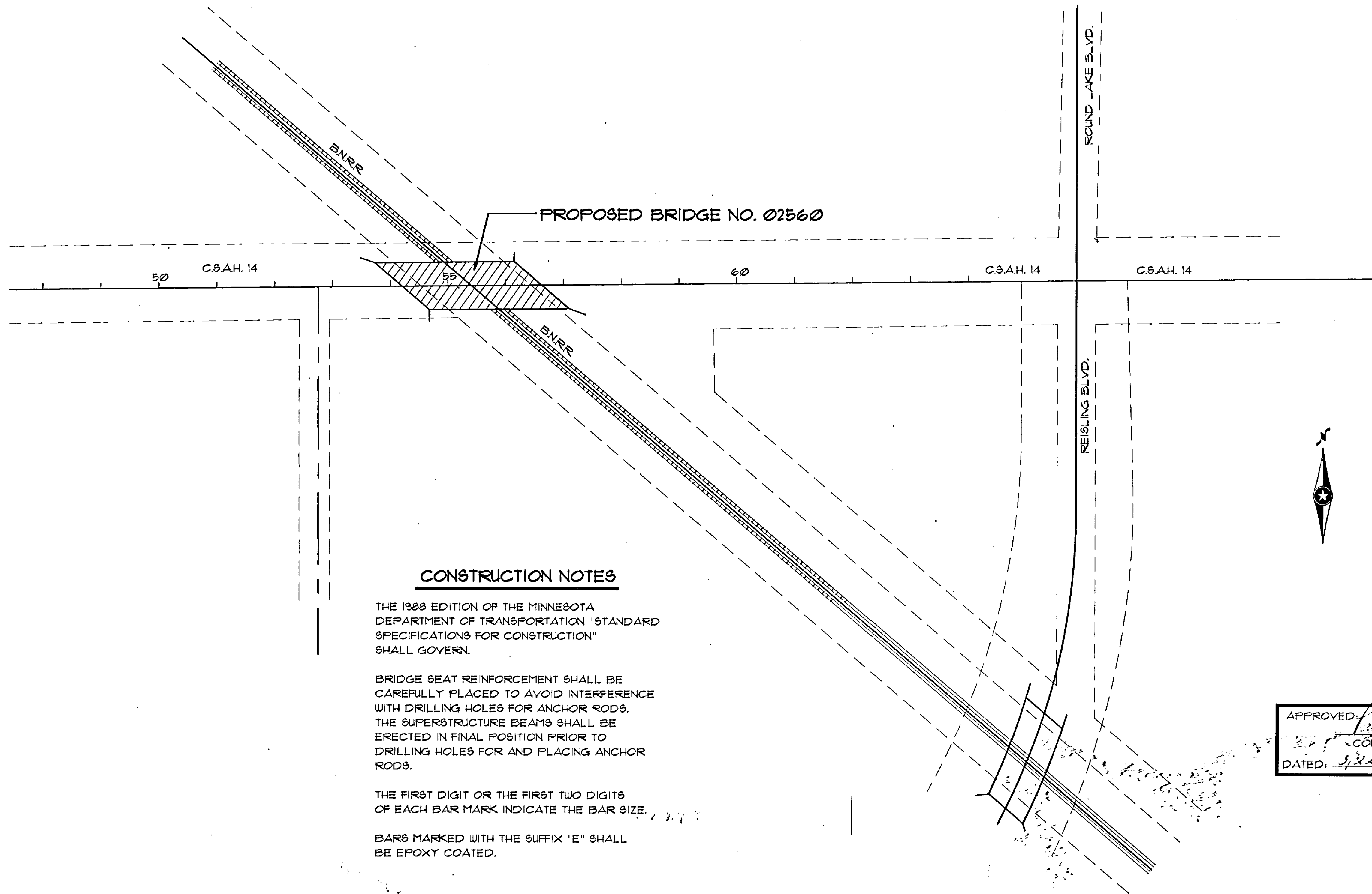


C.S.A.H. 14 OVER B.N.R.R.



CONSTRUCTION NOTES

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

BRIDGE SEAT REINFORCEMENT SHALL BE CAREFULLY PLACED TO AVOID INTERFERENCE WITH DRILLING HOLES FOR ANCHOR RODS. THE SUPERSTRUCTURE BEAMS SHALL BE ERECTED IN FINAL POSITION PRIOR TO DRILLING HOLES FOR AND PLACING ANCHOR RODS.

THE FIRST DIGIT OR THE FIRST TWO DIGITS OF EACH BAR MARK INDICATE THE BAR SIZE.

BARs MARKED WITH THE SUFFIX "E" SHALL BE EPOXY COATED.

APPROVED: *Paul K. Lund*
COUNTY ENGINEER
DATED: 3/22/91

DESIGN DATA

1983 (AND CURRENT INTERIM) A.A.S.H.T.O. DESIGN SPECIFICATIONS
 DESIGN LOADING H20S LIVE LOAD
 LOAD FACTOR DESIGN METHOD
 DEAD LOAD INCLUDES 11 P&F ALLOWANCE FOR FUTURE WEARING COURSE
 REINFORCED CONCRETE:
 f'c = 4000 PSI N=8
 Fy = 60000 PSI (REINFORCEMENT)
 STRUCTURAL STEEL:
 Fy = 50000 PSI (A588 STEEL)
 DECK AREA : 20515 SQ. FT.
 ADT FOR YEAR 2010 = 33,000
 OPERATING RATING H3
 DESIGN SPEED = 45 M.P.H.

SHEET INDEX

NO.	TITLE
1	TITLE SHEET
2	GENERAL PLAN & ELEVATION
3	BRIDGE LAYOUT
4	FOUNDATION LAYOUT
5	WEST ABUTMENT DETAILS
6 - 8	WEST ABUTMENT REINFORCEMENT
9	EAST ABUTMENT DETAILS
10 - 12	EAST ABUTMENT REINFORCEMENT
13, 14	PIER 1 DETAILS
15, 16	PIER 2 DETAILS
17	FRAMING PLAN
18, 19	STRUCTURAL STEEL DETAILS
20, 21	SUPERSTRUCTURE DETAILS
22	TYPE J RAILING DETAILS
23, 24	WATERPROOF EXP. DEVICE DETAILS
25 - 29	BRIDGE DETAILS
30	BRIDGE SURVEY - PLAN & PROFILE
31	BRIDGE SURVEY

BRW PLANNING
 TRANSPORTATION
 ENGINEERING
 URBAN DESIGN
BRW, INC.
 THRESHER SQUARE, 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415

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.

SIGNED: *Mark M... ..*
 DATE: 3/15/91 REG. NO.: 00476

C.S.A.H. 14 CITY OF COON RAPIDS
 MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 02560 TITLE SHEET

C.S.A.H. 14 OVER B.N.R.R.
 IN THE CITY OF COON RAPIDS

0.20 MILES WEST OF RD. LAKE BLVD. IN THE CITY OF COON RAPIDS
 72'-30"-12' CONT. STEEL BEAM SPANS
 82'-0" ROADWAY, 48'-58"-07.95" SKEW
 SPAN IDENTIFICATION NO. 401

SEC 5 & 8 T31N R24W
 CITY OF COON RAPIDS
 ANOKA COUNTY

DATED 4-1-91
 APPROVED: *Donald J. M... ..*
 STATE BRIDGE ENGINEER

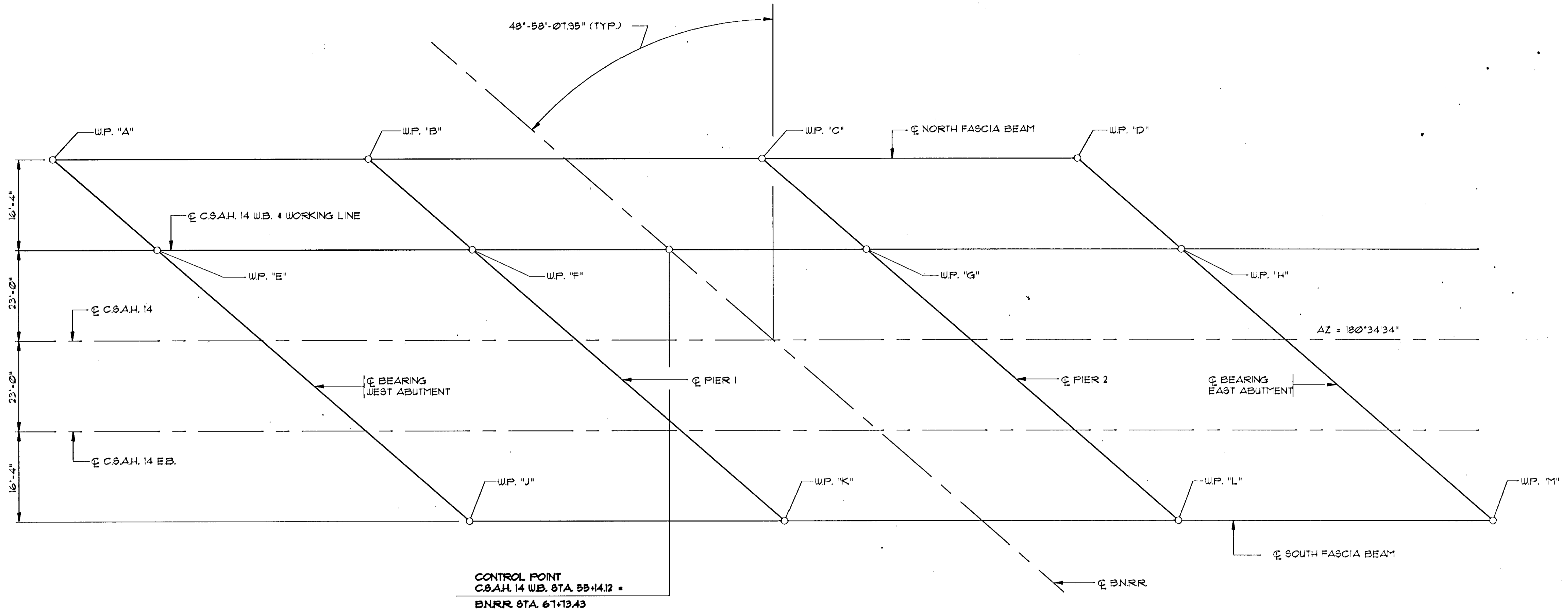
SCHEDULE OF QUANTITIES FOR ENTIRE BRIDGE NO. 02560

ITEM NO.	0401601	2401512	2401513	2404501	2401541	2401541	2402533	2402531	2401501	2401501	2452501	2452508	2452519	2452519	0452602	0452602	2401516	2545501	2417503	2401543	2545503
ITEM	STRUCTURE EXCAVATION	BRIDGE SLAB CONCRETE (3X36)	TYPE J RAILING CONCRETE (3X46)	CONCRETE OVERLAY TYPE SPECIAL	REINFORCEMENT BARS	REINFORCEMENT BARS (EPOXY COATED)	ERECTING STRUCTURAL STEEL (3309)	EXPANSION JOINT DEVICE TYPE 4	STRUCTURE CONCRETE (1A43)	STRUCTURE CONCRETE (3Y43)	CAST-IN-PLACE CONCRETE PILING DELIVERED, 12'	CAST-IN-PLACE CONCRETE DRIVEN, 12'	CAST-IN-PLACE CONCRETE TEST FILES 25' LONG, 12"	CAST-IN-PLACE CONCRETE TEST FILES 50' LONG, 12"	FILE ANALYSIS	FILE REDRIVING	RAISED MEDIAN CONCRETE (3X46)	CONCRETE SLOPE PAVING	ZINC-RICH PAINT SYSTEM (NEW)	SPIRAL REINF. (EPOXY COATED)	CONDUIT SYSTEM (SIGNALS)
UNIT	LUMP SUM	SQ. FT.	LIN. FT.	SQ. FT.	FOUND	FOUND	FOUND	LIN. FT.	CU. YD.	CU. YD.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH	SQ. FT.	SQ. YD.	SQ. FT.	FOUND	LUMP SUM
QUANTITY	1	20515 (P)	485 (P)	15431 (P)	12550 (P)	211620 (P)	540270 (P)	260 (P)	432 (P)	756 (P)	4240	4240	4	6	6	10	4340 (P)	1798	26261 (P)	1310 (P)	1

REVIEWED BY STATE AID BRIDGE UNIT

STATE AID PROJECT NO. S.A.P. 02-614-18

SHEET NO. 1 OF 31 SHEETS



CONTROL POINT
C.S.A.H. 14 W.B. STA. 55+4.12 •
BNRR STA. 67+13.43

DIMENSIONS BETWEEN WORKING POINTS													COORDINATES		ELEVATIONS					
POINT	STATION	A	B	C	D	E	F	G	H	J	K	L	M	POINT	X-COORD.	Y-COORD.	TOP OF ROADWAY	TOP OF RUBY TO BRIDGE SEAT	BRIDGE SEAT	POINT
A	53+72.20		72.00			24.88	92.23	181.51	253.30		180.45	264.37	333.80	A	5516.3439	12004.3765	899.97	4.51	895.46	A
B	54+44.20			90.00		55.68	24.88	109.99	181.50	80.79		196.80	264.37	B	5588.9401	12005.1005	900.71	4.73	895.98	B
C	55+34.20				72.00	144.16	73.08	24.88	92.23	106.37	78.67		180.45	C	5678.9354	12006.0056	901.09	4.81	896.28	C
D	56+06.20					215.85	144.16	55.68	24.88	163.74	106.37	80.79		D	5750.9317	12006.7297	900.95	4.76	896.19	D
E	53+90.97						72.00			94.95	156.57	241.80	311.92	E	5535.8759	11988.2327	900.53			E
F	54+62.97							90.00		62.33	94.95	173.23	241.80	F	5607.8721	11988.9568	901.17			F
G	55+52.97								72.00	109.78	64.98	94.95	156.57	G	5697.8673	11989.8619	901.42			G
H	56+24.97									173.93	109.78	62.33	94.95	H	5769.8637	11990.5860	901.18			H
J	54+62.60										72.00			J	5608.1265	11926.6229	900.84	4.51	896.33	J
K	55+34.60											90.00		K	5680.1227	11927.3470	901.09	4.73	896.36	K
L	56+24.60												72.00	L	5770.1179	11928.2521	900.86	4.81	896.05	L
M	56+96.60													M	5842.1143	11928.9762	900.23	4.76	895.41	M

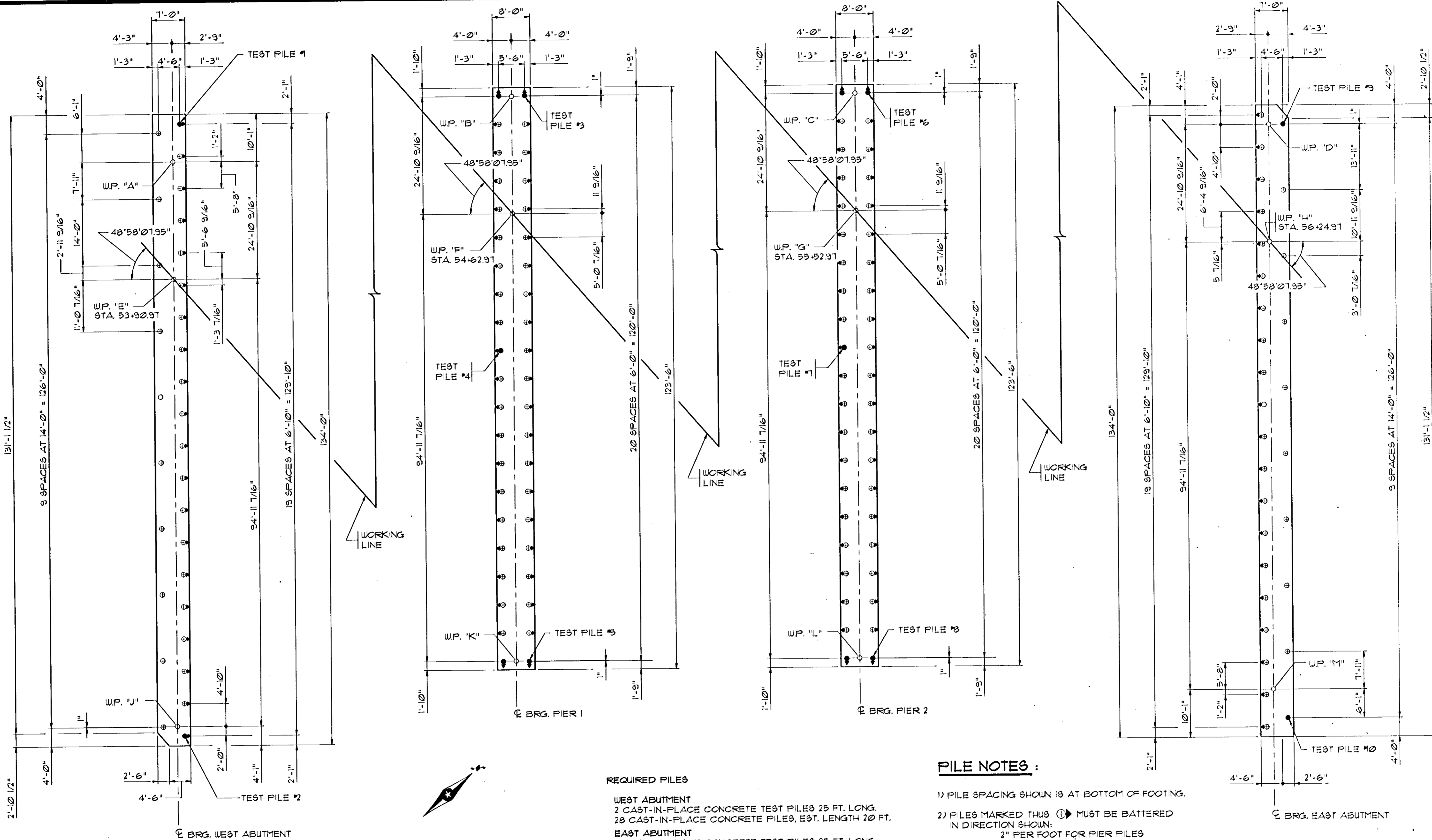
TOP OF ROADWAY TO BRIDGE SEAT				
	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.
SLAB THICKNESS	3"	3"	3"	3"
STOOL HEIGHT	3"	3"	3"	3"
BEAM HEIGHT	36 11/16"	36 11/16"	36 11/16"	36 11/16"
BEARING HEIGHT	5 3/8"	8 1/8"	9 1/16"	8 3/8"
TOTAL	451"	4.73	4.81	4.76

S.A.P. 02-614-13



BRIDGE LAYOUT

DES: DJV	DRW: DJV	APPROVED:	BRIDGE NO. 02560
CHK: MKM	CHK: MKM	4-1-91	
SHEET NO. 3 OF 31 SHEETS			



REQUIRED PILES

- WEST ABUTMENT**
 2 CAST-IN-PLACE CONCRETE TEST PILES 25 FT. LONG.
 28 CAST-IN-PLACE CONCRETE PILES, EST. LENGTH 20 FT.
- EAST ABUTMENT**
 2 CAST-IN-PLACE CONCRETE TEST PILES 25 FT. LONG.
 28 CAST-IN-PLACE CONCRETE PILES, EST. LENGTH 20 FT.
- PIER 1**
 3 CAST-IN-PLACE CONCRETE TEST PILES 50 FT. LONG.
 39 CAST-IN-PLACE CONCRETE PILES, EST. LENGTH 40 FT.
- PIER 2**
 3 CAST-IN-PLACE CONCRETE TEST PILES 50 FT. LONG.
 39 CAST-IN-PLACE CONCRETE PILES, EST. LENGTH 40 FT.

PILE NOTES :

- 1) PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.
- 2) PILES MARKED THIS ⊕ MUST BE BATTERED IN DIRECTION SHOWN:
 2" PER FOOT FOR PIER PILES
 3" PER FOOT FOR ABUTMENT PILES.
- 3) ALL PILES TO BE CAST-IN-PLACE CONCRETE PILES.
- 4) PILES ARE TO HAVE A NOMINAL DIAMETER OF 12".
- 5) FOR PILE SPLICE SEE SHEET NO. 28
- 6) DO NOT PREDRILL PILING UNLESS REQUIRED FOR 15' MINIMUM LENGTH.

COMPUTED FILE LOAD (TONS PER PILE)

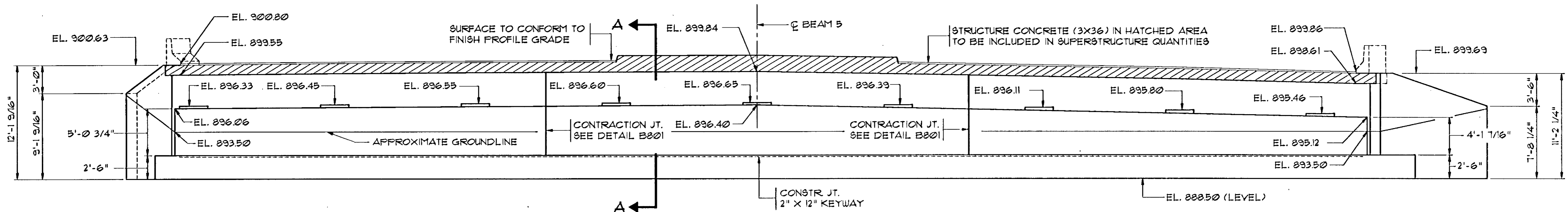
LOCATION	DEAD LOAD + EARTH PRESSURE	DEAD LOAD	LIVE LOAD	OVER-TURNING	TOTAL	DESIGN LOAD	
W. ABUTMENT	37.9		10.6		48.5	48.5	
PIER 1		33.1	10.3	4.1	43.4	43.4	GROUP I GOVERNS
PIER 2		33.1	10.3	4.1	43.4	43.4	GROUP I GOVERNS
E. ABUTMENT	37.9		10.6		48.5	48.5	

S.A.P. 02-614-13

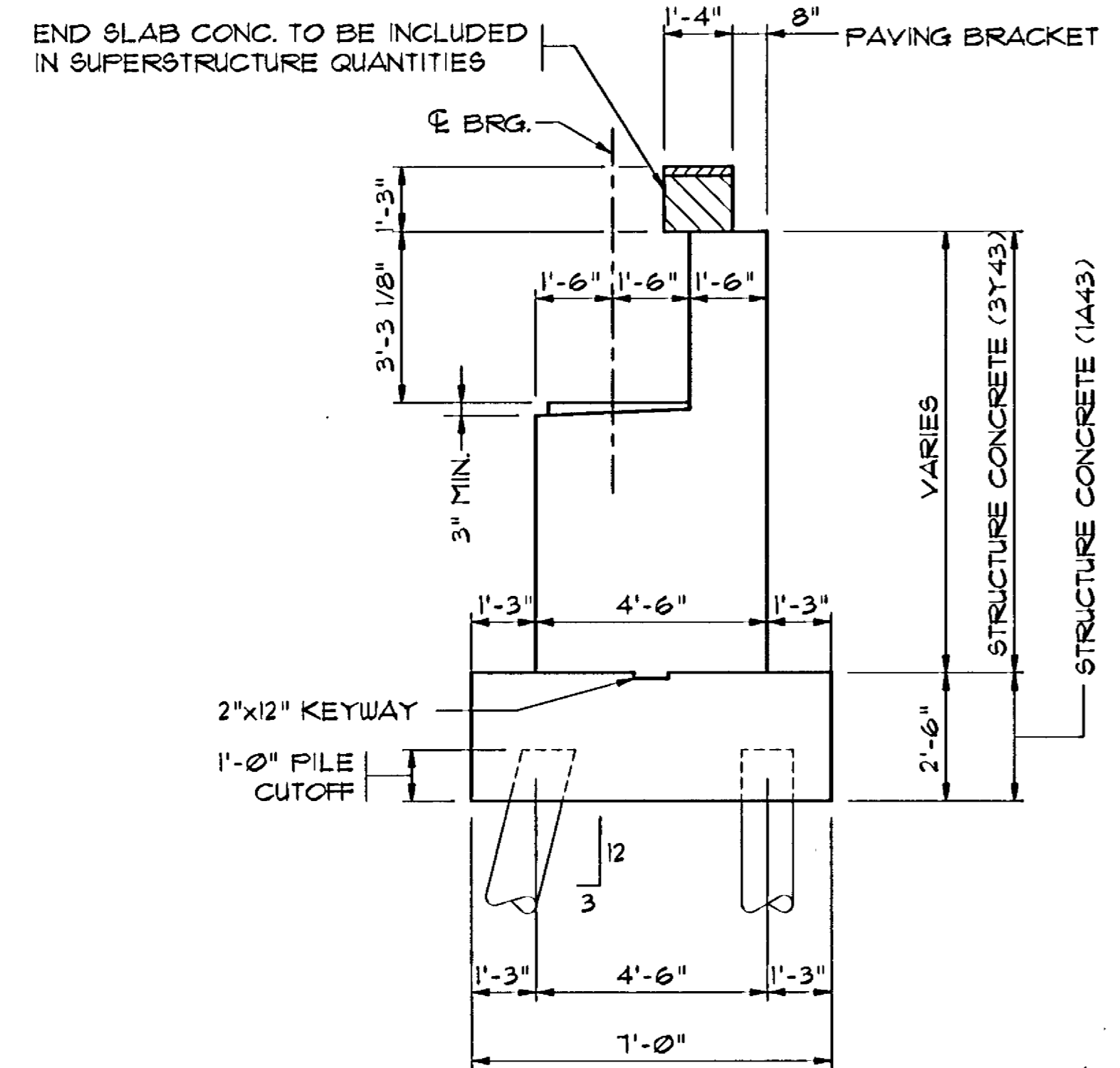


FOUNDATION LAYOUT

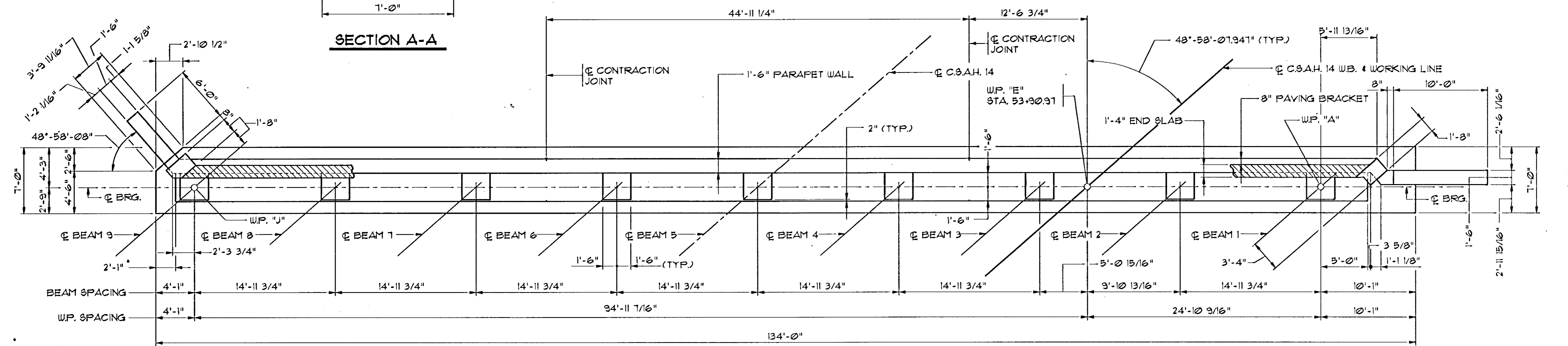
DES: MKM	DRW: JAS	APPROVED:	BRIDGE NO. 02560
CHK: SA	CHK: DJV	4-1-91	
SHEET NO. 4 OF 31 SHEETS			



ELEVATION



SECTION A-A



PLAN

SUMMARY OF QUANTITIES - WEST ABUTMENT		
ITEM	UNIT	QUANT.
STRUCTURE CONCRETE (1A43)	CU. YD.	81
STRUCTURE CONCRETE (3Y43)	CU. YD.	140
REINFORCEMENT BARS	POUND	3825
REINFORCEMENT BARS (EPOXY COATED)	POUND	9123
③ 3-PLY JOINT WATERPROOFING	LIN. FT.	20
C.I.P. CONCRETE TEST PILES 25 FT. LONG (12")	EACH	2
C.I.P. CONCRETE PILING DRIVEN (12")	LIN. FT.	560
② ① C.I.P. CONCRETE PILING DELIVERED (12")	LIN. FT.	560
② ① STRUCTURE EXCAVATION	LUMP SUM	1

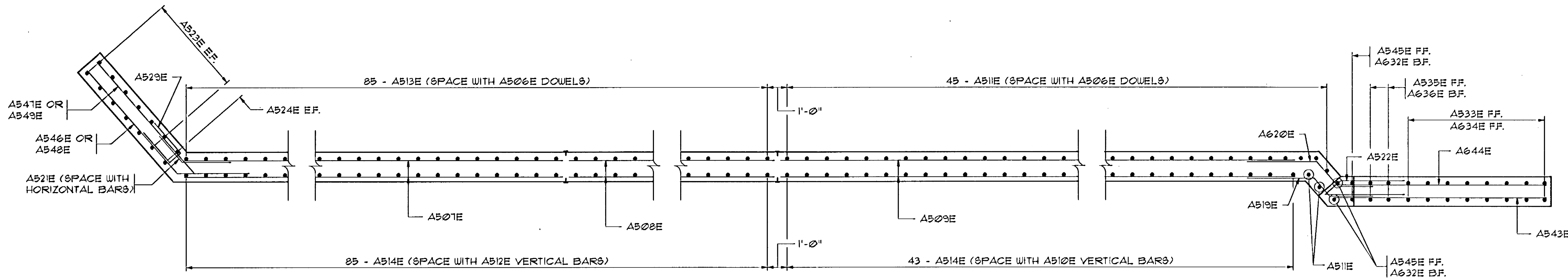
- ① COMPUTED QUANTITY = 254 CU. YDS. FOR INFORMATIONAL PURPOSES ONLY.
- ② SEE SPECIAL PROVISIONS
- ③ TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS.

S.A.P. 02-614-13

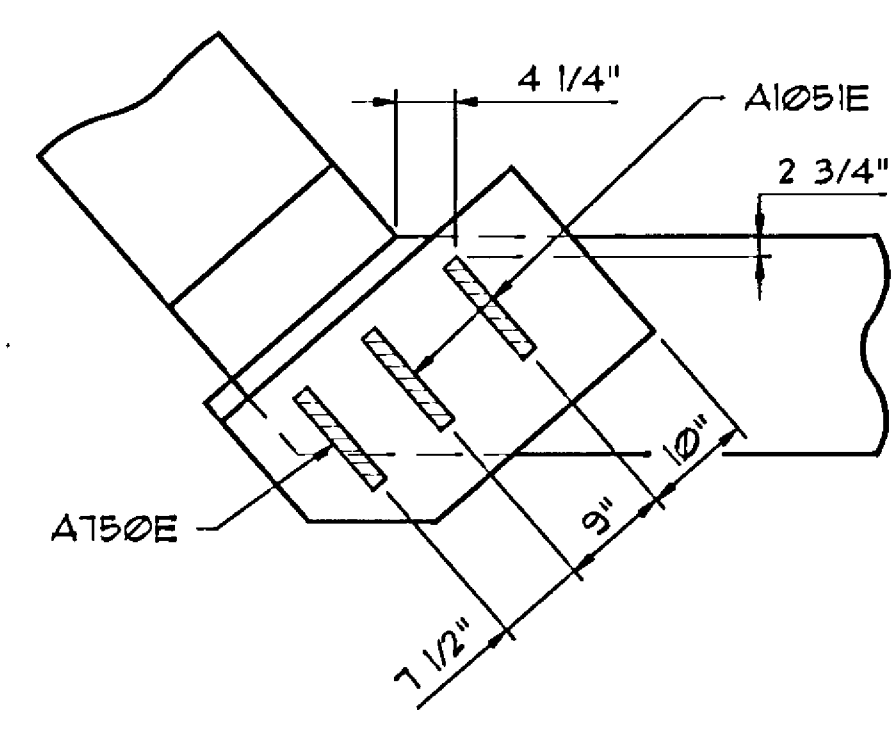


**WEST ABUTMENT
DETAILS**

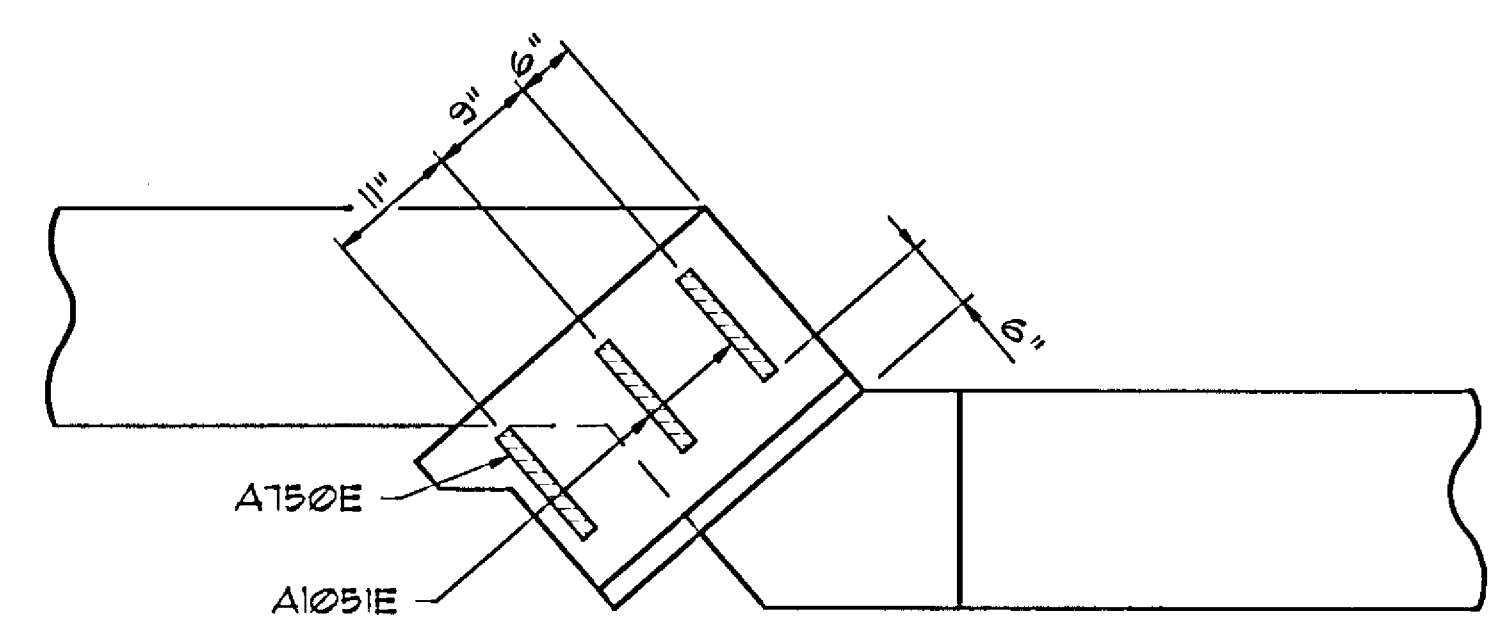
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CHK: SA	CHK: DJV	4-1-91	
SHEET NO. 5 OF 31 SHEETS			



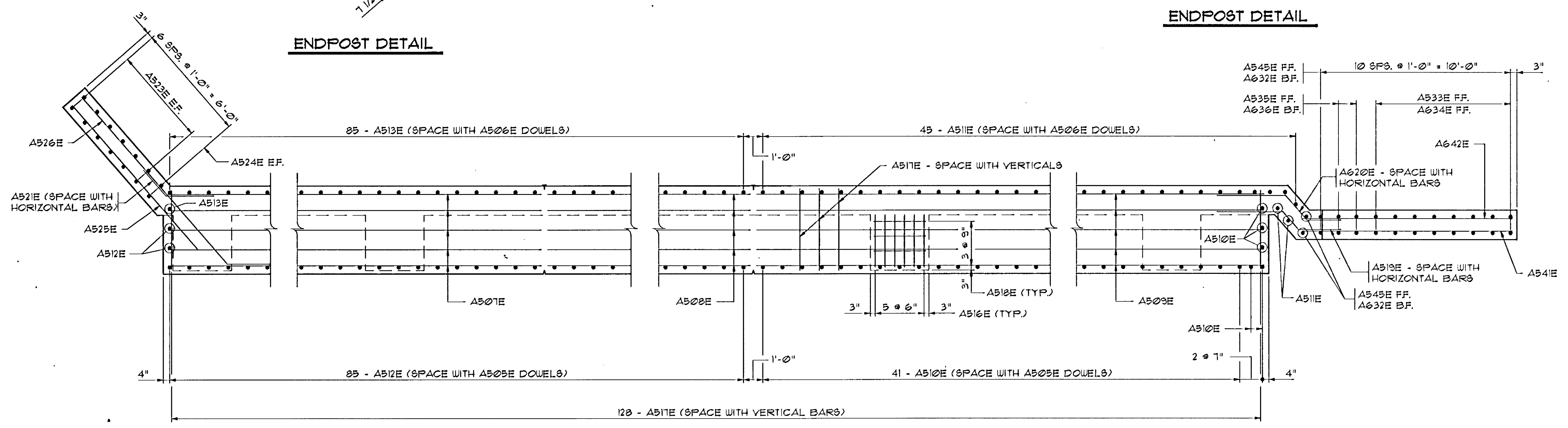
SECTION C-C



ENDPOST DETAIL



ENDPOST DETAIL



SECTION B-B

S.A.P. 02-614-18



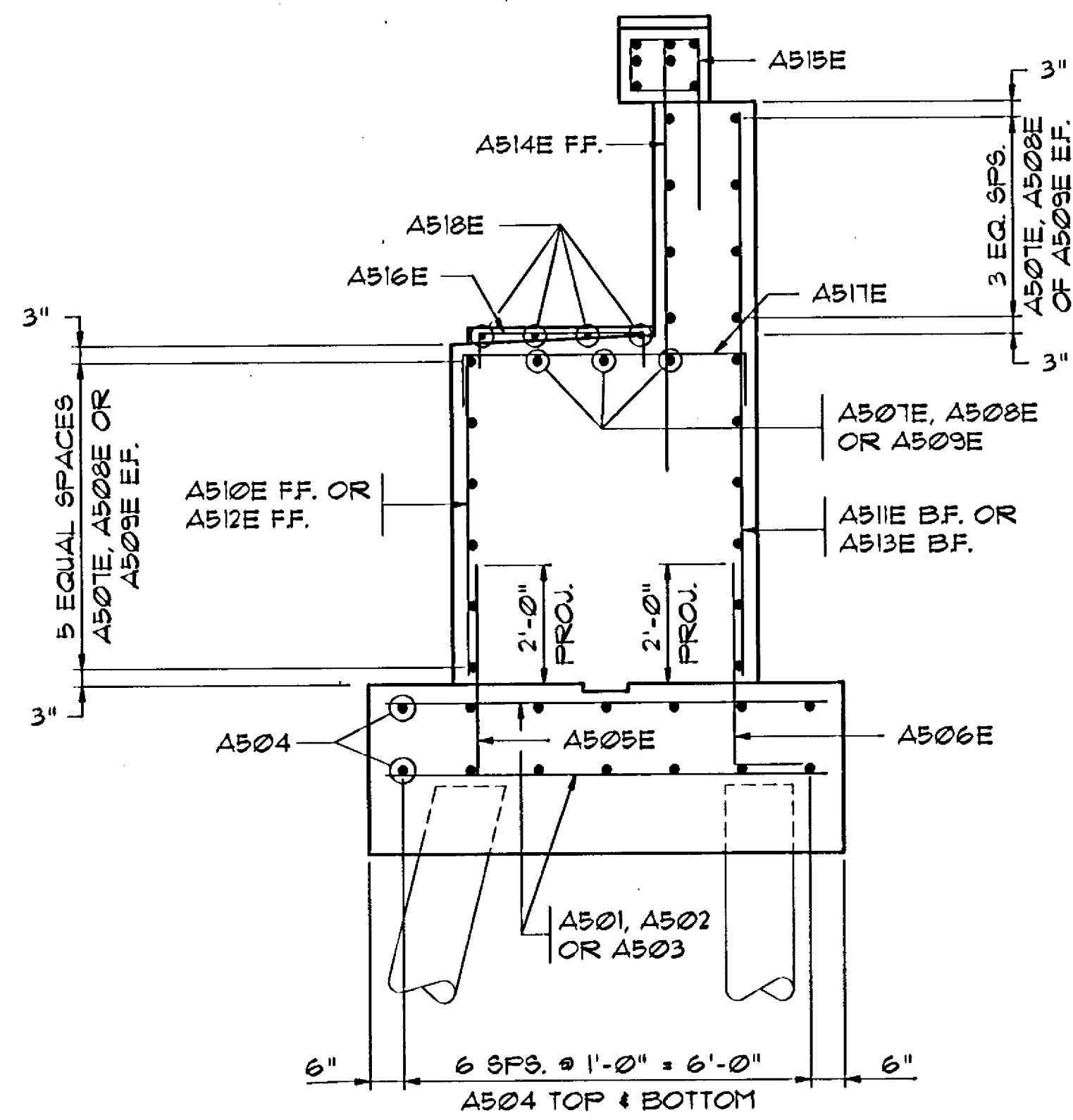
WEST ABUTMENT REINFORCEMENT

DES: MKM	DRW: JAS	APPROVED:
CHK: SA	CHK: DJV	4-1-91
SHEET NO. 7 OF 31 SHEETS		

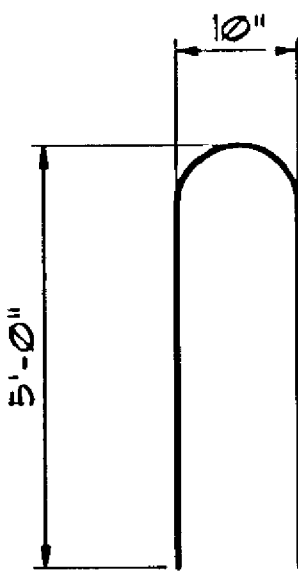
BRIDGE NO. 02560

BILL OF REINFORCEMENT - WEST ABUTMENT

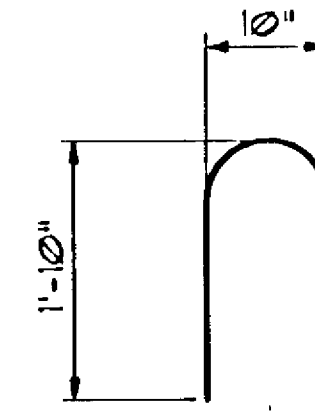
MARK	NO.	LENGTH	SHAPE	LOCATION
A501	264	6'-6"	STR	FOOTING - TRANSVERSE
A502	2	5'-3"	STR	FOOTING - TRANSVERSE
A503	2	7'-8"	BENT	FOOTING - TRANSVERSE
A504	42	45'-10"	STR	FOOTING - LONGITUDINAL
A505E	141	3'-6"	STR	FOOTING - DOWELS
A506E	135	4'-4"	BENT	FOOTING - DOWELS
A507E	23	39'-2"	STR	STEM - LONGITUDINAL
A508E	23	44'-7"	STR	STEM - LONGITUDINAL
A509E	23	42'-1"	STR	STEM - LONGITUDINAL
A510E	46	(1)	STR	STEM - VERTICAL
A511E	47	(2)	STR	STEM - PAR - VERTICAL
A512E	88	4'-9"	STR	STEM - VERTICAL
A513E	85	8'-4"	STR	STEM - PAR - VERTICAL
A514E	128	5'-0"	STR	PAR WALL - VERTICAL
A515E	128	5'-3"	BENT	END SLAB - TIES
A516E	54	4'-0"	BENT	BRIDGE SEAT - TIES
A517E	128	5'-2"	BENT	STEM - TIES
A518E	36	2'-8"	STR	BRIDGE SEAT - TIES
A519E	10	7'-1"	BENT	STEM & PAR WALL - TIES
A620E	10	7'-5"	BENT	STEM & PAR WALL - TIES
A521E	10	4'-3"	BENT	STEM & PAR WALL - TIES
A522E	1	5'-6"	BENT	PARAPET WALL - TIE
A523E	12	(3)	STR	SOUTH W.W. - VERTICAL
A524E	2	9'-5"	STR	SOUTH W.W. - VERTICAL
A525E	6	10'-0"	STR	SOUTH W.W. - HORIZONTAL
A526E	6	13'-10"	BENT	SOUTH W.W. - HORIZONTAL
A527E	2	10'-11"	BENT	SOUTH W.W. - HORIZONTAL
A528E	2	10'-9"	BENT	SOUTH W.W. - HORIZONTAL
A529E	1	4'-10"	BENT	SOUTH W.W. - TIE
A530E	2	6'-5"	STR	SOUTH W.W. - HORIZONTAL
A531E	6	5'-8"	STR	SOUTH W.W. - HORIZONTAL
A632E	2	8'-6"	STR	NORTH W.W. - VERTICAL
A533E	8	(4)	STR	NORTH W.W. - VERTICAL
A634E	8	(4)	STR	NORTH W.W. - VERTICAL
A535E	2	7'-10"	STR	NORTH W.W. - VERTICAL
A636E	2	7'-10"	STR	NORTH W.W. - VERTICAL
A537E	1	10'-9"	STR	NORTH W.W. - HORIZONTAL
A638E	1	10'-9"	STR	NORTH W.W. - HORIZONTAL
A539E	3	7'-4"	STR	NORTH W.W. - HORIZONTAL
A640E	3	7'-4"	STR	NORTH W.W. - HORIZONTAL
A541E	7	11'-0"	STR	NORTH W.W. - HORIZONTAL
A642E	7	10'-6"	STR	NORTH W.W. - HORIZONTAL
A543E	3	(5)	STR	NORTH W.W. - HORIZONTAL
A644E	3	(6)	STR	NORTH W.W. - HORIZONTAL
A545E	2	8'-6"	STR	NORTH W.W. - VERTICAL
A546E	1	9'-0"	BENT	SOUTH W.W. - HORIZONTAL
A547E	1	9'-0"	BENT	SOUTH W.W. - HORIZONTAL
A548E	1	7'-0"	BENT	SOUTH W.W. - HORIZONTAL
A549E	1	7'-0"	BENT	SOUTH W.W. - HORIZONTAL
A150E	2	4'-1"	BENT	ENDSLAB & ENDPST
A105E	4	10'-5"	BENT	ENDPOST



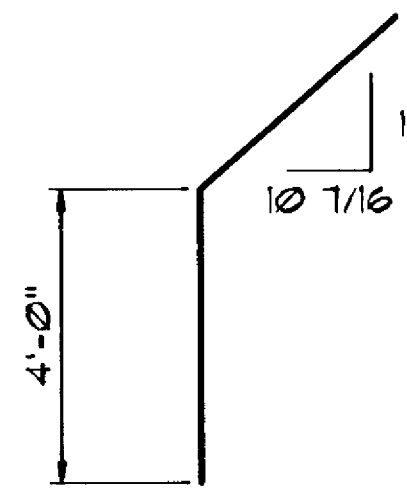
SECTION A-A



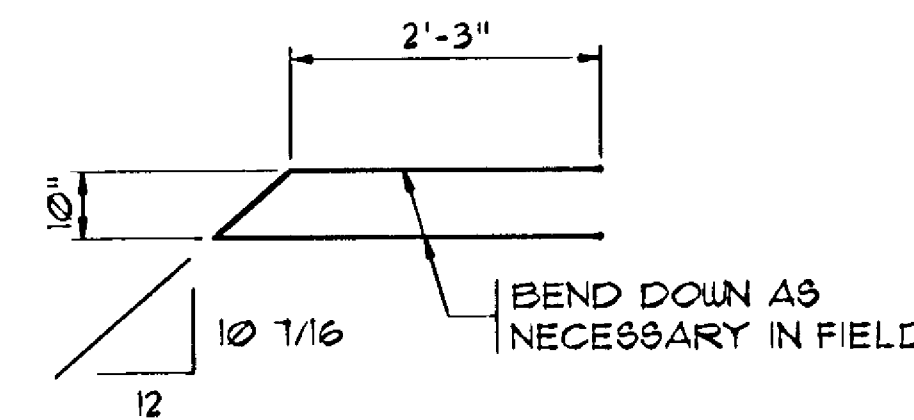
A105E



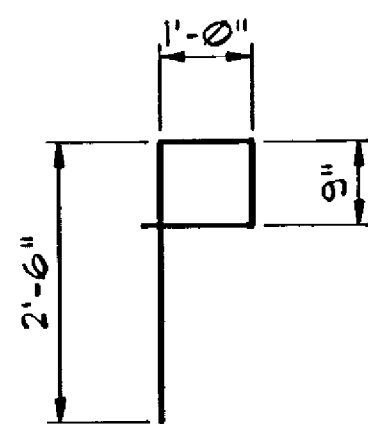
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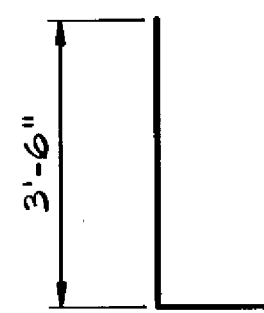
A503E



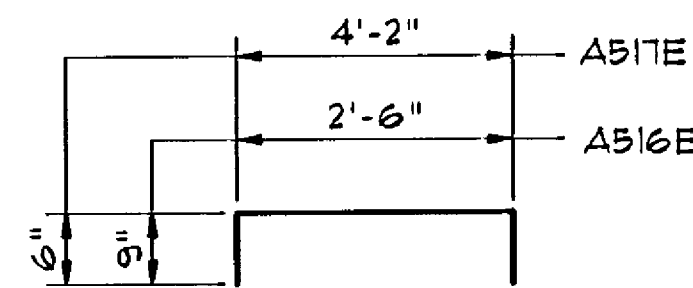
A522E



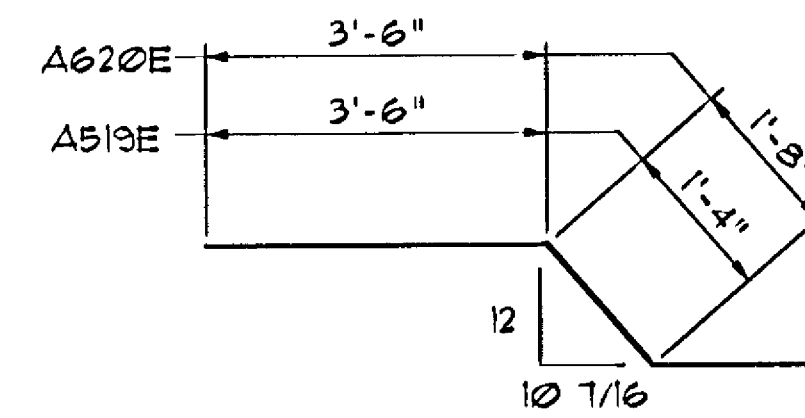
A515E



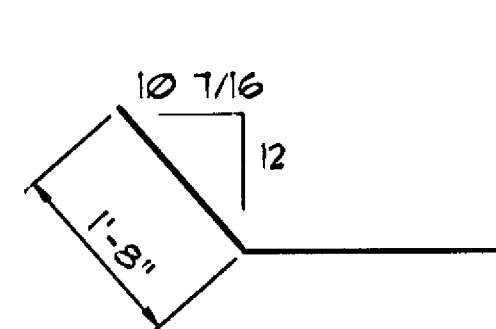
A506E



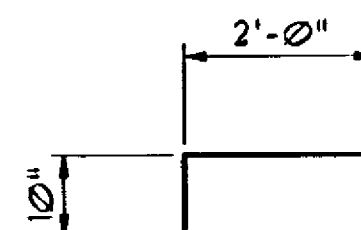
A516E & A517E



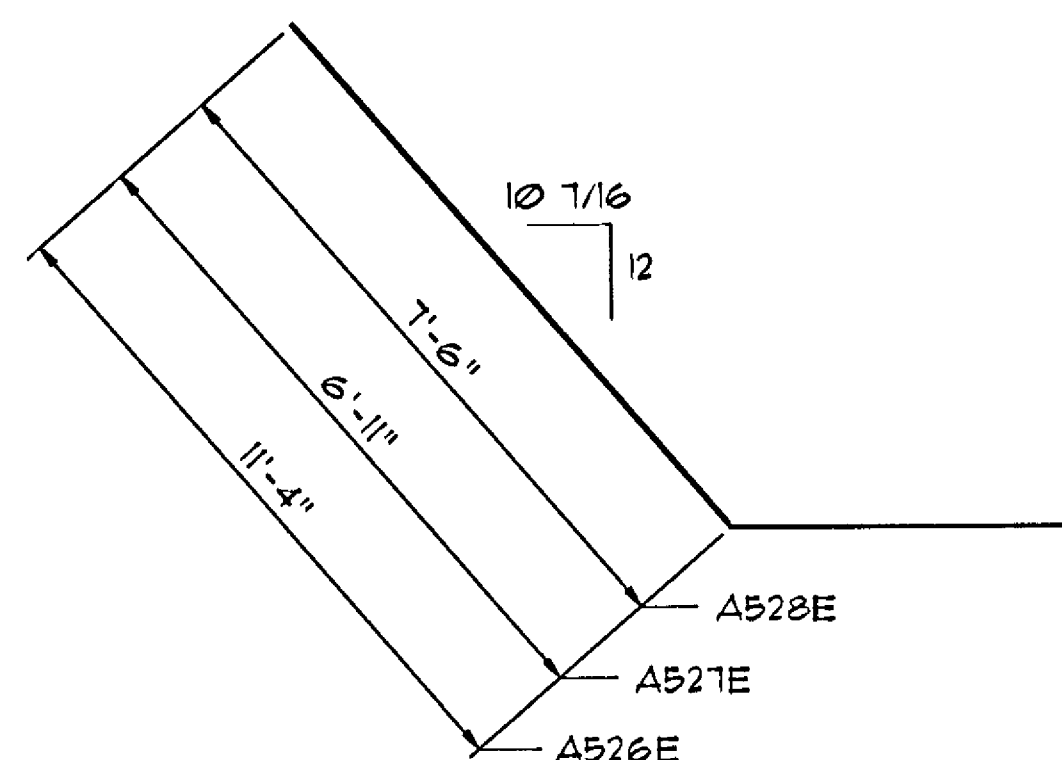
A519E & A620E



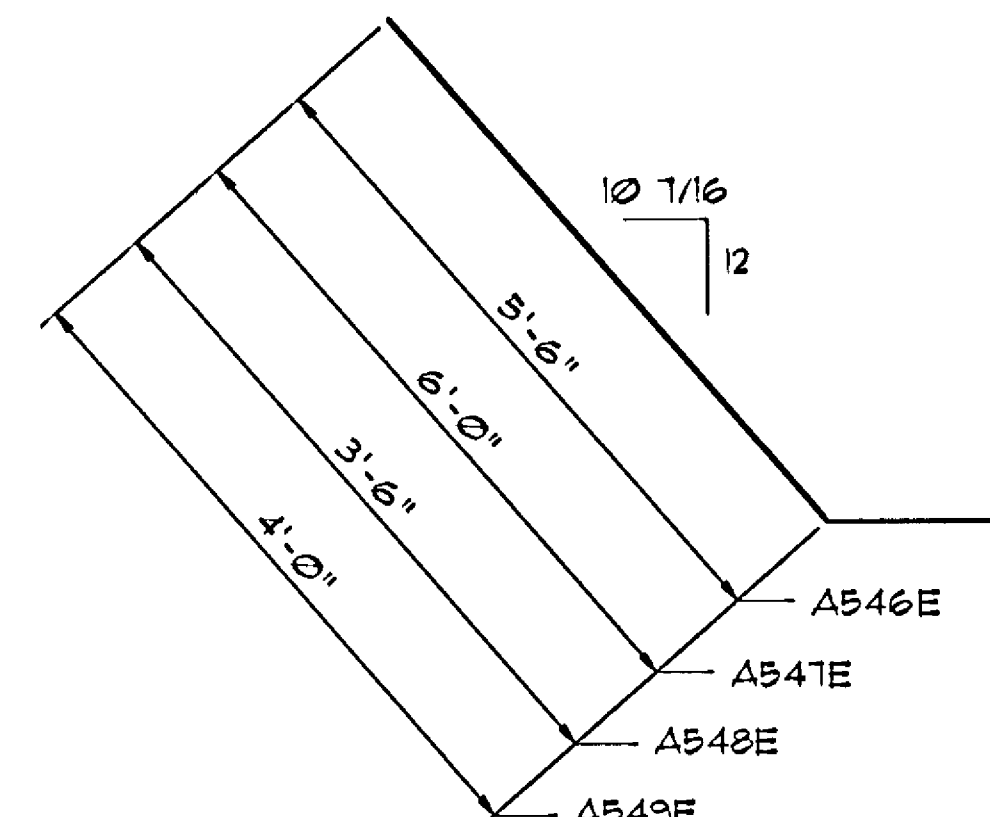
A521E



A529E



A526E, A527E & A528E



A546E - A549E

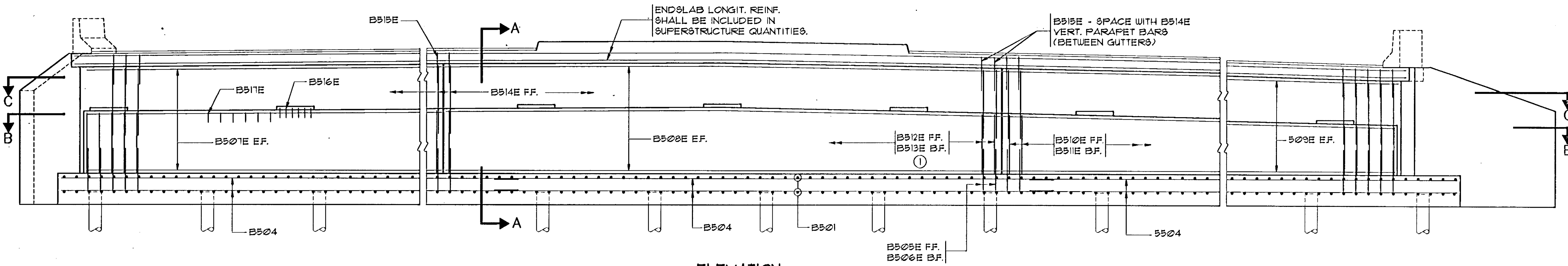
- ① 1 SET OF 46 BARS (3'-10" TO 4'-8")
- ② 1 SET OF 47 BARS (7'-5" TO 8'-3")
- ③ 2 SETS OF 6 BARS (8'-9" TO 11'-3")
- ④ 1 SET OF 8 BARS (7'-5" TO 9'-10")
- ⑤ 1 SET OF 3 BARS (4'-10" TO 10'-4")
- ⑥ 1 SET OF 3 BARS (4'-2" TO 9'-3")

S.A.P. 02-614-18



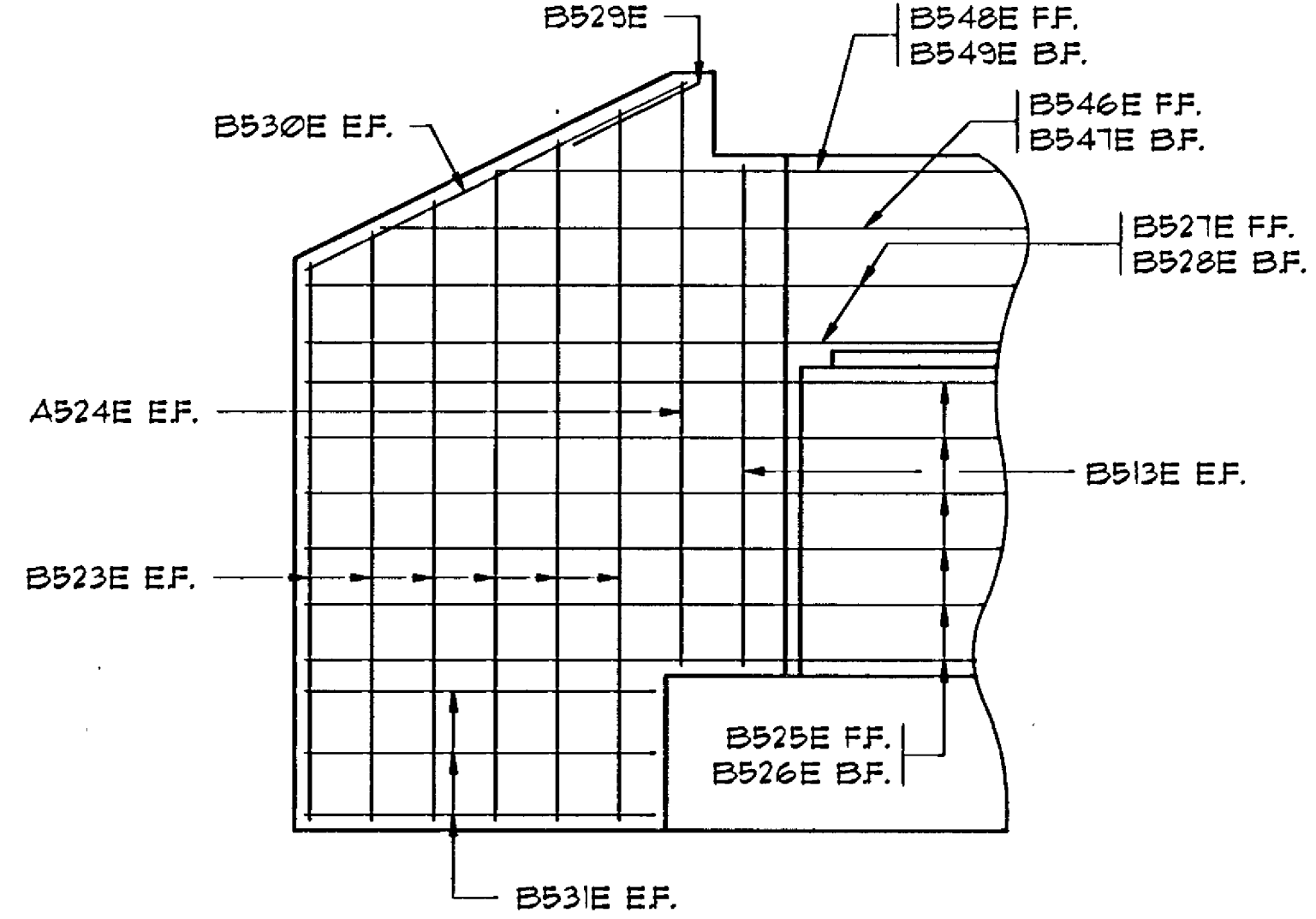
WEST ABUTMENT REINFORCEMENT

DES: MKM	DRW: JAS	APPROVED: 4-1-91	BRIDGE NO. 02560
CHK: SA	CHK: DJV		
SHEET NO. 8 OF 31 SHEETS			

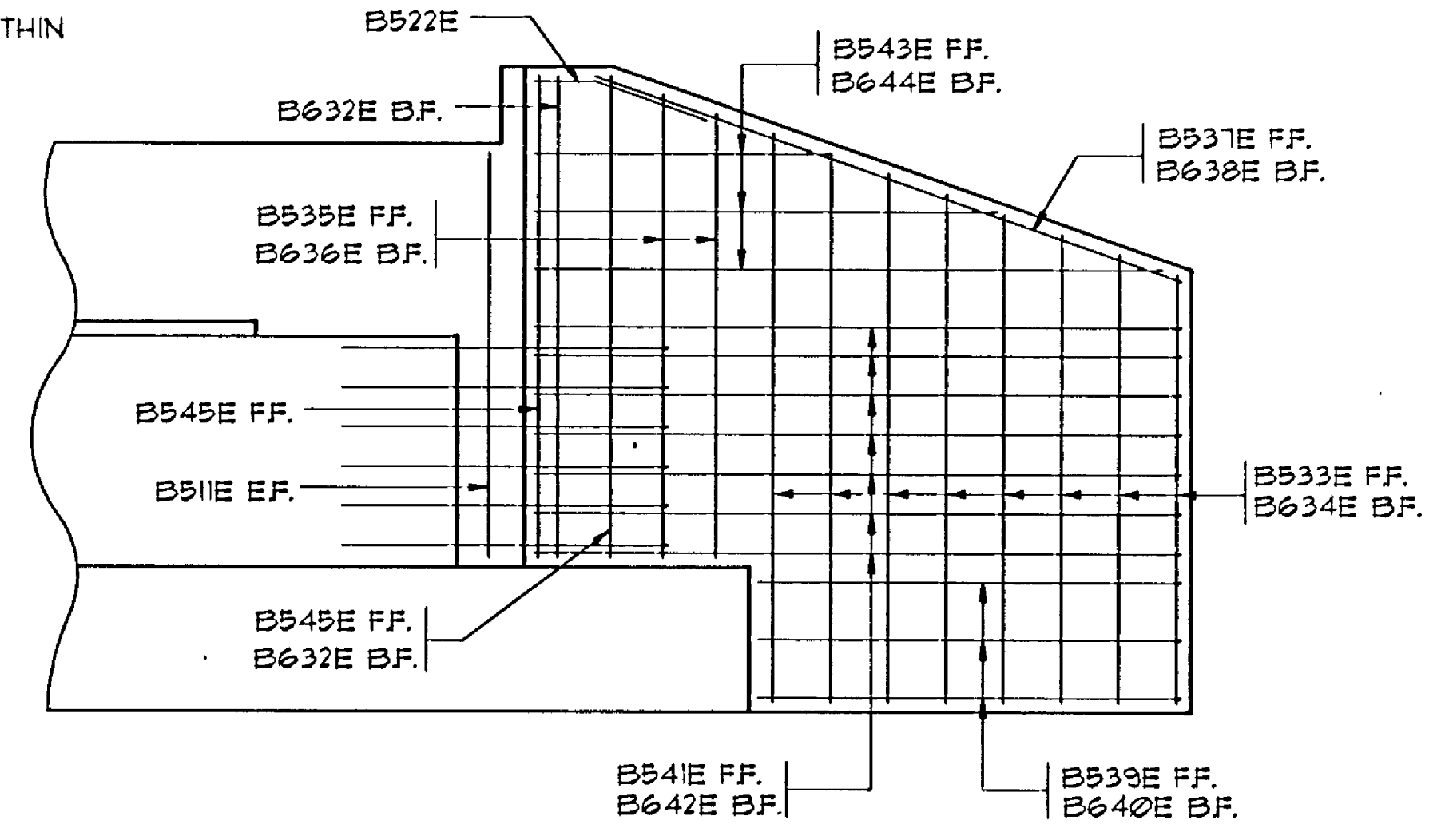


ELEVATION

① FULL BARS UP TO WITHIN 3" OF BR. SEAT.



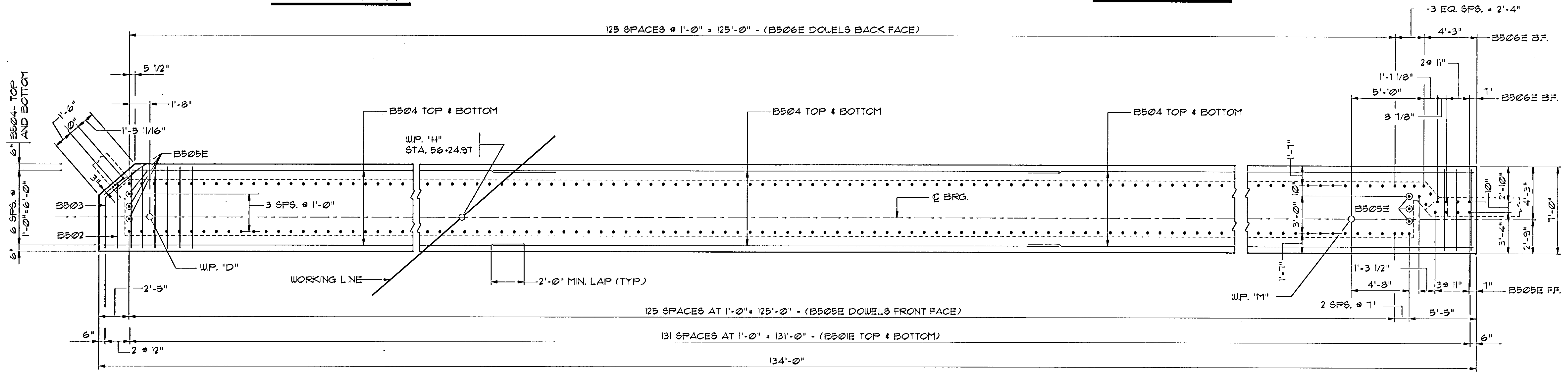
SOUTH WINGWALL



NORTH WINGWALL

NOTES:

- FF. = FRONT FACE
- BF. = BACK FACE
- EF. = EACH FACE
- SEE SHEET 11 FOR SECTIONS B-B & C-C.
- SEE SHEET 12 FOR SECTION A-A.

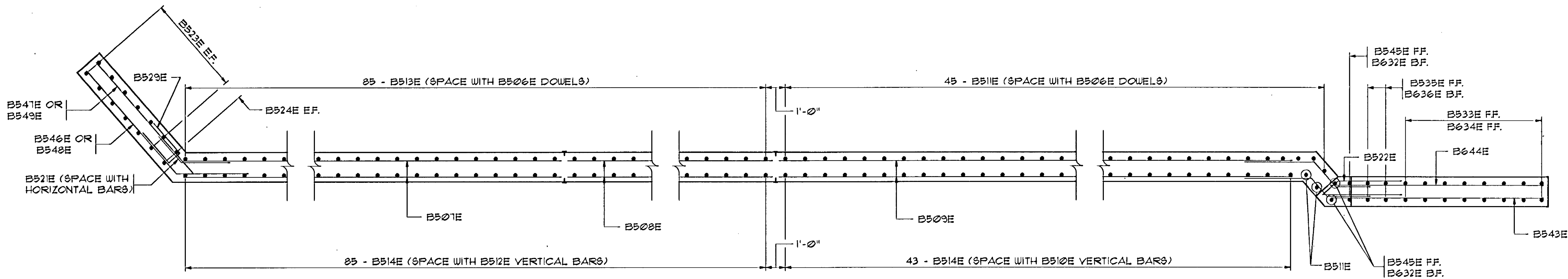


PLAN

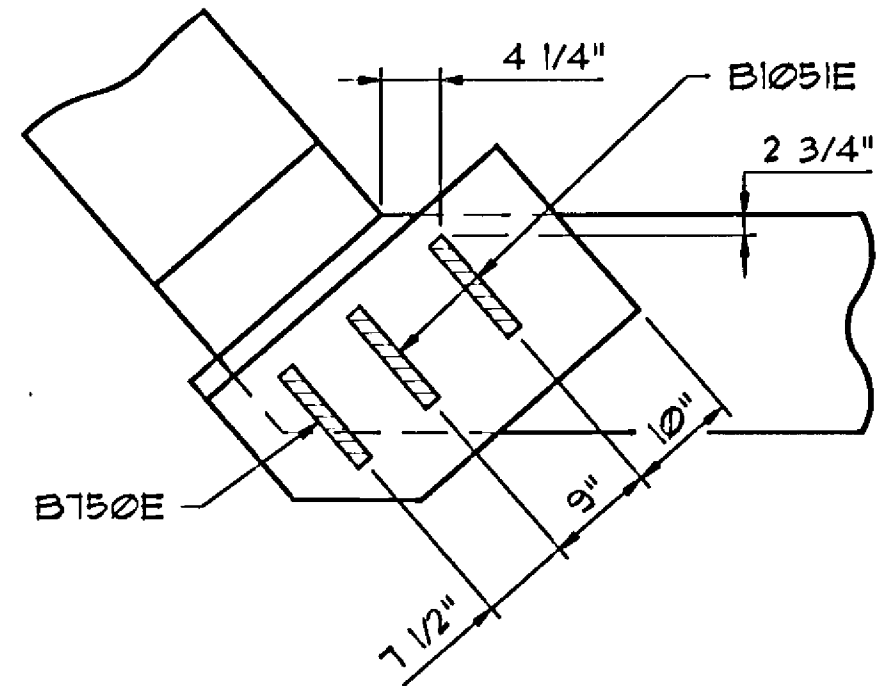


EAST ABUTMENT REINFORCEMENT

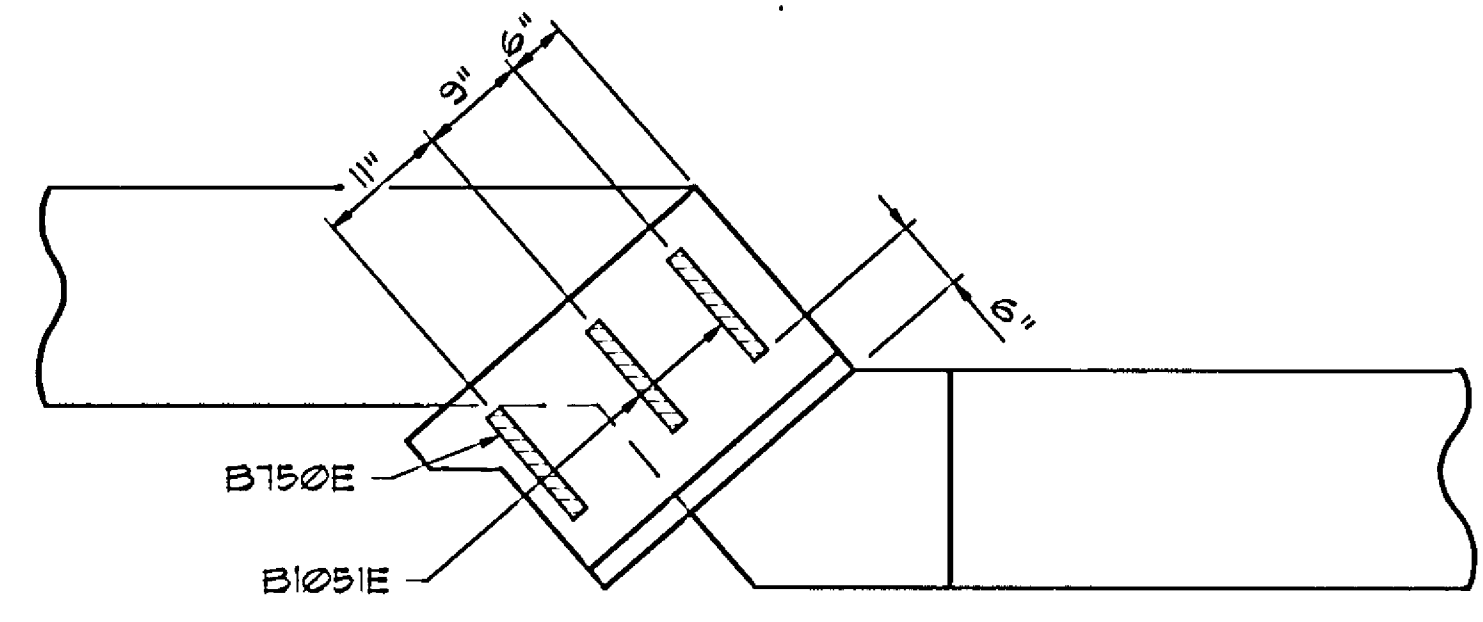
DES: MKM	DRW: JAS	APPROVED: 4-1-91	BRIDGE NO. 02560
CHK: SA	CHK: DJV		
SHEET NO. 10 OF 31 SHEETS			



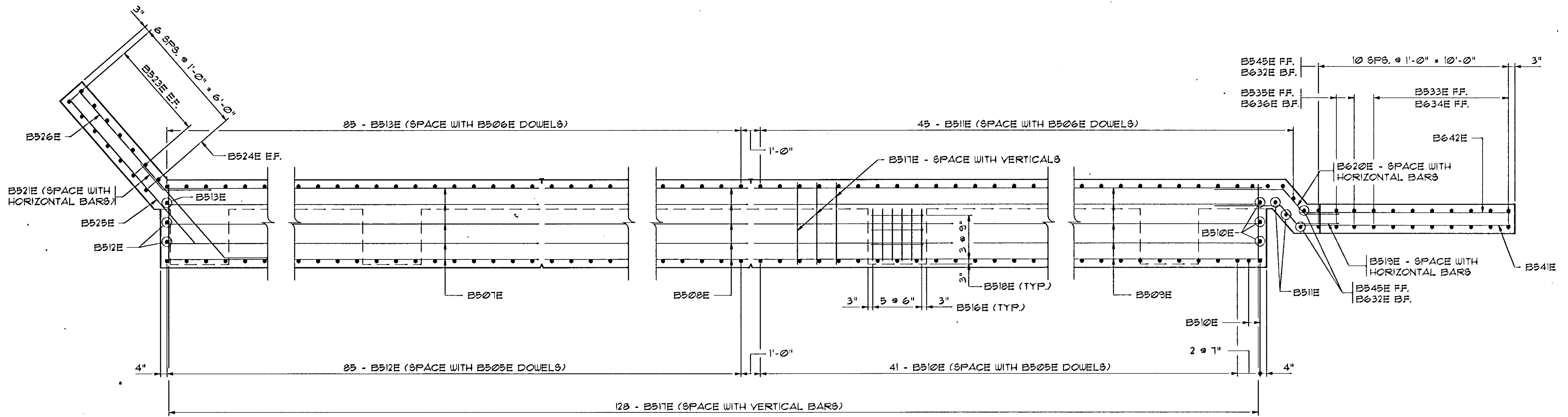
SECTION C-C



ENDPOST DETAIL



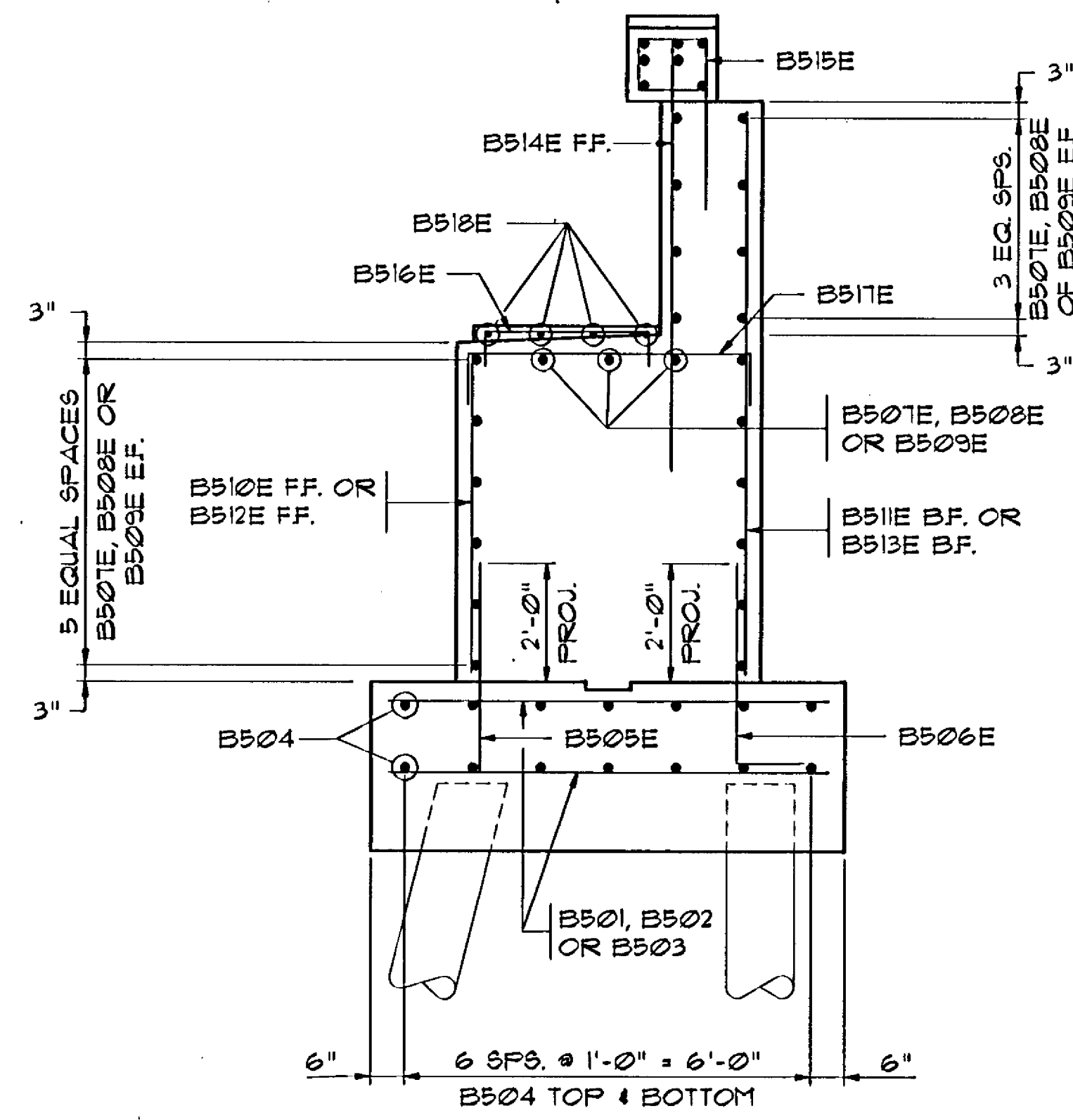
ENDPOST DETAIL



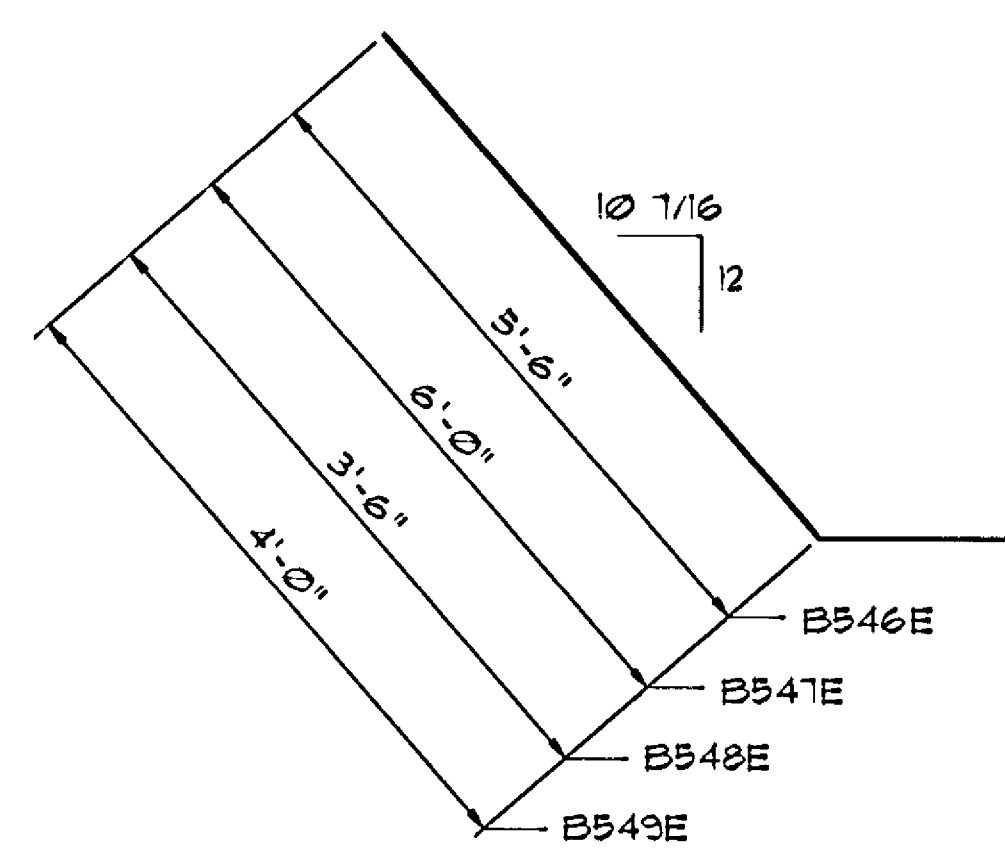
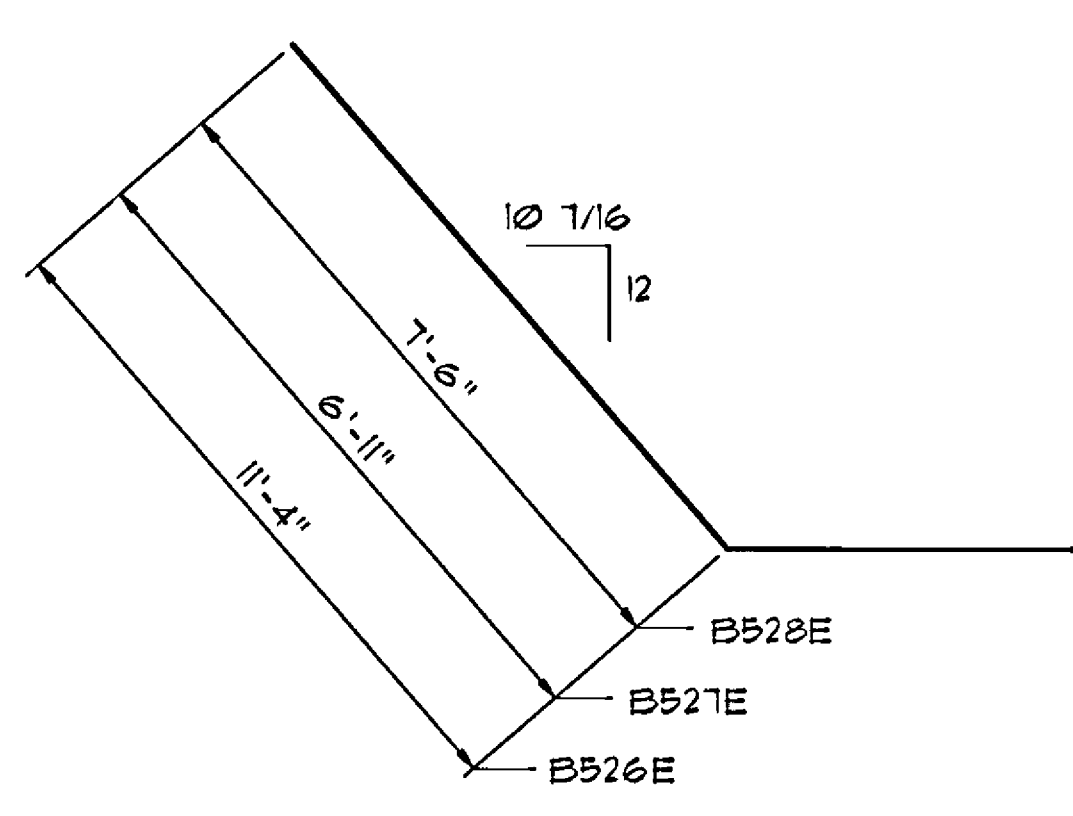
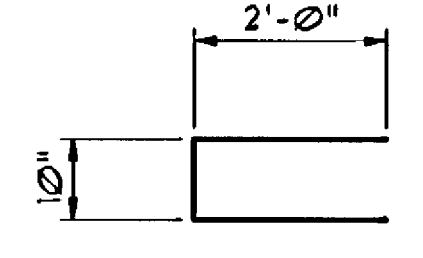
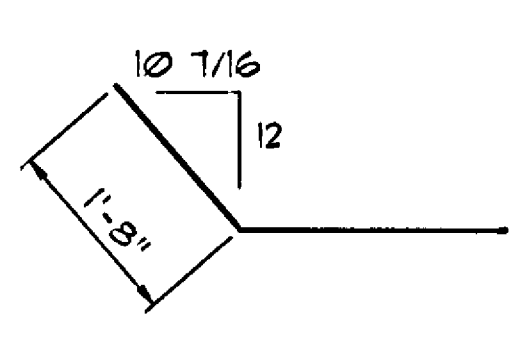
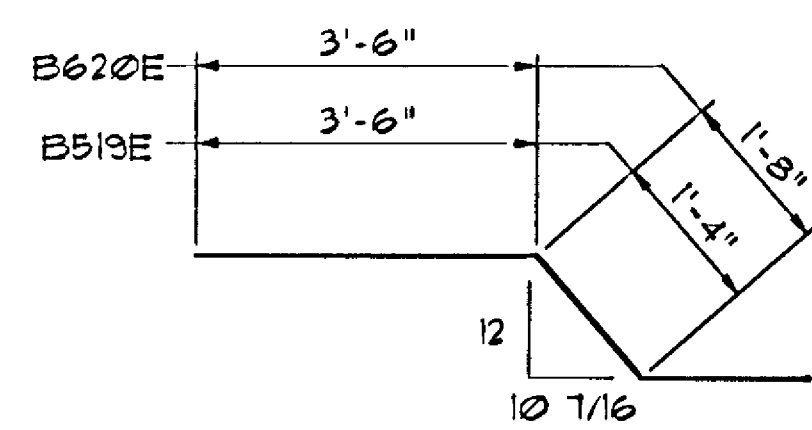
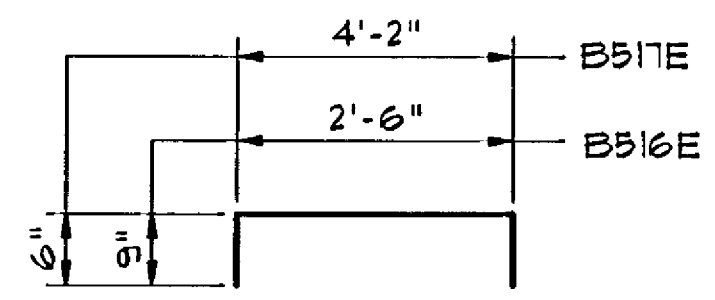
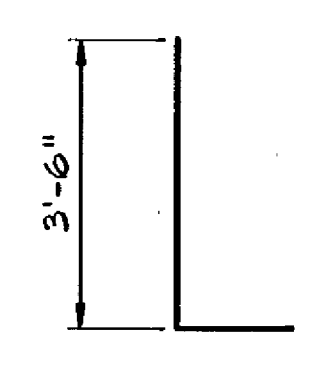
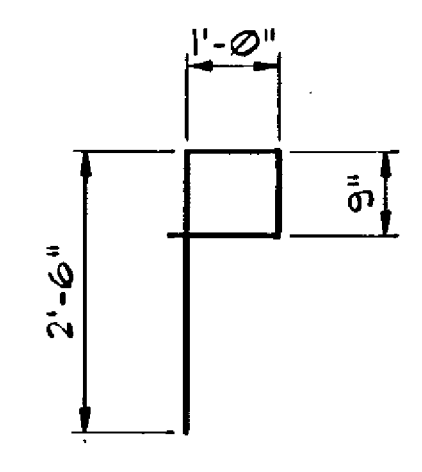
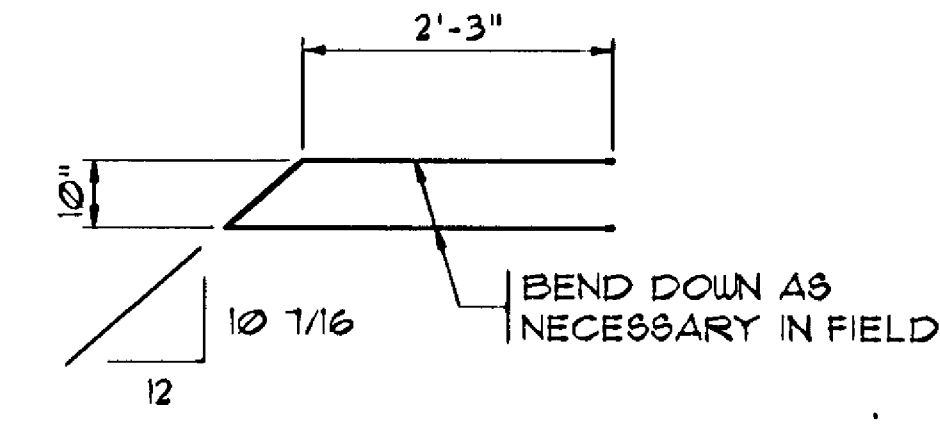
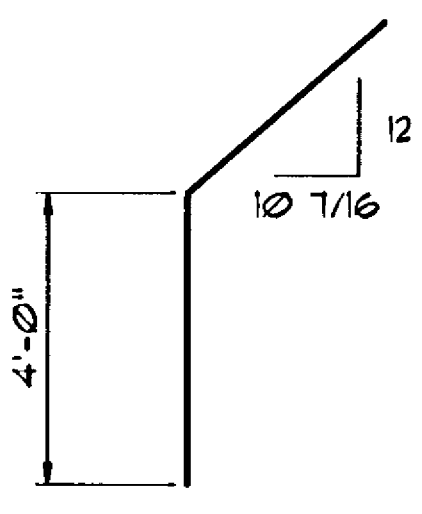
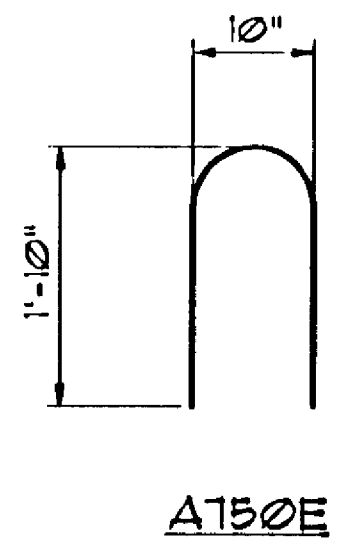
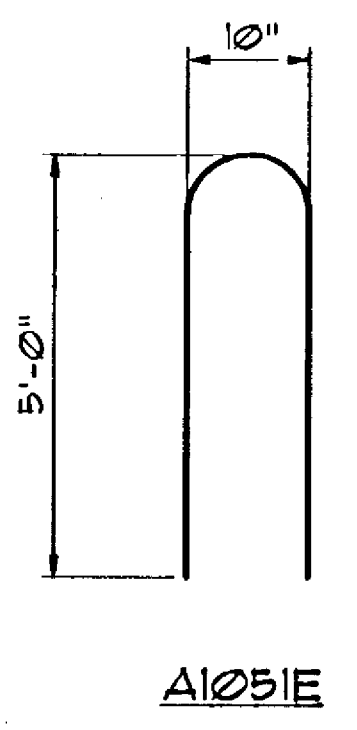
SECTION B-B

BILL OF REINFORCEMENT - EAST ABUTMENT

MARK	NO.	LENGTH	SHAPE	LOCATION
B501	264	6'-6"	STR	FOOTING - TRANSVERSE
B502	2	5'-3"	STR	FOOTING - TRANSVERSE
B503	2	7'-8"	BENT	FOOTING - TRANSVERSE
B504	42	45'-10"	STR	FOOTING - LONGITUDINAL
B505E	141	3'-6"	STR	FOOTING - DOWELS
B506E	135	4'-4"	BENT	FOOTING - DOWELS
B507E	23	33'-2"	STR	STEM - LONGITUDINAL
B508E	23	44'-7"	STR	STEM - LONGITUDINAL
B509E	23	42'-1"	STR	STEM - LONGITUDINAL
B510E	46	(1)	STR	STEM - VERTICAL
B511E	41	(2)	STR	STEM - 4 PAR - VERTICAL
B512E	88	5'-5"	STR	STEM - VERTICAL
B513E	85	9'-0"	STR	STEM - 4 PAR - VERTICAL
B514E	128	5'-0"	STR	PAR WALL - VERTICAL
B515E	128	5'-3"	BENT	END SLAB - TIES
B516E	54	4'-0"	BENT	BRIDGE SEAT - TIES
B517E	128	5'-2"	BENT	STEM - TIES
B518E	36	2'-8"	STR	BRIDGE SEAT - TIES
B519E	10	7'-1"	BENT	STEM & PAR WALL - TIES
B620E	10	7'-5"	BENT	STEM & PAR WALL - TIES
B521E	10	4'-3"	BENT	STEM & PAR WALL - TIES
B522E	1	5'-6"	BENT	PARAPET WALL - TIE
B523E	12	(3)	STR	SOUTH W.W. - VERTICAL
B524E	2	10'-1"	STR	SOUTH W.W. - VERTICAL
B525E	6	10'-0"	STR	SOUTH W.W. - HORIZONTAL
B526E	6	13'-10"	BENT	SOUTH W.W. - HORIZONTAL
B527E	2	10'-11"	BENT	SOUTH W.W. - HORIZONTAL
B528E	2	10'-9"	BENT	SOUTH W.W. - HORIZONTAL
B529E	1	4'-10"	BENT	SOUTH W.W. - TIE
B530E	2	6'-5"	STR	SOUTH W.W. - HORIZONTAL
B531E	6	5'-8"	STR	SOUTH W.W. - HORIZONTAL
B632E	2	9'-3"	STR	NORTH W.W. - VERTICAL
B533E	8	(4)	STR	NORTH W.W. - VERTICAL
B634E	8	(4)	STR	NORTH W.W. - VERTICAL
B535E	2	8'-7"	STR	NORTH W.W. - VERTICAL
B636E	2	8'-7"	STR	NORTH W.W. - VERTICAL
B537E	1	10'-9"	STR	NORTH W.W. - HORIZONTAL
B638E	1	10'-9"	STR	NORTH W.W. - HORIZONTAL
B539E	3	7'-4"	STR	NORTH W.W. - HORIZONTAL
B640E	3	7'-4"	STR	NORTH W.W. - HORIZONTAL
B541E	7	11'-0"	STR	NORTH W.W. - HORIZONTAL
B642E	7	10'-6"	STR	NORTH W.W. - HORIZONTAL
B543E	3	(5)	STR	NORTH W.W. - HORIZONTAL
B644E	3	(6)	STR	NORTH W.W. - HORIZONTAL
B545E	2	9'-2"	STR	NORTH W.W. - VERTICAL
B546E	1	9'-0"	BENT	SOUTH W.W. - HORIZONTAL
B547E	1	9'-0"	BENT	SOUTH W.W. - HORIZONTAL
B548E	1	7'-0"	BENT	SOUTH W.W. - HORIZONTAL
B549E	1	7'-0"	BENT	SOUTH W.W. - HORIZONTAL
B750E	2	4'-1"	BENT	ENDSLAB @ ENDPOST
B1051E	4	10'-5"	BENT	ENDPOST



SECTION A-A



- ① 1 SET OF 46 BARS (4'-6" TO 5'-4")
- ② 1 SET OF 41 BARS (8'-2" TO 9'-0")
- ③ 2 SETS OF 6 BARS (9'-6" TO 12'-0")
- ④ 1 SET OF 8 BARS (8'-3" TO 10'-9")
- ⑤ 1 SET OF 3 BARS (4'-10" TO 10'-4")
- ⑥ 1 SET OF 3 BARS (4'-2" TO 9'-3")

B526E, B527E & B528E

B546E - B549E

S.A.P. 02-614-18

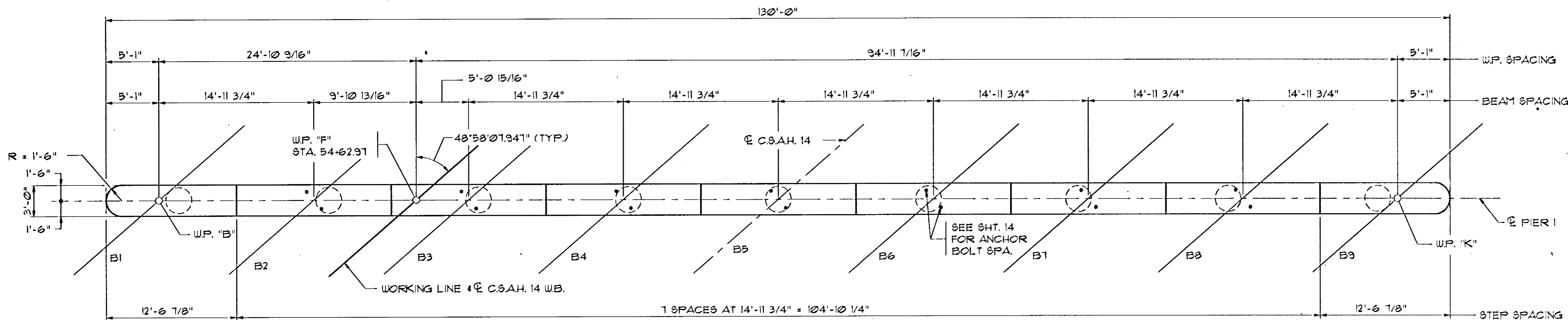


EAST ABUTMENT REINFORCEMENT

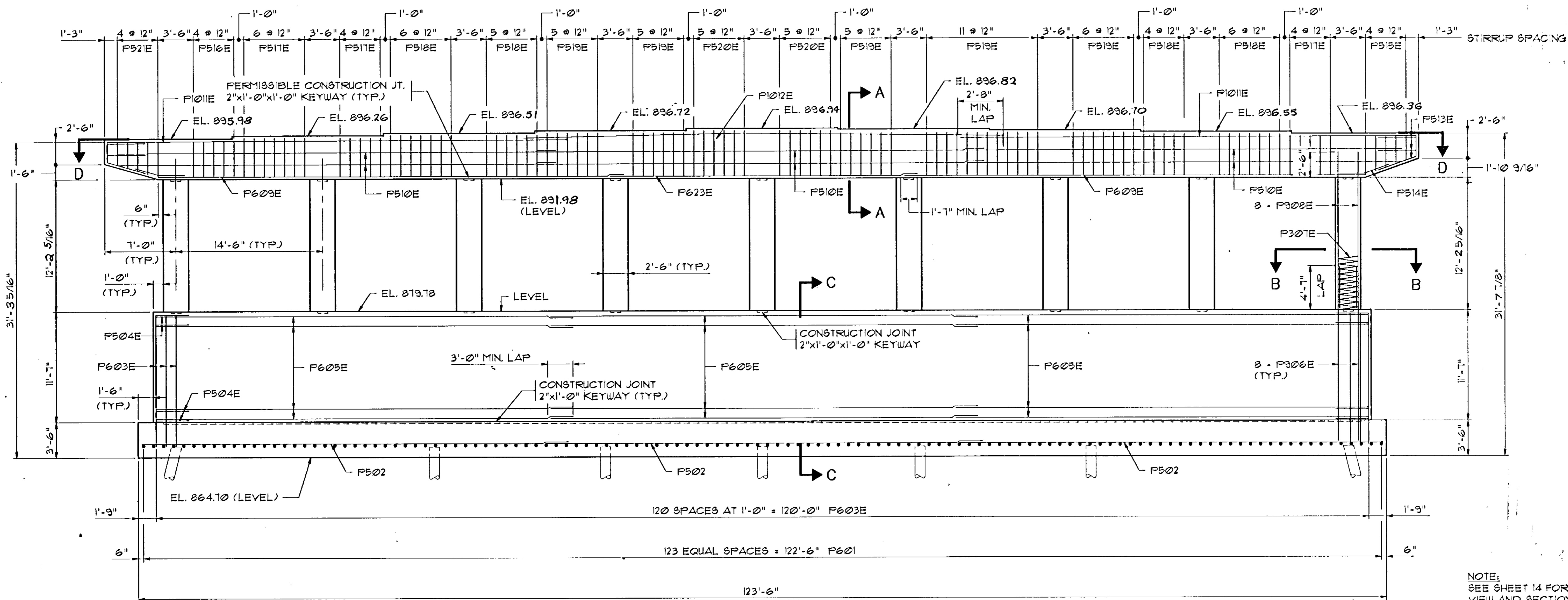
DES: MKM DRW: JAS APPROVED: 4-1-91
 CHK: SA CHK: DJV

BRIDGE NO. 02560

SHEET NO. 12 OF 31 SHEETS



PLAN



ELEVATION

NOTE:
SEE SHEET 14 FOR END
VIEW AND SECTIONS
A-A, B-B, C-C & D-D.

