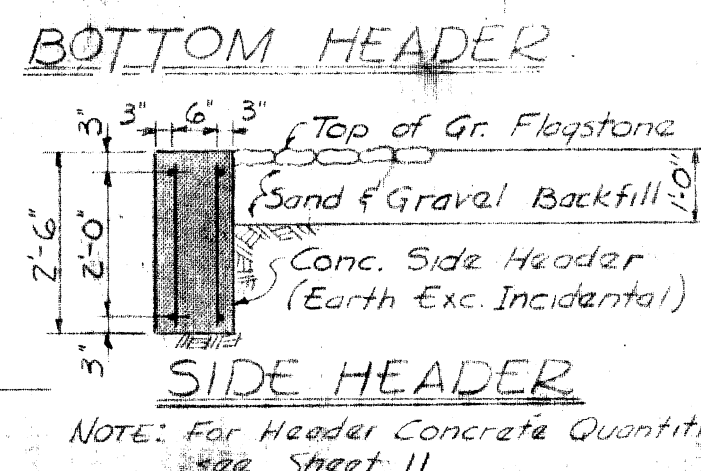
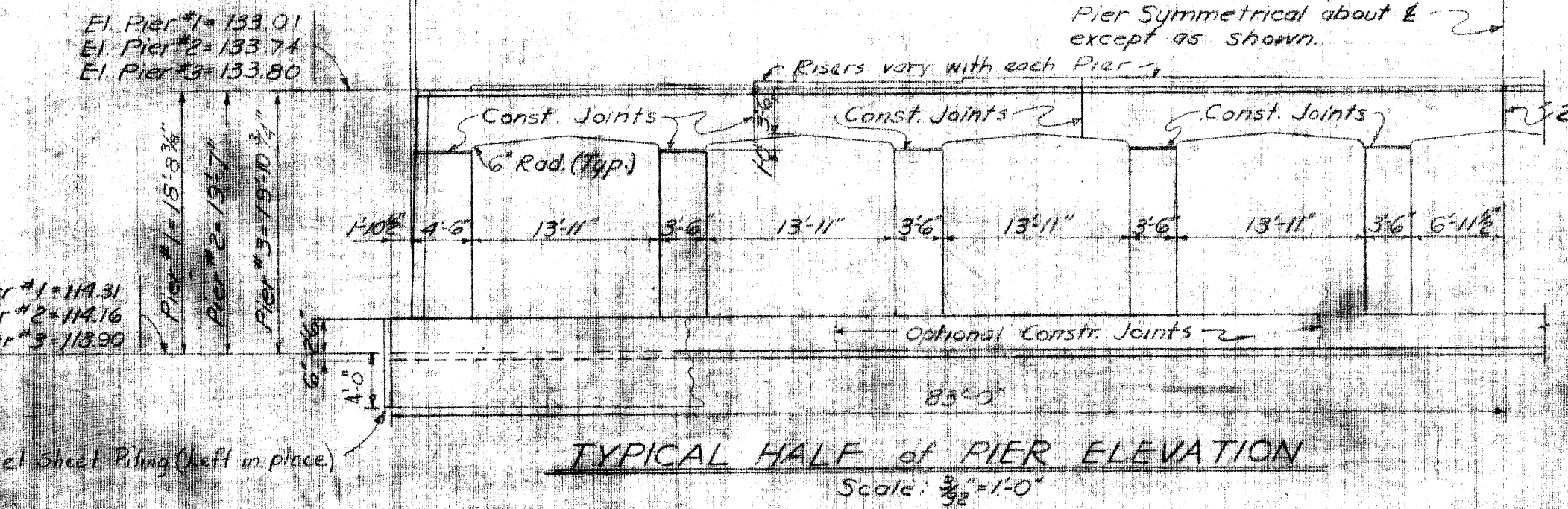


SECTION THRU PIER NO. 2
Scale: 1/8" = 1'-0"

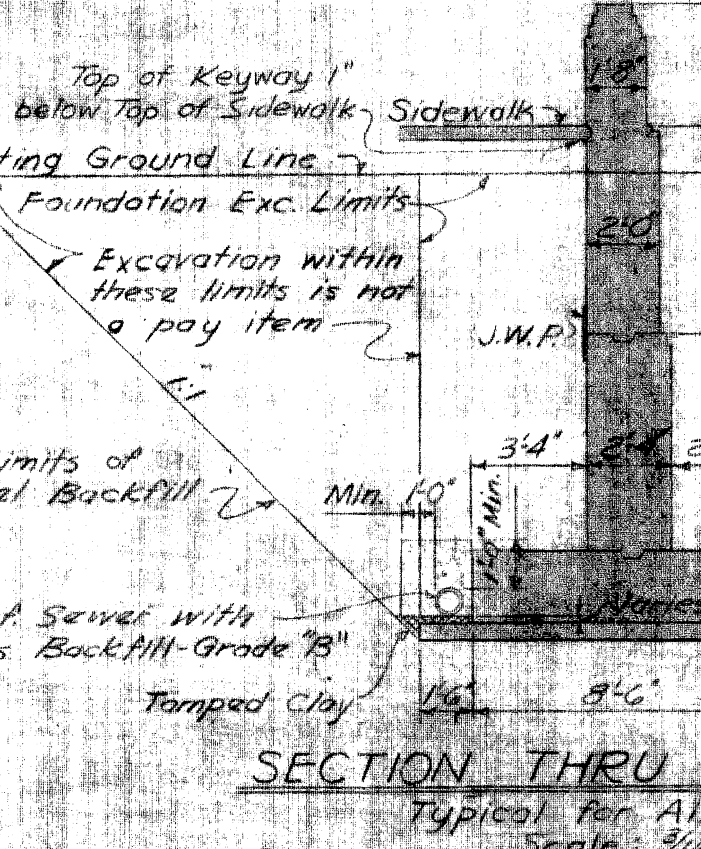


MISCELLANEOUS STRUCTURE QUANTITIES

ITEMS	UNIT	AMOUNT
GRADED FLAGSTONE PAVING	SQ.YDS.	715
SAND-GRAVEL BACKFILL (L.M.)	CUYDS.	255
6" SEWER	LIN. FT.	300
6" Open Joint Sewer	LIN. FT.	350



ELEVATION
(Normal to Const. & E.F.E.)
Scale: 3/8" = 1'-0"



SECTION THRU PIERS NO. 1 or 3
Scale: 1/8" = 1'-0"

MICHIGAN STATE HIGHWAY DEPARTMENT
CHARLES M. ZIEGLER
STATE HIGHWAY COMMISSIONER

GRATIOT AVE. CROSSING THE EDEL FORD EXPRESSWAY IN DETROIT

GENERAL PLAN OF STRUCTURE

HAZLET B. ERDAL - CONSULTING ENGINEERS - FILE NO. 765

APPROVED: *J. C. Trakas* 10.16.56
CHIEF BRIDGE DESIGNER

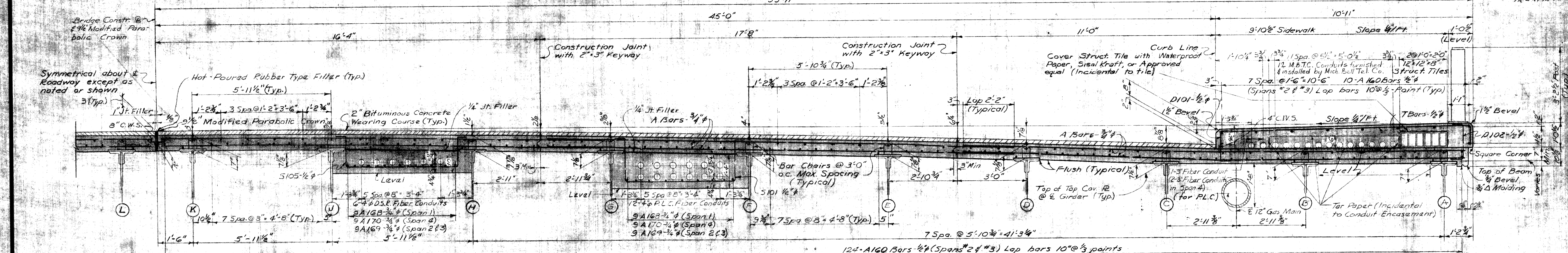
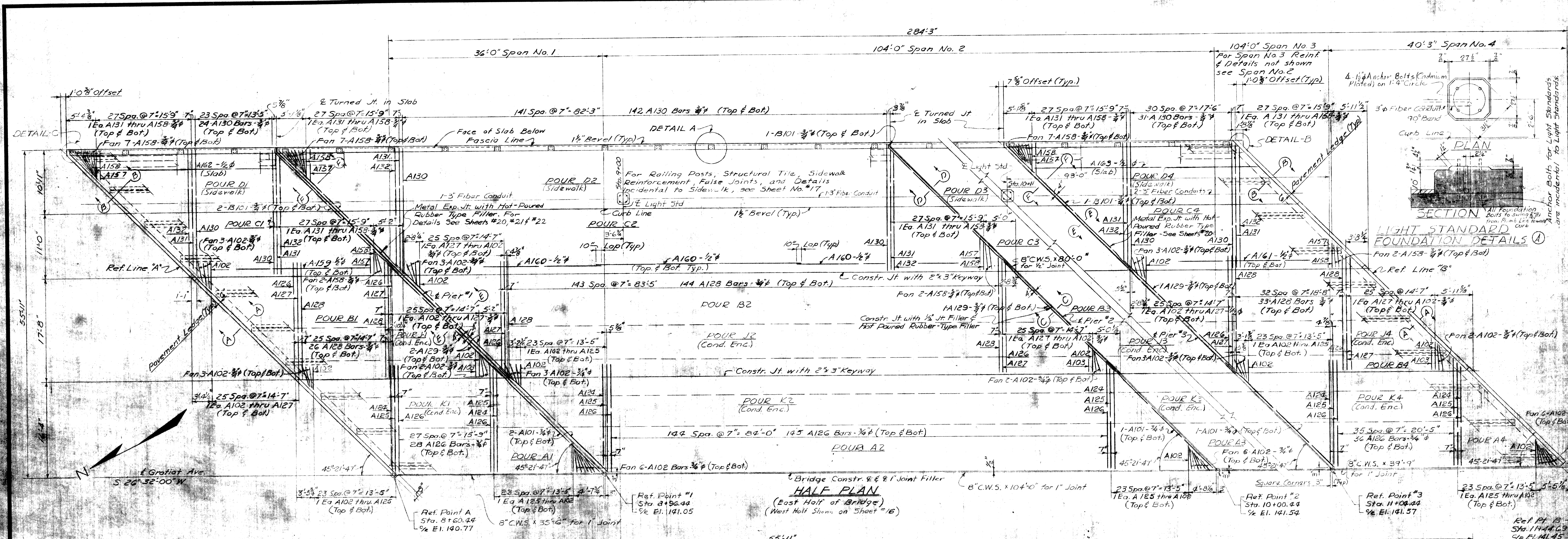
APPROVED: *[Signature]* 10.17.56
ENGINEER OF BRIDGE DESIGN

APPROVED: _____
BRIDGE ENGINEER

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	Revised drainage	11-25-54	O.M.

