

INDEX OF SHEETS

SHEET NO. 1	TITLE
SHEET NO. 2	TYPICAL CROSS SECTIONS
SHEET NO. 3	ESTIMATE OF QUANTITIES
SHEET NO. —	MISCELLANEOUS QUANTITIES
SHEET NO. 4	RIGHT OF WAY PLAT
SHEET NO. 5	PLAN AND PROFILE STA. TO STA.
SHEET NO. —	STANDARD DETAILS
SHEET NO. 6-25	DRAINAGE STRUCTURES
SHEET NO. —	CROSS SECTIONS



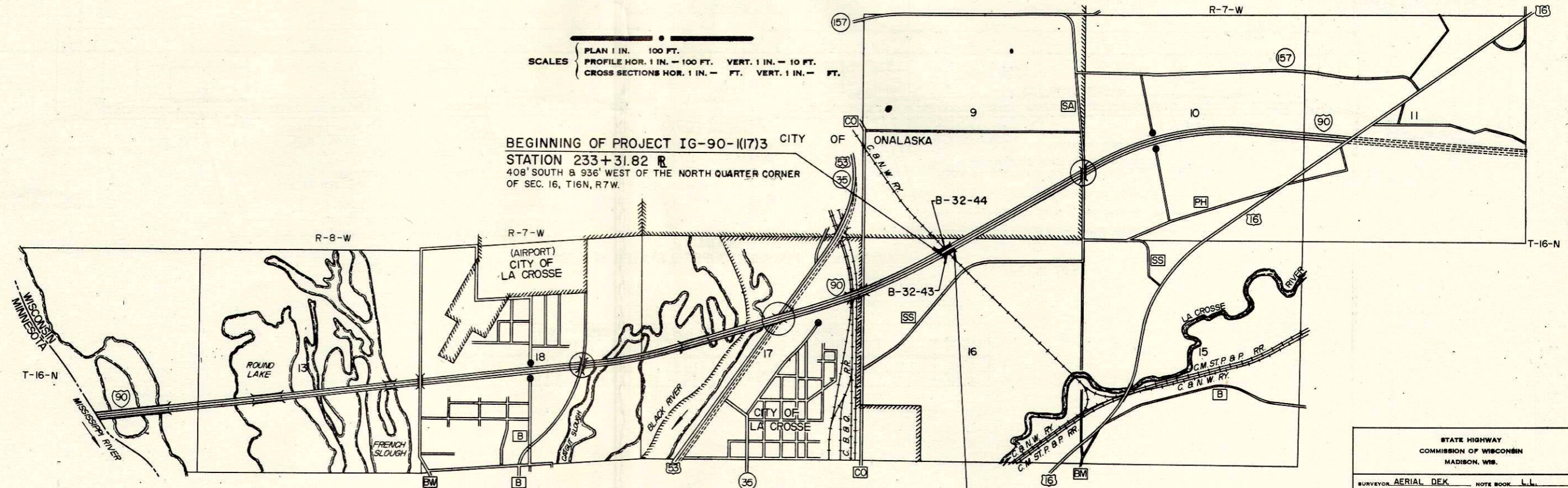
STATE OF WISCONSIN
STATE HIGHWAY COMMISSION OF WISCONSIN

PLAN AND PROFILE OF PROPOSED
LA CROSSE - TOMAH ROAD
(SOUTH ONALASKA OVERPASS)
I. H. 90
LA CROSSE COUNTY
PROJECT IG-90-1(17)3

COUNTY AND HIGHWAY	ROUTE AND SECTION	CLASS AND AGREEMENT		S.P.R. REGION DIVISION	SHEET NUMBER	TOTAL SHEETS
		STATE	FEDERAL			
32.3	90.1		11.17	4 WIS.	1	25

CONTROL OF ACCESS
WITHIN THE LIMITS OF THE PROJECT WHERE CONTROL OF ACCESS LINE IS SHOWN THUS _____ NO ACCESS IS PERMITTED TO THE INTERSTATE TRAFFIC LANES.

PLAN 1 IN. = 100 FT.
PROFILE HOR. 1 IN. = 100 FT. VERT. 1 IN. = 10 FT.
CROSS SECTIONS HOR. 1 IN. = FT. VERT. 1 IN. = FT.

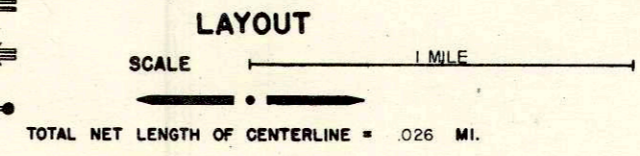


BEGINNING OF PROJECT IG-90-1(17)3 CITY OF ONALASKA
STATION 233+31.82 R
408' SOUTH & 936' WEST OF THE NORTH QUARTER CORNER OF SEC. 16, T16N, R7W.

END OF PROJECT IG-90-1(17)3
STATION 234+69.49 R
345' SOUTH & 814' WEST OF THE NORTH QUARTER CORNER OF SEC. 16, T16N, R7W.

CONVENTIONAL SIGNS

STATE LINE.....	CULVERTS IN PLACE.....	APPROVED INTERSTATE LOCATION.....
COUNTY LINE.....	CULVERTS REQUIRED.....	INTERCHANGE.....
TOWNSHIP OR RANGE LINE.....	DROP INLET.....	HWY. GRADE SEPARATION (MAIN LINE UNDER).....
SECTION LINE.....	POWER POLE.....	BRIDGES (MAIN LINE OVER).....
NEW RIGHT OF WAY LINE.....	TELEPHONE OR TELEGRAPH POLE.....	TERMINATED CROSS ROAD.....
PRESENT RIGHT OF WAY LINE.....	RIGHT OF WAY MARKERS.....	
WIRE FENCE { WOVEN.....	REFERENCE STAKE FOR HUBS ONLY.....	
BARBED.....	MARSH.....	
LOT LINE.....	HEDGE.....	
CORPORATE OR CITY LIMITS.....	TREES.....	
PROPERTY LINE.....	GROUND ELEVATION..... DATUM LINE 73.9	
TRAVELED WAY OR P.E.....	GRADE ELEVATION..... DATUM LINE 75.6	
RAILROADS.....		
BASE OR SURVEY LINE.....		



STATE HIGHWAY COMMISSION OF WISCONSIN
MADISON, WIS.

SURVEYOR: AERIAL DEK. NOTE BOOK: L.L.L.
DIVISION COMPUTER: G.O.B. M. O. CHECKER: W.H.P.
DISTRICT CHECKER: A.E.J. CORRECT.

CORRECT: DATE: 11-16-65 *L.H. Jindler* DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL: DATE: 11/24/65 *E.J. Bork* CHIEF DESIGN ENGINEER

APPROVED: DATE: 11/25/65 *H. L. ...* STATE HIGHWAY ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

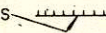
APPROVED: _____ DATE: _____

DIVISION ENGINEER

SCHEDULE OF LANDS AND INTERESTS REQUIRED				
PAR.	OWNER	ACRES	INTEREST REQUIRED	NO ACCESS
82	EMIL HAUSER	—	FEE SIMPLE	✓
84	LA CROSSE COUNTY	2.18	" "	✓
85	LEONARD W. PRALLE	4.40	" "	✓
86	JAMES JOHNSON	11.50	" "	✓
87	STATE OF WISCONSIN (ADJ. GEN.)	0.06	" "	✓
134	NORTHERN STATES POWER CO.	—	POLE EASEMENT RELEASE	
83	CHICAGO NORTHWESTERN RR.	—	BY AGREEMENT	

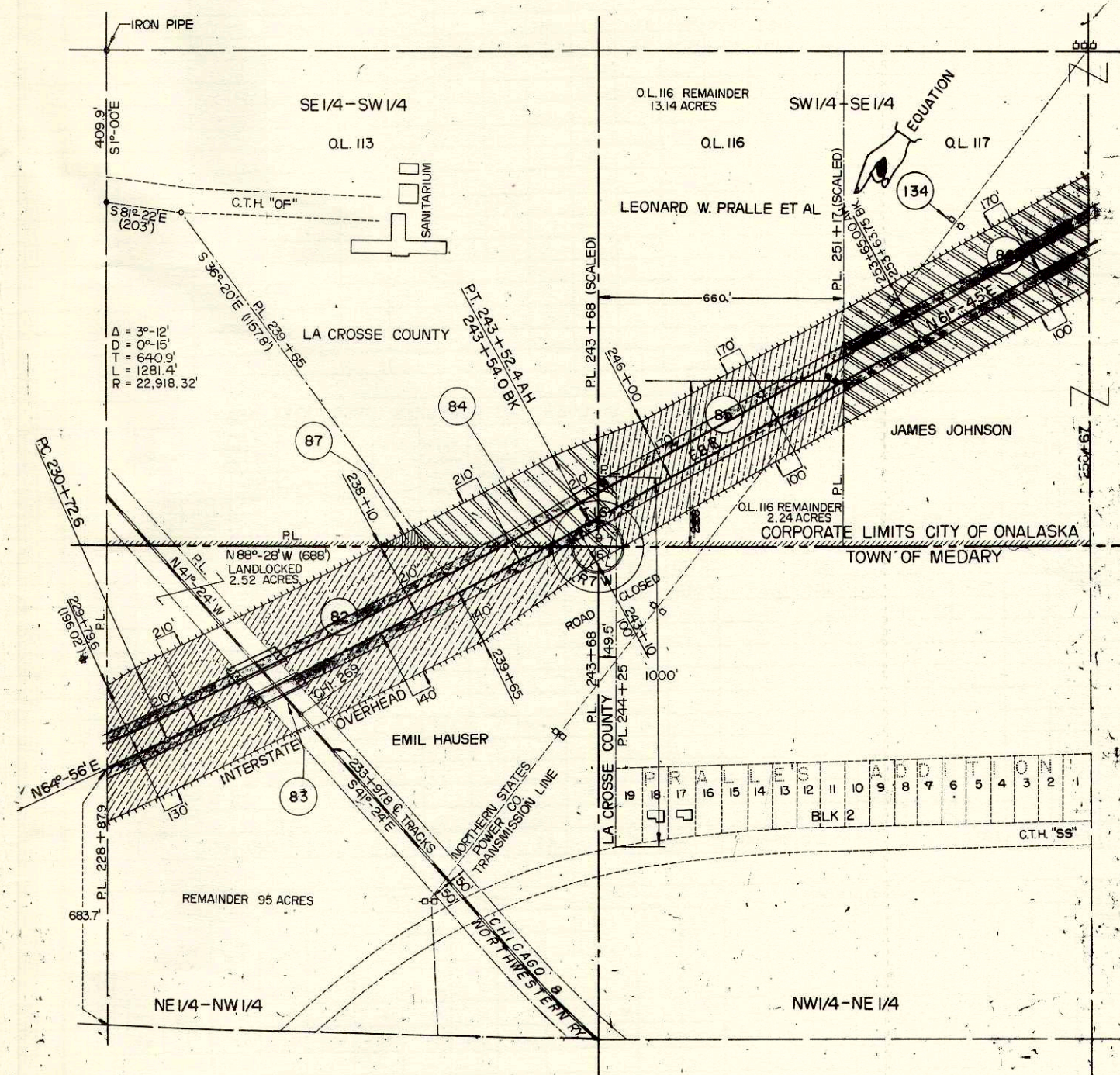
NOTE: NO DIRECT ACCESS PERMITTED BETWEEN THE MAIN ROADWAYS OR RAMPS OF THE INTERSTATE HIGHWAY, AND ABUTTING PROPERTIES.
 BEARINGS SHOWN ON THIS PLAT ARE THE TRUE BEARINGS OF EACH TANGENT TO THE NEAREST MINUTE.

COUNTY AND HIGHWAY	ROUTE AND SECTION	CLASS AND AGREEMENT		FEDERAL DIVISION OFFICE	SHEET NUMBER	TOTAL SHEETS
		STATE	FEDERAL			
32.3	90.1		13.2	4	47	

SYMBOL FOR ACCESS RIGHTS ACQUIRED IS SHOWN THUS 

E.B. R = MEDIAN EDGE OF PAVEMENT - EASTBOUND LANE.

IG-90-1(17)3 4-25



STATE HIGHWAY COMMISSION OF WISCONSIN
 PLAT OF RIGHT OF WAY REQUIRED
 PROJECT I 90-1(12)0

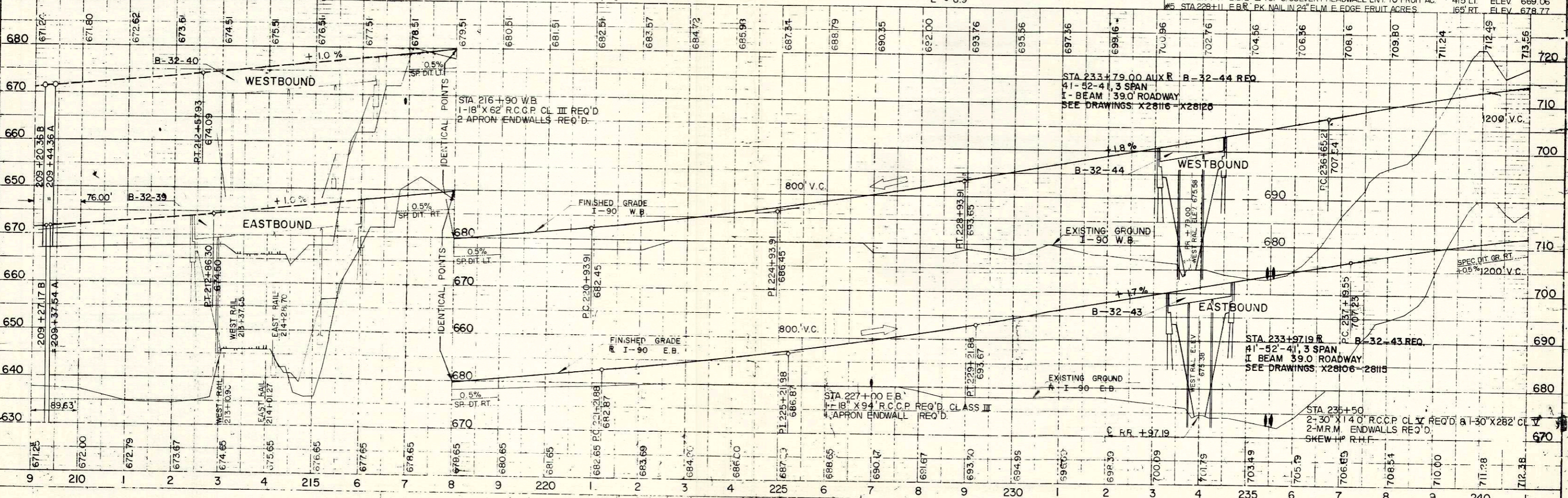
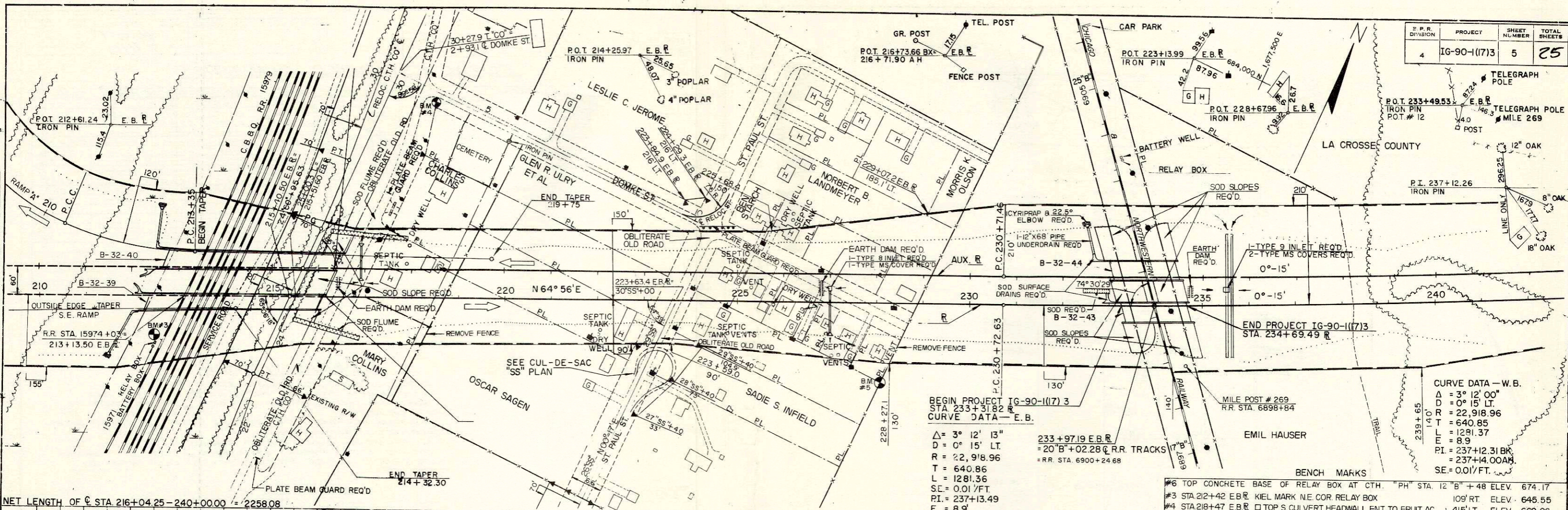
LA CROSSE - TOMAH
 (MINNESOTA - WISCONSIN STATE LINE - U.S. H. 16)
 INTERSTATE HIGHWAY 90 LA CROSSE COUNTY

SCALE
 0 100 200 400 FT.
 LENGTH MILES

OCT 29 1962
 AUG 25 1963
 MARCH 17 1966
 AUGUST 17 1966
 APRIL 15 1964

NOVEMBER 22 1962
 AUGUST 14 1963

MAY 20 1963
 MARCH 8 1963
 JANUARY 23 1963
 DECEMBER 5 1962
 OCTOBER 31 1962



APPROVED: [Signature]
 DATE: [Date]
 NOTE: [Notes]

APPROVED: [Signature]
 DATE: [Date]
 NOTE: [Notes]

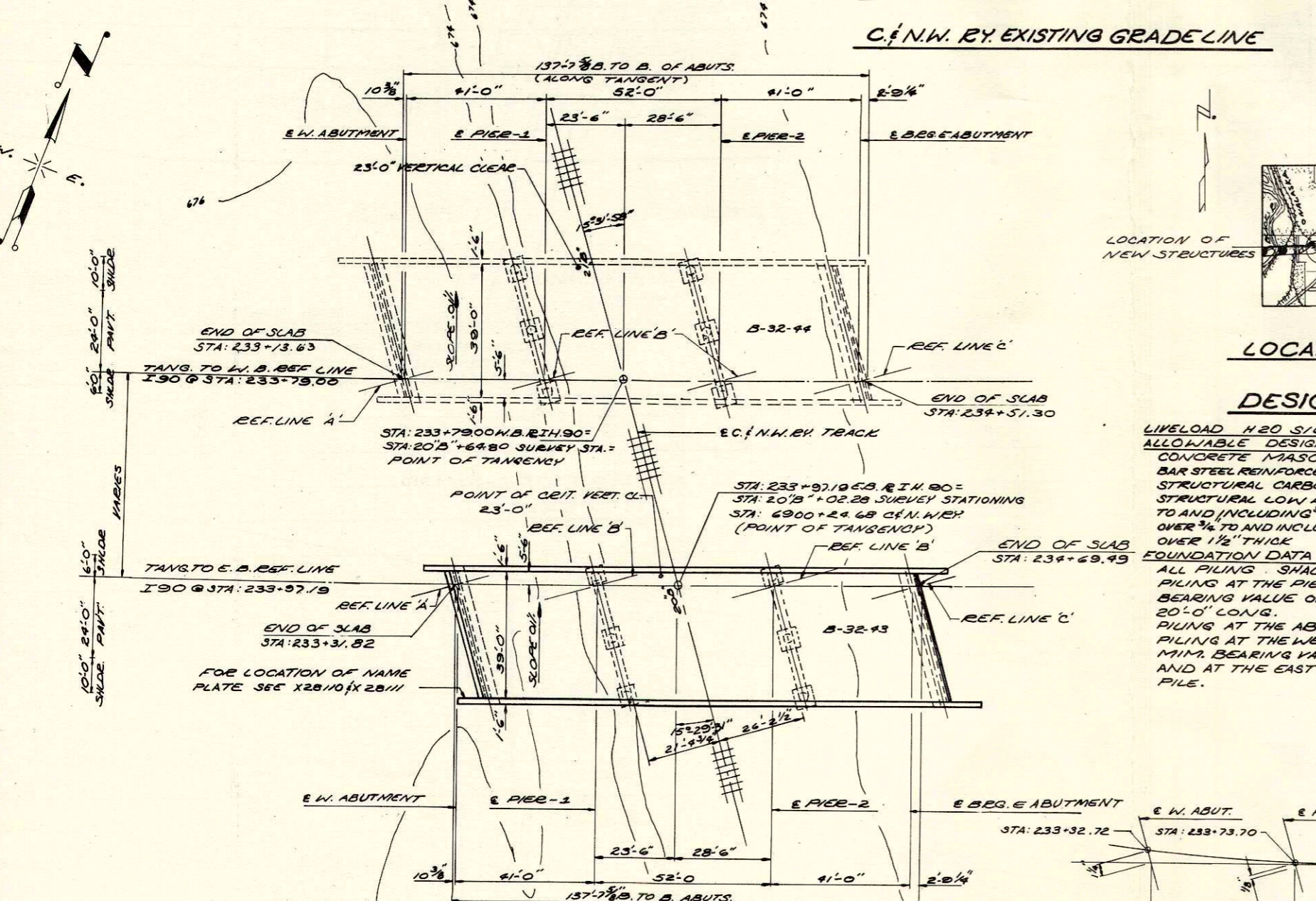
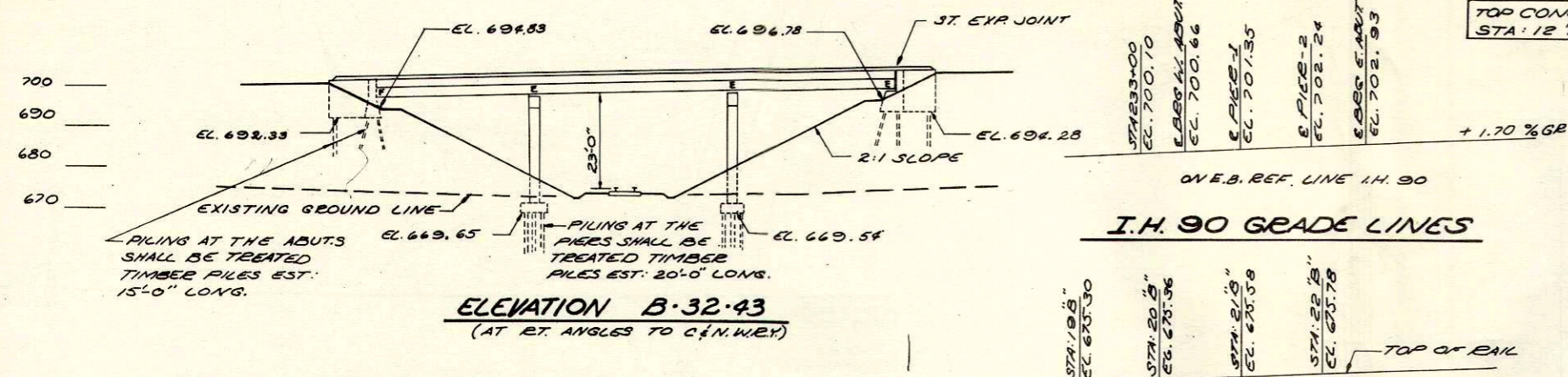
BENCH MARK

TOP CONC BASE OF RELAY BOX @ C.T.H. 'PH'
STA: 12 B' + 48.00 ELEV. 674.24

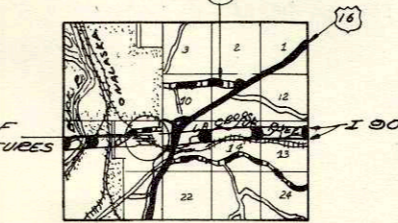
COUNTY & HIGHWAY	ROUTE & SECTION	CLASS & AGREEMENT	B. P. R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
72.3	90.1	13.1	4	16-90-1 (17)3	6	25

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER	W. ABUT.	PIER 1	PIER 2	E. ABUT.	TOTAL
EXCAVATION FOR STRUCTURES	C.Y.	—	50	60	60	50	220
CONCRETE MASONRY	C.Y.	170.0	40.3	43.7	44.1	63.7	361.8
BAR STEEL REINFORCEMENT	L.B.	52,850	1,315	8,390	8,590	17,900	72,035
STRUCTURAL CARBON STEEL	L.B.	17,770	—	—	—	—	17,770
STRUCTURAL LOW ALLOY STEEL	L.B.	75,470	—	—	—	—	75,470
LUBRICATED BRONZE PLATES	L.B.	179	—	—	—	—	179
BEARING PADS	S.F.	23	—	—	—	—	23
* TREATED TIMBER TEST PILING	L.S.	—	—	—	—	—	—
TREATED TIMBER PILING - DEC.	L.F.	—	225	400	420	210	1,255
TREATED TIMBER PILING - DRIVEN	L.F.	—	225	400	420	210	1,255
TUBULAR RAILING - TYPE 'G'	L.F.	307	—	—	—	—	307
NON-BID ITEMS							
ZINC OR ALUMINUM PLATE	S.F.	20	—	—	—	—	20
FILLER	SIZE	—	—	—	—	—	1/2"



CURVE DATA I.H. 90
 $\Delta = 03^\circ-12'-12''$ (C.B. & W.B. REF. LINES)
 $D = 0^\circ-15'$
 $R = 22,918.31'$
 $T = 640.85'$
 $L = 1281.37'$
 $SE = .01\%$



LOCATION MAP

DESIGN DATA

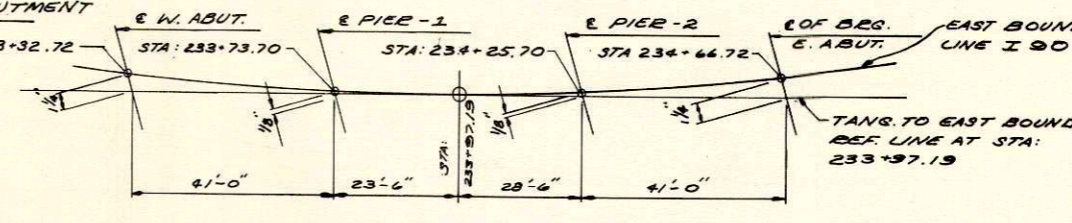
LIVELOAD H20 S16 MOD.
 ALLOWABLE DESIGN STRESSES
 CONCRETE MASONRY, GRADE 'AA' $f_c = 1400$ P.S.I.
 BAR STEEL REINFORCEMENT A15 $f_s = 20,000$ P.S.I.
 STRUCTURAL CARBON STEEL $f_s = 20,000$ P.S.I.
 STRUCTURAL LOW ALLOY STEEL TO AND INCLUDING $3/4''$ THICK $f_s = 27,000$ P.S.I.
 OVER $3/4''$ TO AND INCLUDING $1/2''$ THICK $f_s = 25,000$ P.S.I.
 OVER $1/2''$ THICK $f_s = 23,000$ P.S.I.
FOUNDATION DATA
 ALL PILING SHALL BE TREATED TIMBER.
 PILING AT THE PIER SHALL HAVE A MIN. BEARING VALUE OF 24 TONS PER PILE. EST. 20'-0" LONG.
 PILING AT THE ABUTMENTS EST. 15'-0" LONG.
 PILING AT THE WEST ABUTMENT SHALL HAVE A MIN. BEARING VALUE OF 22 TONS PER PILE. AND AT THE EAST ABUTMENT 17 TON PER PILE.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 ALL CONCRETE MASONRY SHALL BE GRADE 'AA' $f_c = 1400$ P.S.I. BEVEL EXPOSED EDGES OF CONCRETE 1" UNLESS OTHERWISE SHOWN OR NOTED.
 BAR STEEL REINFORCEMENT SHALL BE IMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
 ALL PILING SHALL BE TREATED TIMBER.
 PILING AT THE PIERS SHALL HAVE A MINIMUM BEARING VALUE OF 24 TONS PER PILE. ESTIMATED LENGTH OF 20 FEET.
 ALL FIELD CONNECTIONS SHALL BE MADE WITH $3/4''$ RIVETS OR HIGH TENSILE STRENGTH BOLTS, UNLESS OTHERWISE NOTED.
 PILING AT THE ABUTMENTS ESTIMATED 15'-0" LONG. PILES AT THE WEST ABUTMENT SHALL HAVE A MINIMUM BEARING VALUE OF 22 TONS PER PILE. AND AT THE EAST ABUTMENT 17 TONS PER PILE.
 UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" SHALL BE AS FOLLOWS: FOR THE ABUTMENTS THE FINISHED GRADED SECTION AND FOR THE PIERS THE EXISTING GROUND LINE.
 EXPANSION JOINT FILLER SHALL CONFORM TO ARSHO DESIGNATION M153, TYPE III.
 * TEST PILES SHALL BE TREATED TIMBER 30'-0" LONG. DRIVE ONE AT THE EAST ABUTMENT, AND ONE AT PIER-1.
 HOT-POURED ELASTIC THREE JOINT SEALER SHALL CONFORM TO ASTM DESIGNATION, D1190.

LIST OF DRAWINGS

- 1. GENERAL PLAN _____ X28106
- 2. SUPERSTRUCTURE _____ X28107
- 3. LONG SECTION & BEARINGS _____ X28108
- 4. EXPANSION JOINT _____ X28109
- 5. TUBULAR ALUMINUM RAILING TYPE 'A' _____ X28110
- 6. TUBULAR STEEL RAILING TYPE 'A' _____ X28111
- 7. WEST ABUTMENT _____ X28112
- 8. PIERS 1 & 2 _____ X28113
- 9. EAST ABUTMENT _____ X28114
- 10. SUBSURFACE EXPLORATION _____ X28115



CURVE LAYOUT FOR B-32-43 ONLY

REVISED				STATE HIGHWAY COMMISSION OF WISCONSIN			
GENERAL PLAN							
COLLA CROSSE		BY: W. MEDARY		STA: 233+97.19			
SECTION 16		TOWN 16 N.		RANGE 7 W.			
DESIGN SPEC. A.A.S.H.O. 61		LOADING 1400		CONENT 1963			
DATE/22/63		DESIGN C.G.		DRAWN 678		CHK. 137	
RECOMMENDED				71. B. Schultz			
APPROVED:				STATE HIGHWAY ENGINEER			
STRUCTURE B-32-43				SHEET 1 OF 10			

X28106

NOTE: TOP & BOTTOM TRANSVERSE BAR IN SLAB SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS ON OR ADJACENT TO EACH STRINGER AND BY INDIVIDUAL BAR CHAIRS AT 3'-0" CENTERS AT APPROXIMATELY THE 1/3 POINT BETWEEN STRINGERS.
 NOTE: THE HEIGHT OF THE CURB IS TO BE MAINTAINED AT POINTS OF BEARING.

NOTE: IF S9 BARS INTERFERE WITH THE OPERATION OF FINISHING MACHINE THEY MAY BE IMBEDDED IMMEDIATELY AFTER PASSAGE OF MACHINE.