S.A.P. 02-614-13



PIER 1 DETAILS

DES: MKM	DRW: JAS	APPROVED:	BRIDGE NO. 02560
CHK: SA	CHK: MKM	4-1-91	
SHEET NO. 13 OF 31 SHEETS			

SUMMARY OF QUANTITIES - PIER 1

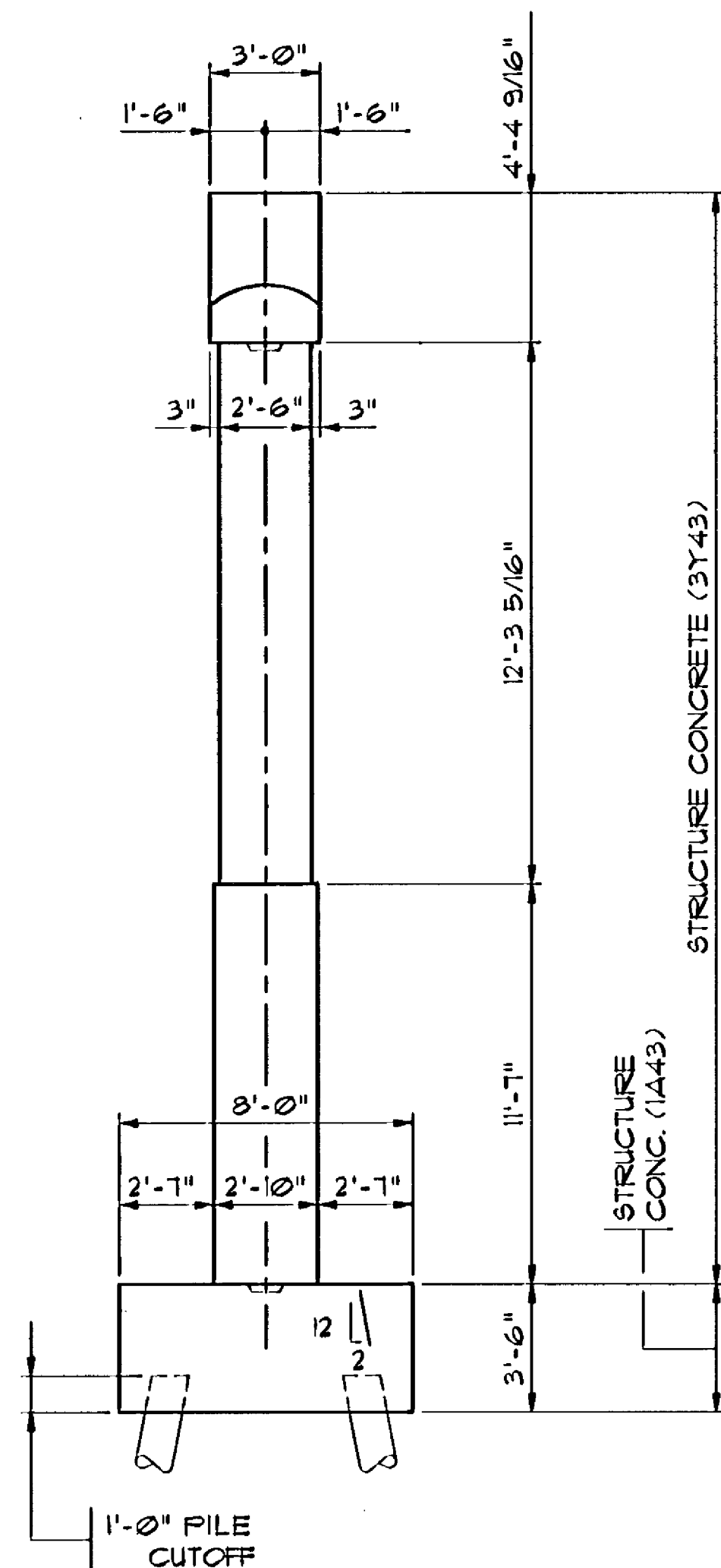
ITEM	UNIT	QUANT.
STRUCTURE CONCRETE (1A43)	CU. YD.	129
STRUCTURE CONCRETE (3Y43)	CU. YD.	232
REINFORCEMENT BARS	POUND	2449
REINFORCEMENT BARS (EPOXY COATED)	POUND	25260
STRUCTURE EXCAVATION	LUMP SUM	1
C.I.P. CONCRETE PILING DRIVEN	LIN. FT.	1560
C.I.P. CONCRETE PILING DELIVERED	LIN. FT.	1560
C.I.P. CONCRETE PILING TEST PILES 50 FT. LONG	EACH	3
SPIRAL REINFORCEMENT (EPOXY COATED)	POUND	650

BILL OF REINFORCEMENT

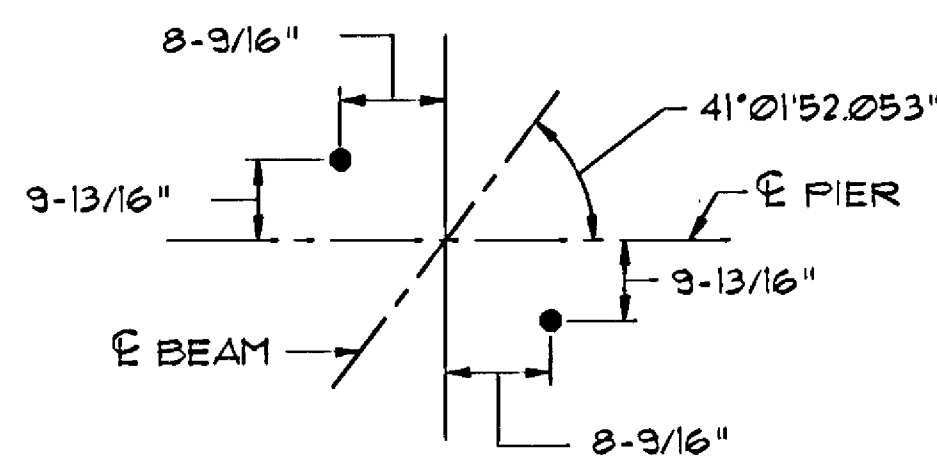
BAR	NO.	LENGTH	SHAPE	LOCATION
P601	124	7'-6"	STR	FOOTING - TRANSVERSE
P602	24	42'-0"	STR	FOOTING - LONGITUDINAL
P603E	240	13'-10"	STR	STRUT - VERTICAL
P504E	24	7'-11"	BENT	STRUT - TIE
P605E	12	40'-8"	STR	STRUT - HORIZONTAL
P306E	12	20'-2"	BENT	COLUMN - DOWELS
P307E	3	(1)	SPIRAL	COLUMN - SPIRAL
P308E	12	14'-8"	STR	COLUMN - VERTICAL
P609E	10	46'-0"	STR	CAP - LONGITUDINAL
P510E	12	43'-11"	STR	CAP - LONGITUDINAL
P1011E	12	46'-3"	BENT	CAP - LONGITUDINAL
P1012E	6	46'-2"	STR	CAP - LONGITUDINAL
P513E	6	9'-2"	BENT	CAP - TIE
P514E	10	6'-0"	BENT	CAP - END
P515E	5	(2)	BENT	CAP - STIRRUP
P516E	5	10'-11"	BENT	CAP - STIRRUP
P517E	11	11'-1"	BENT	CAP - STIRRUP
P518E	25	12'-1"	BENT	CAP - STIRRUP
P519E	37	12'-5"	BENT	CAP - STIRRUP
P520E	12	12'-9"	BENT	CAP - STIRRUP
P521E	5	(3)	BENT	CAP - STIRRUP
P522E	136	4'-8"	BENT	CAP - TIE
P623E	5	30'-1"	STR	CAP - LONGITUDINAL

(1) COMPUTED QUANTITY = 234 CU. YDS. FOR INFORMATIONAL PURPOSES ONLY. SEE SPECIAL PROVISIONS.

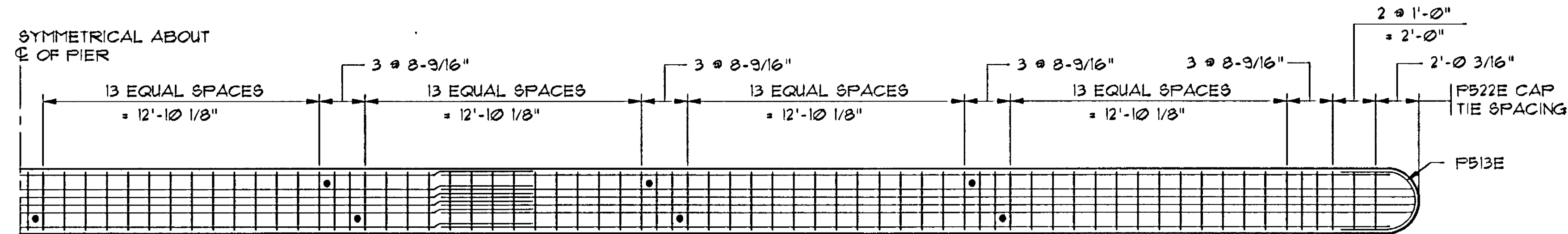
- (1) SEE SPIRAL DATA BELOW.
- (2) 1 SET OF 5 BARS (8'-3" TO 11'-7")
- (3) 1 SET OF 5 BARS (8'-3" TO 10'-11")



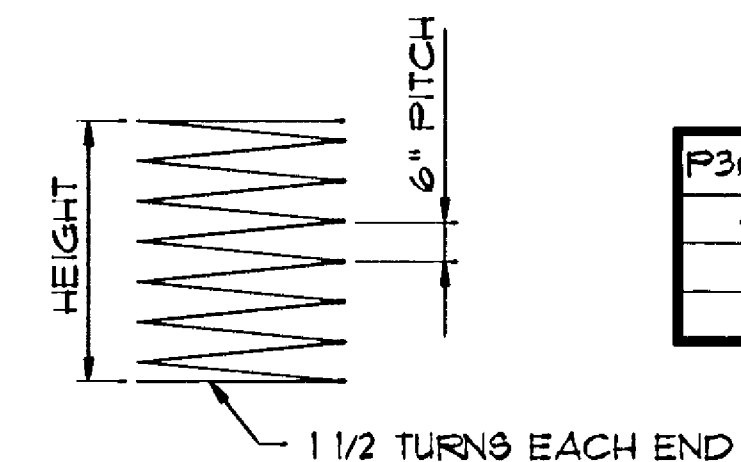
END VIEW (SOUTH END)



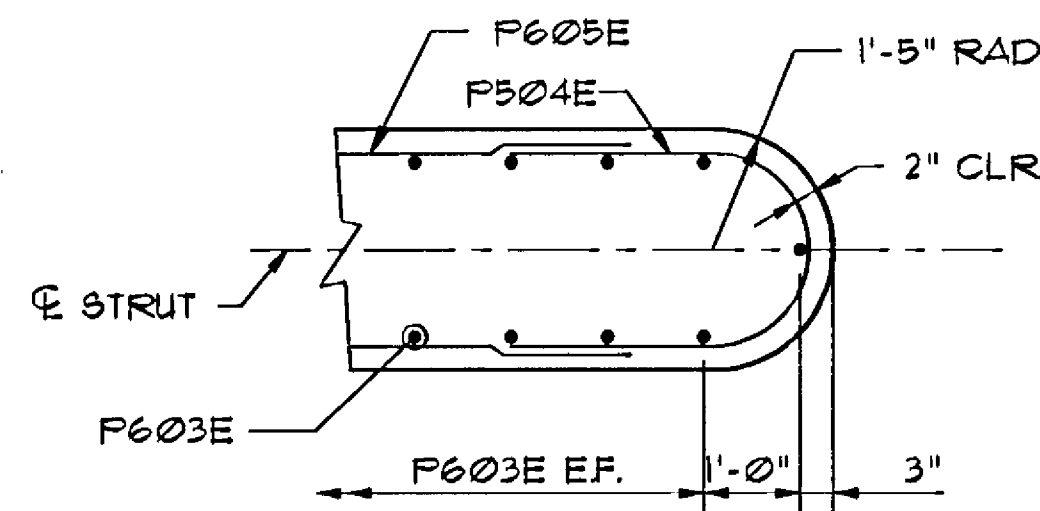
ANCHOR BOLT SPACING



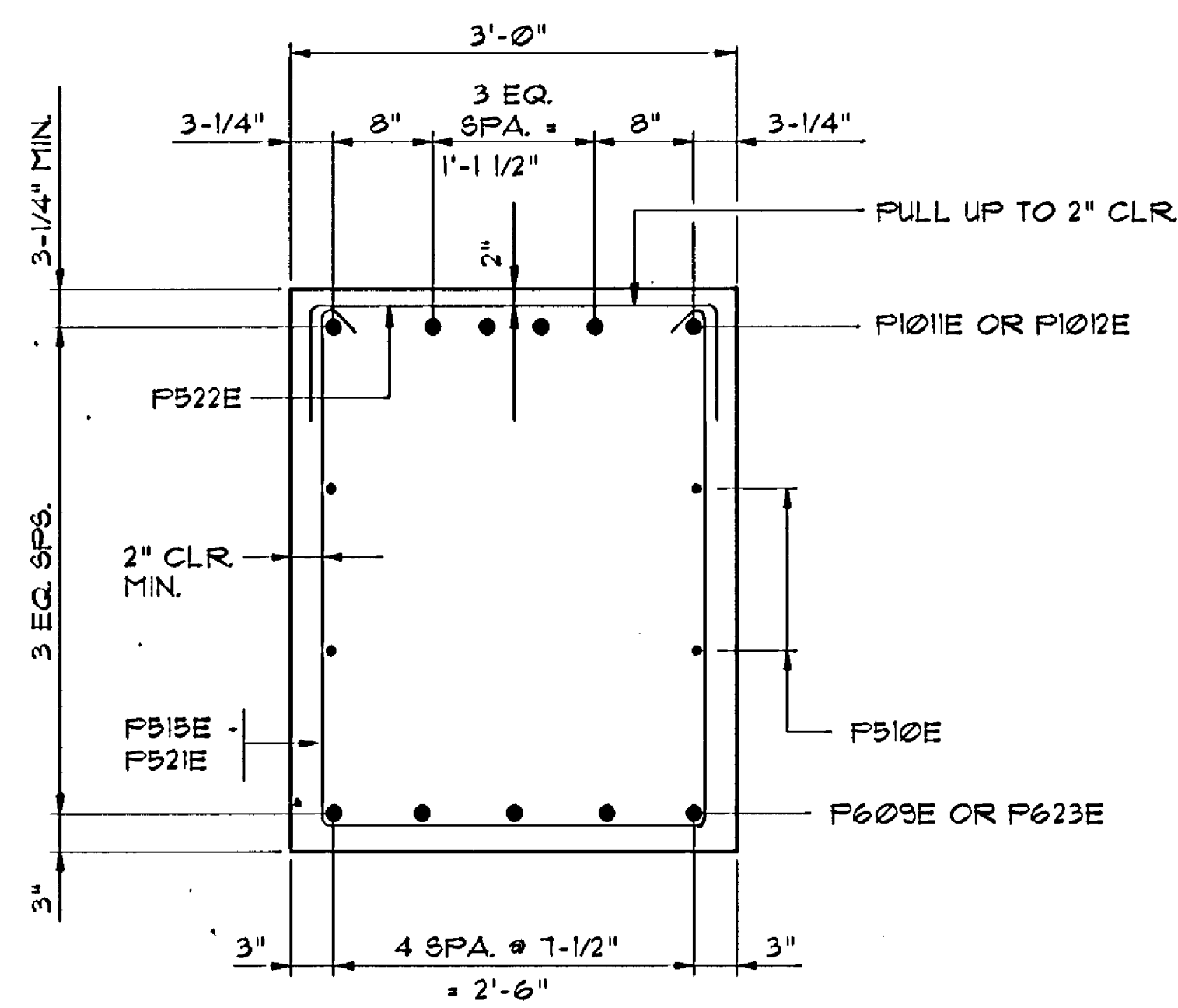
SECTION D-D



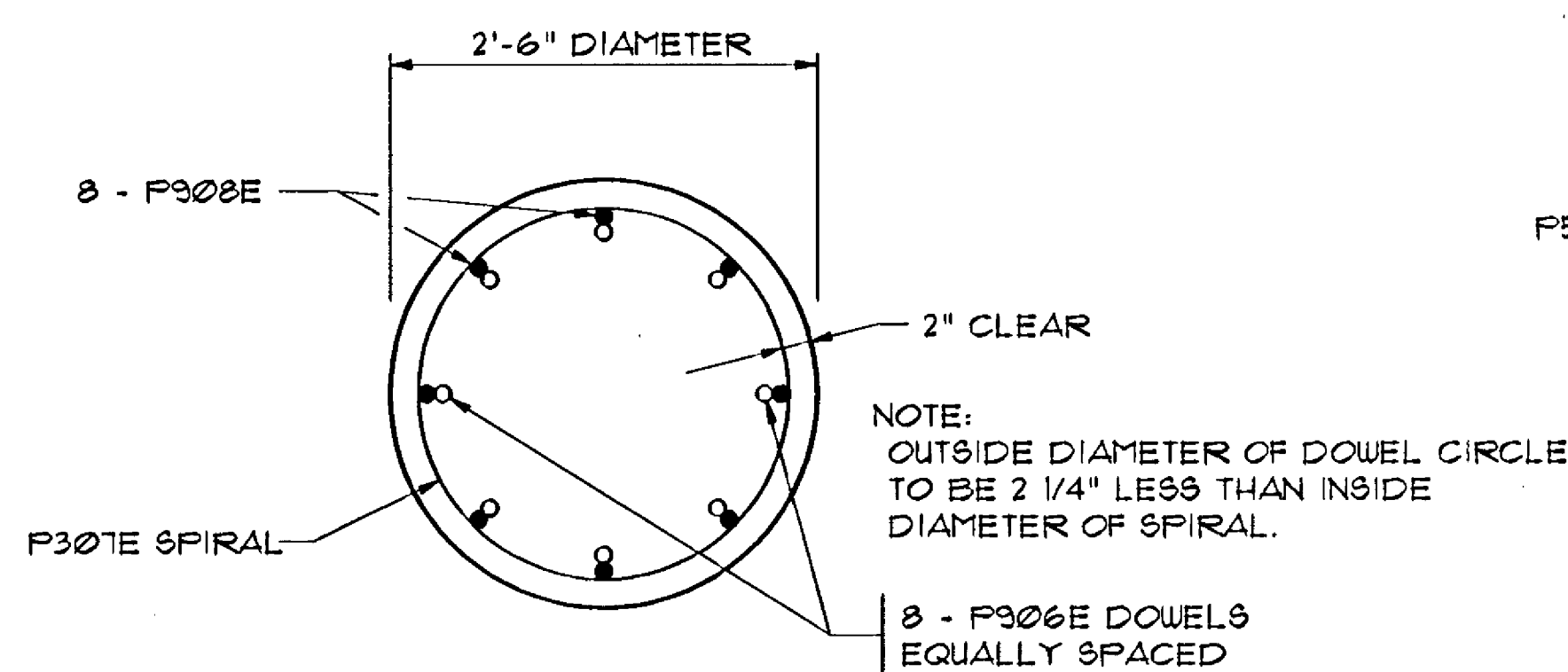
P307E SPIRAL BAR DATA	
OUTSIDE DIA.	2'-2"
HEIGHT	12'-6"
EST. WEIGHT	71.7



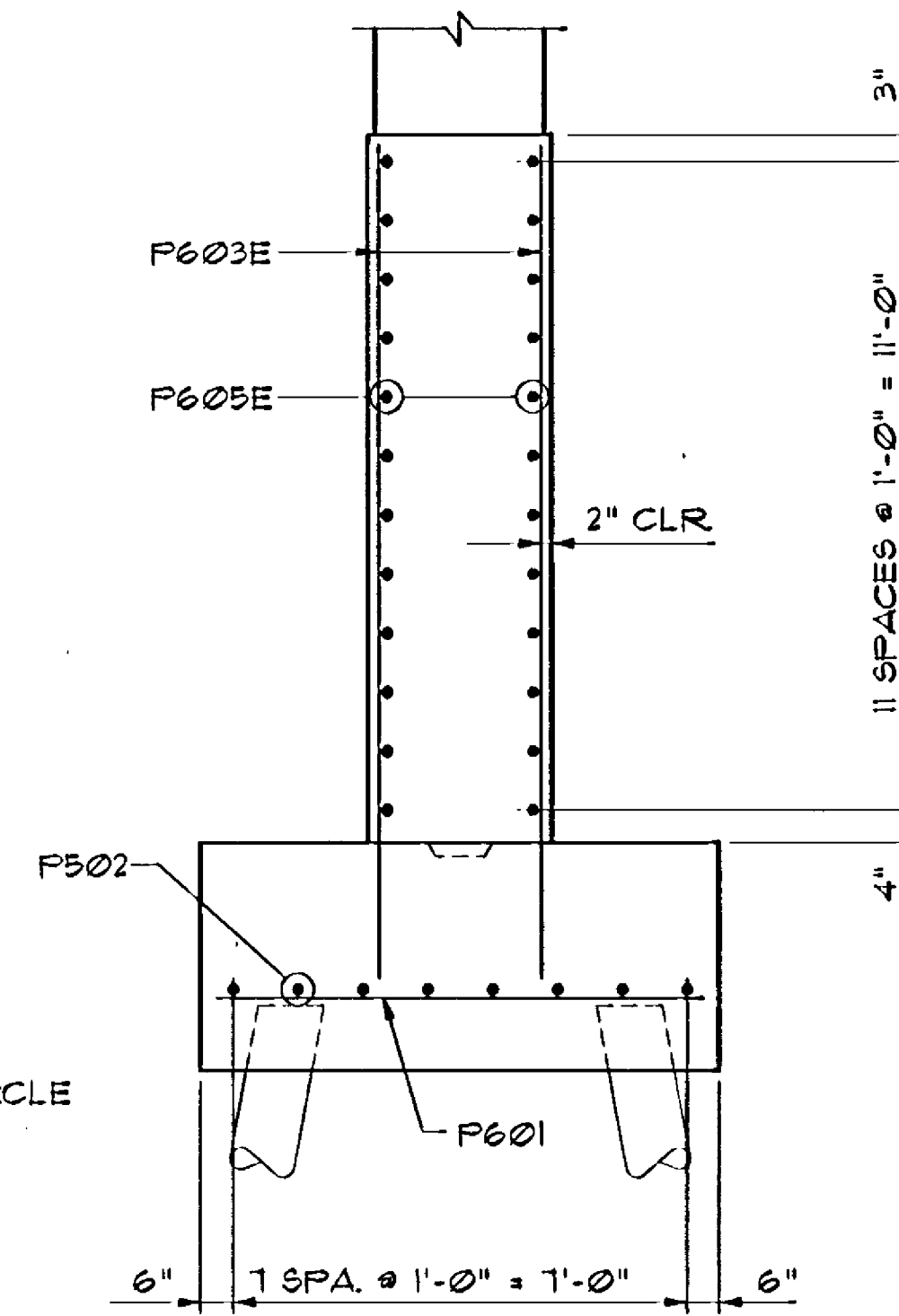
STRUT END REINF.



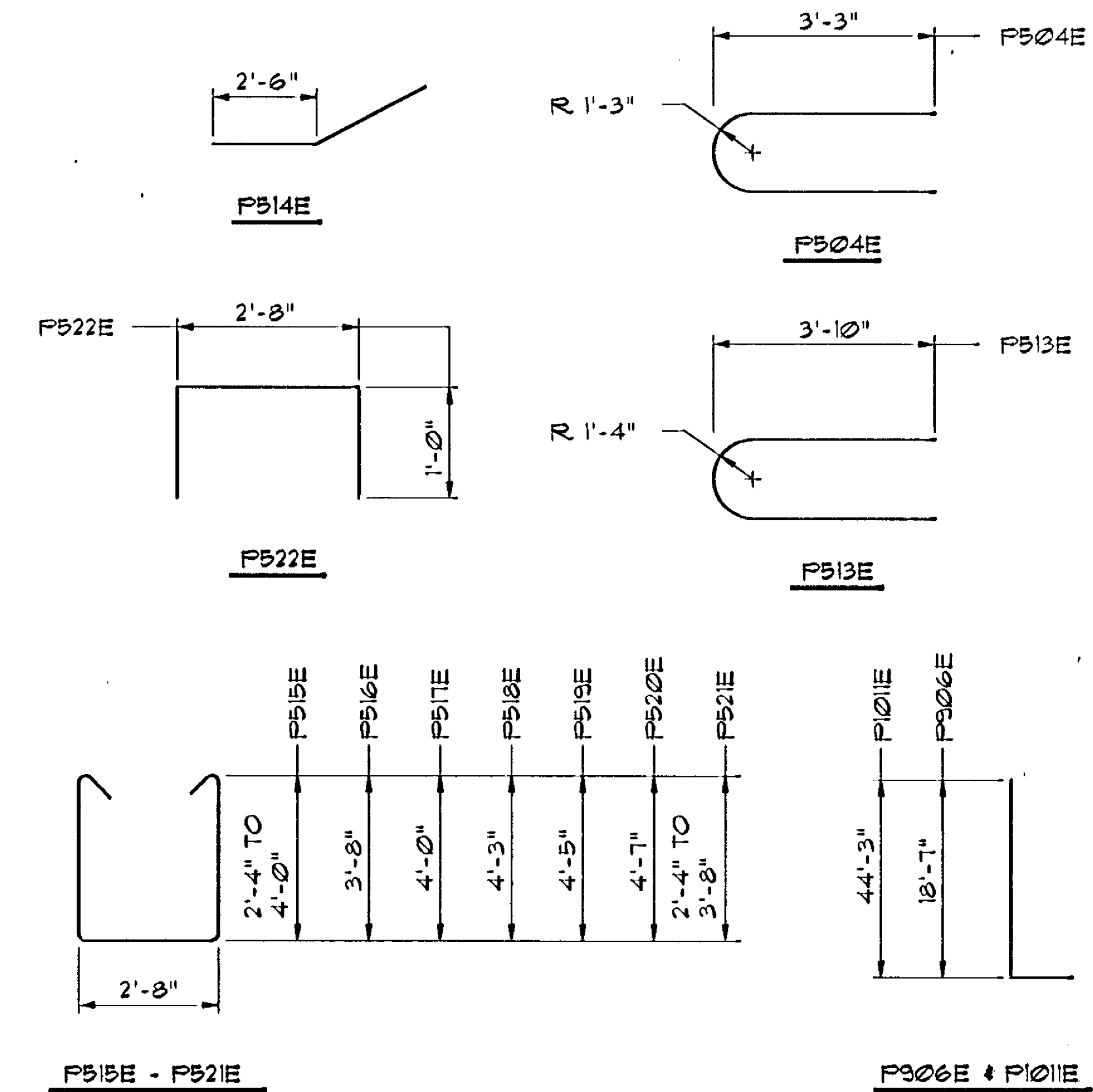
SECTION A-A



SECTION B-B



SECTION C-C



S.A.P. 02-614-18



PIER 1 DETAILS

DES: MKM	DRW: JAG	APPROVED:
CHK: SA	CHK: MKM	4-1-91
SHEET NO. 14 OF 31 SHEETS		

BRIDGE NO. 02560

SUMMARY OF QUANTITIES - PIER 2

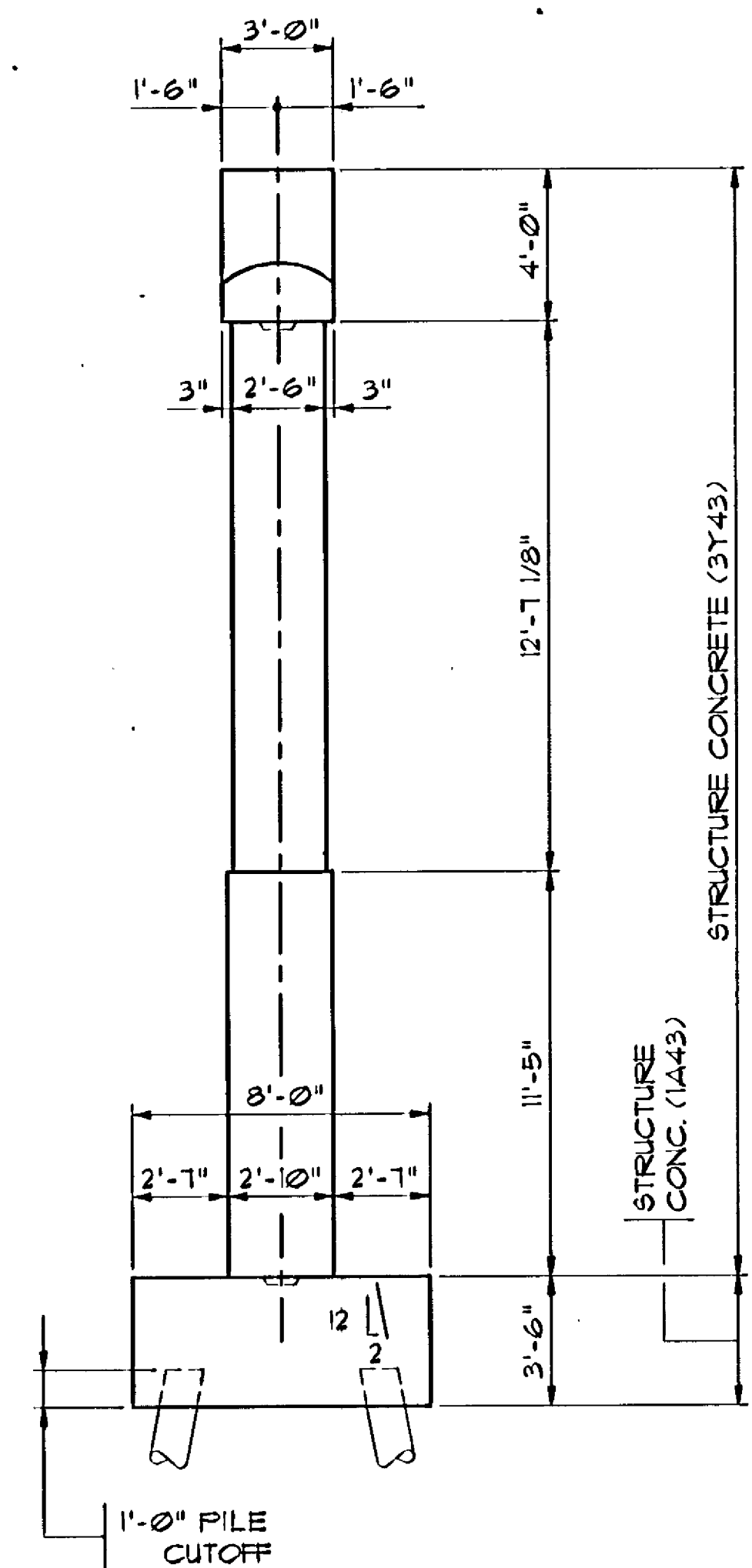
ITEM	UNIT	QUANT.
STRUCTURE CONCRETE (1A43)	CU. YD.	129
STRUCTURE CONCRETE (3Y43)	CU. YD.	230
REINFORCEMENT BARS	FOUND	2449
REINFORCEMENT BARS (EPOXY COATED)	FOUND	25260
STRUCTURE EXCAVATION	LUMP SUM	1
C.I.P. CONCRETE PILING DRIVEN	LIN. FT.	1560
C.I.P. CONCRETE PILING DELIVERED	LIN. FT.	1560
C.I.P. CONCRETE PILING TEST PILES 50 FT. LONG	EACH	3
SPIRAL REINFORCEMENT (EPOXY COATED)	FOUND	657

① COMPUTED QUANTITY = 234 CU. YDS. FOR INFORMATIONAL PURPOSES ONLY. SEE SPECIAL PROVISIONS.

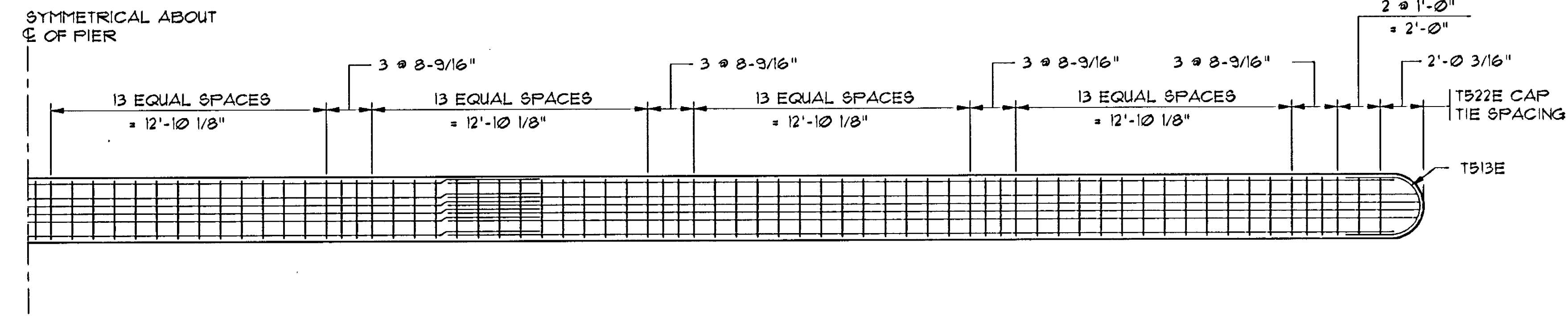
BILL OF REINFORCEMENT

BAR	NO.	LENGTH	SHAPE	LOCATION
T601	124	7'-6"	STR	FOOTING - TRANSVERSE
T502	24	42'-0"	STR	FOOTING - LONGITUDINAL
T603E	240	13'-10"	STR	STRUT - VERTICAL
T504E	24	7'-11"	BENT	STRUT - TIE
T605E	12	40'-8"	STR	STRUT - HORIZONTAL
T306E	72	20'-2"	BENT	COLUMN - DOWELS
T307E	9	①	SPIRAL	COLUMN - SPIRAL
T308E	72	14'-10"	STR	COLUMN - VERTICAL
T609E	10	46'-0"	STR	CAP - LONGITUDINAL
T510E	12	43'-11"	STR	CAP - LONGITUDINAL
T1011E	12	46'-3"	BENT	CAP - LONGITUDINAL
T1012E	6	46'-2"	STR	CAP - LONGITUDINAL
T513E	6	9'-2"	BENT	CAP - TIE
T514E	10	6'-0"	BENT	CAP - END
T515E	5	②	BENT	CAP - STIRRUP
T516E	5	10'-10"	BENT	CAP - STIRRUP
T517E	17	11'-2"	BENT	CAP - STIRRUP
T518E	37	11'-8"	BENT	CAP - STIRRUP
T519E	12	12'-6"	BENT	CAP - STIRRUP
T520E	25	12'-0"	BENT	CAP - STIRRUP
T521E	5	③	BENT	CAP - STIRRUP
T522E	136	4'-8"	BENT	CAP - TIE
T623E	5	30'-7"	STR	CAP - LONGITUDINAL

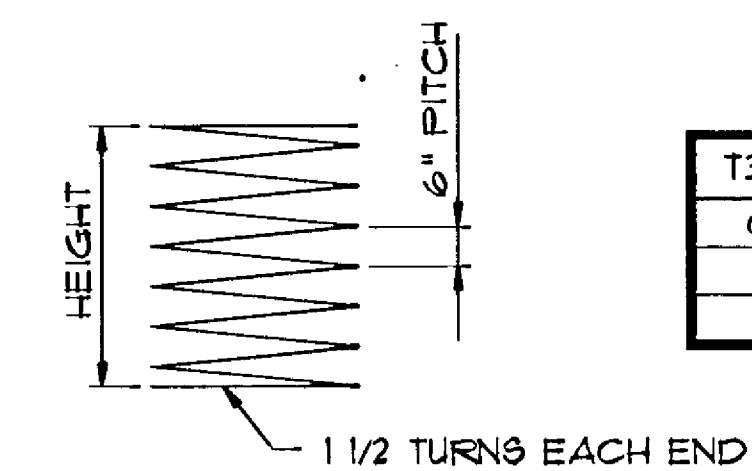
- ① SEE SPIRAL DATA BELOW.
- ② 1 SET OF 5 BARS (8'-6" TO 10'-8")
- ③ 1 SET OF 5 BARS (8'-6" TO 11'-2")



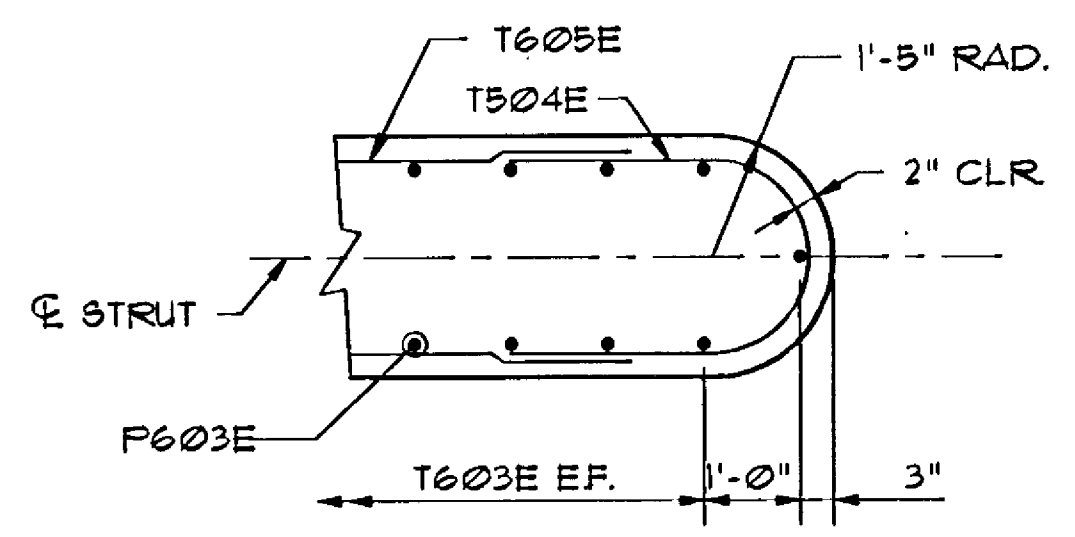
END VIEW (SOUTH END)



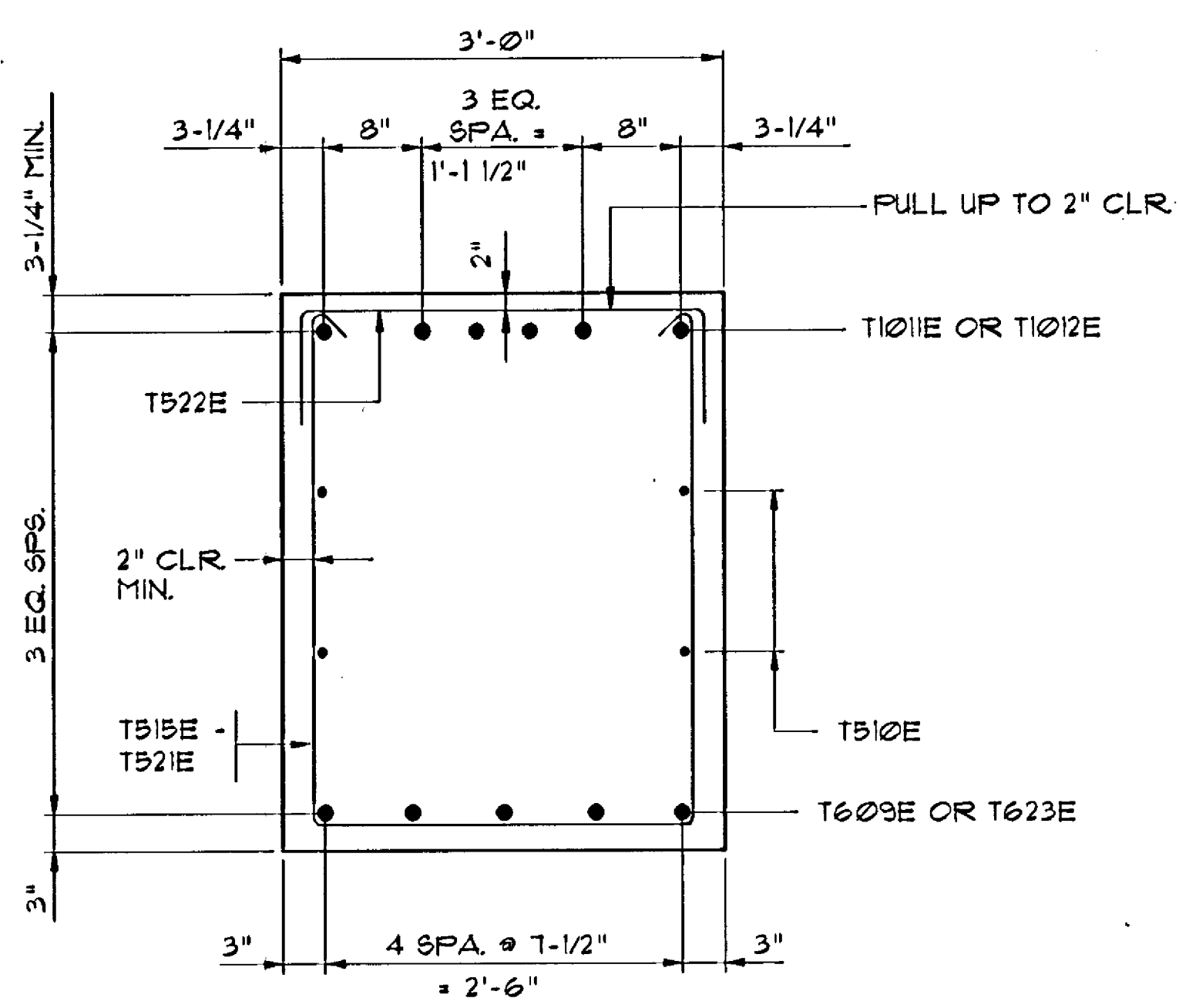
SECTION D-D



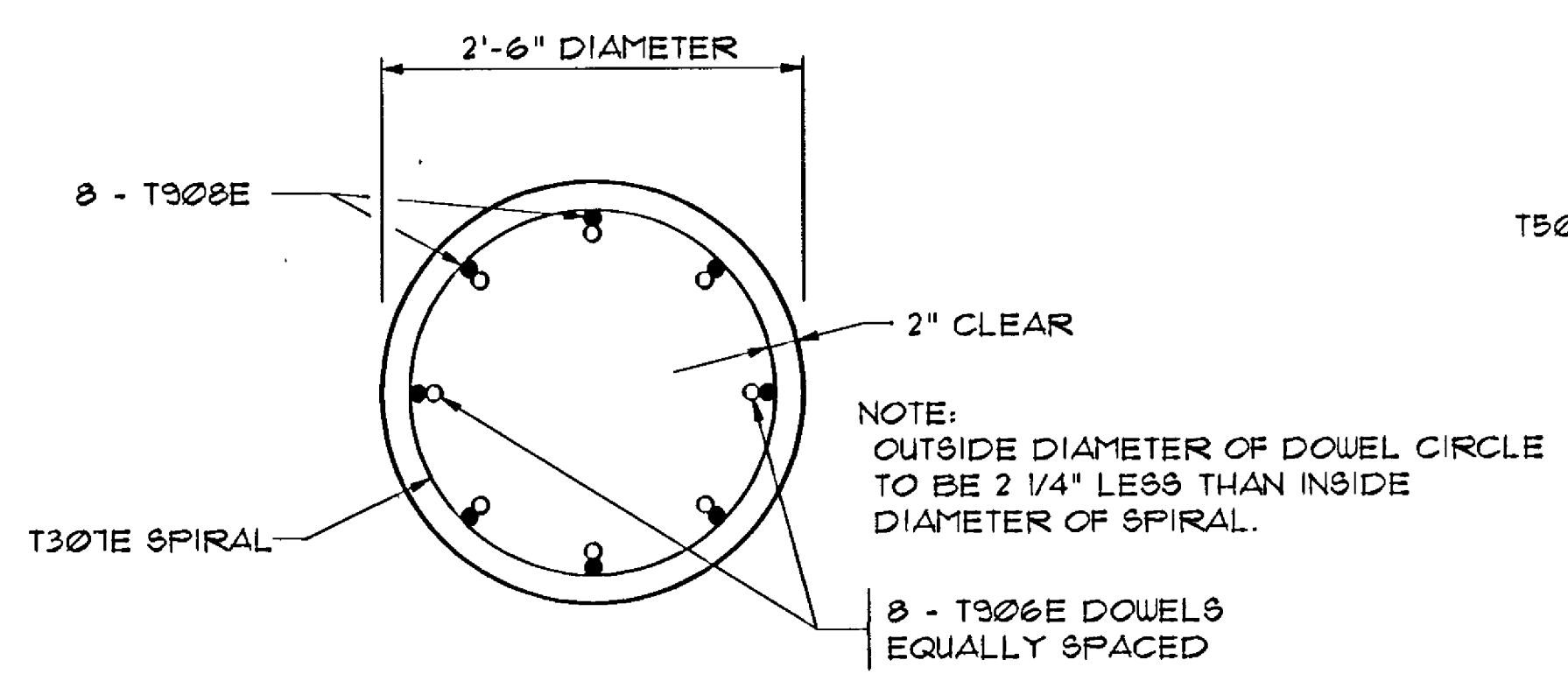
T307E SPIRAL BAR DATA	
OUTSIDE DIA.	2'-2"
HEIGHT	12'-9"
EST. WEIGHT	73.0



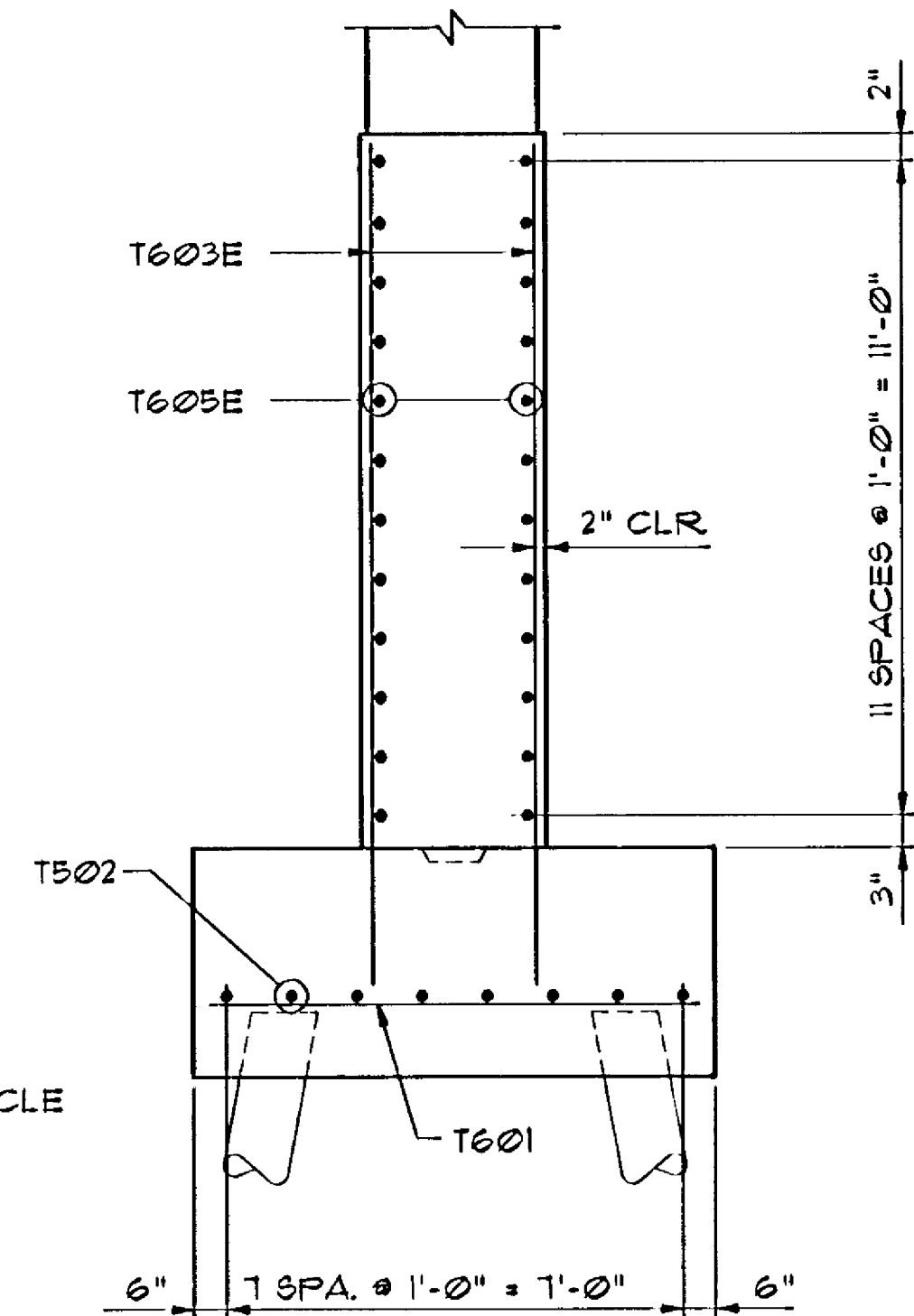
STRUT END REINF.



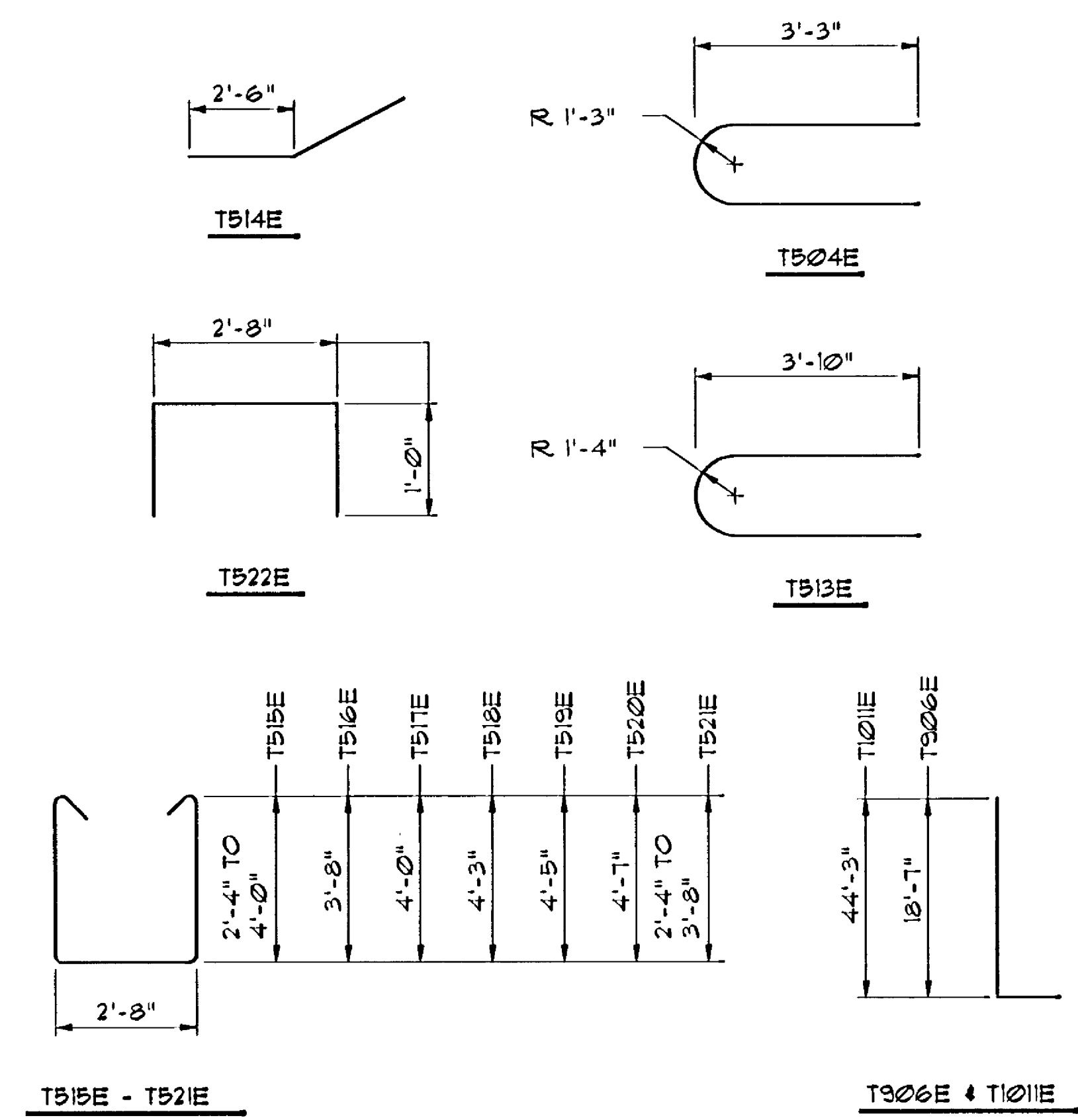
SECTION A-A



SECTION B-B



SECTION C-C



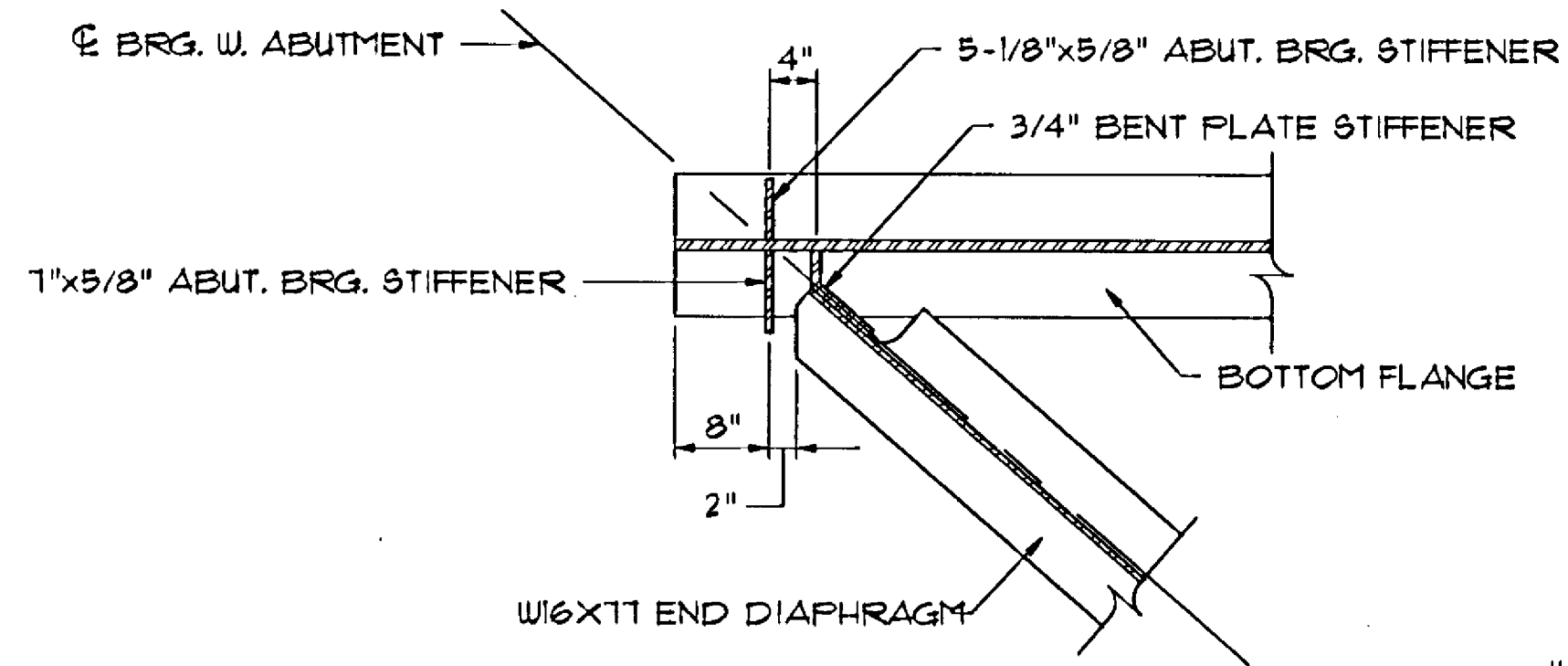
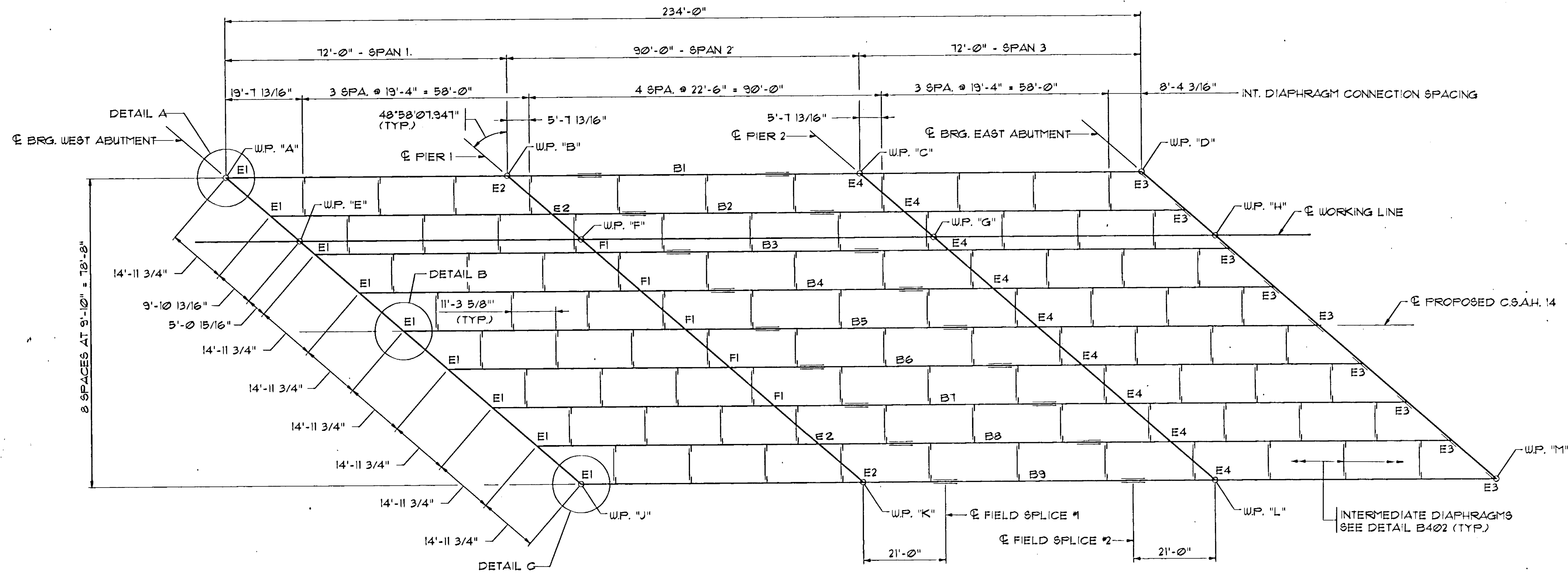
S.A.P. 02-614-13



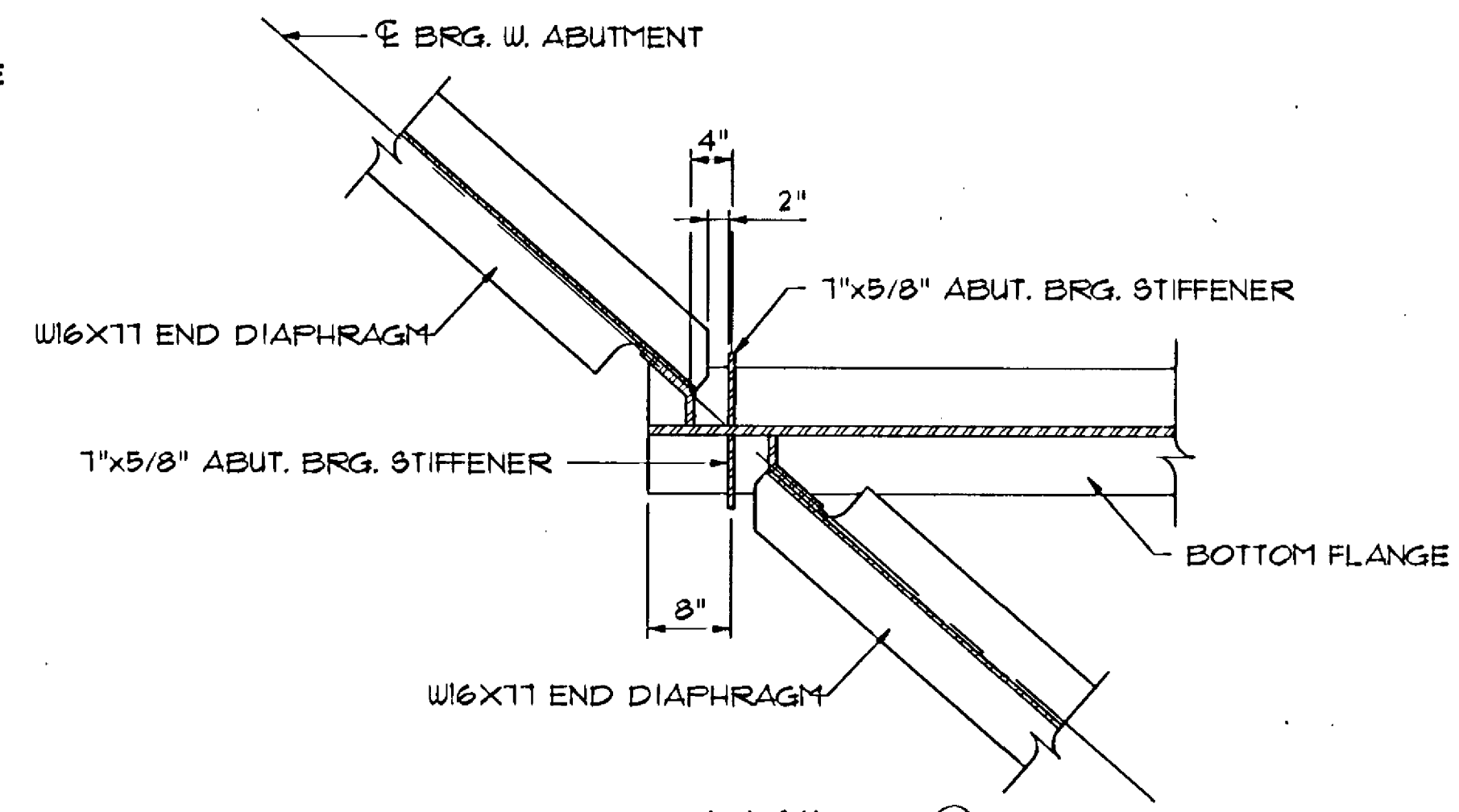
PIER 2 DETAILS

DES: MKM	DRW: JAS	APPROVED: 4-1-91	BRIDGE NO. 02560
CHK: SA	CHK: MKM		

SHEET NO. 16 OF 31 SHEETS

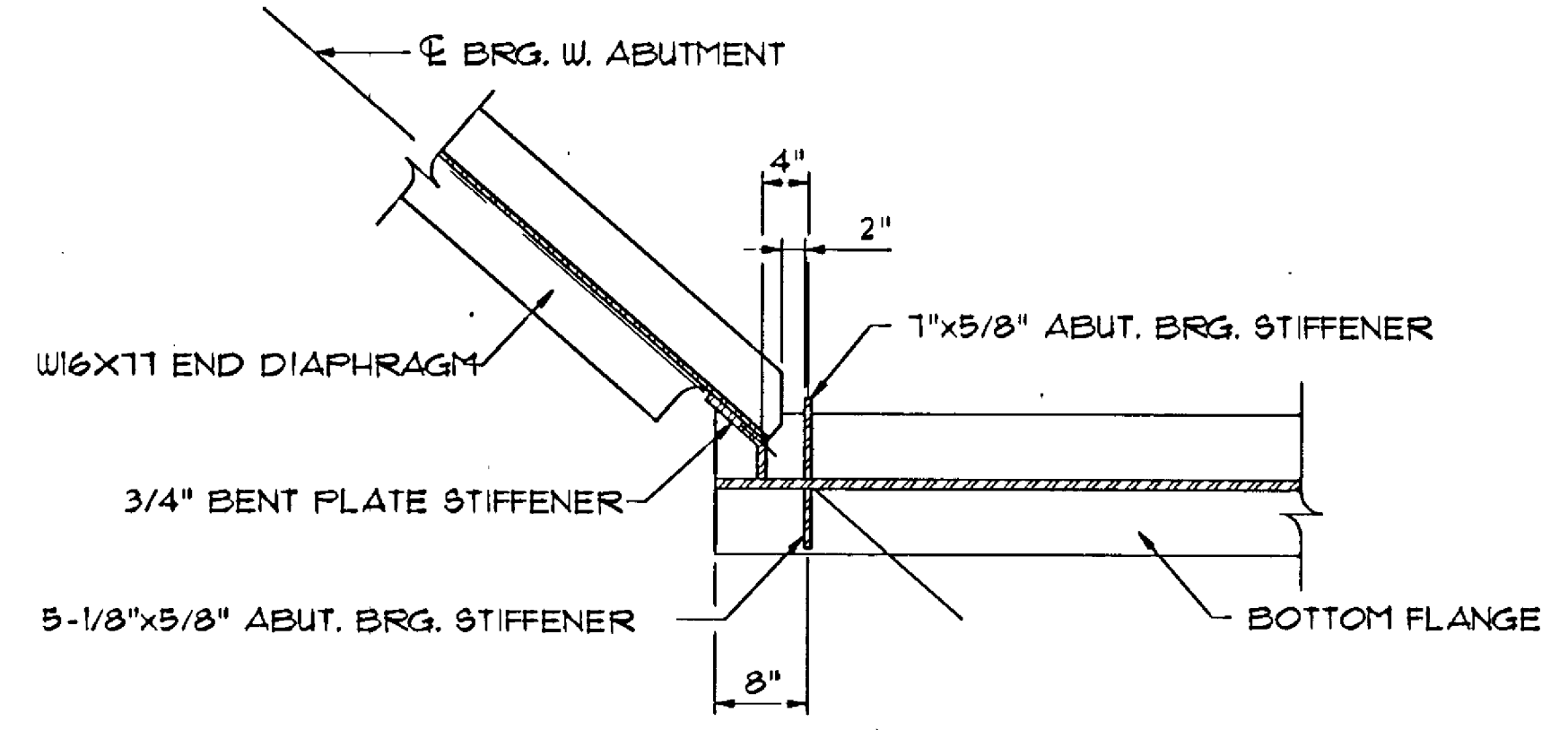


DETAIL A ①



DETAIL B ①

① EAST ABUTMENT SIMILAR



DETAIL C ①

FIELD SPLICE ELEVATIONS AT TOP OF SPLICE PLATES		
	F.S. 1	F.S. 2
BEAM 1	933.90	900.10
BEAM 2	900.16	900.32
BEAM 3	900.33	900.51
BEAM 4	900.53	900.67
BEAM 5	900.71	900.81
BEAM 6	900.65	900.64
BEAM 7	900.51	900.41
BEAM 8	900.34	900.25
BEAM 9	900.13	900.01

WELD CHART	
MAT. THICKNESS OF THICKER PART JOINED	MIN. SIZE FILLET WELD
TO 3/4" INCLUSIVE	1/4"
OVER 3/4" TO 1 1/2" INCL.	5/16"
OVER 1 1/2" TO 2 1/4" INCL.	3/8"

FRAMING NOTES

ALL INTERMEDIATE DIAPHRAGMS ARE PERPENDICULAR TO BEAMS. ELEVATIONS SHOWN AT FIELD SPLICES ARE THEORETICAL ELEVATIONS FURNISHED AS A GUIDE FOR ERECTION. DEFLECTIONS FROM WEIGHT OF BEAM INCLUDED.

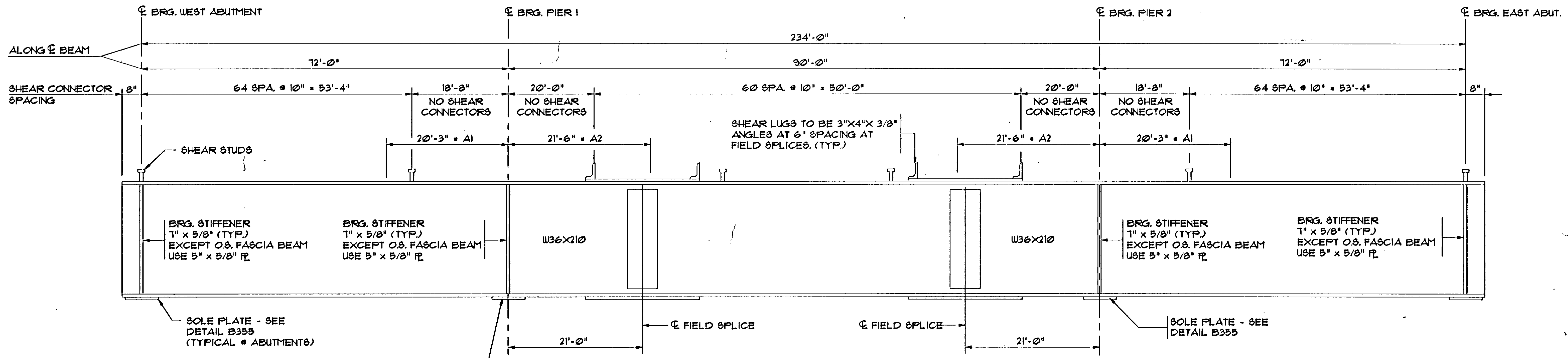
- E1 = EXPANSION BEARING ASSEMBLY, TYPE 1 (3 REQUIRED)
- E2 = EXPANSION BEARING ASSEMBLY, TYPE 2 (4 REQUIRED)
- E3 = EXPANSION BEARING ASSEMBLY, TYPE 3 (3 REQUIRED)
- E4 = EXPANSION BEARING ASSEMBLY, TYPE 4 (3 REQUIRED)
- F1 = FIXED BEARING ASSEMBLY, TYPE 1 (5 REQUIRED)

S.A.P. 02-614-18



FRAMING PLAN

DES: MKM	DRW: JAS	APPROVED:	BRIDGE NO. 02560
CHK: SA	CHK: DJV	4-1-91	
SHEET NO. 17 OF 31 SHEETS			

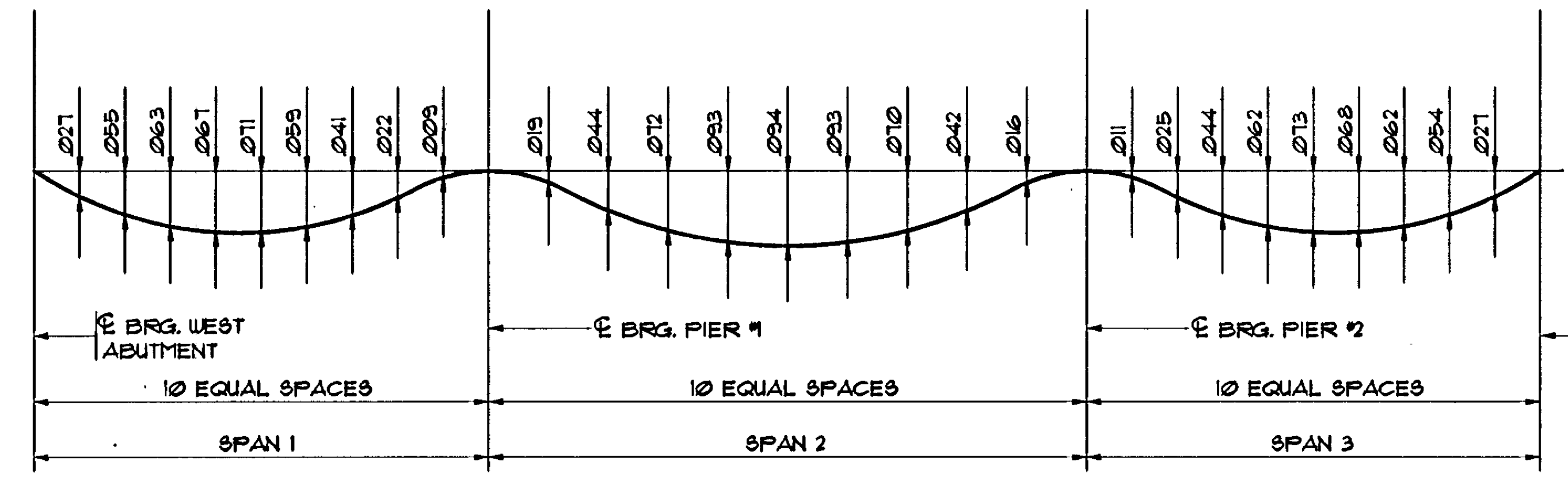


BEAM ELEVATION

NOTE:
SEE DETAIL B402 FOR DIAPHRAGM DETAILS.

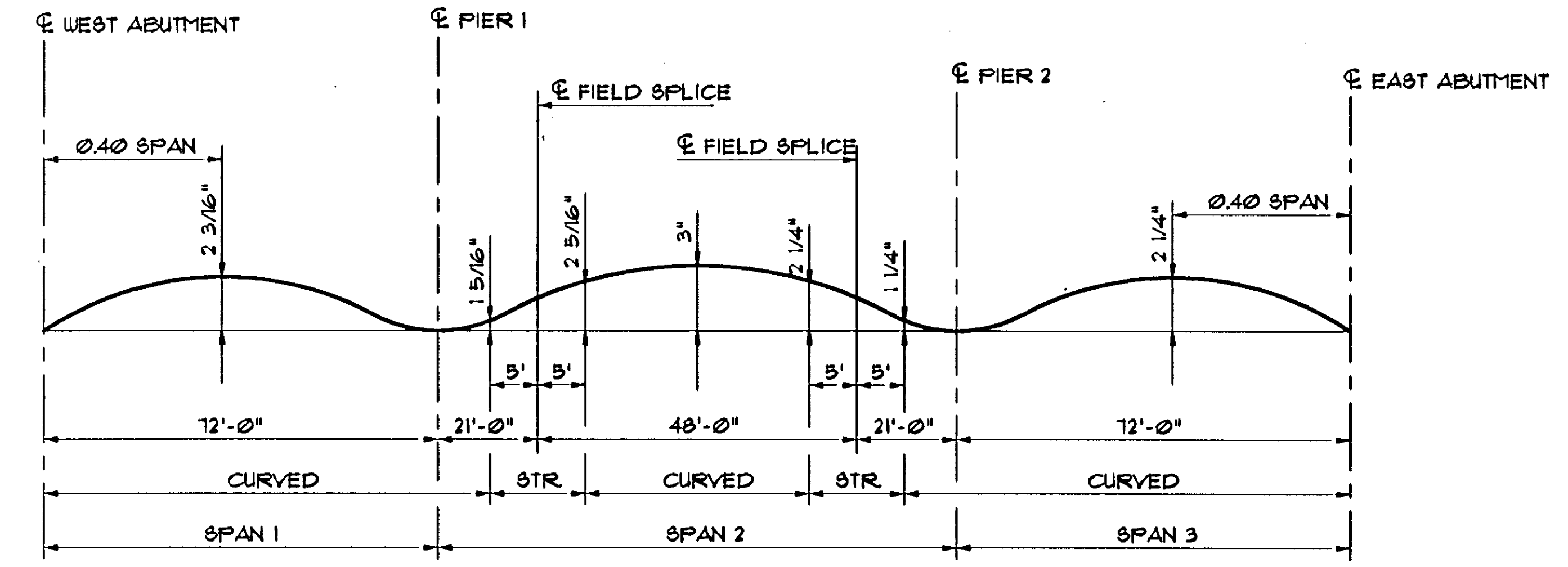
SOLE PLATE - SEE DETAILS B354 OR B355

SOLE PLATE - SEE DETAIL B355



DEFLECTION DIAGRAM
(FEET)

DEFLECTIONS SHOWN ARE FOR WEIGHT OF SLAB, RAILING, AND WEARING COURSE. (DOES NOT INCLUDE WEIGHT OF STEEL BEAMS.)



CAMBER DIAGRAM
(INCHES)

NOTE:
BASE LINE FOR CAMBER AND DEFLECTION DIAGRAMS IS A STRAIGHT LINE AT TOP OF BEAM FROM \bar{C} BEARING TO \bar{C} BEARING.

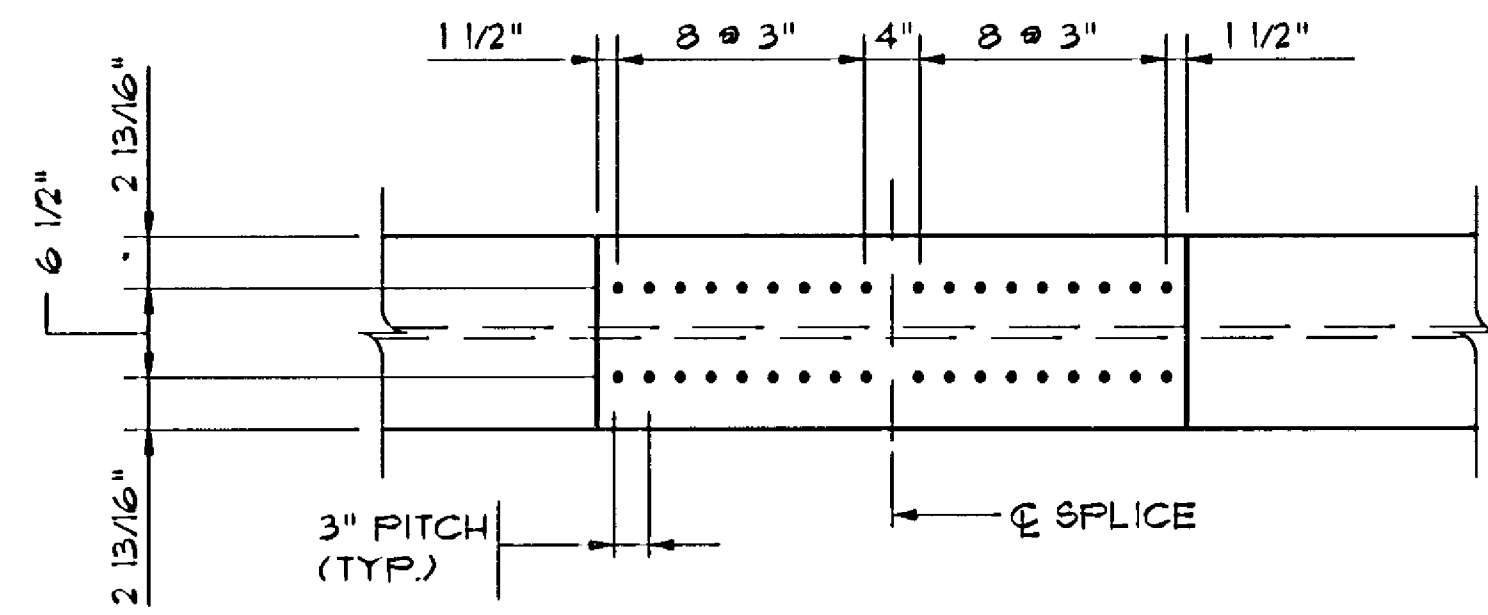
CAMBER DIAGRAM IS FOR BEAMS IN UNLOADED POSITION AND PROVIDES FOR ALL DEAD LOAD DEFLECTION, VERT. CURVE CORRECTION, AND RESIDUAL CAMBER.

S.A.P. 02-614-18

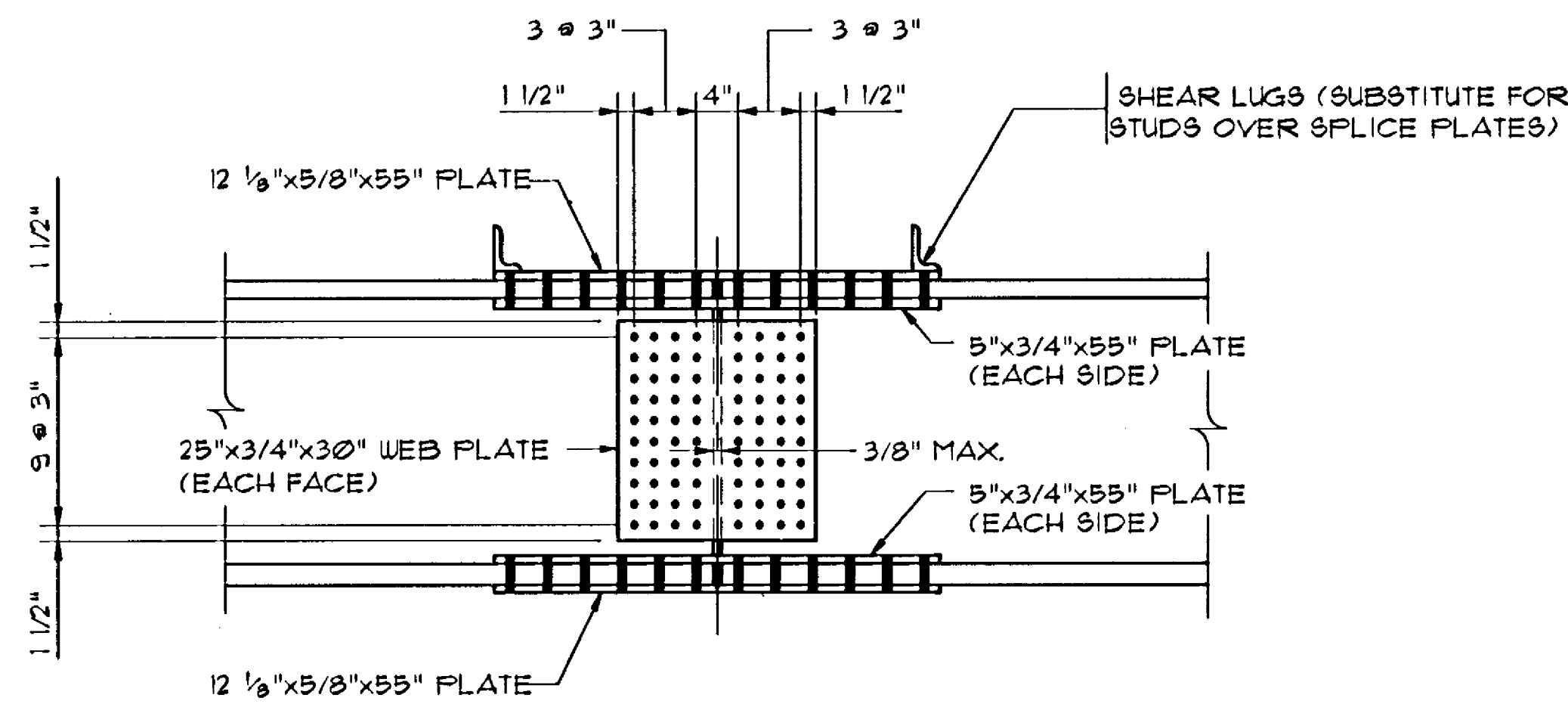


BEAM ELEVATION

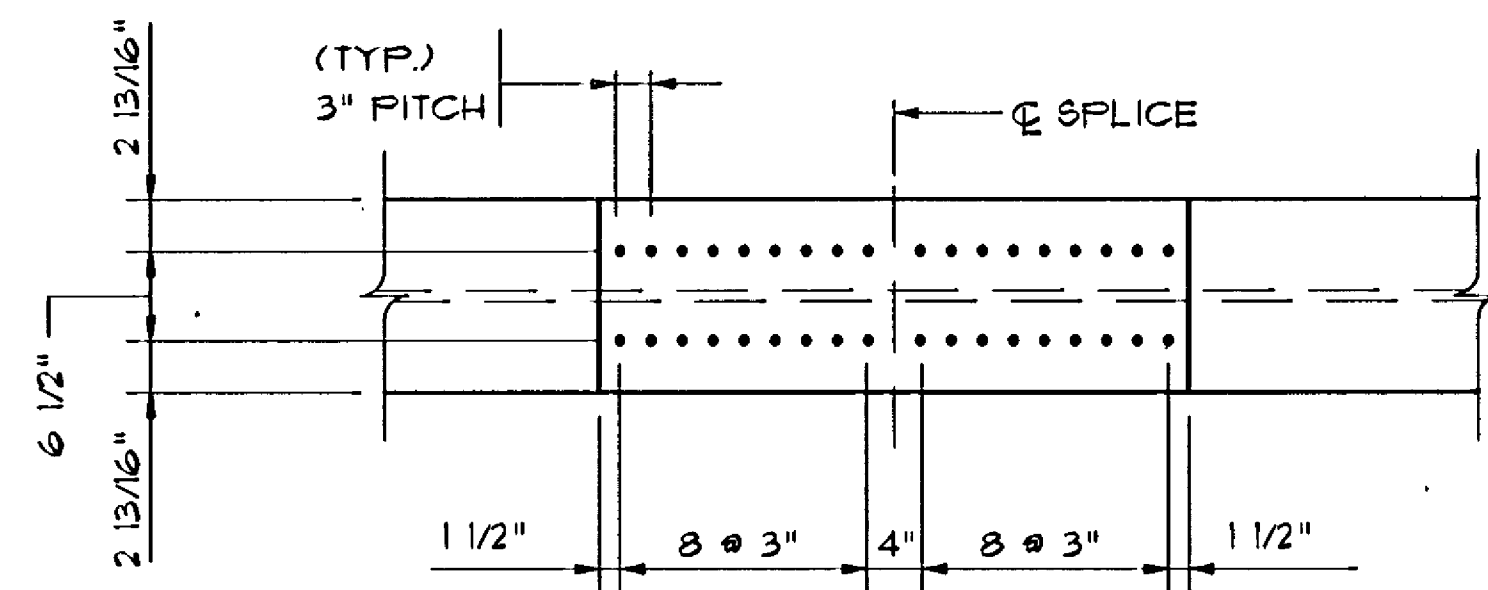
DES: MKM	DRW: JAS	APPROVED:	BRIDGE NO. 02560
CHK: SA	CHK: DJV	4-1-91	
SHEET NO. 18 OF 31 SHEETS			



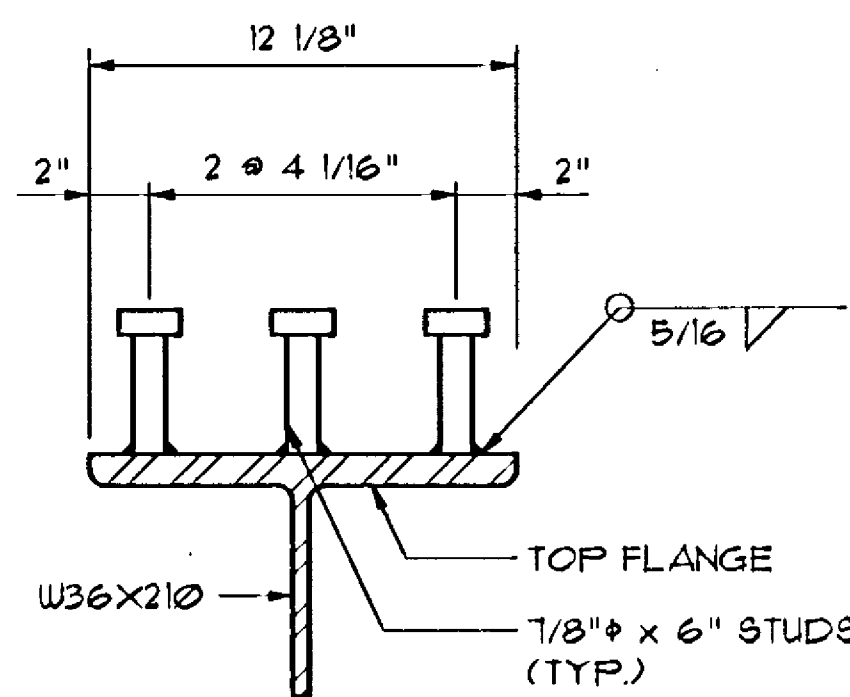
TOP FLANGE SPLICE



WEB SPLICE



BOTTOM FLANGE SPLICE



SHEAR STUD DETAIL

STRUCTURAL STEEL NOTES

ALL STRUCTURAL STEEL SHALL CONFORM TO SPEC. 3309 UNLESS NOTED OTHERWISE.

BEARING STIFFENERS SHALL BE VERTICAL.

FIELD CONNECTIONS SHALL BE MADE WITH 7/8" HIGH STRENGTH BOLTS OR 7/8" PIN BOLTS EXCEPT AS NOTED.

ROWS OF SHEAR CONNECTORS SHALL BE ALIGNED PARALLEL TO THE TRANSVERSE SLAB REINFORCEMENT BARS.

SHEAR CONNECTORS AND BEAM SOLE PLATES TO BE INCLUDED IN WEIGHT OF STRUCTURAL STEEL (3309). SHEAR CONNECTORS SHALL CONFORM TO SPEC. 3391.

ELEVATIONS SHOWN AT FIELD SPLICES ARE THE THEORETICAL ELEVATIONS FURNISHED AS A GUIDE FOR ERECTION. DEFLECTIONS FROM WEIGHT OF BEAM INCLUDED.

SPECIAL REAMING WILL BE REQUIRED PER SPEC. 24113E1d.

ENDS OF BEAMS SHALL BE VERTICAL WHEN ERECTED AND UNDER THE EFFECTS OF THE PROFILE GRADE AND BRIDGE DEAD LOADS.

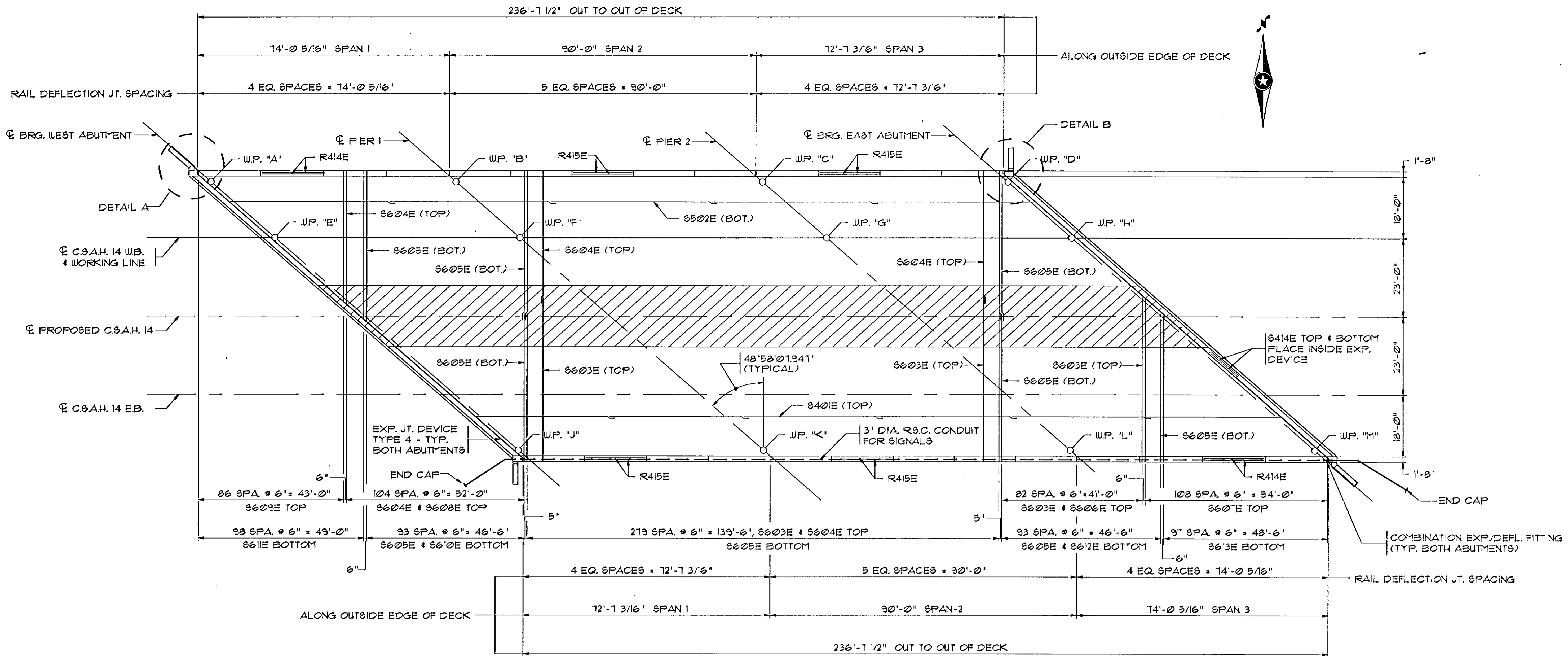
S.A.P. 02-614-18



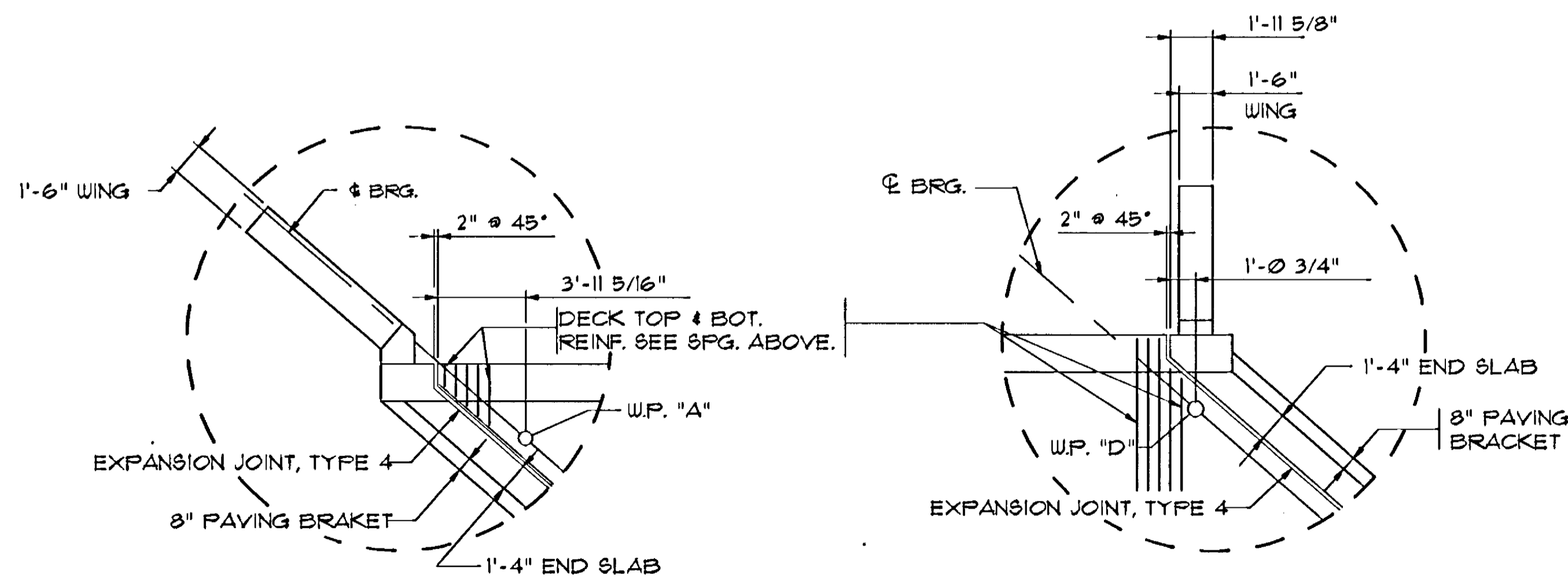
**STRUCTURAL STEEL
DETAILS**

DES: MKM	DRW: JAS	APPROVED:
CHK: SA	CHK: DJV	4-1-91
SHEET NO. 19 OF 31 SHEETS		

**BRIDGE NO.
02560**

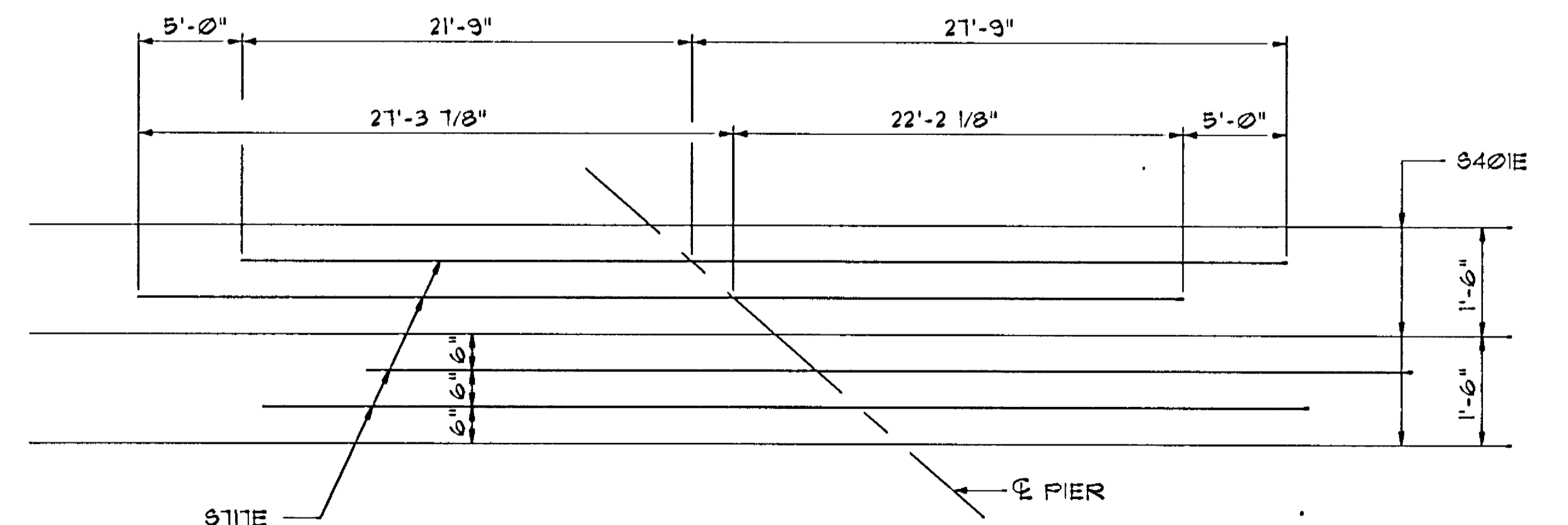


PLAN



DETAIL A

DETAIL B



REINFORCEMENT OVER PIERS

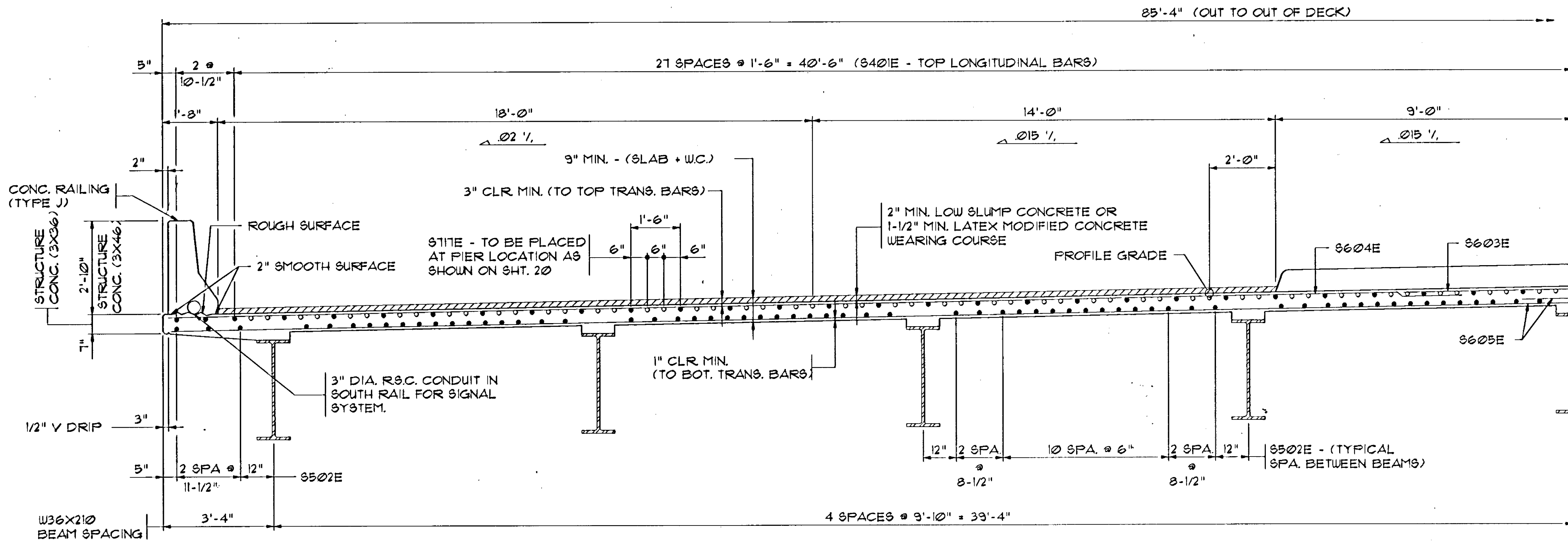
S.A.P. 02-614-18



**SUPERSTRUCTURE
DETAILS**

DES: MKM DRW: JAS APPROVED:
 CHK: SA CHK: DJV 4-1-91
SHEET NO. 20 OF 31 SHEETS

**BRIDGE NO.
02560**



TRANSVERSE SECTION THROUGH DECK

BILL OF REINFORCEMENT - SUPERSTRUCTURE

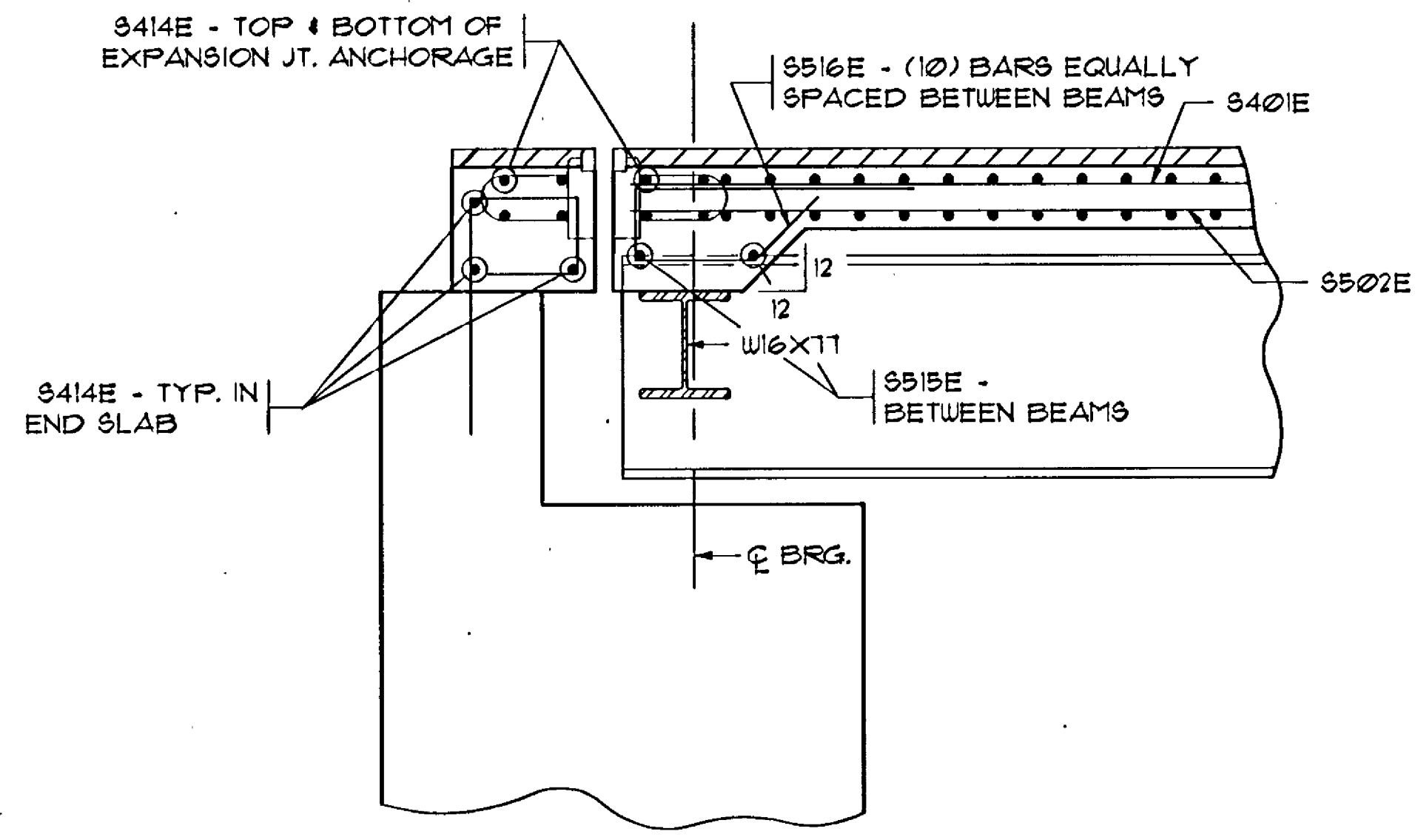
MARK	NO.	LENGTH	SHAPE	LOCATION
S401E	354	41'-0"	STR	SLAB - TOP LONGITUDINAL
S502E	630	48'-10"	STR	SLAB - BOT. LONGITUDINAL
S603E	363	48'-1"	STR	SLAB - TOP TRANSVERSE
S604E	385	38'-9"	STR	SLAB - TOP TRANSVERSE
S605E	148	43'-8"	STR	SLAB - BOT. TRANSVERSE
S606E	83	(1)	STR	SLAB - TOP TRANSVERSE
S607E	109	(2)	STR	SLAB - TOP TRANSVERSE
S608E	105	(3)	STR	SLAB - TOP TRANSVERSE
S609E	81	(4)	STR	SLAB - TOP TRANSVERSE
S610E	94	(5)	STR	SLAB - BOT. TRANSVERSE
S611E	99	(6)	STR	SLAB - BOT. TRANSVERSE
S612E	94	(7)	STR	SLAB - BOT. TRANSVERSE
S613E	98	(8)	STR	SLAB - BOT. TRANSVERSE
S414E	66	44'-0"	STR	EXP. JOINT & END SLAB
S515E	32	14'-8"	STR	BOT. TRANS. BET. BEAMS
S616E	160	6'-8"	BENT	BETWEEN BEAMS @ ENDS
S117E	216	49'-6"	STR	TOP. LONGIT. OVER PIERS

- (1) 1 SET OF 83 BARS (2'-5" TO 38'-9")
- (2) 1 SET OF 109 BARS (0'-9" TO 47'-10")
- (3) 1 SET OF 105 BARS (2'-6" TO 48'-1")
- (4) 1 SET OF 81 BARS (0'-9" TO 38'-4")
- (5) 1 SET OF 94 BARS (2'-1" TO 43'-8")
- (6) 1 SET OF 99 BARS (0'-9" TO 43'-6")
- (7) 1 SET OF 94 BARS (2'-1" TO 43'-8")
- (8) 1 SET OF 98 BARS (0'-9" TO 43'-2")

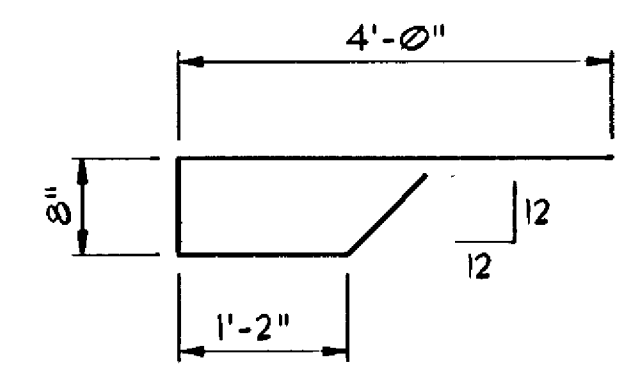
SUMMARY OF QUANTITIES - SUPERSTRUCTURE

ITEM	UNIT	QUANTITY
BRIDGE SLAB CONCRETE (3X36)	SQ. FT.	20575
RAISED MEDIAN CONCRETE (3X46)	SQ. FT.	4340
TYPE J RAILING CONCRETE (3X46)	LIN. FT.	485
CONCRETE OVERLAY TYPE SPECIAL	SQ. FT.	15431
REINFORCEMENT BARS (EPOXY COATED)	POUND	201420
ERECTING STRUCTURAL STEEL (3309)	POUND	540290
ZINC-RICH PAINT SYSTEM	SQ. FT.	26261
EXPANSION JOINT DEVICE (TYPE 4)	LIN. FT.	260
BRIDGE NAMEPLATE (SEE DETAIL B101)	EACH	1
PREFORMED JOINT FILLER	EACH	24
EXPANSION BEARING ASSEMBLY, TYPE 1	EACH	9
EXPANSION BEARING ASSEMBLY, TYPE 2	EACH	4
FIXED BEARING ASSEMBLY, TYPE 1	EACH	5
EXPANSION BEARING ASSEMBLY, TYPE 3	EACH	3
EXPANSION BEARING ASSEMBLY, TYPE 4	EACH	9
CONDUIT SYSTEM (SIGNALS)	LUMP SUM	1

- (1) APPROXIMATE VOLUMES :
BRIDGE SLAB CONCRETE (3X36) (USING 2" AVE. STOOL HEIGHT)
2" WEARING COURSE ALTERNATE 486 CU. YDS.
1 1/2" WEARING COURSE ALTERNATE 517 CU. YDS.
TYPE J RAILING CONC. (3X46) 53 CU. YDS.
CONC. OVERLAY TYPE SPECIAL (2") 36 CU. YDS.
LATEX WEARING COURSE OPTION (1 1/2") 72 CU. YDS.
RAISED MEDIAN CONCRETE (3X46) 108 CU. YDS.
- (2) SEE SPECIAL PROVISIONS.
- (3) INCLUDED IN PRICE BID FOR OTHER ITEMS.
- (4) 1"x11"x1'-1" CORK RAIL DEFLECTION JOINTS.
- (5) BEARINGS WILL BE FURNISHED UNDER A SEPARATE CONTRACT. PLACEMENT OF BEARINGS AT ALL SUBSTRUCTURES WILL BE INCLUDED IN THE PRICE BID FOR ERECTING STRUCTURAL STEEL (3309). SEE SHT. 17 FOR LOCATIONS OF BEARINGS AND SHT. 26 FOR BEARING TYPE INFORMATION.