B69 of 82-22-10



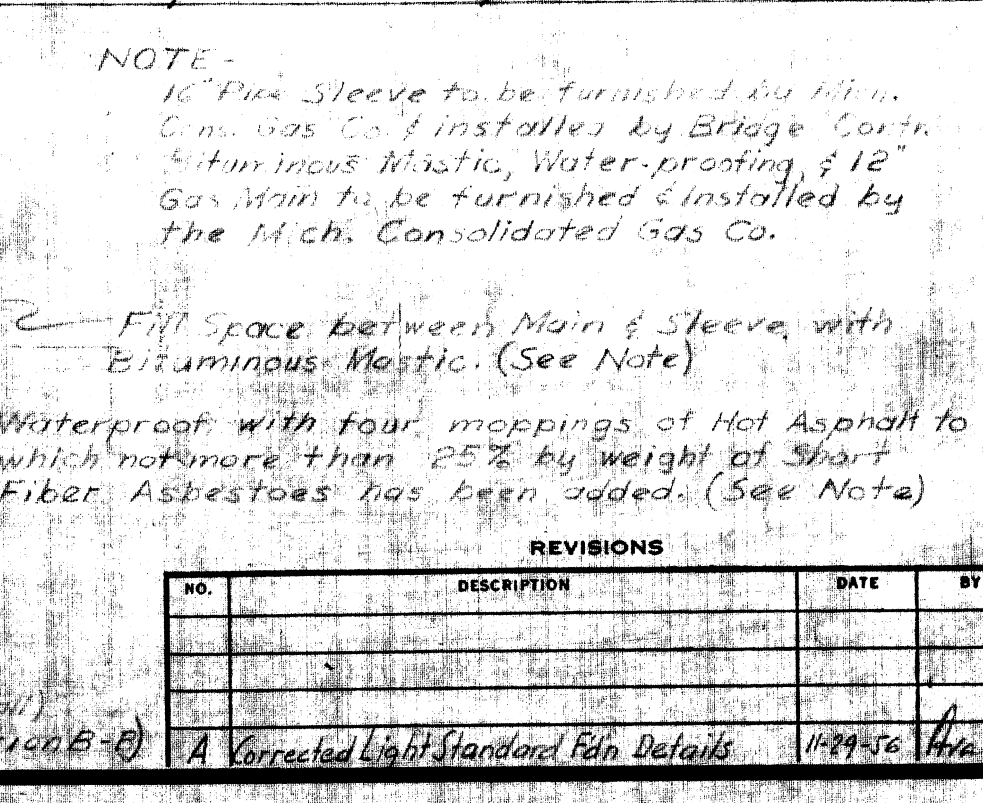
NOTE: The Pour Designations below do not denote Pour Sequence.

GRADE A(6B) CONCRETE QUANTITIES								
POUR	LOCATION	CU. YDS.	POUR	LOCATION	CU. YDS.	POUR	LOCATION	CU. YDS.
A-1	SLAB	16.1	D-3	SIDEWALK	23.3	H-1	SIDEWALK	8.0
A-2	"	41.7	D-4	"	9.0	H-2	"	23.1
A-3	"	41.7	E-1	SLAB	16.2	H-3	"	23.1
A-4	"	17.8	E-2	"	41.7	H-4	"	8.9
B-1	SLAB	18.5	E-3	"	41.7	J-1	COND. ENCL'MENT	9.0
B-2	"	46.1	E-4	"	17.7	J-2	"	27.0
B-3	"	46.1	F-1	SLAB	18.2	J-3	"	27.0
B-4	"	20.2	F-2	"	46.5	J-4	"	9.9
C-1	SLAB	23.4	F-3	"	46.5	K-1	"	5.9
C-2	"	57.2	F-4	"	20.6	K-2	"	7.8
C-3	"	57.2	G-1	SLAB	24.0	K-3	"	17.8
C-4	"	26.5	G-2	"	57.2	K-4	"	6.5
D-1	SIDEWALK	8.1	G-3	"	57.2	L-1	M.B.T.C. ENCL'MENT	2.3
D-2	SIDEWALK	23.3	G-4	"	26.3	L-2	M.B.T.C. ENCL'MENT	6.9

Total Superstructure Grade A(6B) Concrete 1111.5 Cu. Yds.

HALF CROSS SECTION (Showing Spans No. 2 & 3)
(Conduit Encasement is shown for all spans)

MISCELLANEOUS QUANTITIES	
ITEMS	UNIT AMOUNT
12" x 12" x 8" STRUCTURAL TILE EACH	1084
1/2" JOINT FILLER	SOFT 2666
1/2" JOINT FILLER	SOFT 120
1" JOINT FILLER	SOFT 168
HOT-POURED RUBBER TYPE FILLER	156
COPPER	25.5
BRIDGE RAILING LUMENISHING FABRICATED IN FT.	560.1
BRIDGE PAINTING	1402
RUBBED SURFACE FINISH	SOFT 1402
16" PIPE SLEEVES, FLAED EACH	2
2" BIT. CONC. WEARING COURSE TONS	31.3
BITUMINOUS BOND COAT AE-2 GALS	42.7
4" FIBER CONDUIT	UNITS 511.8
3" FIBER CONDUIT	UNITS 553



NOTE: 16" Pipe Sleeve to be furnished by Mich. Cons. Gas Co. & installed by Bridge Const. Co. in inc. Mastic, Water-proofing, & 2" Gas Main to be furnished & installed by the Mich. Consolidated Gas Co.

NOTE: Fit Space Between Main & Sleeve with Bituminous Mastic. (See Note)

NOTE: Waterproof with four moppings of Hot Asphalt to which not more than 25% by weight of Short Fiber Asbestos has been added. (See Note)

Work this sheet with sheet Nos. 16, 17, 18 & 19

MICHIGAN STATE HIGHWAY DEPARTMENT
CHARLES M. ZIEGLER
 STATE HIGHWAY COMMISSIONER
 GRATIOT AVE CROSSING THE EDEL FORD EXPRESSWAY IN DETROIT
SUPERSTRUCTURE DETAILS
 HAZELT & ERDAL - CONSULTING ENGINEERS - FILE NO. 785

APPROVED: *J. C. Tolson* 10-16-56
 BRIDGE DESIGNER

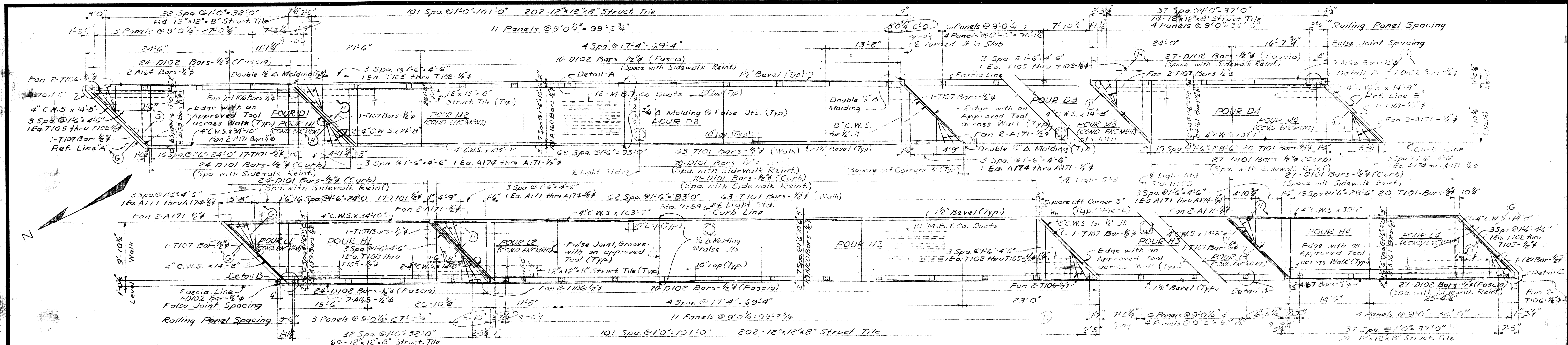
APPROVED: *W. J. ...* 10-17-56
 ENGINEER OF BRIDGE DESIGN

REVISIONS

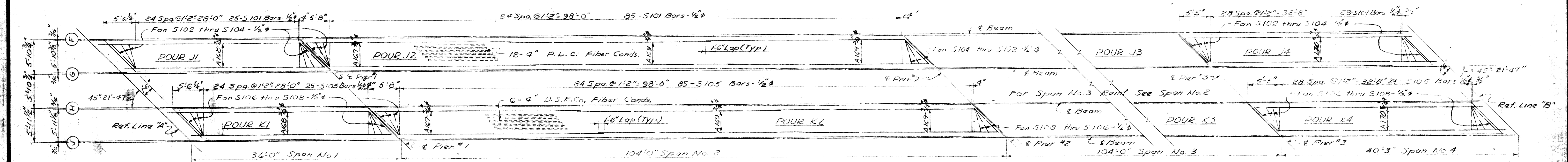
NO.	DESCRIPTION	DATE	BY

BRIDGE ENGINEER

SHOULD BOSS *W. J. ...* 10-17-56
 DRAWN BY *W. J. ...* 10-17-56
 CHECKED BY *S. H. ...* 10-17-56
 SHEET 15 OF 24
B69 OF 82-22-10



SIDEWALK PLAN



CONDUIT ENCASEMENT
(With Deck Removed)

Span	Span No.	Span Length	Reinforcement	Top of Slab	Top of Beam
36'-0"	Span No. 1	36'-0"	4 Equal Spaces	139.33	140.60
104'-0"	Span No. 2	104'-0"	6 Equal Spaces	139.41	140.68
104'-0"	Span No. 3	104'-0"	6 Equal Spaces	139.49	140.76
40'-3"	Span No. 4	40'-3"	4 Equal Spaces	139.57	140.84

Span	Span No.	Span Length	Reinforcement	Top of Slab	Top of Beam
36'-0"	Span No. 1	36'-0"	4 Equal Spaces	140.34	141.61
104'-0"	Span No. 2	104'-0"	6 Equal Spaces	140.42	141.69
104'-0"	Span No. 3	104'-0"	6 Equal Spaces	140.50	141.77
40'-3"	Span No. 4	40'-3"	4 Equal Spaces	140.58	141.85

Span	Span No.	Span Length	Reinforcement	Top of Slab	Top of Beam
36'-0"	Span No. 1	36'-0"	4 Equal Spaces	140.66	141.93
104'-0"	Span No. 2	104'-0"	6 Equal Spaces	140.74	142.01
104'-0"	Span No. 3	104'-0"	6 Equal Spaces	140.82	142.09
40'-3"	Span No. 4	40'-3"	4 Equal Spaces	140.90	142.17

AT WEST CONSTR. JT. BETWEEN BEAMS N & P

SLAB THICKNESS DIAGRAMS

NOTES:
The minimum slab thickness is 7" and is increased to allow for transverse crown, vertical curve, dead load deflection & pre-comber. For comber see sheet No. 25. Particular care shall be taken in determining header elevations. Slab thickness shall be adjusted as required if actual comber varies or if comber exists where no comber is specified.
All Elevations are top of screed elevation.