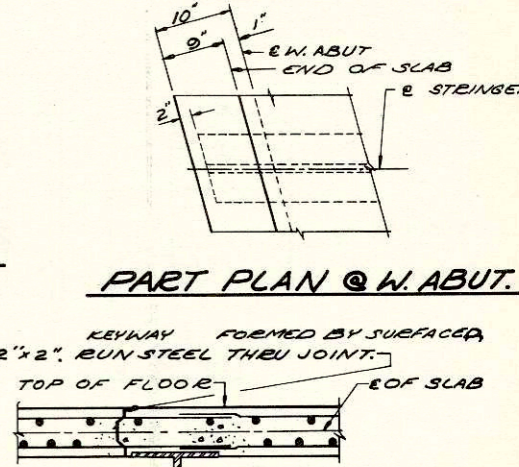
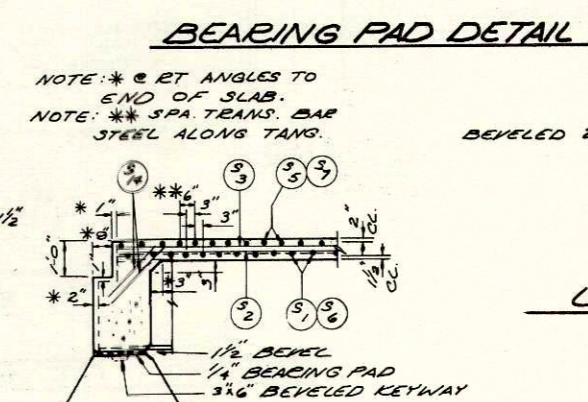
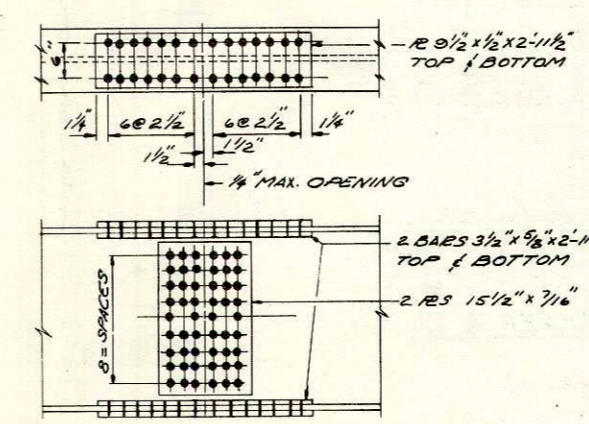
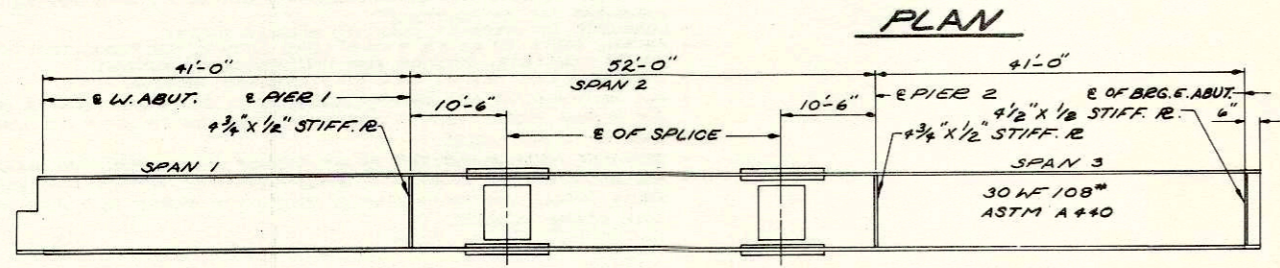
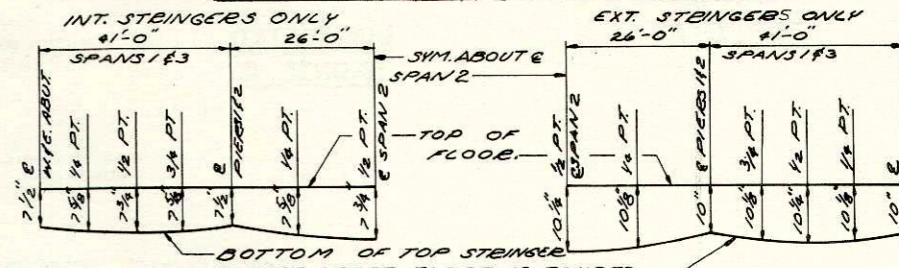
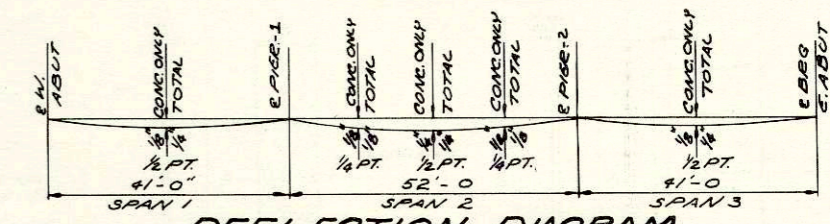
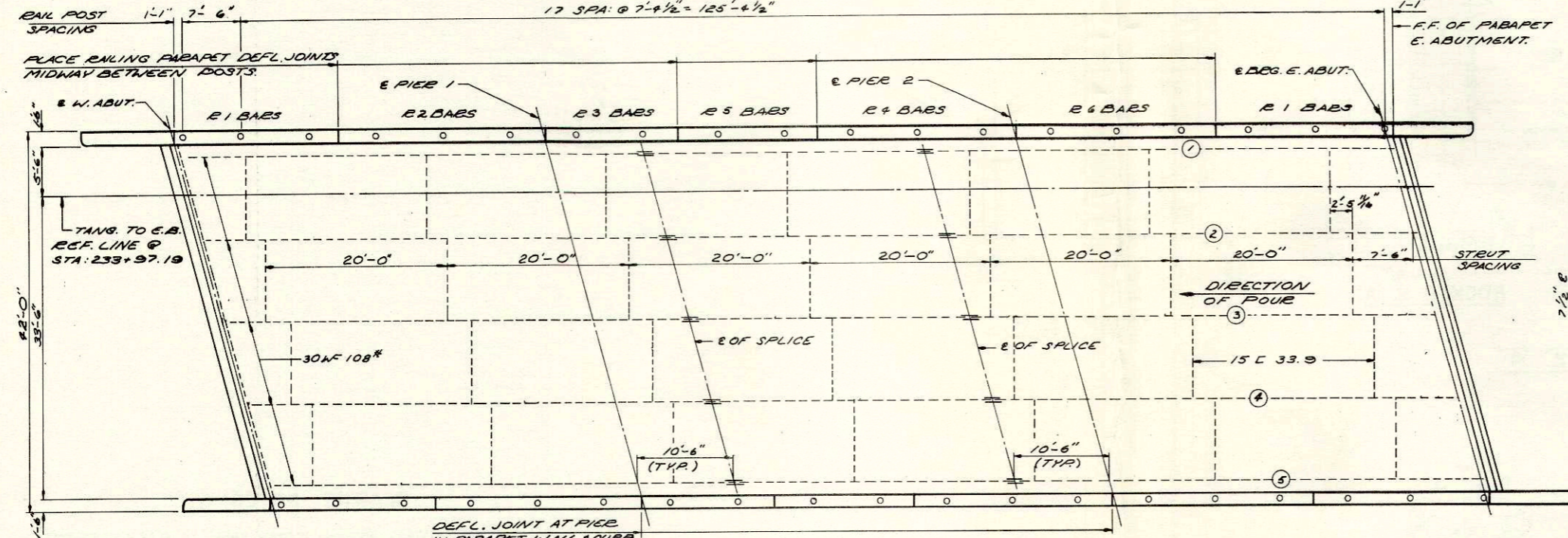
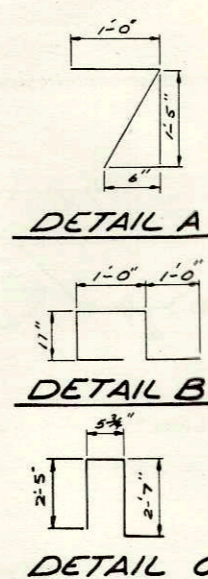
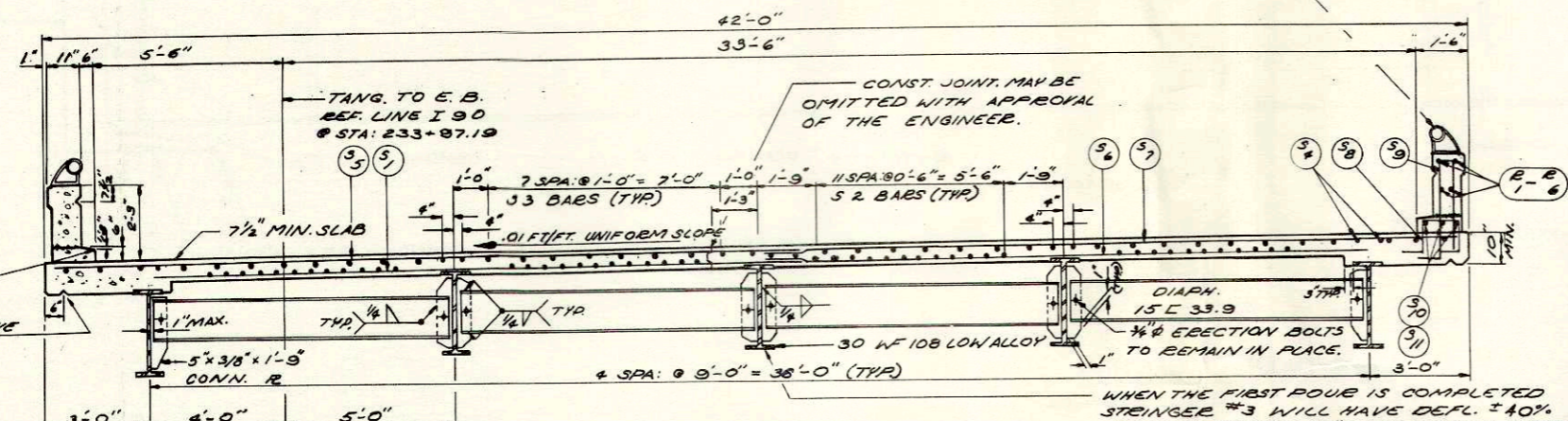
BILL OF BARS
 52850#

B.P.R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	IG-90-1 (17)3	7	25

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

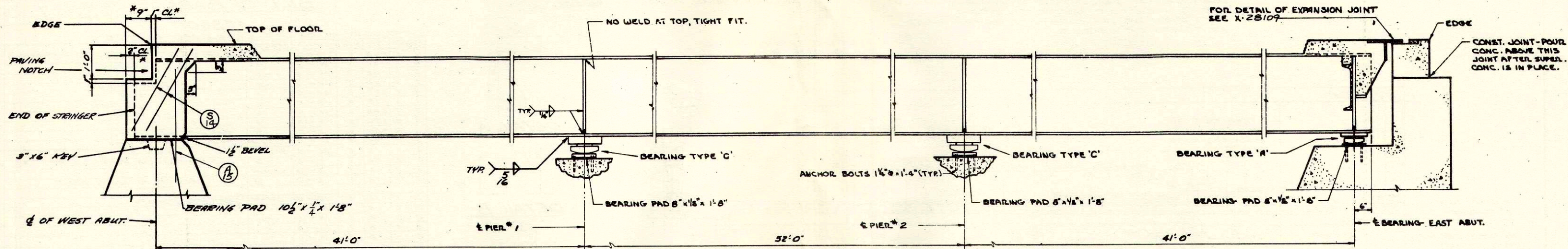
MARK	NO.	SIZE	LENGTH	SPACING	LOCATION	DET.
S 1	248	6	20'-6"	6"	SLAB TRANS. BOTTOM	
S 2	192	5	34'-9"	6"	" LONG. BOTTOM	
S 3	152	5	34'-9"	1'-0"	" " TOP	
S 4	20	5	15'-0"	8"	" SYM. ABOUT PIERS	
S 5	249	6	23'-0"	6"	" TRANS. TOP	
S 6	248	6	19'-0"	6"	" " BOTTOM	
S 7	249	6	21'-6"	6"	" " TOP	
S 8	356	5	4'-8"	9"	CURBS	B
S 9	356	5	6'-3"	9"	RAILING PARAPET	C
S 10	24	5	21'-3"	SHOWN	CURBS SPANS 1 & 3	
S 11	12	5	26'-6"	SHOWN	" SPAN 2	
S 12	24	5	2'-6"	1'-6"	END DIAPHRAGM EAST ABUT.	A
S 13	4	4	8'-9"	SHOWN	" " "	
S 14	72	5	2'-0"	1'-0"	" BLOCK AT WEST ABUT.	
E 1	16	5	19'-0"	SHOWN	RAILING PARAPET	
E 2	8	5	21'-0"	"	" " "	
E 3	8	5	15'-3"	"	" " "	
E 4	8	5	21'-3"	"	" " "	
E 5	8	5	14'-6"	"	" " "	
E 6	8	5	22'-3"	"	" " "	

PLACE TRANSVERSE BAR STEEL PARALLEL TO SUBSTRUCTURE UNITS.



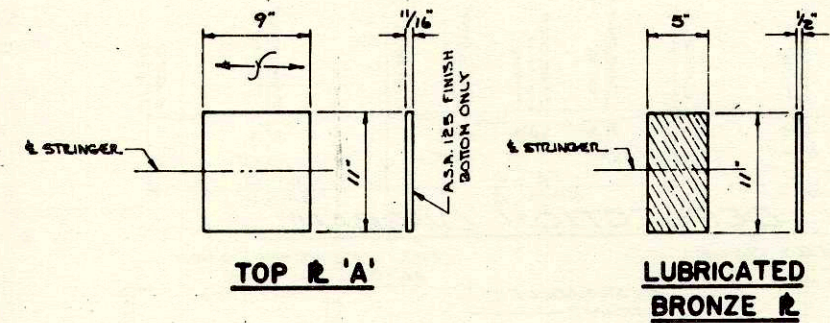
REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN
	SUPERSTRUCTURE
DESIGN SPEC. A.A.S.H.O. 61	LOADING MOD. 12054 CONMT. 1963
DATE 2-28-64	DESIGN C.G. DRAWN G.T.R. CKD. G.T.
STRUCTURE B-32-43	SHEET 2 OF 10

*DENOTES DIMENSIONS AT RIGHT ANGLES



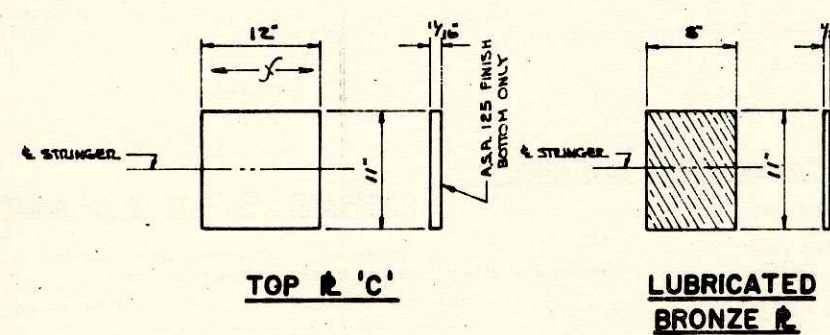
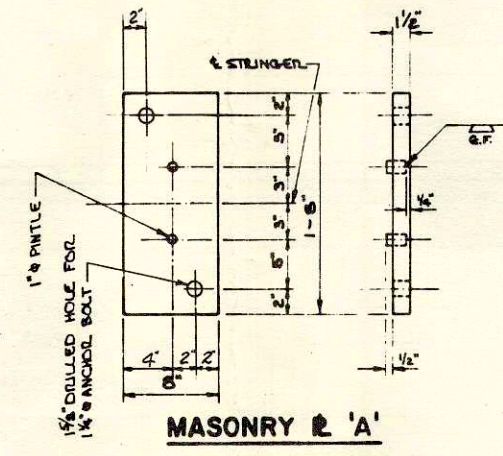
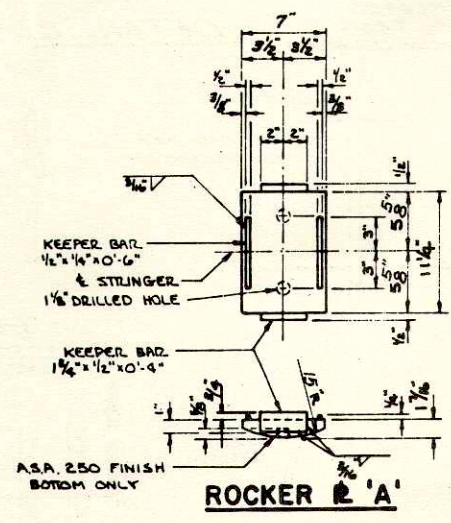
LONGITUDINAL SECTION

FOR LOCATION & DETAILS OF STRINGER SPICE SEE X28107 SECTION IS PARALLEL TO STRINGER.



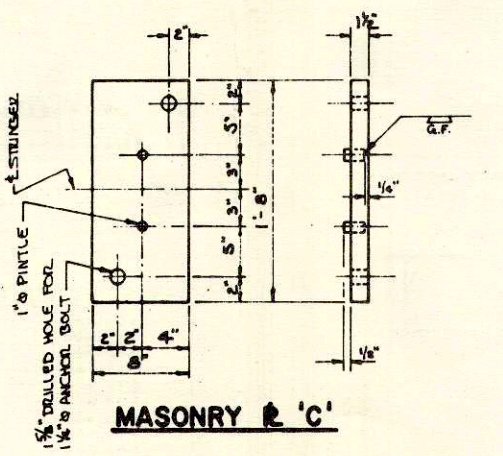
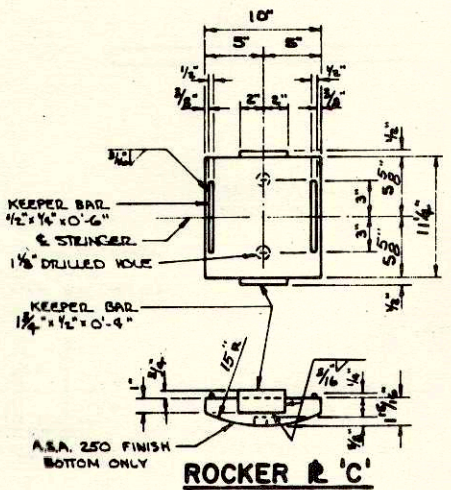
BEARING TYPE 'A'

8 REQ'D.



BEARING TYPE 'C'

10 REQ'D.



BEARING NOTES

- ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH & FREE FROM WARP & ALL EDGES SMOOTH, STRAIGHT, & VERTICAL.
- ALL PLATE CUTS SHALL BE MACHINE FLAME CUTS OR MACHINE CUTS.
- MASONRY PLATE SHALL BE DRILLED TO A DRIVING FIT WITH PINTLES.
- CHAMFER TOP OF PINTLE.
- LUBRICATE TOP SURFACES ONLY OF BRONZE PLATES.
- ANCHOR BOLTS TO BE 1 1/2\"/>
- ALL MATERIAL EXCEPT ANCHOR BOLTS, NUTS & WASHERS SHALL BE MADE OF A 202 STEEL WITH A CORROSION RESISTANCE OF 4 OR MORE TIMES THAT OF A 36 STEEL.
- WASHERS, NUTS, & THE TOP 4\"/>
- ALL MATERIAL IN BEARINGS, EXCEPT BRONZE PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL LOW ALLOY STEEL".

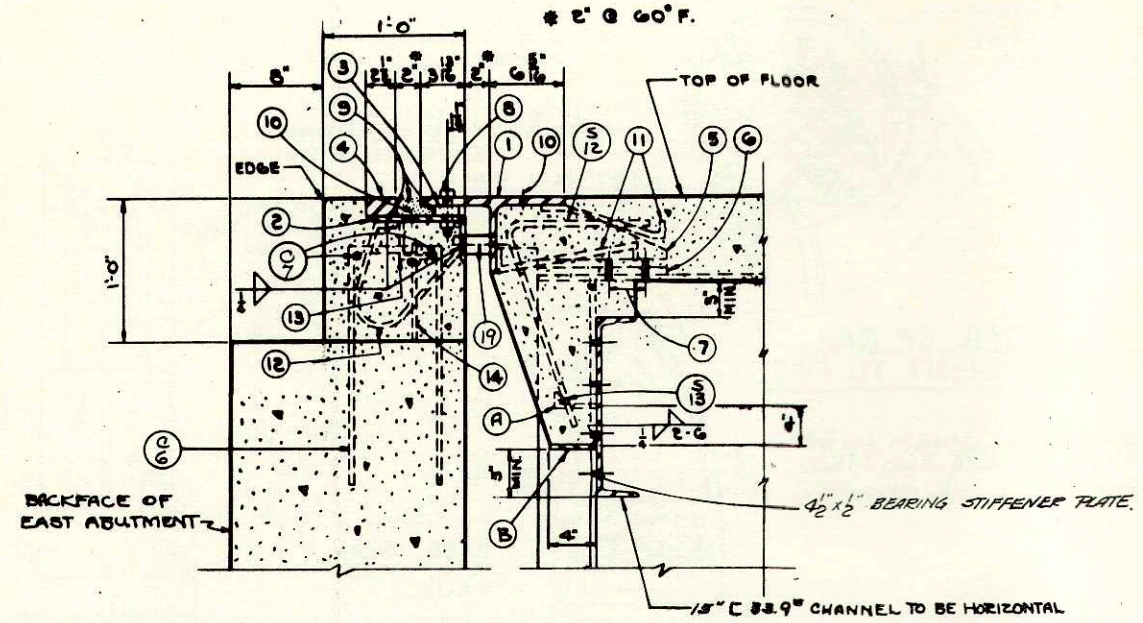
STATE HIGHWAY COMMISSION OF WISCONSIN			
LONG SECTION & BEARINGS			
DESIGN SPEC. AASHO 1961	LOADING: HS20-S16	CONSTR. SPEC. 1963	
DATE: 4/2/64	BY: G.N.	DRAWN: L.L.J.	CHKD: [Signature]
STRUCTURE B-32-43		SHEET 3 OF 10	

X28108

D.P.R. DIVISION	PROJECT	SHEET NUMBER	TOTAL SHEETS
4	IG-90-1 (17)3	9	25

LEGEND

1. S.T. 6" WF 39.5" x ROADWAY WIDTH.
2. L[#]2 x 4" x 1/2" x ROADWAY WIDTH.
3. BAR 2" x 3/4" x ROADWAY WIDTH. WELD TO L[#]2 WITH 2 LINES OF 1/4" FILLET WELD. 2@6".
4. BAR 2 1/2" x 1 1/2" x ROADWAY WIDTH. WELD TO L[#]2 WITH 2 LINES OF 1/4" FILLET WELD. 2@6".
5. FABRICATE FROM 3/8" WELDED PLATE. WELD TO STEM & FLANGE OF S.T.#1 WITH 1/4" FILLET WELD. NEAR & FAR SIDES.
6. 3/8" MIN LAMINATED & SLOTTED SHIM.
7. DRILL HOLES IN GIRDER FLANGE IN FIELD FOR 4-3/4" ERECTION BOLTS.
8. 3/4" BOLT WITH SQUARE NUT @ 2'-0" CENTERS. TACK WELD NUT TO L[#]2. GREASE FOR EASY REMOVAL. 1 1/2" x 1 1/4" SLOTTED IN S.T.#1. LONG DIM. OF SLOTTED HOLE TO BE PARALLEL TO & OF ROADWAY. 1 1/2" HOLE IN BAR #3 & L[#]2.
9. APPLY 1/16" COAT OF BITUMASTIC TO THIS SURFACE. AFTER CONCRETE HAS SET, FILL JOINT WITH HOT POURED ELASTIC TYPE JOINT SEALER.
10. PROVIDE 1 1/2" VENT HOLES @ 2'-0" CENTERS.
11. 3/8" BENT BARS @ 0'-9" ALTERNATE CENTERS BETWEEN STRINGERS 1'-3" LONG. WELD TO S.T.#1
12. 3/8" BENT BARS @ 1'-0" CENTERS 2'-0" LONG. WELD TO L[#]2
13. L 3" x 2 1/2" x 3/8" x 0'-8" @ 5'-0" CENTERS. WELD TO L[#]2. PROVIDE 3/8" HOLE IN 2 1/2" LEG.
14. 1/2" BOLT x 9" LONG & NUT TACK WELD NUT TO L[#]13.
15. R 2" x 3/8" x 3/8"
16. R 1'-02" x 3/8"
17. R 2 1/2" x 3/8" WELD TO R#15
18. R 2" x 3/8" x 1'-0" WELD TO R#15 & #16.
19. BLOCK AND BOLT FOR SHIPMENT WITH PIPE SLEEVE. PROVIDE 9/16" HOLES AT 3'-0" CTRS. IN S.T.#1 & L[#]2 FOR 1/2" BOLT.



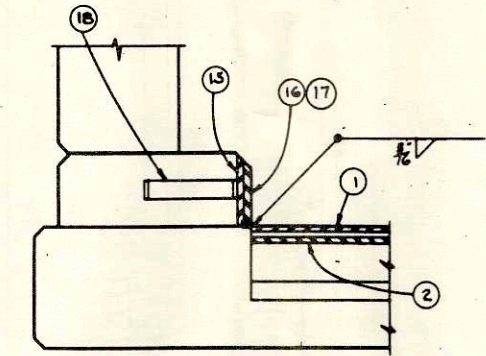
SECTION E1

NOTES

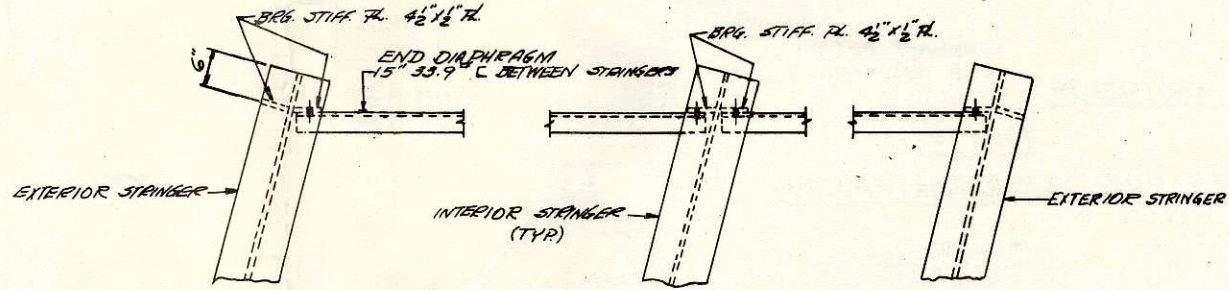
EXPANSION JOINT SHALL BE BUILT TO CONFORM TO ROADWAY CROWN, GRADE, & CURB SLOPE. ONE FIELD SPLICE SHALL BE PERMITTED IN JOINT. AFTER CONCRETE HAS SET REMOVE BOLT #8 AND FILL HOLES WITH HOT POURED ELASTIC TYPE JOINT SEALER.

ALL MATERIAL IN EXPANSION JOINT SHALL BE PAID FOR AS STRUCTURAL CARBON STEEL.

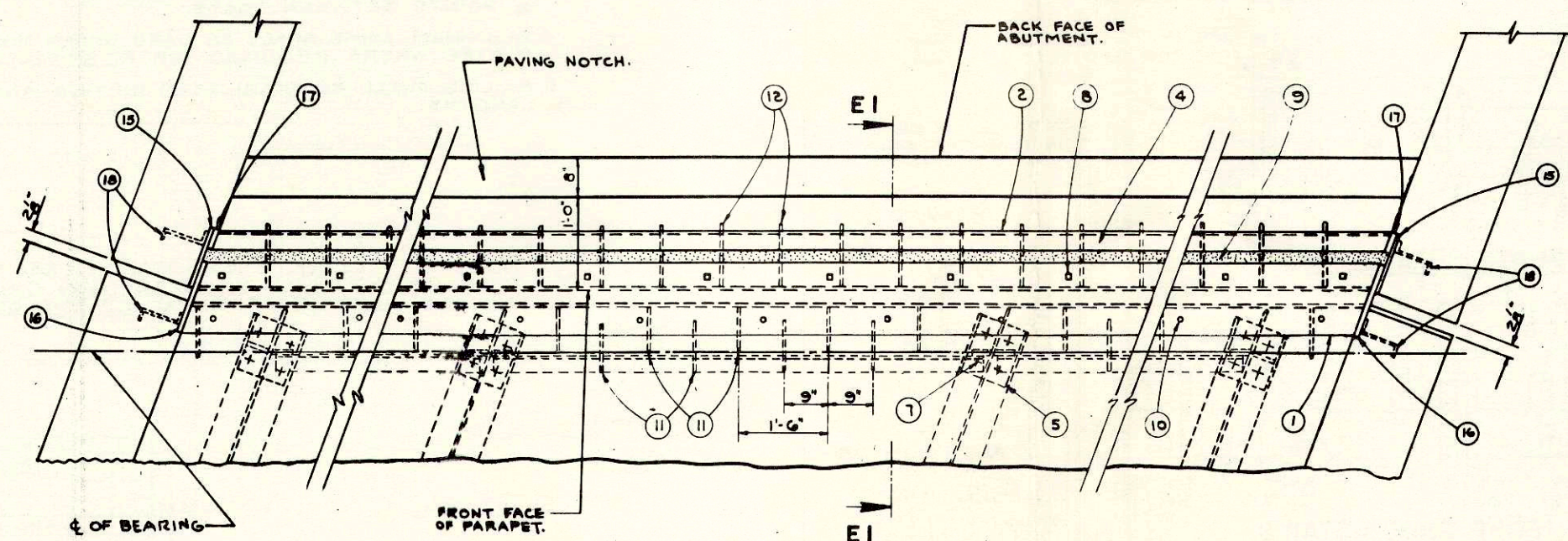
- (A) 1/2" BENT BAR. 3 PER CHANNEL. WELD TO CHANNEL.
- (B) BAR 4" x 3/8" TO BE PARALLEL TO TOP OF SLAB.



