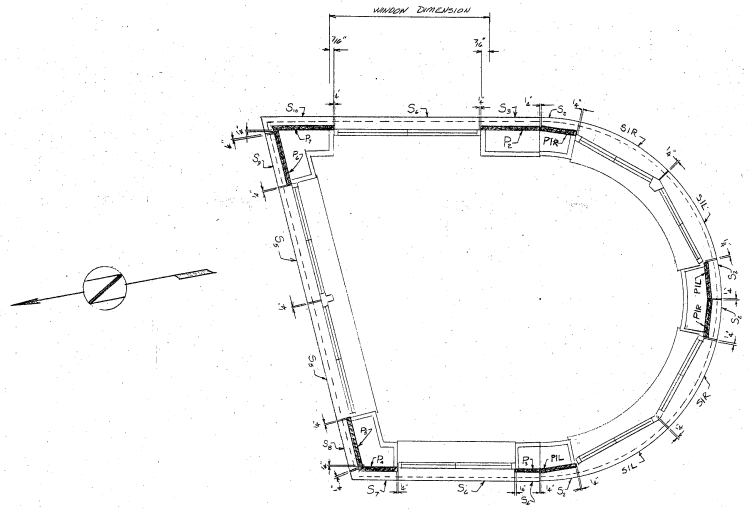
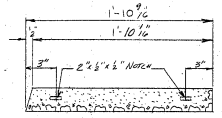
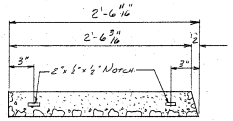


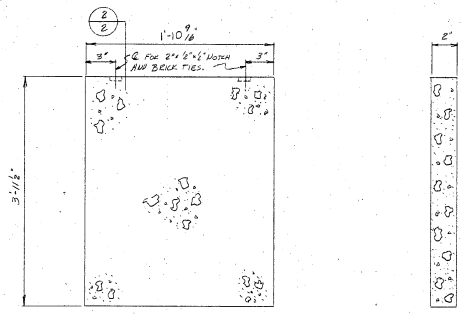
PLAN VIEW OF OPERATOR'S HOUSE
FOR SILL AND PANEL LOCATION ONLY.



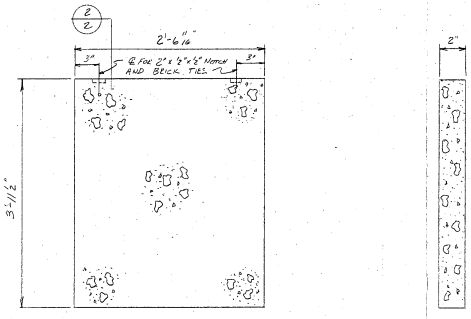
TOP VIEW—PANEL P6



TOP VIEW PANEL P7



FRONT VIEW OF PANEL MKD. P6
ONE (1) PANEL REQD. THUS
NOTE: FINISH FACE & RIGHT SIDE, EXPOSED AGGRAGATE
REINFORCING 4x4-4/4 WWM



FRONT VIEW OF PANEL MKD. P7
ONE (1) PANEL REQD. THUS
NOTE: FINISH FACE & BOTH SIDES. EXPOSED AGGRAGATE
REINFOCING 4x4-4/4 WWM

OFFICE
checked 5-19-66 TES

APPROVED
MAY 19 1966
George C. Wilson
Chief, Bureau of Bridges and Public Roads
MILWAUKEE, WIS.

NOTE:
ALL DIMENSIONS & DETAILS OF PREVIOUS DRAWINGS SHALL BE EXCLUSIVELY USED BY IN-PLANES NEXT SHEET.
ALL DIMENSIONS TO BE VERIFIED AT JOB SITE, WILL BE DONE BY OTHERS.

HUFSCHMIDT ENGINEERING COMPANY INC.
SUSSEX, WISCONSIN 53089 - AREA CODE 414-781-3700

MARK	DATE	BY	DESCRIPTION
5			
4			
3			
2			
A	5-19-66	DW	Dimensions

REVISIONS

DO NOT SCALE DRAWINGS

DESIG. | DRWN. DW | CHKD.

VERTICAL LIFT BRIDGE
PRECAST CONCRETE PANELS & LOCATION
ARCHT: BUREAU OF BRIDGES & PUBLIC ROADS
CONTRACTOR EDWARD KRAMER & SON

RECORD OF PRINTS

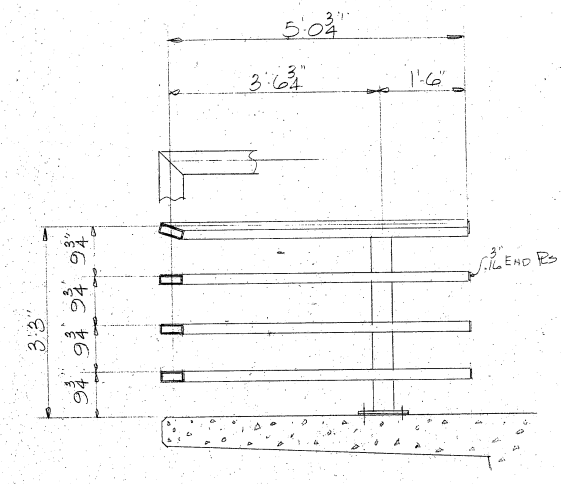
DATE NO.	PURPOSE	DATE NO.	PURPOSE
5-19-66 3	1st Submittal		
5-19-66 3	2nd Submittal		

JOB NO. 6609

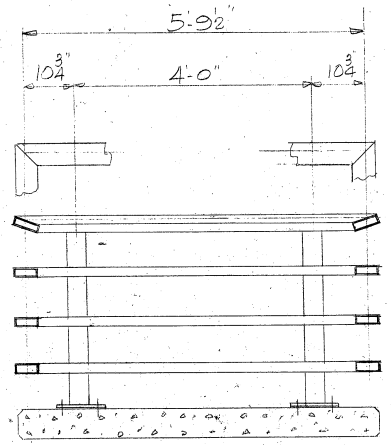
SHEET NO. 3

OF _____ SHTS.

DIAZITE PRODUCTS CO. D-48



8-RAIL SECTIONS THUS-



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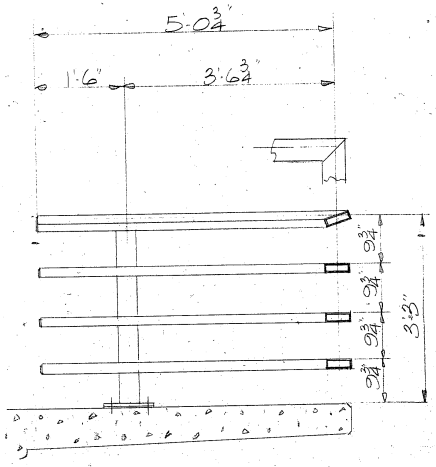
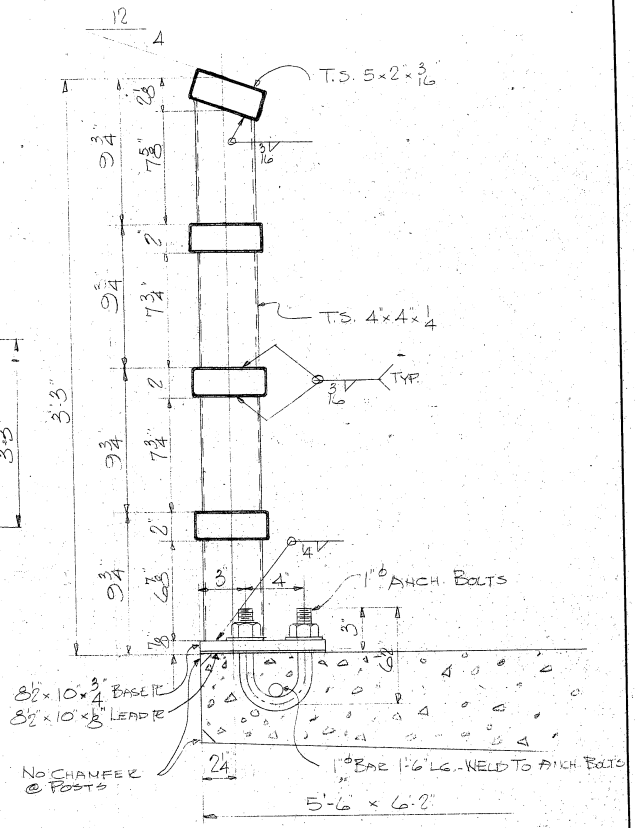
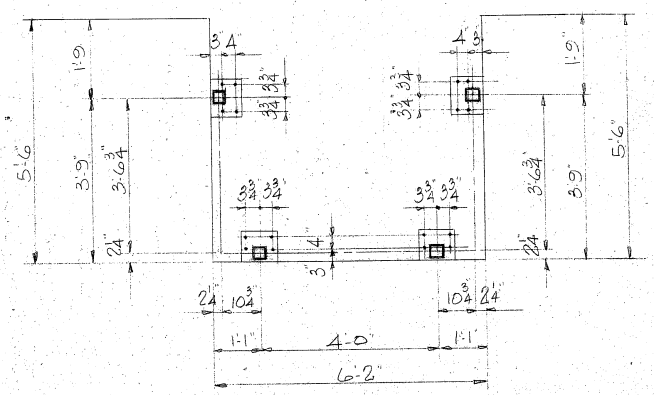


8-RAIL SECTIONS THUS-

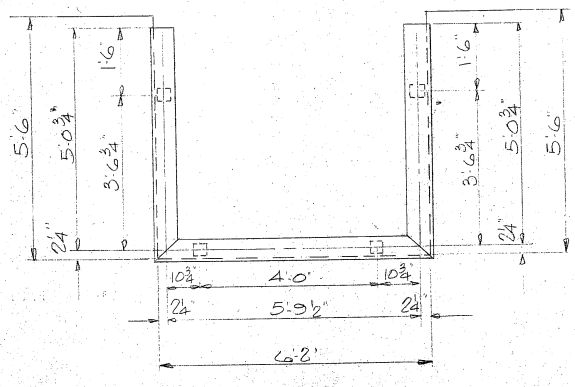


TYP END

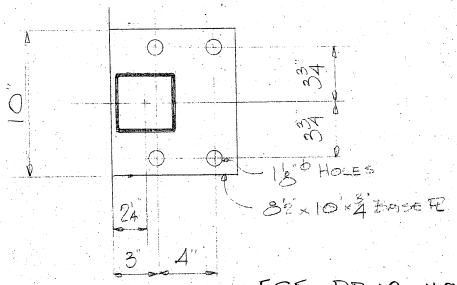
8-HANDRAILS REQUIRED
2-ST. PAUL AVE BRIDGE
4-PLEASANT ST. BRIDGE
2-CLYBOURN ST BRIDGE



TYPICAL ANCHOR BOLT SETTING PLAN
8 AS SHOWN



TYPICAL RAILING PLAN
8 AS SHOWN



ESE DRWG #8

BADGER WIRE & IRON WORKS, INC.
MILWAUKEE, WISCONSIN

3	APPR.	7-13-77	TITLE STEEL HANDRAILS	JOB NO. 1.2722
1	SHOP	8-3-77	BLDG. 2-ST. PAUL AVE BRIDGE 4-PLEASANT ST BRIDGE 2-CLYBOURN ST. BRIDGE	ITEM NO.
1	CONTR	8-3-77	LOCATION CITY	DRWG. NO. 1
			CONTR. J.C. THEILACKER CO.	
			ARCHT.	DRAWN BY RPS
			REF. DRWG. NO.	CHKD. BY
			FINISH SAND BLAST-COMMERCIAL SP-6 PRG-4C46887 ARCAPON RED INHIBITIVE PRIMER	

SCHILLING 10001 50010-78

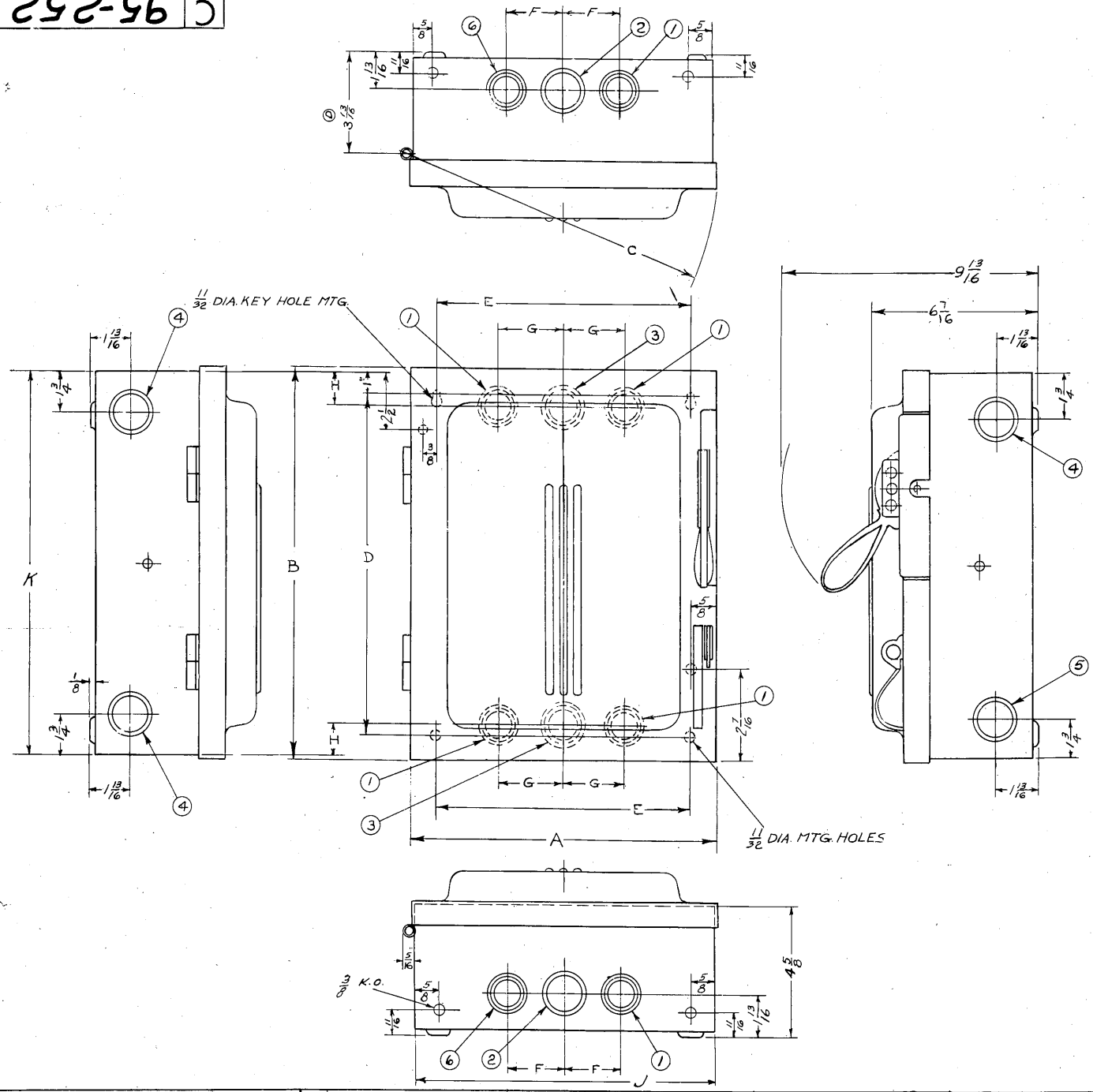


FIG. NO.	VOLTS	NO. POLE	NO. FUSES	NEUT.	GENERAL ASSEMBLY	A	B	C	D	E	F	G	H	J	K	L	CONDUIT KNOCKOUT SIZES ①	②	③	④	⑤	⑥
1.	250	2	NONE	NONE	D95-2-21	9 3/4	16	9 27/32	13 3/4	7 1/2	3	1 3/8	1 9/16	9 1/2	15 3/4		3/4-1-1 1/4	1 1/4-1 1/2	—	1 1/4-1 1/2	—	3/4-1-1 1/4
2.	600	2	NONE	NONE	D95-2-21-12	9 3/4	16	9 27/32	13 3/4	7 1/2	3 1/4	1 3/8	1 9/16	9 1/2	15 3/4		3/4-1-1 1/4	1 1/4-1 1/2	—	1 1/4-1 1/2	—	1 1/4-1 1/2-2
3.	240	3	NONE	NONE	D95-2-21-2	12 3/4	16	12 27/32	13 3/4	10 1/2	3 1/4	3 1/4	1 9/16	12 1/2	14 3/4		1 1/4-1 1/2 2	1 1/4-1 1/2 2	(6) 1 1/4-1 1/2 2	1 1/4-1 1/2 2	1 1/4-1 1/2 2	
4.	240	3	NONE	NONE	D95-2-21-13	15	16	15 3/32	13 3/4	12 3/4	3 1/4	3 1/4	1 9/16	9 1/2	15 3/4		1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2
5.	240	4	NONE	NONE	D95-2-21-3	9 3/4	21 1/2	9 27/32	19 1/4	7 1/2	3	1 3/8	1 9/16	9 1/2	21 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	—	1 1/4-1 1/2 2	1 1/4-1 1/2 2	1 1/4-1 1/2-2
6.	600	4	NONE	NONE	D95-2-21-14	9 3/4	23 1/2	9 27/32	21 1/4	7 1/2	3	1 3/8	1 9/16	9 1/2	23 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2
7.	250	2	2	NONE	D95-2-21-4	9 3/4	21 1/2	9 27/32	19 1/4	7 1/2	3	1 3/8	1 9/16	9 1/2	21 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	—	1 1/4-1 1/2 2	1 1/4-1 1/2 2	1 1/4-1 1/2-2
8.	250	2	2	NONE	D95-2-21-15	12 3/4	21 1/2	12 27/32	19 1/4	10 1/2	3 1/4	3 1/4	1 9/16	12 1/2	23 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2
9.	240	3	2	SOLID	D95-2-21-7	12 3/4	21 1/2	12 27/32	19 1/4	10 1/2	3 1/4	3 1/4	1 9/16	12 1/2	23 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	—	1 1/4-1 1/2 2	1 1/4-1 1/2 2	1 1/4-1 1/2-2
10.	240	3	2	SOLID	D95-2-21-18	12 3/4	23 1/2	12 27/32	21 1/4	10 1/2	3 1/4	3 1/4	1 9/16	12 1/2	23 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2
11.	600	2	2	NONE	D95-2-21-9	9 3/4	23 1/2	9 27/32	21 1/4	7 1/2	3	1 3/8	1 9/16	9 1/2	23 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2
12.	600	2	2	NONE	D95-2-21-21	9 3/4	23 1/2	9 27/32	21 1/4	7 1/2	3	1 3/8	1 9/16	9 1/2	23 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2
13.	240	3	3	NONE	D95-2-21-5	12 3/4	21 1/2	12 27/32	19 1/4	10 1/2	3 1/4	3 1/4	1 9/16	12 1/2	21 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	—	1 1/4-1 1/2 2	1 1/4-1 1/2 2	1 1/4-1 1/2-2
14.	240	4	3	SOLID	D95-2-21-8	12 3/4	21 1/2	12 27/32	19 1/4	10 1/2	3 1/4	3 1/4	1 9/16	12 1/2	23 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2
15	240	3	3	NONE	D95-2-21-16	12 3/4	21 1/2	12 27/32	19 1/4	10 1/2	3 1/4	3 1/4	1 9/16	12 1/2	23 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	—	1 1/4-1 1/2 2	1 1/4-1 1/2 2	1 1/4-1 1/2-2
16	240	4	3	SOLID	D95-2-21-19	12 3/4	23 1/2	12 27/32	21 1/4	10 1/2	3 1/4	3 1/4	1 9/16	12 1/2	23 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2
17.	600	3	3	NONE	D95-2-21-6	12 3/4	23 1/2	12 27/32	21 1/4	10 1/2	3 1/4	3 1/4	1 9/16	12 1/2	23 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	(6) 1 1/4-1 1/2-2	1 1/4-1 1/2 2	1 1/4-1 1/2 2	1 1/4-1 1/2-2
18.	600	3	4	NONE	D95-2-21-17	15	21 1/2	15 3/32	19 1/4	12 3/4	3 1/4	3 1/4	1 9/16	4 3/4	21 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2
19.	240	4	4	NONE	D95-2-21-20																	
20.	240	5	4	SOLID	D95-2-21-23	15	23 1/2	15 3/32	21 1/4	12 3/4	3 1/4	3 1/4	1 9/16	14 3/4	23 1/4		3/4-1-1 1/4	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2
21.	600	4	4	NONE	D95-2-21-11	12 3/4	16	12 27/32	13 3/4	10 1/2	3 1/4	3 1/4	1 9/16	12 1/2	15 3/4		1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	1 1/4-1 1/2-2	—	1 1/4-1 1/2-2
22.	600	3	NONE	NONE	D95-2-21-24																	

CAUTION!

STANDARD TOLERANCES 50-275 APPLY TO DIMENSIONS FOR WHICH TOLERANCES ARE NOT SHOWN.

DO NOT SCALE DRAWING. WORK ACCORDING TO DIMENSIONS.

ITEM	REMARKS	CHANGED BY	DATE
H	PICTURE OF COVER REVISED 6 7/16 WAS 6 3/8 DEPTH OF CASE.	P.W. E.R.L. DV. 89-6501-10	2-11-58
J	RLA SoTo RRB 7-24-61		

ITEM	REMARKS	CHANGED BY	DATE
A	1 1/4) 1 1/2 ADDED	H.H.K.	7-23-41
B	4 3/8" CASE HEIGHT ADDED 5 13/16" TO HINGE ADDED		1-28-42
C	ADDED 3 3/8 DIA. HOLE NO. 2 CONN. 17 NO. 12 STAE 20 COL. 1/2 ON TABLE FOR 1/2-1-15 1/2-35 DIM. 3 4 WAS 4 4	DEV. 4197-19 B.C.S. 32-0 DEV. 4197-10 DV. 3-0-7	12-3-51
D	—	DV. 89-3200-10	
E	FIG. NO. WAS ITEM NO. 250V WAS 220V. 600V WAS 575V. ADDED FIG. 22.	E.R.L. 5-7-70 DV. 89-5511-10	4/19/71
F	REMOVED BUL. NOS. "4101N" AND "4131N"	H.D.B. DV. 89-6009-10	
G	[illegible]	[illegible]	

ORDER NO.	DEV. 4197-10
SUPERSEDES	
INTERCHANGEABLE SUPERSEDES	
INTERCHANGEABLE DIMENSION SWG.	

SCALE NONE | BULLETIN NO. | FINISH | FIRST ASSEMBLY D39-1123

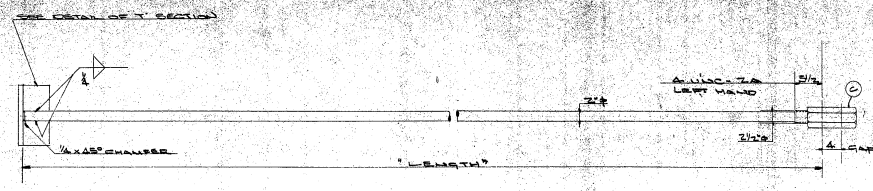
BULLETIN NO. DIMENSION SHEET FOR 100A. FRONT-SIDE OPERATED SAFETY SWITCHES.

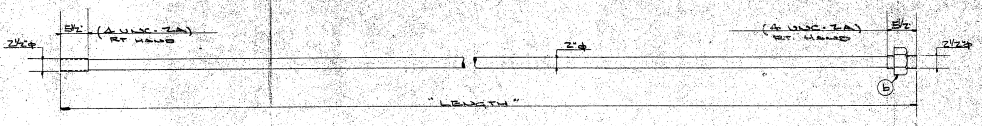
DRAWN H. H. Kean DATE 9-18-40 CHECKED J. Pack DATE 10-10-40

TRACED DATE APPROVED DATE 10-10-40

CUTLER-HAMMER INC. MILWAUKEE NEW YORK

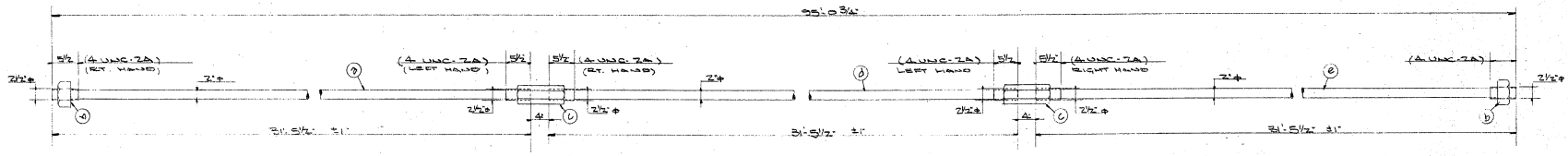
C 95-252 DWG. SIZE





MARK NO.	QTY.	FIELD LOCATION	UPSET LENGTH	MATL. REQ'D FOR UPSET ROD	WEIGHTS ROD	WGT	SLEEVE	T-SECT.	ASSY.
UR-3W	2	W. ABUT. NO. END	29'-9 7/8" ± 3/4	2"ϕ x 30'-4 3/8" (P)	377.0	—	21.4	43.0	386.4
UR-4W	5	W. ABUT CENTER	29'-8 7/8" ± 3/4	2"ϕ x 29'-7 3/8" (L)	316.0	—	21.4	43.0	380.4
UR-5W	ONE	W. ABUT NO. END	29'-5 1/2" ± 3/4	2"ϕ x 29'-9" (K)	318.0	—	21.4	43.0	382.4
UR-5E	ONE	E. ABUT NO. CORNER	28'-6" ± 3/4	2"ϕ x 28'-9 1/4 (AA)	307.0	—	21.4	43.0	371.4
UR-3E	5	EAST ABUT	28'-7 3/8" ± 3/4	2"ϕ x 28'-6 3/8 (BB)	305.0	—	21.4	43.0	369.4

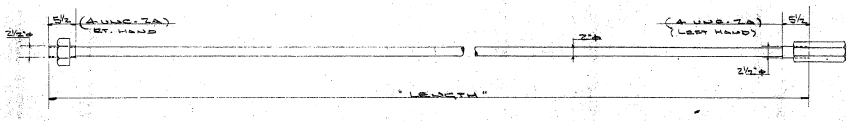
MARK NO.	QTY.	FIELD LOCATION	UPSET LGTH	MATL. REQ'D FOR UPSET ROD	WEIGHTS ROD	WGT	ASSY	D.A. LGTH OF ASSY	MATCHING ROD MARK.
UR-1W	ONE	WEST ABUT NO. END	29'-6 3/8 ± 3/4	2"ϕ x 30'-11 3/8" (N)	377.0	5.7	379.7	59'-4 3/4	UR-5W
UR-7W	5	WEST ABUT.	29'-4 3/4 ± 3/4	2"ϕ x 29'-11 3/4" (Q)	320.0	5.7	370.7	59'-1 1/2	UR-4W
UD-1E	5	EAST ABUT	25'-3 1/4 ± 3/4	2"ϕ x 26'-10 1/4 (CC)	308.0	5.7	313.7	50'-10 1/2	UR-3E
UR-7E	ONE	E. ABUT NO. CORNER	28'-6 7/8 ± 3/4	2"ϕ x 29'-1 7/8 (AA)	311.0	5.7	316.7	57'-3 3/4	UR-5E
UR-7W	2	W. ABUT NO. END	29'-4 3/4 ± 3/4	2"ϕ 29'-11 3/4 (Q)	320.0	5.7	370.7	59'-7 1/2	UR-3W

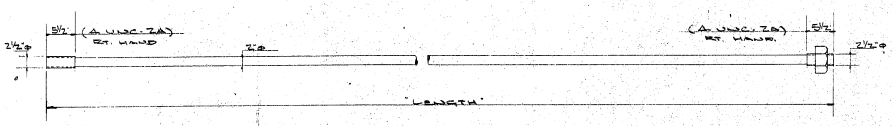


ONE - TIEROD SECTION NW. CTR-1W
(WEST ABUTMENT)

ONE - TIEROD SECTION NW. CTR-2W
(WEST ABUTMENT)

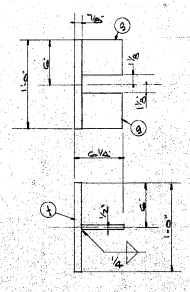
ONE - TIEROD SECTION NW. CTR-3W
(WEST ABUTMENT)





MARK NO.	QTY.	FIELD LOCATION	UPSET LENGTH	MATL. REQ'D FOR UPSET ROD	WEIGHTS ROD	WGT	SLEEVE	WEIGHT OF ASSY.
LR-4W	ONE	WEST ABUT NO. CORNER	24'-9 1/4" ± 3/4	2"ϕ x 25'-4 1/2" (P)	271.0	5.7	21.4	298.0
LR-3W	7	W. ABUT	24'-8 1/4" ± 3/4	2"ϕ x 25'-3 1/4" (T)	270.0	5.7	21.4	297.0
CTR-1E	ONE	EAST ABUT	32'-9 ±1"	2"ϕ x 33'-4" (V)	356.0	5.7	21.4	383.0
LR-3E	5	EAST ABUT	25'-3 3/4 ± 3/4	2"ϕ x 25'-10 3/4 (X)	277.0	5.7	21.4	304.0
LR-4E	ONE	E. ABUT NO. CORNER	25'-6 7/8	2"ϕ x 26'-1 7/8 (Z)	278.0	5.7	21.4	305.0

MARK NO.	QTY.	FIELD LOCATION	UPSET LENGTH	MATL. REQ'D FOR UPSET ROD	WEIGHTS ROD	WGT	ASSY	D.A. OF ASSY	MATCHING ROD MK.
LR-2W	ONE	WEST ABUT NO. CORNER	24'-0 1/2 ± 3/4	2"ϕ x 25'-4 1/2 (S)	271.0	5.7	276.7	49'-11 3/4"	LR-4W
LR-1W	7	W. ABUT	24'-8 1/4 ± 3/4	2"ϕ 25'-3 1/4 (L)	270.0	5.7	275.7	49'-8 1/2"	LR-3W
CTR-1E	ONE	EAST ABUT	32'-9 ±1"	2"ϕ x 33'-4" (W)	356.0	5.7	361.7	65'-10"	CTR-1E
LR-1E	5	EAST ABUT	25'-3 3/4 ± 3/4	2"ϕ x 25'-10 3/4 (Y)	277.0	5.7	282.7	50'-11 1/2	LR-3E
LR-2E	ONE	E. ABUT NO. CORNER	25'-6 7/8 ± 3/4	2"ϕ x 26'-1 7/8 (BB)	278.0	5.7	283.7	51'-5 3/4	LR-4E



DETAIL OF 'T' SECTION

APPROVED
NOV 18 1965
George C. Ashton Supt.
Bureau of Bridges and Traffic Facilities
MILWAUKEE, WIS.

	ONE - TIEROD SECTION NW				CTR-1W (	365.0	4 EA)
a	1	ROD	2"ϕ	32'-0 1/2		343.0	343
b	1	NUT	2 1/2"-4.5 UNC 4 HEX			5.7	5.7
c	1	-	SLEEVE NUT (3 7/8 HEX x 6'-10")			21.4	21.4
	ONE - TIEROD SECTION NW				CTR-2W (	343.4	4 EA)
d	1	ROD	2"ϕ	32'-0 1/2		343.0	343
c	1	-	SLEEVE NUT (3 7/8 HEX x 6'-10")			21.4	21.4
	ONE - TIEROD SECTION NW				CTR-3W (	343.7	4 EA)
c	1	ROD	2"ϕ	32'-0 1/2		343.0	343
b	1	NUT	2 1/2"-4.5 UNC 4 HEX			5.7	5.7
	FURNISH						
	28	SECT.	CAM. PIER 3" STD 20'-0" LG		NW. PS-1	45.4	1271
				16 FOR W. ABUT.			
				12 FOR E. ABUT.			

PIECE MARK	QUAN.	DESC.	SIZE	LENGTH FT.	LENGTH IN.	REMARKS	WT. EA.	WT.

PROJECT
W. ST PAUL AVE DETROIT ST
LIFT BRIDGE
CITY OF MILWAUKEE

CONTR.
EDW. KRAEMER & SONS
JOB NO. 7508 A-37A

PRINTS ISSUED

NO.	FOR	DATE
4.	APPROVAL	11-16
	DISTRIBUTION	
1	W.I.W. DIST.	11-16
	SHOP	
	ERECTION	

REV. SYM.	DATE	REVISION	CHG BY

COMMERCIAL STAMPING & FORGING, Inc.
CHICAGO

DETAIL OF TIEROD
S. ABUT & WEST ABUT

DATE 11-8-65 DR. BY CAE CH. BY CV APP. BY
SCALE 1"=1 1/2" = 1 FT. DCO-2845-5

KLEINSER & KARR, INC. - CHICAGO

C 95-262

RAW MAT SPEC WITH PART NO. AND AMOUNT REQ'D.

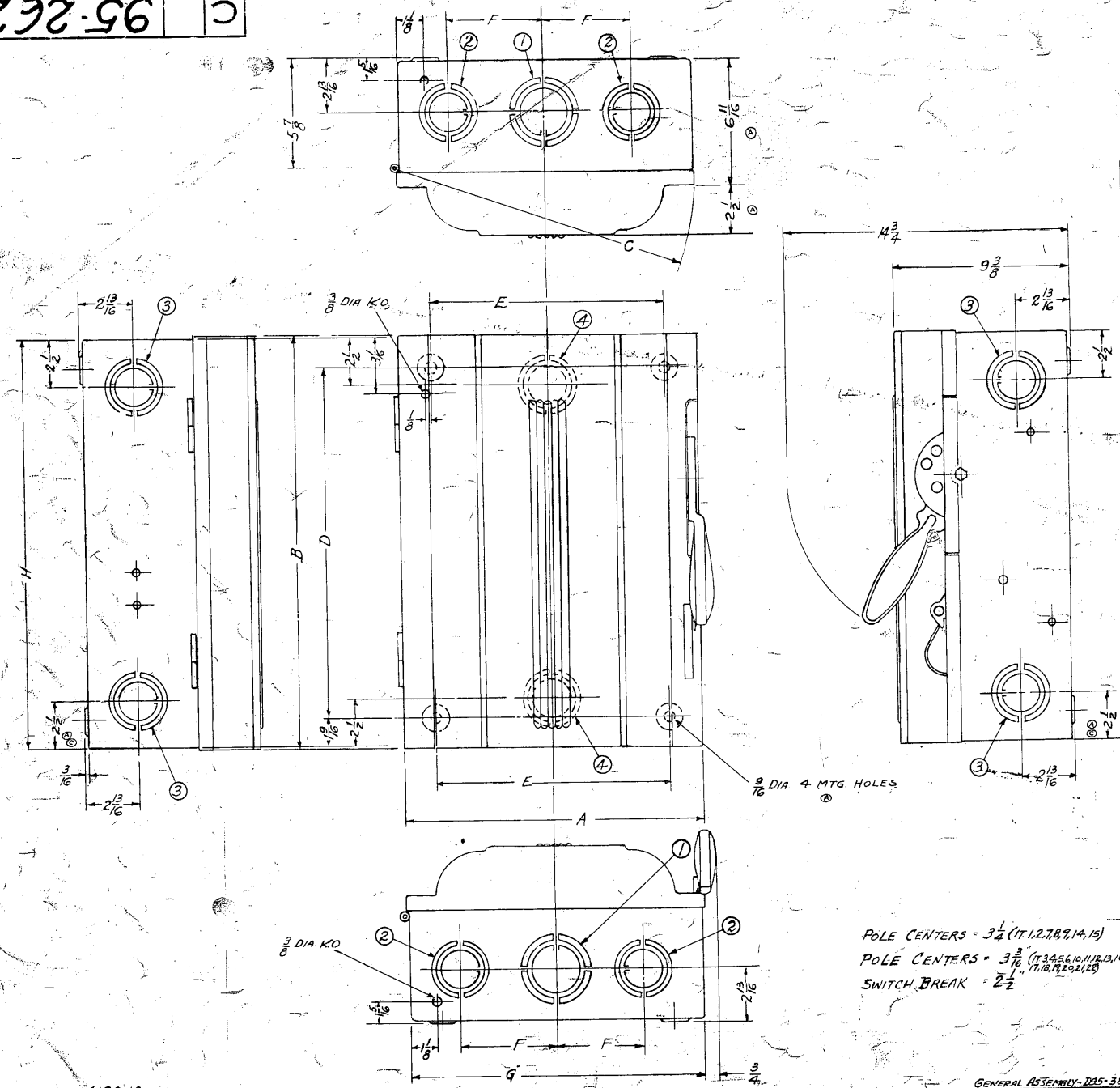


FIG. NO.	WATTS	NO. POLES	NO. FUSES	NEUTRAL	GENERAL ASSEMBLY	H	B	C	D	E	F	G	H	CONDUIT KNOCKOUT SIZES ①	②	③	④
1	250	2	None	None	95-389-2	12	23 1/4	12 1/4	19 3/4	8 1/2	3 1/2	11 3/4	23	1/2, 2, 2 1/2	1/2, 2	1/2, 2, 2 1/2	1/2, 2, 2 1/2
2	250	2	None	None	95-261-2	15 1/2	23 1/4	15 3/4	19 3/4	8 1/2	4 1/2	15 1/4	23	1/2, 2, 2 1/2	1/2, 2, 2 1/2	1/2, 2, 2 1/2	1/2, 2, 2 1/2
3	600	3	None	None	95-389-10	18 3/4	23 1/4	19	19 3/4	12	4 1/2	18 1/2	23	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3
4	240	3	None	None	95-261-4	15 1/4	23 1/4	15 3/4	19 3/4	12	4 1/2	15 1/4	23	1/2, 2, 2 1/2	1/2, 2, 2 1/2	1/2, 2, 2 1/2	1/2, 2, 2 1/2
5	600	4	None	None	95-389-11	18 3/4	30 3/8	19	26 7/8	12 1/4	4 1/2	18 1/2	30 1/8	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3
6	240	4	None	None	95-261-6	12	32 7/8	12 1/4	26 7/8	8 1/2	3 1/2	11 3/4	32 5/8	1/2, 2, 2 1/2	1/2, 2	1/2, 2, 2 1/2	1/2, 2, 2 1/2
7	250	2	2	None	95-389	12	30 3/8	12 1/4	29 5/16	8 1/2	3 1/2	11 3/4	30 1/8	1 1/2, 2, 2 1/2	1 1/2, 2	1 1/2, 2, 2 1/2	1 1/2, 2, 2 1/2
8	250	2	2	None	95-261-8	15 1/2	30 3/8	15 3/4	26 7/8	8 1/2	4 1/2	15 1/4	30 1/8	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3
9	600	2	3	None	95-389-2	12	32 7/8	12 1/4	29 5/16	8 1/2	3 1/2	11 3/4	32 5/8	1 1/2, 2, 2 1/2	1 1/2, 2	1 1/2, 2, 2 1/2	1 1/2, 2, 2 1/2
10	240	3	3	None	95-389-3	15 1/2	30 3/8	15 3/4	26 7/8	12	4 1/2	15 1/4	30 1/8	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3
11	240	3	3	None	95-261-11	15 1/2	32 7/8	15 3/4	29 3/8	12	4 1/2	15 1/4	32 5/8	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3
12	240	3	3	None	95-389-4	13	30 3/8	13 1/4	26 7/8	9 1/2	4	12 3/4	30 1/8	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3
13	600	3	3	None	95-261-13	18 3/4	30 3/8	19	26 7/8	15 1/4	4 1/2	18 1/2	30 1/8	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3
14	240	3	2	Neutral	95-389-5	13	30 3/8	13 1/4	26 7/8	9 1/2	4	12 3/4	30 1/8	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3
15	240	3	2	Neutral	95-261-15	18 3/4	30 3/8	19	26 7/8	15 1/4	4 1/2	18 1/2	30 1/8	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3
16	240	4	4	None	95-389-6	18 3/4	32 7/8	19	29 3/8	15 1/4	4 1/2	18 1/2	32 5/8	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3
17	240	4	4	None	95-261-17	16 1/4	30 3/8	16 1/2	26 7/8	12 3/4	4 1/2	16	30 1/8	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3
18	600	4	4	None	95-389-7	18 3/4	32 7/8	19	29 3/8	15 1/4	4 1/2	18 1/2	32 5/8	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3
19	600	4	4	None	95-261-19	16 1/4	30 3/8	16 1/2	26 7/8	12 3/4	4 1/2	16	30 1/8	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3	2, 2 1/2, 3
20	240	4	3	Neutral	95-389-8	19 3/4	30 3/8	20	26 7/8	16 1/2	4 1/2	19 1/2	30 1/8	2 1/2, 3	2 1/2, 3	2 1/2, 3	2 1/2, 3
21	240	4	4	Neutral	95-261-21	19 3/4	30 3/8	20	26 7/8	16 1/2	4 1/2	19 1/2	30 1/8	2 1/2, 3	2 1/2, 3	2 1/2, 3	2 1/2, 3
22	240	5	4	Neutral	95-261-22	19 3/4	30 3/8	20	26 7/8	16 1/2	4 1/2	19 1/2	30 1/8	2 1/2, 3	2 1/2, 3	2 1/2, 3	2 1/2, 3
23																	
24																	
25																	

ORDER NO. DEV 4198-10

A	3 WAS 2 1/2. ADDED DIM. 6 11/16 & 2 1/2 ADDED 4 MTG. HOLES	E.R.L.	9/2/43
B	PL 95-262-3,7-16,11-12,15 DIM 3 3/4 WAS 15 3/4 DIM C WAS 15 1/4" DIM "E" WAS 11 3/4 DIM G WAS 15. ALL POLE CENTERS WERE 3 1/2	DEV 4198-11	1/18/43
C	2 1/2 WAS 3	E.R.L. DEV 4198-10	1/10/4
D	3-D & H" DIMENSIONS INCREASED BY 2"	E.R.L. DV 4180-15	8-4-49
E	FIG NO. WAS ITEM NO. VOLTAGE RATING FOR FIG. 1, 5, 12, 13, 18 & 19 WAS 575, FIG. 10, 11, 14, 15, 16, 17, 20, 21 & 22 WAS 220, FOR 7 & 8 WAS 220-575	DV 89-3200-10	12/15/42
F	REMOVED BUL NOS. 4101 AND 4131; FROM TITLE AND CHART.	H.O.B. DV 89-6009-10	12-13-56
G	ADDITIONAL ASSEM. DWG'S ADDED TO FIG'S 2, 7, 10, 12, 14, 16, 18 & 20	H.G.K. DV. BY 6007-11	11/16
H	CROSSED OFF FIG'S. 1 THRU 6, 8, 11, 13, 15, 17, 19, 21, 22. CHANGED FIGS. 7, 9, 10, 12, 14, 16, 18, 20 FROM 95-261-7, 9, 10, 12, 14, 16, 18, 20 TO 95-389-2, -3, -4, -5, -6, -7, -8 RESPECTIVELY. CROSSED OFF 95-32 W'S AND 95-389'S IN LEFT HAND COLUMN. DV 89-6436-10, -11	S. JACKSON	1/22/60
L	REINSTATED FIG'S. 1, 3, & 5. GEN. ASSEM. WAS 95-261-2, & -5 RES.	A.W. DV 89-3200-10	5-19-60
M			

N P Q R S T U V W X Y Z

GENERAL ASSEMBLY-DAS-389

BULLETIN

DIMENSION SHEET FOR 200-AMP. FRONT-SIDE OPERATED SAFETY SWITCHES

SURFACE COATING

SCALE —

DO NOT SCALE DRAWING. WORK ACCORDING TO DIMENSIONS.

MACHINING DIMENSIONS ARE SHOWN ALLOWANCES HAVE BEEN MADE FOR COATINGS EXCEPT ON SCREW THREADS.

"O-O" THIS INDICATES AN ACCURATE CONSTRUCTION OR BASIC DIMENSION WHICH NEED NOT BE CHECKED. "T" THIS INDICATES DIMENSION WITH WIDE TOLERANCE WHICH IS NOT TO BE CHECKED.

CUTLER-HAMMER INC. MILWAUKEE NEW YORK

DR. S. SPIECZYNSKI 4-8-42

DIMENSION DRAWING

TR

FIRST ASSEM. WHERE LISTED D95-261

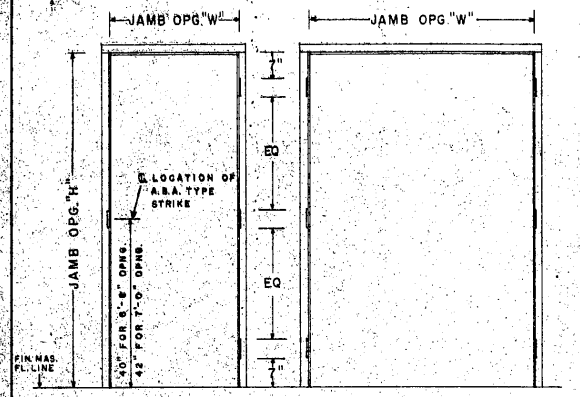
CHK. 5/12/42

SUP'S. NON-INTERCHANGEABLE

APPR. 5-15

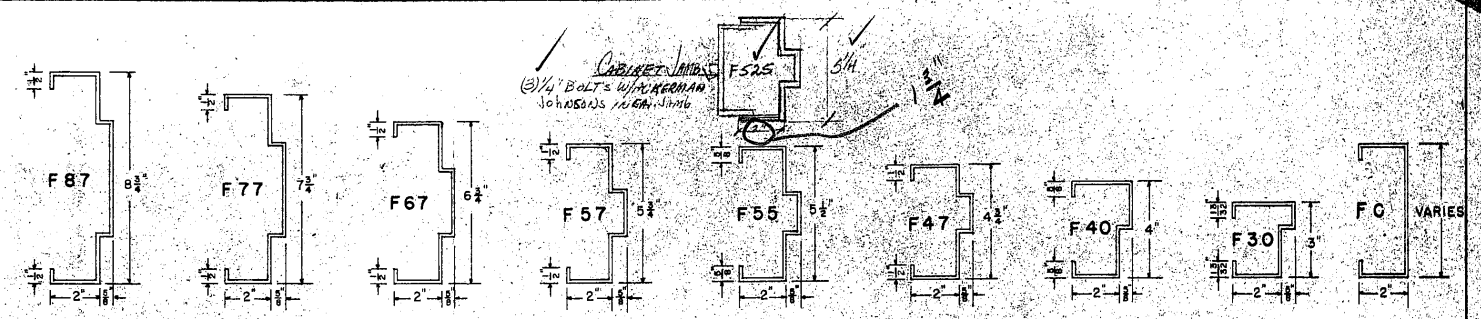
SUP'D BY NON-INTERCHANGEABLE

C 95-262

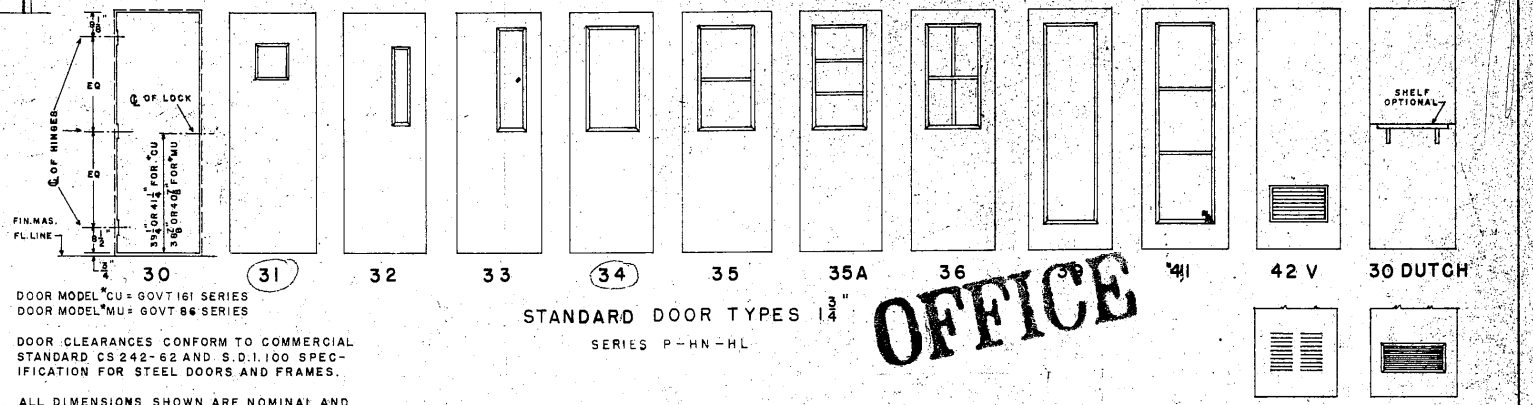


ELEVATION NO.1 ELEVATION NO. 2

FRAMES FOR 1¾" DOORS



STANDARD FRAMES FOR 1¾" DOORS



DOOR MODEL *CU = GOVT 161 SERIES
DOOR MODEL *MU = GOVT 86 SERIES

DOOR CLEARANCES CONFORM TO COMMERCIAL STANDARD CS 242-62 AND S.D.I. 100 SPECIFICATION FOR STEEL DOORS AND FRAMES.

ALL DIMENSIONS SHOWN ARE NOMINAL AND SUBJECT TO MANUFACTURING TOLERANCES.

STANDARD DOOR TYPES 1¾"

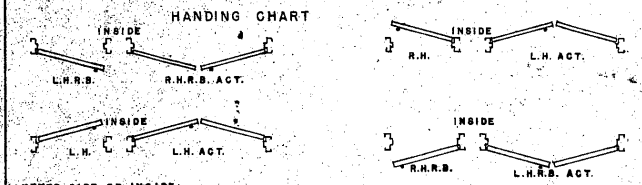
SERIES P-HN-HL

OFFICE

STANDARDS FOR D & H DOORS AND FRAMES

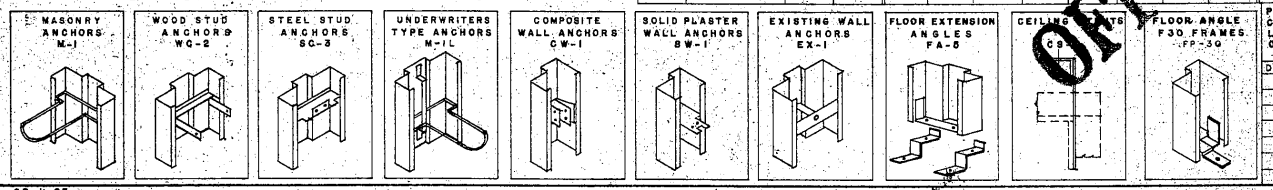
1. All material shown on this drawing and indicated in schedule will be fabricated in accordance with D&H Standards for manufacture after approval by the architects and receipt of complete information for fabrication.
2. Doors and frames will be reinforced, drilled and tapped for mortised hardware.
3. Doors and frames will be reinforced for surface applied hardware as may be required. Drilling and tapping for attachment to be done by others.
4. Unless otherwise noted, all frames will be prepared for A.S.A. Type Universal Strikes.
5. Unless otherwise noted, all 6'8" and 7'0" standard frames for 1¾" doors are prepared for 4½" x 4½" full mortise standard weight template hinges. 8'0" jambs are prepared for 2 pair of the same.
6. All frames are designed to be set at finish masonry floor line. For fastening to rough floor below, Type FA-5 floor extension angles (1"-1½ or 2" extension) are to be attached to all vertical jamb sections. Specify height.
7. Frames are designed as sectional units for assembly in the field unless otherwise noted.
8. Two (2) rubber door silencers are provided with all standard frames.
9. Standard height frames are furnished with 3 masonry anchors, 4 wood stud anchors or 4 steel stud anchors. One additional anchor per each 2'0" will be furnished for each jamb, if height exceeds standard.
10. All doors and frames are factory primed with one coat of D&H Standard metallic primer.
11. Glass light doors are prepared for 1/4" thick glass by others unless otherwise noted.
12. Glass light sizes shown on drawing SD-5-65.
13. Hardware locations are in accordance with D&H Standards unless otherwise noted.
14. Inactive door leaves are prepared for A.S.A. 115.4 standard 12" flush bolts unless otherwise noted.
15. Application of all finish hardware to be done in field in accordance with manufacturers standard practice and instructions.
16. Louver sizes, types and free air space will be in accordance with louver schedule in D&H, Inc. door catalog.

