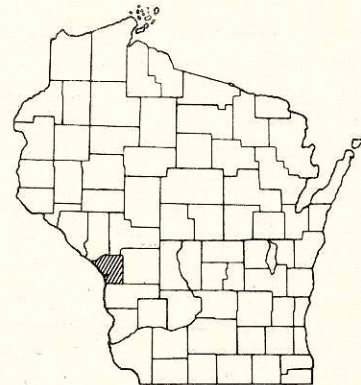


INDEX OF SHEETS

- SHEET NO. 1 TITLE
- SHEET NO. 2-2.7 TYPICAL CROSS SECTIONS
- SHEET NO. 3 ESTIMATE OF QUANTITIES
- SHEET NO. 3A-B MISCELLANEOUS QUANTITIES
- SHEET NO. 4-4.5 RIGHT OF WAY PLAT
- SHEET NO. 5-17 PLAN AND PROFILE STA. 45+69.93 TO STA. 191+94.89
- SHEET NO. 18-18.9 STANDARD DETAILS
- SHEET NO. 19-22 DRAINAGE STRUCTURES
- SHEET NO. 23-56 CROSS SECTIONS



STATE OF WISCONSIN  
STATE HIGHWAY COMMISSION OF WISCONSIN

PLAN AND PROFILE OF PROPOSED  
**LA CROSSE - TOMAH ROAD**  
(MISSISSIPPI RIVER - U.S.H. 53 SECTION)  
I.H. 90  
LA CROSSE COUNTY  
PROJECT EACI-90-1(15)0

COUNTY AND HIGHWAY	ROUTE AND SECTION	CLASS AND AGREEMENT		S.P.A. REGION DIVISION	SHEET NUMBER	TOTAL SHEETS
		STATE	FEDERAL			
32.3	90.1		13.15	4 WIS.	1	65

CONTROL OF ACCESS

WITHIN THE LIMITS OF THE PROJECT WHERE CONTROL OF ACCESS LINE IS SHOWN \_\_\_\_\_ NO ACCESS IS PERMITTED TO THE INTERSTATE TRAFFIC LANES EXCEPT BY RAMPS AT INTERCHANGES.

DESIGN DESIGNATION

ADT <sub>1962</sub>	6,800
ADT <sub>1986</sub>	16,100
DHV <sub>1986</sub>	2090
K	13%
D	60%
T	8%
V	70mph

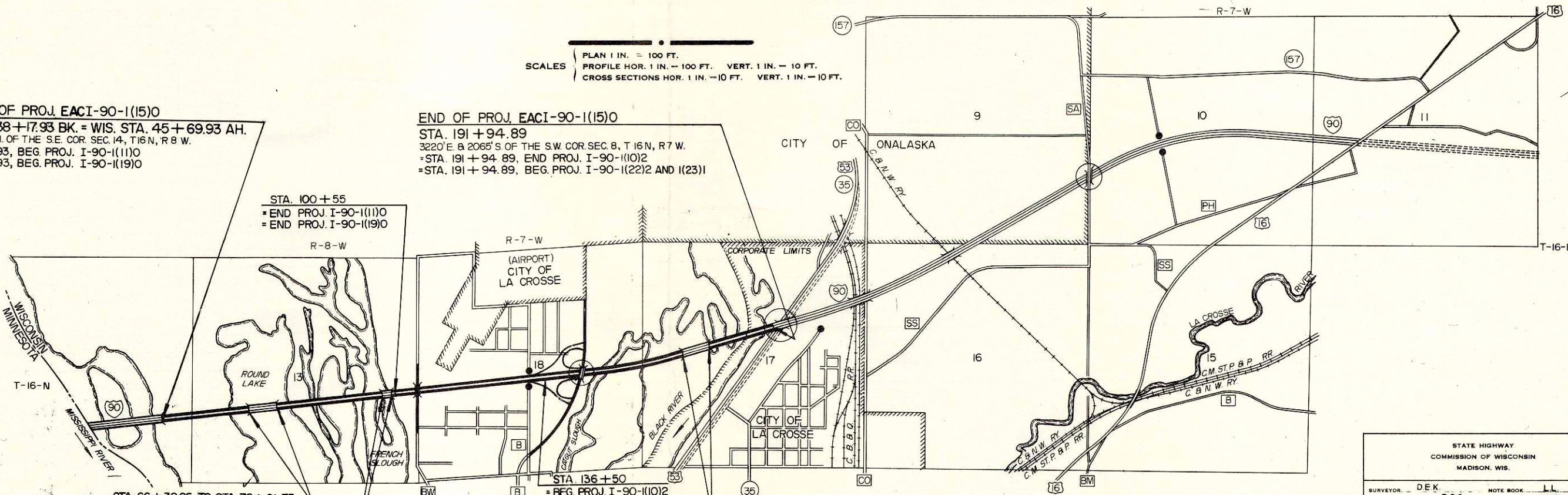
PLAN 1 IN. = 100 FT.  
PROFILE HOR. 1 IN. = 100 FT. VERT. 1 IN. = 10 FT.  
CROSS SECTIONS HOR. 1 IN. = 10 FT. VERT. 1 IN. = 10 FT.

BEGINNING OF PROJ. EACI-90-1(15)0

MINN. STA. 538+17.93 BK. = WIS. STA. 45+69.93 AH.  
716' W. & 1470' N. OF THE S.E. COR. SEC. 14, T16N, R8W.  
= STA. 45+69.93, BEG. PROJ. I-90-1(11)0  
= STA. 45+69.93, BEG. PROJ. I-90-1(19)0

END OF PROJ. EACI-90-1(15)0

STA. 191+94.89  
3220' E. & 2065' S. OF THE S.W. COR. SEC. 8, T16N, R7W.  
= STA. 191+94.89, END PROJ. I-90-1(10)2  
= STA. 191+94.89, BEG. PROJ. I-90-1(22)2 AND 1(23)1



CONVENTIONAL SIGNS

- |                           |       |                               |                  |
|---------------------------|-------|-------------------------------|------------------|
| STATE LINE                | ..... | CULVERTS IN PLACE             | .....            |
| COUNTY LINE               | ..... | CULVERTS REQUIRED             | .....            |
| TOWNSHIP OR RANGE LINE    | ..... | DROP INLET                    | .....            |
| SECTION LINE              | ..... | POWER POLE                    | .....            |
| NEW RIGHT OF WAY LINE     | ..... | TELEPHONE OR TELEGRAPH POLE   | .....            |
| 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 75.16 |
| RAILROADS                 | ..... |                               |                  |
| BASE OR SURVEY LINE       | ..... |                               |                  |

STA. 97+63.42 TO STA. 99+00.58  
EXCEPTION TO NET & LENGTH  
= STA. 99+00.58, END PROJ. I-90-8(3)275

APPROVED INTERSTATE LOCATION

INTERCHANGE

HWY. GRADE SEPARATION (MAIN LINE UNDER)

BRIDGES (MAIN LINE OVER)

TERMINATED CROSS ROAD

LAYOUT

SCALE 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 2,530 MI.  
TOTAL URBAN = 0.136 MI.  
TOTAL RURAL = 2,394 MI.

STATE HIGHWAY COMMISSION OF WISCONSIN  
MADISON, WIS.

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

CORRECT: DATE: 4-27-66 *[Signature]* DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL: DATE: 6/13/66 *[Signature]* CHIEF DESIGN ENGINEER

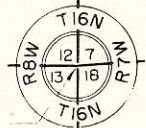
APPROVED: DATE: 6/24/66 *[Signature]* STATE HIGHWAY ENGINEER

EACI-90-1(15)0 275







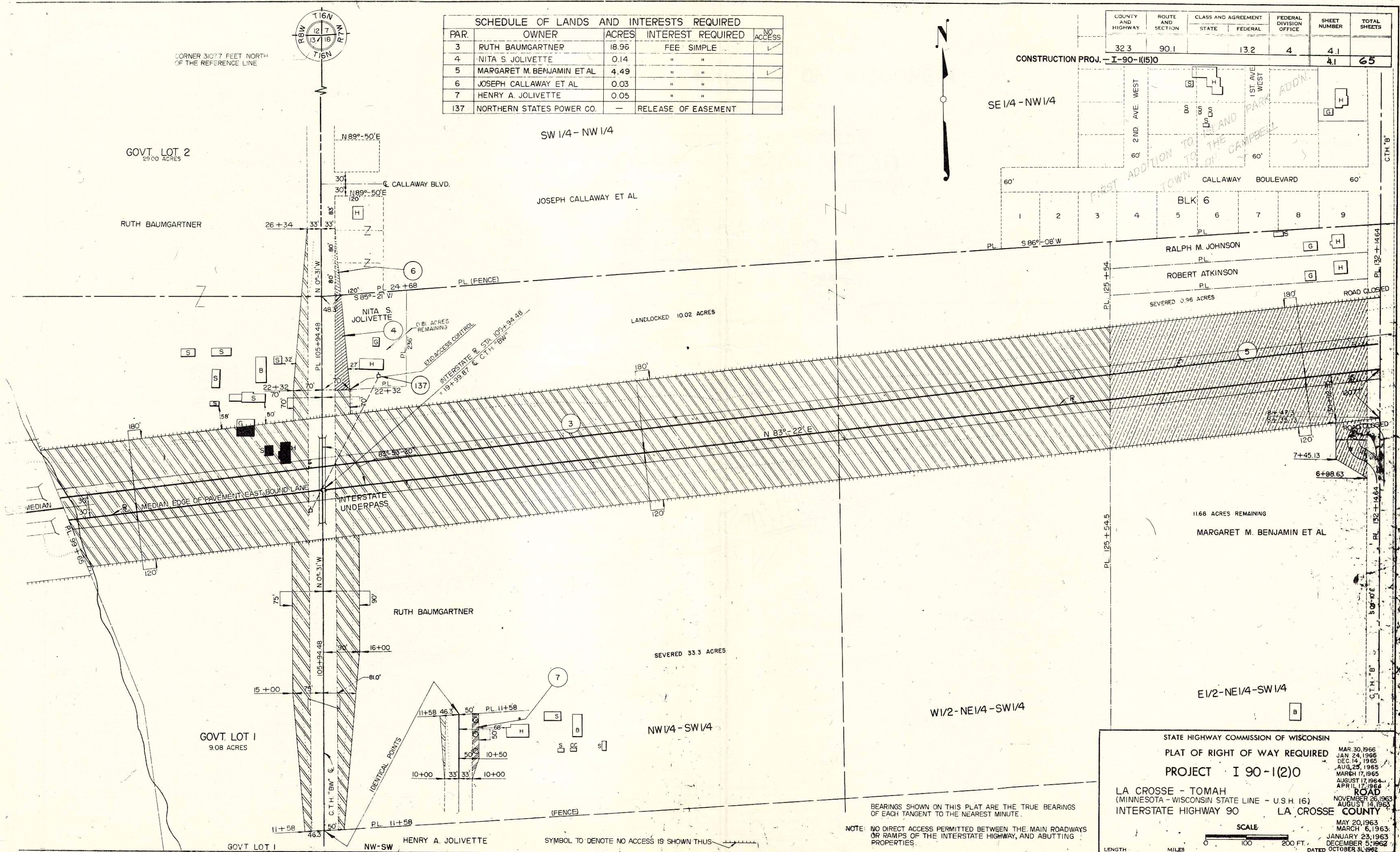


CORNER 3107.7 FEET NORTH OF THE REFERENCE LINE

SCHEDULE OF LANDS AND INTERESTS REQUIRED				
PAR.	OWNER	ACRES	INTEREST REQUIRED	NO ACCESS
3	RUTH BAUMGARTNER	18.96	FEE SIMPLE	<input checked="" type="checkbox"/>
4	NITA S JOLIVETTE	0.14	" "	<input type="checkbox"/>
5	MARGARET M. BENJAMIN ET AL	4.49	" "	<input checked="" type="checkbox"/>
6	JOSEPH CALLAWAY ET AL	0.03	" "	<input type="checkbox"/>
7	HENRY A. JOLIVETTE	0.05	" "	<input type="checkbox"/>
137	NORTHERN STATES POWER CO.	-	RELEASE OF EASEMENT	<input type="checkbox"/>

COUNTY AND HIGHWAY	ROUTE AND SECTION	CLASS AND AGREEMENT	FEDERAL DIVISION OFFICE	SHEET NUMBER	TOTAL SHEETS
323	90.1	132	4	4.1	65

CONSTRUCTION PROJ. - I-90-(15)0



W1/2-NE1/4-SW1/4

E1/2-NE1/4-SW1/4

STATE HIGHWAY COMMISSION OF WISCONSIN  
 PLAT OF RIGHT OF WAY REQUIRED  
 PROJECT I 90-1(2)0

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

MAR. 30, 1966  
 JAN. 24, 1966  
 DEC. 14, 1965  
 AUG. 25, 1965  
 MARCH 17, 1965  
 AUGUST 17, 1964  
 APRIL 17, 1964  
 NOVEMBER 26, 1963  
 AUGUST 14, 1963  
 MAY 20, 1963  
 MARCH 6, 1963  
 JANUARY 23, 1963  
 DECEMBER 5, 1962  
 DATED OCTOBER 31, 1962

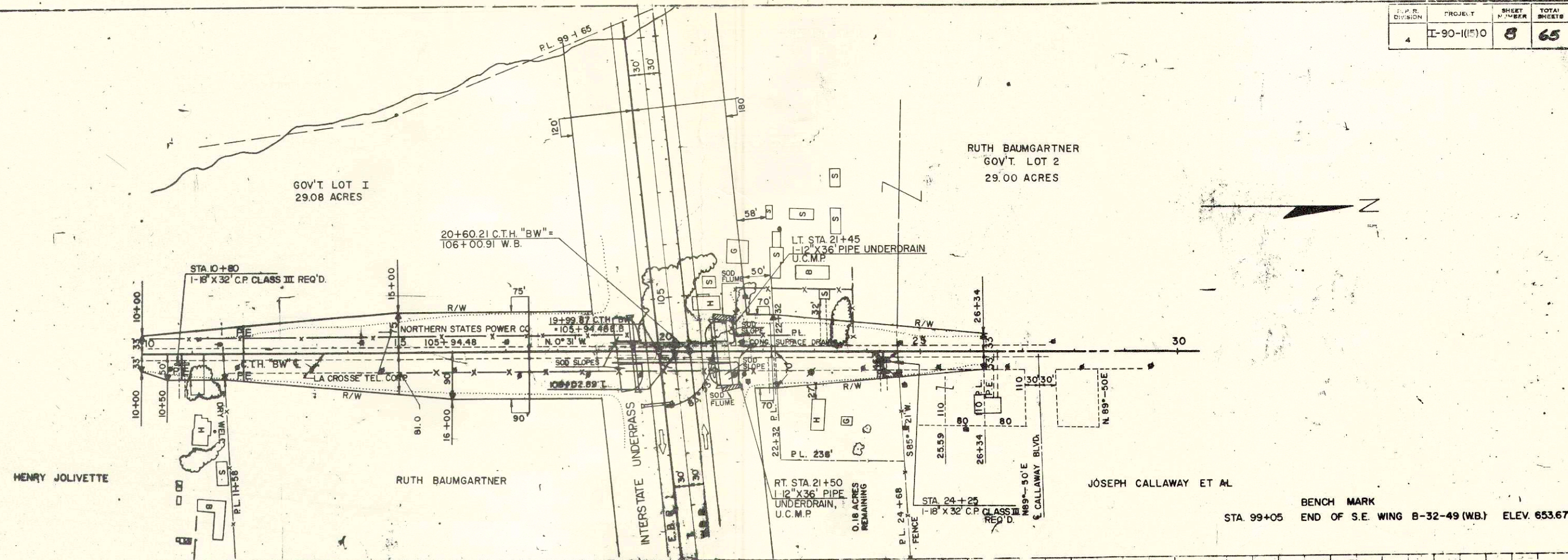
SCALE  
 0 100 200 FT.  
 LENGTH MILES

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

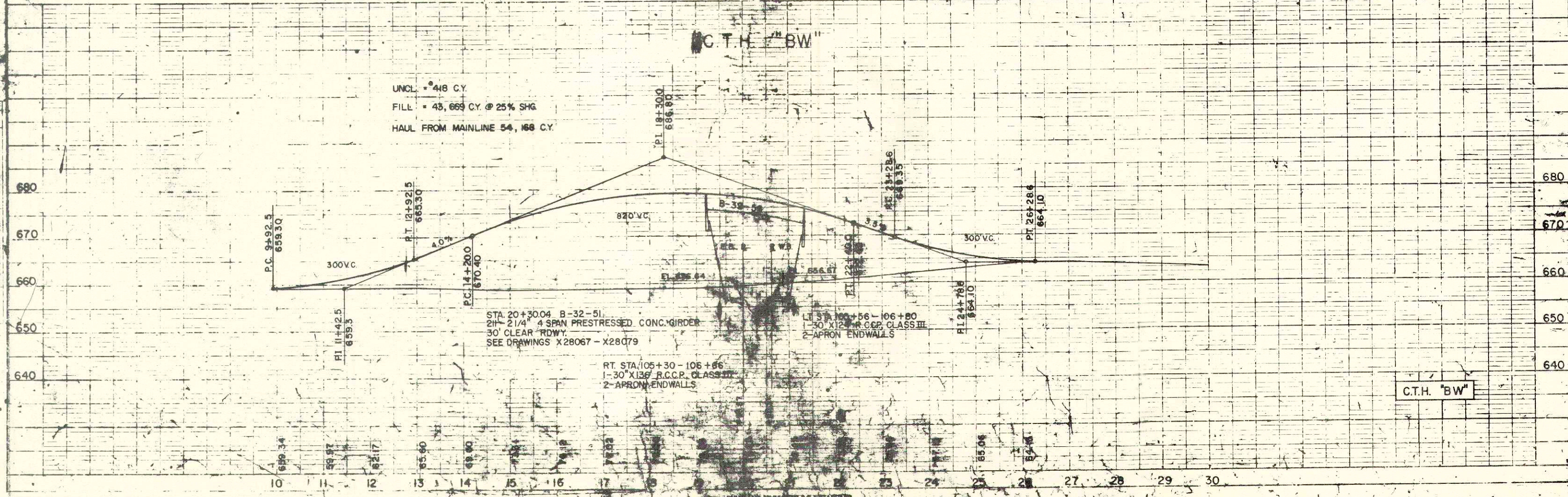
SYMBOL TO DENOTE NO ACCESS IS SHOWN THUS



D.P.R. DIVISION	PROJECT	SHEET NUMBER	TOTAL SHEETS
4	I-90-1(15)0	8	65



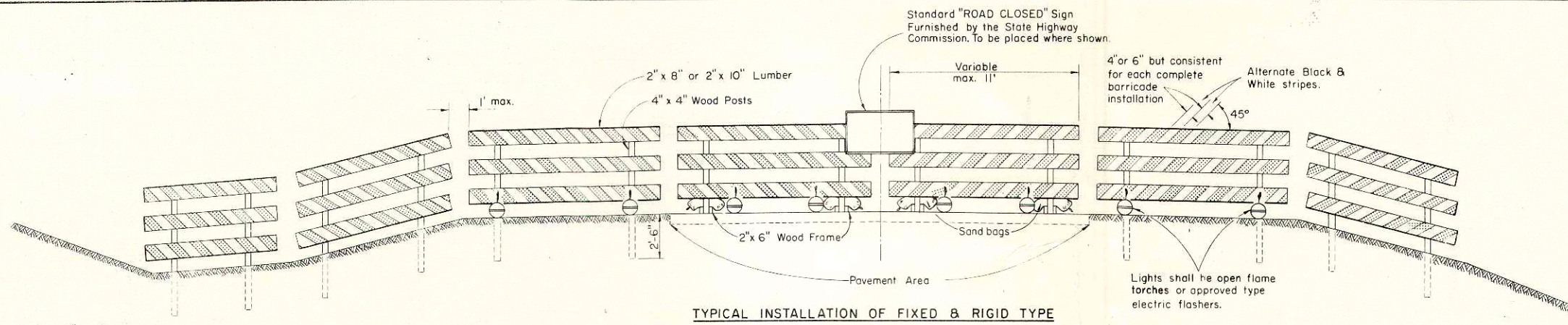
UNCL. = 418 C.Y.  
 FILL = 43,669 C.Y. @ 25% SHG.  
 HAUL FROM MAINLINE 54,168 C.Y.