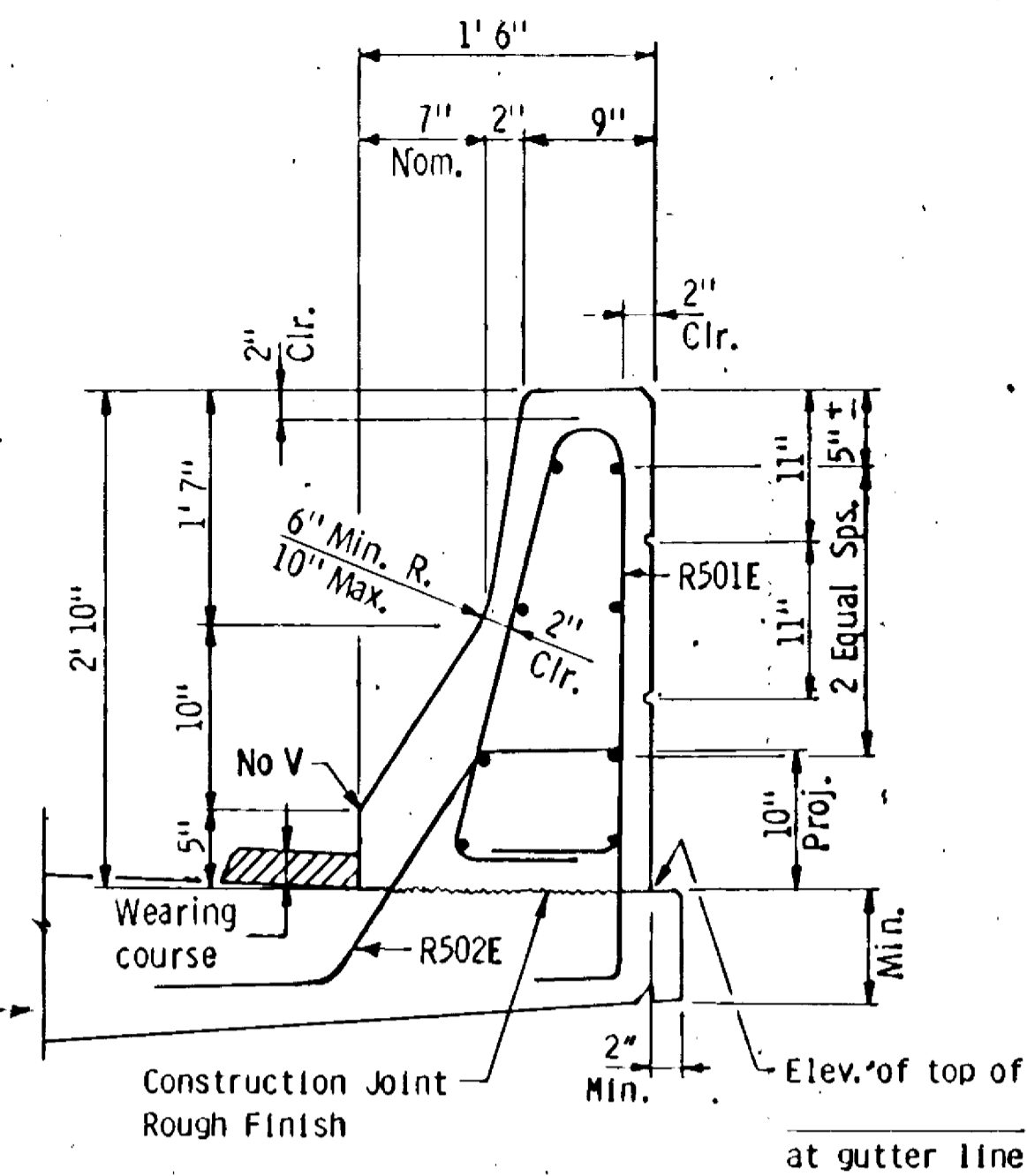
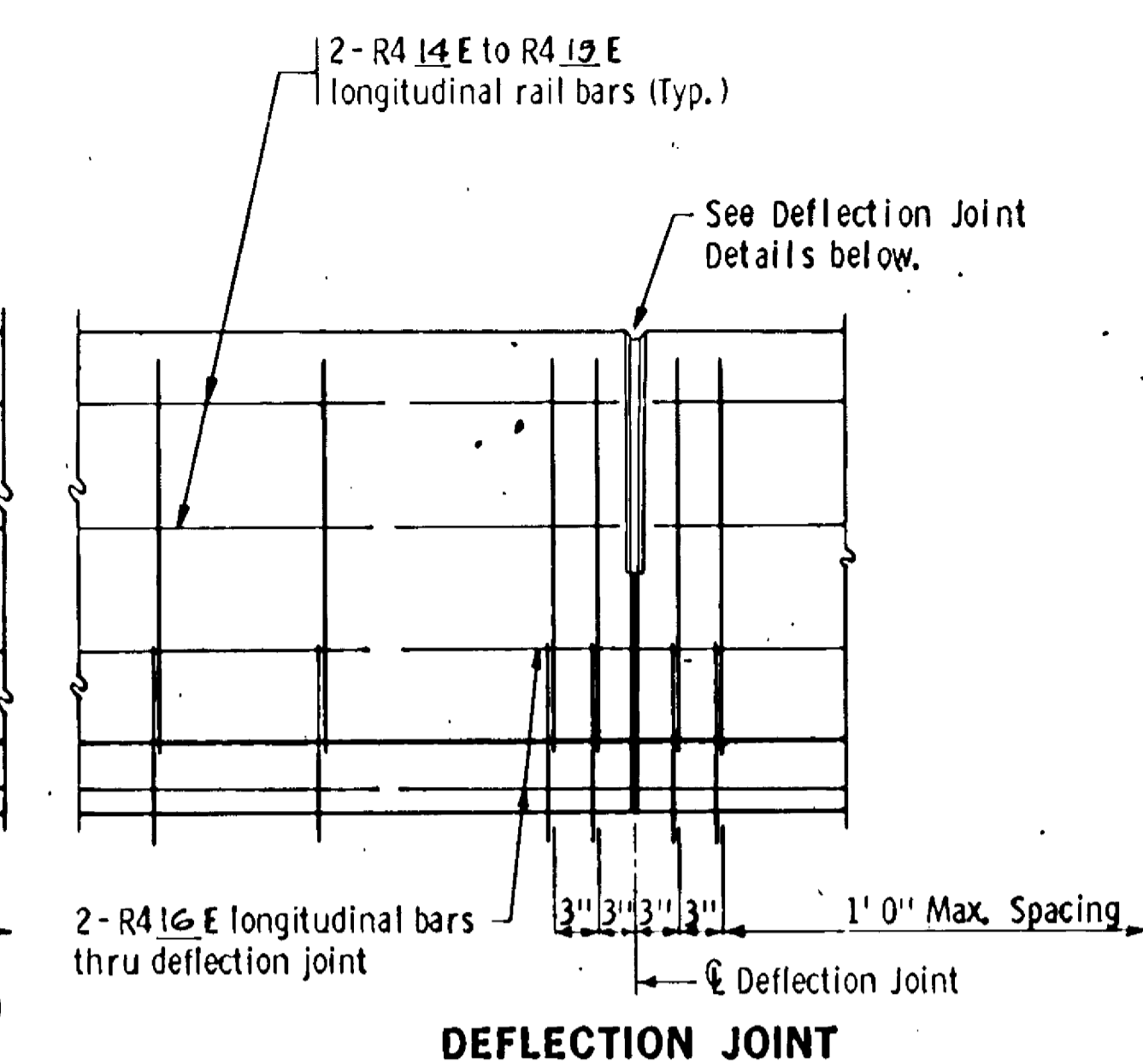
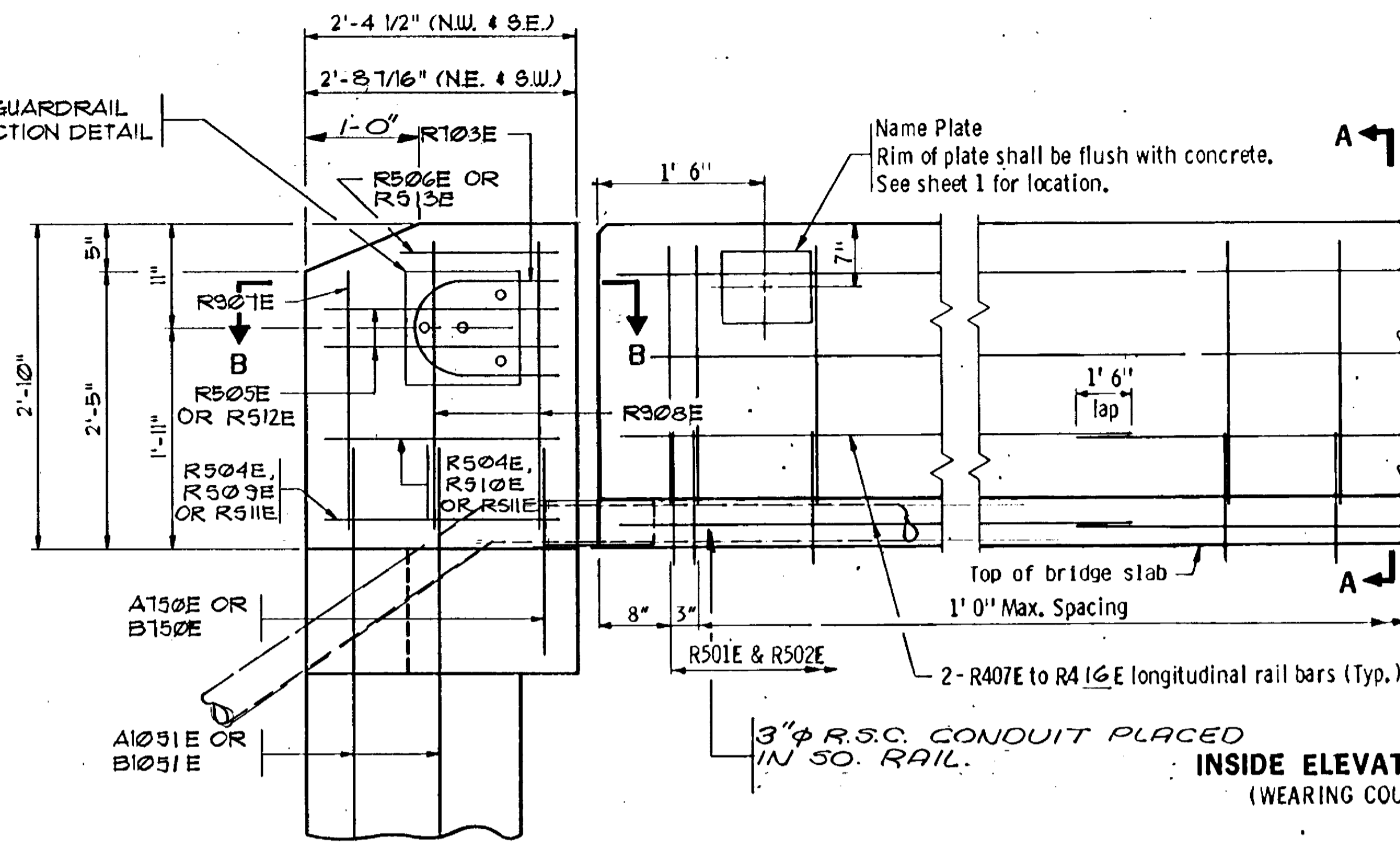
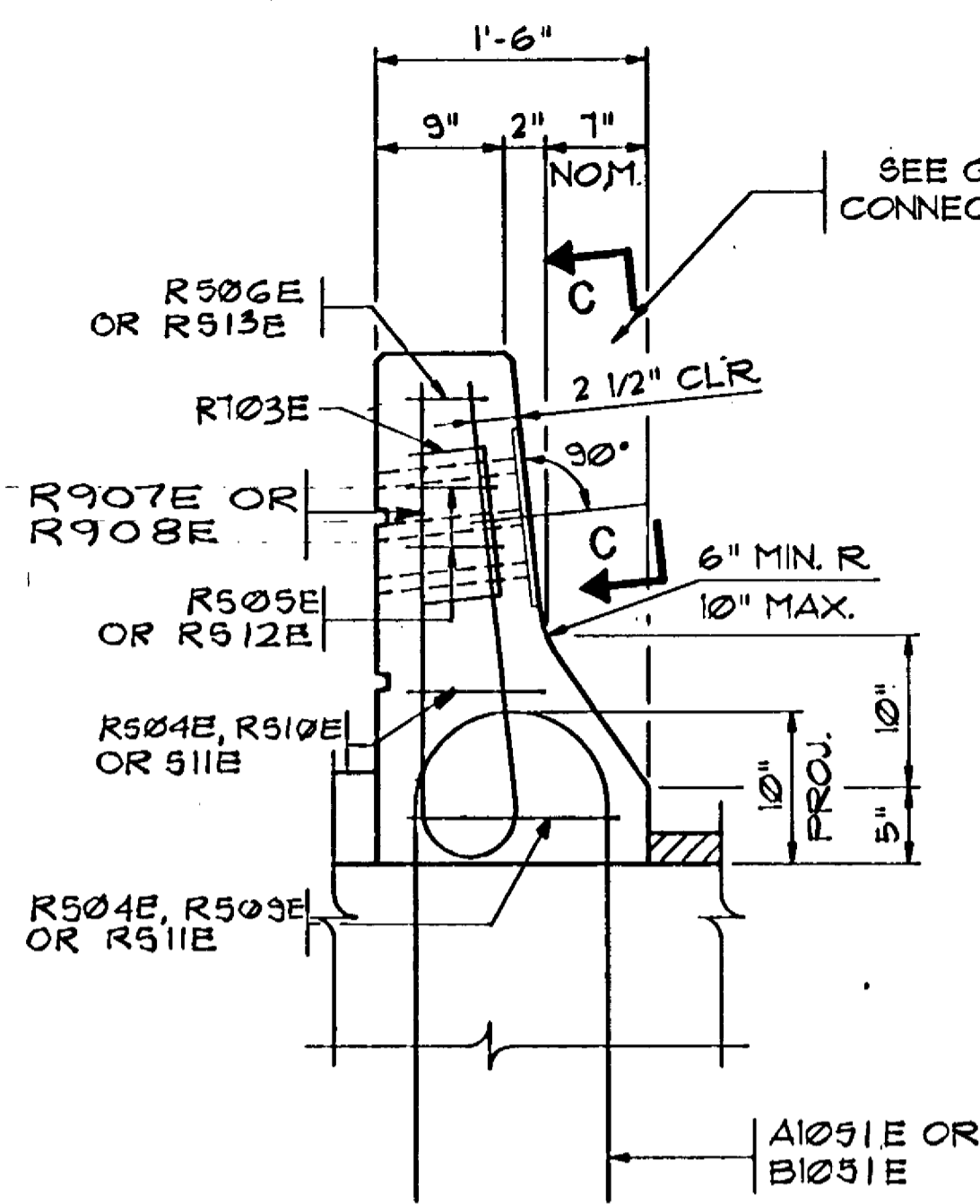
SECTION THRU DECK AT EXP. DEVICE



S516E

CONDUIT SYSTEM (SIGNALS)	
3" DIA. R.S.C. CONDUIT	210 L.F.
COMBINATION EXP/DEFL. FITTING	2 EA.
END CAPS	2 EA.
45° ELBOWS	6 EA.

(3) ALL MATERIALS LISTED ABOVE ARE INCLUDED IN CONDUIT SYSTEM (SIGNALS). MINOR ADJUSTMENTS MADE IN THE FIELD TO SYSTEM SHALL BE MADE BY CONTRACTOR WITH NO EXTRA COMPENSATION.



VERTICAL END POST

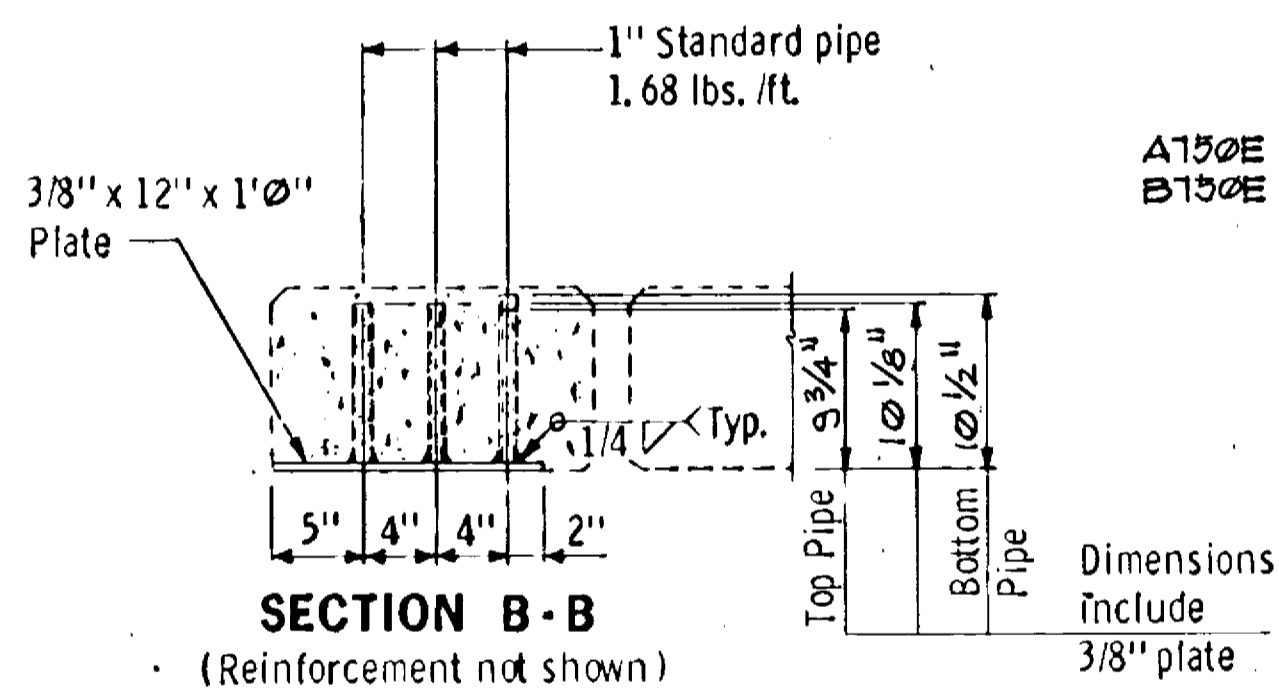
INSIDE ELEVATION OF RAILING
(WEARING COURSE NOT SHOWN)

DEFLECTION JOINT

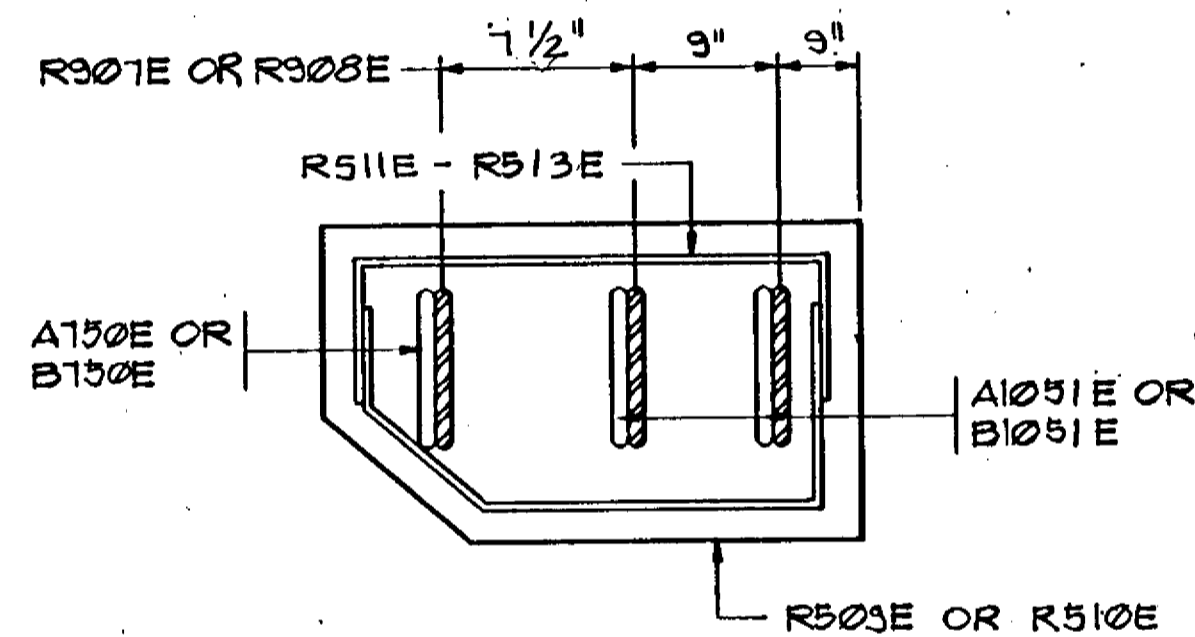
SECTION A-A

BILL OF REINFORCEMENT - RAILING

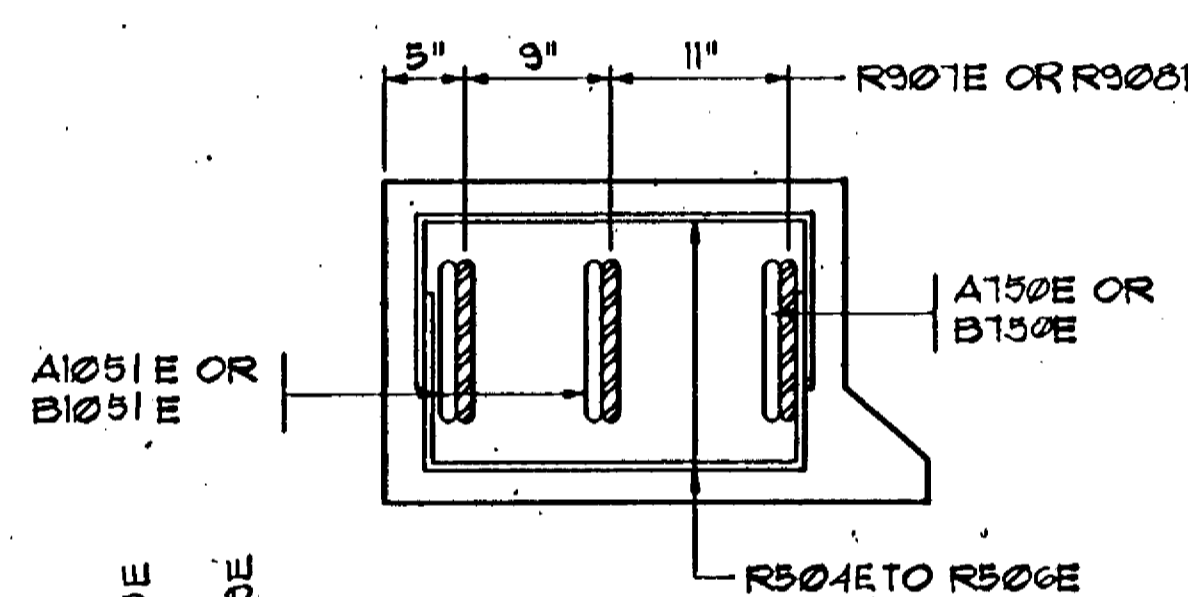
MARK	NO.	LENGTH	SHAPE	LOCATION
R501E	534	6'-6"	BENT	RAIL - VERTICAL
R502E	534	5'-6"	BENT	RAIL - VERTICAL
R103E	4	4'-0"	BENT	ENDPOST
R504E	8	3'-8"	BENT	ENDPOST (N.W. & S.E. CORNERS)
R505E	8	3'-2"	BENT	ENDPOST (N.W. & S.E. CORNERS)
R506E	4	2'-2"	BENT	ENDPOST (N.W. & S.E. CORNERS)
R307E	4	4'-11"	BENT	ENDPOST (ALL CORNERS)
R308E	8	5'-9"	BENT	ENDPOST (ALL CORNERS)
R509E	2	4'-0"	BENT	ENDPOST (N.E. & S.W. CORNERS)
R510E	2	3'-4"	BENT	ENDPOST (N.E. & S.W. CORNERS)
R511E	4	3'-6"	BENT	ENDPOST (N.E. & S.W. CORNERS)
R512E	8	3'-4"	BENT	ENDPOST (N.E. & S.W. CORNERS)
R513E	4	2'-3"	BENT	ENDPOST (N.E. & S.W. CORNERS)
R414E	32	18'-2"	STR	RAIL - LONGITUDINAL
R415E	72	17'-8"	STR	RAIL - LONGITUDINAL
R416E	48	40'-8"	STR	RAIL - LONGITUDINAL



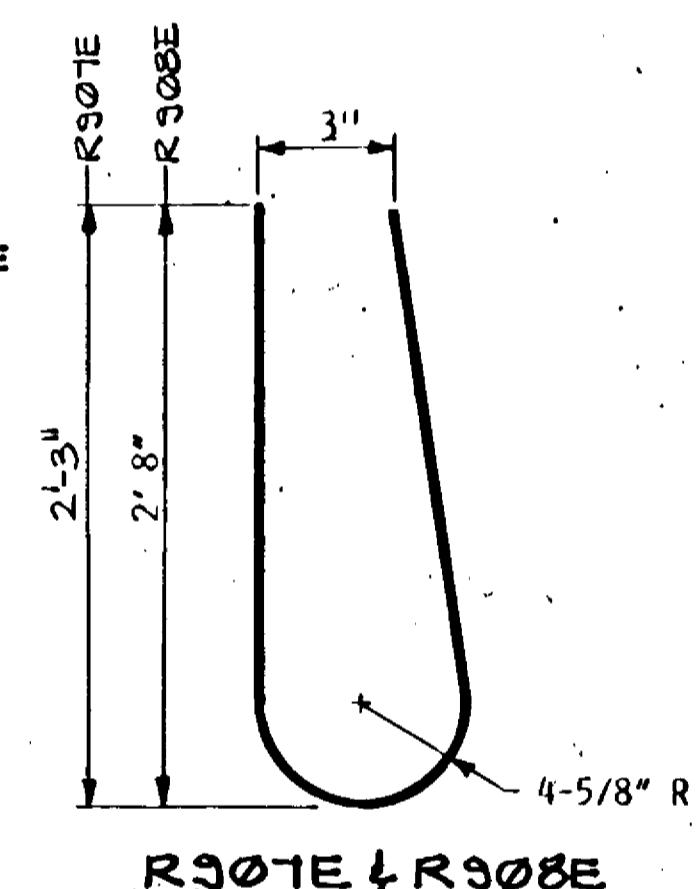
SECTION B-B
(Reinforcement not shown)



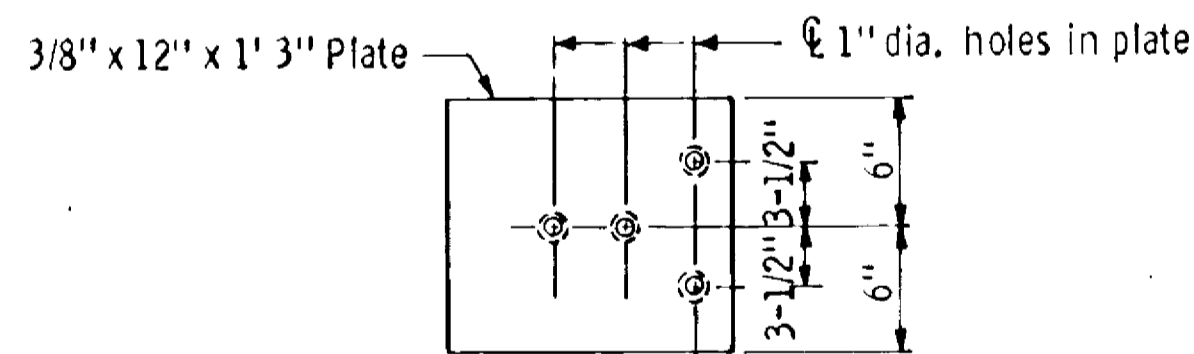
END POST DETAIL
N.E. & S.W. CORNERS



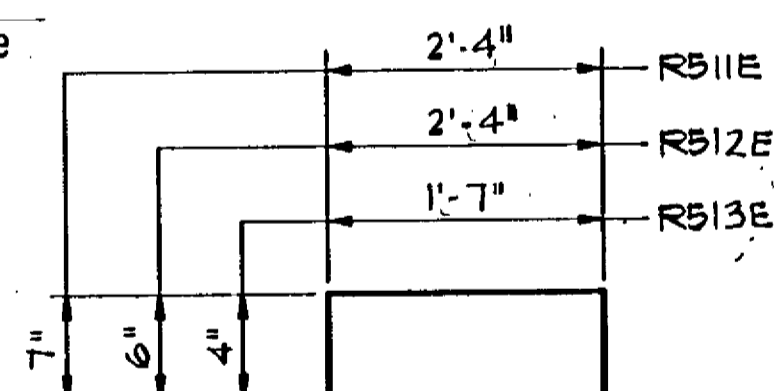
END POST DETAIL
N.W. & S.E. CORNERS



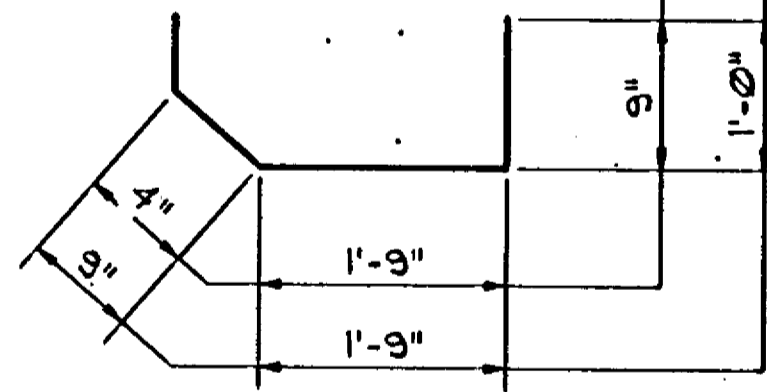
R307E & R308E



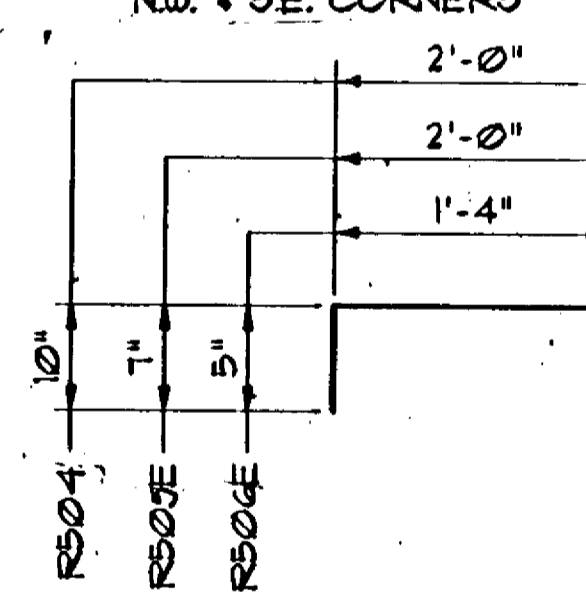
VIEW C-C



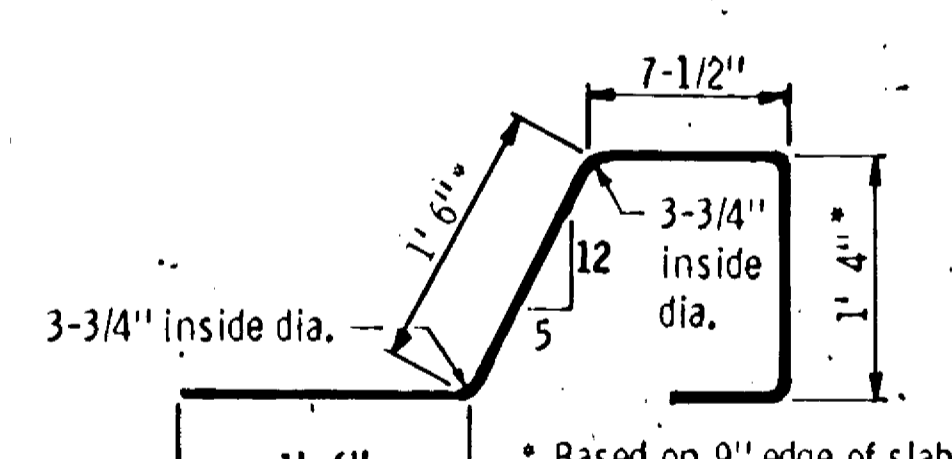
R511E - R513E



R509E & R510E

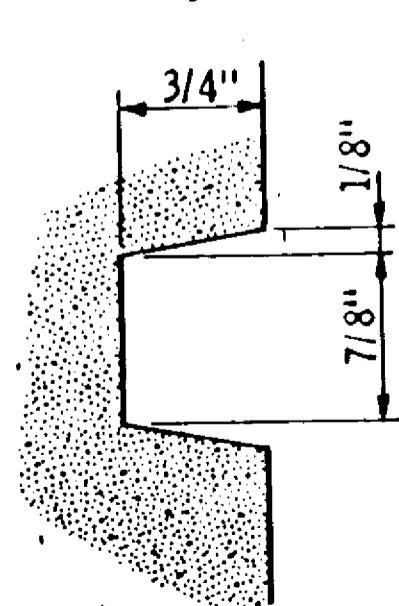


R504E - R506E

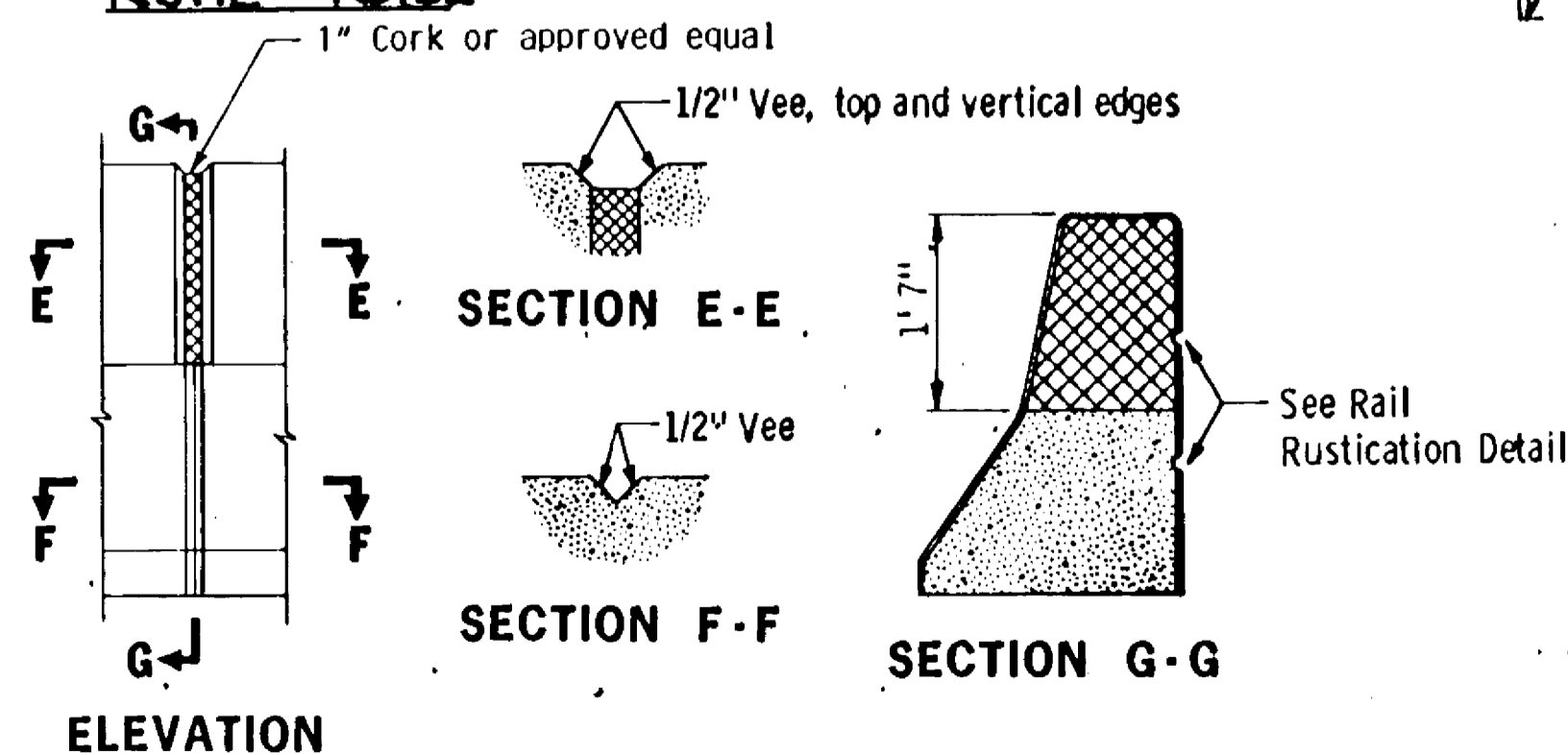


R502E

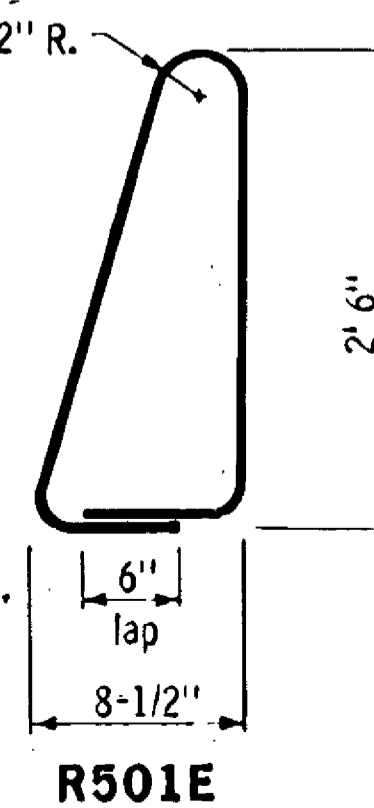
GUARDRAIL CONNECTION DETAIL
Galvanize after fabrication per Spec. 3394
Estimated Weight = 24 lbs.



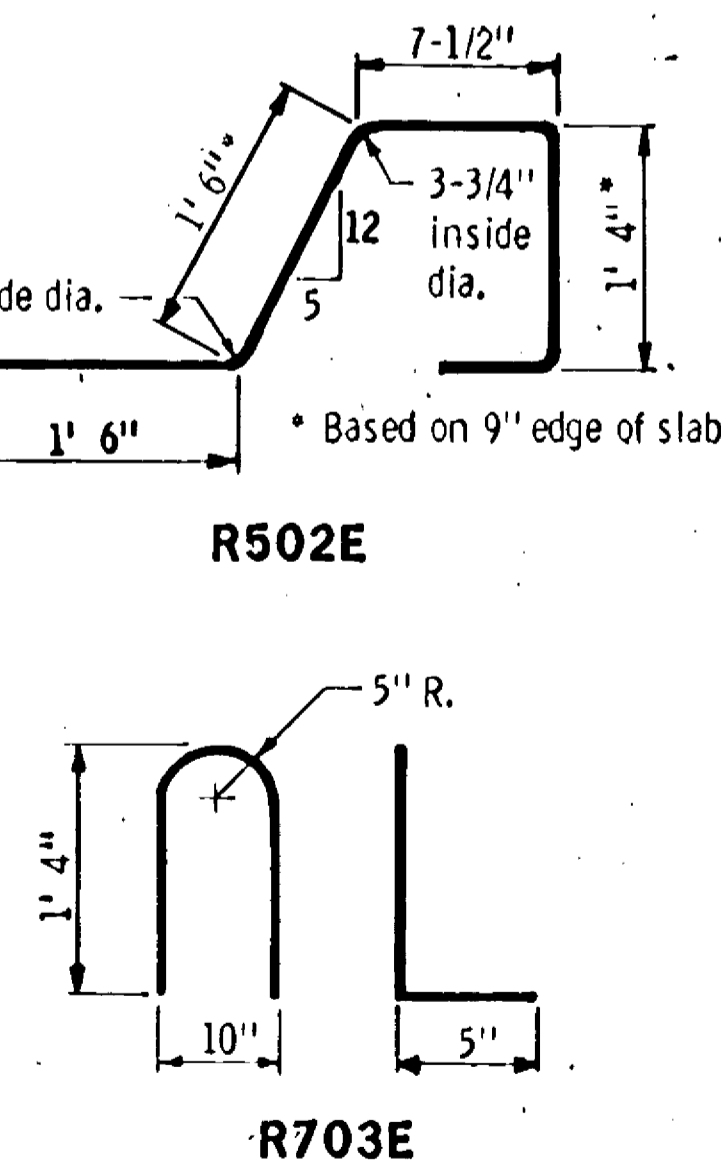
RAIL RUSTICATION



DEFLECTION JOINT DETAILS



R501E



R703E

GENERAL NOTES

All bars marked with the suffix "E" shall be epoxy coated in accordance with Spec. 3301.

Con. Railing = 440 lbs./ft.
Conc. Railing = .109 cu. yds./ft.

Rail and end post to be Concrete Mix No. 3x46.

Guardrail connection to be Structural Steel, Spec. 3306.

Finish all edges of rail and end post with 1/2" vee except where otherwise noted.

See superstructure sheet for joint spacing.

Maximum spacing of concrete deflection joints shall be 20'-0".

Guardrail connection to be included in price bid for other items.

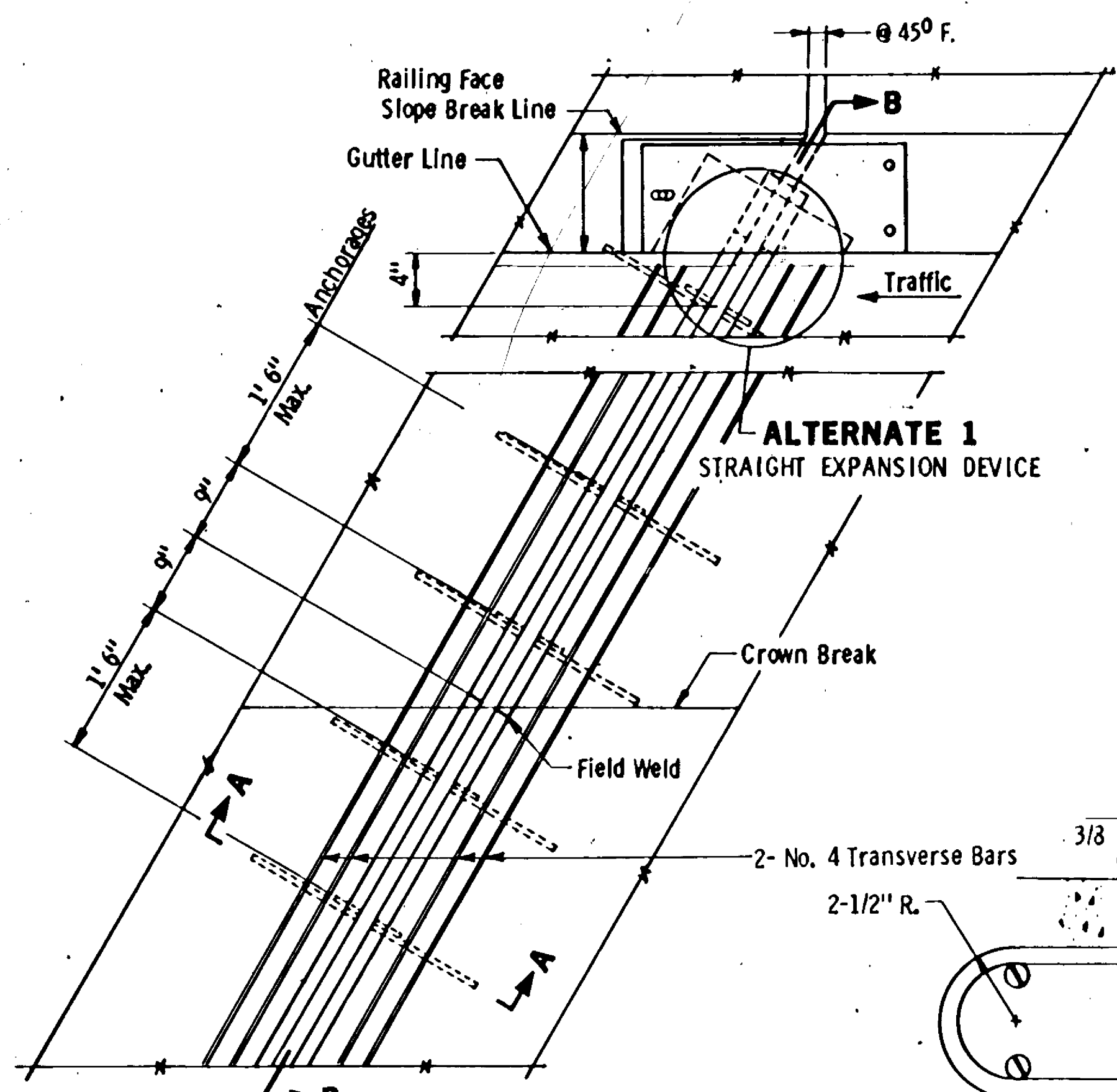
Rail quantities are included in summary of quantities for superstructure.

Length of railing concrete to be measured for payment between outside faces of end posts.

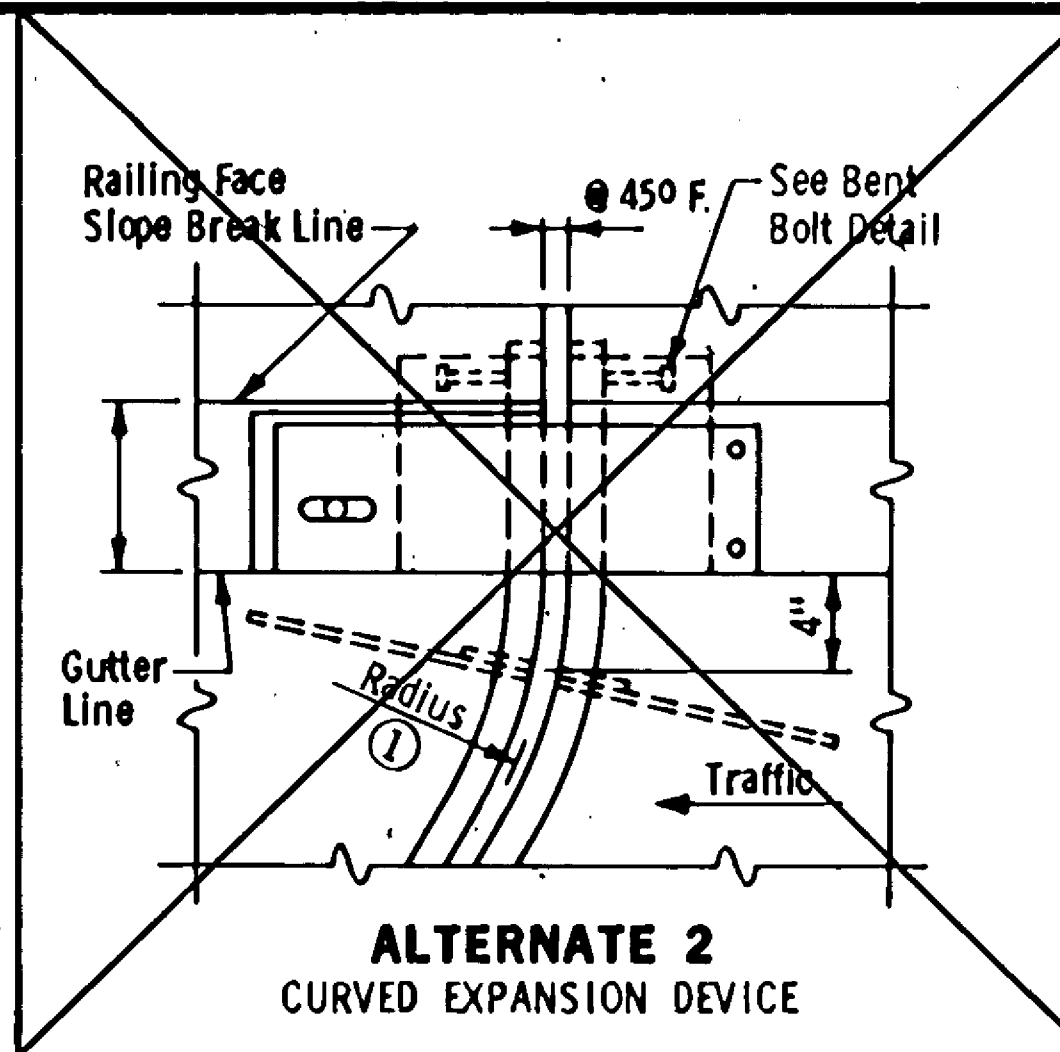
S.A.P. 02-614-18

REVISED: APPROVED: Nov. 26, 1985 FIG. 5-397.116

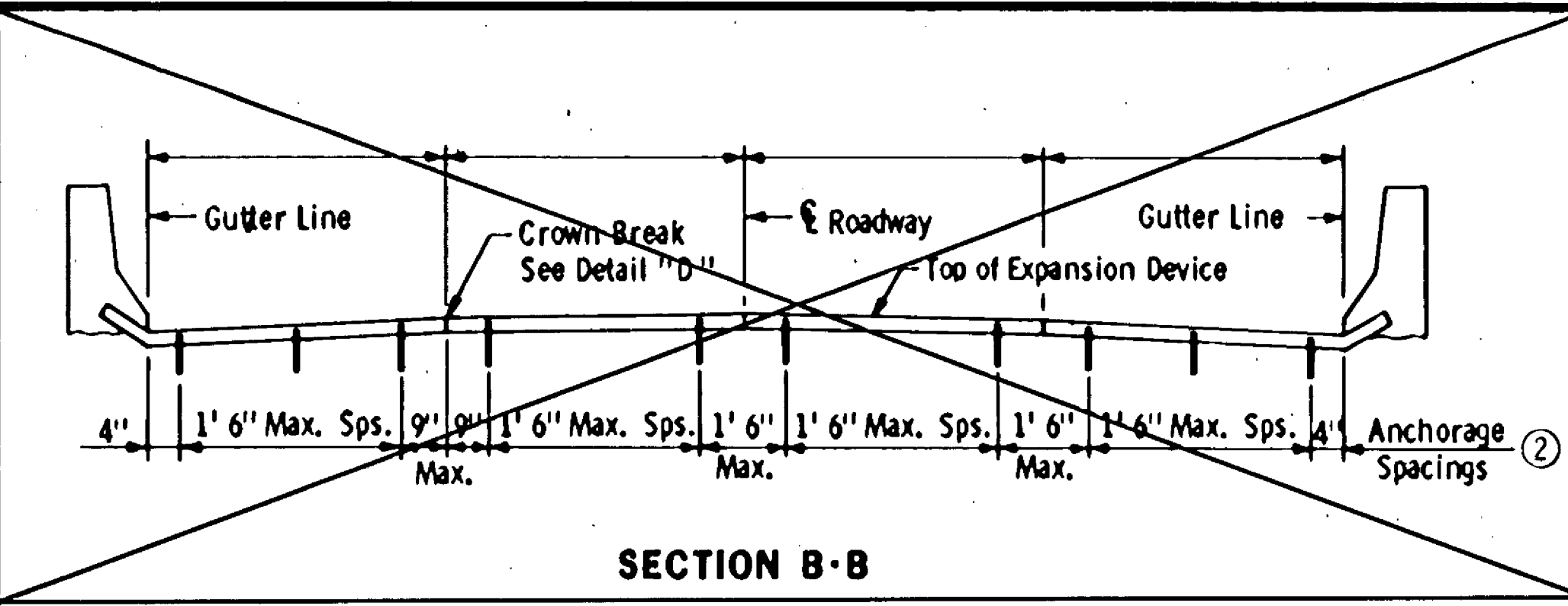
TITLE: CONCRETE RAILING (TYPE J) WITH SEPARATE END POST
DES: DR: APPROVED: 4-1-71
CHK: CHN: Bridge No. 02560
Sheet No. 22 of 31 Sheets



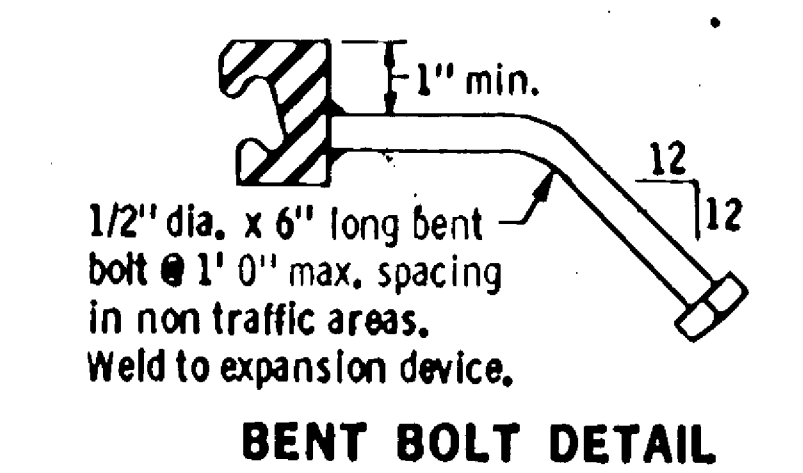
PLAN VIEW AT EXPANSION DEVICE



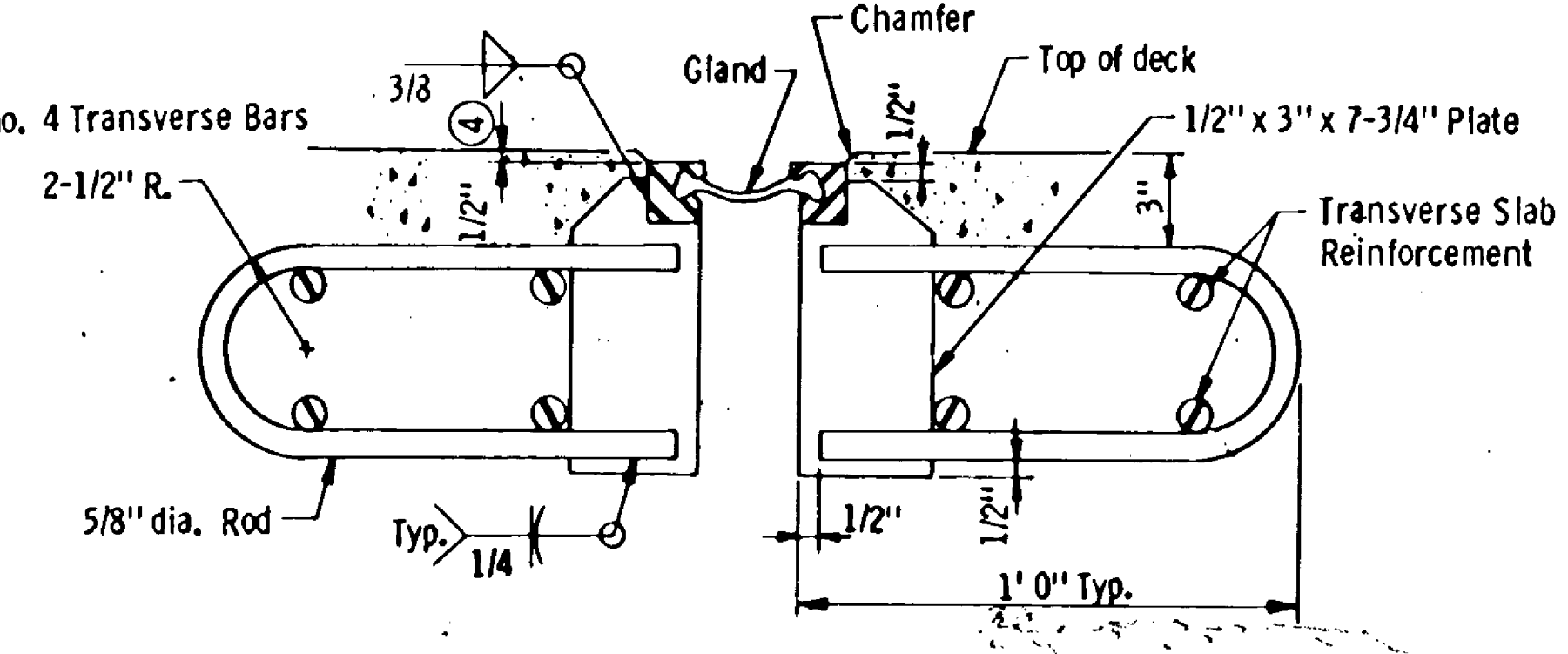
ALTERNATE 2 CURVED EXPANSION DEVICE



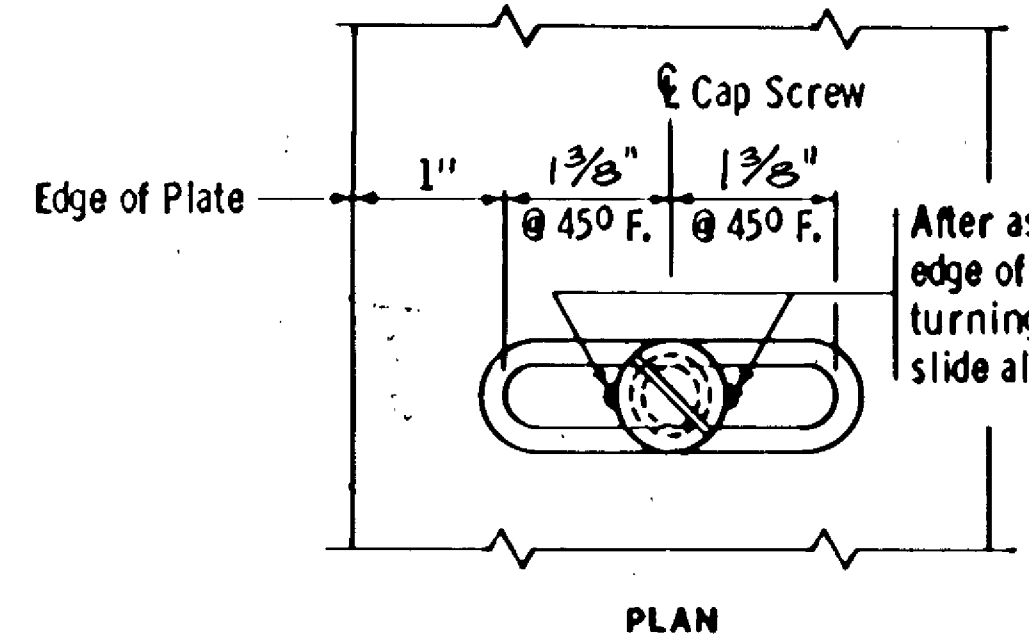
SECTION B-B



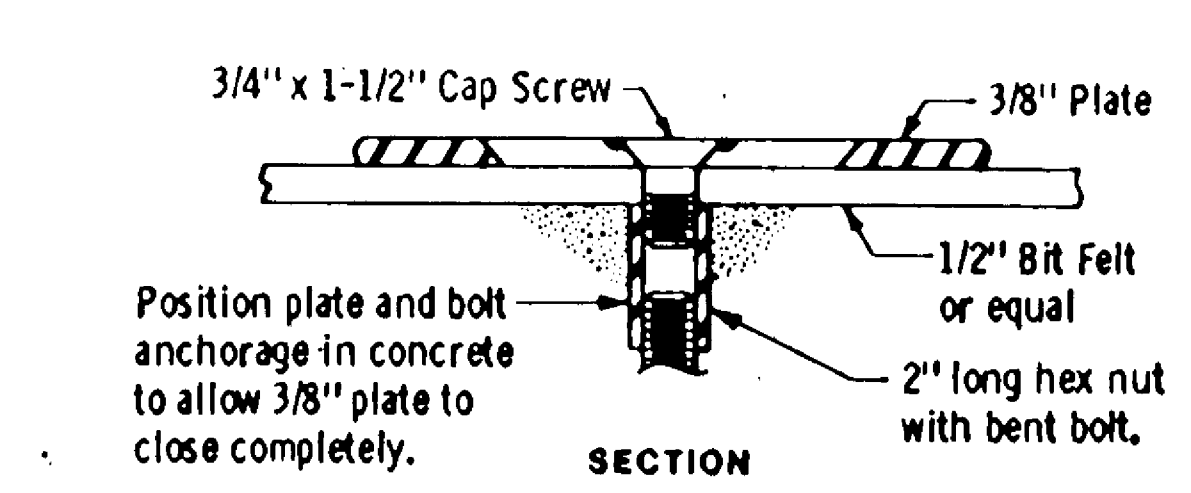
BENT BOLT DETAIL



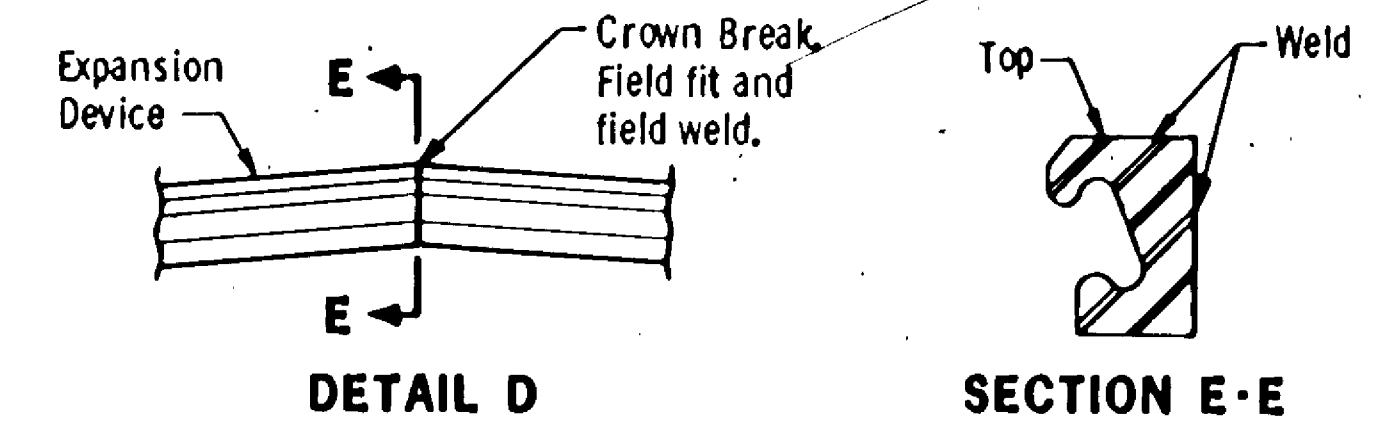
SECTION A-A ANCHORAGE



PLAN



SECTION DETAIL C SLOTTED HOLE & CAP SCREW

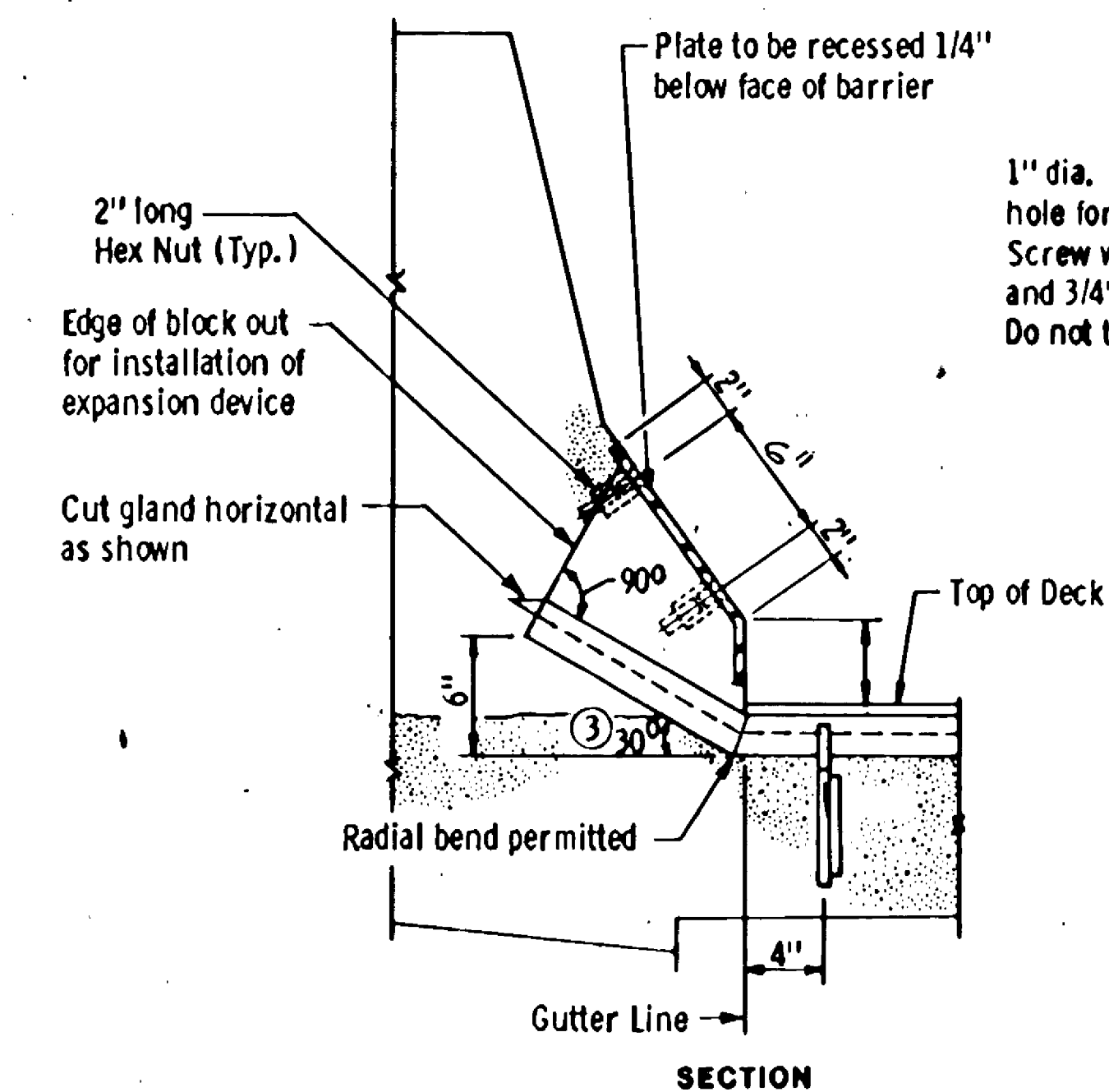


DETAIL D

SECTION E-E

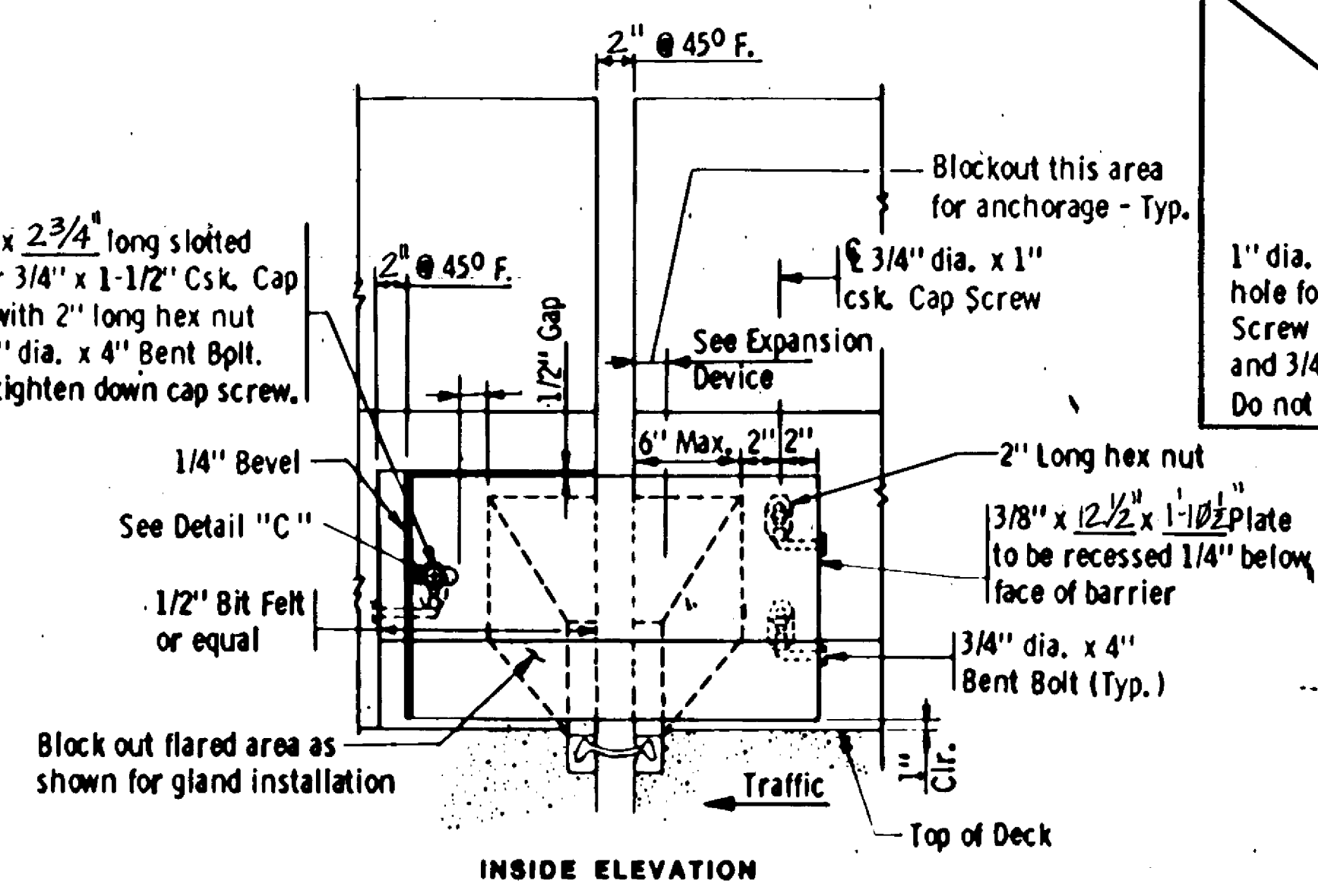
NOTES:
 Galvanize structural steel after fabrication as per Spec. 3394.
 Joints in roadway plate or extrusion shall be located at breaks in transverse profile and as otherwise required. Joints shall be close fit and welded. Repair after welding as per Spec. 2471.3L.
 Structural steel shall comply with Spec. 3306, Spec. 3307 & Spec. 3309.
 Expansion device shall be straightened to a tolerance of 1/8" in 10 ft.
 Cap screws shall be countersunk 1/16" below top of plate.
 Galvanize screws and nuts as per Spec. 3392.
 See superstructure sheets for expansion device alternate at railing.
 When expansion devices are used at ends of bridge, the bridge contractor shall furnish expansion device and gland. The roadway contractor shall install the part of the expansion device which includes the gland as shown on this sheet.

- ① Varies 18" to 24"
- ② Dimension along centerline of joint.
- ③ For roadway skews over 25° use 45°.
- ④ 5/8" max. when Snowplow Fingers are used. Use 1/8" (with 1/4" max.) when Snowplow Fingers are not used.

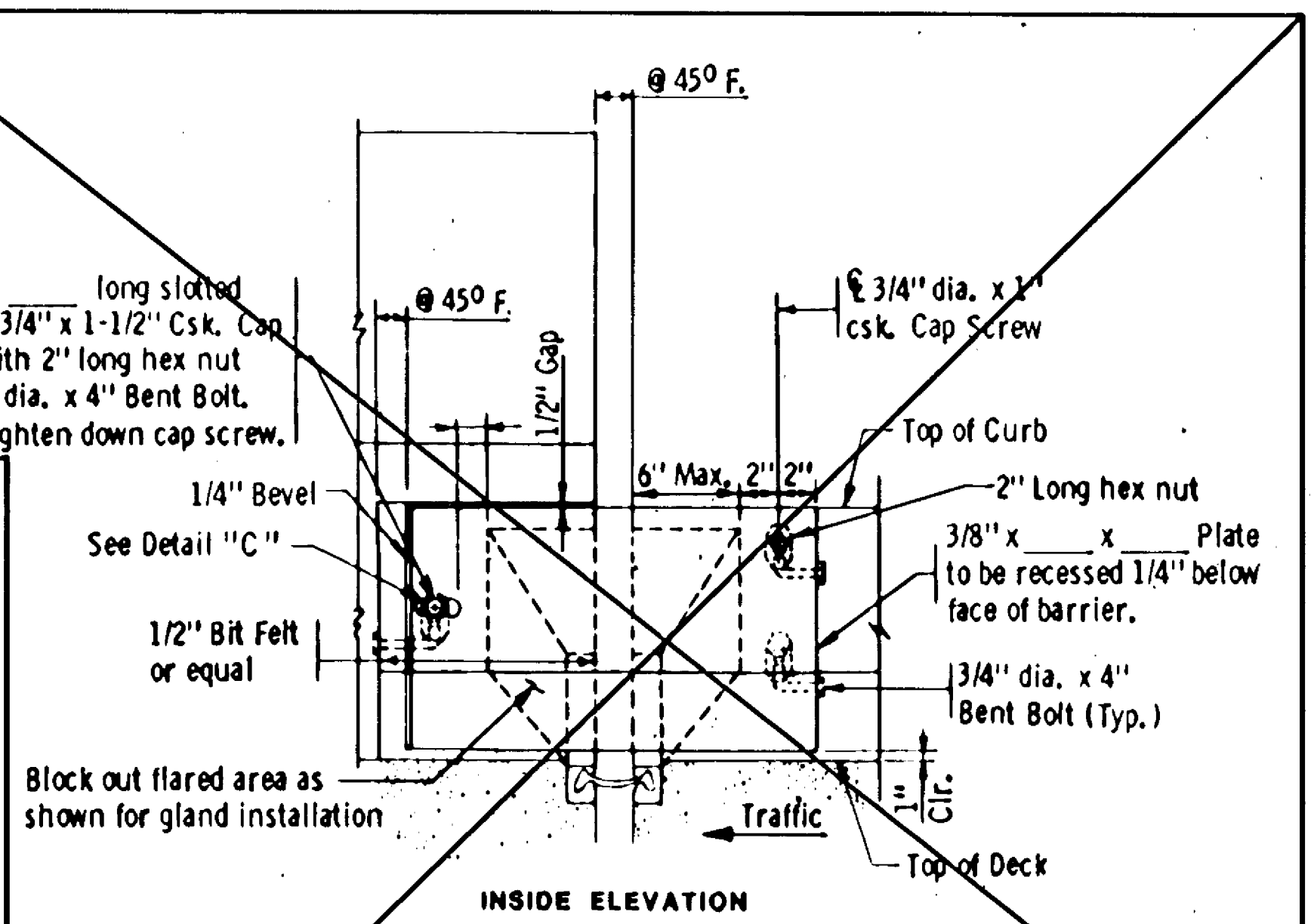


SECTION

RAILING OR MEDIAN SQUARE BRIDGE APPLICATION



INSIDE ELEVATION

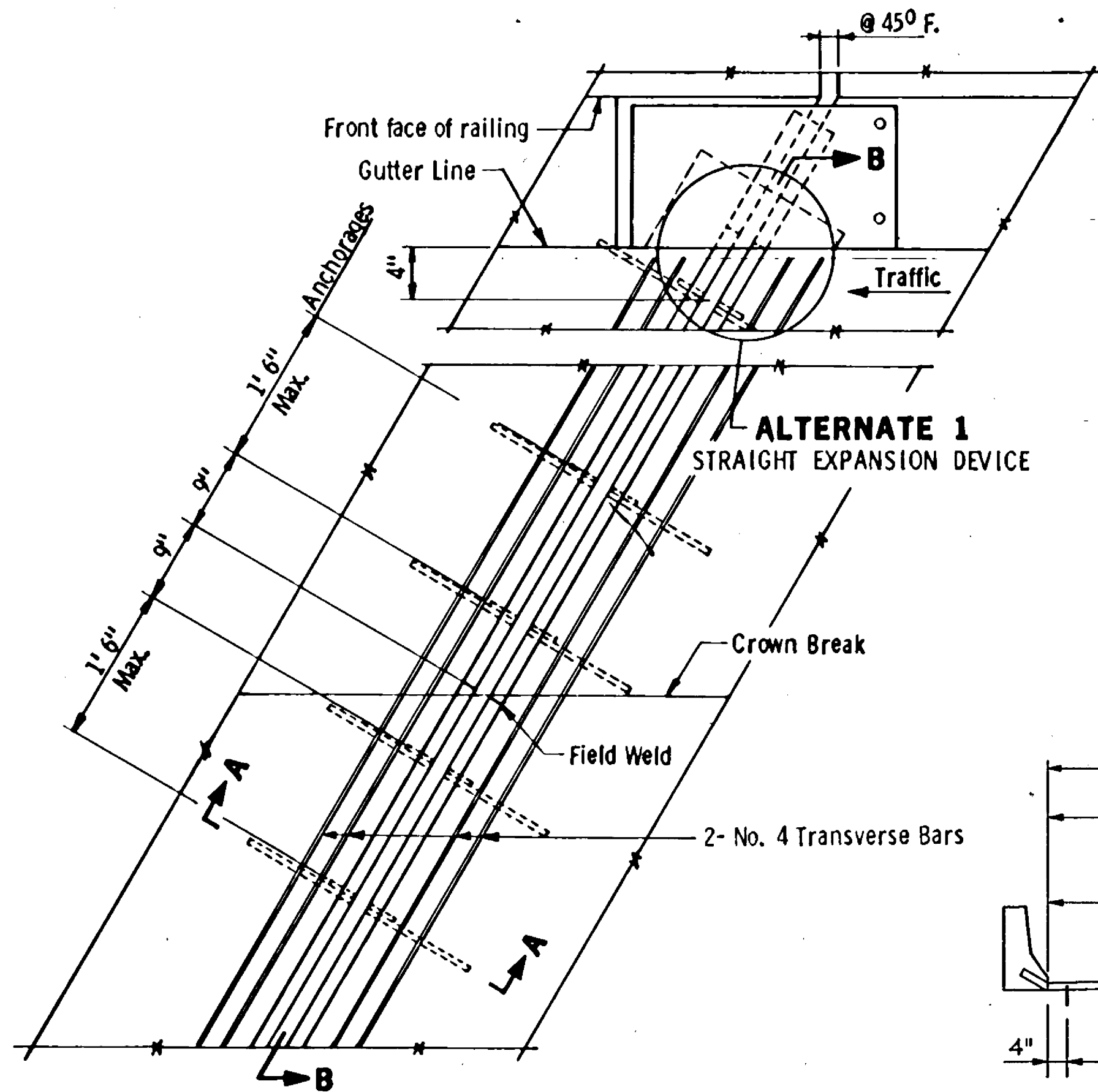


INSIDE ELEVATION

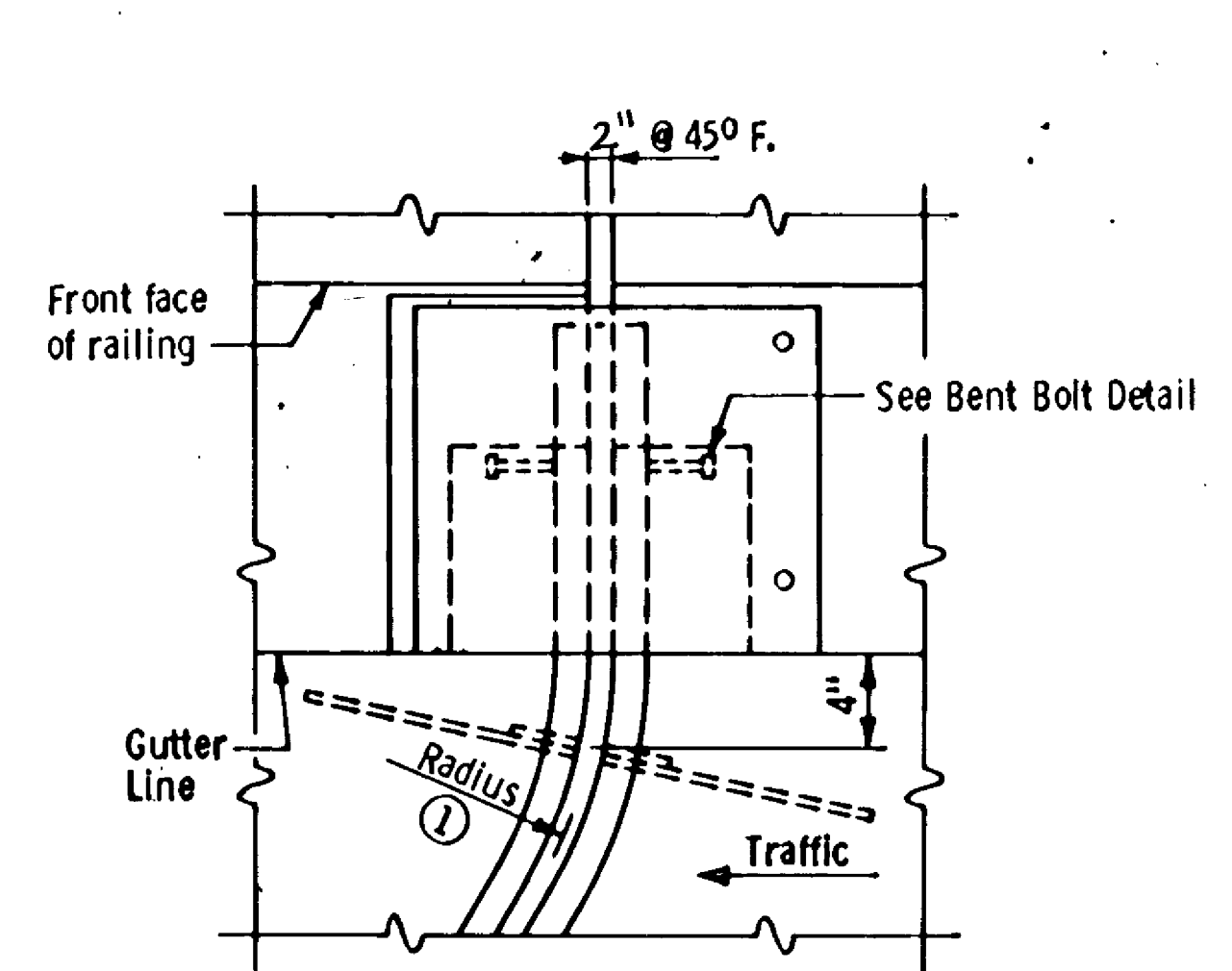
RAILING AT CURB TRANSITION

TITLE: WATERPROOF EXPANSION DEVICE WITH TYPE J BARRIER
 DES: [] DR: []
 CHK: [] CHK: []
 3.A.P. 02-614-18

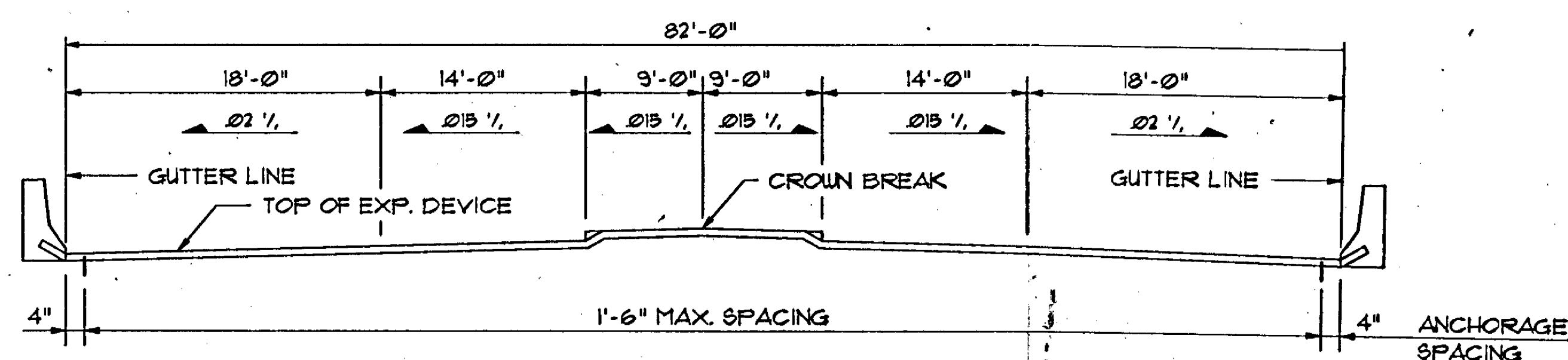
FIG. 5-397.627
 Revised: October 15, 1982 Approved: July 16, 1982
 Sheet No. 23 of 31 Sheets
 Bridge No. 02560



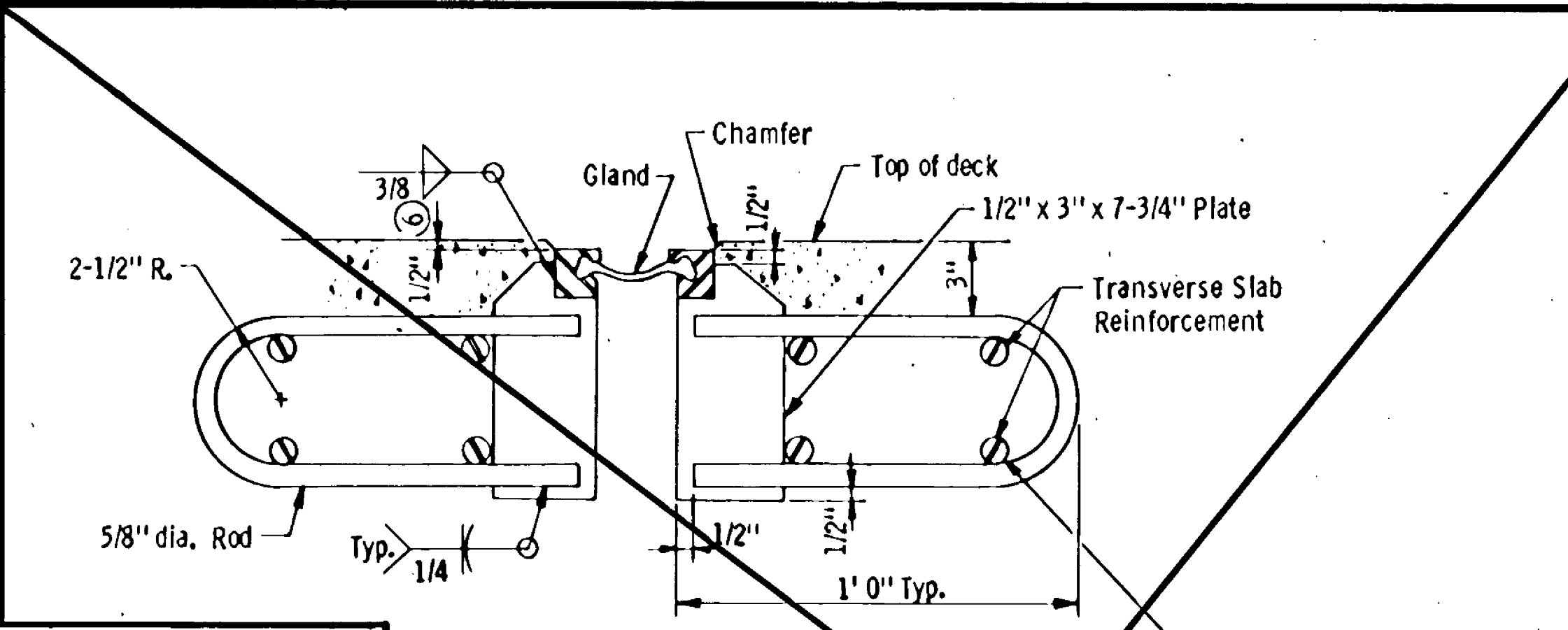
PLAN VIEW AT EXPANSION DEVICE



ALTERNATE 2 CURVED EXPANSION DEVICE



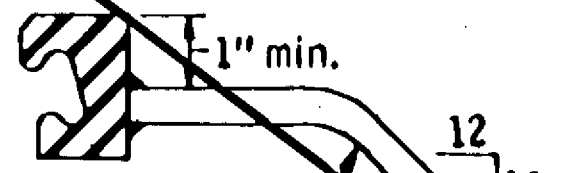
SECTION THRU EXPANSION DEVICE (PERPENDICULAR TO ROADWAY)



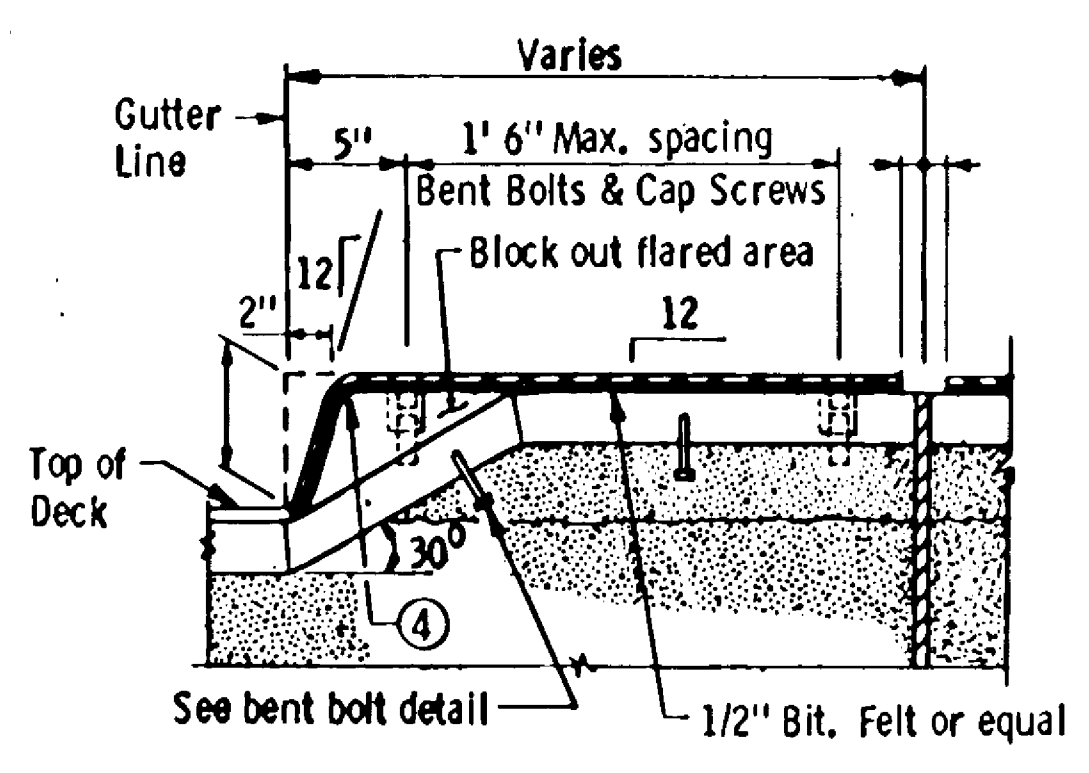
SECTION A-A ANCHORAGE



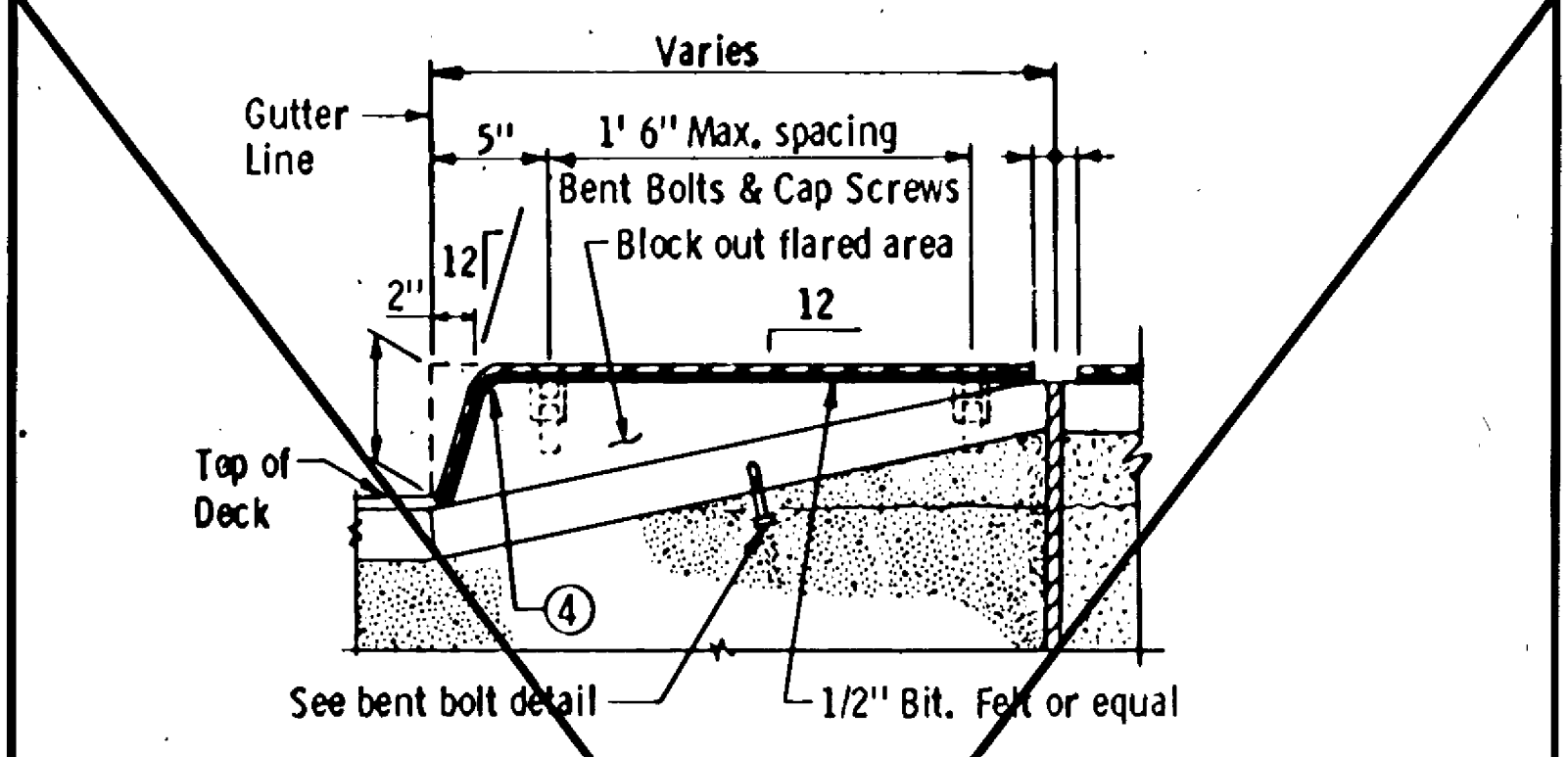
SECTION D-D



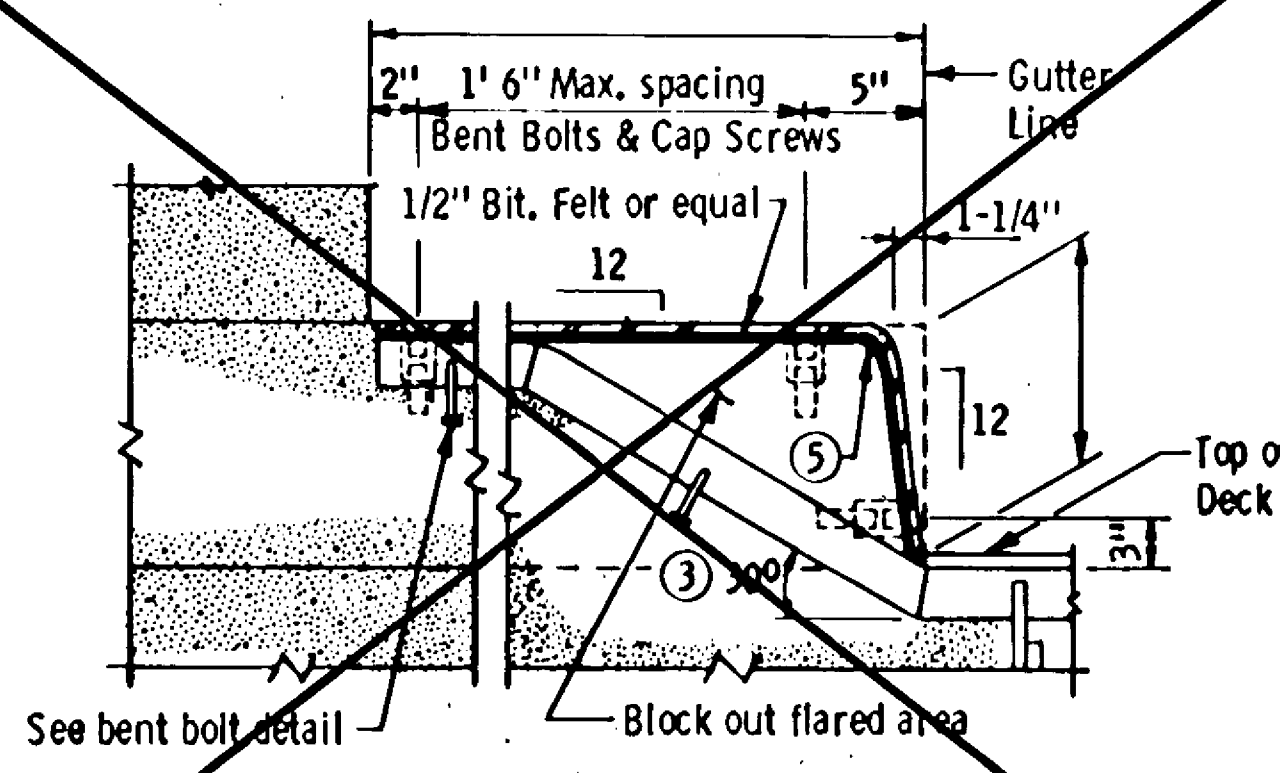
BENT BOLT DETAIL



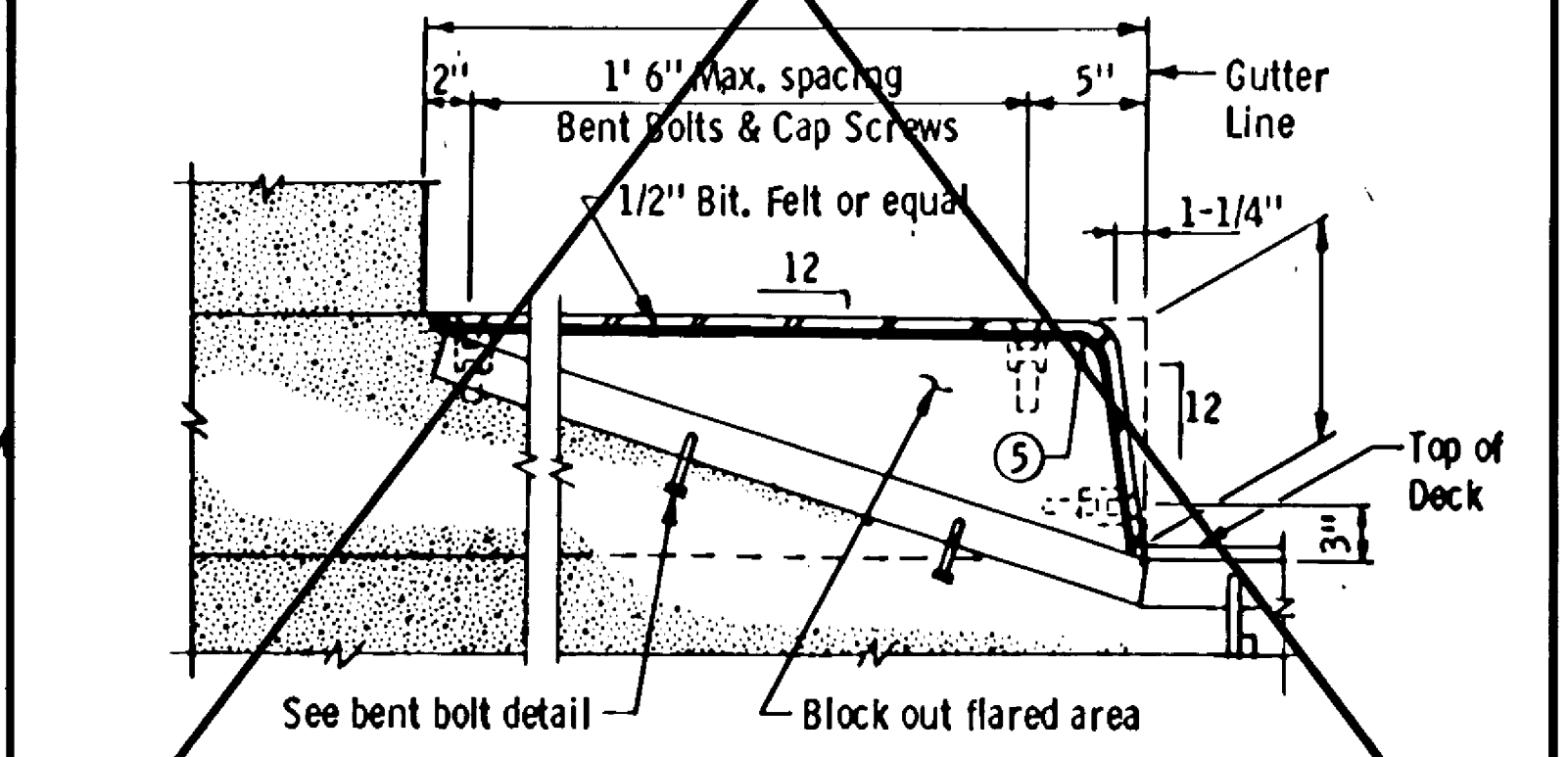
SECTION ALTERNATE X



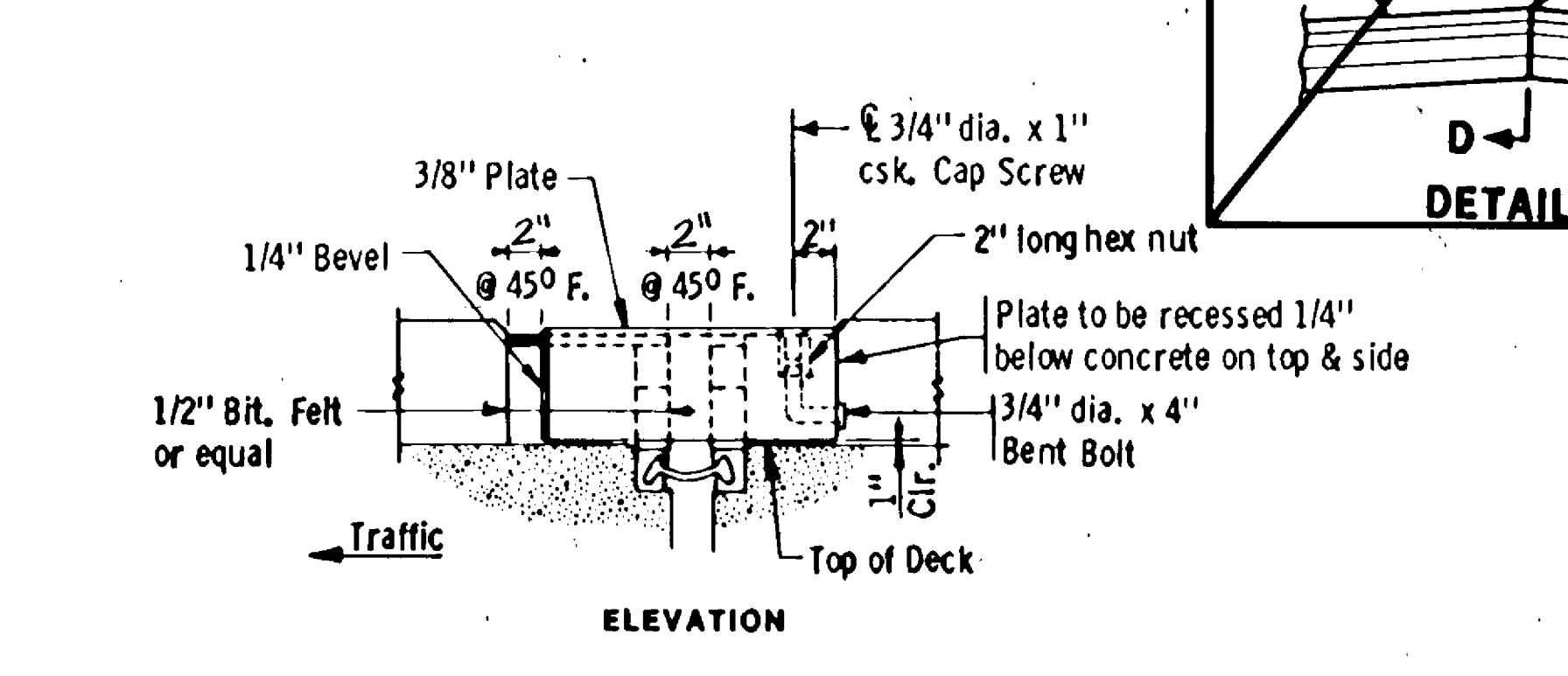
SECTION ALTERNATE Y RAISED MEDIAN DETAILS



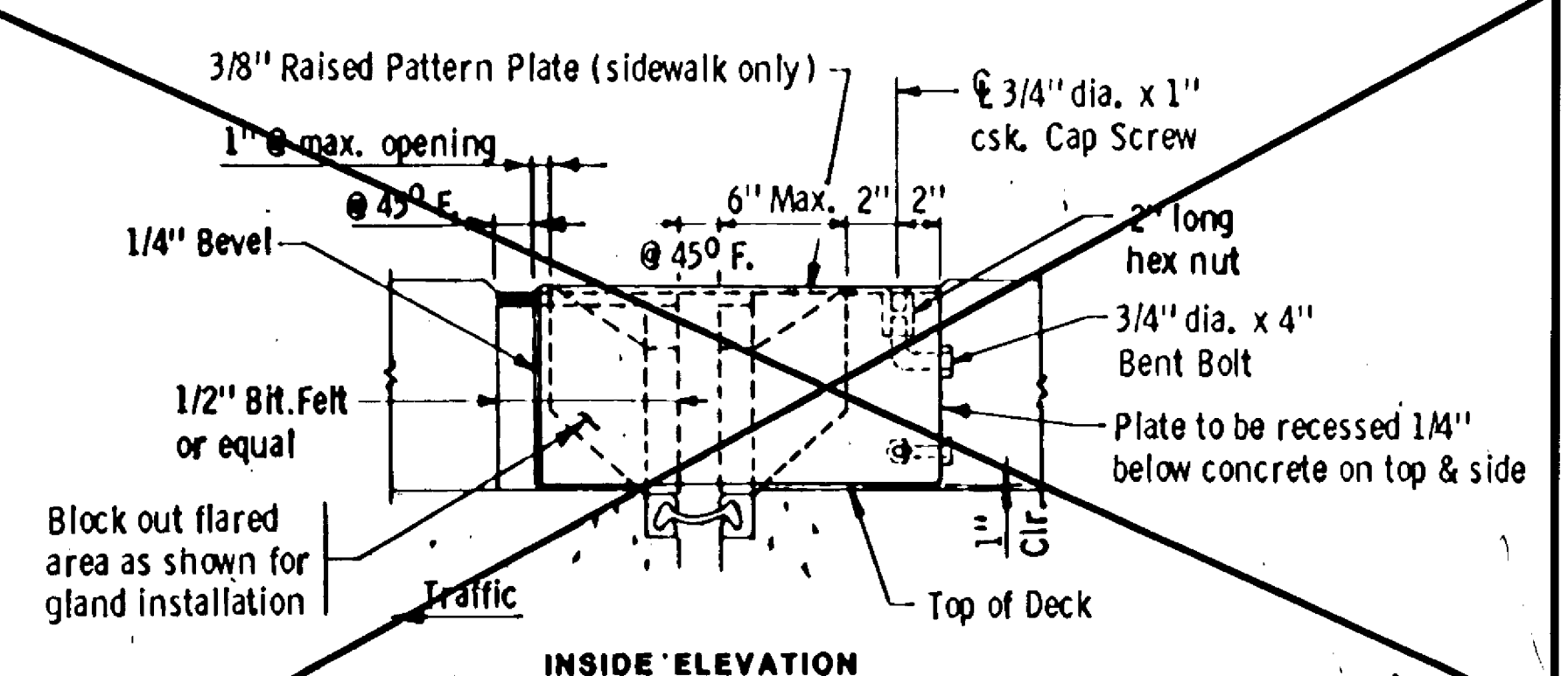
SECTION ALTERNATE X



SECTION ALTERNATE Y SIDEWALK DETAILS



ELEVATION



INSIDE ELEVATION

NOTES:
Galvanize structural steel after fabrication as per Spec. 3394.
Joints in roadway plate or extrusion shall be located at breaks in transverse profile and as otherwise required. Joints shall be close fit and welded. Repair after welding as per Spec. 2471.3L.
Structural steel shall comply with Spec. 3306, Spec. 3307 & Spec. 3309.
Expansion device shall be straightened to a tolerance of 1/8" in 10 ft.
Cap screws shall be countersunk 1/16" below top of plate.
Galvanize screws and nuts as per Spec. 3392.
See superstructure sheets for expansion device alternate at railing.
When expansion devices are used at ends of bridge, the bridge contractor shall furnish expansion device and gland. The roadway contractor shall install the part of the expansion device which includes the gland as shown on this sheet.