HANDING CHART



*KEYED SIDE OR INSIDE

STANDARD FRAME ACCESSORIES



SCHEDULE

ARCHITECTS MARK	MARK NUMBER	LOCATION FROM	LOCATION TO	FRAME SECTION	FRAME ELEVATION	TYPE OF ANCHOR	LABEL OR NON LABEL	COLD ROLLED OR Z.C. STEEL	FA-5 FLOOR EXT. ANGLES	JAMB OPG. WIDTH "W"	JAMB OPG. HEIGHT "H"	DOOR TYPE	MODEL	SERIES	LABEL OR NON LABEL	SINGLE OR PAIR	HAND	THICKNESS	REMARKS by this Contractor
1	OPERATOR'S HOUSE @ ELV. 12.67			525	1	CART JAMB	B	CR	—	36"	80"	34	CU	P	B	S	(LH)	1¾	1½ PR. 5x5 STANLEY BB/RB BUTTS 1-YALE LOCKSET # 5407 THRESHOLD RIXON 400 3⅜x½ LCN DOOR CLOSER # 4011 SMOOTHEE WEATHER PROOF
2	OPERATOR'S HOUSE @ ELV. 4.00			8.3	1	MAS	B	CR		36	80	31	CU	P	B	S	RH	1¾	1½ PR 5x5 STANLEY BUTTS 1-YALE LOCKSET # 5407 1-LCN DOOR CLOSER 1-THRESHOLD RIXON 400 3⅜x½ WEATHER PROOF
3	PIER #3 @ ELV. 4.00			525	1	CART JAMB	B	CR		32"	74"	31	CU	P	B	S	(RH)	1¾	1½ PR 5x5 STANLEY F-1 MAS BUTTS 1-YALE LOCKSET # 5407 1-LCN CLOSER # 4013 SMOOTHEE 1-THRESHOLD RIXON 400 3⅜x½ 1-WEATHER PROOF

L.H.R.B.

RH RB.

APPROVED HARDWARE
AS CORRECTED
JUL 1 1966
George C. Ashton Supt.
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

GLASS & GLAZING BY OTHERS

ROUGH BUCK 14 ga.
HR METAL FRAMES 14 ga.

OFFICE

POSSESSION OF THIS DRAWING DOES NOT CONVEY THE RIGHTS TO MANUFACTURE UNLESS ACCOMPANIED BY FORMAL WRITTEN CONSENT BY DUSING & HUNT, INC.
—DO NOT SCALE DRAWING—

DATE	Nº	TO

RECORD OF PRINTS

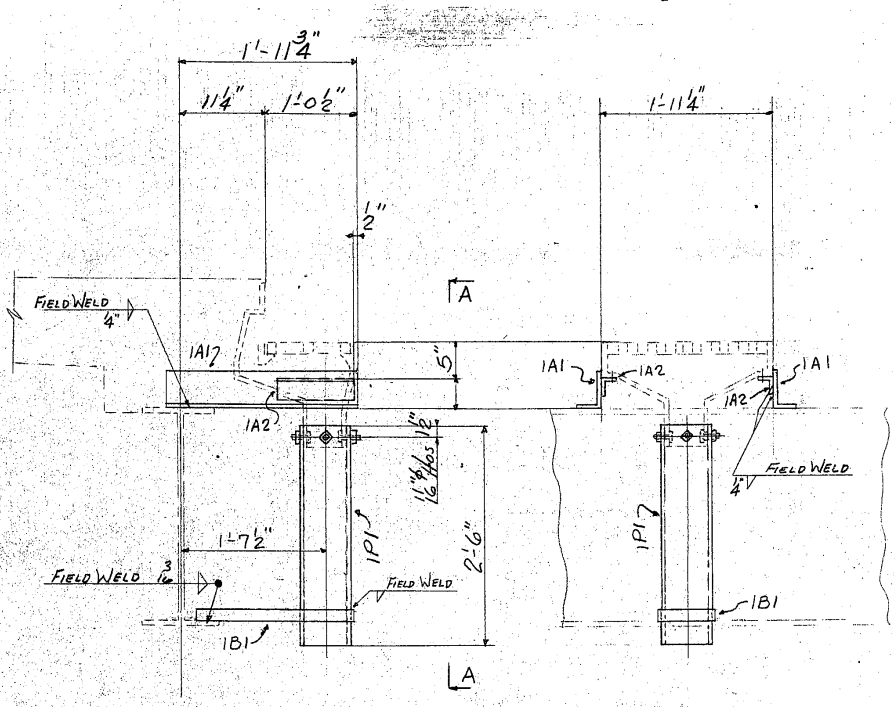
REINKE & SCHOMANN, Inc.
— Phone 964-1600 —
Sheet Metal, Miscellaneous & Ornamental Iron Contractors
"Qualified Service Dealers For H. H. Robertson Co."
1400 E. PARK PLACE MILWAUKEE, WIS. 53211

DRAWN BY	DATE	HARDWARE BY	INSTALLATION BY
	6/23/66		

PROJECT: W. ST PAUL AVE - E. DETROIT ST VERTICAL LIFT BRIDGE OVER MILWAUKEE RIVER
ARCHITECT: BUREAU OF BRIDGES
DRAWING NO.
SHEET 1 OF 1

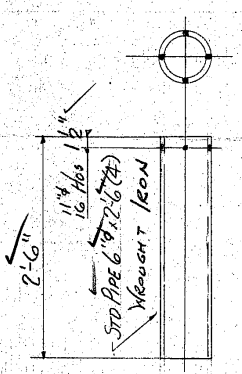
DUSING & HUNT INC.
59 LAKE STREET LEROY, NEW YORK

SD-1-65

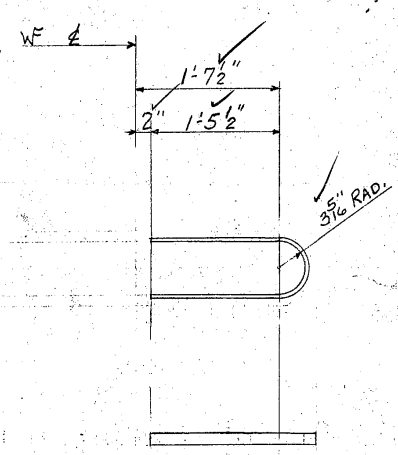


SECTION A-A

TYPICAL SCUPPER DETAIL AT CURB (4 REQ'D)

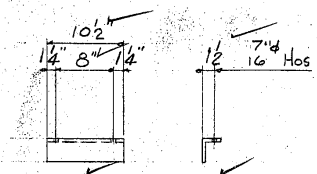


4 PIPES 1P1



BAR 1 1/2" x 3/16" x ABT 3'-5" (4)

4 HOOP BAR 1B1



L 3" x 2 1/2" x 3/8" x 0'-10 1/2" (8)

8 ANGLES 1A2

OFFICE

APPROVED
APR 27 1966
George C. Ashton Supt.
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

PLAIN MATERIAL

L 5" x 3 1/2" x 3/8" x 2'-2" (8) 1A1

FIELD BOLTS

MB 5/8" ϕ x 0'-2 1/4 (16) GALV.
STD NUT 5/8" (16) GALV.
ZINC PLATED BOLT 3/8" ϕ x 0'-2 1/4" (16)

REF ENG DWG SHT # 41

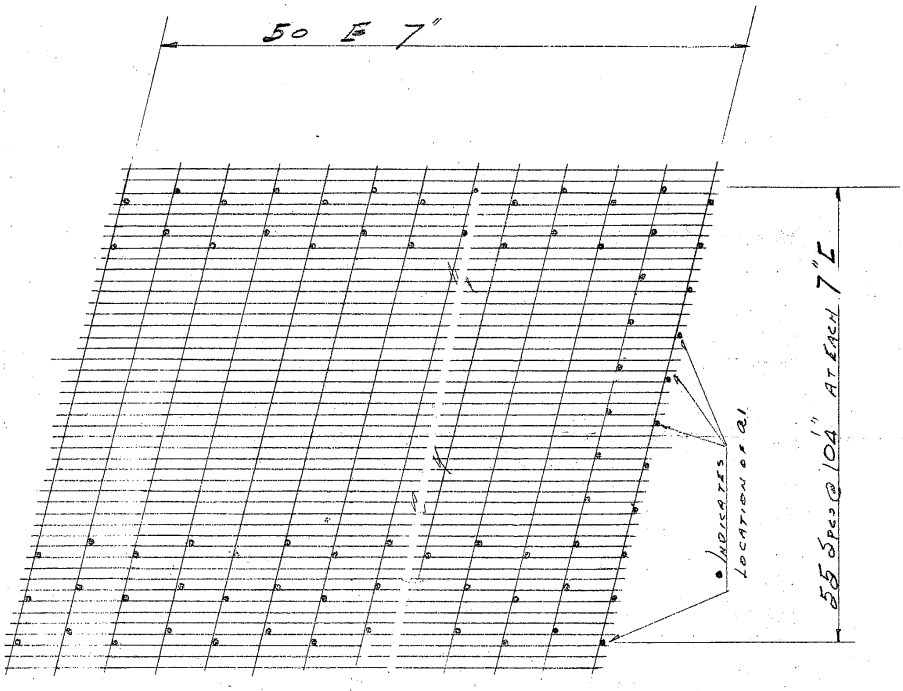
PRINT RECORD		
4/65	3	APP.

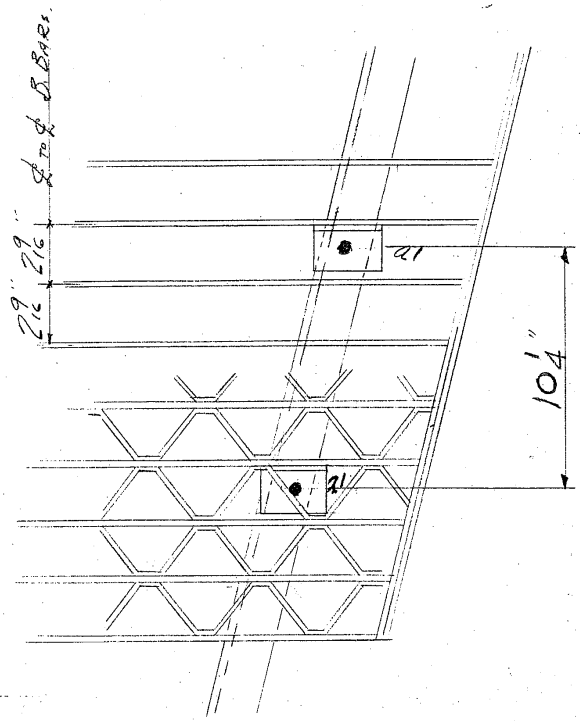
CONT # 4076 SHT # 1

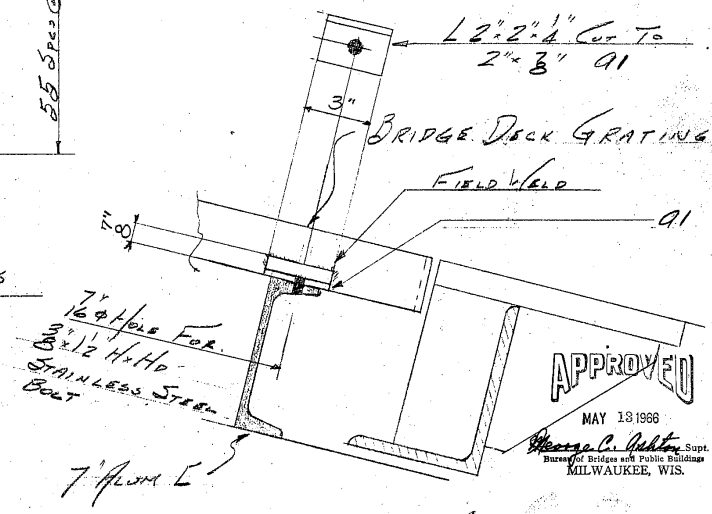
DEPARTMENT OF PUBLIC WORKS
BUREAU OF BRIDGES & PUBLIC BLDGS.
CITY OF MILWAUKEE
W. ST. PAUL AVE. - E. DETROIT ST.
VERTICAL LIFT BRIDGE

CONTRACTOR -
DETAIL OF SCUPPER AT CURB

RTC MILWAUKEE IRON WORKS
Telephone Area 414 — 481-3211
138 East Becher Street • Milwaukee, Wis. 53207







Location Diagram Hold Down Clips At Bridge Decking.

Paint 1 Ct Red Lead

Typical At All 7" Alum E

2800 Angles a1
2800 H×Hd Cap Scr ⅜"×1½" Stainless Steel
2800 H×Nuts ⅜" Stainless.
2800 Washers ⅜" Stainless.

Ref Eng Dwg Sh # 27

APPROVED
MAY 13 1966
George C. Ashton Supt.
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

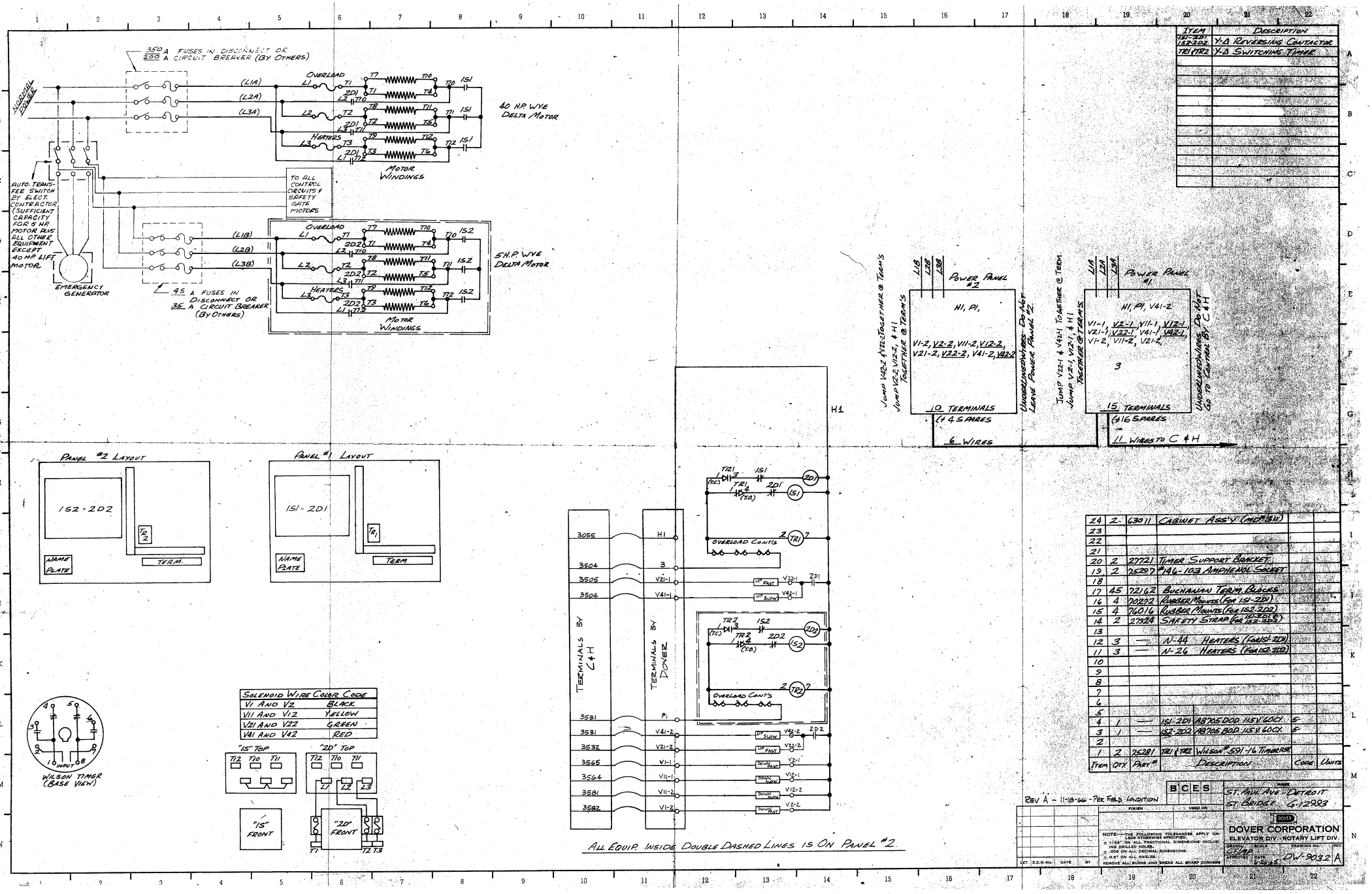
PRINT RECORD		
3/4	4	App.
9/2	4	App.
5/11	3	App.

Cont 4066 Sh # 1

City of Milwaukee.

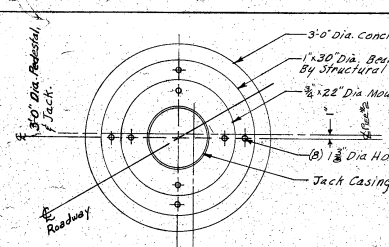
Department of Public Works
W. St Paul Ave E. Detroit St.
Vertical Lift Bridge.

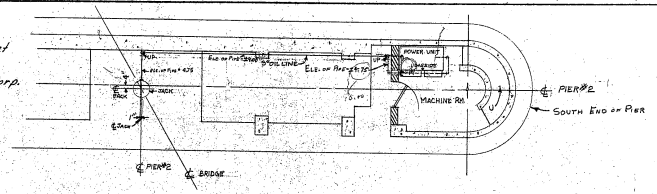
RTC MILWAUKEE IRON WORKS
Telephone Area 414 — 481-3211
138 East Becher Street • Milwaukee, Wis. 53207



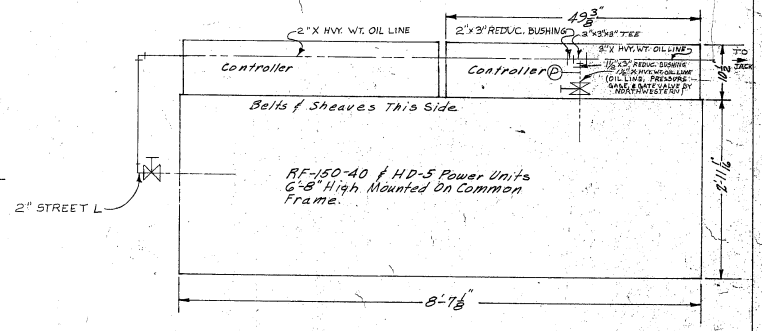
ITEM	DESCRIPTION
151-2D1 152-2D2	Y-Δ REVERSING CONTACTOR
TR1 & TR2	Y-Δ SWITCHING TIMER

ITEM	QTY	PART #	DESCRIPTION	CODE	UNITS
24	2	63011	CABINET ASS'Y (MCP-311)		
23					
22					
21					
20	2	27721	TIMER SUPPORT BRACKET		
19	2	25297	#46-103 AMPHENOL SOCKET		
18					
17	45	72162	BUCHANAN TERM. BLOCKS		
16	4	70272	RUBBER MOUNTS (FOR 151-2D1)		
15	4	76016	RUBBER MOUNTS (FOR 152-2D2)		
14	2	27924	SAFETY STRAP (FOR 151-2D1 152-2D2)		
13					
12	3	—	N-44 HEATERS (FOR 151-2D1)		
11	3	—	N-26 HEATERS (FOR 152-2D2)		
10					
9					
8					
7					
6					
5					
4	1	—	151-2D1 A8705DOD 115V 60CY.	5-	
3	1	—	152-2D2 A8706BOD 115V 60CY.	5-	
2					
1	2	76281	TR1 & TR2 WILSON #591-16 TIMER		

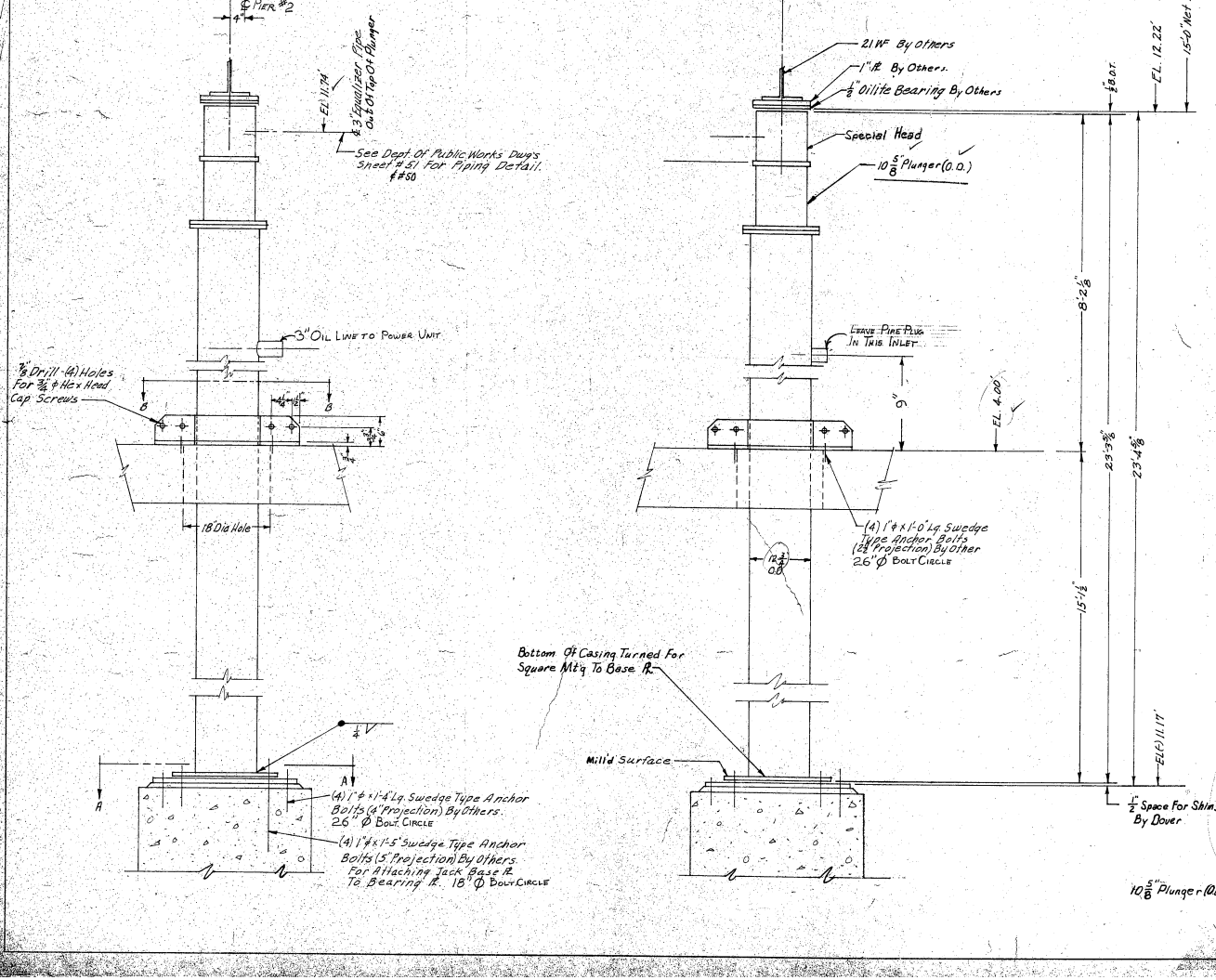


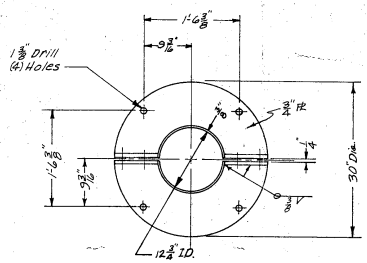


Section A-A

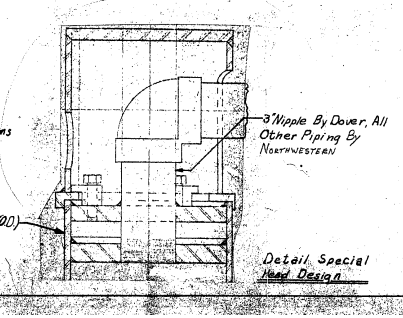


Speed	Power Unit	Horsepower	Voltage	Phase	Cycle	Min Wire Size	Circuit Breaker Amps	Fuses In Disconnect Sw. Amps	Fusetron In Disconnect Sw. Amps
15 f.p.m.	RF-150-40	40	240	3	60	00	200	350	125
2 f.p.m.	HD-5	5	240	3	60	12	35	45	20





Section B-B



Detail Special Head Design

Specifications For Bridge Lift

Bridge Section — By Others

Jacks — (2) Special Model 10-D Jacks For A Total Travel Of 15'-2". Jacks To Be Equipped With Wiper, Drip Ring, Chevron Packing, Extended Guide Bearings, Special Mounting Brackets, Special Head Design & Bottom Mounting Plates With Milled Surface To Be Field Welded To Casing.

Travel — 15'-0" Net Travel

Control — Single Automatic Pushbutton 2 Stops (On Both Pump & Motor Combinations) With Multi-Speed Two Way Leveling.

Power Unit — RF-150-40 & HD-5 Units With 40 & 5 H.P. Motors Respectively Mounted On Single Frame To Operate On 240 Volt 60 Cycle 3 Phase Power Supply & Equipped With Constant Speed Lowering Valves, Sound Panels, Wye Delta Reduced Voltage Starting, & Allen Bradley Starting Switches For Both Units.

OFFICE

RETURNED FOR CORRECTION

DEC 2 1965

George C. Ashbow
Director of Bridges and Public Buildings
MILWAUKEE, WIS.

DATE	SYM.	REVISION	BY
12-9-65	A	REVISED PIPING TO JACK	DER

Dist: Northwestern Elevator Co., Inc. Milwaukee, Wisconsin

Dept. Of Public Works
Bureau Of Bridges And Public Buildings
City Of Milwaukee

DOVER CORPORATION
ELEVATOR DIV. - ROTARY LIFT DIV.
MEMPHIS, TENN. MADISON, IND.

OWNER St. Paul Ave. - Detroit St. Bridge
ADDRESS Milwaukee, Wisconsin

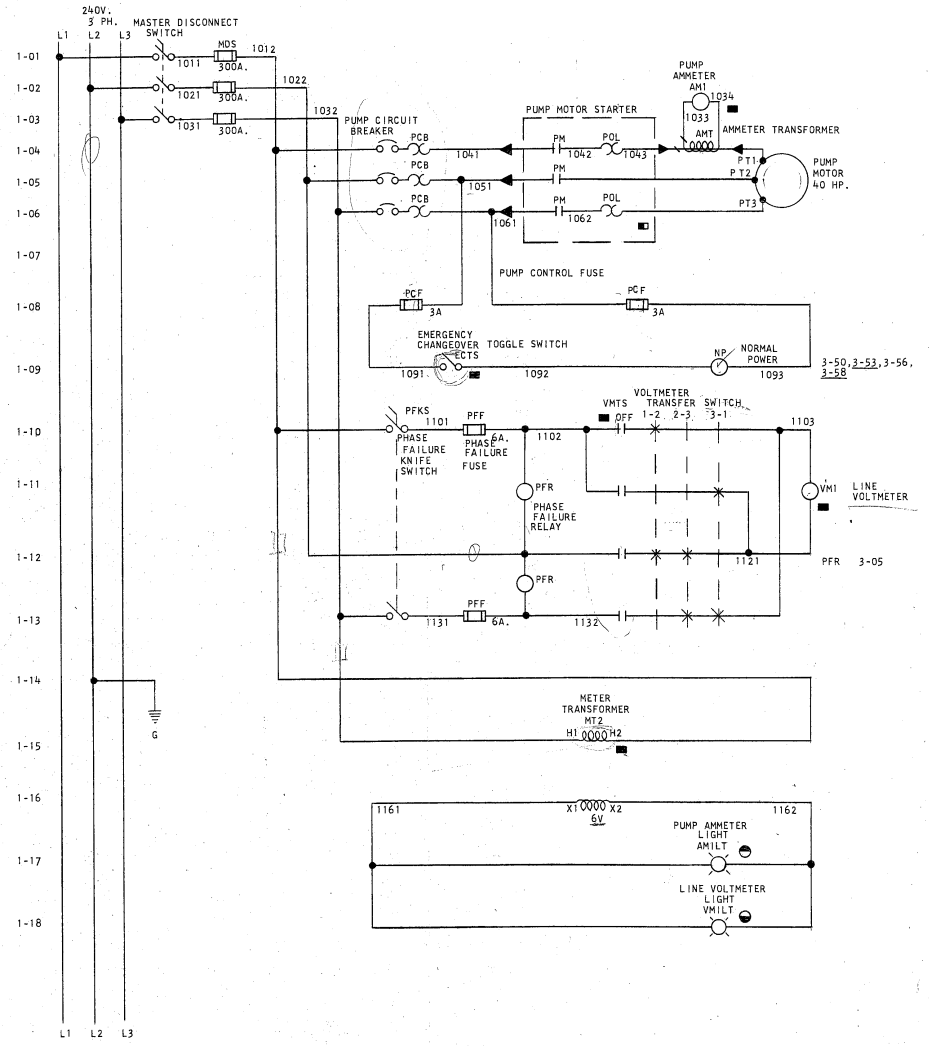
THIS DRAWING, IN DESIGN AND DETAIL, IS THE PROPERTY OF THE ROTARY LIFT COMPANY AND IS LOANED, SUBJECT TO RETURN UPON DEMAND, AND UNDER THE EXPRESS CONDITION THAT IT MUST NOT BE COPIED OR USED, EXCEPT BY PERMISSION.

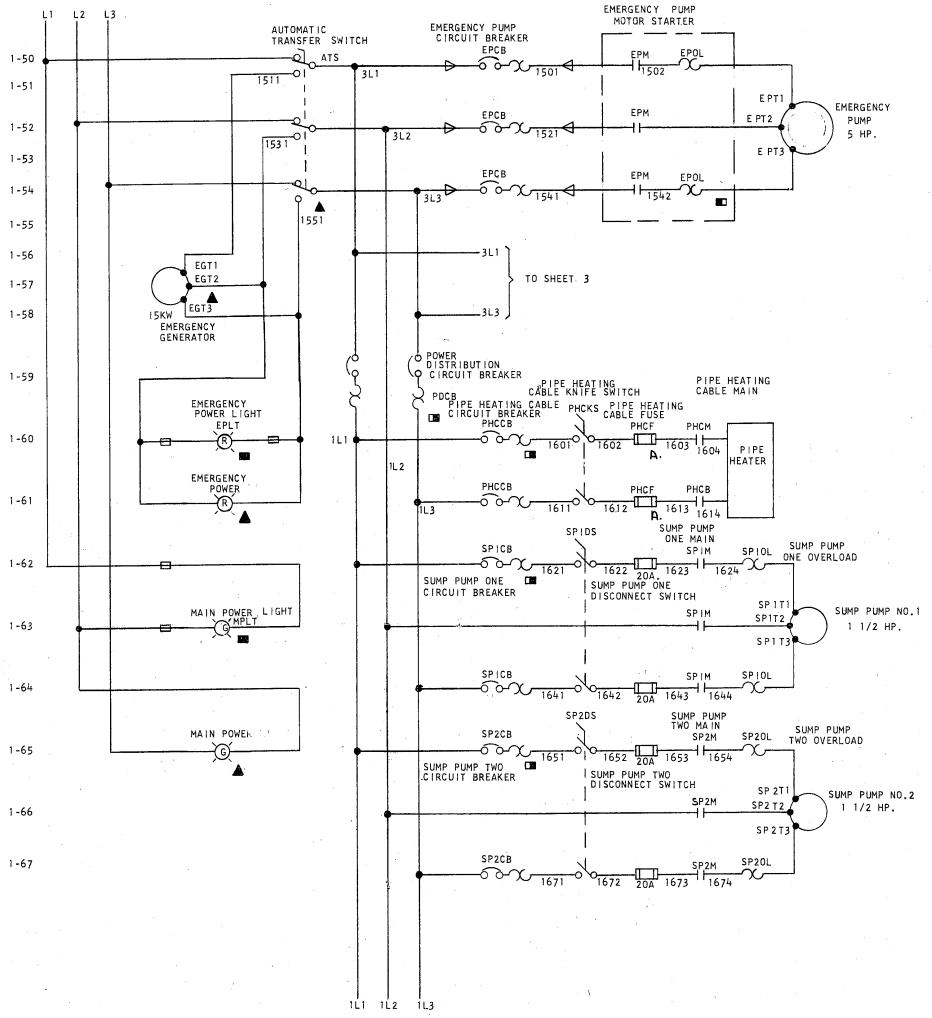
DRAWN BY
CHECKED
SCALE
DATE 11-2-65

Dover Job #G-12993

DWG. NO. DG-12993

REVISION A





DEVICES ARE SHOWN WITH BRIDGE IN FULLY SEATED POSITION AND OPEN TO TRAFFIC

- ▲ — EMERGENCY POWER SYSTEM (BY OTHERS)
- — POWER DIST. PANEL "A"
- — 70 AMP TERMINAL-DESK
- — OPERATORS DESK
- — 125 AMP. TERMINAL-PANEL
- — AMMETER LIGHT
- — HOIST CONTROL PANEL (BY OTHERS)
- — 70 AMP. TERMINAL-PANEL
- — VOLTMETER LIGHT

CONNECTION DIAGRAM 214876D4-6,7
INTERCONNECTION DIAGRAM 214876D4-8
DESCRIPTION OF OPERATION A072-2342

OFFICE

ELEMENTARY DIAGRAM FOR WEST ST. PAUL AVENUE — EAST DETROIT STREET BRIDGE

	APPROVAL	WIRING CHANGED INTERNAL	EXTERNAL			
A				DRAWN P.A. NORTROM	12-27-65	ENGR.
B				CHECKED		SUPR. APP.
C				SUP. NO.		
D				SUP. BY NO.		
E				PANEL NO.		
F				BUL. NO.		
G				GROUP NO. 5810		
				ORDER NO. 21F305752A		

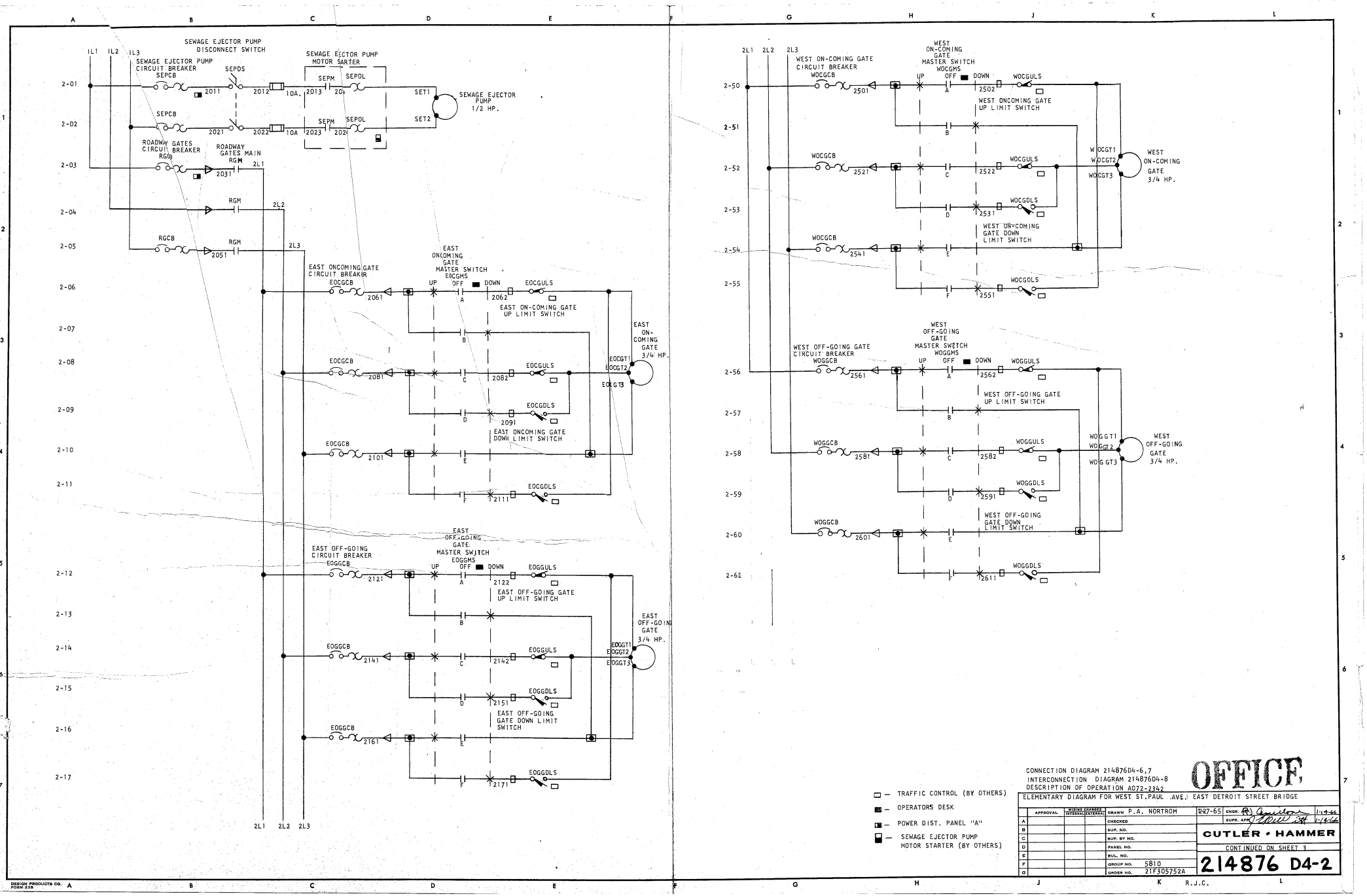
CUTLER • HAMMER

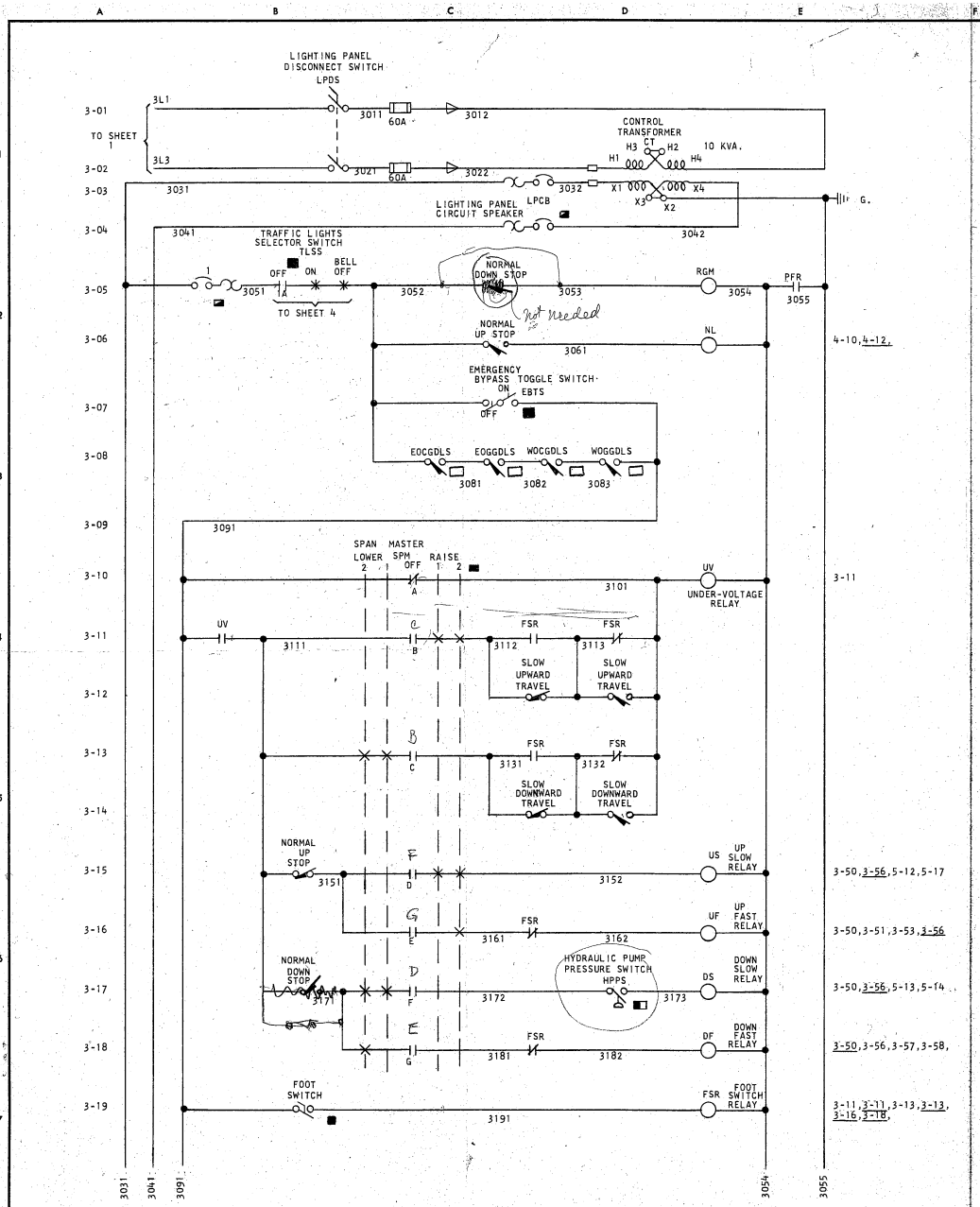
CONTINUED ON SHEET 2

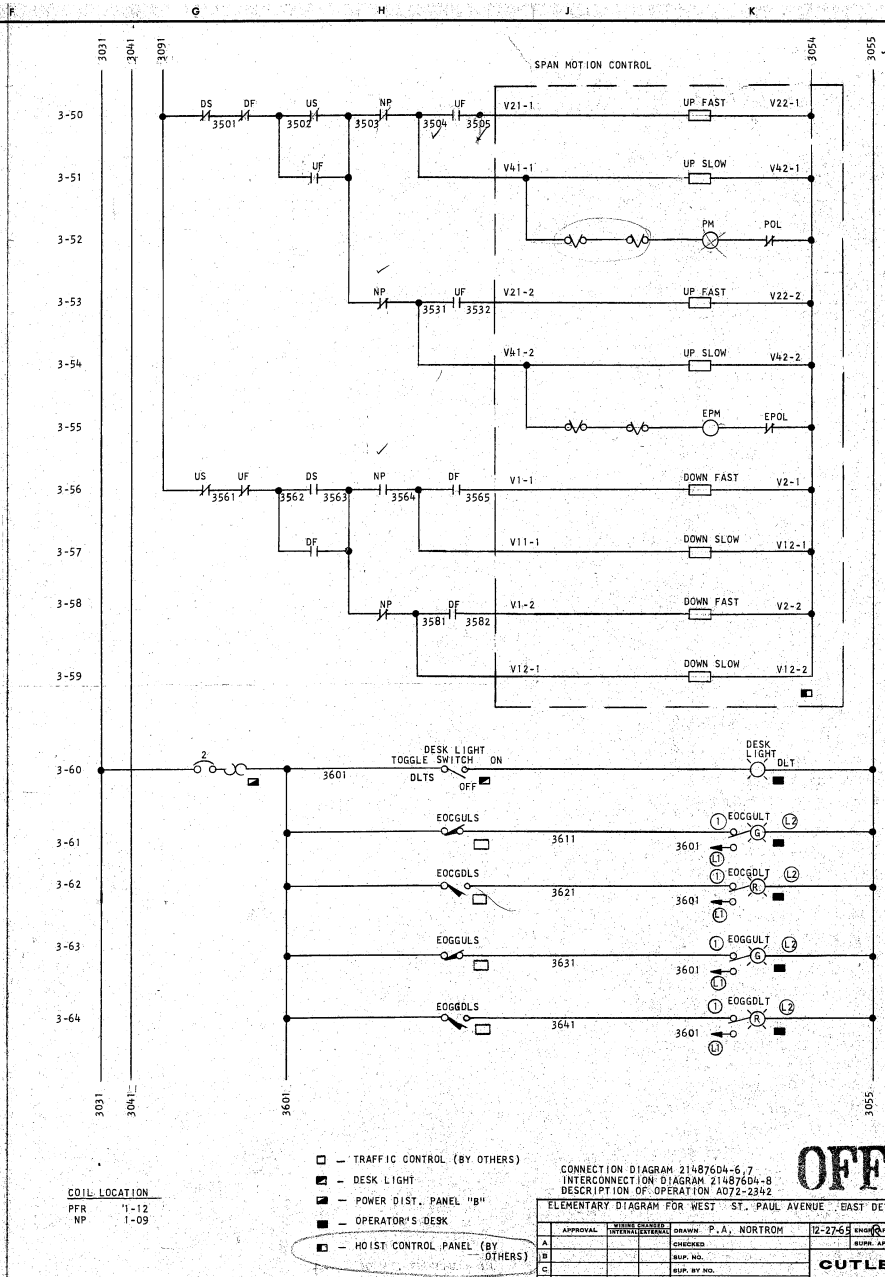
214876 D4-1

R.J.C.