Work this Sheet with Sheet Nos. 15, 16, 18 & 19

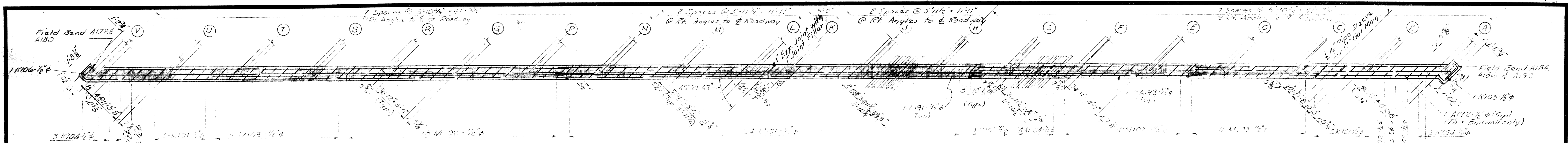
NO.	DESCRIPTION	DATE	BY

MICHIGAN STATE HIGHWAY DEPARTMENT
CHARLES M. ZIEGLER
 STATE HIGHWAY COMMISSIONER
 GRATIOT AVE CROSSING THE EDEL FORD EXPRESSWAY IN DETROIT
SUPERSTRUCTURE DETAILS
 HAZLET & ERDAL - CONSULTING ENGINEERS FILE NO. 765

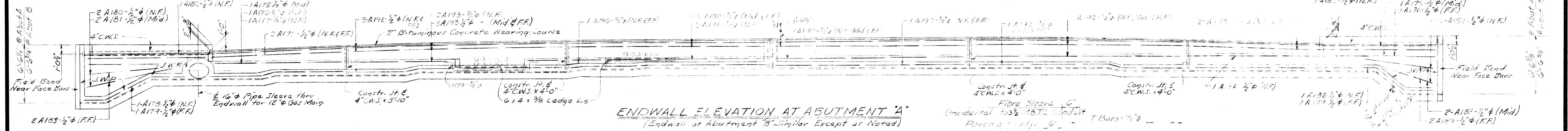
APPROVED: *J.C. Trahan* 10-16-56
 CHIEF BRIDGE DRAFTSMAN
 APPROVED: *W.G.B.* 10-17-56
 ENGINEER OF BRIDGE DESIGN
 APPROVED: _____
 BRIDGE ENGINEER

SQUAD BOSS	K.P.H.	7-26-56
DRAWN BY	W.G.B.	6/17/54
TRACED BY		
CHECKED BY	S.McK.	5/24/55
SHEET 17 OF 29		

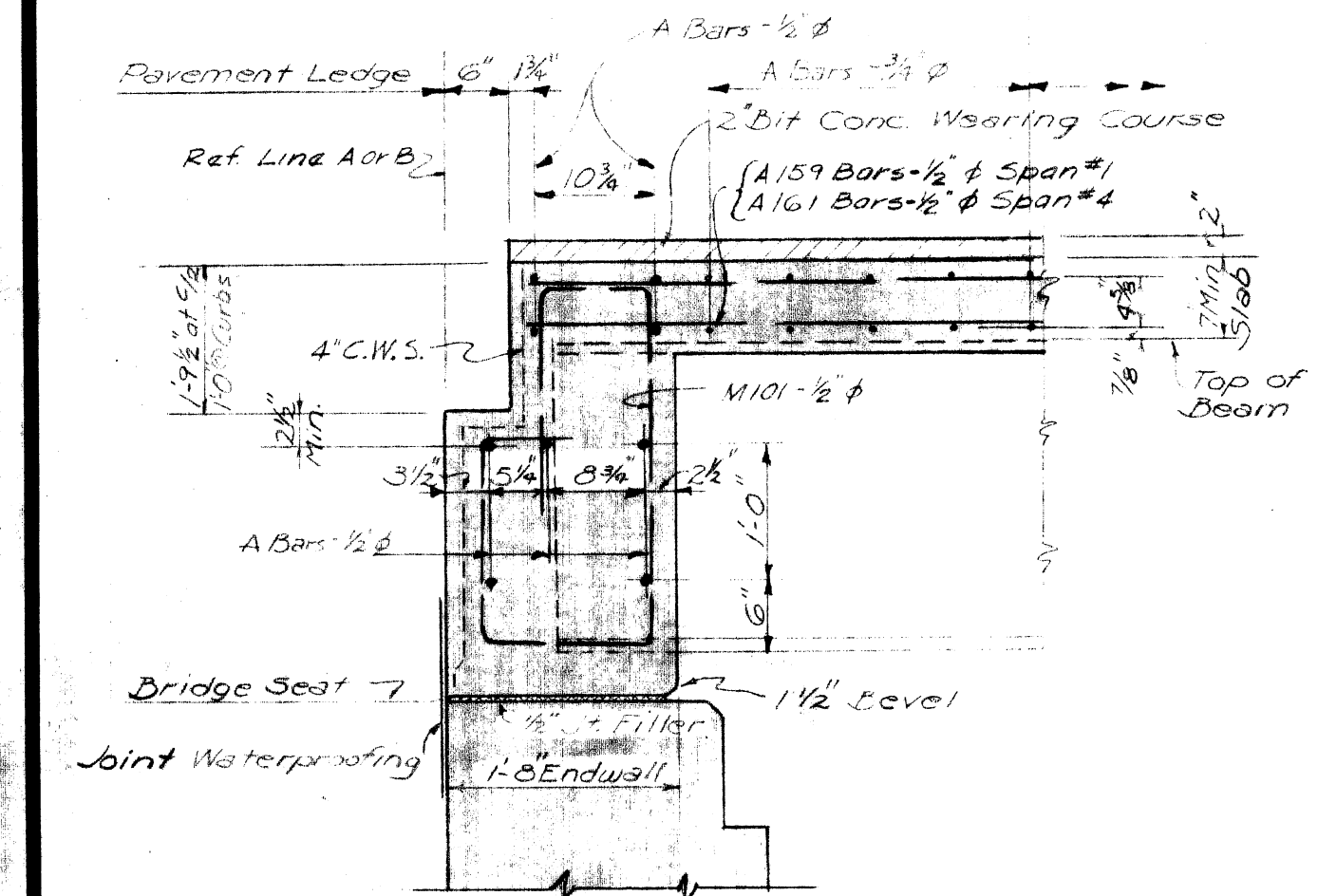
B69 OF 82-22-10



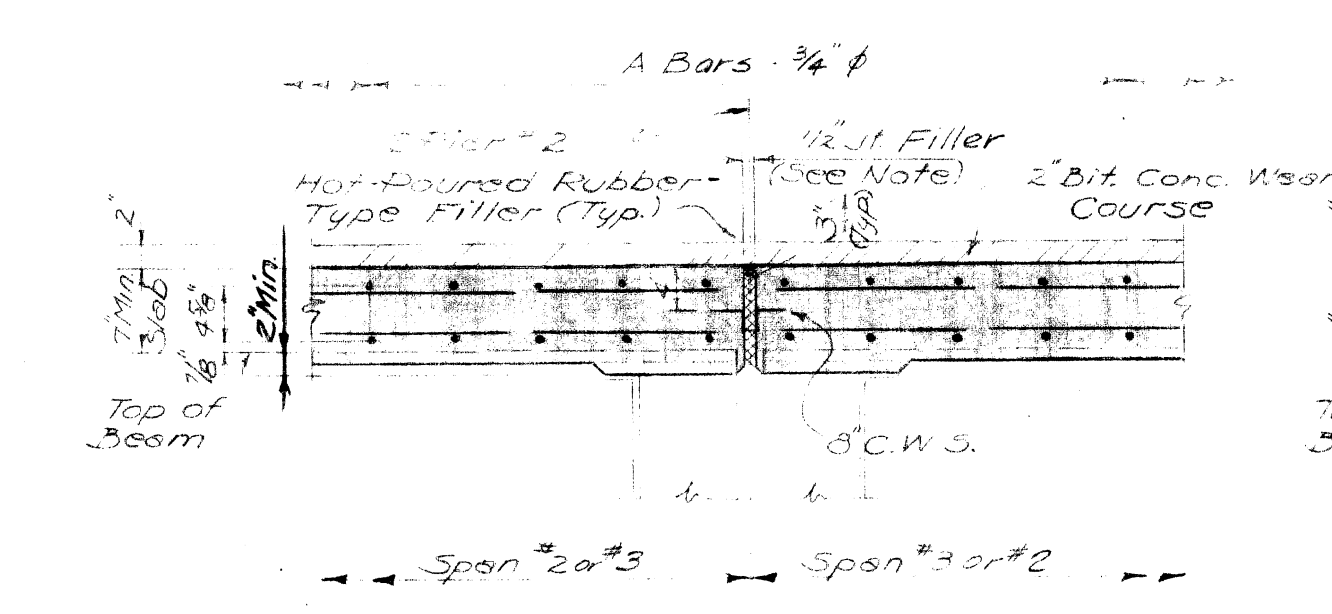
SECTIONAL PLAN OF ENDWALL AT ABUTMENT 15
(Endwall of Abutment "A" Similar Except as Noted)