SECTION THRU JOINTS AT CURBS



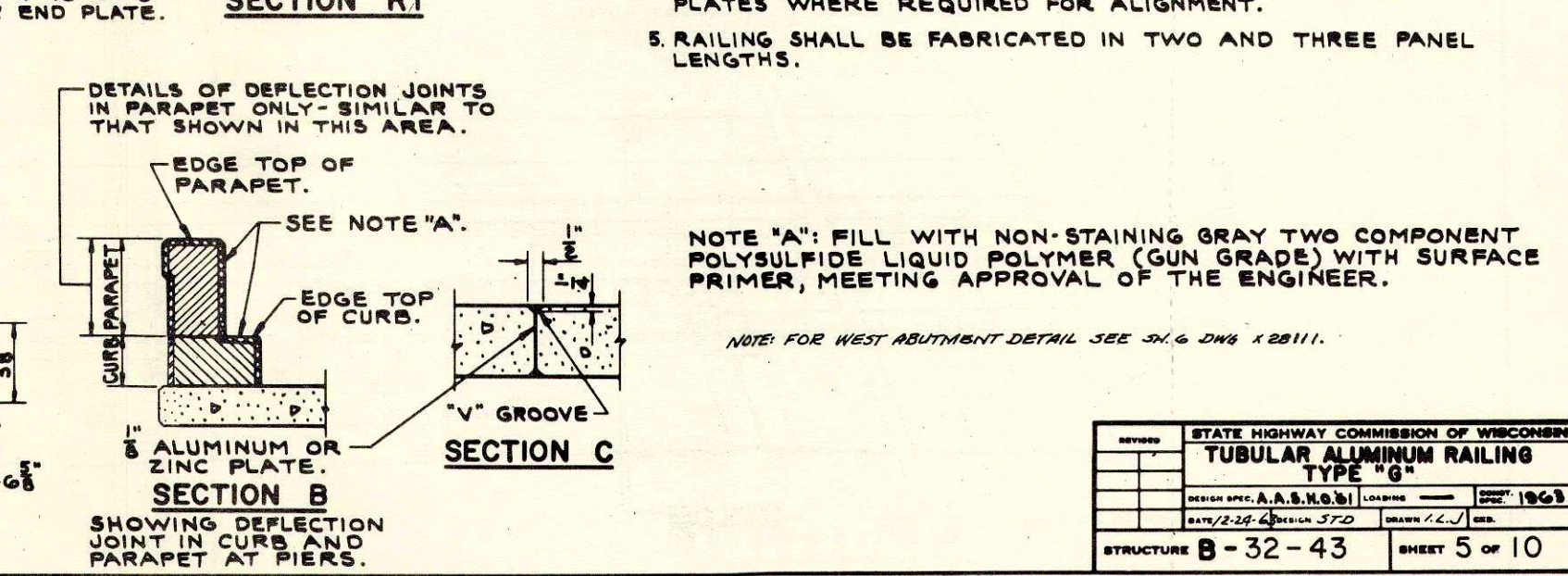
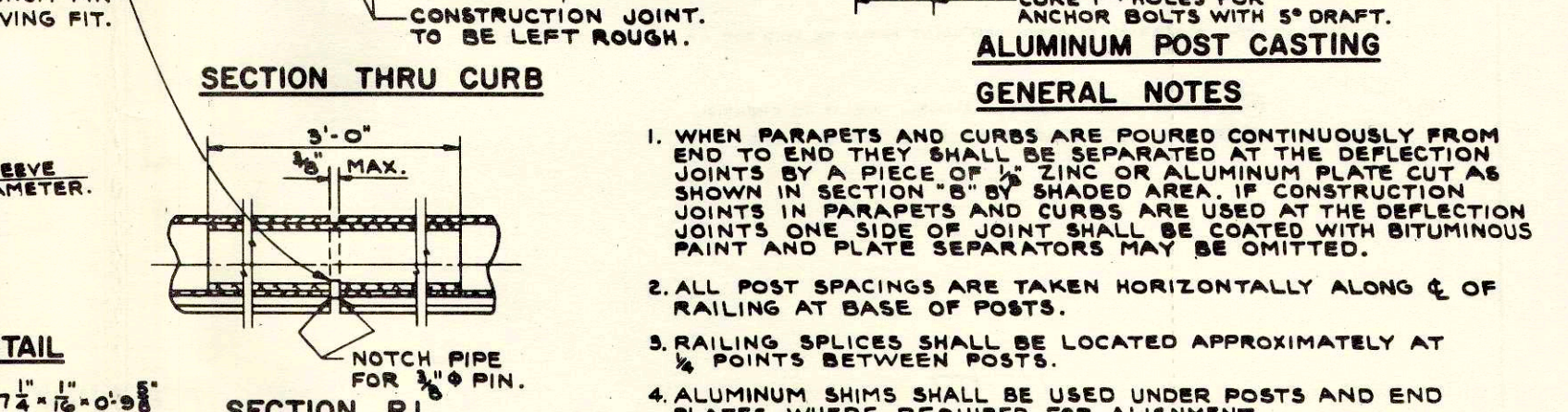
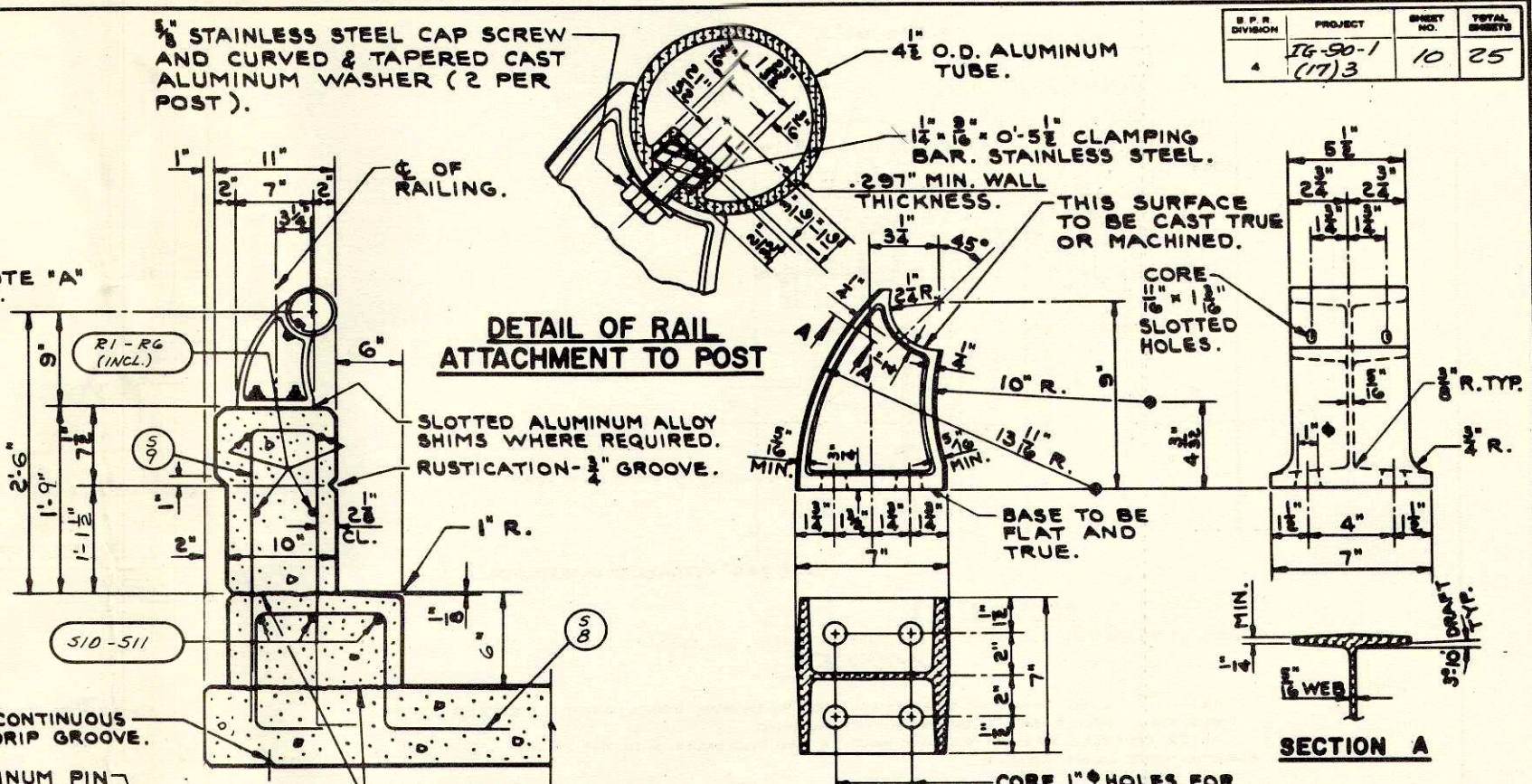
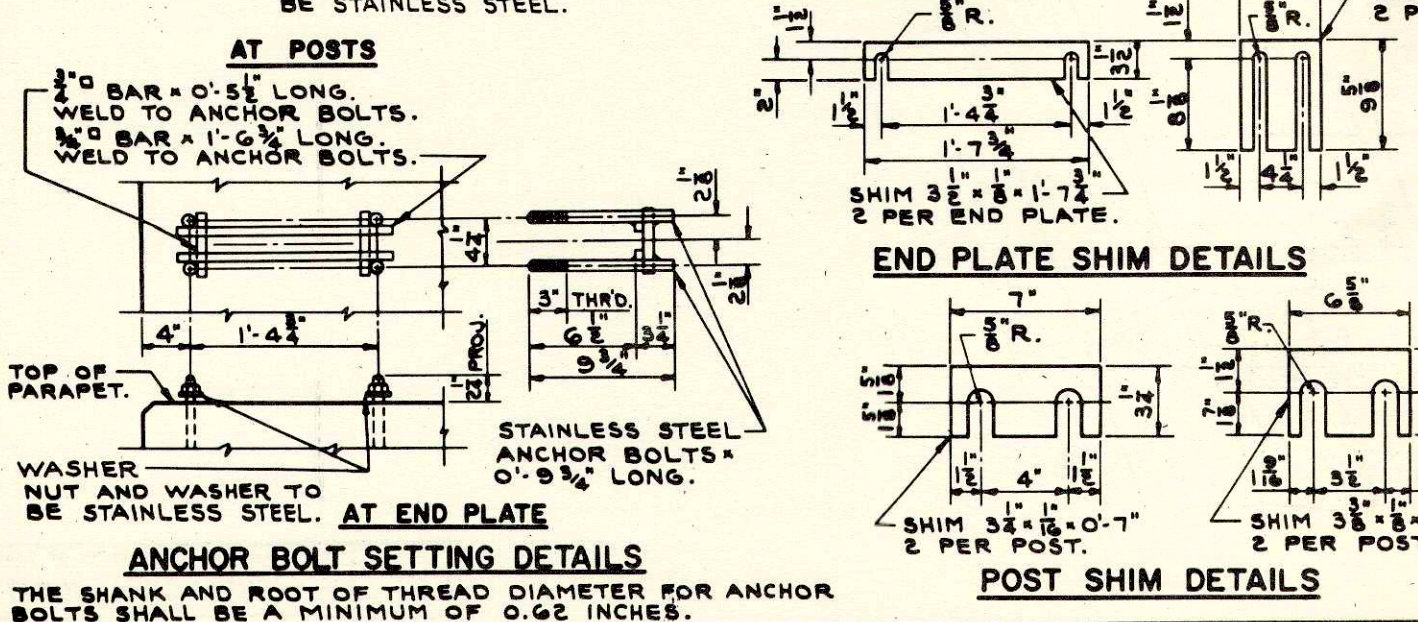
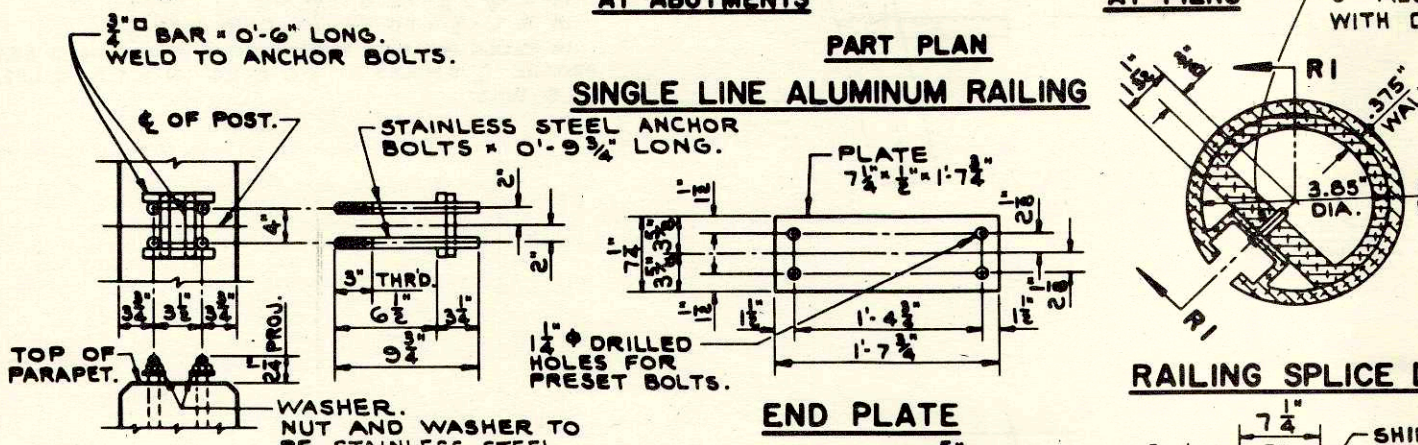
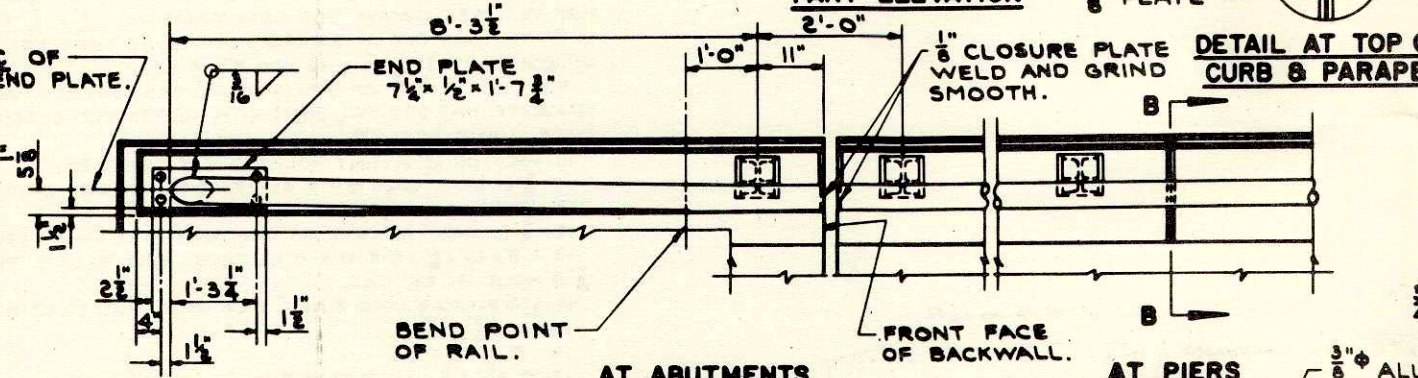
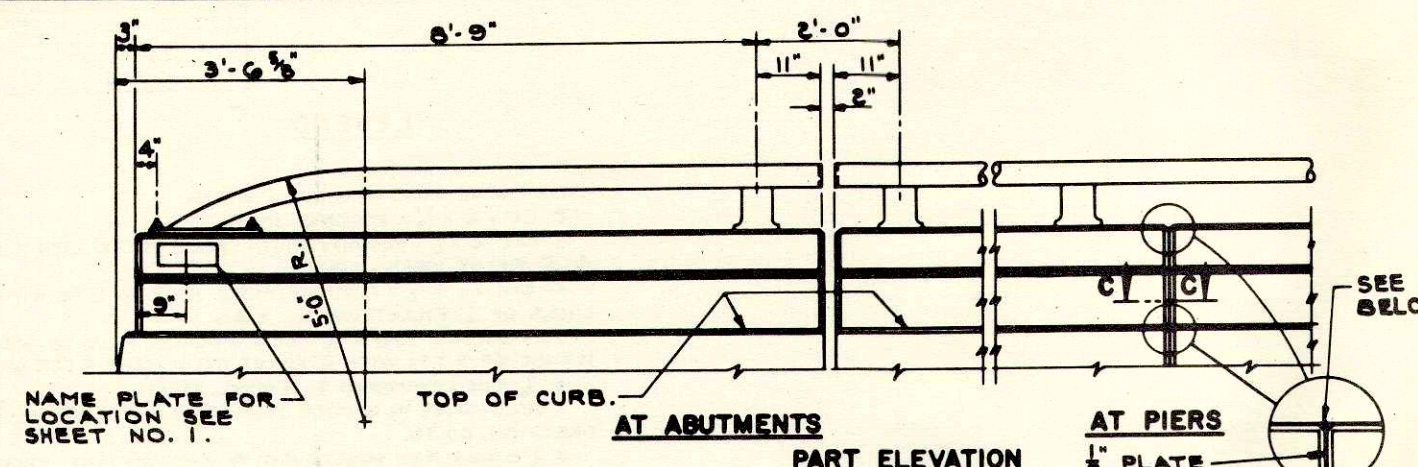
PART PLAN (AT EAST ABUTMENT ONLY)



PART PLAN

STATE HIGHWAY COMMISSION OF WISCONSIN			
EXPANSION JOINT			
DESIGN SPEC. A.A.S.H.O. '61	LOADING	MOD.	1963
DATE: 2-24-63	DESIGN: STD.	DRAWN: L.L.L.	CHECK: EX
STRUCTURE: B-32-43	SHEET 4 OF 10		

DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	16-90-1 (17)3	10	25



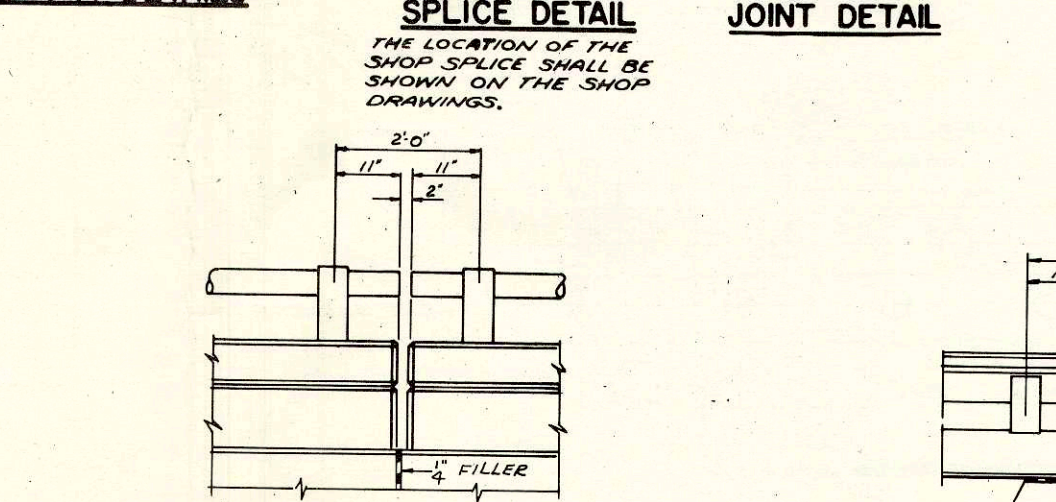
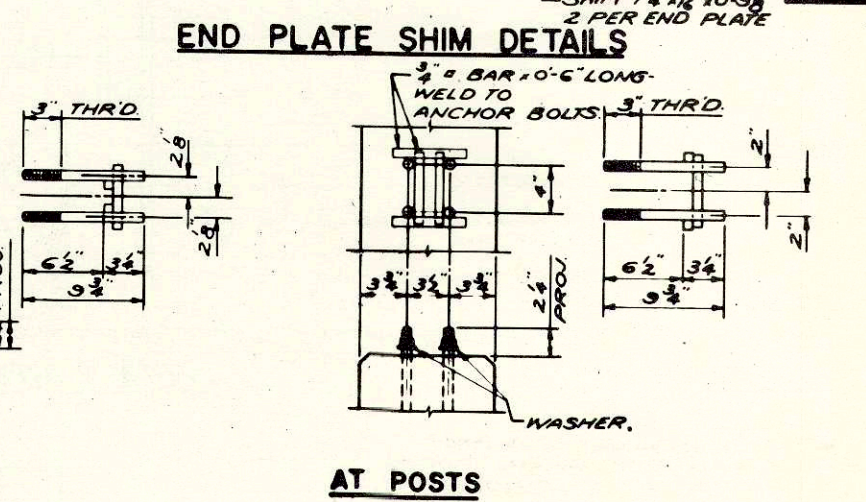
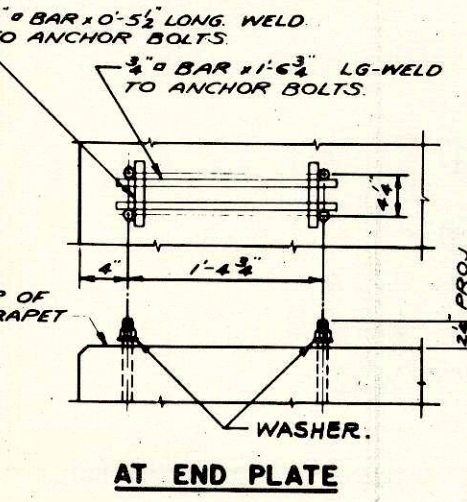
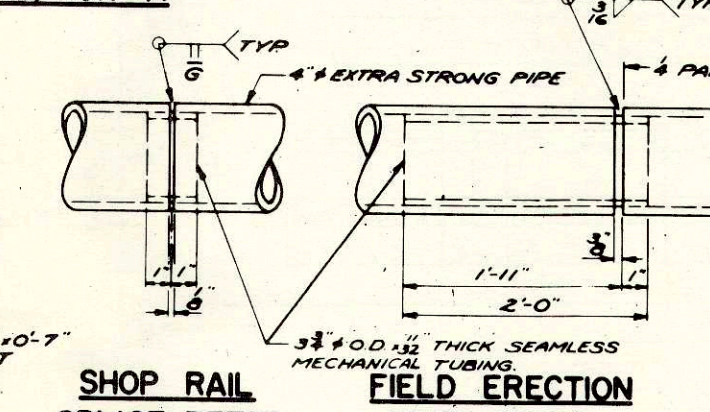
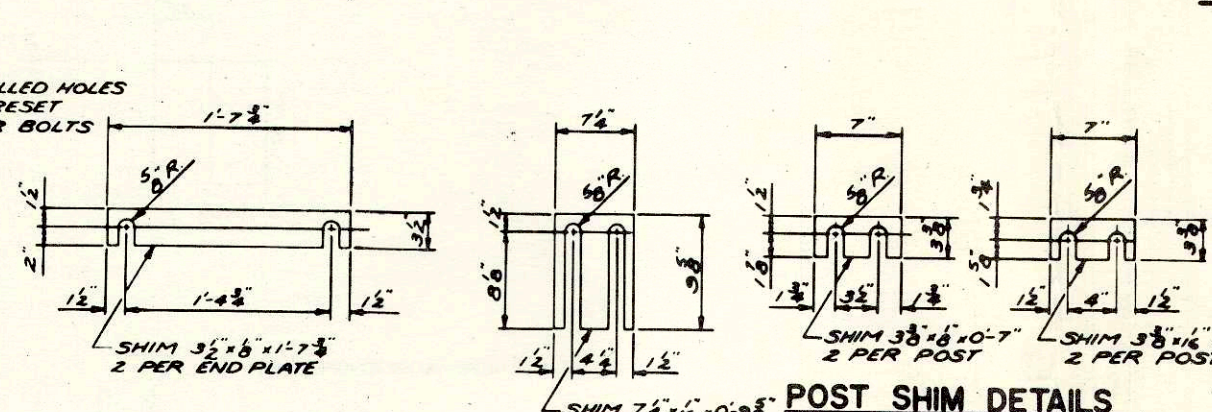
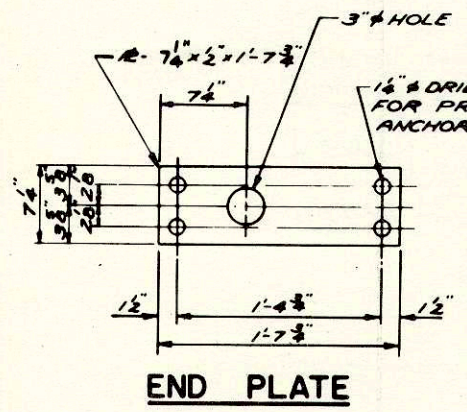
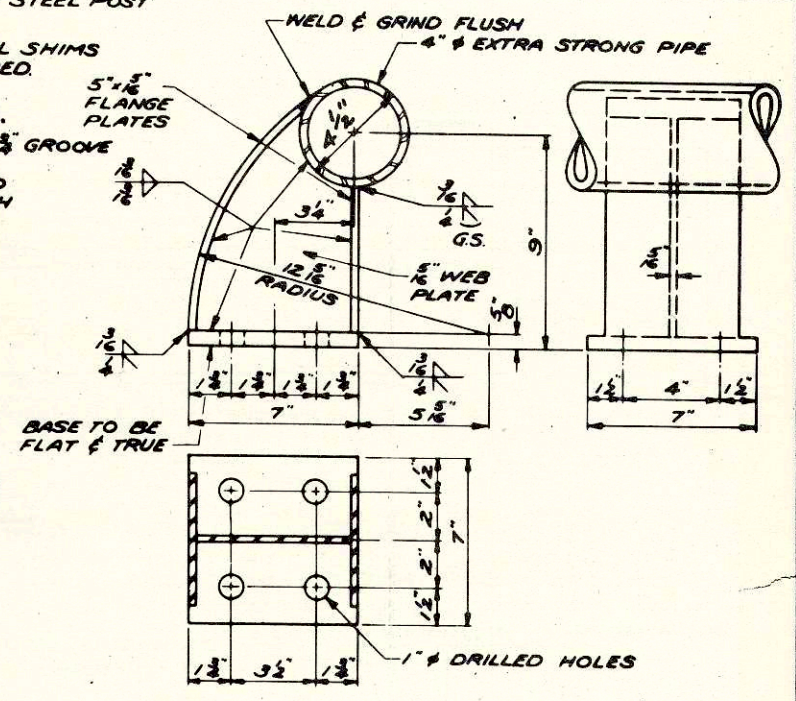
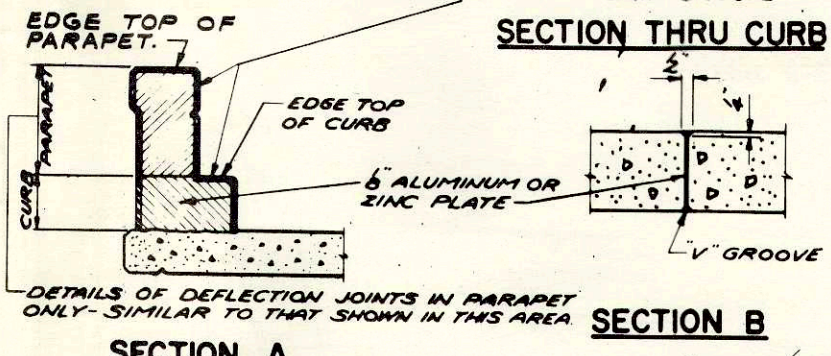
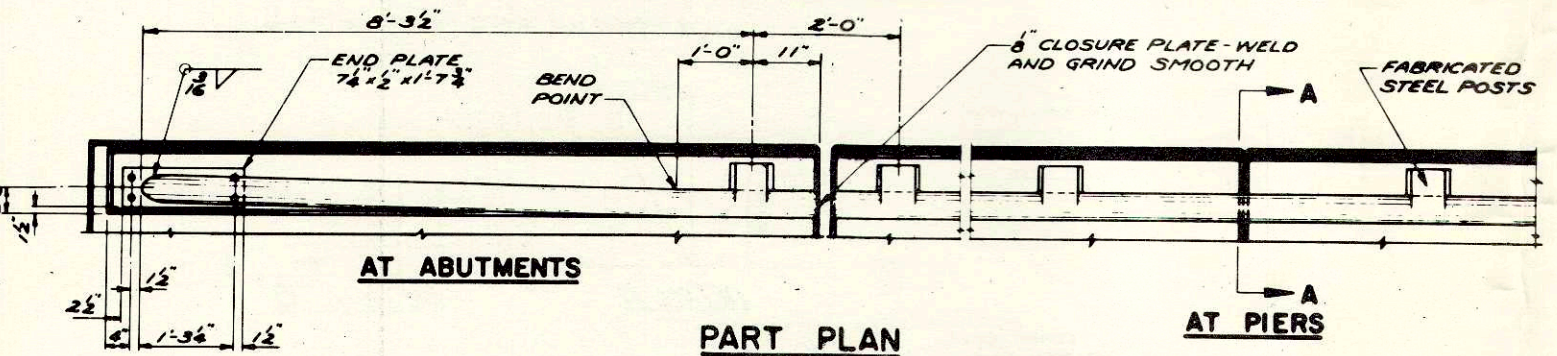
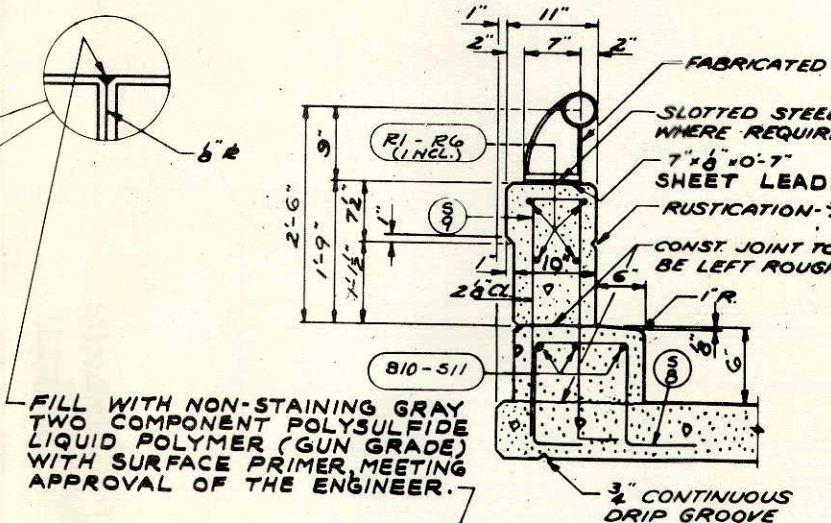
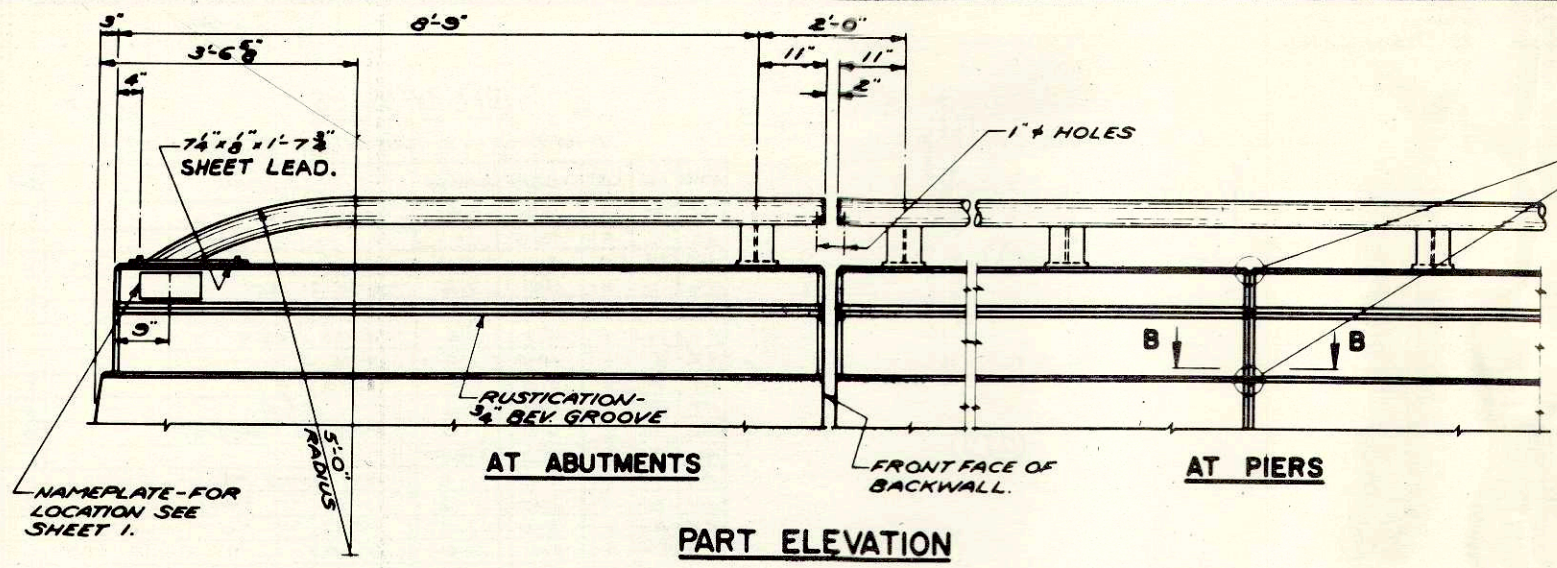
- GENERAL NOTES**
1. WHEN PARAPETS AND CURBS ARE POURED CONTINUOUSLY FROM END TO END THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/2" ZINC OR ALUMINUM PLATE CUT AS SHOWN IN SECTION "B" BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS AND CURBS ARE USED AT THE DEFLECTION JOINTS ONE SIDE OF JOINT SHALL BE COATED WITH BITUMINOUS PAINT AND PLATE SEPARATORS MAY BE OMITTED.
 2. ALL POST SPACINGS ARE TAKEN HORIZONTALLY ALONG C OF RAILING AT BASE OF POSTS.
 3. RAILING SPLICES SHALL BE LOCATED APPROXIMATELY AT 1/4 POINTS BETWEEN POSTS.
 4. ALUMINUM SHIMS SHALL BE USED UNDER POSTS AND END PLATES WHERE REQUIRED FOR ALIGNMENT.
 5. RAILING SHALL BE FABRICATED IN TWO AND THREE PANEL LENGTHS.

NOTE "A": FILL WITH NON-STAINING GRAY TWO COMPONENT POLYSULFIDE LIQUID POLYMER (GUN GRADE) WITH SURFACE PRIMER, MEETING APPROVAL OF THE ENGINEER.

NOTE: FOR WEST ABUTMENT DETAIL SEE SH. 6 DWG X 28111.

STATE HIGHWAY COMMISSION OF WISCONSIN			
TUBULAR ALUMINUM RAILING TYPE "G"			
DESIGN SPEC. A.A.S.H.O. 61	LOADING	DATE: 2-28-66	DESIGN: STD
DATE: 2-28-66	DESIGN: STD	DRAWN: J.C.L.	CHKD:
STRUCTURE B-32-43	SHEET 5 OF 10		

DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	TG-90-1 (17)3	11	25



NOTES

1. STEEL RAIL POSTS SHALL BE SET NORMAL TO GRADE.
2. RAILING SHALL BE FABRICATED IN 2 & 3 PANEL LENGTHS.
3. STEEL SHIMS SHALL BE USED UNDER POSTS AND UNDER END PLATES WHERE REQUIRED FOR ALIGNMENT.
4. WHEN PARAPETS AND CURBS ARE POURED CONTINUOUSLY FROM END TO END THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 6" ZINC OR ALUMINUM PLATE CUT AS SHOWN IN SECTION 'A' BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS AND CURBS ARE USED AT THE DEFLECTION JOINTS ONE SIDE OF JOINT SHALL BE COATED WITH BITUMINOUS PAINT AND PLATE SEPARATORS MAY BE OMITTED.
5. THE FOLLOWING MATERIALS SHALL BE USED:
 RAILING SHALL BE 4" EXTRA STRONG PIPE CONFORMING TO ASTM DESIGNATION A53, GRADE B.
 SLEEVES SHALL BE 3/8" O.D. 1/2" THICK SEAMLESS MECHANICAL TUBING MADE OF STEEL WITH A MINIMUM ULTIMATE TENSILE STRENGTH OF 60,000 P.S.I. AND A MINIMUM ELONGATION OF 10%.
 POSTS SHALL BE FABRICATED FROM MATERIAL CONFORMING TO ASTM DESIGNATION A36.
 ANCHOR BOLTS TO BE MADE FROM MATERIAL CONFORMING TO ASTM A307.
 6. CAULK EXPOSED OPENINGS BETWEEN SHIMS WITH LEAD WOOL.
 7. GALVANIZE ENTIRE RAILING AFTER FABRICATION INCLUDING NUTS, WASHERS, SHIMS AND TOP 3/8" OF ANCHOR BOLTS.

ANCHOR BOLT SETTING DETAILS

THE SHANK AND ROOT OF THREAD DIAMETER FOR ANCHOR BOLTS SHALL BE A MINIMUM OF 0.62 INCHES.

REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN
TUBULAR STEEL RAILING	
TYPE G	
DESIGN SPEC. A.A.S.H.O. 51	LOADING
DATE: 2-20-63	DESIGN: STD. DRAWN: L.J. CRB.
STRUCTURE B-32-43	SHEET 6 OF 10

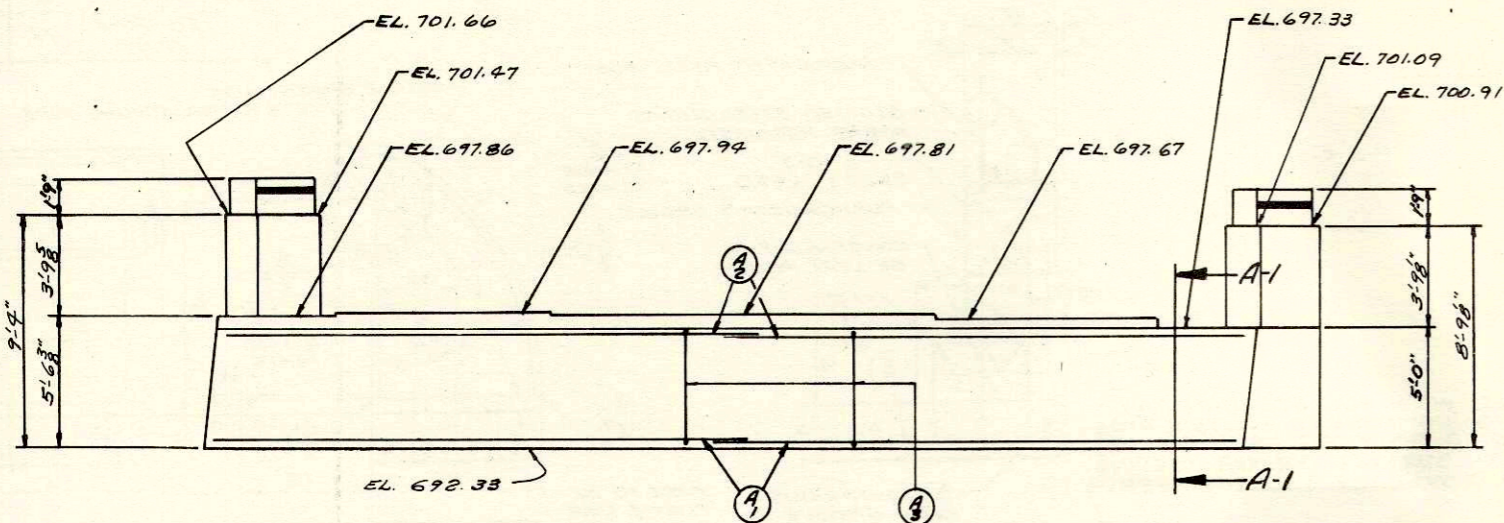
S.P.A. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	IG-50-1 (17)3	12	25

BILL OF BARS 1315 #

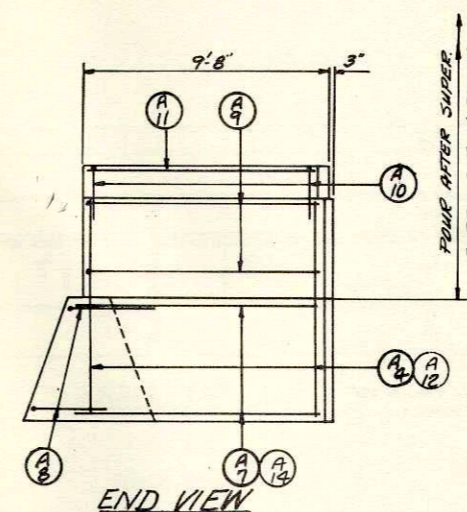
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT

MAR. NO.	SIZE	LENGTH	SPACING	LOCATION	DIST.
A1	20	4	22-0	SHOWN	BODY-HORIZ
A2	4	6	22-6	"	TOP
A3	3B	4	9-0	±2-0	VERT
A4	7	4	8-3	1-6	WING 3-VERT
A5	6	4	4-6	1-6	"
A6	14	4	4-9	1-6	WINGS - 3 & 4
A7	8	4	10-0	1-6	WING 3
A8	8	4	4-3	1-6	WING 3 & 4
A9	12	4	10-6	1-6	" 3 & 4
A10	20	5	6-0	1-0	RAILING PARAPET
A11	8	5	9-3	SHOWN	"
A12	7	4	9-0	1-6	VERT-WING #4
A13	6	4	5-0	1-6	" #4
A14	8	4	10-6	1-6	HORIZ - #4
A15	20	5	3-9	1-6	DOWELS

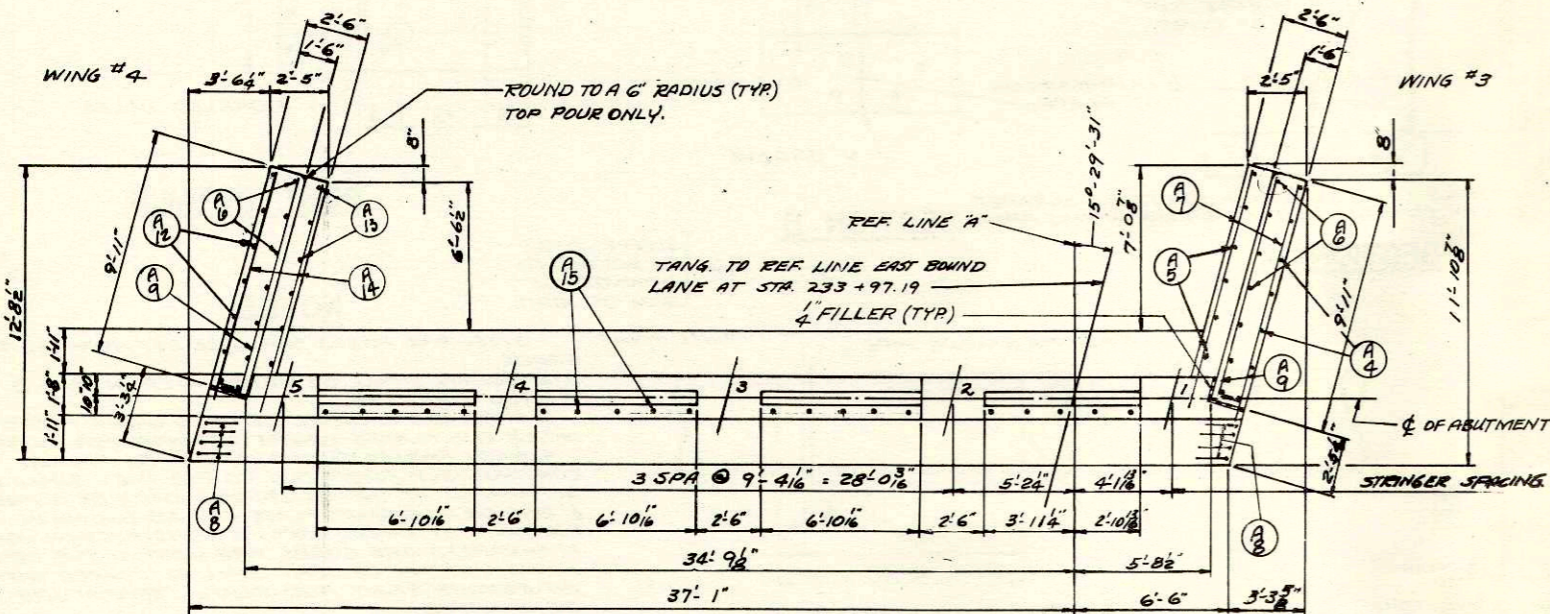
* SPACE A3 BARS TO CLEAR PILING.



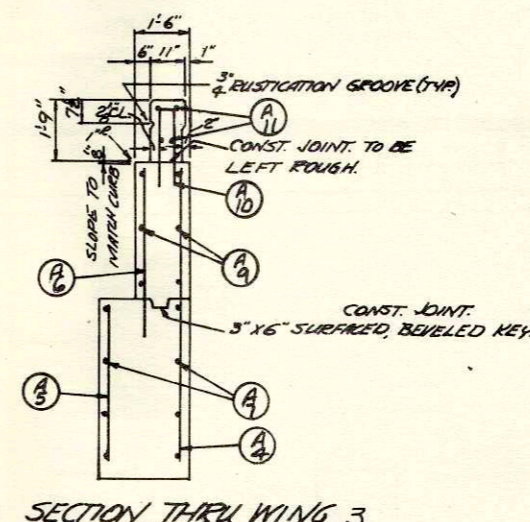
ELEVATION
(LOOKING WEST)



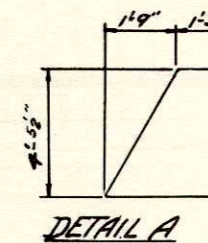
END VIEW



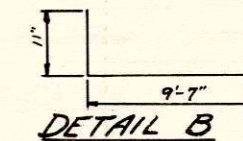
PLAN



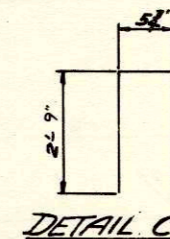
SECTION THRU WING 3



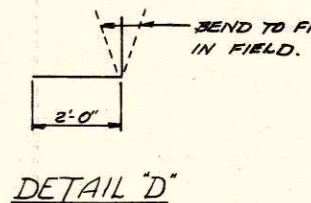
DETAIL A



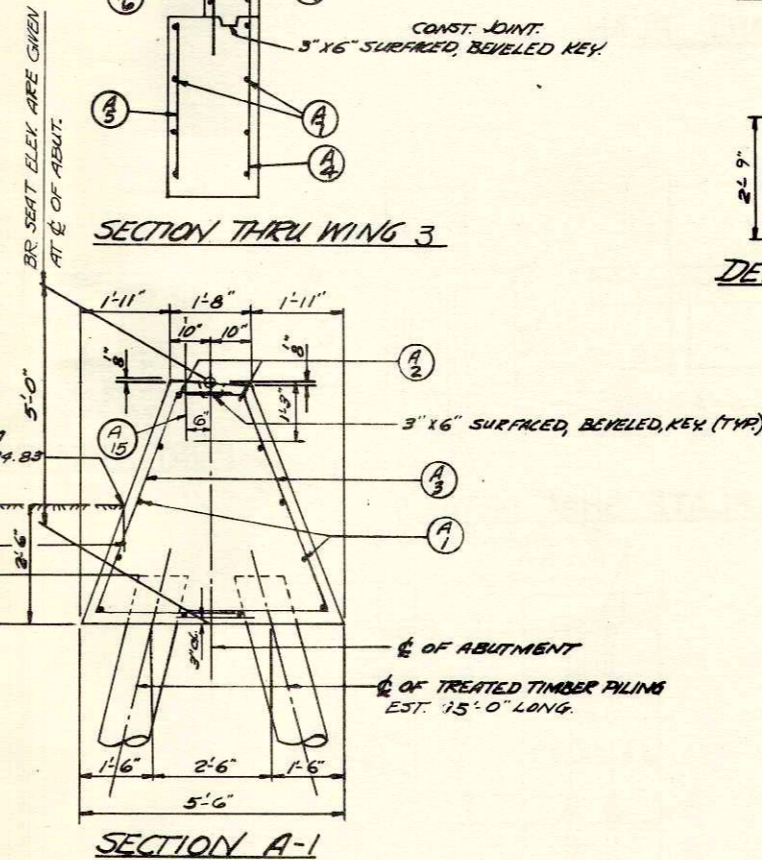
DETAIL B



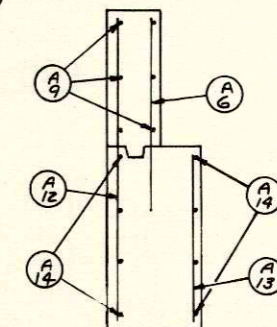
DETAIL C



DETAIL D

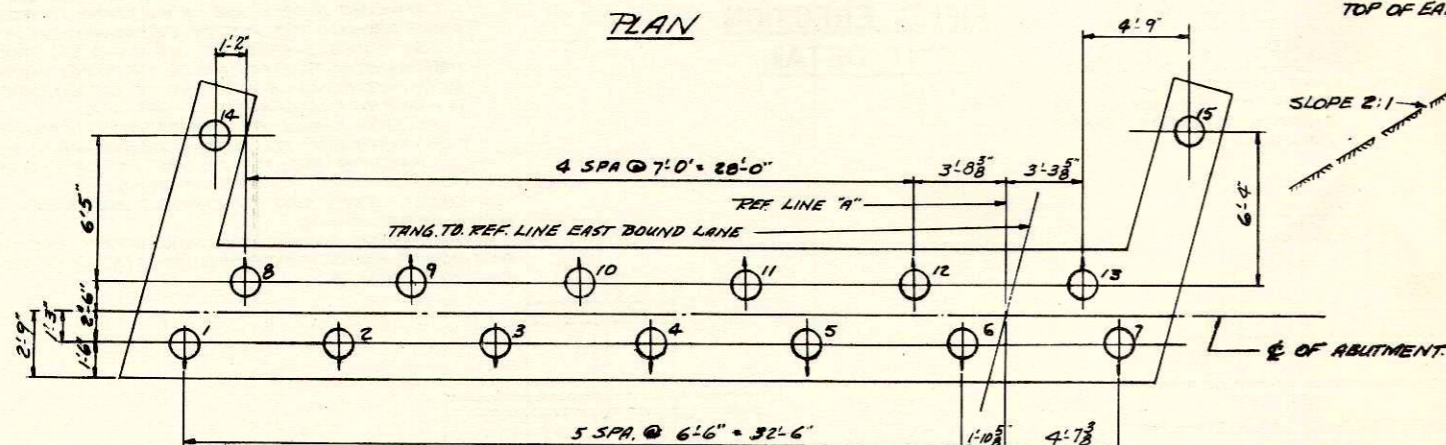


SECTION A-1



SECTION THRU WING 4

NOTE:
FILL TO ELEVATION 694.83 BEFORE DRIVING PILING. UPPER LIMITS FOR EXCAVATION FOR STRUCTURES SHALL NOT EXCEED THIS ELEVATION.



PILE LAYOUT

REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN		
	WEST ABUTMENT		
	DESIGN SPEC. ASHO 61	LOADING HS-20	CONTR. SPEC. 1963
	DATE 12-24-65	DESIGN G.N.	DRAWN LLM CKD B
STRUCTURE B-32-43	SHEET 7 OF 10		

X 28112

S.D. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	16-90-1 (17)3	13	25

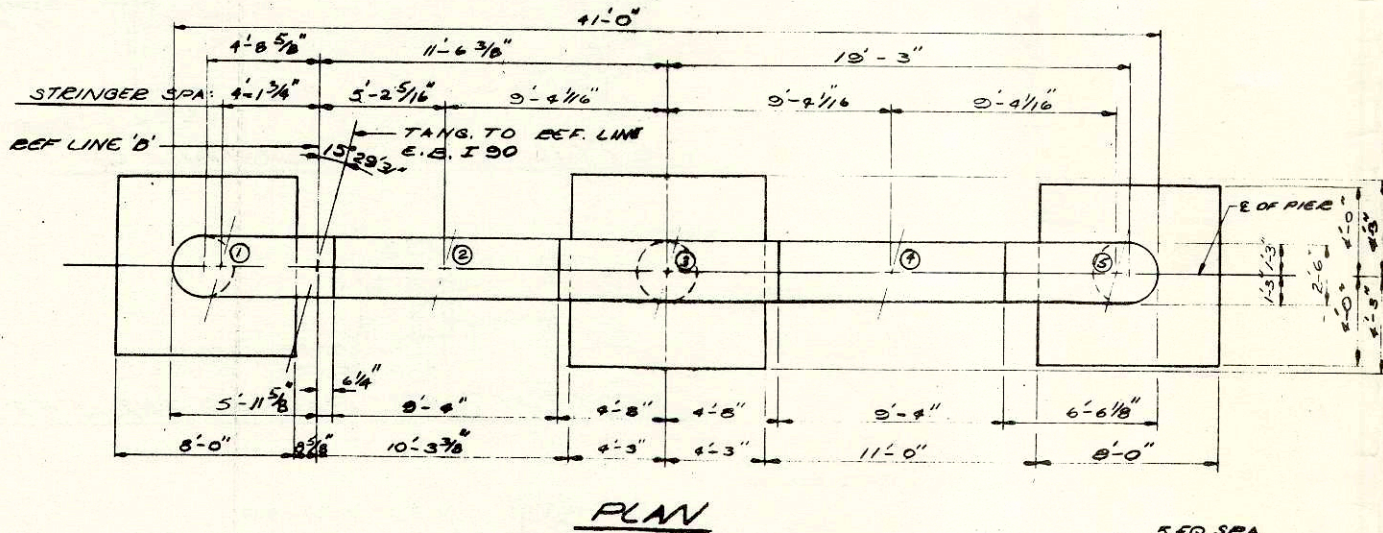
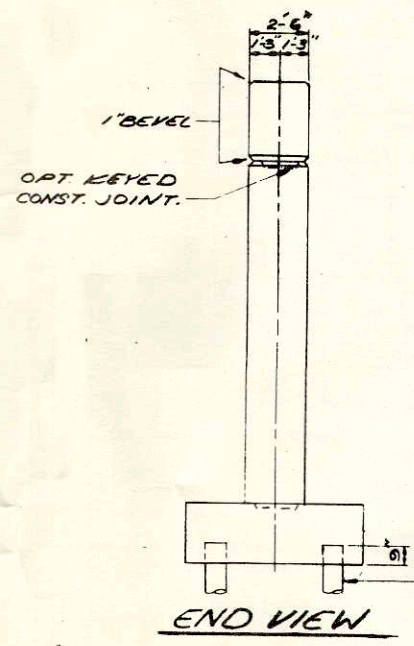
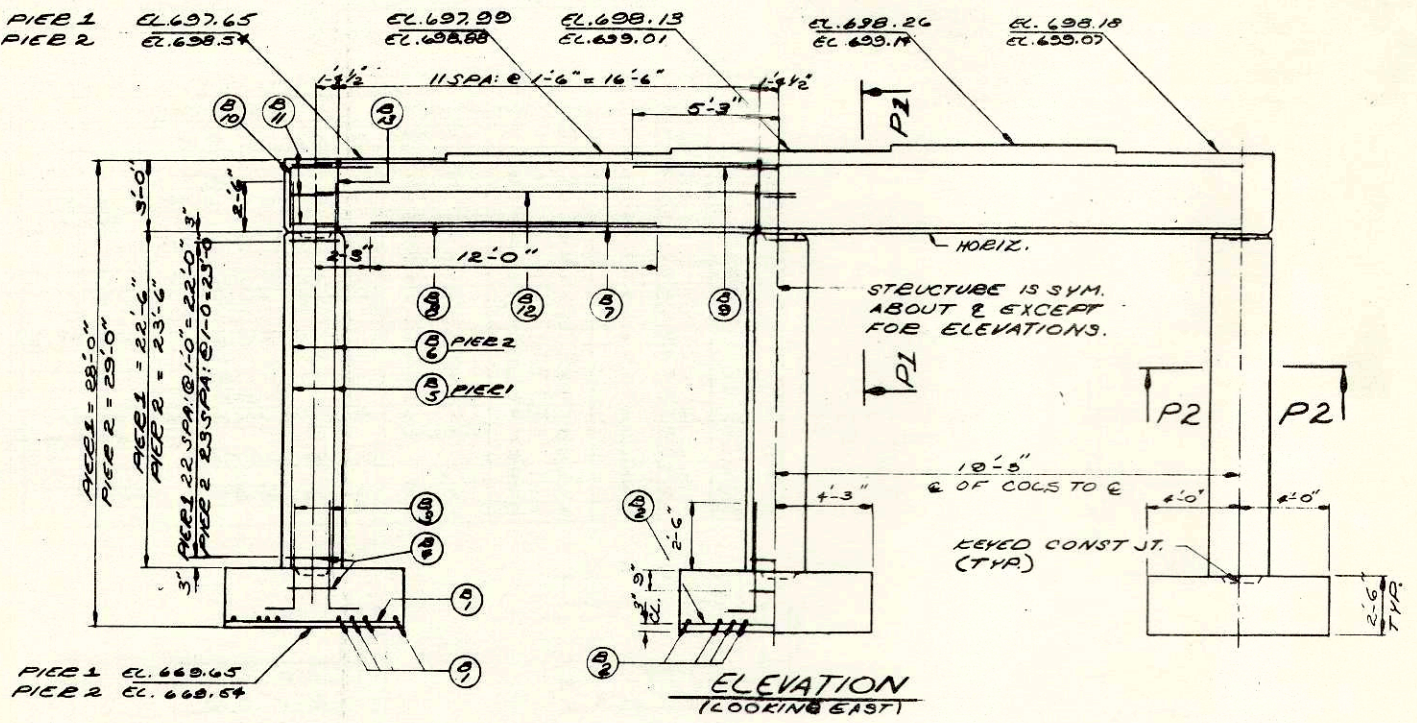
BILL OF BARS

TOTAL FOR PIERS 2 & 2 16,980#

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

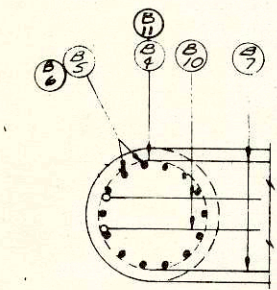
MARK	NO	SIZE	LENGTH	SPACING	LOCATION	DET.
B 1	44	8	7-6	SHOWN	FOOTINGS - EXTERIOR	
B 2	32	8	8-0	"	INTERIOR	
B 3	84	10	5-0	"	COLUMNS	C
B 4	147	4	7-9	1-0	"	A
B 5	42	10	25-0	SHOWN	COLUMNS VERT. PIER-1 ONLY	
B 6	42	10	26-0	"	" PIER-2 ONLY	
B 7	10	10	38-6	"	CAP HORIZ.	
B 8	16	10	12-0	"	"	
B 9	8	10	10-6	"	"	
B 10	8	10	7-6	"	"	
B 11	12	5	6-0	"	CORNER BARS	C
B 12	8	4	19-9	"	END SIDES	D
B 13	40	2	10-8	1-6	HORIZ. STIRRUPS	B

NOTE: ALL KEYED CONST. JTS FORMED BY A SURFACE BEVELED 1-3/4" x 1-8"



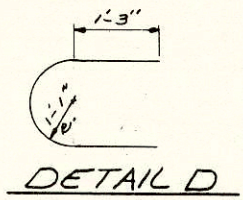
DETAIL A

DETAIL B

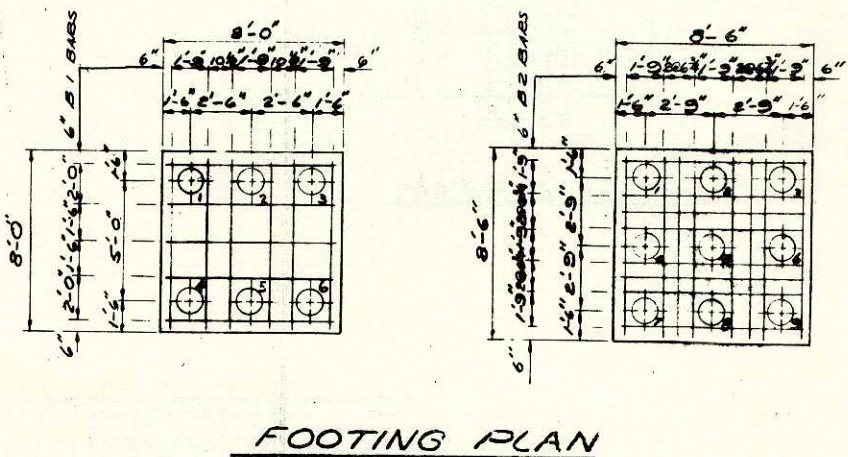


END OF CAP DETAIL

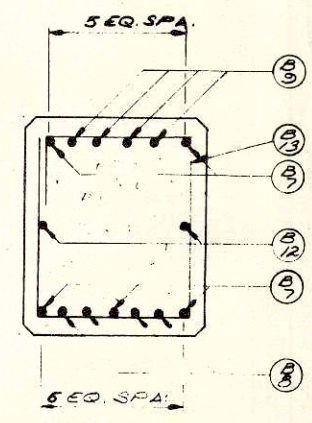
DETAIL C



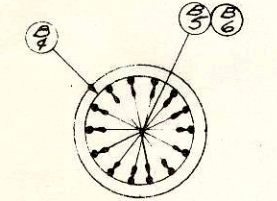
DETAIL D



FOOTING PLAN



SECTION P1



SECTION P2

CONCRETE MASONRY

	PIER 1	PIER 2
FOOTINGS	18.5	18.5
COLUMNS	12.3	12.8
CAP	12.9	12.8
TOTAL	43.7	44.1

REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN		
	PIERS 1 & 2		
	DESIGN SPEC. A.A.S.H.O. 61	LOADING MOD. SPEC. 1963	CONST. SPEC.
DATE	DESIGN C.S.	DRAWING C.R.	CRD. P.C.
STRUCTURE B-32-43	SHEET 8 OF 10		

X DIMENSIONS ARE ALONG FRONT FACE OF PARAPET

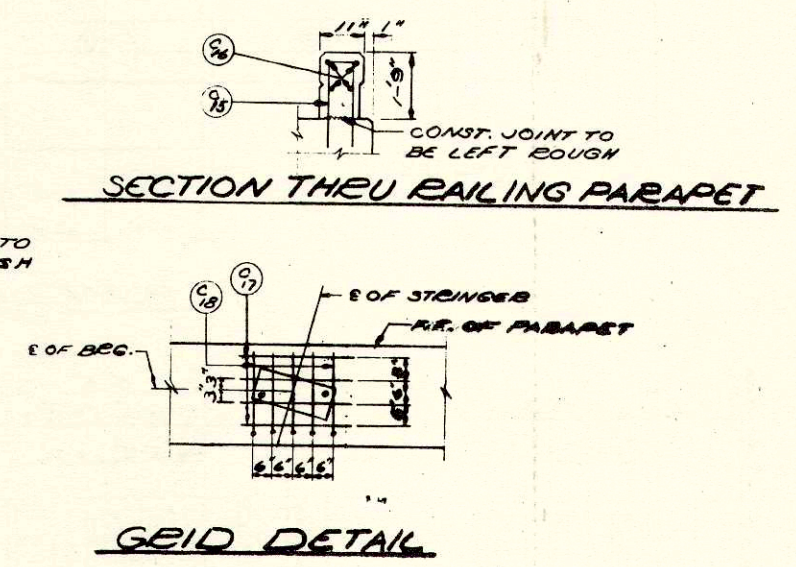
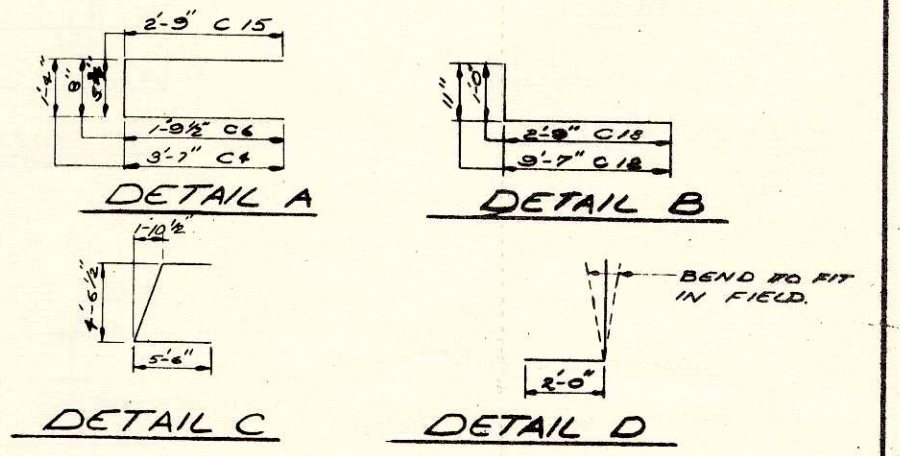
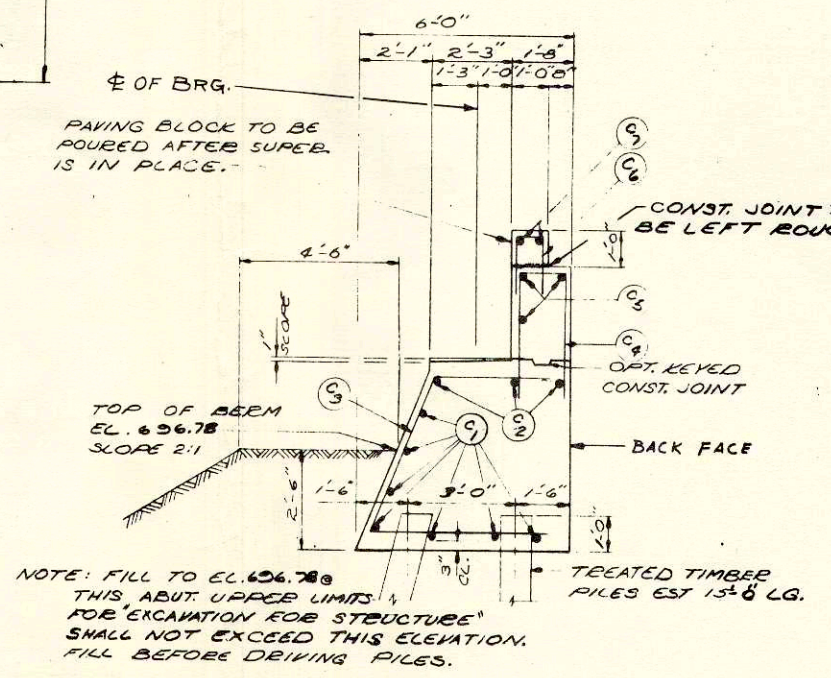
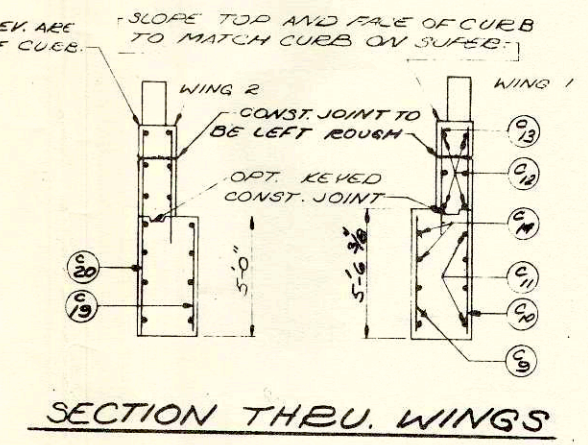
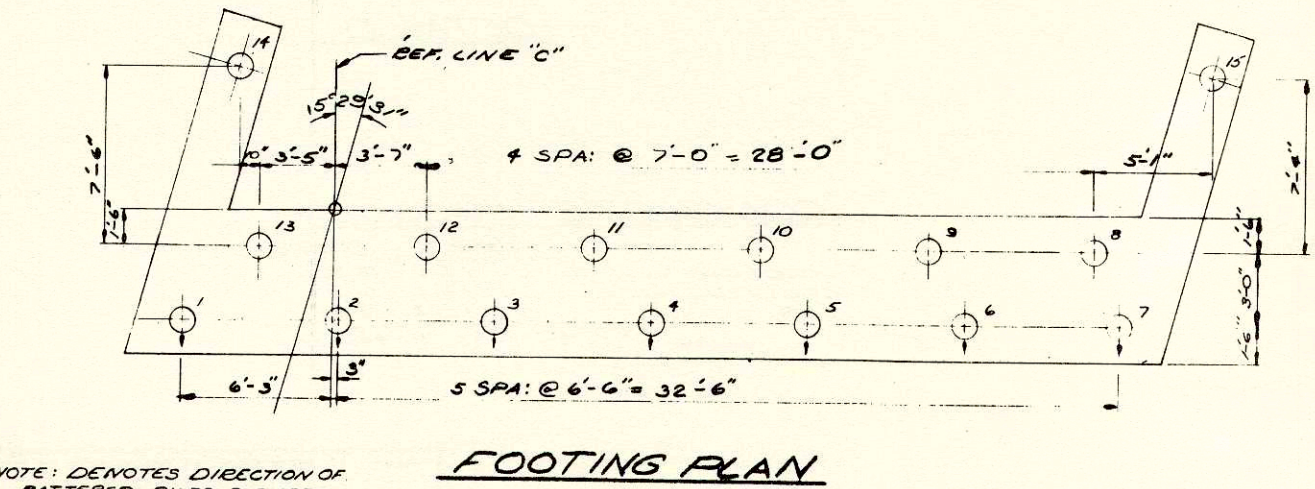
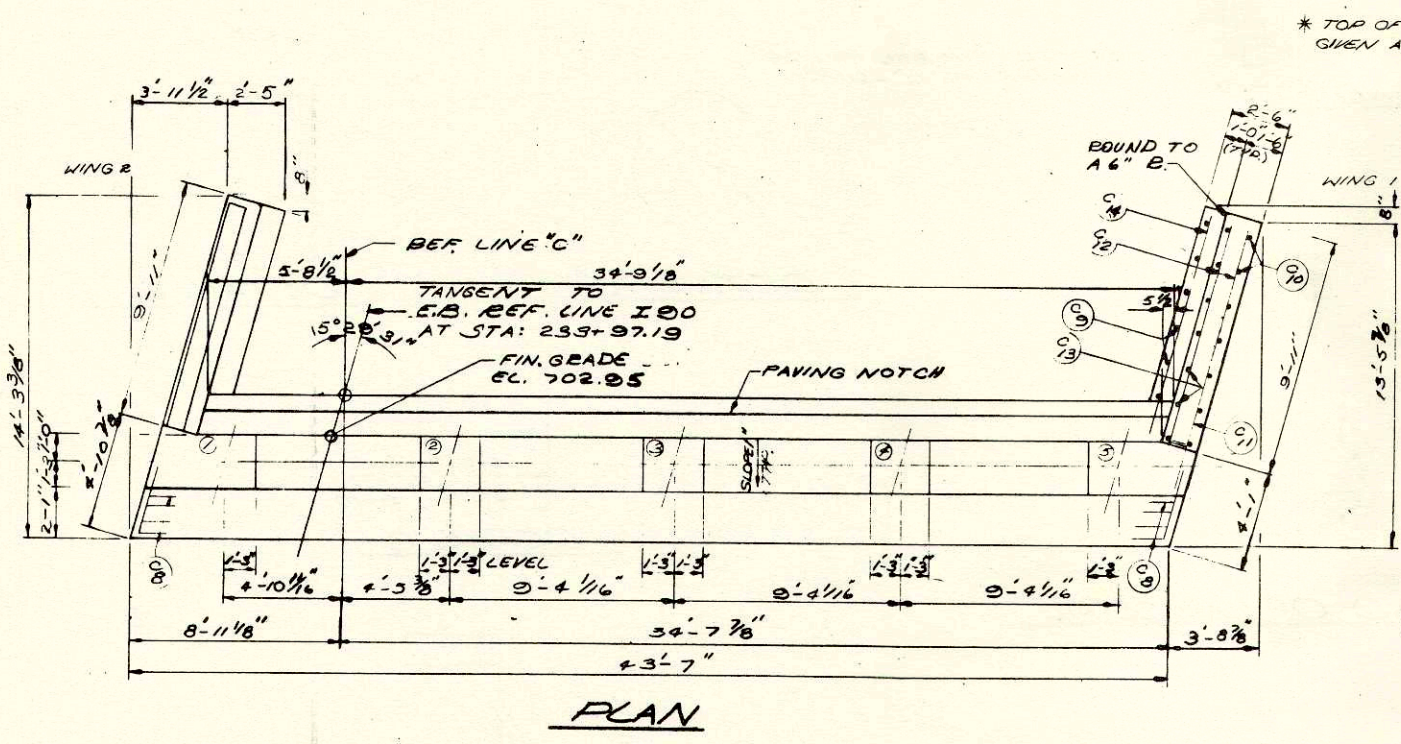
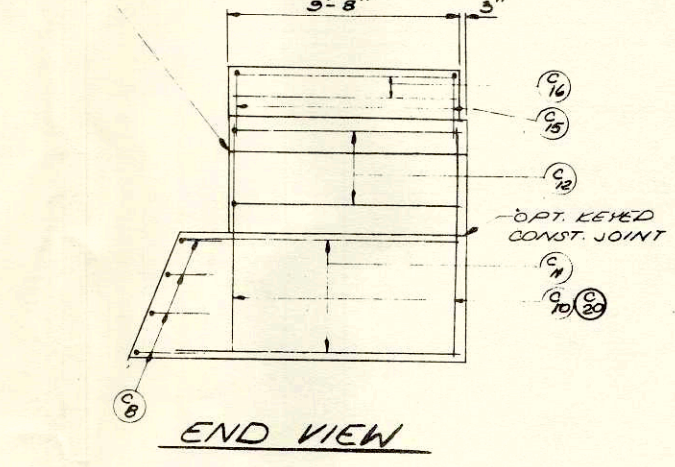
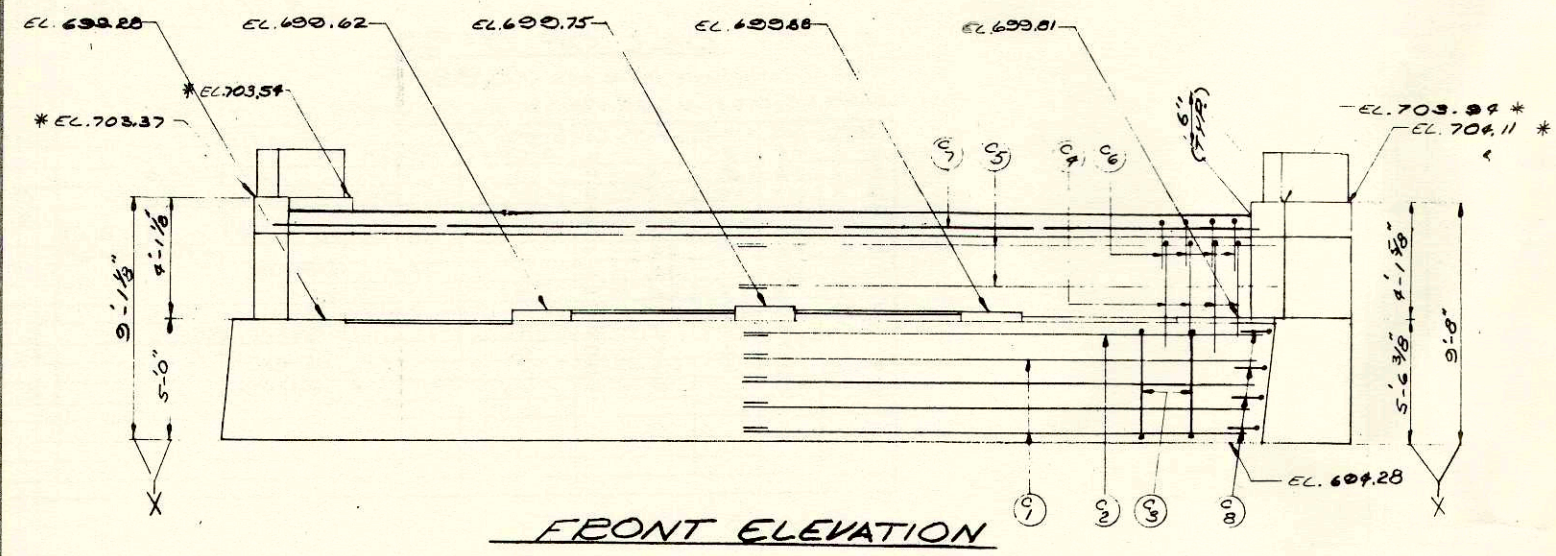
NOTE: FOR ADDITIONAL RAILING PARAPET DETAIL SEE SHEETS X28110 & X28111
 CONST. JOINT IN WINGS, WITH A 3/4 BUSTICATION GROOVE IN FRONT FACE. TOP OF WING TO BE POURED AFTER SUPER. CURBS ARE IN PLACE.
 ALL OPT. KEYED CONST. JOINTS SHALL BE FORMED BY A SURFACED BEVELED 2"x6"