DESIGN PRODUCTS CO. FORM 239


SEWAGE EJECTOR PUMP DISCONNECT SWITCH
SEWAGE EJECTOR PUMP CIRCUIT BREAKER
SEPCB
SEPDS
SEWAGE EJECTOR PUMP MOTOR SARTER
SEPM
SEPOL
SET1
SET2
SEWAGE EJECTOR PUMP 1/2 HP.
ROADWAY GATES CIRCUIT BREAKER
RGCB
ROADWAY GATES MAIN
RGM
EAST ONCOMING GATE CIRCUIT BREAKIR
EOCGCB
EAST ONCOMING GATE MASTER SWITCH
EOCGMS
UP
OFF
DOWN
EOCGULS
EAST ON-COMING GATE UP LIMIT SWITCH
EOCGDLS
EAST ONCOMING GATE DOWN LIMIT SWITCH
EOCGT1
EOCGT2
EOCGT3
EAST ON-COMING GATE 3/4 HP.
EAST OFF-GOING CIRCUIT BREAKER
EOGGCB
EAST OFF-GOING GATE MASTER SWITCH
EOGGMS
EOGGULS
EAST OFF-GOING GATE UP LIMIT SWITCH
EOGGDLS
EAST OFF-GOING GATE DOWN LIMIT SWITCH
EOGGT1
EOGGT2
EOGGT3
EAST OFF-GOING GATE 3/4 HP.
WEST ON-COMING GATE CIRCUIT BREAKER
WOCGCB
WEST ON-COMING GATE MASTER SWITCH
WOCGMS
WOCGULS
WEST ONCOMING GATE UP LIMIT SWITCH
WOCGDLS
WEST ON-COMING GATE DOWN LIMIT SWITCH
WOCGT1
WOCGT2
WOCGT3
WEST ON-COMING GATE 3/4 HP.
WEST OFF-GOING GATE CIRCUIT BREAKER
WOGGCB
WEST OFF-GOING GATE MASTER SWITCH
WOGGMS
WOGGULS
WEST OFF-GOING GATE UP LIMIT SWITCH
WOGGDLS
WEST OFF-GOING GATE DOWN LIMIT SWITCH
WOGGT1
WOGGT2
WOGGT3
WEST OFF-GOING GATE 3/4 HP.
TRAFFIC CONTROL (BY OTHERS)
OPERATORS DESK
POWER DIST. PANEL "A"
SEWAGE EJECTOR PUMP MOTOR STARTER (BY OTHERS)
CONNECTION DIAGRAM 2148760D4-6,7
INTERCONNECTION DIAGRAM 2148760D4-8
DESCRIPTION OF OPERATION A072-2342
OFFICE
ELEMENTARY DIAGRAM FOR WEST ST.PAUL AVE. EAST DETROIT STREET BRIDGE
APPROVAL
WIRING CHANGED INTERNAL EXTERNAL
DRAWN P.A. NORTROM
CHECKED
SUP. NO.
SUP. BY NO.
PANEL NO.
BUL. NO.
GROUP NO. 5810
ORDER NO. 21F305752A
D27-65
ENGR.
SUPR. APP.
CUTLER • HAMMER
CONTINUED ON SHEET 3
214876 D4-2
R.J.C.
DESIGN PRODUCTS CO. FORM 338





COIL LOCATION

PFR	1-12
NP	1-09

- □ — TRAFFIC CONTROL (BY OTHERS)
- ◪ — DESK LIGHT
- ◪ — POWER DIST. PANEL "B"
- ■ — OPERATOR'S DESK
- ◧ — HOIST CONTROL PANEL (BY OTHERS)

CONNECTION DIAGRAM 214876D4-6,7
INTERCONNECTION DIAGRAM 214876D4-8
DESCRIPTION OF OPERATION A072-2342

OFFICE

ELEMENTARY DIAGRAM FOR WEST ST. PAUL AVENUE EAST DETROIT STREET BRIDGE

	APPROVAL	WIRING CHANGED INTERNAL	WIRING CHANGED EXTERNAL			
A				DRAWN P.A. NORTROM	12-27-65	ENGR. APP.
B				CHECKED		SUPR. APP.
C				SUP. NO.		
D				SUP. BY NO.		
E				PANEL NO.		
F				BUL. NO.		
G				GROUP NO. 5810		
				ORDER NO. 21F305752A		

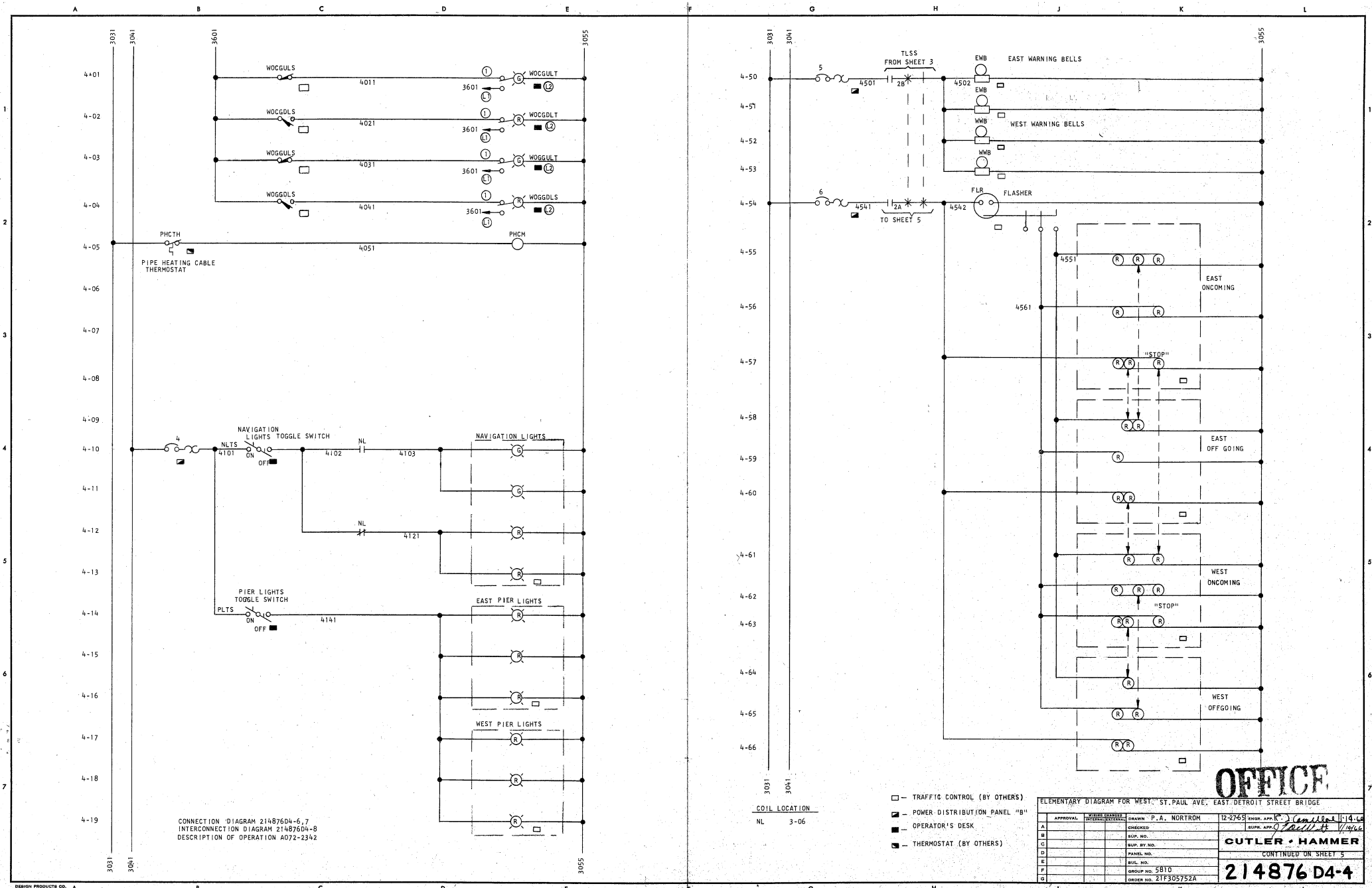
CUTLER - HAMMER

CONTINUED ON SHEET 4

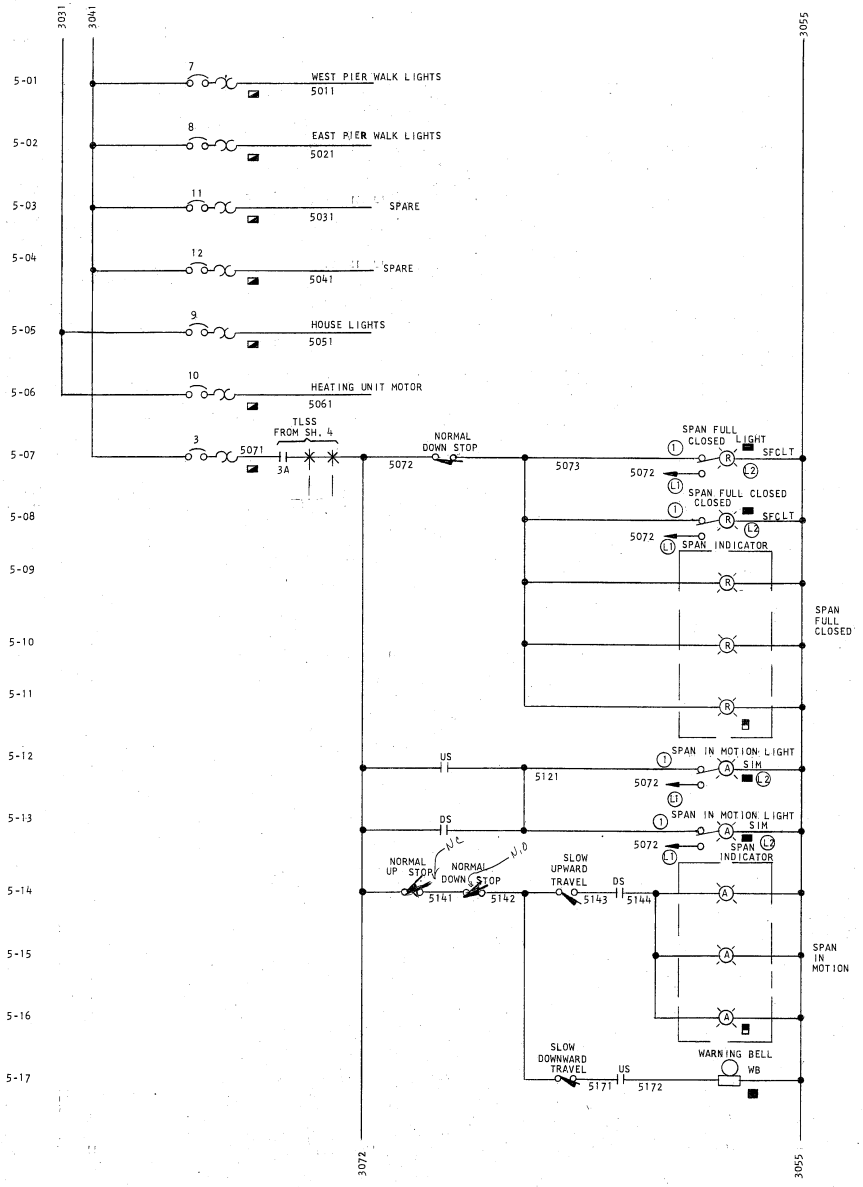
214876 D4-3

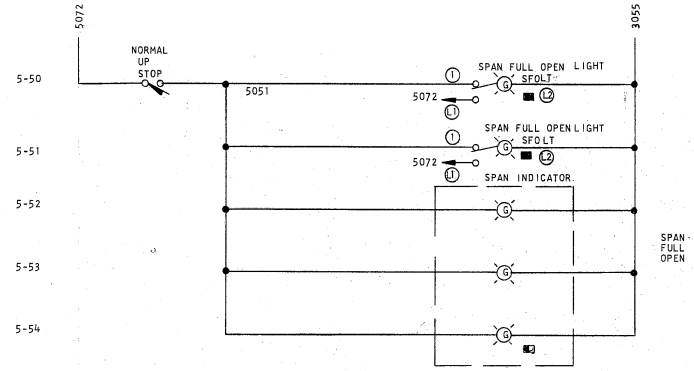
R.J.C.

DESIGN PRODUCTS CO. FORM 239


3031
3041
3601
3055
4-01
4-02
4-03
4-04
4-05
4-06
4-07
4-08
4-09
4-10
4-11
4-12
4-13
4-14
4-15
4-16
4-17
4-18
4-19
WOCGULS
WOCGULT
WOCGDLS
WOCGDLT
WOGGULS
WOGGULT
WOGGDLS
WOGGDLT
4011
4021
4031
4041
PHCTH
PHCM
4051
PIPE HEATING CABLE THERMOSTAT
NAVIGATION LIGHTS TOGGLE SWITCH
NLTS
4101
ON
OFF
4102
NL
4103
NAVIGATION LIGHTS
4121
PIER LIGHTS TOGGLE SWITCH
PLTS
4141
EAST PIER LIGHTS
WEST PIER LIGHTS
CONNECTION DIAGRAM 214876D4-6,7
INTERCONNECTION DIAGRAM 214876D4-8
DESCRIPTION OF OPERATION A072-2342
TLSS FROM SHEET 3
4501
2B
4502
EWB
EAST WARNING BELLS
WWB
WEST WARNING BELLS
4541
2A
TO SHEET 5
4542
FLR
FLASHER
4551
EAST ONCOMING
4561
"STOP"
EAST OFF GOING
WEST ONCOMING
WEST OFFGOING
COIL LOCATION
NL 3-06
TRAFFIC CONTROL (BY OTHERS)
POWER DISTRIBUTION PANEL "B"
OPERATOR'S DESK
THERMOSTAT (BY OTHERS)
ELEMENTARY DIAGRAM FOR WEST ST. PAUL AVE. EAST DETROIT STREET BRIDGE
APPROVAL
WIRING CHANGES INTERNAL EXTERNAL
DRAWN P.A. NORTROM
12-27-65
ENGR. APP.
SUPR. APP.
CHECKED
SUP. NO.
SUP. BY NO.
PANEL NO.
BUL. NO.
GROUP NO. 5810
ORDER NO. 21F305752A
CUTLER - HAMMER
CONTINUED ON SHEET 5
214876 D4-4
R.J.C.
DESIGN PRODUCTS CO. FORM 238

OFFICE





COIL LOCATION	
US	3-15
DS	3-17

■ — OPERATORS DESK
◪ — POWER DISTRIBUTION PANEL "B"
◧ — HOIST CONTROL PANEL (BY OTHERS)
▣ — SPAN INDICATOR

CONNECTION DIAGRAM 21487604-6,7
INTERCONNECTION DIAGRAM 21487604-8
DESCRIPTION OF OPERATION A072-2342

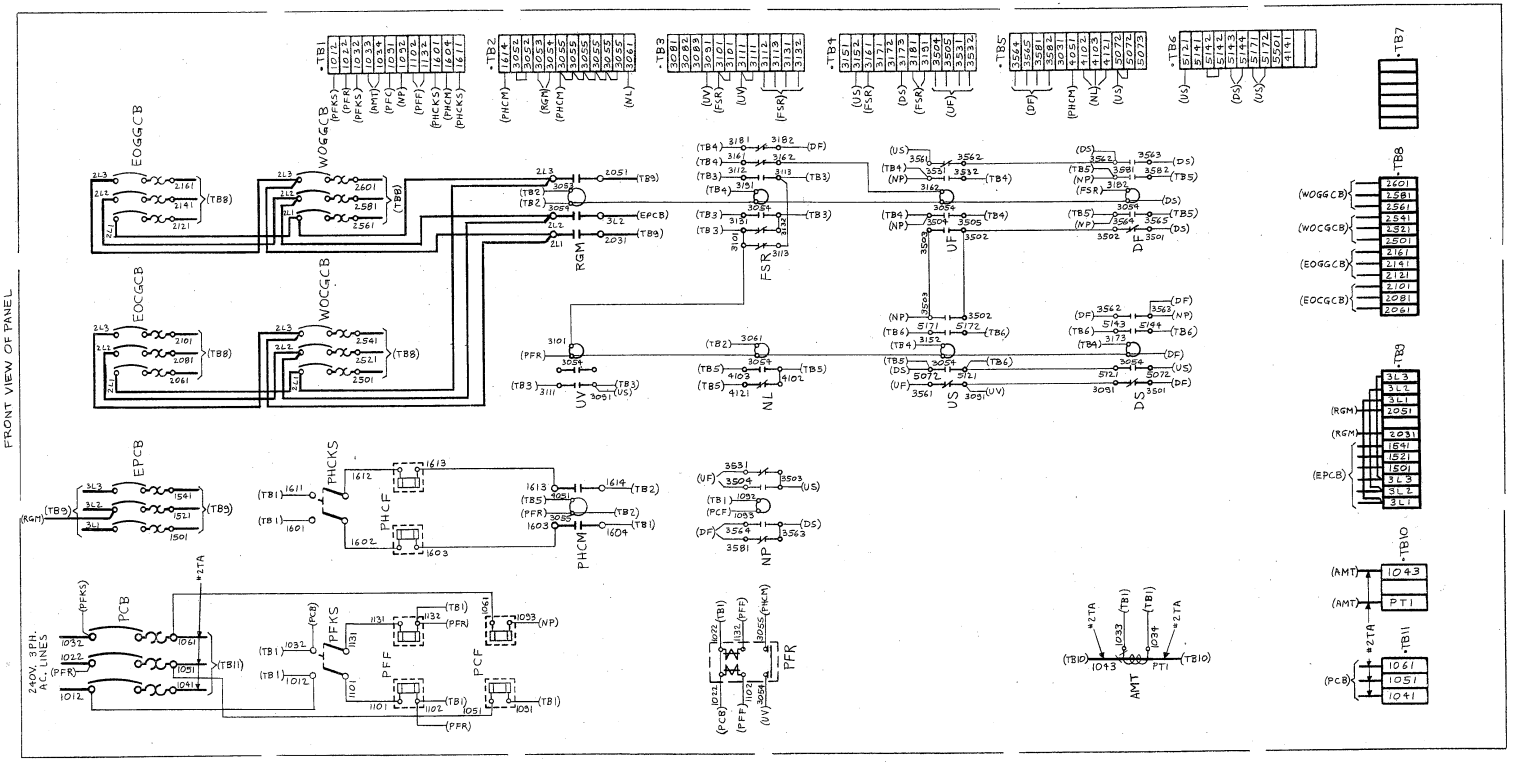
OFFICE

ELEMENTARY DIAGRAM FOR WEST ST. PAUL AVENUE EAST DETROIT STREET BRIDGE

	APPROVAL	WIRING CHANGES INTERNAL	WIRING CHANGES EXTERNAL				
A				DRAWN P.A. NORTROM	12-27-65	ENGR. APP. R. J. Camillone	1-14-66
B				CHECKED		SUPR. APP.	1/14/66
C				SUP. NO.		CUTLER • HAMMER	
D				SUP. BY NO.			
E				PANEL NO.		CONTINUED ON SHEET 6	
F				SUL. NO.			
G				GROUP NO. 5810		214876 D4-5	
				ORDER NO. 21F305752A			

R.J.C.

DESIGN PRODUCTS CO. FORM 239



COLOR CODE				PART NO.
MAIN WIRING	HEAVY LINES	MARKED	#2TA	1301-632
		UNMARKED	#10TA	1301-492
CONTROL WIRING	LIGHT LINES	UNMARKED	#12TA	1301-493

ELEMENTARY DIAGRAM 214876D4-1-5
INTERCONNECTION DIAG. 214876D4-8
DESCRIPTION OF OPERATION A072-2342

OFFICE

CONNECTIONS FOR WEST ST. PAUL AVE. EAST DETROIT STREET BRIDGE- CONTROL PANEL

	APPROVAL	WIRING CHANGES INTERNAL	WIRING CHANGES EXTERNAL				
A				DRAWN R. F. MEHRSTEDT	1-5-66	ENGR. APP. R. J. Camillone	1-19-66
B				CHECKED M. F. MATAIC	1-5-66	SUPR. APP.	1/19/66
C				SUP. NO.		CUTLER • HAMMER	
D				SUP. BY NO.			
E				PANEL NO.			
F				BUL. NO.			
G				GROUP NO. 5810			
				ORDER NO. 21F305752A			

CONTINUED ON SHEET 7

214876D4-6

R.J.C.

DESIGN PRODUCTS CO. FORM 258

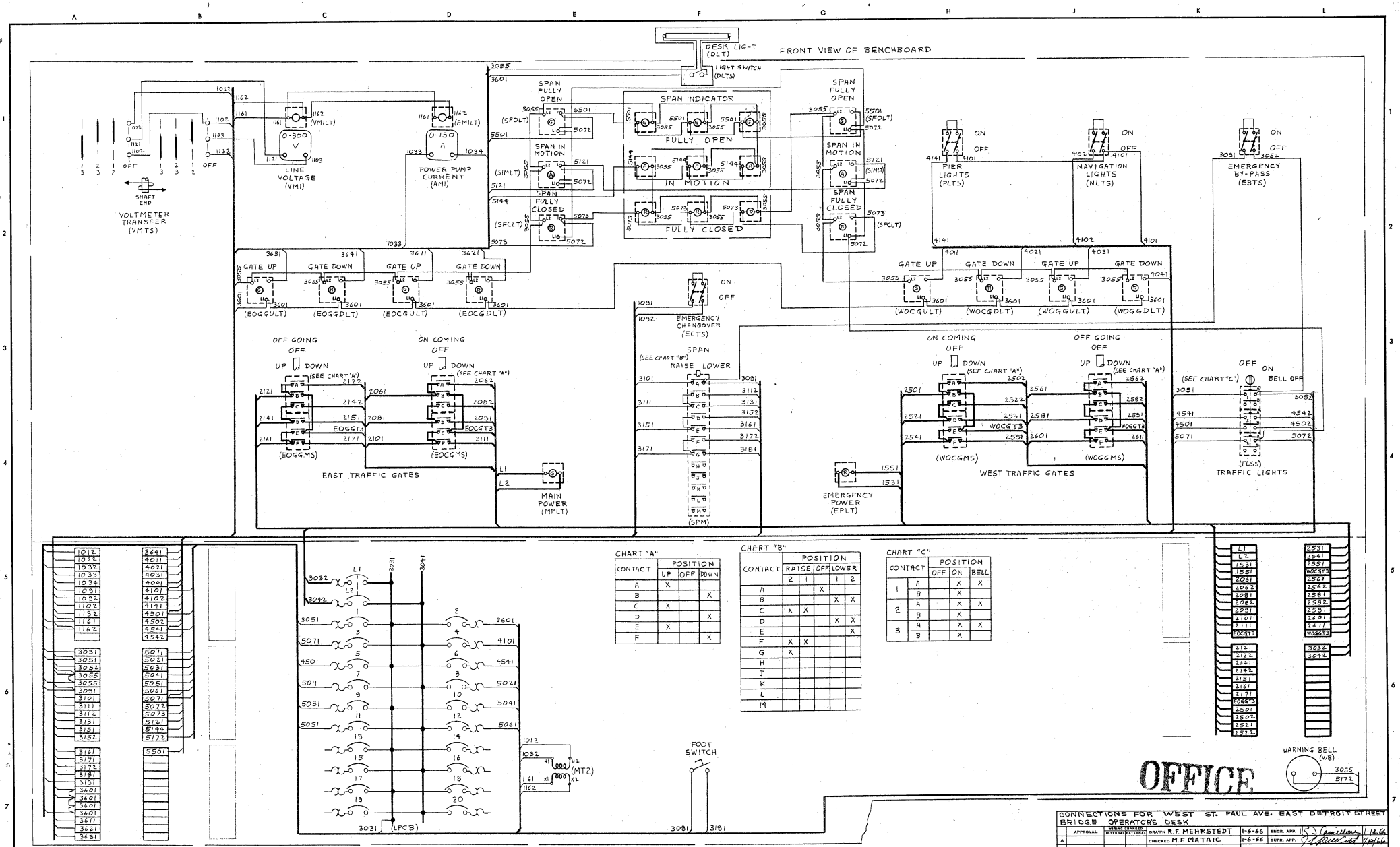


CHART "A"

CONTACT	POSITION UP	OFF	DOWN
A	X		
B			X
C	X		
D			X
E	X		
F			X

CHART "B"

CONTACT	RAISE 2	RAISE 1	OFF	LOWER 1	LOWER 2
A			X		
B				X	X
C	X	X			
D				X	X
E					X
F	X	X			
G	X				
H					
J					
K					
L					
M					

CHART "C"

CONTACT		POSITION OFF	ON	BELL
1	A		X	X
	B		X	
2	A		X	X
	B		X	
3	A		X	X
	B		X	

COLOR CODE NOTE ON 214876D4-6
ELEMENTARY DIAGRAM 214876D4-1-5
INTERCONNECTION DIAG. 214876D4-8
DESCRIPTION OF OPERATION A072-2342

CONNECTIONS FOR WEST ST. PAUL AVE. EAST DETROIT STREET BRIDGE OPERATOR'S DESK

	APPROVAL	WIRING CHANGED INTERNAL	EXTERNAL				
A				DRAWN R.F. MEHRSTEDT	1-6-66	ENGR. APP.	1-14-66
B				CHECKED M.F. MATAIC	1-6-66	SUPR. APP.	1/18/66
C				SUP. NO.			
D				SUP. BY NO.			
E				PANEL NO.			
F				BUL. NO.			
G				GROUP NO. 5810			
				ORDER NO. 21F305752A			

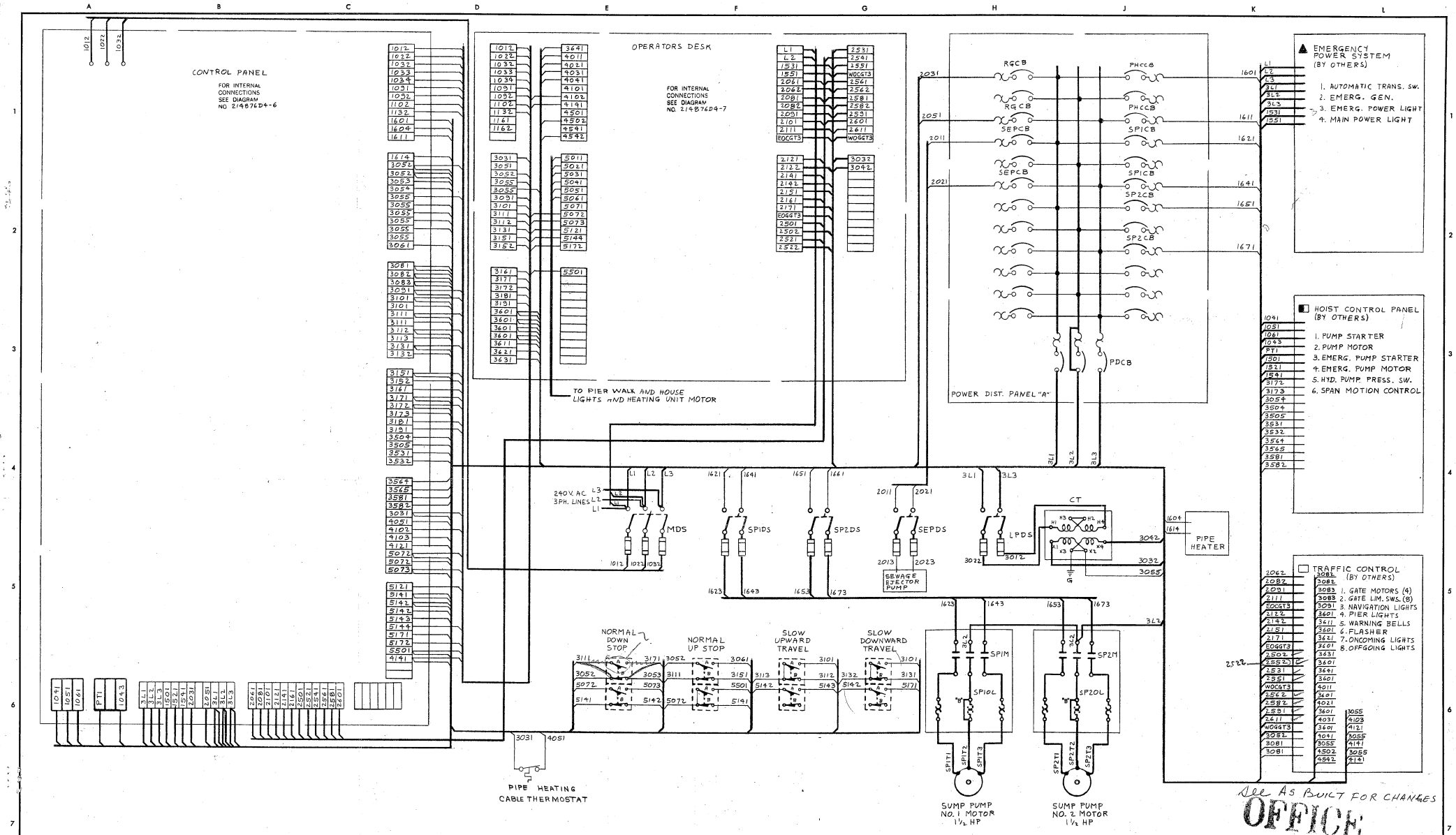
CUTLER • HAMMER

CONTINUED ON SHEET 8

214876 D4-7

R.J.C.

DESIGN PRODUCTS CO. FORM 239



See As Built For Changes

OFFICE

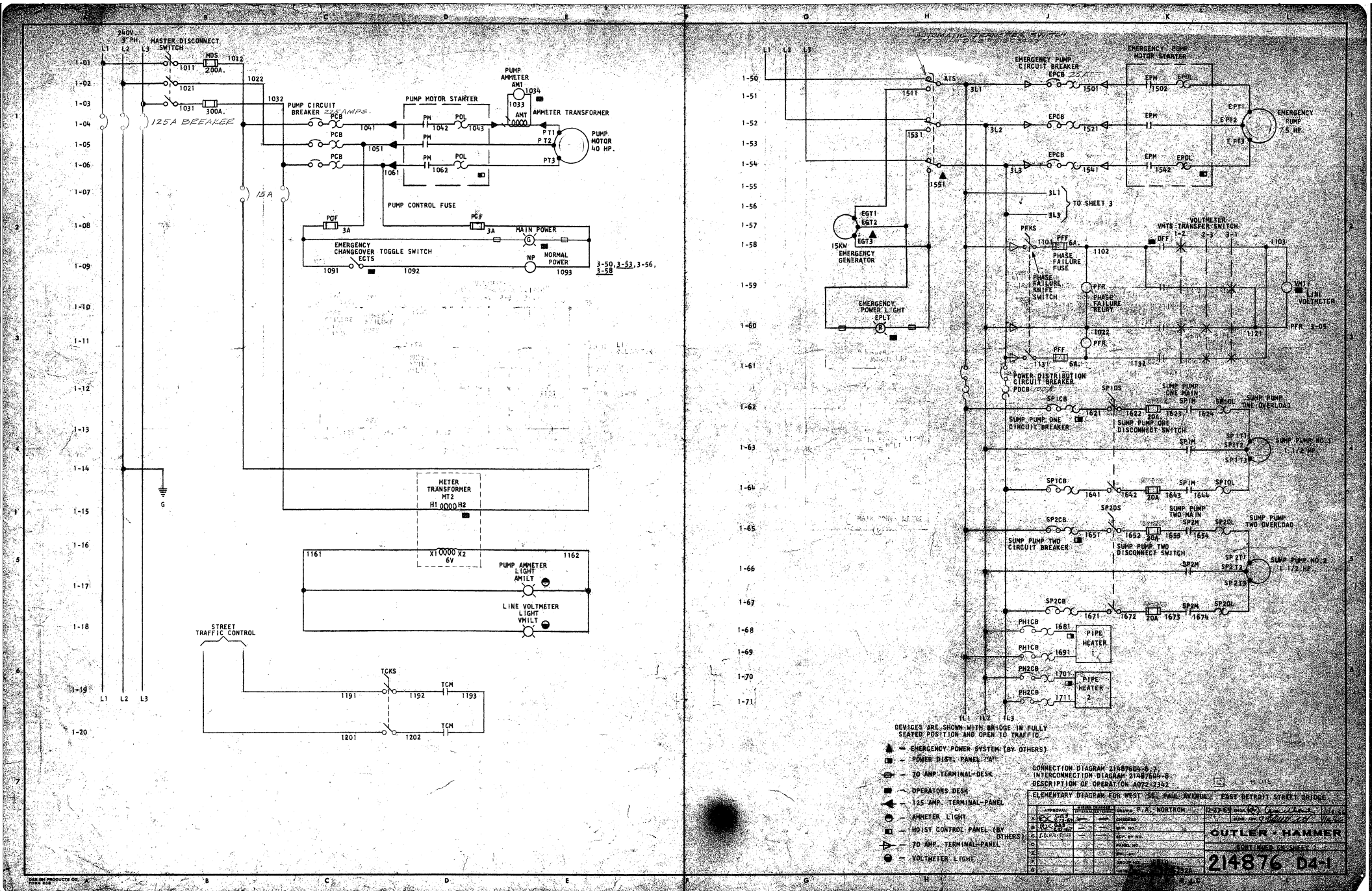
CONNECTIONS FOR WEST ST. PAUL AVE. EAST DETROIT STREET BRIDGE

	APPROVAL	WIRING CHANGED INTERNAL	WIRING CHANGED EXTERNAL				
A				DRAWN R.F. MEHRSTEDT	1-8-66	ENGR. APP. R.J. Camellone	1-14-66
B				CHECKED M.F. MATAIC	1-8-66	SUPR. APP. [signature]	1/14/66
C				SUP. NO.		CUTLER • HAMMER	
D				SUP. BY NO.			
E				PANEL NO.		SHEET 8 IS THE LAST SHEET	
F				BUL. NO.			
G				GROUP NO. 5810		214876D4-8	
				ORDER NO. 21F305752A			

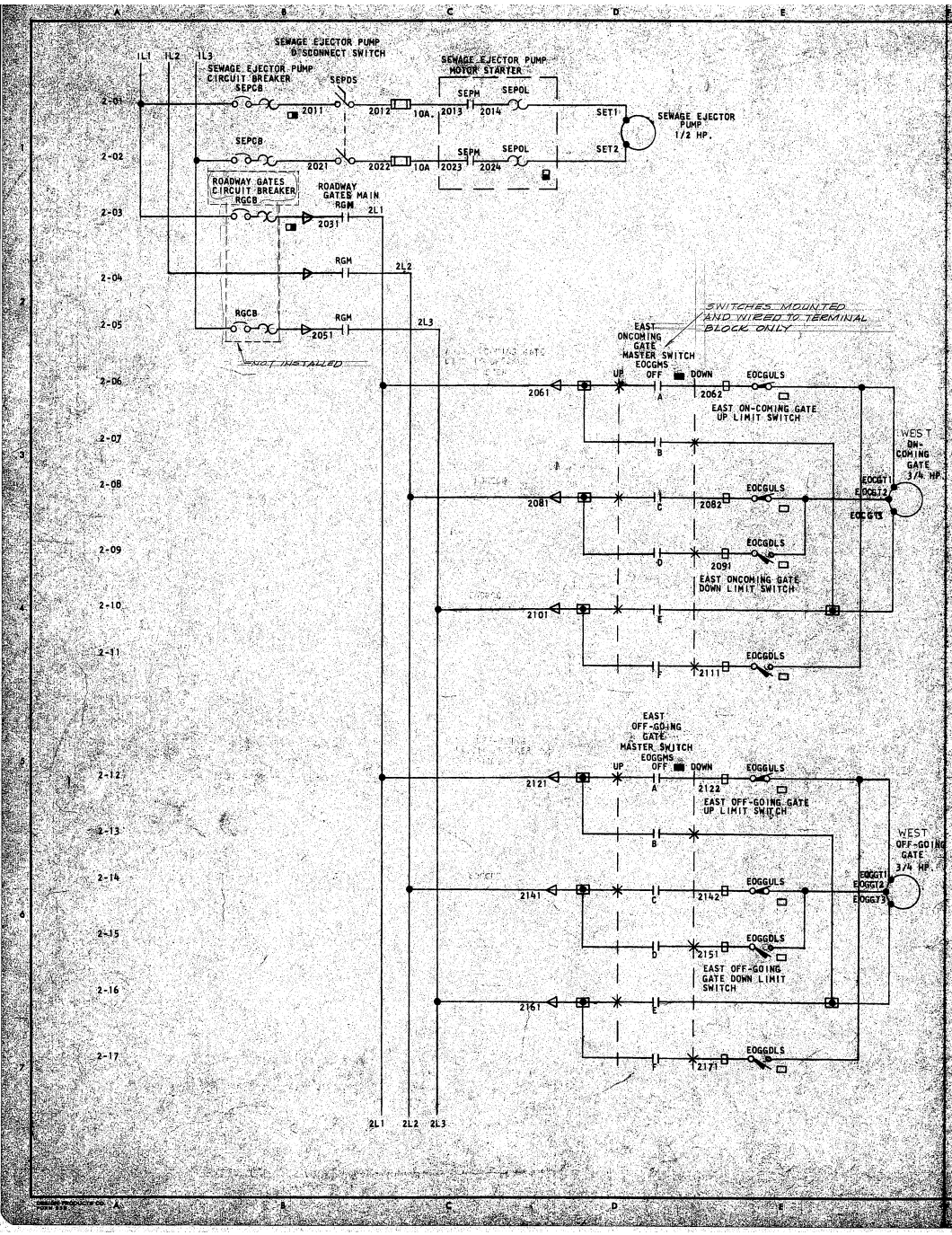
ELEMENTARY DIAGRAM 214876D4-1-5
CONNECTION DIAGRAM 214876D4-1-5
DESCRIPTION OF OPERATION A072-2342

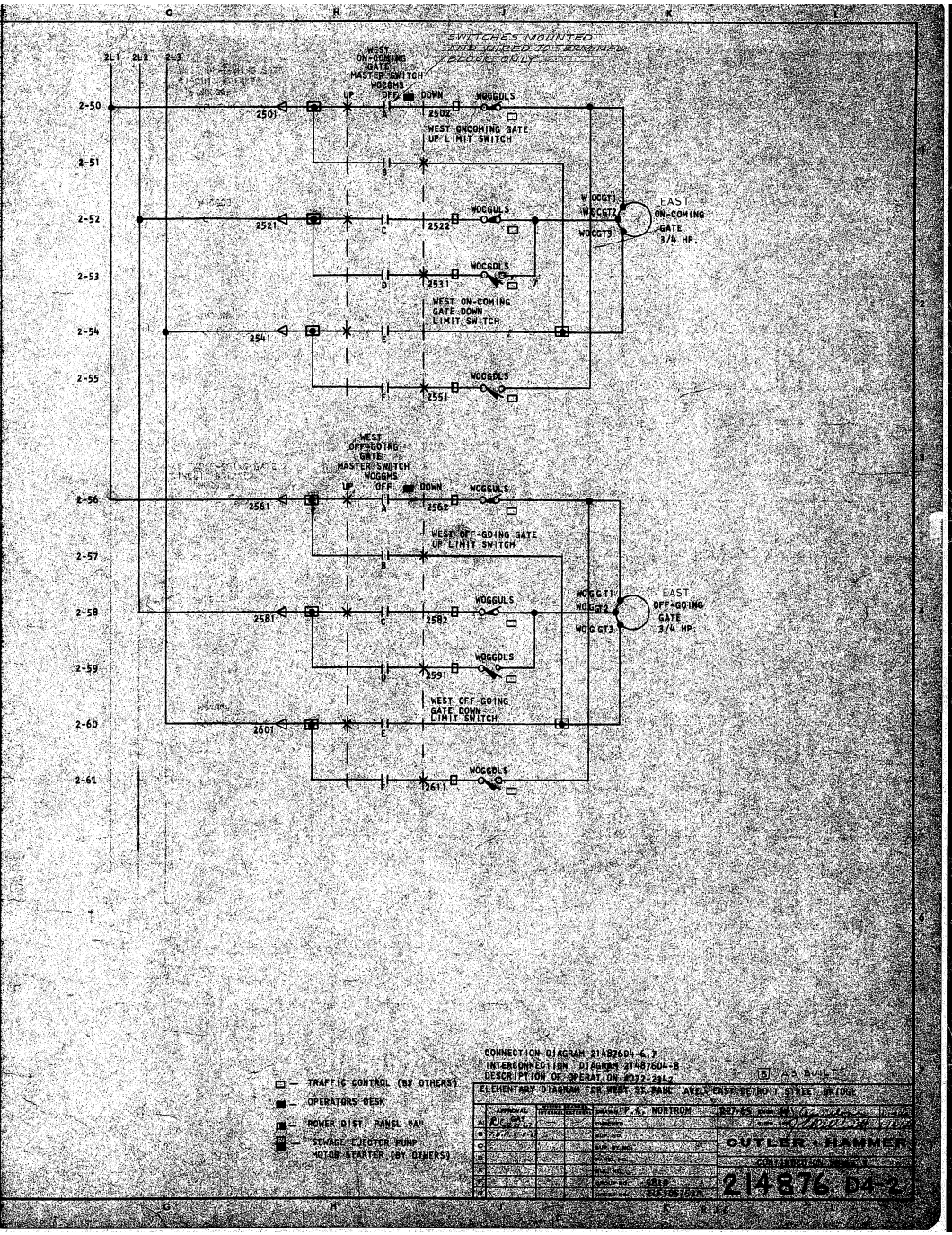
R.J.C.

DESIGN PRODUCTS CO. FORM 238



240V. 3 PH.
MASTER DISCONNECT SWITCH
MDS 200A.
300A.
125A BREAKER
PUMP CIRCUIT BREAKER 225 AMPS.
PUMP MOTOR STARTER
PUMP AMMETER AM1
AMMETER TRANSFORMER
PUMP MOTOR 40 HP.
PUMP CONTROL FUSE
MAIN POWER
EMERGENCY CHANGEOVER TOGGLE SWITCH
NORMAL POWER
3-50, 3-53, 3-56, 3-58
METER TRANSFORMER MT2
PUMP AMMETER LIGHT AMILT
LINE VOLTMETER LIGHT VMILT
STREET TRAFFIC CONTROL
TCKS
TCM
EMERGENCY PUMP CIRCUIT BREAKER
EMERGENCY PUMP MOTOR STARTER
EMERGENCY PUMP 7.5 HP.
TO SHEET 3
15KW EMERGENCY GENERATOR
EMERGENCY POWER LIGHT EPLT
PHASE FAILURE FUSE
PHASE FAILURE KNIFE SWITCH
PHASE FAILURE RELAY
VOLTMETER TRANSFER SWITCH
LINE VOLTMETER
POWER DISTRIBUTION CIRCUIT BREAKER
SUMP PUMP ONE CIRCUIT BREAKER
SUMP PUMP ONE DISCONNECT SWITCH
SUMP PUMP ONE MAIN
SUMP PUMP ONE OVERLOAD
SUMP PUMP NO. 1 1 1/2 HP.
SUMP PUMP TWO CIRCUIT BREAKER
SUMP PUMP TWO DISCONNECT SWITCH
SUMP PUMP TWO MAIN
SUMP PUMP TWO OVERLOAD
SUMP PUMP NO. 2 1 1/2 HP.
PIPE HEATER 1
PIPE HEATER 2
DEVICES ARE SHOWN WITH BRIDGE IN FULLY SEATED POSITION AND OPEN TO TRAFFIC.
EMERGENCY POWER SYSTEM (BY OTHERS)
POWER DIST. PANEL "A"
70 AMP TERMINAL-DESK
OPERATORS DESK
125 AMP. TERMINAL-PANEL
AMMETER LIGHT
HOIST CONTROL PANEL (BY OTHERS)
70 AMP. TERMINAL-PANEL
VOLTMETER LIGHT
CONNECTION DIAGRAM 21487604-6,7
INTERCONNECTION DIAGRAM 21487604-8
DESCRIPTION OF OPERATION A072-2342
ELEMENTARY DIAGRAM FOR WEST ST. PAUL AVENUE - EAST DETROIT STREET BRIDGE
DRAWN P.A. NORTROM
CUTLER - HAMMER
CONTINUED ON SHEET 2
214876 D4-1





TRAFFIC CONTROL (BY OTHERS)

OPERATORS DESK

POWER DIST. PANEL "A"

SEWAGE EJECTOR PUMP MOTOR STARTER (BY OTHERS)

CONNECTION DIAGRAM 214876D4-6, 7
INTERCONNECTION DIAGRAM 214876D4-8
DESCRIPTION OF OPERATION 2072-2842

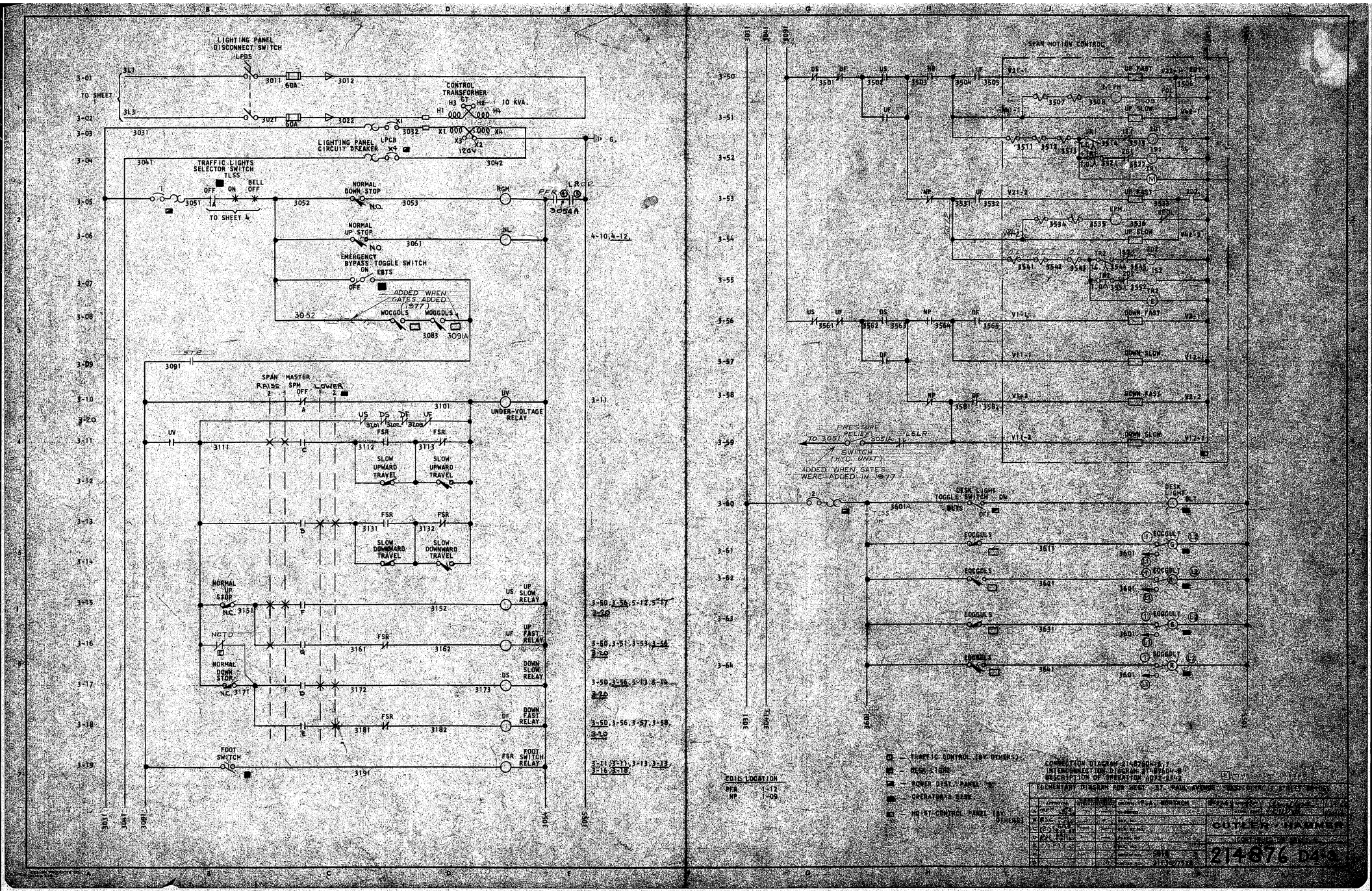
AS BUILT

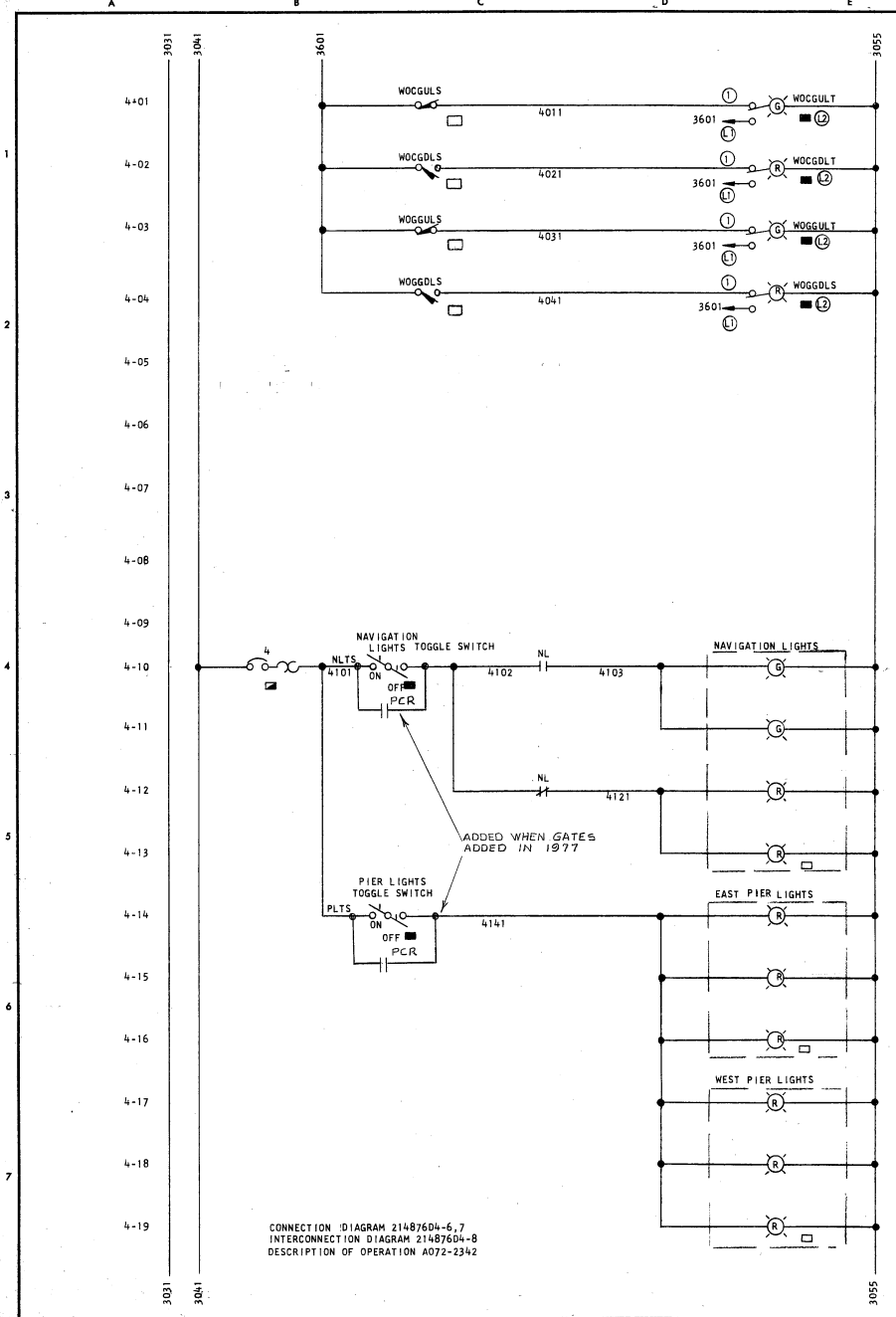
ELEMENTARY DIAGRAM FOR WEST ST. MARC AVE. EAST DETROIT STREET BRIDGE

	APPROVAL	DATE	REVISION	DRAWN P. A. NORTROM	DATE 6-5-65
A				CHECKED	
B					
C					
D					
E					
F					
G					

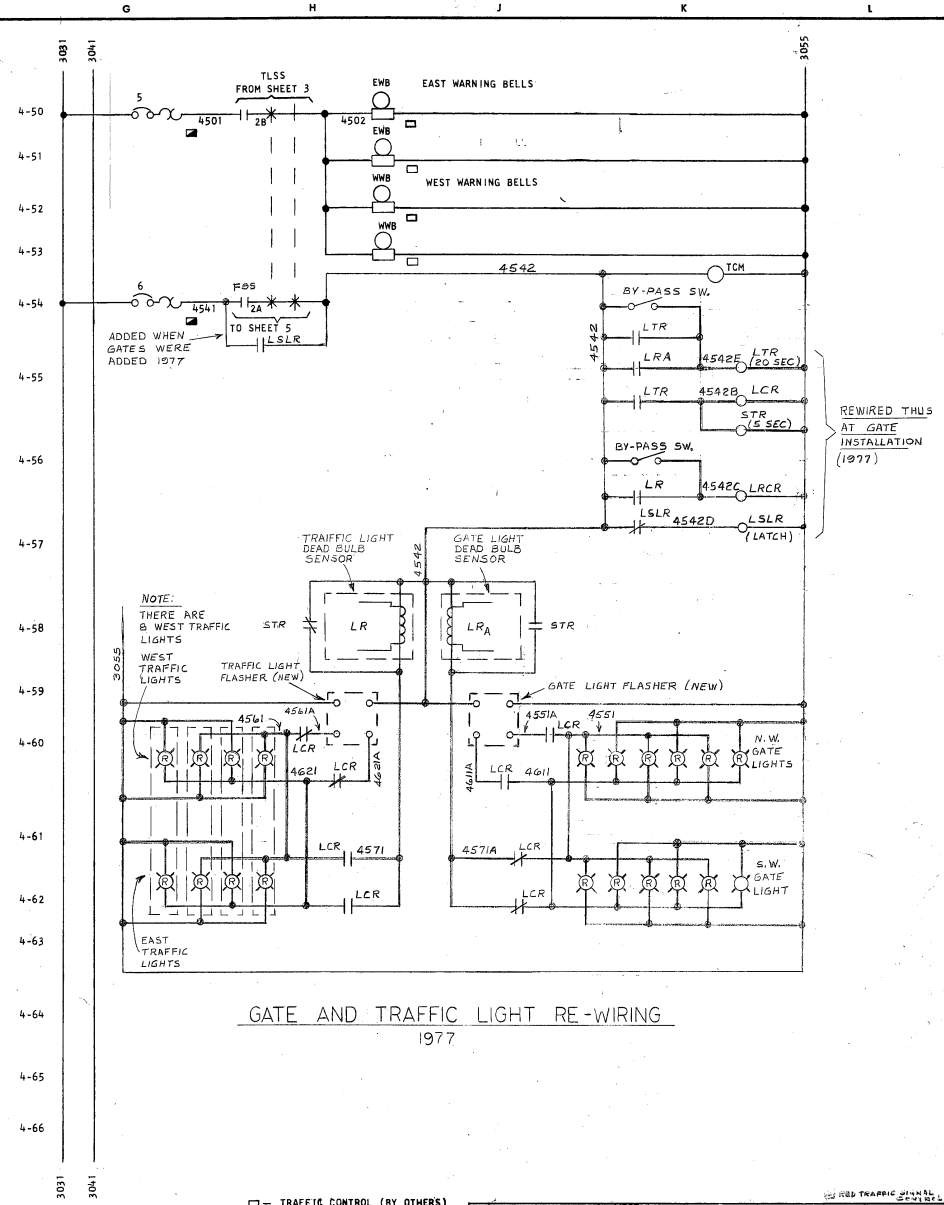
CUTLER-HAMMER

214876 D4-2


LIGHTING PANEL DISCONNECT SWITCH
LPDS
TO SHEET 1
CONTROL TRANSFORMER
10 KVA.
LIGHTING PANEL CIRCUIT BREAKER
LPCB
TRAFFIC LIGHTS SELECTOR SWITCH
TLSS
TO SHEET 4
NORMAL DOWN STOP
NORMAL UP STOP
EMERGENCY BYPASS TOGGLE SWITCH
EBTS
ADDED WHEN GATES ADDED (1977)
WOGGDLS
SPAN MASTER
RAISE
LOWER
UNDER-VOLTAGE RELAY
SLOW UPWARD TRAVEL
SLOW DOWNWARD TRAVEL
NORMAL UP STOP
UP SLOW RELAY
UP FAST RELAY
NORMAL DOWN STOP
DOWN SLOW RELAY
DOWN FAST RELAY
FOOT SWITCH
FOOT SWITCH RELAY
SPAN MOTION CONTROL
PRESSURE RELIEF SWITCH (HYD. UNIT)
ADDED WHEN GATES WERE ADDED IN 1977
DESK LIGHT TOGGLE SWITCH
EOCGDLS
EOCGDLT
TRAFFIC CONTROL (BY OTHERS)
DESK LIGHT
POWER DIST. PANEL "B"
OPERATOR'S DESK
HOIST CONTROL PANEL (BY OTHERS)
COIL LOCATION
PFR 1-12
NP 1-09
CUTLER - HAMMER
214876 D4-3



CONNECTION DIAGRAM 214876D4-6,7
INTERCONNECTION DIAGRAM 214876D4-8
DESCRIPTION OF OPERATION A072-2342



GATE AND TRAFFIC LIGHT RE-WIRING
1977

COIL LOCATION

NL	3-06

- TRAFFIC CONTROL (BY OTHERS)
- POWER DISTRIBUTION PANEL "B"
- OPERATOR'S DESK
- THERMOSTAT (BY OTHERS)

ELEMENTARY DIAGRAM FOR WEST ST. PAUL AVE. EAST DETROIT STREET BRIDGE

	APPROVAL	WIRING CHANGES INTERNAL	WIRING CHANGES EXTERNAL			
A				DRAWN P.A. NORTROM	12-27-65	ENGR. APP.
B	3-8-68			CHECKED		SUPR. APP.
C				SUP. NO.		
D				SUP. BY NO.		
E				PANEL NO.		
F				BUL. NO.		
G				GROUP NO. 5810		
				ORDER NO. 21F305752A		

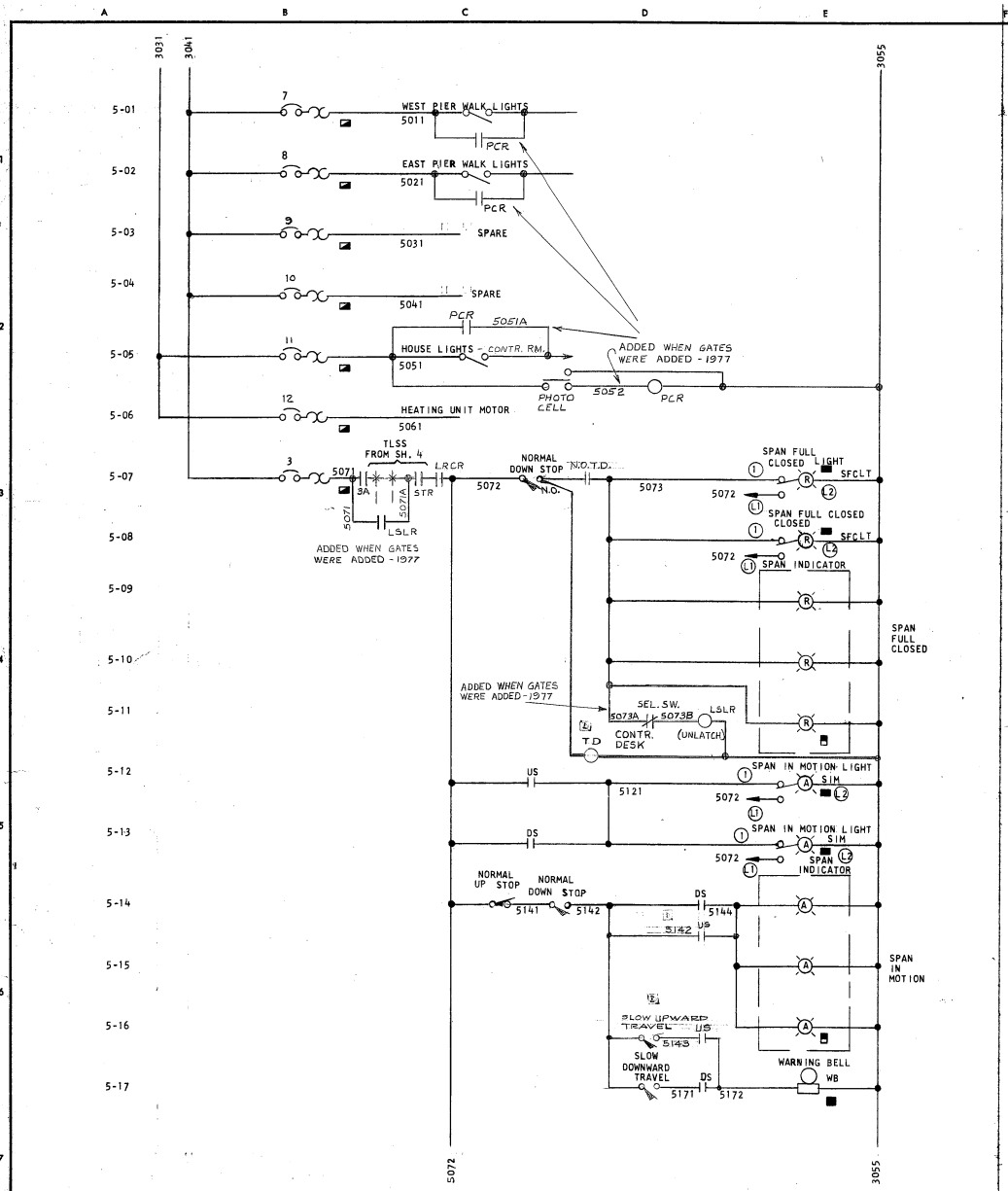
CUTLER-HAMMER

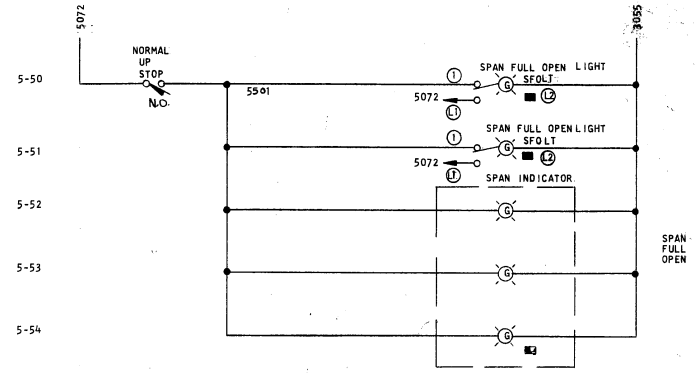
CONTINUED ON SHEET 5

214876 D4-4

DESIGN PRODUCTS CO. FORM 229

R.J.C.