- ① Varies 18" to 24"
- ② Dimension along centerline of joint.
- ③ For roadway skews over 25° use 45°.
- ④ 2-3/4" outside radius of steel plate
- ⑤ 3/4" outside radius of steel plate
- ⑥ 5/8" max. when Snowplow Fingers are used. Use 1/8" (with 1/4" max.) when Snowplow Fingers are not used.

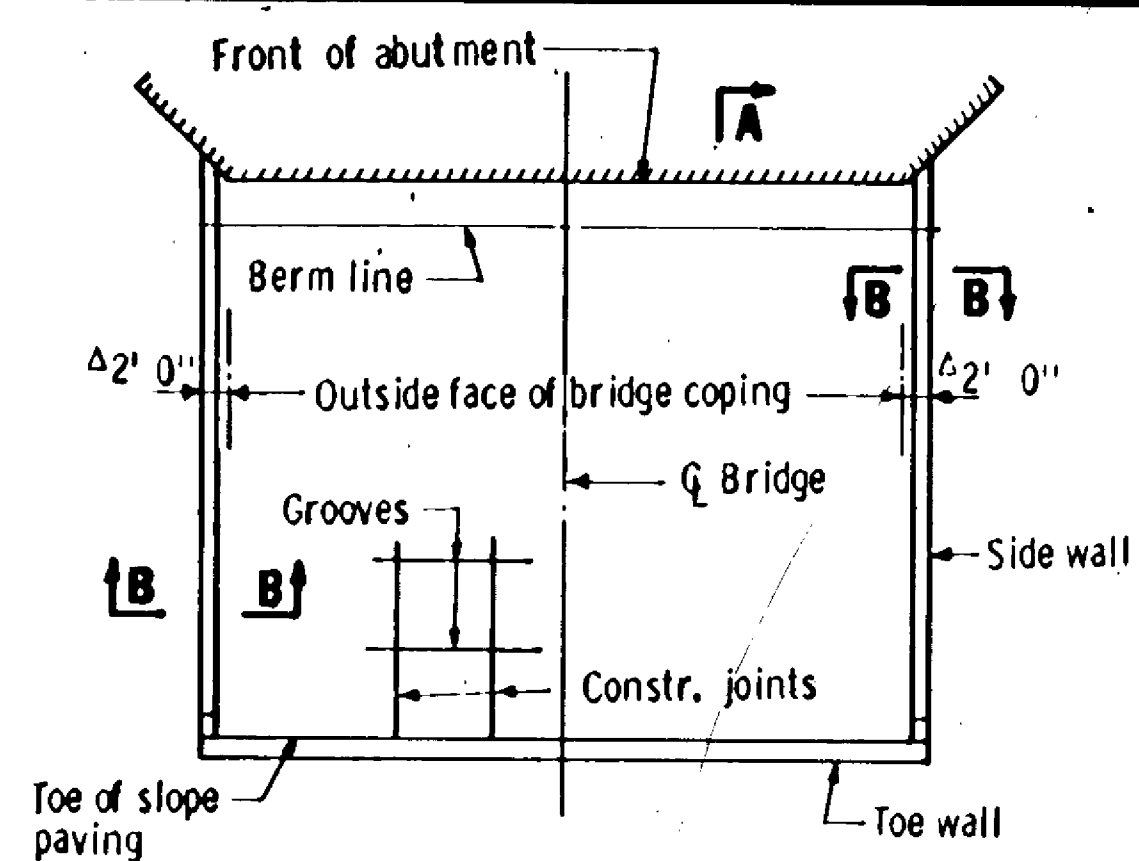
FIG. 5-397.630
Revised: October 15, 1982 Approved: July 16, 1982

TITLE: **WATERPROOF EXPANSION DEVICE WITH SIDEWALK OR RAISED MEDIAN**

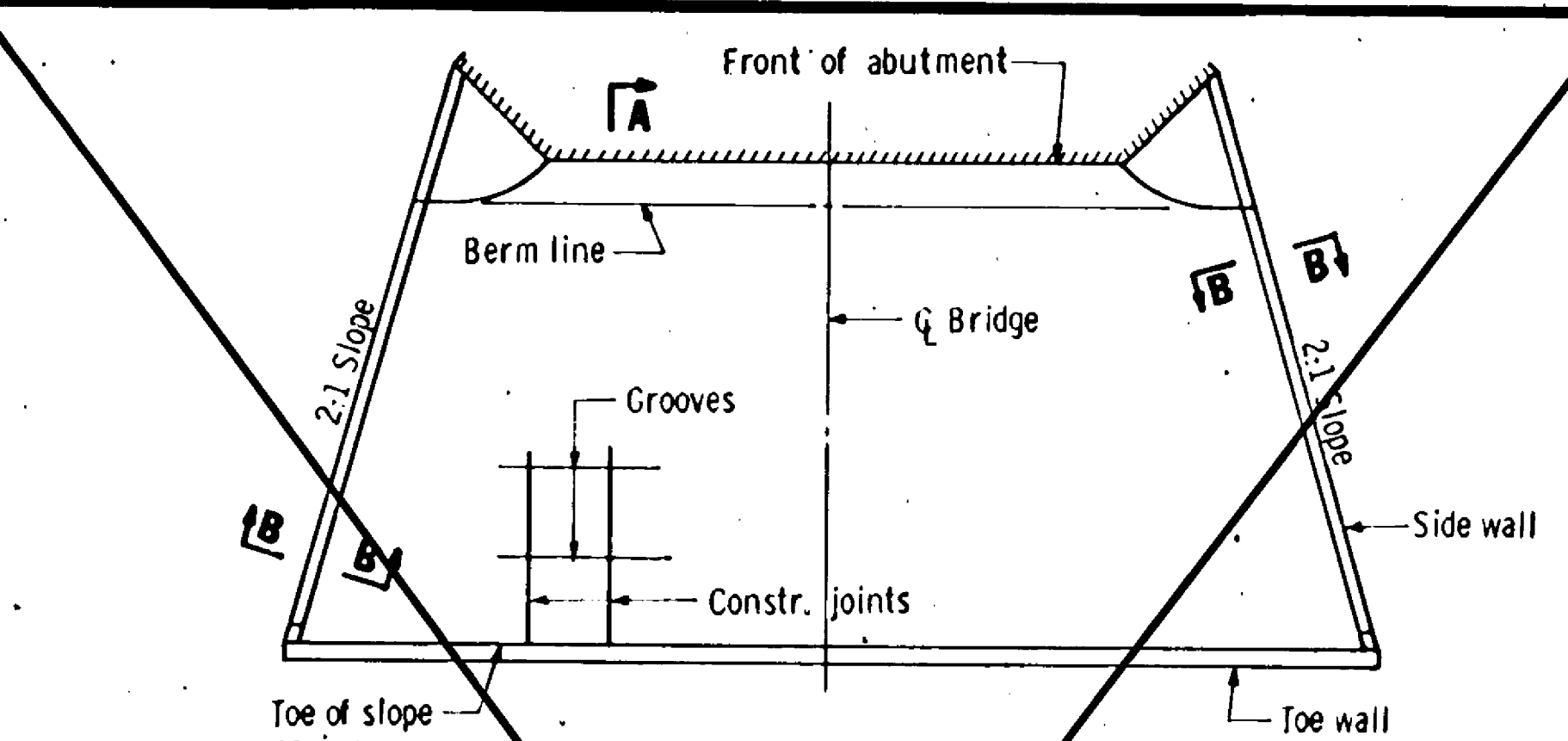
DES: _____ DR: _____
CNC: _____ CNC: _____
APPROVED: 4-1-71

Bridge No. 02560
Sheet No. 24 of 31 Sheets

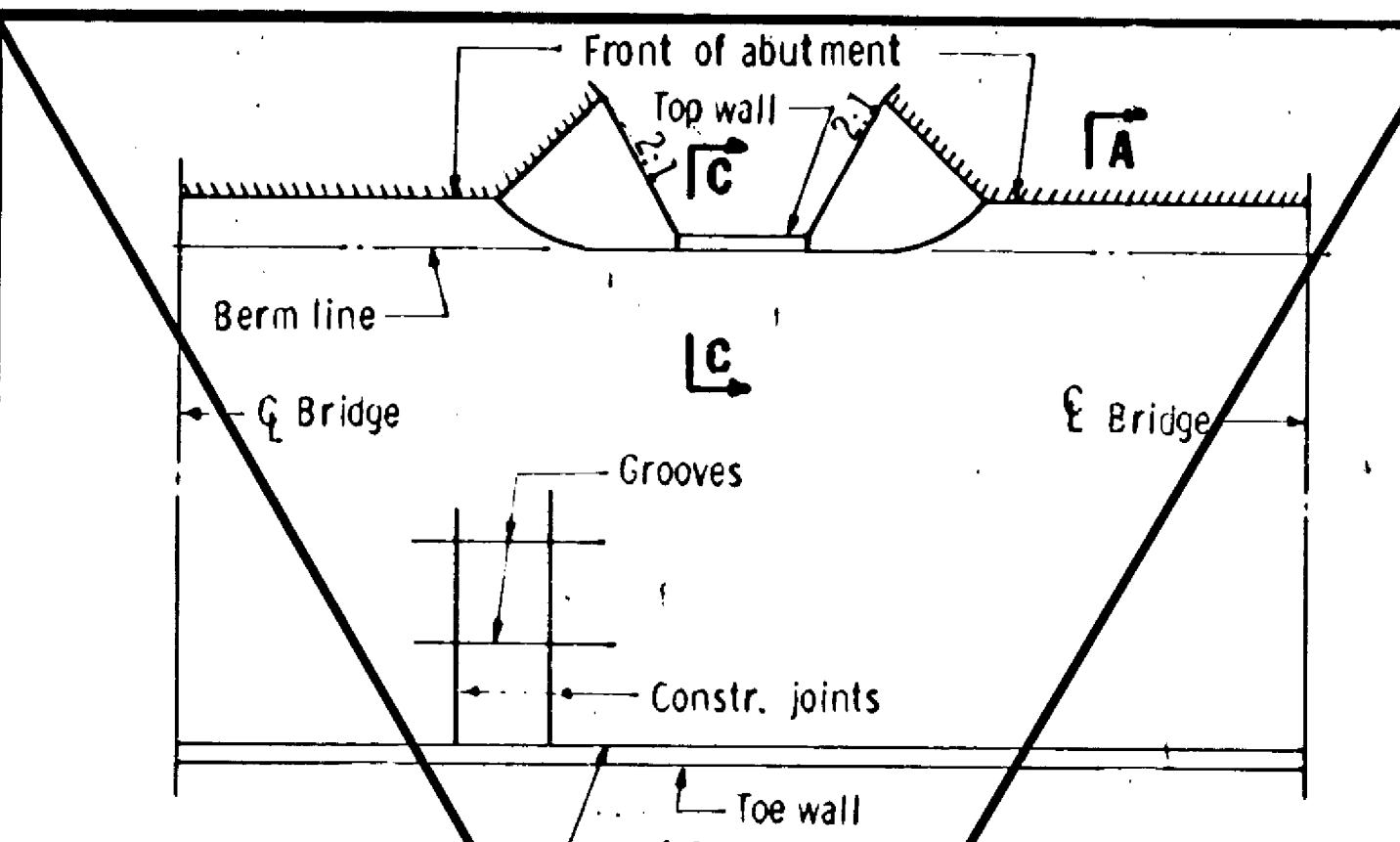
S.A.P. 02-614-18



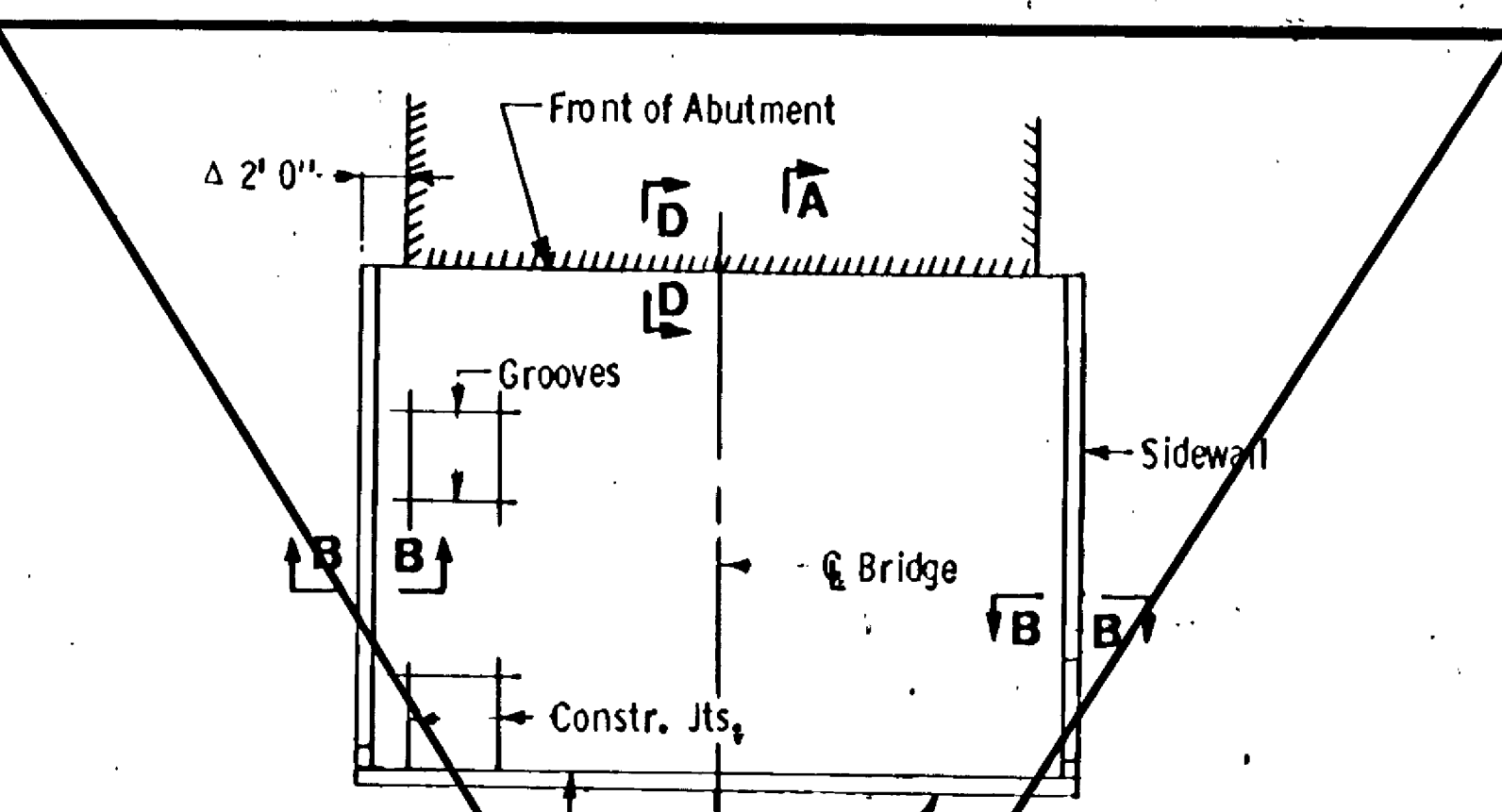
SQUARE BRIDGE



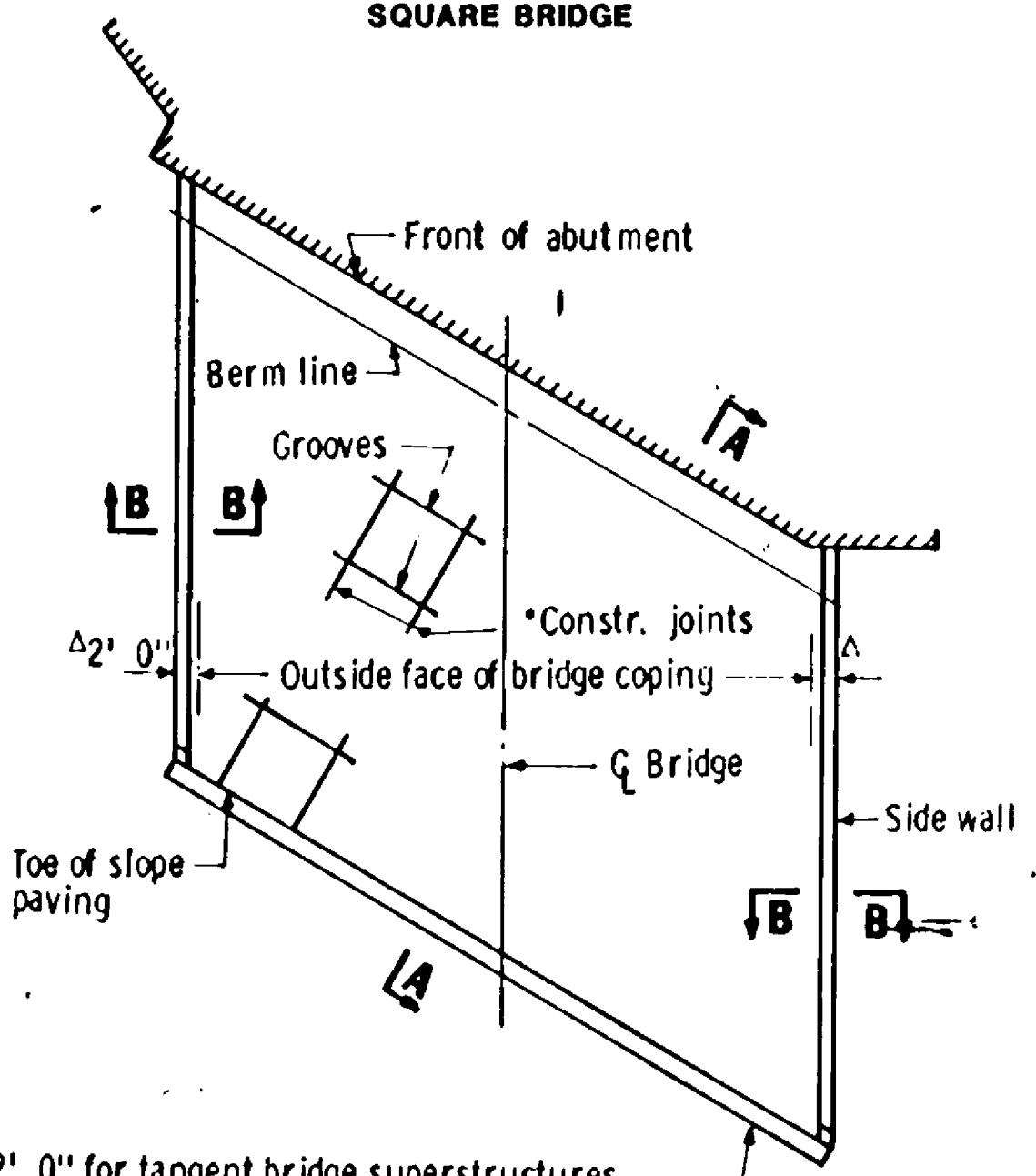
SQUARE BRIDGE



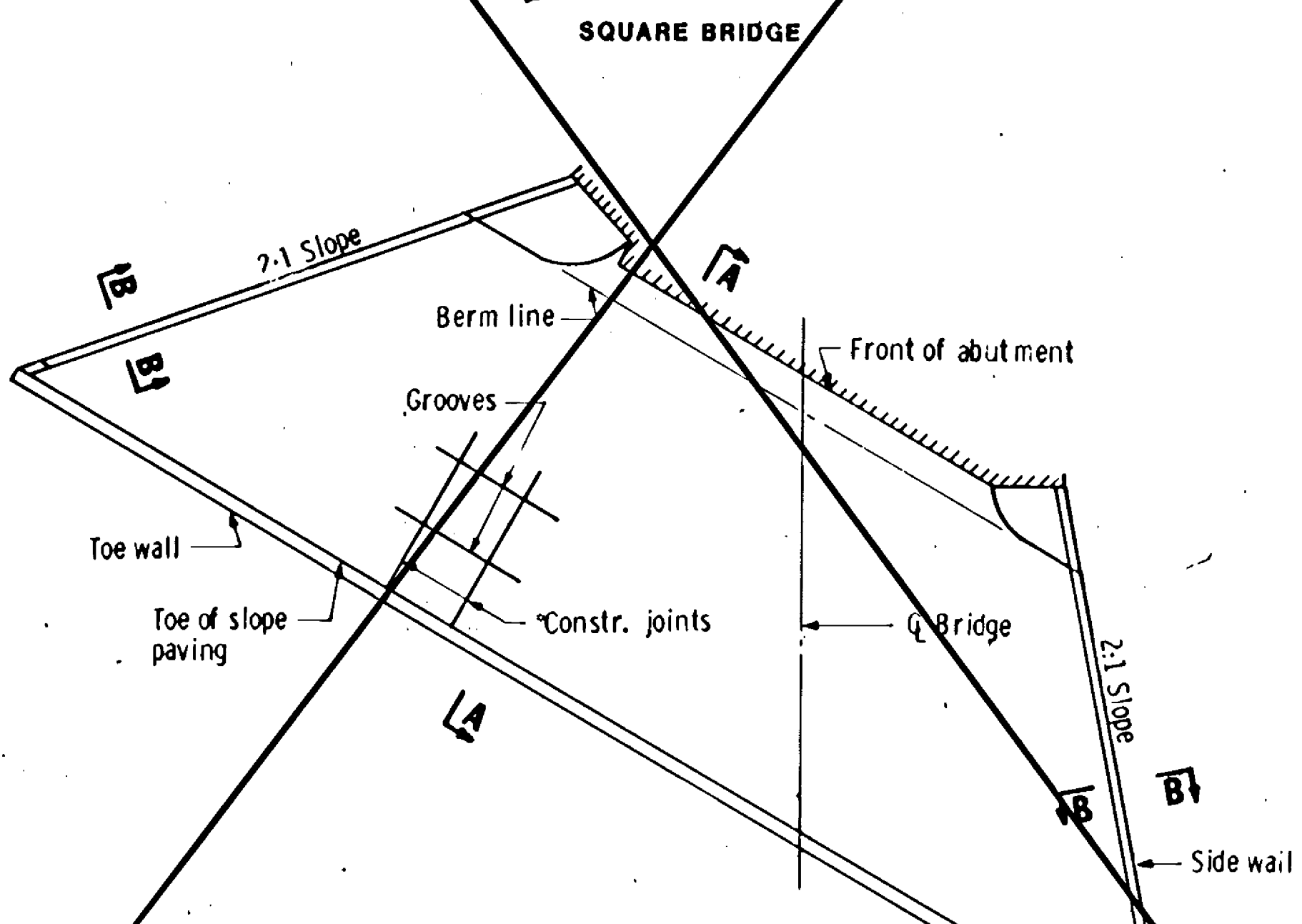
SQUARE BRIDGE



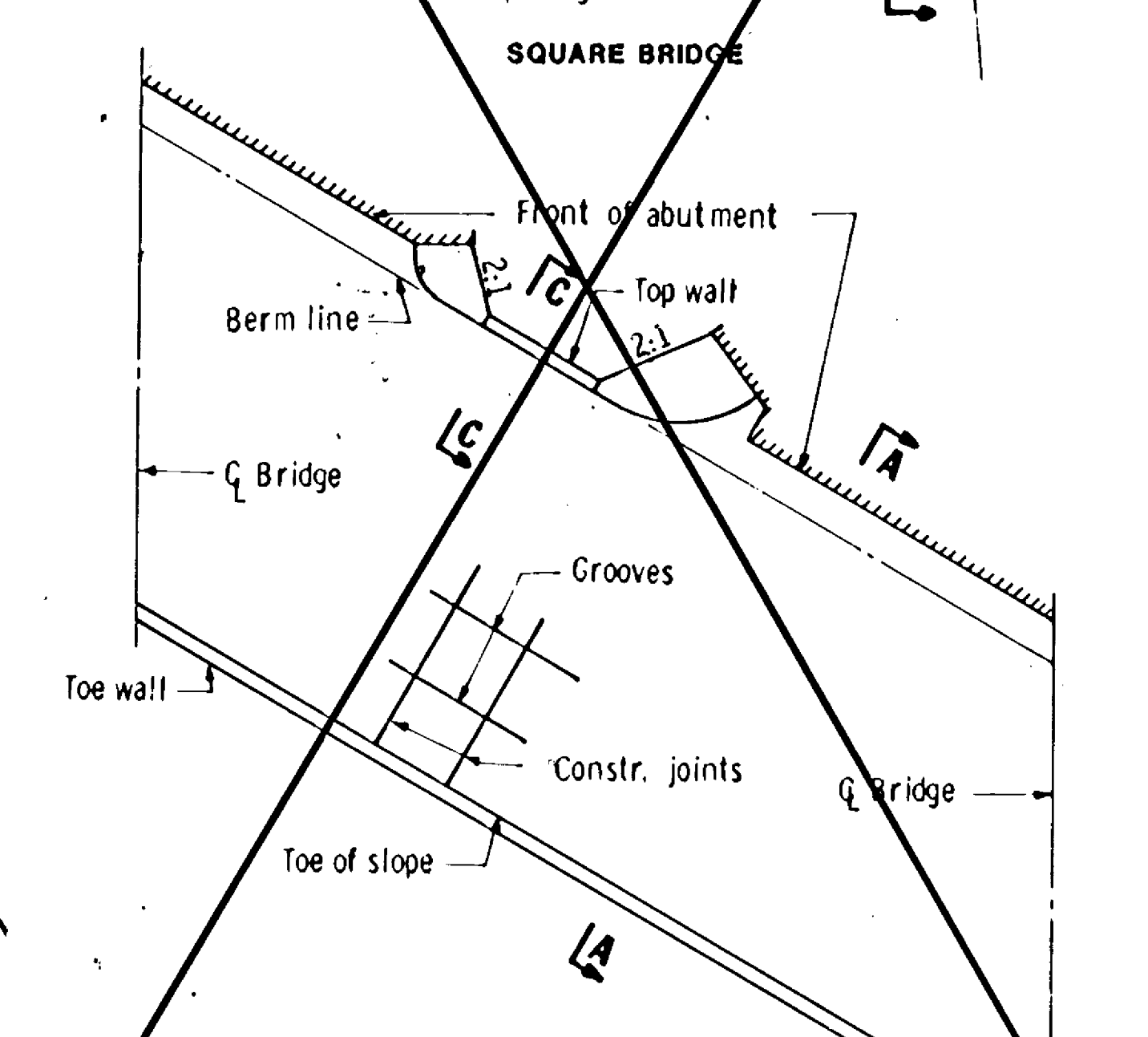
SQUARE BRIDGE



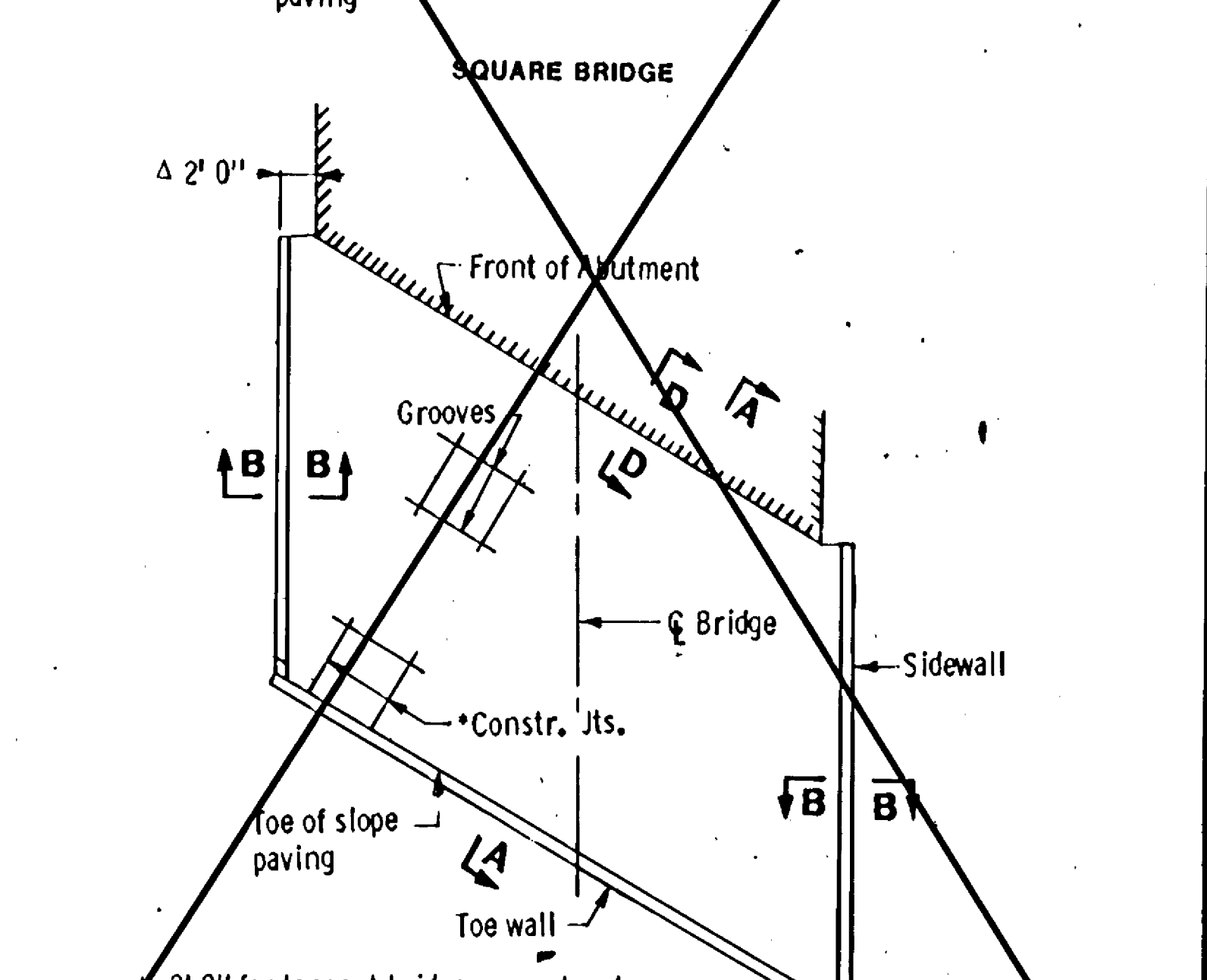
SKewed BRIDGE



SKewed BRIDGE



SKewed BRIDGE



SKewed BRIDGE

2' 0" for tangent bridge superstructures. Varies 2' 0" minimum for curved bridge superstructures.
 *Vertical construction joints may be constructed parallel to G of bridge for skews to 10° only.

*Vertical construction joints may be constructed parallel to G of bridge for skews to 10° only.

*Vertical construction joints may be constructed parallel to G of bridge for skews to 10° only.

2' 0" for tangent bridge superstructures. Varies 2' 0" minimum for curved bridge superstructures.
 *Vertical construction joints may be constructed parallel to G of bridge for skew to 10° only.

LAYOUTS FOR SLOPES 2:1 OR FLATTER

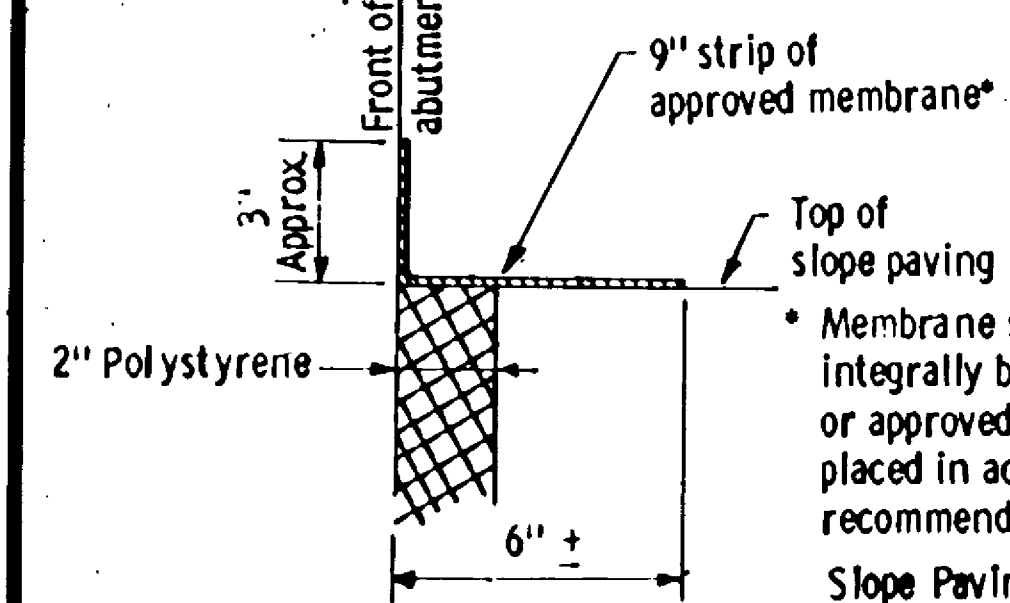
LAYOUTS FOR SLOPES STEEPER THAN 2:1

LAYOUTS FOR SLOPES STEEPER THAN 2:1 BETWEEN BRIDGES

LAYOUTS FOR SLOPES AT HIGH ABUTMENTS

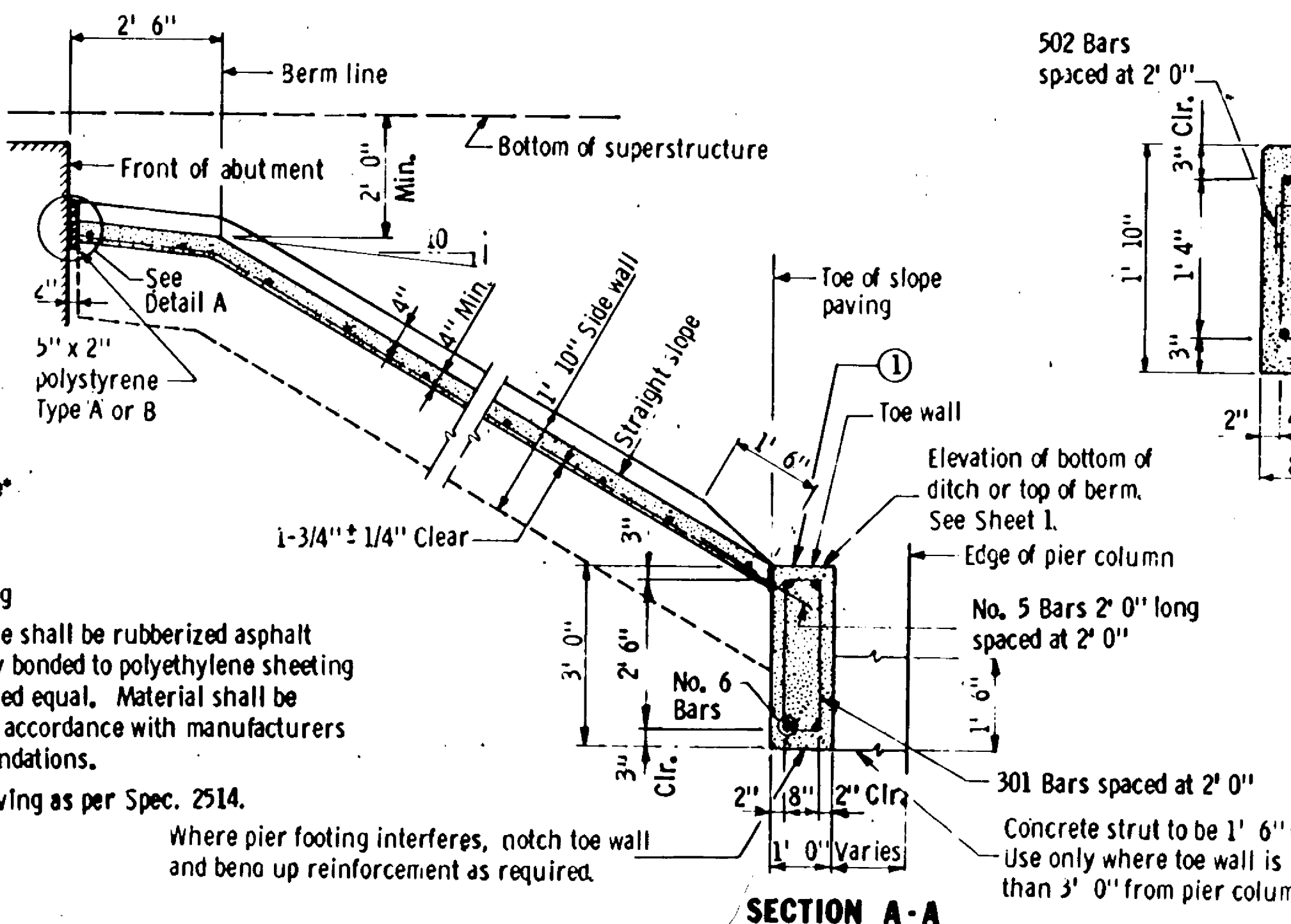
CONCRETE & REINFORCEMENT UNIT QUANTITIES

- ① 3.00 Sq. Ft. of concrete/Lin. Ft. 1.41 Lbs. of reinforcement/Lin. Ft.
- ② 1.23 Sq. Ft. of concrete/Lin. Ft. 4.46 Lbs. of reinforcement/Lin. Ft.
- ③ 1.56 Sq. Ft. of concrete/Lin. Ft. 3.70 Lbs. of reinforcement/Lin. Ft. Based on a slope of 2:1
- ④ .33 Cu. Ft. of concrete/Sq. Ft. .50 Lbs. of reinforcement/Sq. Ft.

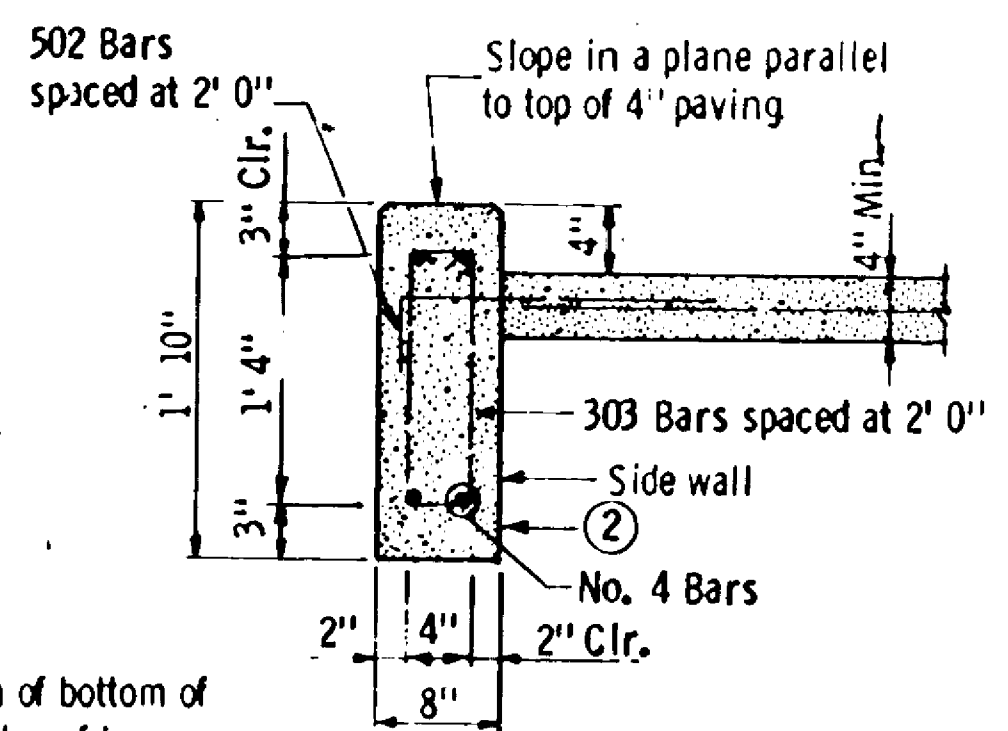


DETAIL A

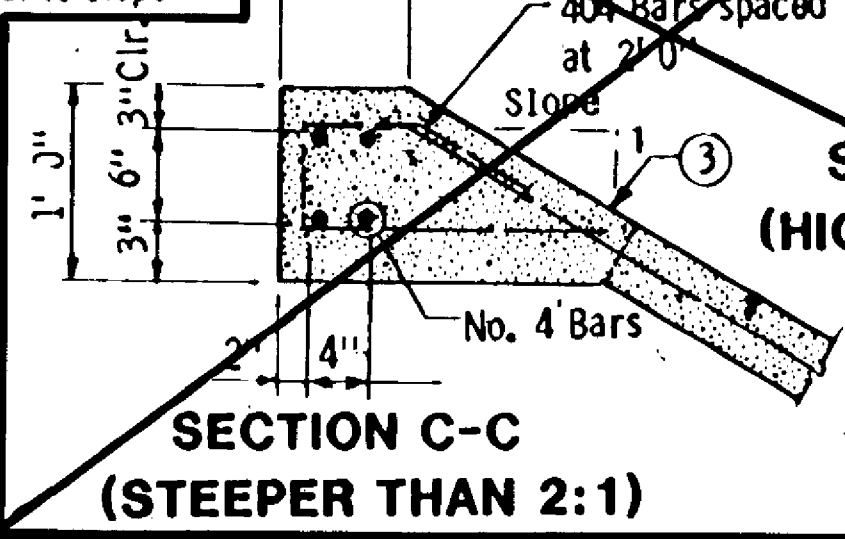
Membrane shall be rubberized asphalt integrally bonded to polyethylene sheeting or approved equal. Material shall be placed in accordance with manufacturers recommendations.
 Slope Paving as per Spec. 2514.



SECTION A-A

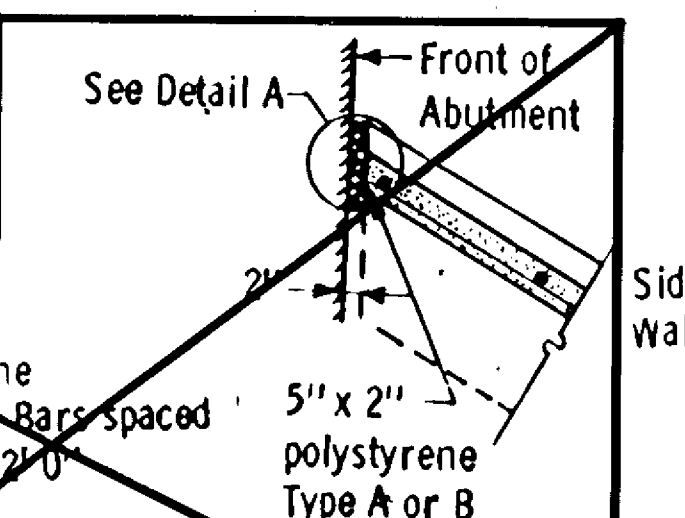


SECTION B-B (SIDE WALL)

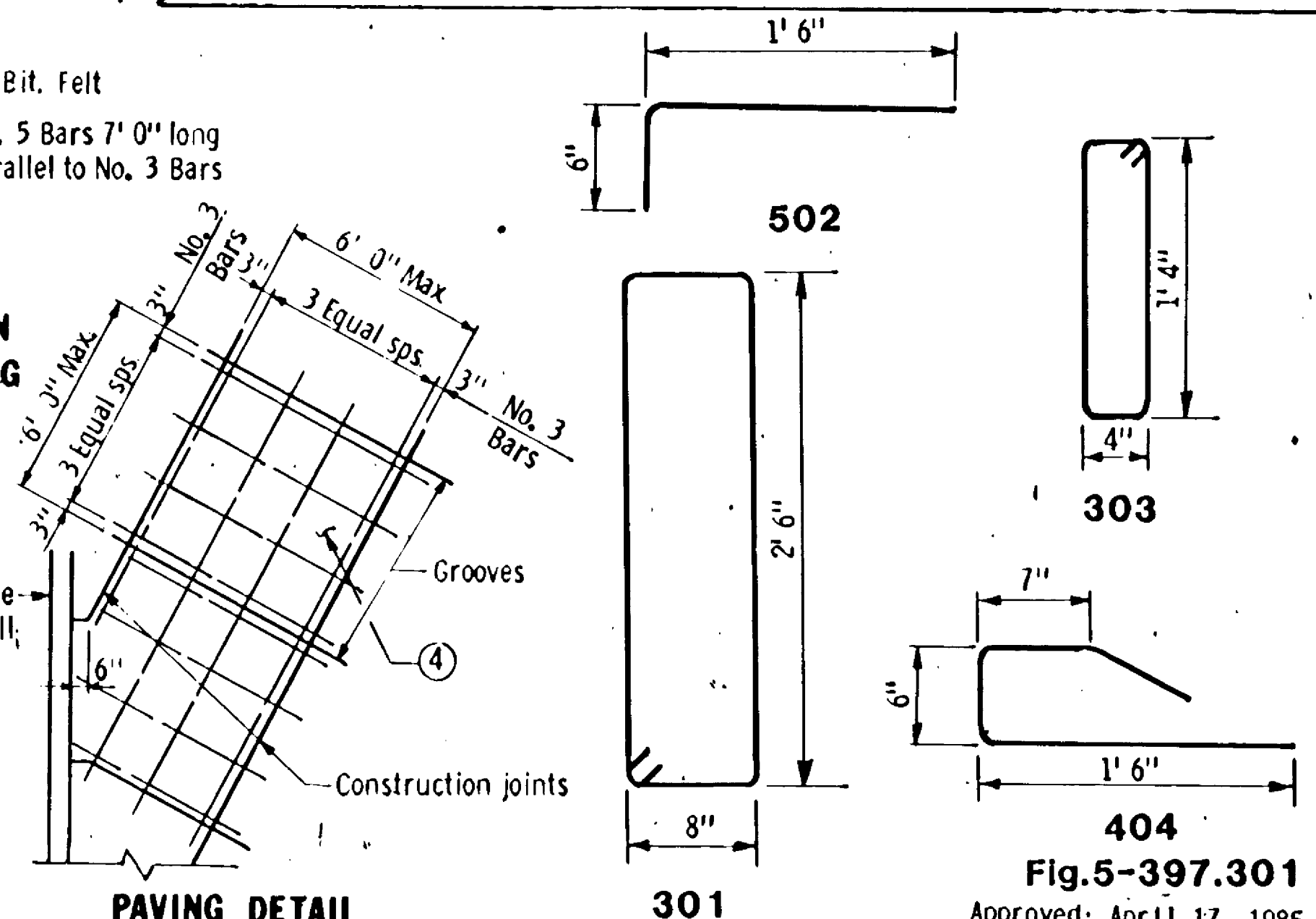


SECTION C-C (STEEPER THAN 2:1)

DETAIL WHERE PIER COLUMN EXTENDS THRU SLOPE PAVING



SECTION D-D (HIGH ABUTMENTS)

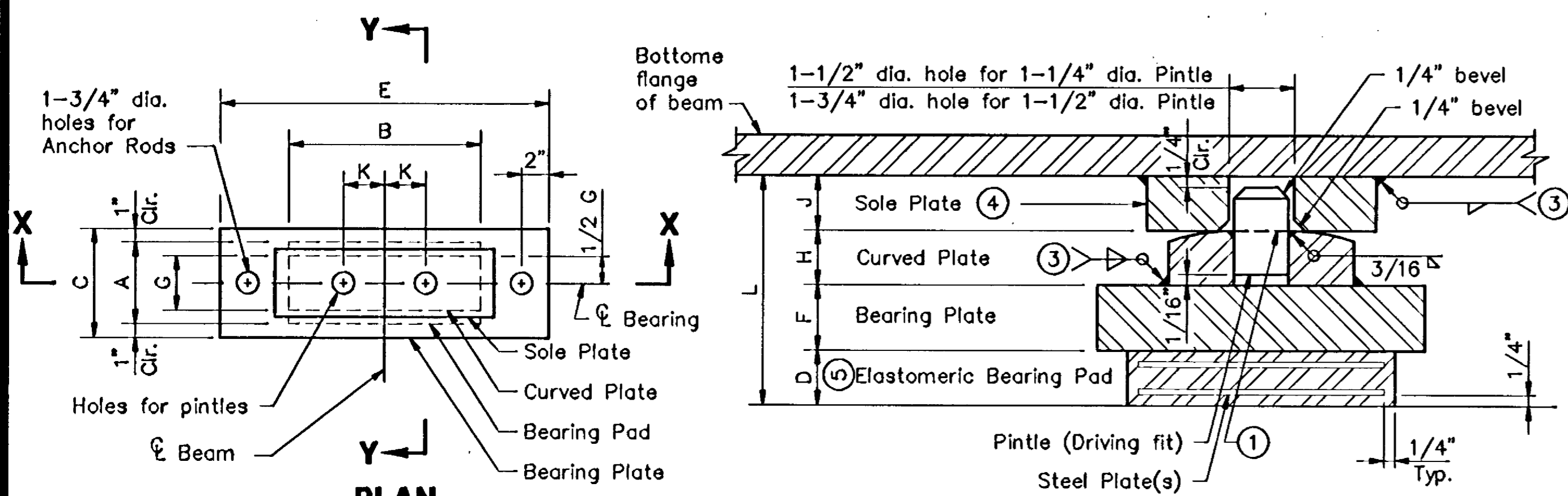


PAVING DETAIL

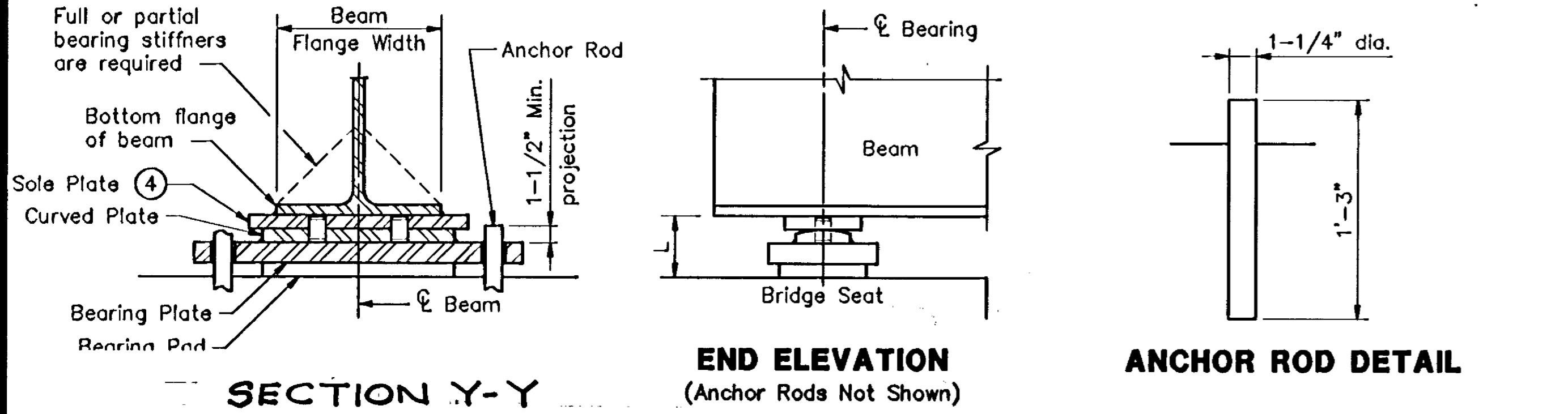
CONCRETE SLOPE PAVING UNDER BRIDGES

DES:	DR:	APPROVED:	Bridge No.
CNK:	CNK:	4-1-71	02560
Sheet No. 25 of 31 Sheets			

Fig. 5-397.301
 Approved: Apr 11 17, 1985



**SECTION Y-Y
(ENLARGED BEARING ASSEMBLY)**



**END ELEVATION
(Anchor Rods Not Shown)**

ANCHOR ROD DETAIL

TABLE ②

Beam Flange Size	Bearing Pad Size			Steel Plates		Laminates		Shape Factor	Bearing Plate Size			Curved Plate Size			Sole Plate Size			Pintle Dia.	Pintle Spacing	Assy. Height	Assembly Type
	A	B	D	No.	Thick.	No.	Thick.		C	E	F	G	B	H	Width	Length	J ④				
12"	20"	20"	1 3/8"	2	3/16"	1	3/4"	6.7	22"	30"	2"	8"	20"	2 1/4"	10"	22"	2 1/4"	1 1/2"	2 3/4"	8 1/8"	FI

NOTES:

For elastomeric materials & pad construction, see Spec. 3741 and special provisions, except as noted.

All steel plates & anchor rods shall comply with Spec. 3306, except as noted.

All plates shall be flat after fabrication and galvanizing. Welding distortion of the bearing plates shall be straightened to within 1/16" of flatness by mechanical means without damage to the zinc coating.

Pintles shall comply with Spec. 3314, Type II.

Galvanize anchor rods and structural steel bearing assembly after fabrication per Spec. 3394, except as noted.

Payment for bearing assembly shall include all material on this detail, except the sole plate.

- ① The radius of the curved plate shall be 1'-0" min. & 1'-6" max. Finish to 250 Micro. The finished thickness of the plate may be 1/16" less than shown.
- ② See Bridge Design Manual for design requirements.
- ③ For sole plate or bearing plate thicknesses up to 1-1/2", use 5/16" fillet welds; for thicknesses over 1-1/2" to 2-1/4", use 3/8" fillet welds; for thicknesses over 2-1/4", use 1/2" fillet welds with minimum preheat of 300°.
- ④ The sole plate may be tapered, only as shown on superstructure details. When the sole plate is tapered, dimension "J" is the minimum thickness of the plate.
- ⑤ The total thickness "D" includes the steel plates required. Do not galvanize these plates.

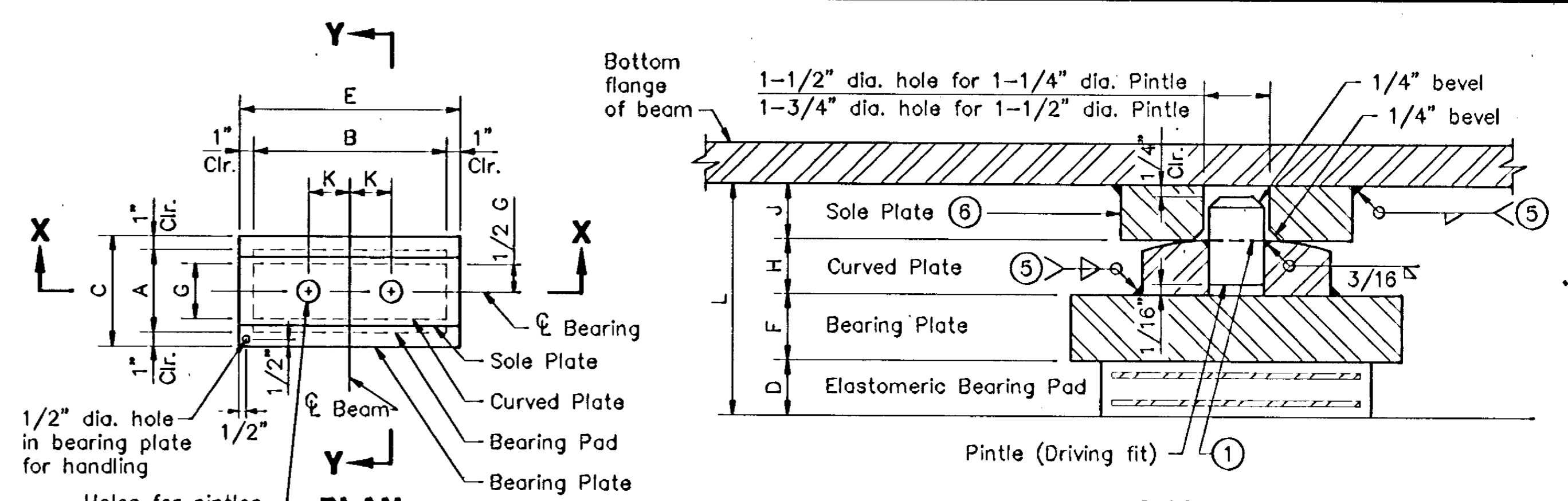
STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

CURVED PLATE BEARING ASSEMBLY
STEEL BEAMS
(FIXED)

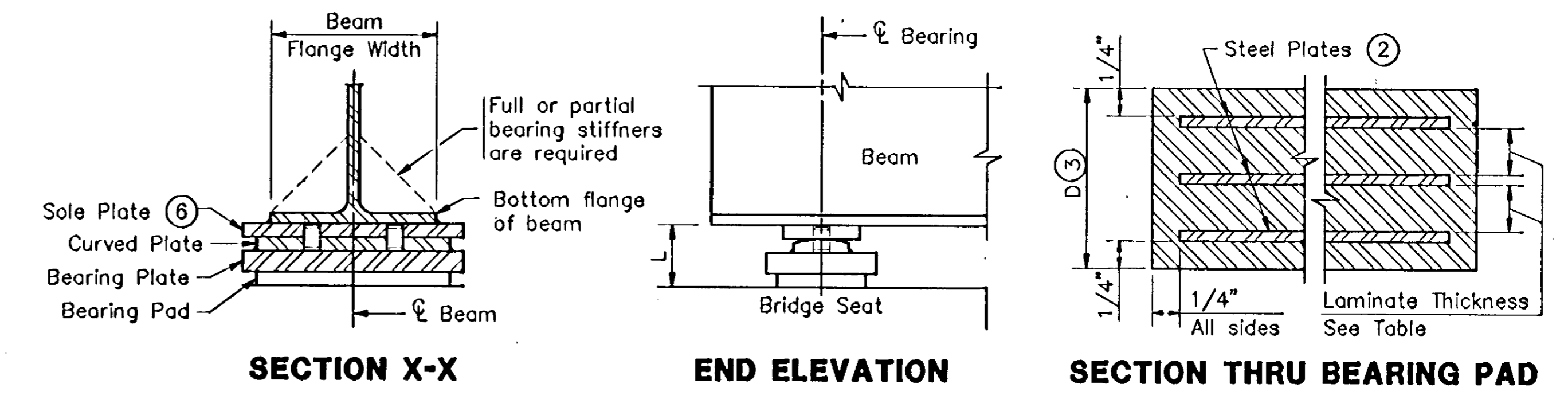
REVISION

DETAIL NO.
B354
MODIFIED

NOTE:
BEARING ARE TO BE FURNISHED UNDER SEPARATE CONTRACT.



**SECTION Y-Y
(ENLARGED BEARING ASSEMBLY)**



SECTION X-X

END ELEVATION

SECTION THRU BEARING PAD

TABLE ④

Beam Flange Size	Bearing Pad Size			Steel Plates		Laminates		Shape Factor	Bearing Plate Size			Curved Plate Size			Sole Plate Size			Pintle Dia.	Pintle Spacing	Assy. Height	Assembly Type
	A	B	D	No.	Thick.	No.	Thick.		C	E	F	G	B	H	Width	Length	J ⑥				

NOTES:

For elastomeric materials & pad construction, see Spec. 3741 and special provisions, except as noted.

All steel plates shall comply with Spec. 3306, except as noted.

All plates shall be flat after fabrication and galvanizing. Welding distortion of the bearing plates shall be straightened to within 1/16" of flatness by mechanical means without damage to the zinc coating.

Pintles shall comply with Spec. 3314, Type II.

Galvanize structural steel bearing assembly after fabrication per Spec. 3394, except as noted.

Payment for bearing assembly shall include all material on this detail, except the sole plate.

- ① The radius of the curved plate shall be 1'-0" min. & 1'-6" max. Finish to 250 Micro. The finished thickness of the plate may be 1/16" less than shown.
- ② Do not galvanize these plates.
- ③ The total thickness shown includes the steel plates.
- ④ See Bridge Design Manual for design requirements.
- ⑤ For sole plate or bearing plate thicknesses up to 1-1/2", use 5/16" fillet welds; for thicknesses over 1-1/2" to 2-1/4", use 3/8" fillet welds; for thicknesses over 2-1/4", use 1/2" fillet welds with minimum preheat of 300°.
- ⑥ The sole plate may be tapered, only as shown on superstructure details. When the sole plate is tapered, dimension "J" is the minimum thickness of the plate.

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

CURVED PLATE BEARING ASSEMBLY
STEEL BEAMS
(EXPANSION)

REVISION

DETAIL NO.
B355
MODIFIED

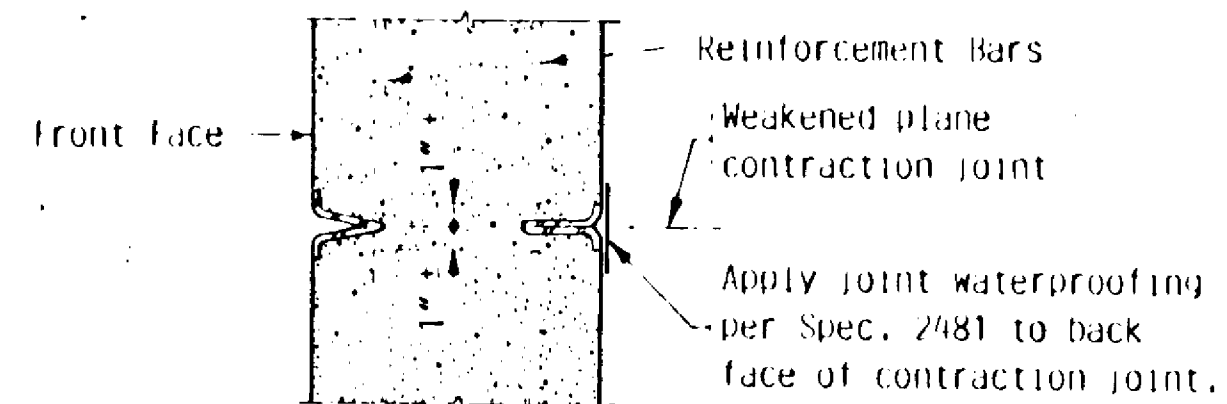
DETAILS

BRIDGE NO.
02560

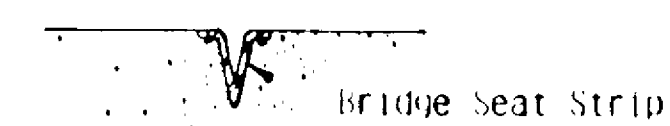
SHEET NO. 26 OF 31 SHEETS



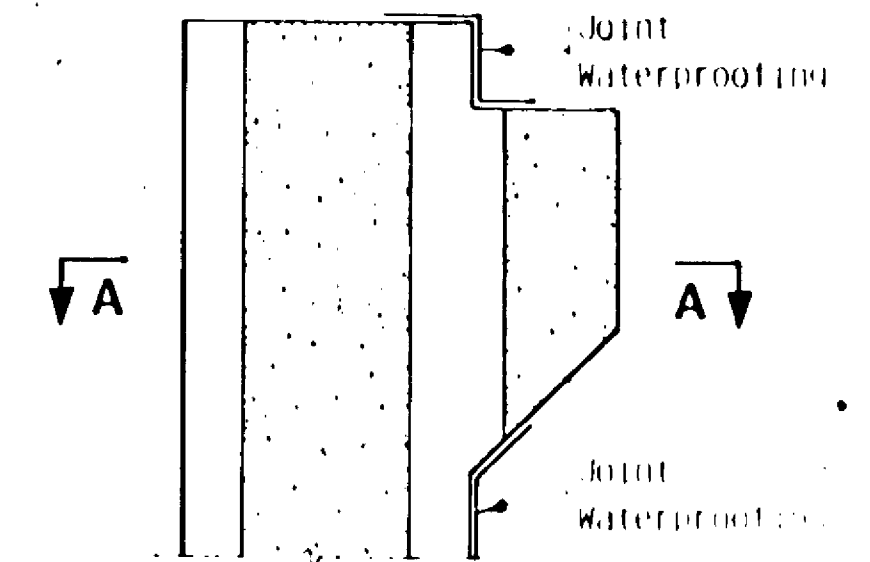
SECTION A-A



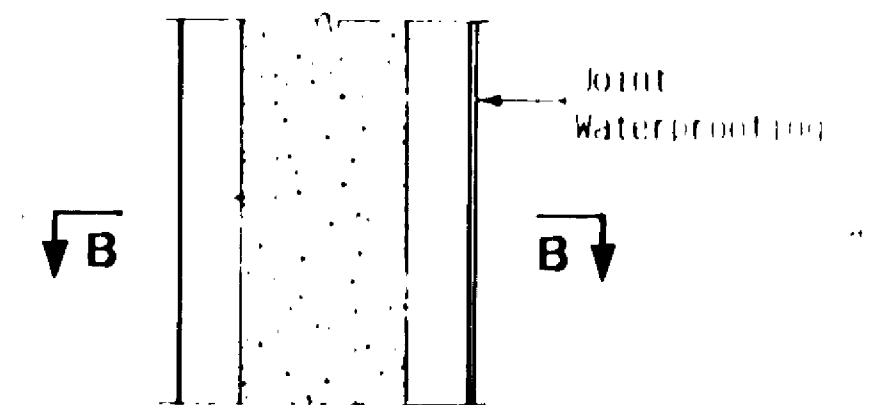
SECTION B-B



SECTION C-C

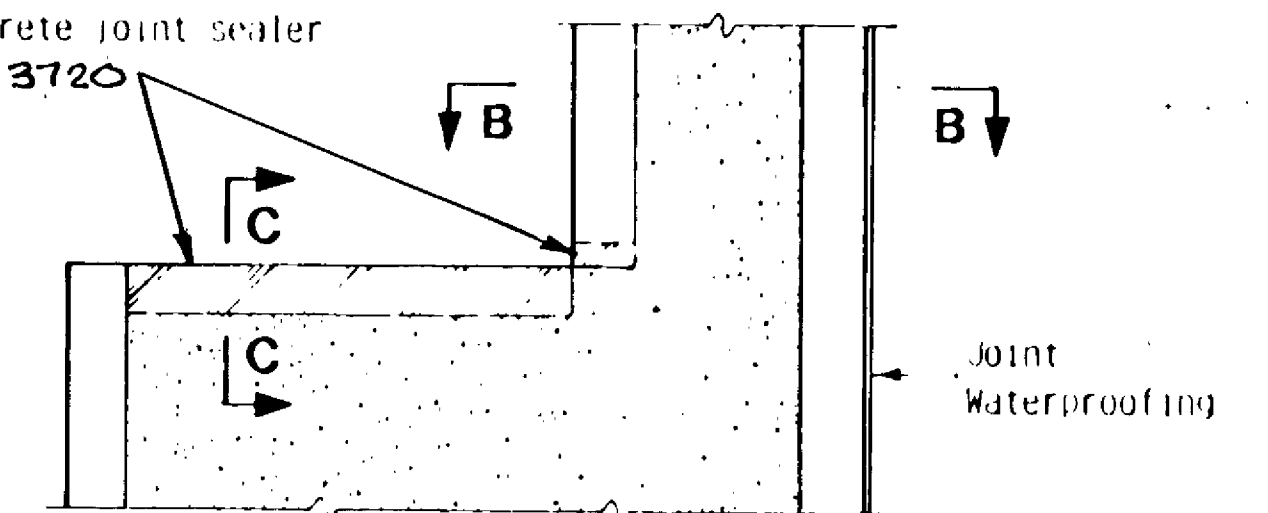


SECTION THRU PAVING BRACKET



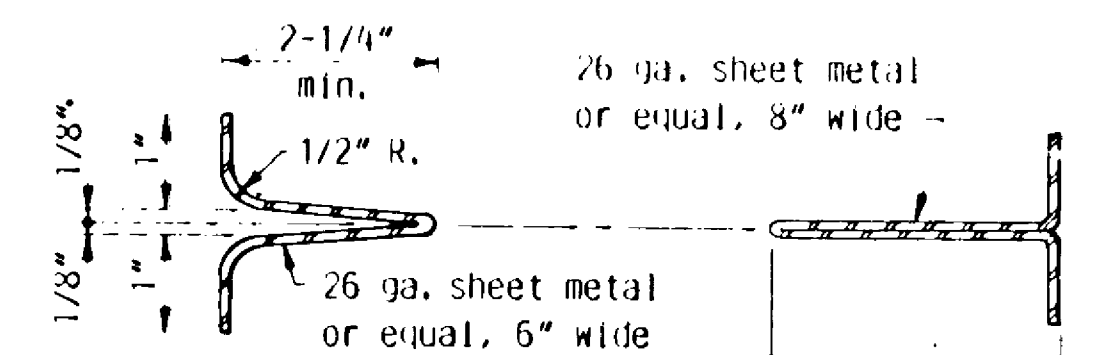
SECTION THRU WALL

Seal across bridge seat and 1" up face of abutment with concrete joint sealer per Spec. 3720



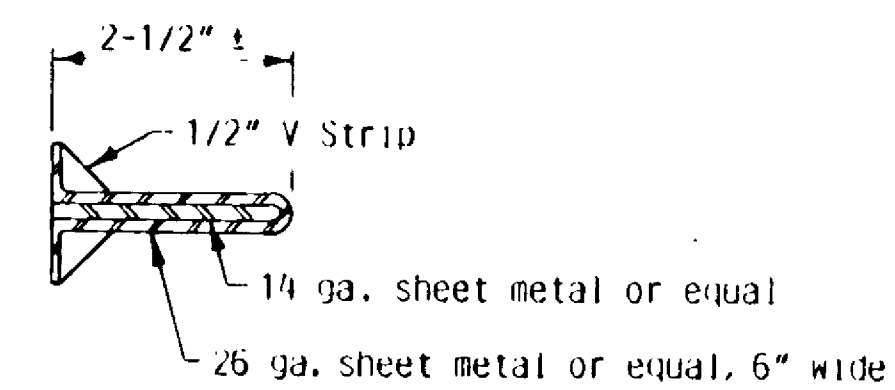
SECTION THRU BRIDGE SEAT

PART SECTION THRU ABUTMENT AT JOINT



BRIDGE SEAT and FRONT STRIP

BACK STRIP



ALTERNATE BRIDGE SEAT and FRONT STRIP

NOTES:

The methods and materials indicated on this sheet shall be considered as suggested only. Variations will be permitted, subject to approval by the Engineer, but must provide dummy joints of a depth not less than the depth shown, and a width at the front face of the abutment of not greater than 5/16". The separation of the horizontal reinforcement bars shall be not less than 1-1/2" nor more than 3", centered as shown, regardless of the procedure used for forming the dummy joint.

If the front and bridge seat strips are galvanized metal, they shall be securely fastened to the forms so that they will be removed with the forms. If a suitable plastic or other durable material, satisfactory to the Engineer, is used, the material may be left in place.

The back strip may be galvanized metal, a suitable plastic, or other durable material satisfactory to the Engineer. The back strip shall remain in place after the forms are removed.

The cost of forming the joint shall be included in the price bid for other items.

APPROVED: February 20, 1987
Developed by: ENGINEERING STANDARDS and BRIDGES & STRUCTURES
Issued by: ENGINEERING STANDARDS

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
CONTRACTION JOINT

REVISION

DETAIL NO.

B801

TITLE:

DETAILS

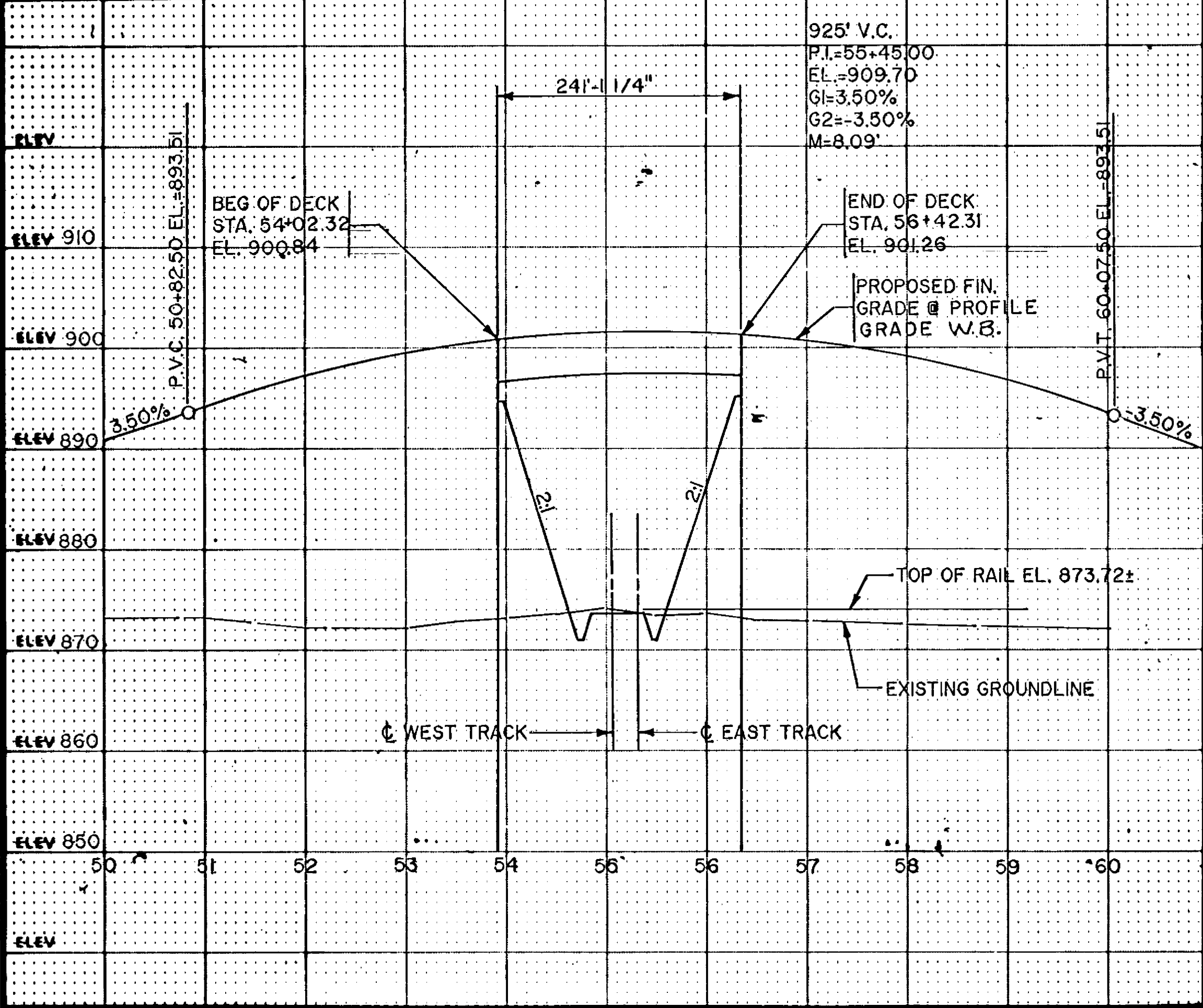
DES: _____ DR: _____
CHK: _____ CHK: _____
APPROVED: 4-1-91
Sheet No. 29 of 31 Sheets

Bridge No. 02560

S.A.P. 02-614-18

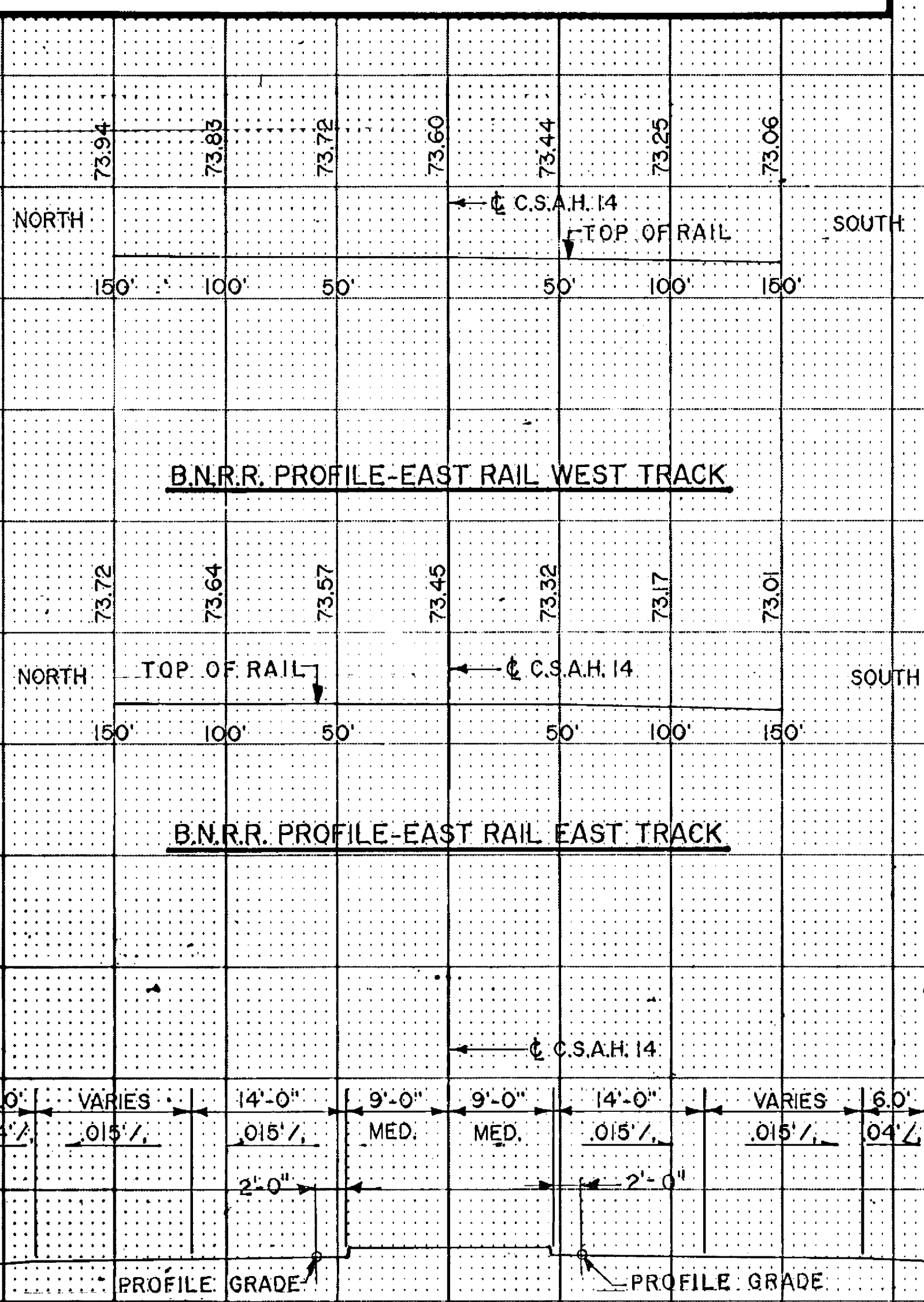
CONTRACTED PROFILE

SCALE: HOR. 1" = 50' VER. 1" = 5'

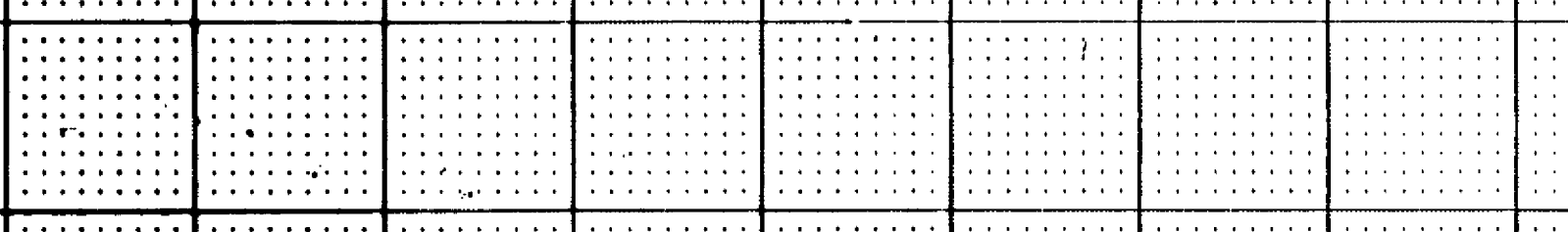


TYPICAL SECTIONS & PERTINENT DATA

SCALES AS SHOWN

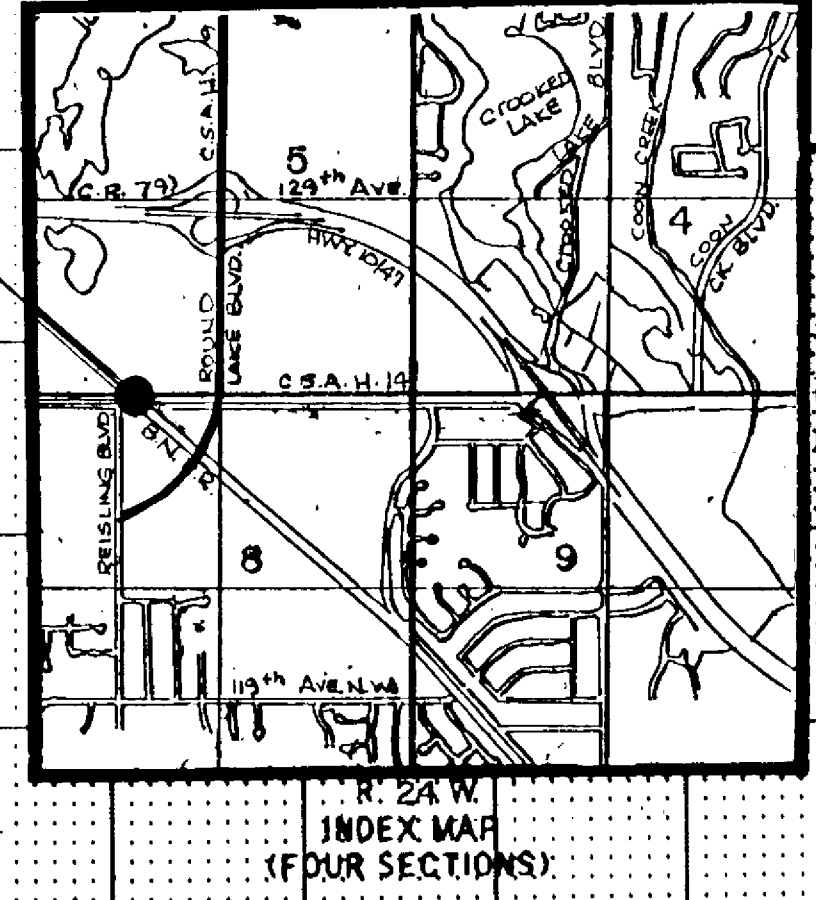
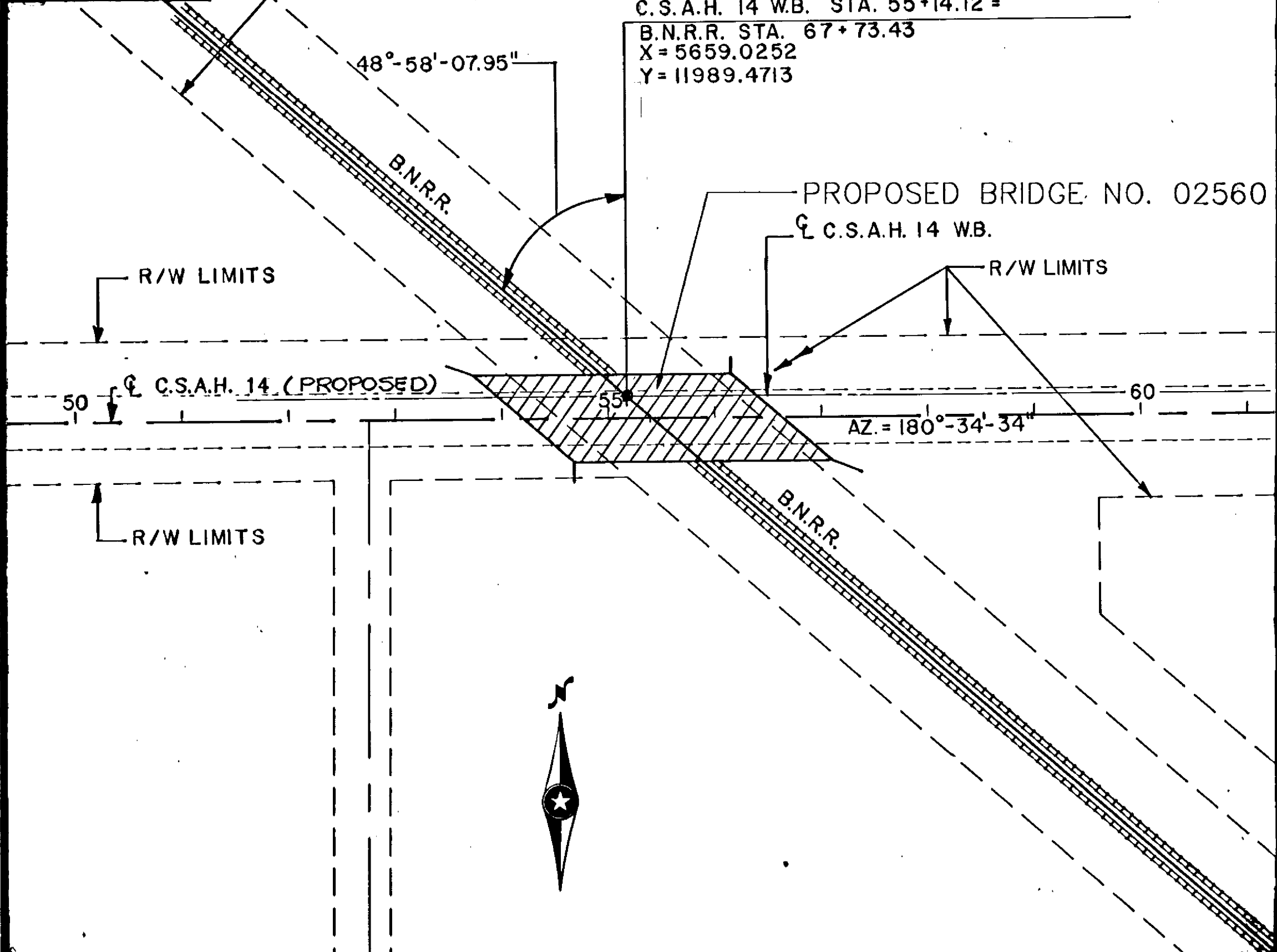


TYPICAL APPROACH ROADWAY SECTION (PROPOSED)



PLAT

SCALE: 1" = 100'



Fed. Proj. No.

LOCATION ENGINEER'S OBSERVATIONS AT BRIDGE SITE

- Special Features: Waterfalls, dams, floods, ice, debris, sliding banks, recreational boating.
- Other bridges or culverts over the same stream (particularly structures which carry high water without overflow of roadway): Given location, type, length, height above high water, cross-sectional area etc.
- Apparent highwater elevation Obtained from
- Other data: Approx. velocity of water at time of survey

HYDRAULIC ENGINEERS RECOMMENDATION

DATE

Stream or ditch designation

Drainage area

Max. flood on record Design flood (..... yr. freq.) C.F.S.

Max. observed highwater elevation Design highwater elevation

Design mean velocity through structure F.P.S.

Low superstructure at or above elevation

Flowline elevation Skew angle

Waterway area req'd. below elevation Sq. Ft. at Rt. angles to channel

In the interest of flood plain zoning the regional flood (100 yr. freq.) is C.F.S. at stage and mean velocity of F.P.S. with Ft. swellhead.

The above recommendation will provide a structure of adequate waterway to pass the regional flood within criteria established by the Dept. of Natural Resources.

FOUNDATION ENGINEERS RECOMMENDATION

DATE

REPORT DATED 8/26/88, BY STS CONSUL.

" " 10/15/90 " " " "

Bridge survey sheets made from: BRW SURVEY NOTES

Bench mark elevation 975.209 (M.S.L. 1929 Adj.) (STAMP 0212E)
 Location: 0.4 MI. WEST OF HWY. 10 ALONG T.H. 242, 73' SOUTH OF T.H. 242 MnDOT NE 1/4)

MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE SURVEY

AT MILE POINT ON C.S.A.H. 14
 (T.H. C.S.A.H., C.R. etc.)
 PROPOSED BRIDGE LOCATED 1.03 MILES WEST ... OF
 JCT. T.H. 10/47 & JCT. T.H. 242
 SEC. 5/8 TWP. 31N R. 24W
 CITY OF COON RAPIDS COUNTY ANOKA
 BRIDGE NO. 02560

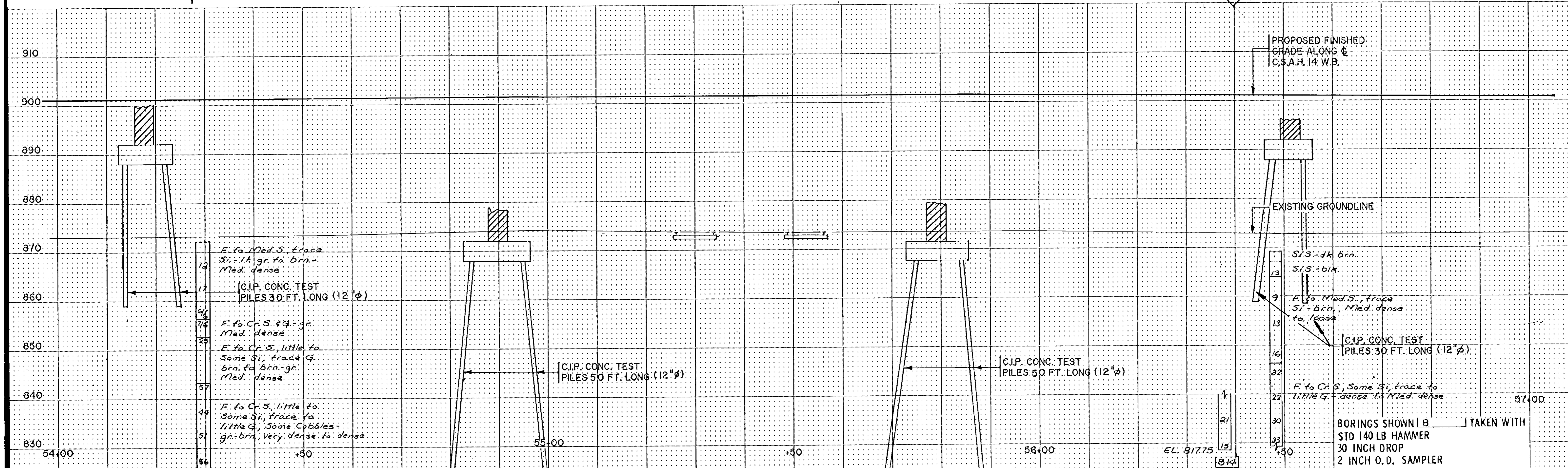
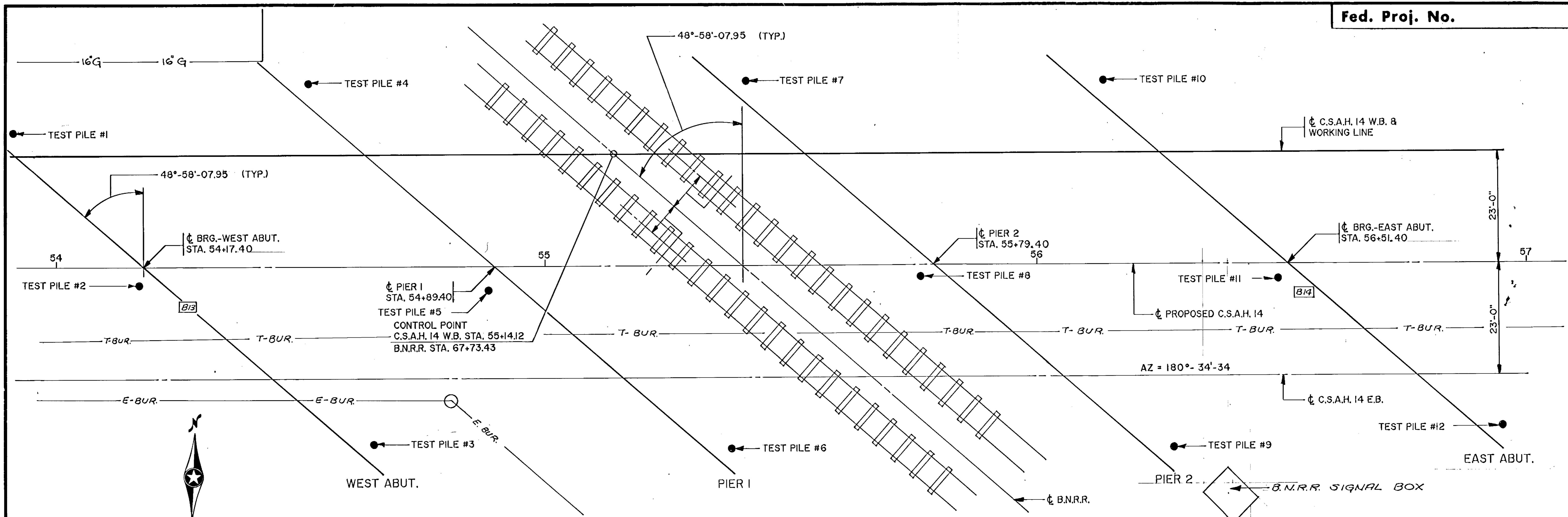
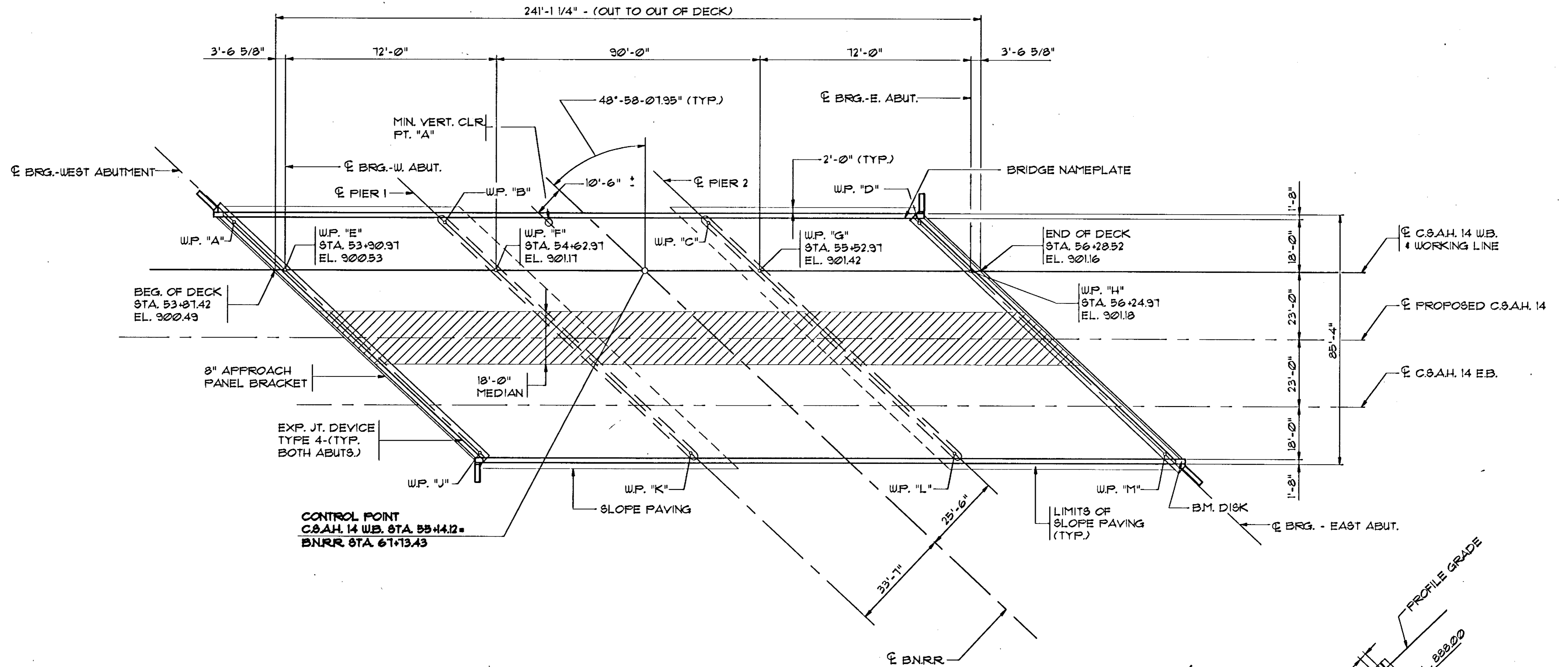
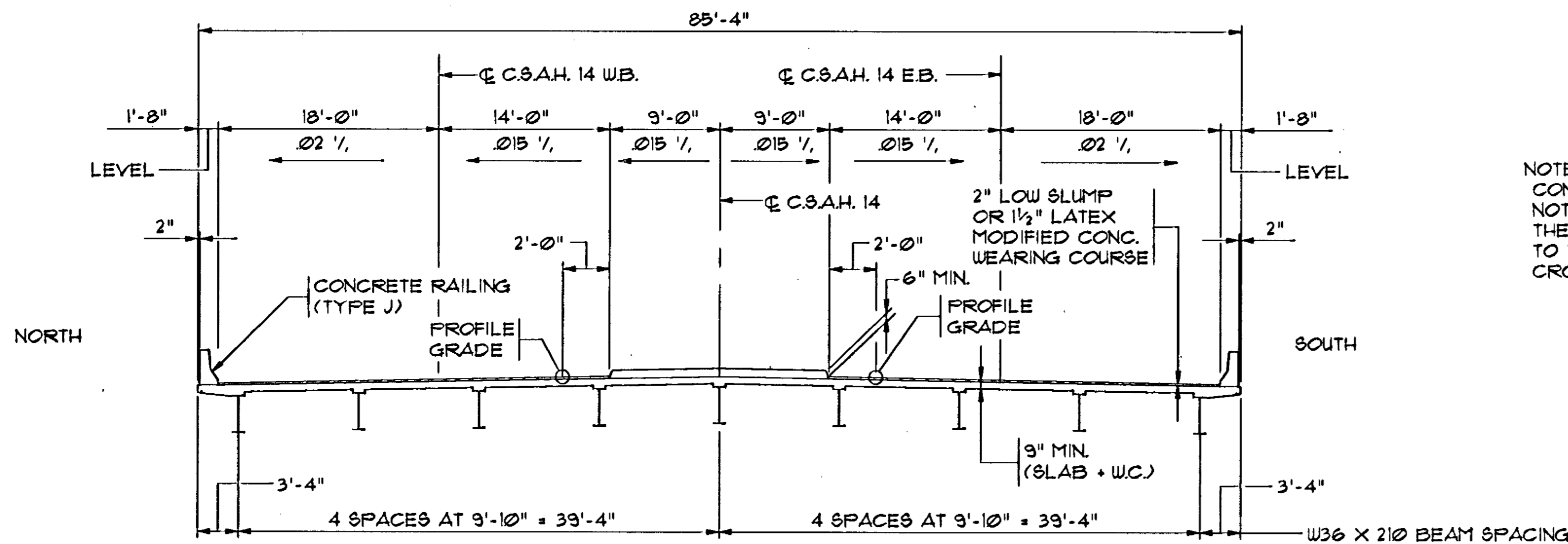


ILLUSTRATION NO. 1001-1-100



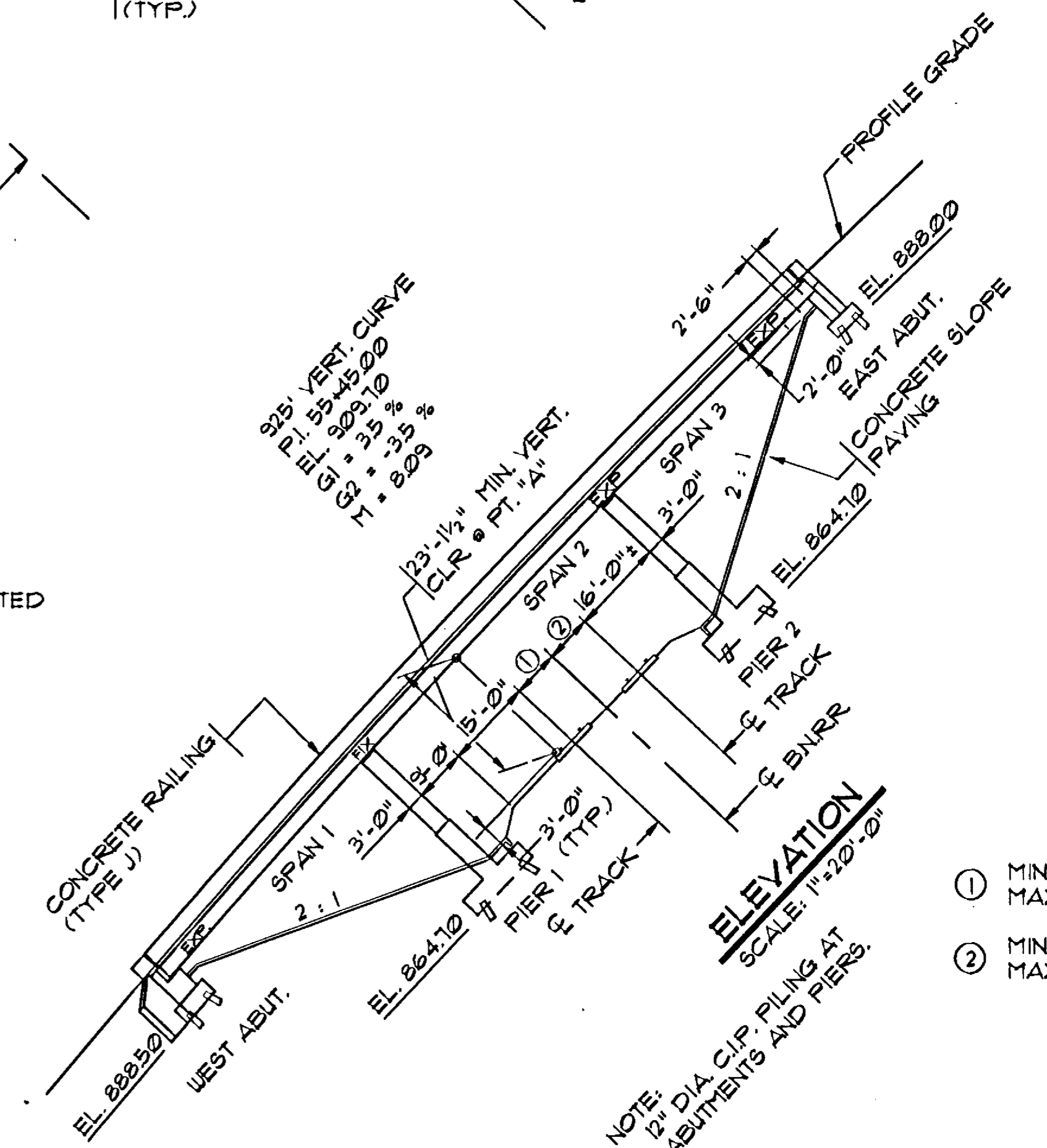
PLAN



TRANSVERSE SECTION THRU DECK

SCALE: 1/8" = 1'-0"

NOTE:
CONSTRUCTION OF EACH ABUTMENT SHALL NOT BE STARTED UNTIL 12 HOURS AFTER THE APPROACH FILL HAS BEEN CONSTRUCTED TO THE FULL HEIGHT OF THE FILL AND CROSS SECTION.



ELEVATION

NOTE:
12" DIA CIP PILING AT ABUTMENTS AND PIERS.