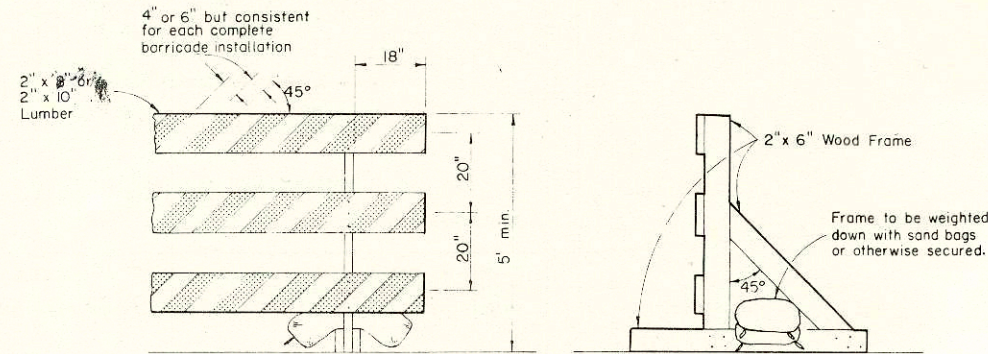
C.T.H. "BW"



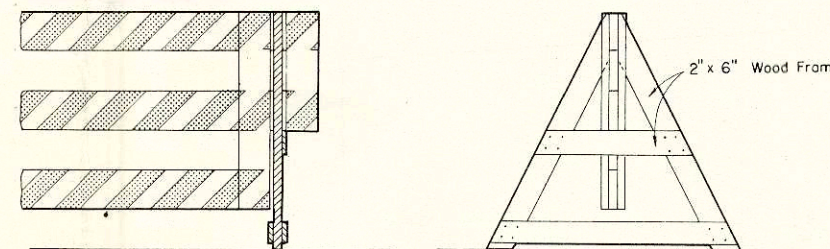
18.6-65



TYPICAL INSTALLATION OF FIXED & RIGID TYPE



ALTERNATE TYPE INSTALLATION (RIGID)



ALTERNATE TYPE INSTALLATION (DEMOUNTABLE)

**CLASS I BARRICADE**

**GENERAL NOTES:**

The Contractor shall construct, place and maintain barricades as shown on this drawing and as required by the Standard Specifications for the duration of the project at all points of highway closure. Barricades shall be painted as shown hereon and structurally maintained for maximum visibility at all times, for the duration of the respective project.

**CLASS I BARRICADE**

Shall be used at points of closure where road is closed to traffic. Gates or movable sections of barricade shall be provided when necessary, for access of equipment or other authorized vehicles only.

**CLASS II BARRICADE**

May be used only where the hazard to traffic is relatively small, and for the more or less continuous delimiting of a restricted roadway, or for temporary daytime use.

**LUMBER & FABRICATION**

Lumber shall be of a grade structurally sound and sufficiently rigid to satisfactorily support and maintain the purpose and intent of a barricade facility. The fabrication of the barricade shall be in accord with good pertinent wood-working practices.

**PAINTING**

Barricades shall be painted as shown hereon in alternate black and white stripes. Black stripes shall be painted with weather resistant and durable black paint. White stripes shall be painted a prime coat of good grade wood primer, followed by two coats of white "Codal Reflective Liquid" (Minnesota Mining Co.) or equivalent, or reflective sheeting wide angle, flat top "Scotchlite" brand material (Minnesota Mining Co.) or equivalent.

**DIRECTION OF DIAGONAL STRIPES**

Where a barricade extends entirely across the roadway and no vehicle access provision, the stripes shall slope downward toward the highway centerline. Where vehicle access is permitted, the stripes shall slope downward in the direction toward which vehicles must turn in detouring. Where both right and left turns are provided for, the stripes shall slope downward in both directions from the center.

**MEASUREMENT & PAYMENT**

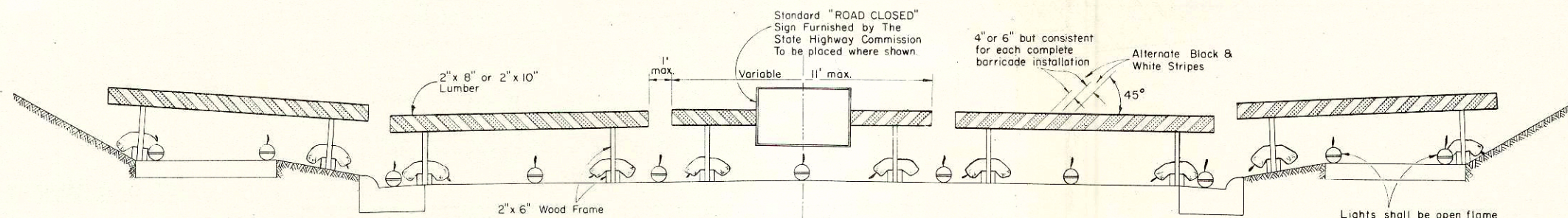
All barricades, unless otherwise provided for in the plans and/or special provisions shall be furnished, placed, and maintained as noted above, and no additional compensation will be allowed but shall be construed to be included in the price bid for other items.

**NOTE:**

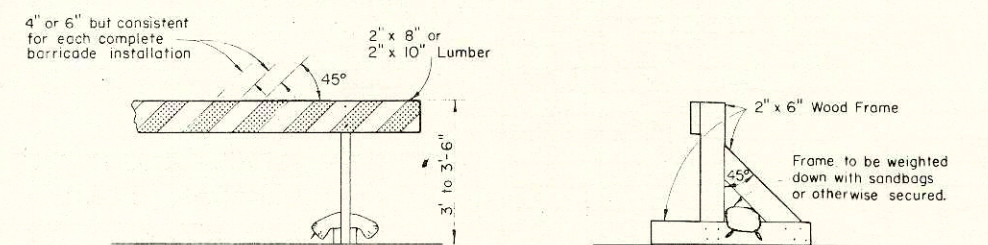
Lighting devices for barricades shall conform to the requirements of the Standard Specifications.

**NOTE:**

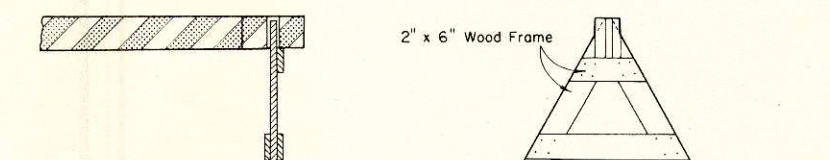
All lumber or timber dimensions shown hereon are nominal.



TYPICAL INSTALLATION OF RIGID TYPE



ALTERNATE TYPE INSTALLATION (RIGID)



ALTERNATE TYPE INSTALLATION (DEMOUNTABLE)

**CLASS II BARRICADE**

**CONSTRUCTION BARRICADE**

STATE HIGHWAY COMMISSION OF WISCONSIN

RECOMMENDED FOR APPROVAL  
DATE 2-5-63 J. J. Pelt ENGINEER OF DESIGN

APPROVED  
DATE 2/6/63 P. C. Berlin STATE HIGHWAY ENGINEER

DATE 2/6/63

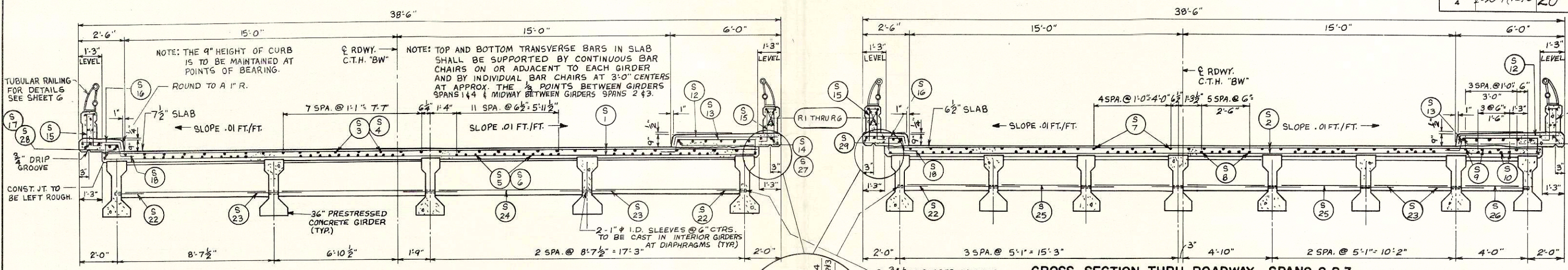
PLATE NO. 7-4.1.4







B. P. R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	I-90-1(15)0	20	65



CROSS SECTION THRU ROADWAY SPANS 1 & 4

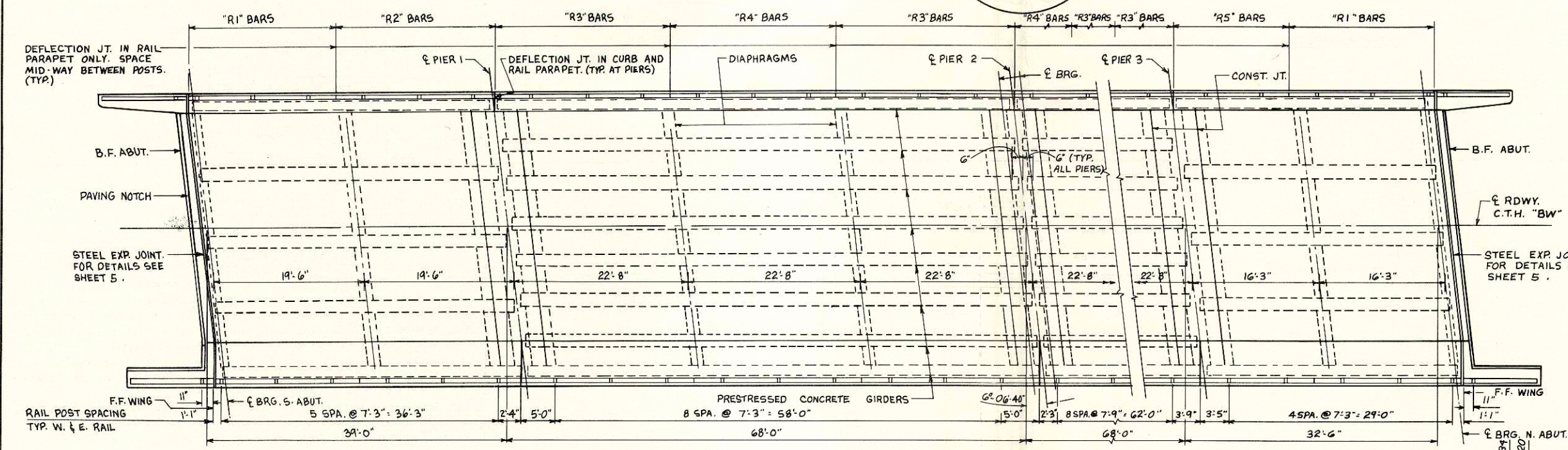
CROSS SECTION THRU ROADWAY SPANS 2 & 3

BILL OF BARS 64,790 #

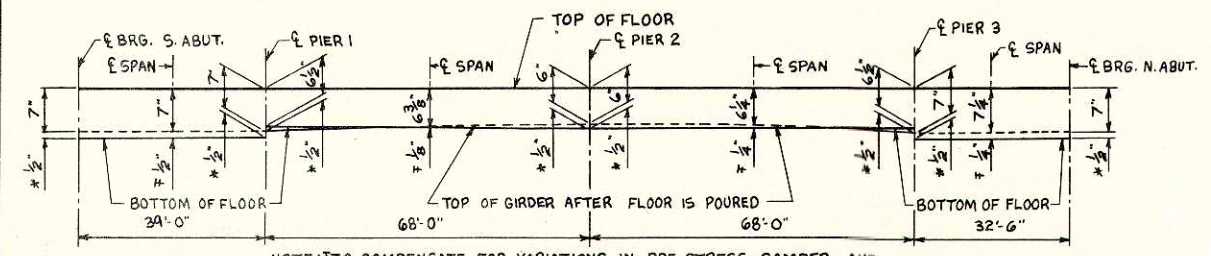
NOTE: PLACE TRANS. BAR STEEL REINFORCEMENT IN FLOOR PARALLEL TO & SUBSTRUCTURE UNITS.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

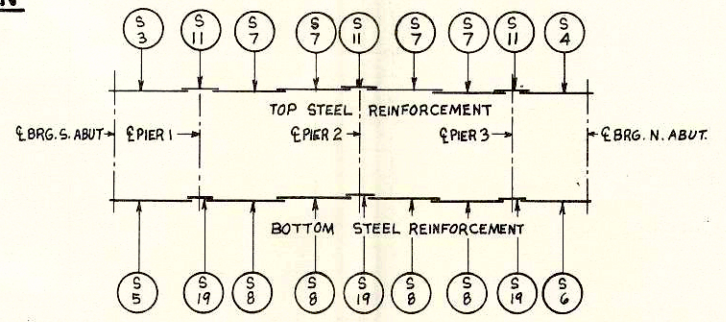
MARK	NO.	SIZE	LENGTH	SPACING	LOCATION	DET.
S1	257	6	35-9	6 1/2	FLOOR - TOP & BOTTOM - TRANS. SPAN 1 & 4	
S2	519	5	35-9	6	" " " " SPAN 2 & 3	
S3	32	5	32-9	1-1	" " TOP - LONG. - SPAN 1	
S4	32	5	25-3	1-1	" " TOP - LONG. - SPAN 4	
S5	48	5	37-6	6 1/2	" " BOTTOM - LONG. - SPAN 1	
S6	48	5	30-9	6 1/2	" " BOTTOM - LONG. - SPAN 4	
S7	120	5	28-6	1-0	" " TOP - LONG. - SPAN 2 & 3	
S8	144	4	32-9	6	" " BOTTOM - LONG. - SPAN 2 & 3	
S9	16	5	28-6	1-0	" " TOP - LONG. - SPAN 2 & 3	
S10	16	4	32-9	6	" " BOTTOM - LONG. - SPAN 2 & 3	
S11	102	8	15-0	1-0	" " AT PIERS (SYM. @ & PIERS)	
S12	207	5	6-0	1-0	SIDE WALK - EAST	D
S13	207	5	7-3	1-0	" " " " " "	C
S14	16	5	20-3	9	" " " " LONG. - SPAN 1	
S15	416	5	5-0	1-0	CURB, SDWK & RAIL PARAPET	E
S16	207	6	2-6	1-0	CURB - WEST	D
S17	10	6	20-3	6	" " " " LONG. - SPAN 1	
S18	207	5	3-9	1-0	" " " " " "	C
S19	77	5	8-9	"	HAUNCH	A
S20	50	5	5-9	"	" " PIERS 1 & 3	B
S21	120	4	3-3	SHOWN	" @ PIERS SPANS 2 & 3	
S22	24	6	1-6	"	DIAPHRAGMS (THREAD ONE END 3")	
S23	60	6	3-0	"	" " " " " "	
S24	16	6	7-9	"	" " SPANS 1 & 4	
S25	48	6	4-3	"	" " SPANS 2 & 3	
S26	8	6	2-9	"	" " SPANS 2 & 3	
S27	8	5	32-3	9	SDWK - EAST - LONG. - SPAN 4	
S28	5	6	32-3	6	CURB - WEST - LONG. - SPAN 4	
S29	20	6	34-6	6	" " WEST - LONG. - SPAN 2 & 3	
S30	32	5	34-6	9	SDWK - EAST - LONG. - SPAN 2 & 3	
S31	64	3	6-0	1-0	STRUTS @ ABUTMENTS	*
S32	16	4	7-6	"	" " " " " "	
S33	24	6	7-6	"	" " " " " "	
S34	27	5	7-9	"	HAUNCH @ PIER 2	B
S35	32	4	7-3	SHOWN	HAUNCH @ PIERS SPANS 1 & 4	
S36	10	4	2-3	"	HAUNCH @ PIERS SPANS 2 & 3	
R1	16	5	18-6	SHOWN	RAIL PARAPET	
R2	8	5	20-0	"	" " " " " "	
R3	32	5	22-9	"	" " " " " "	
R4	16	5	21-3	"	" " " " " "	
R5	8	5	13-9	"	" " " " " "	