COIL LOCATION	
US	3-15
DS	3-17

■ — OPERATORS DESK
▨ — POWER DISTRIBUTION PANEL "B"
◧ — HOIST CONTROL PANEL (BY OTHERS)
▪ — SPAN INDICATOR

CONNECTION DIAGRAM 214876D4-6,7
INTERCONNECTION DIAGRAM 214876D4-8
DESCRIPTION OF OPERATION A072-2342

[D] TRAFFIC SIGNAL OPERATION

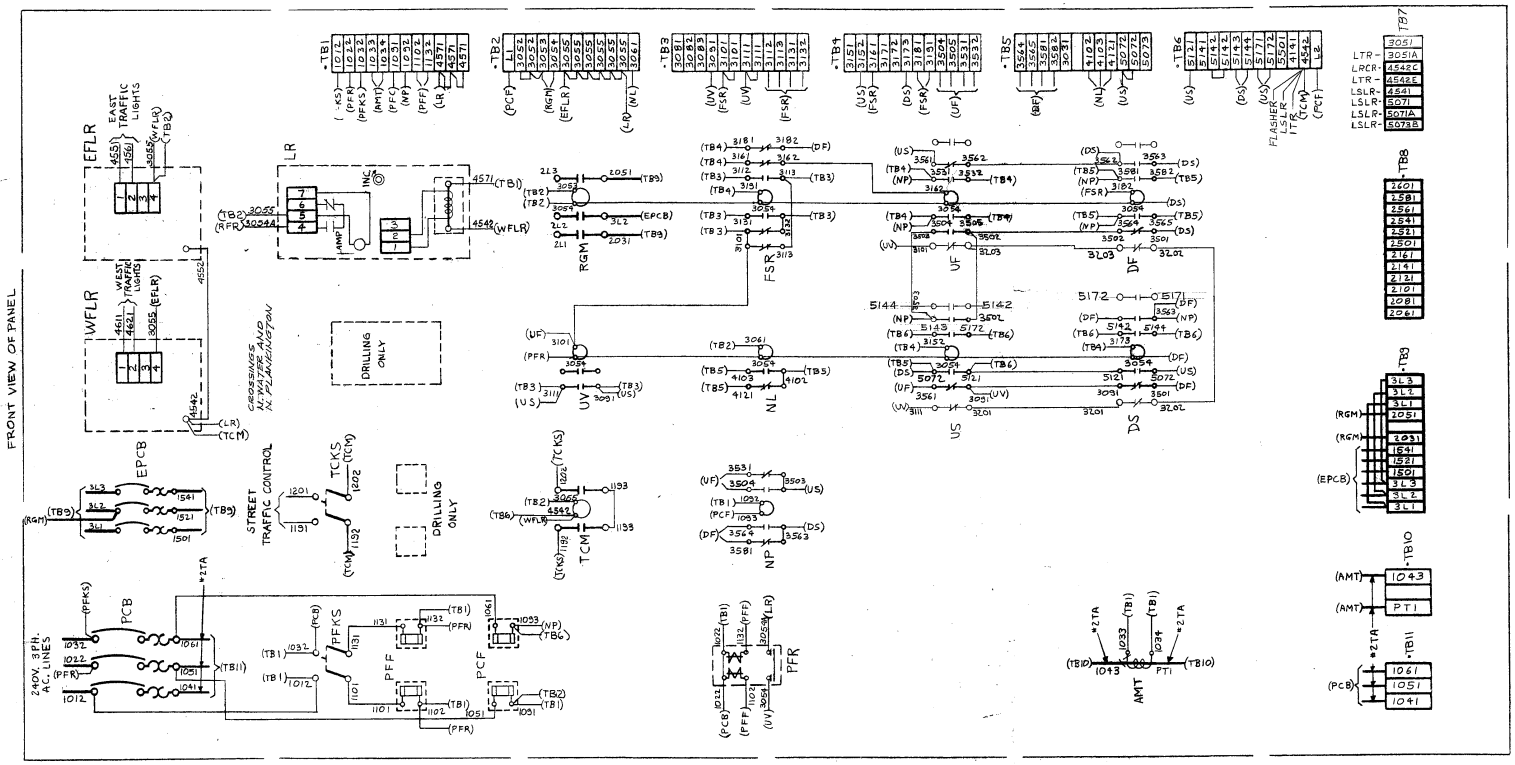
TIME DELAY "CLOSING"

ELEMENTARY DIAGRAM FOR WEST ST. PAUL AVENUE EAST DETROIT STREET BRIDGE

	APPROVAL	MUSTAD CARRIED INTERNATIONAL		DRAWN P.A. NORTROM	12-27-65	ENGR. APP. R. J. Camillone	1-14-66
A	MFM 8-2-66	—	—	CHECKED		SUPR. APP.	1/14/66
B	RJC 11-5-66	—	—	SUP. NO.		CUTLER • HAMMER	
C	PA 2-8-67	—	—	SUP. BY NO.			
D	J.D.P. 2-8-68	—	—	PANEL NO.		CONTINUED ON SHEET: 6	
E				BUL. NO.			
F				GROUP NO. 5810		214876 D4-5	
G				ORDER NO. 21F305752A			

R.J.C.

DESIGN PRODUCTS CO. CHI. 238



COLOR CODE				PART NO.
MAIN WIRING	HEAVY LINES	MARKED	#2TA	1301-632
		UNMARKED	#10TA	1301-492
CONTROL WIRING	LIGHT LINES	UNMARKED	#12TA	1301-493

ELEMENTARY DIAGRAM 214876D4-1-5
INTERCONNECTION DIAG. 214876D4-8
DESCRIPTION OF OPERATION A072-2342

D AS BUILT

CONNECTIONS FOR WEST ST. PAUL AVE. EAST DETROIT STREET BRIDGE- CONTROL PANEL

	APPROVAL	WIRING CHANGED INTERNAL	EXTERNAL				
A	MFM 5-9-66	YES	NO	DRAWN R. F. MEHRSTEDT	1-5-66	ENGR. APP. R. J. Camillone	1-19-66
B	RJC 11-5-66	YES	NO	CHECKED M. F. MATAIC	1-5-66	SUPR. APP. C. J. [illegible]	1/11/66
C	RJC GAS 2-5-67	YES	NO	SUP. NO.		CUTLER • HAMMER	
D	JWH 2-5-68	—		SUP. BY NO.			
E				PANEL NO.		CONTINUED ON SHEET 7	
F				BUL. NO.		214876D4-6	
G				GROUP NO. 5810			
				ORDER NO. 21F305752A			

R.J.C.

DESIGN PRODUCTS CO. FORM 239

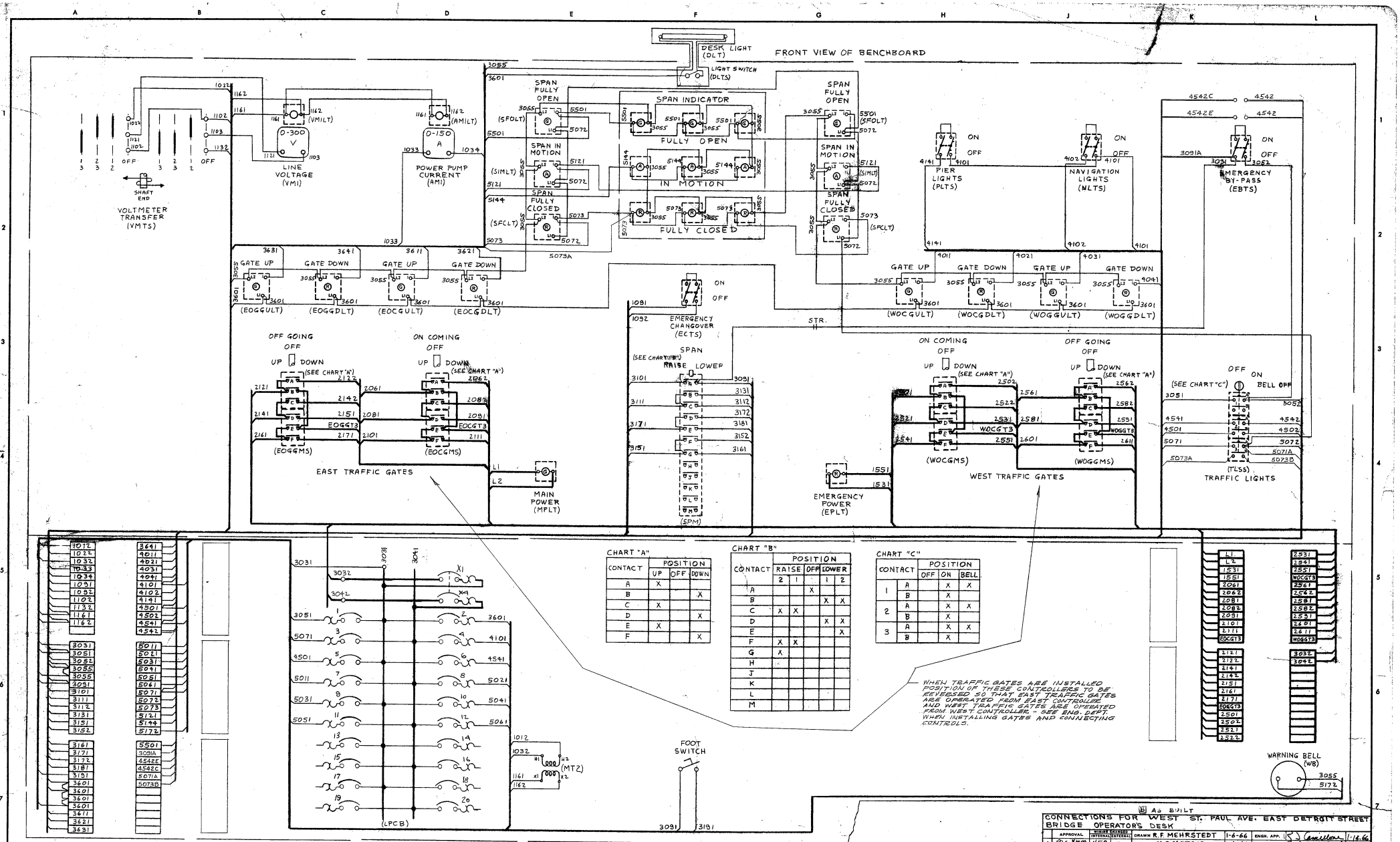


CHART "A"

CONTACT	POSITION UP	OFF	DOWN
A	X		
B			X
C	X		
D			X
E	X		
F			X

CHART "B"

CONTACT	POSITION RAISE 2	1	OFF	LOWER 1	2
A			X		
B				X	X
C	X	X			
D				X	X
E					X
F	X	X			
G	X				
H					
J					
K					
L					
M					

CHART "C"

	CONTACT	POSITION OFF	ON	BELL
1	A		X	X
	B		X	
2	A		X	X
	B		X	
3	A		X	X
	B		X	

COLOR CODE NOTE ON 214876D4-6
ELEMENTARY DIAGRAM 214876D4-1-5
INTERCONNECTION DIAG. 214876D4-8
DESCRIPTION OF OPERATION A072-2342

Ⓑ AS BUILT

CONNECTIONS FOR WEST ST. PAUL AVE. EAST DETROIT STREET BRIDGE OPERATOR'S DESK

	APPROVAL	WIRING REVISED INTERNAL	EXTERNAL
A		YES	No
B		—	—
C			
D			
E			
F			
G			

DRAWN R.F. MEHRSTEDT 1-6-66 ENGR. APP.
CHECKED M.F. MATAIC 1-6-66 SUPR. APP.
SUP. NO.
SUP. BY NO.
PANEL NO.
BUL. NO.
GROUP NO. 5810
ORDER NO. 21F305752A

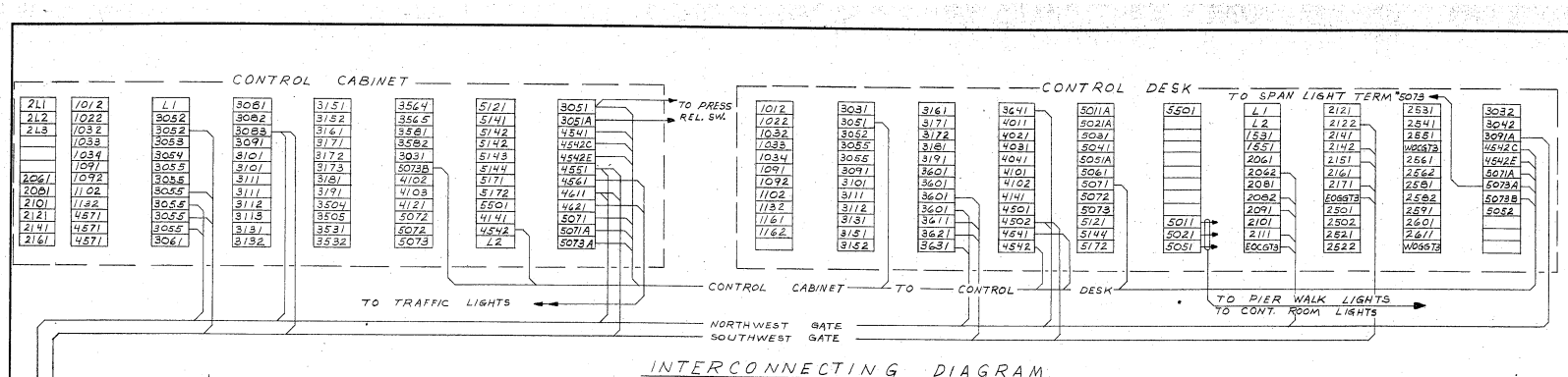
CUTLER • HAMMER

CONTINUED ON SHEET 8

214876 D4-7

R.J.C.

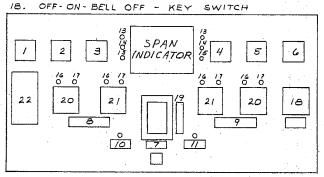
DESIGN PRODUCTS CO. FORM 339



INTERCONNECTING DIAGRAM

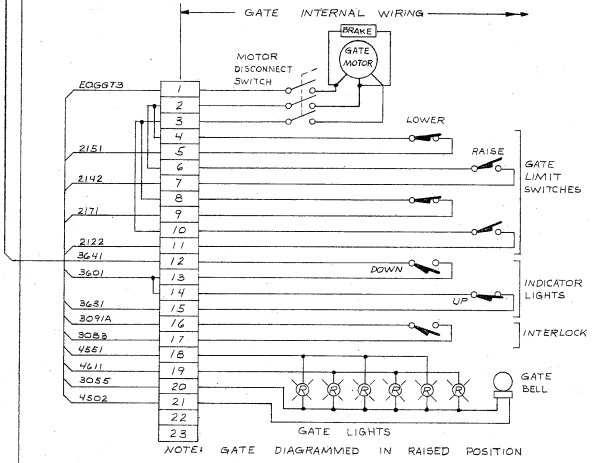
NAMEPLATE MARKING:

4. PIER LIGHTS - KEY SWITCH
5. NAVIGATION LIGHTS - KEY SWITCH
6. EMERGENCY BY-PASS - KEY SWITCH
18. OFF-ON-BELL OFF - KEY SWITCH



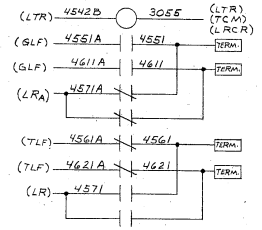
NOTE:

1. ITEM #15 (RED LIGHT) ATTACH CONDUCTOR 5073A AS SHOWN ON INTERCONNECTING DIAGRAM.
2. ITEMS #4, #5, #6 AND #18 ARE MASTER KEYED, KEY LOCK SWITCHES. ITEMS #4, #5 AND #6 ARE KEYED ALIKE. ITEMS #4 AND #5 HAVE KEY RETRACTABLE IN BOTH OFF AND ON POSITION. ITEMS #6 AND #18 HAVE KEY RETRACTABLE IN THE OFF POSITION ONLY.



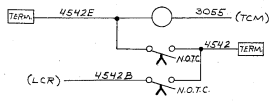
NOTE: GATE DIAGRAMMED IN RAISED POSITION

NORTHWEST GATE



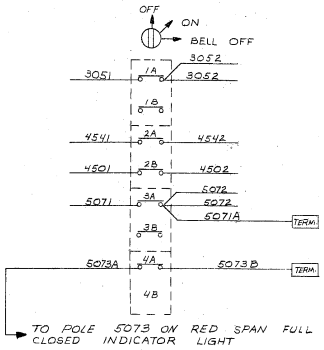
LCR

LIGHT CONTROL RELAY



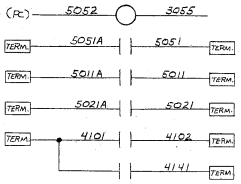
LTR

LIFT TIME RELAY



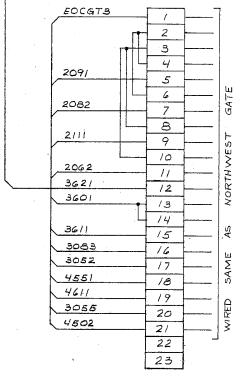
SELECTOR SWITCH

ITEM #18 ON CONTROL DESK

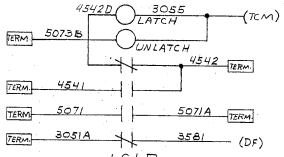


PCR

PHOTO CELL RELAY

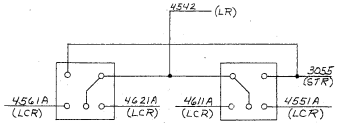


SOUTHWEST GATE



LSLR

LIFT SPAN LATCH RELAY



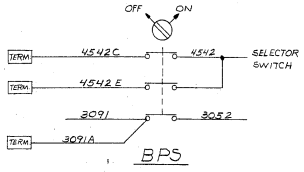
TLF

TRAFFIC LIGHT

GLF

GATE LIGHT

FLASHERS

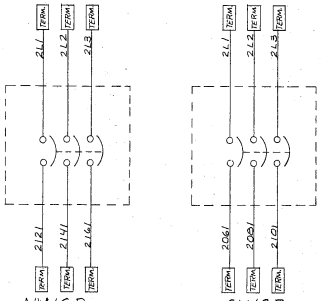


BPS

EMERGENCY

BY-PASS SWITCH

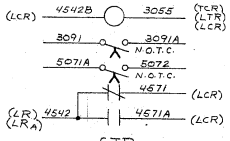
ITEM #6 ON CONTROL DESK



NWGB

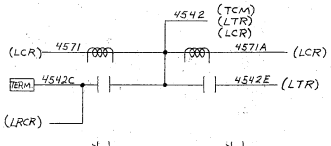
SWGB

ROADWAY GATES CIRCUIT BREAKERS



STR

STREET TRAFFIC RELAY

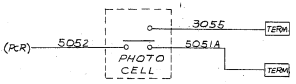


LR

DEAD BULB

LRA

SENSOR

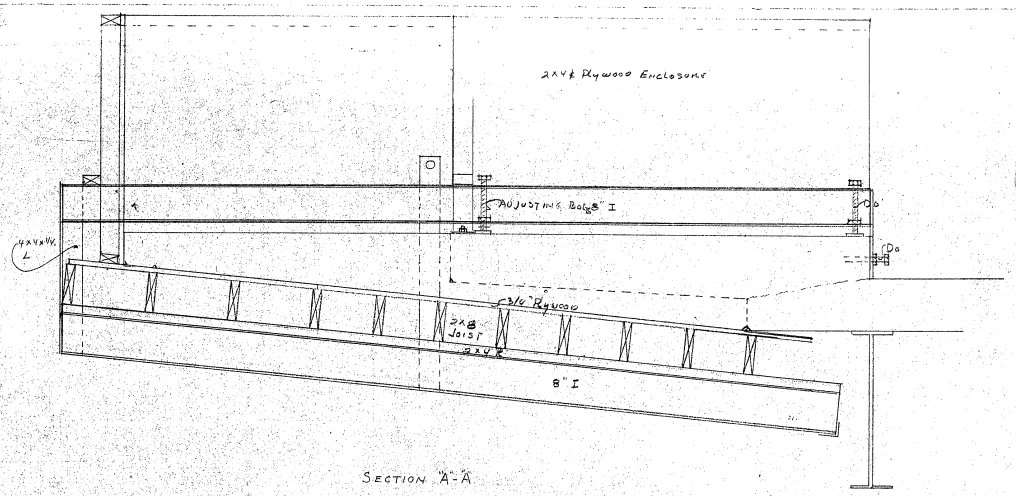


PC

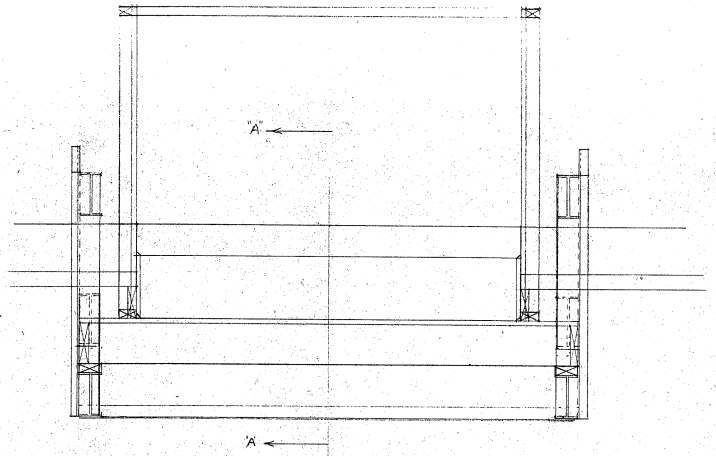
PHOTO CELL

ST. PAUL AVE. VERTICAL LIFT BRIDGE OVER MILWAUKEE RIVER		
SCALE: NONE	APPROVED BY:	DRAWN BY R.W.E.
DATE: 3-1-78		REVISED
ADDITION OF TRAFFIC GATES AND KEY SWITCHES TO WIRING DIAGRAM		
ELECTRIC SALES & ENG. CO.		DRAWING NUMBER P-101-77-C3

88X34 PRINTED ON NO. 1000H-10 CLEARPRINT



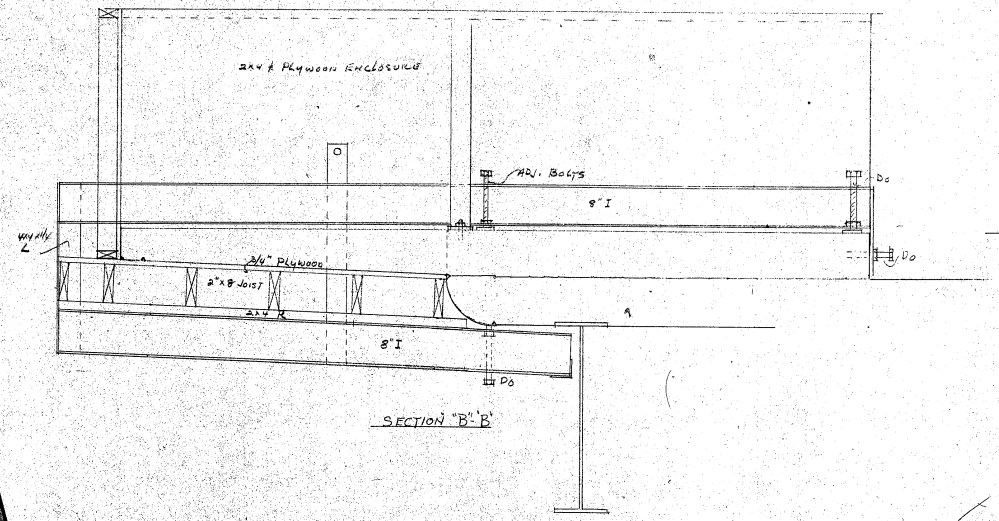
SECTION A-A



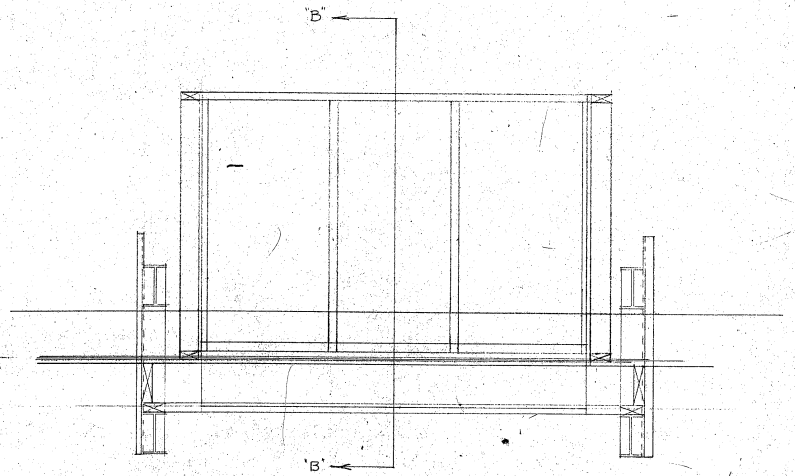
END VIEW FROM RIVER

CATCH PLATFORM & FORMING FOR ST PAUL AVE BRIDGE

1 THUS



SECTION "B"-"B"



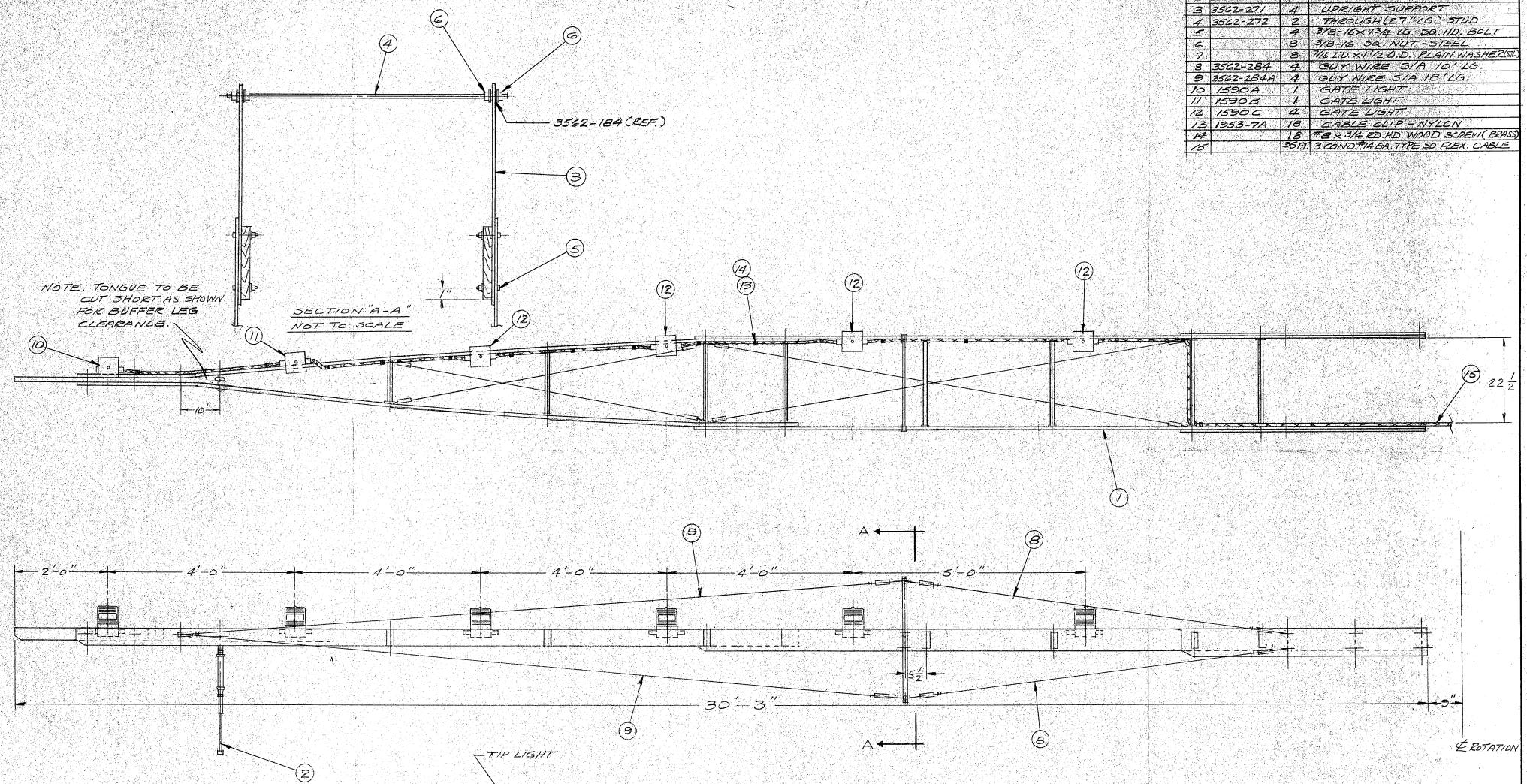
END VIEW FROM RIVER

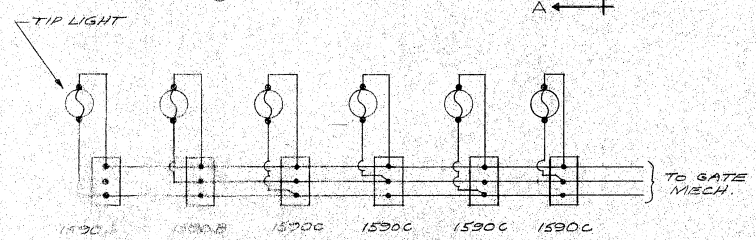
CATCH PLATFORM & FORM FOR CLYBOURN ST. & PLEASNT STREET BRIDGES

2 THUS

PROPOSED FORMING FOR TRAFFIC GATES
FOR 3 BRIDGES FOR CITY OF MILWAUKEE
PREPARED BY T.V. JOHN & SON INC. GEN. CONTR.
SCALE 1" = 1'-0" DATE July 5, 1977

ITEM	PART NO.	REQ'D	DESCRIPTION
1	38-0007-41	1	GATE ARM ASSEMBLY.
2	3562-316-A	1	BUFFER LEG ASSEMBLY
3	3562-271	4	UPRIGHT SUPPORT
4	3562-272	2	THROUGH (27" LG.) STUD
5		4	3/8-16 x 1 3/4 LG. SQ. HD. BOLT
6		8	3/8-16 SQ. NUT - STEEL
7		8	7/16 I.D. x 1 1/2 O.D. PLAIN WASHER (STL)
8	3562-284	4	GUY WIRE S/A 10' LG.
9	3562-284A	4	GUY WIRE S/A 18' LG.
10	1590A	1	GATE LIGHT
11	1590B	1	GATE LIGHT
12	1590C	4	GATE LIGHT
13	1953-7A	18	CABLE CLIP - NYLON
14		18	#8 x 3/4 RD. HD. WOOD SCREW (BRASS)
15		95 FT.	3 COND. #14 GA. TYPE SO FLEX. CABLE





GATE LIGHT WIRING DIAGRAM

NOTE: GATE ARM IS PAINTED ONLY WHITE.

NO.	DATE	BY	REVISED
1	8/15/77	ALS	

MATERIAL

FINISH

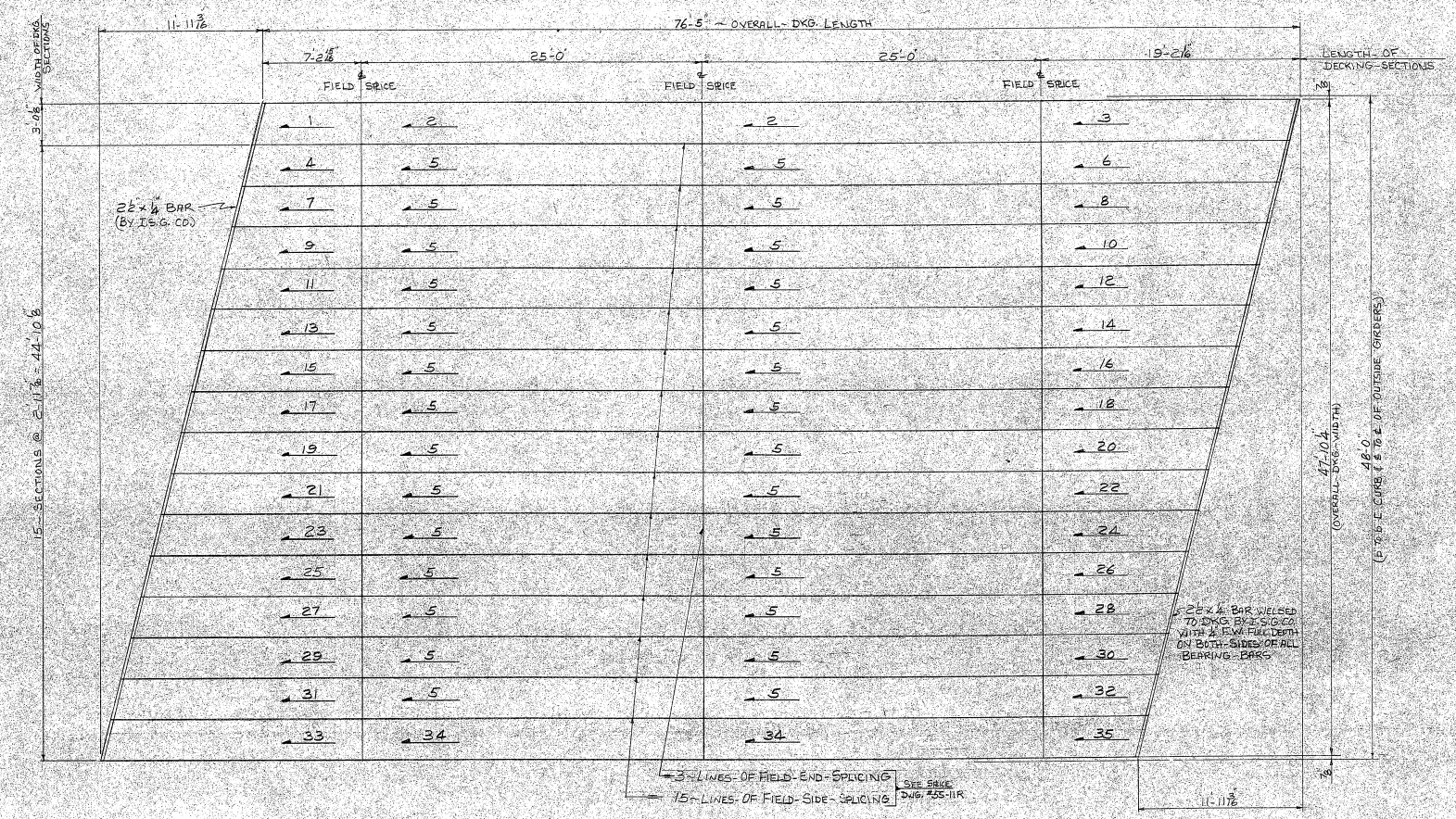
TOLERANCE UNLESS SPECIFIED FRACT. ± 1/64 DEC. ± .005

SECURITY PRODUCTS DIVISION Federal Signal Corporation

DRWN. BY ALS DATE 7/28/77 CHKD. BY DATE SCALE 1"=1'

NAME GATE ARM ASSEMBLY

5967-2391



PLAN OF IRVING DECKING FOR W. ST. PAUL AVE. & E. DETROIT ST.
VERTICAL LIFT BRIDGE OVER MILWAUKEE RIVER, MILW. WIS.

IRVING DECKING
TYPE "V"

2 1/2" x 1/4" STRAIGHT BARS @ 2 5/8" O.C.
1/2" x 1/8" RETICULINE BARS
3/8" ϕ RIVETS @ 5" O.C.

(NOTE: BRG. BARS, RETIC. BARS & ALL RIVETS TO CONFORM TO A.S.T.M. A 36 WITH .20% MINIMUM COPPER CONTENT)

WEIGHT: 17.6# PER SQ. FT.

DECKING TO BE FURNISHED IN A TOTAL OF 64 SECTIONS WITH PROVISIONS MADE FOR FIELD-SPLICING TOGETHER

NECESSARY FIELD-SPLICE RIVETS & LOAN OF ASSEMBLY-TOOLS BY I.S.G. COMPANY

DECKING TO BE FASTENED TO EVERY ALUMINUM JOIST WITH SPECIAL STEEL CLIPS & GALVANIZED BOLTS (BY J.C. THEILACKER CO) AFTER END & SIDE SPLICES ARE COMPLETE.

FINISH: 1 ~ COAT RED-LEAD

LIST OF MATERIAL SHIPPED IN BULK FOR FIELD-ASSEMBLY OF END-AND-SIDE SPLICES:-

1,485 ~ 3/8" ϕ RIVETS, 3/8" LONG FOR 2 ~ BAR SPLICES
2,880 ~ " " 1 1/8" " " 3 ~ " "
1,570 ~ " " 1 5/8" " " 4 ~ " "

SEE SPLICE DWG #55-11R

LOAN OF NECESSARY ASSEMBLY-TOOLS
SPLICE-RIVET QUANTITIES ARE 10% IN EXCESS OF ACTUAL REQUIREMENTS

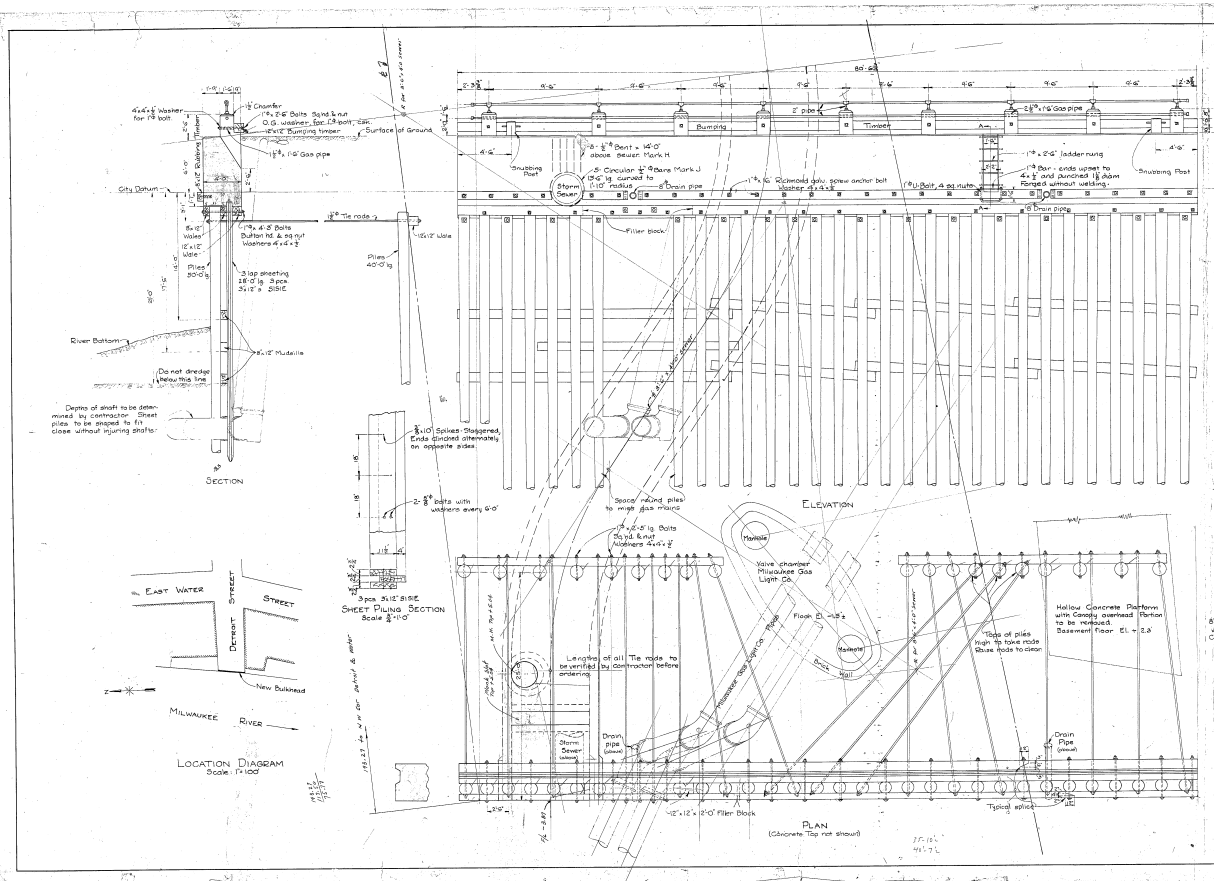
CUSTOMERS ORDER NO:-

J.C. THEILACKER GENERAL CONTRACTOR
MILWAUKEE, WISCONSIN

3		
2		
1	1-28-66	J.F.

REVISIONS

IRVING SUBWAY GRATING CO., INC.
Division of Harsco Corporation
IRVING IRON WORKS COMPANY
50-08 27TH ST.,
LONG ISLAND CITY, N. Y.
CONTRACT NO. D-1747
MADE BY J. FORBES CHECKED BY
DATE 12-22-65 DRAWING NO. 1



BILL OF MATERIAL

Item	Pieces	Length	Size	Material	Fittings	Remarks
Piles	30	50'-0"				
Anchor Pipe	19	40'-0"				
Sheet Piles	81	28'-0"				
Wales			8x12"			1344 F.B.M.
Wales			12x12"			1872 F.B.M.
Mudsills			8x12"			1584 F.B.M.
Bumper Timber			16x12"			1000 F.B.M.
Rubing Timber			6x12"	Oak		660 F.B.M.
Tie Rod	9	26'-6"	1 1/4"	Steel	At each end - Sq. nut	8" thread & washer 6x6x3/8"
Tie Rod	3	26'-8"	1 1/4"	Steel	At each end - Sq. nut	8" thread, & washer 6x6x3/8"
Tie Rod	1	27'-0"	1 3/4"	Steel	At each end - Sq. nut	8" thread, & washer 6x6x3/8"
Tie Rod	2	27'-3"	1 1/4"	Steel	At each end - Sq. nut	8" thread, & washer 6x6x3/8"
Tie Rod	1	28'-0"	1 3/4"	Steel	At each end - Sq. nut	8" thread, & washer 6x6x3/8"
Tie Rod	1	31'-6"	1 1/4"	Steel	At each end - Sq. nut	8" thread, & washer 6x6x3/8"
Tie Rod	1	33'-0"	1 1/4"	Steel	At each end - Sq. nut	8" thread, & washer 6x6x3/8"
Tie Rod	1	34'-6"	1 3/4"	Steel	At each end - Sq. nut	8" thread, & washer 6x6x3/8"
Bolts	19	4'-3"	1 3/4"	Steel	Button hd. & sq. nut	At head, plate washer 4x4x3/8"
Bolts	9	2'-8"	1 1/4"	Steel	Sq. hd. & nut	4" thread washer 4x4x3/8" & 0.G. washer
Bolts	12	2'-5"	1 1/4"	Steel	Sq. hd. & nut	4" thread, plate washer 4x4x3/8"
Bolts	36	1'-0"	7/8"	Steel	Sq. hd. & nut	2" thread. For mating flanges
Rods	4	4'-0"	1 3/4"	Steel	One end threaded 6"	other end 3", 4 sq. nuts each
Ladder Rung	5	2'-6"	1 1/4"	Steel		
Forged Bar	1		1 1/4"	Steel	Ends upset to 4 1/2"	and punched 1 1/2" diam.
U-Bolt	1	5'-0"	1 1/4"	Steel	4 sq. nuts, 16" thread each end	
Pin	2	2'-0"	2 3/4"	Steel		
Plate Washer	6	12"	3/8"x6'-0"	Steel		
Gas Pipe	9	1'-6"	1 1/2"			13.5 lin. ft.
Gas Pipe			2"			15.6 lin. ft.
Gas Pipe	9	1'-6"	2 1/2"			13.5 lin. ft.
Gas Pipe	2	4'-6"	1 1/2"			
Pipe Caps	4					For 2" pipe
Tees	9					For 2" pipe
Floor Flanges	9					For 2" pipe
Screw Anchor	27	10"	1 1/4"		Richmond galv. screw	anchor, bolt, Washer 4x4x3/8"
Bottom Forms			1"	Douglas Fir or	Yellow Pine Select grade	1,110 F.B.M.
Concrete					As specified	80 cu. yds.
Drain Pipe	2	8'-0"	8"			

REINFORCEMENT

Mk	No	Length	Size	Remarks
A	42	41'-0"	2 3/4"	Str.
B	102	8'-9"	3/4"	Bent
C	102	8'-6"	3/4"	Bent
D	102	8'-0"	3/4"	Bent
E	18	12'-9"	3/4"	Bent
F	18	4'-6"	3/4"	Bent
G	27	6'-6"	3/4"	Bent
H	5	14'-0"	1 1/4"	Bent
J	9	13'-6"	3/4"	Circular (10' radius)
K	102	3'-3"	2 3/4"	Str.