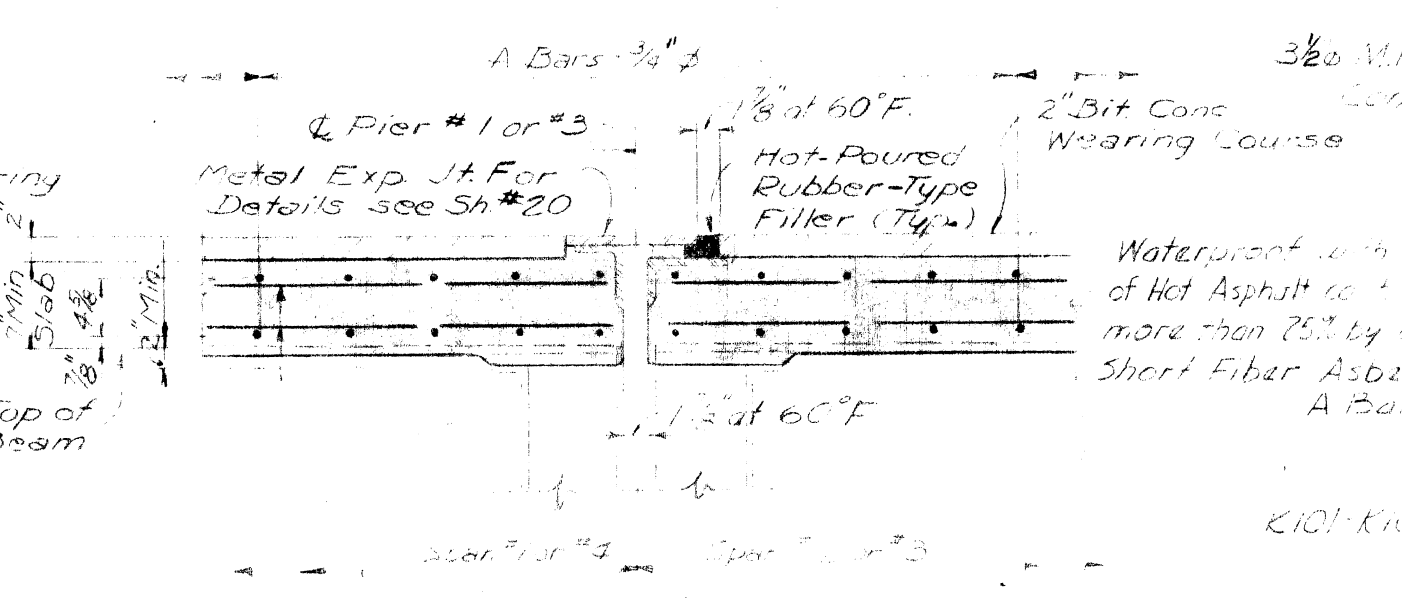
ENDWALL ELEVATION AT ABUTMENT "A"
(Endwall of Abutment "B" Similar Except as Noted)