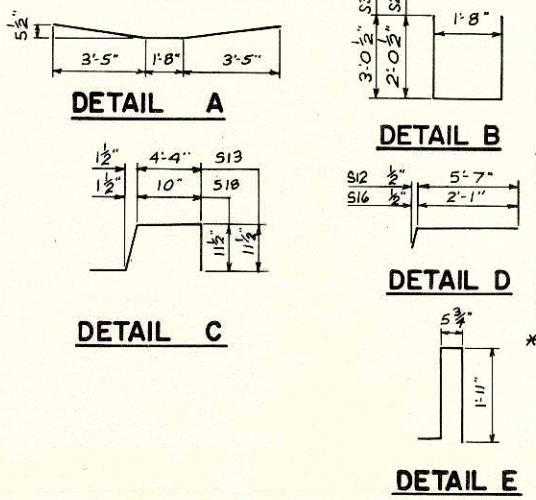
PLAN



SLAB THICKNESS DIAGRAM



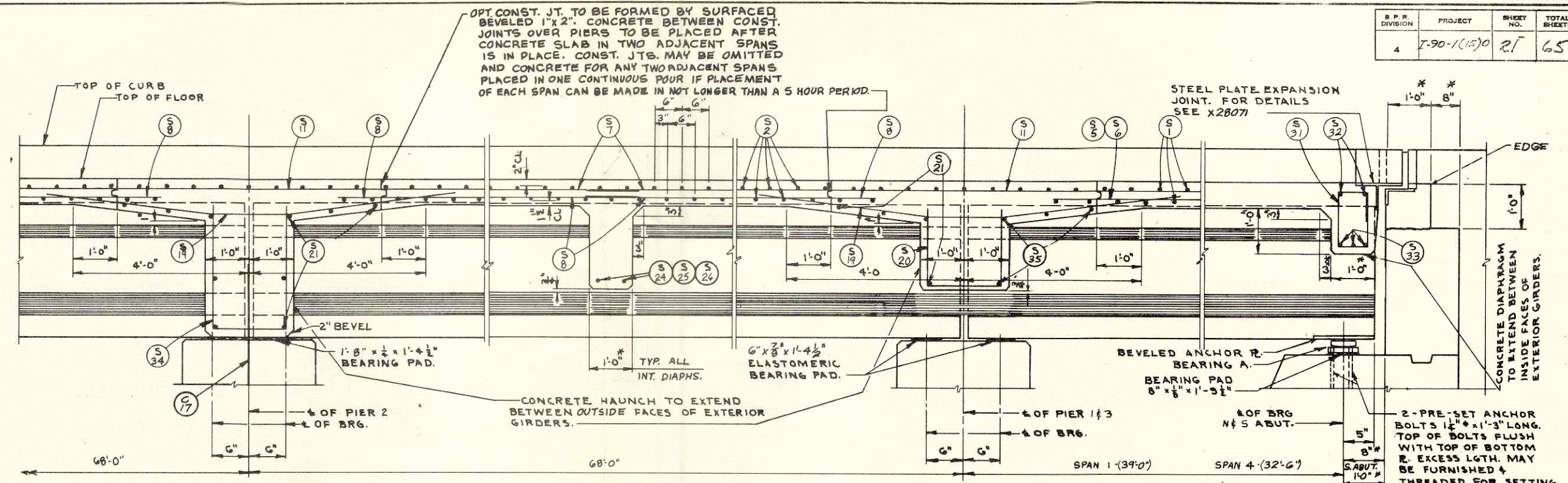
REINFORCEMENT DETAIL



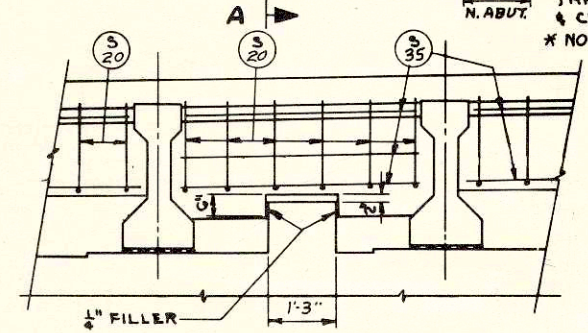
REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN		
	<b>SUPERSTRUCTURE</b>		
DESIGN SPEC.	AASHO '61	LOADING	H20
DATE	12-6-63	DESIGN	VGH
		DRAWN	DB
		CHKD.	ML
STRUCTURE B - 32 - 51		SHEET 2 OF 13	



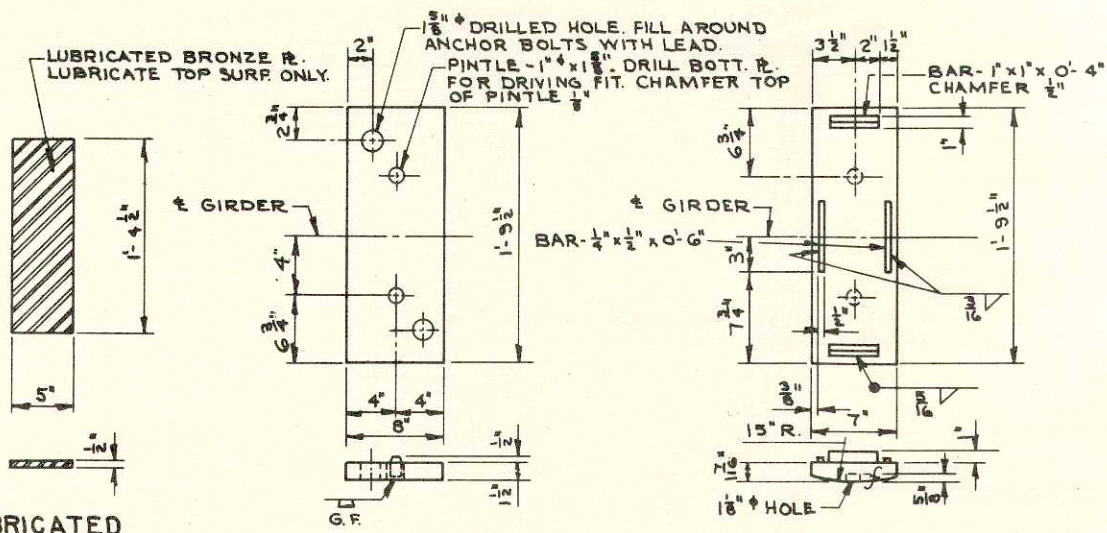
B.P.R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	7-90-1(15)0	27	65



**PART LONGITUDINAL SECTION**



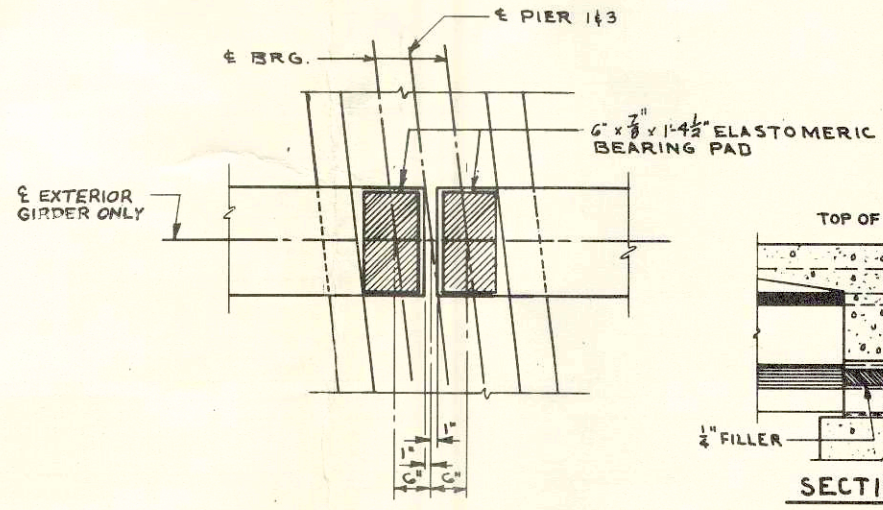
**PART SECTION AT PIER 1 & 3**



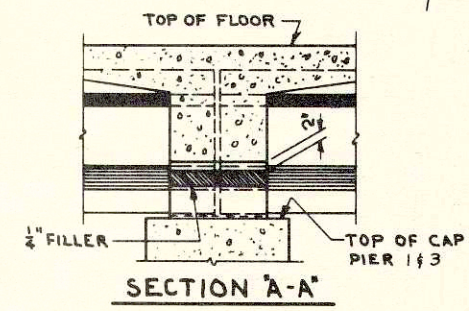
**BEARING "A"**

**BOTTOM PART**

**TOP PART**



**PART PLAN AT PIERS 1 & 3**

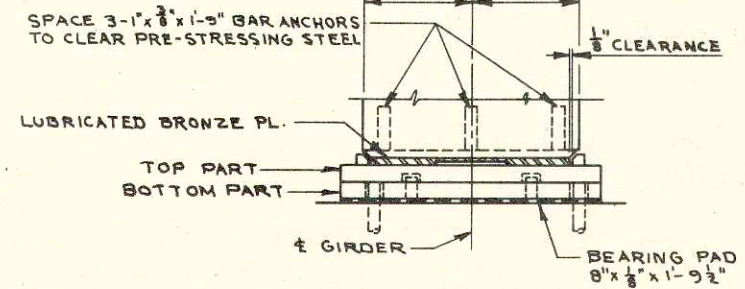


**SECTION A-A**

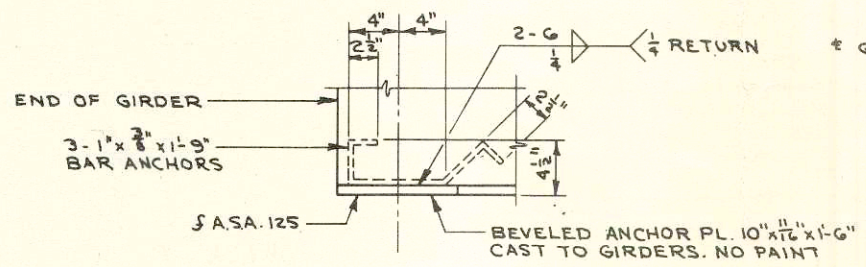
**BEARING NOTES**

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS. ALL SURFACES MARKED 'S' SHALL BE MACHINE FINISHED. ALL MATERIAL EXCEPT ANCHOR BOLTS, NUTS AND WASHERS SHALL BE MADE OF A242 STEEL, WITH A CORROSIVE RESISTANCE OF 4 TIMES, OR MORE, THAT OF A36 STEEL. ALL BEARING MATERIAL EXCEPT BRONZE PLATES, BEARING PADS AND ANCHOR PLATES SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL LOW-ALLOY STEEL".

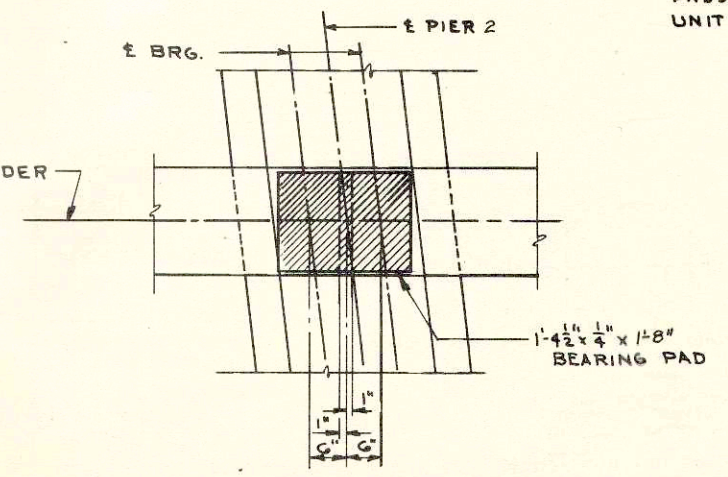
**LUBRICATED BRONZE PLATE**



**ELEVATION BEARING "A"**



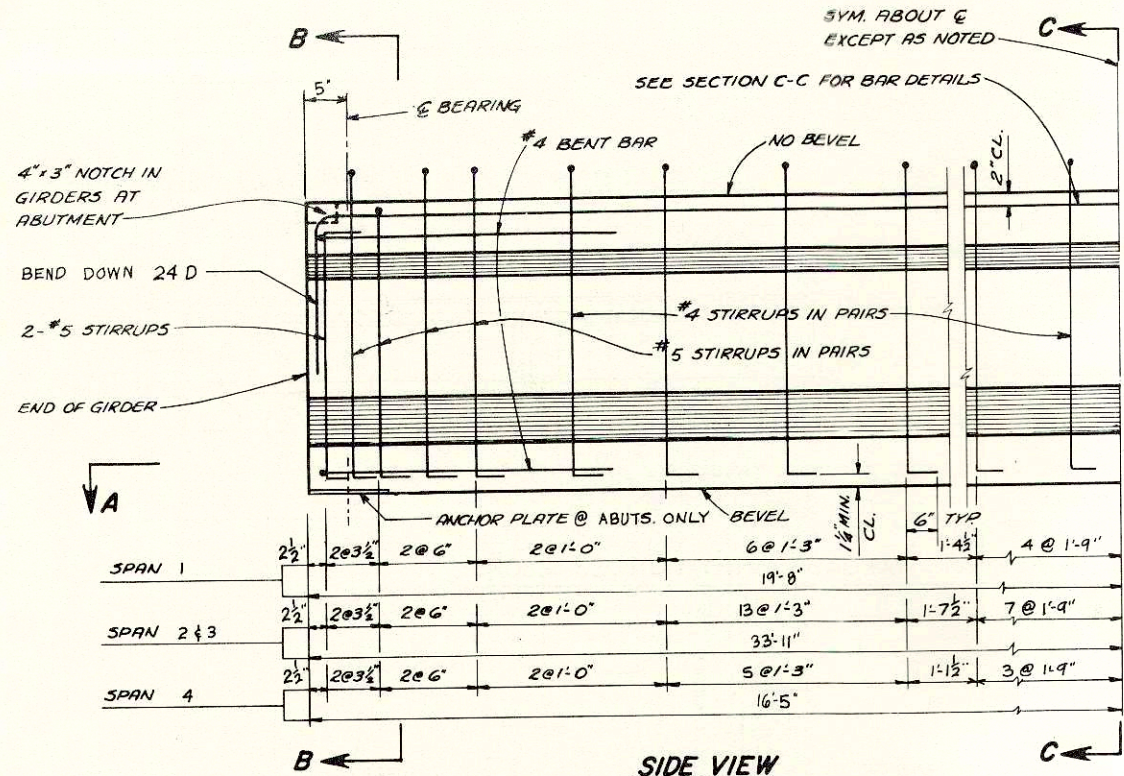
**ANCHOR DETAIL**



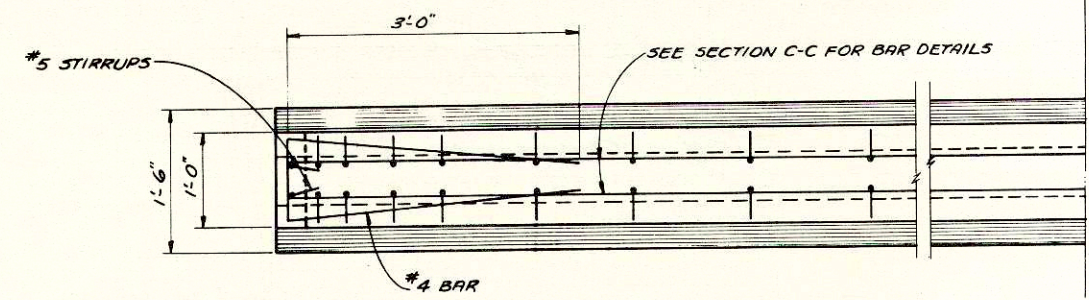
**PART PLAN AT PIER 2**

REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN
	<b>LONG. SECTION &amp; BEARINGS</b>
	DESIGN SPEC. A.A.S.H.O.'61 LOADING H20 CONCR. 1963
	DATE 12-6-65 DESIGN VGH DRAWN DB CND. MHL
STRUCTURE B-32-51 SHEET 3 OF 13	

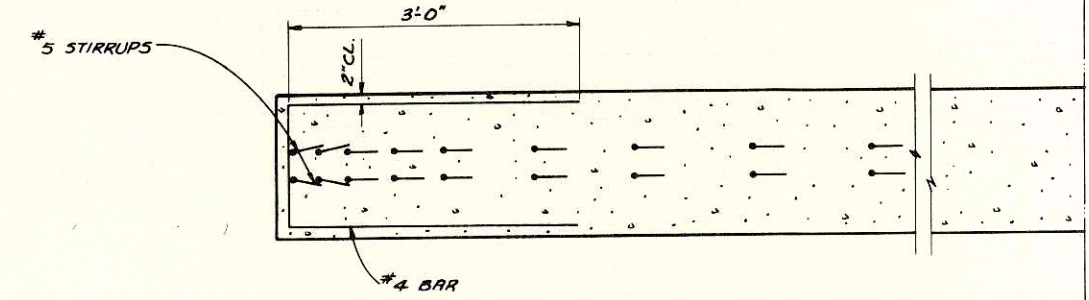




**SIDE VIEW**



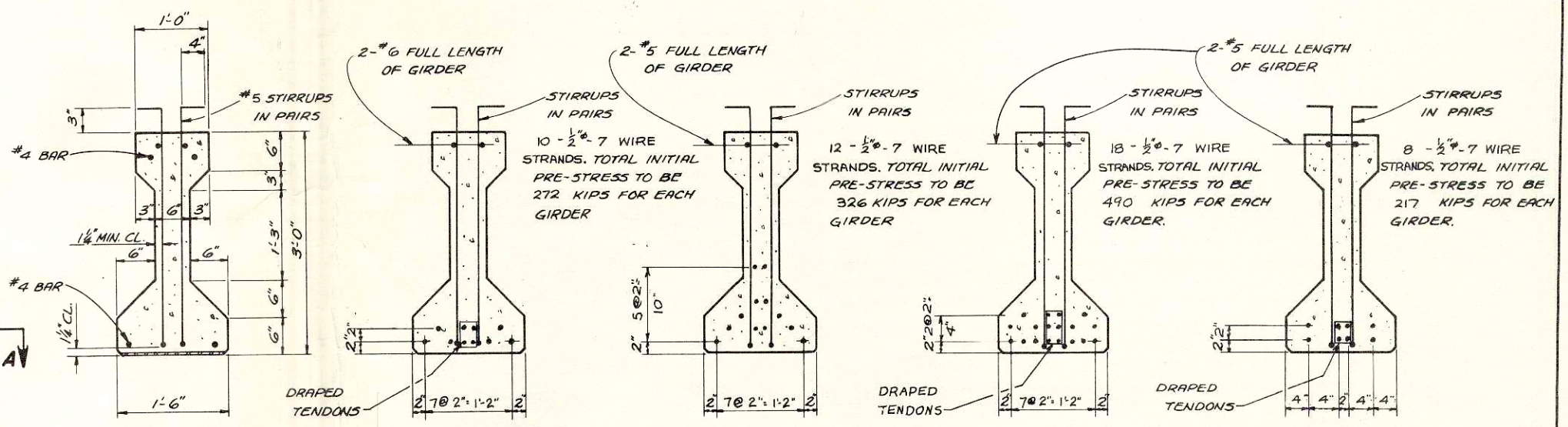
**TOP VIEW**



**SECTION A-A**

MINIMUM CYLINDER STRENGTH OF CONCRETE AT TIME OF TRANSFER OF PRE-STRESS FORCE ( $f_{ci}$ )

GIRDER TYPE	SPAN 1	SPANS 2 & 3	SPAN 4
DRAPED PATTERN	4,000	4,300	4,000
SPREAD PATTERN	4,000	-	4,000



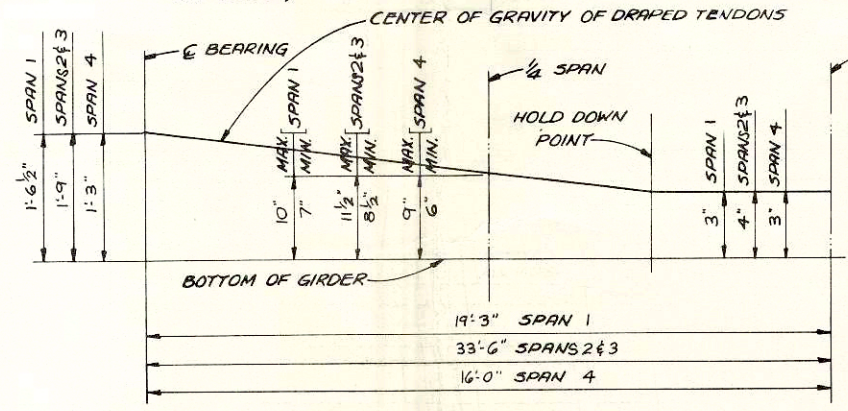
**SECTION B-B**

**SECTION C-C**

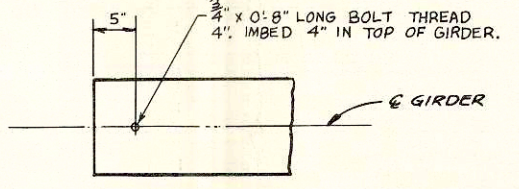
**SECTION C-C**

**SECTION C-C**

**SECTION C-C**



**DRAPED TENDON PROFILE**



**EXPANSION PLATE ANCHOR BOLT LAYOUT**

**DEFLECTION DATA**

CAMBER	SPAN 1	SPANS 2 & 3	SPAN 4
*A = PRE-STRESSED CAMBER	1/4"	1 3/4"	1/4"
*B = DEAD LOAD DEFLECTION	1/8"	3/4"	1/8"
*C = RESIDUAL CAMBER	1/8"	1"	1/8"

\*PRE-STRESS CAMBER AND DEAD LOAD DEFLECTION DATA SHOWN ARE THEORETICAL AND MAY VARY WITH CONCRETE STRENGTH, VARIABLE PRE-STRESSING CONDITIONS AND PRE-STRESS LOSSES.