BOARD OF HARBOR COMMISSIONERS
CITY OF MILWAUKEE

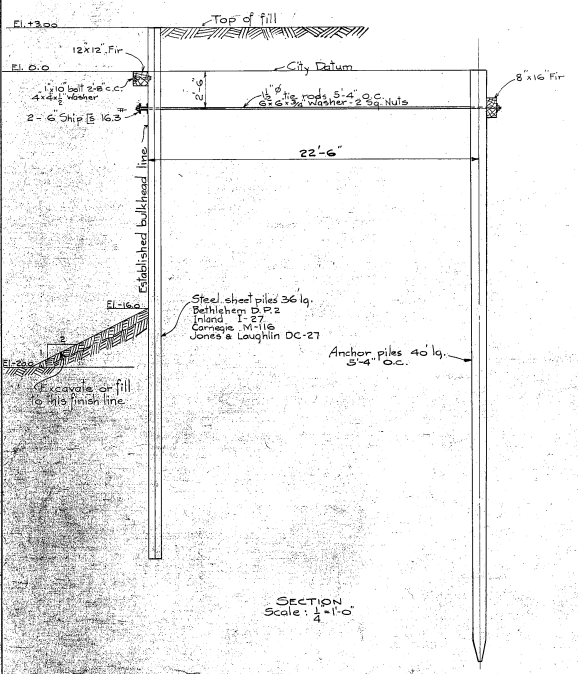
STREET END BULKHEAD
EAST BANK OF MILWAUKEE RIVER
FOOT OF DETROIT STREET

Scale: ¼"=1'-0" unless noted
Milwaukee, June 30, 1930
Drawing No. D-21
Contract No. 34

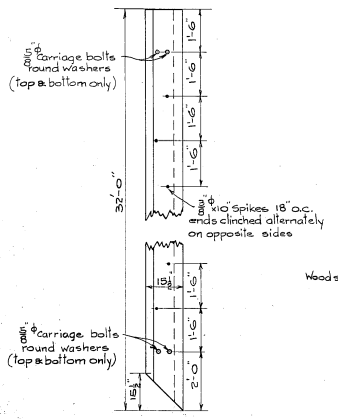
Concur: H. Reiner
Chief Harbor Engineer

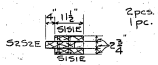
Approved: U. Quintel
Harbor Terminal Director

ST. PAUL - DETROIT 86202
REC'D 11-16-66 from Harbor Commission
D-2-33-35

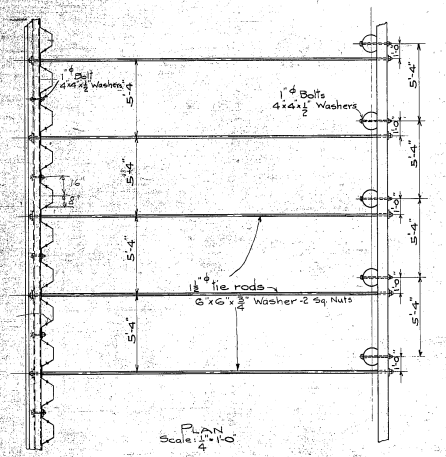


SECTION
Scale: 1/4" = 1'-0"

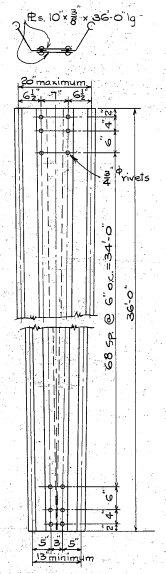




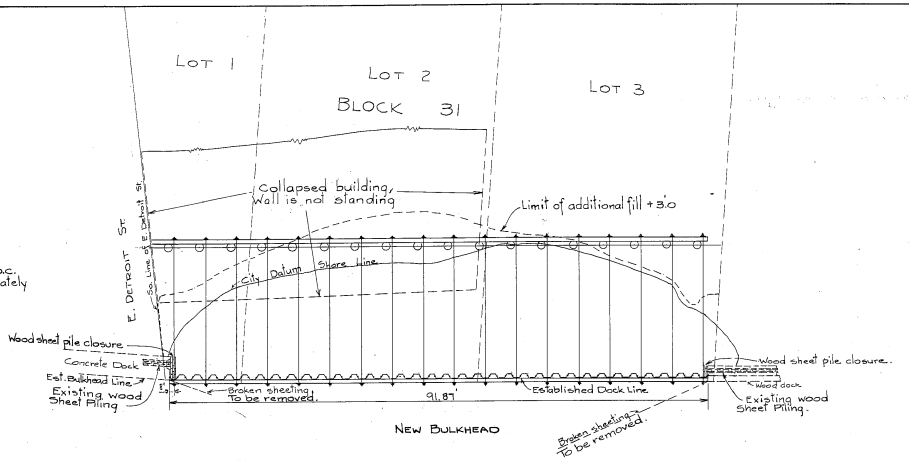
DETAIL OF WOOD SHEETING
Scale: 1/2" = 1'-0"



PLAN
Scale: 1/4" = 1'-0"

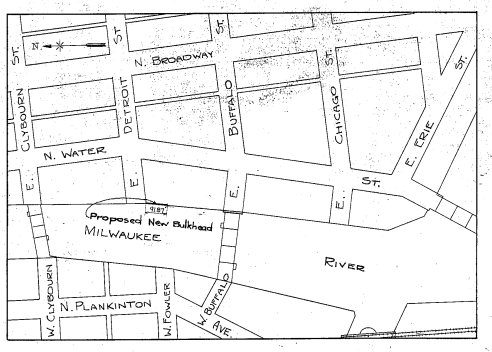


DETAIL OF STANDARD WEDGE PILE
Scale: 3/4" = 1'-0"
(To be used only on order of engineer)

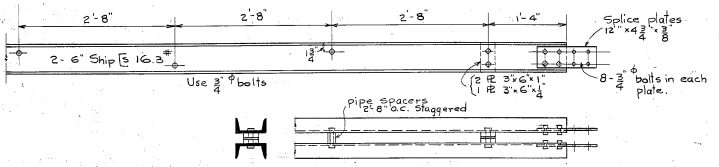


NEW BULKHEAD

LOCATION PLAN OF BULKHEAD AND COLLAPSED BUILDING
Scale: 1" = 10'



VICINITY DIAGRAM
Scale: 1" = 250'



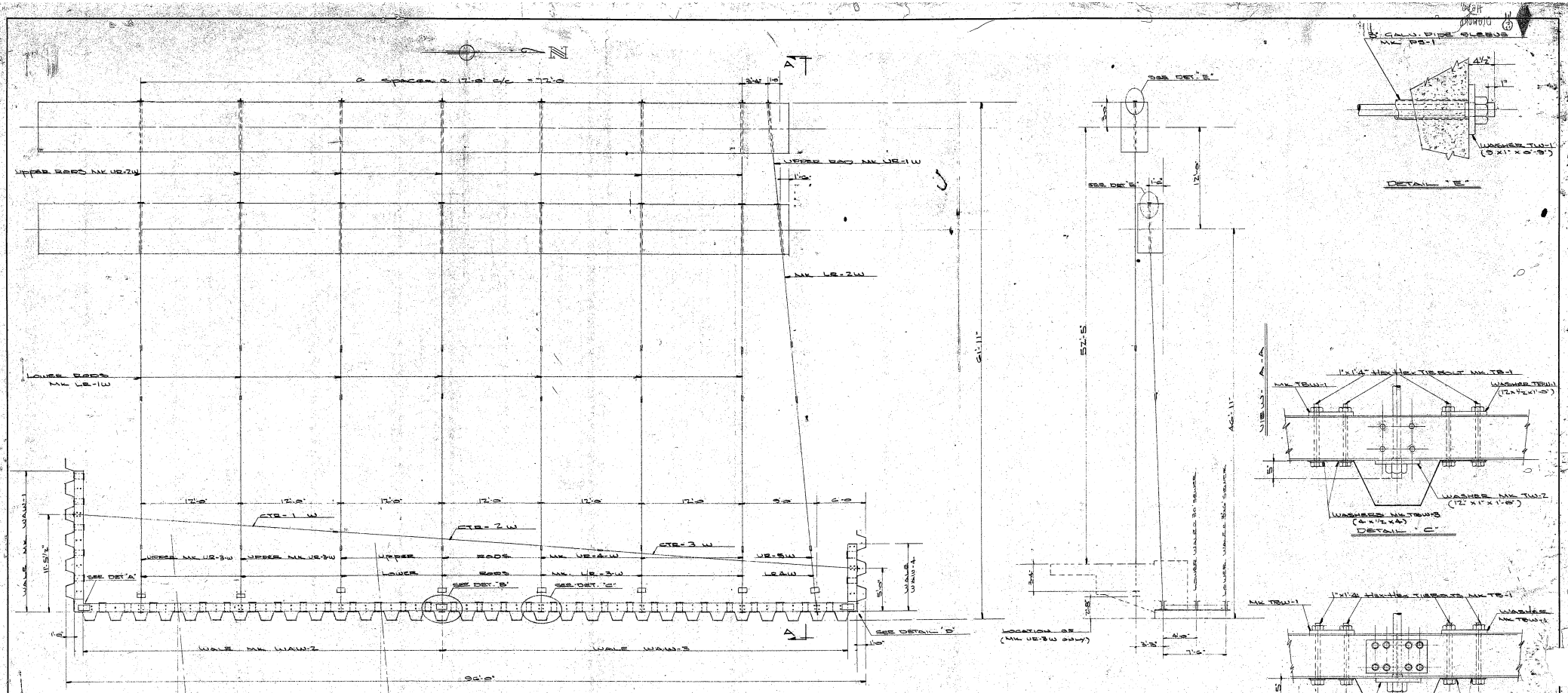
DETAIL OF CHANNEL CONNECTIONS
Scale: 1" = 1'-0"

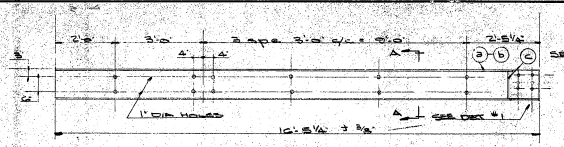
BOARD OF HARBOR COMMISSIONERS
CITY OF MILWAUKEE

RIVER BULKHEAD
EAST BANK OF MILWAUKEE RIVER
ALONG PRIVATE PROPERTY
LOTS No. 1, 2 AND 3 BLOCK 31
PLAT OF MILWAUKEE

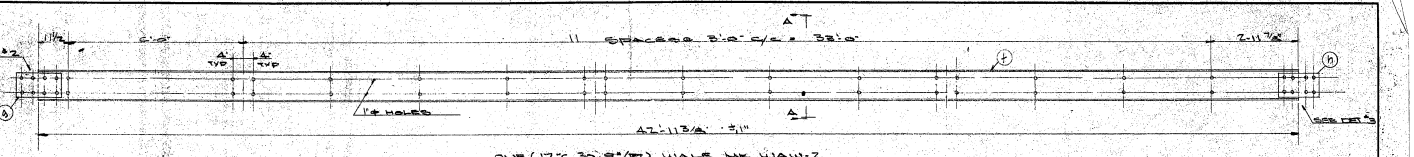
Milwaukee, June, 16th 1936
Scale as shown.
Drawing No. D2-3-61
Approved:
Correct:
Prin. Asst. Engr.
Genl. Mgr. & Chief Engr.

ST. PAUL DETROIT BRIDGE REC'D 11-20-62

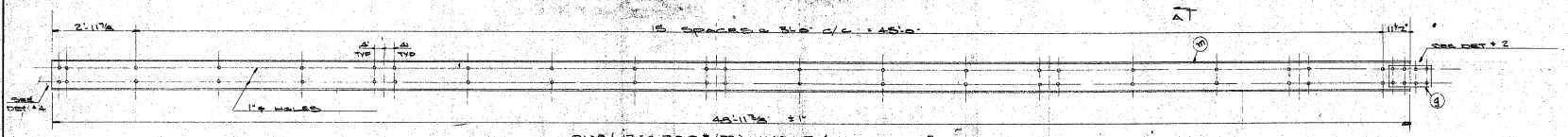

N
6 SPACES @ 12'-0" O/C = 72'-0"
UPPER RODS MK UR-2W
UPPER ROD MK UR-1W
MK LR-2W
LOWER RODS MK LR-1W
61'-11"
52'-5"
WALE MK WAW-1
11'-5½"
CTR-1 W
CTR-2 W
CTR-3 W
UPPER MK UR-3W
UPPER MK UR-3W
UPPER RODS MK UR-4W
UR-5W
LOWER RODS MK LR-3W
LR-4W
SEE DET. 'A'
SEE DET. 'B'
SEE DET. 'C'
WALE WAW-4
5'-0"
SEE DETAIL 'D'
WALE MK WAW-2
WALE WAW-3
90'-0"
SEE DET. 'E'
LOCATION OF (MK UR-3W ONLY)
LOWER WALE 3½" SPLICE
46'-11"
DETAIL 'E'
3½" CAST PIPE CLEVIS MK. PS-1
WASHER TW-1 (3"x1" x 0'-3")
DETAIL 'C'
1"x1'-4" HEX HEAD TIE BOLT MK. TB-1
MK TBW-1
WASHER TBW-1 (12"x½"x1'-0")
WASHER MK TW-2 (12" x 1" x 1'-0")
WASHERS MK TBW-3 (4 x ½" x 4")
DETAIL 'B'
1"x1'-2" HEX HEAD TIE BOLTS MK TB-1
WASHER MK TBW-2
WASHERS MK TBW-3 (TYP)
FIELD LOCATION PLAN OF WEST ABUTMENT
3'-2"x6'-0" SEWER
36" SEWER
EL. +4.00
BURN HOLES IN FIELD FOR TIERODS
MK LW-1
LOWER TIERODS (1" PIN & HD.)
EL. -3.00
3 BOLTS MK TB-1
4 WASHERS MK TBW-1
3 WASHERS MK TBW-3
PROVIDES FOR THE COMB. SECTION OF WALE LW-1
EL. -6.50
LOWER WALE MK LW-2
2 BOLTS MK TB-1
3 WASHERS MK TBW-1
3 WASHERS MK TBW-3
PROVIDES FOR THE COMB. SECTION OF WALE LW-2
BOLT MK PB-1
WASHER BW-1
WASHER BW-1
1½" GAP
DETAIL 'A'
SOUTH GIRDER
9½"x 3/8"x11'-6" SPLICE PL. ASSM. TO WALE
2¾"
1½"
7/8"x7 BOLTS W/ WASHERS ASSEMBLED TO WALE
1"x2½" HEX HEAD BOLT MK PB-1 W/ 1 STD CUT WASHER MK BW-1 & 1 BEVEL WASHERS MK BW-1
7/8"x10'-7" HEX HEAD SPLICE BOLTS MK. SB-1 W/ 2 7/8" CUT WASHER / BOLT MK. C-W-2
1"x2¾" PIPE SPACER PS-1
DETAIL 'D'
NORTH GIRDER
FOR ADDITIONAL DIMENSIONS NOT SHOWN SEE SHOP DETAILS OF ALL COMPONENTS ON DWG. DGO-3845-2
DETAILS OF TIERODS ON DWG. DGO-3845-3
APPROVED
NOV 18 1965
George C. Ashton
Bureau of Bridges & Traffic Engineering
MILWAUKEE, WIS.
PROJECT
W. ST. PAUL AVE. OVER 4TH ST.
LIFT BRIDGE
CITY OF MILWAUKEE
CONT'R.
EDW. KRAEMER & SONS
JOB NO. 1548 A018
PRINTS ISSUED
NO. | FOR | DATE
A | APPROVAL | 11-16
DISTRIBUTION
1 | MILW. DEPT | 11-16
SHOP
ERECTION
PIECE MARK | QUAN. | DESC. | SIZE | LENGTH FT. IN. | REMARKS | WT./PT. | WT.
COMMERCIAL STAMPING & FORGING, INC. CHICAGO
FIELD LOCATION PLAN WEST ABUTMENT WALES AND RODS
DATE 6-29-65 | DR. BCK | CH. BY CK | APP. BY
SCALE 3/8"=1'-0"
DGO-3845-1
REV. SYM. | DATE | REVISION | CHG. BY
ELEMENS & KERN, INC., CHICAGO



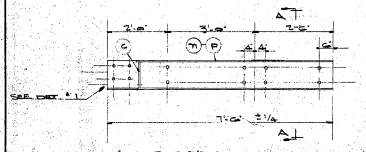
ONE (17" @ 30.9#/FT) WALE MK WAW-1



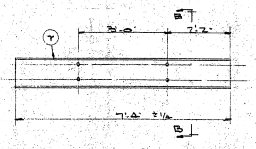
ONE (17" @ 30.9#/FT) WALE MK WAW-2



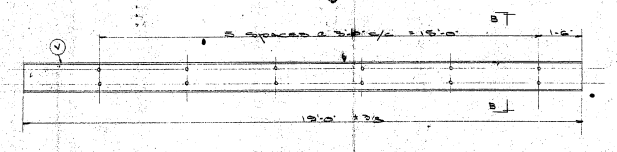
ONE (17" @ 30.9#/FT) WALE MK WAW-3



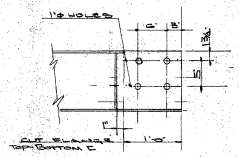
ONE (17" @ 30.9#/FT) WALE MK WAW-4



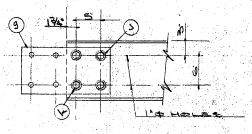
ONE - LOWER WALE MK LW-2



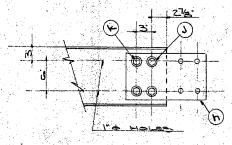
ONE - LOWER WALE MK LW-1



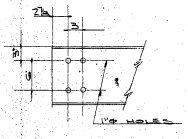
DETAIL NO. 1
FOR WALE WAW-1
WAW-4



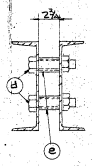
DETAIL NO. 2
WALE WAW-2 & 3



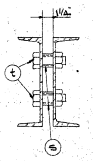
DETAIL NO. 3
WALE WAW-2



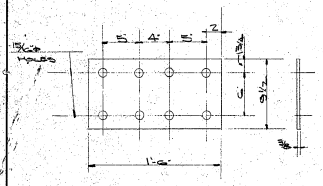
DETAIL NO. 4
WALE WAW-3



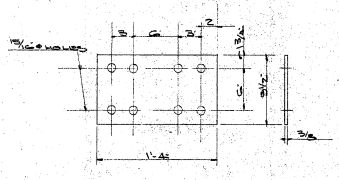
SECTION A-A



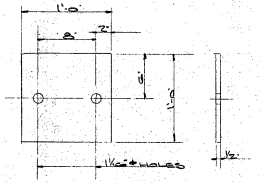
SECTION A-A



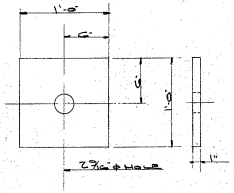
SPLICE PLATE PL. MK. g
4 REQ'D



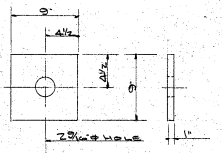
SPLICE PLATE PL. MK. h
2 REQ'D



TIEBOLT WASHER MK TBW-1
44 REQ'D WEST ABUT.

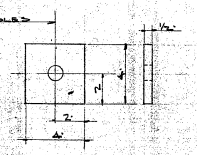


TIEROD WASHER MK TW-2
10 REQ'D WEST ABUT.



TIEROD WASHERS TW-1
10 REQ'D WEST ABUT.

2 - WALE TIERODS MK WE-1



TIEBOLT WASHER MK TBW-2
88 REQ'D

APPROVED
NOV 18 1965
George C. Ashton
Supt.
Bureau of Bridges and Public Buildings
MILWAUKEE, Wis.

PROJECT	
W. ST. PAUL AVE. DETROIT ST.	
LIFT BRIDGE	
CITY OF MILWAUKEE	
CONTR. EDW. KRAUSER & SONS	JOB NO. 1908 4-978

PRINTS ISSUED		
NO.	FOR	DATE
4	APPROVAL	11-16
	DISTRIBUTION	
1	MILW. DIST.	11-16
	SHOP	
	ERECTION	

PIECE MARK	QUAN.	DESC.	SIZE	LENGTH FT.	LENGTH IN.	REMARKS	WT. EACH	WT.
	88	TIEBOLT WASHERS MK TBW-3					(7.0 #EA)	
	88	BPD	4 x 1/2	0'-4			2.3	202
	16	TIEROD WASHERS MK TW-1					(21.6 #EA)	
	16	BPD	9" x 1"	0'-9			7.3	116.8
	ONE - WALE MK WAW-1						(104.5 #EA)	
a	1	C	17" @ 30.9#	16'-5 1/4			508	508
b	1	C	17" @ 30.9#	16'-5 1/4			508	508
c	2	BARS	3 x 3/8	1'-0"		CUT TO FIT	3.8	7
d	17	BOLTS	7/8 x 6 HEX	HEX			1.5	18
e	17	PIPES	1" STD	0'-7 3/4"			.38	5
	ONE - WALE MK WAW-2						(775.3 #EA)	
f	2	C	17" @ 30.9#	42'-11 3/4			1327	2654
g	2	PL	9 1/2 x 3/8	1'-6			18	36
h	2	PL	9 1/2 x 3/8	1'-4			16	32
j	8	BOLTS	7/8 x 7 HEX	HEX			1.7	14
k	16	-	7/8" STD CUT WASHERS				.116	2
e	40	PIPES	1" STD	0'-7 3/4"			.38	15
	ONE - WALE MK WAW-3						(3145 #EA)	
m	2	C	17" @ 30.9#	49'-11 3/4			1517	3034
g	2	PL	9 1/2 x 3/8	1'-6			18	36
j	8	-	7/8" STD CUT WASHERS				.116	0.93
k	4	BOLTS	7/8 x 7 HEX	HEX			1.7	7
d	40	"	7/8 x 6 HEX	HEX			1.5	60
e	44	PIPES	1" STD	0'-7 3/4"			.38	17
	ONE - WALE MK WAW-4						(466 #EA)	
n	1	C	17" @ 30.9#	7'-6			232	232
p	1	C	17" @ 30.9#	7'-6			232	232
c	2	BARS	3 x 3/8	1'-0		CUT TO FIT	3.8	7
d	8	BOLTS	7/8 x 6 HEX	HEX			1.5	9
e	8	PIPES	1" STD	0'-7 3/4"			.38	3
	ONE - LOWER WALE MK LW-1						(1195 #EA)	
v	2	C#	17" @ 30.9	19'-0"			587	1174
t	12	BOLTS	7/8 x 6 HEX	HEX			1.7	18
s	12	PIPES	1" STD	0'-11 1/4"			.17	2
	ONE - LOWER WALE MK LW-2						(466 #EA)	
r	2	C#	17" @ 30.9	7'-4			227	454
t	4	BOLTS	7/8 x 6 HEX	HEX			1.7	5
s	4	PIPES	1" STD	0'-11 1/4"			.17	.68
	2	WALE TIERODS MK WE-1					(34.0 #EA)	
w	2	BARS	2" ϕ	8'-3			8.8	17.6
x	4	NUTS	2" H.B. HEX	HEX			8.0	17
	44	TIEBOLT WASHERS MK TBW-1					(20.6 #EA)	
	44	PLS	17" x 1/2	1'-0"			20.6	906
	10	TIEROD WASHERS MK TW-2					(39.4 #EA)	
	10	PLS	17" x 1"	1'-0"			40.8	408
FIELD SPLICE								
	4	-	1" BEVEL WASHERS			MK BW-1 AT COVER PLATE	.37	1.7
	4	BOLTS	1" x 2 1/2 HEX	HEX	NUTS	BS-1 "	1.4	6
	4	-	1" STD CUT WASHERS			CW-1	.159	.64
	88	BOLTS	1" x 1 1/4 HEX	HEX	MK TB-1		3.9	342
	4	PIPES	2" STD x 0-1 1/4	0'-2		FOR WB-1	38	1.5
	4	-	2" STD WASHERS			WB-2	.551	2
	12	PIPES	1" STD x 0-7 3/4			PB-1	FIELD SPLICE	5
	12	BOLTS	7/8 x 7 HEX	HEX		SB-1	" "	1.7	20
	24		7/8 WASHERS			CW-2	" "	.116	3

REV. SYM.	DATE	REVISION	CHK. BY

COMMERCIAL STAMPING & FORGING, INC.
CHICAGO

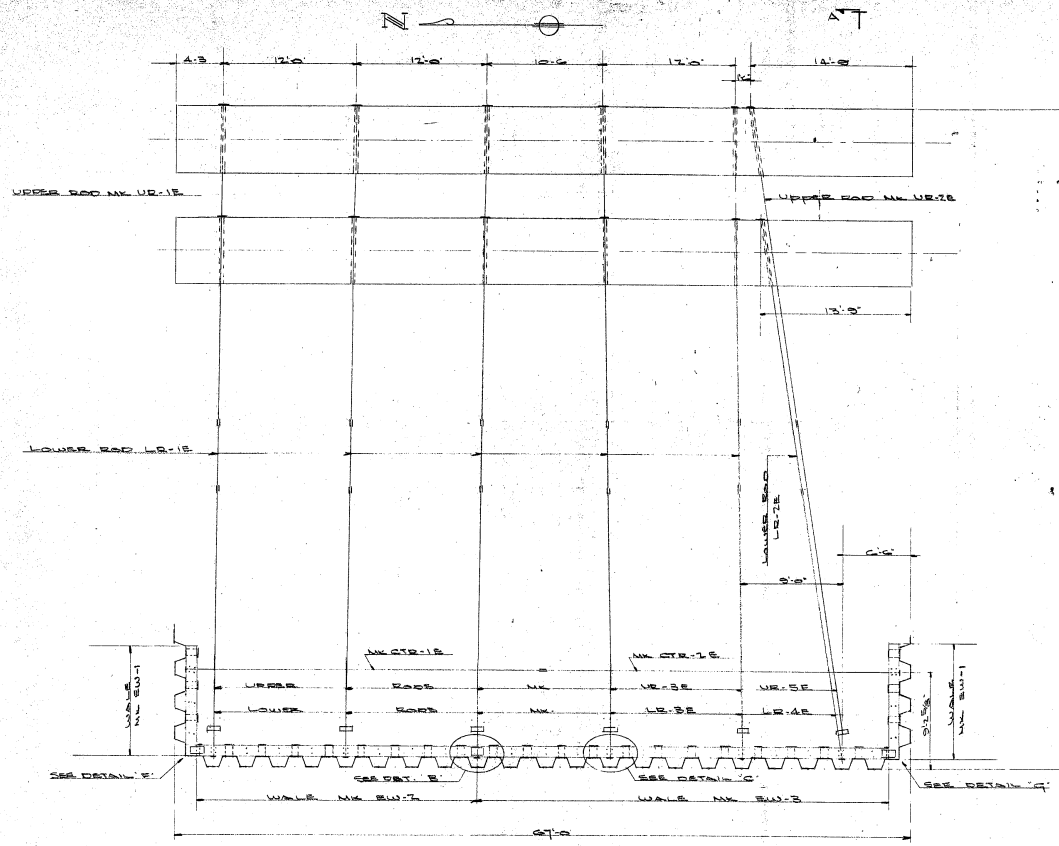
WALES, WASHERS & CONNECTIONS FOR WEST ABUTMENT

DATE	DR. BY	CK. BY	APP. BY
11-2-65	CM	CW	

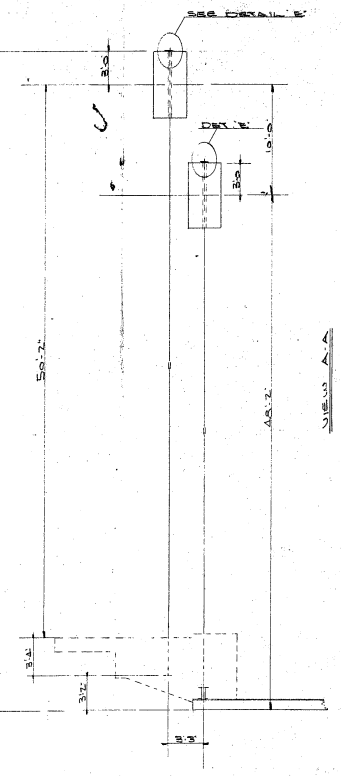
SCALE 1/4" = 1 1/2" = 1'-0"

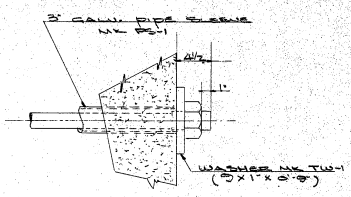
D60-3845-2

GUNNAR B. BODIN, INC., CHICAGO

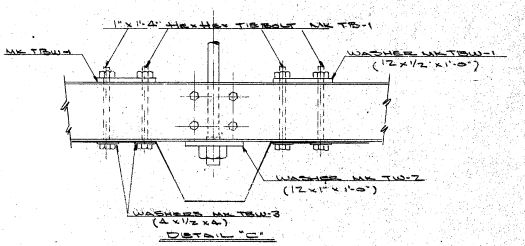


FIELD LOCATION PLAN OF EAST ABUTMENT

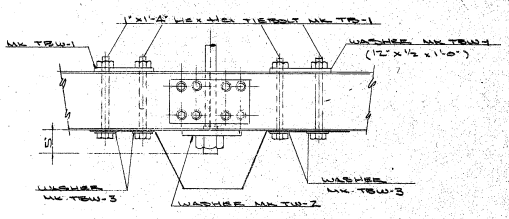




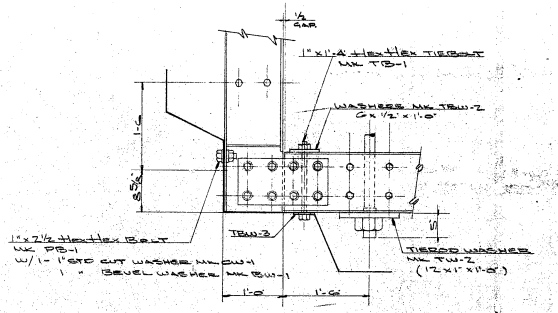
DETAIL "E"



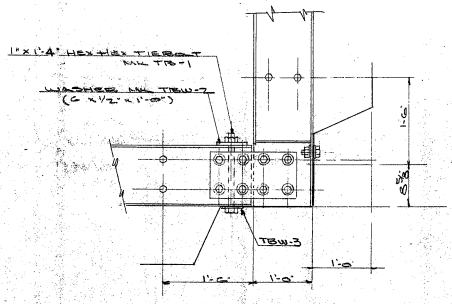
DETAIL "C"



DETAIL "B"



DETAIL "F"
NORTH CORNER



DETAIL "C"
(SOUTH CORNER)

FOR ADDITIONAL DIMENSIONS NOT SHOWN SEE SHOP DETAILS OF ALL COMPONENTS ON DWG. D60-3945-A

TIERODS SHOWN ON DWG. D60-3945-E

APPROVED
NOV 18 1965
George C. Ashton
Bureau of Bridges and Traffic - Milwaukee
MILWAUKEE, WIS.

PROJECT
WEST PAUL AVE. - DETROIT ST.
WEST BRIDGE
CITY OF MILWAUKEE

CONT'R.
EDW. KUESNER & SONS

JOB NO.
2908
4978

PRINTS ISSUED		
NO.	FOR	DATE
4	APPROVAL	11-16
	DISTRIBUTION	
1	MILW. DEPT.	11-16
	SHOP	
	ERECTION	

PIECE MARK	QUAN.	DESC.	SIZE	LENGTH FT.	LENGTH IN.	REMARKS	WT./FT.	WT.

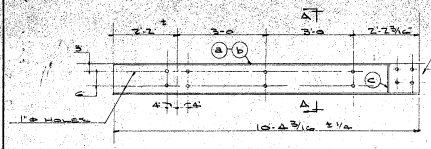
REV. SYM.	DATE	REVISION	CHD. BY

COMMERCIAL STAMPING & FORGING, INC.
CHICAGO

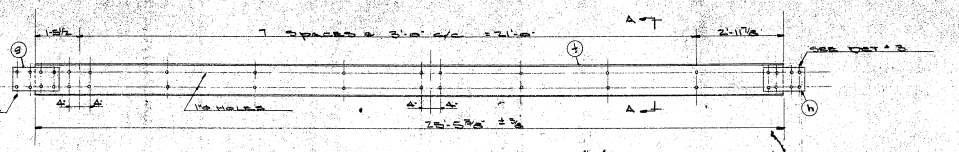
FIELD LOCATION PLAN
EAST ABUTMENT
WINGS AND RODS

DATE 11-3-65 | DR. BY CK. | CH. BY | APP. BY
SCALE 3/8"=1'-0" | D60-3945-B

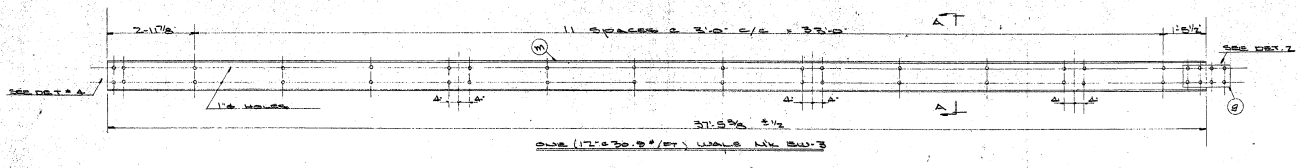
GERNDT & KERN, INC., CHICAGO



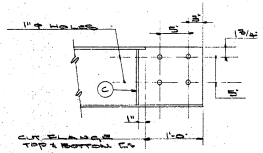
2-(12"ϕ 30.9#/FT) WALE MK BW-1



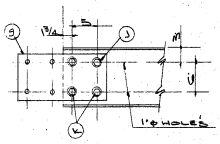
ONE (12"ϕ 30.9#/FT) WALE MK BW-2



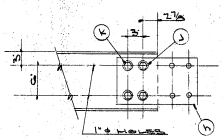
ONE (12"ϕ 30.9#/FT) WALE MK BW-3



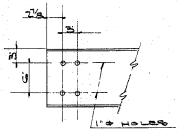
DETAIL NO. 1
WALES BW-1



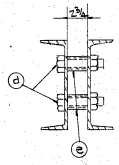
DETAIL NO. 2
WALE MK BW-2



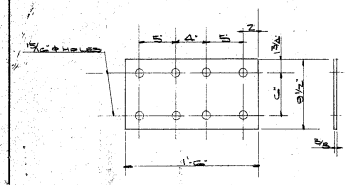
DETAIL NO. 3
WALE BW-2



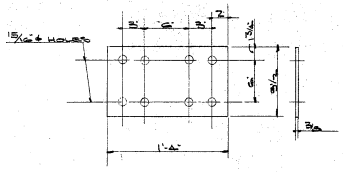
DETAIL NO. 4
WALE BW-3



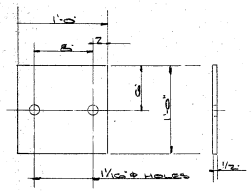
SECTION A-A



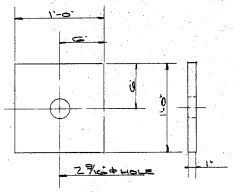
SPLICE PLATE RE. MK. g
4 - REQ'D



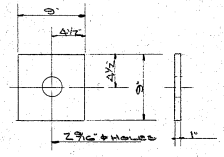
SPLICE PLATE RE. MK. h
2 REQ'D



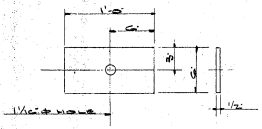
TIEBOLT WASHER MK. TBW-1
26 REQ'D (PART ABUT.)



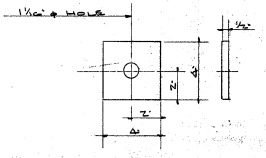
TIEROD WASHERS MK. TW-2
8 - REQ'D



TIEROD WASHERS MK. TW-1
12 REQ'D.



TIEBOLT WASHER MK. TBW-2
2 REQ'D



TIEBOLT WASHER MK. TBW-3
54 REQ'D

		2 -	WALES	MK.	BW-1		(667	#/EA)	
a	2	PL	12"x 30.9#	10	4 3/16		320	640	
b	2	PL	12"x 30.9#	10	4 3/16		320	640	
c	4	BAR	3 x 3/8	1	0	CUT TO FIT	5.8	15	
d	16	BOLT	7/8 x 6 HEX	HEX			1.5	24	
e	16	PIPE	1" STD	0	2 3/4		.38	6	
		ONE -	WALE	MK.	BW-2		(1697.0	#/EA)	
f	2	PL	12"x 30.9#	25	5 3/8		786.0	1572	
g	2	PL	9 1/2 x 3/8	1	6		18.0	36	
h	2	PL	9 1/2 x 3/8	1	4		16.0	32	
j	8	BOLT	7/8 x 7 HEX	HEX			1.7	14	
k	16	-	7/8" STD CUT WASHERS				.116	2	
e	28	PIPE	1" STD	0	2 3/4		.38	11	
d	70	BOLT	7/8 x 6 HEX	HEX			1.5	30	
		ONE -	WALE	MK.	BW-3		(741.6	#/EA)	
m	2	PL	12"x 30.9#	37	5 3/8		1159.0	2316	
d	30	BOLT	7/8 x 6 HEX	HEX			1.5	45	
e	54	PIPE	1" STD	0	2 3/4		.38	13	
g	2	PL	9 1/2 x 3/8	1	6		18.0	36	
j	4	BOLT	7/8 x 7 HEX	HEX			1.7	7	
k	8	-	7/8" STD CUT WASHERS				.116	0.93	
		2 -	TIEBOLT WASHERS		MK. TBW-2		(10.0	#/EA)	
	2	PL	12" x 1/2	0	6		10.2	20	
		26	TIEBOLT WASHERS		MK. TBW-1		(20.0	#/EA)	
	26	PL	12 x 1/2	1	0		20.4	530	
		8	TIEROD WASHERS		MK. TW-2		(39.6	#/EA)	
	8	PL	12 x 1	1	0		40.8	326	
		12	TIEROD WASHERS		MK. TW-1		(21.0	#/EA)	
	12	PL	9 x 1	0	9		33.0	396	
		54	TIEBOLT WASHERS		MK. TBW-3		(7.9	#/EA)	
	54	BAR	4 x 1/2	0	4		7.3	158	
FIELD WELD -									
	4	-	1" BEVEL WASHERS AT MN.			MK. TBW-4 CORNER PLATES	.57	1.7	
	4	BOLT	1" x 2 1/2 HEX	HEX	PB-1	"	1.4	6	
	4	WASH	1" STD CUT WASHERS			MK. CW-4	.159	.64	
	54	BOLT	1" x 1'-2" HEX	HEX		MK. TB-1	2.9	211	
	12	PIPE	1" STD x 0'-2 3/4	MK.	PB-1	FIELD SPLICE	3.8	5	
	12	BOLT	7/8 x 7 HEX	HEX	SB-1	" "	1.7	20	
	24		7/8 WASHERS	MK.	CW-2	" "	.116	3	

PIECE MARK	QUAN.	DESC.	SIZE	FT.	IN. LENGTH	REMARKS	WT. EA.	WT.

REV. SYM.	DATE	REVISION	CHG. BY

APPROVED
NOV 18 1965
George C. Ashton Supt.
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

PROJECT
W. ST. PAUL AVE. - DETROIT ST.
LIFT BRIDGE
CITY OF MILWAUKEE

CONT'R. EDW. K. KUENZLER & SONS
JOB NO. 2005 A-018

PRINTS ISSUED		
NO.	FOR	DATE
4	APPROVAL	11-4-66
	DISTRIBUTION	
1	MILW. DIST.	11-16
	SHOP	
	ERECTION	

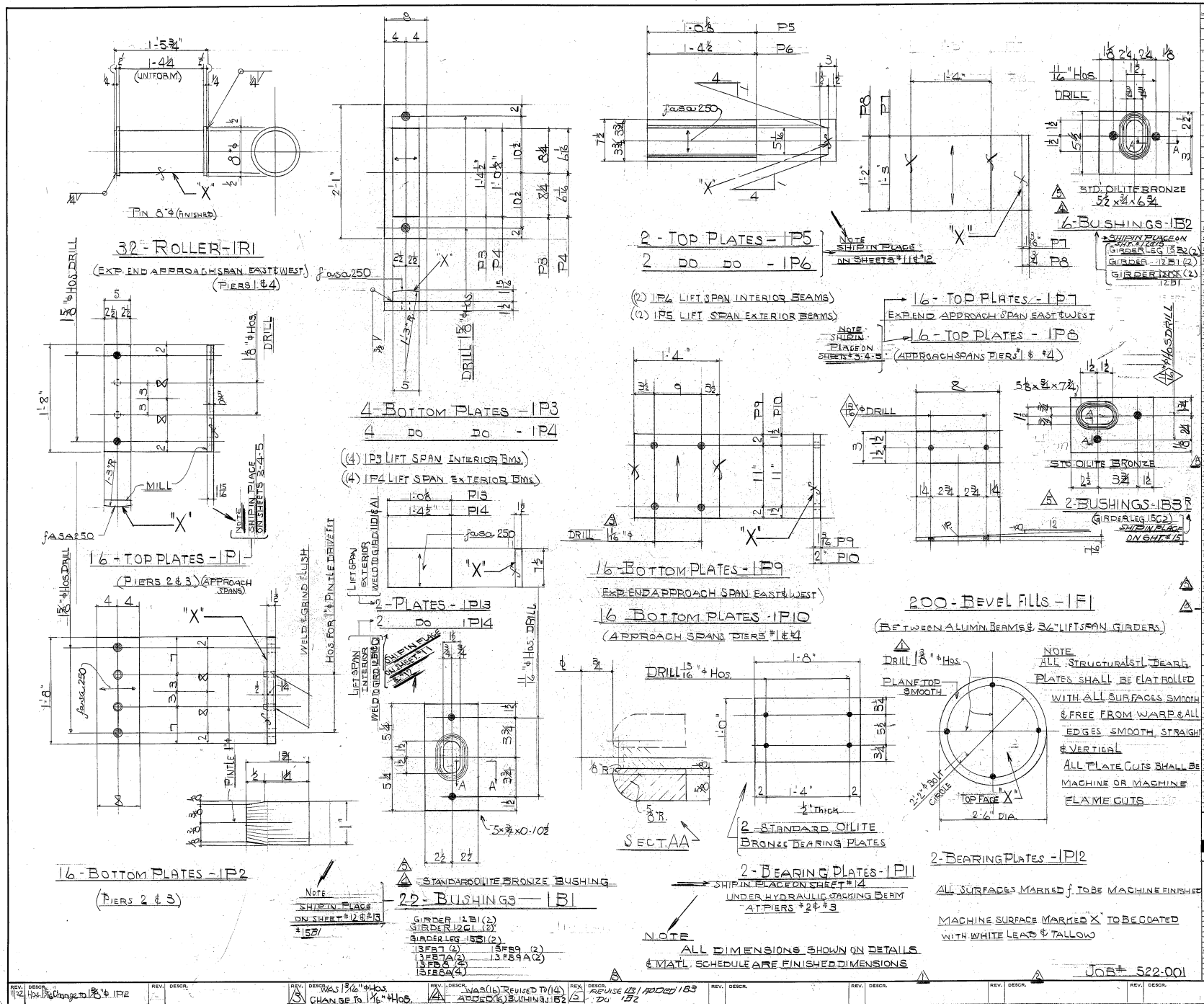
COMMERCIAL STAMPING & FORGING, INC.
CHICAGO

WALES - WASHERS & COMPONENTS FOR EAST ABUTMENT

DATE 1-24-66 DR. BY CK. CH. BY APP. BY

SCALE 1/2"-1"-1 1/2" PT. D60-3945-4

GLASSON & KOHL, INC., CHICAGO



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH	PROVISIONS AND REMARKS	SPECIAL PURCHASES	P.A.
1			32 ROLLER - 1R1					
2								
3	32		PINS 8"φ FIN. DIM.		1 5¾	A36 STEEL		
4								
5	64		PL. WASHER					
6				9 x ½	0 9	A36 STEEL		
7								
8			16 - TOP PLATES - 1P1			SHIP IN PLACE ON SHEETS 3-4-5		
9								
10	16		PL.	5 x 1 15/16	1 8	MILL TOP FIN. BOTT. A36 STEEL	WEIGHT ON SHT. #3-4-5	
11								
12								
13			16 - BOTTOM PLATES - 1P2					
14								
15	16		PL.	8 x 1½	1 8	A36 STEEL FIN. TOP		
16	32		PINTELS 1"φ		0 1¾	A36 STEEL		
17								
18								
19			4 BOTTOM PLATES - 1P3					
20			4 DO DO 1P4					
21								
22	8		PL.	8 x 1½	2 1	A36 STEEL		
23	4	P3	PL.	5 x 1 15/16	1 4½	FIN. 1 SIDE DO		
24								
25	4	P4	PL.	5 x 1 15/16	1 0⅛	FIN. 1 SIDE DO		
26								
27								
28			2 - TOP PLATES - 1P5					
29			2 DO DO - 1P6					
30								
31	2	P5	PL.	7½ x 3	1 0⅛	A36 STEEL	WEIGHT ON SHEET 11	
32								
33	2	P6	PL.	7½ x 3	1 4½	A36 STEEL	WEIGHT ON SHEET 12	
34								
35			16 - PLATES - 1P7			SHIP IN PLACE ON SHEETS #3-4-5		
36			16 DO 1P8			DO		
37								
38	16	P7	PL.	15 x 1 3/16	1 4	FIN. 1 SIDE A36 STEEL FIN. 2 E.	WEIGHT ON SHT. #3-4-5	
39								
40	16	P8	PL.	14 x ¾	1 4	FIN. 1 SIDE A36 STEEL FIN. 2 E.	WEIGHT ON SHT. #3-4-5	
41								
42			2 - BUSHINGS - 1B3			SHIP IN PLACE AND WEIGHT ON SHT. #15		
43	2		PL.	5⅛ x ¾	0 7¾	STD. OILITE BRONZE		
44			16 BOTTOM PLATES - 1P9					
45			16			1P10		
46	16	P9	PL.	15 x 1 3/16	1 4	FIN. 1 SIDE A36 STEEL FIN. 2 E.		
47								
48	16	P10	PL.	14 x 2	1 4	FIN. 1 SIDE A36 STEEL FIN. 2 E.		
49								
50			200 BEVEL FILLS - 1F1					
51	200		PL.	3 x ½	0 8	A36 STL.		
52								
53			22 - BUSHINGS - 1B1			SHIP IN PLACE ON SHT. 12 & 13 #15		
54	22		BUSHING STANDARD OILITE BRONZE					
55				5 x ¾	0 10½	WEIGHT ON SHT. 12-13-15		
56			6 - BUSHING - 1B2			SHIP IN PLACE ON SHT. 12 & 15		
57	16		BUSHING STANDARD OILITE BRONZE					
58				5½ x ¾	0 6¾	WEIGHT ON SHT. 12 & 15		
59			2 - BEARING PLATES - 1P11			SHIP IN PLACE ON SHT. #14		
60			STANDARD OILITE BRONZE BRG. PL.					
61								
62	2			12 x ½	1 8	WEIGHT ON SHEET 14		
63								
64			2 - BEARING PLATES - 1P12					
65	2		PL.	30 x 1 FINISHED DIM.	2 6	FIN. 1 SIDE A36 STEEL		
66								
67								
68			2 - PLATES - 1P13			SHIP IN PLACE ON SHEET 11		
69								
70	2		PL.	7½ x 1½	1 0⅛	FIN. 1 SIDE A36 STEEL	WEIGHT ON SHT. #11	
71								
72			2 PLATES - 1P14			SHIP IN PLACE ON SHT. #12		
73	2		PL.	7½ x 1½	1 4½	FIN. 1 SIDE A36 STEEL	WEIGHT ON SHT. #12	
74								
75								

WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J.C. THEILACKER MILWAUKEE WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION W. ST. PAUL AVE. E. DETROIT ST. MILWAUKEE
DETAILS OF ROLLERS PLATES (MACHINE FINISH) WIS.
SHOP PAINT ICT. ETR 860 (SEE SPEC.) EXC. NOTED

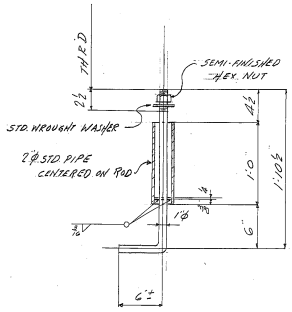
MADE BY O.S. DATE 11/10/65
CHECKED BY F.S. DATE 1/7/66
RIVETS OPEN HOLES NOTED
MAX. SHIPPING LGTH. CUST. ORDER NO.

CONT. NO. 8412 SHEET NO. 1

Member of AISC

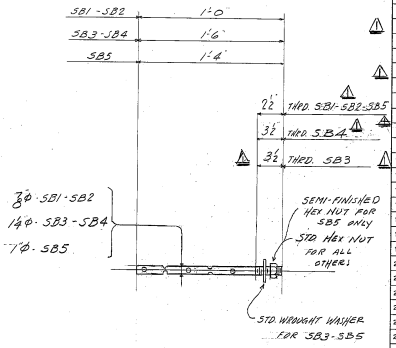
REV. 11/22 DESCR. Hos. 1 3/16 Change to 1 3/8"φ 1P12 | REV. DESCR. | REV. 3 DESCR. WAS 1 3/16"φ HOS. CHANGE TO 1 1/16"φ HOS. | REV. 4 DESCR. WAS (16) REVISED TO (14) ADDED (6) BUSHINGS 1B2 | REV. 5 DESCR. REVISE 1B1 ADDED 1B3 DO 1B2 | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REVISION 1 2 3 4 5 6 7 8 9

JOB # 522-001



64-ANCHOR BOLTS-2AB3

(CWT. BARING-38)



64-SWEDGE ANCHOR BOLTS-2SB1

(EAST & WEST ABUT.)