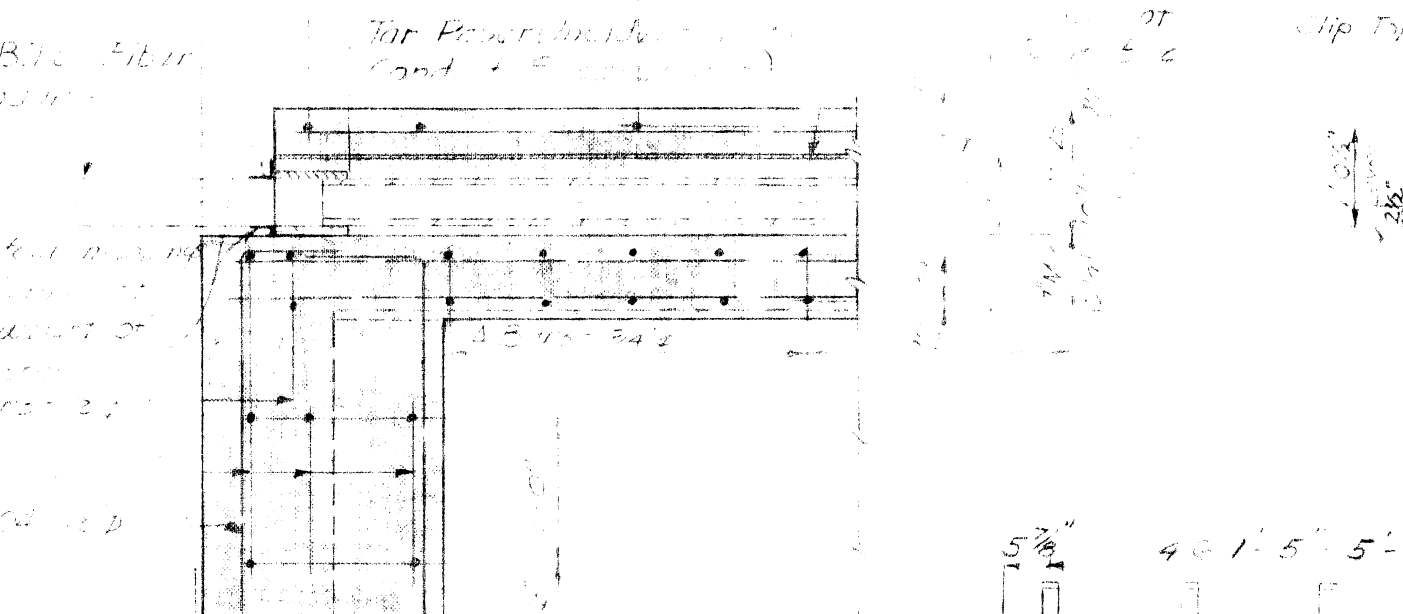
SECTION A-A



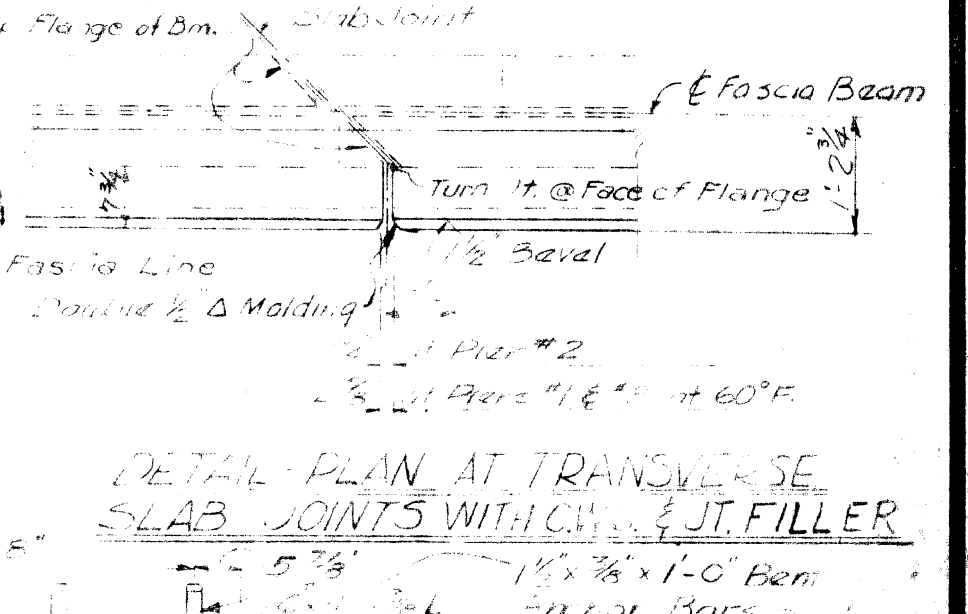
SECTION C-C



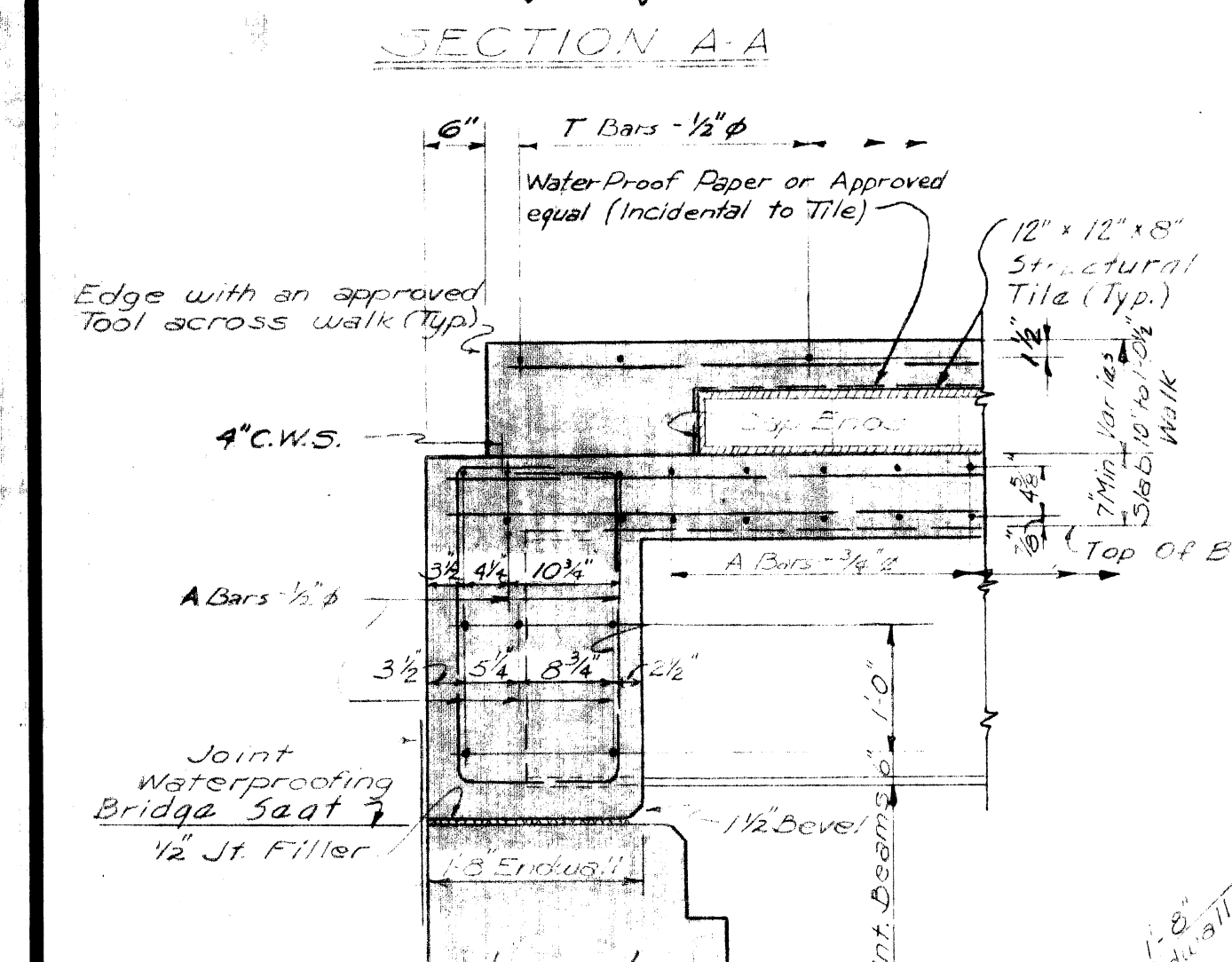
SECTION E-E



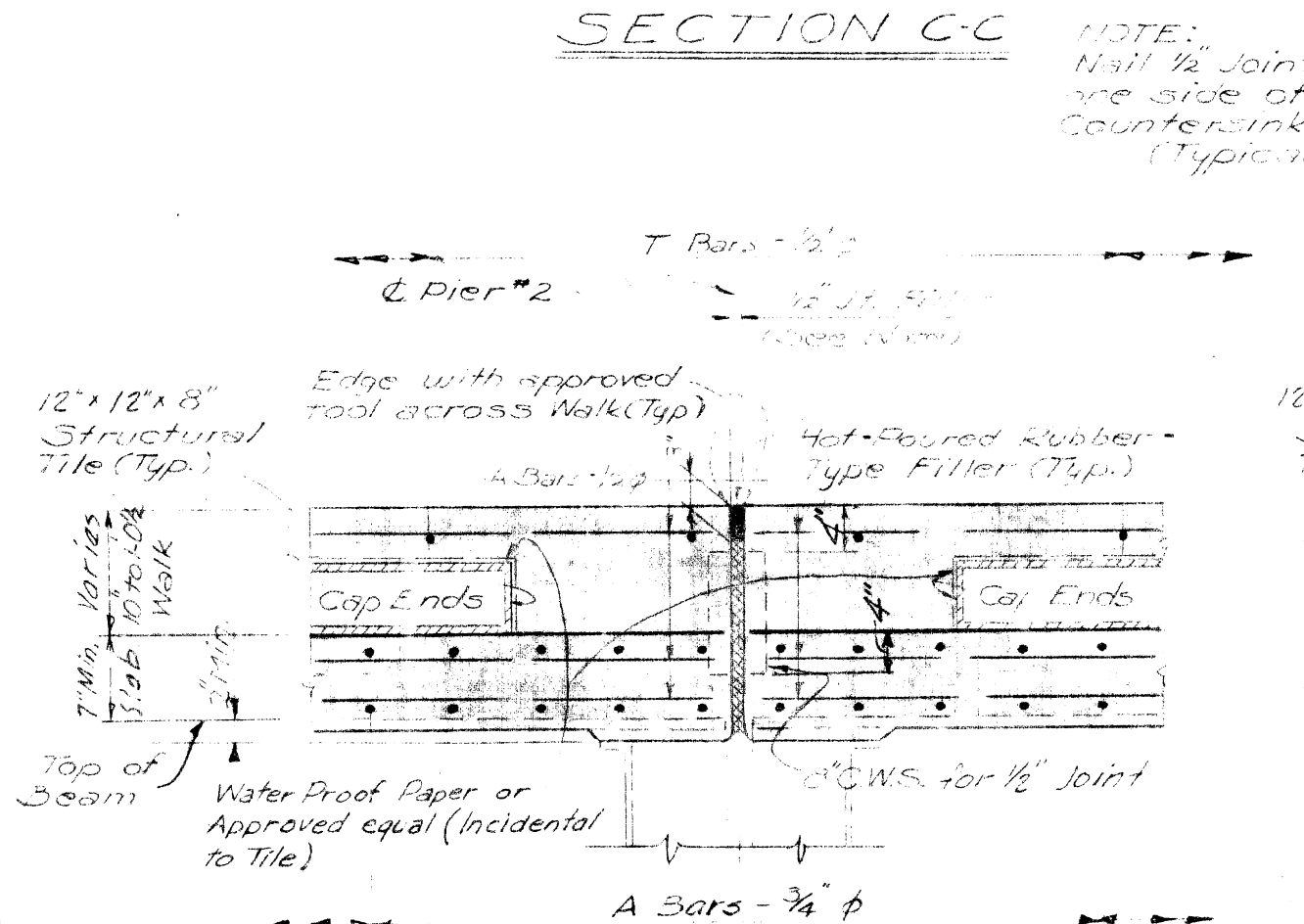
SECTION G-G



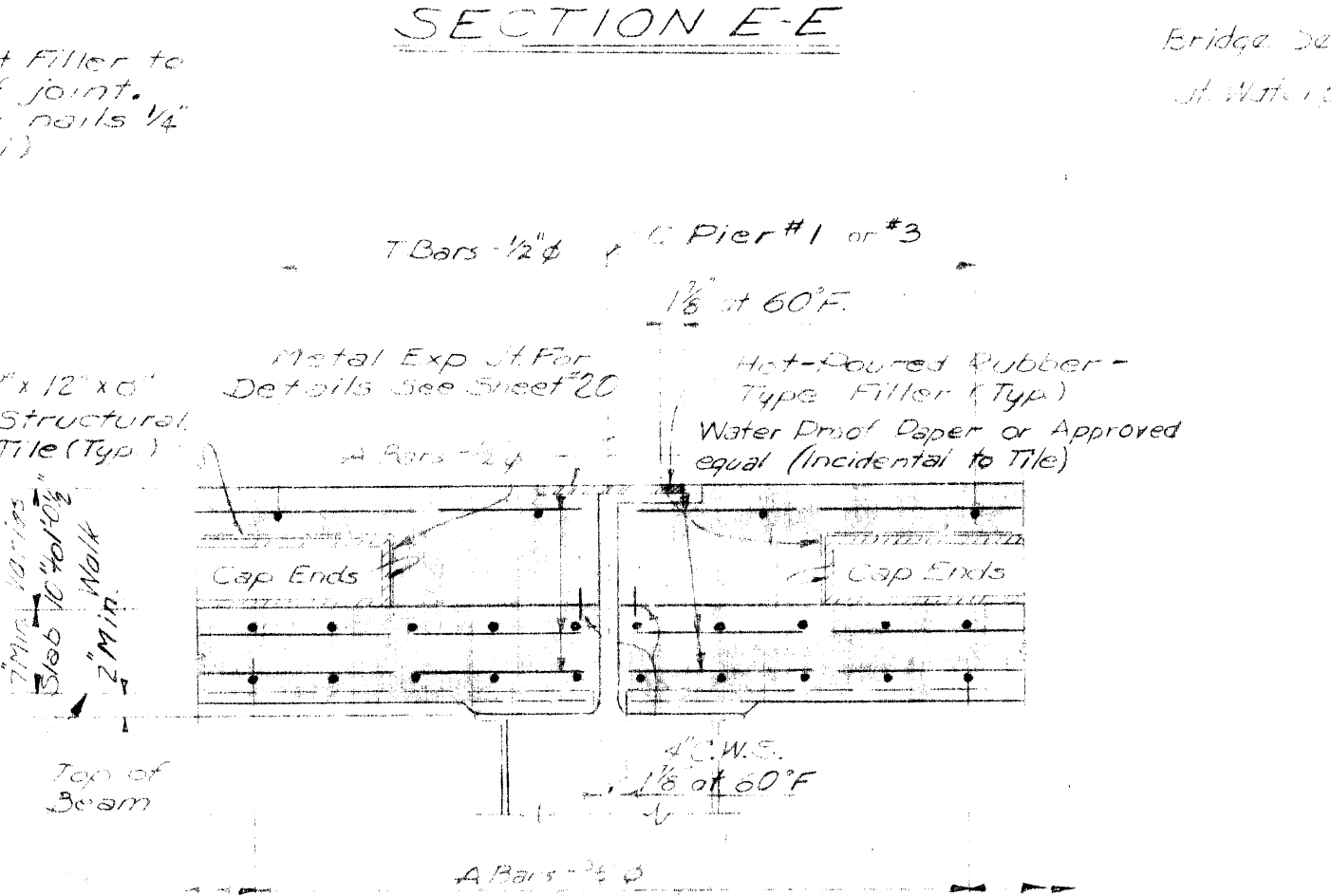
DETAIL PLAN AT TRANSVERSE SLAB JOINTS WITH CH. JT. FILLER



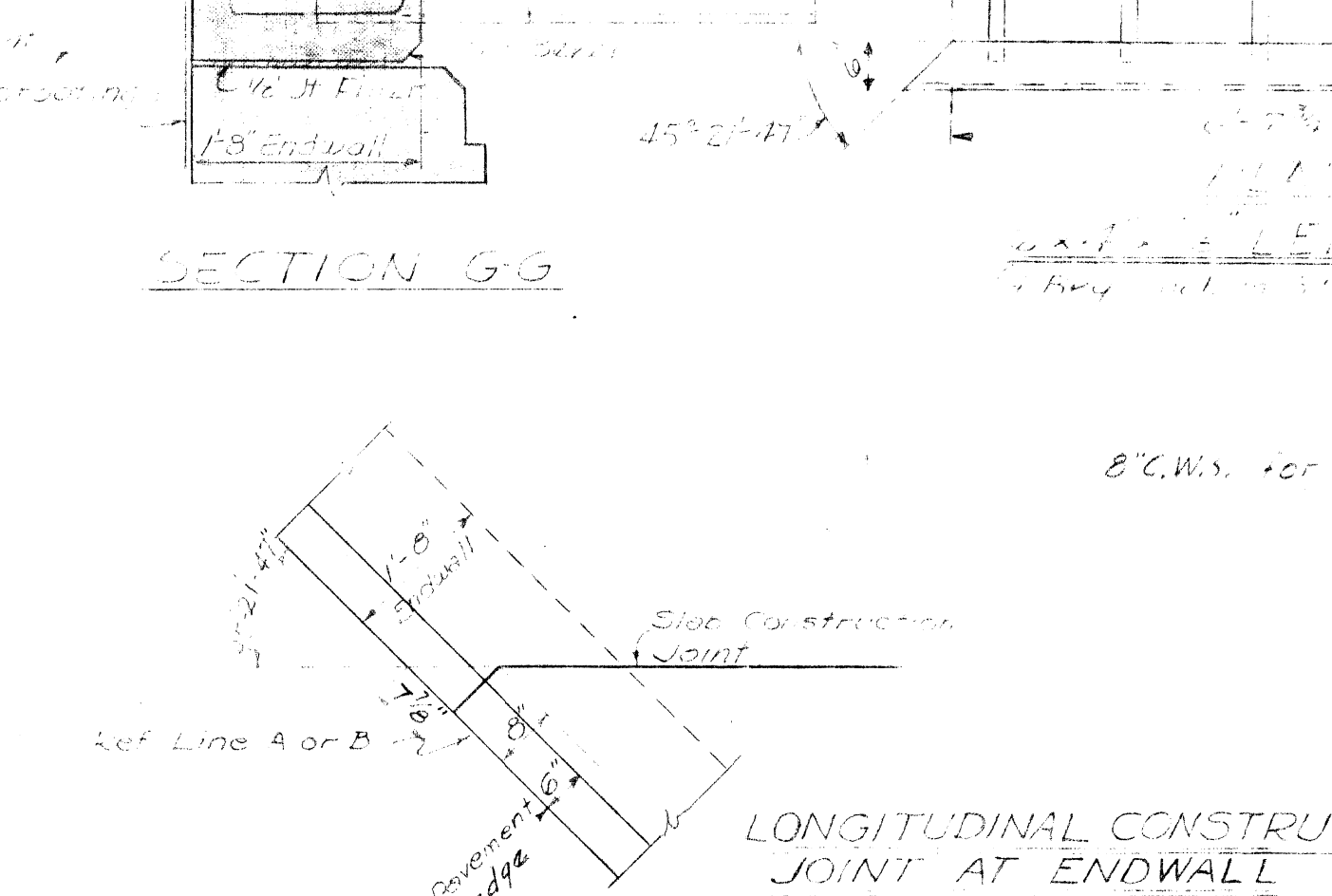
SECTION B-B



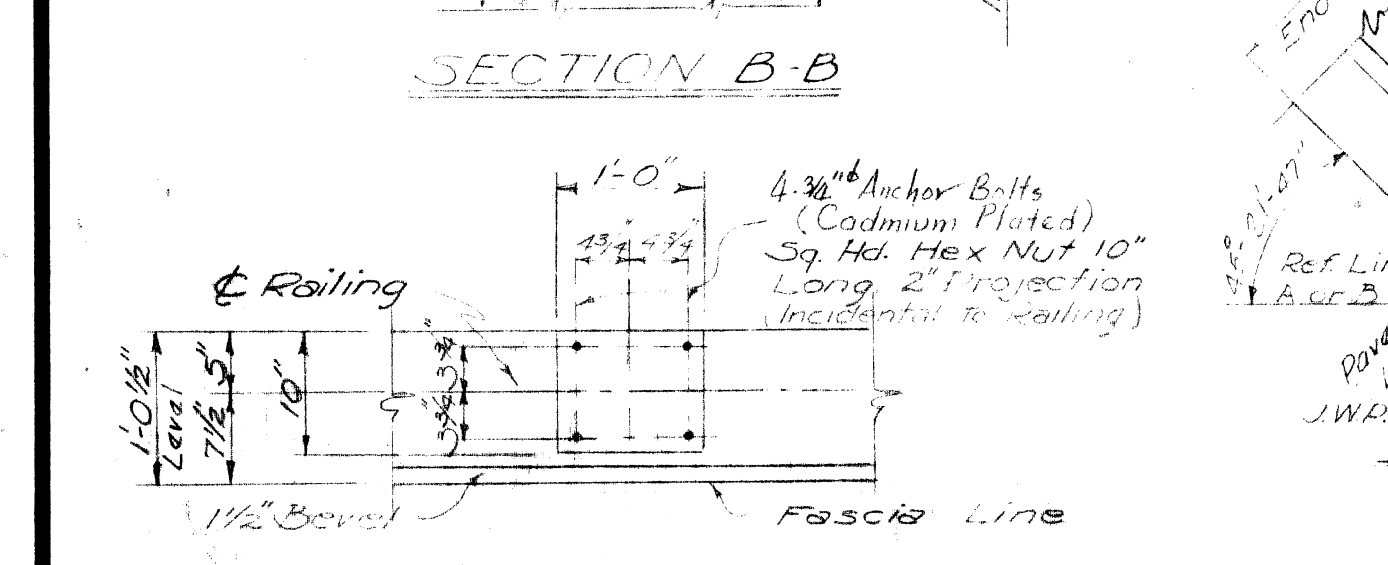