NOTE: 270,000 P.S.I. ULTIMATE TENSILE STRENGTH STRAND STEEL SHALL BE USED. IF THE CONTRACTOR WISHES TO USE OTHER GRADE OF STRAND STEEL HE SHALL SUBMIT DETAILED PLANS FOR APPROVAL.

NOTES:

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN. WIRES SHALL BE FLUSH WITH END OF GIRDER AND PAINTED WITH NON-STAINING GRAY TWO COMPONENT POLYSULFIDE LIQUID POLYMER (GUN-GRADE) WITH SURFACE PRIMER, CONFORMING TO ASA-A-116.1-1960.

THE GIRDER MANUFACTURER SHALL PROVIDE A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. DETAILS OF THE LIFTING DEVICE TO BE USED SHALL BE SUBMITTED FOR APPROVAL.

TOPS OF GIRDERS SHALL BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO SLAB.

**SECTION C-C**  
SPAN 4 SPREAD

REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN		
	<b>PRE-TENSIONED GIRDER DETAILS</b>		
	DESIGN SPEC. R.R.S.H.O. '61	LOADING H20	CONST. 1963
	DATE/2-6-63	DESIGN VGH	DRAWN DB
STRUCTURE B-32-51		SHEET 4 of 13	



B. P. R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
	I-90-1(15)0	23	65

**LEGEND**

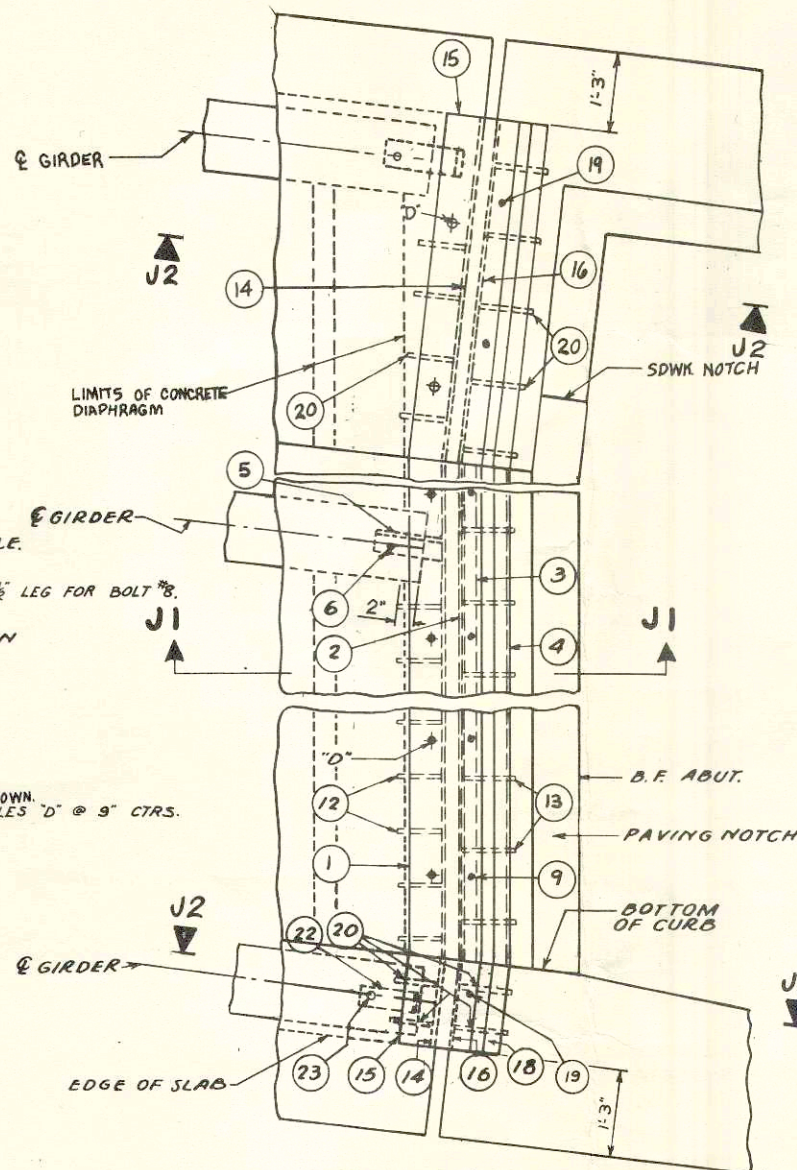
1. ST. 6" W 39.5" x RDWY. WIDTH. PROVIDE 1/8" VENT HOLES "D" AT 2'-0" CTRS.
2. L 8" x 4" x 1/2" x RDWY. WIDTH. PROVIDE 1/8" VENT HOLES "D" AT 2'-0" CTRS.
3. BAR 2" x 1/2" x RDWY. WIDTH. WELD TO L#2 WITH 2 LINES OF 1/2" FILLET WELD @ 6".
4. BAR 2 1/2" x 1 1/2" x RDWY. WIDTH. WELD TO L#2 WITH 2 LINES OF 1/2" FILLET WELD @ 6".
5. L 3 1/2" x 3" x 3/8" x 1'-0" LG. PROVIDE 1 1/2" HOLE IN 3 1/2" LEG FOR #6. FILLET WELD TO FLANGE AND STEM OF ST.#1 N.S. AND F.S. FIELD DRILL HOLE.
6. 3/8" x 0'-8" LG. BOLT. THREAD 4". IMBED ON GIRDERS.
7. 5" x 5" FROM END. PROVIDE 2 PLATE WASHERS AND 2 HEX. NUTS.
8. L 2 1/2" x 3" x 3/8" x 0'-3" SPACE AT 3'-0" CTRS. WELD TO L#2. PROVIDE 1/2" HOLE IN 2 1/2" LEG FOR BOLT #8.
9. 1/2" BOLT WITH SQ. NUT AT 2'-0" CTRS. TACK WELD NUT TO L#2. GREASE FOR EASY REMOVAL. 1 1/2" x 1 1/2" SLOTTED HOLE IN ST.#1. LONG. DIMENSION OF SLOTTED HOLE TO BE PARALLEL TO RDWY. 1 1/2" HOLE IN BAR #3 AND L#2.
10. AFTER CONCRETE HAS SET THE JOINT OPENING SHALL BE THOROUGHLY CLEANED.
11. APPLY 2 1/2" COAT OF BITUMASTIC TO METAL SURFACES FORMING THE JOINT AND FILL JOINT WITH HOT POURED ELASTIC TYPE JOINT SEALER.
12. 3/8" x 2'-6" LG. BENT BAR AT 0'-9" CTRS. BETWEEN GIRDERS. WELD TO ST.#1 WITH 1/2" FILLET WELD ALL AROUND.
13. 3/8" x 2'-0" LG. BENT BAR AT 1'-0" CTRS. WELD TO L#2.
14. 3/8" PLATE. CUT TO LIMITS SHOWN.
15. 1/2" x 3/8" PLATE. BEND DOWN FLUSH WITH FACE OF CURB & SDWK AS SHOWN. WELD TO PL#16 AS SHOWN. FIELD WELD TO ST.#1. PROVIDE 1/8" VENT HOLES "D" @ 9" CTRS.
16. 3/8" PLATE. CUT TO CURB & SDWK. LIMITS AS SHOWN.
17. 8" x 3/8" PLATE. BEND DOWN FLUSH WITH FACE OF CURB AS SHOWN. WELD TO PL#16 AS SHOWN. PROVIDE 1/8" VENT HOLES "D" @ 9" CTRS.
18. 2 1/2" x 3/8" PLATE. BEND DOWN FLUSH WITH FACE OF CURB AS SHOWN. WELD TO PL#17 WITH 1 LINE OF 3/8" FILLET WELD. FIELD WELD TO BAR #4.
19. 1/2" BOLT. SAME AS #9 EXCEPT FOR LENGTH.
20. 3/8" BENT BAR 1'-6" LG. WELD TO PLS #14 & #15 AND PLS #16 & #17 WITH 3/8" FILLET WELD ALL AROUND.
21. ANCHOR BAR 2 1/2" x 3/8" x 1'-0" WELD TO PLS #15 & #17.
22. L (\*\*\*) x 0'-4" LG. PROVIDE 1 1/2" HOLE IN 8" LEG FOR #23.
23. WELD TO PL#15.
24. 3/8" THREADED BOLT x 0'-8" LG. PROVIDE 2 PLATE WASHERS AND 2 HEX. NUTS.
25. 3/8" MALLEABLE HEX. NUT x 0'-3" LG.
26. 3/8" x 1'-0" LG. BOLT. THREAD 4".
27. BLOCK AND BOLT FOR SHIPMENT WITH PIPE SLEEVE AND 1/2" BOLT. PROVIDE 3/8" HOLES AS SHOWN IN ST.#1 AND L#2 AT 3'-0" CTRS. FOR 1/2" BOLT.
- (\*\*\*) L 9" x 4" x 1/2" @ S. ABUT. SDWK. L 4" x 4" x 1/2" @ N. ABUT. SDWK.  
L 4" x 4" x 1/2" @ S. ABUT. CURB. L 9" x 4" x 1/2" @ N. ABUT. CURB.

**NOTES:**

EXPANSION JOINT SHALL BE BUILT TO CONFORM TO RDWY. CROWN AND GRADE AND CURB AND SDWK SLOPES.  
ALL MATERIAL IN EXPANSION JOINT TO BE PAID FOR AS STRUCTURAL CARBON STEEL.

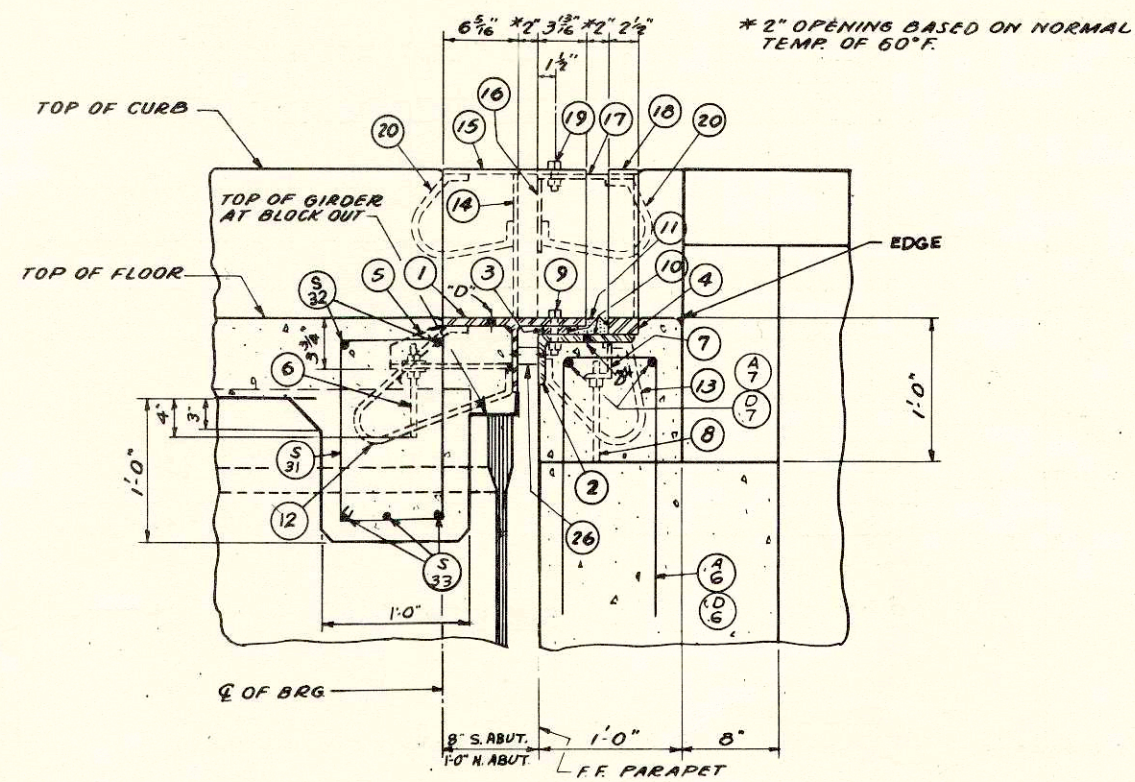
AFTER CONCRETE HAS SET REMOVE BOLTS NO. 9 & NO. 19 AND FILL HOLES WITH HOT POURED ELASTIC TYPE JOINT SEALER.

NO PAINT SHALL BE APPLIED TO EXPANSION JOINT EXCEPT AS NOTED.

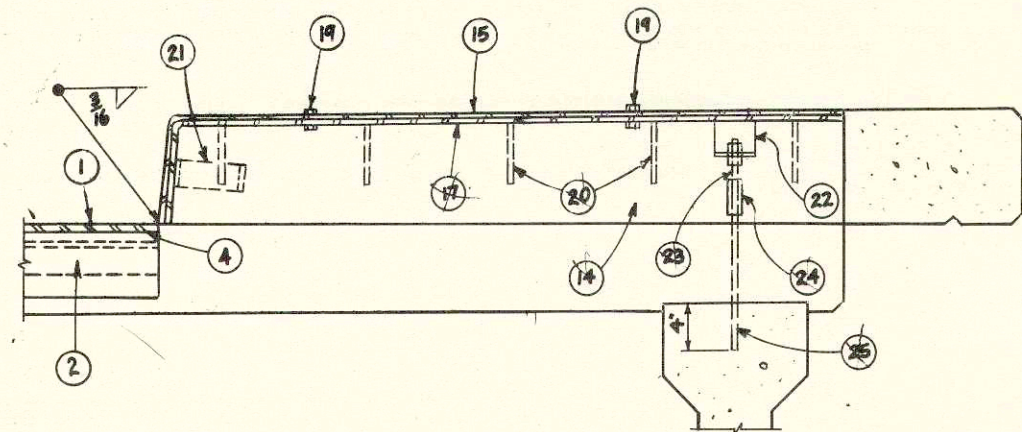


**PLAN**

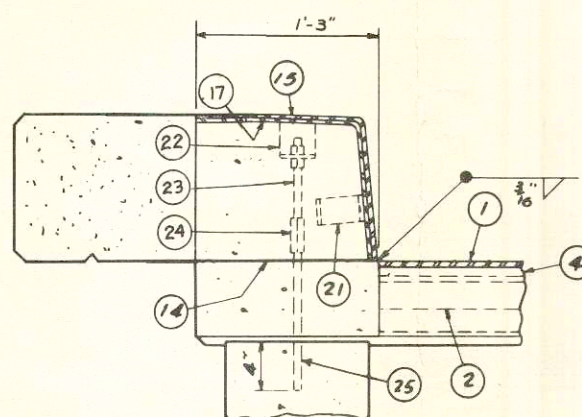
(S ABUT SHOWN. JOINT AT N. ABUT. IDENTICAL EXCEPT SDWK. AND CURB JOINTS ARE REVERSED TO OPPOSITE SIDES.)  
(2 REQD. ONE AT S. ABUT. AND ONE AT N. ABUT.)