64- " " " -2SB2

(PIER #1 & #4)

32- " " " -2SB3

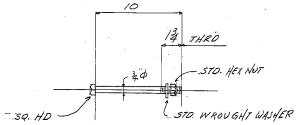
(PIER #2 & #3-APPROACH SIDE)

16- " " " -2SB4

(PIER #2 & #3 LIFT SIDE)

8- " " " -2SB5

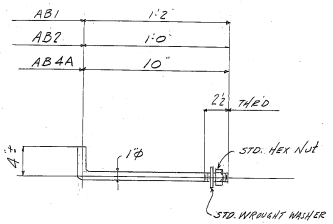
(PIER #2 & #3 LIFTING SIDE)

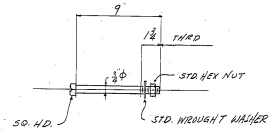


32 ANCHOR BOLTS-2AB6

(CWT. GUIDE SET #28)

64 (32-Shipped on Item #4 this order) (32 Shipped on Bill #802)





16-ANCHOR BOLTS-2AB5

(BRIDGE OPERATOR'S HOUSE)

44-ANCHOR BOLTS-2AB1

(ASSEMBLY 12/12) (ASSEMBLY 12/12-2)

20- " " -2AB2

(ASSEMBLY 12/12)

16- " " -2AB4A

(ASSEMBLY 12/12-(18/12))

LINE	PIECE	ASSEM. MARK	LOCL.	MAT.	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
1				64-SWEDGE ANCHOR BOLTS-2SB1						
2				64- " " -2SB2						
3				32- " " -2SB3						
4				16- " " -2SB4						
5				8- " " -2SB5						
6	128	SB1 SB2	Rod	⅞"ϕ	1	0				
7	48	SB3 SB4	Rod	1¼"ϕ	1	6	SB3 (32) SB4 (16)			
8	8	SB5	Rod	1"ϕ	1	4				
9	128	SB1 SB2	STD. HEX NUTS-⅞"ϕ							
10	48	SB3 SB4	STD. HEX NUTS-1¼"ϕ				SB3 (32) SB4 (16)			
11	8	SB5	SEMI-FIN. HEX NUT 1"ϕ							
12	32	SB3	STD. WROUGHT WASHER FOR 1¼"ϕ							
13	8	SB5	STD. WROUGHT WASHER FOR 1"ϕ							
14										
15										
16										
17										
18										
19				44-ANCHOR BOLTS-2AB1						
20				20- " " -2AB2						
21	44	AB1	Rod	1"ϕ	1	6	Bent			
22	20	AB2	Rod	1"ϕ	1	4	"			
23	64		STD. HEX NUTS-1"ϕ							
24	64		STD. WROUGHT WASHERS-1"							
25										
26										
27										
28										
29										
30										
31				64-ANCHOR BOLTS-2AB3						
32	64		Rod	1"ϕ	2	4½	Bent			
33	64		STD. PIPE 2"ϕ							
34	64		Pl. 2"ϕ x ¼ THICK							
35	64		SEMI-FIN. HEX NUTS 1"ϕ							
36	64		STD. WROUGHT WASHER-1"							
37										
38										
39										
40										
41										
42				64						
43				32 ANCHOR BOLTS-2AB6						
44	32		SQ. HD. Bolts-¾"ϕ		0	10	w/STD. HEX NUT			
45							& STD. WROUGHT WASHER			
46	64									
47										
48										
49				16-ANCHOR BOLTS-2AB5						
50	16		SQ. HD. Bolts-¾"ϕ		0	9	w/STD. HEX NUT			
51							& STD. WROUGHT WASHER			
52										
53										
54										
55										
56										
57				NOTE:-						
58				ALL BOLTS SHALL BE MADE OF RIVET						
59				STEEL AND SHALL BE ANNEALED						
60				BEFORE BEING MACHINED.						
61										
62										
63				16-ANCHOR BOLTS-2AB4A						
64	16		Rod	1"ϕ	1	2	Bent			
65	16		STD. HEX NUTS-1"ϕ							
66	16		STD. WROUGHT WASHERS-For 1"ϕ							
67										
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WISCONSIN BRIDGE & IRON CO.

5023 NORTH 35th ST • MILWAUKEE, WIS. 53209

Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J. C. THEILACKER MILWAUKEE WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION W. ST. PAUL AVE. & EAST DETROIT ST. MILWAUKEE WIS.
DETAILS OF ANCHOR BOLTS
SHOP PAINT NONE

MADE BY R. Buck DATE 12-2-65
CHECKED BY DS DATE 12/15/65
RIVETS — OPEN HOLES —
MAX. SHIPPING LGTH. — CUST. ORDER NO. —

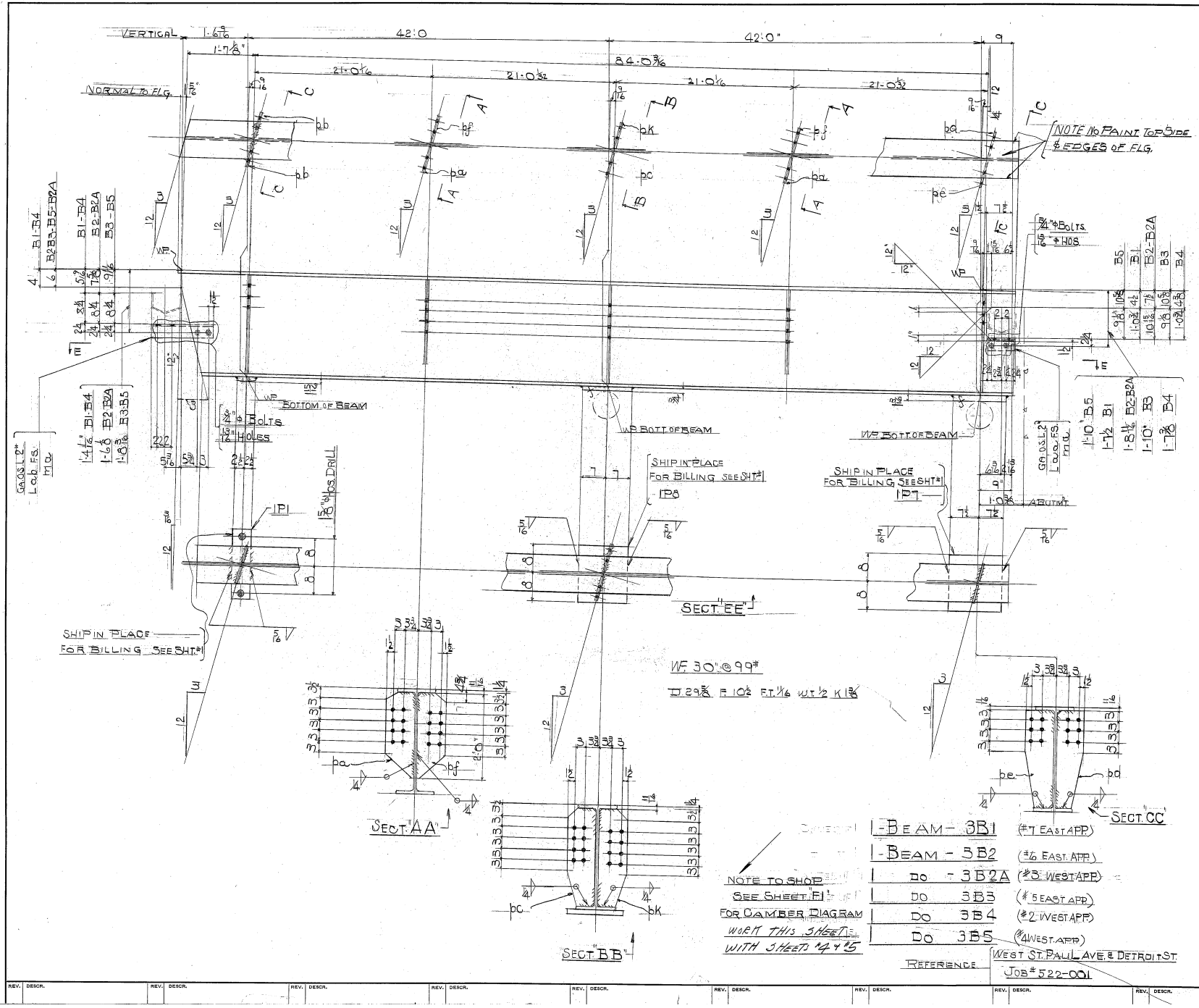
CONT. NO. 8412 SHEET NO. 2

JOB # 522-001

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.
										2	CHANGED QUANTITY OF BOLTS 2AB6 R.H. 1-27-66	1	ADDED BOLTS FOR CABLE ATTACHMENT AS NOTED 12-27-65

REVISION 1 2 3 4 5 6 7 8 9

Member of AISC



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT. IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP WEIGHT	P.A.
1			1	1-BEAM - 3B1					
2			1	1-BEAM - 3B2					
3			1	DO - 3B2A					
4			1	DO - 3B3					
5			1	DO - 3B4					
6			1	DO - 3B5					
7									
8	6		WF	30"@99#	86 5 5/8	PL 1/16 @ 86 5 5/8			
9	6	a,a	L	4x3 1/2x3/8	0 8 1/2				
10	24	ma		H.S. BOLTS 3/4"-ϕ	0 2"				
11									
12	6	ab	L	3 1/2x3 1/2x5/16	1 7 1/2				
13									
14	12	ba	PL	8x1/2	2 0	1.E.E.			
15	12	bb	PL	8x1/2	2 0	1.E.E.			
16									
17	6	bc	PL	8x1/2	2 4 1/4	2.E.E.			
18	6	bk	PL	8x1/2	2 4 1/4	2.E.E.			
19	6	bd	PL	8x1/2	2 4 1/4	2.E.E.			
20									
21	6	be	PL	8x1/2	2 4 1/4	2.E.E.			
22									
23	12	bb	PL	8x1/2	2 4 1/4	2.E.E.			
24									
25									
26									
27									
28									
29	6	IP1	PL	5x1 11/16	1 8	SHOP WELD			
30						MATL. PROVIDED ON SHT #1			
31									
32	6	IP7	PL	15x1 3/16	1 4	SHOP WELD			
33						MATL. PROVIDED ON SHT #1			
34									
35	6	IP8	PL	14x3/4	1 4	SHOP WELD			
36						MATL. PROVIDED ON SHT #1			
37									
38									
39									
40									
41									
42									
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J.C. THEILACKER
DESCRIPTION CITY OF MILWAUKEE, WIS
LOCATION MILWAUKEE WIS
DETAILS OF BEAMS
SHOP PAINT IOT TR860 (SEE SPECS) (SEE NOTE)

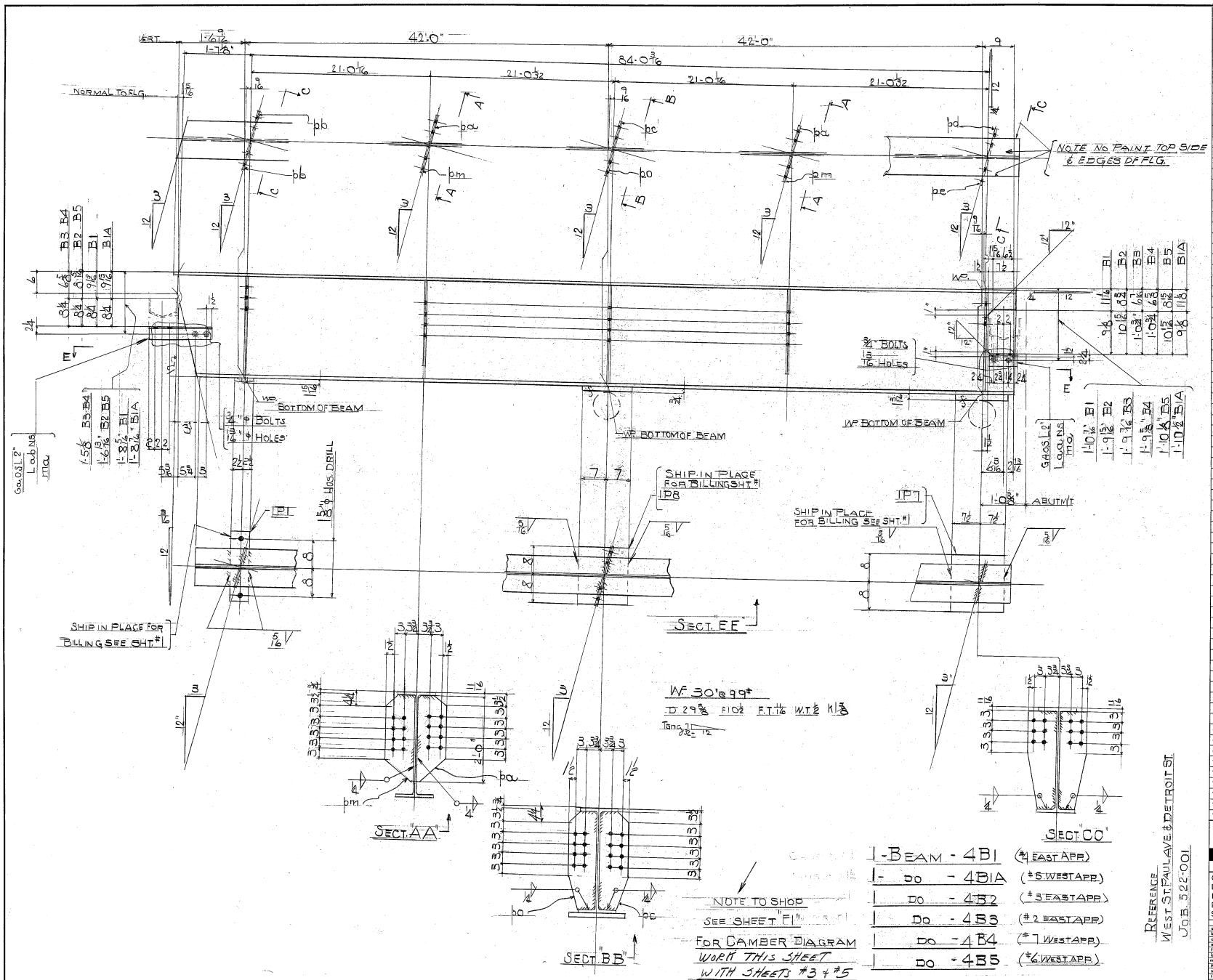
MADE BY D.J. DATE 1-13-65
CHECKED BY F.S. DATE 2-22-66
RIVETS OPEN HOLES 13/16 & 1/N.
MAX. SHIPPING LGTH. 87-2 1/2 OPEN ORDER NO.

CONT. NO. 8412
SHEET NO. 3

REVISION 1 2 3 4 5 6 7 8 9

REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR.

Member of AISC



ITEM	NO. PIECES	ASSEM. MARKS	MATL	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT EA. UNIT	TOTAL WGT.	R.A.
1				1 BEAM - 4B1						
2				1 BEAM - 4B1A						
3				1 DO - 4B2						
4				1 DO - 4B3						
5				1 DO - 4B4						
6				1 DO - 4B5						
7										
8										
9	6		W.	30 @ 99#	86	5 5/8	FROM 86-5 5/8			
10	6	aa	L	4x3½x3/8	0	8½				
11										
12	24	ma		HS. BOLTS						
13				3/4" ϕ	0	2"				
14										
15	6	ab	L	3½x3½x5/16	1	7½				
16										
17	12	ba	PL	8x½	2	0	1 E.E.			
18	12	bm	PL	8x½	2	0	1 E.E.			
19	12	bb	PL	8x½	2	4¼	2 E.E.			
20										
21	6	bc	PL	8x½	2	4¼	2 E.E.			
22	6	bd	PL	8x½	2	4¼	2 E.E.			
23										
24										
25										
26										
27										
28										
29	6	bd		8x½	2	4¼	2 E.E.			
30										
31	6	be	PL	8x½	2	4¼	2 E.E.			
32										
33	6	IP1	PL	5x1 5/8	1	8	SHOP WELD			
34							MATL. PROVIDED ON SHT #1			
35										
36	6	IP7	PL	15x1 3/16	1	4	SHOP WELD			
37							MATL. PROVIDED ON SHT #1			
38										
39										
40	6	IP8	PL	14x3/4	1	4	SHOP WELD			
41							MATL. PROVIDED ON SHT #1			
42										
43										
44										
45										
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

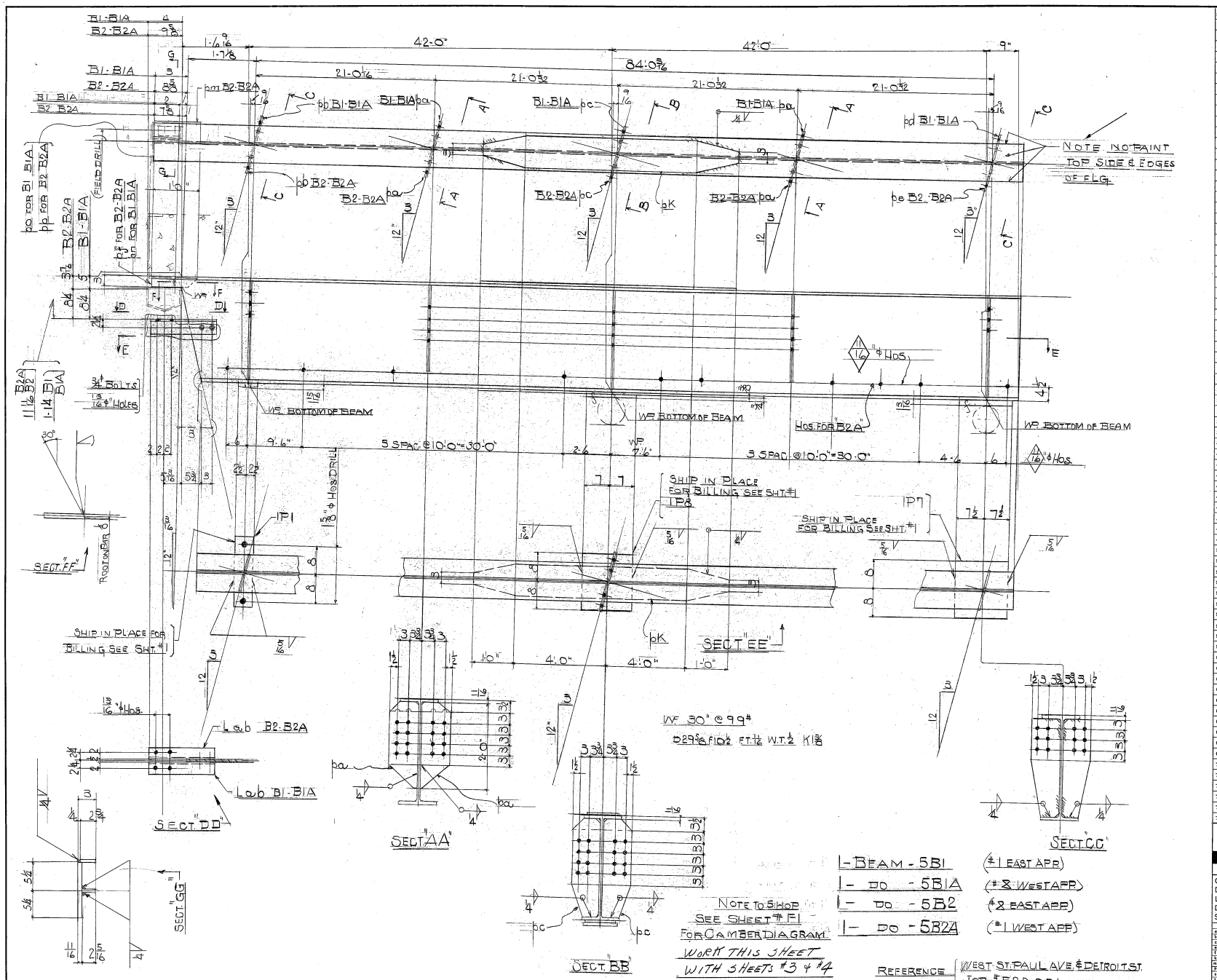
CUSTOMER J.C. THEILACKER
DESCRIPTION CITY OF MILWAUKEE, WIS.
LOCATION MILWAUKEE, WIS.
DETAILS OF BEAMS
SHOP PAINT CT. 11 P.66C (SEE NOTE) (SEE SPECS.)

REVISIONS		
MADE BY	O.S.	DATE 12-14-65
CHECKED BY	F.S.	DATE 2-7-66
RIVETS		OPEN HOLES 13/16
MAX. SHIPPING LGTH.	37-22	CUST. ORDER NO.

CONT. NO. 8412 SHEET NO. 4

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.



ITEM	NO. ELECTRIC	ASSEM. REFERE	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	B A
1										
2			1	BEAM - 5 B1						
3			1	DO - 5 B1A						
4			1	DO - 5 B2						
5			1	DO - 5 B2A						
6										
7										
8	4		WF	30" 99#	86	5 3/4	FROM 86'-5 3/4"			
9										
10	2	ab	L	3 1/2 x 3 1/2 x 5/16	1	7 1/2	B1-B1A			
11										
12	2	ab	L	3 1/2 x 3 1/2 x 5/16	1	7 1/2	B2-B2A			
13										
14	8	ma		HS. BOLTS						
15				3/4" ϕ	0	2"				
16										
17	8	pk	PL	9 x 3/8	1	0				
18										
19	8	pa	PL	8 x 1/2	2	0				
20										
21	4	pb	PL	8 x 1/2	2	4 1/4	2 E.E.			
22										
23	2	pe	PL	8 x 1/2	2	4 1/4	B2-B2A 2 E.E.			
24										
25	2	pd	PL	8 x 1/2	2	4 1/4	B1-B1A 2 E.E.			
26										
27	4	pc	PL	8 x 1/2	2	4 1/4				
28										
29										
30										
31	2	pg	PL	2 9/16 x 1/2	0	7 5/8	B2-B2A			
32										
33	2	pm	PL	2 3/4 x 3/8	1'	0'	B2-B2A			
34										
35	2	pn	PL	2 3/4 x 1/2	0	2'	B1-B1A			
36										
37	2	po	PL	2 x 11/16	0	10 1/2	B1 B1A			
38										
39	2	pp	PL	7 5/8 x 11/16	0	10 1/2	B2-B2A			
40										
41	4	IP1	PL	5 x 1 1/16	1	8	(SHOPWELD)			
42							MATL. PROVIDED ON SH #1			
43										
44	4	IP7	PL	15 x 1 9/16	1	4	(SHOPWELD)			
45							MATL. PROVIDED ON SH #1			
46										
47										
48	4	IP8	PL	14 x 3/4	1	4	(SHOPWELD)			
49							MATL. PROVIDED ON SH #1			
50										
51										
52										
53										
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER U.C. THEILACKER
DESCRIPTION CITY OF MILWAUKEE, WIS.
LOCATION MILWAUKEE, WIS.
DETAILS OF BEAMS
SHOP PAINT TC-TTP-866 SEE SPECS. (SEE NOTE)

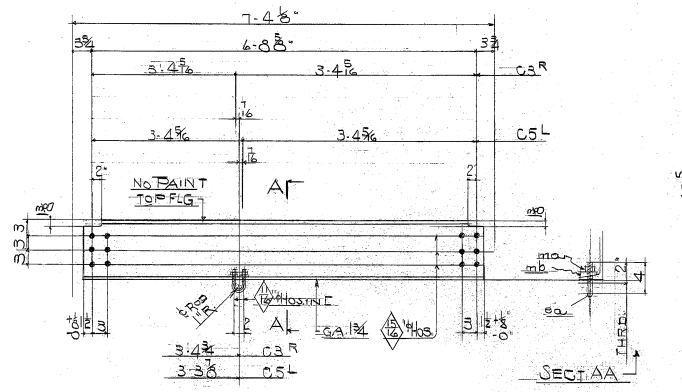
REVISIONS		
MADE BY O.S.	DATE 2-17-65	
CHECKED BY F.S.	DATE 2-7-66	
RIVETS	OPEN HOLES 5/16 U.N.	
MAX. SHIPPING LGTH. 87-2 1/2	CUST. ORDER NO.	

CONT. NO. 8412 SHEET NO. 5

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.

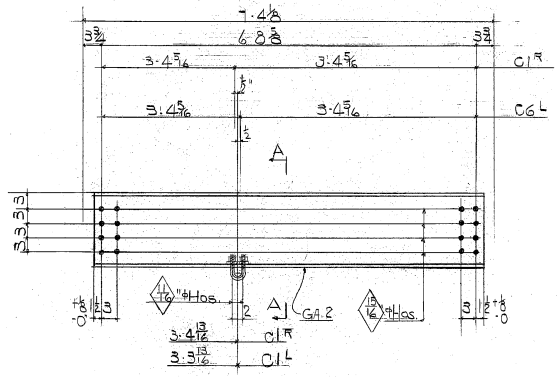
REVISION 1 2 3 4 5 6 7 8 9



[12" @ 20.7#

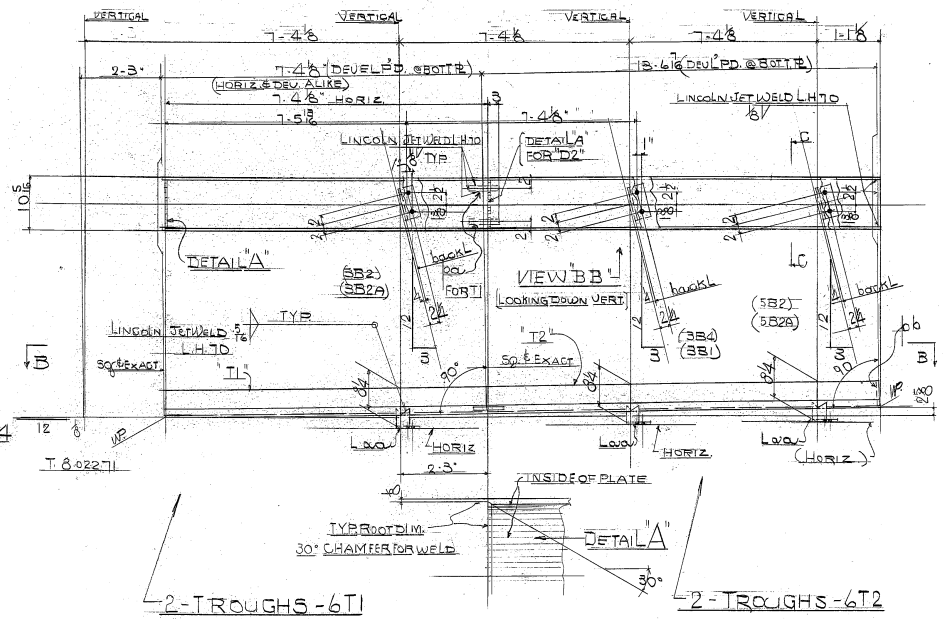
1-CHANNEL-6C3R
DO -6C5L

26-CHANNELS-6C4



[15" @ 33.9#

1-CHANNEL-6C1R
2 DO 6C1L
39 DO 6C2



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL EACH WEIGHT	P.A.
1										
2			1-CHANNEL-6C3R							
3			26 DO -6C4							
4			1 DO -6C5L							
5										
6	28		C	12" @ 20.7	6	11⅝	7/8 ORD. (4) 50'0"			
7										
8	2	ea	ROD	½"φ	0	9¼	BENT C3R C5L			
9	4	ma	HEX. NUTS	½"φ			C3R C5L			
10	4	mb	STD. BEVEL WASHERS				C3R C5L			
11			FOR ½"φ							
12										
13										
14										
15										
16			1-CHANNEL-6C1R							
17			2- DO -6C1L							
18			39 DO -6C2							
19										
20	42		C	15" @ 33.9	6	11⅝	7/2 ORD. (4) 50'0			
21										
22	3	ea	ROD	½"φ	0	9¼	BENT C1R C1L			
23	6		HEX. NUTS	½"φ			C1R C1L			
24	6	mb	STD. BEVEL WASHERS				C1R C1L			
25			FOR ½"φ							
26										
27										
28			2-TROUGHS-6T1							
29			CORTEN				BENT			
30	2		PL	19 x ⅜	7	4⅛	FROM 38" x 28'0			
31										
32	2	aa	L	4 x 3½ 5/16	0	8	TO FIT TROUGH			
33	4	aa	PL	1 x 4	0	6				
34										
35			2-TROUGHS-6T2							
36			CORTEN				BENT			
37	2		PL	19 x ⅜	13	6½	FROM 38" x 28'0			
38										
39	4	aa	L	4 x 3½ 5/16	0	8	TO FIT TROUGH			
40	2	bb	PL	5⅛ x ⅜	0	9⅞				
41			CORTEN							
42										
43										
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

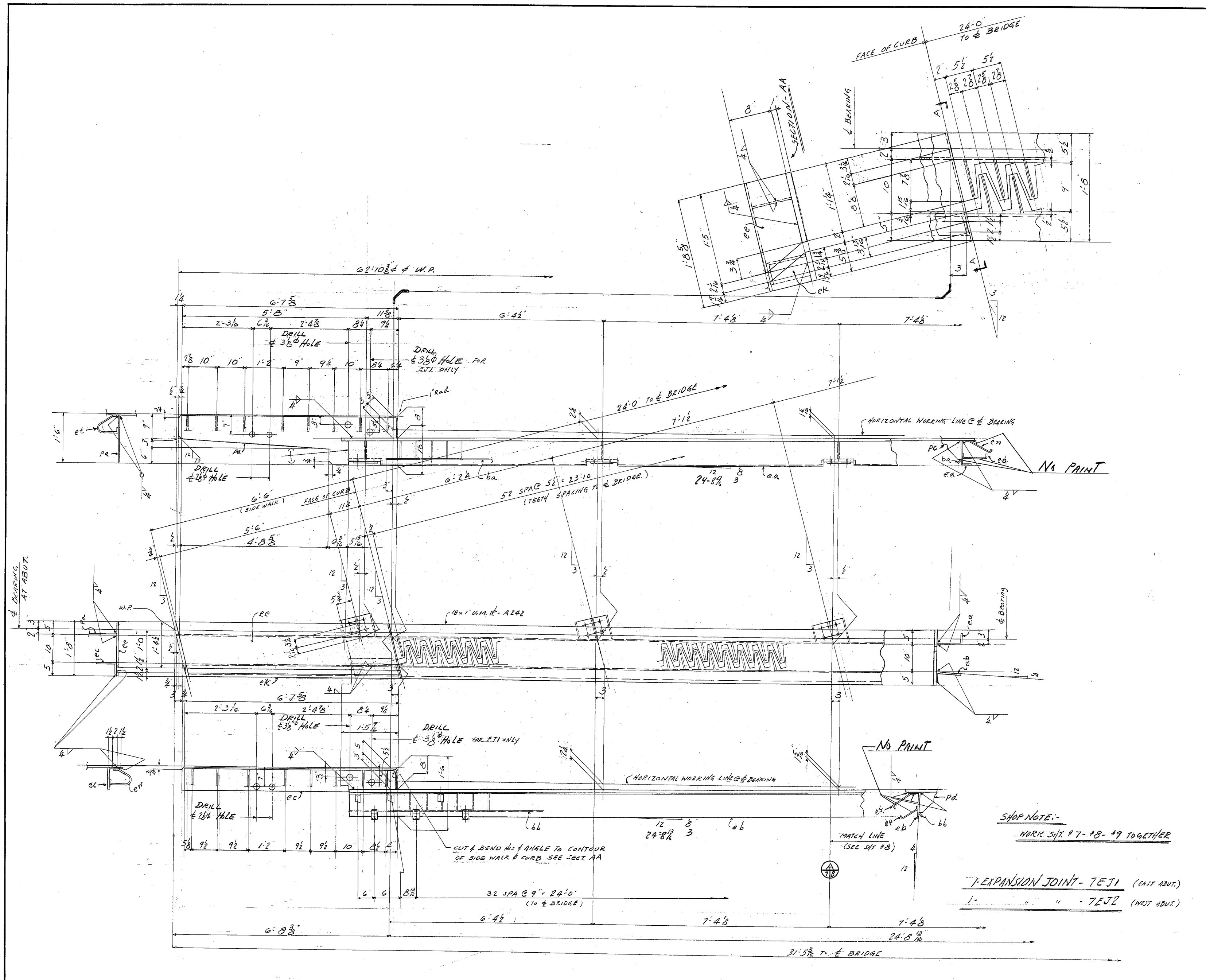
CUSTOMER J.C. THEILACKER
DESCRIPTION CITY OF MILWAUKEE, WIS.
LOCATION MILWAUKEE, WIS.
DETAILS OF BEAMS & CHANNELS
SHOP PAINT DO. TTP 560 (SEE SPECS) (SEE NOTE)

MADE BY DS DATE 12/20/65
CHECKED BY FS. DATE 2-7-66
RIVETS — OPEN HOLES 9/16" DIA.
MAX. SHIPPING LGTH. 13-6½ LIST ORDER-NO.

CONT. NO. 8412 SHEET NO. 6

Member of AISC

REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REVISION 1 2 3 4 5 6 7 8 9



SHOP NOTE:- WORK SHT. #7-#8-#9 TOGETHER

1-EXPANSION JOINT - 7EJ1 (EAST ABUT.)
1- " " - 7EJ2 (WEST ABUT.)

ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
1		1-EXPANSION JOINT-7EJ1								
2		1-		"		"	-7EJ2			
3	2		A242 U.M. ℞s	18×1"	53	0½	8/2 2@50-0 2-19×3-6 SPLICE			
4	2	ea	A242 ∠s	9×4×½	52	4¾	Bent 8/2 4@50-0 1@20-0 SPLICE			
5	2	e.b	A242 ∠s	9×4×½	52	4¾	Bent FROM 50-0 " 20-0 SPLICE			
6	2	ec	∠s	8×4×½	7	6	ABT. cut Bend & weld.			
7	2	ed	∠s	8×4×½	7	6	ABT. Cut Bend & weld			
8	2	pa	℞s	17⅝×⅜	6	8				
9	2	pb	℞s	17⅝×⅜	6	8				
10	2	ee	℞s	18½×⅜	7	8¾	Bent			
11	2	ef	℞s	18½×⅜	7	8¾	Bent			
12	2	ek	℞s	5⅜×⅜	7	3¾	Bent			
13	2	em	℞s	6⅜×⅜	7	3¾	Bent			
14	2	ba	CORTEN BARS	1¼×³⁄₁₆	49	11⅝	P5/5 43@10-0"			
15	2	bb	CORTEN BARS	1¼×³⁄₁₆	49	11⅝	8/4 fr. 10-0"			
16	105	pk	A242 ℞s	7½×½	0	8¼	(1 cut 2) P4/3 @90×22-0			
17	104	pd	A242 ℞s	7½×½	0	8⅜	" 8/6 Fr. 90×22-0			
18	32	et	Bars	⅝ ⌀	1	4½	Bent			
19	32	ew	Bars	⅝ ⌀	1	5¼	Bent			
20										
21	70	en	Bars	1¼×¼	1	0	Bent			
22	56	eo	Bars	1¼×¼	1	0	Bent			
23	70	ep	Bars	1¼×¼	1	0	Bent.			
24	72	es	Bars	1¼×¼	1	0	Bent.			
25	16	bk	Bars	1"×½	0	8⅛	Bevel cut.			
26	16	bm	Bars	1"×½	0	11⅛	" "			
27	16	mc	ST.WF	8@44#	0	10⅞	" "			
28	16	fa	A242 shims	10⁹⁄₁₆×¼	0	8½	B.S. P8/9 fr. 48"×10-0			
29	48	fb	A242 shims	10⁹⁄₁₆×⅛	0	8½	B.S. P8/10 fr. 48"×12-0			
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J.C. THEILACKER MILWAUKEE WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION W. ST. PAUL AVE. & EAST DETROIT ST. MILWAUKEE WIS.
DETAILS OF EXPANSION JOINTS EAST & WEST ABUTMENT.
SHOP PAINT 1 CT. T.T.P.-86C SEE SPEC'S. SEE NOTES.

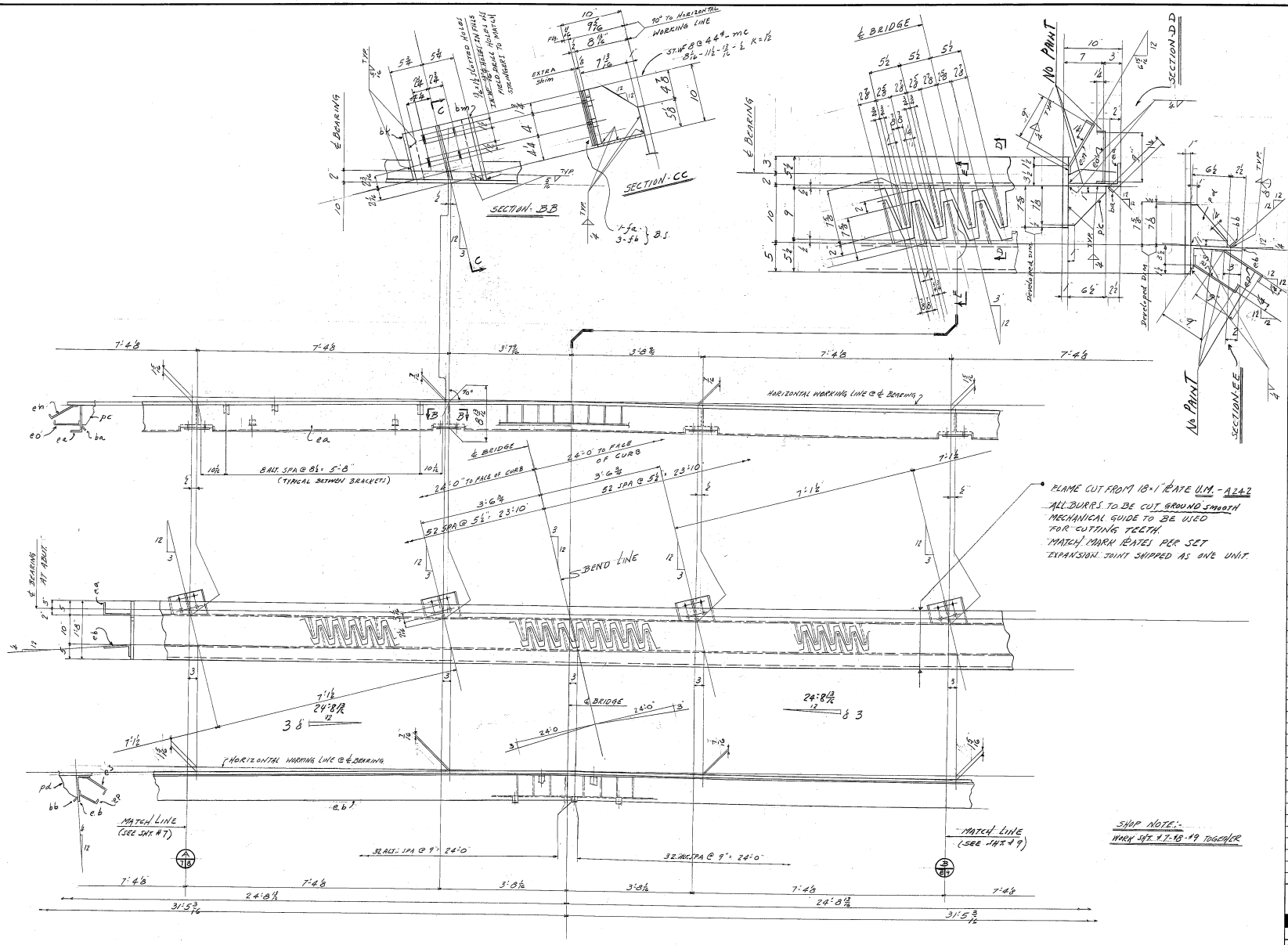
MADE BY R. BUCH DATE 12-28-65
CHECKED BY F.S. DATE 2-14-66
RIVETS
OPEN HOLES AS NOTED
MAX. SHIPPING LGTH. 63'-2"
CUST. ORDER NO.

CONT. NO.	SHEET NO.
8412	7

REVISION 1 2 3 4 5 6 7 8 9

REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR.

Member of AISC



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL EST. WEIGHT	P.A.
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J.C. THEILACKER MILWAUKEE WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION W. ST. PAUL AVE. & EAST DETROIT ST. MILWAUKEE WIS
DETAILS OF EXPANSION JOINTS EAST & WEST ABUTMENT
SHOP PAINT LCT. TTP-86C SEE SPEC'S. SEE NOTES

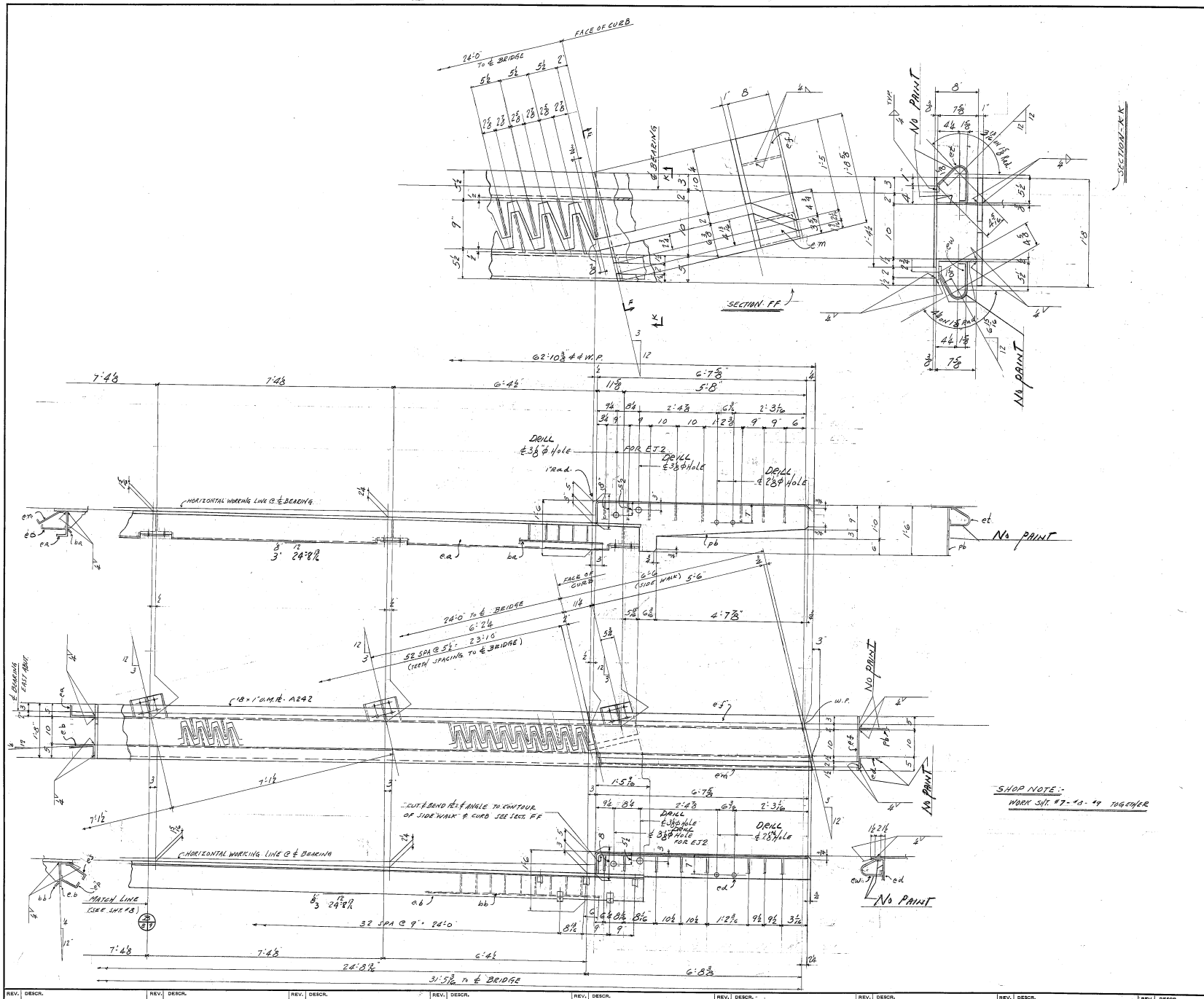
MADE BY R. Buck DATE 12-28-65
CHECKED BY F.L. DATE 2-14-66
RIVETS OPEN HOLES AS NOTED
MAX. SHIPPING LGTH. CUST. ORDER NO.

CONT. NO. 8412 SHEET NO. 8

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.

REVISION 1 2 3 4 5 6 7 8 9



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J.C. THEILACKER MILWAUKEE WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION W. ST. PAUL AVE. & EAST DETROIT ST. MILWAUKEE WIS.
DETAILS OF EXPANSION JOINTS EAST & WEST ABUTMENT
SHOP PAINT ICT. TTP.-86C SEE SPEC'S. SEE NOTES

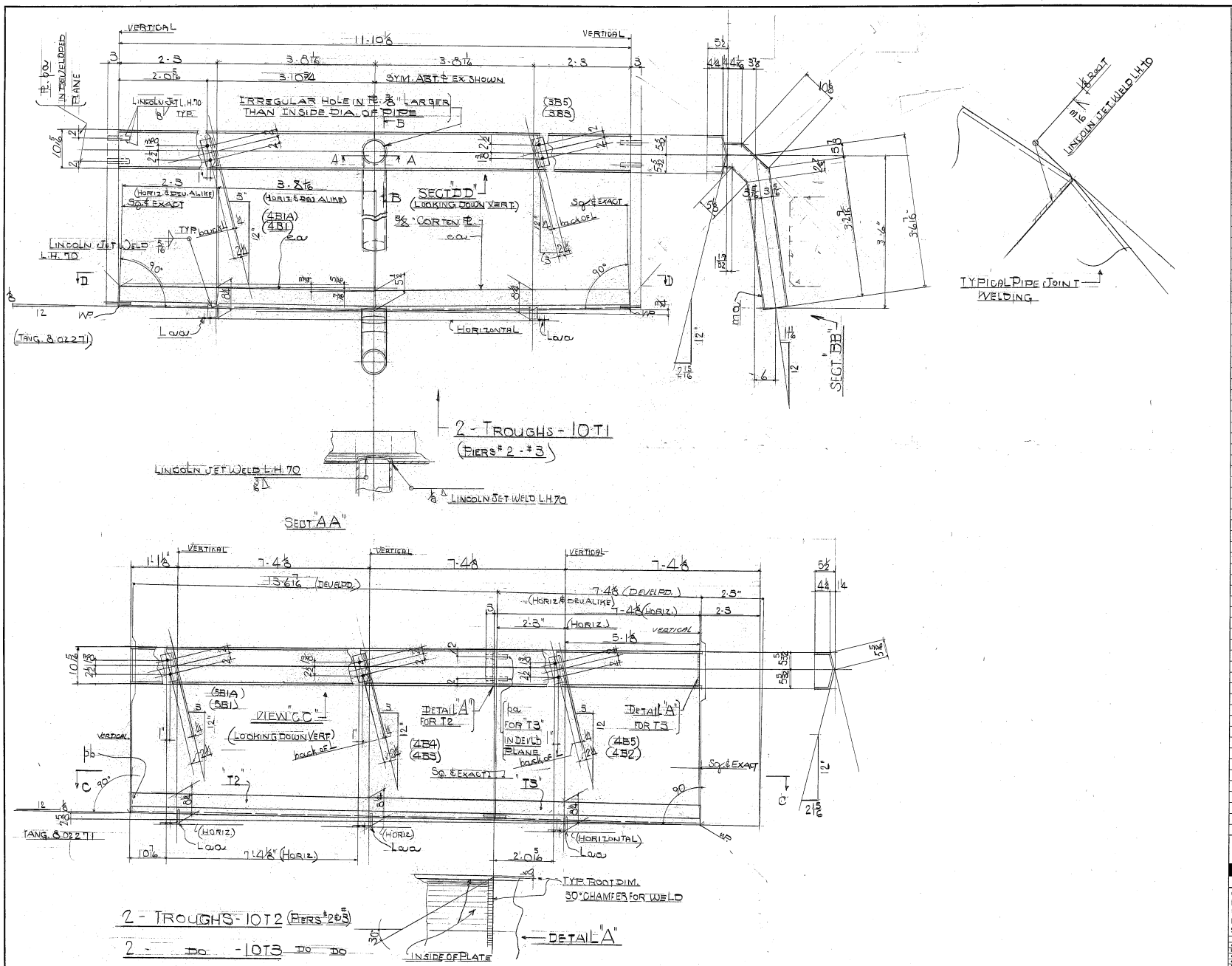
MADE BY R. BUCH DATE 12-28-66
CHECKED BY F.S. DATE 2-14-66
RIVETS OPEN HOLES AS NOTED
MAX. SHIPPING LGTH. CUST. ORDER NO.

CONT. NO. 8412
SHEET NO. 9

REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR.

REVISION 1 2 3 4 5 6 7 8 9

Member of AIA



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT PER UNITS	TOTAL WEIGHT	P.A.
1										
2			2 - TROUGHS 10T1							
3			CORTEN				PID 18(2) 3B x 28'0"			
4	4	ea	PL	19 x 3/8	5	11 1/16	BENT			
5										
6	4	ea	L	4 x 3½ x 5/16	0	8	FIT TO TROUGH			
7										
8	2	ea	WROUGHT							
9			IRON PIPE							
10				6" I.D.	4	8	TO CUT			
11	8	ea	PL	1 x 1/4	0	6				
12										
13										
14			2 - TROUGHS - 10T2							
15			CORTEN				FROM 3B x 28'0"			
16	2	ea	PL	19 x 3/8	13	6 7/16	BENT			
17										
18	4	ea	L	4 x 3½ x 5/16	0	8	FIT TO TROUGH			
19	2	ea	PL	5/8 x 3/8	0	9 1/16				
20			CORTEN							
21										
22			2 - TROUGHS - 10T3							
23			CORTEN				FROM 3B x 28'0"			
24	2	ea	PL	19 x 3/8	7	4 1/8	BENT			
25										
26	2	ea	L	4 x 3½ x 5/16	0	8	FIT TO TROUGH			
27										
28	4	ea	PL	1 x 1/4	0	6				
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J. C. THELACKER
DESCRIPTION CITY OF MILWAUKEE, WIS.
LOCATION MILWAUKEE, WIS.
DETAILS OF DRAIN TROUGH PIERS # 2 & 3
SHOP PAINT 1 CT. T.T.P. 660 SEE SPECS.