SECTION D-D



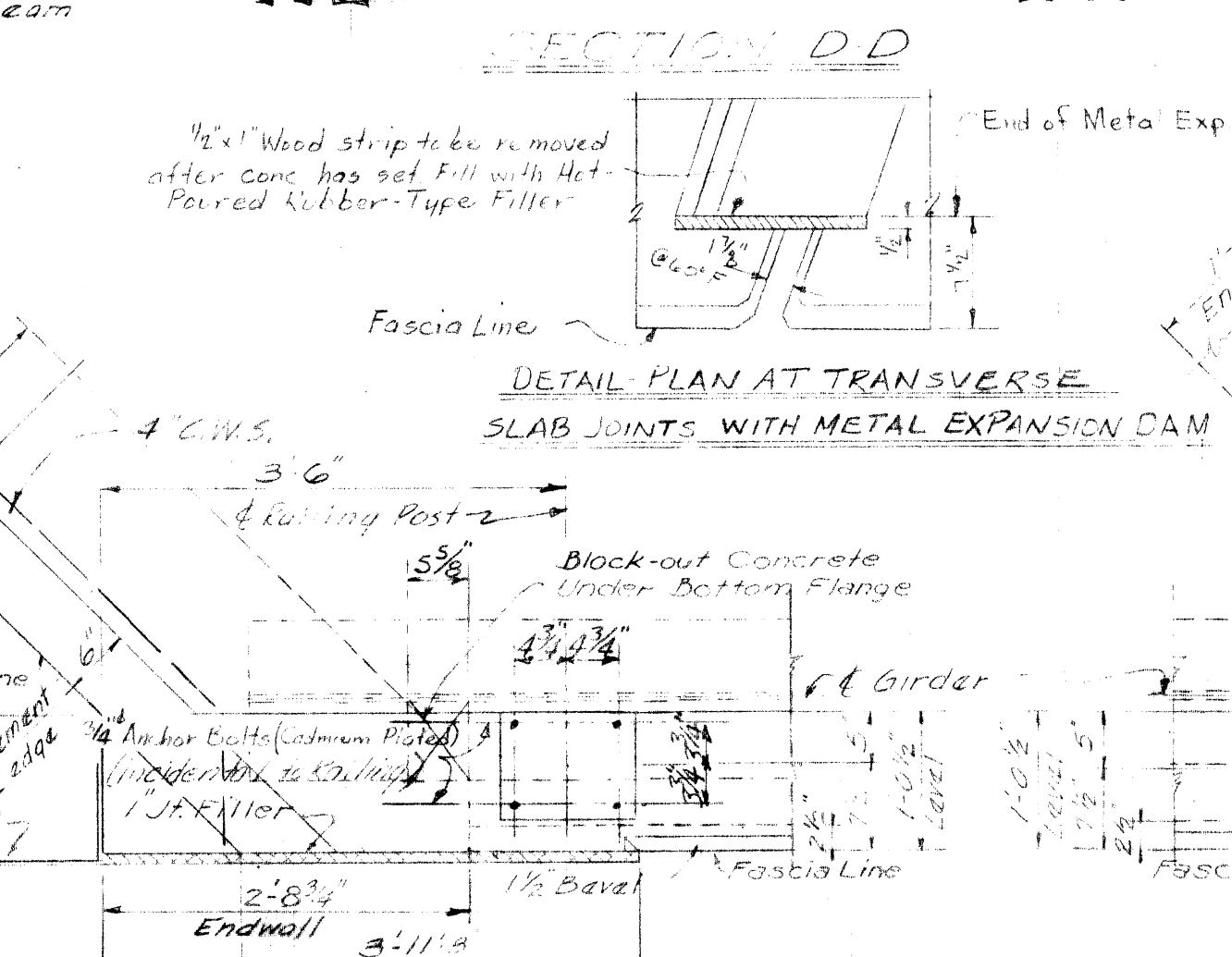
SECTION F-F



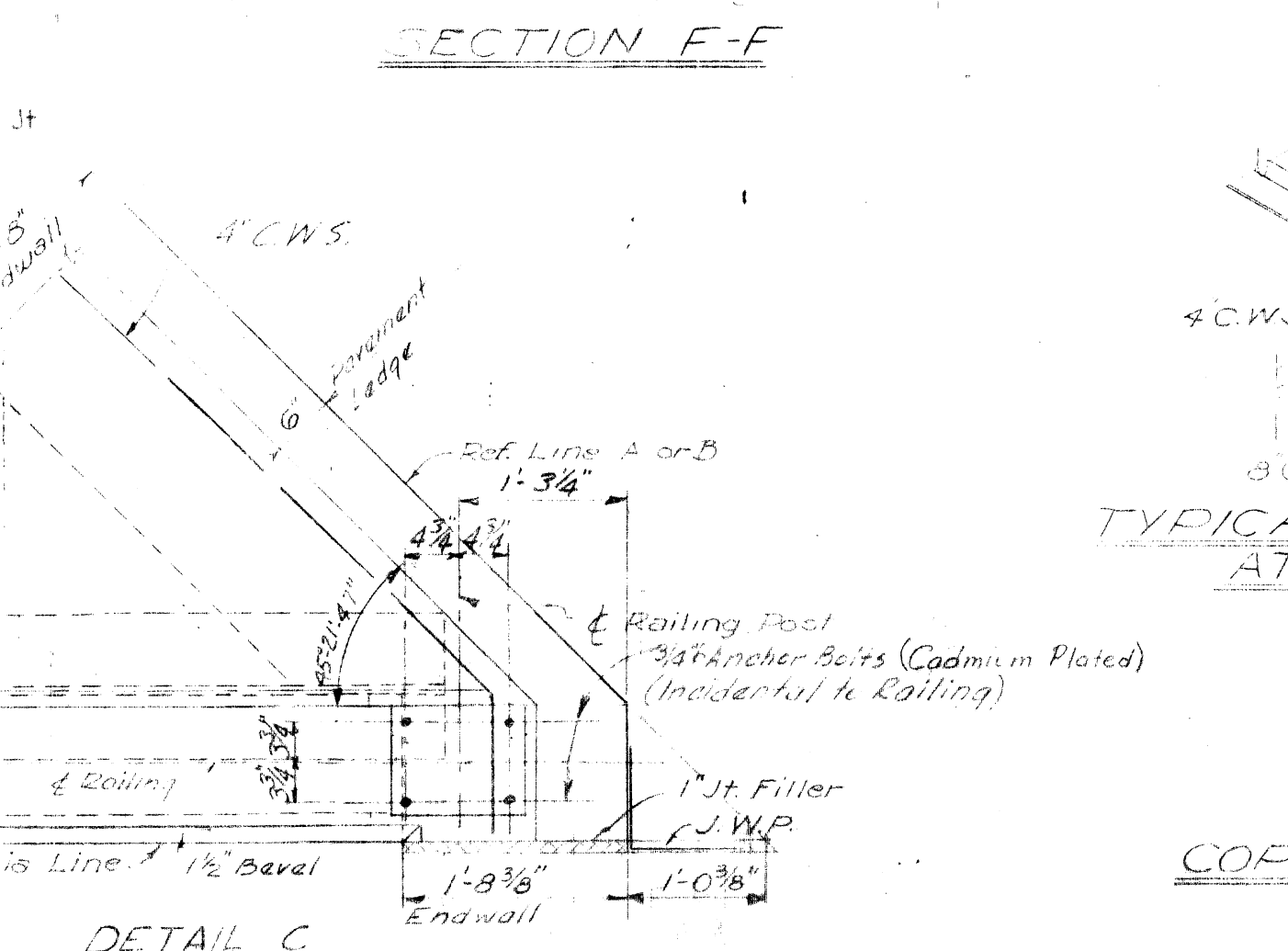
LONGITUDINAL CONSTRUCTION JOINT AT ENDWALL



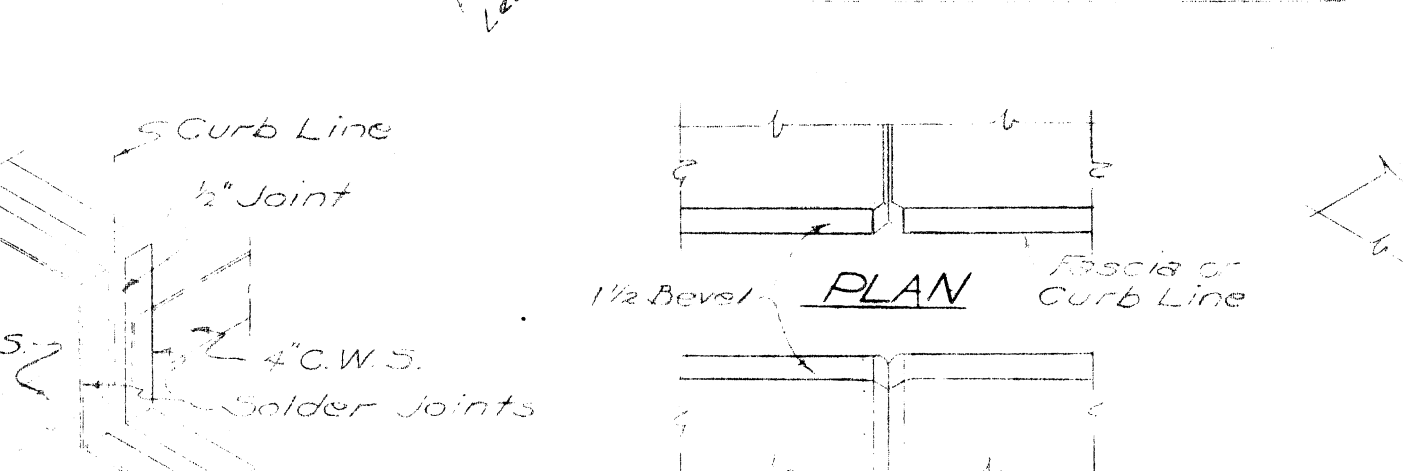
DETAIL A
(Typical for all Interior Railing Posts)



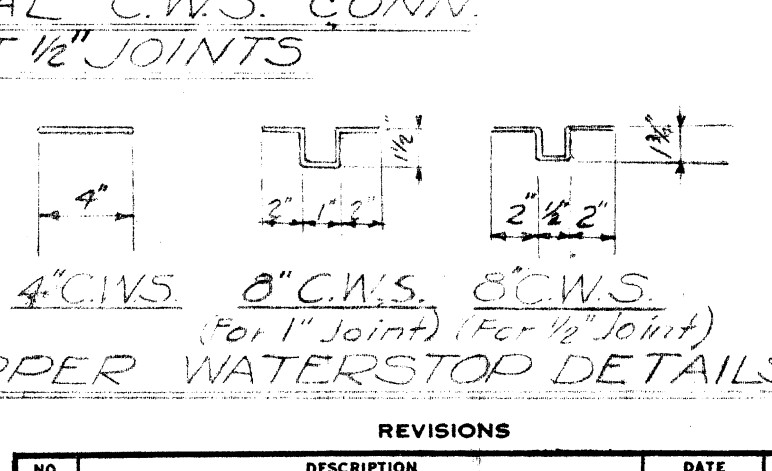
DETAIL B



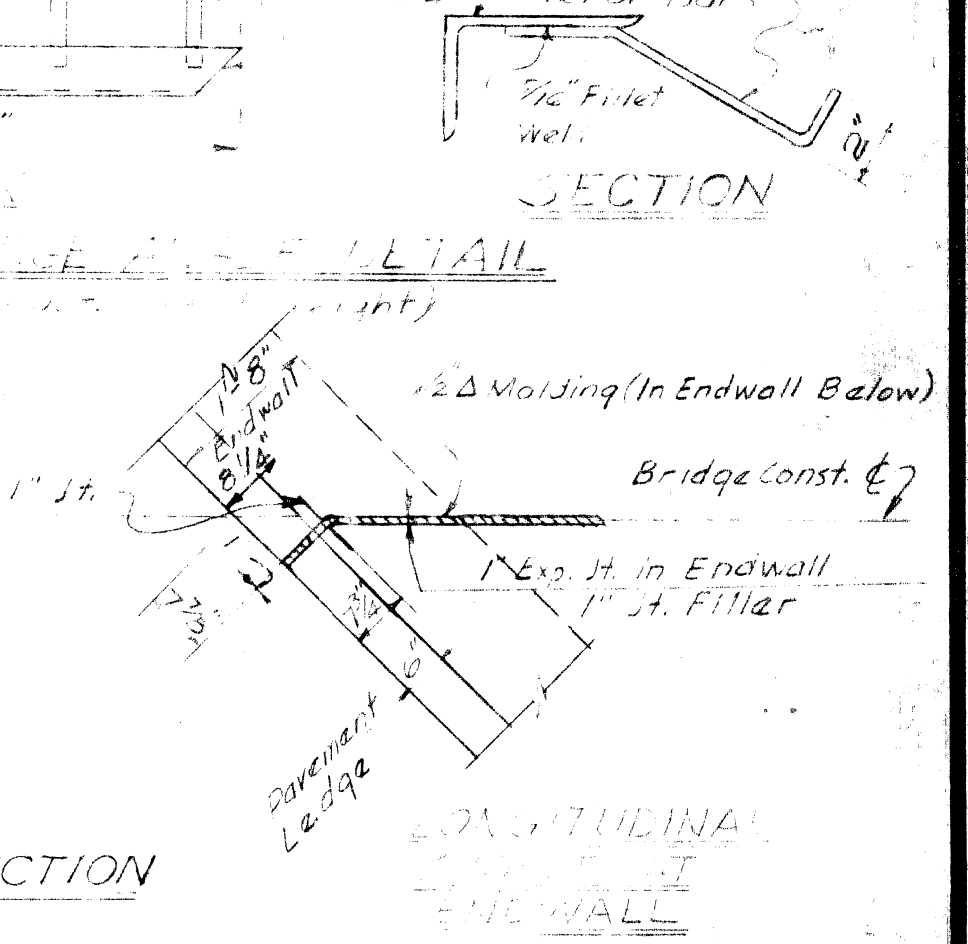
DETAIL C



TYPICAL C.W.S. CONN. AT 1/2\"/>



COPPER WATERSTOP DETAILS