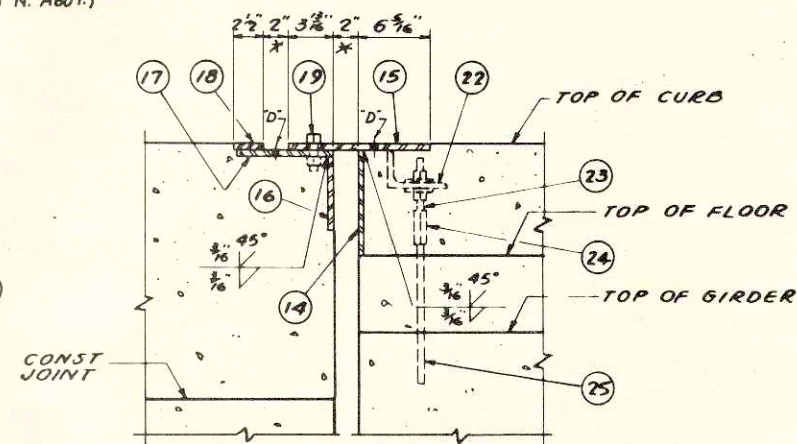
**SECTION J1**



**SECTION THRU JOINT AT SIDEWALK**



**SECTION THRU JOINT AT CURB**



**SECTION J2**

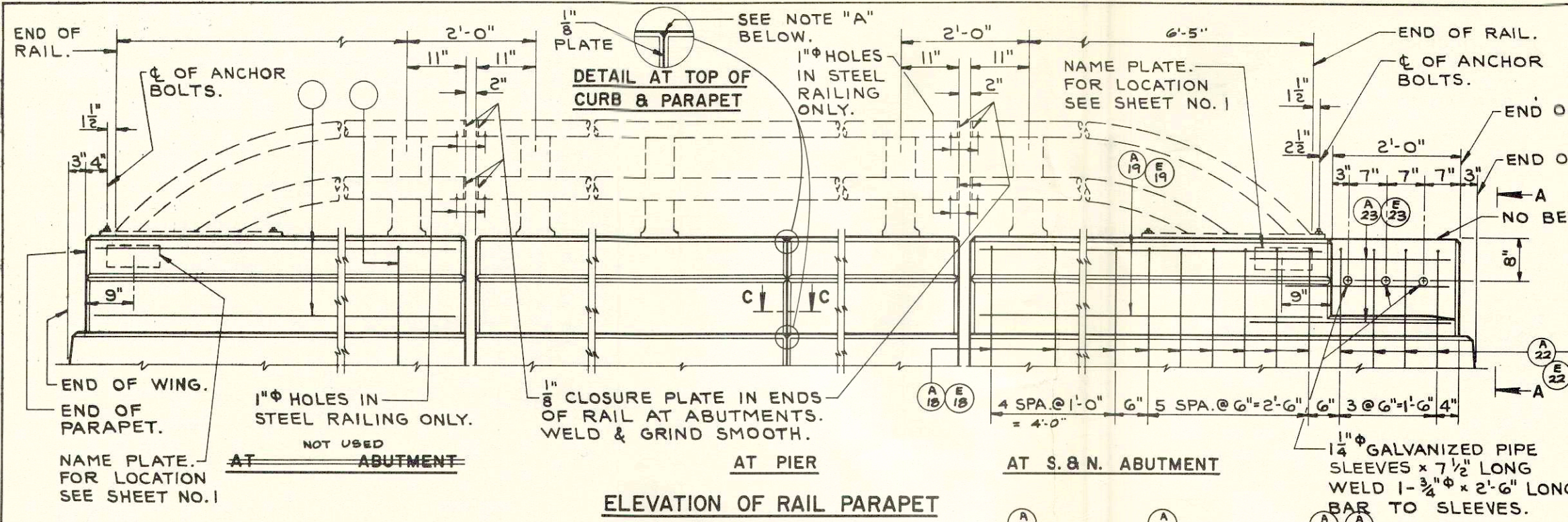
REVISION	STATE HIGHWAY COMMISSION OF WISCONSIN		
	<b>EXPANSION JOINT</b>		
	DESIGNED BY: AASHO'61	STANDARD: H20	DATE: 1963
	DATE: 12-6-63	DESIGNED BY: JTD	CHECKED BY: DB
STRUCTURE B - 32 - 51	SHEET 5 OF 13		



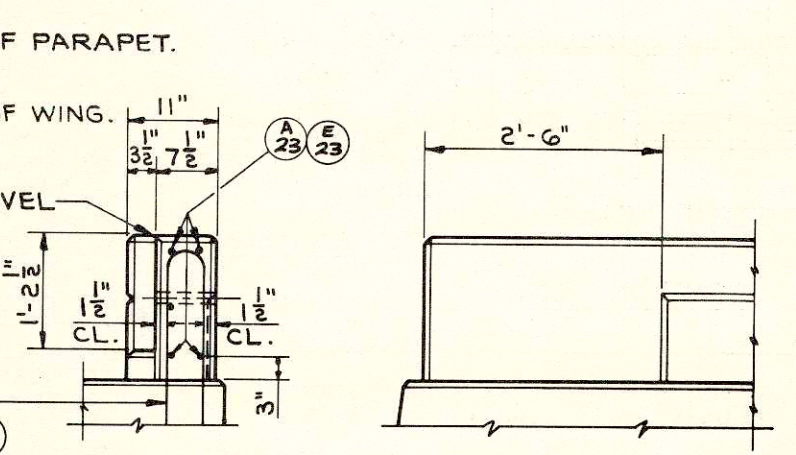




B. P. R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	I-90-(115)0	25	65



ELEVATION OF RAIL PARAPET

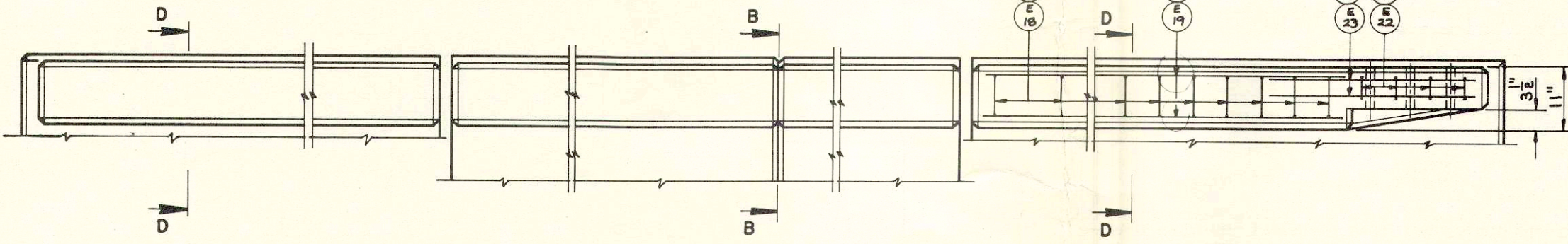


VIEW A

VIEW SHOWING OUTSIDE FACE OF RAIL PARAPET TYPICAL ALL WINGS

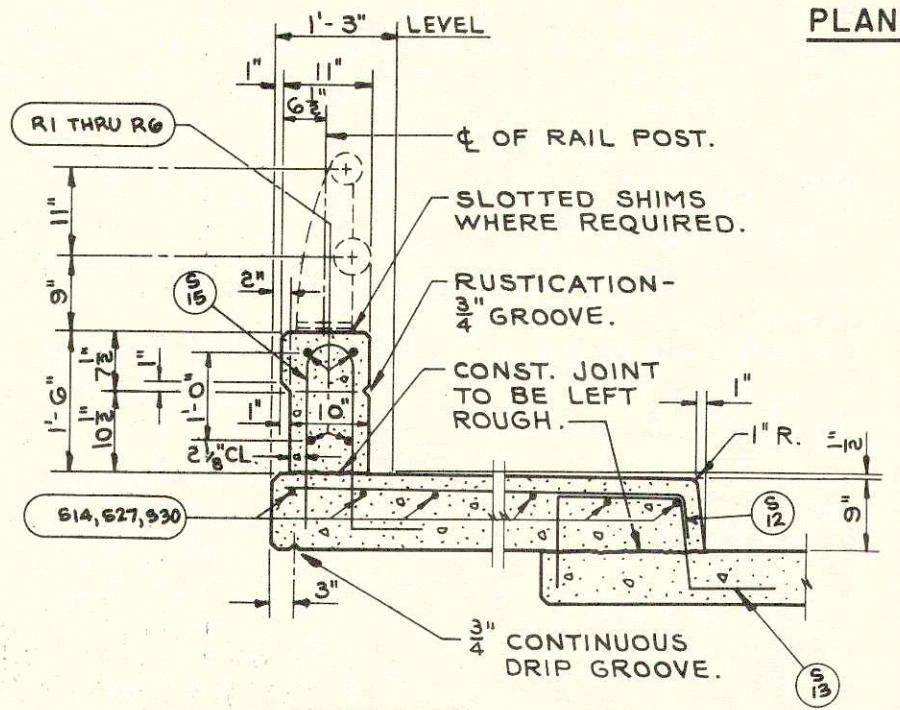
NOTES

WHEN PARAPETS AND CURBS ARE POURED CONTINUOUSLY FROM END TO END THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" 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. COST OF 1/4" GALVANIZED PIPE SLEEVES AND 3/4" BAR TO BE INCLUDED IN UNIT PRICE BID FOR CONCRETE MASONRY. WORK THIS SHEET WITH SHEET TITLED "DETAILS FOR TYPE "H" TUBULAR ALUMINUM AND STEEL RAILING". ALL POST SPACINGS ARE TAKEN HORIZONTALLY ALONG CL OF RAILING AT BASE OF POSTS. ALL POSTS SHALL BE SET NORMAL TO GRADE.

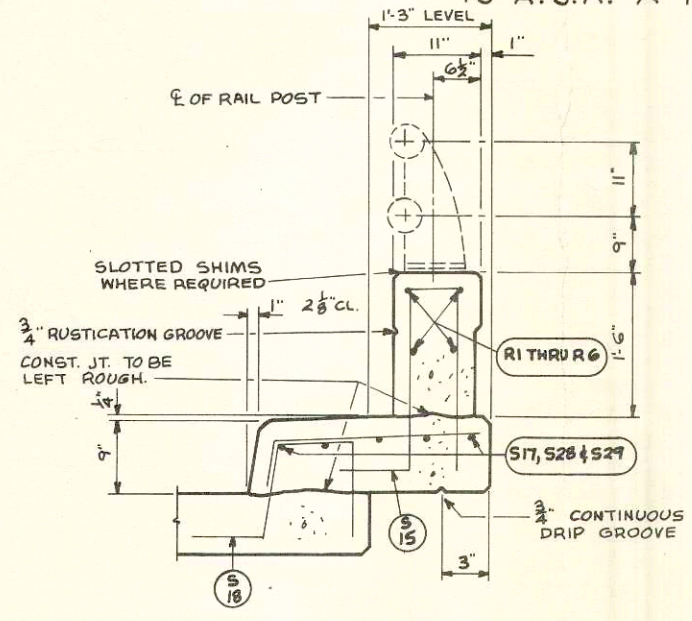


PLAN OF RAIL PARAPET

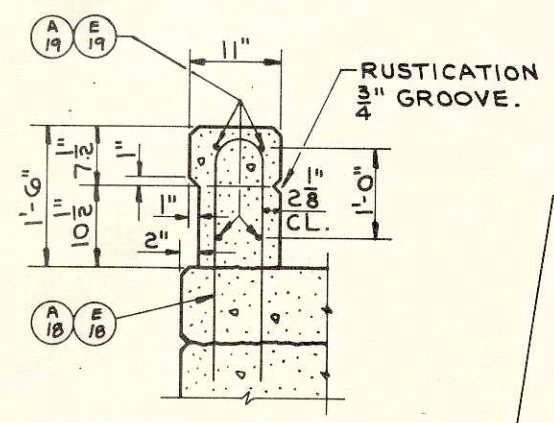
NOTE "A": FILL WITH NON-STAINING GRAY TWO COMPONENT POLYSULFIDE LIQUID POLYMER (GUN GRADE) WITH SURFACE PRIMER, CONFORMING TO A. S. A. - A-116.1-1960.



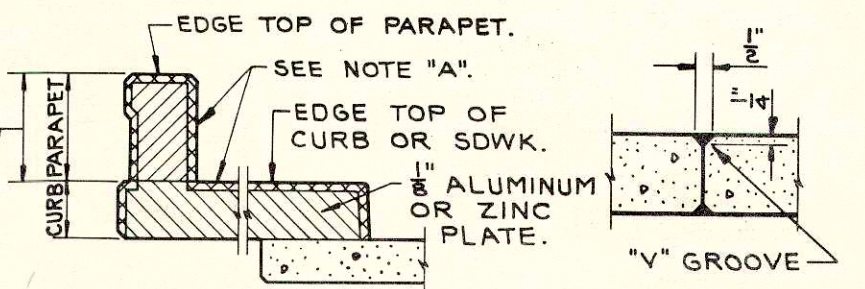
SECTION THRU PARAPET & SIDEWALK ON BRIDGE



SECTION THRU CURB



SECTION D



SECTION B

SECTION C

DETAILS OF DEFLECTION JOINTS IN PARAPET ONLY - SIMILAR TO THAT SHOWN IN THIS AREA.

REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN
	<b>RAIL PARAPET DETAILS</b>
DESIGN SPEC. AASHO G1	LOADING
DATE 12-6-63	DESIGN
STRUCTURE B-32-51	SHEET 7 OF 13







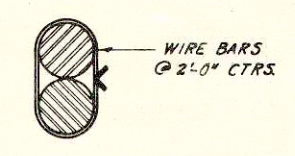
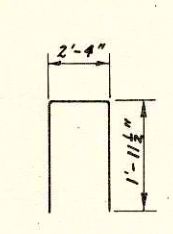
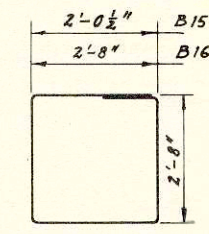
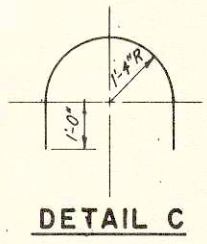
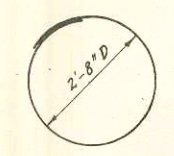
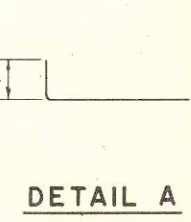
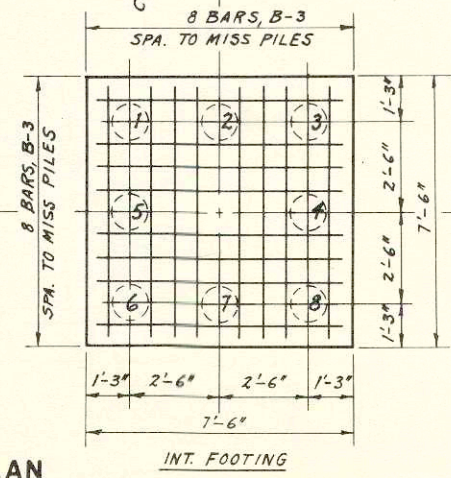
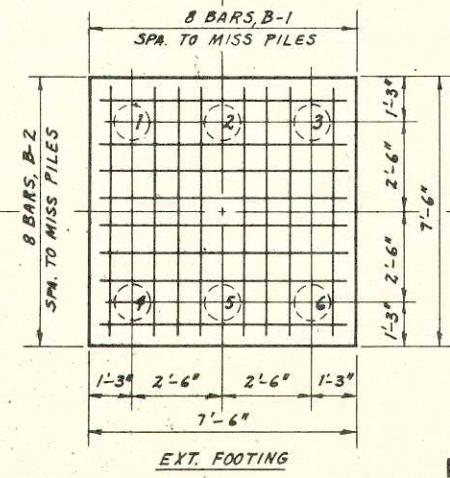
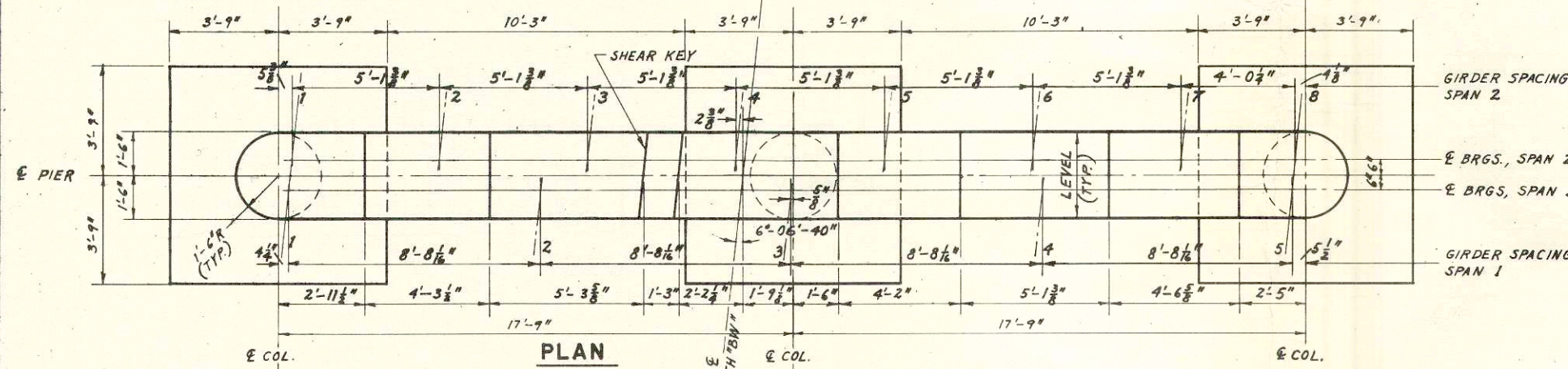
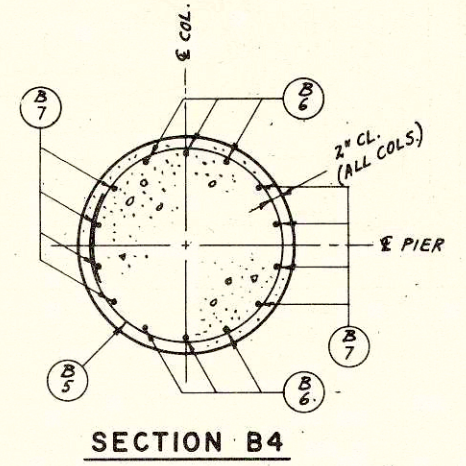
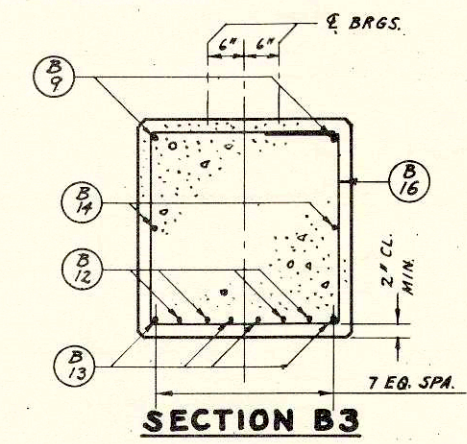
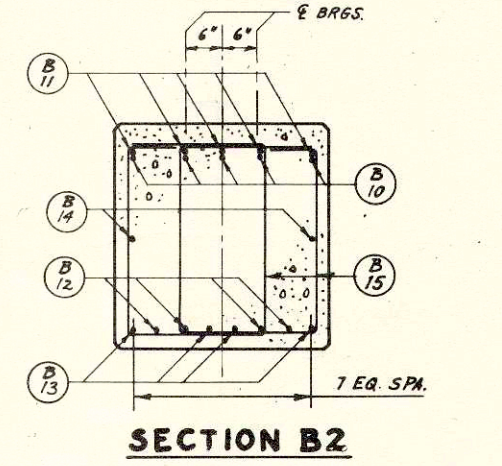
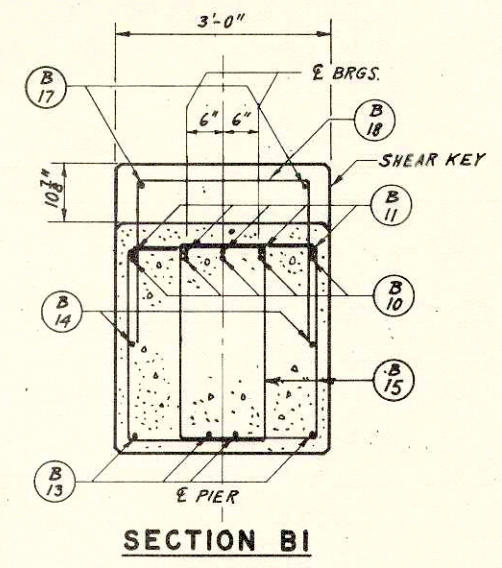
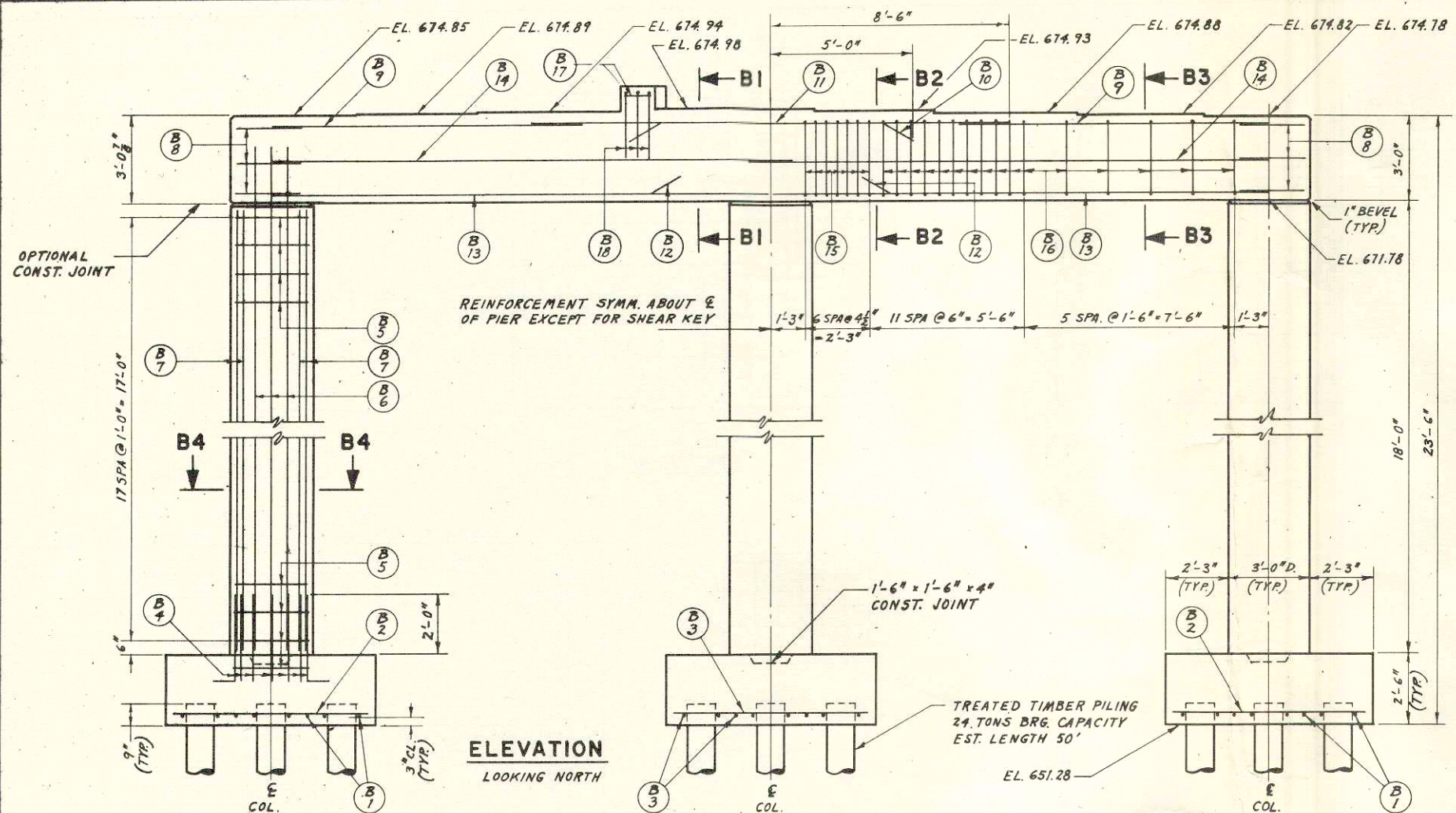
B. P. R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	I-20-1(15)0	27	65