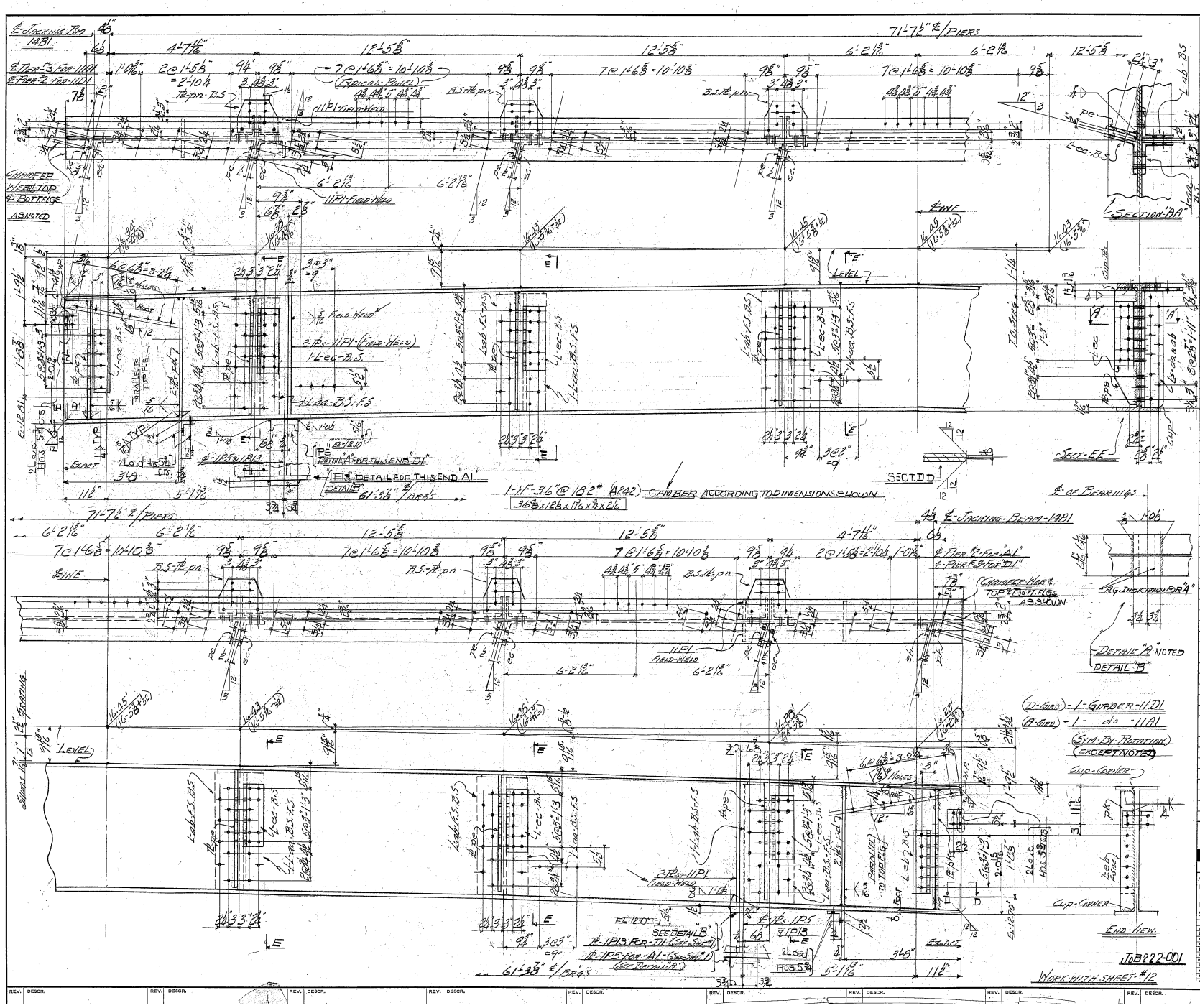
MADE BY OS DATE 12-27-65
CHECKED BY FS DATE 2-8-66
RIVETS DATE
OPEN-HOLES 5/16
MAX. SHIPPING LGTH. 13-6½ CUST. ORDER NO.

CONT. NO. 8412
SHEET NO. 10

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.

REVISION 1 2 3 4 5 6 7 8 9



Item	No. Pieces	Assem. Mark	Descr.	Size	Length Ft.	Length In.	Provisions and Remarks	Weight of Units	Total Shipping Weight	P.A.
1										
2										
3			1 - Girder-11D1							
4			1 - do -11A1							
5				Triten			(Combined-See Drwg.)			
6	2	*A2	NF	36@182#	73	10	2EE-Chamfered (2)	000 73-10	P/11	
7	12	aa	Ls	6x6x⅜	2	9½	2-E-to-Bear			
8	12	ab	Ls	6x6x⅜	2	9⅜	2-E-to-Bear			
9	2	pc	Pls	4x½	2	10	2EE- Cup-Coper			
10	8	pd	Pls	5¾x⅜	2	10"	2EE- Cup-Coper Contours	A242		#16x51
11	12	pe	Pls	6¾x⅜	2	9⅜	1.EE			
12	2	ea	Ls	4x4x⅜	1	6	Open			
13	2	eb	Ls	4x4x⅜	1	6	Close			
14	12	ec	Ls	6x6x⅜	1	6	Open			
15										
16	2	pk	Pls	4bx⅜	2	10				
17	12	pn	Pls	11"x⅜	1	1	B.S.			
18	8	aa	L	4x4x⅜	0	6	B.S.			
19										
20	2	1P5	Pl	7½x⅜	1	0⅝	Shop Weld			
21							(Mat'l. Provided on Sht. #1)			
22										
23	2	1P3	Pl	7½x½	1	0⅝	Shop Weld			
24							(Mat'l. Provided on Sht. #1)			
25										
26	4	ad	L	4x4x⅜	0	8¼	B.S.			
27										
28										
29										
30										
31			B-Plates 11P1							
32										
33	8	P1	Pls	5¾x⅜	2	10	2EE- Shop Weld			
34			(Same as Pls pd.)							
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER: J. G. Theilacker
DESCRIPTION: St. Paul Ave. & Pierpont St. Vertical Lift Bridge
LOCATION: Milwaukee, Wis.
DETAILS OF: A & D - Lift-Span Girders
SHOP PAINT: IOTT TP-860 See Specs.

Revision	Date
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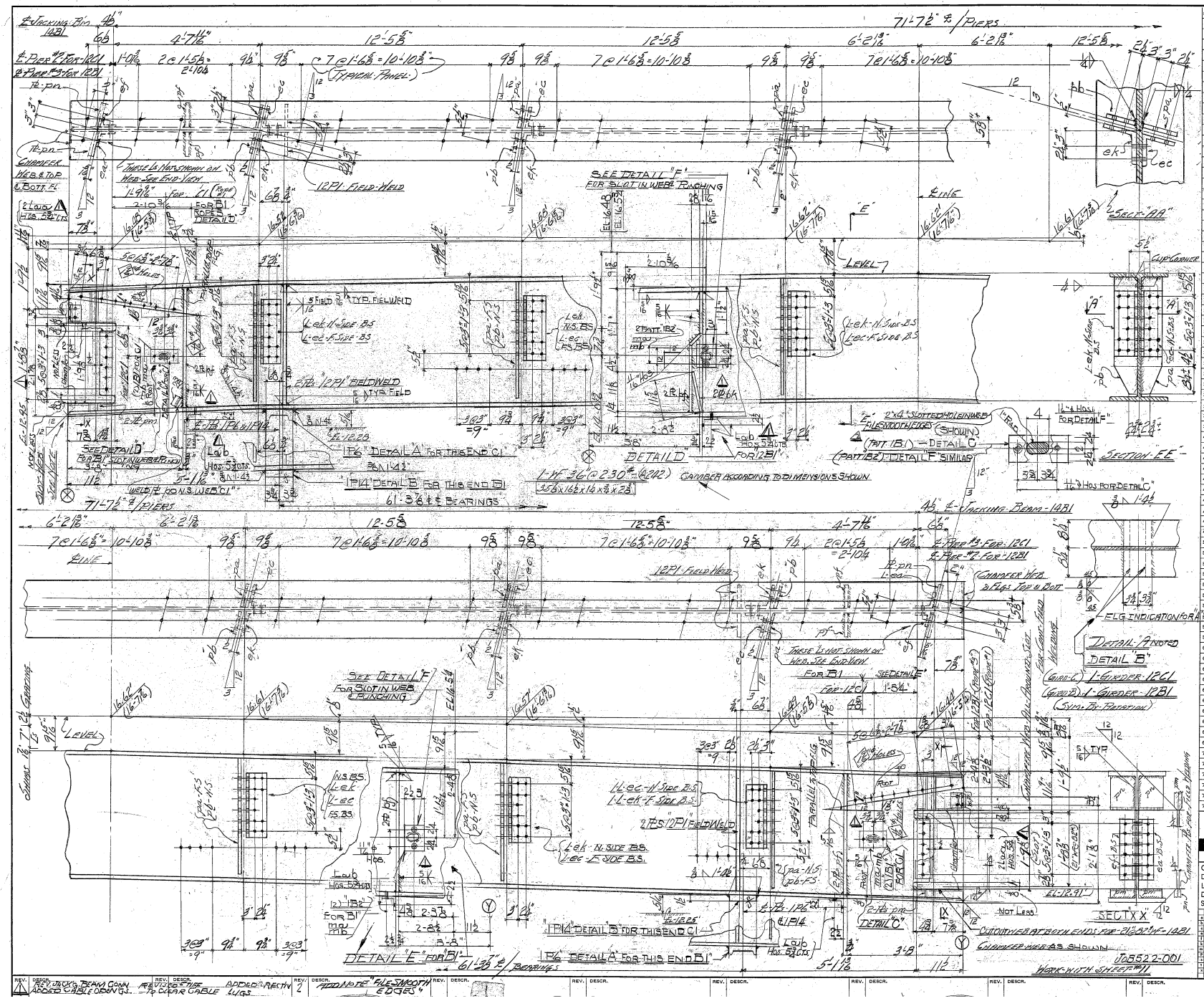
MADE BY: Art Dunne — DATE: 12/7/65
CHECKED BY: OS — DATE: 12/8/65
RIVETS: — OPEN HOLES: 13/16" DIA.
MAX. SHIPPING LGTH.: 73'-9" — CUST. ORDER NO.:

CONT. NO. 8412 — SHEET NO. 11

Member of AISC

Rev.	Descr.	Rev.	Descr.	Rev.	Descr.	Rev.	Descr.	Rev.	Descr.	Rev.	Descr.	Rev.	Descr.	Rev.	Descr.	Rev.	Descr.

Revision: 1 2 3 4 5 6 7 8 9



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT EA. UNITS	TOTAL WGT.	P.A.
1										
2										
3			1 - Girder - 12C1							
4			1 do - 12B1							
5			Truss				Camber See Dwg.			
6	2	AA2	Hf	36 C 230	73	10	See Chamfer Sec. (2) Dwg. 73-10			P1/2
7	4	ab	∠	4 x 4 x ⅜	0	8½	B.S.			
8	12	pa	Pl	6½ x ⅜	2	8½				
9	12	pb	Pls	6½ x ⅜	2	8½				
10	4	ea	Ls	4 x 4 x ⅜	1	6	Open			
11	4	ef	Ls	4 x 4 x ⅜	1	6	Closed			
12	12	ec	Ls	6 x 6 x ⅜	1	6	Closed			
13	12	ek	Ls	6 x 6 x ⅜	1	6	Open			
14	8	pf	Pls	7½ x ½	2	9½	Clip 2 Corners			P.P. 66 x 31
15	8	pn	Pls	7½ x ½	0	10½				
16	8	pm	Pl	2½ x ¾	0	7⅜				
17	2	bh	Pl	7½ x ½	0	11½	For B1			
18	2	PA	Pl	7½ x 3	1	4½				
19			Matl. Provided On Sheet #1							
20	2	P14	Pl	7½ x 12	1	4½				
21			Matl. Provided On Sheet #1							
22	1	bo	Pl	23¾ x ¾	0	7¾				
23	8	aa	L	4 x 4 x ⅜	0	6	B.S.			
24			Std. Oilite Bronze Matl. Provided On Sht #1							
25	4	B1	Bu	5 x ¾	0	10½	For B1			
26			Std. Oilite Bronze Matl. Provided On Sht #1							
27	4	B2	Bu	5 x ¾	0	6½	For B1			
28	8	ma	Std. Bolts ⅝ x		0	8½	Sq. Hd. Hex. Nut			
29	16	mb	Std. Washers ⅝ Short							
30			8 - Plates - 12P1							
31										
32	8	P1	Pls	7½ x ½	2	9½	Clip 2 Corners			P.P. 66 x 31
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

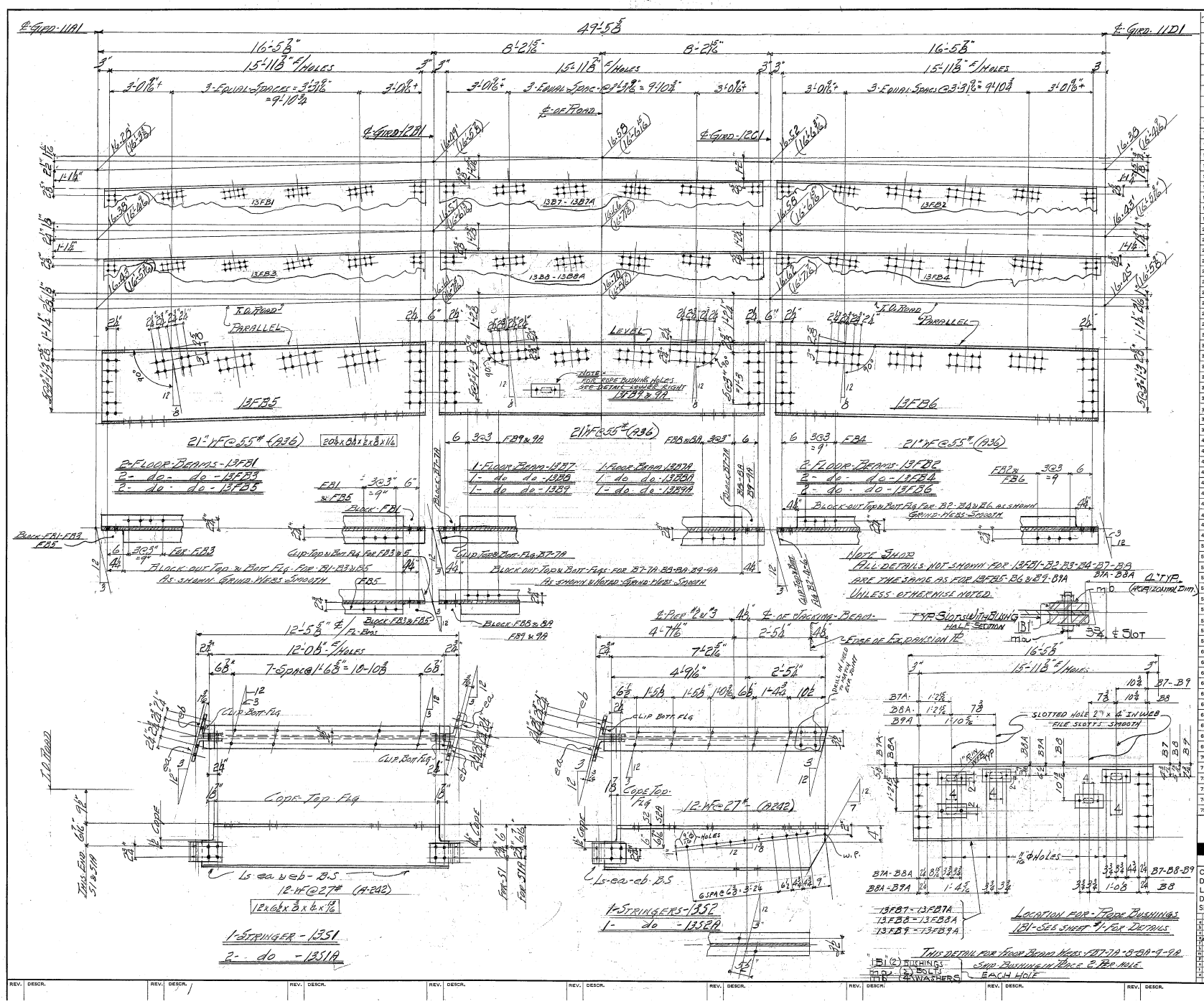
CUSTOMER J. C. THELLACKER
DESCRIPTION 5-Pavilion-5-Detroit 5-Vertical-Lift-Span
LOCATION Milwaukee Wis
DETAILS OF B.N.C. Lift-Span Girders
SHOP PAINT Ict. TTP-860. See Specs.

MADE BY [illegible] DATE 12/8/68
CHECKED BY D.S DATE 2/23/66
RIVETS DATE 5/16/69
MAX. SHIPPING LGTH. 73'-9" OPEN HOLES
COST ORDER NO.

CONT. NO. 8412
SHEET NO. 12

REVISION 1 2 3 4 5 6 7 8 9

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.
1	Rev. Truss & Beam Conn. Added Cable Dwg.	2	Revised Hf. To Clear Cable Lugs	2	Added Rectiv.	2	Add Note "File Smooth Edges"								



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP WEIGHT	C.O.
1										
2			2-FLOOR BEAMS - 13FB1							
3			2- do				do - 13FB2			
4			2- do				do - 13FB3			
5			2- do				do - 13FB4			
6			2- do				do - 13FB5			
7			2- do				do - 13FB6			
8			1- do				do - 13FB7			
9			1- do				do - 13FB8			
10			1- do				do - 13FB9			
11			1- do				do - 13FB7A			
12			1- do				do - 13FB8A			
13			1- do				do - 13FB9A			
14										
15	18		WF	21 @ 55#	16	3½	(A36) PL's ASTM A36			
16				STD. OILITE BRONZE			MATERIAL PROVIDED ON SHT. #1			
17	16	B1	(BUSHING)	5 x ¾	0	10¼	27(2) B7A(2) B8A(4) B8A(2)			
18							27(2) B7A(2)			
19	16	mo	STD. BOLTS	⅝ - 4 x 3¼ G.						
20				27(2) B7A(1) B8(4)			B8A(4) 29(2) B9A(1)			
21	32	mb	STD. WASHER FOR ⅝ Ø							
22				27(4) B7A(4) B8(8)			B8A(8) 27(4) B9A(4)			
23										
24			1-STRINGER - 1351							
25			2- do				- 1351A			
26										
27	3		WF	12 @ 27#	12	3¼	(A-242) PL's ASTM A-283 GR D			
28	6	ea	Ls	6 x 6 x ⅜	0	5¼	B.S.	OPEN		
29	6	eb	Ls	6 x 6 x ⅜	0	5¼	B.S.	CLOSE		
30										
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35										
36			1-STRINGER - 1352							
37			1- do				- 1352A			
38										
39	2		WF	12 @ 27#	7	0¼	(A242) PL's ASTM A-283 GR D BEVEL CUT 1" 40'-0"			
40	2	ea	L	6 x 6 x ⅜	0	5¼	B.S.	OPEN		
41	2	eb	Ls	6 x 6 x ⅜	0	5¼	B.S.	CLOSE		
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WISCONSIN BRIDGE & IRON CO.
3023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER: J. CONTRACTOR
DESCRIPTION: ST. PAUL AVE. & DETROIT ST. VERTICAL LIFT BRIDGE
LOCATION: MILWAUKEE, WIS.
DETAILS OF: FLOOR BEAMS & STEEL STRINGERS
SHOP PAINT: 1 COAT T.T.P. 860 (SEE SPEC.)

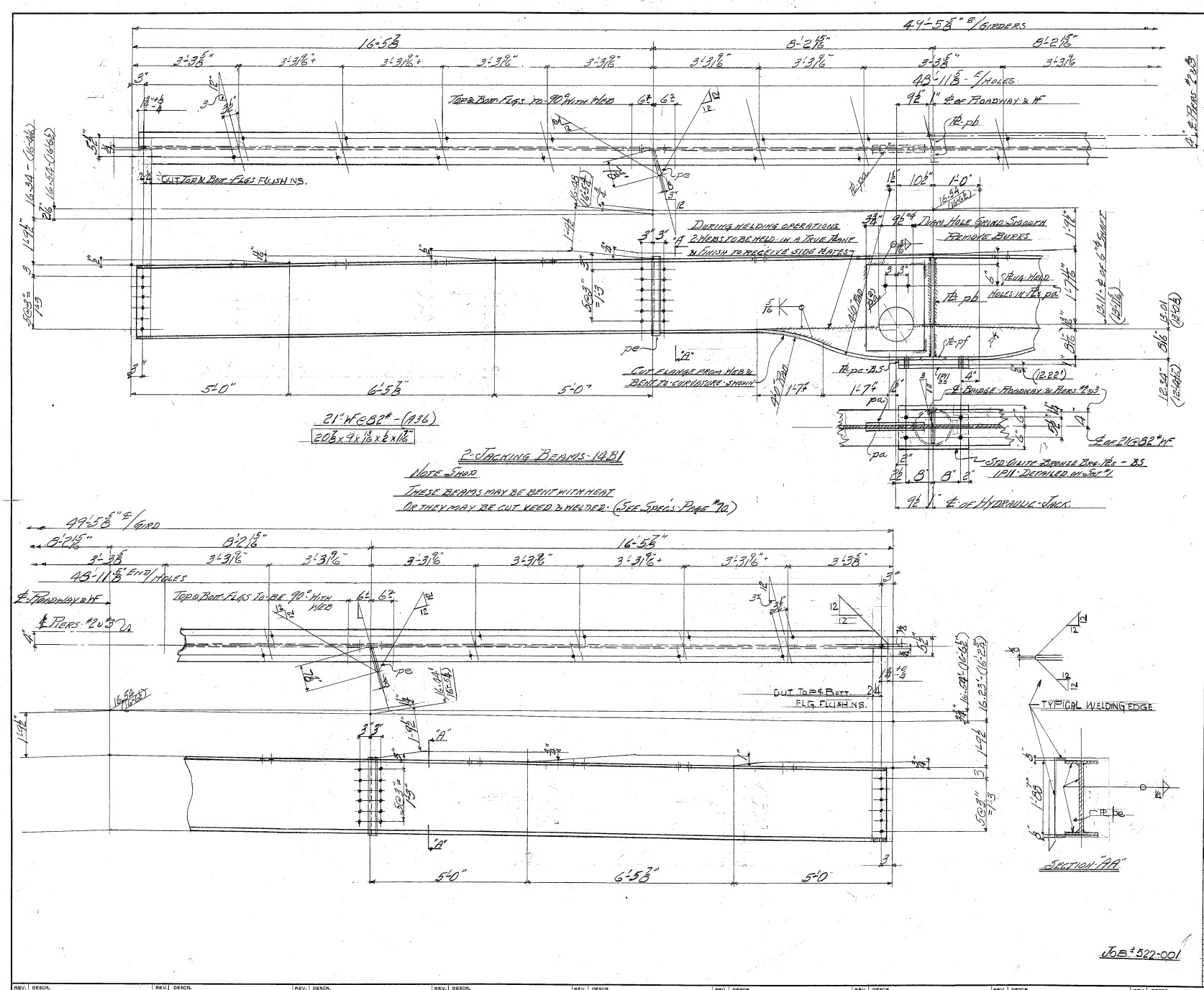
MADE BY	A.D. Dupke	DATE	12/10/65
CHECKED BY	R. Bach	DATE	3/5/65
RIVETS	—	OPEN HOLES	11/16 Ø O.N.
MAX. SHIPPING LGTH.	16'-3¼	CUST. ORDER NO.	

CONT. NO. 8412 — SHEET NO. 13

REVISION 1 2 3 4 5 6 7 8 9

Member of AISC

REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR.



ITEM	NO. REQ'D	MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	REMARKS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP WEIGHT	P.A.
1										
2										
3										
4			2	JACKING BEAMS 1 @ 1						
5										
6	2		WF	21 @ 82#	49	3 1/2	(A36) - BENT ORD. (2) 500 T 1/15			
7										
8	2	pk	PL.	8" x 1/2	7	0				
9	2	pf	PL.	3" x 7/16	0	9	CHAMFER & SMOOTHED			
10	4	pa	PL.	17 3/4	2	0 1/2				
11	4	pb	PL.	4 x 1/2	2	3 1/2				
12	2	pc	PL.	12 x 1	1	8	(A36)			
13	4	pe	PL.	7 x 3/4	1	9 1/2	CHAMFERED			
14										
15										
16			STD. IN PLACE				2 - STD. OLITE			
17			BRONZE BUSH				(DETAILED ON SHT. #1)			
18	2	1P11	BUSHING		1	8	(MAT'L PROVIDED ON SHEET #1)			
19										
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JOB # 522-001

WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J. C. THELLACKER
DESCRIPTION ST. PAUL AVE. & DETROIT ST. VERTICAL LIFT BRIDGE
LOCATION MILWAUKEE, WIS.
DETAILS OF JACKING BEAMS
SHOP PAINT 1 COAT TT-B-600 (SEE SPEC.)

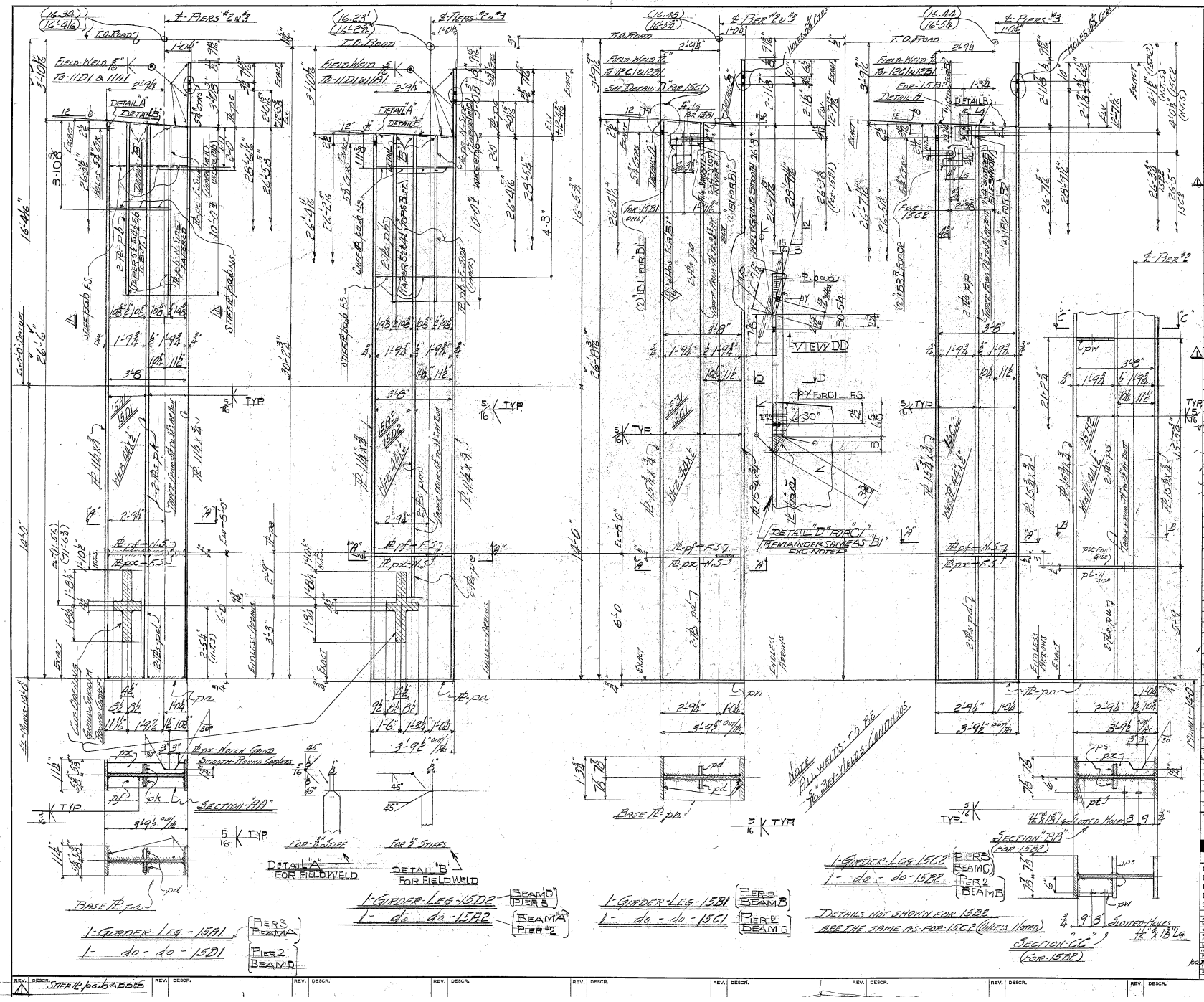
MADE BY [illegible] DATE 12/8/65
CHECKED BY O.S. DATE 2/12/66
RIVETS ____ OPEN HOLES 1/16
MAX. SHIPPING LGTH. ____ CUST. ORDER NO. ____

CONT. NO. 8412
SHEET NO. 14

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.

REVISION 1 2 3 4 5 6 7 8 9



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
1										
2			1-GIRDER-LEG-15A1				(ALL			
3			1- do	do -15D1			(A242) MATERIAL)			
4										
5	2	Web	PL	40 1/2 x 5/8	26	6 1/8	2EE - Bev. Cut from 90° x 27'-0"			
6	2	Flg	PL	11 1/4 x 3/4	26	6 1/8	2EE @ (1) 66 x 31'-0"			P3/13
7	2	Flg	PL	11 3/4 x 3/4	29	6	2EE @ (1) 66 x 30'-0"			P4/12
8	2	pa	PL	11 1/4 x 3/4	3	9 1/4	Base PL from 48" x 31'-0"			
9	6	pb	PL	5 1/2 x 1/2	10	0 1/8	Taper 5 1/2 to 4 1/2 @ (3) 90° x 22'-0"			P4/1
10	2	pc	PL	5 1/2 x 1/2	2	0	Taper 1 (1 in 10) from 90° x 2'-0"			
11	4	pd	PL	3 1/2 x 1/2	5	11 1/2	2 E.E.			
12	2	px	PL	4 x 1/2	3	8				
13	2	pf	PL	4 1/2	3	8				
14	4	pk	PL	5 1/2 x 1/2	20	5 1/8	Taper to 3 1/2 1.E.E.			
15										
16	14	bab	PL	5 x 1/2	0	10 3/8	from 90° x 22'-0"			
17										
18										
19			1-GIRDER-LEG-15D2				(ALL			
20			1- do	do -15A2			(A242) MATERIAL)			
21										
22	2	Web	PL	40 1/2 x 5/8	26	4 1/8	2EE - Bev. Cut (4) 90° x 27'-0"			P3/13
23	2	Flg	PL	11 1/4 x 3/4	26	4 1/2	2EE from 48" x 31'-0"			
24	2	Flg	PL	11 3/4 x 3/4	29	4 1/2	2EE from 48" x 30'-0"			
25	2	pa	PL	11 1/4 x 3/4	3	9 1/4	Base PL from 48" x 31'-0"			
26	6	pb	PL	5 1/2 x 1/2	10	0 1/8	Taper 5 1/2 to 4 1/2 from 90° x 22'-0"			
27	2	pc	PL	5 1/2 x 1/2	2	0	Taper to (1 in 10)			
28	2	px	PL	4 x 1/2	3	8				
29	4	ps	PL	3 1/2 x 1/2	2	8 1/2	1.E.E.			
30	2	pf	PL	4 1/2	3	8				
31	4	pm	PL	5 1/2 x 1/2	20	0 1/2	Taper to 3 1/2 1.E.E.			
32	14	bab	PL	5 x 1/2	0	10 3/8	from 90° x 22'-0"			
33										
34			1-GIRDER-LEG-15B1							
35			1 do	15C1			(ALL MAT'L A242)			
36										
37	1	bab	PL	3 3/16 x 3/4	0	7 1/2	C1			
38										
39	1	pl	PL	6 3/4 x 3/4	0	7 3/8	For 15C1			
40										
41	2	Web	PL	44 x 5/8	26	0 3/8	"Bevel Cut from 90° x 27'-0"			
42										
43	2	Flg	PL	15 3/4 x 3/4	26	6 3/8	2EE - (1) 66 x 31'-0"			P3/15
44	2	Flg	PL	15 3/4 x 3/4	29	7 1/2	2EE (1) 66 x 30'-0"			P4/18
45	2	pn	PL	15 3/4 x 3/4	3	9 1/4	Base PL from 66" x 31'-0"			
46	4	po	PL	7 1/2 x 1/2	20	8	Taper to 3 1/2" 1.E.E. from 90° x 22'-0"			
47	2	pf	PL	4 x 1/2	3	8				
48	2	px	PL	4 x 1/2	3	8				
49	4	pd	PL	3 1/2 x 1/2	5	11 1/2	2 E.E.			
50										
51	2	1B1		5 x 3/4	0	10 1/2	Bushing		Bronze	
52		For B1	Material Provided on Sheet #7							
53	2	ma	Common Bolts 3/4" dia. x 3" Lg. Hex. Hd. & Nut for B1"							
54										
55										
56			1-GIRDER-LEG-15B2				ALL MAT'L			
57			1 do	do 15C2			A242			
58	2	B3 & B4		5 x 3/4	0	7 1/2	Bushing - Std. Oil Lite Bronze			
59		For C1" Matl. Provided on Sheet #7								
60	2	Web	PL	44 x 5/8	26	7 1/8	2EE from 90° x 27'-0"			
61	2	Flg	PL	15 3/4 x 3/4	26	7 1/8	2EE from 66" x 31'-0"			
62	2	Flg	PL	15 3/4 x 3/4	29	7 3/8	2EE from 66" x 30'-0"			
63	2	pn	PL	15 3/4 x 3/4	3	9 1/4	Base PL from 66" x 31'-0"			
64	2	pb	PL	7 1/2 x 1/2	20	7 1/2	Taper to 3 1/2 (1.E.E.) from 90° x 22'-0"			
65	2	ps	PL	7 1/2 x 1/2	20	10 1/2	Taper to 3 1/2" (15B2) 1.E.E. from 90° x 22'-0"			
66	7	pf	PL	4 x 1/2	3	8	(15C2)			
67	1	px	PL	4 x 1/2	3	8	(15C2)			
68	2	pd	PL	3 1/2 x 1/2	5	11 1/2	(15C2) 2.E.E.			
69	2	pd	PL	3 1/2 x 1/2	5	8 1/2	(15B2) 1.E.E.			
70	1	pc	PL	7 1/2 x 1/2	3	8	(15B2)			
71	1	pm	PL	7 1/2 x 1/2	1	9 1/2	(15B2)			
72	1	pz	PL	4 x 1/2	3	8	(15B2)			
73	2	1B2		5 1/2 x 3/4	0	13 1/8	Bushing - Std. Oil Lite Bronze			
74		For B2" Matl. Provided on Sht. #7								
75	4	ma	Common Bolts 3/4" dia. x 3" Lg. Sq. Hd. Hex. Nut							

WISCONSIN BRIDGE & IRON CO.
5023 North 35th St. • Milwaukee, Wis. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER: C.C. Mel Lacher
DESCRIPTION: Stoneline - Detroit St. Vertical Lift Bridge
LOCATION: Milwaukee, Wis.
DETAILS OF: 1-Girder-Legs
SHOP PAINT: 1-Coat TTR 666 (See Spec.)

MADE BY: Art Davis DATE: 2/15/66
CHECKED BY: DS DATE: 3/9/66
RIVETS: OPEN HOLES: 9/16 (11/16)
MAX. SHIPPING LGTH.: 29'9" CUST. ORDER NO.:

CONT. NO. 8412 | SHEET NO. 15

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.
1	Stiff. PL pab added														

REVISION 1 2 3 4 5 6 7 8 9

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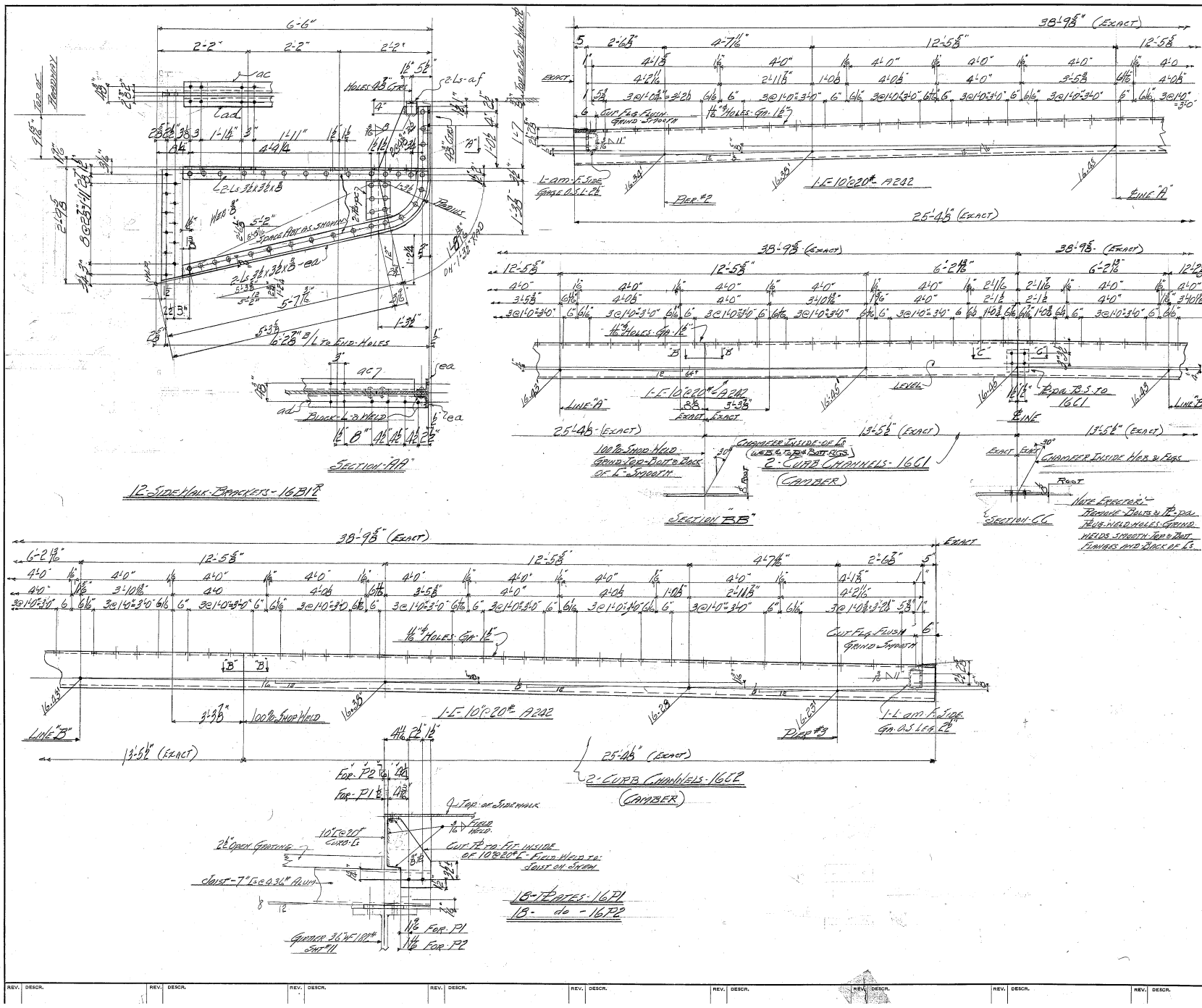

Item	No. Pieces	Assem. Mark	Descr.	Size	Length Ft.	Length In.	Provisions and Remarks	Weight of Units	Total Ship. Weight	P.O.
			12-Side Walk Brackets 16B1							
	6	1-Cut Pl	Pls	5½ x ⅜	5	2	A36			
	12	pb	Pls	15¼ x ⅜	3	1¼	A36			
	24	pc	Pls	6" x ⅜	1	0	A36			
	12	ac	Ls	3½ x 3½ x ⅜	5	7	A36			
	12	ac	Ls	3½ x 3½ x ⅜	5	10⅜	A36			
	24	ea	Ls	3½ x 3½ x ⅜	8	6¾	A36 - Bent			
	24	af	Ls	4 x 3½ x ⅜	0	2½	A36			
			2-Curb Channels-16C1 (Camber)							
	2		Cs	10@20#	25	4⅛	2EE - A242			or 3 @ 540 P2/6
	2		Cs	10@20#	13	5½	2EE - A242			from 54'-0
	2	pa	Pls	5½ x 3/16	0	5½	B.S.			
	2	am	Ls	3 x 4 x ⅜	0	5	A36			
			2-Curb Channels-16C2							
	2		Cs	10@20#	25	4⅛	2EE - A242			from 54'-0
	2		Cs	10@20#	13	5½	2EE - A242			from 54'-0"
	2	am	Ls	3 x 4 x ⅜	0	5½	A36			
			18-Plates-16P1							
			18- do -16P2							
	18	P1	Pls	8 3/16 x ⅜	1'	1"				
	18	P2	Pls	8¼ x ⅜	1'	1"				

WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J. C. Theilacker
DESCRIPTION St. Paul Ave. E. Detroit St. Vertical Lift Span.
LOCATION Milwaukee-Wis.
DETAILS OF Sidewalk Brackets & Curb Channels & Shims
SHOP PAINT 1 Coat TTP-860 (See Spec.)

MADE BY Act Dowe DATE 12/30/65
CHECKED BY DATE
RIVETS ¾"φ OPEN HOLES 1 1/16" φ U.N.
MAX. SHIPPING LGTH. 38-9⅝ CUST. ORDER NO.

CONT. NO. 8412 SHEET NO. 16

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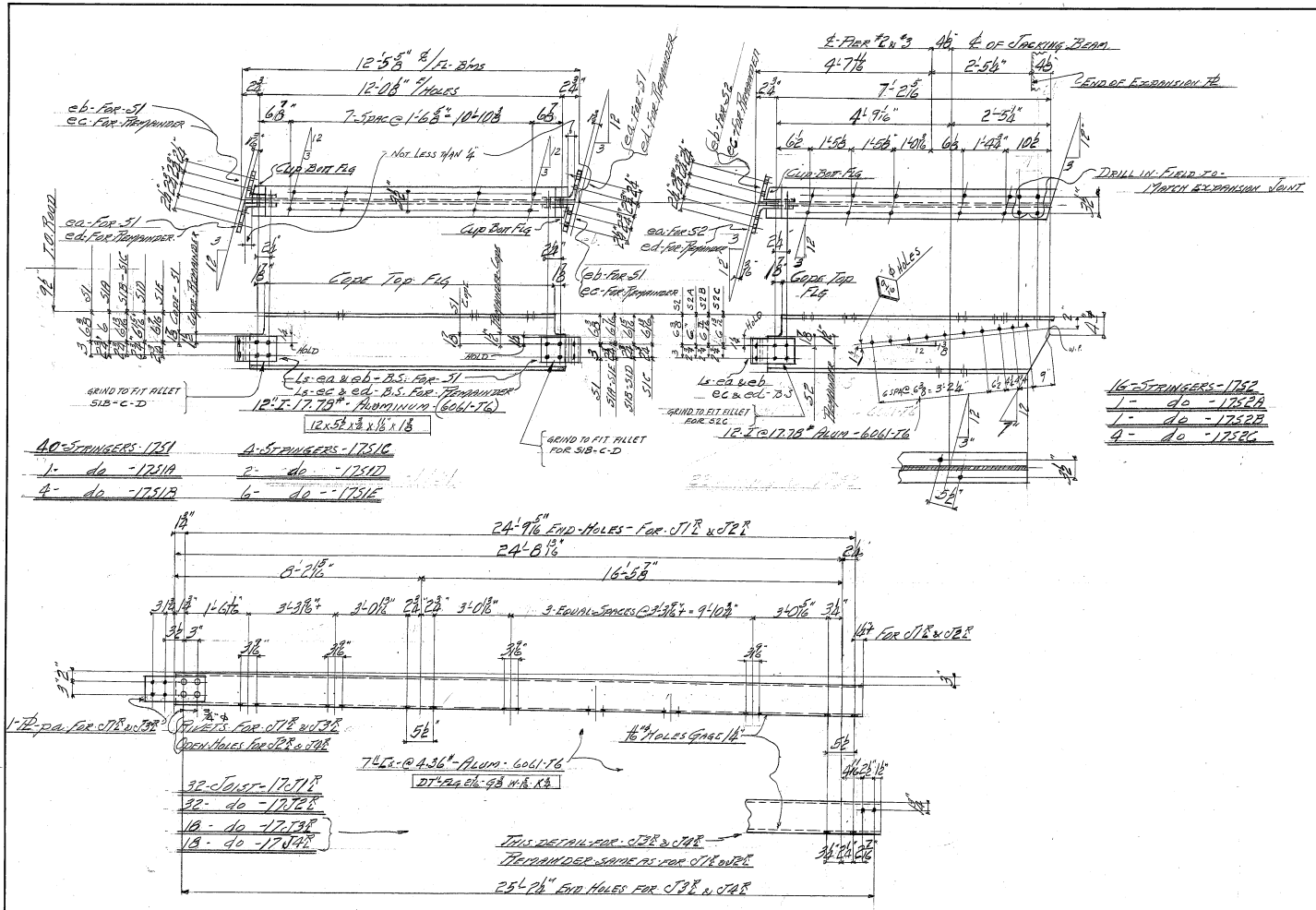

ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	SPECIAL PURCHASES	P.A.
1		40-	Stringers-	1751			4- Stringers-	1751C	
2		1-	do -	1751A			2- do -	1751D	
3		4-	do -	1751B			6- do -	1751E	
4									
5	57		I	12 x 17.78#	12	4½	Cope & clip both	Mill ord.	
6	80	ea	Ls	6 x 6 x 3/8	0	5½	Alum. 6061-T6	7-16, 12-46,	
7	80	eb	Ls	6 x 6 x 3/8	0	5½	Alum. 6061-T6 (open-S1)	7-54-D-S2	
8	34	ec	Ls	6 x 6 x 3/8	0	5½	(close-S1)	(close-S1A, S1B-C-D, S1E)	
9	34	ed	Ls	6 x 6 x 3/8	0	5½		(open-S1A, S1B-C-D, S1E)	
10									
11									
12									
13		16-	Stringers-	1752			1- Stringers-	1752B	
14		1-	do -	1752A			4- do -	1752C	
15									
16	22		Is	12 x 17.78#	7	4½	Bev. cut cope & clip	Mill ord.	
17	16	ea	Ls	6 x 6 x 3/8	0	5½	Alum. 6061-T6	210-7-C	
18	16	eb	Ls	6 x 6 x 3/8	0	5½	Alum. 6061-T6 (open-S2)	54-D-S2	
19	6	ec	Ls	6 x 6 x 3/8	0	5½	(close-S1)	(close-S2A-B-C)	
20	6	ed	Ls	6 x 6 x 3/8	0	5½		(open-S2A-B-C)	
21									
22									
23									
24									
25									
26		32-	Joist-	17J1E					
27		32-	do -	17J2E					
28		18-	do -	17J3E					
29		18-	do -	17J4E					
30									
31	64	21/2 x 1/2	Ls	7 x 4.31#	25	0½	Alum - 6061-T6		P/S
32	36	7/8 x 1/8	Ls	7 x 4.31#	25	5½	do do		P/S
33	50	pr.	Pa	6 x ½"	1	0½	do do	3/4" ϕ	
34	200		Rivets	3/4" ϕ x 1 1/8" Grip - Pa			Alum 6061-T6		
35			Cold Driven For 7/8" ϕ J3E						
36									
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JOB. #522-001

WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J. C. Theilacker
DESCRIPTION St. Paul Ave. & Detroit Vertical Lift Bridge
LOCATION Milwaukee, Wis.
DETAILS OF Stringers & Joist
SHOP PAINT Kopt-Jip 645 1962 (See Spec)

MADE BY Art Dunke DATE 12/8/65
CHECKED BY R.B. & D.S. DATE 3/4/65
RIVETS 3/4 Alum. OPEN HOLES 11/16" Dia.
MAX. SHIPPING LGTH. 28-0 CUST. ORDER NO.

CONT. NO. 8412 1st Extra
SHEET NO. 17

REVISION 1 2 3 4 5 6 7 8 9

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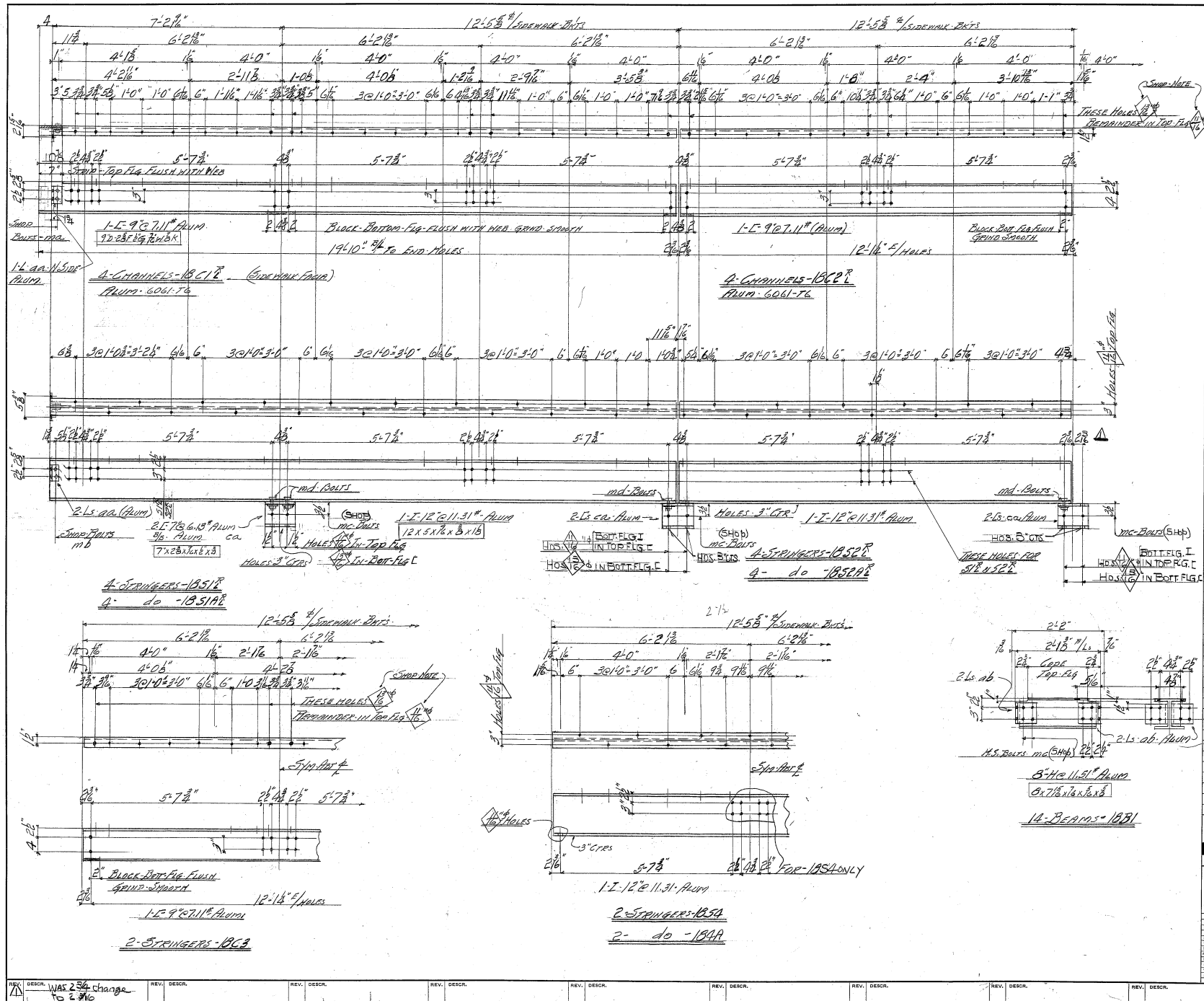
REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR. | REV. DESCR.