BILL OF BAES
 # 1790

D.P. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	IG-90-1 (17)3	14	25

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

MARK	NO	SIZE	LENGTH	SPACING	LOCATION	DET.
C 1	14	4	22-0	SHOWN	BODY HORIZ.	
C 2	6	6	22-3	"	"	
C 3	18	4	13-3	±2-0	" KEET.	C
C 4	27	5	8-6	1-6	PARAPET WALL VERT.	A
C 5	6	4	21-6	SHOWN	" HORIZ.	
C 6	4	5	4-3	1-0	PAVING BLOCK	A
C 7	10	4	8-0	SHOWN	"	
C 8	8	4	4-0	1-6	CORNER BARS	
C 9	6	4	5-0	1-6	WING VERT. WING 1	B
C 10	7	4	9-3	1-6	"	
C 11	8	4	11-3	7-6	" HORIZ. WING 1 & 2	
C 12	12	4	10-6	1-6	" VERT.	B
C 13	14	4	1-9	1-6	" HORIZ.	
C 14	8	4	9-6	1-6	" HORIZ.	
C 15	20	5	6-0	1-0	RAILING PARAPET VERT.	A
C 16	8	5	9-3	SHOWN	" HORIZ.	
C 17	20	4	2-3	"	GRID DETAIL	
C 18	25	4	3-9	"	"	
C 19	6	4	4-9	1-6	WING VERT - WING 2	B
C 20	7	4	8-9	1-6	"	



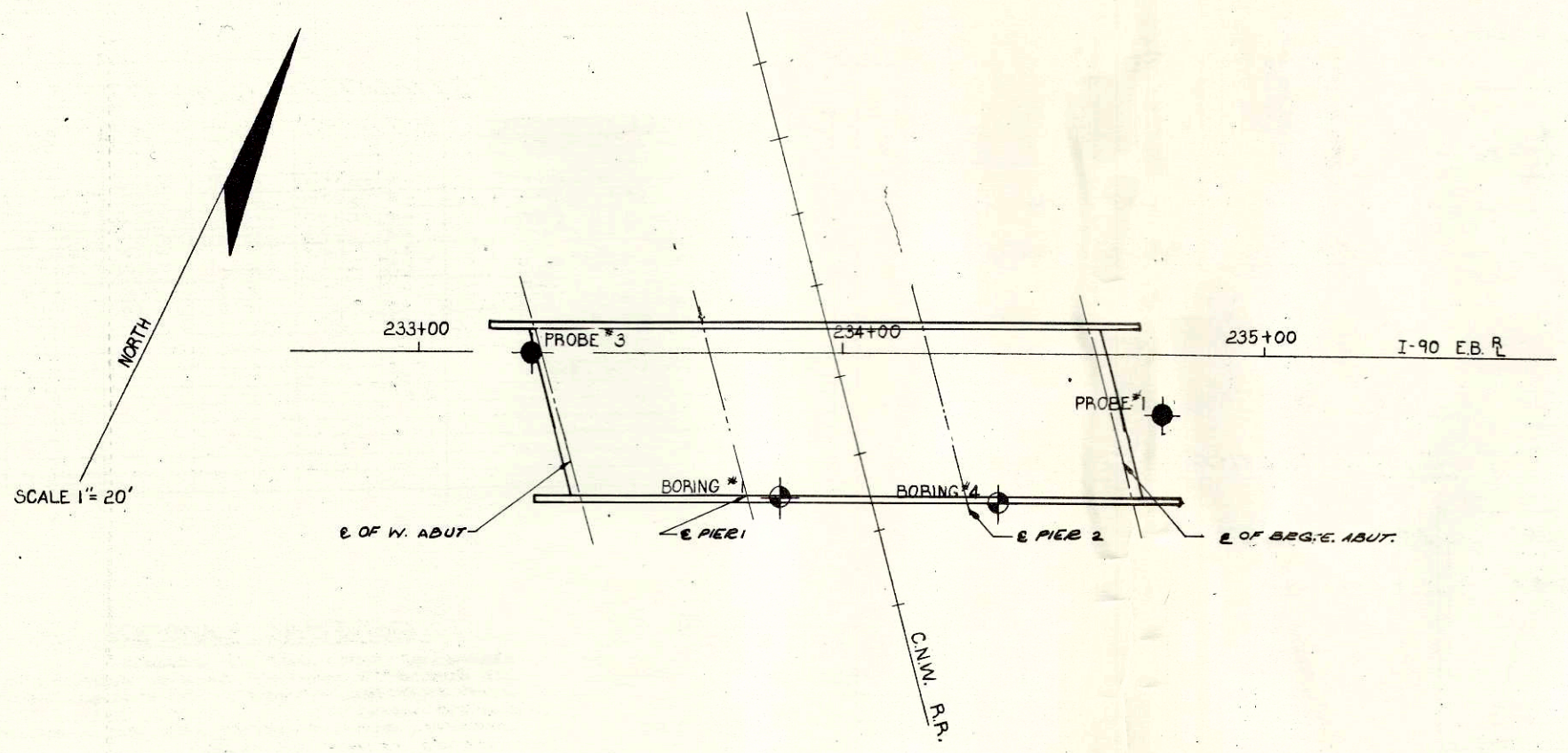
NOTE: DENOTES DIRECTION OF BATTERED PILES. BATTERED PILING TO BE BATTERED 3" PER FOOT.

NOTE: FILL TO EL. 696.78 THIS ABUT. UPPER LIMITS FOR EXCAVATION FOR STRUCTURE SHALL NOT EXCEED THIS ELEVATION. FILL BEFORE DRIVING PILES.

DESIGNED BY	STATE HIGHWAY COMMISSION OF WISCONSIN
EAST ABUTMENT	
DESIGN SPEC.	A.S.H.O. LOADINGS
DATE	12-24-65
DESIGN	L.G.
DRAWING	NO.
STRUCTURE	B-32-93
SHEET	14 OF 14

X28110

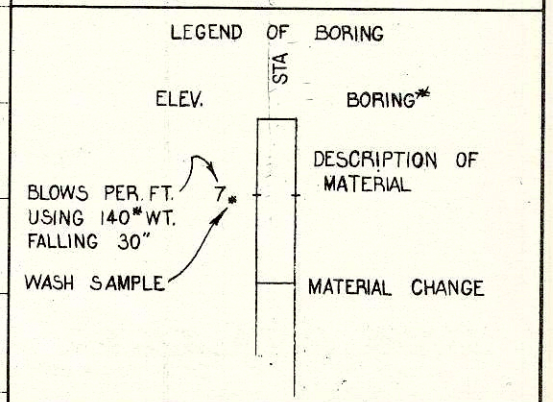
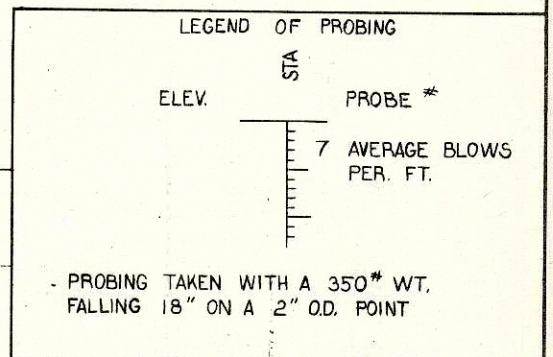
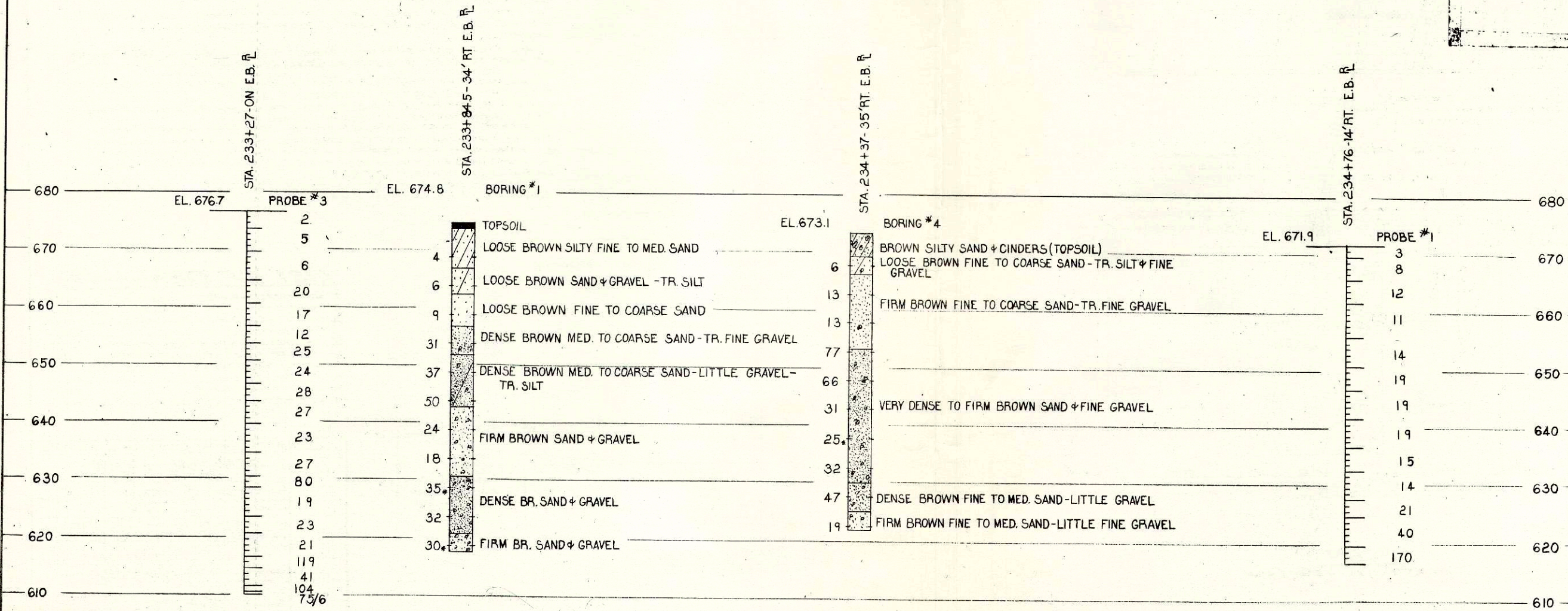
D.P. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	IG-90-1 (17)3	15	25



SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN

FOR THE DESIGN OF THE STRUCTURE FOUNDATION, TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING WITH THE LOG OF SUCH EXPLORATION DATA AS INTERPRETED FOR SUCH DESIGN PURPOSE AS SHOWN. THE EXPLORATIONS WERE MADE BY ORDINARY AND CONVENTIONAL METHODS AND CARE DEEMED ADEQUATE FOR SUCH PURPOSE. HOWEVER, SINCE IT IS A MATTER OF COMMON KNOWLEDGE THAT THE EXACT CHARACTER OF ANY MATERIAL AND ITS REACTION IS DIFFICULT TO DETERMINE FROM SUCH SUBSURFACE EXPLORATION AND THAT THE KIND AND CHARACTER OF MATERIAL AT THE SITE WHERE THE FOUNDATIONS ARE BUILT MAY VARY SUBSTANTIALLY FROM THAT INDICATED BY THE LOG THEY ARE MADE AVAILABLE TO THE BIDDERS SIMPLY FOR WHAT THEY ARE WORTH, WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED THAT THE MATERIAL TO BE ENCOUNTERED IN BUILDING THE FOUNDATION WILL CONFORM THERewith. IF THE LOG IS USED BY THE CONTRACTOR IN MAKING HIS BID, IT IS HEREBY EXPRESSLY STIPULATED THAT THE COMMISSION ACCEPTS NO RESPONSIBILITY FOR SAID USE.

UNLESS OTHERWISE SPECIFIED THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" OD X 1.4" ID SPLIT SPOON SAMPLER WITH A 140 LB. HAMMER HAVING A FREE FALL OF 30 INCHES. THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.



REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN		
	SUBSURFACE EXPLORATION		
DESIGN SPEC. AASHTO '61'	LOADING MOD.	CONCR. SPEC.	1963
DATE 2/21/63	DESIGN L.S.	DRAWN S.P.B.	CRK. E.S.
STRUCTURE	B-32-43	SHEET	10 OF 10

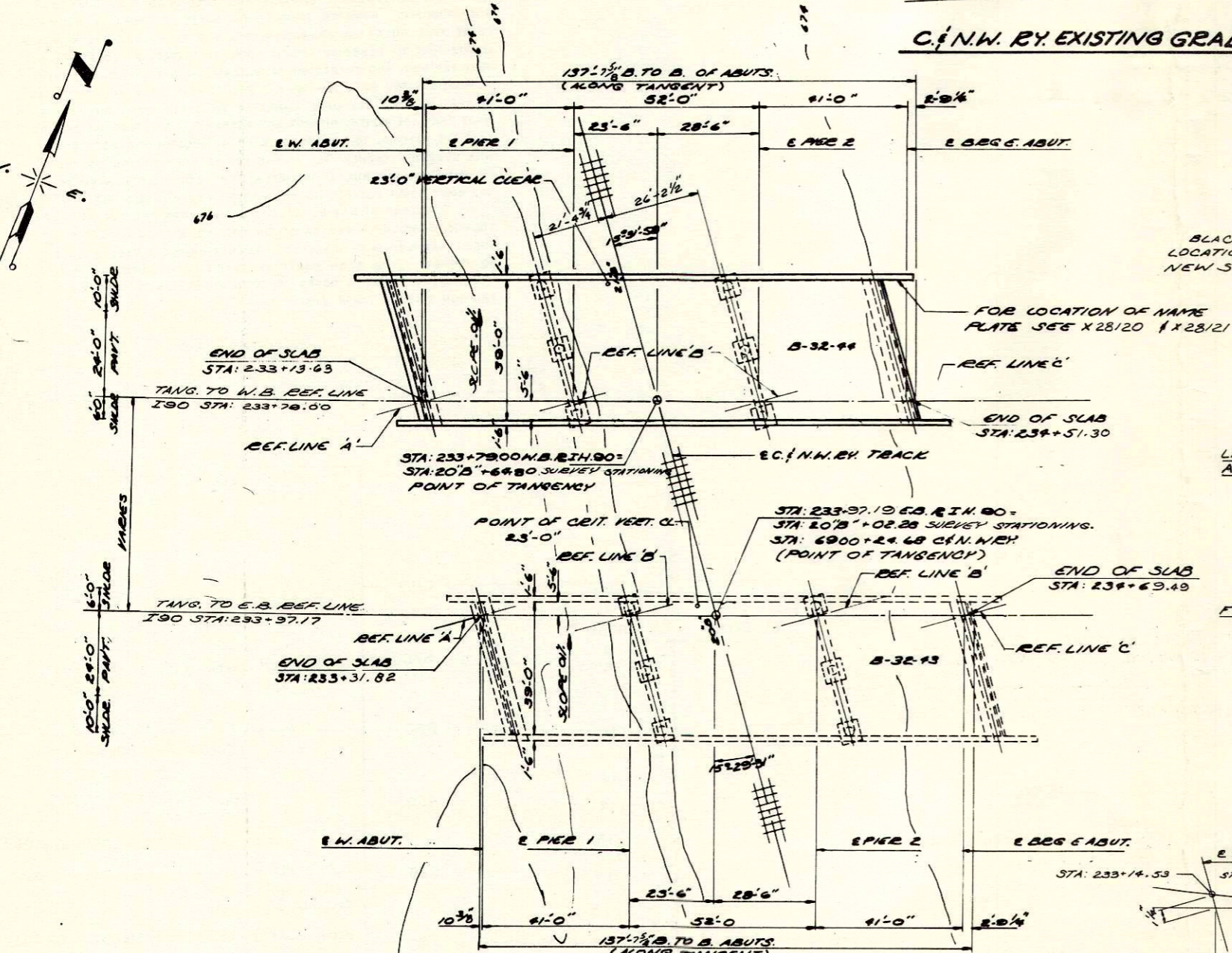
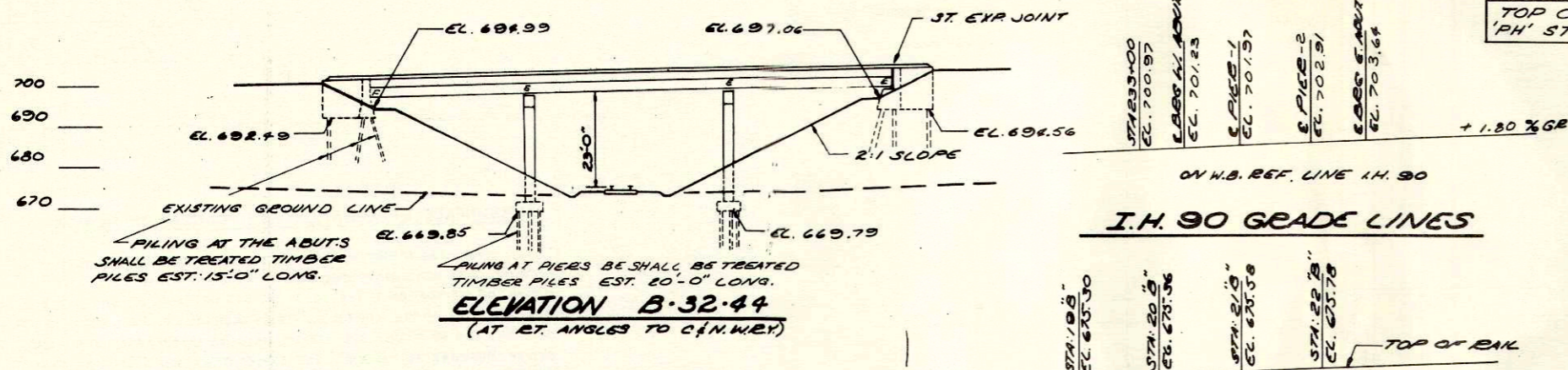
BENCH MARK

TOP CONC. BASE OF RELAY BOX @ C.N.W.
'PH' STA: 12 'B' + 48.00 ELEV. 674.24

COUNTY & HIGHWAY	ROUTE & SECTION	CLASS & AGREEMENT STATE FEDERAL	S. P. R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
72.3	90.1	13.1	4	IG-90-1 (17)3	16	25

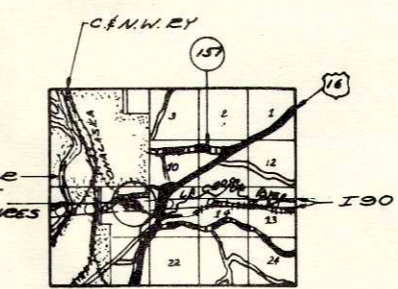
TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER	N. ABUT.	PIER 1	PIER 2	E. ABUT.	TOTAL
EXCAVATION FOR STRUCTURES	C.Y.	—	30	60	60	50	220
CONCRETE MASONRY	C.Y.	170.0	40.3	43.7	44.1	63.7	361.8
BAR STEEL REINFORCEMENT	L.B.	52,850	4,315	6,390	6,590	17,900	78,035
STRUCTURAL CARBON STEEL	L.B.	17,770	—	—	—	—	17,770
STRUCTURAL LOW ALLOY STEEL	L.B.	75,470	—	—	—	—	75,470
LUBRICATED BRONZE PLATE	L.B.	179	—	—	—	—	179
BEARING PADS	S.F.	23	—	—	—	—	23
* TREATED TIMBER TEST PILING	L.S.	—	—	—	—	—	1
TREATED TIMBER PILING - DEL.	L.F.	—	210	420	400	225	1,255
TREATED TIMBER PILING - DRIVEN	L.F.	—	210	420	400	225	1,255
TUBULAR RAILING - TYPE 'G'	L.F.	307	—	—	—	—	307
NON BID - ITEMS							
ZINC OR ALUMINUM PLATE	S.F.	20	—	—	—	—	20
FILLER	SIZE	—	—	—	—	—	1/4



CURVE DATA I.H. 90

Δ = 03°-12'-12"	(C.B. f W.B. REF. LINES)
D = 0°-15'	
R = 22,018.31'	
T = 690.85'	
L = 1281.37'	
SE = .01%	



LOCATION MAP

DESIGN DATA

LIVELOAD H20-S16 MOD.
ALLOWABLE DESIGN STRESSES
CONCRETE MASONRY GRADE 1/4" #1, 400 P.S.I.
BARSTEEL REINFORCEMENT A15 #2, 20,000 P.S.I.
STRUCTURAL CARBON STEEL #20,000 P.S.I.
STRUCTURAL LOW-ALLOY STEEL TO AND INCLUDING 3/4" THICK #27,000 P.S.I.
OVER 3/4" TO AND INCLUDING 1/2" THICK #25,000 P.S.I.
OVER 1/2" THICK #23,000 P.S.I.

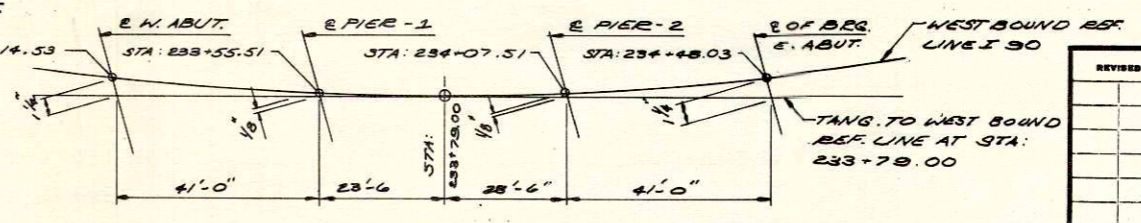
FOUNDATION DATA
ALL PILING SHALL BE TREATED TIMBER.
PILING AT THE PIERS SHALL HAVE A MIN. BEARING VALUE OF 24 TONS/PILE EST. 20'-0" LONG.
PILING AT THE ABUTMENTS SHALL BE EST. 15'-0" LONG. PILING AT THE WEST ABUTMENT SHALL HAVE A MIN. BEARING VALUE OF 22 TONS PER PILE, AND AT THE EAST ABUTMENT 17 TONS PER PILE.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
ALL CONCRETE MASONRY SHALL BE GRADE 'AA' #2 1900 P.S.I. EXPOSED EDGES OF CONCRETE 1" UNLESS OTHERWISE SHOWN OR NOTED.
BARSTEEL REINFORCEMENT SHALL BE IMBEDDED & CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
ALL PILING SHALL BE TREATED TIMBER.
PILING AT THE PIERS SHALL HAVE A MINIMUM BEARING VALUE OF 24 TONS PER PILE. ESTIMATED LENGTH OF 20 FEET.
* TEST PILES SHALL BE TREATED TIMBER 30'-0" LONG. DRIVE ONE AT THE WEST ABUTMENT AND ONE AT PIER 2.
ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/4" BOLTS OR HIGH TENSILE STRENGTH BOLTS, UNLESS OTHERWISE NOTED.
PILING AT THE ABUTMENTS SHALL BE ESTIMATED 15'-0" LONG. PILES AT THE WEST ABUTMENT SHALL HAVE A MINIMUM BEARING VALUE OF 22 TONS PER PILE, AND AT THE EAST ABUTMENT 17 TONS PER PILE.
UPPER LIMITS OF EXCAVATION FOR STRUCTURES SHALL BE AS FOLLOWS. FOR ABUTMENTS THE FINISHED GRADED SECTION AND FOR THE PIERS THE EXISTING GROUND LINE.
EXPANSION JOINT FILLER SHALL CONFORM TO A.A.S.H.O DESIGNATION M153, TYPE III.
HOT-POURED ELASTIC TYPE JOINT SEALER SHALL CONFORM TO ASTM DESIGNATION, D1190.

LIST OF DRAWINGS

1. GENERAL PLAN	X281/6
2. SUPERSTRUCTURE	X281/7
3. LONG. SECTION & BEARINGS	X281/8
4. EXPANSION JOINT	X281/9
5. TUBULAR ALUMINUM RAILING TYPE 'A'	X281/10
6. TUBULAR STEEL RAILING TYPE 'A'	X281/11
7. WEST ABUTMENT	X281/12
8. PIERS 1 & 2	X281/13
9. EAST ABUTMENT	X281/14
10. SUBSURFACE EXCAVATION	X281/15



CURVE LAYOUT FOR B-32-44 ONLY

STATE HIGHWAY COMMISSION OF WISCONSIN			
GENERAL PLAN			
CO. LA CROSSE	ENGR. MEDAERY	STA. 233	79.00
SECTION 16	TOWN 16 N.	RANGE 7 W.	
DESIGN SPEC. A.A.S.H.O. 6/	LOADING 1953/4	CONSTR. SPEC. 1963	
DATE 12-24-63	DESIGN C.G.	DRAWN 878	CRD. 107
RECOMMENDED	T. B. Schull		
APPROVED	[Signature]		
STRUCTURE B-32-44		SHEET 1 OF 10	

X281/6

NOTE: TOP & BOTTOM TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY CONTINUOUS BAR CHAINS ON OR ADJACENT TO EACH STRINGER AND BY INDIVIDUAL BAR CHAINS AT 3'-0" CENTERS AT APPROXIMATELY THE 1/3 POINT BETWEEN STRINGERS.
NOTE: THE HEIGHT OF THE CURB IS TO BE MAINTAINED AT POINTS OF BEARINGS.

NOTE: IF 59 BARS INTERFERE WITH THE OPERATION OF FINISHING MACHINE THEY MAY BE IMBEDDED IMMEDIATELY AFTER PASSAGE OF MACHINE.

BILL OF BARS

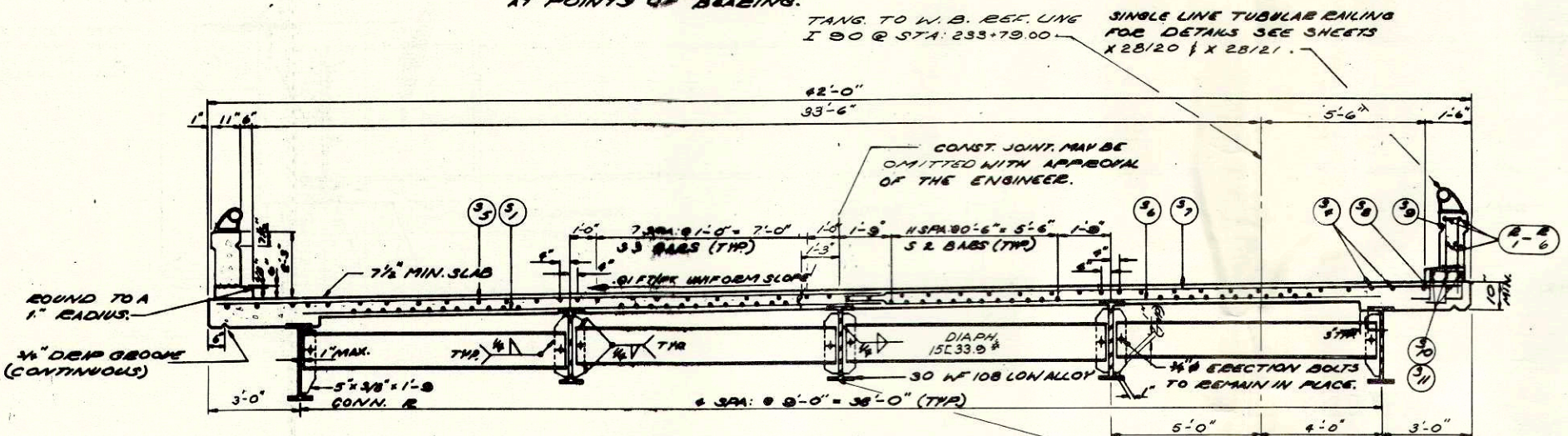
B.P.R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	115-90-1 (17)3	17	25

52,850#

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

MARK	NO.	SIZE	LENGTH	SPACING	LOCATION	DEF.
3	1	268	6	20-6	6	SLAB TEAN. BOTTOM
3	2	192	3	34-9	6	" LONG. BOTTOM
3	3	152	3	34-9	1-0	" " TOP
3	4	20	5	15-0	8	" SYM ABOUT PIER 3
3	5	269	6	23-0	6	" TEAN TOP
3	6	268	6	19-0	6	" " BOTTOM
3	7	269	6	21-6	6	" " TOP
3	8	354	5	4-6	9	CUBES
3	9	356	5	6-3	9	RAILING PARAPET
3	10	24	5	21-3	SHOWN	CUBES SPANS 1 & 3
3	11	12	5	26-6	SHOWN	" " 2
3	12	24	5	2-6	1-6	END DIAPHRAGM EAST ABUT.
3	13	4	9	8-9	SHOWN	" " " "
3	14	72	5	2-0	1-0	" BLOCK AT WEST ABUT.
E	1	16	5	19-0	SHOWN	RAILING PARAPET
E	2	8	5	21-0	"	" " " "
E	3	8	5	15-3	"	" " " "
E	4	8	5	21-3	"	" " " "
E	5	8	5	14-6	"	" " " "
E	6	8	5	22-6	"	" " " "

PLACE TRANSVERSE BAR STEEL PARALLEL TO SUB STRUCTURE UNITS.