- ① MIN. 6'-10 3/4" MAX. 7'-0 1/2"
- ② MIN. 1'-8 3/8" MAX. 8'-0 1/2"

S.A.P. 02-614-18

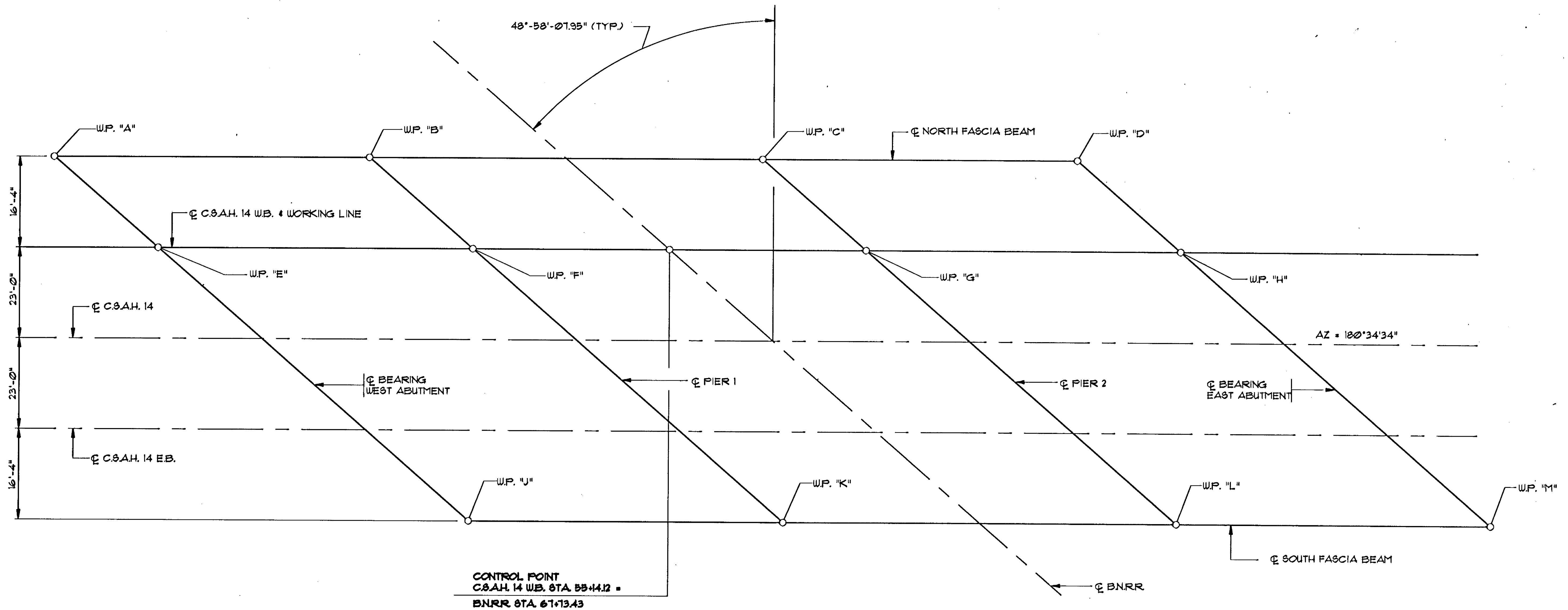


GENERAL PLAN AND ELEVATION

DES: MKM	DRW: JEM	APPROVED:
CHK: SA	CHK: DJV	

SHEET NO. 2 OF 10 SHEETS

BRIDGE NO. 02560



WORKING POINT LAYOUT



DIMENSIONS BETWEEN WORKING POINTS													COORDINATES		ELEVATIONS					
POINT	STATION	A	B	C	D	E	F	G	H	J	K	L	M	POINT	X-COORD.	Y-COORD.	TOP OF ROADWAY	TOP OF ROULY TO BRG SEAT	BRIDGE SEAT	POINT
A	53+12.20		72.00			24.88	92.23	181.51	253.30		180.45	264.37	333.80	A	5516.9439	12004.3765	899.97	4.63	895.34	A
B	54+44.20			90.00		55.68	24.88	103.99	181.50	80.79		196.80	264.37	B	5588.9401	12005.1005	900.71	4.65	896.06	B
C	55+34.20				72.00	144.16	73.08	24.88	92.23	106.37	78.67		180.45	C	5678.9354	12006.0056	901.09	4.65	896.44	C
D	56+06.20					215.85	144.16	55.68	24.88	163.74	106.37	80.79		D	5750.9317	12006.7297	900.95	4.76	896.19	D
E	53+90.97						72.00			94.95	156.57	241.80	311.92	E	5535.8759	11988.2327	900.53			E
F	54+62.97							90.00		62.33	94.95	173.23	241.80	F	5607.8721	11988.9568	901.17			F
G	55+52.97								72.00	109.78	64.98	94.95	156.57	G	5697.8673	11989.8619	901.42			G
H	56+24.97									173.93	109.78	62.33	94.95	H	5769.8637	11990.5860	901.18			H
J	54+62.60										72.00			J	5608.1265	11926.6229	900.84	4.63	896.21	J
K	55+34.60											90.00		K	5680.1227	11927.3470	901.09	4.65	896.44	K
L	56+24.60												72.00	L	5770.1179	11928.2521	900.86	4.65	896.21	L
M	56+36.60													M	5842.1143	11928.9762	900.23	4.76	895.47	M

TOP OF ROADWAY TO BRIDGE SEAT				
	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.
SLAB THICKNESS	9"	9"	9"	9"
STOOL HEIGHT	3"	3"	3"	3"
BEAM HEIGHT	36 11/16"	36 11/16"	36 11/16"	36 11/16"
BEARING HEIGHT	6 7/8"	7 1/8"	7 1/8"	8 3/8"
TOTAL	4.63'	4.65'	4.65'	4.76'

S.A.P. 02-614-18

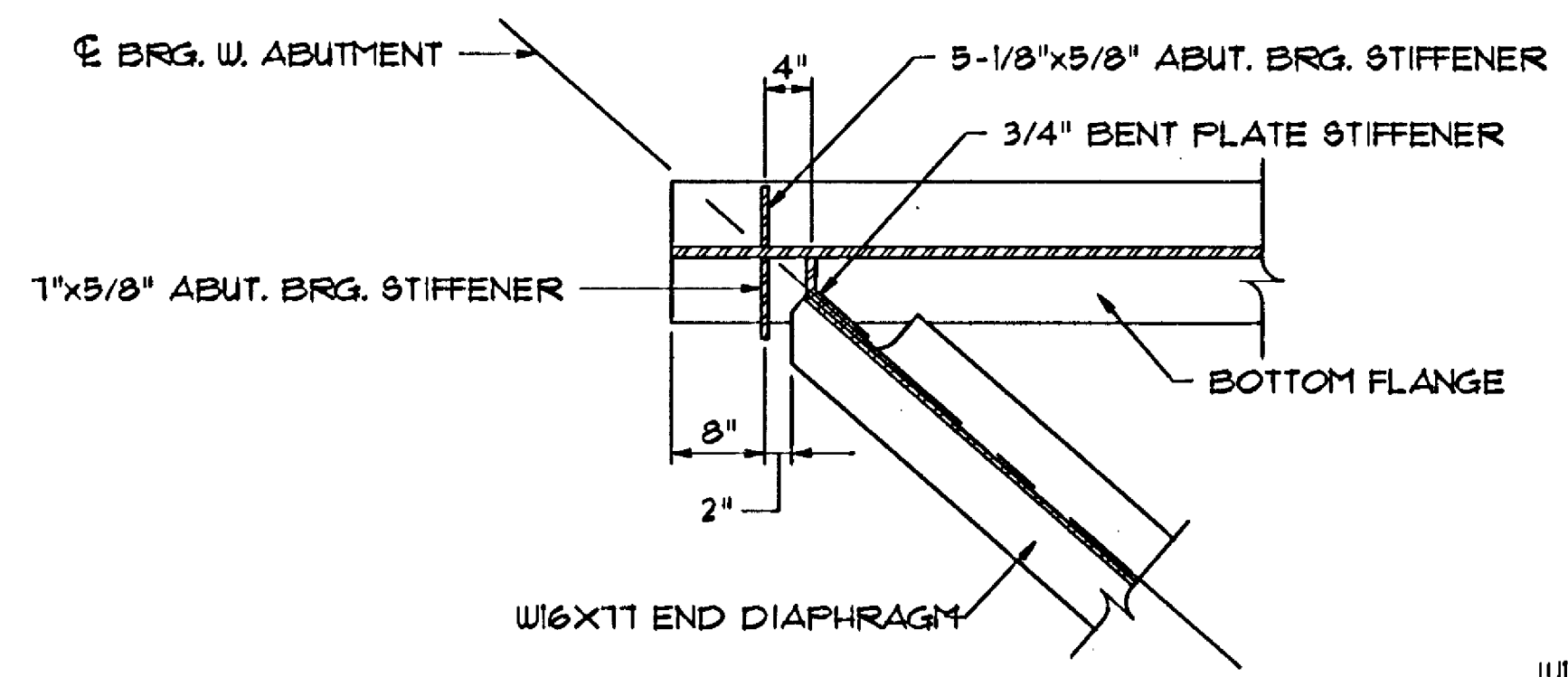
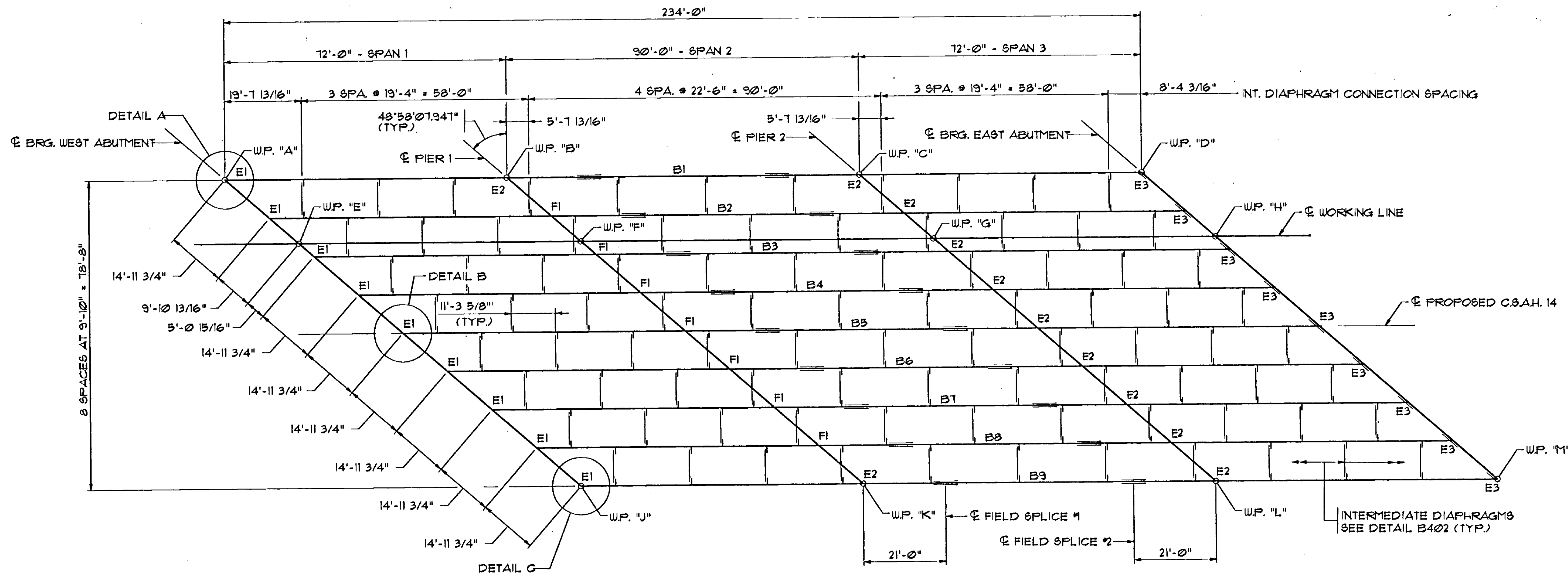


BRIDGE LAYOUT

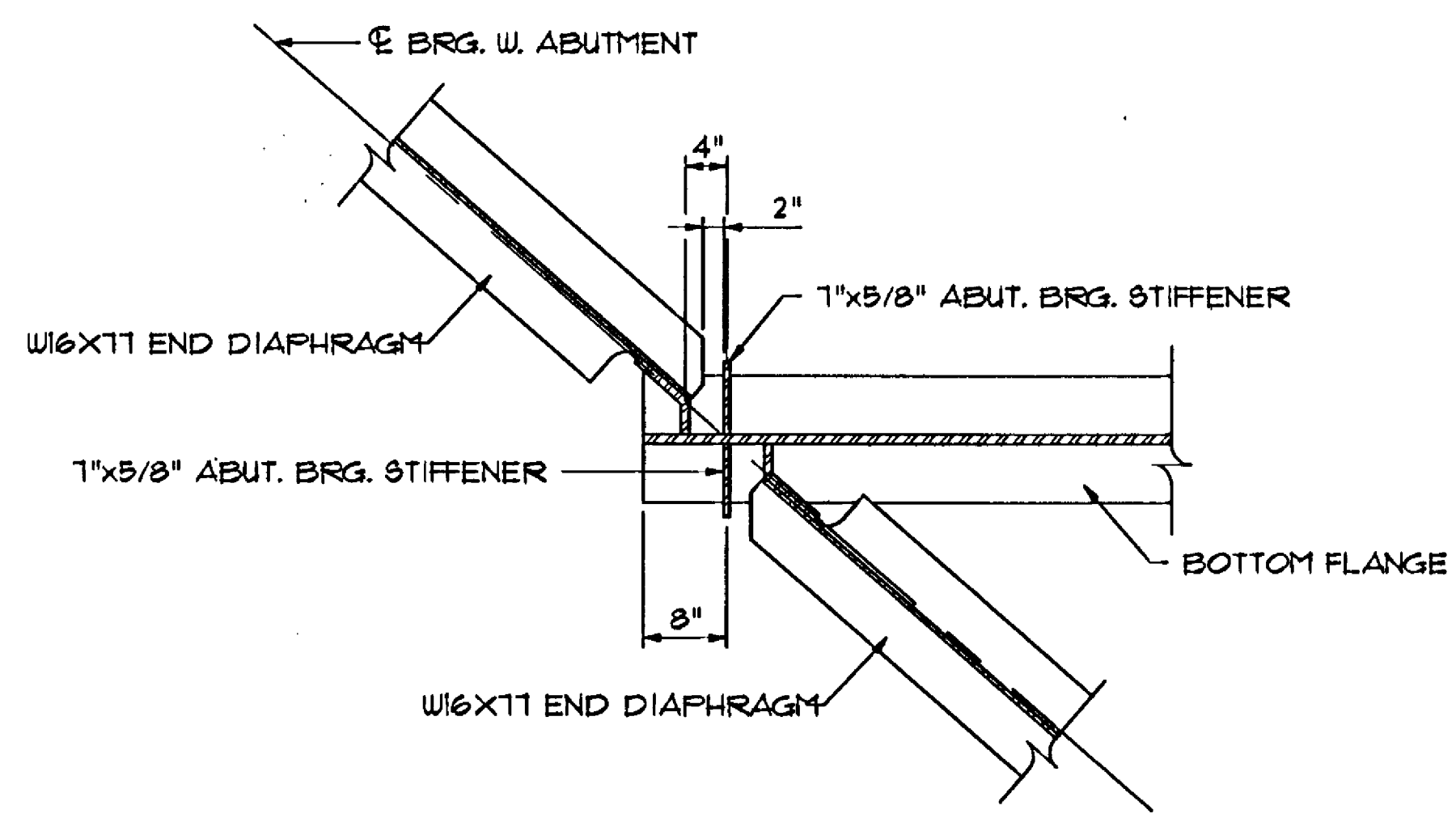
DES: DJV DRW: DJV APPROVED:
 CHK: MKM CHK: MKM

BRIDGE NO.
02560

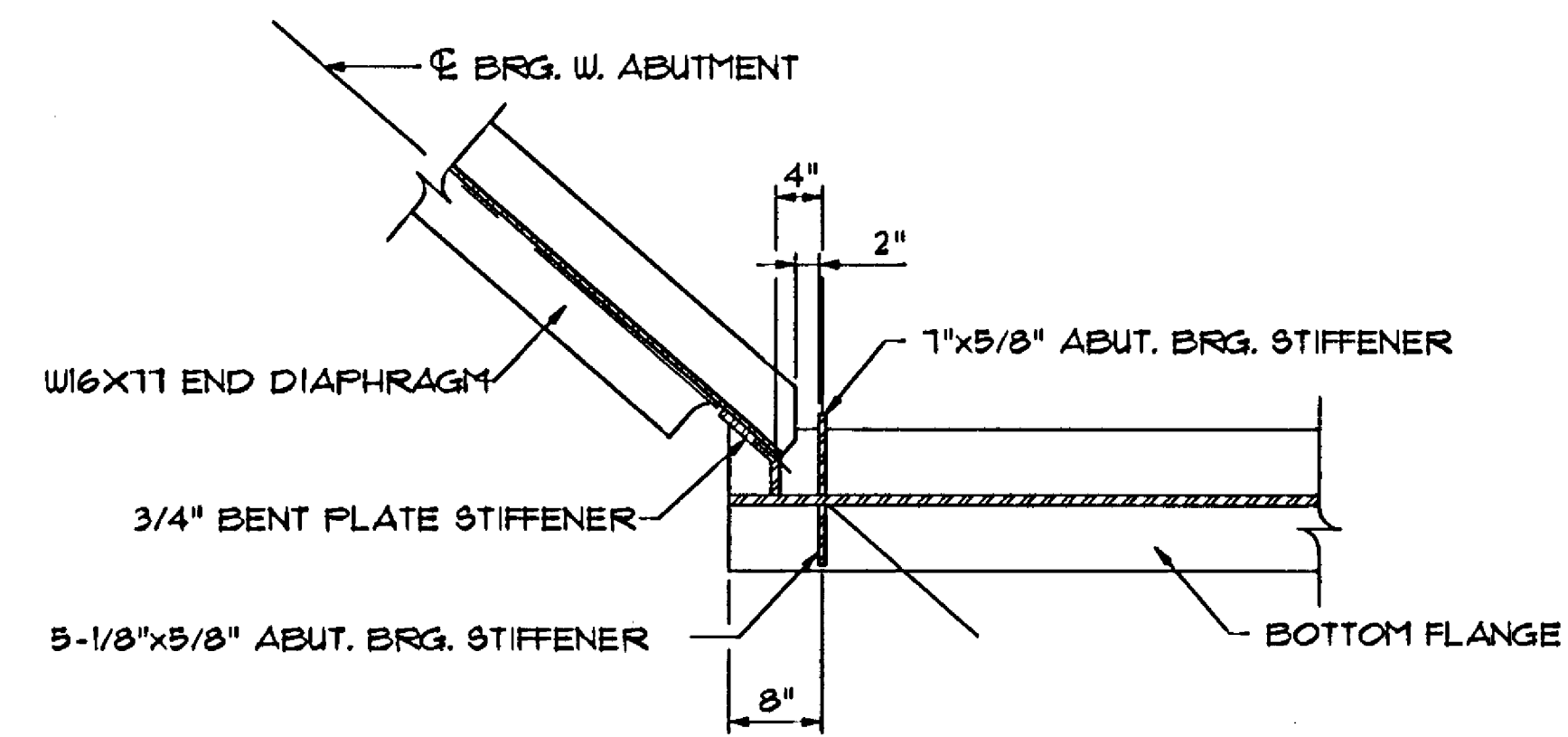
SHEET NO. 3 OF 10 SHEETS



DETAIL A



DETAIL B



DETAIL C

	F.S. 1	F.S. 2
BEAM 1	900.90	900.10
BEAM 2	900.16	900.32
BEAM 3	900.39	900.51
BEAM 4	900.59	900.67
BEAM 5	900.77	900.81
BEAM 6	900.65	900.64
BEAM 7	900.51	900.47
BEAM 8	900.34	900.25
BEAM 9	900.13	900.01

WELD CHART	
MAT. THICKNESS OF THICKER PART JOINED	MIN. SIZE FILLET WELD
TO 3/4" INCLUSIVE	1/4"
OVER 3/4" TO 1 1/2" INCL.	5/16"
OVER 1 1/2" TO 2 1/4" INCL.	3/8"

FRAMING NOTES

ALL INTERMEDIATE DIAPHRAGMS ARE PERPENDICULAR TO BEAMS. DIAPHRAGMS OVER THE CENTERLINE OF THE PIER CANNOT BE TIGHTENED UNTIL THE ANCHOR RODS ARE INSTALLED IN THE PIER BEARING.

ELEVATIONS SHOWN AT FIELD SPLICES ARE THEORETICAL ELEVATIONS FURNISHED AS A GUIDE FOR ERECTION. DEFLECTIONS FROM WEIGHT OF BEAM INCLUDED.

- E1 = EXPANSION BEARING ASSEMBLY, TYPE 1 (9 REQUIRED)
- E2 = EXPANSION BEARING ASSEMBLY, TYPE 2 (11 REQUIRED)
- E3 = EXPANSION BEARING ASSEMBLY, TYPE 3 (9 REQUIRED)
- F1 = FIXED BEARING ASSEMBLY, TYPE 1 (1 REQUIRED)

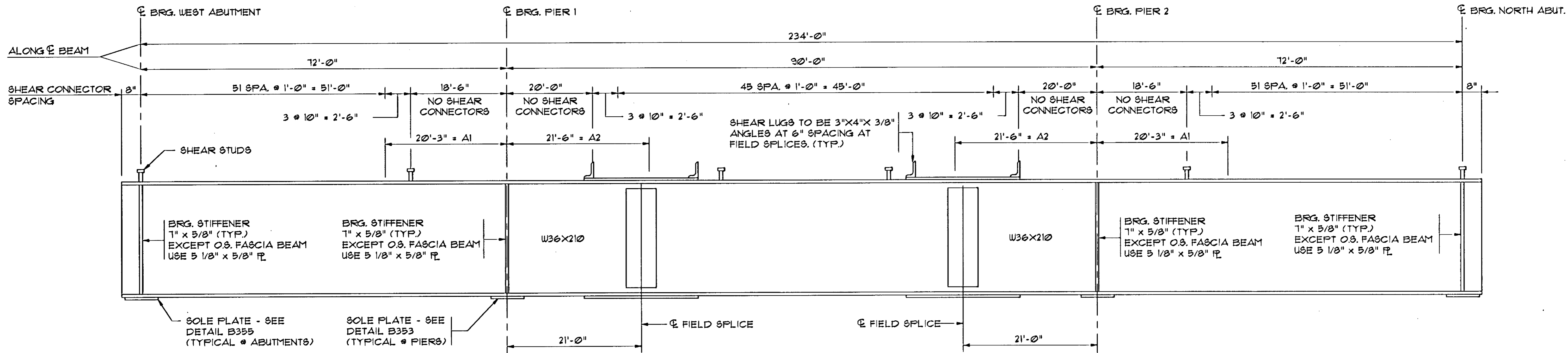
S.A.P. 02-614-18



FRAMING PLAN

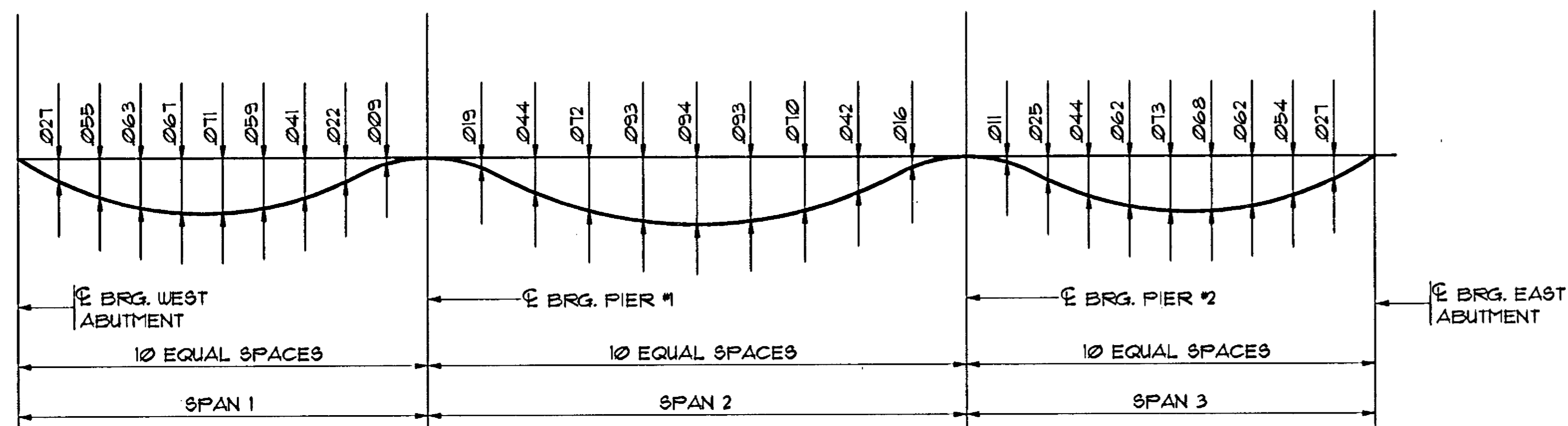
DES: MKM	DRW: JAS	APPROVED:
CHK: SA	CHK: DJV	
SHEET NO. 4 OF 10 SHEETS		

BRIDGE NO.
02560



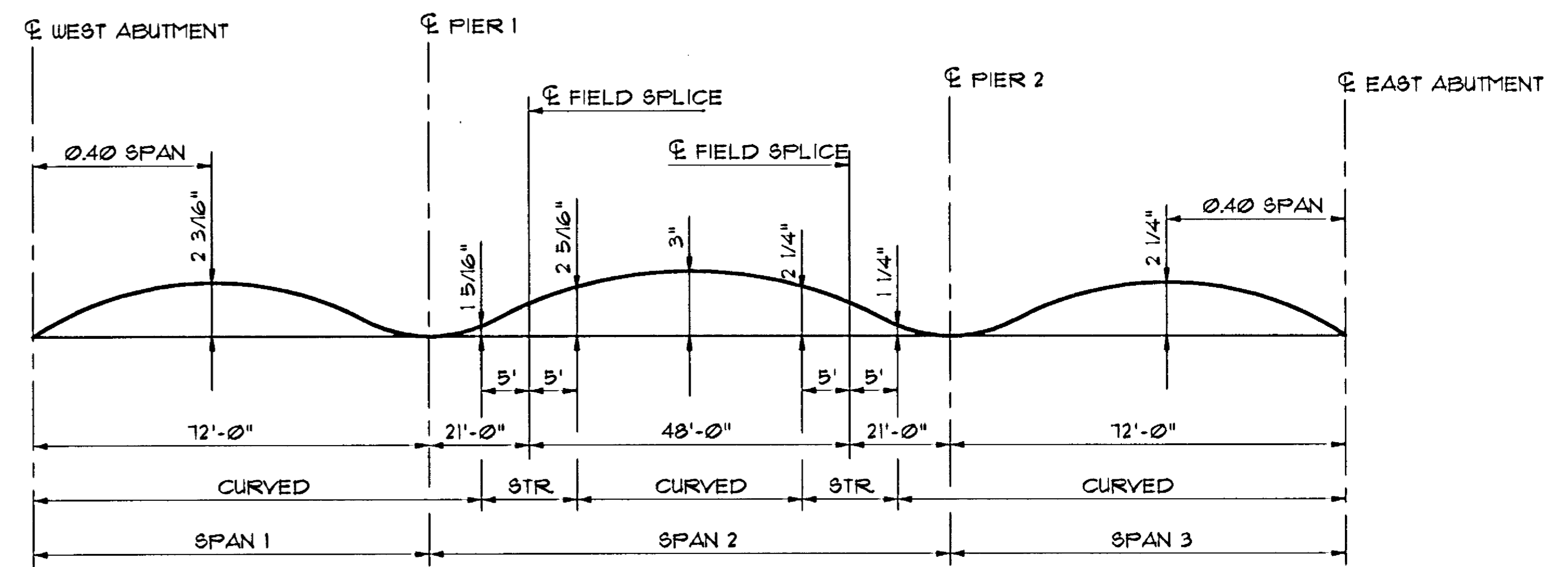
BEAM ELEVATION

NOTE:
SEE DETAIL B402 FOR DIAPHRAGM DETAILS.



DEFLECTION DIAGRAM
(FEET)

DEFLECTIONS SHOWN ARE FOR WEIGHT OF SLAB, RAILING, AND WEARING COURSE. (DOES NOT INCLUDE WEIGHT OF STEEL BEAMS.)

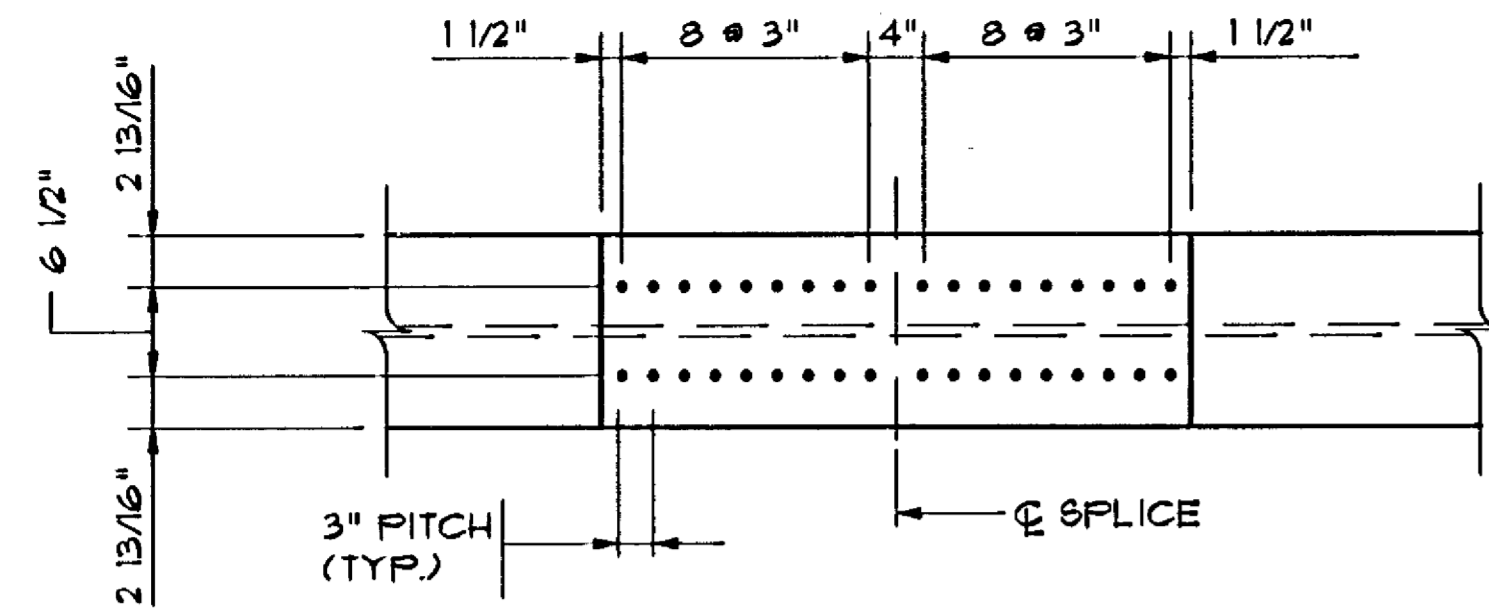


CAMBER DIAGRAM
(INCHES)

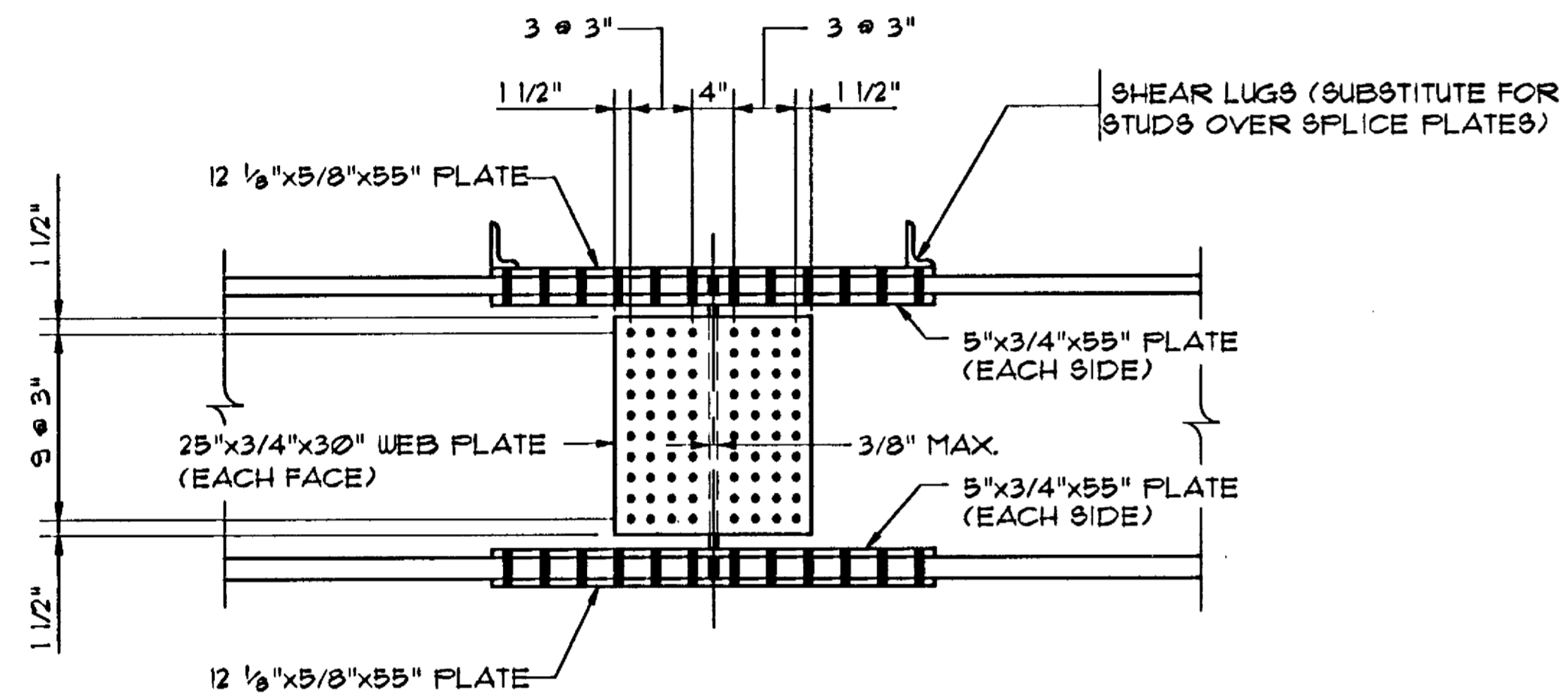
NOTE:
BASE LINE FOR CAMBER AND DEFLECTION DIAGRAMS IS A STRAIGHT LINE AT TOP OF BEAM FROM \bar{C} BEARING TO \bar{C} BEARING.

CAMBER DIAGRAM IS FOR BEAMS IN UNLOADED POSITION AND PROVIDES FOR ALL DEAD LOAD DEFLECTION AND RESIDUAL CAMBER.

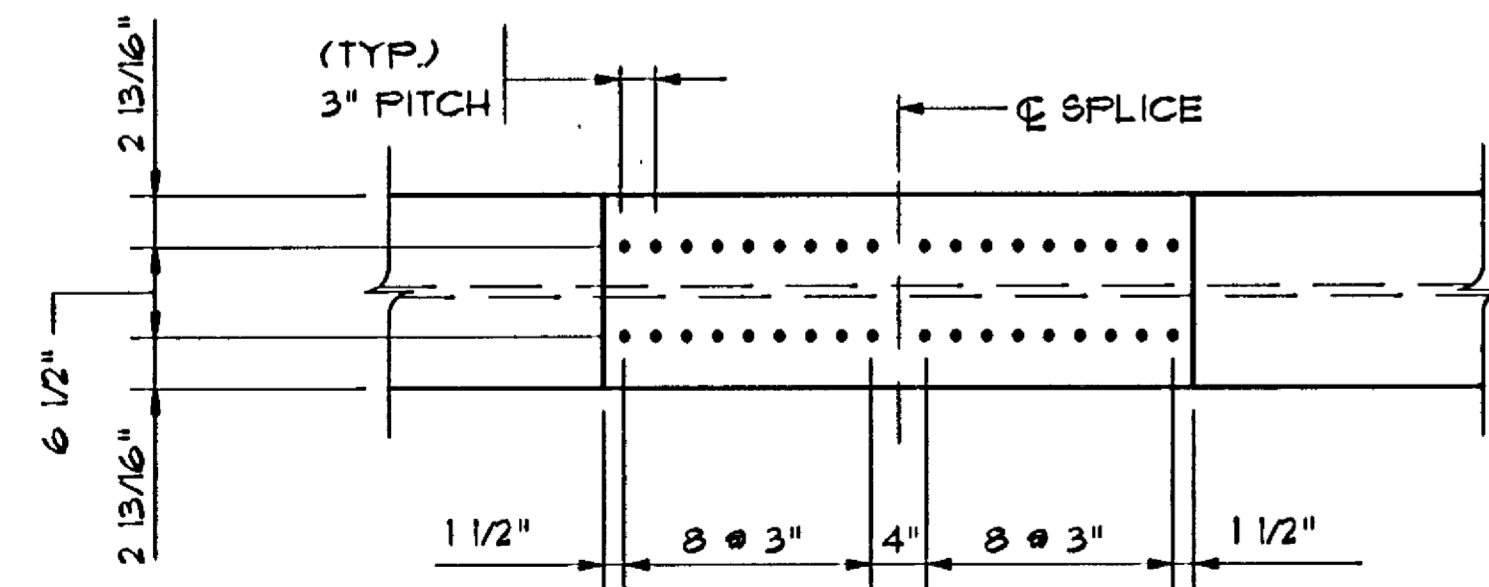
S.A.P. 02-614-18



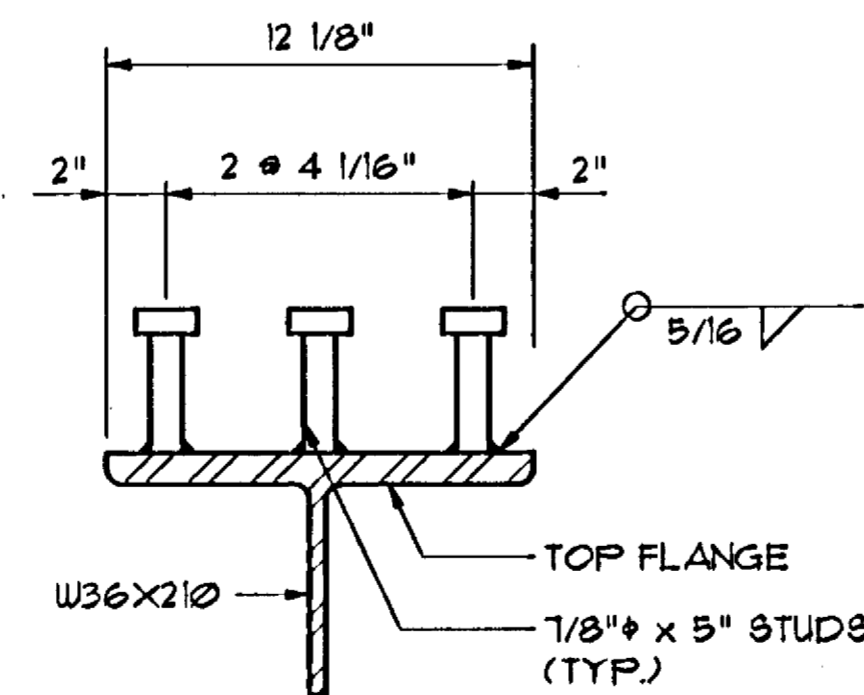
TOP FLANGE SPLICE



WEB SPLICE



BOTTOM FLANGE SPLICE



SHEAR STUD DETAIL

STRUCTURAL STEEL NOTES

ALL STRUCTURAL STEEL SHALL CONFORM TO SPEC. 3309 ASTM A588 GRADE 50 UNLESS NOTED OTHERWISE.

BEARING STIFFENERS SHALL BE VERTICAL.

FIELD CONNECTIONS SHALL BE MADE WITH 1/8" HIGH STRENGTH BOLTS OR 1/8" PIN BOLTS EXCEPT AS NOTED.

ROWS OF SHEAR CONNECTORS SHALL BE ALIGNED PARALLEL TO THE TRANSVERSE SLAB REINFORCEMENT BARS.

SHEAR CONNECTORS AND BEAM SOLE PLATES TO BE INCLUDED IN WEIGHT OF STRUCTURAL STEEL (3309) AND SHALL CONFORM TO SPEC. 3391.

ELEVATIONS SHOWN AT FIELD SPLICES ARE THE THEORETICAL ELEVATIONS FURNISHED AS A GUIDE FOR ERECTION. DEFLECTIONS FROM WEIGHT OF BEAM INCLUDED.

FULL ASSEMBLY REAMING WILL BE REQUIRED PER SPEC. 241.3E1g.

ENDS OF BEAMS SHALL BE VERTICAL WHEN ERECTED AND UNDER THE EFFECTS OF THE PROFILE GRADE AND BRIDGE DEAD LOADS.

ALL BOLTS, SHEAR STUD CONNECTORS, & SHEAR LUG ANGLES SHALL BE FURNISHED ONLY. INSTALLATION AND ERECTION TO BE DONE BY OTHERS.

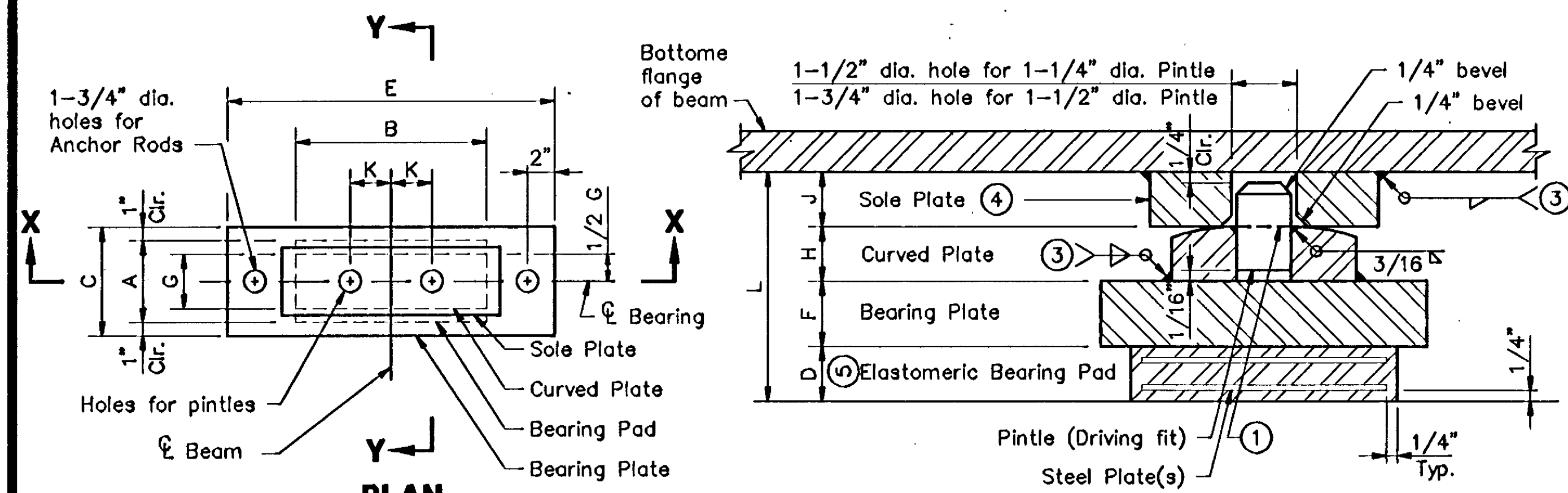
S.A.P. 02-614-13



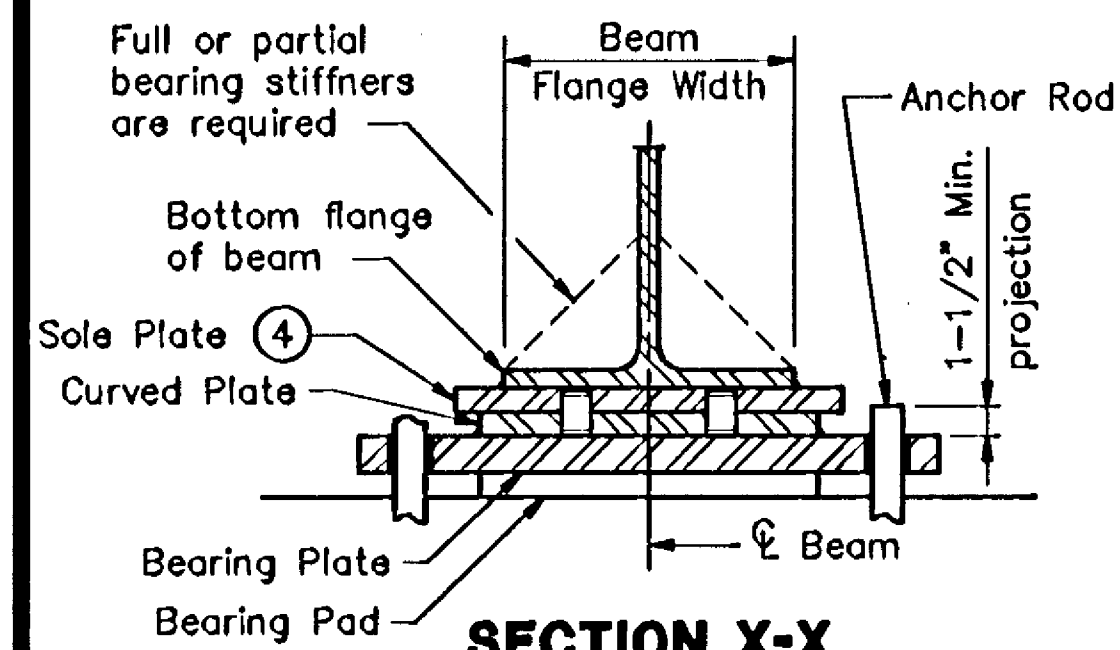
**STRUCTURAL STEEL
DETAILS**

DES: MKM	DRW: JAS	APPROVED:
CHK: SA	CHK: DJV	
SHEET NO. 6 OF 10 SHEETS		

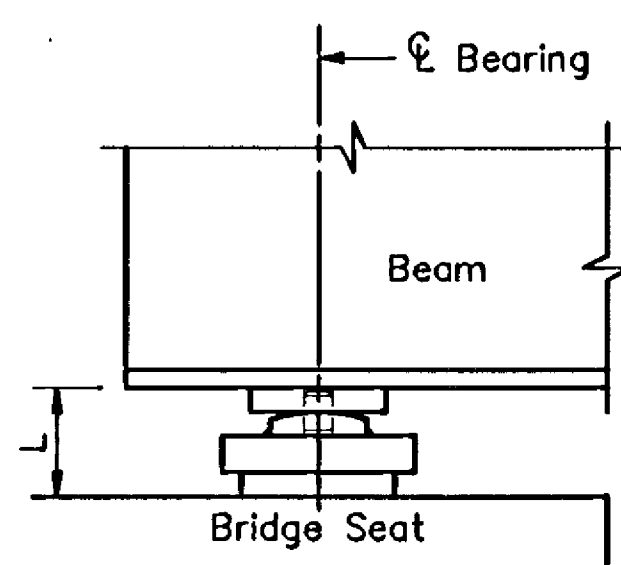
**BRIDGE NO.
02560**



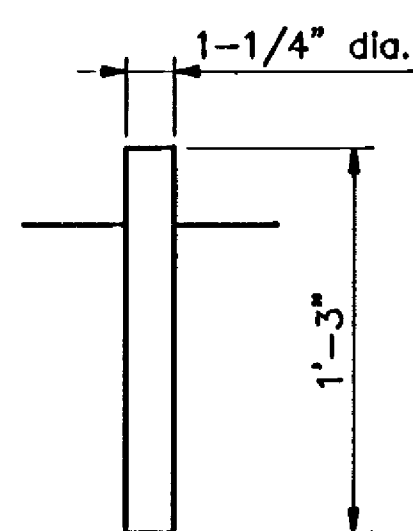
**SECTION Y-Y
(ENLARGED BEARING ASSEMBLY)**



SECTION X-X



**END ELEVATION
(Anchor Rods Not Shown)**



ANCHOR ROD DETAIL

TABLE ②

Beam Flange Size	Bearing Pad Size			Steel Plates		Laminates		Shape Factor	Bearing Plate Size			Curved Plate Size			Sole Plate Size			Pintle Dia.	Pintle Spacing	Assy. Height	Assembly Type
	A	B	D	No.	Thick.	No.	Thick.		C	E	F	G	B	H	Width	Length	J ④				
12"	20"	20"	1 3/8"	2	1/8"	1	3/8"	6.7	22"	30"	2"	8"	20"	2 1/4"	10"	22"	1 1/4"	1 1/2"	2 3/4"	1 1/8"	FI

NOTES:

For elastomeric materials & pad construction, see Spec. 3741 and special provisions, except as noted.

All steel plates & anchor rods shall comply with Spec. 3306, except as noted.

All plates shall be flat after fabrication and galvanizing. Welding distortion of the bearing plates shall be straightened to within 1/16" of flatness by mechanical means without damage to the zinc coating.

Pintles shall comply with Spec. 3314, Type II.

Galvanize anchor rods and structural steel bearing assembly after fabrication per Spec. 3394, except as noted.

Payment for bearing assembly shall include all material on this detail, except the sole plate.

① The radius of the curved plate shall be 1'-0" min. & 1'-6" max. Finish to 250 Micro. The finished thickness of the plate may be 1/16" less than shown.

② See Bridge Design Manual for design requirements.

③ For sole plate or bearing plate thicknesses up to 1-1/2", use 5/16" fillet welds; for thicknesses over 1-1/2" to 2-1/4", use 3/8" fillet welds; for thicknesses over 2-1/4", use 1/2" fillet welds with minimum preheat of 300°.

④ The sole plate may be tapered, only as shown on superstructure details. When the sole plate is tapered, dimension "J" is the minimum thickness of the plate.

⑤ The total thickness "D" includes the steel plates required. Do not galvanize these plates.

APPROVED: AUGUST 4, 1987

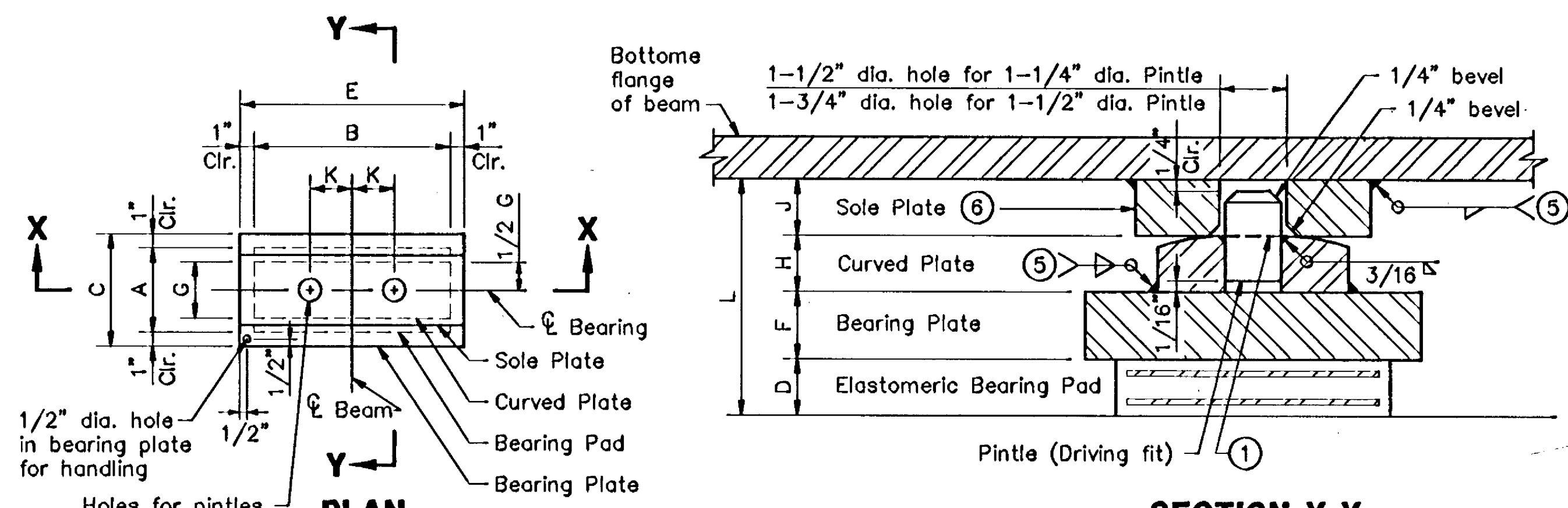
Developed by: ENGINEERING STANDARDS and BRIDGES & STRUCTURES
Issued by: ENGINEERING STANDARDS

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
CURVED PLATE BEARING ASSEMBLY
STEEL BEAMS
(FIXED)

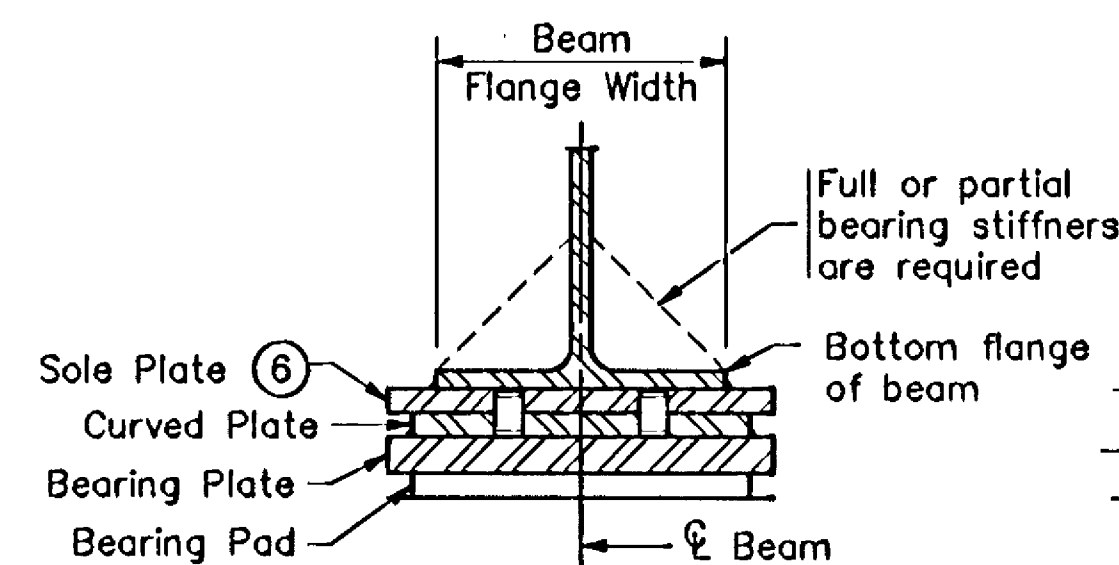
REVISION

DETAIL NO.

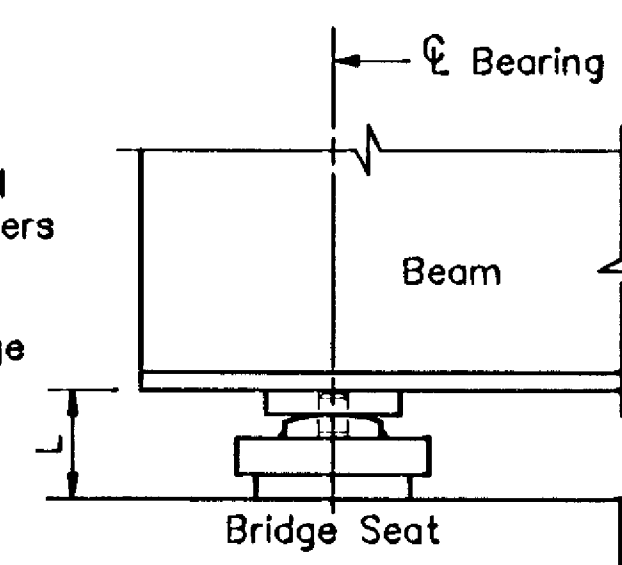
B354



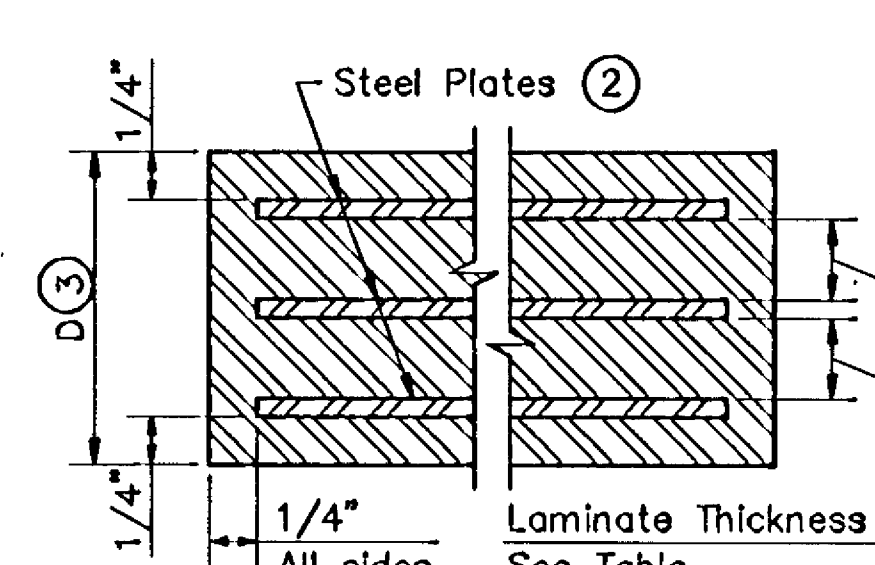
**SECTION Y-Y
(ENLARGED BEARING ASSEMBLY)**



SECTION X-X



END ELEVATION



SECTION THRU BEARING

TABLE ④

Beam Flange Size	Bearing Pad Size			Steel Plates		Laminates		Shape Factor	Bearing Plate Size			Curved Plate Size			Sole Plate Size			Pintle Dia.	Pintle Spacing	Assy. Height	Assembly Type
	A	B	D	No.	Thick.	No.	Thick.		C	E	F	G	B	H	Width	Length	J ⑥				
12"	10"	14"	3 3/8"	7	1/8"	6	3/8"	7.8	12"	16"	1"	4 1/2"	14"	1 1/4"	6"	16"	1"	1 1/2"	2 3/4"	6 3/8"	E1
12"	20"	20"	1 3/8"	2	1/8"	1	3/8"	6.7	22"	30"	2"	8"	20"	2 1/4"	10"	22"	1 1/4"	1 1/2"	2 3/4"	7 1/8"	E2
12"	10"	14"	5 1/8"	10	1/8"	9	3/8"	7.8	12"	16"	1"	4 1/2"	14"	1 1/4"	6"	16"	1"	1 1/2"	2 3/4"	8 3/8"	E3

NOTES:

For elastomeric materials & pad construction, see Spec. 3741 and special provisions, except as noted.

All steel plates shall comply with Spec. 3306, except as noted.

All plates shall be flat after fabrication and galvanizing. Welding distortion of the bearing plates shall be straightened to within 1/16" of flatness by mechanical means without damage to the zinc coating.

Pintles shall comply with Spec. 3314, Type II.

Galvanize structural steel bearing assembly after fabrication per Spec. 3394, except as noted.

Payment for bearing assembly shall include all material on this detail, except the sole plate.

① The radius of the curved plate shall be 1'-0" min. & 1'-6" max. Finish to 250 Micro. The finished thickness of the plate may be 1/16" less than shown.

② Do not galvanize these plates.

③ The total thickness shown includes the steel plates.

④ See Bridge Design Manual for design requirements.

⑤ For sole plate or bearing plate thicknesses up to 1-1/2", use 5/16" fillet welds; for thicknesses over 1-1/2" to 2-1/4", use 3/8" fillet welds; for thicknesses over 2-1/4", use 1/2" fillet welds with minimum preheat of 300°.

⑥ The sole plate may be tapered, only as shown on superstructure details. When the sole plate is tapered, dimension "J" is the minimum thickness of the plate.

APPROVED: AUGUST 4, 1987

Developed by: ENGINEERING STANDARDS and BRIDGES & STRUCTURES
Issued by: ENGINEERING STANDARDS

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
CURVED PLATE BEARING ASSEMBLY
STEEL BEAMS
(EXPANSION)

REVISION

DETAIL NO.

B355

TITLE:

DETAILS

DES: MN/DOT
CHK: MN/DOT
DRW: MN/DOT
CHK:
APPROVED:

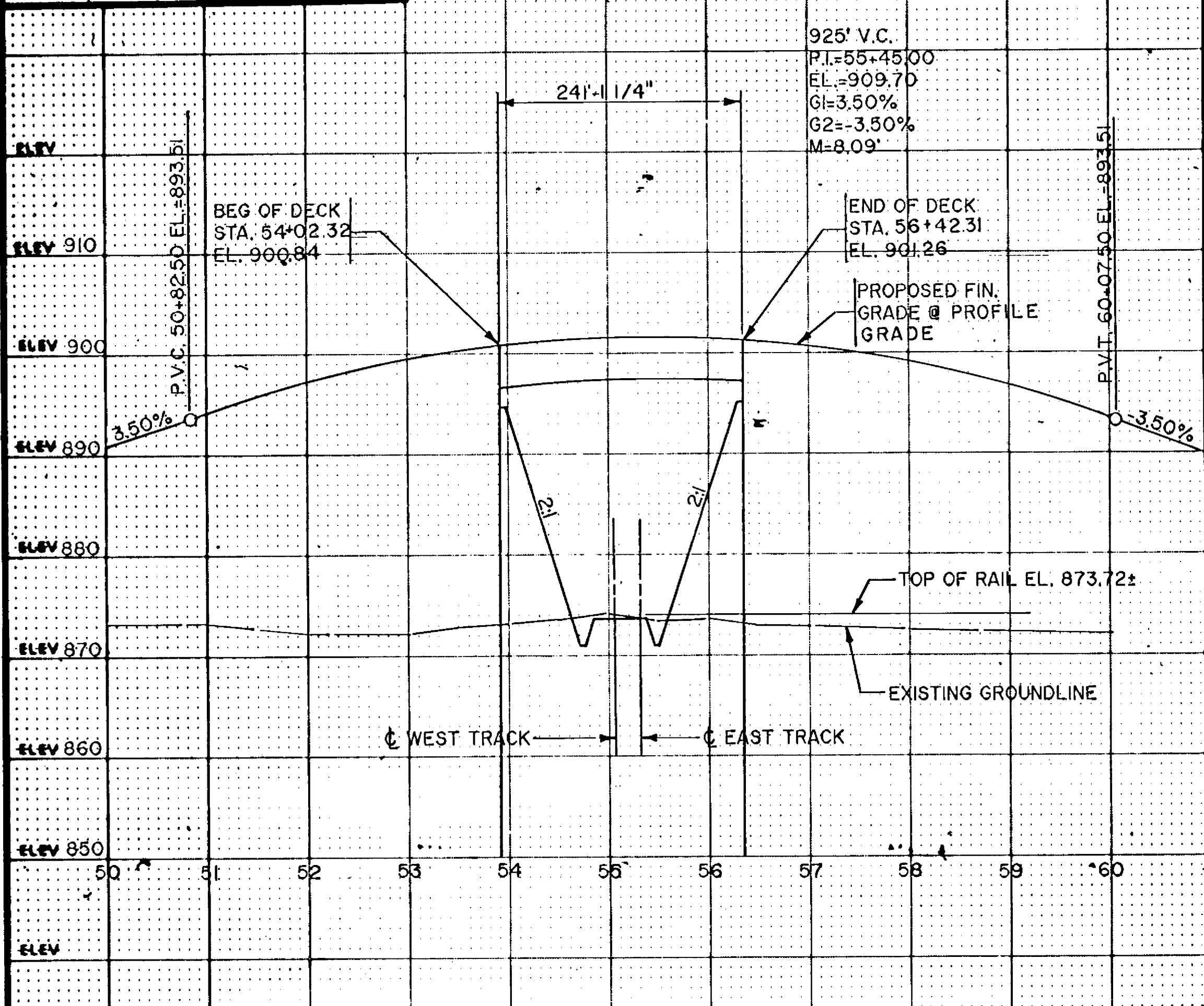
BRIDGE NO.
02560

SHEET NO. 7 OF 10 SHEETS

S.A.P. 02-614-18

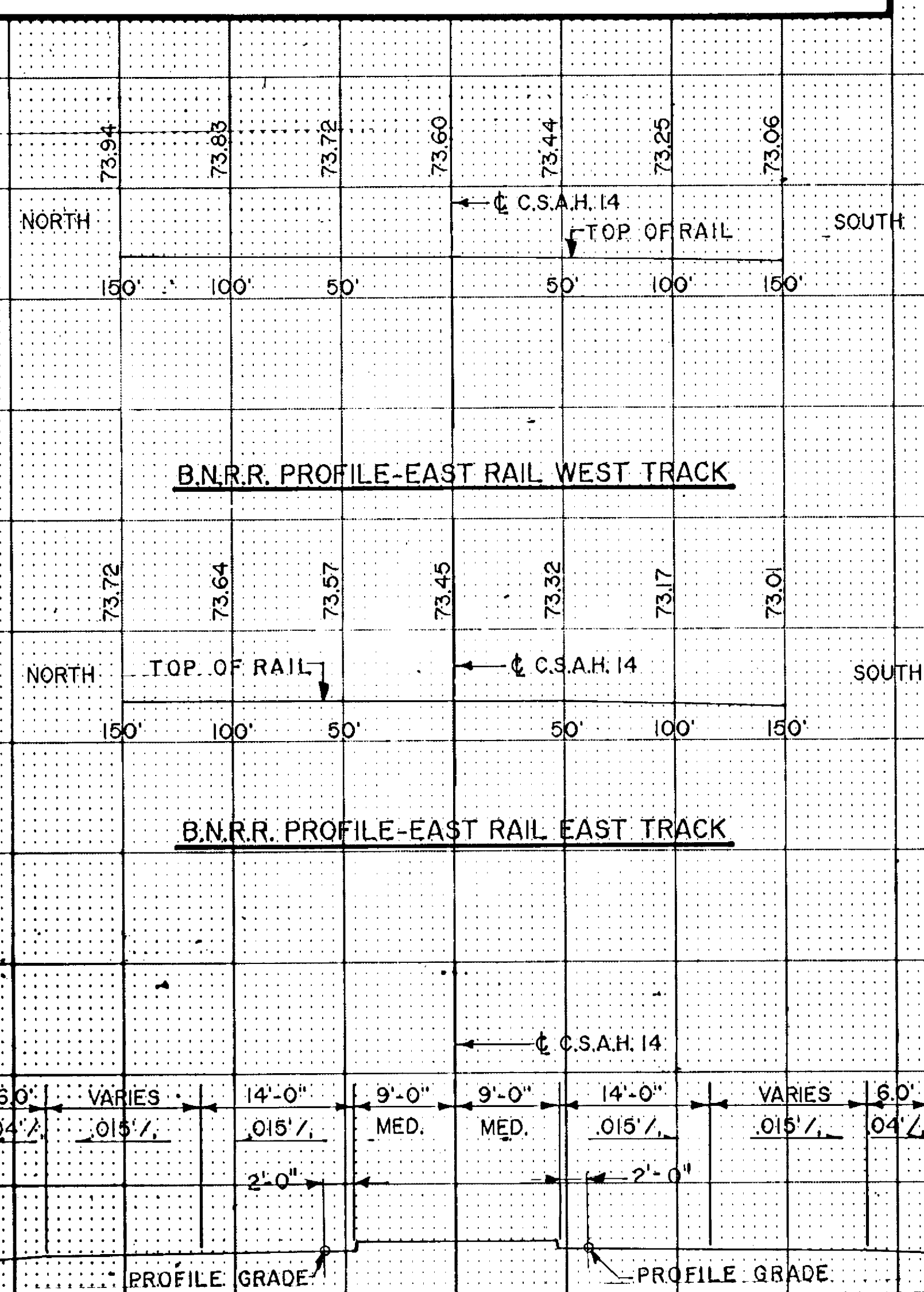
CONTRACTED PROFILE

SCALE: HOR. 1" = 100' VER. 1" = 10'



TYPICAL SECTIONS & PERTINENT DATA

SCALES AS SHOWN



Fed. Proj. No.

LOCATION ENGINEER'S OBSERVATIONS AT BRIDGE SITE

- Special Features: Waterfalls, dams, floods, ice, debris, sliding banks, recreational boating.
- Other bridges or culverts over the same stream (particularly structures which carry high water without overflow of roadway): Given location, type, length, height above high water, cross-sectional area etc.
- Apparent highwater elevation Obtained from
- Other data: Approx. velocity of water at time of survey

HYDRAULIC ENGINEERS RECOMMENDATION

DATE

Stream or ditch designation

Drainage area

Max. flood on record Design flood (..... yr. freq.) C.F.S.

Max. observed highwater elevation Design highwater elevation

Design mean velocity through structure F.P.S.

Low superstructure at or above elevation

Flowline elevation Skew angle

Waterway area req'd. below elevation Sq. Ft. at Rt. angles to channel

In the interest of flood plain zoning the regional flood (100 yr. freq.) is C.F.S. at stage and mean velocity of F.P.S. with Ft. swellhead.

The above recommendation will provide a structure of adequate waterway to pass the regional flood within criteria established by the Dept. of Natural Resources.

FOUNDATION ENGINEERS RECOMMENDATION

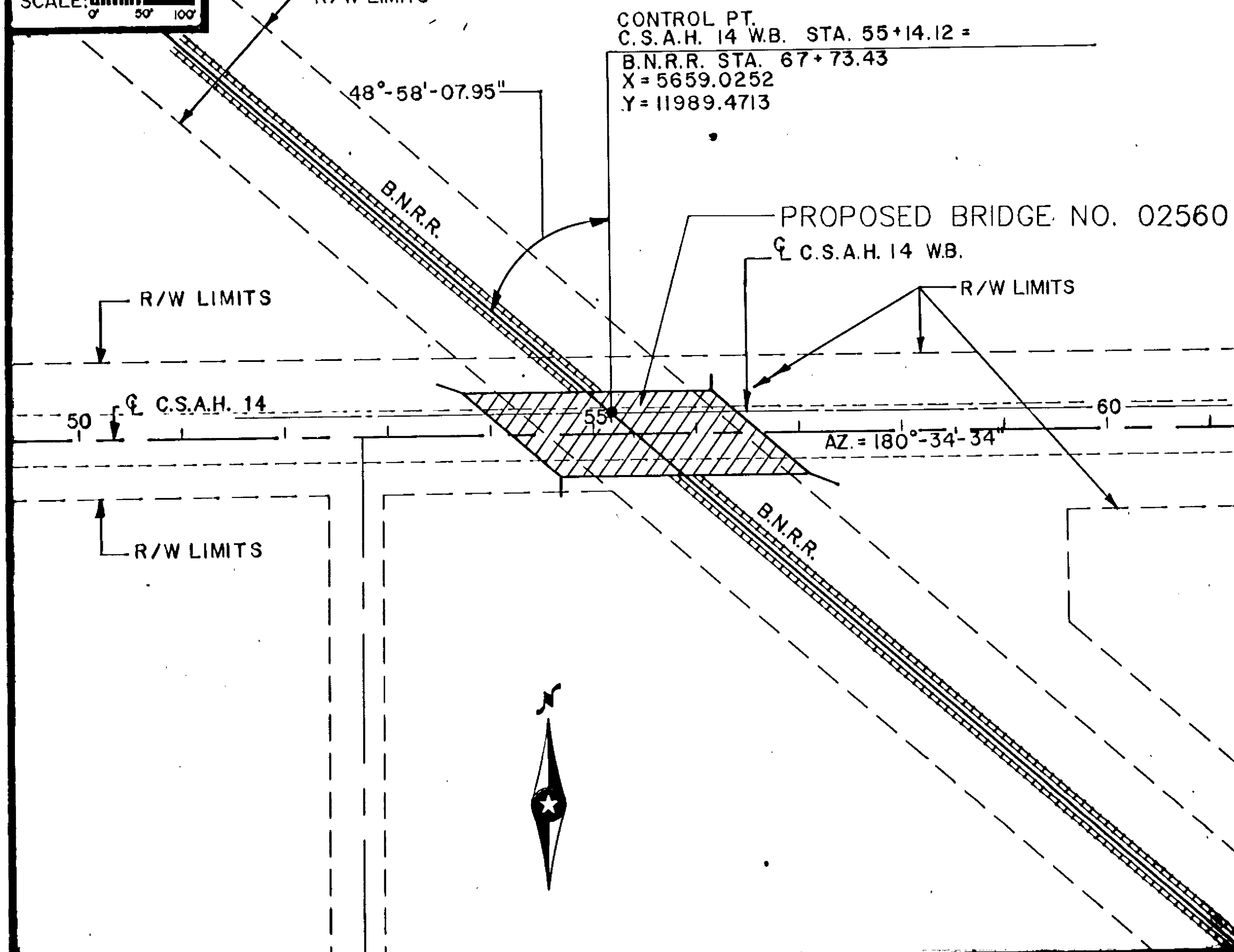
DATE

REPORT DATED 8/26/88, BY STS CONSULT.

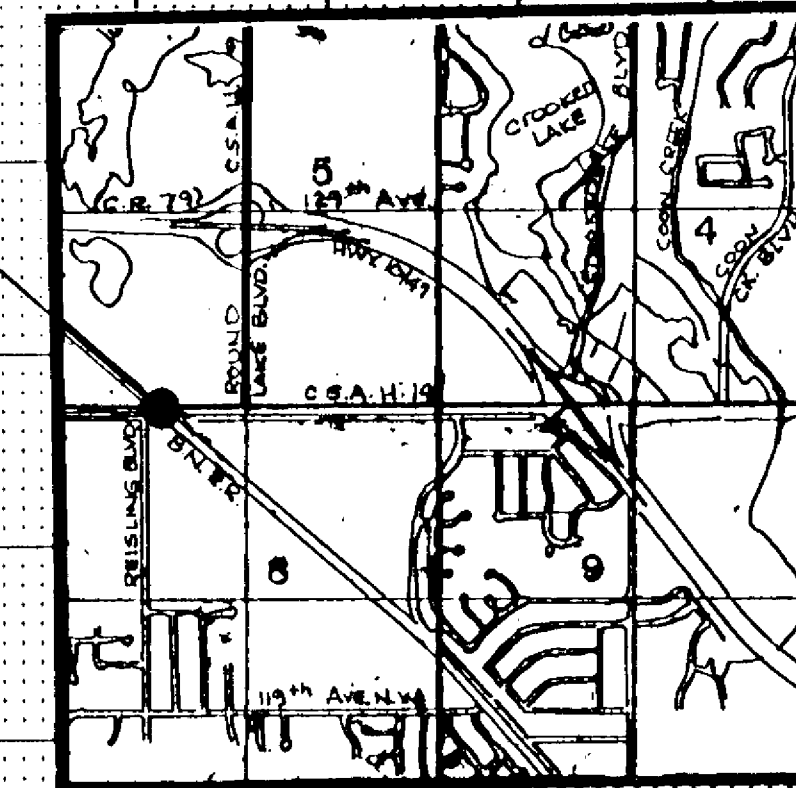
" " 10/31/90 " " " "

PLAT

SCALE: 1" = 100'



TYPICAL APPROACH ROADWAY SECTION (PROPOSED)



Bridge survey sheets made from: BRW SURVEY NOTES

Bench mark elevation 975.209 (M.S.L. 1929 Adj.) (STAMP 0212E)
 Location: 0.4 MI. WEST OF HWY. 10 ALONG T.H. 242, 73' SOUTH OF T.H. 242 MnDOT NE 1/4

MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE SURVEY

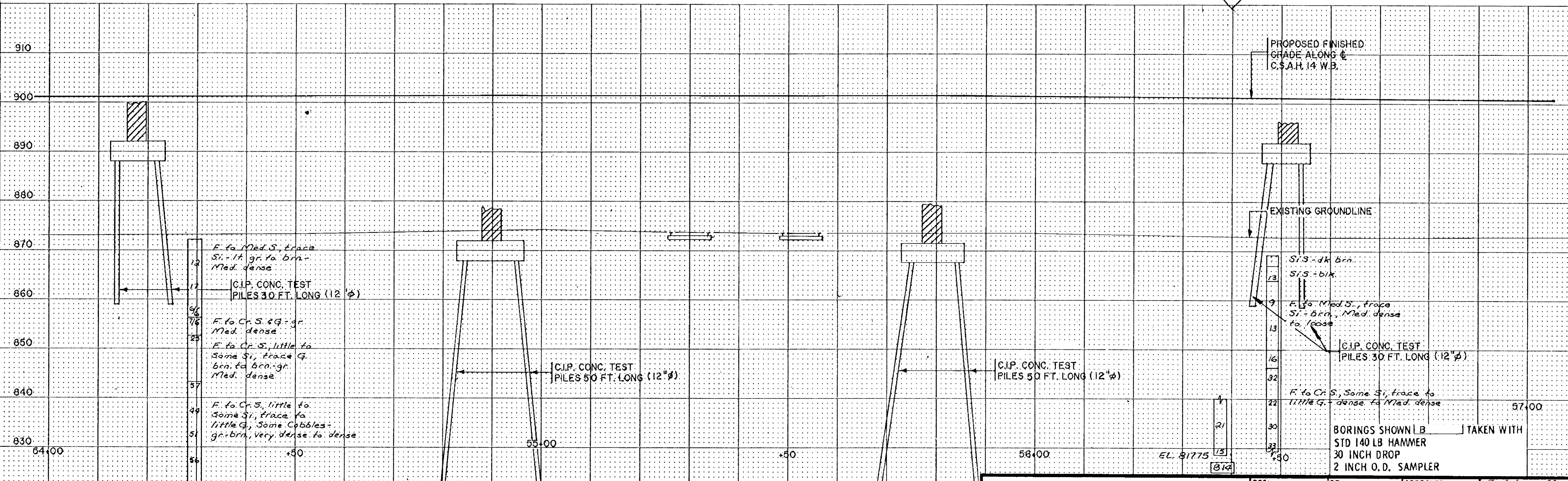
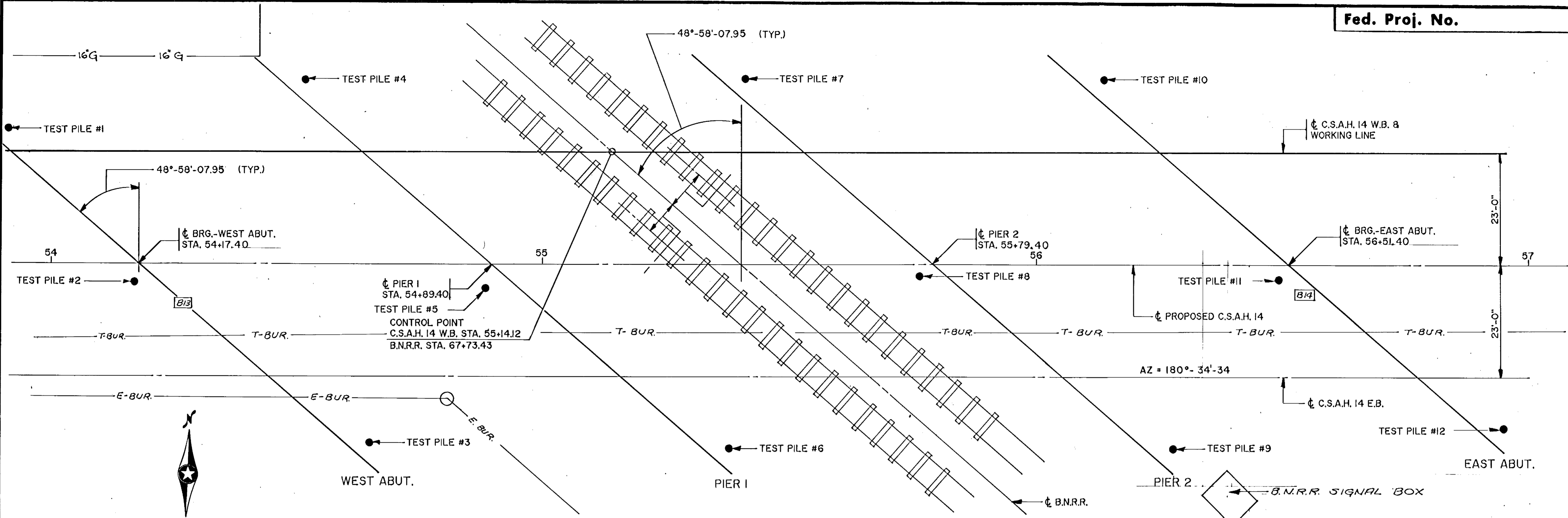
AT MILE POINT ON C.S.A.H. 14 (T.H., C.S.A.H., C.R. etc.)

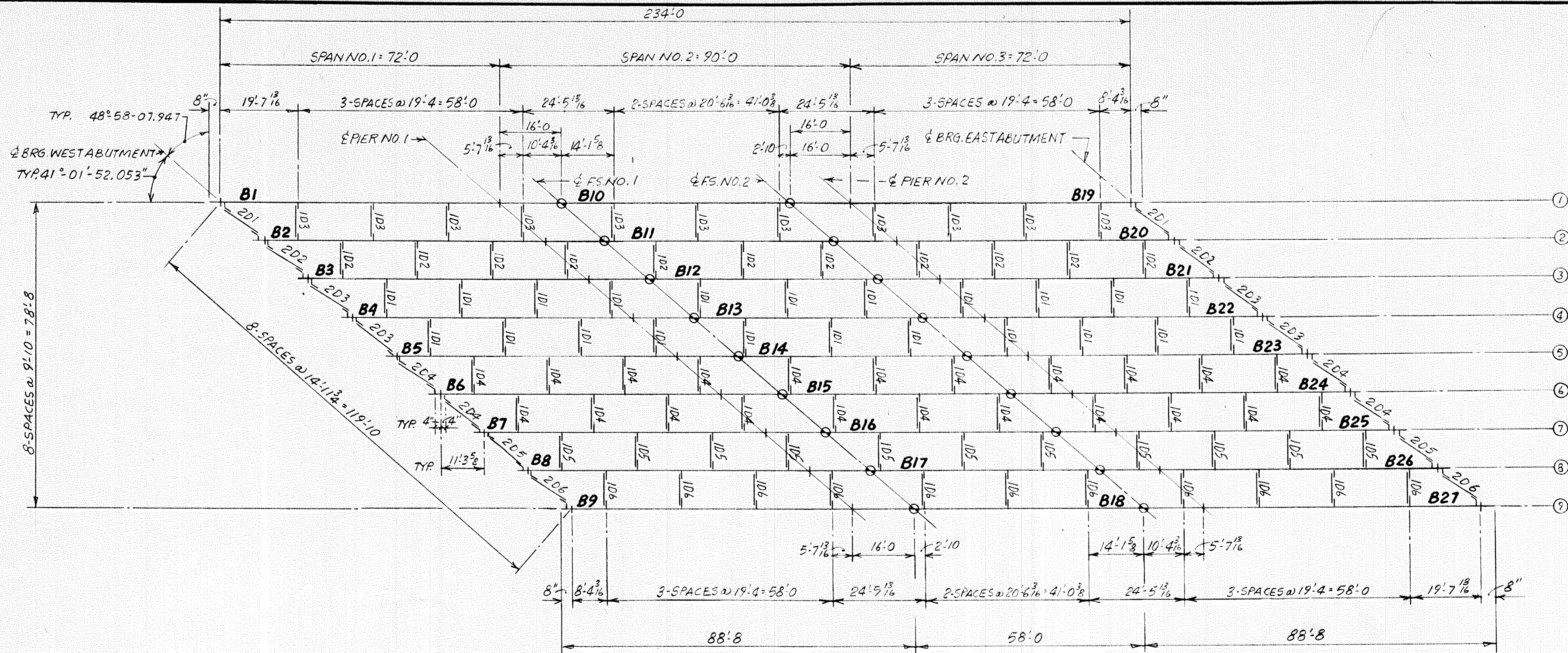
PROPOSED BRIDGE LOCATED 1.05 MILES WEST OF JCT. T.H. 10/47 & JCT. T.H. 242

SEC. 5/8 TWP. 31N R. 24W

CITY OF COON RAPIDS COUNTY ANOKA

BRIDGE NO. 02560





STEEL PLACING PLAN

CONTRACTOR NOTE:
 1. USE 2 WASHERS AT ALL DIAPHRAGM CONNECTIONS.
 2. ALL STUDS TO BE FIELD APPLIED. SEE DESIGN DRAWINGS FOR LAYOUT. SEE SHEET B1 FOR STUDS AND FERRULES.

APPROVED FOR CONSTRUCTION

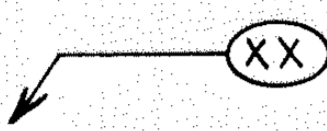
INDEX OF DRAWINGS		FIELD BOLT LOCATION	
SHEET #	DESCRIPTION	SIZE	LOCATION
E1	STEEL PLACING PLAN	7/8" x 4"	FLANGE SPLICES
E2	NOTE SHEET	7/8" x 3 3/4"	WEB SPLICES
E3	BLOCKING DIAGRAM	7/8" x 2 3/4"	ABUT. DIAPH. TO STIFF.
SU-1	SHOP USE SHEET - SPLICE R _s and BEARINGS	7/8" x 2 1/4"	INT. DIAPH. TO STIFF.
SU-2	SHOP USE SHEET - STIFFENER R _s .		
S1 and S2	DIAPHRAGMS.		
S3-S15	BEAMS MK B1 THRU B27.		
B1	FIELD BOLT LIST		
B2	SHOP BOLT LIST.		
	WELD PROCEDURES		

SEE SHEET E 2 FOR TYPICAL SHOP NOTES.
 ALL LONGITUDINAL DIMENSIONS SHOWN ON PLAN ARE MEASURED ALONG CENTER LINE OF GIRDER IN A HORIZONTAL PLANE AND INCLUDE NO CORRECTION FOR GRADE.

Egger Steel Co.
 909 So. Seventh Ave.
 Drawer E
 Sioux Falls, So. Dak. 57101

PROJ. NO. D2-614-10			SHEET E/1
BRIDGE NO. 02560 R.			
C.S.A.H. 14 OVER B.N.R.R. IN THE CITY OF COON RAPIDS.			
REVISIONS			STEEL PLACING PLAN.
LET	DATE	BY	DRAWN BY
A			1/22
B			CHECKED BY
C			91-038
STRUCTURE 234' ROLLED BEAM BRIDGE.			DATE
LOCATION ANOKA COUNTY MINNESOTA.			APRIL 1991
CUSTOMER ANOKA COUNTY HWY. DEPT.			
ARCHITECT BRW. INC.			

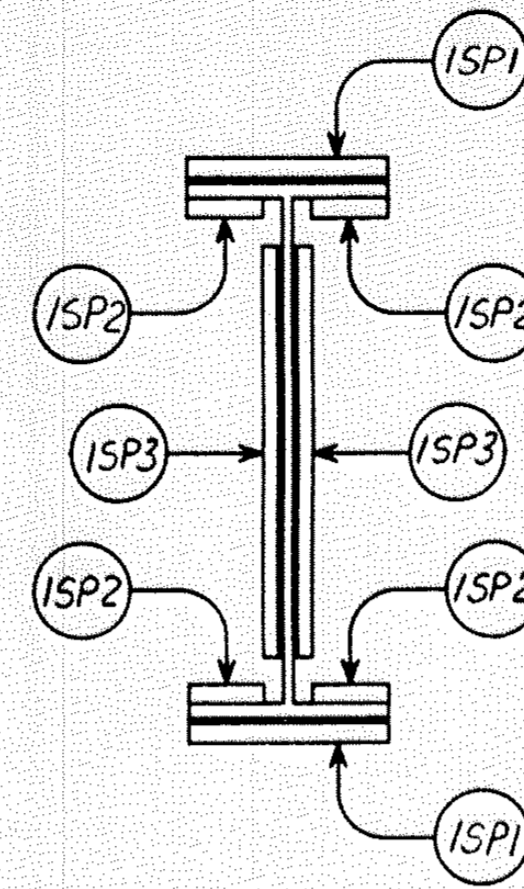
TYPICAL SHOP NOTES

1. ALL WORK ON THIS PROJECT IS TO CONFORM TO THE MINNESOTA/D.O.T. STANDARD SPECIFICATIONS FOR CONSTRUCTION (1988 EDITION), SUPPLEMENTAL SPECIFICATIONS AND THE PLANS.
2. ALL HOLES TO BE $15/16$ " UNLESS NOTED. HOLES IN SPLICE PLATES TO BE DRILLED WITH ALL PARTS ASSEMBLED IN THE POSITION IT IS TO ASSUME IN THE FIELD. THIS SHALL BE FROM ABUT. TO ABUT.
3. THE HOLES AT GIRDER SPLICES TO BE DRILLED. (ALL HOES TO BE DEBURRED.)
4. MATCH-MARK ALL GIRDERS AND SPLICE PLATES. SHOP FIT GIRDERS AS SHOWN ON SHEET # E3, FOR SPLICE PLATES SEE SHEETS *SU1* #.
5. ALL WELDING SHALL COMPLY WITH THE REQUIREMENTS OF CURRENT EDITION OF THE AWS STRUCTURAL WELDING CODE AS MODIFIED AND SUPPLEMENTED BY THE STRUCTURAL STEEL HIGHWAY BRIDGES, PLANS AND SPECIAL PROVISIONS. SEE SMALL DETAIL SHEETS FOR WELDING PROCESS AND PROCEDURE.
6. WELD PROCEDURE NUMBER IS INDICATED BY XX AFTER THE WELD SYMBOL. 
7. ALL WELDERS ON THIS PROJECT ARE TO BE CERTIFIED PER MINN./D.O.T.
8. WELDING INSPECTION AS FOLLOWS:
 - A. MAGNETIC PARTICLE INSPECTION AS FOLLOWS:
 - a) ONE FOOT OF EVERY TEN FOOT FLANGE TO WEB.
 - b) 100% OF ALL BEARING STIFFENER WELDS.
 - B. RADIOGRAPHIC INSPECTION WHEN AUTHORIZED BY THE ENGINEER.
9. ALL MATERIAL ON THIS PROJECT TO BE "AMERICAN MADE".
10. MILL CERTIFICATES ARE REQUIRED ON ALL MATERIAL.
11. ALL MATERIAL TYPE, GRADE, ETC. WILL BE AS SHOWN ON THE DETAILS.
12. ALL UNITS SHALL HAVE THE PIECE MARKS APPLIED WITH LOW-STRESS STEEL DIE STAMPS. PIECE MARKS FOR GIRDERS AND DIAPHRAGMS SHALL ALSO BE PUT ON THE TOP FLANGE USING OIL BAS PAINT. ALL MAIN MEMBERS (AS INDICATED BELOW) SHALL HAVE HEAT NUMBERS APPLIED WITH LOW-STRESS STEEL DIE STAMPS.

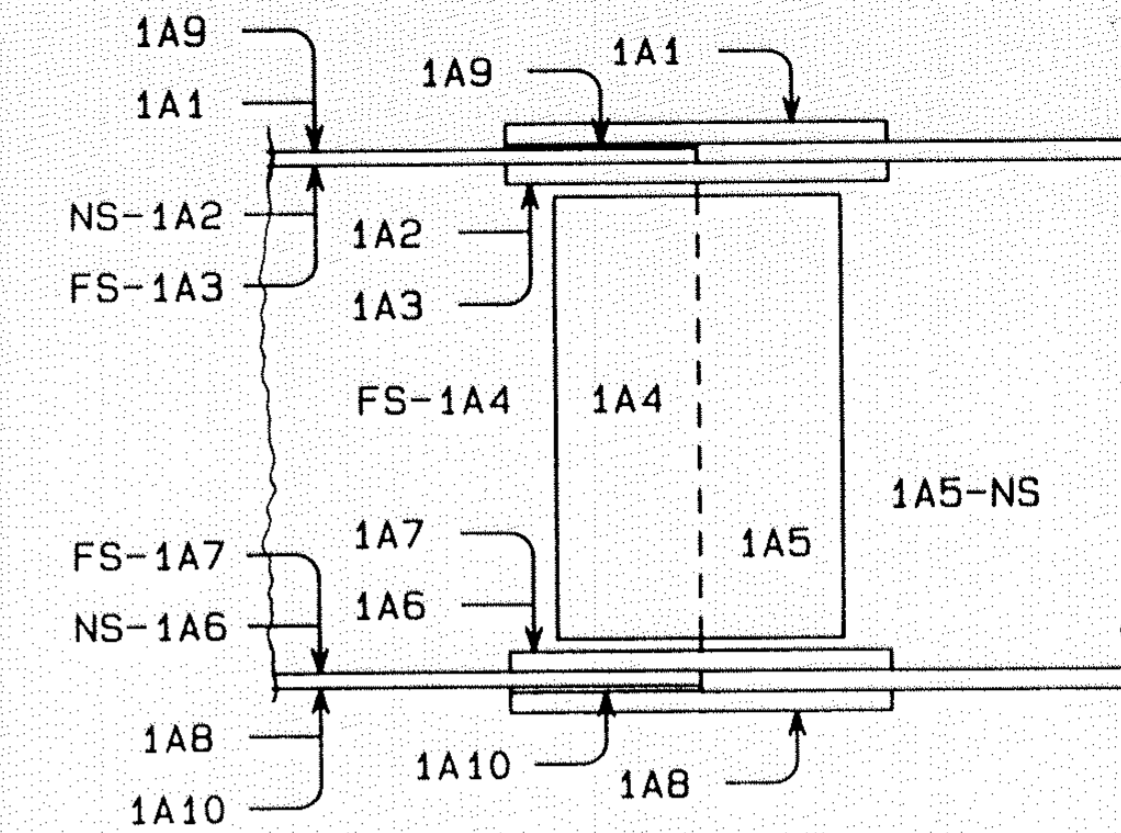
ALL WIDE FLANGE SECTIONS
SPLICE PLATES

BENT PLATE DIAPHRAGMS
BEARING STIFFENERS

ALL MATERIAL SHALL BE IDENTIFIED BY HEAT NUMBERS, COLOR CODES OR ASTM GRADE THROUGHOUT FABRICATION.
13. TOP AND BOTTOM FLANGE PLATES AND SOLE PLATES TO BE 90° TO THE WEB.
14. DO NOT SHEAR CUT ANY MATERIAL OVER 1/2" THICK. DO NOT SHEAR CUT ANY SPLICE PLATES.
15. ARROWS ON THE DETAILS INDICATE THE DIRECTION OF ROLLING FOR STEEL PLATES WHEN REQUIRED.
16. ALL RE-ENTRANT CUTS SHALL HAVE A RADIUS OF NOT LESS THAN 1" UNLESS NOTED.
17. ALL STIFFENERS SHALL BE PERPENDICULAR TO THE WEB AND FLANGE UNLESS NOTED.
18. MEMBERS WEIGHING MORE THAN 3 TONS SHALL HAVE THE WEIGHT MARKED THEREON.
19. ALL FLAME CUTTING TO MEET ANSI RATING OF 1000. FLAME CUT SURFACES OF MEMBERS SHALL HAVE CORNERS ROUNDED TO 1/16" RADIUS AFTER FLAME CUTTING. CUT SURFACES AND EDGES TO BE FREE OF SLAG.
20. CLEAN AND PAINT
 - A. DO NOT BLAST-CLEAN ANY MACHINED SURFACES.
 - B. ALL CONTACT SURFACES (WITHIN 3" OF HOLES) TO BE BLAST-CLEANED TO A #10 NEAR-WHITE FINISH AND PAINT WITH A MINIMUM OF 2 COATS ZINC RICH ORGANIC VEHICLE PRIMER. THE FIRST COAT SHALL BE TYPE I (RED TINT). THE SECOND COAT SHALL BE TYPE II (GRAY TINT). THE TWO COATS SHALL PROVIDE A MINIMUM OF 3 MILS DRY THICKNESS. IF ADDITIONAL COATS ARE REQUIRED THEY SHALL BE ALTERNATING TYPE I AND TYPE II. NO BLASTING OR PAINTING ANY OTHER AREAS.



SPLICE PLATE DETAIL

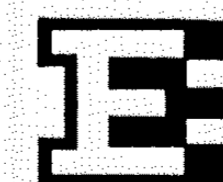


TYPICAL MATCH MARKING FOR SPLICE MATERIAL

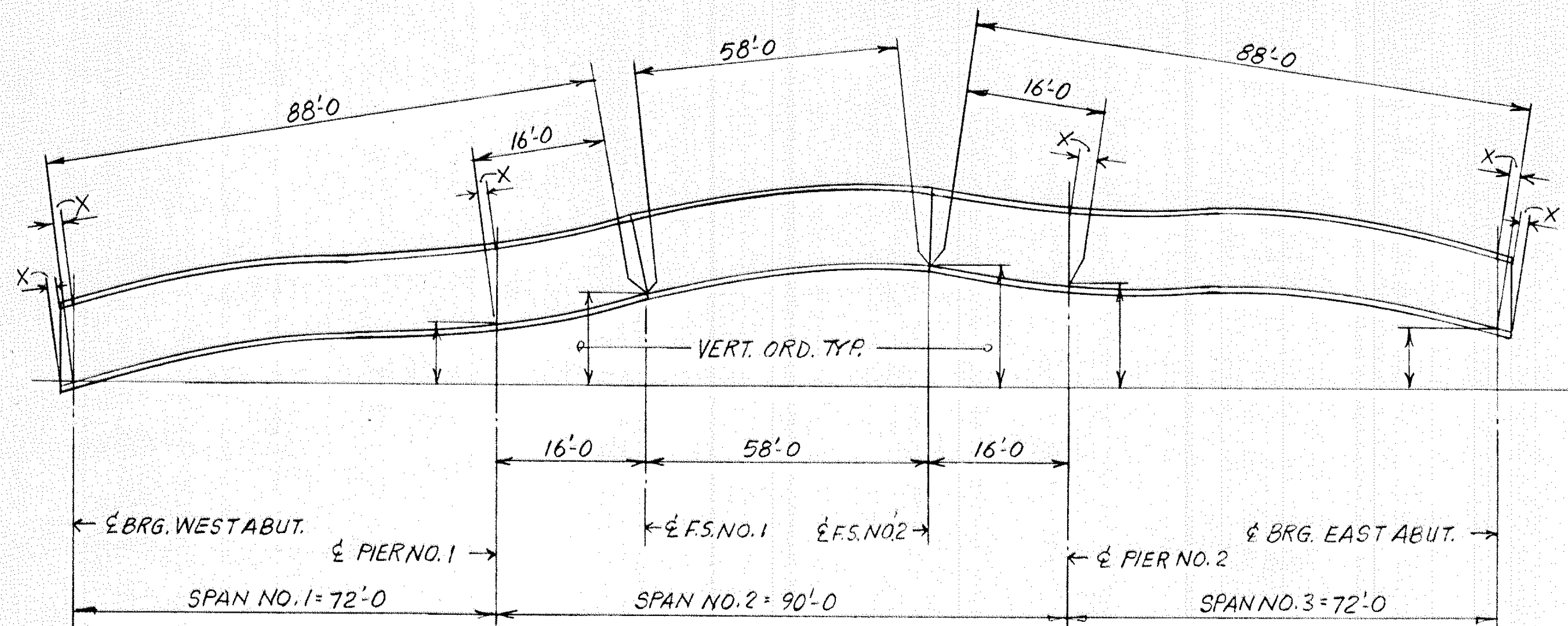
THE INTERSECTION OF A GIRDER LINE LETTER & JOINT NUMBER WILL FORM AN IDENTIFICATION MATCH MARK. EXAMPLE: 1A. THIS MARK WILL BE PLACED ON THE ENDS OF GIRDERS AT THE SPLICES. ALL SPLICE MATERIAL WILL BE MARKED WITH A NUMERAL FOR EACH INDIVIDUAL PIECE OF SPLICE MATERIAL. EXAMPLE: 1A2. CORRESPONDING MARKS ALSO WILL BE AFFIXED ON THE GIRDERS. THE MARKS MUST BE POSITIONED TO PREVENT INTERCHANGE OR ROTATION OF THE SPLICE MATERIAL, WITH MARKS OPPOSITE EACH OTHER IN AN OFF-CENTER OF PLATE POSITION AND SHALL BE CLEARLY MADE WITH 1/2" SIZE STEEL NUMBERING DIES.

APPROVED FOR CONSTRUCTION

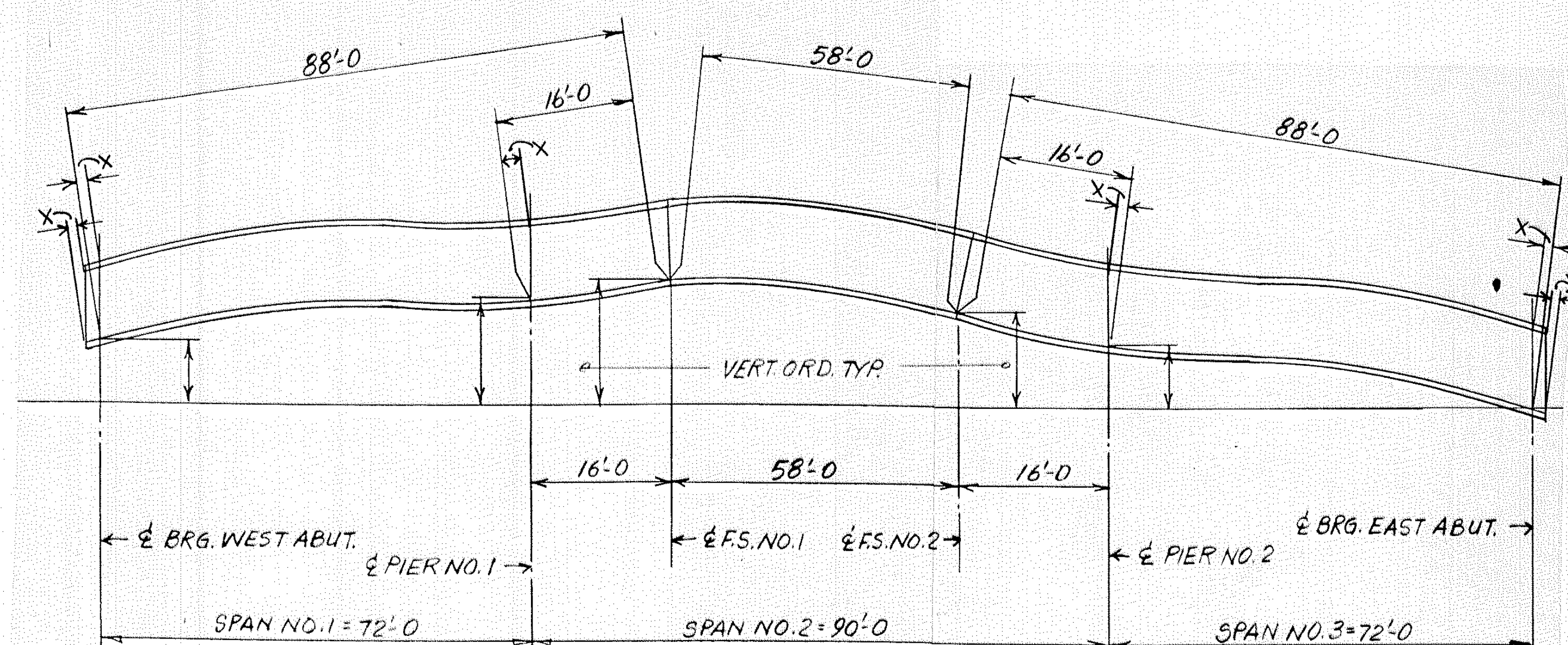
		PROJ. NO. 02-614-18		SHEET E2
		BRIDGE NO. 02560R.		
		C.S.A.H. 14 OVER BNRR. IN THE CITY OF COON RAPIDS		
REVISIONS		TYPICAL NOTE SHEET.		DRAWN BY <i>RJC</i> CHECKED BY <i>JK</i> JOB NO. 91-038 DATE APRIL 1991.
LET	DATE	BY	STRUCTURE 234' ROLLED BEAM BRIDGE.	
A			LOCATION ANOKA COUNTY MINNESOTA.	
B			CUSTOMER ANOKA COUNTY HWY. DEPT.	
C			ARCHITECT BRW. INC.	



Egger Steel Co.
909 So. Seventh Ave.
Drawer E
Sioux Falls, So. Dak. 57101



BLOCKING FOR GIRDER LINES 1 THRU 5

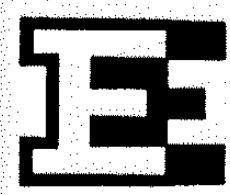


BLOCKING FOR GIRDER LINES 6 THRU 9.

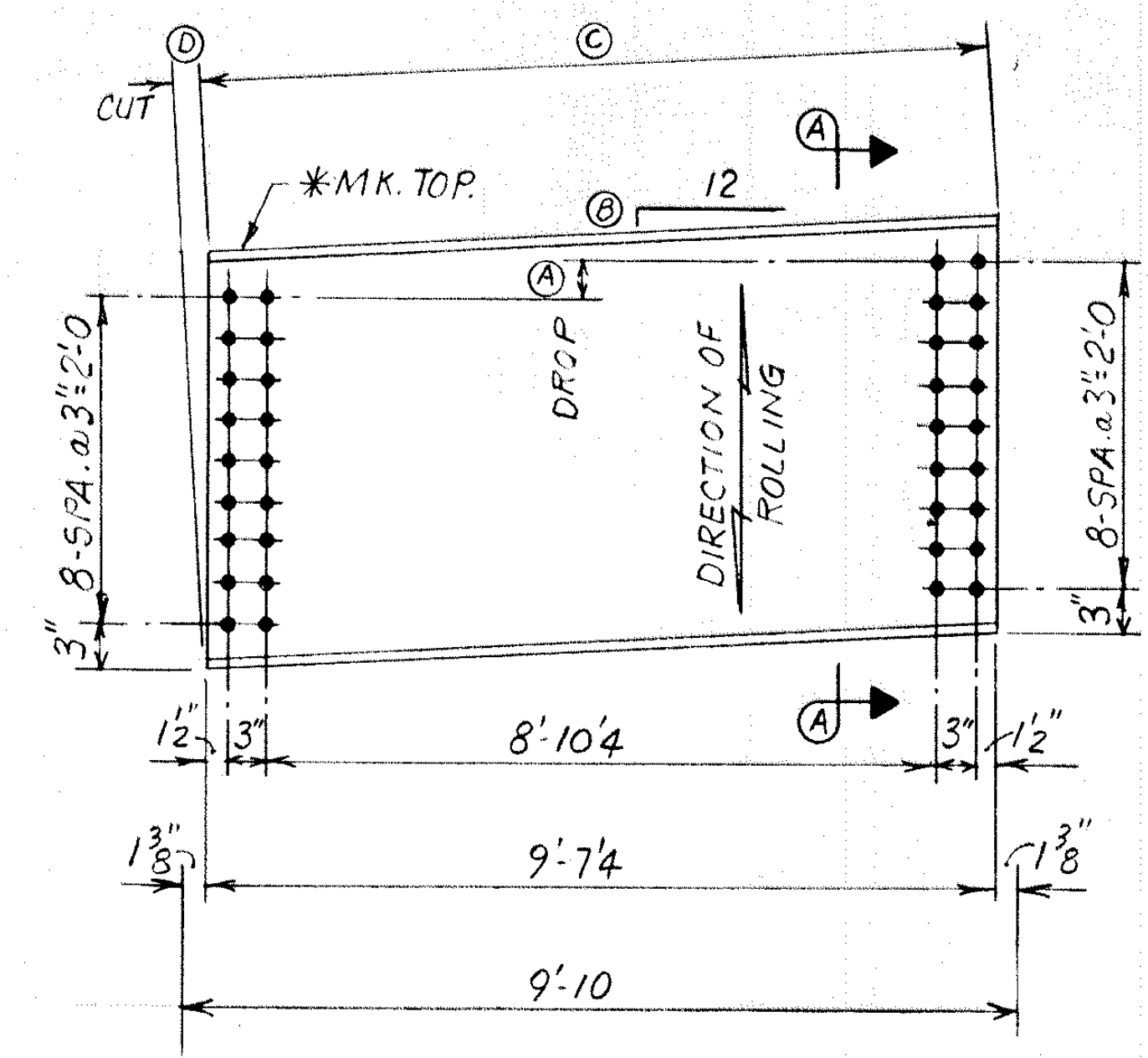
TABLE OF BLOCKING ORDINATES.