**BILL OF BARS** 5950#

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT

FOUR MARK	NO.	SIZE	LENGTH	SPACING	LOCATION	DET.
FOOTINGS	B-1	16	6	7-0	SHOWN	FOOTINGS - EXT.
	B-2	16	5	7-0	"	"
	B-3	16	7	7-0	"	FOOTINGS - INT.
	B-4	42	8	4-0	"	FOOTINGS - DOWELS*
	B-5	3	4	9-6	"	" - HOOPS
CAP & COLUMNS	B-5	54	4	9-6	SHOWN	COLUMNS - HOOPS
	B-6	18	8	20-0	"	"
	B-7	24	8	17-9	"	"
	B-8	6	4	6-3	"	CAP - BANDS
	B-9	4	5	11-0	"	"
	B-10	5	11	10-0	"	"
	B-11	5	11	17-0	"	"
	B-12	8	10	14-6	"	"
	B-13	8	10	17-9	"	"
	B-14	4	4	18-6	"	"
	B-15	28	5	10-6	"	" - STIRRUPS, DOUBLE
	B-16	32	4	11-9	"	" - " SINGLE
	B-17	2	4	1-0	"	" - SHEAR KEY
B-18	3	5	6-3	"	" - " - "	

\* SAME SPACING AS VERTICAL COLUMN BARS  
 \*\* BUNDLED BARS



**CONCRETE MASONRY**

FOOTINGS	15.7
COLUMNS	14.2
CAP	13.1
<b>TOTAL</b>	<b>43.0</b>

REVISION	STATE HIGHWAY COMMISSION OF WISCONSIN
	<b>PIER 1</b>
DESIGN SPEC. AASHO '61	LOADING H20
DATE 12-6-63	DESIGN VGH
STRUCTURE B-32-51	SHEET 9 OF 13



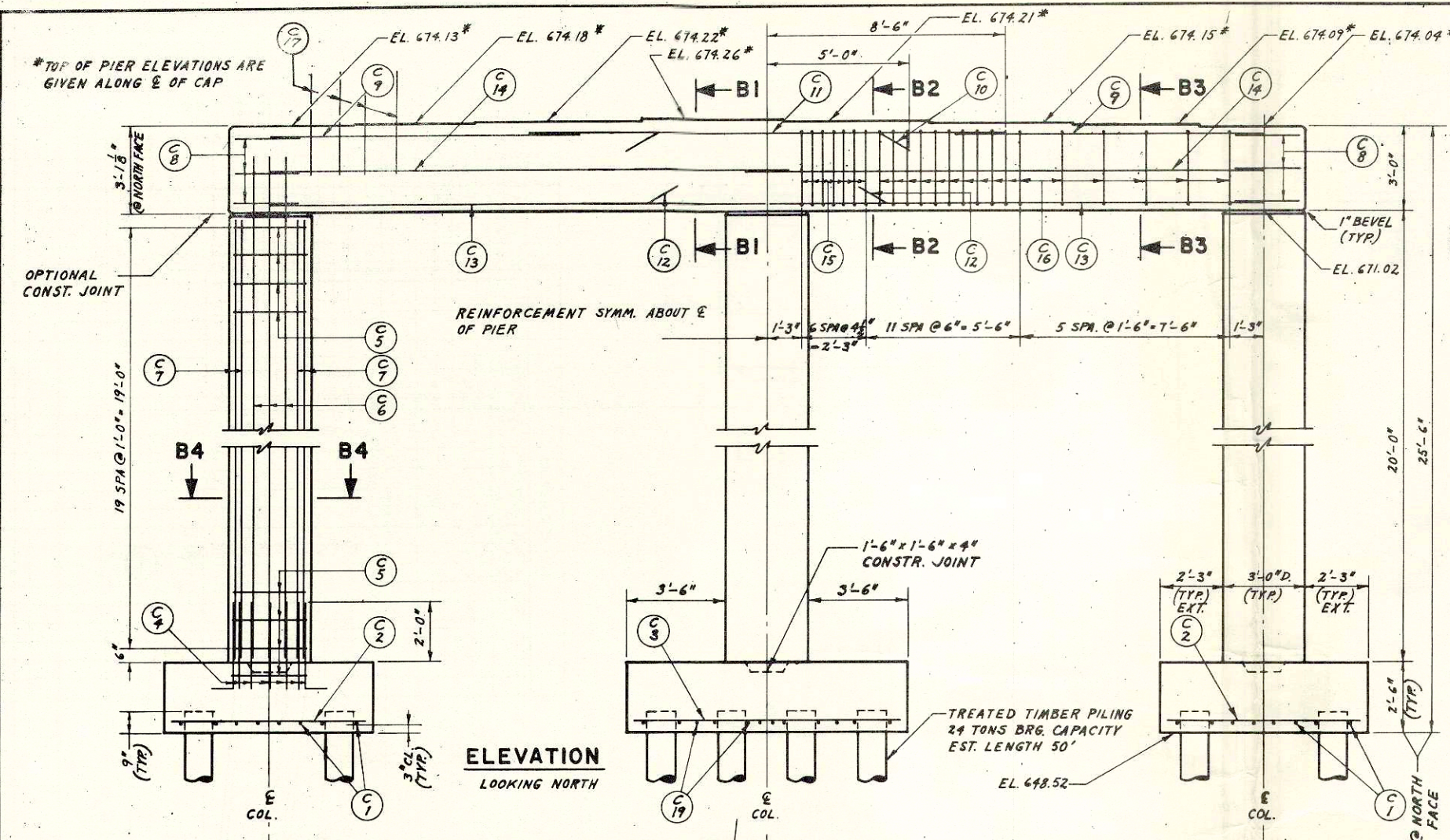
S.P.R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	I-90-1(15)C	28	65

**BILL OF BARS** 6,540#

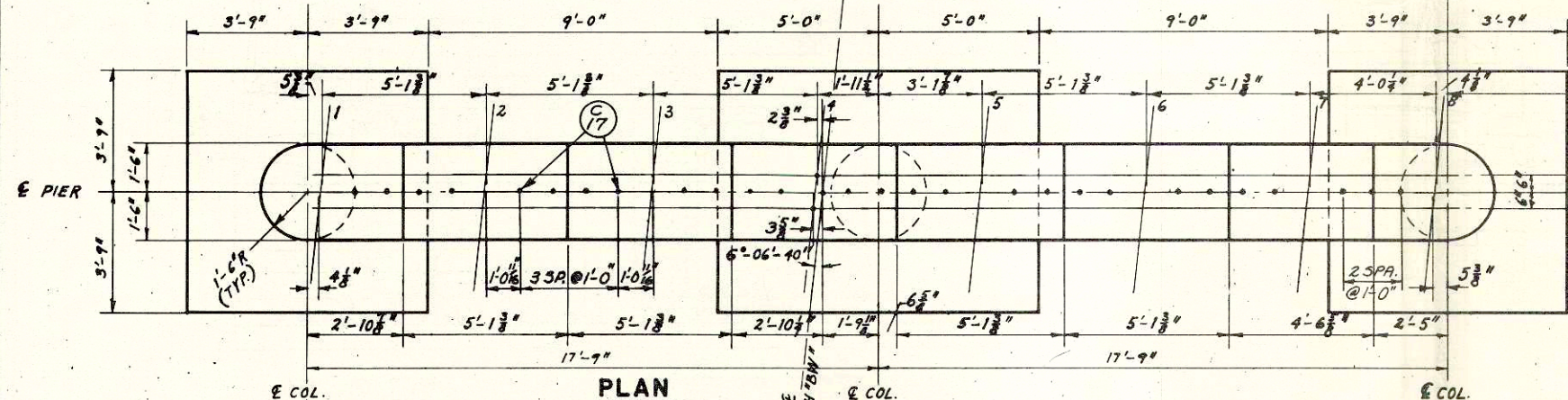
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT

FOUR MARK	NO.	SIZE	LENGTH	SPACING	LOCATION	DET.
FOOTINGS	C-1	16	5	7-0	SHOWN	FOOTINGS - EXT.
	C-2	16	6	7-0	"	"
	C-3	8	9	9-6	"	FOOTING - INT.
	C-4	42	8	4-0	"	FOOTINGS - DOWELS*
	C-5	3	4	9-6	"	" - HOOPS
C-19	12	6	7-0	"	FOOTING - INT.	
CAP & COLUMNS	C-5	60	4	9-6	SHOWN	COLUMNS - HOOPS
	C-6	18	8	22-0	"	"
	C-7	24	8	19-9	"	"
	C-8	6	4	6-3	"	CAP - BANDS
	C-9	4	5	11-0	"	"
	C-10	5	11	11-0	"	"**
	C-11	5	11	17-0	"	"**
	C-12	8	10	14-6	"	"
	C-13	8	10	17-9	"	"
	C-14	4	4	18-6	"	"
	C-15	28	5	10-6	"	" - STIRRUPS, DOUBLE
	C-16	32	4	11-9	"	" - " SINGLE
C-17	27	7	3-6	"	" - BETWEEN GIRDERS	

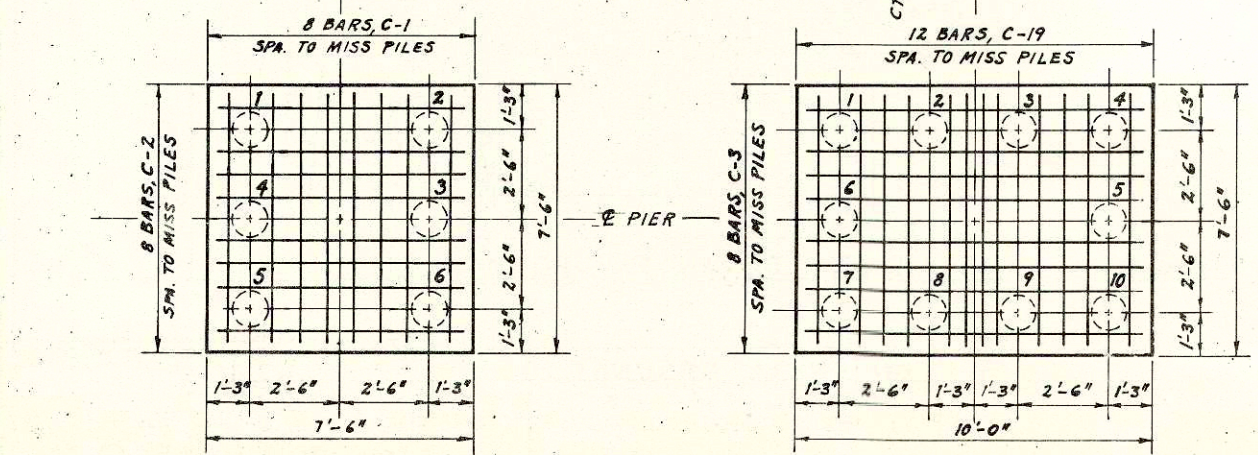
\* SAME SPACING AS VERTICAL COLUMN BARS  
 \*\* BUNDLED BARS



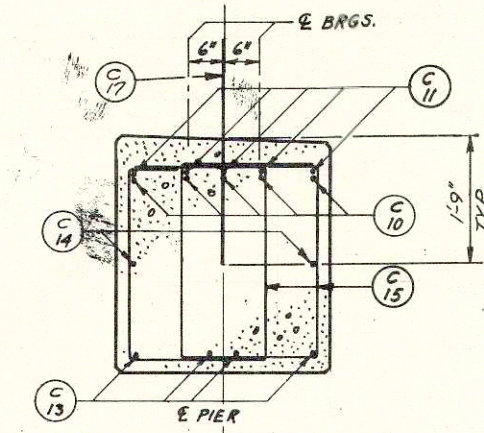
**ELEVATION**  
LOOKING NORTH



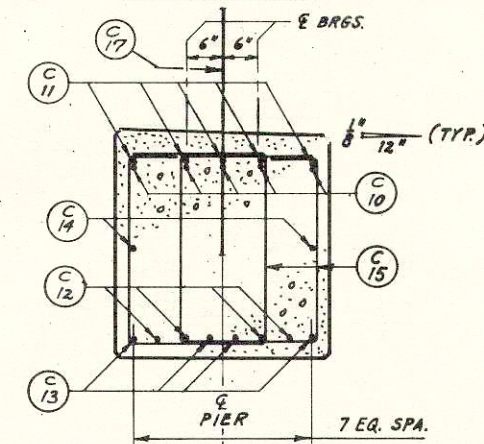
**PLAN**



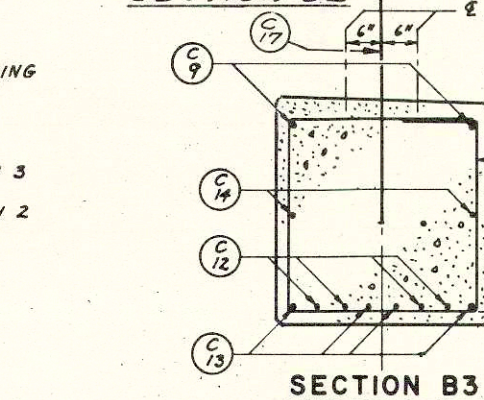
**FOOTING PLAN**



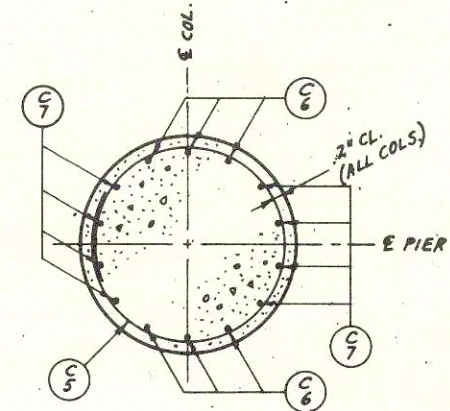
**SECTION B1**



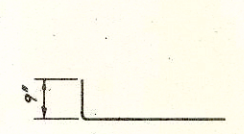
**SECTION B2**



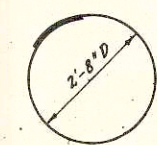
**SECTION B3**



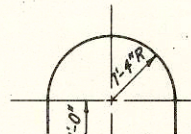
**SECTION B4**



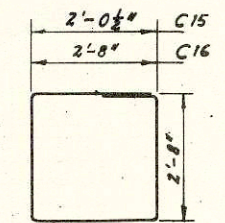
**DETAIL A**



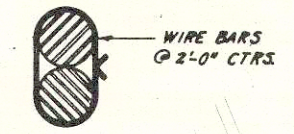
**DETAIL B**



**DETAIL C**



**DETAIL D**



**BUNDLE DETAIL**

**CONCRETE MASONRY**

FOOTINGS	17.4
COLUMNS	15.7
CAP	13.0
<b>TOTAL</b>	<b>46.1 CY.</b>

STATE HIGHWAY COMMISSION OF WISCONSIN			
<b>PIER 2</b>			
DESIGN SPEC: AASHO '61	LOADING: H20	CONTR. SPEC: 1963	
DATE: 12-6-63	DESIGN: VGH	DRAWN: HFN	CHKD: WJL
STRUCTURE B-32-51		SHEET 10 OF 13	