MOLDING DETAILS
(At Fascia or Curb Lines)

MICHIGAN STATE HIGHWAY DEPARTMENT
CHARLES M. ZIEGLER
 STATE HIGHWAY COMMISSIONER
 GRATIOT AVE CROSSING THE EDEL FORD EXPRESSWAY IN DETROIT
SUPERSTRUCTURE DETAILS
 HAZELET & ERDAL-CONSULTING ENGINEERS FILE NO. 765

APPROVED: *J. C. Traber* 10-26-58
 CHIEF BRIDGE DRAFTSMAN

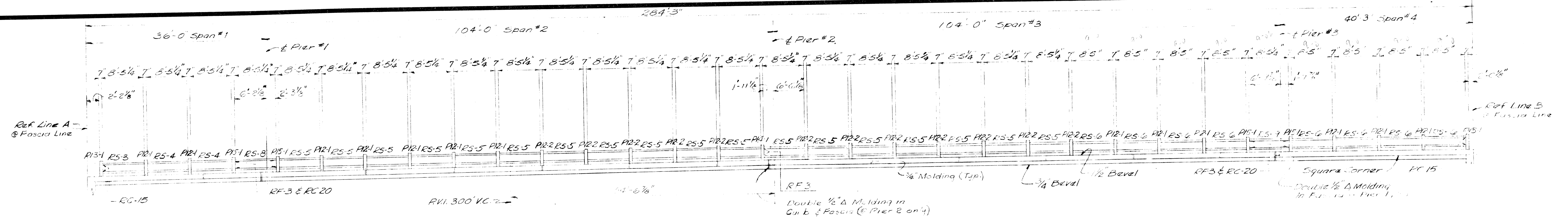
APPROVED: *J. C. Traber* 10-17-58
 ENGINEER OF BRIDGE DESIGN