GIRDER LINE	← BRG. WEST ABUTMENT		← PIER NO. 1		← F.S. NO. 1		← F.S. NO. 2		← PIER NO. 2		← BRG. EAST ABUTMENT			
	VERT. ORD.	X	ELEV. BOT. WEB	VERT. ORD.	X	ELEV. BOT. WEB	VERT. ORD.	ELEV. BOT. WEB	VERT. ORD.	ELEV. BOT. WEB	VERT. ORD.	X	ELEV. BOT. WEB	
1	0	3/8"	896.026	8 15/16"	3/8"	896.772	1 1/16"	896.949	1'-1 1/2"	1/16"	897.188	1'-1 1/2"	1/16"	897.015
2	0	3/8"	896.366	8 3/16"	3/8"	897.05	10 3/16"	897.214	1'-0 7/16"	1/16"	897.403	11 3/16"	1/16"	897.353
3	0	5/16"	896.68	7 7/16"	5/16"	897.302	9 4"	897.452	10 3/16"	8/8"	897.592	10 3/16"	8/8"	897.528
4	0	5/16"	896.951	6 3/4"	5/16"	897.512	8 3/8"	897.648	9 7/16"	8/8"	897.739	8 2"	8/8"	897.661
5	0	1/4"	897.212	6"	1/4"	897.732	7 7/16"	897.834	7 1/8"	7/16"	897.875	6 5/8"	7/16"	897.783
6	8"	1/4"	897.17	5 3/8"	1/4"	897.607	6 1/16"	897.716	6 5/8"	3/16"	897.707	5 5/16"	3/16"	897.602
7	2 9/16"	3/16"	897.116	7 1/8"	3/16"	897.492	8 3/16"	897.587	7 1/2"	3/16"	897.529	6 1/16"	3/16"	897.41
8	4 15/16"	3/16"	897.021	8 3/4"	3/16"	897.335	9 1/16"	897.417	8 7/16"	3/16"	897.309	6 13/16"	3/16"	897.177
9	7 3/8"	3/8"	896.899	10 3/8"	3/8"	897.152	11 3/16"	897.219	9 5/16"	7/16"	897.062	7 7/16"	1/4"	896.917

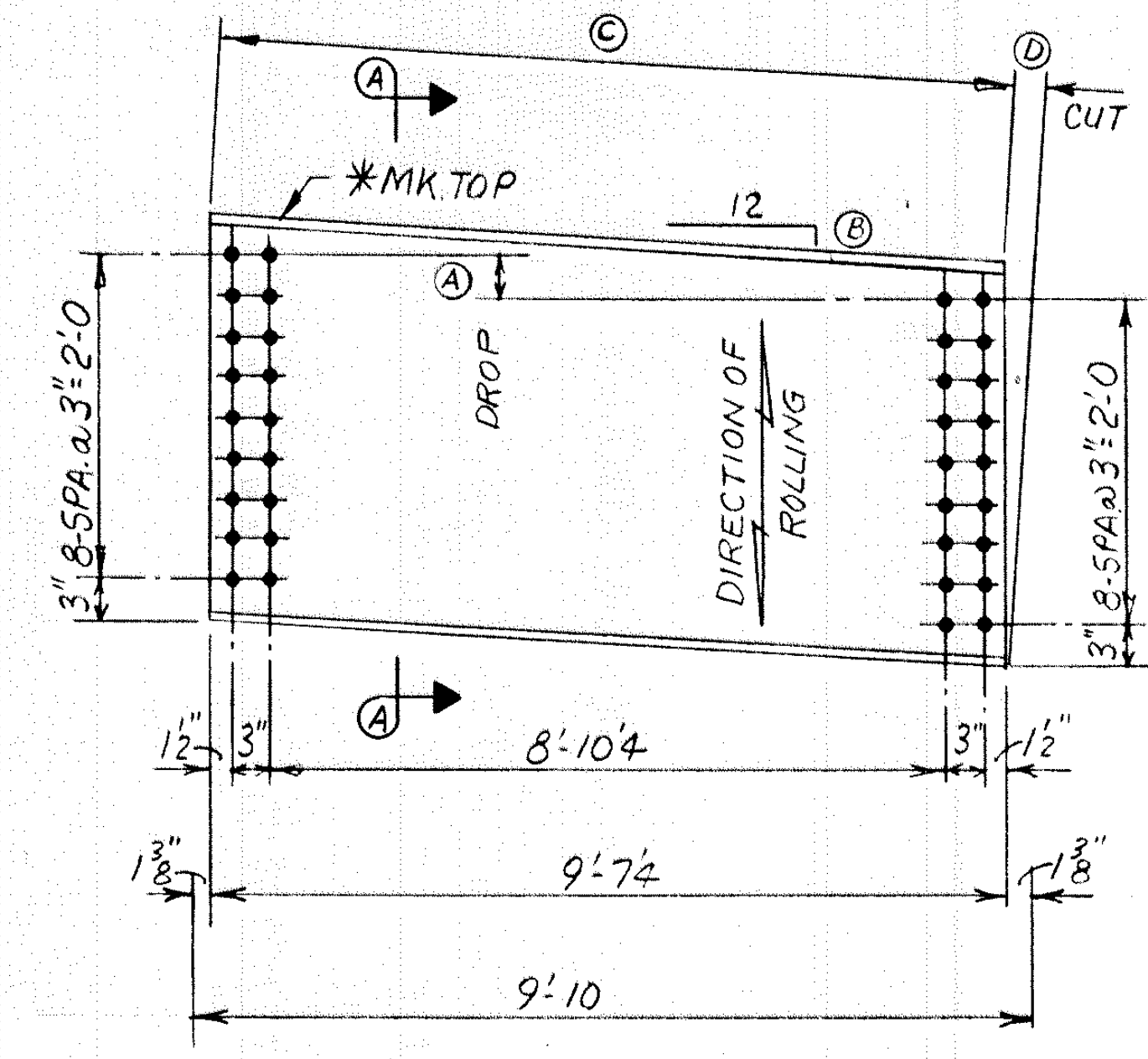
APPROVED FOR
CONSTRUCTION

 Egger Steel Co. 909 So. Seventh Ave. Drawer E Sioux Falls, So. Dak. 57101			PROJ. NO. 02-614-18 BRIDGE NO. 02560R. C.S.A.H. 14 OVER B.N.R.R. IN THE CITY OF COON RAPIDS.				
			REVISIONS BLOCKING DIAGRAM.			SHEET E 3	
			LET DATE BY A B C			DRAWN BY CHECKED BY JOB NO. 91-038 DATE APR 10 1991	
			STRUCTURE 234' ROLLED BEAM BRIDGE. LOCATION ANOKA COUNTY MINNESOTA. CUSTOMER ANOKA COUNTY HWY. DEPT. ARCHITECT BRW INC.				

JOB NO. 91-038 (V)		BILL OF MATERIAL					SHEET: 51
MK. NO.	MATERIAL FOR ONE		WT.	ORDER SIZE	P. O. NO.	TYPE	REMARKS
	DESCRIPTION						
1D1	1	R 5/16 x 38'4 x 9'7 11/16	STOCK			A709-50W (A588)	Note: Direction of Rolling
1D2	1	R 5/16 x 38'4 x 9'7 13/16					
1D3	1	R 5/16 x 38'4 x 9'7 7/8					
1D4	1	R 5/16 x 38'4 x 9'7 11/16					
1D5	1	R 5/16 x 38'4 x 9'7 13/16					
1D6	1	R 5/16 x 38'4 x 9'7 7/8					

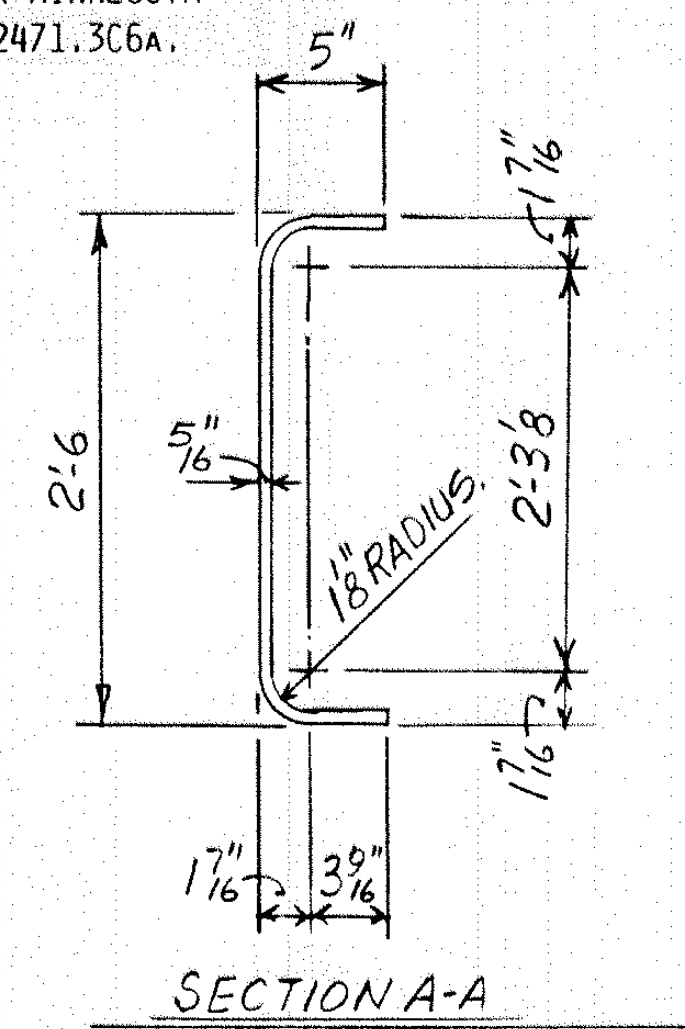


QUANTITY	MARK	(A)	(B)	(C)	(D)
22	1D1	13 1/4"	3 1/8"	9'-7 1/4"	7 1/8"
11	1D2	2 3/16"	1 1/4"	9'-7 1/4"	9 1/8"
11	1D3	2 3/8"	1 1/4"	9'-7 1/4"	5 3/8"



QUANTITY	MARK	(A)	(B)	(C)	(D)
22	1D4	13 1/4"	3 1/8"	9'-7 1/4"	7 1/8"
11	1D5	2 3/16"	1 1/4"	9'-7 1/4"	9 1/8"
11	1D6	2 3/8"	1 1/4"	9'-7 1/4"	5 3/8"

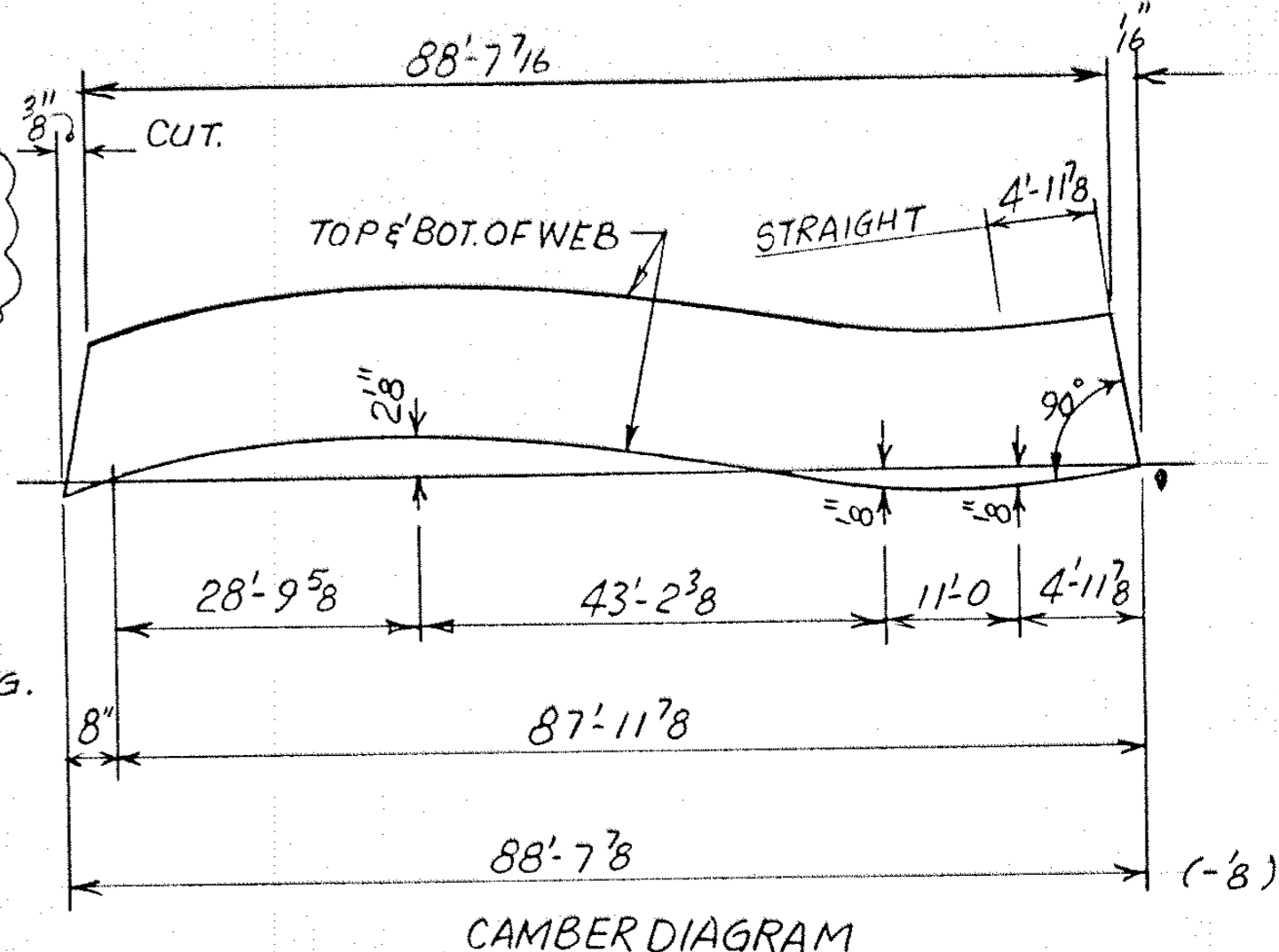
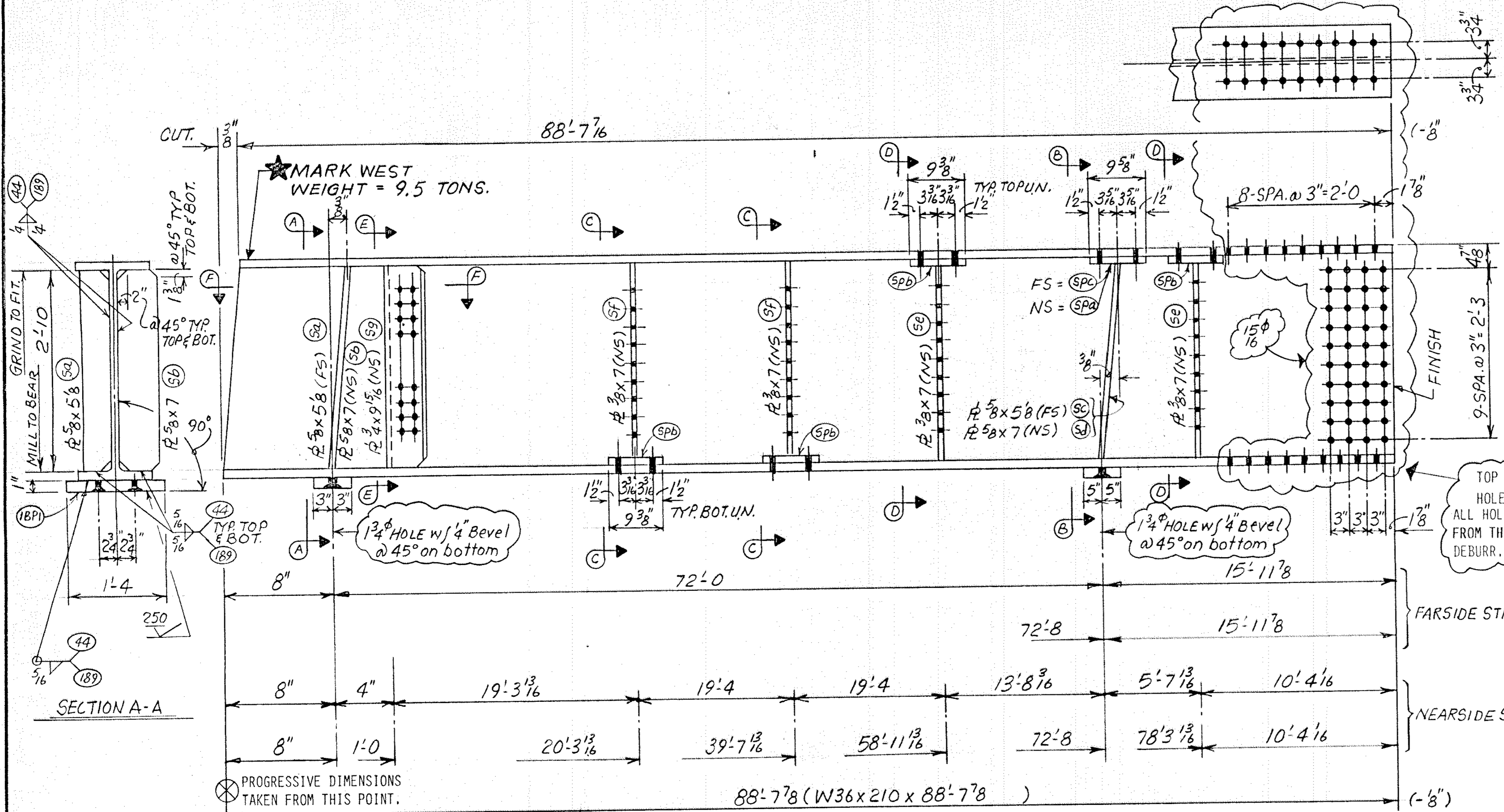
SHOP NOTE: THE BEND LINE WILL BE AT RIGHT ANGLES TO THE DIRECTION OF ROLLING. BEFORE BENDING, THE CORNERS SHALL BE ROUNDED TO A RADIUS OF 1/16" THROUGHOUT THE PORTION AT WHICH BENDING IS TO OCCUR, PER MINNESOTA DEPARTMENT OF TRANSPORTATION 2471.3C6A.



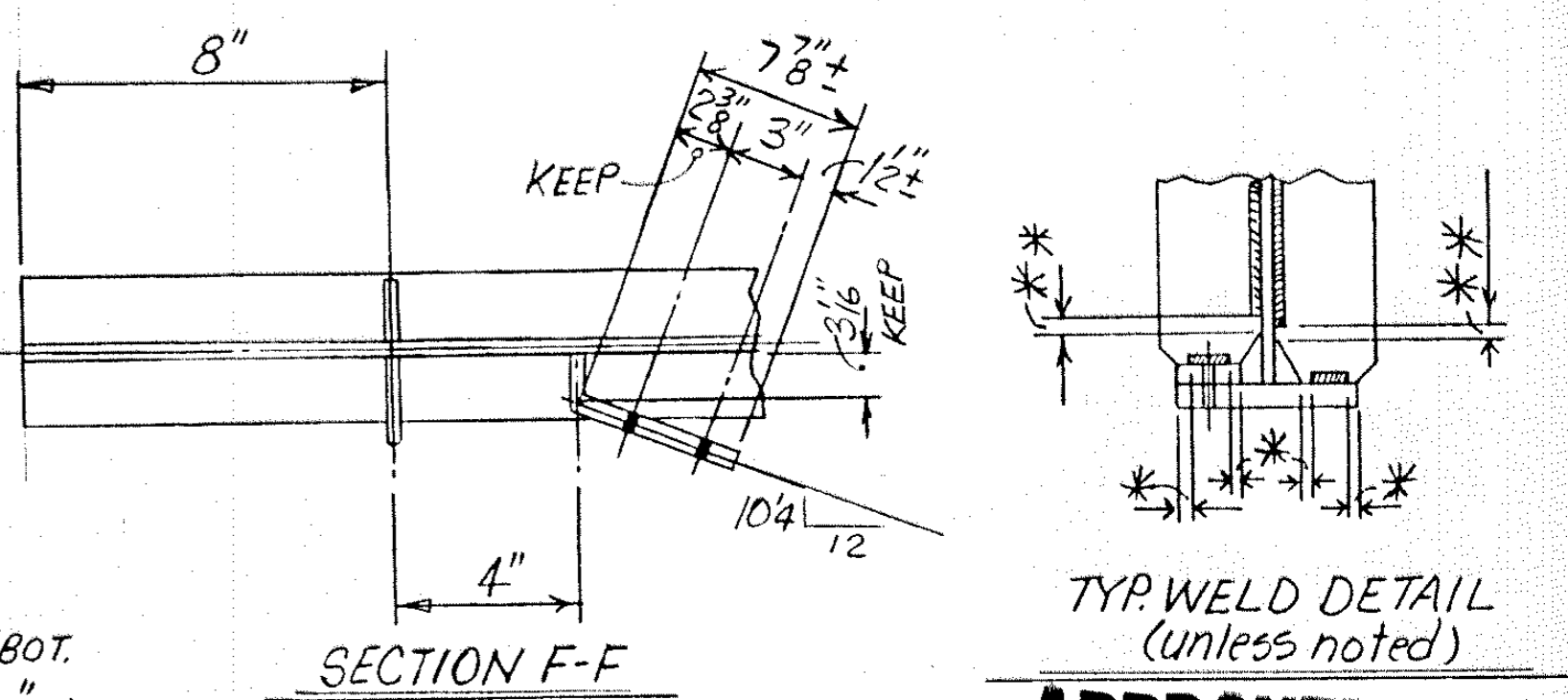
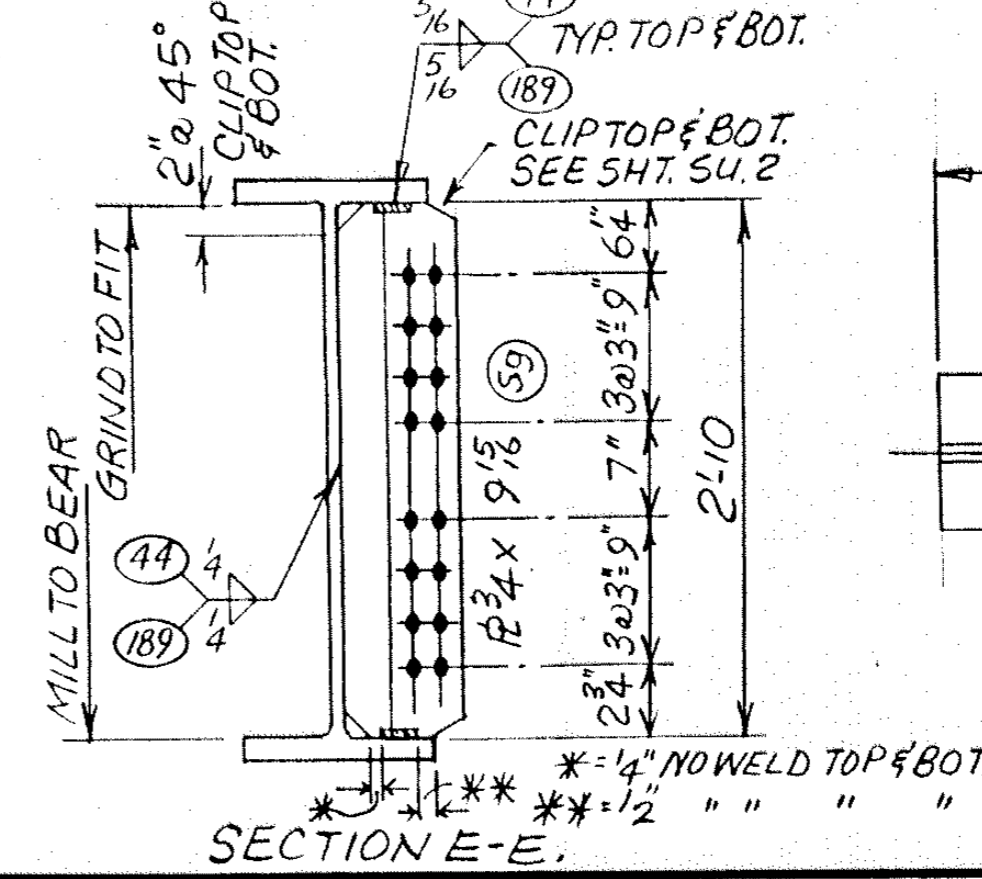
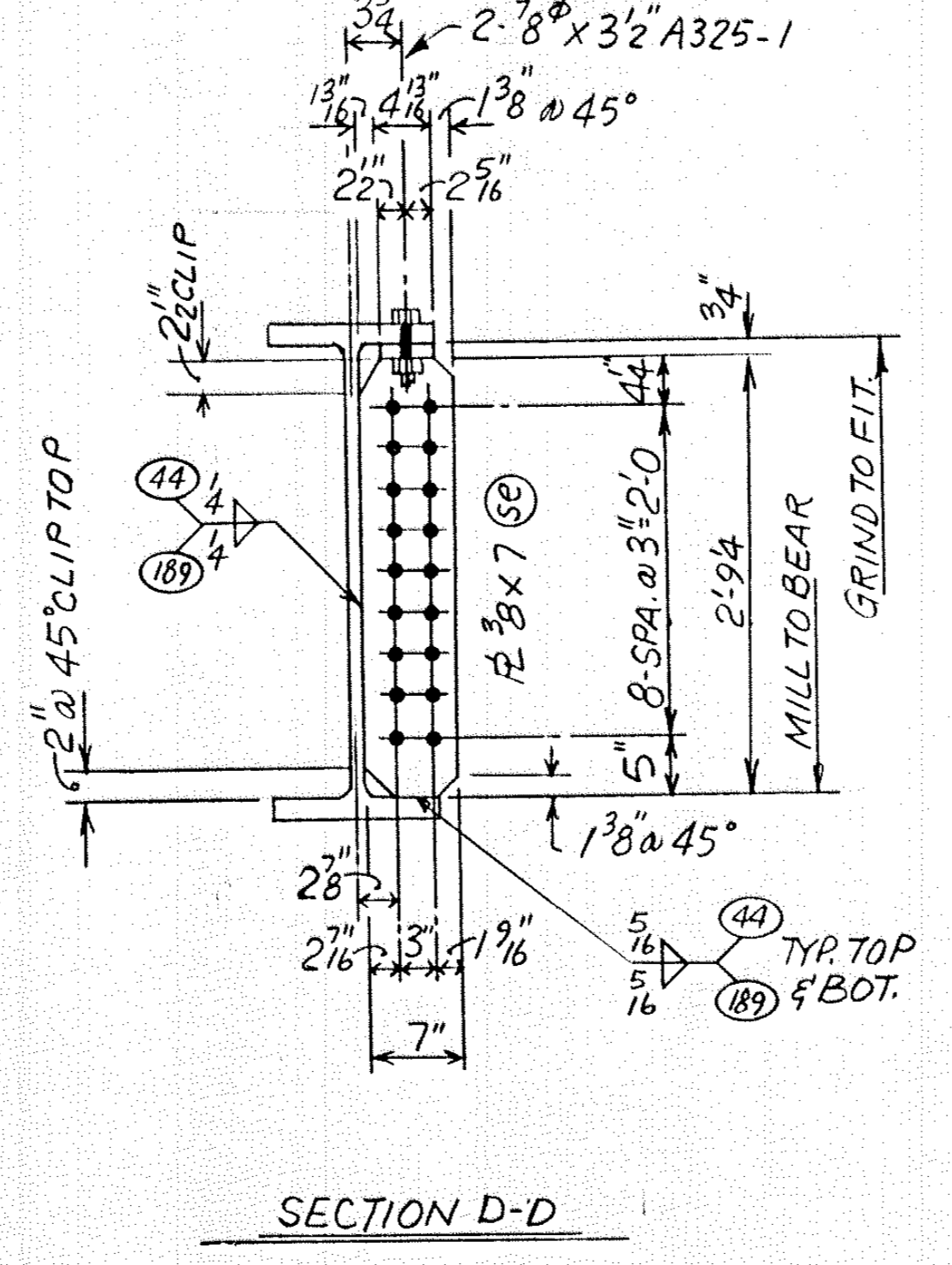
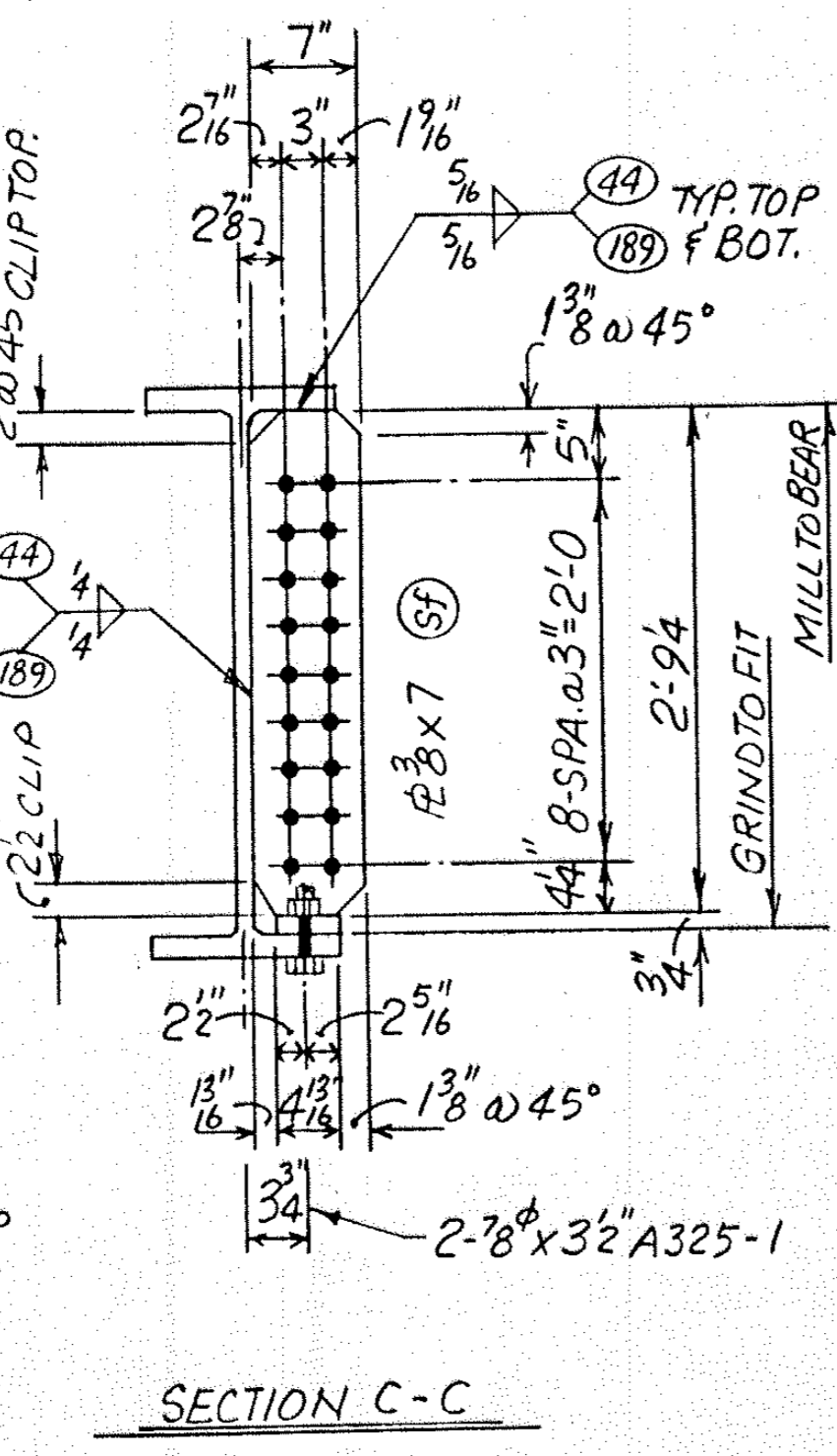
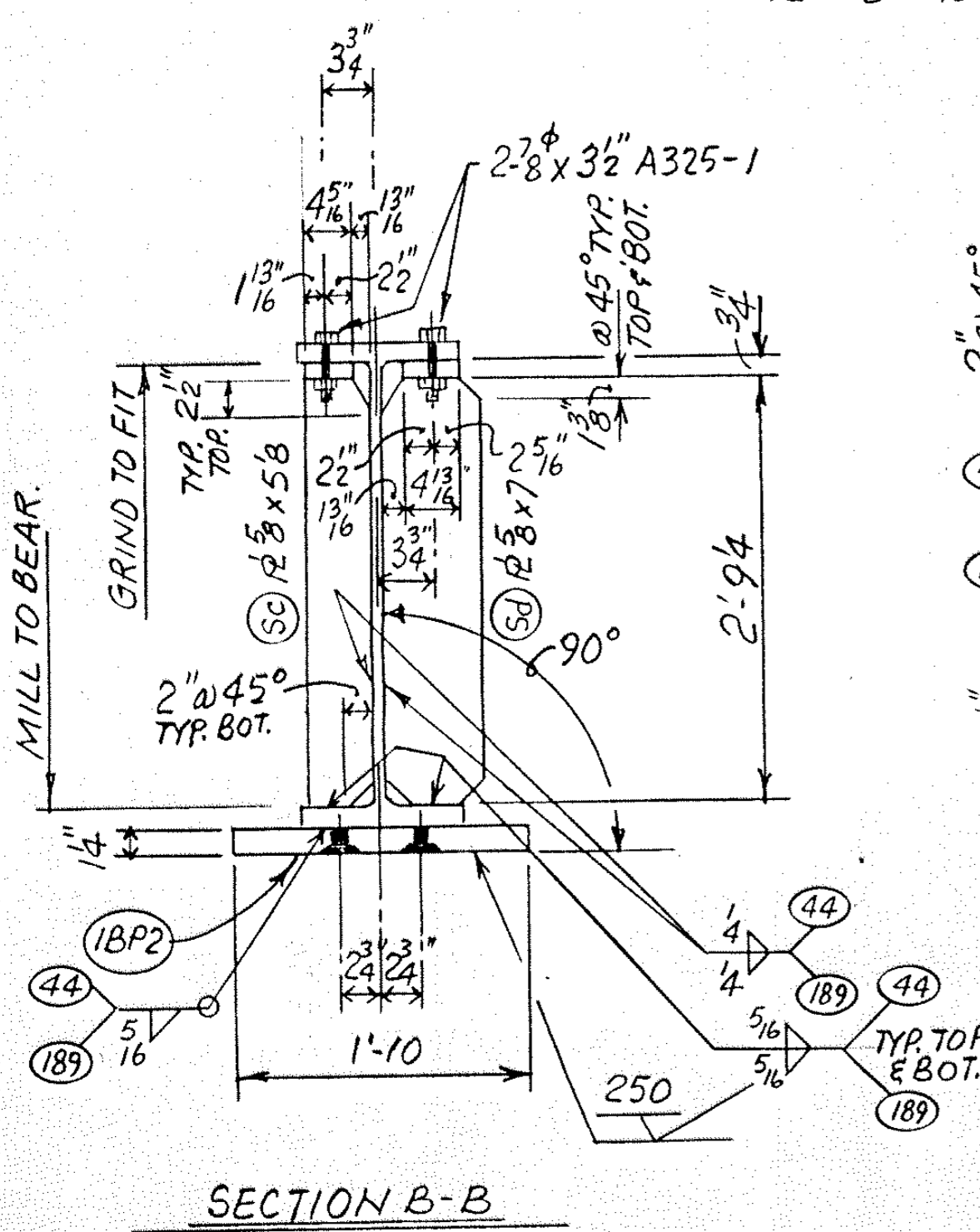
SEE SHEET E2 FOR TYPICAL SHOP NOTES ALL MATERIAL TO BE AMERICAN MADE MILL CERTIFICATES REQUIRED ON ALL MATERIAL ALL WELDERS TO BE CERTIFIED	PROJ. NO. 02-614-18.		APPROVED FOR CONSTRUCTION SHEET 51 DRAWN BY [Signature] CHECKED BY [Signature] JOB NO. 91-038 (V) DATE APRIL 1991	
	BRIDGE NO. 02560 R.			
	C.S.A. H 14 OVER B.N.R.R. IN THE CITY OF COON RAPIDS.			
Egger Steel Co. 909 So. Seventh Ave. Drawer E Sioux Falls, So. Dak. 57101	HOLES 116 PAINT SEE NOTE NO. 20 SHT. E 2.	REVISIONS	STRUCTURE 234' ROLLED BEAM BRIDGE. LOCATION ANOKA COUNTY MINNESOTA. CUSTOMER ANOKA COUNTY HWY. DEPT. ARCHITECT BRW. INC.	
		LET	DATE	BY
		A		
		DIAPHRAGMS.		

JOB NO. 91-038 (F) BILL OF MATERIAL SHEET: 53

MK.	NO.	MATERIAL FOR ONE DESCRIPTION	WT.	ORDER SIZE	P. O. NO.	TYPE	CAMBER ZONE	REMARKS
BI		ONE-THUS						
a	1	W36 x 210 x 88'-7 7/8		88'-11	30382	A709-50 WT. 3 (A588 7M 222)	C/3	FIE
sa	1	R 5/8 x 5'8 x 2'-10		STOCK				
sb	1	R 5/8 x 7 x 2'-10						
sc	1	R 5/8 x 5'8 x 2'-9 1/4						
sd	1	R 5/8 x 7 x 2'-9 1/4						
se	2	R 3/8 x 7 x 2'-9 1/4						
sf	2	R 3/8 x 7 x 2'-9 1/4						
sg	1	R 3/4 x 9'5/16 x 2'-10						BENT.
spa	1	R 3/4 x 4'3/16 x 0'-9 5/8				do	do	
spb	4	R 3/4 x 4'3/16 x 0'-9 5/8				do	do	
spc	1	R 3/4 x 4'5/16 x 0'-9 5/8				do	do	
lbp1	1	R 1x6 x 1'-4				A709-50W (A588)		
lbp2	1	R 2'4 x 10 x 1'-10				do		



SEE SHEET B2 FOR SHOP BOLT LIST.
 SHOP BOLTS FOR ONE BEAM.
 12 - 7/8" x 3 1/2" A325-1 BOLTS.
 12 - 7/8" A325-1 WASHERS.



SEE SHEET E2 FOR TYPICAL SHOP NOTES
 ALL MATERIAL TO BE AMERICAN MADE
 MILL CERTIFICATES REQUIRED ON ALL MATERIAL
 ALL WELDERS TO BE CERTIFIED

PROJ. NO. 02-614-18.
 BRIDGE NO. 02560 R.
 C.S.A.H. 14 OVER BNRR. IN THE CITY OF COON RAPIDS.

REVISIONS

LET	DATE	BY
A		
B		
C		

EGGER STEEL CO.
 909 So. Seventh Ave.
 Drawer E
 Sioux Falls, So. Dak. 57101

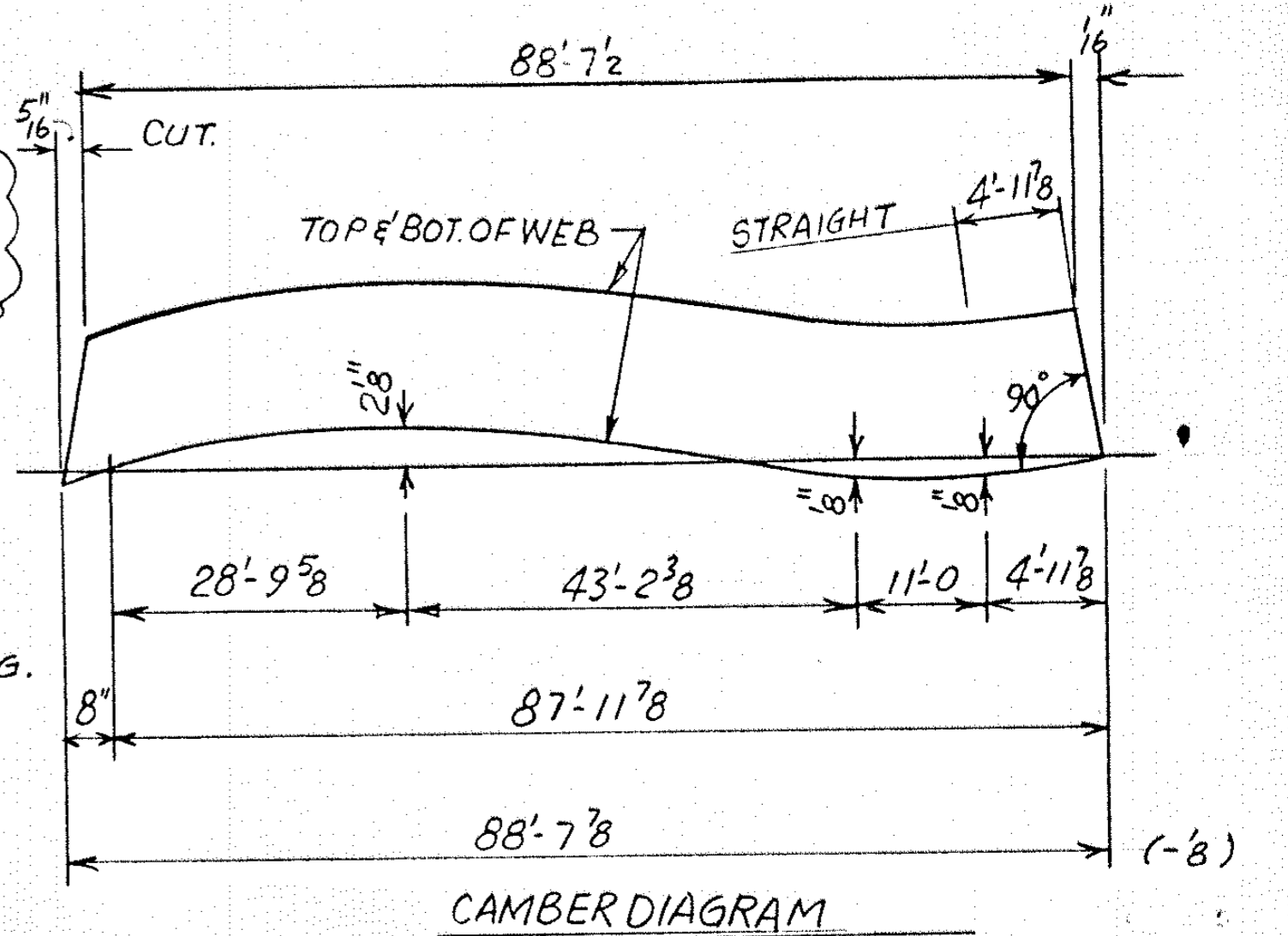
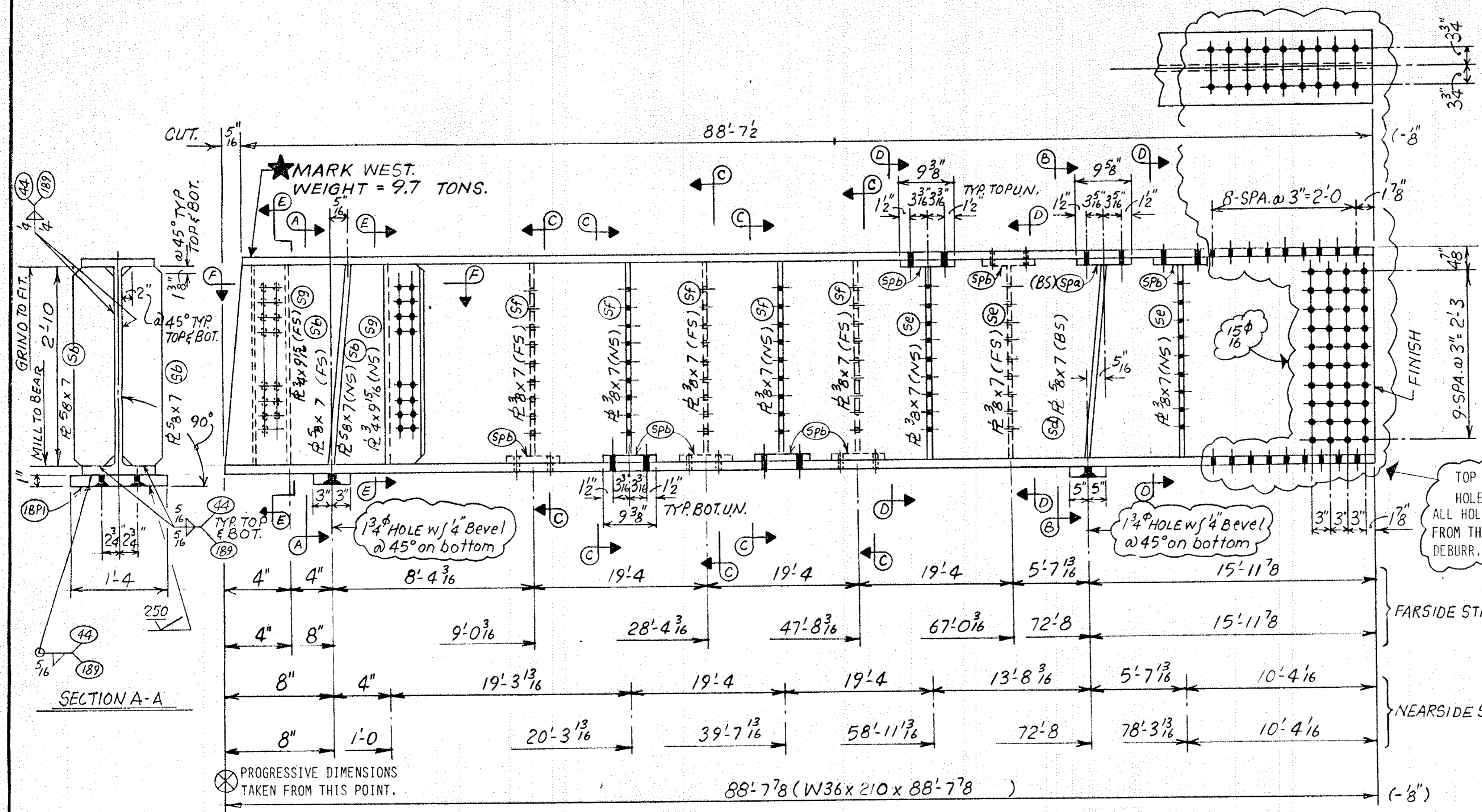
HOLES UNLESS NOTED 1 1/8" UNLESS NOTED.
 PAINT SEE NOTE
 NO. 20 SHEET E2.

STRUCTURE 234' ROLLED BEAM BRIDGE.
 LOCATION ANOKA COUNTY MINNESOTA.
 CUSTOMER ANOKA COUNTY HWY. DEPT.
 ARCHITECT BRW. INC.

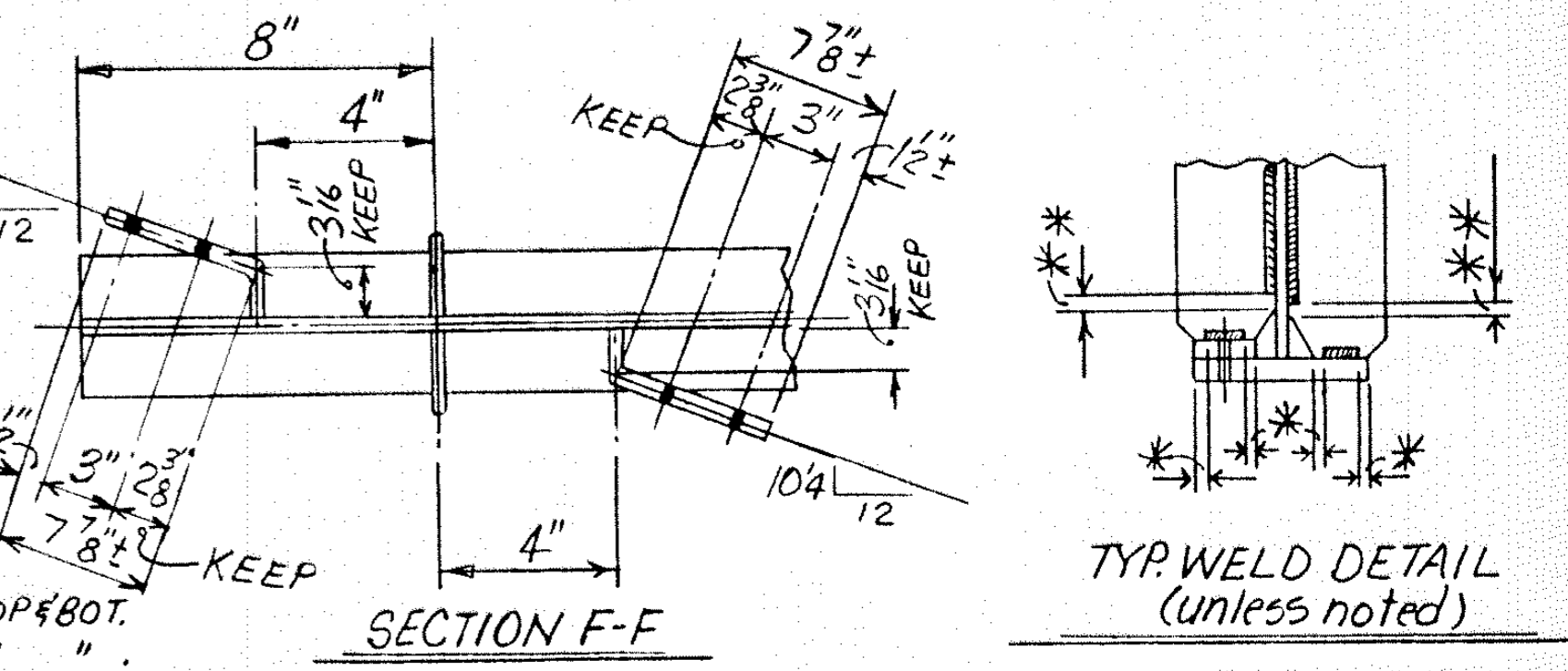
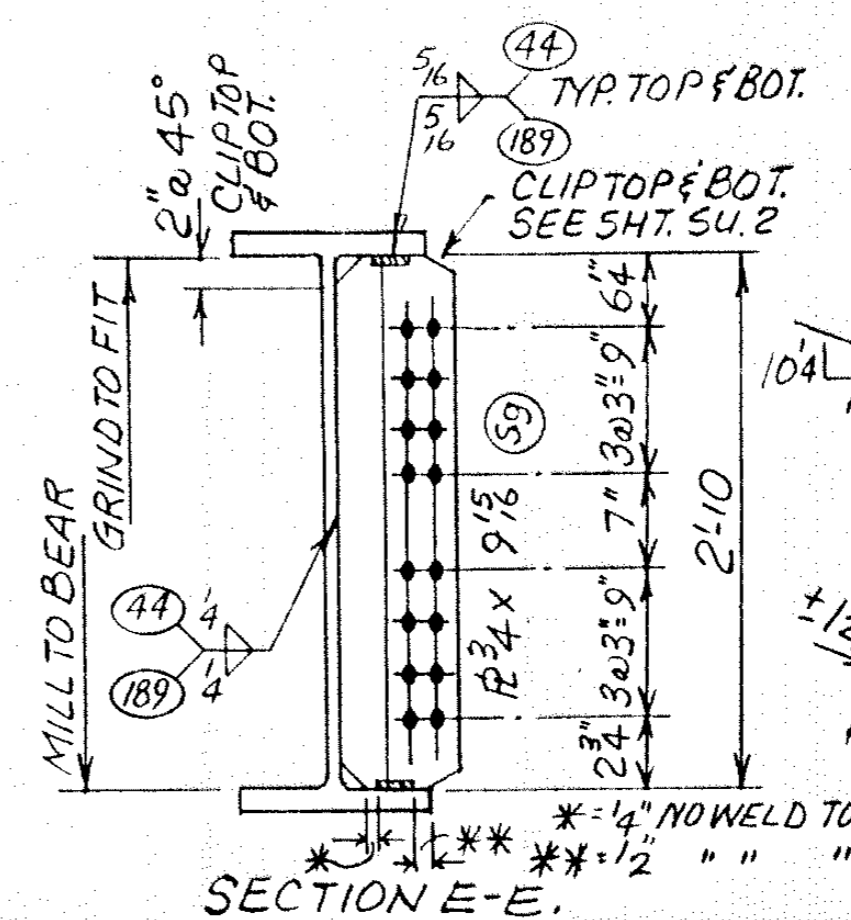
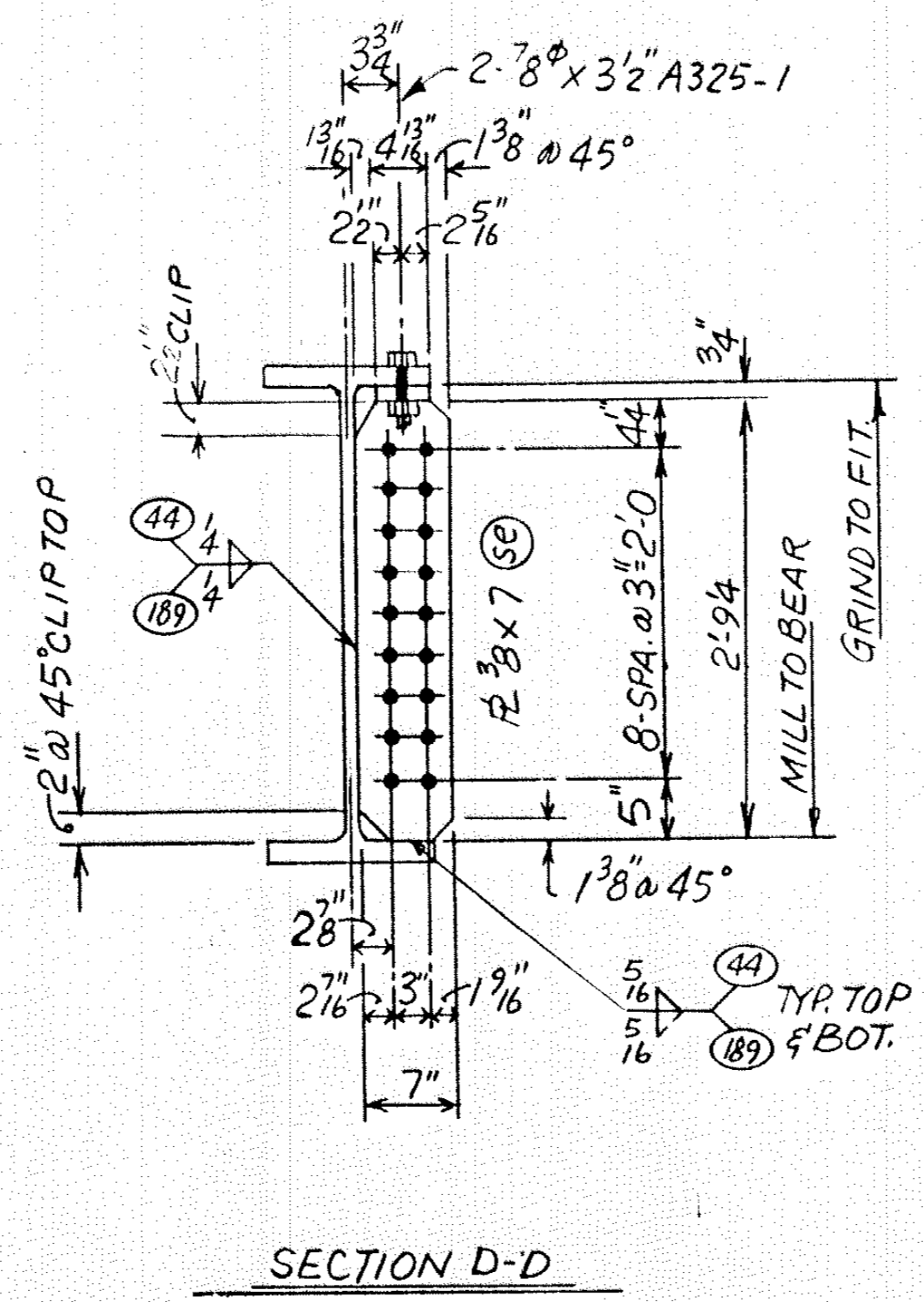
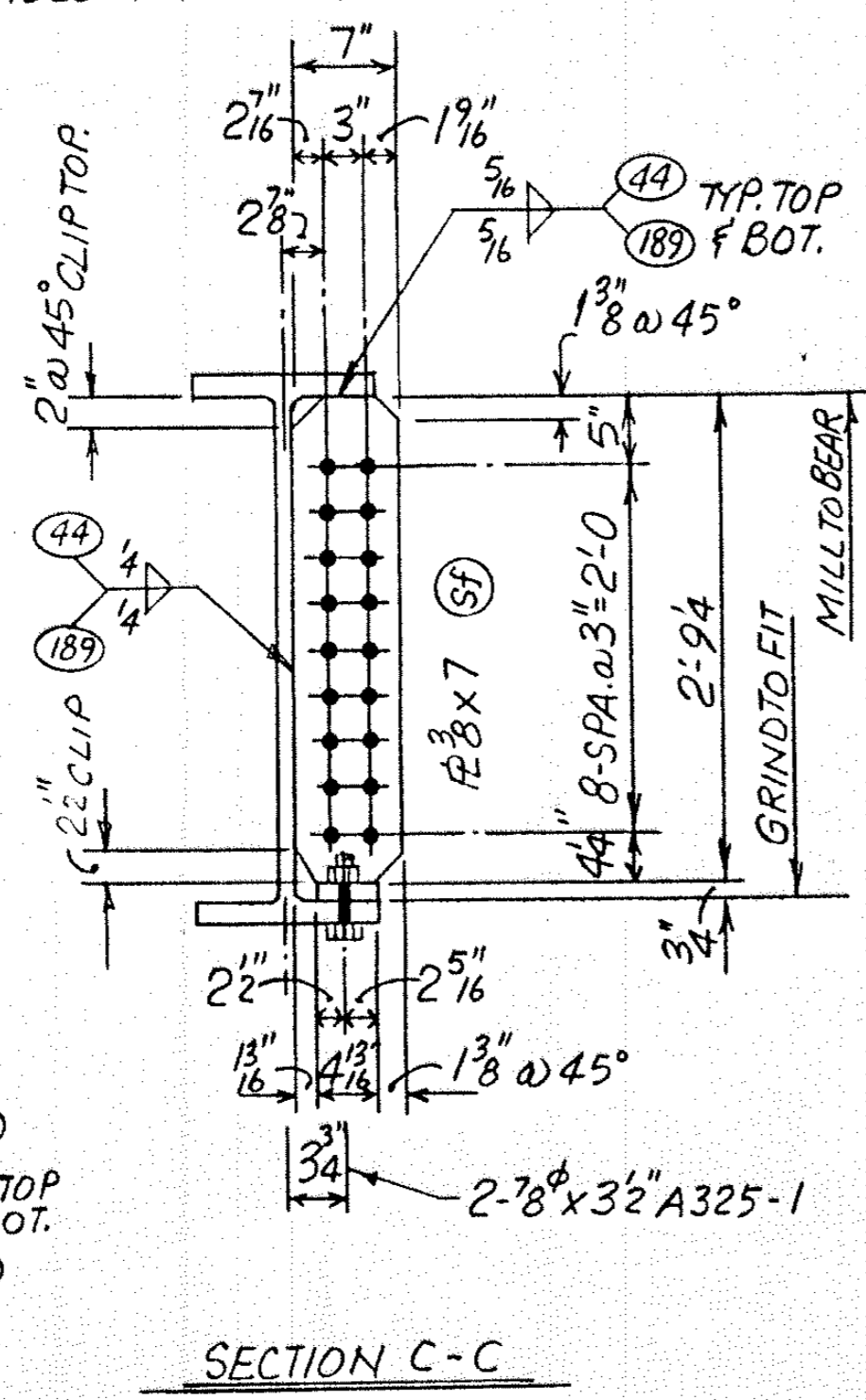
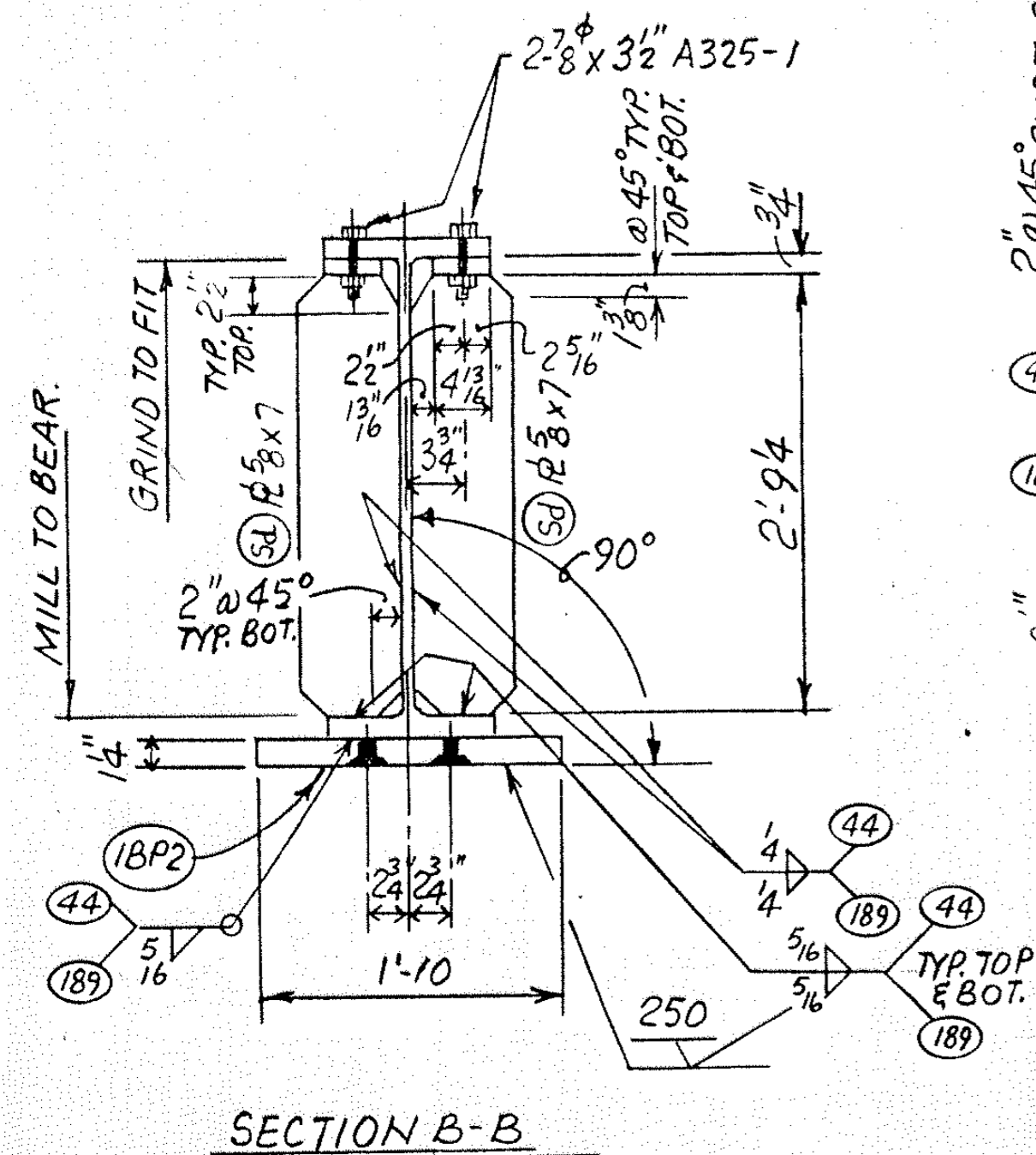
APPROVED FOR CONSTRUCTION

SHEET 53
 DRAWN BY [Signature]
 CHECKED BY [Signature]
 JOB NO. 91-038
 DATE APRIL 1991.

JOB NO. 91-038 (F)		BILL OF MATERIAL				SHEET: S5	
MK.	NO.	MATERIAL FOR ONE DESCRIPTION	WT.	ORDER SIZE	P. O. NO.	TYPE	REMARKS
B3		ONE - THUS					
B4		ONE - THUS					
a	1	W36 x 210 x 88' 7 7/8		88'-11	34382	A709-50 WT 3 (A588) (M222)	C/3 FIE
Sb	2	R 5/8 x 7 x 2'-10		STOCK			
Sd	2	R 5/8 x 7 x 2'-9 1/4					
Se	3	R 3/8 x 7 x 2'-9 1/4					
Sf	5	R 3/8 x 7 x 2'-9 1/4					
Sg	2	R 3/4 x 9 1/2 x 2'-10					BENT
Spa	2	R 3/4 x 4 1/2 x 10'-9 5/8					do
Spb	8	R 3/4 x 4 1/2 x 10'-9 5/8					do
1BP1	1	R 1/2 x 6 x 1'-4				A709-50 W (A588)	
1BP2	1	R 1/2 x 10 x 1'-10				do	



SEE SHEET B2 FOR SHOP BOLT LIST.
SHOP BOLTS FOR ONE BEAM.
20 - 7/8" x 3 1/2" A325-1 BOLTS.
20 - 7/8" A325-1 WASHERS.



SEE SHEET E2 FOR TYPICAL SHOP NOTES
ALL MATERIAL TO BE AMERICAN MADE
MILL CERTIFICATES REQUIRED ON ALL MATERIAL
ALL WELDERS TO BE CERTIFIED

Egger Steel Co.
909 So. Seventh Ave.
Drawer E
Sioux Falls, So. Dak. 57101

HOLES
1 1/8" UNLESS
NOTED.
PAINT
SEE NOTE
NO. 20 SHEET
E 2.

PROJ. NO. 02-614-18.
BRIDGE NO. 02560 R.
C.S.A.H. 14 OVER BNRR. IN THE CITY OF COON RAPIDS.

APPROVED FOR CONSTRUCTION

REVISIONS

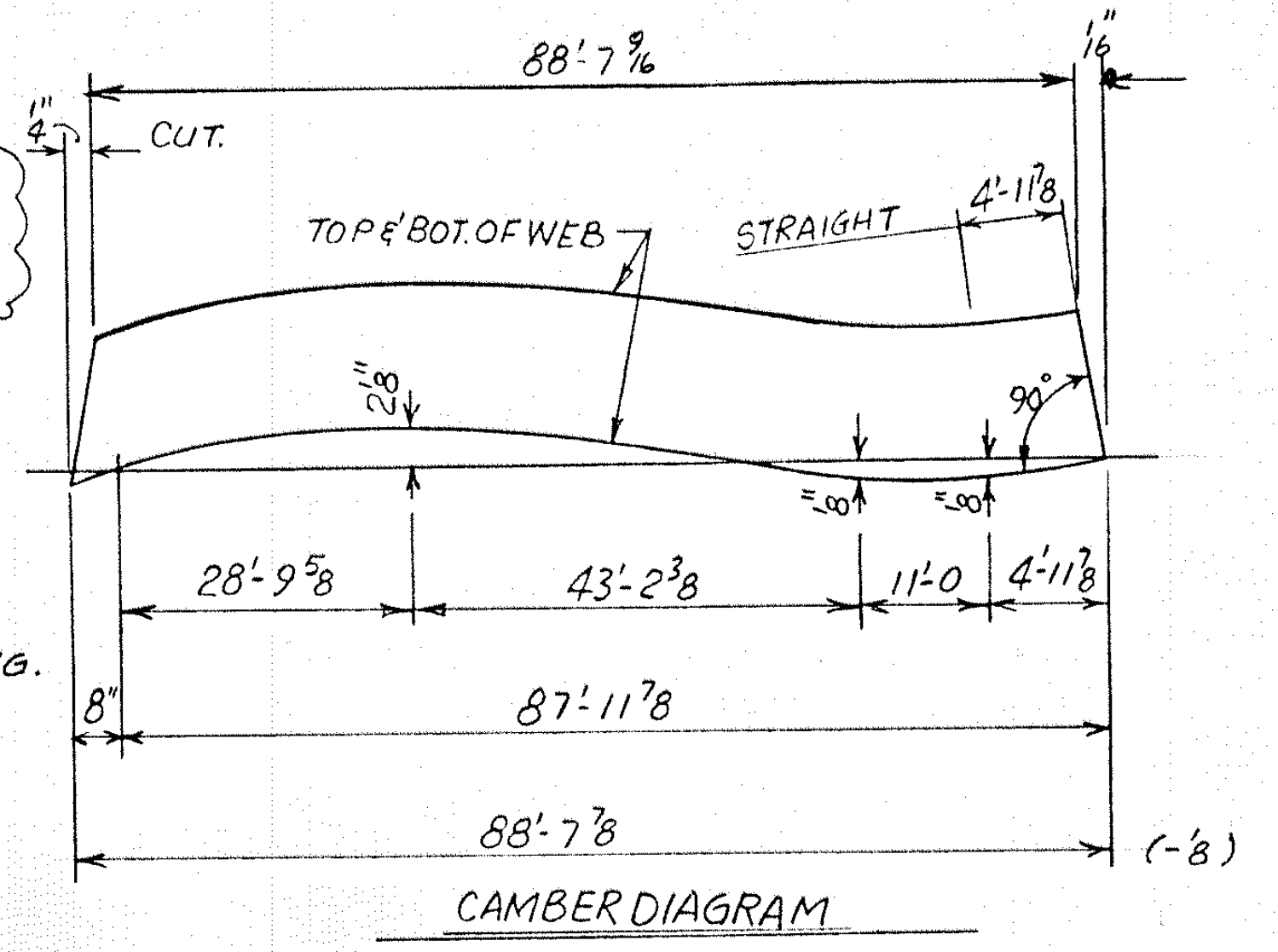
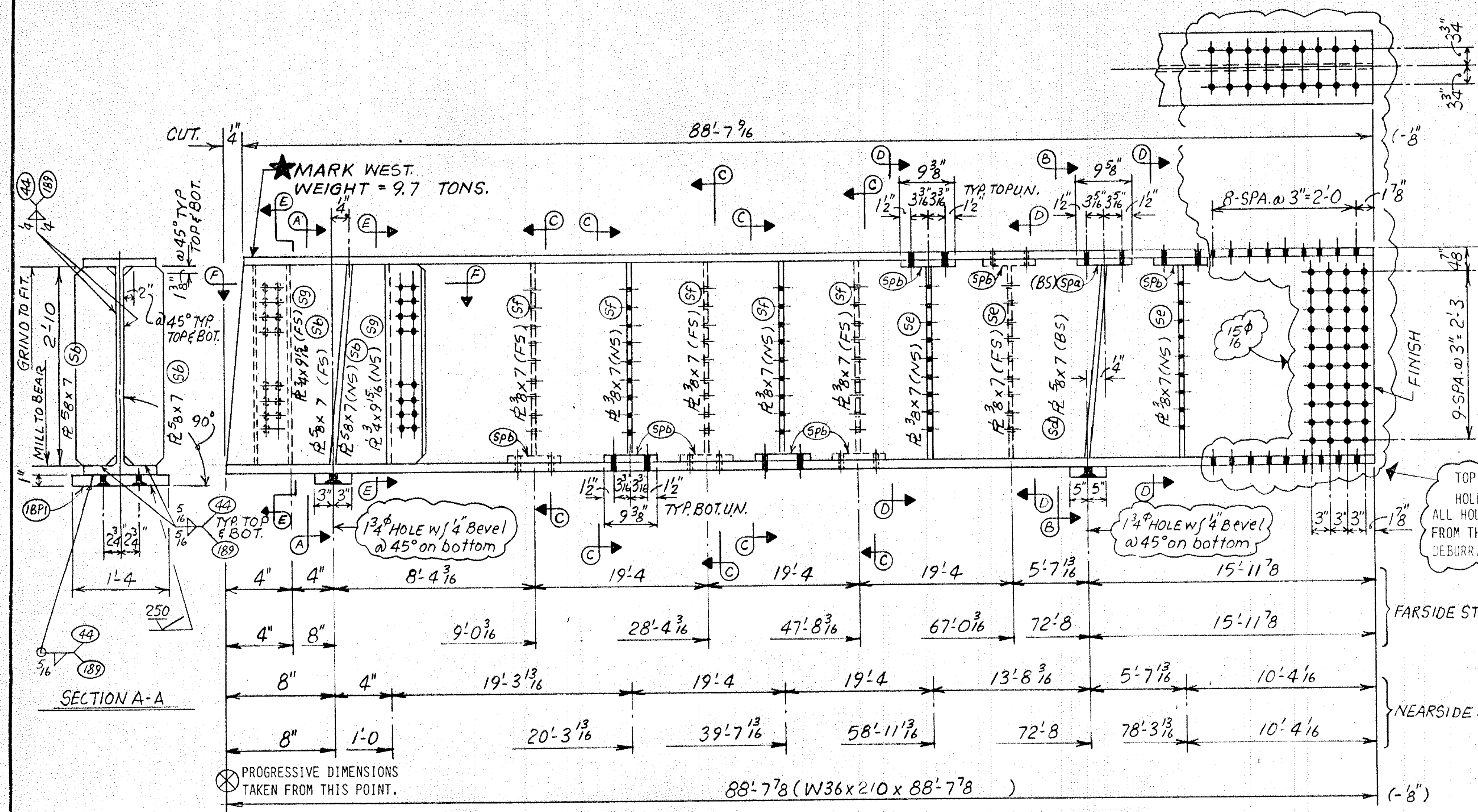
LET	DATE	BY
A		
B		
C		

BEAM MK. B3 and B4

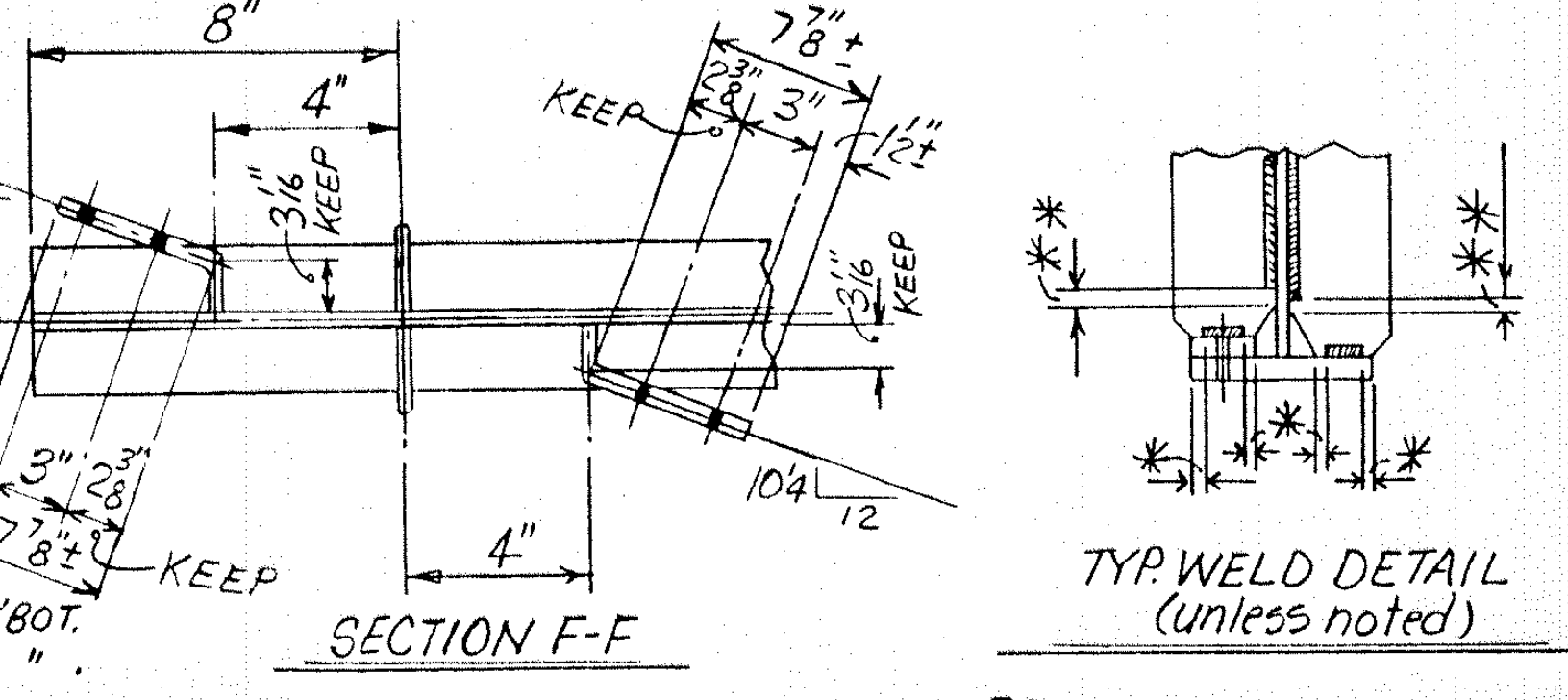
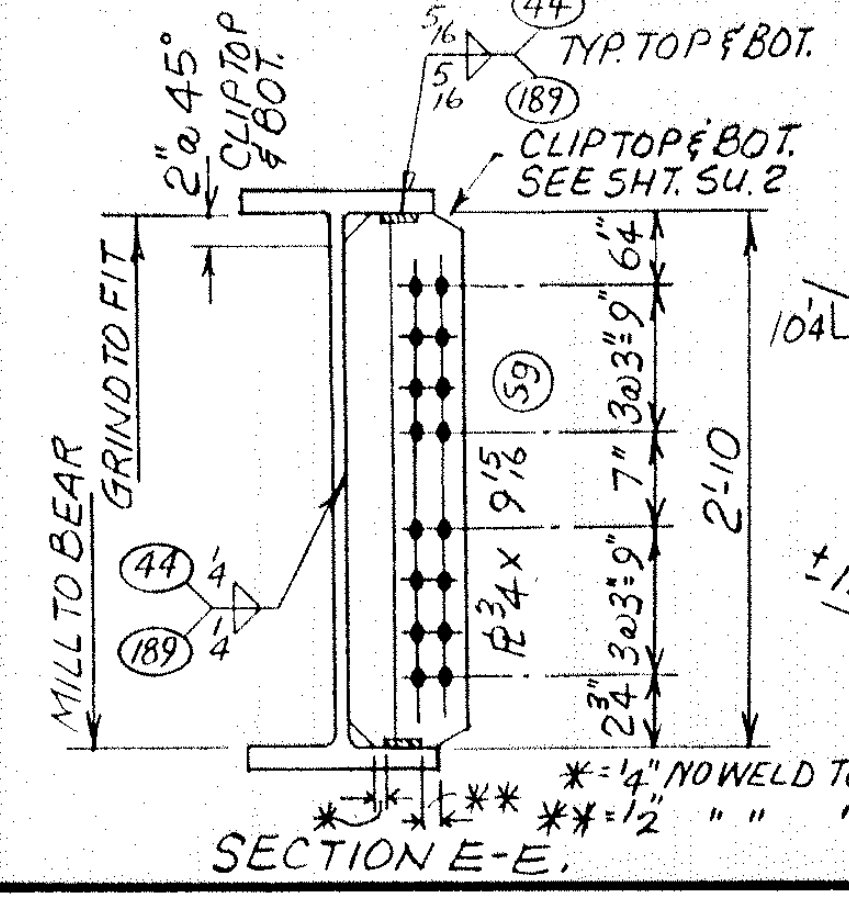
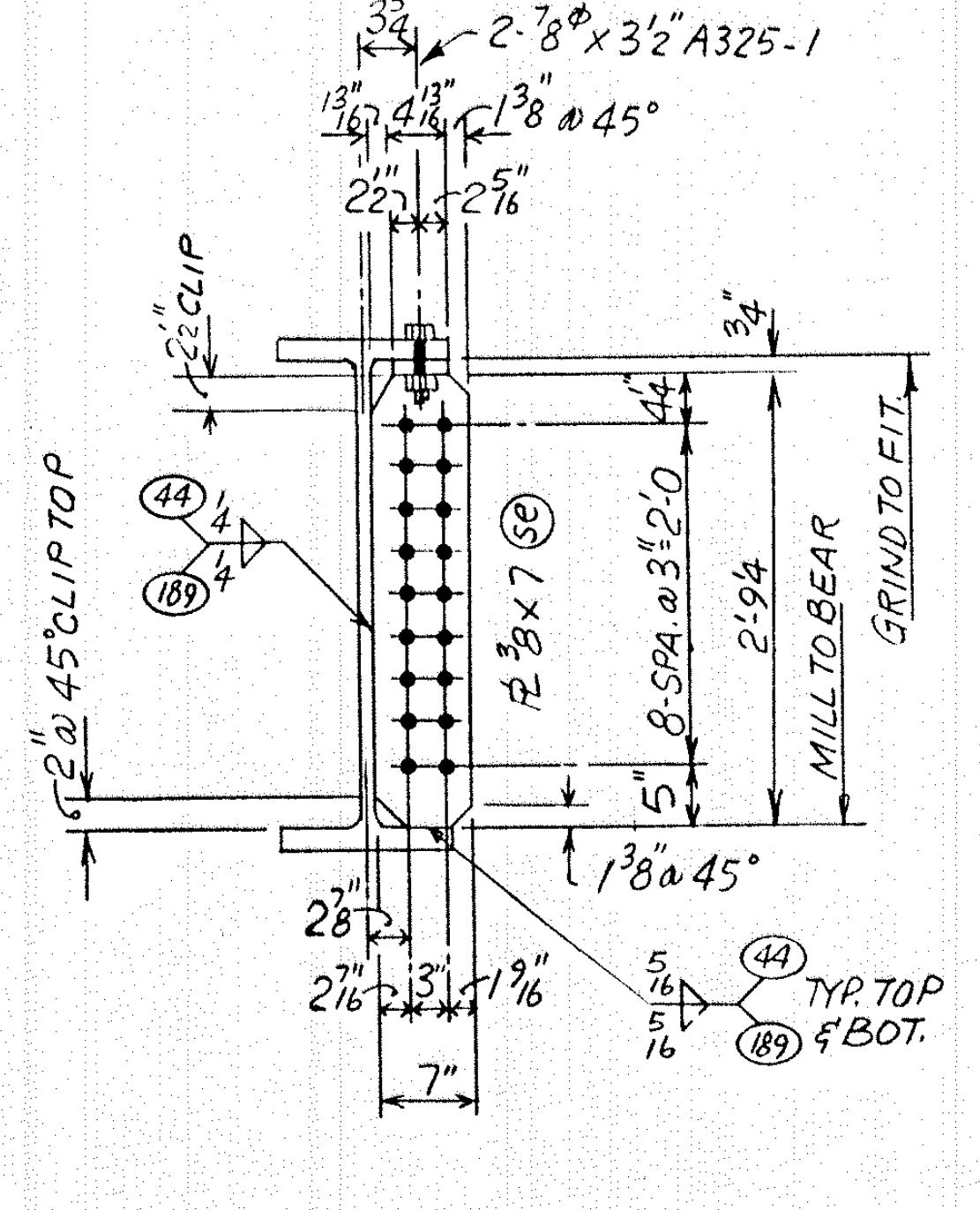
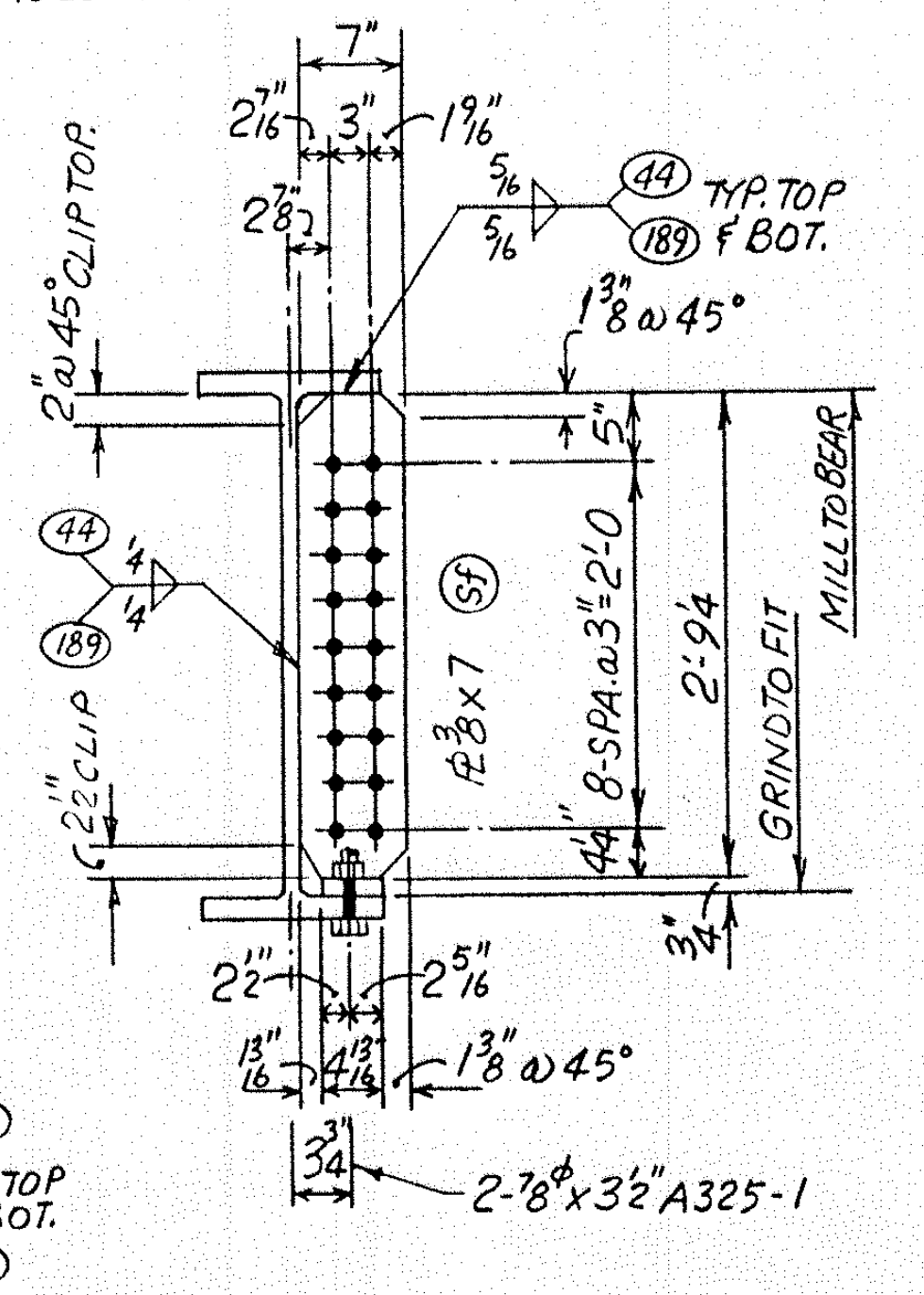
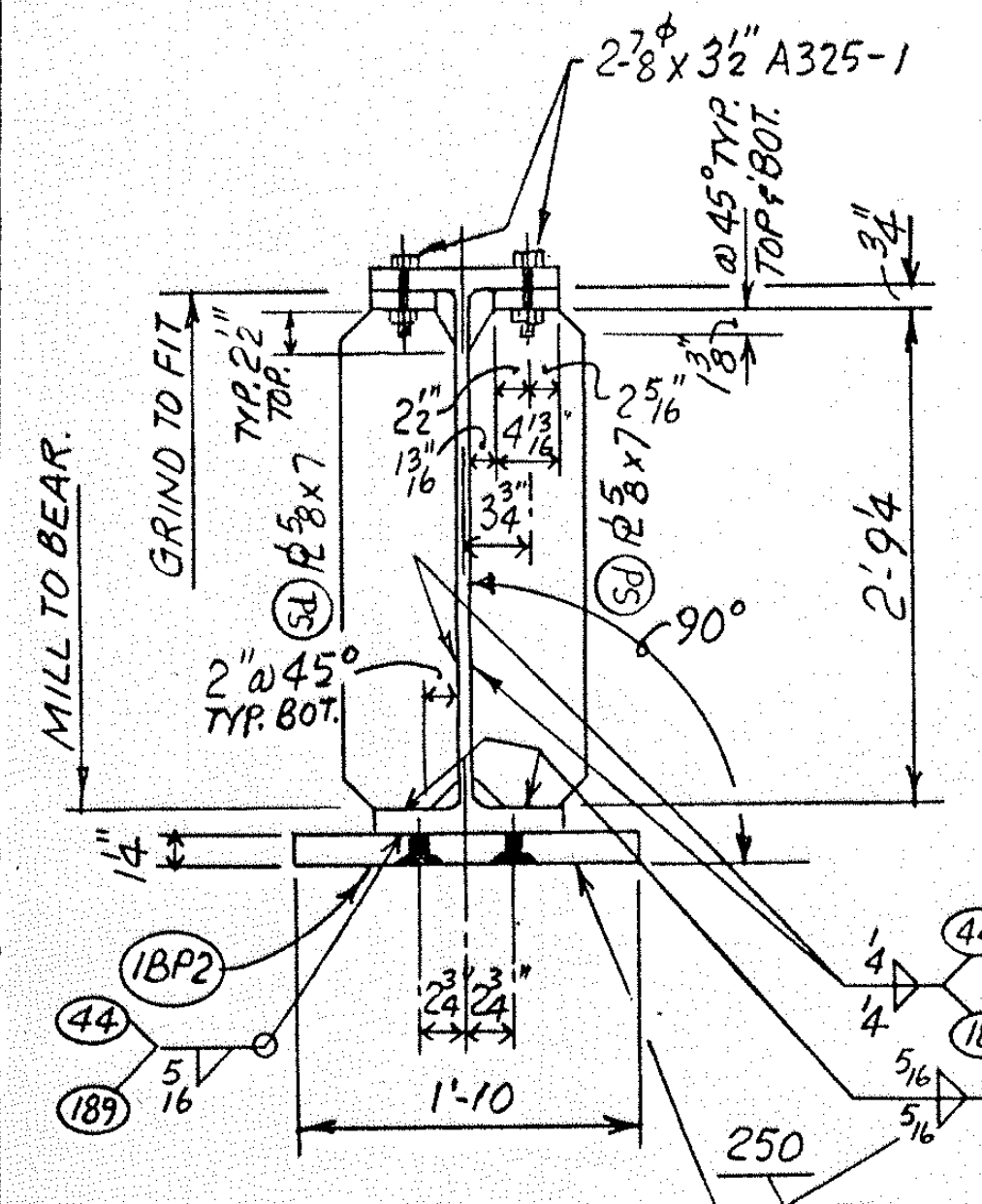
STRUCTURE 234' ROLLED BEAM BRIDGE.
LOCATION ANOKA COUNTY MINNESOTA.
CUSTOMER ANOKA COUNTY HWY. DEPT.
ARCHITECT BRW. INC.

SHEET S5
DRAWN BY
CHECKED BY
JOB NO. 91-038
DATE APRIL 1991.

MK. NO.	MATERIAL FOR ONE DESCRIPTION	WT.	ORDER SIZE	P. O. NO.	TYPE	CHERRY ZONE	REMARKS
B5	ONE-THUS						
B6	ONE-THUS						
a	1 W36x210x88'-7 7/8		88'-11"	3A382			C/3 FIE
Sb	2 #58x7x2'-10		STOCK				
Sd	2 #58x7x2'-9 1/4						
Se	3 #38x7x2'-9 1/4						
Sf	5 #38x7x2'-9 1/4						
Sg	2 #34x9'15 1/16x2'-10						BENT
Spa	2 #34x4'13 1/16x0'-9 5/8				do	do	
Spb	8 #34x4'13 1/16x0'-9 3/8				do	do	
1BP1	1 #1x6x1'-4				A709-50W(A588)		
1BP2	1 #2x4x10x1'-10				do		



SEE SHEET B2 FOR SHOP BOLT LIST.
 SHOP BOLTS FOR ONE BEAM.
 20 - 7/8" x 3 1/2" A325-1 BOLTS.
 20 - 7/8" A325-1 WASHERS.



SEE SHEET E2 FOR TYPICAL SHOP NOTES
 ALL MATERIAL TO BE AMERICAN MADE
 MILL CERTIFICATES REQUIRED ON ALL MATERIAL
 ALL WELDERS TO BE CERTIFIED

Egger Steel Co.
 909 So. Seventh Ave.
 Drawer E
 Sioux Falls, So. Dak. 57101

HOLES UNLESS 1/16" NOTED.
 PAINT SEE NOTE
 NO. 20 SHEET E2.

LET	DATE	BY
A		
B		
C		

PROJ. NO. 02-64-18.
 BRIDGE NO. 02560 R.
 C.S.A.H. 14 OVER BNRR. IN THE CITY OF COON RAPIDS.

APPROVED FOR CONSTRUCTION

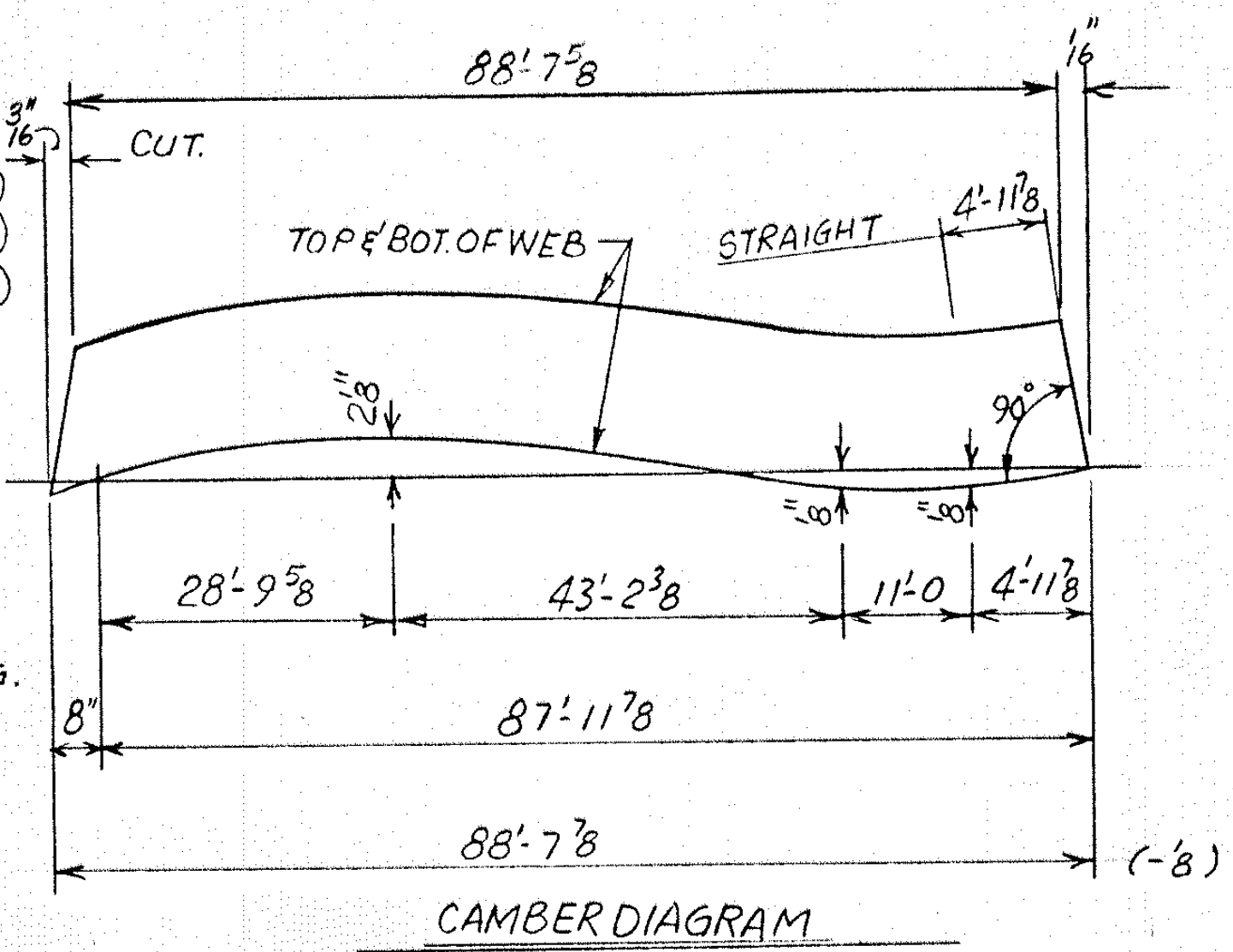
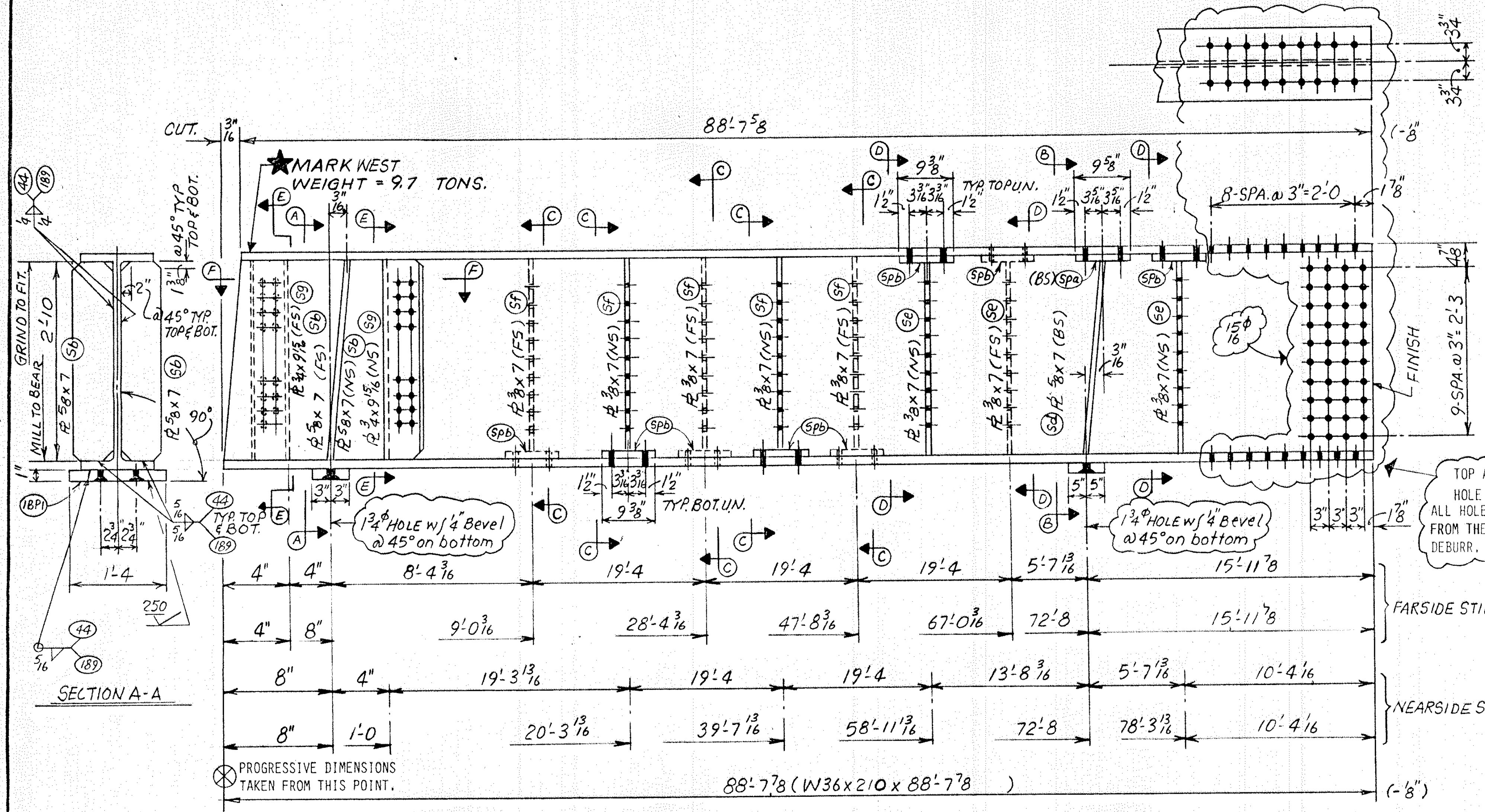
REVISIONS

BEAM MK. B5 and B6

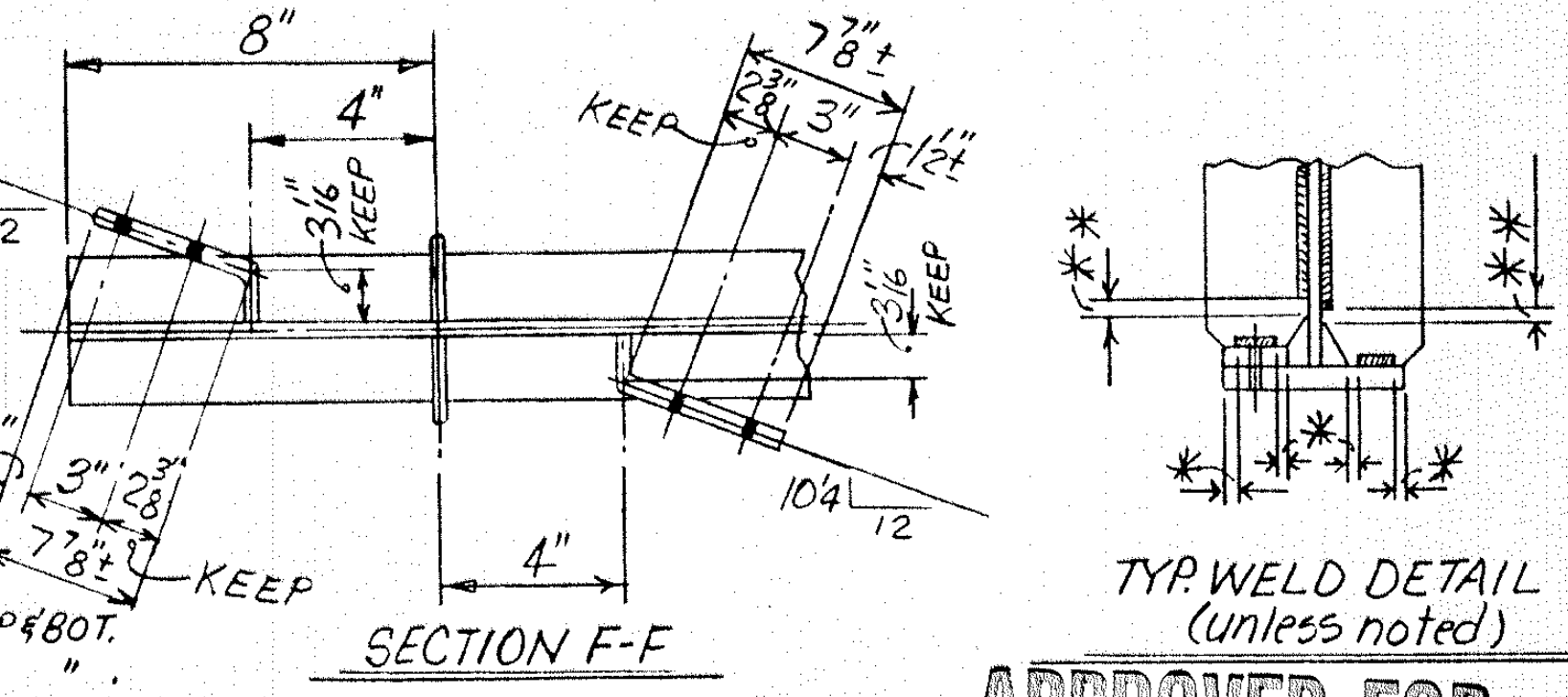
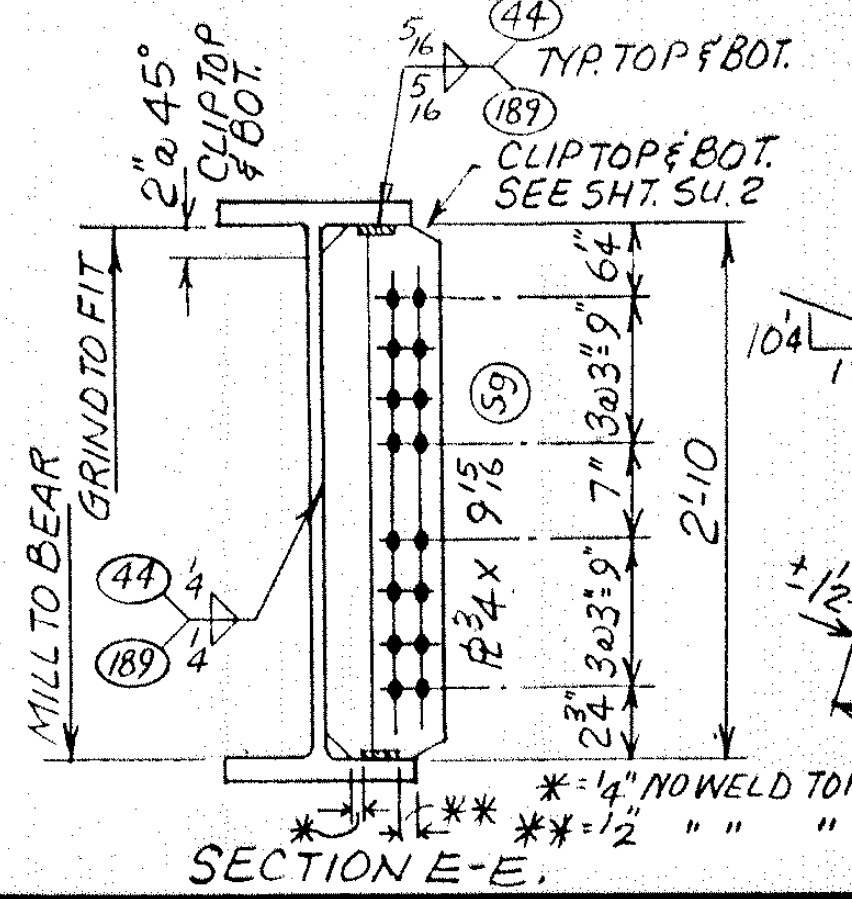
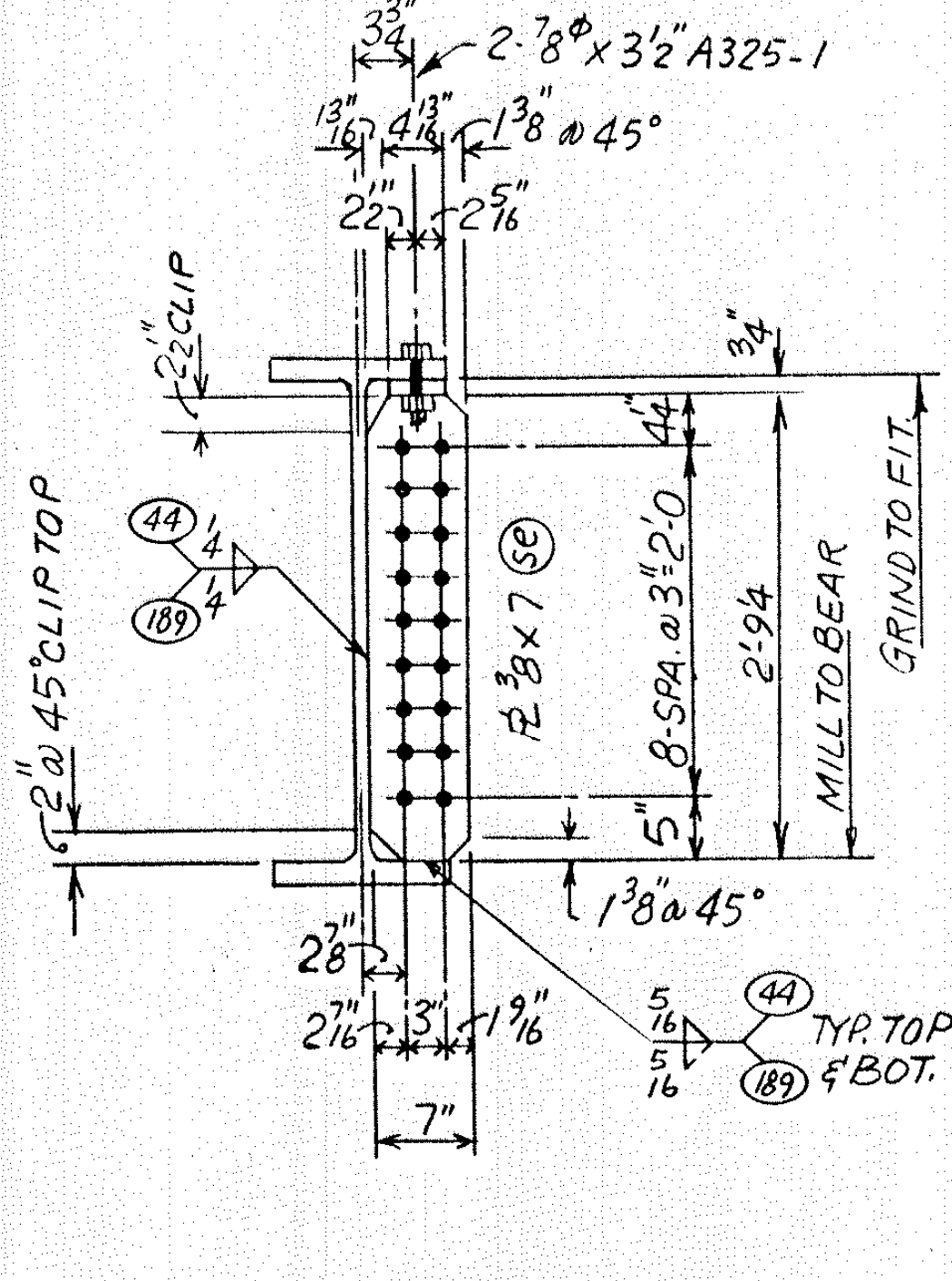
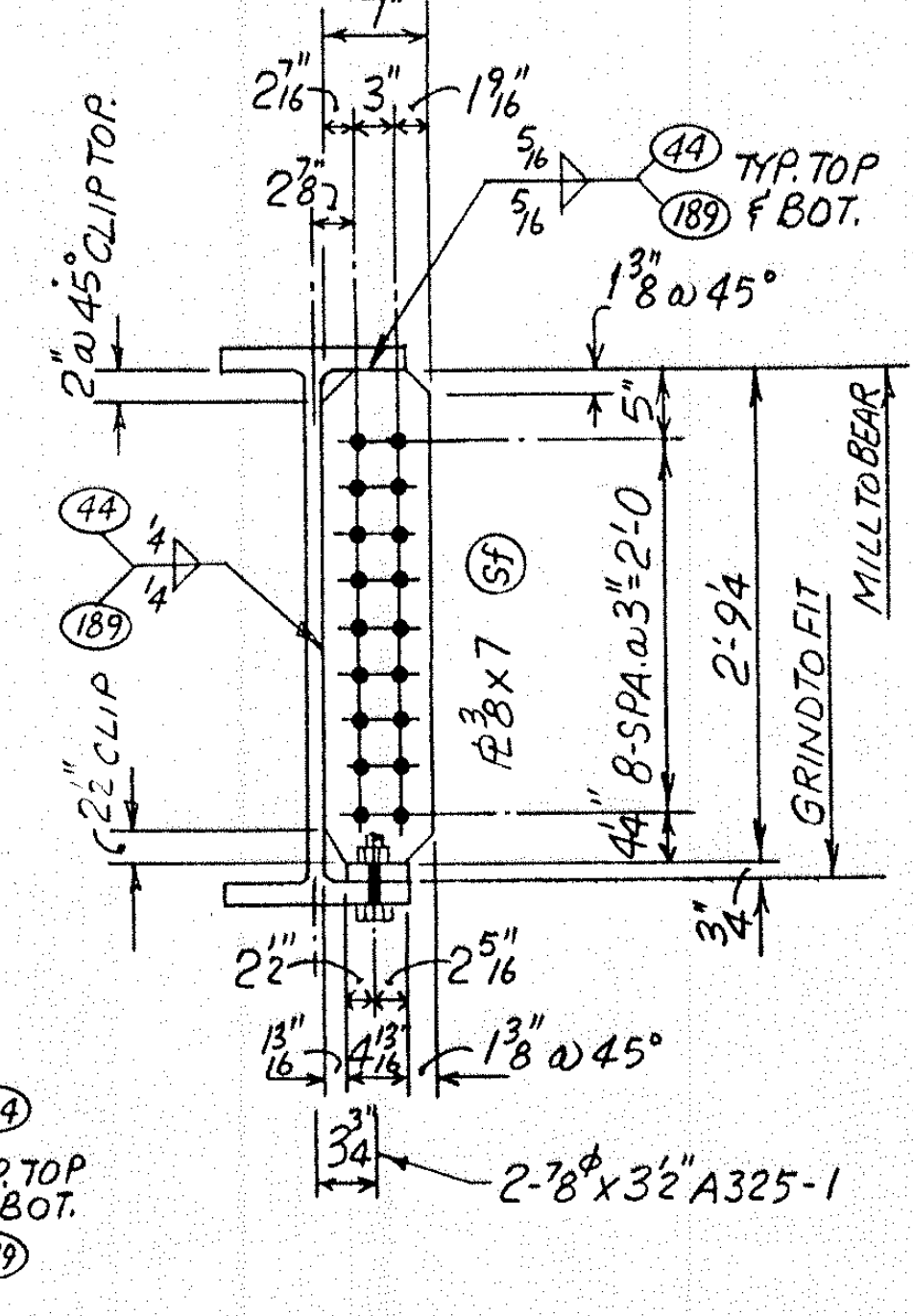
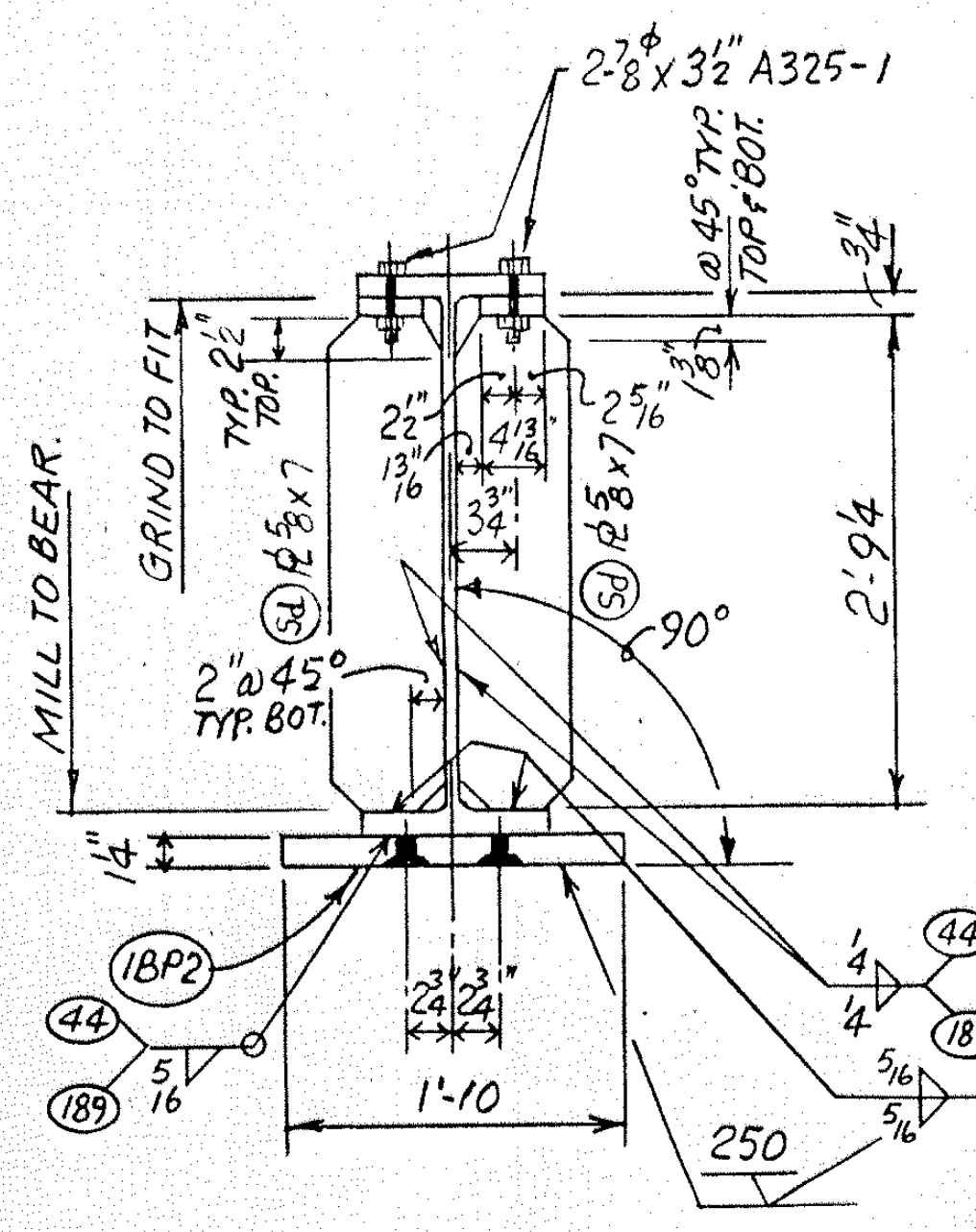
STRUCTURE 234' ROLLED BEAM BRIDGE.
 LOCATION ANOKA COUNTY MINNESOTA.
 CUSTOMER ANOKA COUNTY HWY. DEPT.
 ARCHITECT BRW. INC.