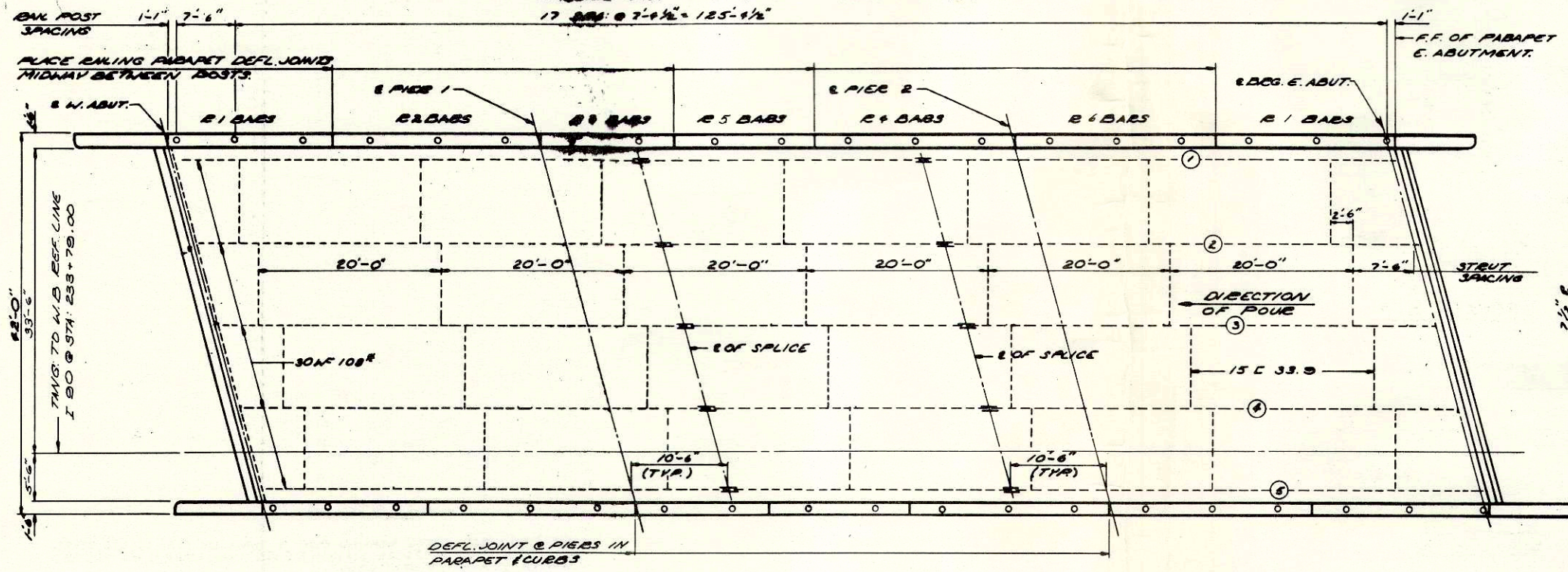
DETAIL A

DETAIL B

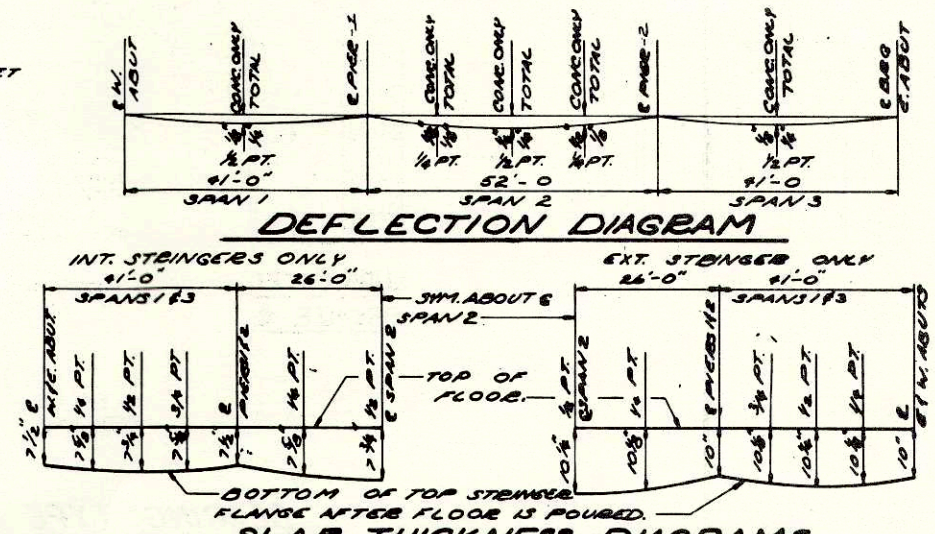
DETAIL C

CROSS SECTION THRU RDWAY

COORDINATE EAST - TAKEN @ RIGHT ANGLES TO TANG. 17 286 @ 7'-4 1/2" = 125'-4 1/2"

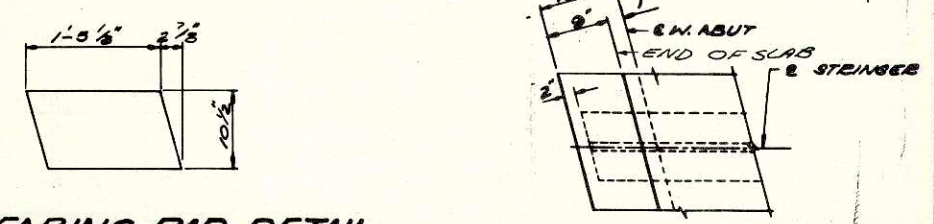


DEFLECTION DIAGRAM

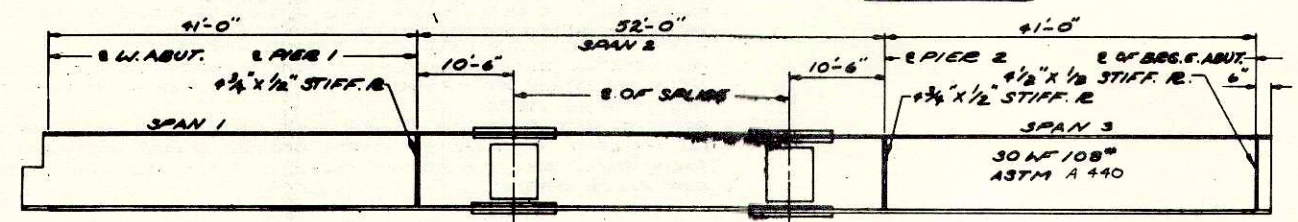


SLAB THICKNESS DIAGRAMS

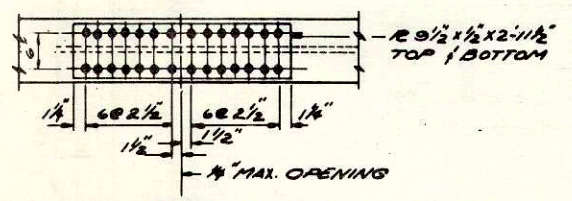
NOTE: SLAB THICKNESS FIGURES SHOWN ARE THEORETICAL AND ARE SUBJECT TO CORRECTION TO MEET VARIABLE FIELD CONDITIONS.



PLAN

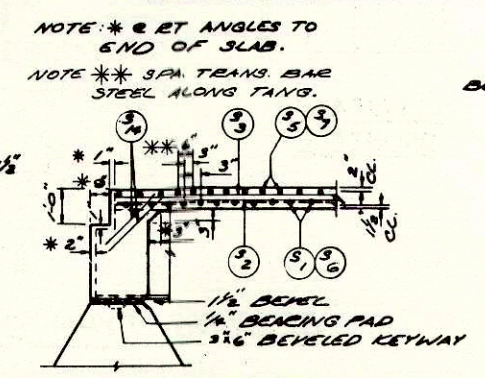


ELEVATION OF STRINGER



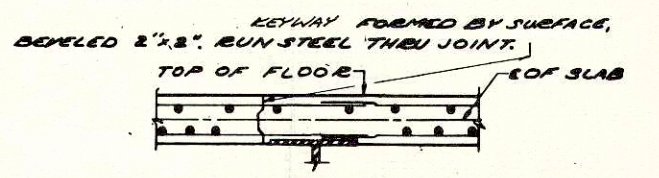
SPLICE DETAIL
(THR FOR ALL SPACE)

BEARING PAD DETAIL



LONG. SECTION THRU SLAB
(AT W. ABUT.)

PART PLAN @ W. ABUT.

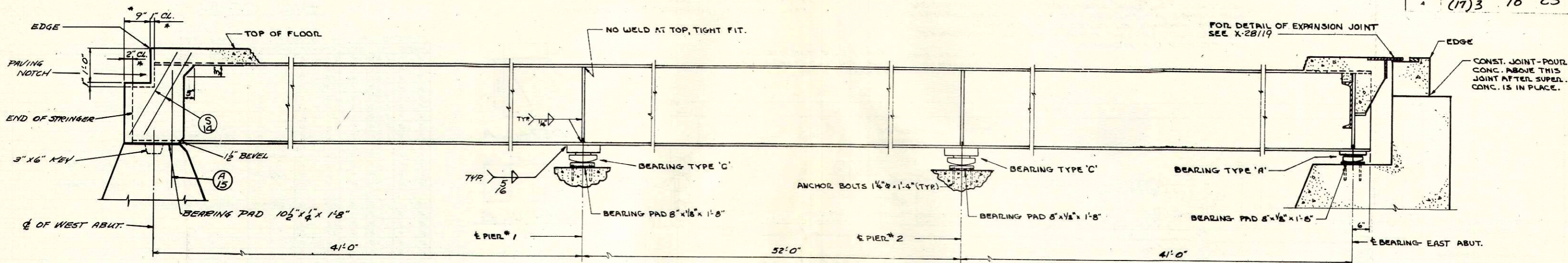


LONG. FLOOR JOINT

REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN		
	SUPERSTRUCTURE		
	DESIGN SPEC. A.A.S.H.O. 61	LOADING	14.25 CONCR. 1963
	DATE 12-24-64	DESIGN L.S.	DRAWN 8/72
STRUCTURE B-32-44		SHEET 2 OF 10	

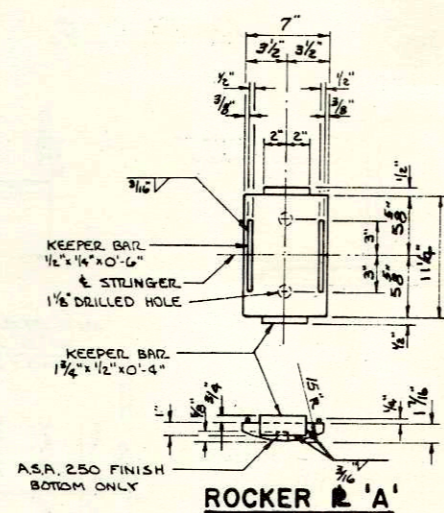
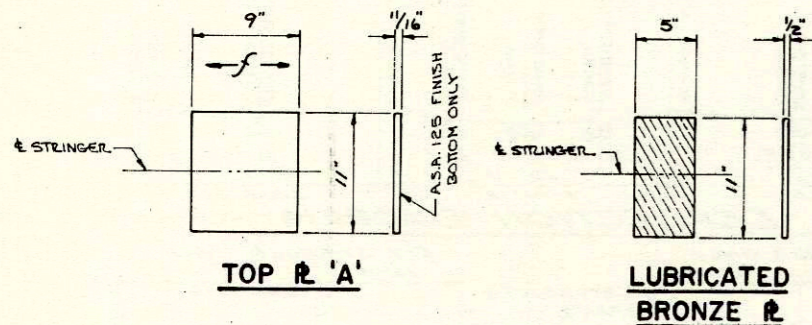
X28/17

* DENOTES DIMENSIONS AT RIGHT ANGLES



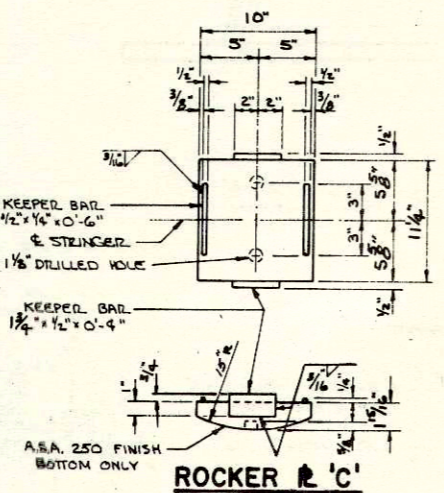
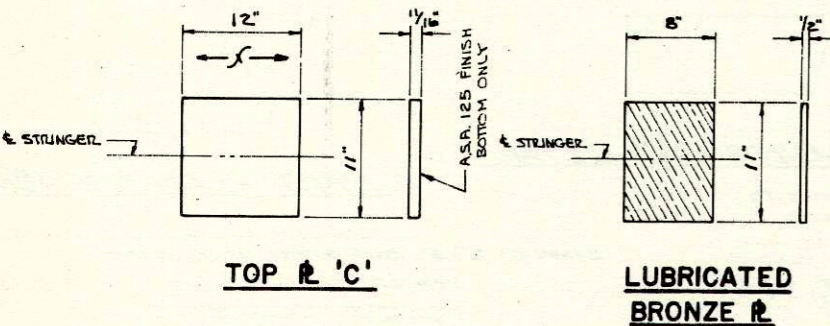
LONGITUDINAL SECTION

FOR LOCATION & DETAILS OF STRINGER SPLICE SEE X-28117 SECTION IS PARALLEL TO STRINGER.



BEARING TYPE 'A'

5 REQ'D.



BEARING TYPE 'C'

10 REQ'D.

BEARING NOTES

- ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH & FREE FROM WARP & ALL EDGES SMOOTH, STRAIGHT, & VERTICAL.
- ALL PLATE CUTS SHALL BE MACHINE FLAME CUTS OR MACHINE CUTS.
- MASONRY PLATE SHALL BE DRILLED TO A DRIVING FIT WITH PINTLES.
- CHAMFER TOP OF PINDLE.
- LUBRICATE TOP SURFACES ONLY OF BRONZE PLATES.
- ANCHOR BOLTS TO BE 1 1/2" x 1'-4" LONG WITH 3/4" MIN. PROJECTION ABOVE TOP OF CONCRETE. PROVIDE ONE 1 1/8" STANDARD WRIGHT WASHER & ONE HEX NUT PER BOLT. THREAD BACK 3".
- ALL MATERIAL EXCEPT ANCHOR BOLTS, NUTS, & WASHERS SHALL BE MADE OF A 242 STEEL WITH A CORROSION RESISTANCE OF 4 OR MORE TIMES THAT OF A 36 STEEL.
- WASHERS, NUTS, & THE TOP 4 1/2" OF ANCHOR BOLTS SHALL BE GALVANIZED.
- ALL MATERIAL IN BEARINGS, EXCEPT BRONZE PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL LOW ALLOY STEEL".

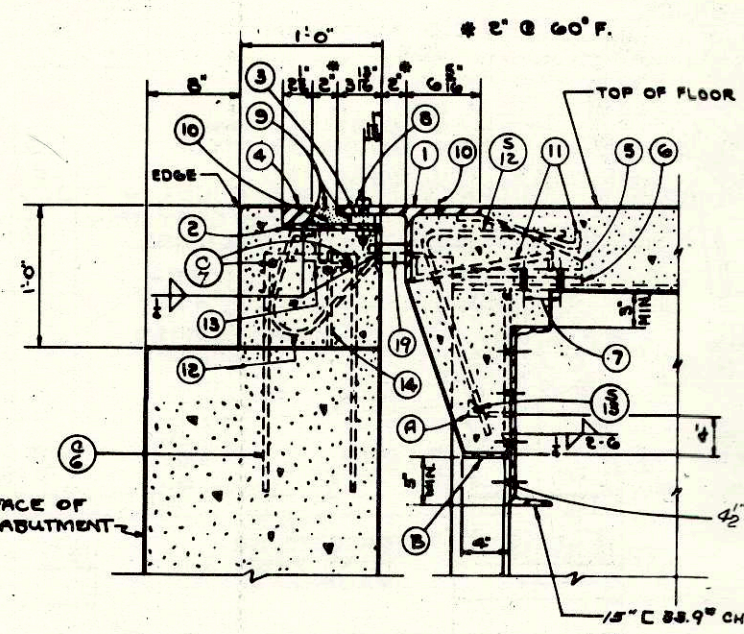
STATE HIGHWAY COMMISSION OF WISCONSIN
LONG. SECTION & BEARINGS
DESIGNED BY ARSHO 1961 DRAWING NO. H20-516
DATE 12-24-63 BY G.N. DRAWN K.L.N. DATE 1963
STRUCTURE B-32-44 SHEET 3 OF 10

X-28118

S.P.R. DIVISION	PROJECT	SHEET NUMBER	TOTAL SHEETS
4	IG-90-1 (17) 3	19	25

LEGEND

1. S.T. 6" WF 39.5" x ROADWAY WIDTH.
2. L8" x 4" x 1/2" x ROADWAY WIDTH.
3. BAR 2" x 2" x ROADWAY WIDTH. WELD TO L#2 WITH 2 LINES OF 1/4" FILLET WELD. 2 @ 6".
4. BAR 2 1/2" x 1 1/2" x ROADWAY WIDTH. WELD TO L#2 WITH 2 LINES OF 1/4" FILLET WELD. 2 @ 6".
5. FABRICATE FROM 3/8" WELDED PLATE. WELD TO STEM & FLANGE OF S.T.#1 WITH 1/4" FILLET WELD. NEAR & FAR SIDES.
6. 3/8" MIN. LAMINATED & SLOTTED SHIM.
7. DRILL HOLES IN GIRDER FLANGE IN FIELD FOR 4-3/4" ERECTION BOLTS.
8. 3/4" BOLT WITH SQUARE NUT @ 2'-0" CENTERS. TACK WELD NUT TO L#2. GREASE FOR EASY REMOVAL. 1 1/2" x 1 1/2" SLOTTED IN S.T.#1. LONG DIM. OF SLOTTED HOLE TO BE PARALLEL TO & OF ROADWAY. 1 1/2" HOLE IN BAR # 3 & L#2.
9. APPLY 1/16" COAT OF BITUMASTIC TO THIS SURFACE. AFTER CONCRETE HAS SET, FILL JOINT WITH HOT POURED ELASTIC TYPE JOINT SEALER.
10. PROVIDE 1 1/2" VENT HOLES @ 2'-0" CENTERS.
11. 3/8" BENT BARS @ 0'-9" ALTERNATE CENTERS BETWEEN STRINGERS 1'-3" LONG. WELD TO S.T.#1
12. 3/8" BENT BARS @ 1'-0" CENTERS 2'-0" LONG. WELD TO L#2
13. L5 x 2 1/2 x 1/4 x 0'-8" @ 3'-0" CENTERS. WELD TO L#2. PROVIDE 3/8" HOLE IN 2 1/2" LEG.
14. 1/2" BOLT x 9" LONG & NUT TACK WELD NUT TO L#13.
15. R 8 1/2" x 3/8"
16. R 1'-0 1/2" x 3/8"
17. R 2 1/2" x 3/8" WELD TO R#15
18. R 2" x 3/8" x 1'-0" WELD TO R#15 & #16.
19. BLOCK AND BOLT FOR SHIPMENT WITH PIPE SLEEVE. PROVIDE 1 1/2" HOLES AT 3'-0" CTRS. IN S.T.#1 & L#2 FOR 1/2" BOLT.



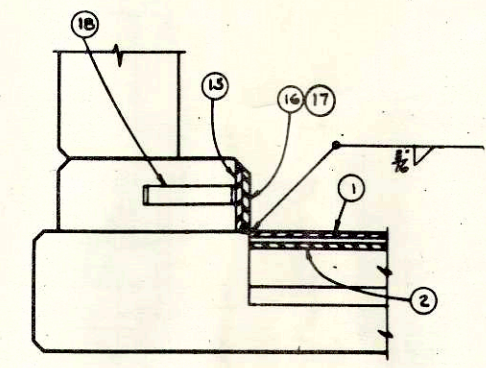
SECTION E1

NOTES

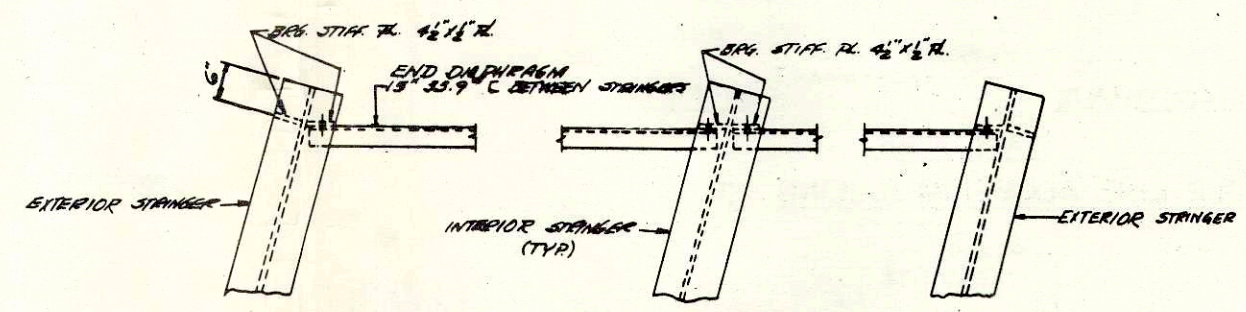
EXPANSION JOINT SHALL BE BUILT TO CONFORM TO ROADWAY CROWN, GRADE, & CURB SLOPE. ONE FIELD SPlice SHALL BE PERMITTED IN JOINT. AFTER CONCRETE HAS SET REMOVE BOLT # 8 AND FILL HOLES WITH HOT POURED ELASTIC TYPE JOINT SEALER.

ALL MATERIAL IN EXPANSION JOINT SHALL BE PAID FOR AS STRUCTURAL CARBON STEEL.

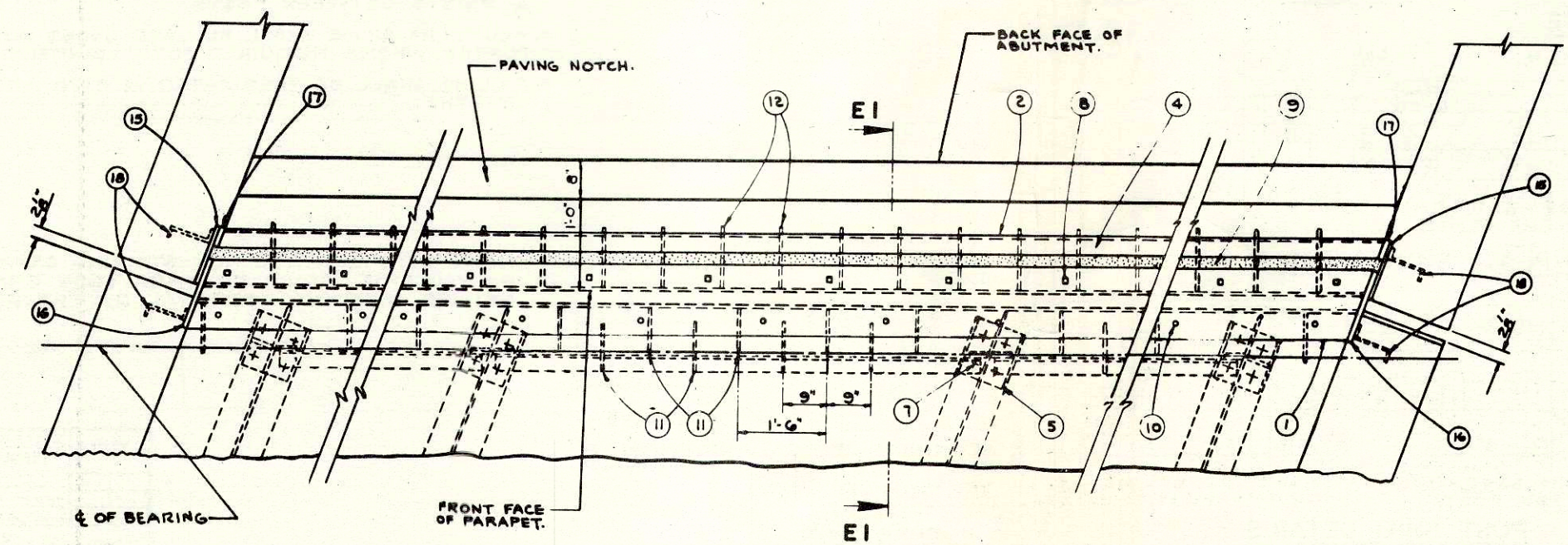
- (A) 1/2" BENT BAR. 3 PER CHANNEL. WELD TO CHANNEL
- (B) BAR 4" x 1/2" TO BE PARALLEL TO TOP OF FLOOR.



SECTION THRU JOINTS AT CURBS



PART PLAN (AT EAST ABUTMENT ONLY)