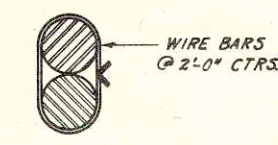
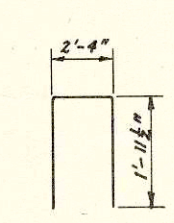
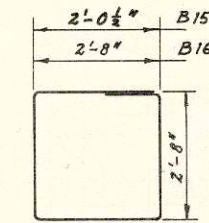
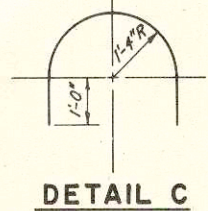
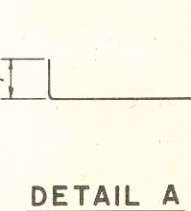
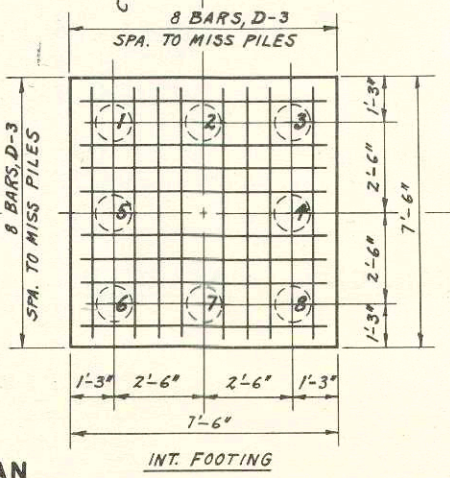
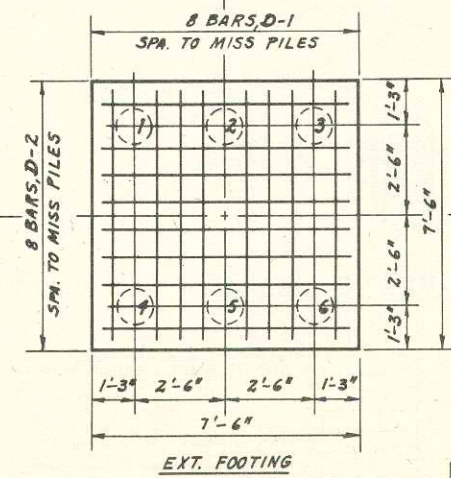
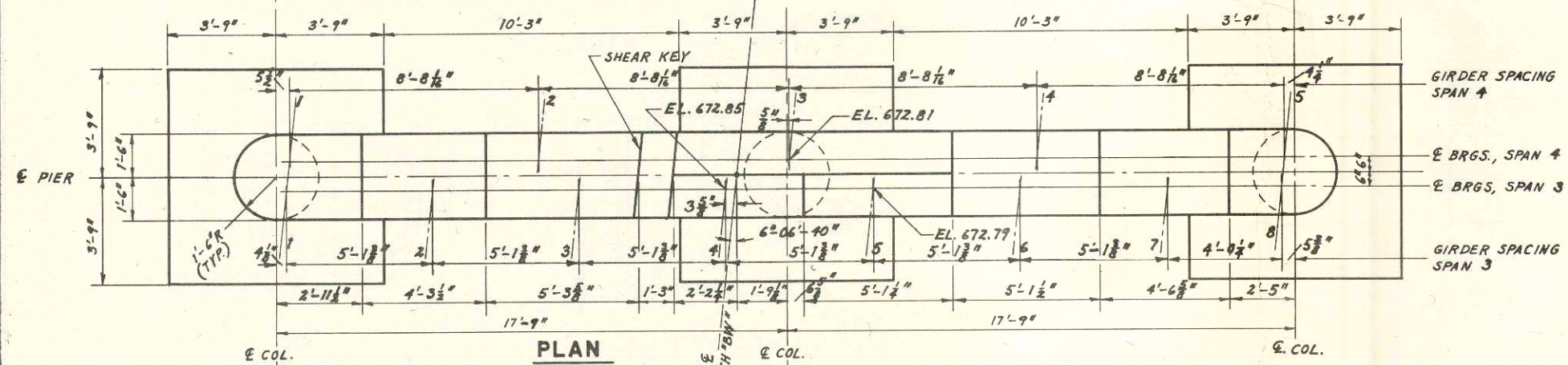
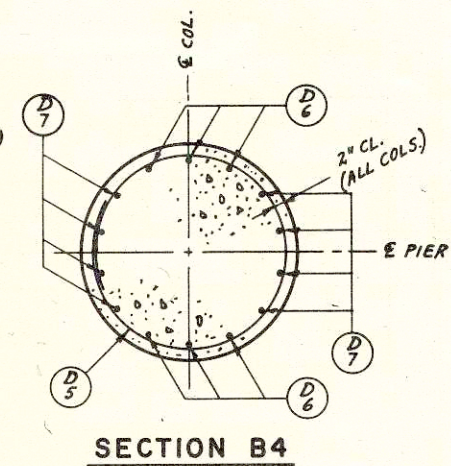
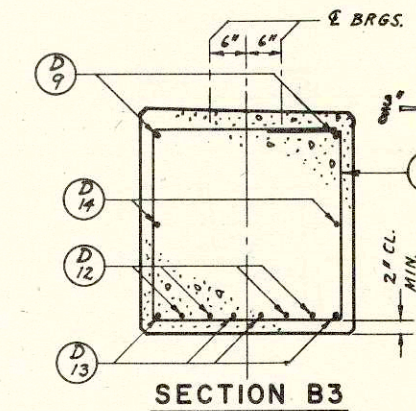
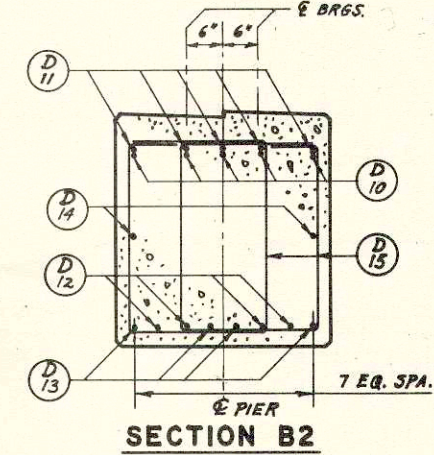
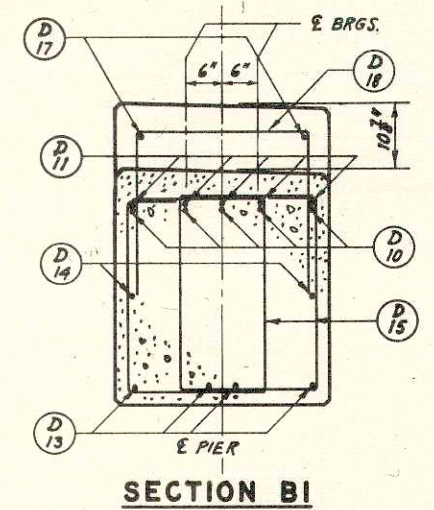
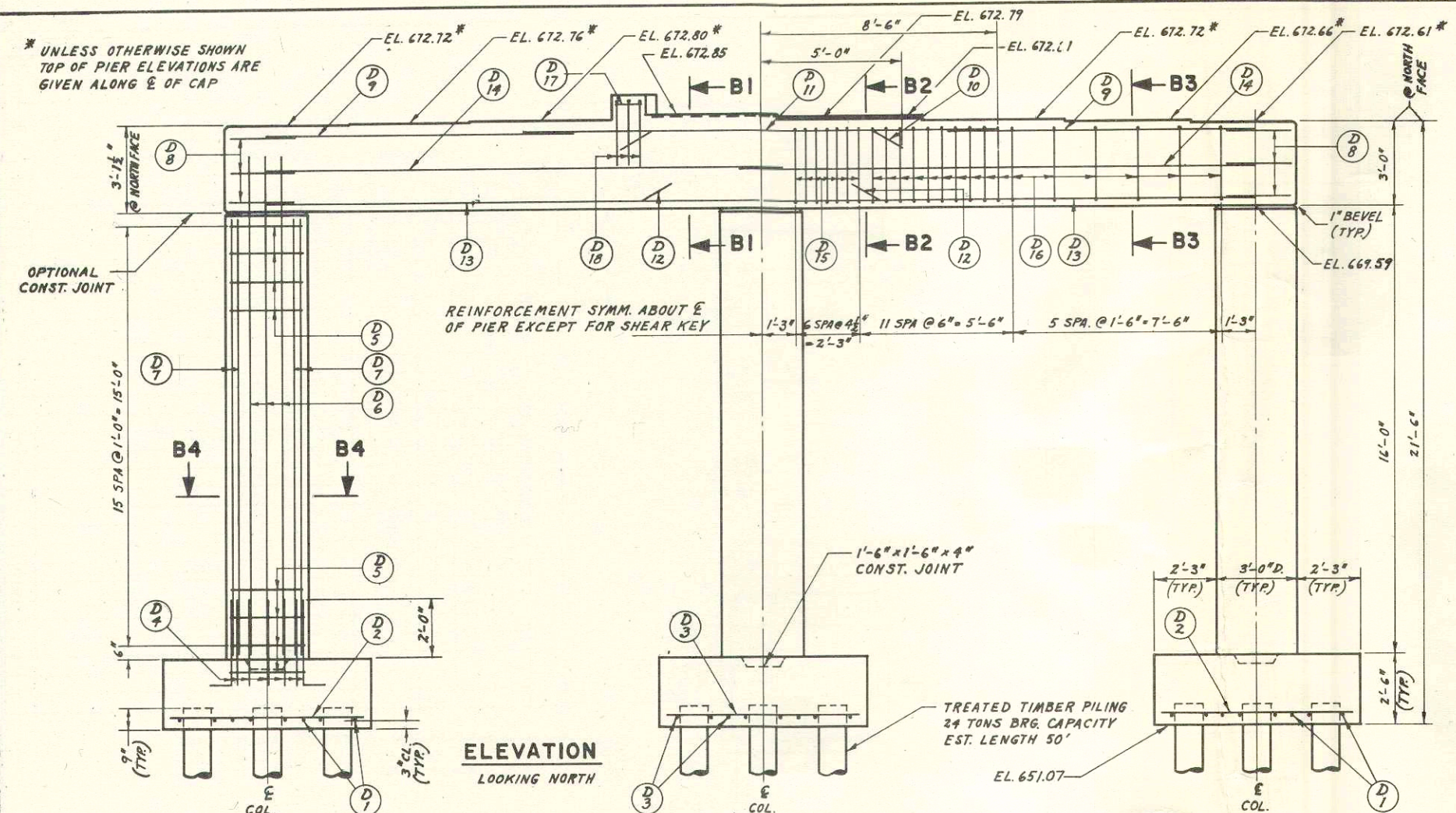
S. P. R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	I-90-1(15)0	29	65

**BILL OF BARS** 5690#

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT

FOUR MARK	NO.	SIZE	LENGTH	SPACING	LOCATION	DET.
FOOTINGS	D-1	16	6	7-0	SHOWN	FOOTINGS - EXT.
	D-2	16	5	7-0	"	"
	D-3	16	7	7-0	"	FOOTINGS - INT.
	D-4	42	8	4-0	"	FOOTINGS - DOWELS*
	D-5	3	4	9-6	"	" - HOOPS
CAP & COLUMNS	D-5	48	4	9-6	SHOWN	COLUMNS - HOOPS
	D-6	18	8	18-0	"	"
	D-7	24	8	15-9	"	"
	D-8	6	4	6-3	"	CAP - BANDS
	D-9	4	5	11-0	"	"
	D-10	5	11	10-0	"	"
	D-11	5	11	17-0	"	"
	D-12	8	10	14-6	"	"
	D-13	4	10	17-9	"	"
	D-14	4	4	18-6	"	"
	D-15	28	5	10-6	"	" - STIRRUPS, DOUBLE
	D-16	32	4	11-9	"	" - " SINGLE
	D-17	2	4	1-0	"	" - SHEAR KEY
D-18	3	5	6-3	"	" - " "	

\* SAME SPACING AS VERTICAL COLUMN BARS  
 \*\* BUNDLED BARS



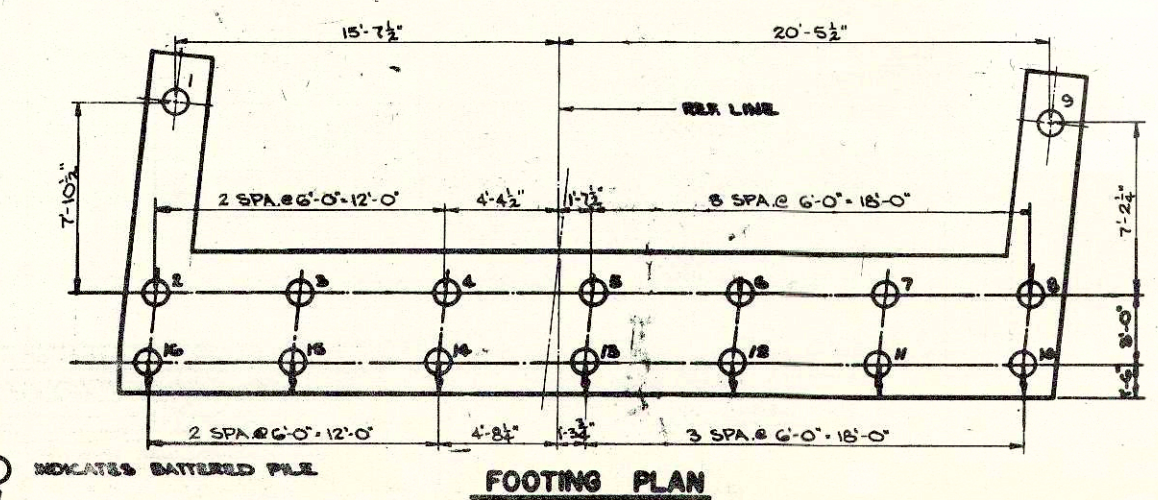
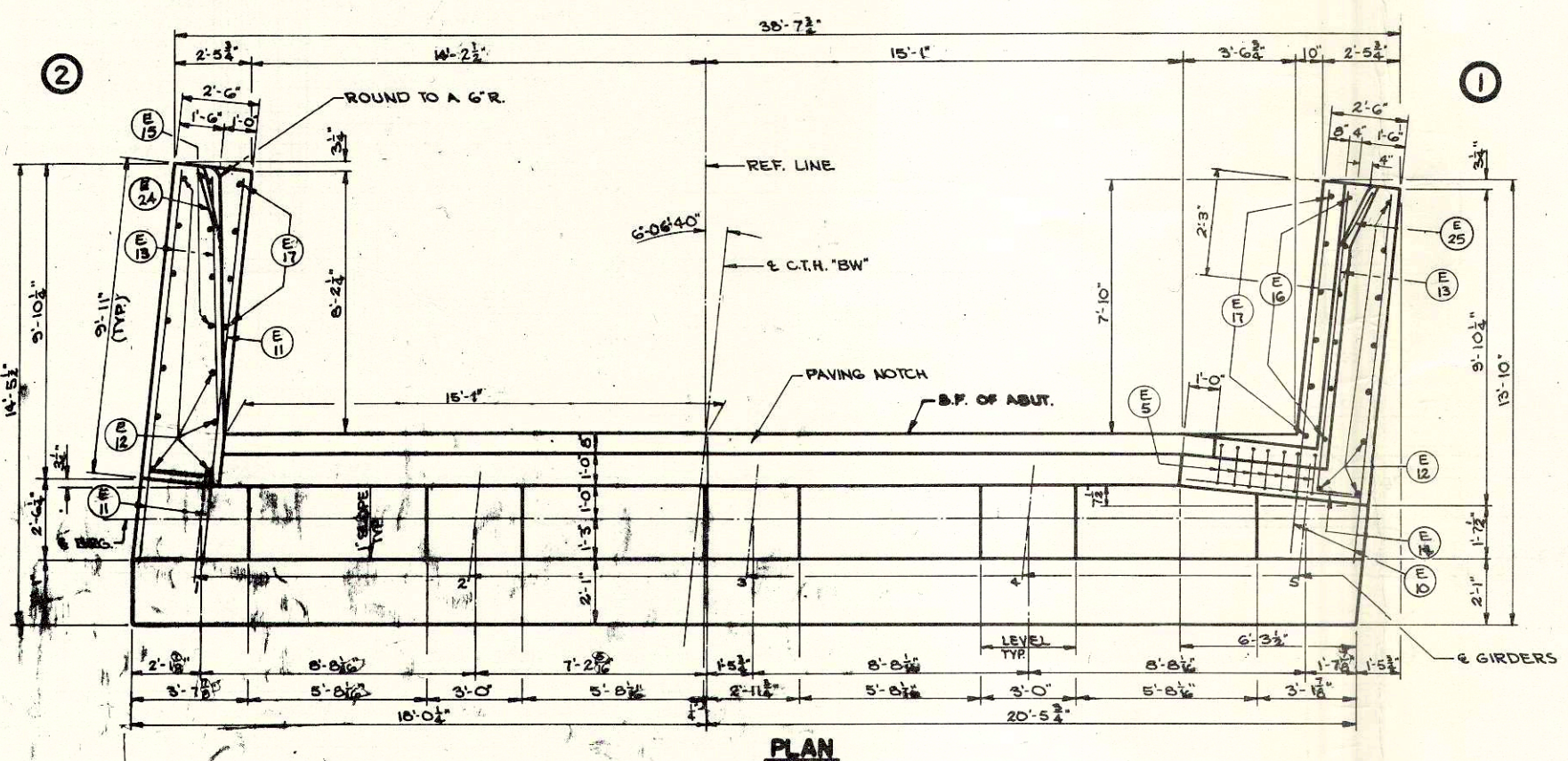
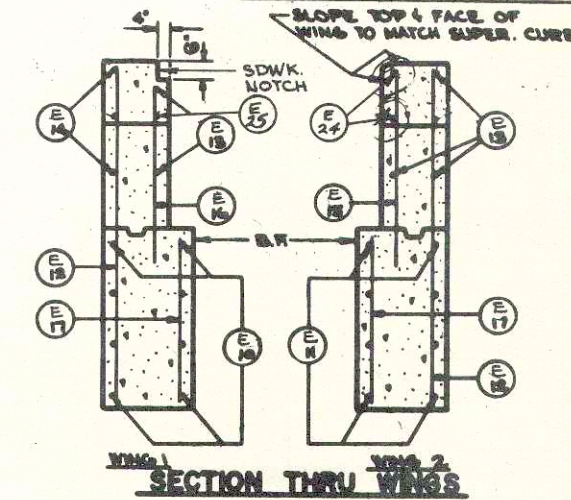
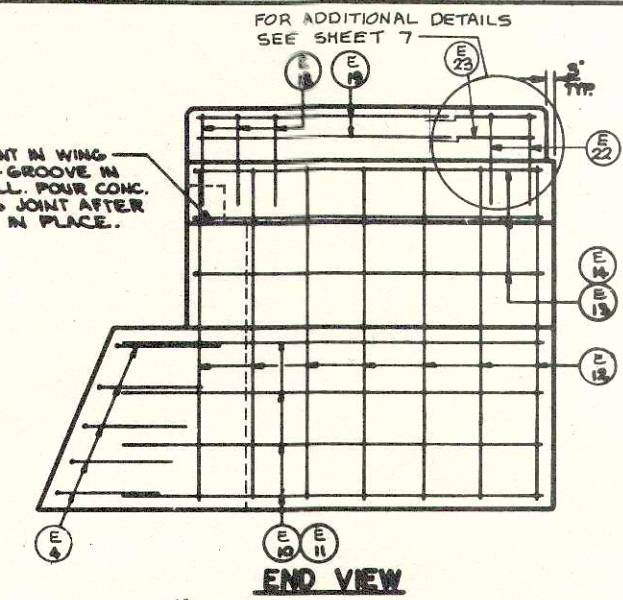
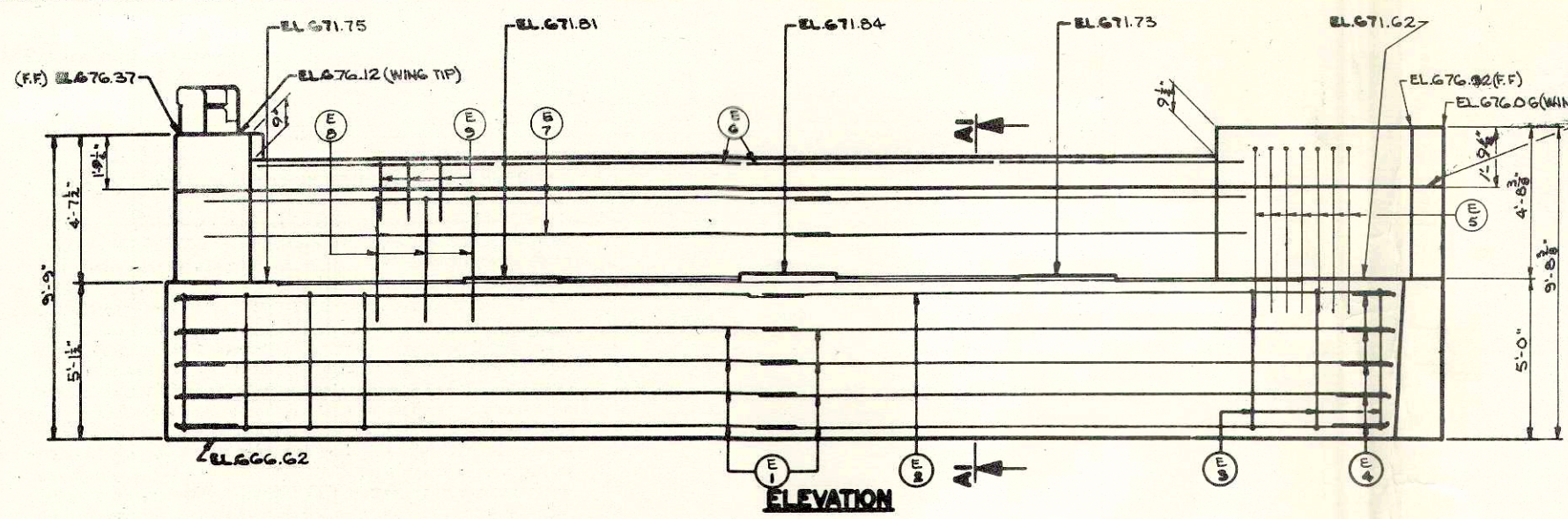
**CONCRETE MASONRY**