SHEET S6
 DRAWN BY [Signature]
 CHECKED BY [Signature]
 JOB NO. 91-038 (F)
 DATE APRIL 1991.

JOB NO. 91-038 (F)		BILL OF MATERIAL				SHEET: 57	
MK.	NO.	DESCRIPTION	WT.	ORDER SIZE	P. O. NO.	TYPE	REMARKS
B7		ONE-THUS					
B8		ONE-THUS					
a	1	W36x210x88'-7.8		88'-11"	34382	A709-50WT 3 (A588) M222	C/3 FIE
Sb	2	R 58x7x2-10		STOCK			
Sd	2	R 58x7x2-9.4					
Se	3	R 38x7x2-9.4					
Sf	5	R 38x7x2-9.4					
Sg	2	R 34x9.5x2-10					BENT
Spa	2	R 34x4.5x0-9.58					
Spb	8	R 34x4.5x0-9.38					do do
IBP1	1	R 1x6x1-4				A709-50W (A588)	
IBP2	1	R 1x4x10x1-10				do	



SEE SHEET B2 FOR SHOP BOLT LIST.
 SHOP BOLTS FOR ONE BEAM.
 20 - 7/8" x 3/2" A325-1 BOLTS.
 20 - 7/8" A325-1 WASHERS.



SEE SHEET E2 FOR TYPICAL SHOP NOTES
 ALL MATERIAL TO BE AMERICAN MADE
 MILL CERTIFICATES REQUIRED ON ALL MATERIAL
 ALL WELDERS TO BE CERTIFIED

PROJ. NO. 02-64-18.			SHEET 57	
BRIDGE NO. 02560 R.			DRAWN BY	
C.S.A.H. 14 OVER BNRR. IN THE CITY OF COON RAPIDS.			CHECKED BY	
REVISIONS			BEAM MK. B7, B8	
LET			DATE	
BY			DATE	
A			DATE	
B			DATE	
C			DATE	

Egger Steel Co.
 909 So. Seventh Ave.
 Drawer E
 Sioux Falls, So. Dak. 57101

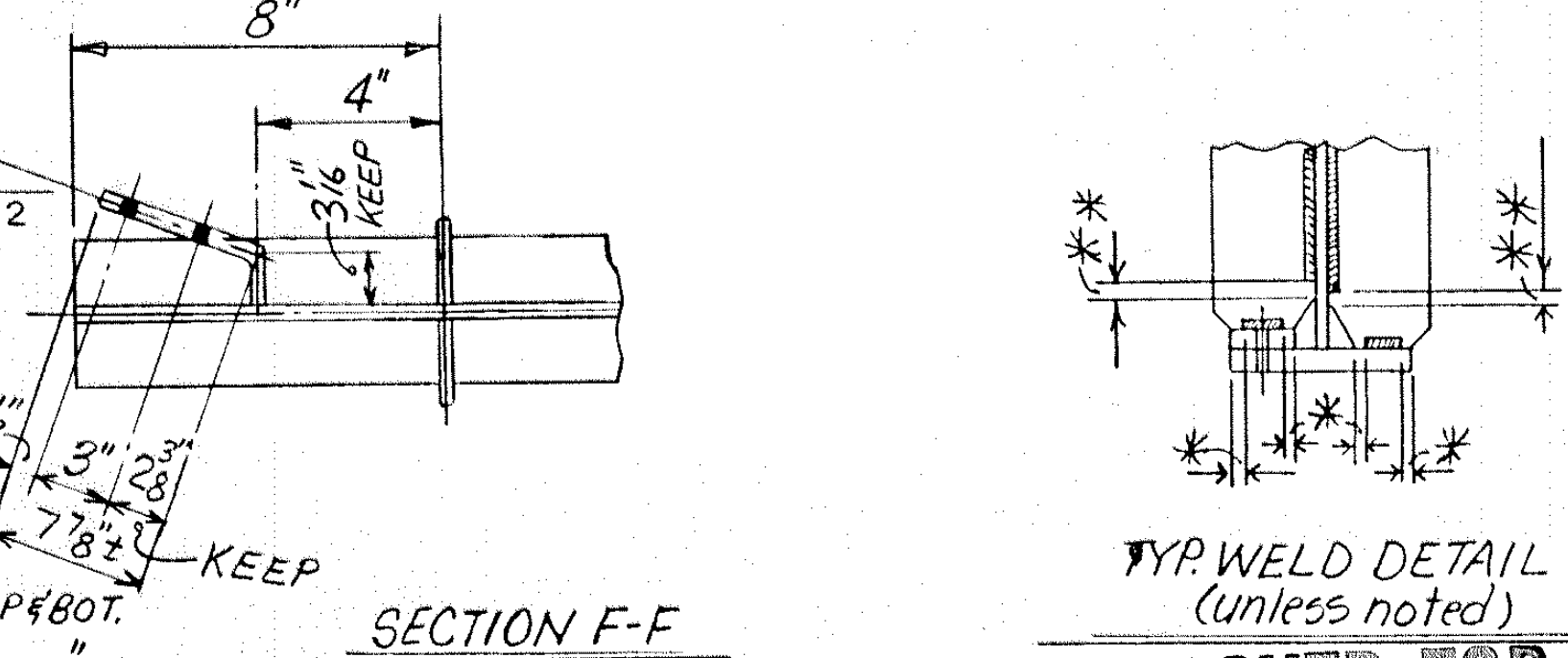
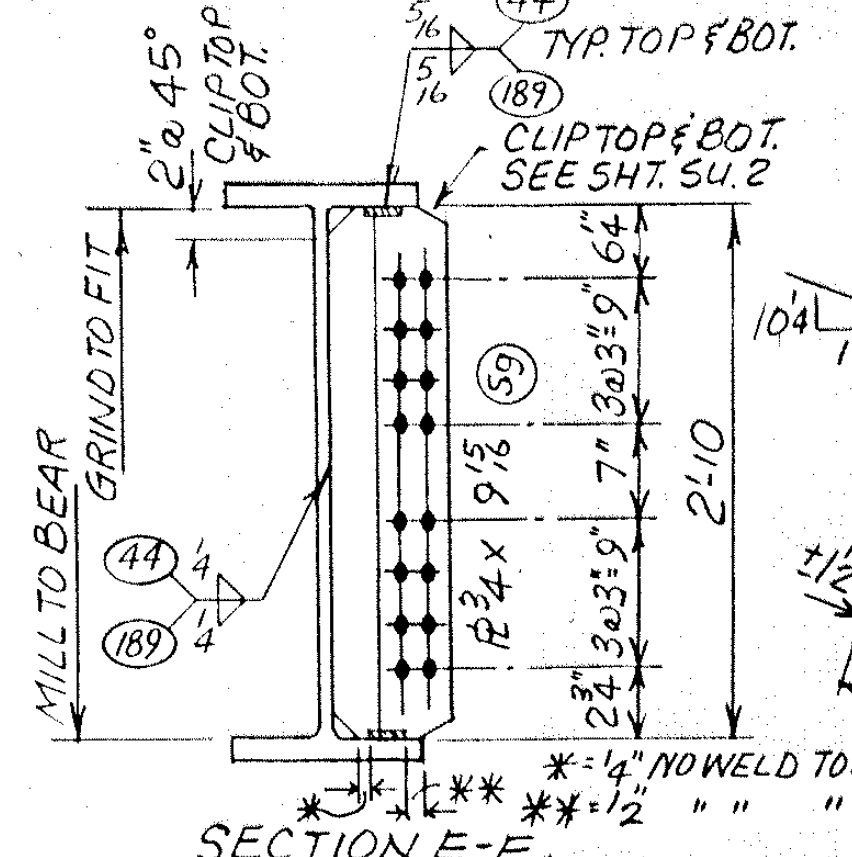
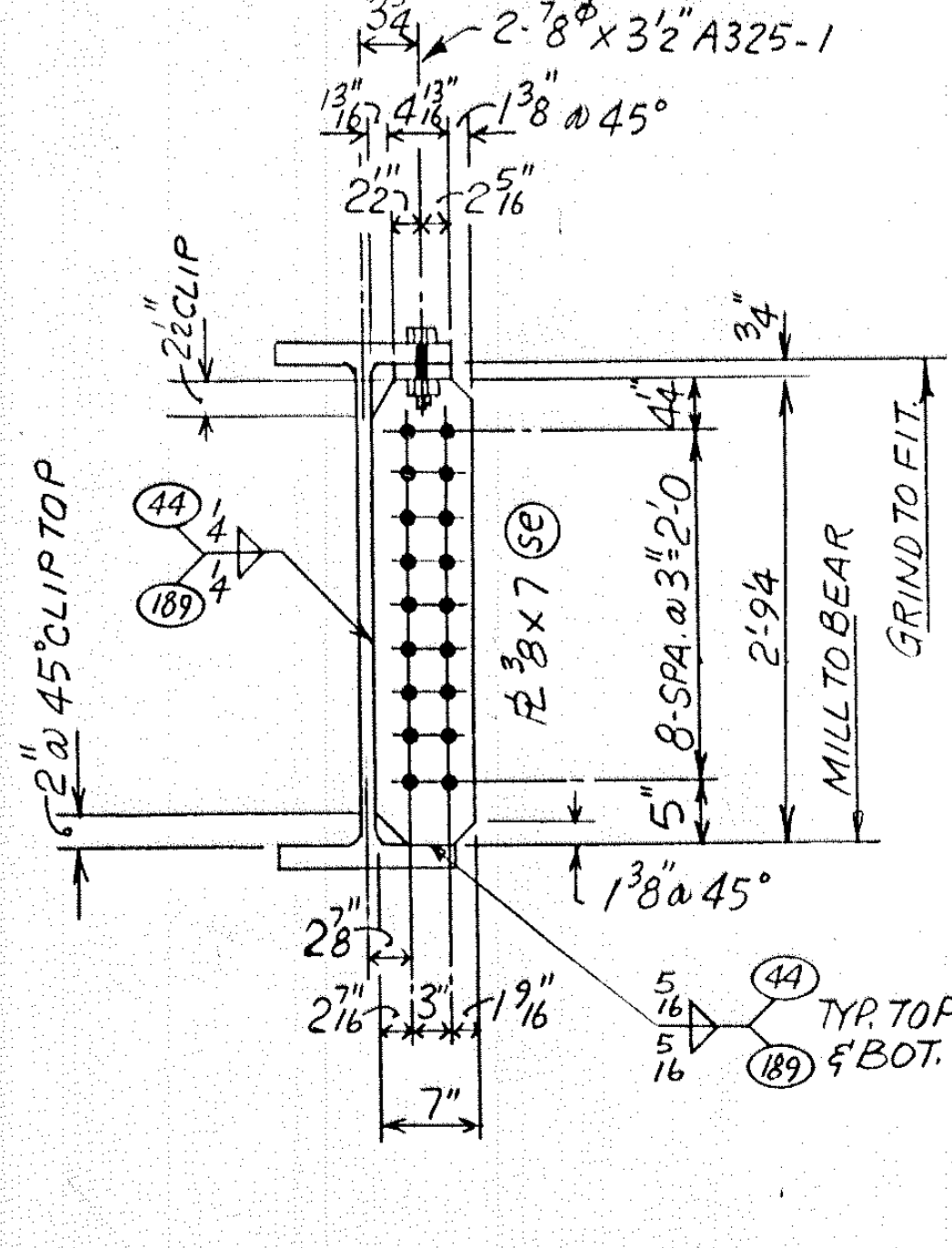
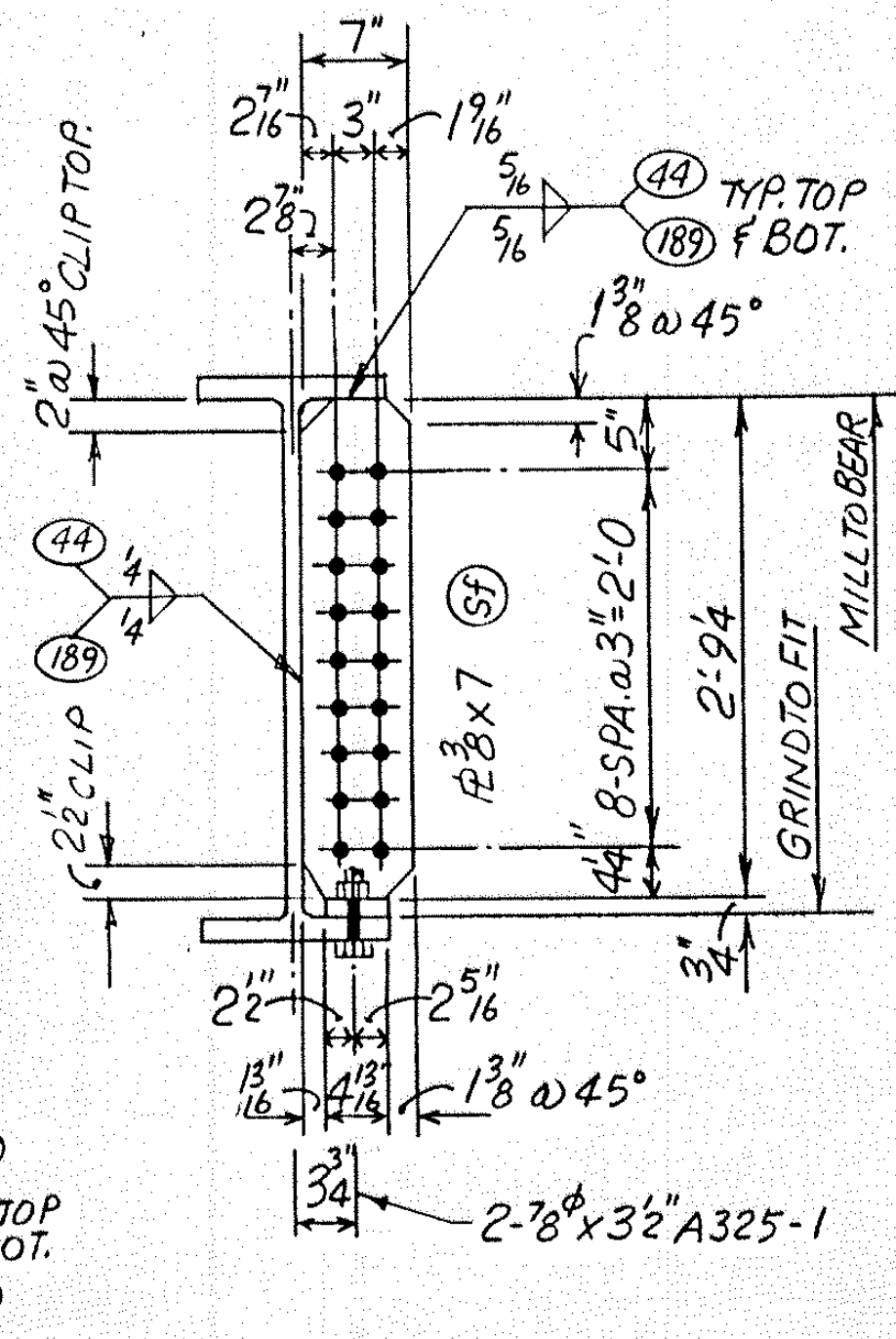
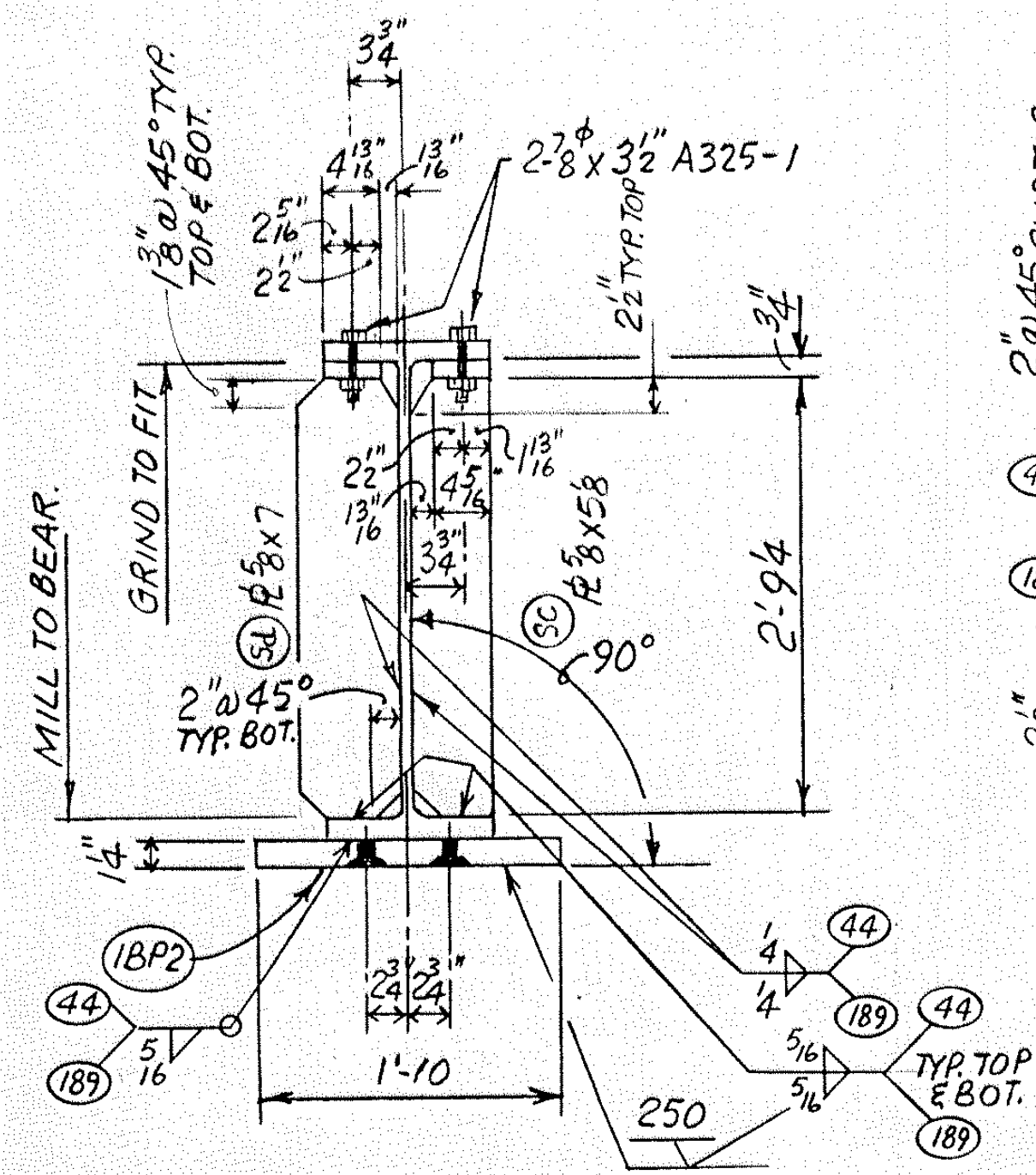
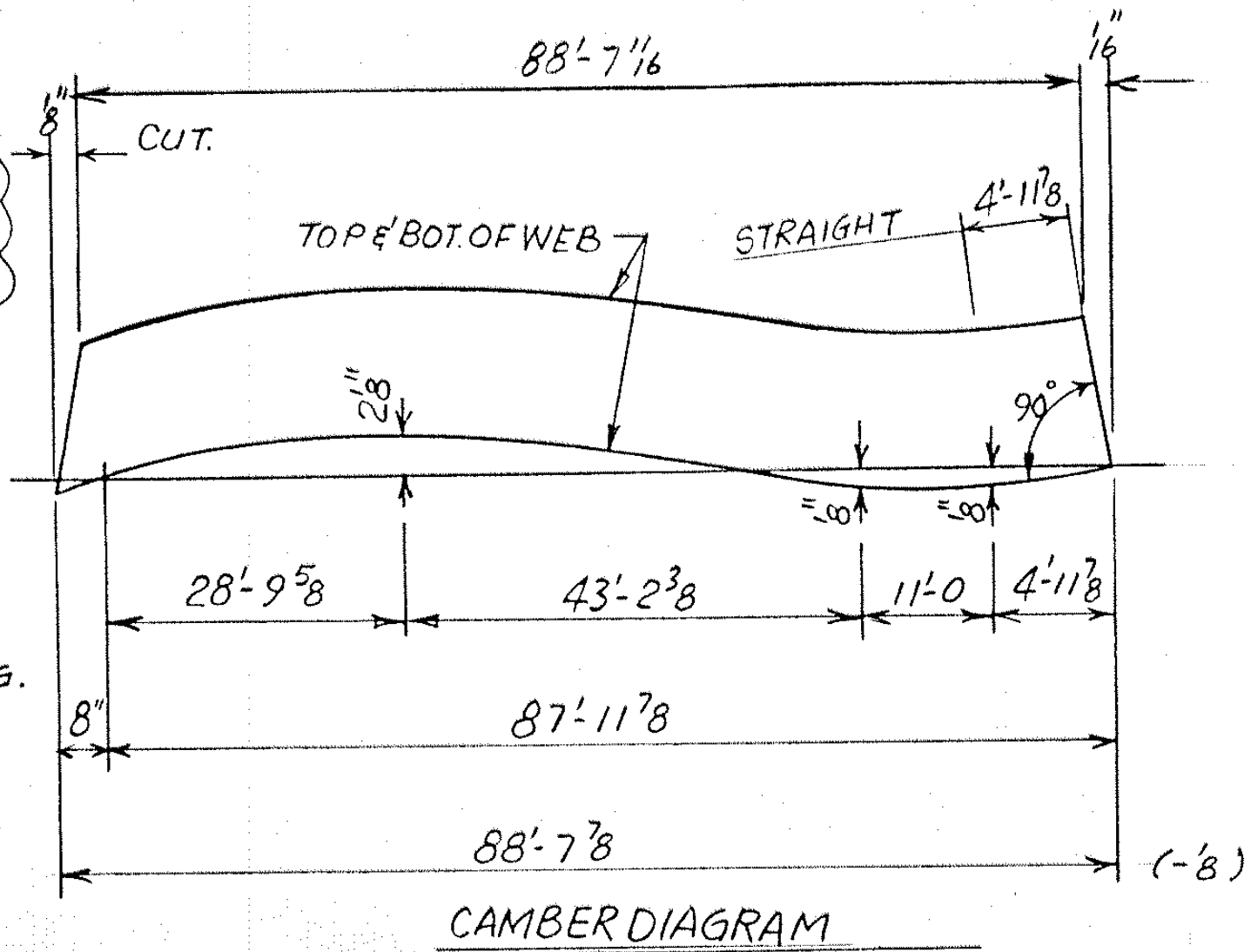
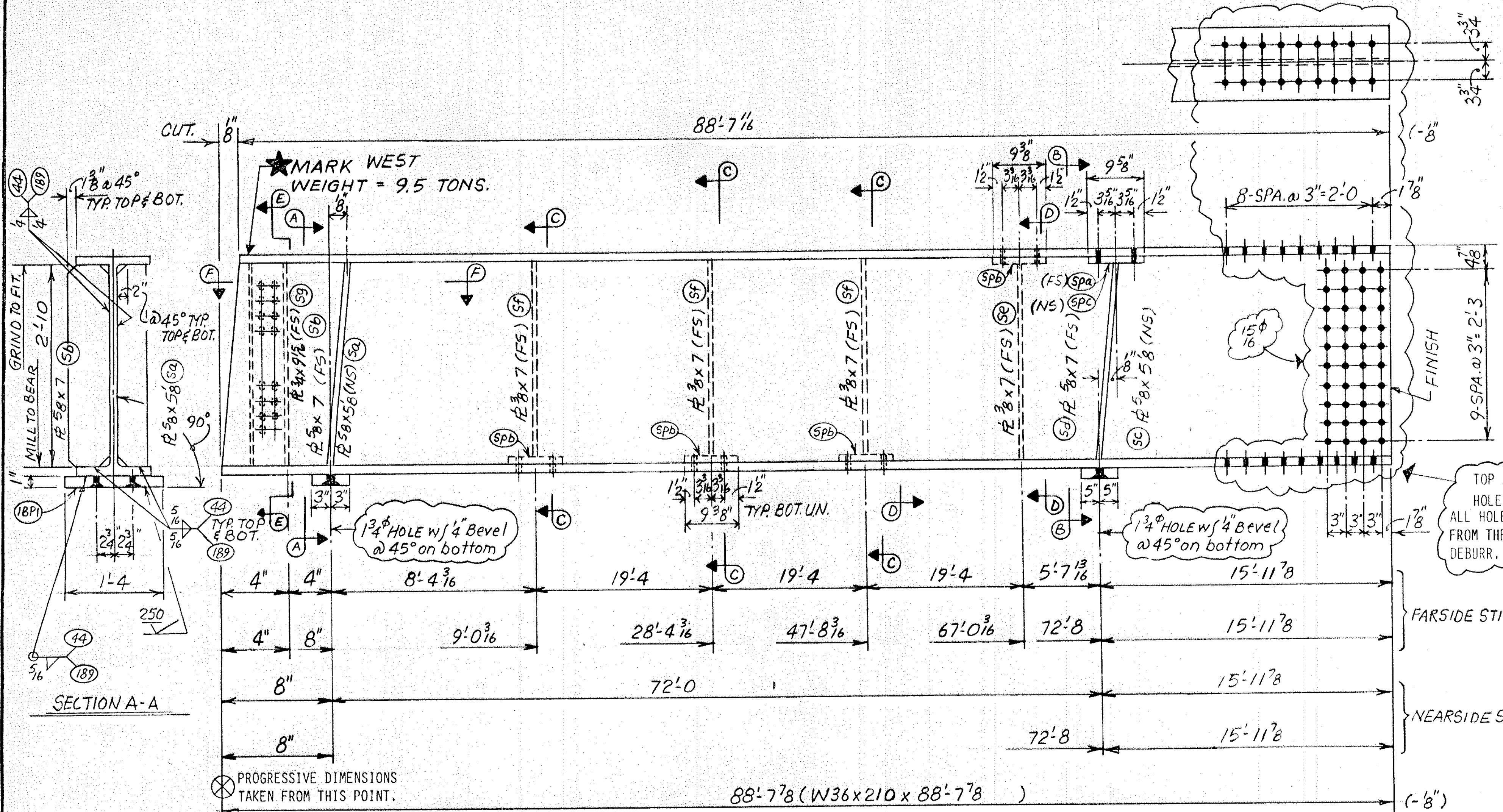
HOLES UNLESS 1/16" NOTED.
 PAINT SEE NOTE NO. 20 SHEET E 2.

STRUCTURE 234' ROLLED BEAM BRIDGE.
 LOCATION ANOKA COUNTY MINNESOTA.
 CUSTOMER ANOKA COUNTY HWY. DEPT.
 ARCHITECT BRW. INC.

JOB NO. 91-038 (F)
 DATE APRIL 1991.

APPROVED FOR CONSTRUCTION

JOB NO. 91-038 (F)		BILL OF MATERIAL				SHEET: 58	
MK.	NO.	MATERIAL FOR ONE DESCRIPTION	WT.	ORDER SIZE	P. O. NO.	TYPE	REMARKS
B9		ONE THIS					
a		W36x210x88-7 ⁸ B		88'-11"	21392	4709-50 WT ³	FIE
sa	1	R 5 ⁸ x5 ⁸ x2'-10		STOCK			
sb	1	R 5 ⁸ x7x2'-10					
sc	1	R 5 ⁸ x5 ⁸ x2'-9 ⁴					
sd	1	R 5 ⁸ x7x2'-9 ⁴					
se	1	R 3 ⁸ x7x2'-9 ⁴					
sf	3	R 3 ⁸ x7x2'-9 ⁴					
sg	1	R 3 ⁴ x9 ¹ / ₁₆ x2'-10					BENT.
spa	1	R 3 ⁴ x4 ¹ / ₁₆ x0'-9 ⁵ / ₈					
spb	4	R 3 ⁴ x4 ¹ / ₁₆ x0'-9 ⁵ / ₈					
spc	1	R 3 ⁴ x4 ¹ / ₁₆ x0'-9 ⁵ / ₈					
1B1	1	R 1x6x1'-4				do	do
1B2	1	R 2x10x1'-10				1709-50W(A588)	do



SEE SHEET E2 FOR TYPICAL SHOP NOTES
ALL MATERIAL TO BE AMERICAN MADE
MILL CERTIFICATES REQUIRED ON ALL MATERIAL
ALL WELDERS TO BE CERTIFIED

PROJ. NO. 02-614-18.
BRIDGE NO. 02560 R.
C.S.A.H. 14 OVER BNRR. IN THE CITY OF COON RAPIDS.

REVISIONS

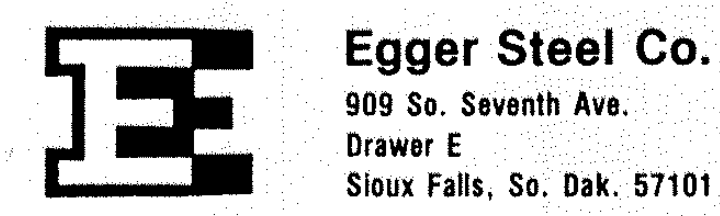
LET	DATE	BY
A		
B		
C		

APPROVED FOR CONSTRUCTION

BEAM MK. B9

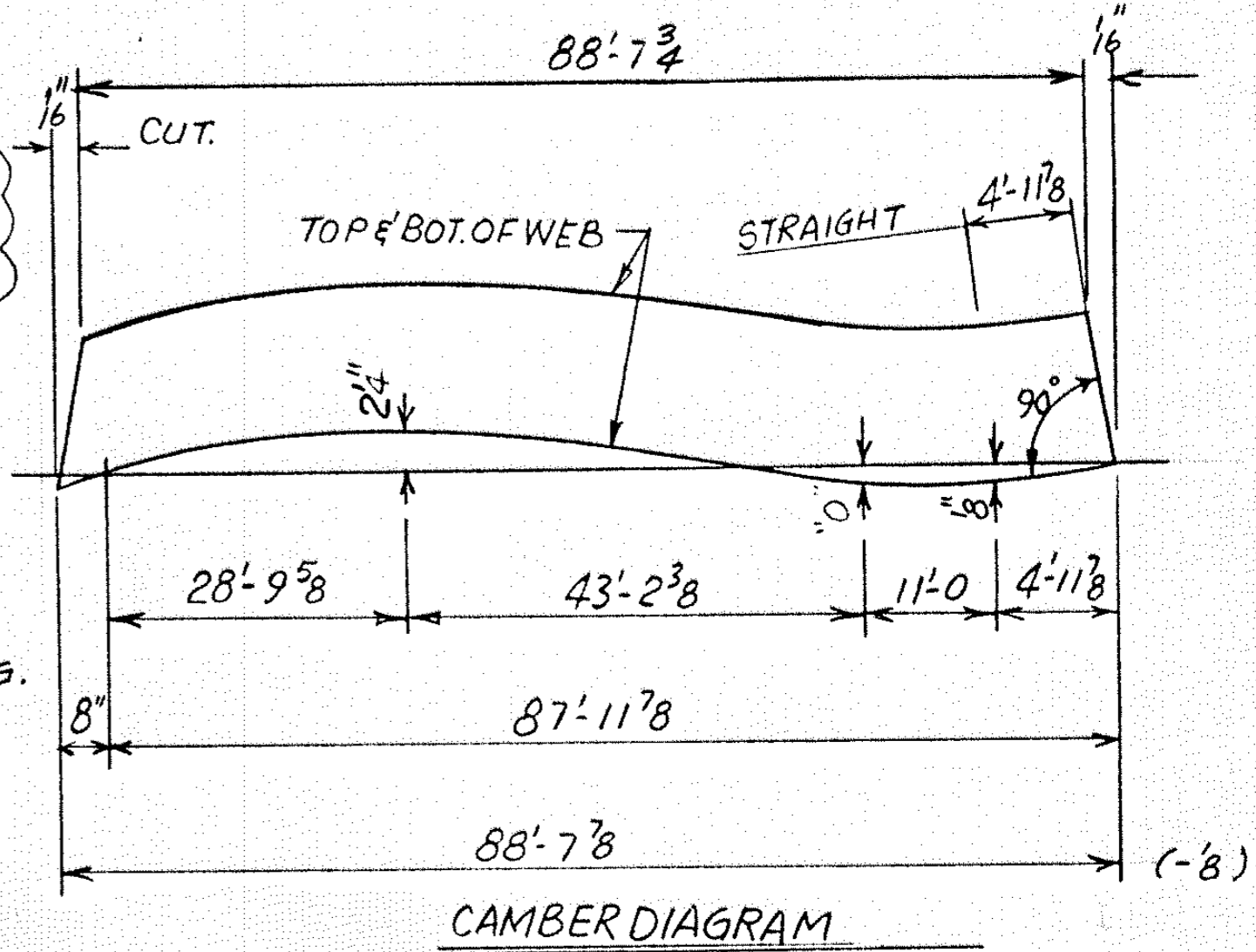
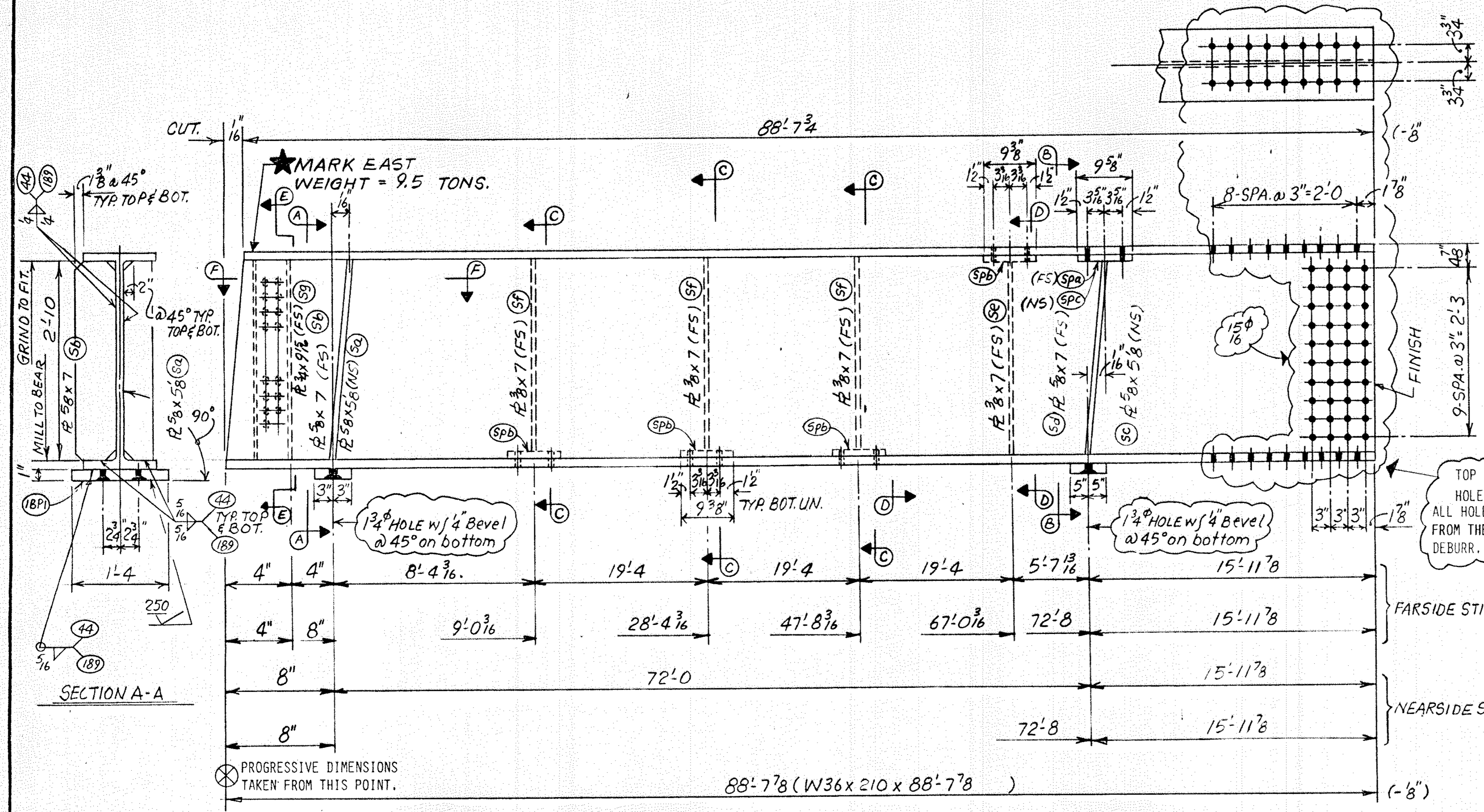
STRUCTURE 234' ROLLED BEAM BRIDGE.
LOCATION ANOKA COUNTY MINNESOTA.
CUSTOMER ANOKA COUNTY HWY. DEPT.
ARCHITECT BRW. INC.

SHEET 58.
DRAWN BY [Signature]
CHECKED BY [Signature]
JOB NO. 91-038.
DATE APRIL 1991.

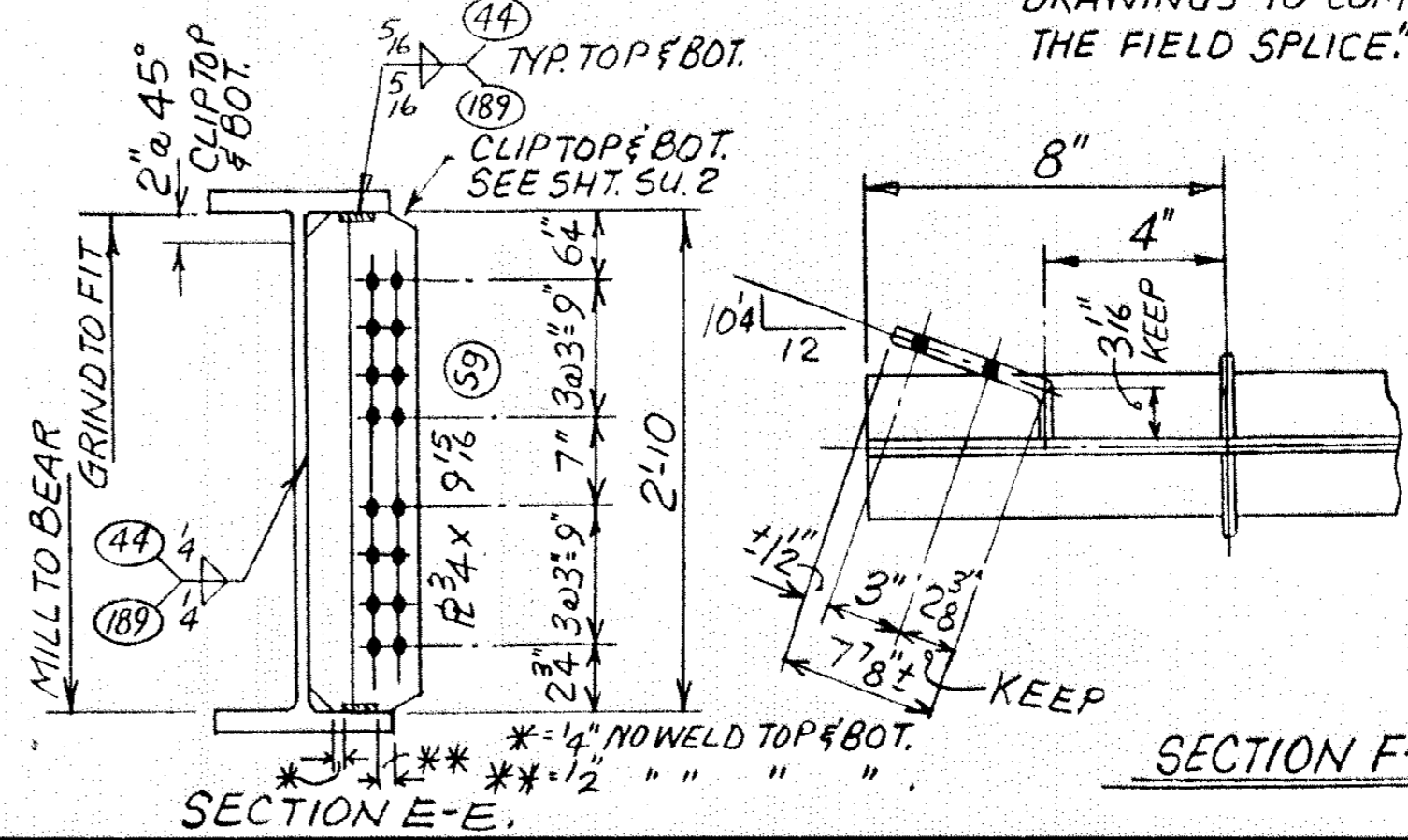
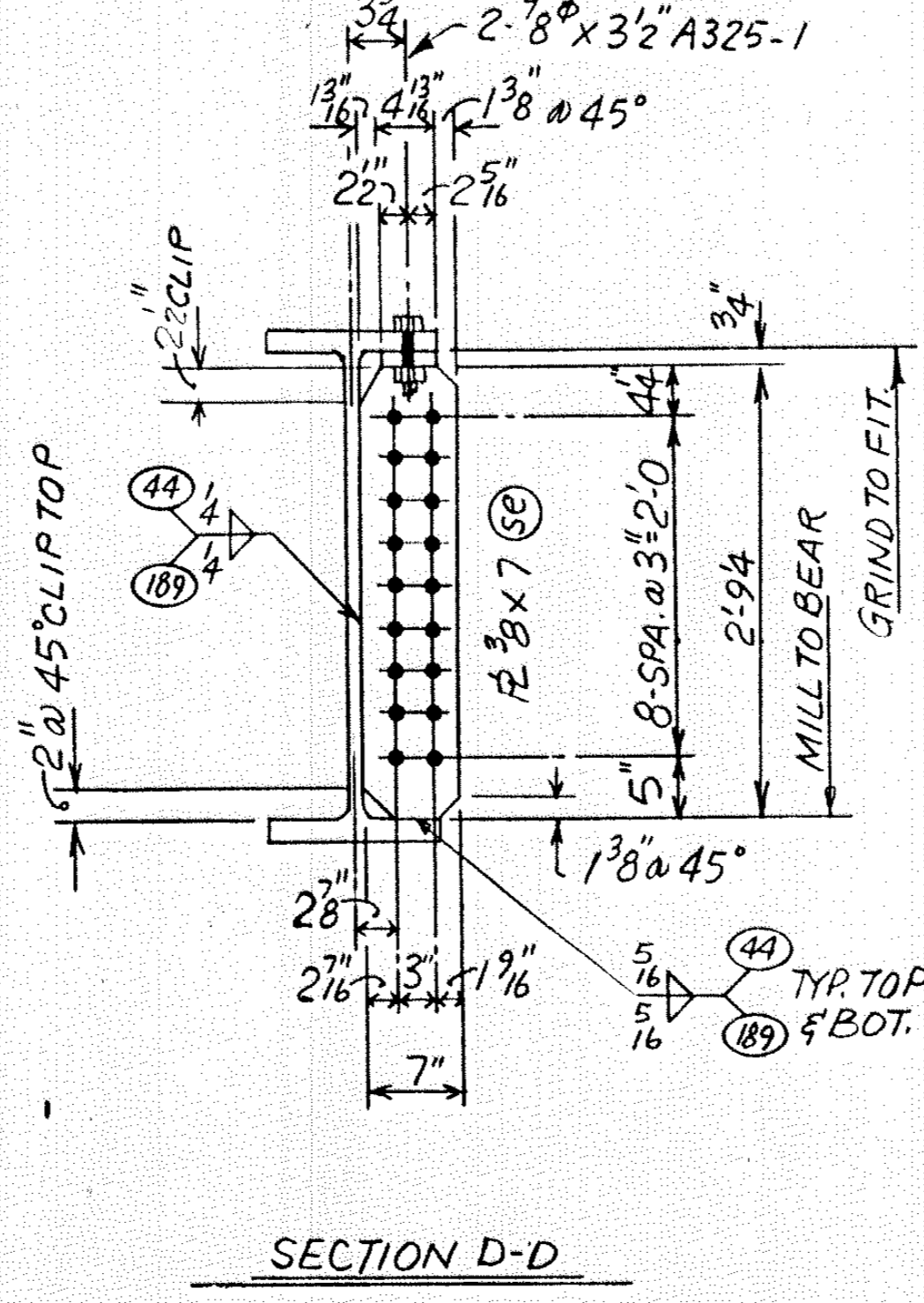
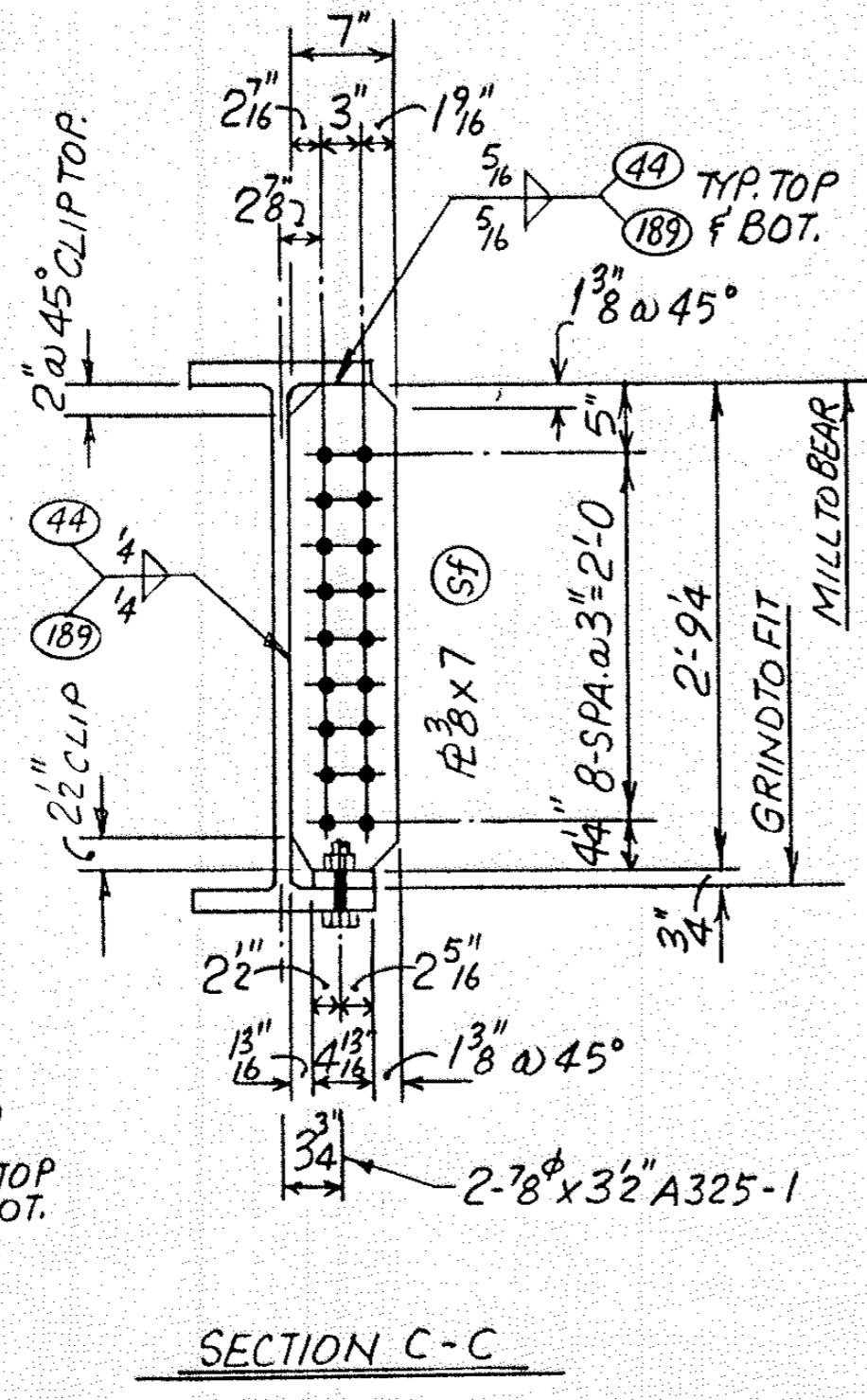
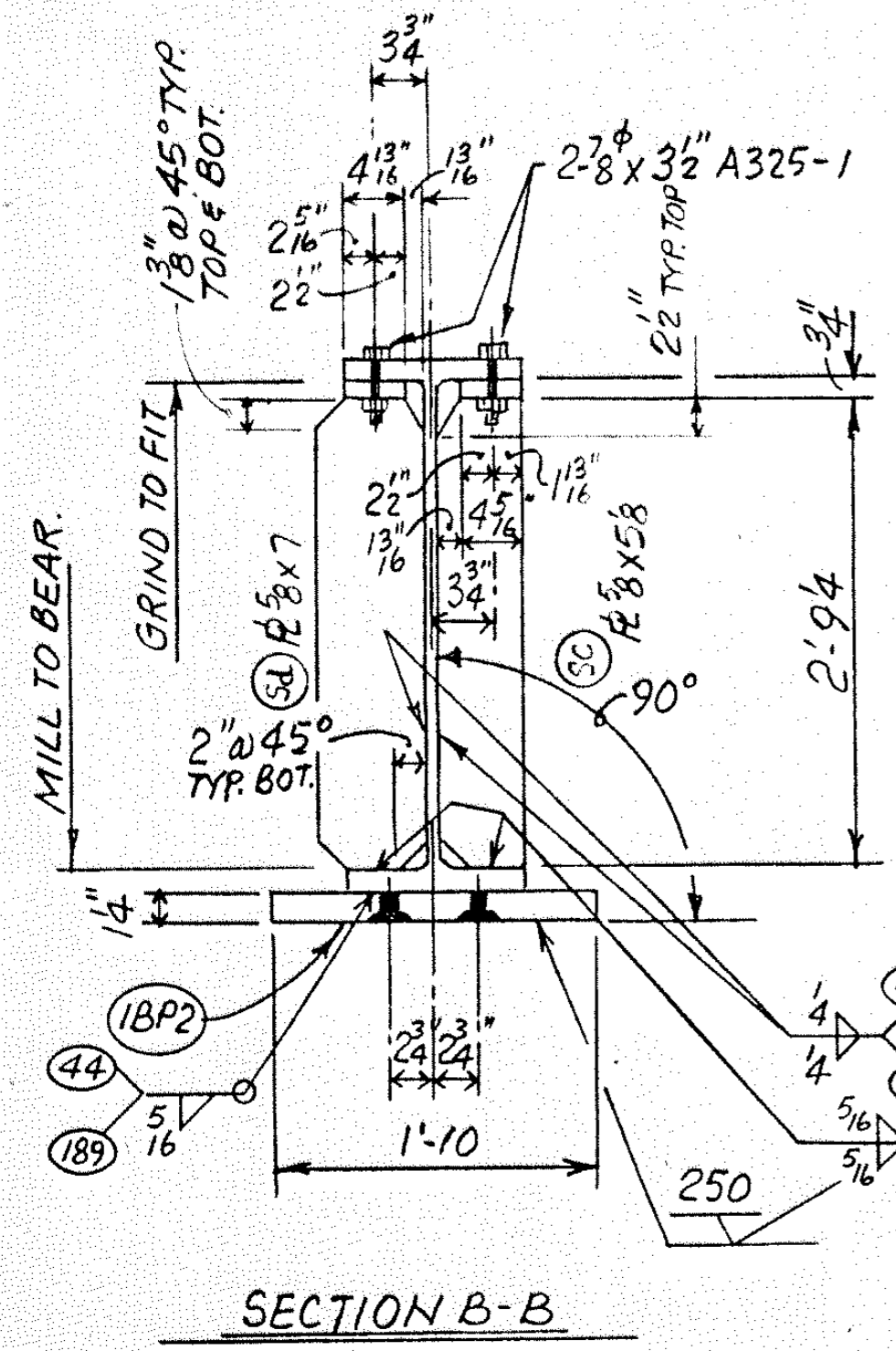


HOLES UNLESS NOTED.
PAINT SEE NOTE NO. 20 SHEET E 2.

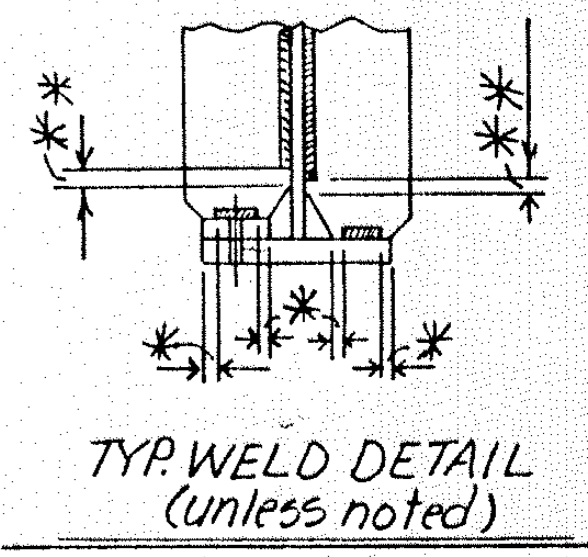
JOB NO. 91-038 (F)		BILL OF MATERIAL				SHEET: 59	
MK.	NO.	MATERIAL FOR ONE	WT.	ORDER SIZE	P. O. NO.	TYPE	REMARKS
B19	ONE THUS						
a	W36x210x88-7 ³ / ₄		88'-11"	34382			FIE
sa	1 # 5/8x5/8x2'-10		STOCK				
sb	1 # 5/8x7x2'-10						
sc	1 # 5/8x5/8x2'-9 ¹ / ₄						
sd	1 # 5/8x7x2'-9 ¹ / ₄						
se	1 # 3/8x7x2'-9 ¹ / ₄						
sf	3 # 3/8x7x2'-9 ¹ / ₄						
sg	1 # 3/4x9 ¹ / ₁₆ x2'-10						BENT.
spa	1 # 3/4x4 ¹ / ₁₆ x0'-9 ⁵ / ₈					do	do
spb	4 # 3/4x4 ¹ / ₁₆ x0'-9 ⁵ / ₈					do	do
spc	1 # 3/4x4 ¹ / ₁₆ x0'-9 ⁵ / ₈					do	do
1B1	1 # 1x6x1'-4					do	do
1B2	1 # 2x4x10x1'-10					do	do



SEE SHEET B2 FOR SHOP BOLT LIST.
 SHOP BOLTS FOR ONE BEAM.
 12 - 7/8" x 3/2" A325-1 BOLTS.
 12 - 7/8" A325-1 WASHERS.



SECTION F-F



SEE SHEET E2 FOR TYPICAL SHOP NOTES
 ALL MATERIAL TO BE AMERICAN MADE
 MILL CERTIFICATES REQUIRED ON ALL MATERIAL
 ALL WELDERS TO BE CERTIFIED

PROJ. NO. 02-614-18.		SHEET 59
BRIDGE NO. 02560 R.		
C.S.A.H. 14 OVER BNRR. IN THE CITY OF COON RAPIDS.		DRAWN BY CHECKED BY
REVISIONS		
BEAM MK. B19.		JOB NO. DATE
STRUCTURE 234' ROLLED BEAM BRIDGE.		
LOCATION ANOKA COUNTY MINNESOTA.		JOB NO. 91-038. DATE APRIL 1991.
CUSTOMER ANOKA COUNTY HWY. DEPT.		
ARCHITECT BRW. INC.		

Egger Steel Co.
 909 So. Seventh Ave.
 Drawer E
 Sioux Falls, So. Dak. 57101

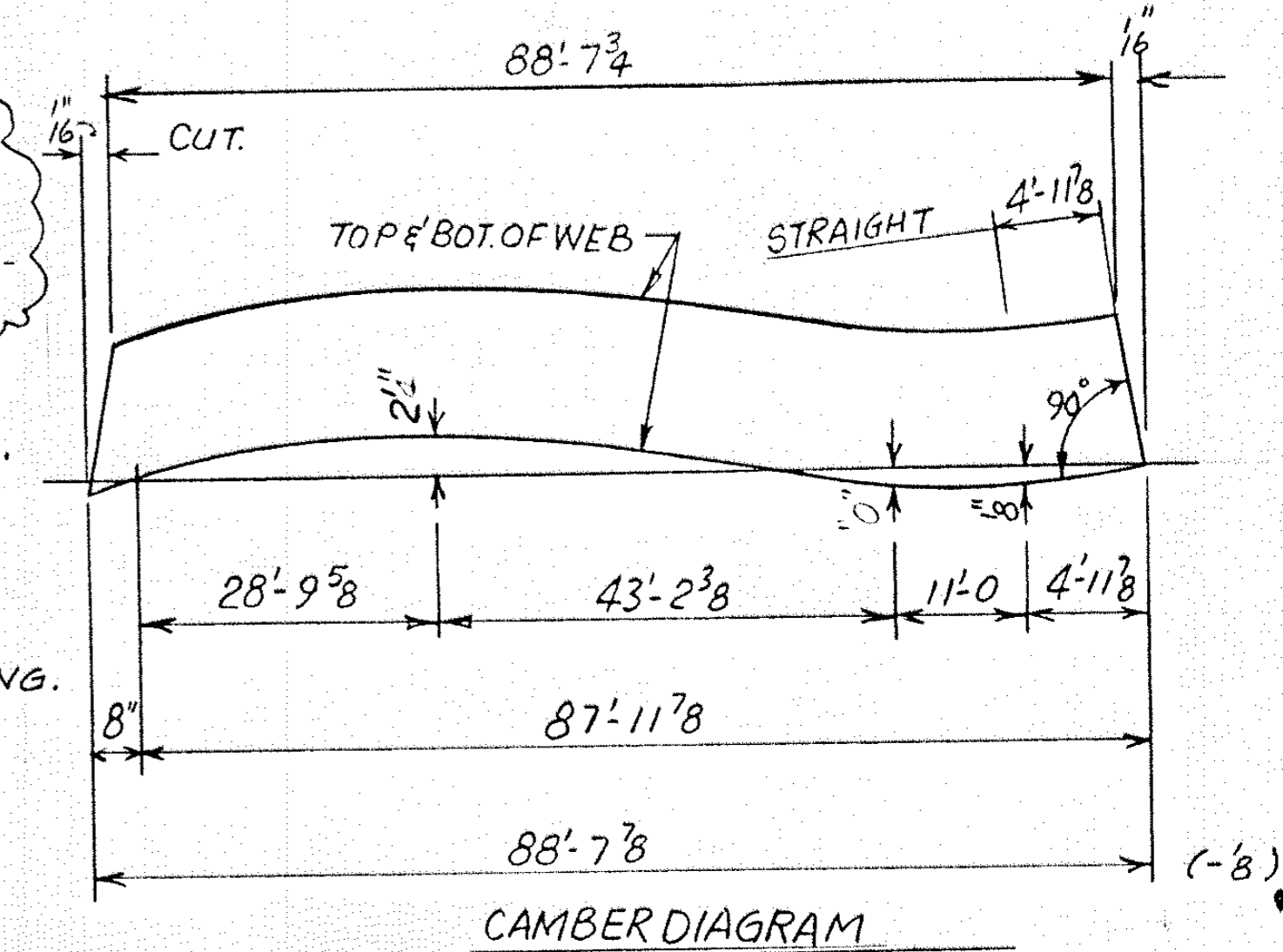
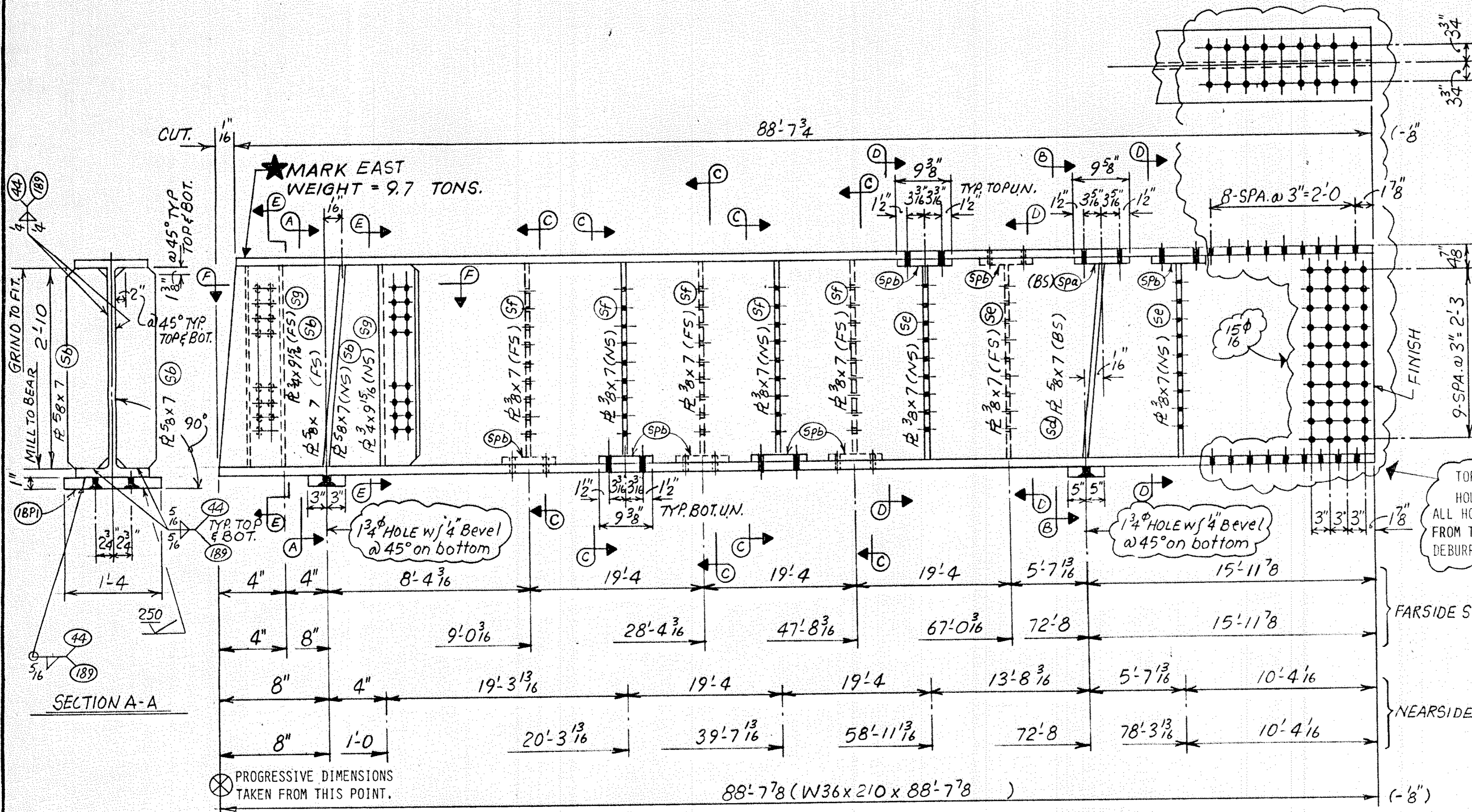
HOLES UNLESS NOTED.
 PAINT SEE NOTE NO. 20 SHEET E2.

LET	DATE	BY
A		
B		
C		

STRUCTURE 234' ROLLED BEAM BRIDGE.
 LOCATION ANOKA COUNTY MINNESOTA.
 CUSTOMER ANOKA COUNTY HWY. DEPT.
 ARCHITECT BRW. INC.

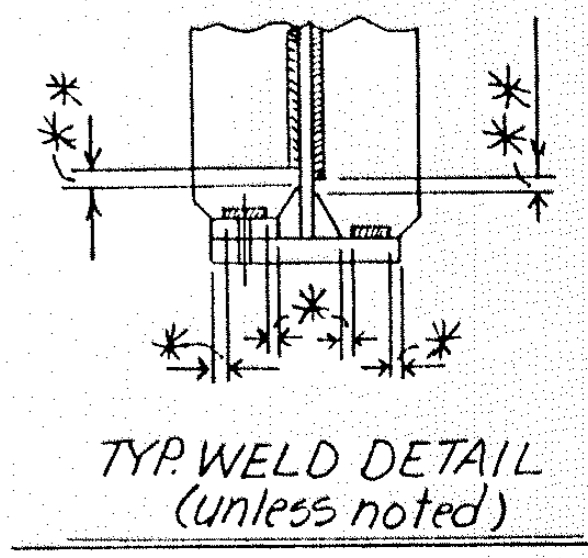
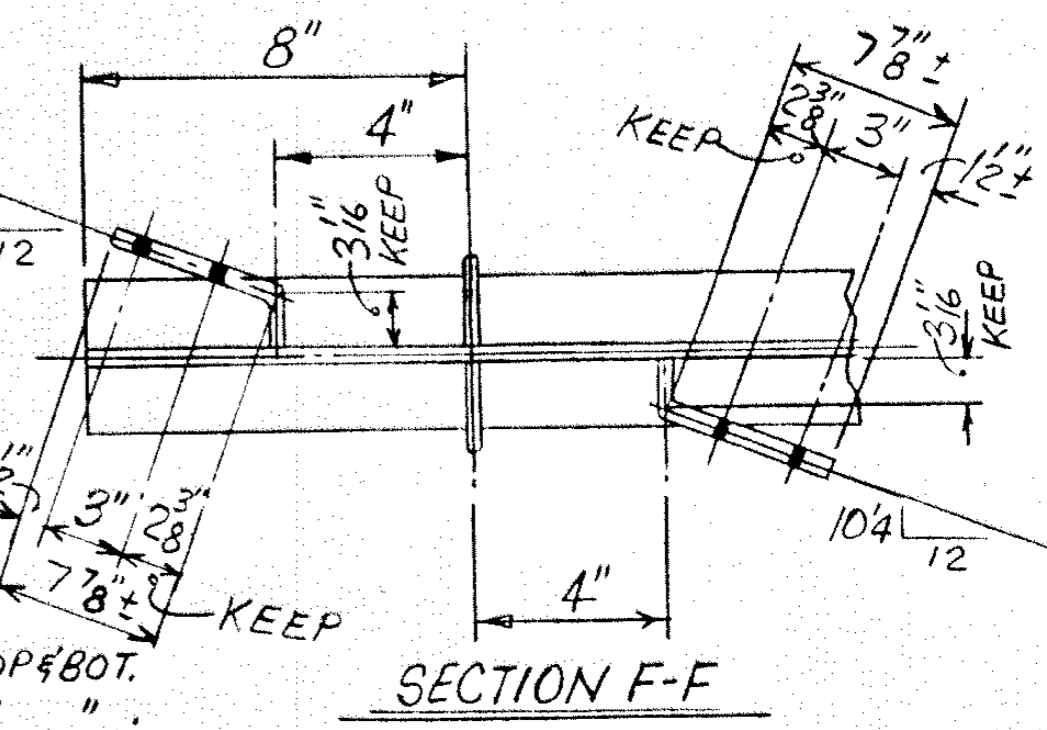
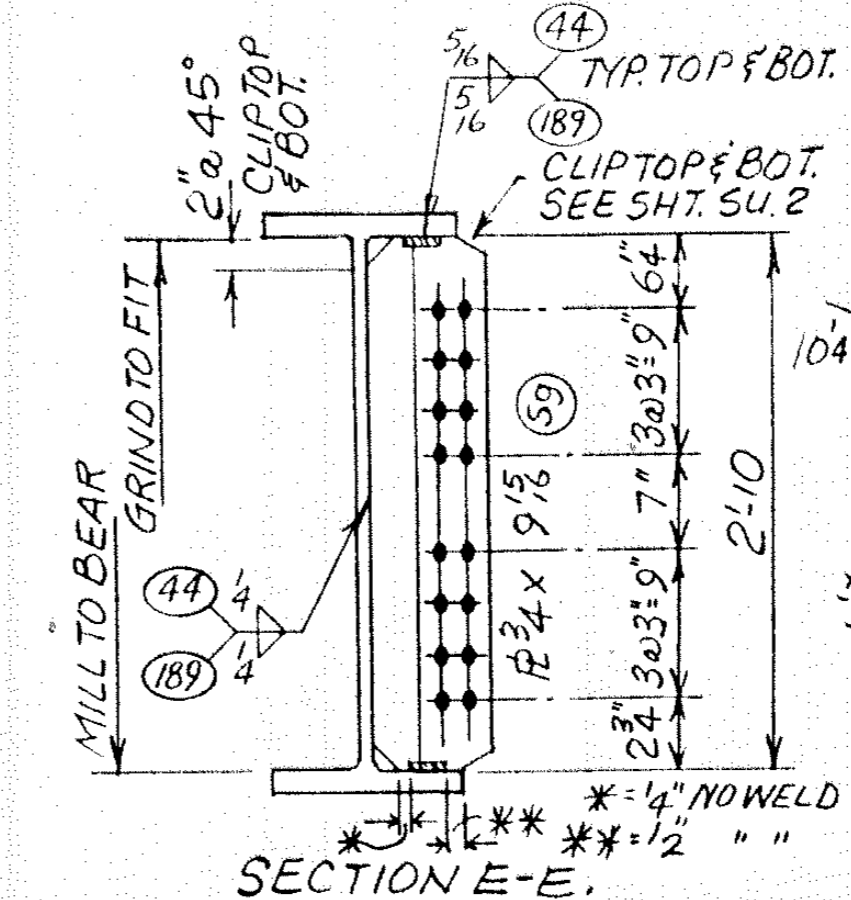
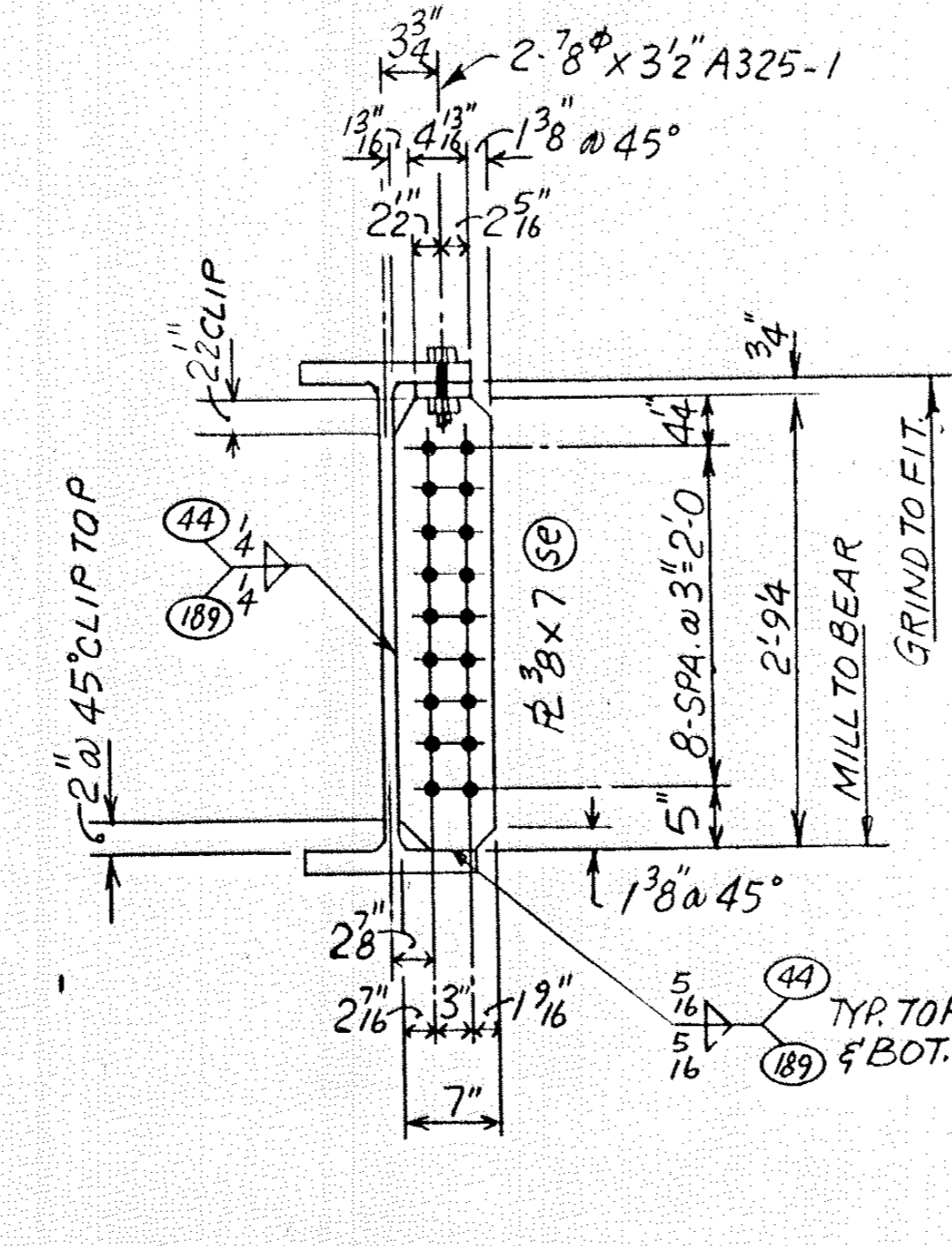
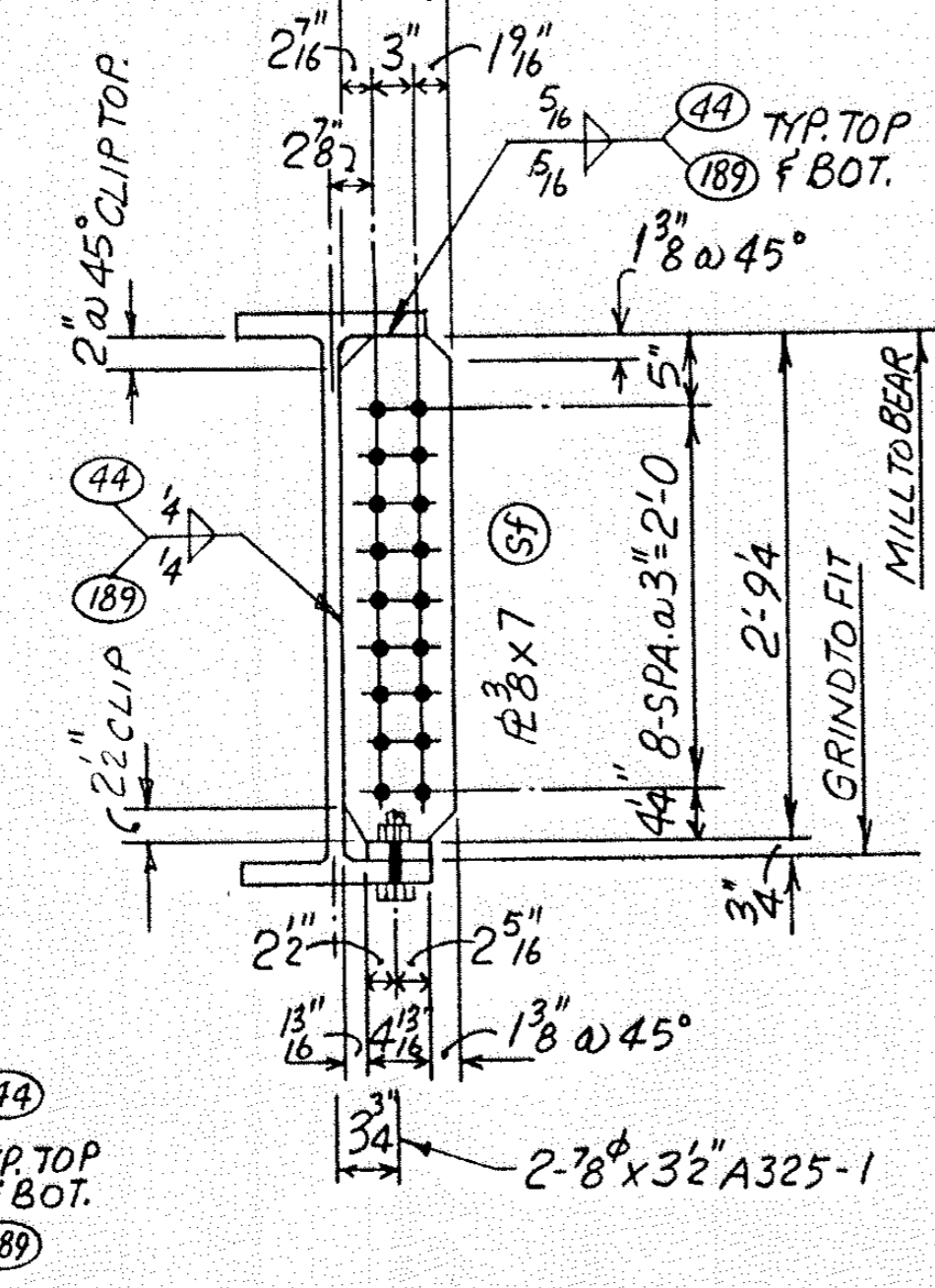
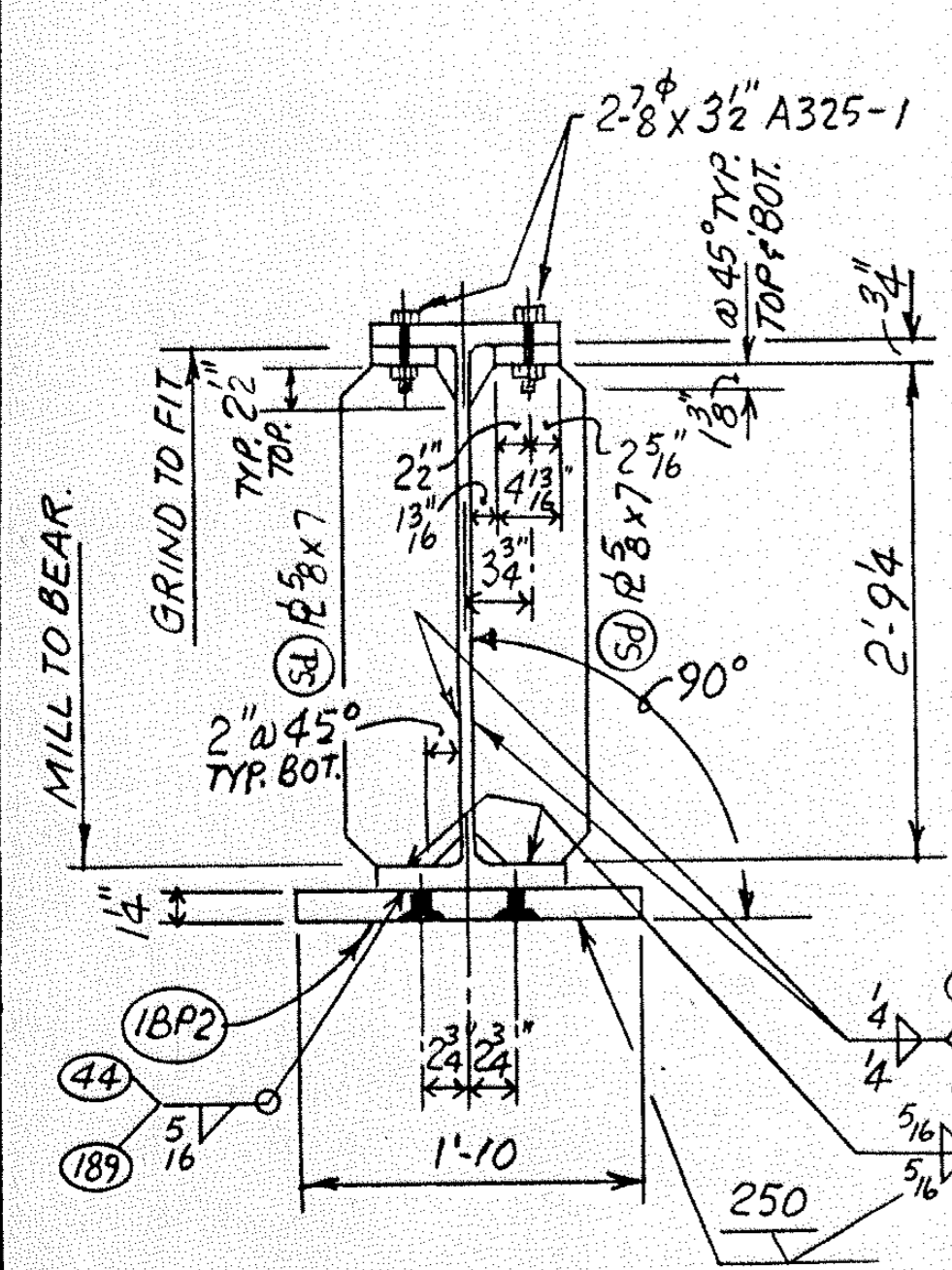
APPROVED FOR CONSTRUCTION

JOB NO. 91-038 (F)		BILL OF MATERIAL				SHEET: 510	
MK.	NO.	MATERIAL FOR ONE DESCRIPTION	WT.	ORDER SIZE	P. O. NO.	TYPE	REMARKS
B20	ONE THIS						
a	1	W36 x 210 x 88'-7 7/8	88'-11	34387	A709-50W (A588/M222)	C/3	FIE
Sb	2	R 5/8 x 7 x 2'-10	STOCK				
Sd	2	R 5/8 x 7 x 2'-9 4					
Se	3	R 3/8 x 7 x 2'-9 4					
Sf	5	R 3/8 x 7 x 2'-10					
Sg	2	R 3/4 x 9 1/2 x 2'-10					BENT
Spa	2	R 3/4 x 4 1/2 x 0'-9 5/8				do	do
Spb	8	R 3/4 x 4 1/2 x 0'-9 3/8				do	do
1BP1	1	R 1 x 6 x 1'-4				A709-50W (A588)	
1BP2	1	R 2 x 10 x 1'-10				do	



SEE SHEET B2 FOR SHOP BOLT LIST.
 SHOP BOLTS FOR ONE BEAM.
 20 - 7/8" x 3 1/2" A325-1 BOLTS.
 20 - 7/8" A325-1 WASHERS.

NOTE: CAMBER AT FIELD SPLICE AND 5' BACK AND AHEAD HAVE BEEN REDUCED BY 1/2" FROM THE ENGINEERS DRAWINGS TO COMPENSATE FOR THE 5' SHIFT OF THE FIELD SPLICE.



SEE SHEET E2 FOR TYPICAL SHOP NOTES
 ALL MATERIAL TO BE AMERICAN MADE
 MILL CERTIFICATES REQUIRED ON ALL MATERIAL
 ALL WELDERS TO BE CERTIFIED

Egger Steel Co.
 909 So. Seventh Ave.
 Drawer E
 Sioux Falls, So. Dak. 57101

HOLES UNLESS NOTED.
 PAINT SEE NOTE NO. 20 SHEET E2.

LET	DATE	BY
A		
B		
C		

PROJ. NO. 02-614-18.
 BRIDGE NO. 02560 R.

C.S.A.H. 14 OVER BNRR IN THE CITY OF COON RAPIDS.

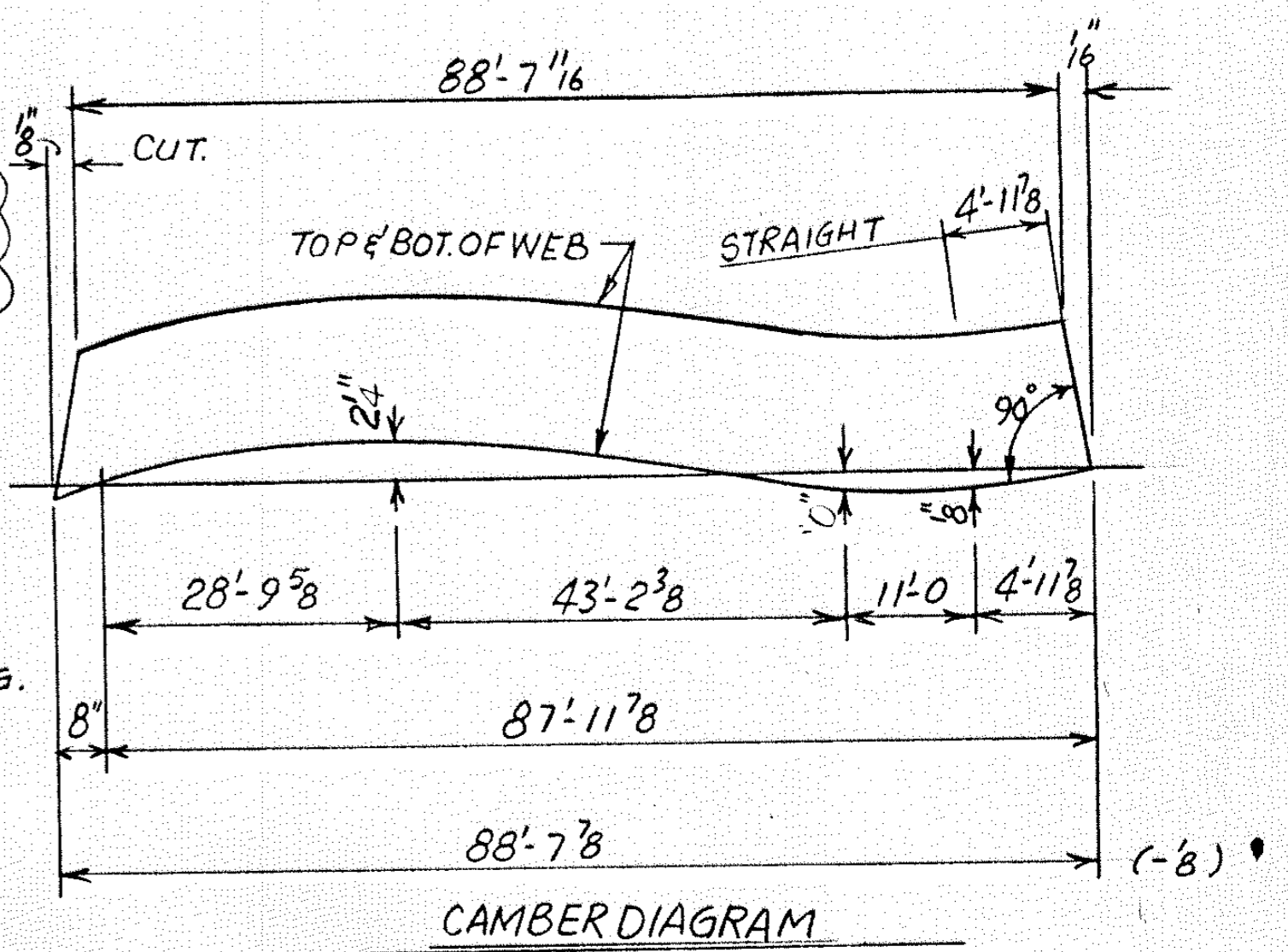
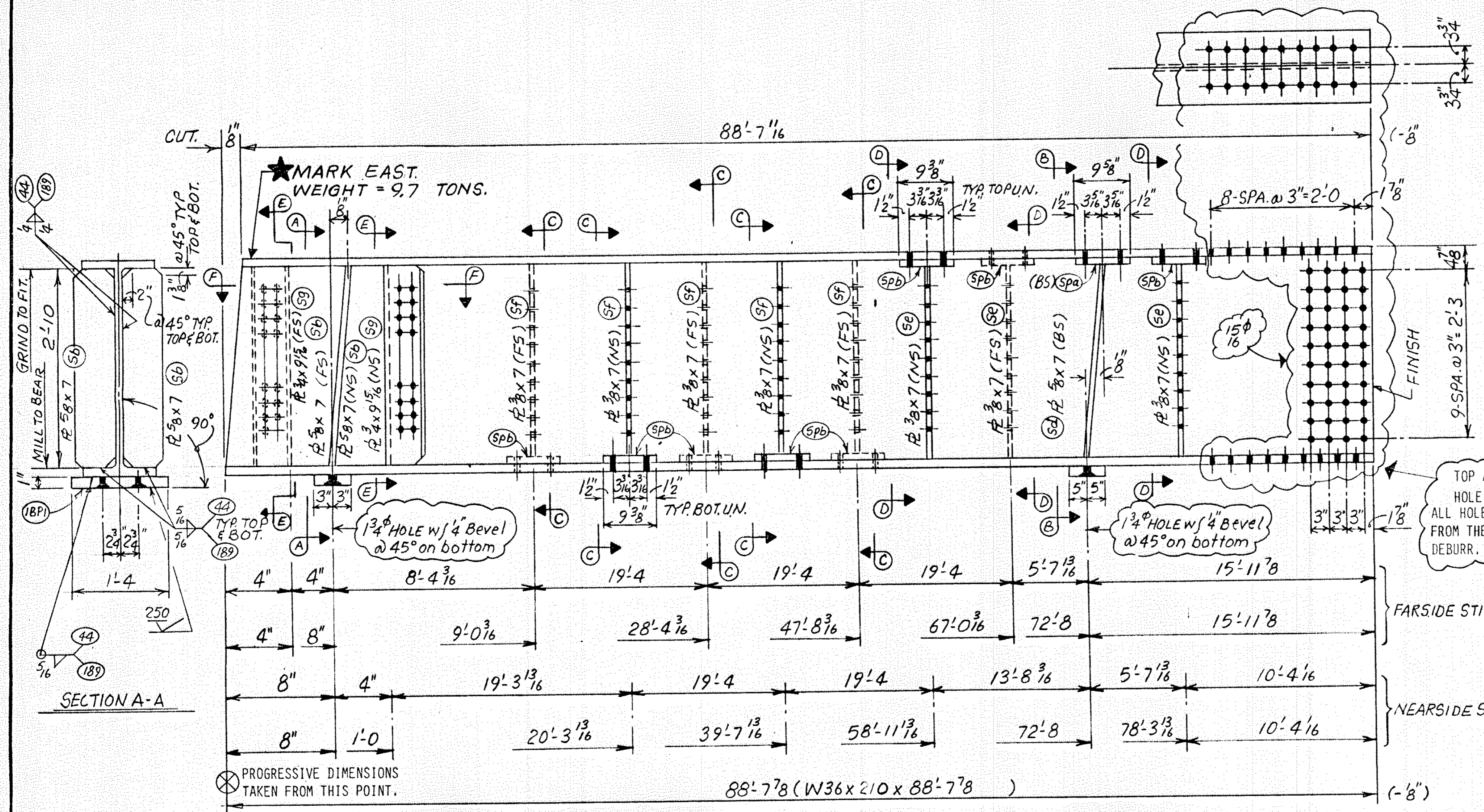
BEAM MK. B20

APPROVED FOR CONSTRUCTION

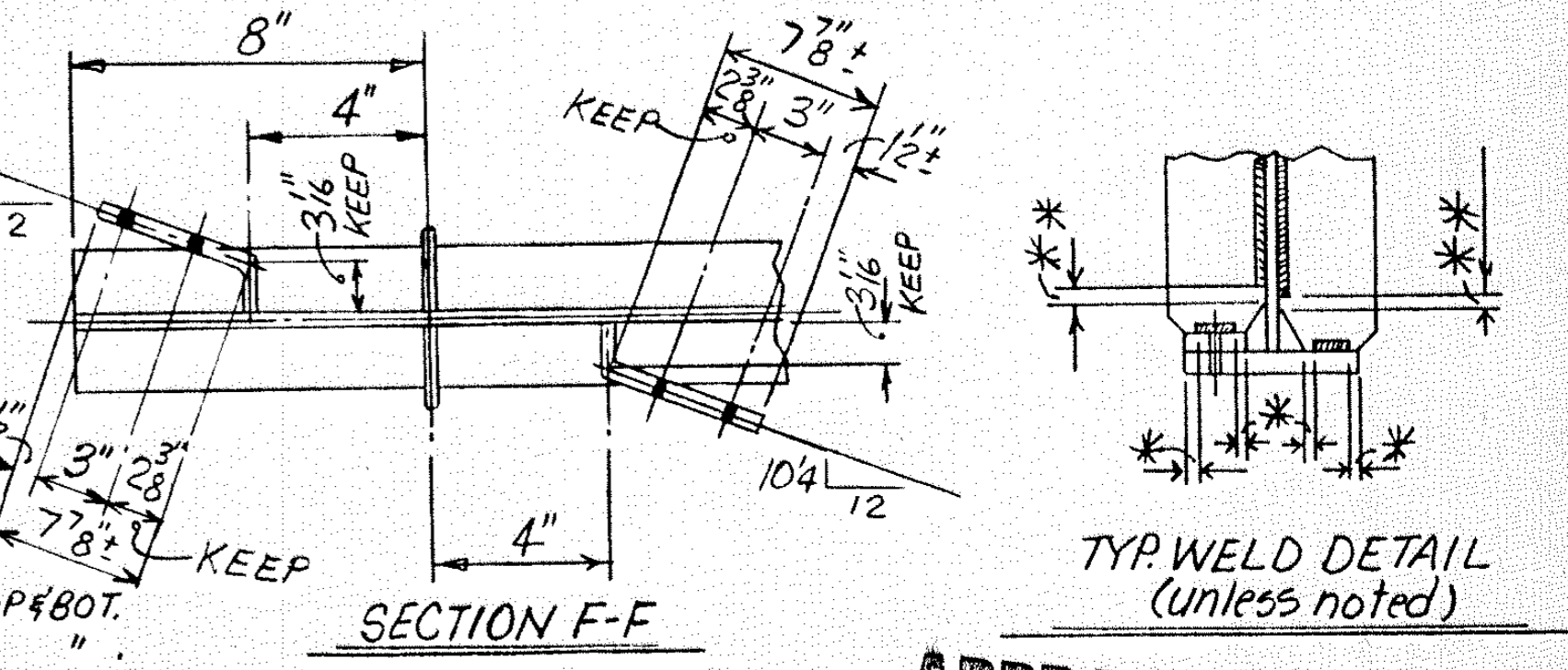
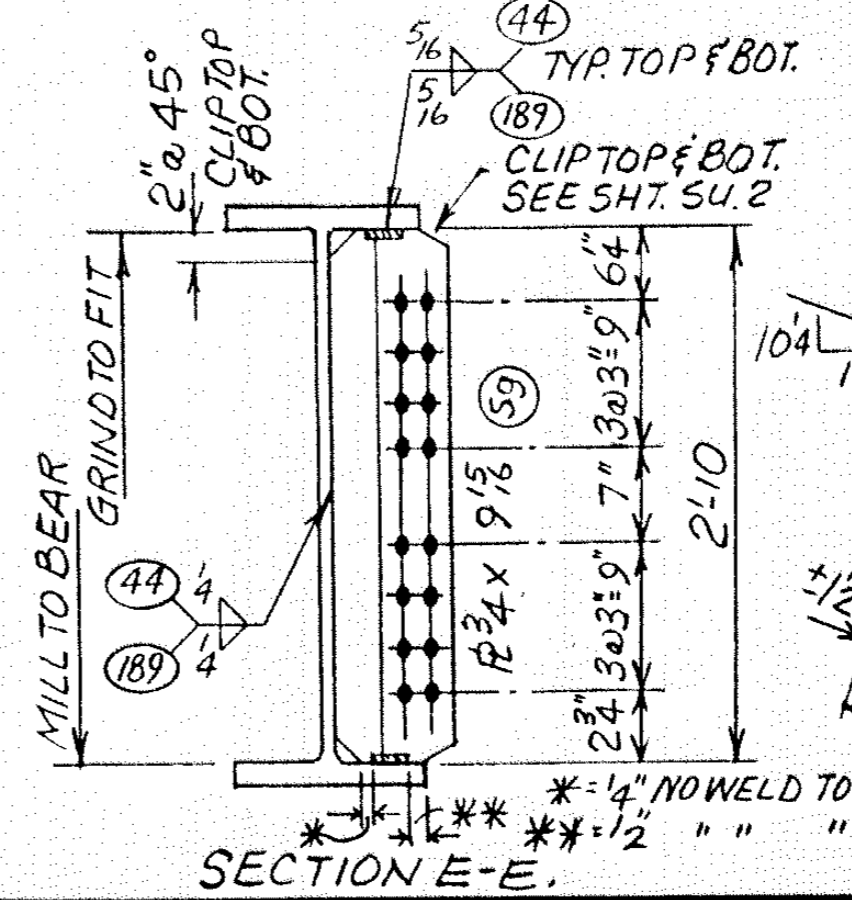
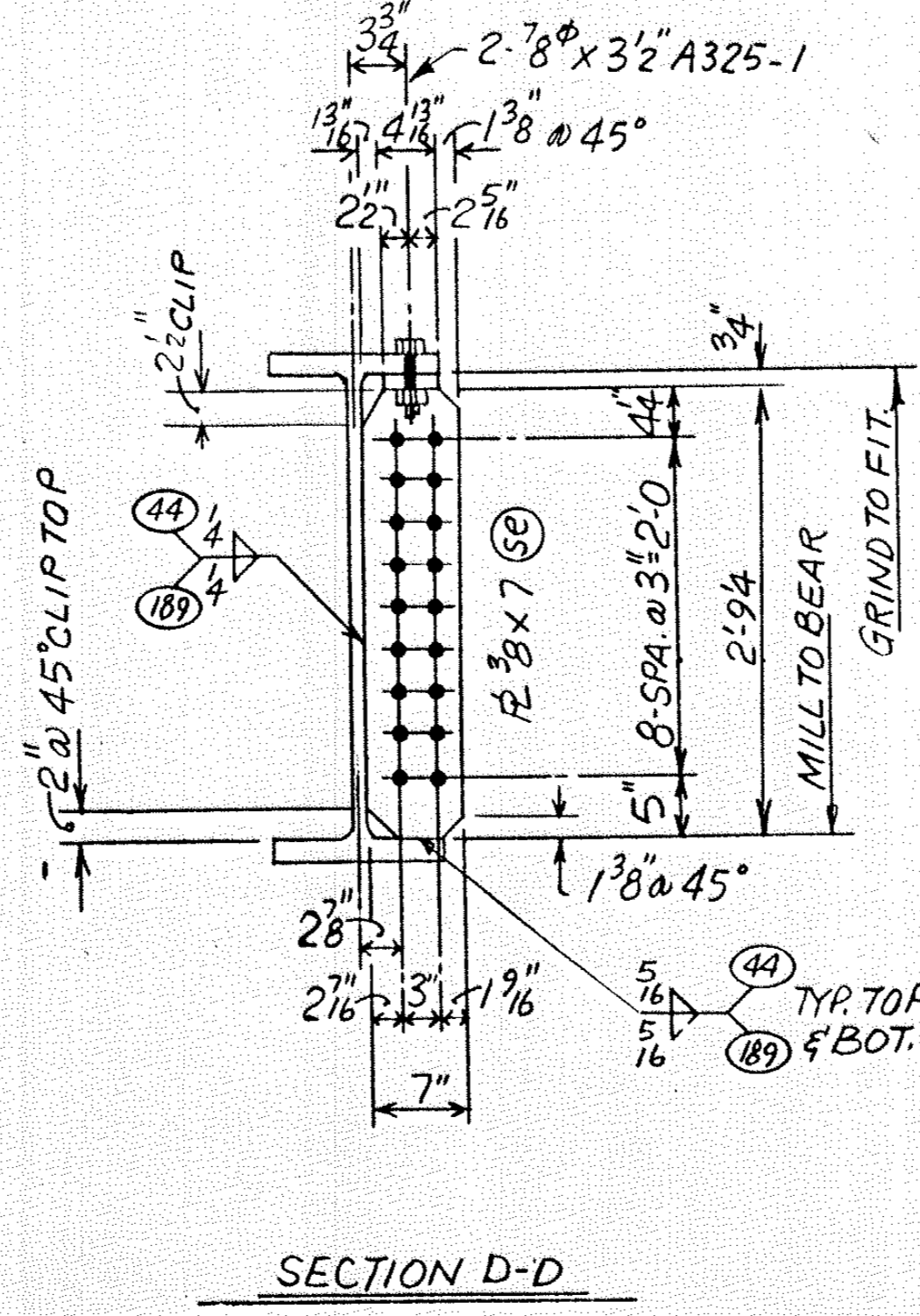
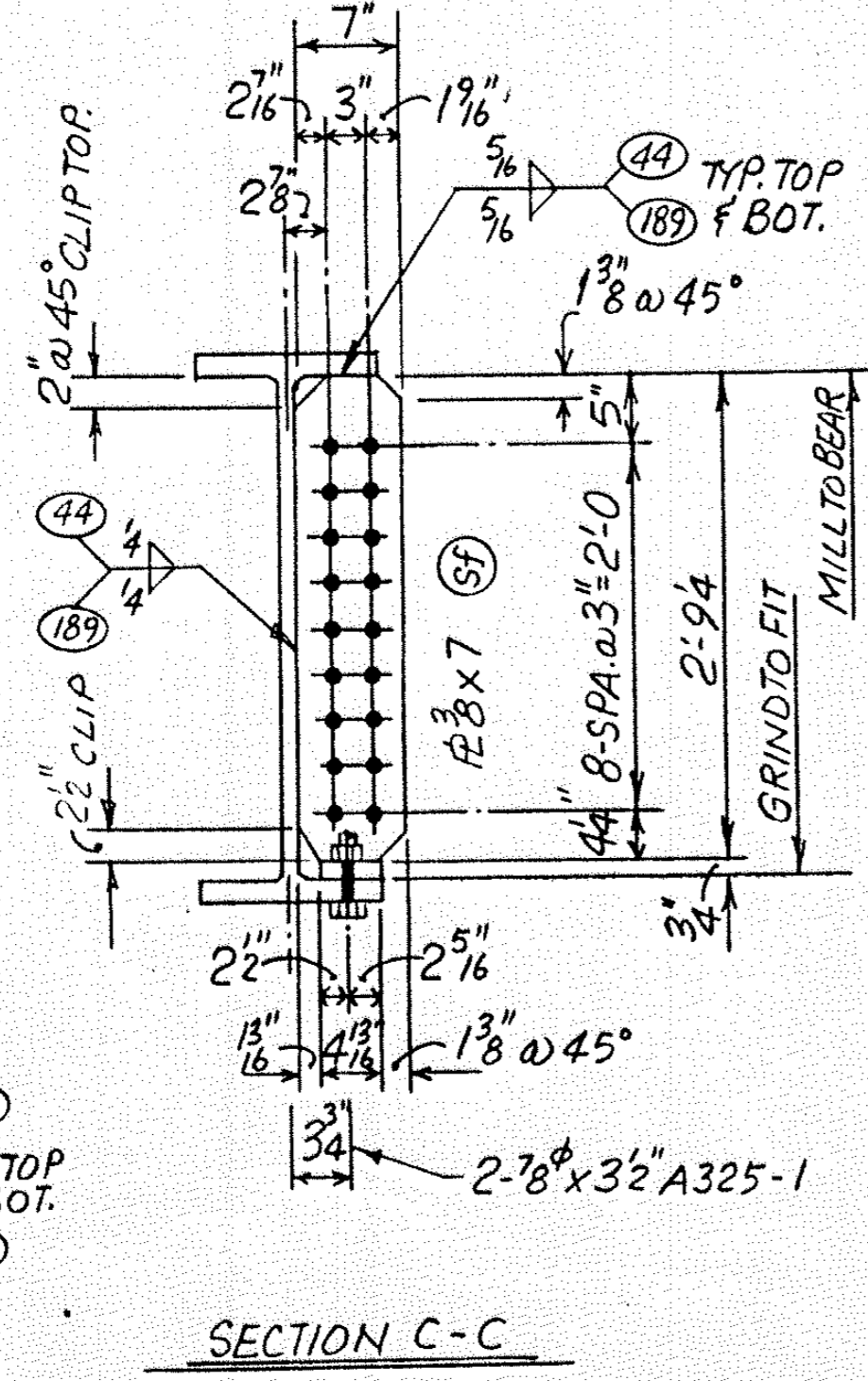
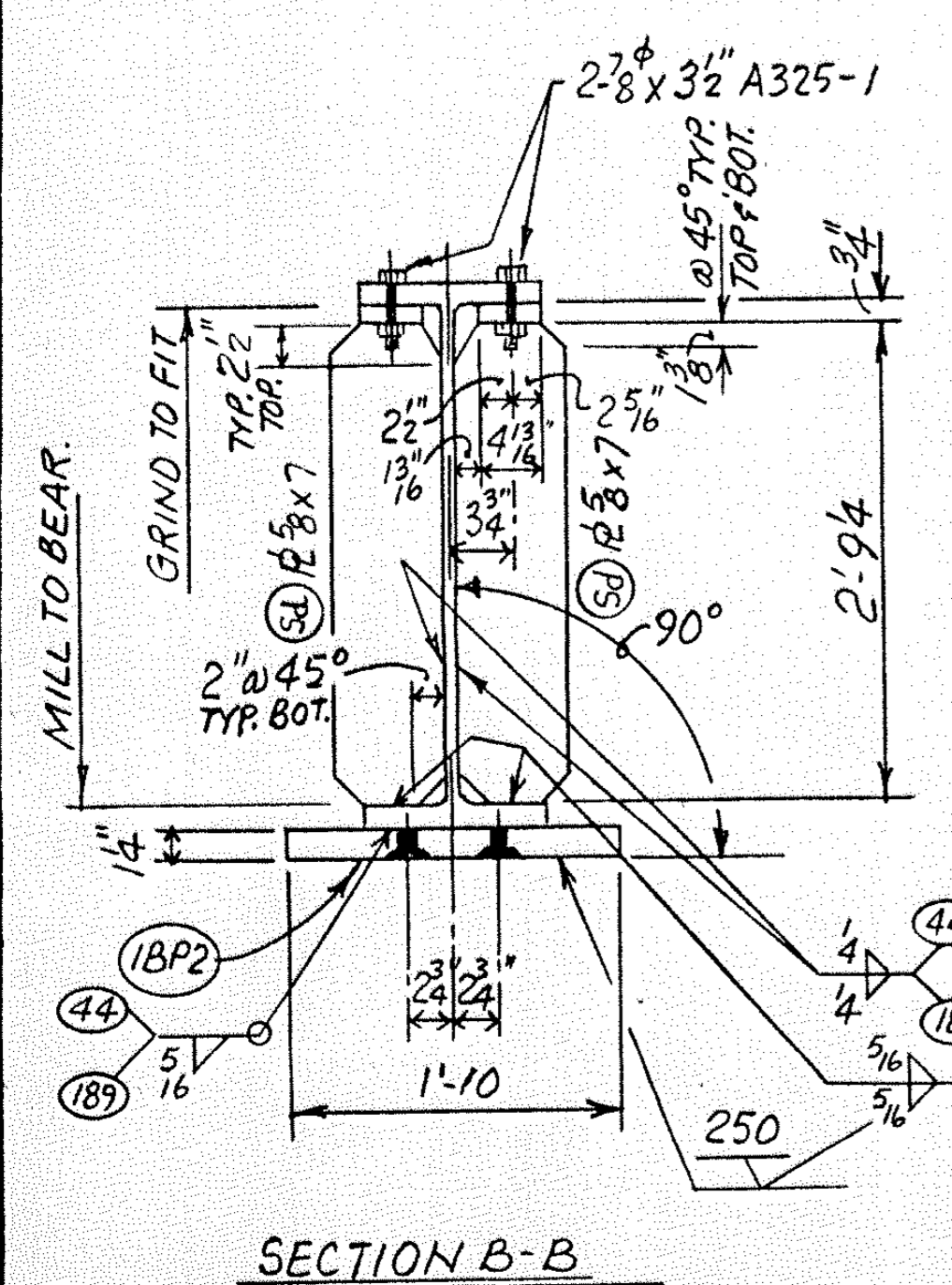
SHEET 510.
 DRAWN BY
 CHECKED BY
 JOB NO. 91-038
 DATE APRIL 1991.