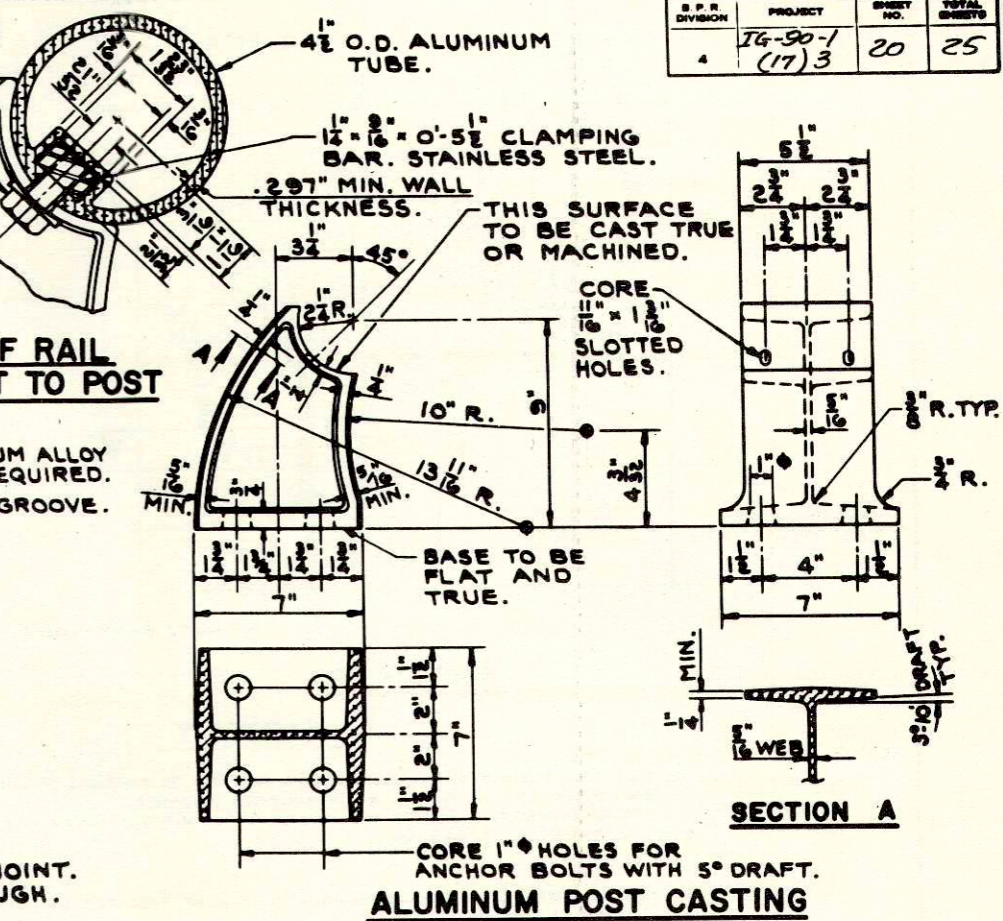
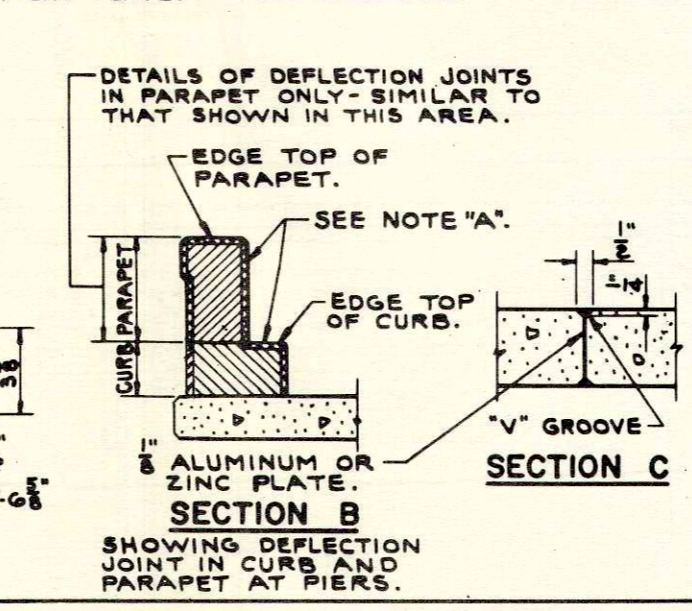
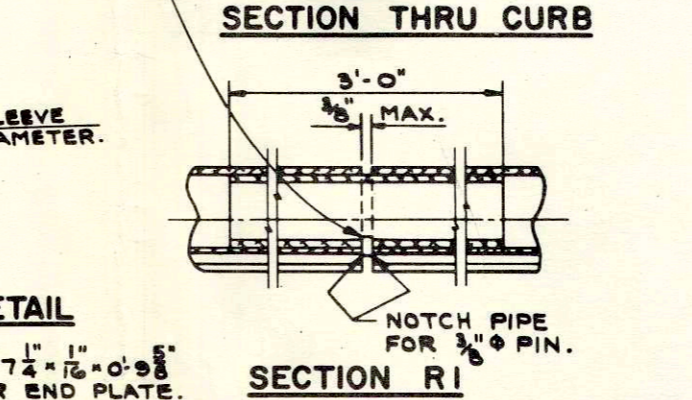
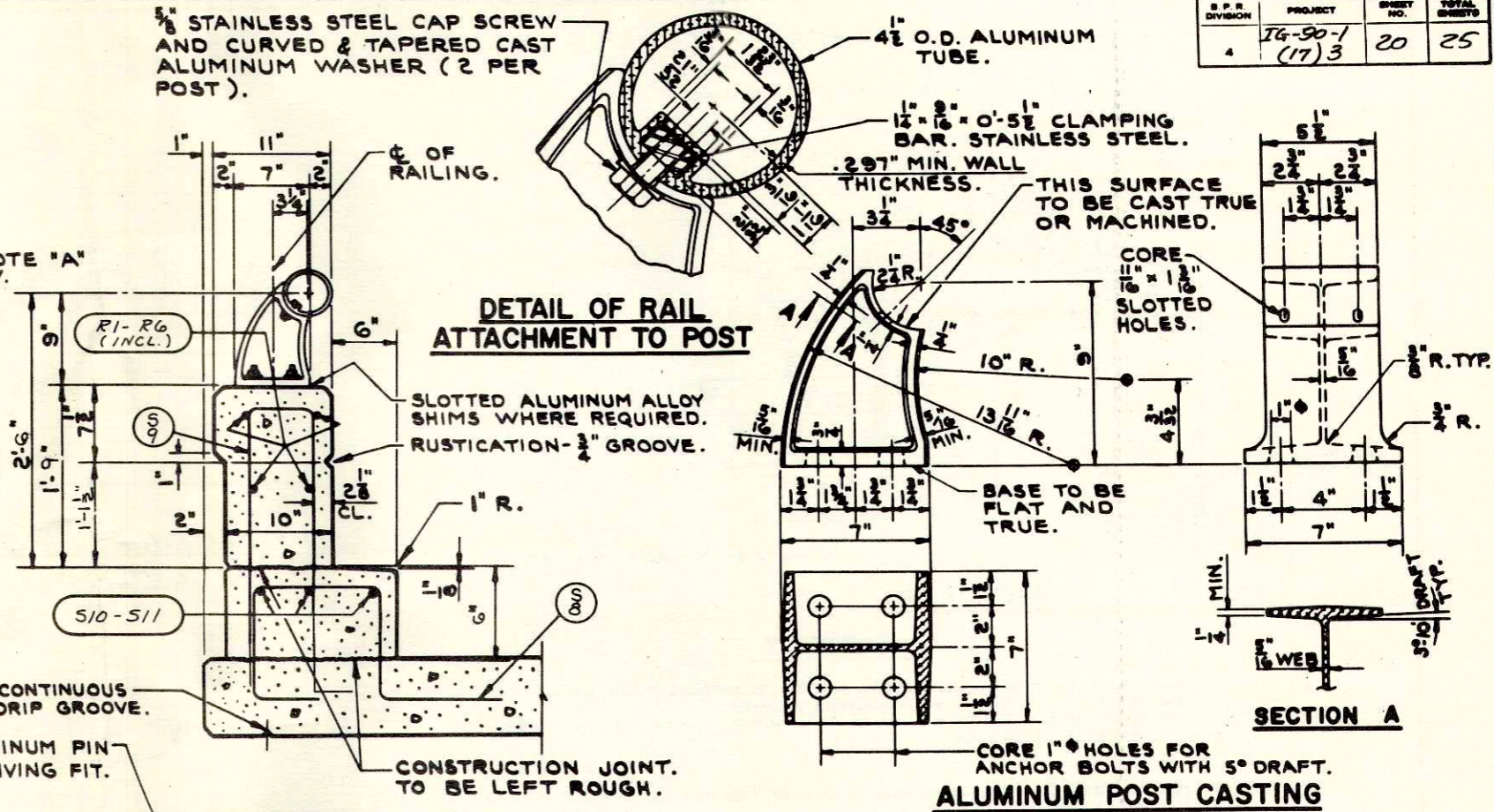
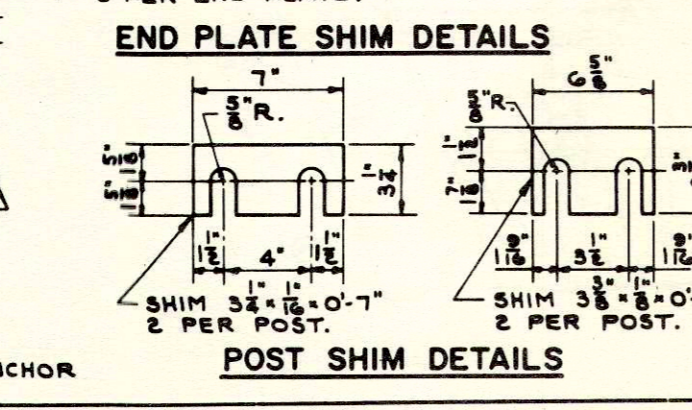
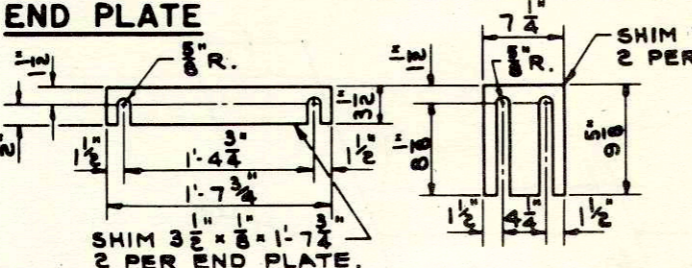
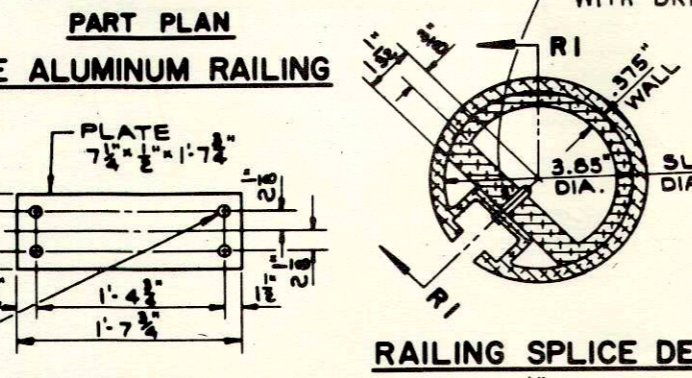
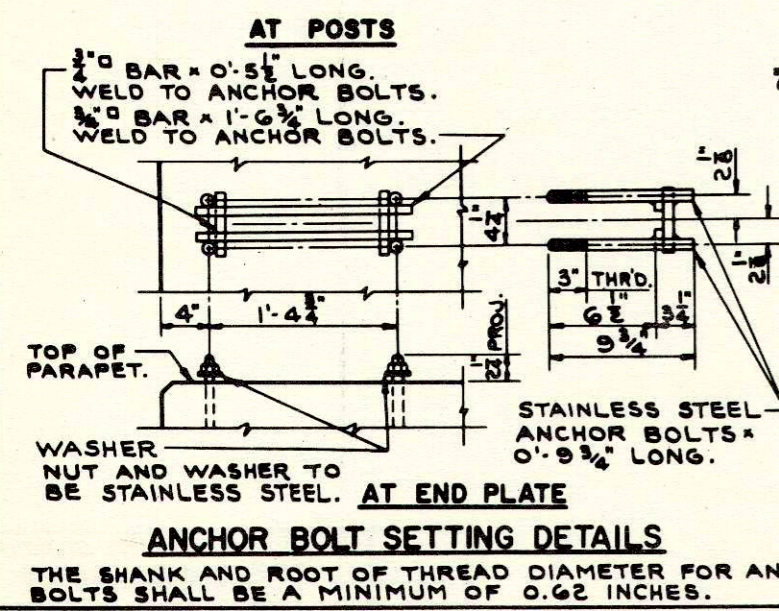
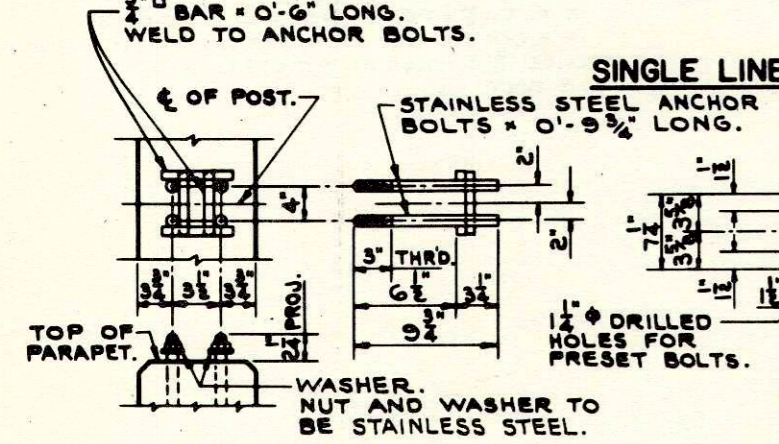
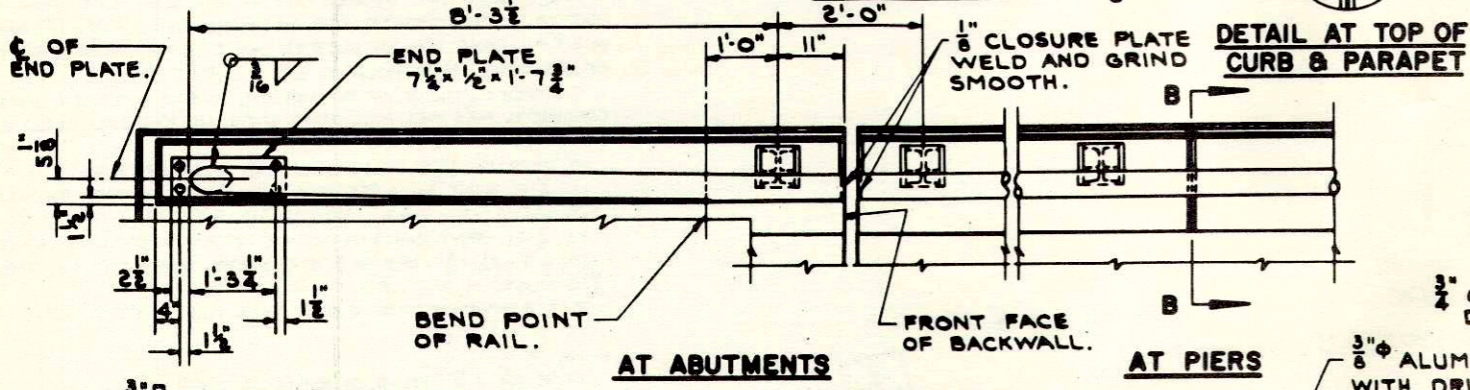
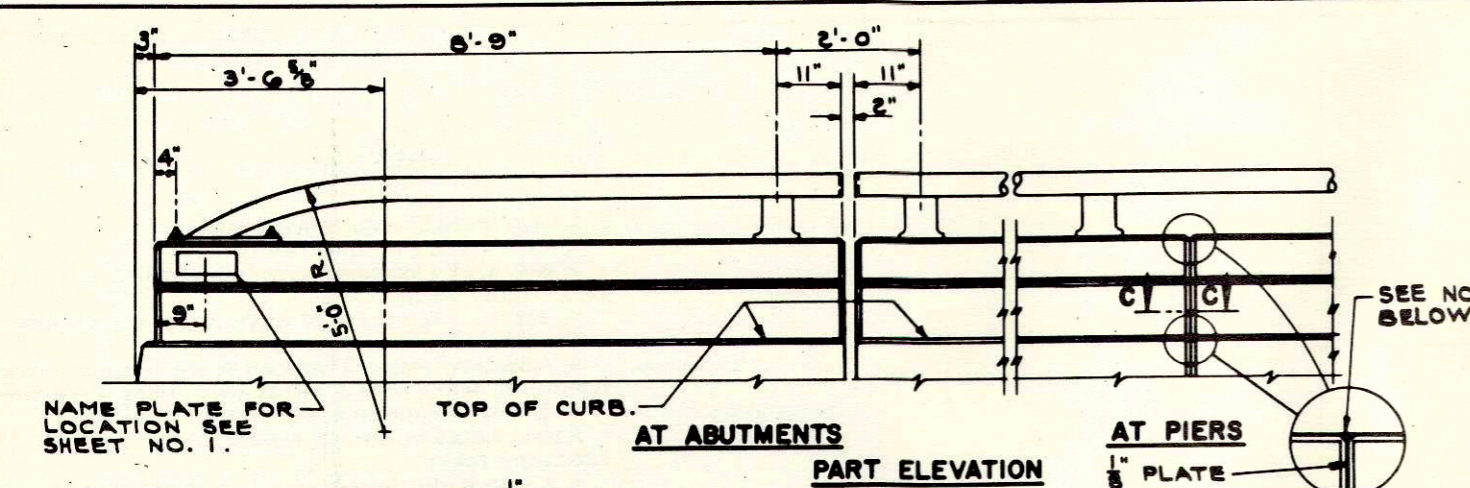


PART PLAN

STATE HIGHWAY COMMISSION OF WISCONSIN			
EXPANSION JOINT			
DESIGN SPEC. A.A.S.H.O. '61	LOADING	REVISED	DATE
DATE 2-24-69	DESIGN BY D.	URBAN I. L. L.	CHE. 82
STRUCTURE B-32-44		SHEET 4 OF 10	

X 28119

D.P.R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	76-90-1 (17)3	20	25



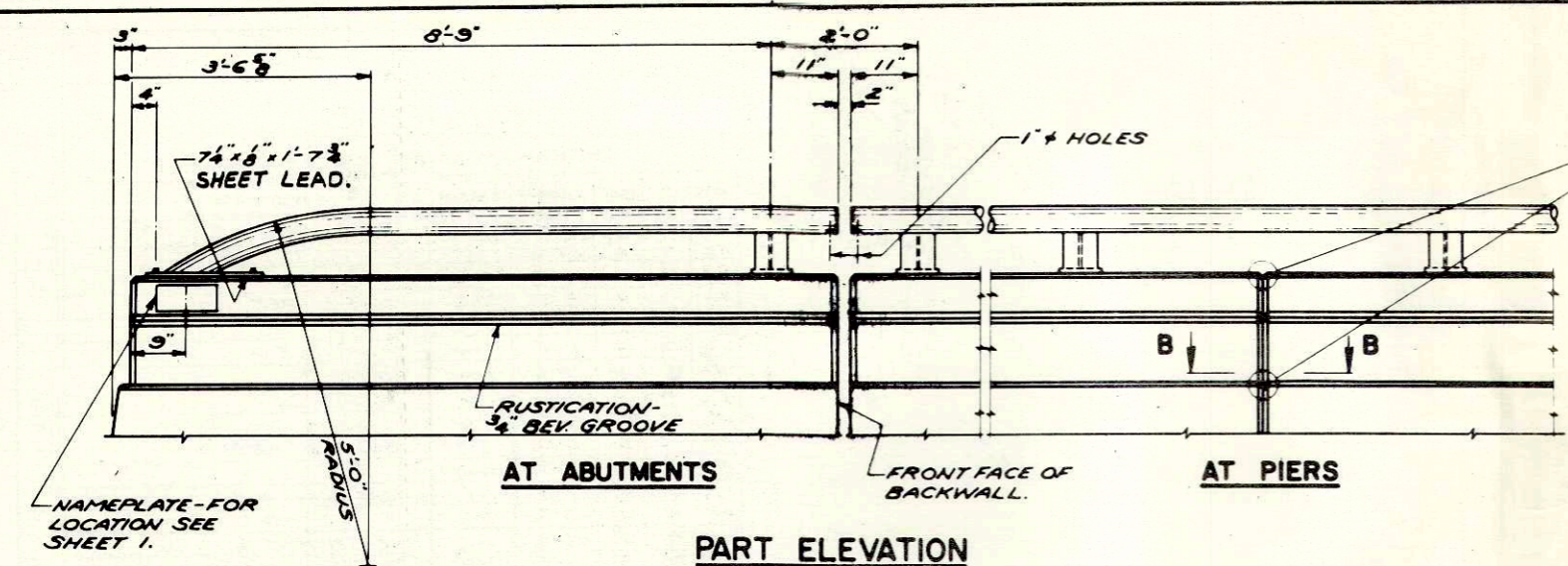
- GENERAL NOTES**
1. WHEN PARAPETS AND CURBS ARE POURED CONTINUOUSLY FROM END TO END THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/2" ZINC OR ALUMINUM PLATE CUT AS SHOWN IN SECTION "B" BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS AND CURBS ARE USED AT THE DEFLECTION JOINTS ONE SIDE OF JOINT SHALL BE COATED WITH BITUMINOUS PAINT AND PLATE SEPARATORS MAY BE OMITTED.
 2. ALL POST SPACINGS ARE TAKEN HORIZONTALLY ALONG C& OF RAILING AT BASE OF POSTS.
 3. RAILING SPLICES SHALL BE LOCATED APPROXIMATELY AT 1/4 POINTS BETWEEN POSTS.
 4. ALUMINUM SHIMS SHALL BE USED UNDER POSTS AND END PLATES WHERE REQUIRED FOR ALIGNMENT.
 5. RAILING SHALL BE FABRICATED IN TWO AND THREE PANEL LENGTHS.

NOTE "A": FILL WITH NON-STAINING GRAY TWO COMPONENT POLYSULFIDE LIQUID POLYMER (GUN GRADE) WITH SURFACE PRIMER, MEETING APPROVAL OF THE ENGINEER.

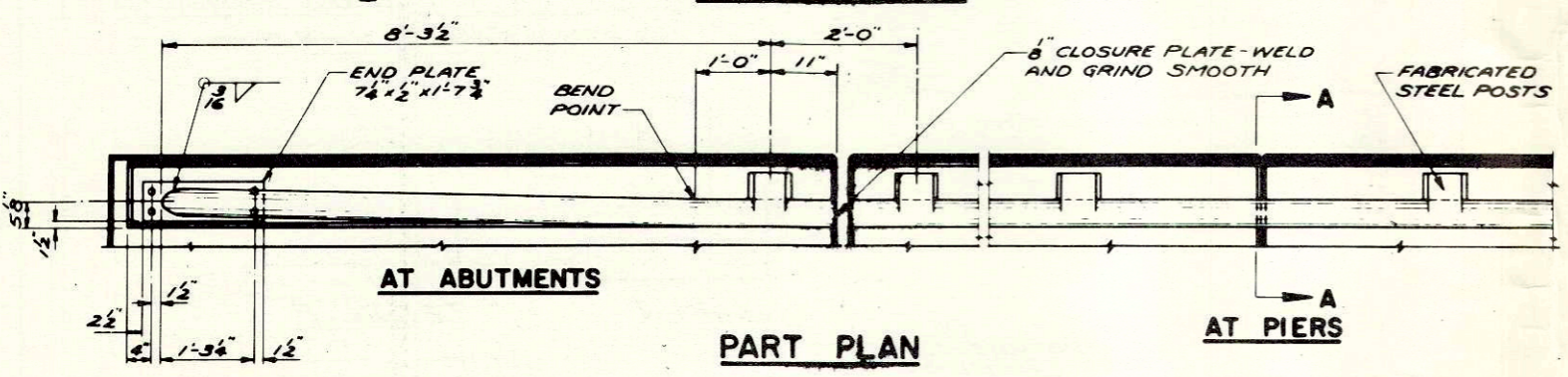
NOTE: FOR WEST ABUTMENT DETAIL SEE SH. 6 DWG. X 28121

REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN		
	TUBULAR ALUMINUM RAILING		
	TYPE "G"		
	DESIGN SPEC. A.A.S.H.O. 61	LOADING	DATE 1963
	DATE 7-24-63	DESIGN STD.	DRAWN J.L.J. GED.
STRUCTURE	B-32-44	SHEET	5 OF 10

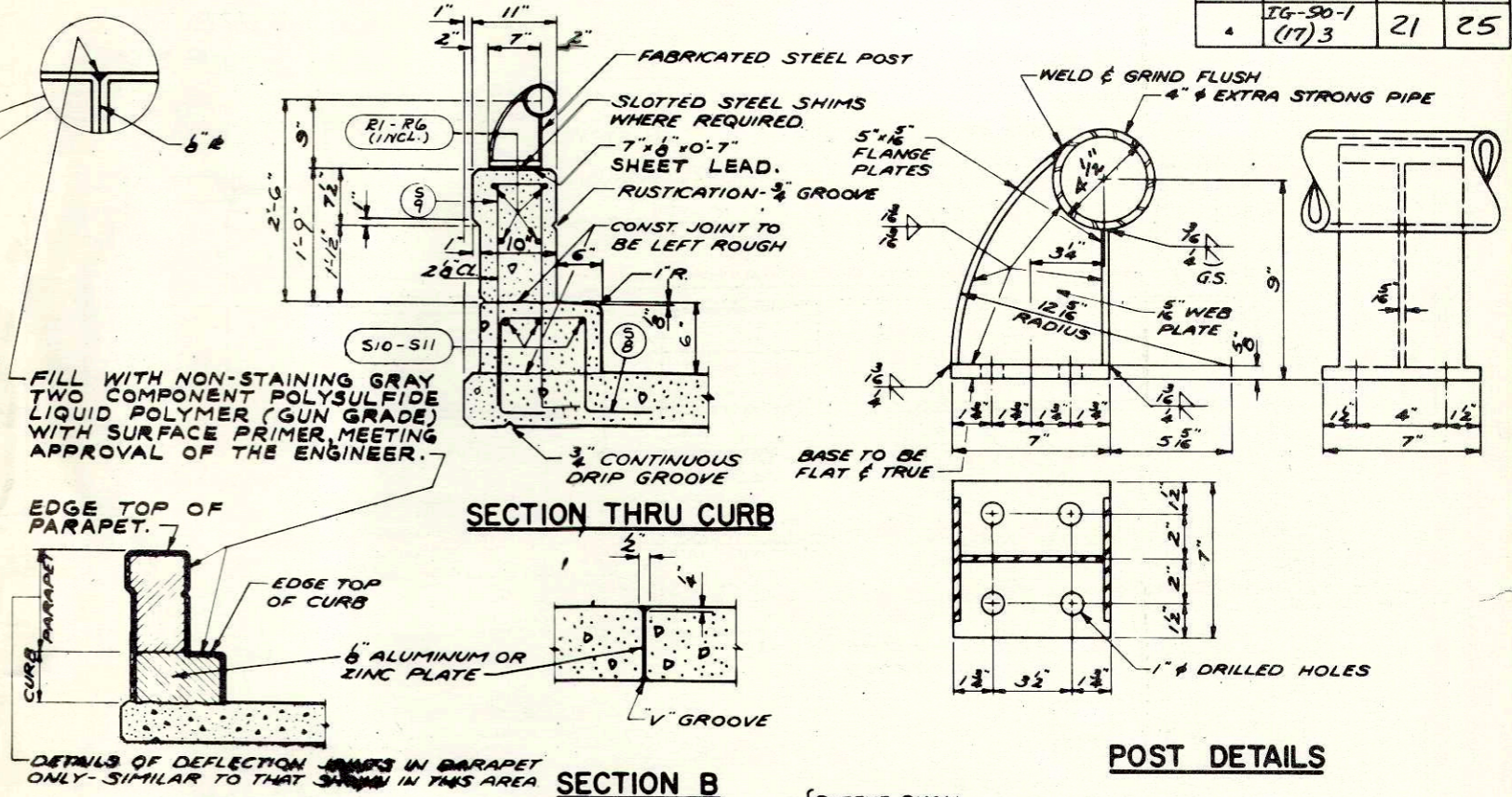
B.P.R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	IG-90-1 (17)3	21	25



PART ELEVATION



PART PLAN

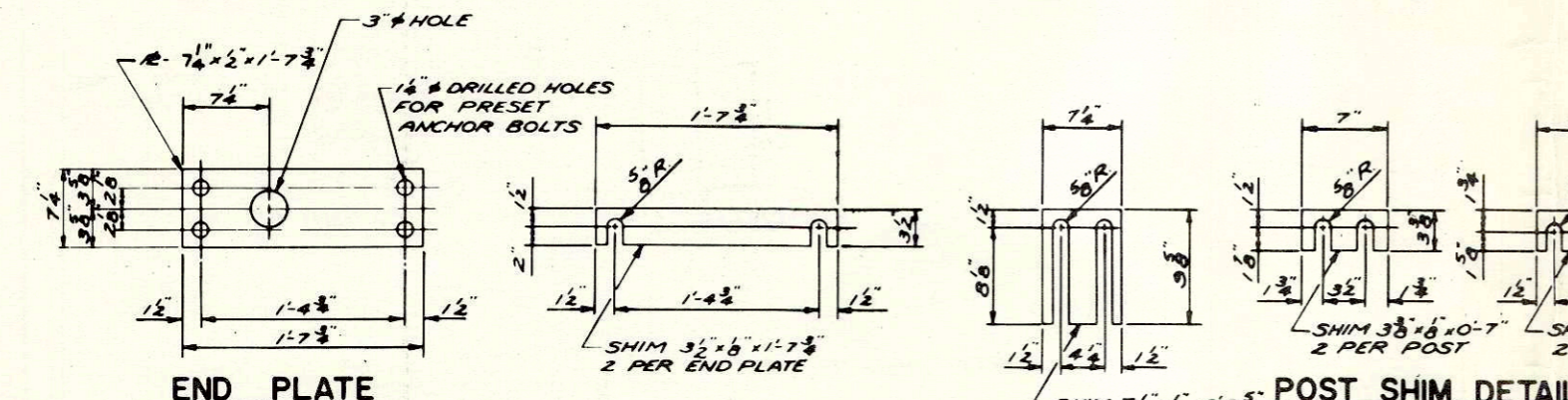


SECTION THRU CURB

SECTION A

SECTION B

POST DETAILS



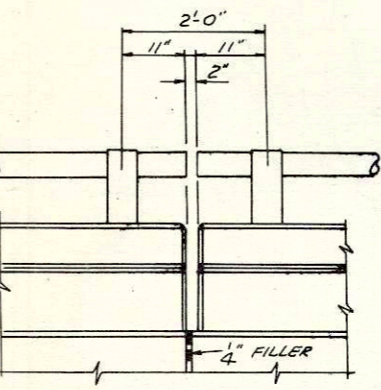
END PLATE SHIM DETAILS

POST SHIM DETAILS

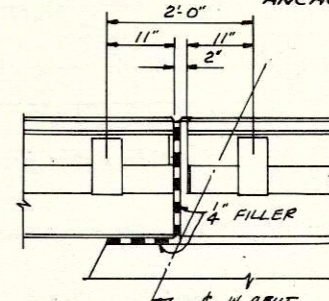
SHOP RAIL SPLICE DETAIL

FIELD ERECTION JOINT DETAIL

THE LOCATION OF THE SHOP SPLICE SHALL BE SHOWN ON THE SHOP DRAWINGS.



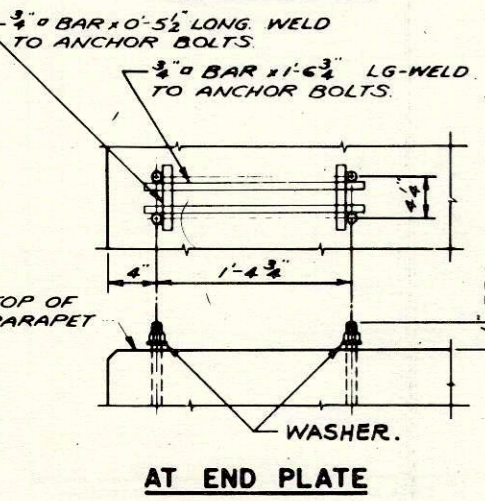
PART ELEVATION AT W. ABUTMENT



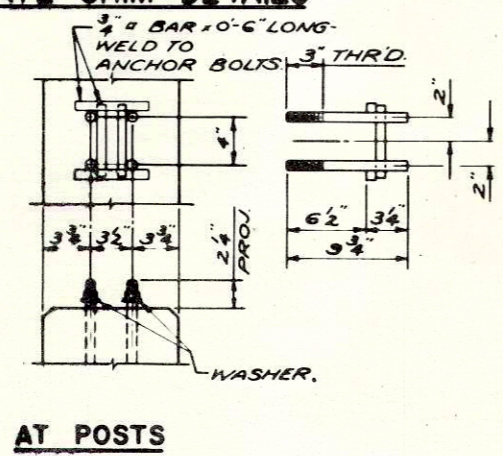
PART PLAN AT W. ABUTMENT

NOTES

1. STEEL RAIL POSTS SHALL BE SET NORMAL TO GRADE.
2. RAILING SHALL BE FABRICATED IN 2 & 3 PANEL LENGTHS.
3. STEEL SHIMS SHALL BE USED UNDER POSTS AND UNDER END PLATES WHERE REQUIRED FOR ALIGNMENT.
4. WHEN PARAPETS AND CURBS ARE POURED CONTINUOUSLY FROM END TO END THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 6 ZINC OR ALUMINUM PLATE CUT AS SHOWN IN SECTION 'A' BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS AND CURBS ARE USED AT THE DEFLECTION JOINTS ONE SIDE OF JOINT SHALL BE COATED WITH BITUMINOUS PAINT AND PLATE SEPARATORS MAY BE OMITTED.
5. THE FOLLOWING MATERIALS SHALL BE USED:
 RAILING SHALL BE 4" EXTRA STRONG PIPE CONFORMING TO ASTM DESIGNATION A53, GRADE B. SLEEVES SHALL BE 3 3/4" O.D. 1/2" THICK SEAMLESS MECHANICAL TUBING MADE OF STEEL WITH A MINIMUM ULTIMATE TENSILE STRENGTH OF 60,000 P.S.I. AND A MINIMUM ELONGATION OF 10%.
 POSTS SHALL BE FABRICATED FROM MATERIAL CONFORMING TO ASTM DESIGNATION A36.
 ANCHOR BOLTS TO BE MADE FROM MATERIAL CONFORMING TO ASTM A307.
 6. CAULK EXPOSED OPENINGS BETWEEN SHIMS WITH LEAD WOOL.
 7. GALVANIZE ENTIRE RAILING AFTER FABRICATION INCLUDING NUTS, WASHERS, SHIMS AND TOP 3/2" OF ANCHOR BOLTS.



AT END PLATE



AT POSTS

ANCHOR BOLT SETTING DETAILS

THE SHANK AND ROOT OF THREAD DIAMETER FOR ANCHOR BOLTS SHALL BE A MINIMUM OF 0.62 INCHES.

REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN		
	TUBULAR STEEL RAILING		
	TYPE 'G'		
	DESIGN SPEC. A.A.S.H.O. 51	LOADING	CONST. SPEC. 1963
	DATE 7-23-63	DESIGN S.T.D.	DRAWN L.L.V. C.R.D.
STRUCTURE B-32-44		SHEET 6 OF 10	

NOTE: ALL KEYED CONST. JTS. FORMED BY A SURFACE BEVELED 1'-3" x 4" x 1'-3".

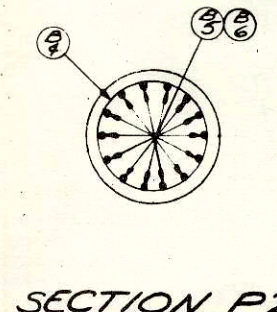
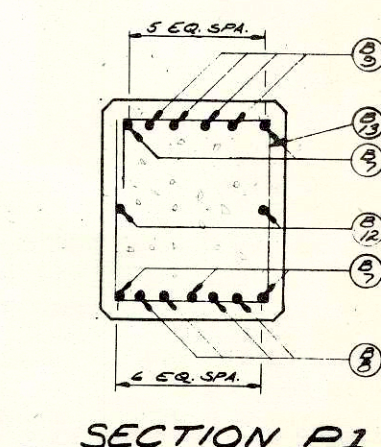
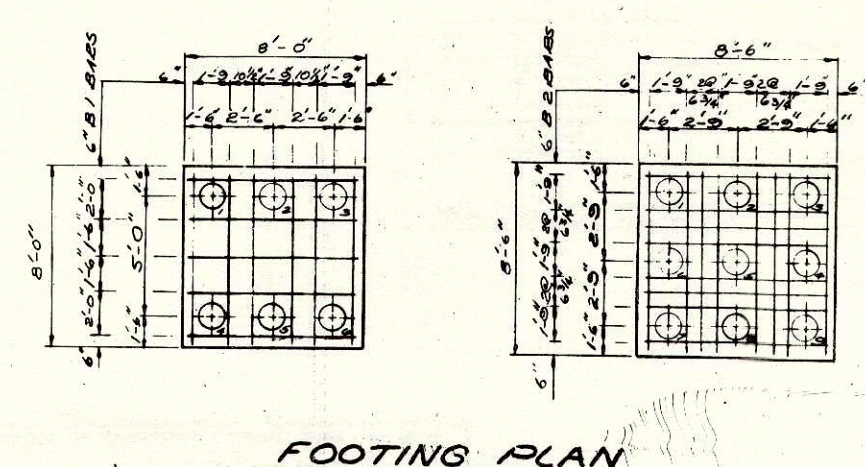
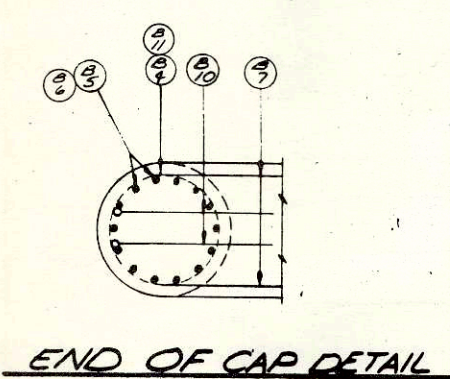
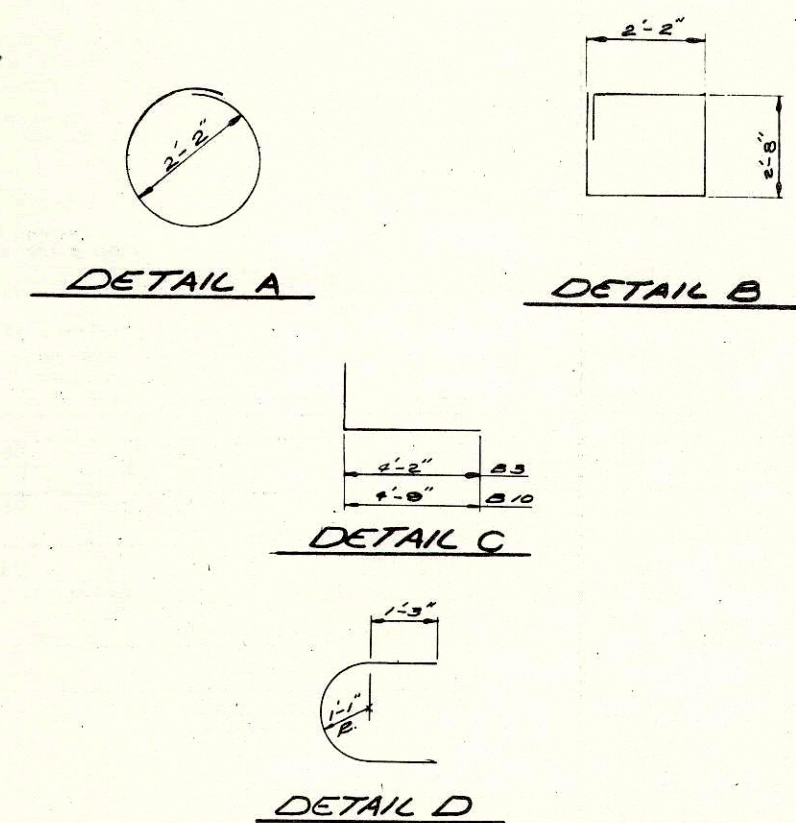
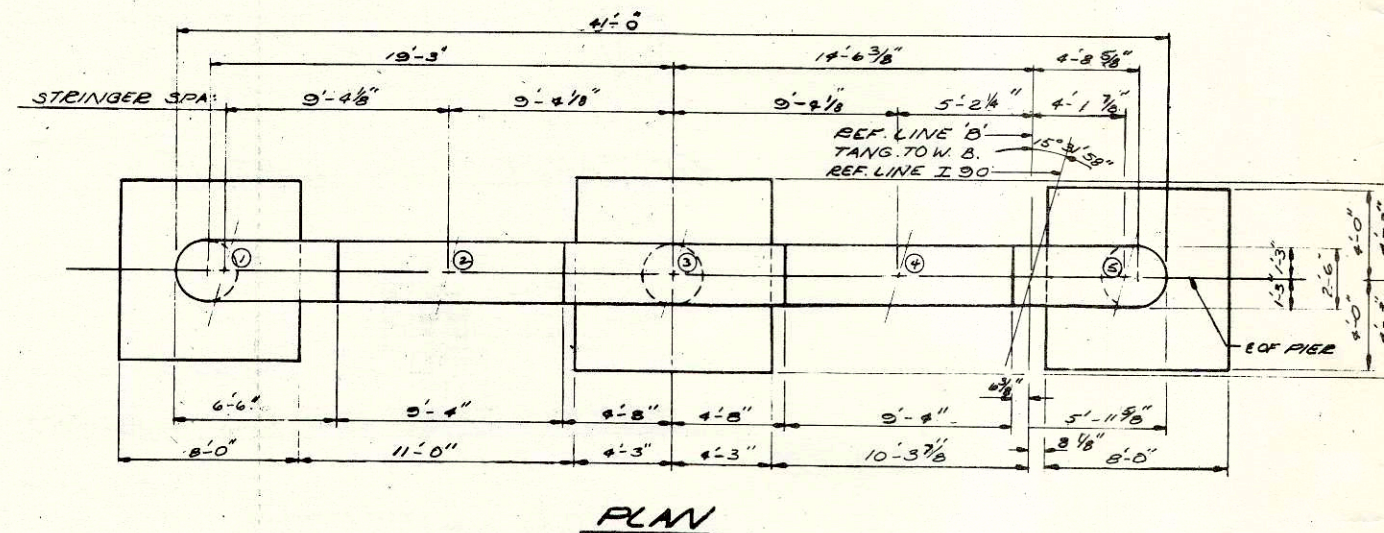
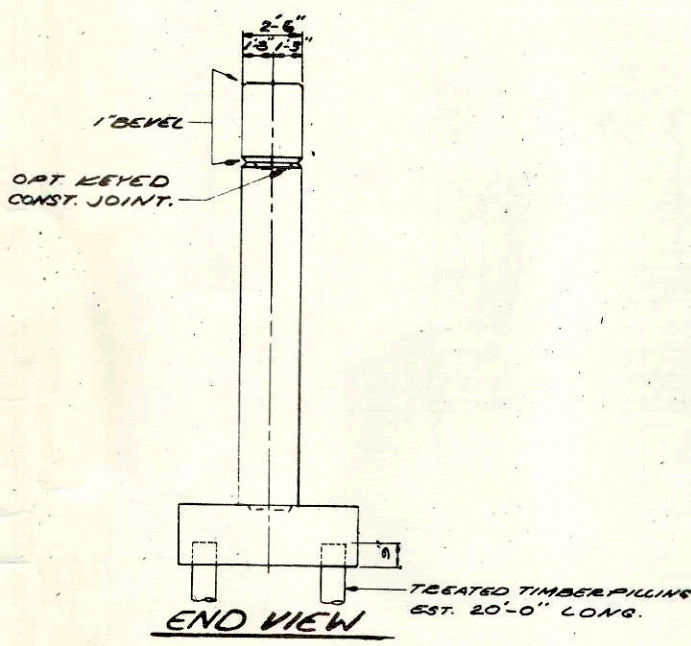
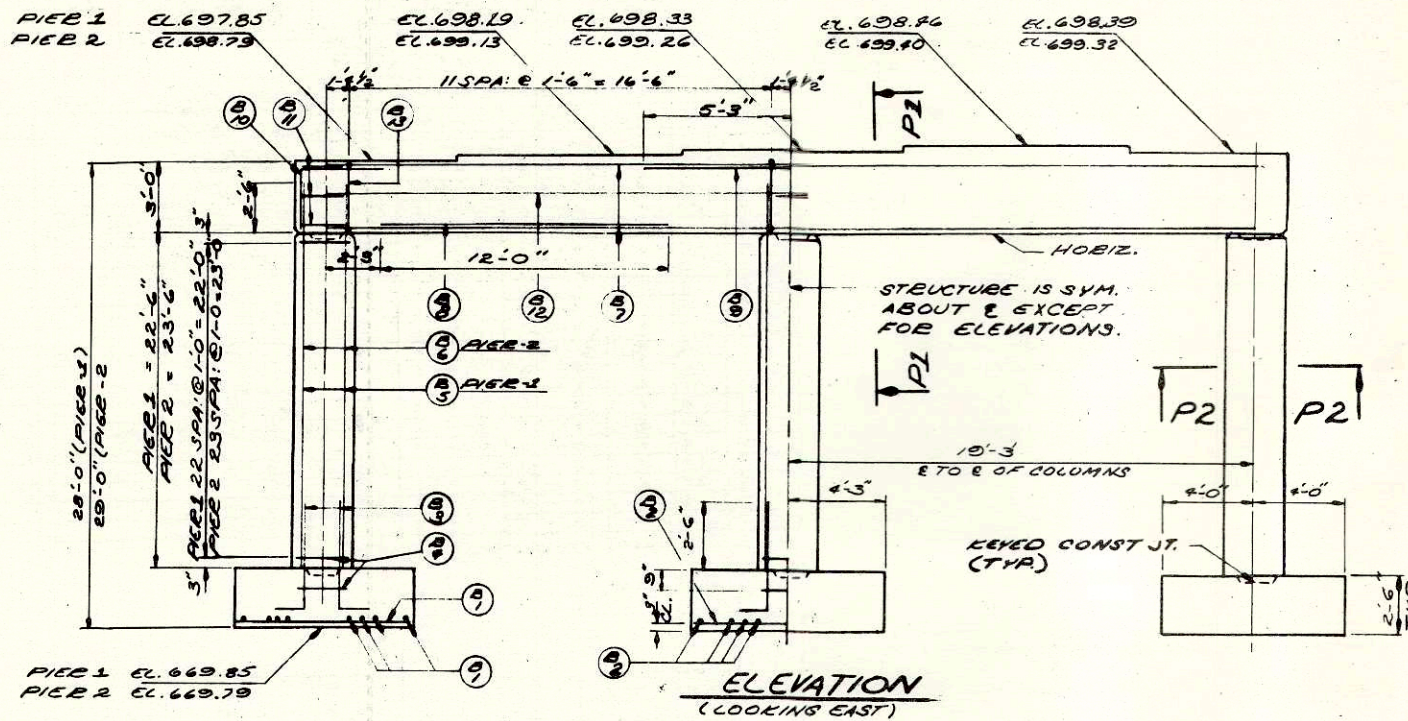
S.A. DESIGN	PROJECT	SHEET NO.	TOTAL SHEETS
4	16-90-1 (17)3	23	25