FOOTINGS	15.7
COLUMNS	12.7
CAP	13.1
<b>TOTAL</b>	<b>41.5 C.Y.</b>

STATE HIGHWAY COMMISSION OF WISCONSIN			
<b>PIER 3</b>			
DESIGNER	DATE	DESIGN	DATE
VGH	12	VGH	12
DRAWN	DATE	CHKD.	DATE
HFH	12	TUL	12
STRUCTURE	B-32	SHEET	11 OF 13



S.P.R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
4	I-90-1(15)0	30	65



CONST. JOINT IN WING WALL. 1/2\"/>

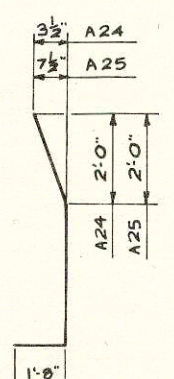
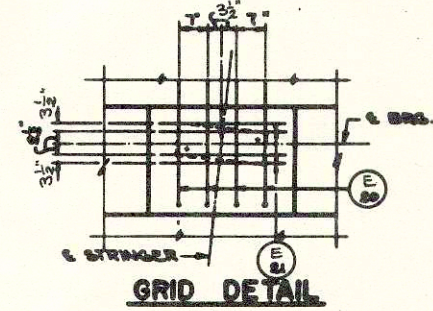
FOR ADDITIONAL DETAILS SEE SHEET 7

END VIEW

BILL OF BARS 1930\*

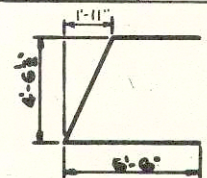
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

POST MARK	NO.	SIZE	LENGTH	SPACING	LOCATION	DET.
E1	14	4	19-9	SHOWN	BODY - HORIZ.	
E2	6	6	20-0	"	"	
E3	19	4	12-9	2-0	" - VERT.	A
E4	10	4	4-6	SHOWN	" & WINGS	B
E5	7	4	11-6	"	WING 1 - PARAPET	B
E6	8	4	7-9	SHOWN	PARAPET - HORIZ. - DO NOT LAP	
E7	6	4	17-0	"	"	
E8	21	6	9-6	1-6	BODY & PARAPET	B
E9	31	8	5-0	1-0	PARAPET	B
E10	8	4	11-0	1-6	WING 1 - HORIZ.	
E11	8	4	12-0	1-6	" - 2 -	
E12	18	4	9-3	1-6	WING 2 1/2 - VERT.	
E13	5	4	11-3	1-6	" 1/2 - HORIZ.	C
E14	3	4	15-3	1-6	WING 1 - HORIZ.	C
E15	4	4	5-6	1-6	" 2 - VERT.	
E16	6	4	5-0	1-6	" - 1 -	
E17	10	4	4-6	1-6	WING 2 1/2 - VERT.	
E18	22	8	5-9	1-0	RAILING PARAPET	B
E19	8	6	7-3	SHOWN	"	
E20	20	4	3-9	"	GRID	C
E21	20	4	2-3	"	"	
E22	8	5	5-6	"	RAILING PARAPET	B
E23	8	5	3-3	"	"	
E24	2	4	11-3	1-6	WINGS - HORIZ.	D
E25	2	4	11-3	"	"	D

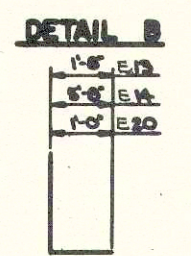


DETAIL D

\* BEND IN FIELD AS REQ'D.

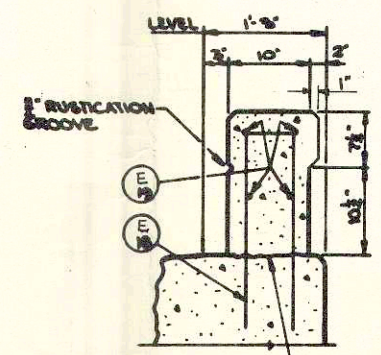


DETAIL A

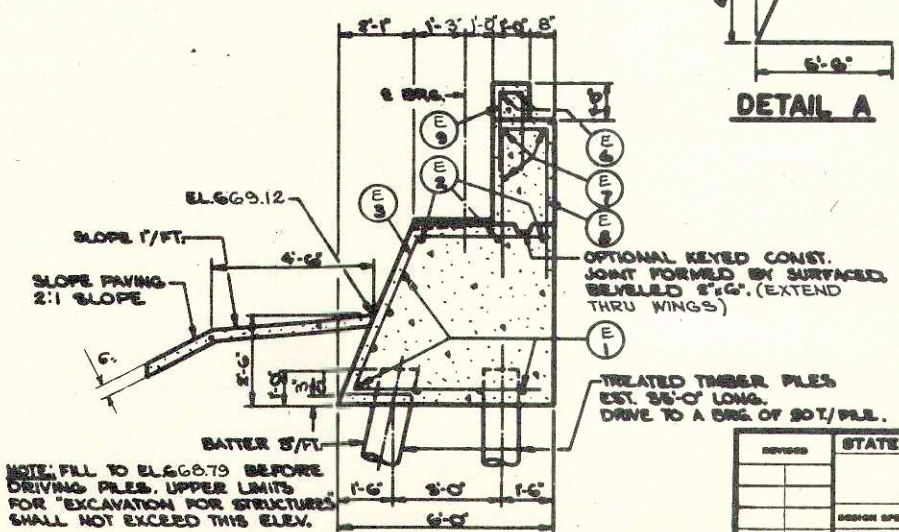


DETAIL B

DETAIL C



SECTION THRU RAILING PARAPET



SECTION A1

NOTE: FILL TO EL. 669.79 BEFORE DRIVING PILES. UPPER LIMITS FOR 'EXCAVATION FOR STRUCTURE' SHALL NOT EXCEED THIS ELEV.

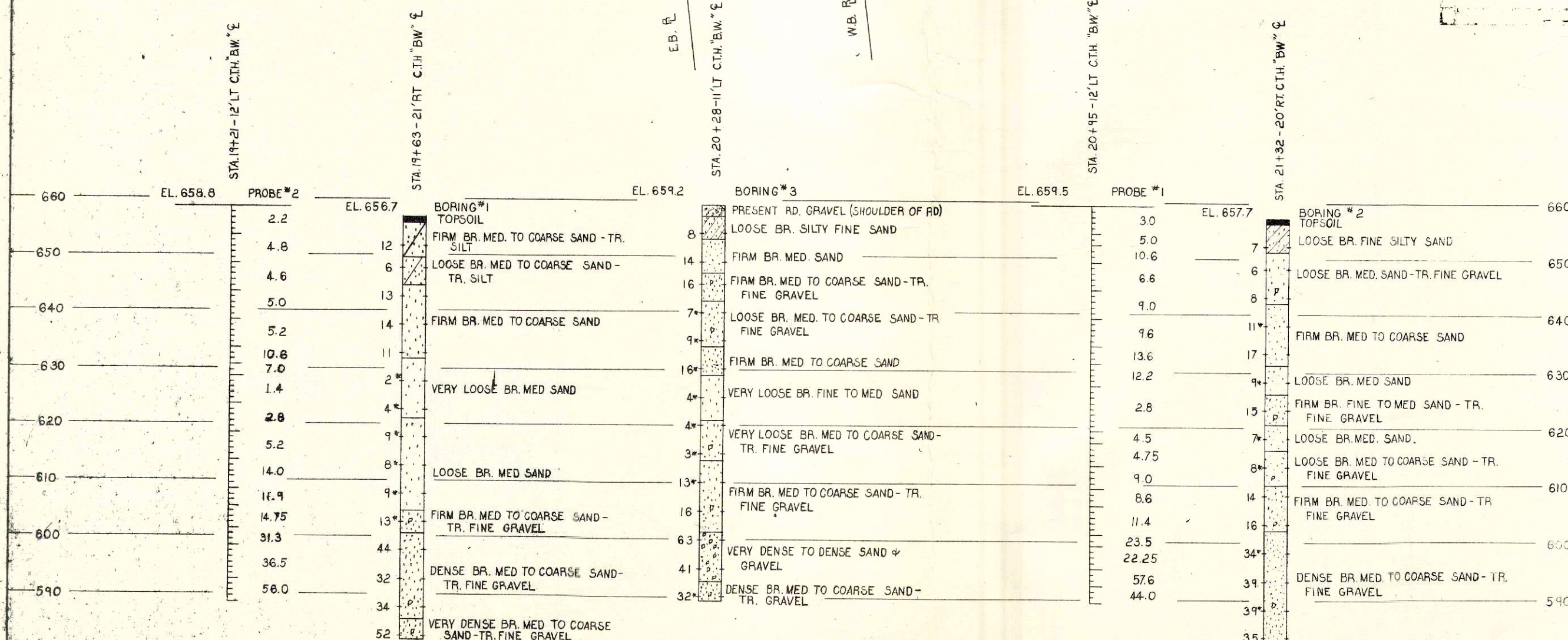
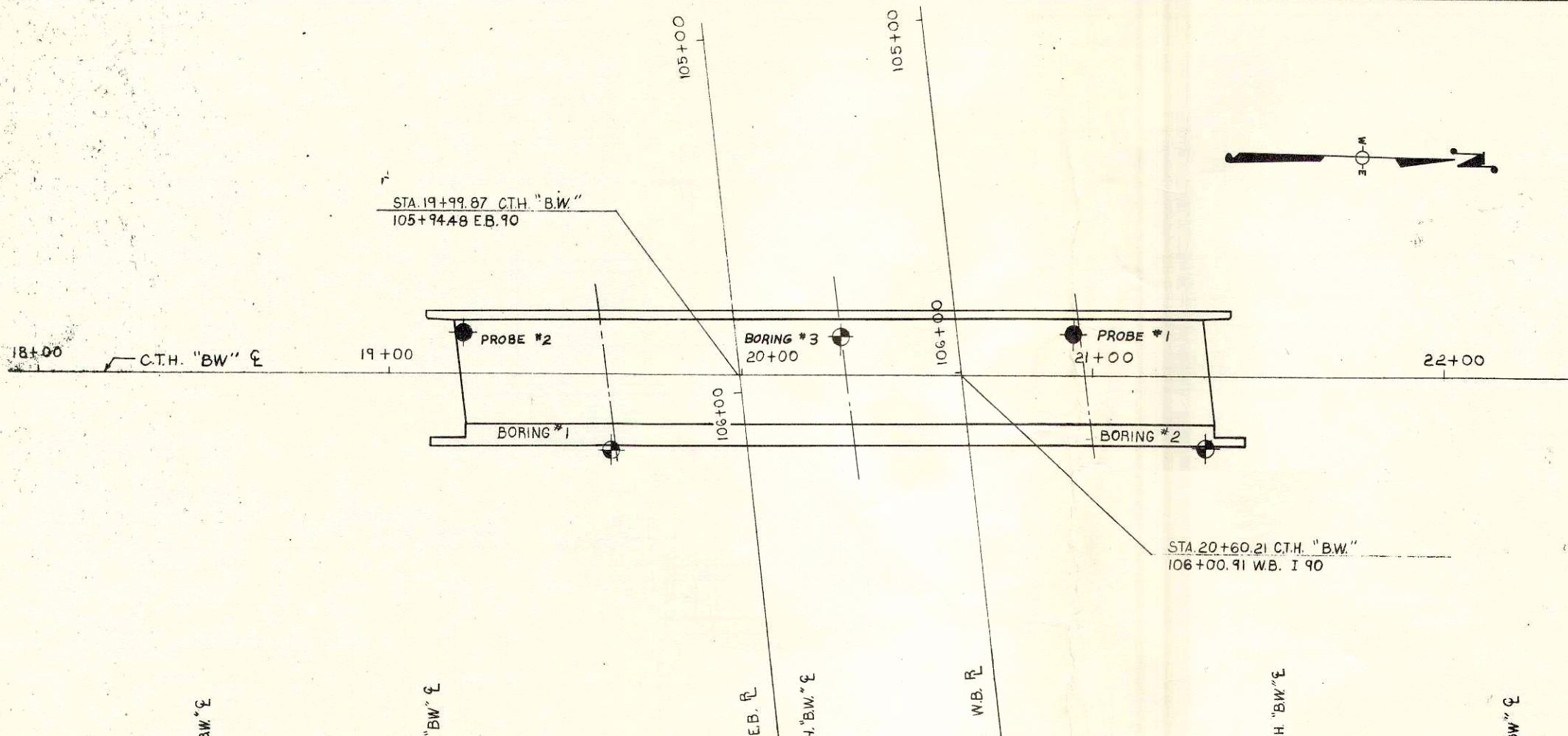
DESIGNED BY	STATE HIGHWAY COMMISSION OF WISCONSIN
PROJECT	NORTH ABUTMENT
DESIGNER	A.A.S.H.O. BY LAMAR H. SO
DATE	2-6-65
DRAWN BY	J.C.M.
STRUCTURE	B-32-51
SHEET	12 OF 13



**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.



**LEGEND OF PROBING**

STA. ELEV. PROBE #

AVERAGE BLOWS PER FT.

PROBE TAKEN USING A 350\* WT. FALLING 18" ON A 2" O.D. POINT

**LEGEND OF BORING**

STA. ELEV. BORING #

DESCRIPTION OF MATERIAL

MATERIAL CHANGE

BLOWS PER FT. USING 140\* WT. FALLING 30"

\* WASH SAMPLE

REVISED	STATE HIGHWAY COMMISSION OF WISCONSIN		
	<b>SUBSURFACE EXPLORATION</b>		
	DESIGN SPEC. AASHO '61	LOADING H20	CONSTR. SPEC. 1963
	DATE 12-6-63	DESIGN VGH	DRAWN DB
			CHKD. TML
STRUCTURE B-32-51		SHEET 13 OF 13	