STRUCTURE 234' ROLLED BEAM BRIDGE.
 LOCATION ANOKA COUNTY MINNESOTA.
 CUSTOMER ANOKA COUNTY HWY. DEPT.
 ARCHITECT BRW. INC.

JOB NO. 91-038 (F)		BILL OF MATERIAL				SHEET: S11	
MK.	NO.	MATERIAL FOR ONE DESCRIPTION	WT.	ORDER SIZE	P. O. NO.	TYPE	REMARKS
B21		ONE - THUS					
B22		ONE - THUS					
a	1	W36x210x88'-7 7/8	88'11"	34382	A709-50WT2 (A588, 1/2" 22)	C/3	FIE
Sb	2	R 5/8x7x2'-10		STOCK			
Sd	2	R 5/8x7x2'-9 1/4					
Se	3	R 3/8x7x2'-9 1/4					
Sf	5	R 3/8x7x2'-9 1/4					
Sg	2	R 3/4x9 1/2x2'-10					BENT
spa	2	R 3/4x4 1/2x16x0'-9 5/8					
spb	8	R 3/4x4 1/2x16x0'-9 3/8				do	do
1BP1	1	R 1x6x1'-4				A709-50WN (A588)	
1BP2	1	R 2x10x1'-10				do	



SEE SHEET B2 FOR SHOP BOLT LIST.
 SHOP BOLTS FOR ONE BEAM.
 20 - 7/8" x 3 1/2" A325-1 BOLTS.
 20 - 7/8" A325-1 WASHERS.



SEE SHEET E2 FOR TYPICAL SHOP NOTES
 ALL MATERIAL TO BE AMERICAN MADE
 MILL CERTIFICATES REQUIRED ON ALL MATERIAL
 ALL WELDERS TO BE CERTIFIED

Egger Steel Co.
 909 So. Seventh Ave.
 Drawer E
 Sioux Falls, So. Dak. 57101

HOLES UNLESS NOTED. PAINT SEE NOTE NO. 20 SHEET E2.

APPROVED FOR CONSTRUCTION

PROJ. NO. 02-614-18.
 BRIDGE NO. 02560 R.
 C.S.A.H. 14 OVER BNRR. IN THE CITY OF COON RAPIDS.

BEAM MK. B21 and B22.

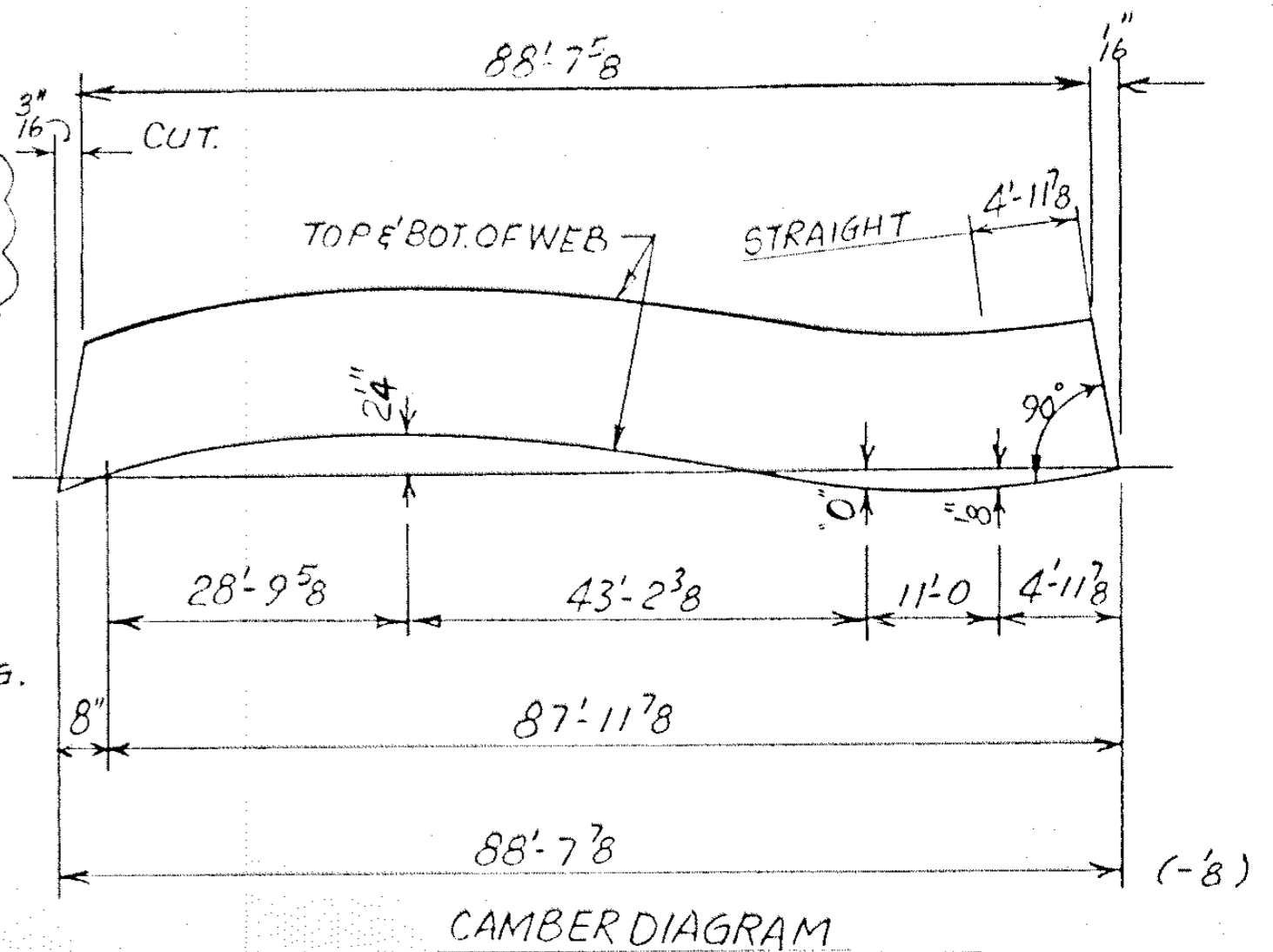
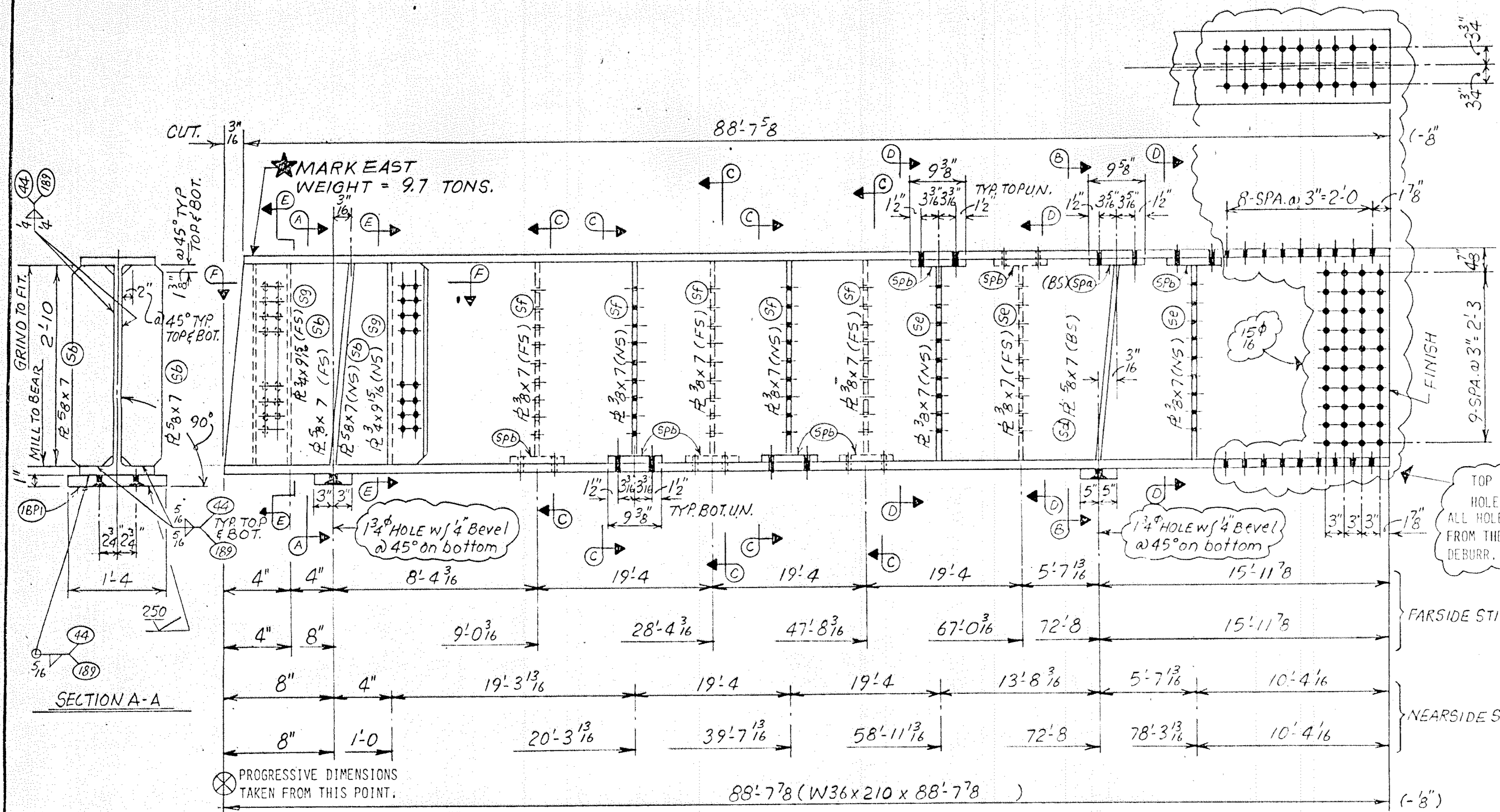
REVISIONS

LET	DATE	BY
A		
B		
C		

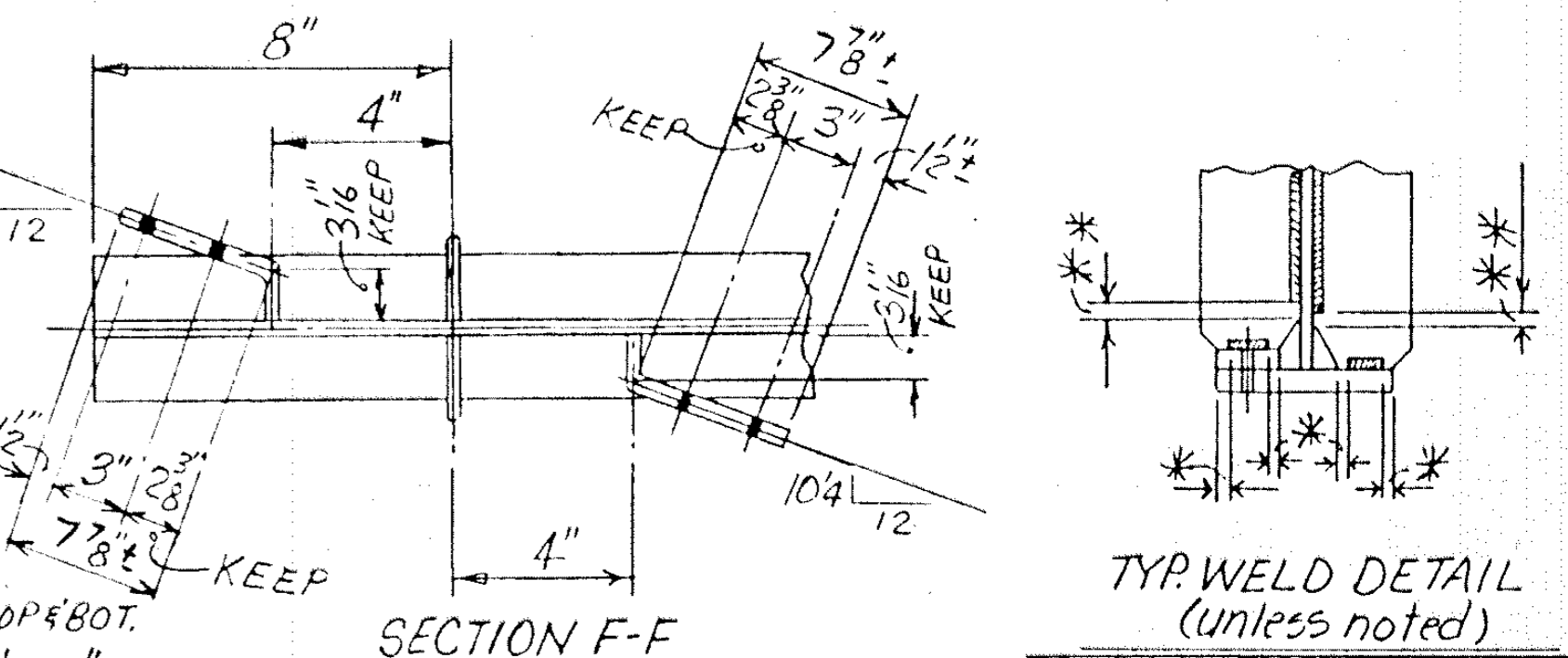
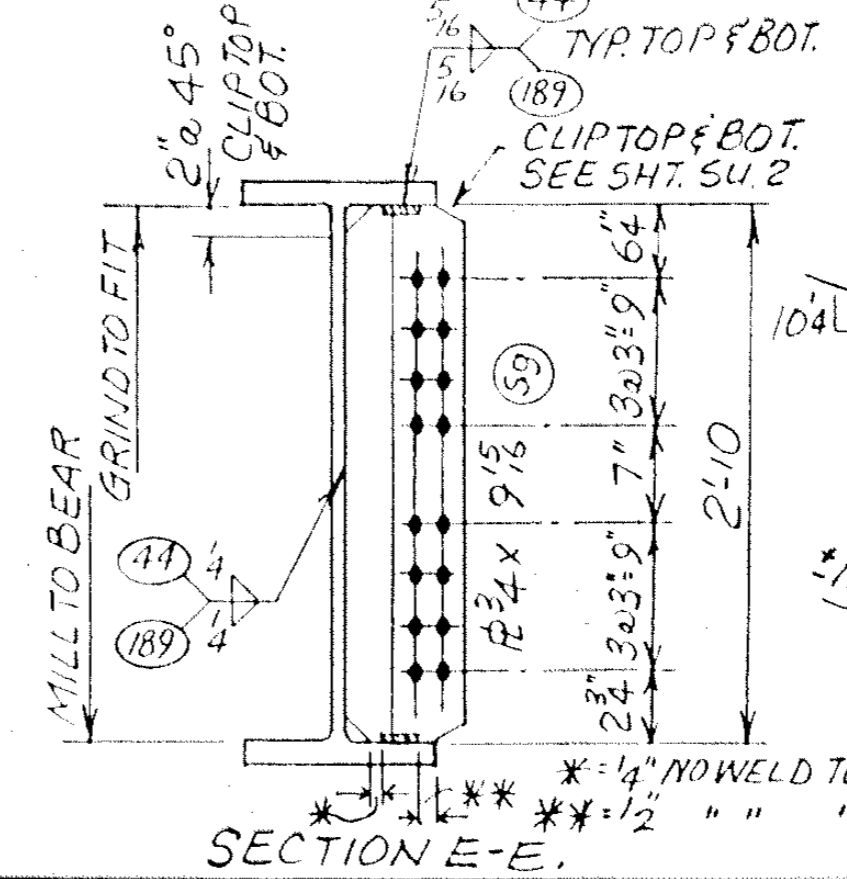
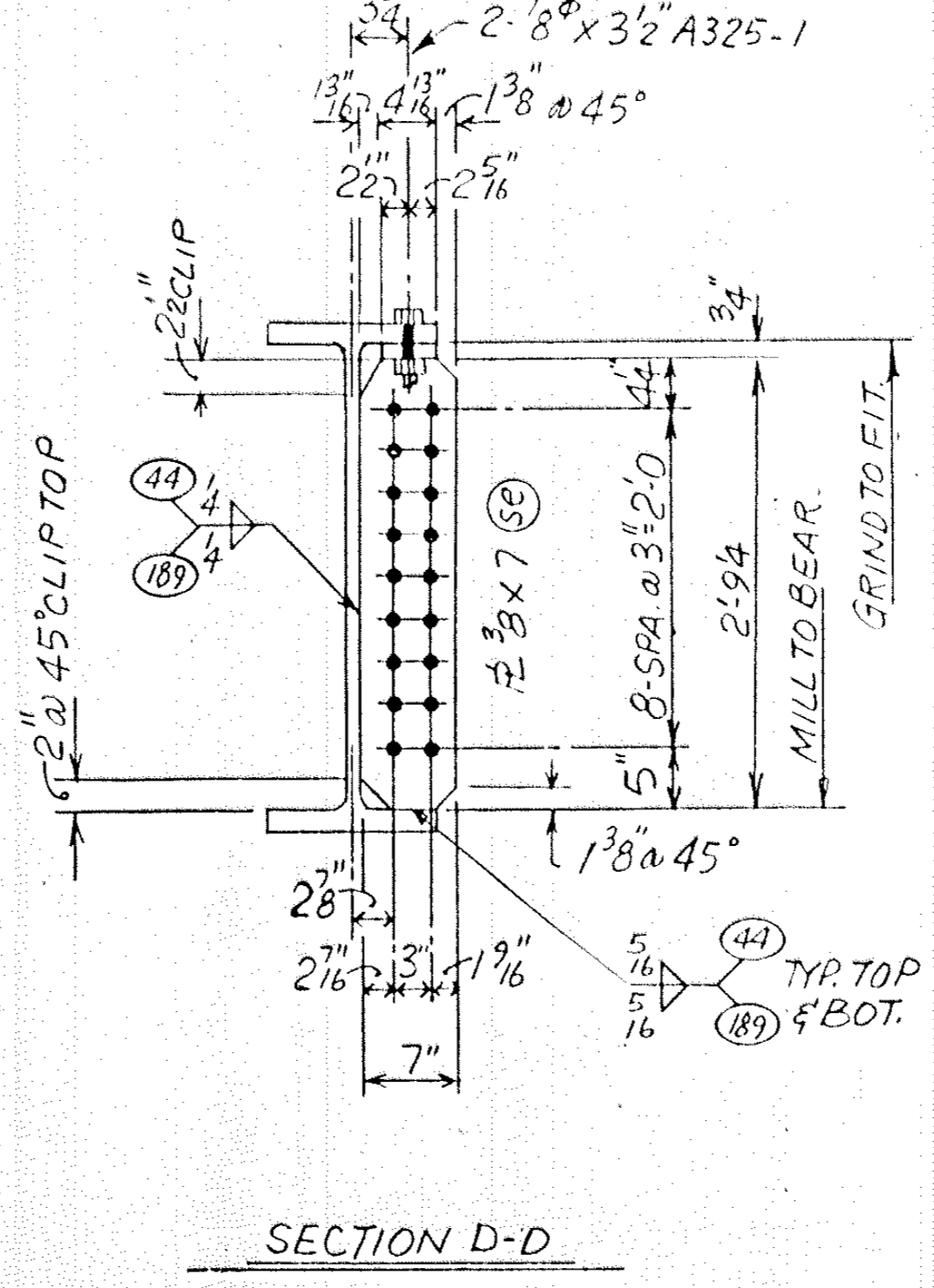
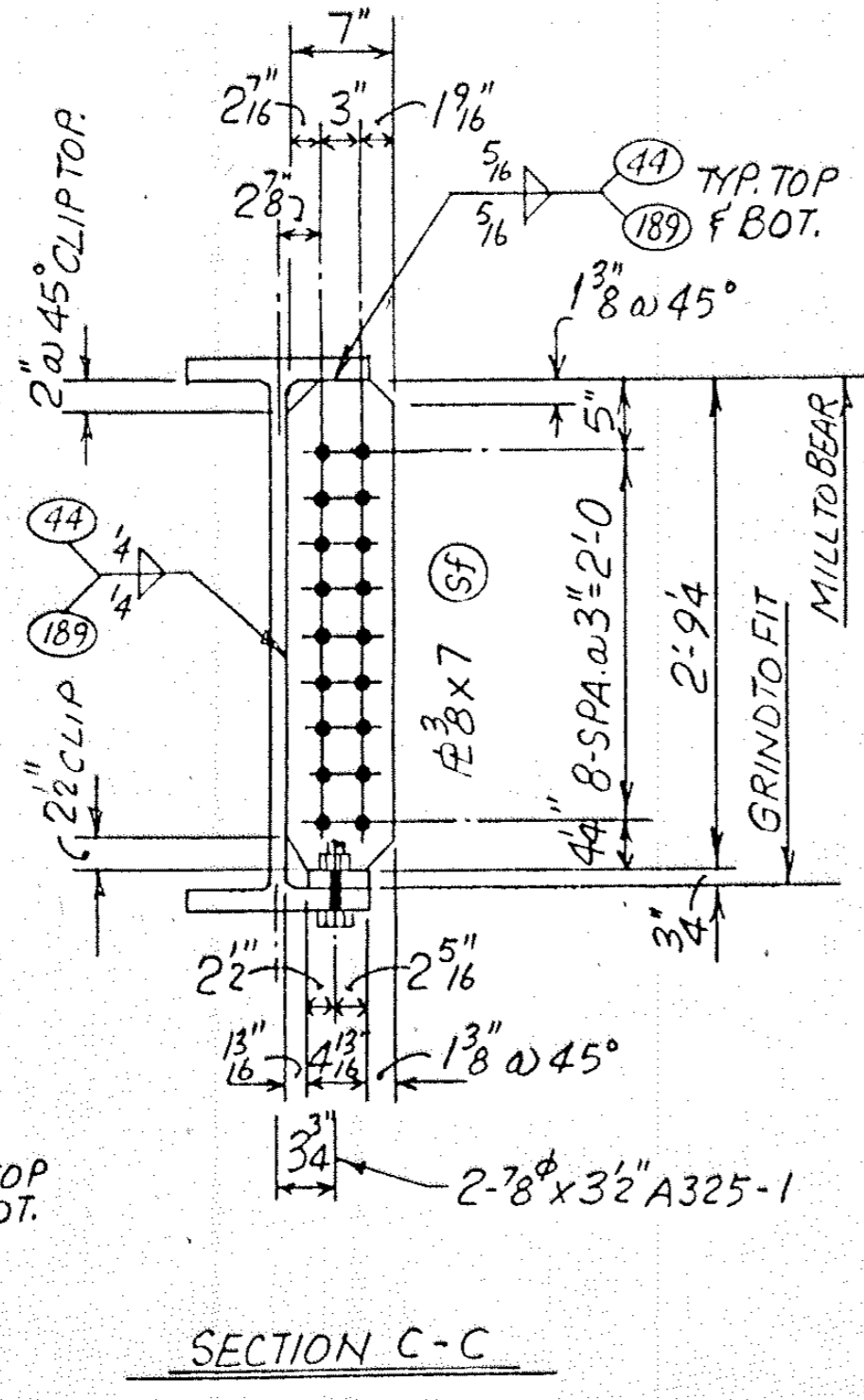
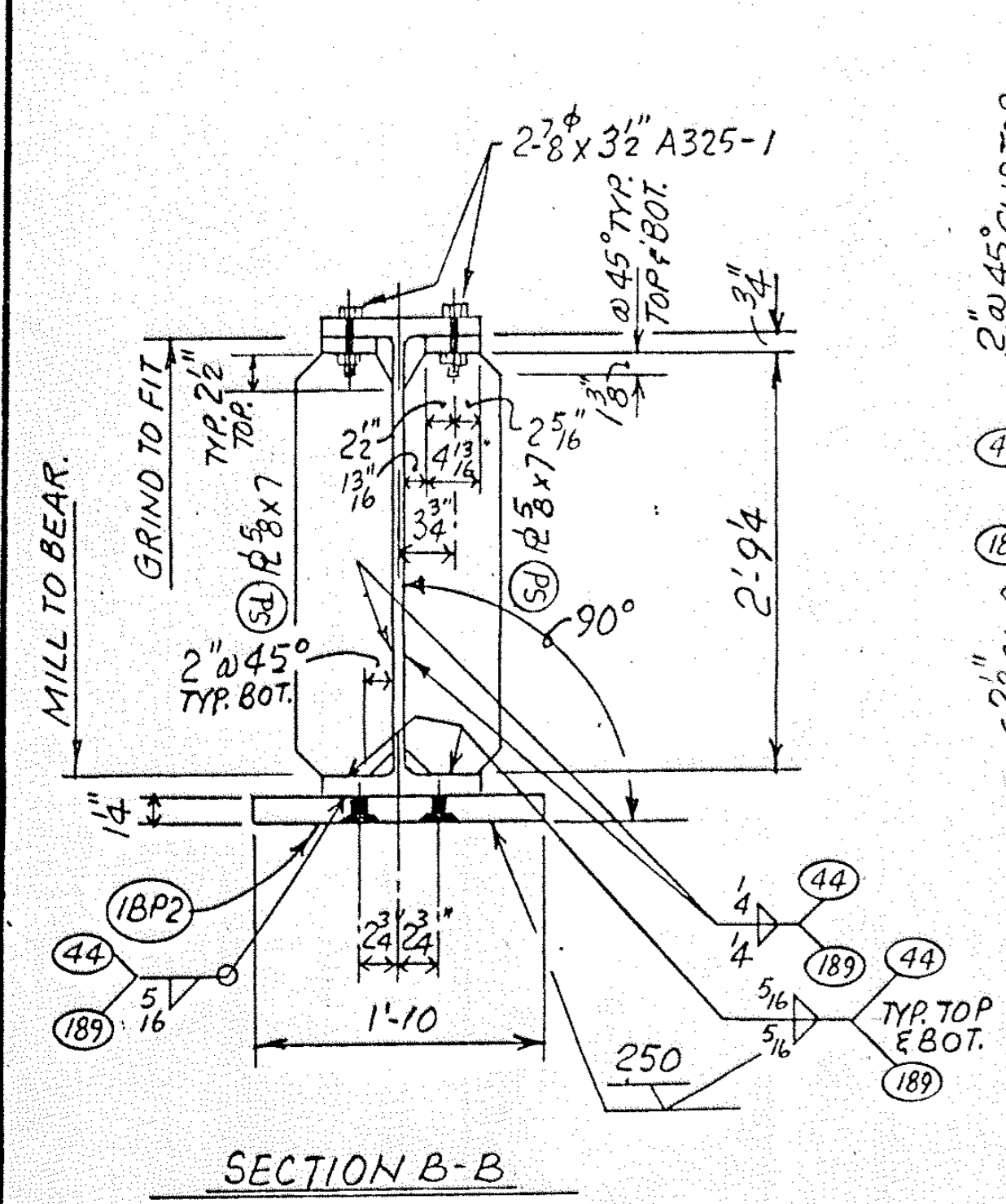
STRUCTURE 234' ROLLED BEAM BRIDGE.
 LOCATION ANOKA COUNTY MINNESOTA.
 CUSTOMER ANOKA COUNTY HWY. DEPT.
 ARCHITECT BRW. INC.

SHEET S11
 DRAWN BY [Signature]
 CHECKED BY [Signature]
 JOB NO. 91-038 (F)
 DATE APRIL 1991.

MK.	NO.	MATERIAL FOR ONE DESCRIPTION	WT.	ORDER SIZE	P. O. NO.	TYPE	CHANGY. ZONE	REMARKS
B23		ONE - THUS						
B24		ONE - THUS						
B25		ONE - THUS						
B26		ONE - THUS						
a	1	W36x210 x 88'-7 7/8	88'-11"	34382	A709-50WT 3 (A588/M222)	C/3		FIE
Sb	2	R 5/8 x 7 x 2'-10"	STOCK					
Sd	2	R 5/8 x 7 x 2'-9 1/4						
Se	3	R 3/8 x 7 x 2'-9 1/4						
Sf	5	R 3/8 x 7 x 2'-9 1/4						
Sg	2	R 3/4 x 9 1/2 x 2'-10"						BENT
Spa	2	R 3/4 x 4 1/2 x 0'-9 5/8						
Spb	8	R 3/4 x 4 1/2 x 0'-9 3/8				do.	do.	
IBP1	1	R 1 x 6 x 1'-4"				A709-50W (A588)		
IBP2	1	R 2 1/2 x 10 x 1'-10"				do.		



SEE SHEET B2 FOR SHOP BOLT LIST.
 SHOP BOLTS FOR ONE BEAM.
 20 - 7/8" x 3/2" A325-1 BOLTS.
 20 - 7/8" A325-1 WASHERS.



SEE SHEET E2 FOR TYPICAL SHOP NOTES
 ALL MATERIAL TO BE AMERICAN MADE
 MILL CERTIFICATES REQUIRED ON ALL MATERIAL
 ALL WELDERS TO BE CERTIFIED

PROJ NO. 02-614-18.
 BRIDGE NO. 02560 R.
 C.S.A.H. 14 OVER BNRR. IN THE CITY OF COON RAPIDS.

APPROVED FOR CONSTRUCTION

Egger Steel Co.
 909 So. Seventh Ave.
 Drawer E
 Sioux Falls, So. Dak. 57101

HOLES UNLESS NOTED.
 PAINT SEE NOTE NO. 20 SHEET E.2.

LET	DATE	BY
A		
B		
C		

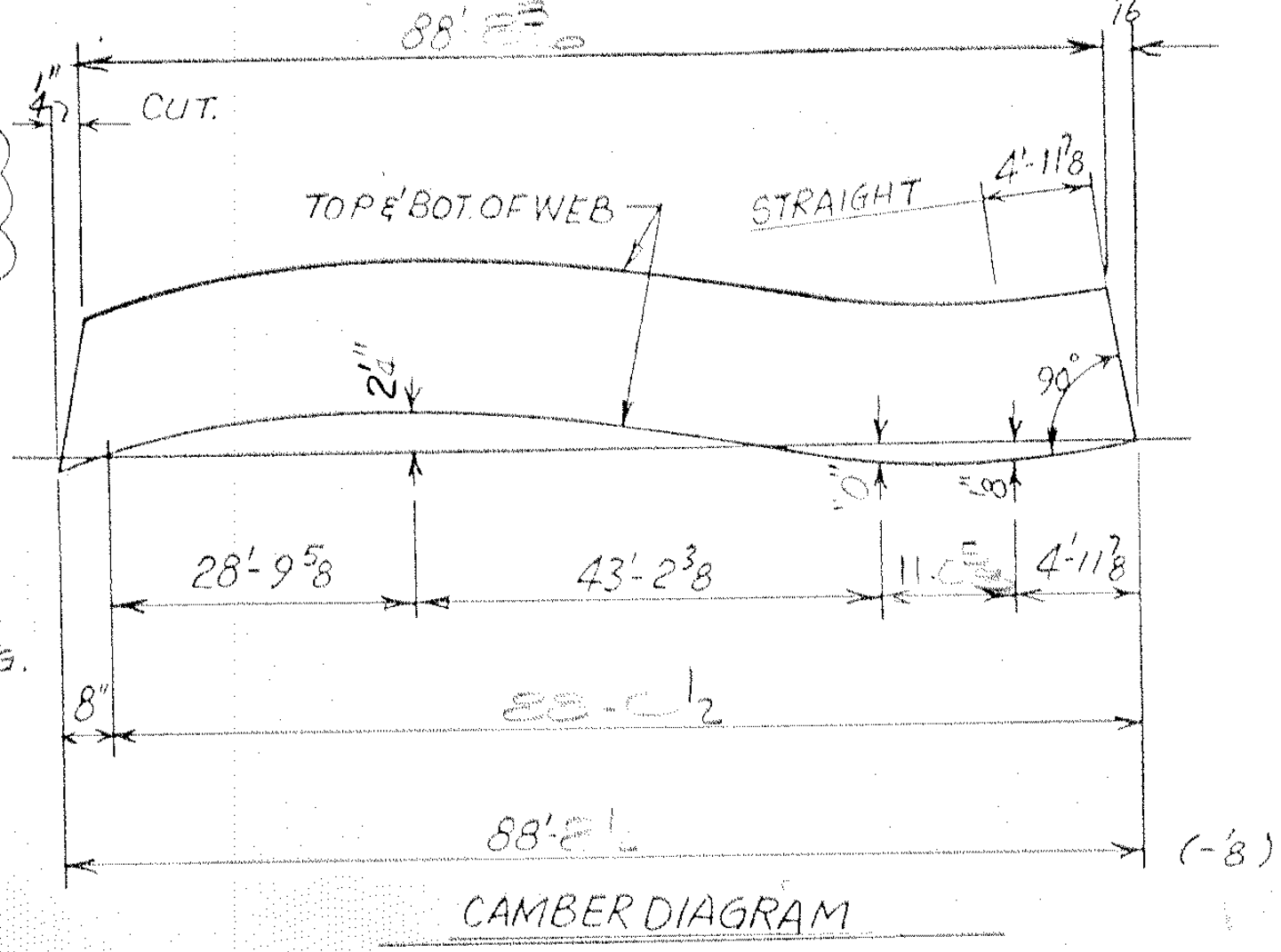
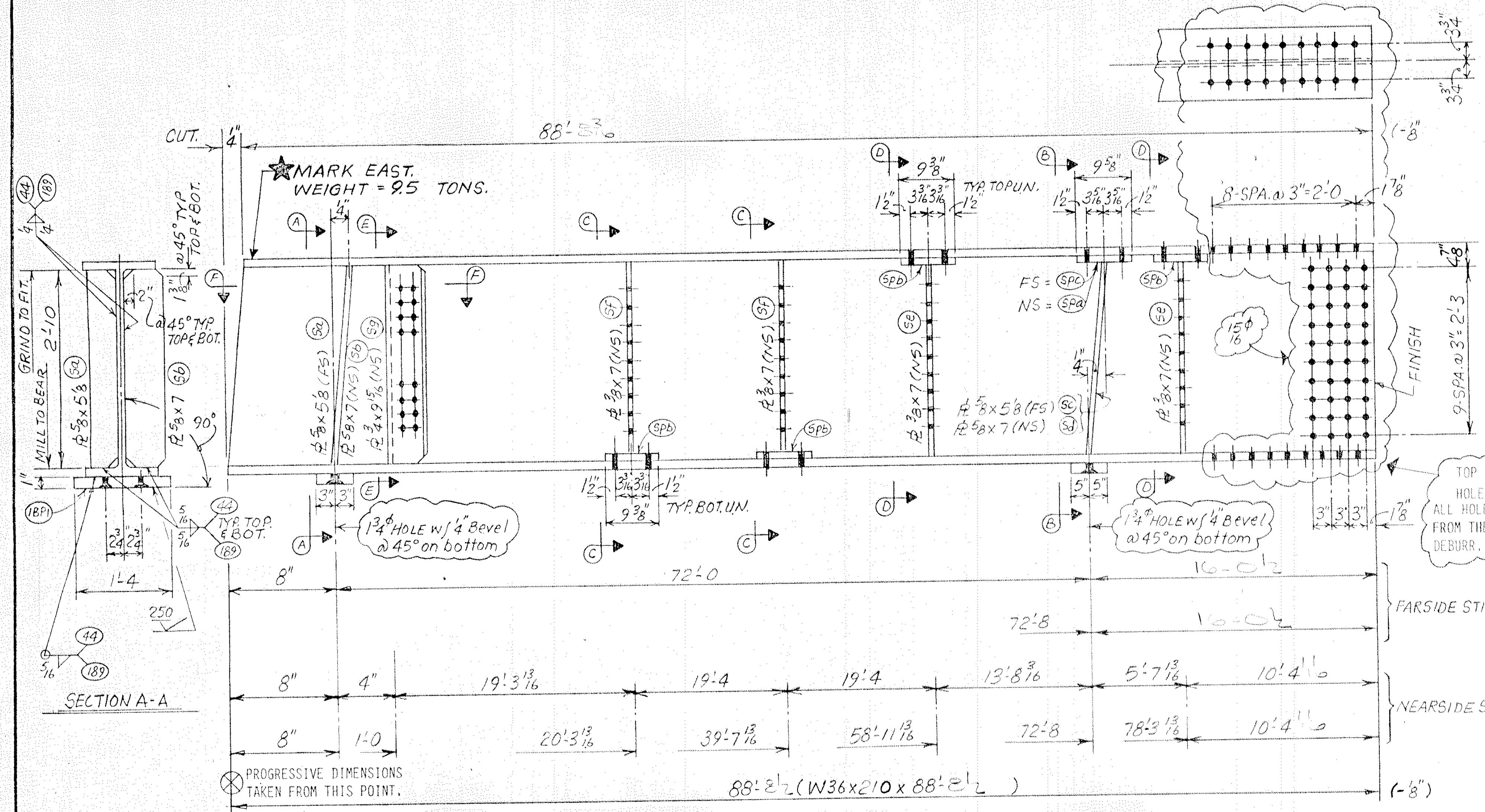
REVISIONS BEAM MK. B23, B24, B25, B26.

STRUCTURE 234' ROLLED BEAM BRIDGE.
 LOCATION ANOKA COUNTY MINNESOTA.
 CUSTOMER ANOKA COUNTY HWY. DEPT.
 ARCHITECT BRW. INC.

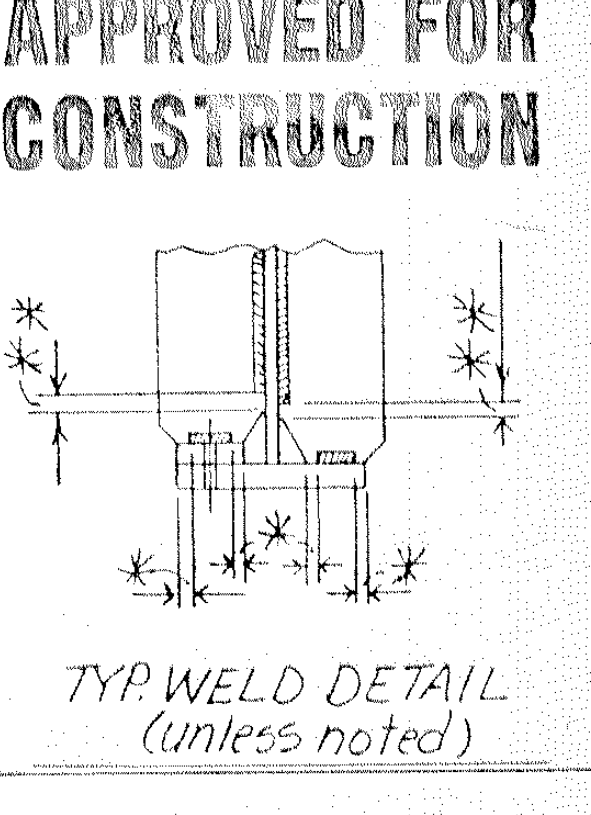
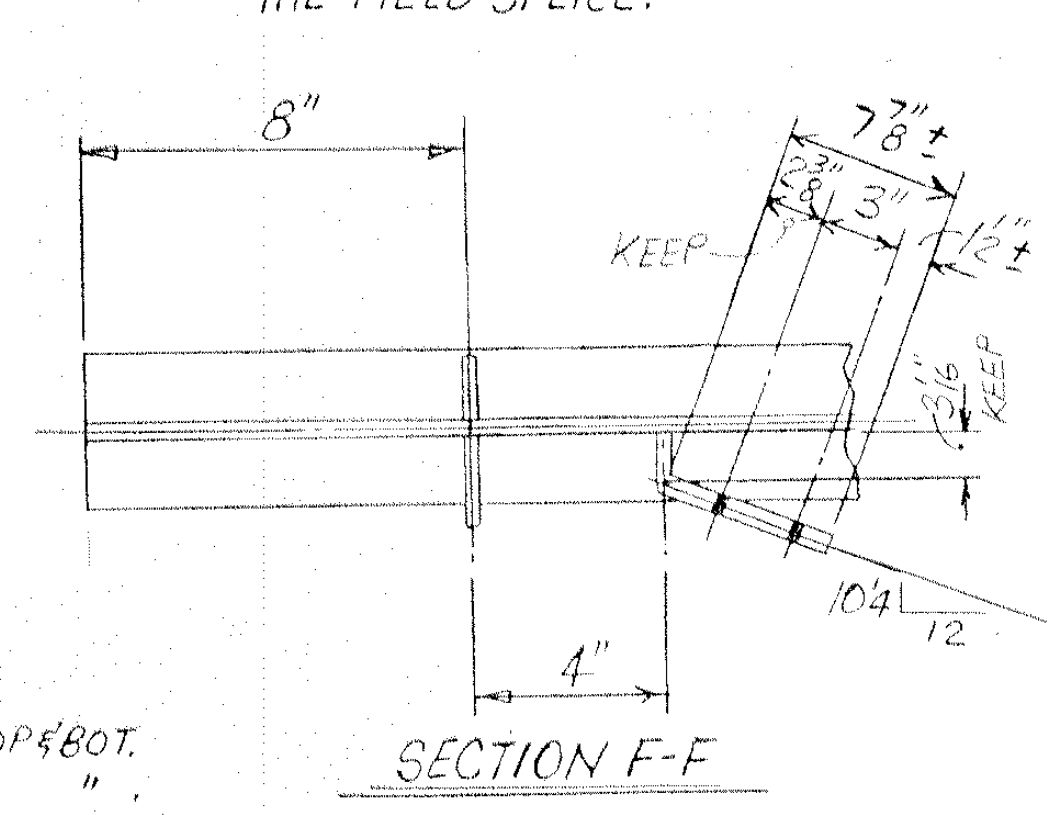
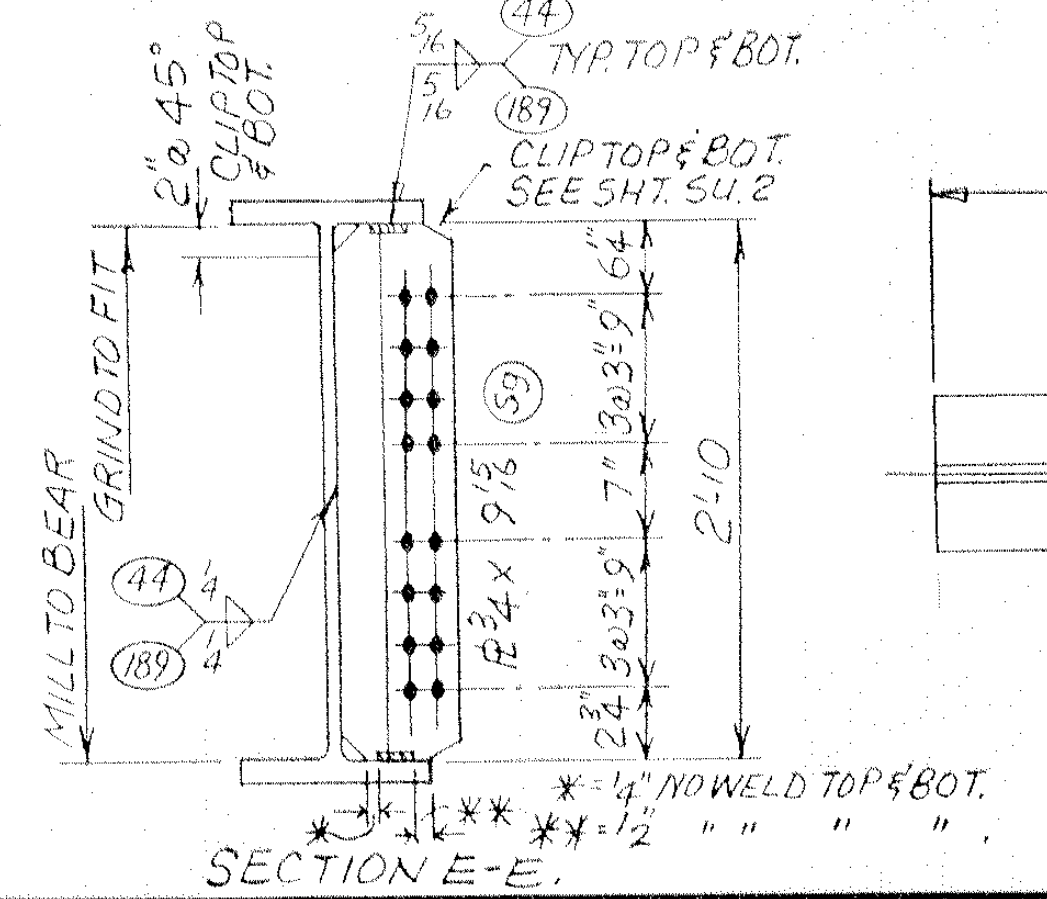
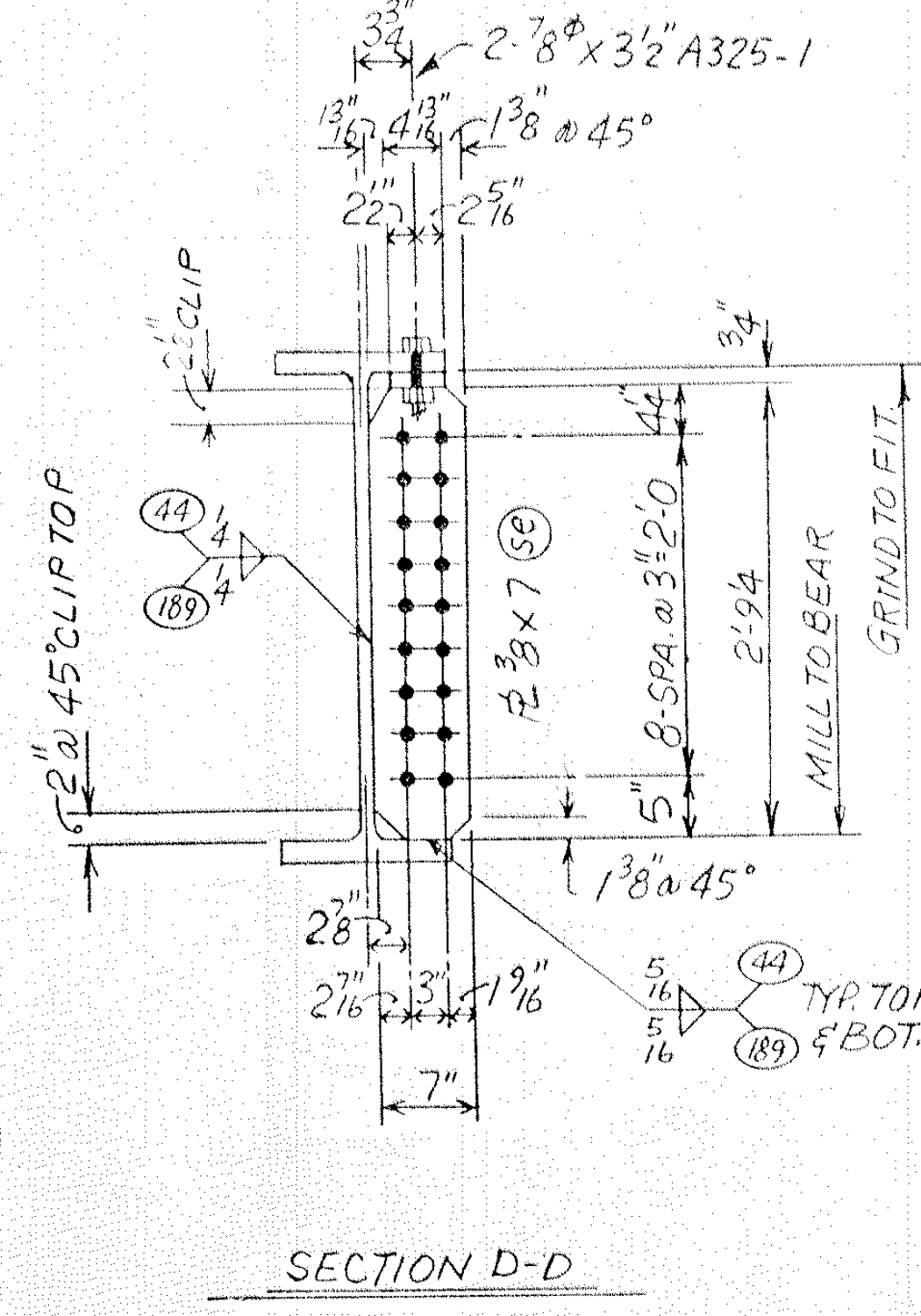
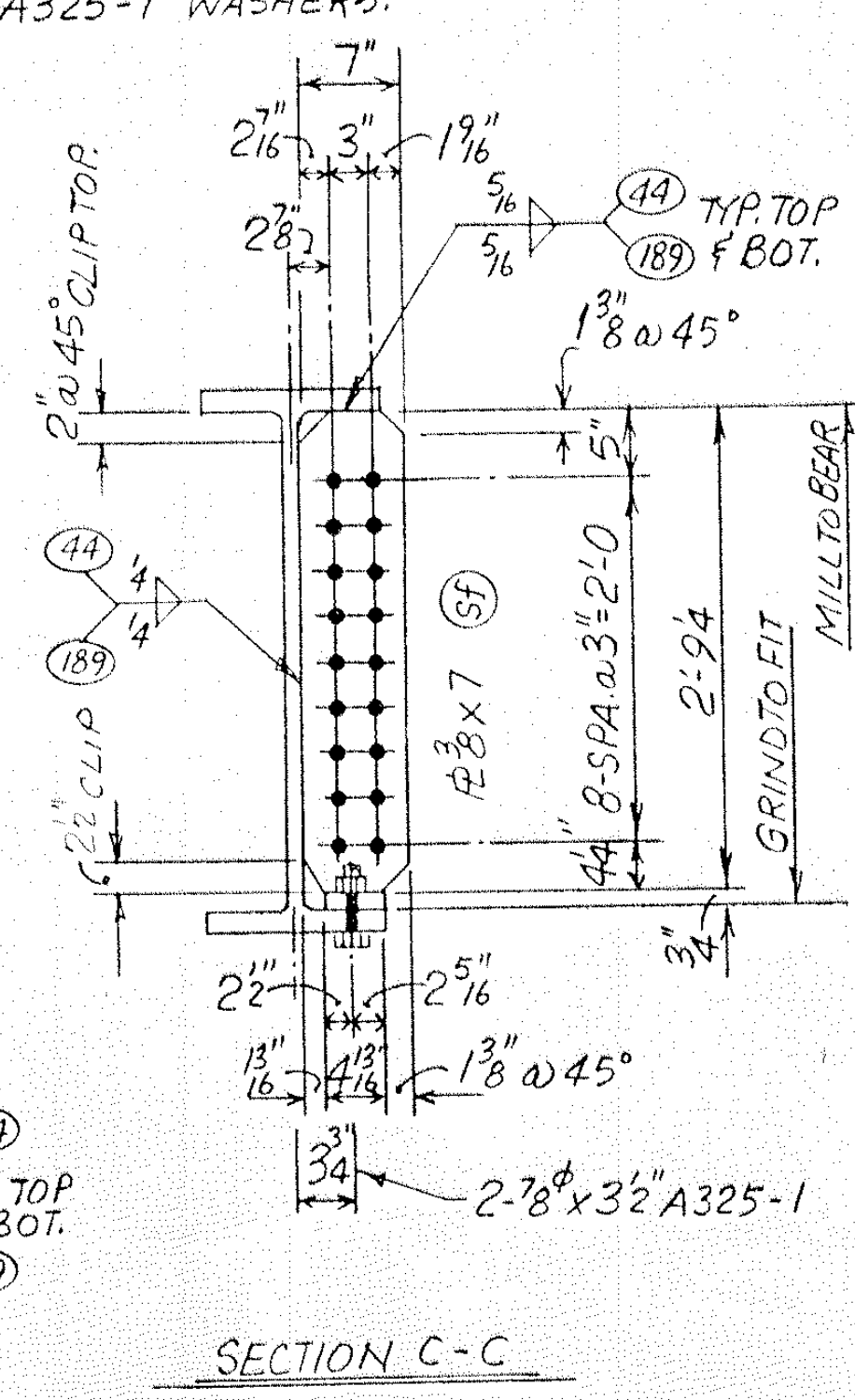
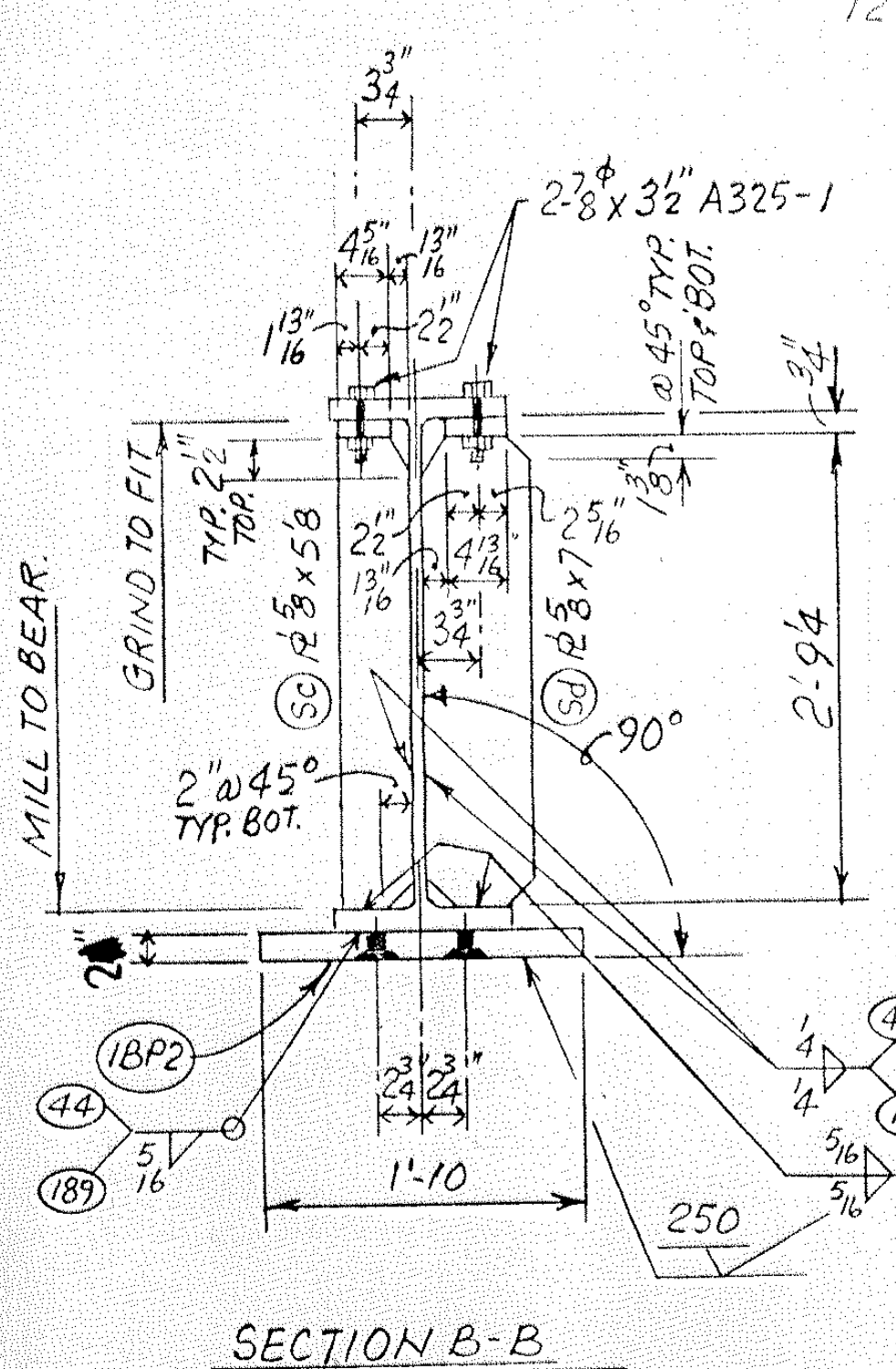
SHEET S12
 DRAWN BY
 CHECKED BY
 JOB NO. 91-038
 DATE APRIL 1991

MK.	NO.	MATERIAL FOR ONE DESCRIPTION	WT.	ORDER SIZE	P. O. NO.	TYPE	CHAMBER ZONE	REMARKS
B27	1	ONE - THIS						
	1	W36 x 210 x 88 1/2	88-11	34382		A709-50 WT3 (A588/M222)	C13	FILE
	1	A588 x 5 1/2 x 2'-10"		STOCK				
	1	A588 x 7 x 2'-10"						
	1	A588 x 5 1/2 x 2'-9 1/4"						
	1	A588 x 7 x 2'-9 1/4"						
	2	A588 x 7 x 2'-9 1/4"						BENT
	1	A588 x 9 1/2 x 2'-10"						
	1	A588 x 4 1/2 x 10'-9 5/8"						
	4	A588 x 4 1/2 x 10'-9 5/8"						
	1	A588 x 4 5/16 x 10'-9 5/8"						
	1	1 x 6 x 1 1/4"						
	1	1 x 10 x 1'-10"						

REVISED PRINT DESTROY ALL PRINTS PREVIOUSLY SENT



SEE SHEET B2 FOR SHOP BOLT LIST.
SHOP BOLTS FOR ONE BEAM.
12 - 7/8" x 3 1/2" A325-1 BOLTS.
12 - 7/8" A325-1 WASHERS.



APPROVED FOR CONSTRUCTION

SEE SHEET E2 FOR TYPICAL SHOP NOTES
ALL MATERIAL TO BE AMERICAN MADE
MILL CERTIFICATES REQUIRED ON ALL MATERIAL
ALL WELDERS TO BE CERTIFIED

PROJ. NO. 02-614-18.
BRIDGE NO. 02560 R
C.S.A.H. 14 OVER BNRR. IN THE CITY OF COON RAPIDS.

REVISIONS: BEAM MK B27

LET DATE BY
A 5-28-11
B
C

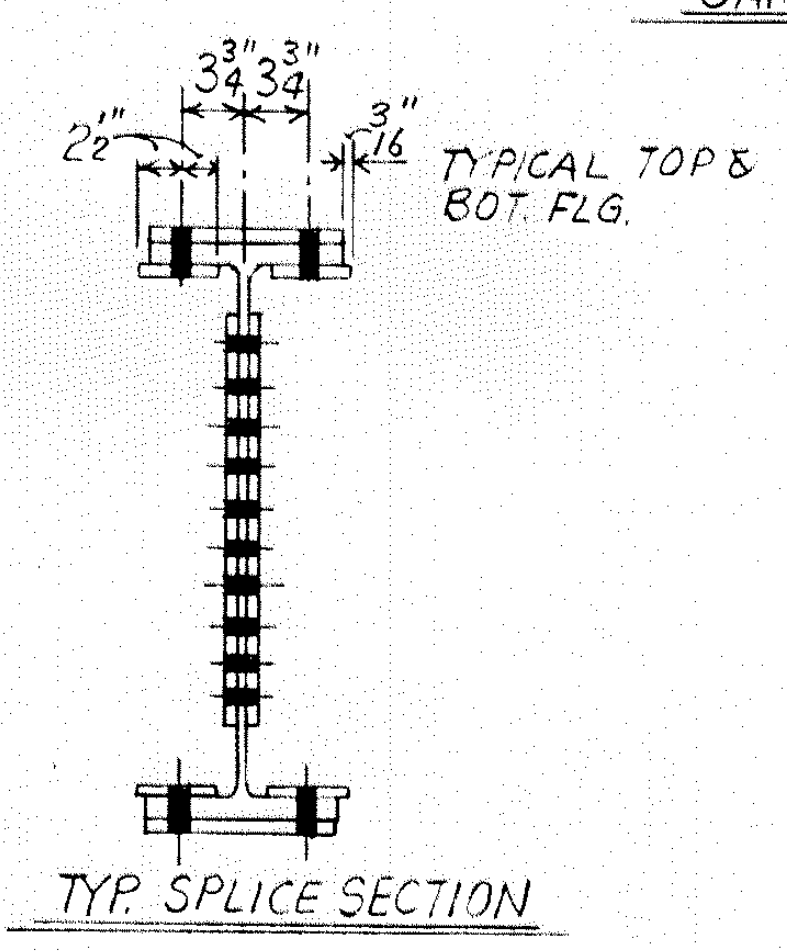
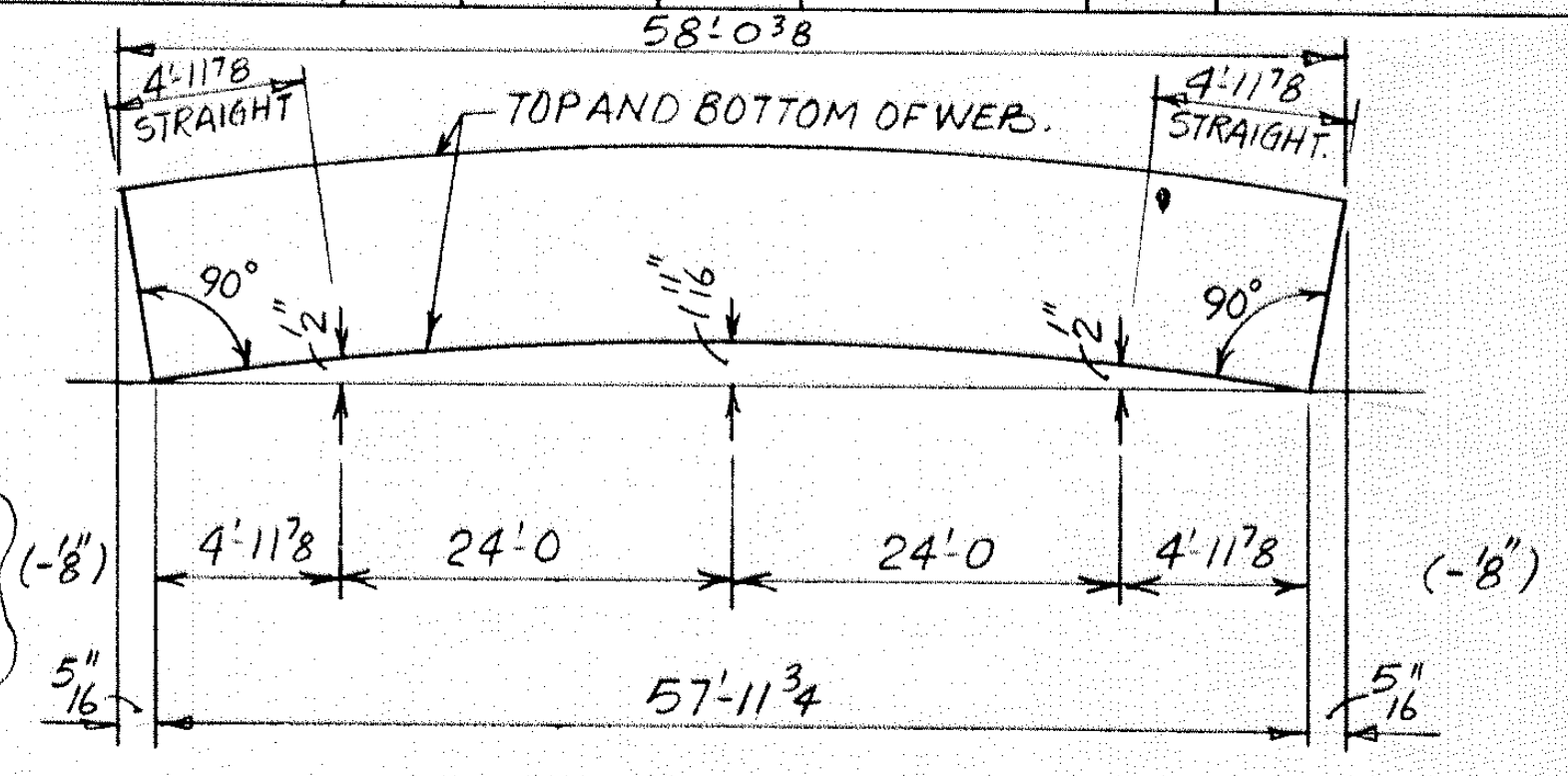
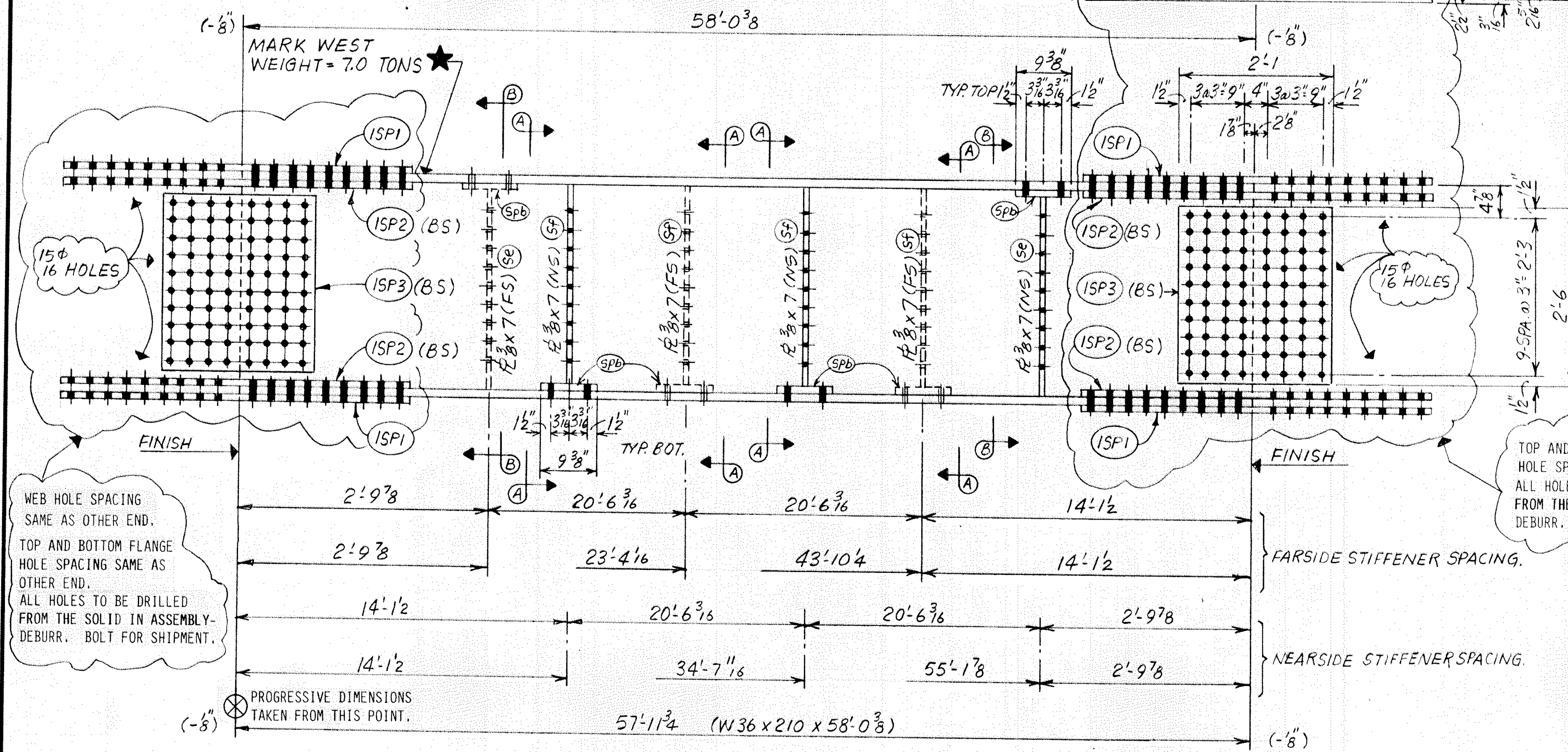
HOLES UNLESS NOTED. PAINT SEE NOTE NO. 20 SHEET E2.

Egger Steel Co.
909 So. Seventh Ave.
Drawer E
Sioux Falls, So. Dak. 57101

STRUCTURE 234' ROLLED BEAM BRIDGE.
LOCATION ANOKA COUNTY MINNESOTA.
CUSTOMER ANOKA COUNTY HWY. DEPT.
ARCHITECT BRW. INC.

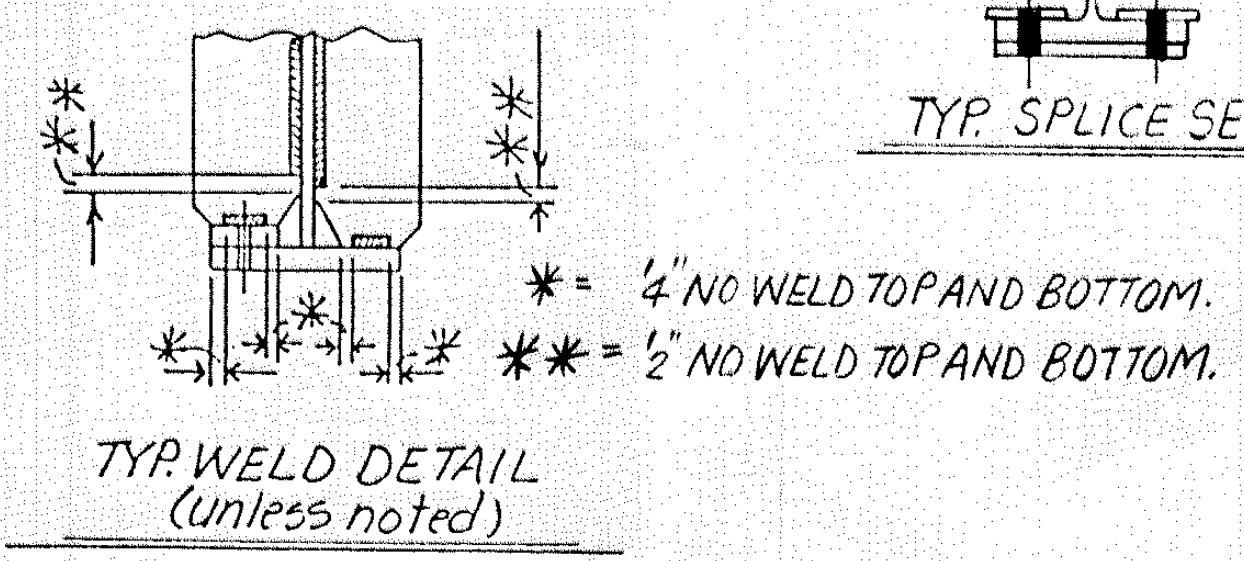
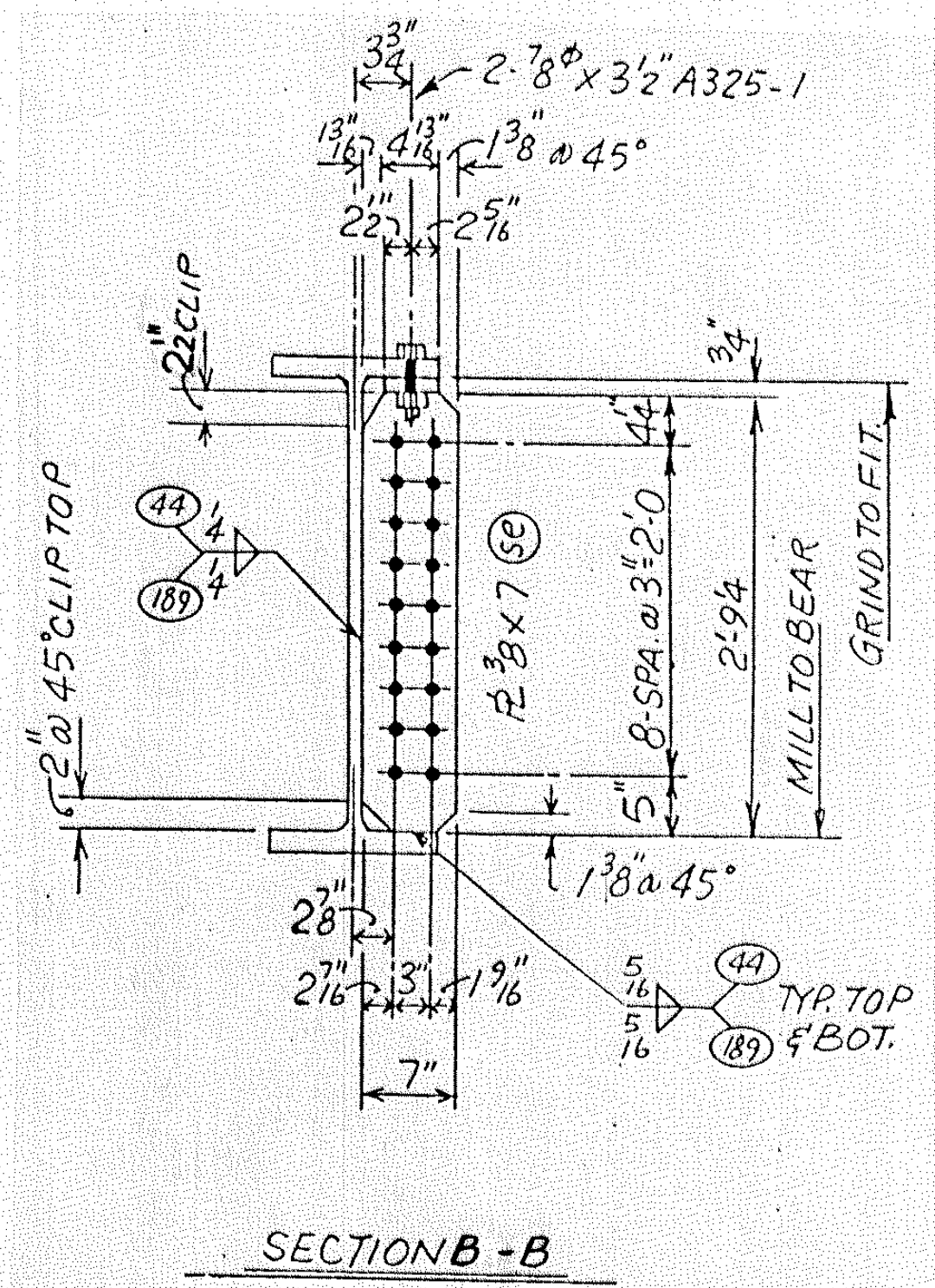
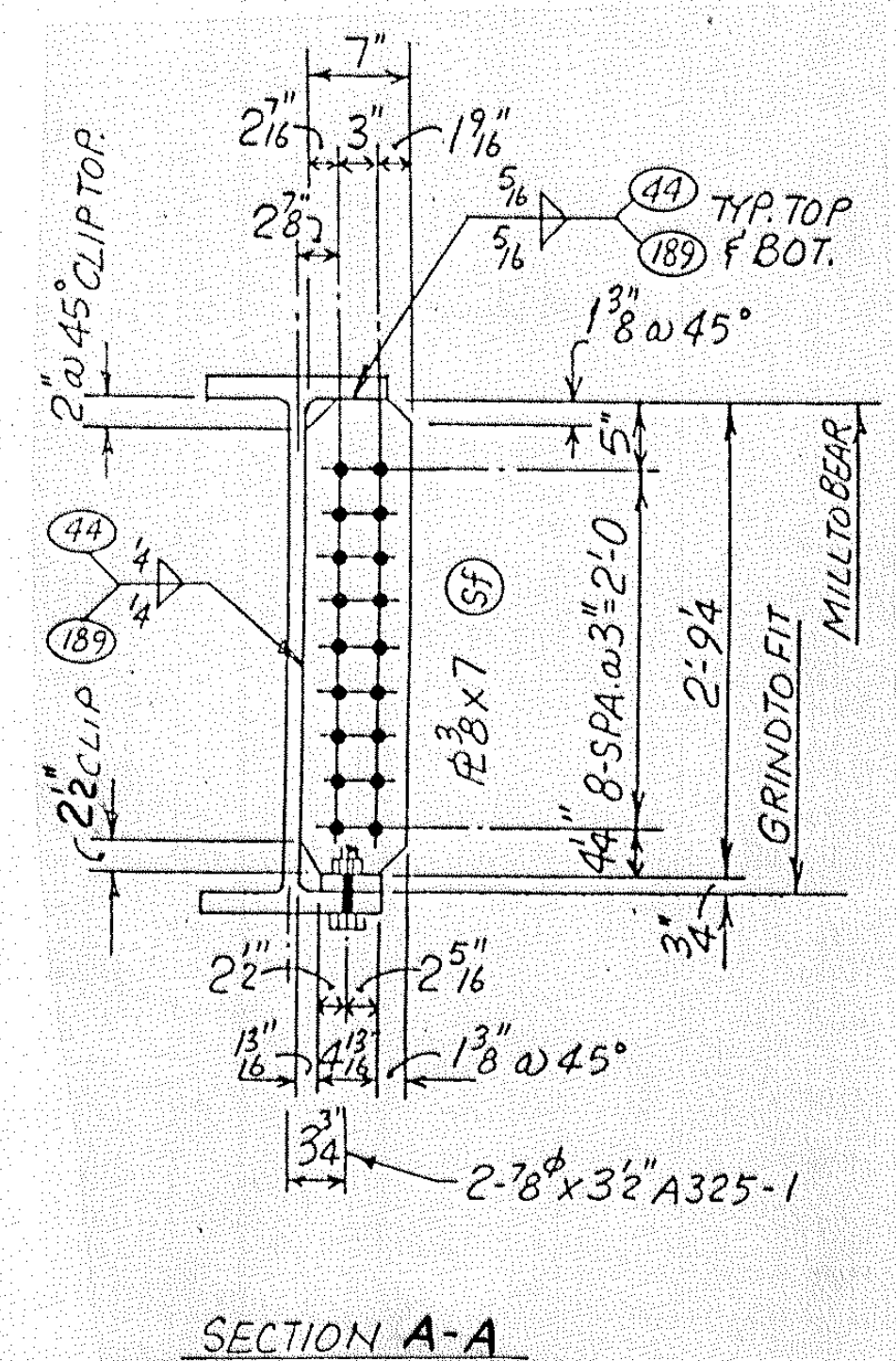
SHEET S13
DRAWN BY
CHECKED BY
JOB NO. 91-038
DATE APRIL 1991

JOB NO. 91-038 (F)		BILL OF MATERIAL				SHEET: S15	
MK.	NO.	MATERIAL FOR ONE	WT.	ORDER SIZE	P. O. NO.	TYPE	REMARKS
B11		ONE-THUS					
B12		ONE-THUS					
B13		ONE-THUS					
B14		ONE-THUS					
B15		ONE-THUS					
B16		ONE-THUS					
B17		ONE-THUS					
a	1	W36 x 210 x 58'0 3/8	58'2	3438.2	A104-30WT (A388, A122)	C/3	F2E
ISP1	4	R 58 x 12'8 x 4'7	STOCK				DIR. OF ROLL - 4'7
ISP2	8	R 34 x 5 x 4'7					DIR. OF ROLL - 4'7
ISP3	4	R 34 x 25 x 2'6					DIR. OF ROLL - 25"
SE	2	R 38 x 7 x 2'9 1/4					
SF	4	R 38 x 7 x 2'9 1/4					
SPB	6	R 34 x 4'13/16 x 0'9 3/8					



NOTE: CAMBER AT FIELD SPLICE AND 5' BACK AND AHEAD HAVE BEEN REDUCED BY 1/2" FROM THE ENGINEERS DRAWINGS TO COMPENSATE FOR THE 5' SHIFT OF THE FIELD SPLICE.

SEE SHEET B2 FOR SHOP BOLT LIST
SHOP BOLTS FOR ONE BEAM
12-7/8φ x 3 1/2 A325-1 BOLTS.
12-7/8φ A325-1 WASHERS.



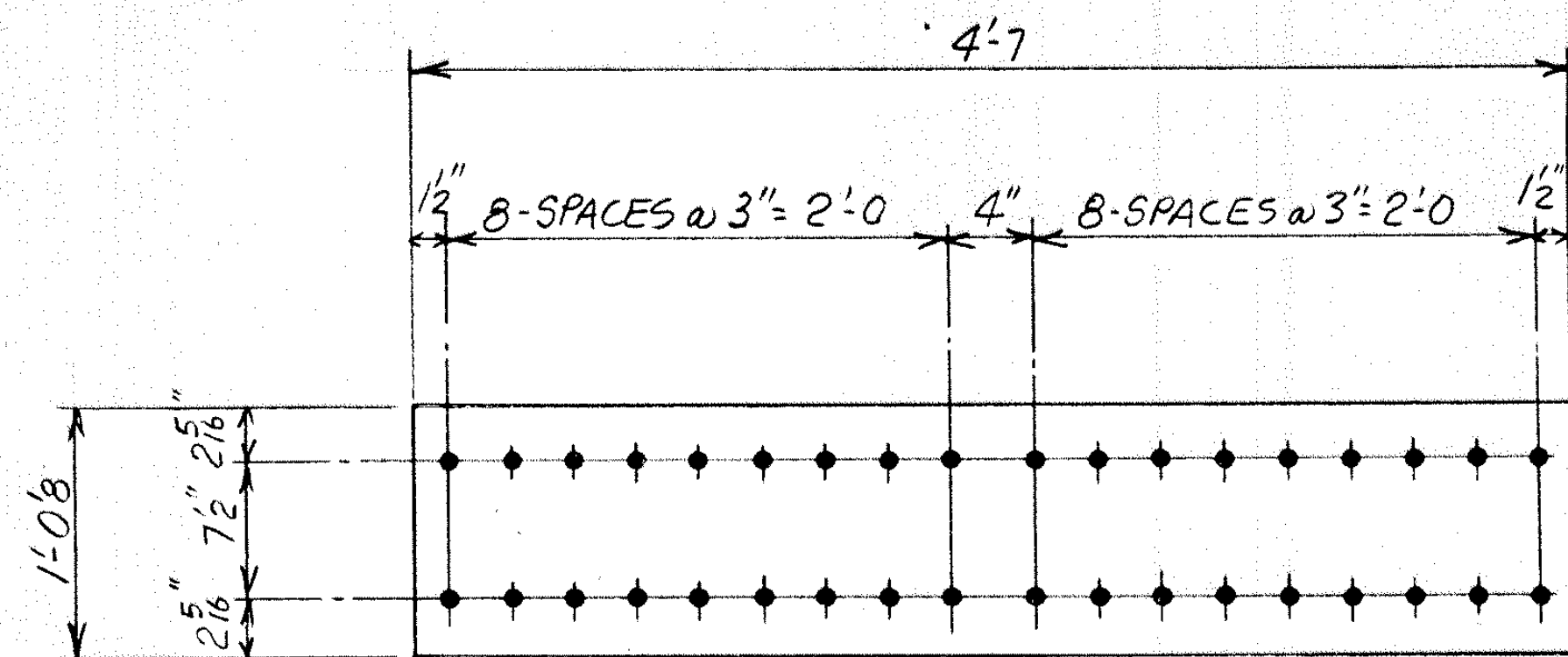
SEE SHEET E2 FOR TYPICAL SHOP NOTES
ALL MATERIAL TO BE AMERICAN MADE
MILL CERTIFICATES REQUIRED ON ALL MATERIAL
ALL WELDERS TO BE CERTIFIED

PROJ. NO. 02-614-18			SHEET S15	
BRIDGE NO. 02560 R.			DRAWN BY	
C.S.A.H. 14 OVER BNRR. IN THE CITY OF COON RAPIDS			CHECKED BY	
REVISIONS			JOB NO. 91-038 (F)	
BEAM MK. B11, B12, B13, B14, B15, B16, B17			DATE APRIL 1991	
LET	DATE	BY	STRUCTURE	234' ROLLED BEAM BRIDGE.
A			LOCATION	ANOKA COUNTY MINNESOTA.
B			CUSTOMER	ANOKA COUNTY HWY. DEPT.
C			ARCHITECT	BRW INC.

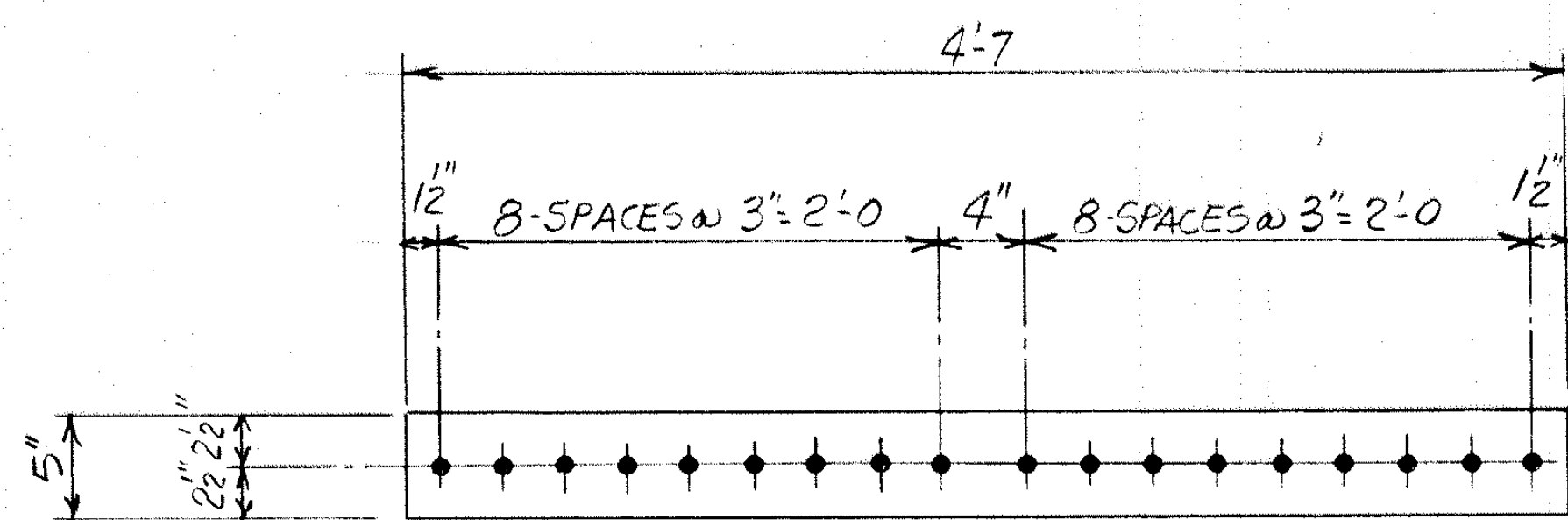
Egger Steel Co.
909 So. Seventh Ave.
Drawer E
Sioux Falls, So. Dak. 57101

HOLES 1 1/8 UNLESS NOTED
PAINT SEE NOTE NO. 20 SHEET E2.

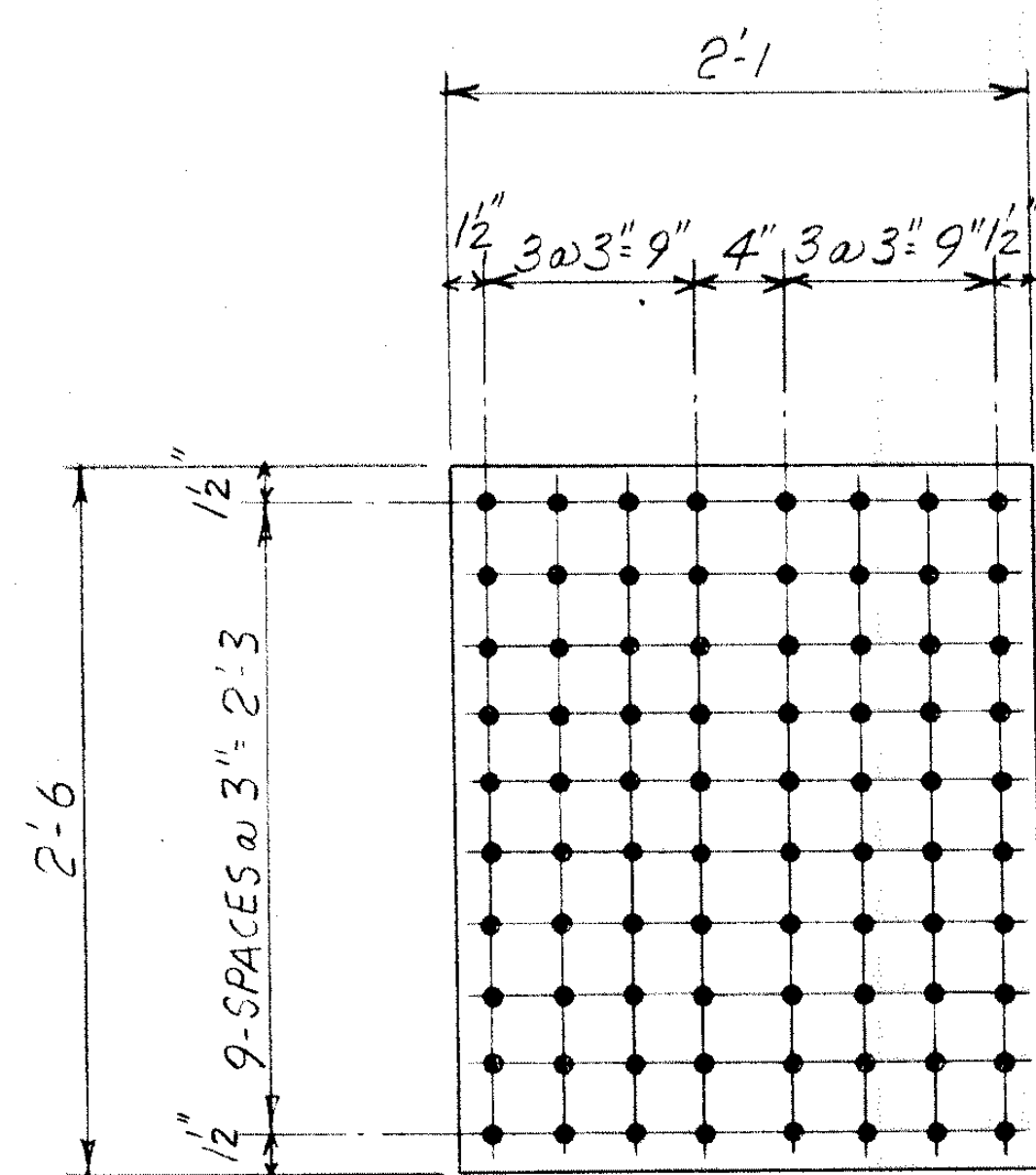
APPROVED FOR CONSTRUCTION



DIRECTION OF ROLLING
 #58 x 12'8 x 4'-7 (A709-50 WT3) (A588 / M222).
 36-THUS MK 1 SP1 PRE-DRILL 36

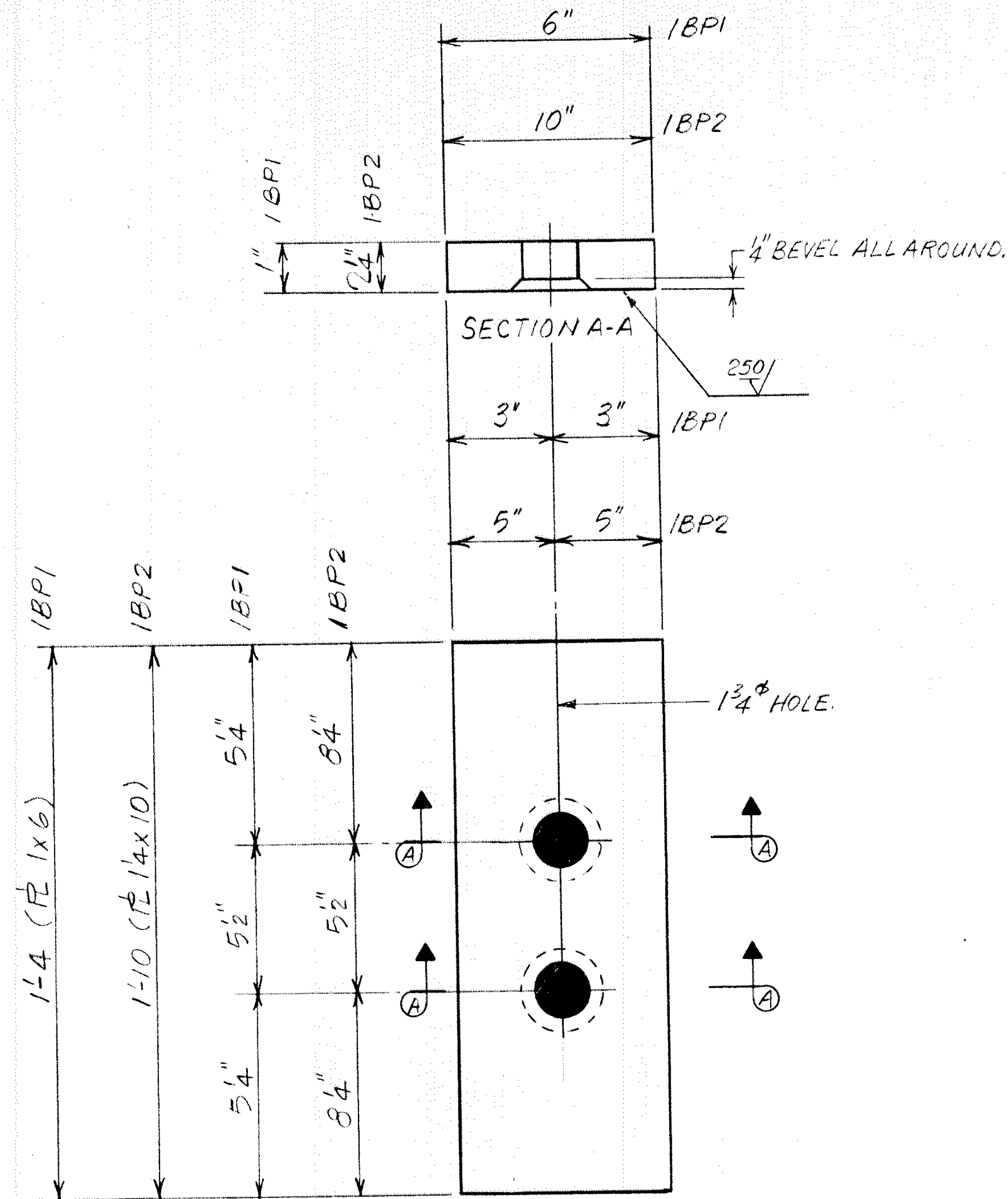


DIRECTION OF ROLLING
 #34 x 5 x 4'-7 (A709-50 WT3) (A588 / M222).
 72-THUS MK 1 SP2 DRILL IN ASSEMBLY



DIRECTION OF ROLLING
 #34 x 25 x 2'-6 (A709-50 WT3) (A588 / M222).
 36-THUS MK 1 SP3 PRE-DRILL 18

SHOP NOTE: THIS SHEET IS FOR SHOP USE ONLY - DO NOT SHIP FROM THIS SHEET.



SHOP WELD TO BEAMS
 1B-THUS MK 1BP1 AT EAST & WEST ABUT.
 (R. 1x6 x 1'-4 A588 (A709-50W).
 1B-THUS MK 1BP2 AT PIER 1 & 2.
 (R. 2'4 x 10 x 1'-10 A588 A709-50W).

SEE SHEET E2 FOR TYPICAL SHOP NOTES ALL MATERIAL TO BE AMERICAN MADE MILL CERTIFICATES REQUIRED ON ALL MATERIAL ALL WELDERS TO BE CERTIFIED		PROJ. NO. 02-614-18.		APPROVED FOR CONSTRUCTION
		BRIDGE NO. 02560 R.		
		C.S.A H. 14 OVER B.N.P.R. IN THE CITY OF COON RAPIDS.		
		SHOP USE SHEET FOR BEARINGS AND SPLICE PLATES.		SHEET 5U-1
		LET	DATE	BY
		A		
		B		
		C		
	Egger Steel Co. 909 So. Seventh Ave. Drawer E Sioux Falls, So. Dak. 57101	HOLES UNLESS NOTED WITH BEAMS.		STRUCTURE 234' ROLLED BEAM BRIDGE. LOCATION ANOKA COUNTY MINNESOTA. CUSTOMER ANOKA COUNTY HWY. DEPT. ARCHITECT BRW. INC.
		PAINT & CLEAN WITH BEAMS.		
		DATE		JOB NO. 91-038
		DATE		APRIL 1991