APPROVED: _____
 BRIDGE ENGINEER

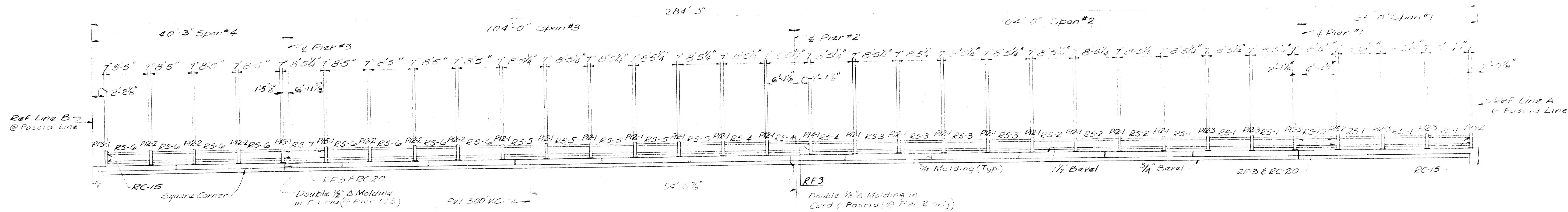
NO.	DESCRIPTION	DATE	BY

SQUAD BOOK	DATE	BY

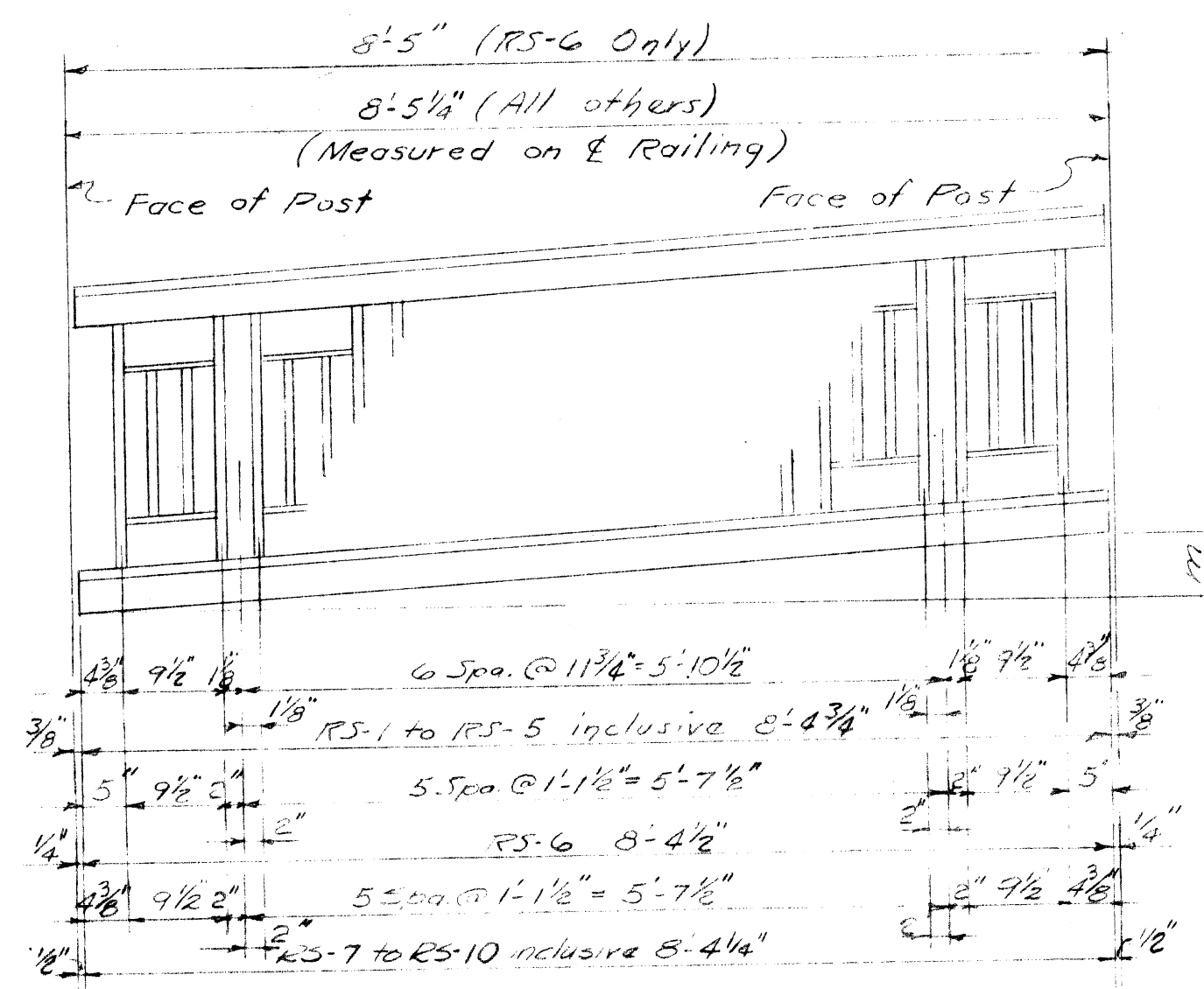
B69 OF 82-22-10



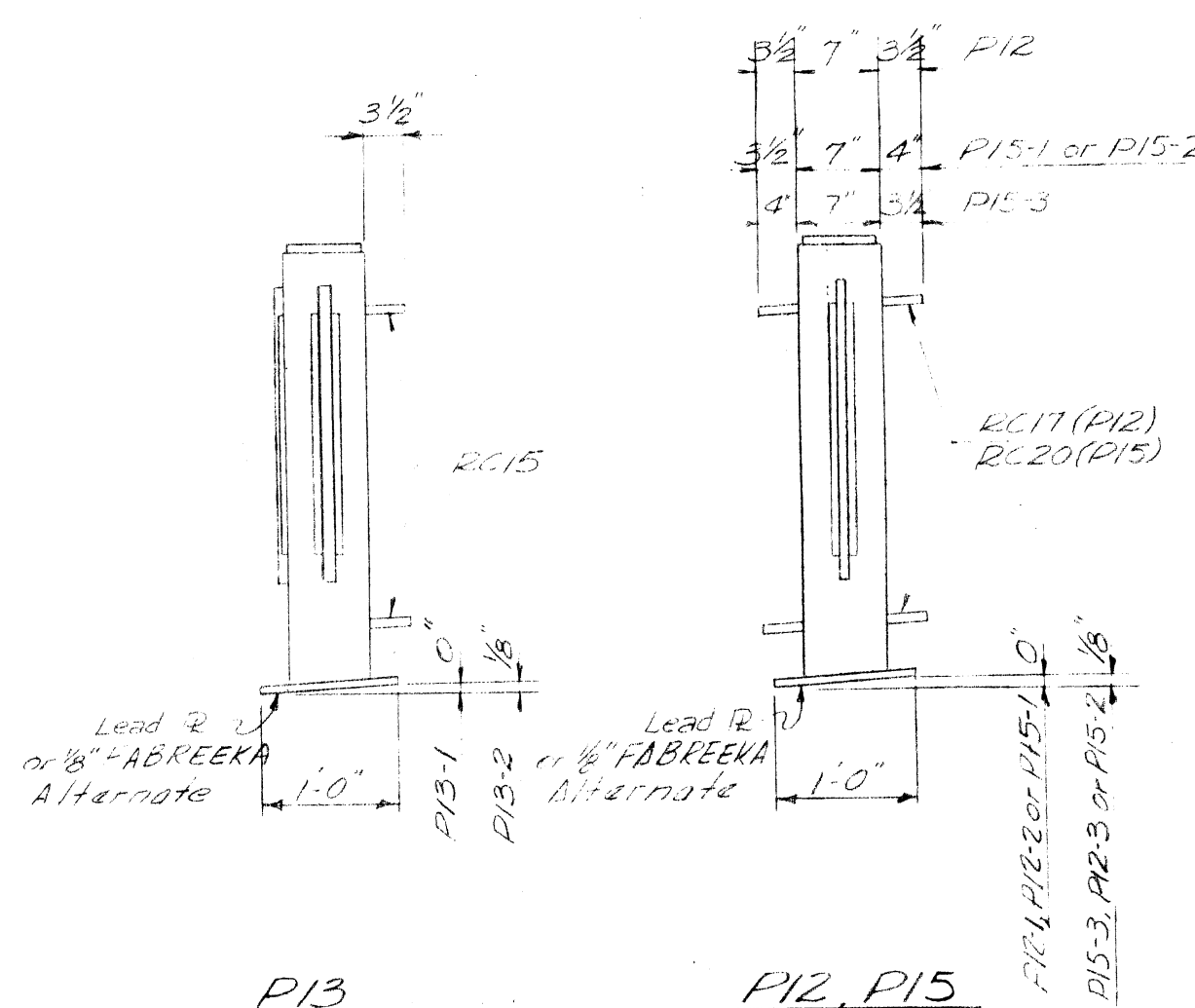
RAILING ELEVATION - WEST FASCIA



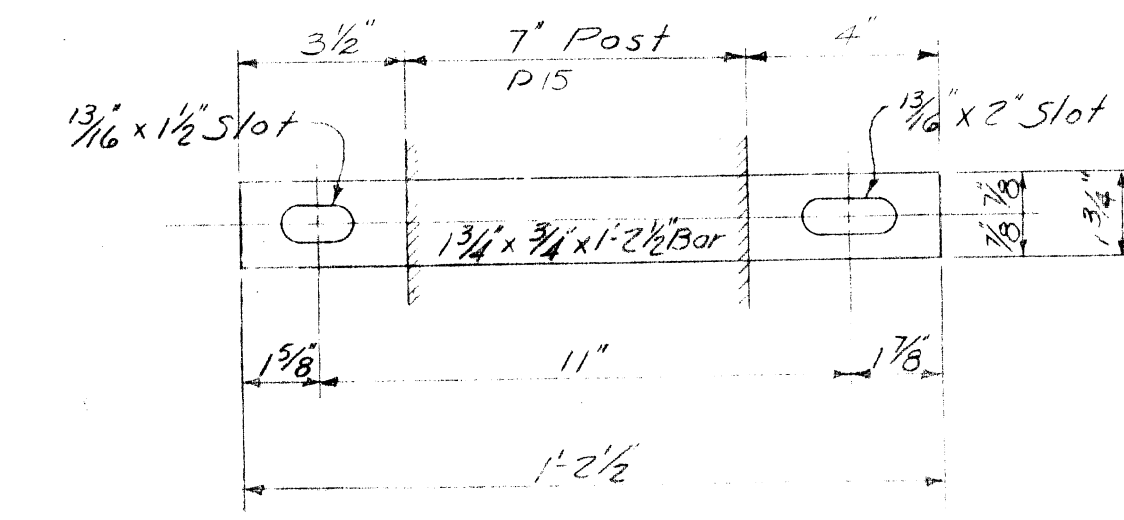
RAILING ELEVATION - EAST FASCIA



RAILING SECTION



RAILING POSTS



RAILING CLIP RC-20 (16 Required)

NOTES -
 P15 Posts are the same as Post P14 except RC-20 clips are used on P15.
 All railing flanges to be RF-4 & all railing clips to be RC-17 unless otherwise noted.
 For Railing Molding & Bevel details not shown here on. See M.S.H.P. Std. Drawing E4.
 For Railing Posts, Railing Clip & Railing Flange details not shown see M.S.H.P. Std. Drawing E-5.

BILL OF RAILING MATERIAL						
MARK	NO REQD	m	DESCRIPTION	MARK	NO REQD	DESCRIPTION
RS-1	6	7/8"	Railing Section	P12-1	28	Railing Post
RS-2	3	3/4"	"	P12-2	18	"
RS-3	3	3/8"	"	P12-3	4	"
RS-4	5	1/2"	"	P13-1	3	"
RS-5	23	0"	"	P13-2	1	"
RS-6	16	0"	"	P14-1	2	"
RS-7	1	0"	"	P15-1	6	"
RS-8	1	1/2"	"	P15-2	1	"
RS-9	1	5/8"	"	P15-3	1	Railing Post
RS-10	1	7/8"	Railing Section	RF-3	20	Railing Flange
				RF-4	228	Railing Flange
				RC-15	8	Railing Clip
				RC-17	104	"
				RC-20	16	Railing Clip
				Bolts	248	3/4" x 2 1/2" Hex. Hd. Bolts
				Washers	248	3/4" Lock Washers
				Lead 2	64	1/2" Lead or 1/2" FABREEKA 21
				Anchor Bolts	250	3/4" x 10" Bolt, 1/4" Hex. Nut, Project 2" (Column Mounted)
APPROXIMATE RAILING WEIGHT 36,170						* Voids between P15's and Railing Posts to be Coupled with lead wool (Incidental)

Work this sheet with Sheets No. 15, 16, 17 & 18

MICHIGAN STATE HIGHWAY DEPARTMENT
 CHARLES M. ZIEGLER
 STATE HIGHWAY COMMISSIONER
 GRATIOT AVE CROSSING THE EDEL FORD EXPRESSWAY IN DETROIT
RAILING DETAILS
 HAZLET & ERDAL - CONSULTING ENGINEERS FILE NO. 765

APPROVED	<i>J. S. Truhler</i> 10-16-56 CHIEF BRIDGE DRAFTSMAN
APPROVED	<i>W. E. Jones</i> 10-17-56 ENGINEER OF BRIDGE DESIGN
APPROVED	BRIDGE ENGINEER

NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	<i>J. G. ...</i>
DRAWN BY	<i>J. L. G.</i> 3-26-54
TRACED BY	<i>J. H. K.</i> 5-29-55
CHECKED BY	<i>J. H. K.</i> 5-29-55
SHEET	19 OF 69

B69 OF 82-22-10