BILL OF BARS

TOTAL FOR PIER 1 & 2 16,980 #

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

MARK	NO	SIZE	LENGTH	SPACING	LOCATION	QTY
B 1	44	8	7'-6"	SHOWN	FOOTINGS - EXTERIOR	
B 2	32	8	8'-0"	"	" INSIDE	
B 3	84	10	5'-0"	"	" COLUMNS	C
B 4	147	4	7'-9"	1'-0"	"	A
B 5	42	10	25'-0"	SHOWN	COLUMNS VERT. PIER 1 ONLY	
B 6	42	10	24'-0"	"	" PIER 2 ONLY	
B 7	10	10	38'-6"	"	CAP HORIZ.	
B 8	16	10	12'-0"	"	"	
B 9	8	10	7'-6"	"	"	
B 10	8	10	7'-6"	"	CORNER BARS	C
B 11	12	5	6'-0"	"	END SIDES	D
B 12	8	4	19'-9"	"	HORIZ.	
B 13	48	4	10'-9"	1'-6"	STIRRUPS	B



CONCRETE MASONRY

	PIER 1	PIER 2
FOOTINGS	18.5	18.5
COLUMNS	12.3	12.8
CAP	12.9	12.8
TOTAL	43.7	44.1

REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN
	PIERS 1 & 2
DESIGN SPEC. A.A. 340.67	LOADING 1963
DATE 12-24-63	DESIGN C.S. DRAWN C.S. CHK. D.B.
STRUCTURE B-32-44	SHEET 8 OF 10

X DIMENSIONS ARE ALONG FRONT FACE OF PARAPET.

NOTE: FOR ADDITIONAL RAILING PARAPET DETAIL SEE SHEETS X28120 & X28121
 CONST. JOINT IN WINGS, WITH A 3/4 BUSTICATION GROOVE IN FRONT FACE. TOP OF WING TO BE POURED AFTER SUPER. CURBS ARE IN PLACE.
 ALL OPT. KEYED CONST. JOINTS SHALL BE FORMED BY A SURFACED BEVELED 2"x6"

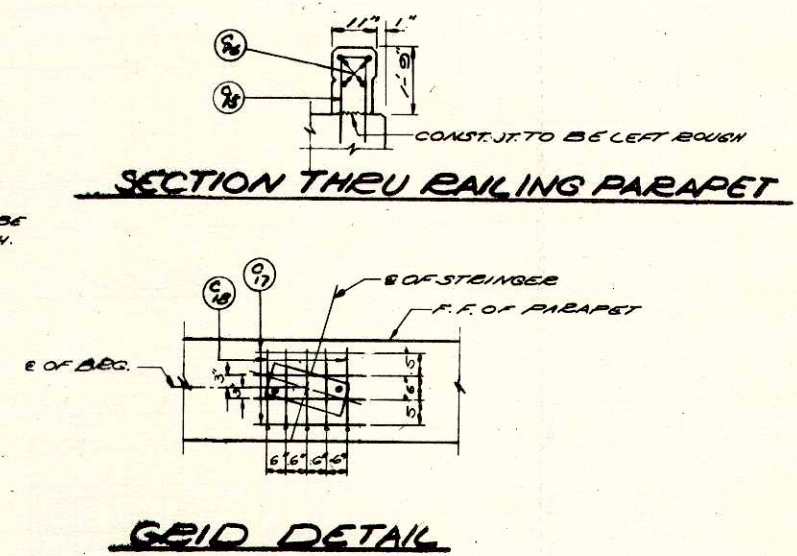
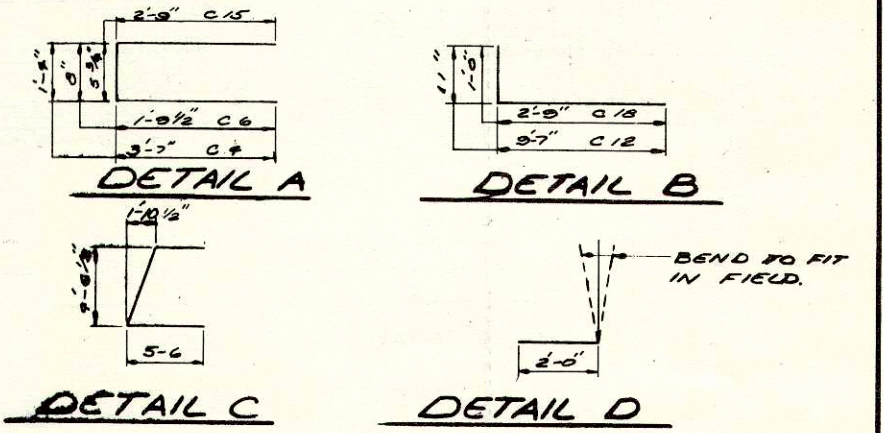
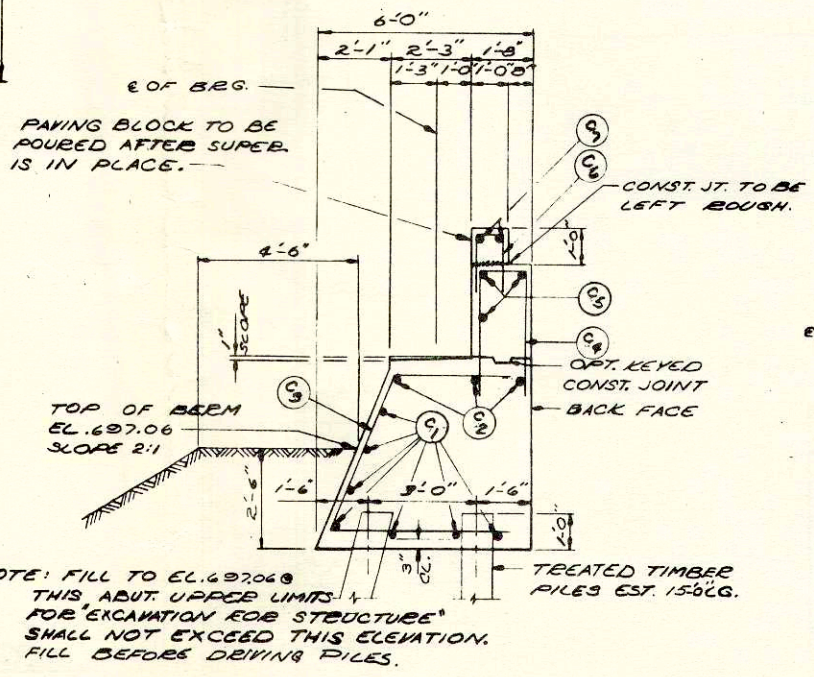
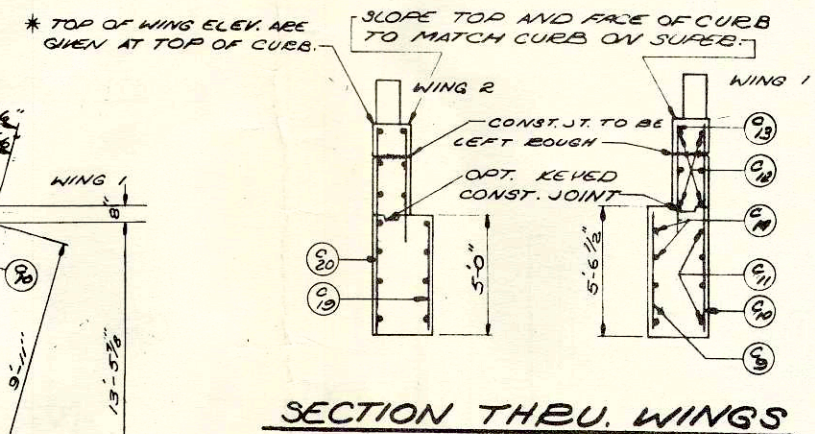
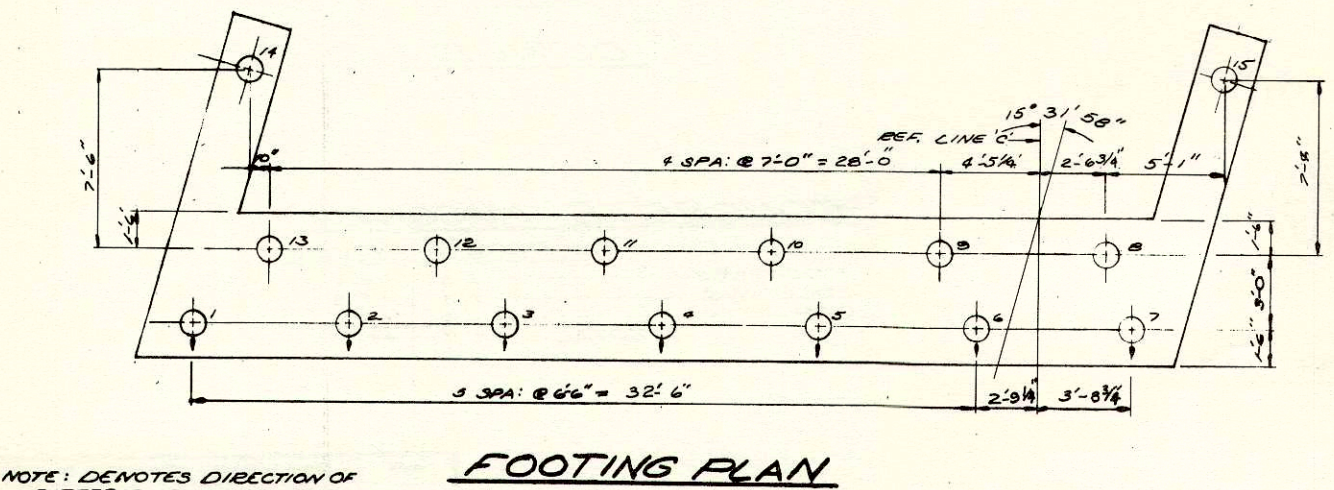
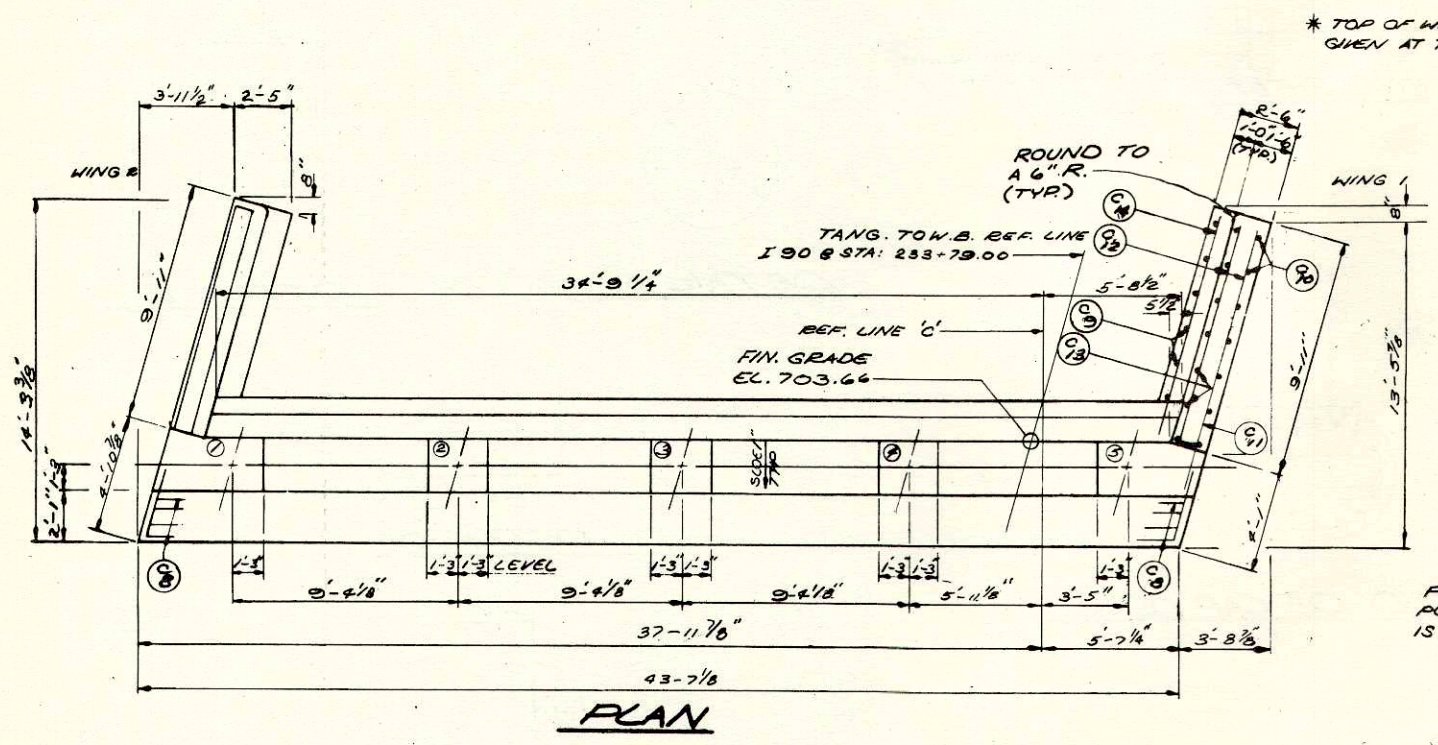
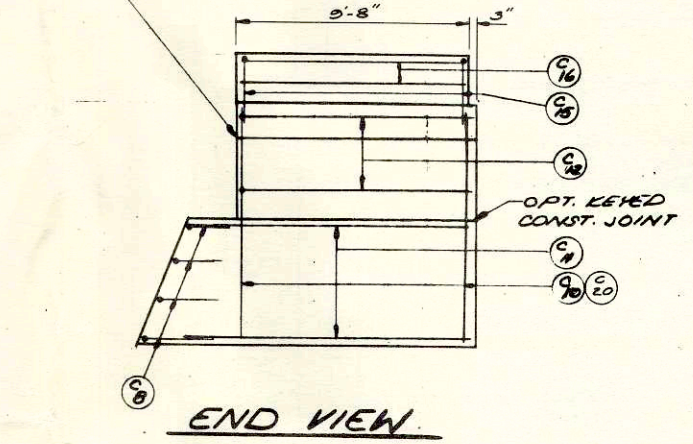
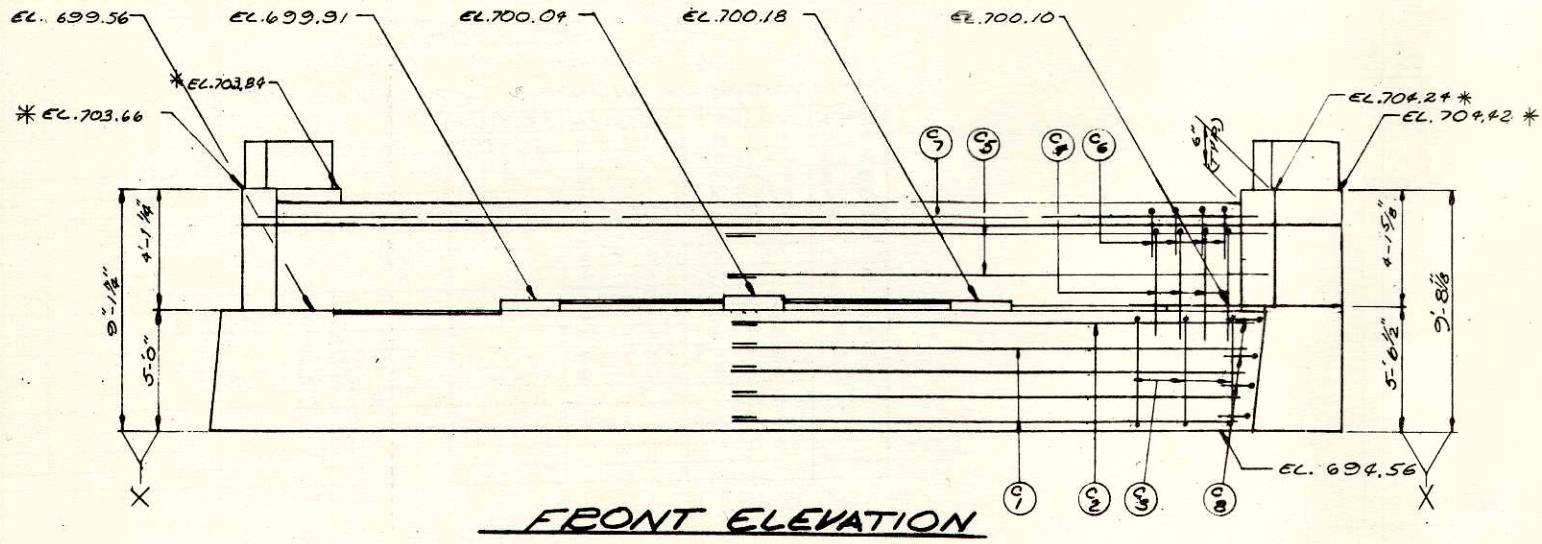
BILL OF BARS
 1790#

DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	16-90-1 (17)3	24	25

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

NO.	SIZE	LENGTH	SPACING	LOCATION	DET.
C 1	1#	22'-0"	SHOWN	BODY HORIZ.	
C 2	6#	22'-3"	"	"	
C 3	18#	13'-0"	32'-0"	" VERT.	C
C 4	27#	8'-6"	1'-6"	PARAPET WALL VERT.	A
C 5	6#	21'-6"	SHOWN	" HORIZ.	
C 6	10#	4'-9"	1'-0"	PAVING BLOCK	A
C 7	10#	8'-0"	SHOWN	"	
C 8	8#	1'-0"	1'-6"	CORNER BARS	D
C 9	4#	5'-0"	1'-6"	WING VERT. WING-1	
C 10	7#	9'-3"	1'-6"	"	
C 11	8#	11'-3"	1'-6"	"	
C 12	12#	10'-6"	1'-6"	" HORIZ. WINGS 1&2	
C 13	14#	4'-9"	1'-6"	" VERT.	B
C 14	3#	9'-6"	1'-6"	" HORIZ.	
C 15	20#	6'-0"	1'-0"	RAILING PARAPET VERT.	A
C 16	8#	9'-3"	SHOWN	" HORIZ.	
C 17	20#	2'-3"	"	GRID DETAIL	
C 18	25#	3'-9"	"	"	B
C 19	6#	1'-9"	1'-6"	WING 2 VERT.	
C 20	7#	8'-9"	1'-6"	"	

* SPA: '03' BARS TO CLEAR PILING.



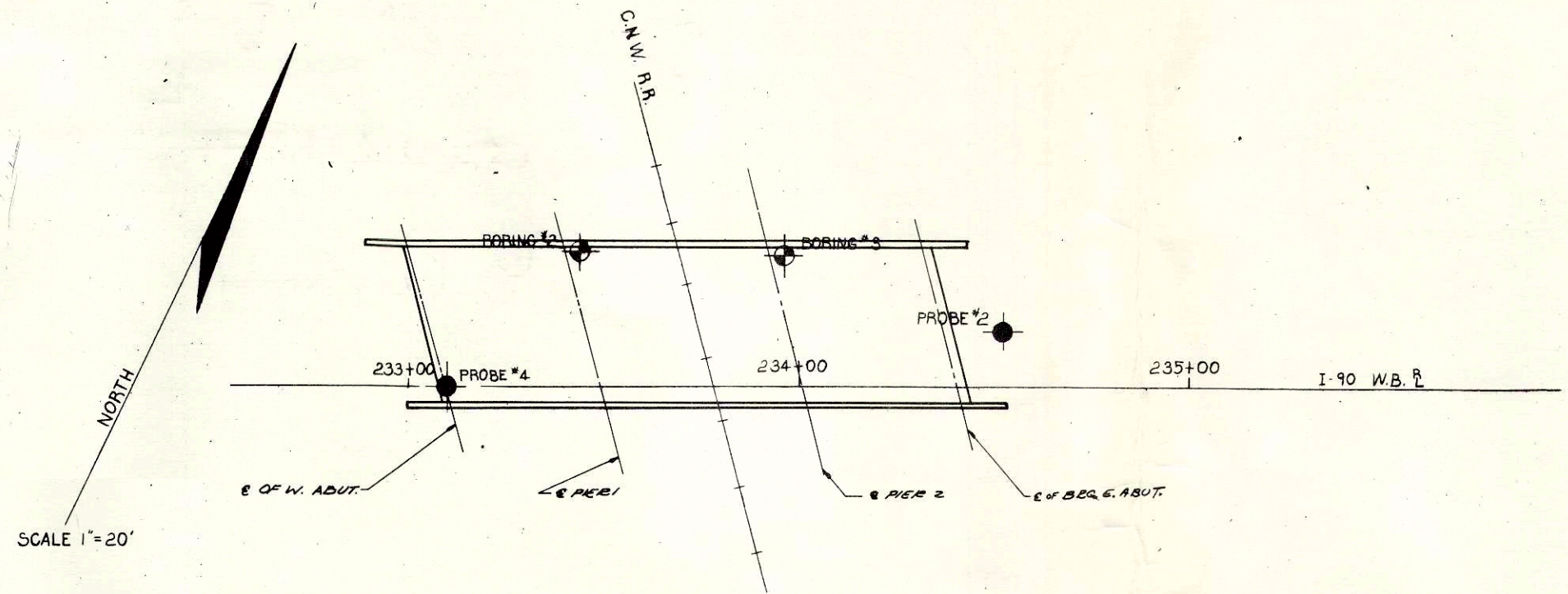
NOTE: DENOTES DIRECTION OF BATTERED PILES. BATTERED PILING TO BE BATTERED 3" PER FOOT.

NOTE: FILL TO EL. 697.06 THIS ABUT. UPPER LIMITS FOR EXCAVATION FOR STRUCTURE SHALL NOT EXCEED THIS ELEVATION. FILL BEFORE DRIVING PILES.

DESIGNED BY	STATE HIGHWAY COMMISSION OF WISCONSIN
TITLE	EAST ABUTMENT
DESIGN SPEC.	A.A.S.H.O. 1963
DATE	12-21-45
DESIGNER	C.G.
DRAWN BY	E.C.
STRUCTURE	B-32-44
SHEET	9 OF 10

X28124

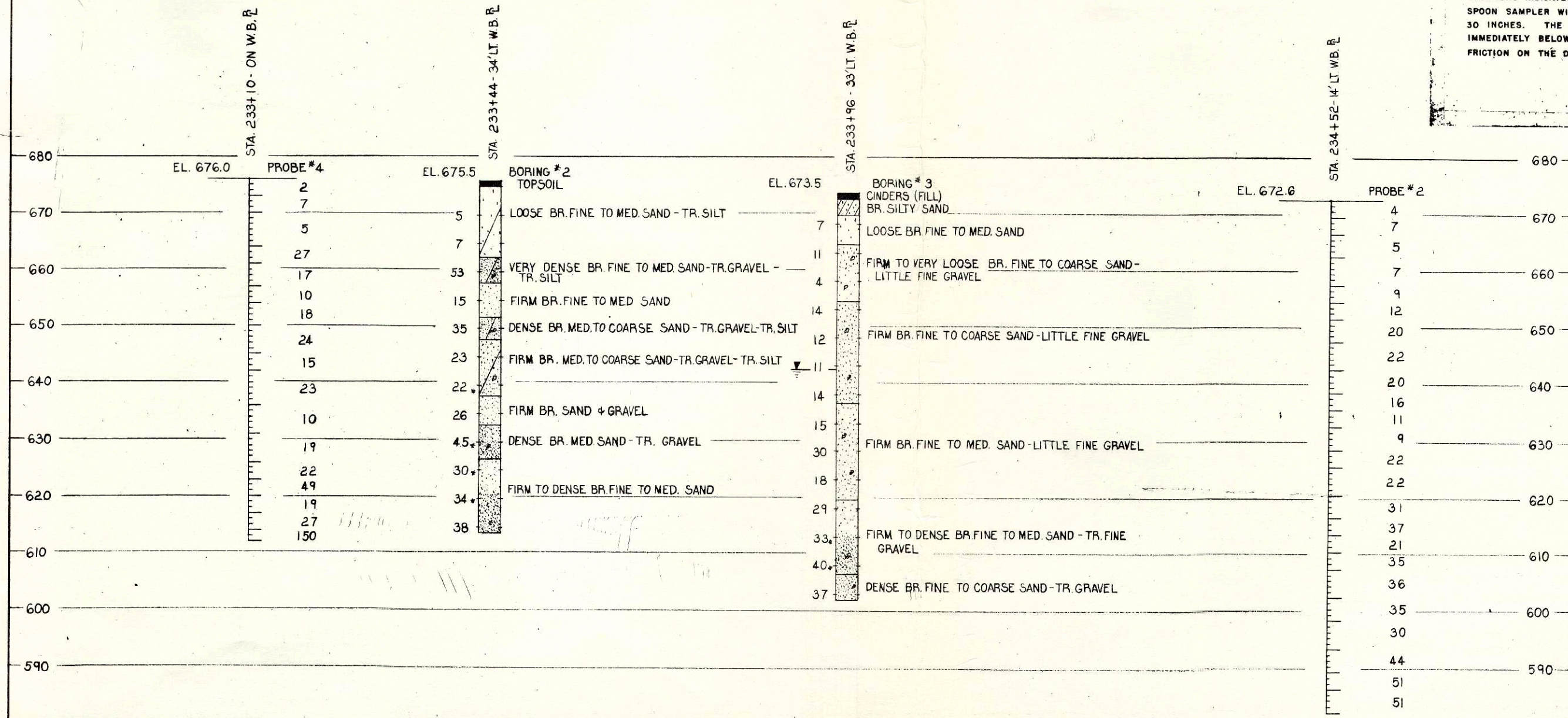
D.P.R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	16-50-1 (17)3	25	25



SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN

FOR THE DESIGN OF THE STRUCTURE FOUNDATION, TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING WITH THE LOG OF SUCH EXPLORATION DATA AS INTERPRETED FOR SUCH DESIGN PURPOSE AS SHOWN. THE EXPLORATIONS WERE MADE BY ORDINARY AND CONVENTIONAL METHODS AND CARE DEEMED ADEQUATE FOR SUCH PURPOSE. HOWEVER, SINCE IT IS A MATTER OF COMMON KNOWLEDGE THAT THE EXACT CHARACTER OF ANY MATERIAL AND ITS REACTION IS DIFFICULT TO DETERMINE FROM SUCH SUBSURFACE EXPLORATION AND THAT THE KIND AND CHARACTER OF MATERIAL AT THE SITE WHERE THE FOUNDATIONS ARE BUILT MAY VARY SUBSTANTIALLY FROM THAT INDICATED BY THE LOG THEY ARE MADE AVAILABLE TO THE BIDDERS SIMPLY FOR WHAT THEY ARE WORTH, WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED THAT THE MATERIAL TO BE ENCOUNTERED IN BUILDING THE FOUNDATION WILL CONFORM THEREWITH. IF THE LOG IS USED BY THE CONTRACTOR IN MAKING HIS BID, IT IS HEREBY EXPRESSLY STIPULATED THAT THE COMMISSION ACCEPTS NO RESPONSIBILITY FOR SAID USE.

UNLESS OTHERWISE SPECIFIED THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140 LB. HAMMER HAVING A FREE FALL OF 30 INCHES. THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.



LEGEND OF PROBINGS

STA. ELEV. PROBE #

7 AVERAGE BLOWS PER FT.

PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT

LEGEND OF BORING

STA. ELEV. BORING #

DESCRIPTION OF MATERIAL

BLOWS PER FT. 7. USING 140# WT. FALLING 30"

WASH SAMPLE MATERIAL CHANGE

GROUND WATER ELEVATION

REVISIONS

NO.	DATE	BY	DESCRIPTION
1			

STATE HIGHWAY COMMISSION OF WISCONSIN

SUBSURFACE EXPLORATION

DESIGN SPEC. AASHTO 61 LOADING SPEC. 1002 CORRECT. 1063

DATE 2-24-63 DESIGN C. G. DRAWN J. S. D. CHK. J. L. M.

STRUCTURE **B-32-44** SHEET **10 OF 10**