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
1										
2										
3			4-	Channels-18C1 R						
4			4-	do -18C2 R						
5										
6	A	C1 R	C	9"@7.11	20	0 b	Alum-6061-T6	ORD (A) 20.0		F1/8
7	4	C2 R	C	9"@7.11	12	5 1/2	do do			F1/8
8	4	aa	Ls	4x3x3/8	0	5 1/2	do do	C1 R		F1/8
9	8	mc	H.S. Bolts 3/4 ø		0	2	Galv-	C1 R		04
10			Hex-Nut-2 Flat Washer Galv.					C1 R		
11										
12										
13										
14										
15			4-	Stringers-18S1 R						
16			4-	do -18S2 R						
17			4-	do -18S1A R						
18			4-	do -18S2A R						
19										
20	B	S1A	I	12"@11.31	19	8	Alum 6061-T6	(B) ORD 19.8		F1/8
21	B	S2A	I	12"@11.31	12	5 1/2	do do	(B) ORD 12.5		F1/8
22	16	aa	Ls	9x5x3/8	0	5 1/2	do do	5 1/2		F1/15
23	16	mb	H.S. Bolts 3/4 ø		0	2 1/2	Galv			04
24			Hex-Nut & Flat Washer							
25	32	ca	Ls	7"@6.13#	0	7 1/2	Alum 6061-T6	51 R x 52 R	ORD (A)	30'-6" F1/8
26	16	ca	Ls	7"@6.13#	0	7 1/2	do do	51 R x 52 R	from 30'-6"	
27	48	mc	H.S. Bolts 3/4 ø		0	2 1/2	Galv			04
28			Hex-Nut-2 Flat Washer-Galv							
29	48	md	H.S. Bolts 3/4 ø		0	2 1/2	Galv-	51 R x 51 R		04
30			Hex-Nuts-2 Bev Washers-Galv							
31	16	md	H.S. Bolts 3/4 ø		0	2 1/2	Galv-	52 R x 52 R		04
32			Hex-Nuts-2 Bev Washers Galv							
33										
34										
35										
36										
37										
38										
39										
40										
41			2-	Stringers-18C3						
42										
43	2		Ls	9"@7.11	12	5 1/2	Alum 6061-T6			F1/16
44										
45										
46										
47			2-	Stringers-18S4						
48			2	do -18S4A						
49										
50	4		Is	12"@11.31	12	5 1/2	Alum-6061-T6			
51							from 12-5 1/2			
52										
53										
54										
55			14-	Beams-18B1						
56										
57	14		H	8"@11.51#	2	1	Alum-6061-T6	ORD (A) 2.1		F1/16 ✓
58	56	ab	L	6x6x3/8	0	6	do do			F1/17 ✓
59	112	mc	H.S. Bolts 3/4 ø		0	2 1/2	Galv			04 ✓
60			Hex-Nuts-Flat-Washer-Galv							
61										
62										
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

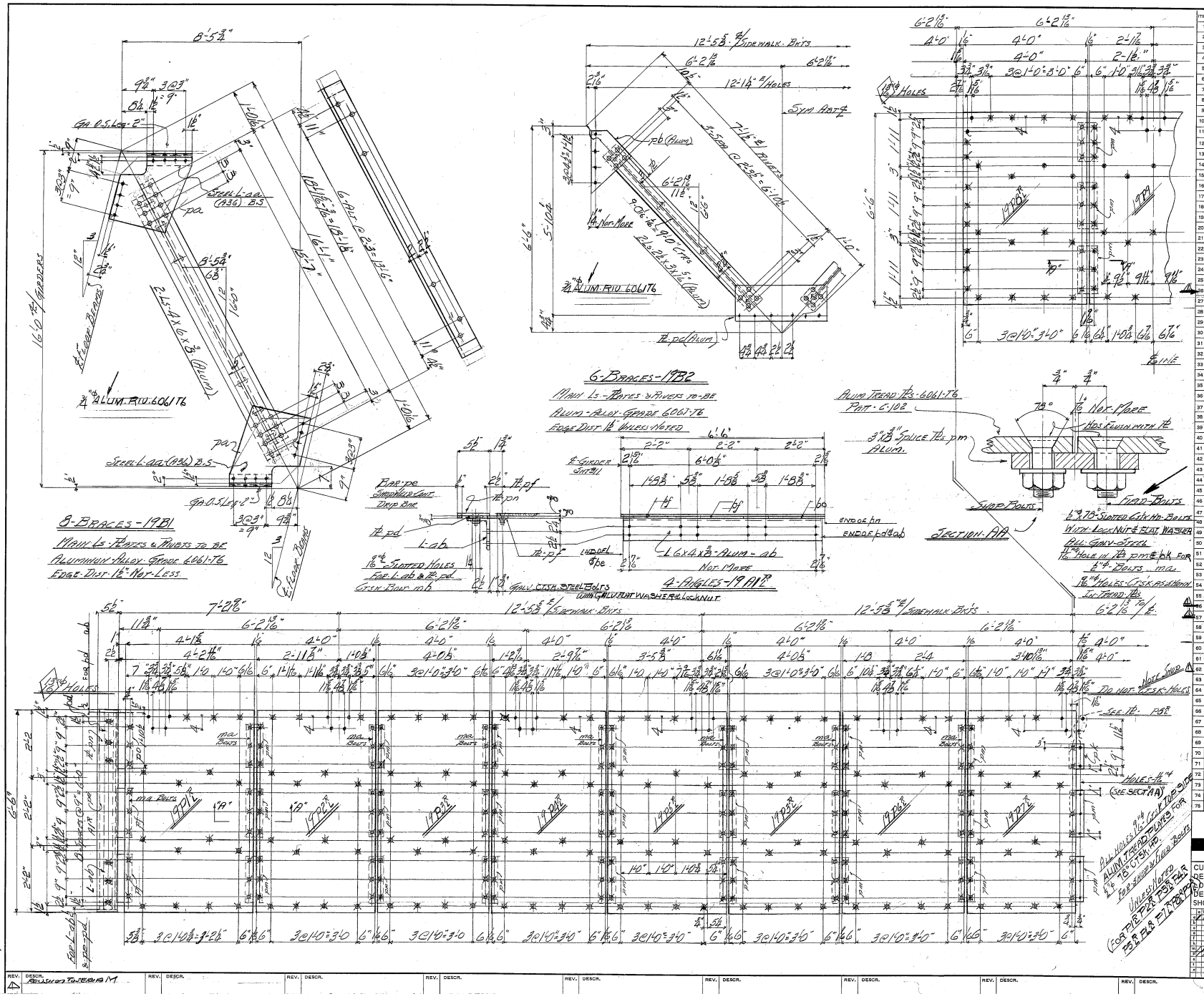
CUSTOMER J. C. THELACKER
DESCRIPTION St. Paul Port & Depot Vertical Lift Bridge
LOCATION Milwaukee Wis.
DETAILS OF Sidewalk Fascia-Ls & Stringers
SHOP PAINT Coat TP 645 1962 (See Spec)

MADE BY Pat Runte DATE 7-16-62
CHECKED BY DO DATE 7-16-62
RIVETS OPEN HOLES 2-8 UN
MAX. SHIPPING LGTH. 20'-4" CUST. ORDER NO.

CONT. NO. 8412-1-ST EXTRA
SHEET NO. 18

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.
1	Was 2 3/4 change to 2 9/16																



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP WEIGHT	P.A.
1			8-BRACES-1981-ALUM 6061-T6							
4	16		Ls	6x4x⅜	16	4	ALUM-6061-T6 (16) ORD 17.5			P1/1
5	16	pa	PL	19x⅜	1	11½	do do (3) ORD 26.3x2			P1/1
6	16	aa	Ls	3x2x3/16	1	0	(1936) - B.S.			
7	184		ALUM RIVETS ¾"x 2¼" Lg - ALUM 6061-T6 (COLD-DRIVEN)							01
8										
9										
10										
11										
12			6-BRACES-1982							
13	24		L	3x2½x7/16	7	0½	ALUM-6061-T6 ORD (24) 7.4			P2/10
14	12	pb	PL	11x⅜	1	4½	ALUM-6061-T6 (3) 5.6x⅜x7.6			P2/10
15	6	pc	PL	10x⅜	2	3	ALUM-6061-T6 from 5x⅜x96			
16	96		ALUM RIVETS ¾"x 2¼" Lg - ALUM 6061-T6							01
17	48		ALUM-RIVETS ¾"x 2¼" Lg - ALUM-6061-T6 (COLD DRIVEN)							01
18										
19										
20										
21										
22										
23			4-ANGLES-1981½"							
24	4	ab	L	6x4x⅜	6	5	ALUM-6061-T6 ORD (4) 6.5			P2/11
25	4	pa	PL	5½x⅜	6	6	ALUM-6061-T6 ORD (8) 6.6			P2/5 -
26			ALUM TREAD PL-6061-T6 PATT #C102							
27	4	pc	BAR	8x⅜	6	3½	DRIP BAR ALUM 6061-T6 ORD (4) 12.0			P2/8
28	4	pd	PL	3x⅜	6	5"	ALUM-6061-T6 ORD (4) 6.4			P2/9
29	36	mb	BOLTS ½"x 7½" 82°		0	7½	SCREW DRIVER SLOTTED HD WITH LOCK NUT & FLAT WASHER			P2
30			ALL GALV. STEEL							
31										
32										
33										
34										
35										
36			4-PLATES-1981½"							
37			4 do - 1981½"							
38			5 do - 1981½"							
39			4 do - 1981½"							
40			4 do - 1981½"							
41			4 do - 1981½"							
42			4 do - 1981½"							
43			4 do - 1981½"							
44			2 do - 1981½"							
45										
46	4	pf	PL	49⅜x⅜	6	6	ALUM TREAD PL 6061-T6 PATT C-102 (38) 5.1x6.6			P2/9
47	32	*	PL	8x⅜	6	6	do do from 5½x6'-6"			
48			PL	8x⅜	6	6	do do			
49	2	pg	PL	50⅜x⅜	6	6	do do from 5½x6'-6"			
50	96	pm	PL	3x⅜	1	8	ALUM 6061-T6 (108) 3x⅜x1'-8			P2/10
51			PL	3x⅜	1	8	do do			
52	8	pm	PL	3x⅜	1	8	PL ALUM-6061-T6 from 3x⅜x1'-8"			
53	4	pk	PL	3x⅜	1	1	PL do do from 3x⅜x1'-8"			
54	8	pm	PL	3x⅜	X	8	PL do do			
55	2	pk	PL	3x⅜	X	10½	PL do do			
56										
57	36	ma	BOLTS ¾"x 2¼"		0	12	SCREW DRIVER SLOTTED HD 82° WITH LOCK NUTS & FLAT WASHER			02
58			ALL GALV. STEEL							
59	8	pl	PL	3½x⅜	1	8	FOR PL			
60			ALUM 6061-T6 (8) 3½x⅜x 6'-3 1/8" (SX NUTS NONE)							
61	4	pn		3½x⅜	1	10½	FOR PL ALUM 6061-T6 from 5½x⅜x6'-6"			
62										
63										
64										
65										
66										
67										
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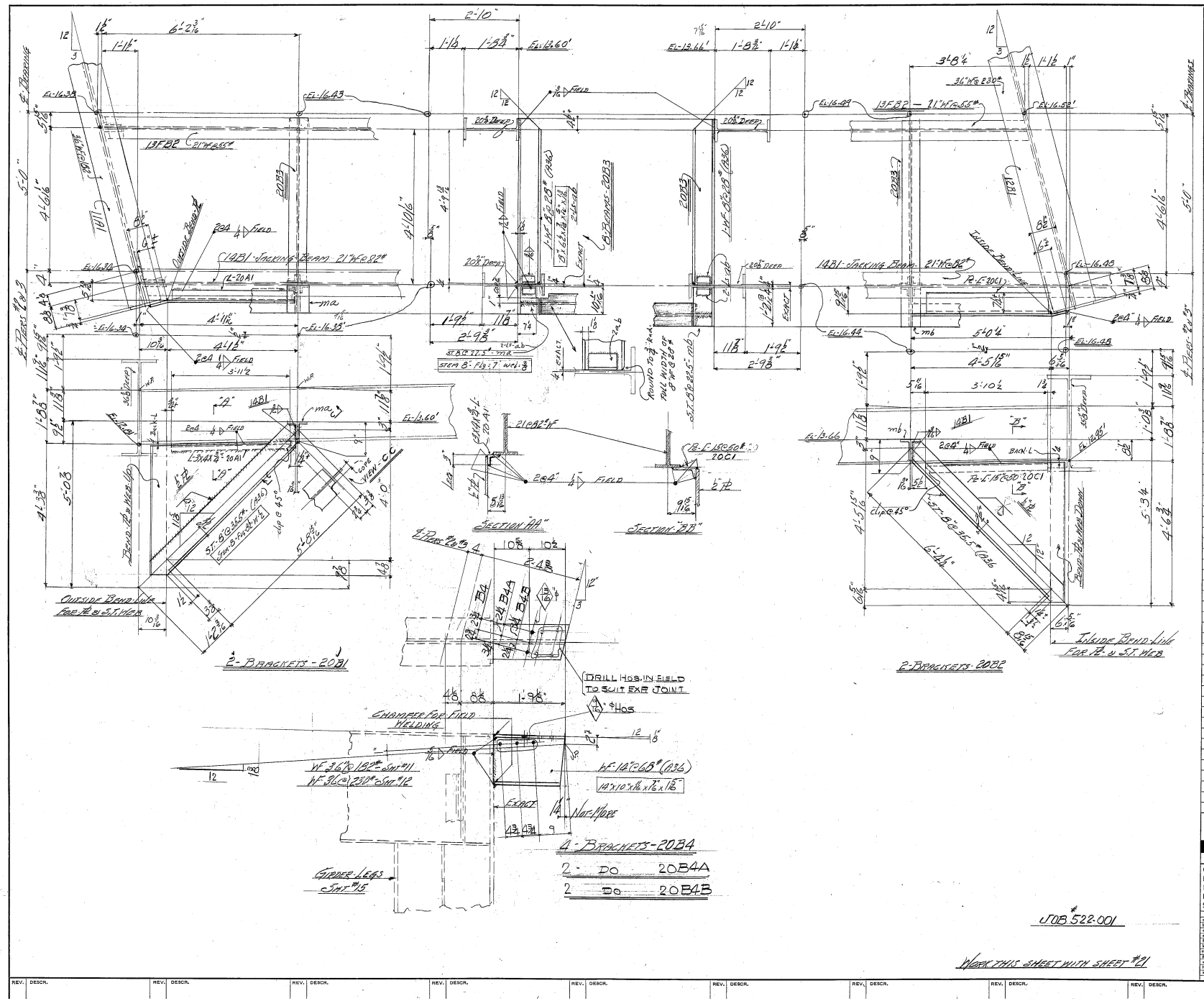
WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER C.C. THEILACKER
DESCRIPTION 5th Ave. Hale Detroit's Vertical Lift Bridge
LOCATION Milwaukee, Wis.
DETAILS OF Lateral Bracing & Sidewalk Fdn.
SHOP PAINT Lead TT-P-615 1962 (See Spec.)

MADE BY Art Dunne DATE 12/27/65
CHECKED BY O.S. DATE 1/25/66
RIVETS ¾ Bolts ⅞ NORD OPEN HOLES 13/16" DIM
MAX. SHIPPING LGTH. 18'-2" CUST. ORDER NO.

CONT. NO. 8412-13 Extra
SHEET NO. 19

REV. DESCR. REVISED TO FIRM



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
1										
2										
3			2-BRACKETS-20B1							
4										
5	1		PL	43 x ½	3	6	1-CUT-2 Bent			
6	2		ST	8@35.5#	6	7	Bevel Cut Bent			
7										
8	2	ma	ST	8@22.5#	0	10½	I.E.E.			
9	4	ab	Ls	3x3x⅜	0	5¾				
10										
11										
12										
13										
14										
15			2-BRACKETS-20B2							
16										
17	1		PL	48 x ½	4	1¾	(1-CUT-2) Bent			
18	2		ST	8@35.5	7	2½	Bevel Cut Bent			
19										
20	2	mb	ST	8@22.5	1	2¼	I.E.E.			
21	4	ab	Ls	3x3x⅜	0	5¾				
22										
23										
24										
25										
26										
27			B-BEAMS-20B3							
28	8		WF	8@28#	5	2½	IEE			
29	16	ab	Ls	3x3x⅜	0	5¾				
30										
31										
32										
33										
34										
35			2-BRACKETS-20B4A							
36			2 DO 20B4B							
37			4-BRACKETS-20B4							
38										
39	8		WF	14@68	1	10½	(P36) IEE			
40										
41										
42										
43										
44										
45			2-ANGLES-20A1							
46	2		Ls	3x4x¼	3	1½	clip leg			
47										
48										
49										
50										
51			2-CHANNELS-20C1							
52	1		C	15@50#	3	10½	(1-CUT-2) clip leg			
53										
54										
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56										
57										
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J.C. TAYLACKER
DESCRIPTION St. PAUL-ACE-DETROIT-SC VERTICAL LIFT BRIDGE
LOCATION MILWAUKEE WIS
DETAILS OF SPIDER-LEG-BRACKETS
SHOP PAINT 1-COAT T.P.-86 C (SEE SPEC.)

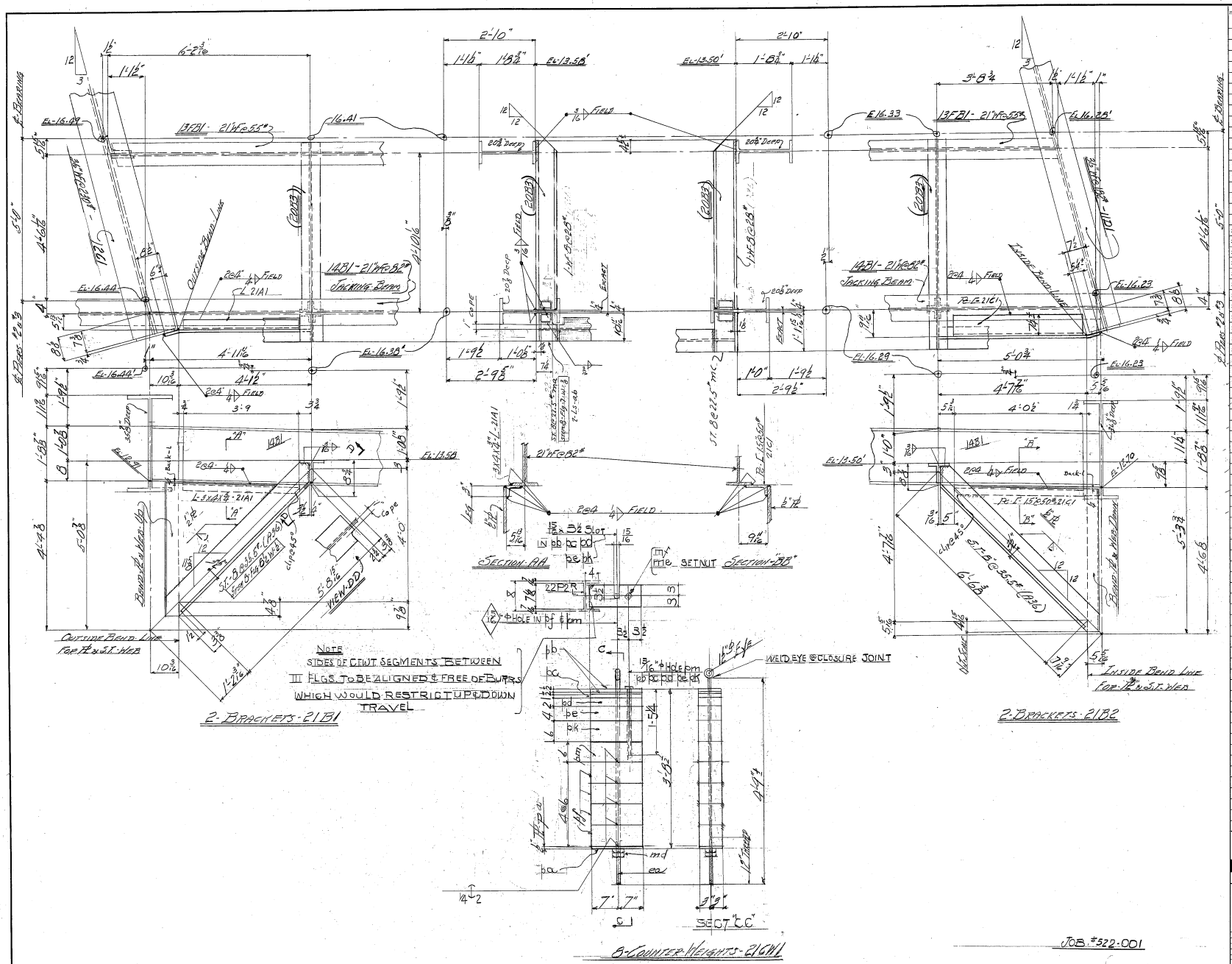
MADE BY A.T. DUNE DATE 1/4/66
CHECKED BY D.S.-R.B DATE 3-9-66
RIVETS OPEN HOLES NOTED
MAX. SHIPPING LGTH. 7-0½ CUST. ORDER NO.

CONT. NO. 8412 | SHEET NO. 20

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.

REVISION 1 2 3 4 5 6 7 8 9



ITEM	NO. IN BOM	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
3			2-BRACKETS-21B1							
5	1		PL	4 3/4 x 1/2	3	8 3/4	(1-cut-2) Bent			
6	2		ST	8 @ 35.5#	6	6	Bevel Cut Bent			
9	2	mc	ST	8 @ 22.5	0	10 1/2	I.E.E.			
9	4	ab	Ls	3 x 3 x 3/8	0	5 3/4				
15			2-BRACKETS-21B2							
17	1		PL	4 3/4 x 1/2	4	0 1/2	(1-cut-2) Bent			
18	2		ST	8 @ 35.5	7	2 1/2	Bevel Cut Bent			
20	2	mc	ST	8 @ 22.5	1	2	I.E.E.			
21	4	ab	Ls	3 x 3 x 3/8	0	5 3/4				
30			B-COUNTER WEIGHTS-20GW1							
32	8	ba	PL	6 x 1/2	1	2	ORD. (4) 6 x 14 x 7-4			Pg 16
34	16	bb	PL	6 x 1/2	1	2	from 6 x 14 x 7-4			
36	8	bc	PL	6 x 1"	1	2	From 6 x 14 x 7-4			
38	8	bd	PL	6 x 2	1	2				
40	8	be	PL	6 x 4	1	2				
42	32	bf	PL	6 x 6	1	2				
44	8	bh	PL	6 x 6	1	2				
46	8	bm	PL	6 x 6	1	2				
48	8	ea	ROD 3/4" ϕ		5	2"	BENT			
49	16	md	NUTS HEX FOR 3/4" ϕ							
51	8	mf	ROD 1/2" ϕ		1	6"				
52	8	mc	NUTS HEX 1/2"							
61			2-ANGLES-21A1							
62	2		Ls	3 x 4 x 3/8	3	9	clip leg			
66			2-CHANNELS-21C1							
67	1		L	15 @ 50#	4	0 1/2	(1-cut-2) "clip" leg			

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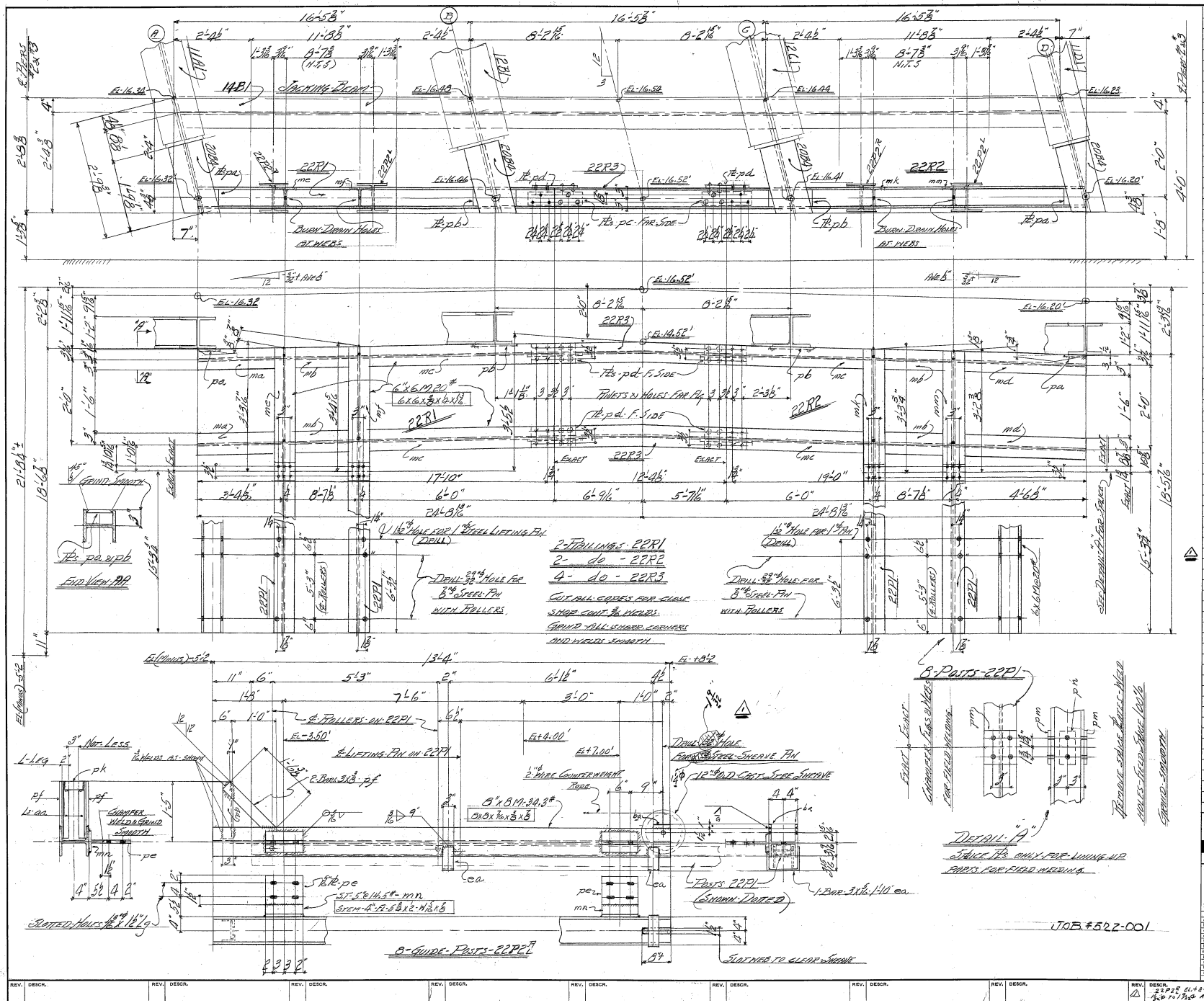
CUSTOMER J. C. THELLBACKER
DESCRIPTION St. Paul Ave. & Detour St. Vertical Lift Bridge
LOCATION Milwaukee Wis.
DETAILS OF Bipod Leg Brackets
SHOP PAINT Coat T.T.B.G.C. (See Spec.)

MADE BY A.D. Duck DATE 1/6/66
CHECKED BY D.S.R.B. DATE 2/15/66
RIVETS
MAX. SHIPPING LGTH. 7'-6"
OPEN HOLES As Noted
CUST. ORDER NO.

CONT. NO. 8412
SHEET NO. 21

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REVISION	1	2	3	4	5	6	7	8	9



JOB #522-001

ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
3			2-Railings- 22R1							
4	4	ma	LC	6x6M20#	3	8 1/8	Cope Pts. 280, 78, 56'0			
5	4	mb	LC	6x6M20#	3	7 1/8	do do ft 56'0			
6	4	mc	LC	6x6M20#	6	0	do - IEE ft 56'0			
7	2	me	LC	6x6M20#	3	3 1/4	IEE ft 56'0			
8	2	mf	LC	6x6M20#	3	4 3/8	IEE ft 56'0			
9	2	pa	Pts	5 1/2 x 1/2	0	6				
10	2	pb	Pts	5 1/2 x 1/2	1	0				
14			2-Railings 22R2							
16	4	mc	LC	6x6M20#	6	0	Cope T.E.E. ft 56'0			
17	4	mb	LC	6x6M20#	8	7 1/8	Cope ft 56'0			
18	4	md	LC	6x6M20#	4	6 1/8	Cope ft 56'0			
19	2	mk	LC	6x6M20#	3	3 3/4	IEE ft 56'0			
20	2	mm	LS	6x6M20#	3	8 3/4	IEE ft 56'0			
21	2	pa	Pts	5 1/2 x 1/2	0	6				
22	2	pb	Pts	5 1/2 x 1/2	1	0				
29			8-Posts- 22R1							
31	8		LC	6x6M20#	15	3 3/8	IEE ft 56'0			
32	16	pm	Pts	6x1/2	0	6				
33	8	pn	Pts	3 1/2 x 1/2	0	6				
42			8-Guide Posts- 22R2							
44	8		LC	8x8M-30.3#	13	4	Pts 28, 50'0 (Bar 14)			
45	16	mn	ST	5/8x10.5#	0	10				
46	16	pe	Pts	7 1/2 x 7/16	0	10				
47	16	ea	Bars	3x5/16	1	10				
48	16	pf	Bars	3x3/8	1	6 3/8				
49	8	pk	Bars	2x1/2	0	6				
50	16	aa	LS	3x2x5/16	1	4				
51	16	ba	Bars	1 x 5/16	0	4 1/2				
56			4-Railings- 22R3							
57	4		LC	6x6M20#	12	4 1/2	Bent T.E.E. ft 56'0			
58	8	pk	Pts	4 3/8 x 1/2	1	2				
59	8	pd	Pts	6 x 7/16	1	0				

WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
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CUSTOMER J.C. Theilacker
DESCRIPTION St. Paul Ave. & Detroit St. Vertical Lift Bridge
LOCATION Milwaukee, Wis.
DETAILS OF Bundle
SHOP PAINT Red-Oxide-Prime-866 See Spec.

MADE BY A.J. Dunne DATE 11-10-66
CHECKED BY R. Buch DATE 2-23-66
RIVETS 3/4" OPEN HOLES 13/16" DIA.
MAX. SHIPPING LGTH. 19'-0" CUST. ORDER NO.

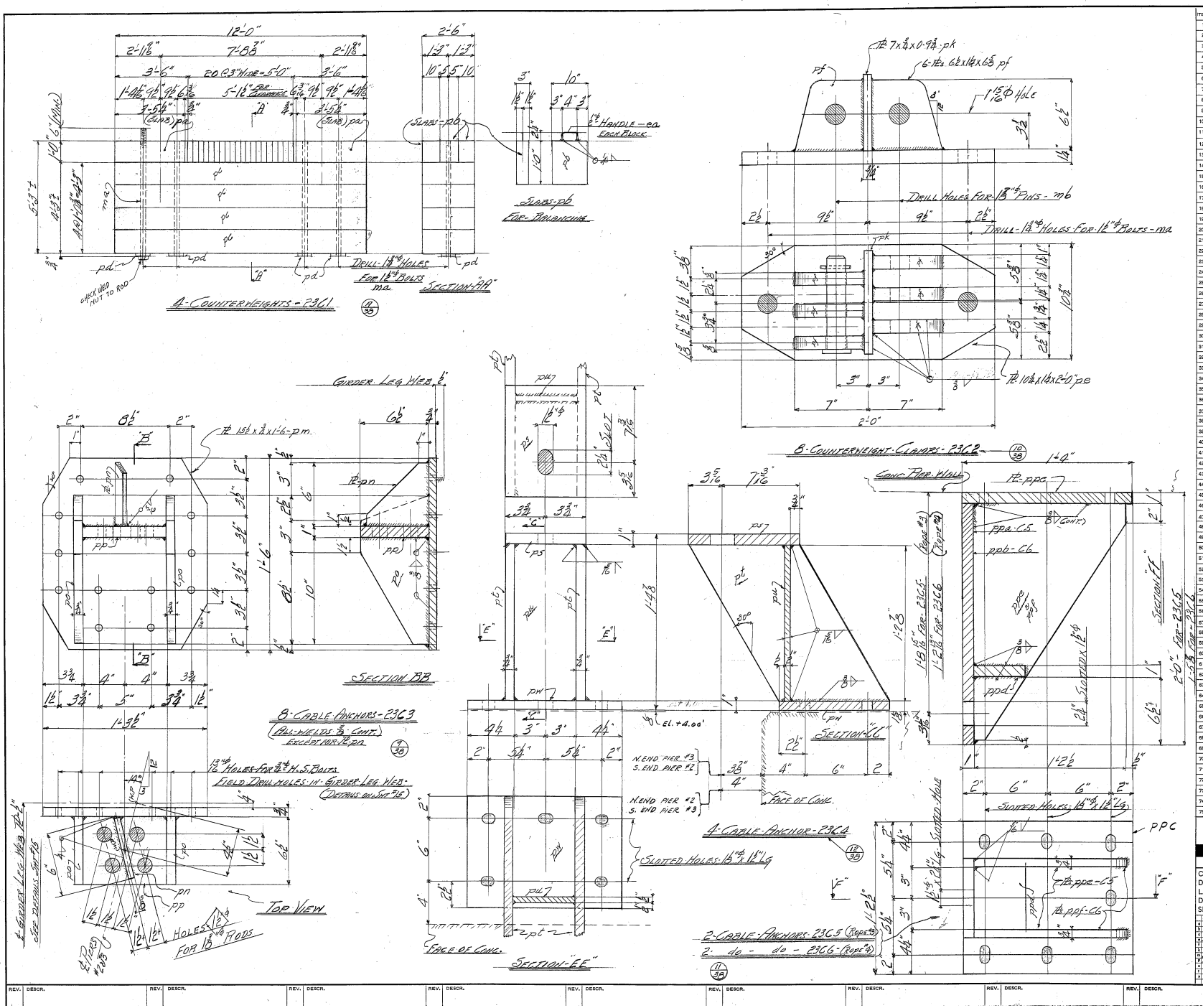
CONT. NO. 8412 SHEET NO. 22

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.

REVISION 1 2 3 4 5 6 7 8 9

1 — 22R2 & 8 El. +8'2 change Drill 8 8. 8 Since 1 — 22R2 & 8 El. +8'2 Bar 14 8 Since



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
1										
2			4-COUNTERWEIGHTS-23C1							PL/ls-3-6 See PL/
3										
4	8	pa	SLABS	30"x12"	3	5 1/2		428.11	3428.8	Rolled
5	240	pb	do	10"x3"	1	0		102	24480	do
6	16	pc	do	30"x12 3/4"	12	0		1540.08	24,632	do
7	16	pd	PL	6"x 3/4"	0	6		8	128	
8	240	ea	RODS	1/2" ϕ	0	8 1/2	HANDLE		240	
9	16		BOLTS	1 1/4" ϕ x 5-11" LG	-	6	H.C. THREADS - 9" LG	36	576	
10		ma	HEX HD. & HEX NUT	- 1" WASHER.						
11										
12										
13										
14										
15										
16			8-COUNTERWEIGHT-CLAMPS-23C2							
17										
18	8	pe	PL	10 3/4"x1/2"	2	0				
19	48	pf	PL	6 1/2"x1/4"	0	6 1/2				
20	8	pk	PL	7"x 3/4"	0	9 1/2				
21	16	mb	PINS	- 1 3/8" ϕ	0	9 3/4	WITH HD. - 2 3/4" x 1/2" TK.			
22	16	mc	COTTER PINS	- 3/8" x 3" LG			(MACHINED)			
23										
24										
25										
26										
27										
28			8 CABLE ANCHORS - 23C3							
29										
30	8	pm	PL	15 1/2"x 3/4"	1	6				
31	8	pn	PL	6"x 3/4"	0	6				
32	16	pp	PL	6 1/2"x 3/4"	1	2				
33	8	pp	PL	6 1/2"x 1"	0	8				
34										
35										
36										
37										
38										
39			4-CABLE ANCHORS-23C4							
40										
41	4	ps	PL	7 1/2"x 1"	0	10 1/2				
42	4	pt	PL	9"x 3/4"	3	5	1-CUBE			
43	4	pu	PL	6"x 1/2"	1	2 3/4				
44	4	pw	PL	10 1/2"x 1"	1	2 1/2				
45										
46										
47										
48										
49										
50			2-CABLE ANCHORS 23C5							
51			2- do do -23C6							
52										
53	2	ppa	PL	7 1/2"x 1"	1	11"	FOR 23C5			
54	2	ppb	PL	7 1/2"x 1"	1	4 1/2	FOR 23C6			
55	4	ppc	PL	14 1/2"x 1"	1	4				
56	4	ppd	PL	5"x 1"	0	6"				
57	4	ppe	PL	14 1/2"x 3/4"	1	10 1/2	FOR 23C5			
58	4	ppf	PL	14 1/2"x 3/4"	1	4 3/4	FOR 23C6			
59										
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER: J. C. THEILBACKER
DESCRIPTION: 5th BRIDGE DETROIT ST. VERTICAL LIFT BRIDGE
LOCATION: WEST BULLER, WIS.
DETAILS OF: COUNTERWEIGHTS & WEDGE-ANCHORS
SHOP PAINT: 1-COAT TYP-BGC (SEE SPEC)

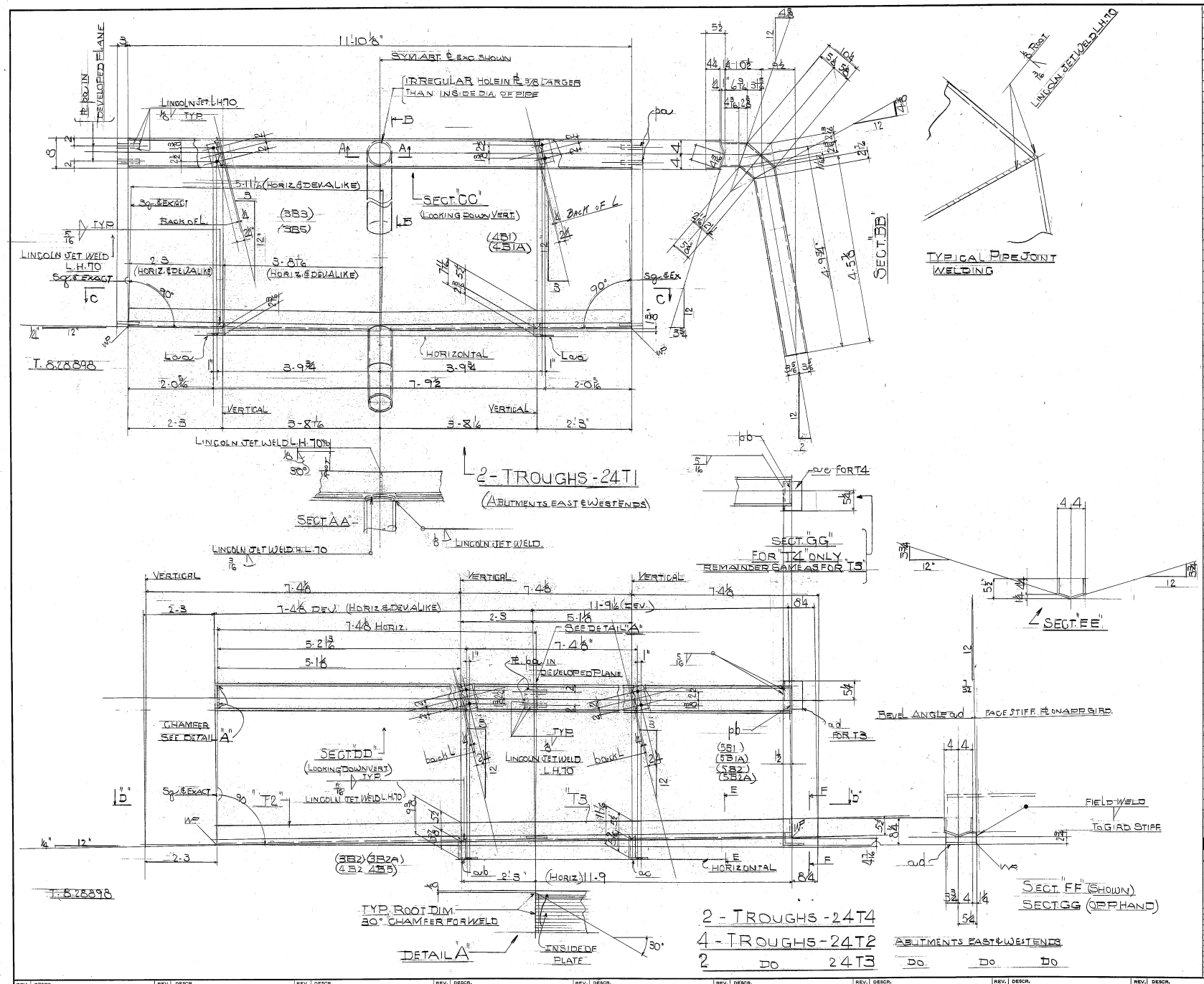
MADE BY: RUT DUNIE DATE 11/1/66
CHECKED BY: R. BULA DATE 1-28-66
RIVETS: OPEN HOLES 13/16" ϕ U.N.
MAX. SHIPPING LGTH.: 12'0" CUST. ORDER NO.

CONT. NO. 8412
SHEET NO. 23

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.

REVISION 1 2 3 4 5 6 7 8 9



ITEM	PL	NO. PCES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
1											
2				2 - TROUGHS - 24T1							
3				CORTEN				PIO/1 PIO/2			
4		4		PL	16½ x 3/8	5	11 1/16	BENT (2) 38" x 27'-0"			
5											
6		8	pa	PL	1 x 1/4	0	6				
7											
8											
9		2	ma	WROUGHT							
10				IRON PIPE							
11				6" I.D.		5	11 3/4	TO CUT			
12											
13		4	oa	L	4 x 3 x 3/8	0	7	FIT TO DRAIN			
14											
15											
16											
17											
18				4 TROUGHS - 24T2							
19				CORTEN				BENT			
20		4		PL	16½ x 3/8	7	4 1/8	FROM 38" x 27'-0"			
21											
22		4	ob	L	7 x 4 x 3/8	0	7	FIT TO DRAIN			
23		8	pa	PL	1 x 1/4	0	6				
24											
25											
26				2 TROUGHS 24T4							
27				2 TROUGHS - 24T3							
28								BENT			
29		4		PL	16½ x 3/8	11	9 1/16	FROM 38" x 27'-0"			
30											
31		4	oc	L	7 x 4 x 3/8	0	7"	FIT TO DRAIN			
32								FOR "T3"			
33		2	od	L	4 x 4 x 3/8	0	9"	FIT TO DRAIN			
34				CORTEN							
35		4	bb	PL	5/8 x 3/8	0	7 1/4				
36											
37		2	oe	L	4 x 4 x 3/8	0	9"	FIT TO DRAIN			
38								FOR "T4"			
39											
40											
41											
42											
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44											
45											
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WISCONSIN BRIDGE & IRON CO.
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Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J. C. THEILACKER
DESCRIPTION CITY OF MILWAUKEE, WIS.
LOCATION MILWAUKEE, WIS.
DETAILS OF DRAIN TROUGH
SHOP PAINT TOP-TIPPED. SEE SPECS.

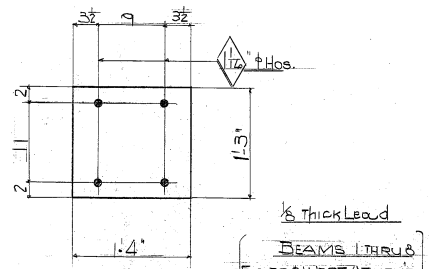
MADE BY	O.S.	DATE	12/8/65
CHECKED BY	J.S.	DATE	2-8-66
RIVETS		OPEN HOLES	5/16"
MAX. SHIPPING LGTH.	12.4	ORDER NO.	

CONT. NO. 8412 SHEET NO. 24

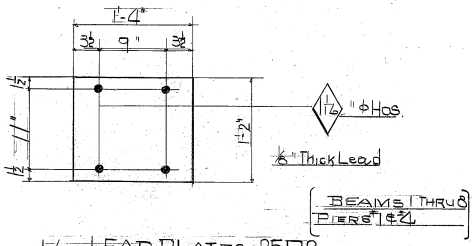
Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.

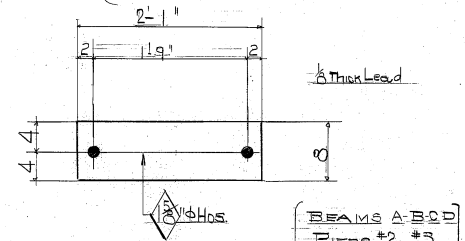
REVISION 1 2 3 4 5 6 7 8 9



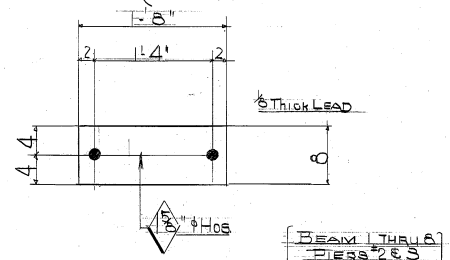
16 - LEAD PLATES 25P1
(NO PAINT)



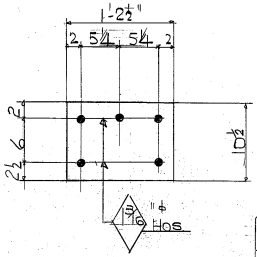
16 - LEAD PLATES - 25P2
(NO PAINT)



8 - LEAD PLATES 25P3
(NO PAINT)

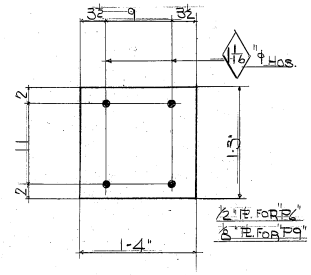


16 LEAD PLATES - 25P5
(NO PAINT)



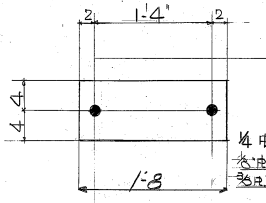
HORIZONTAL BRACKETS FOR CABLE NORTH & SOUTH ENDS PIERS #2 & 3

4 - LEAD PLATES - 25P4
(NO PAINT)



4 - PLATES - 25P6 ← EAST ABUTMT. BM. #2 & #4; WEST ABUTMT. BM. #5 & #7

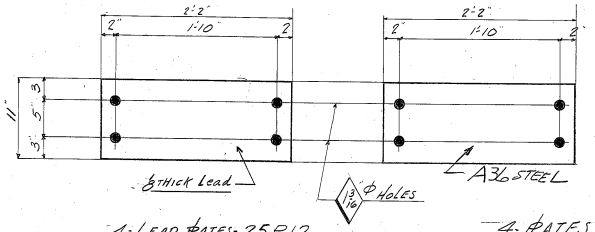
2 DO 25P9 ← EAST ABUTMT. BM. #5; WEST ABUTMT. BM. #6



4 - PLATES - 25P7 [PIER #3 BM. #3-X; PIER #2 BM. #1-4]

1 DO 25P8 (PIER #2 BM. #5)

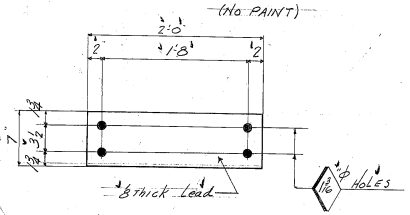
1 DO 25P9A (PIER #3 BM. #4)



4 - LEAD PLATES - 25P12
(NO PAINT)

4" PL FOR "P10"
⅜" PL FOR P11

4 - PLATES - 25P10
8 - " - 25P11



16 - LEAD PLATES - 25P13
(NO PAINT)

ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
1										
2			16 LEAD PLATES - 25P1							
3										
4	16		LEAD PL	15 x ⅛	1	4				
5										
6			A.S.T.M. DESIGN B29-43							
7			DESILVERIZED LEAD "A"							
8										
9										
10			16 - LEAD PLATES - 25P2							
11										
12	16		LEAD PL	14 x ⅛	1	4				
13										
14										
15			A.S.T.M. DESIGN B29-43							
16			DESILVERIZED LEAD "A"							
17										
18										
19			8 - LEAD PLATES - 25P3							
20										
21	8		LEAD PL	8 x ⅛	2	1				
22										
23			A.S.T.M. DESIGN B29-43							
24			DESILVERIZED LEAD "A"							
25										
26			4 - LEAD PLATES - 25P4							
27	4		LEAD PL	10½ x ⅛	1	2½				
28										
29			A.S.T.M. DESIGN B29-43							
30			DESILVERIZED LEAD							
31			16 - LEAD PLATES - 25P5							
32	16		LEAD PL	8 x ⅛	1	8				
33										
34			A.S.T.M. DESIGN B29-43							
35			DESILVERIZED LEAD							
36										
37			4 - PLATES - 25P6							
38	4		PL	15 x ½	1	4	A36 STL.			
39										
40			2 - PLATE - 25P9							
41	2		PL	15 x ⅛	1	4	A36 STL.			
42										
43			4 - PLATE - 25P7							
44	4		PL	8 x ⅛	1	8	A36 STL.			
45										
46			1 - PLATE - 25P8							
47	1		PL	8 x ⅜	1	8	A36 STL.			
48										
49			4 - PLATES - 25P10							
50			8 " - 25P11							
51	4	P10	PL	11 x ¼	2	2	A36 STEEL			
52	8	P11	PL	11 x ⅜	2	2	A36 STEEL			
53										
54			4 - LEAD PLATES - 25P12							
55	4		LEAD PL	11 x ⅛	2	2				
56										
57			A.S.T.M. DESIGN B29-43							
58			DESILVERIZED LEAD "A"							
59										
60			1 - PLATE - 25P9A							
61	1		PL	8 x ¼	1	8	A36			
62										
63										
64			16 - LEAD PLATES - 25P13							
65	16		LEAD PL	7 x ⅜	2	0				
66										
67			A.S.T.M. DESIGN B29-43							
68			DESILVERIZED LEAD							
69										
70										
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J.C. THEILACKER MILWAUKEE WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION WEST ST. PAUL AVE. & DETROIT ST. MILWAUKEE
DETAILS OF FILLS LEAD PLATES WIS.
SHOP PAINT CT TTP-SGD. EXC. NOTED

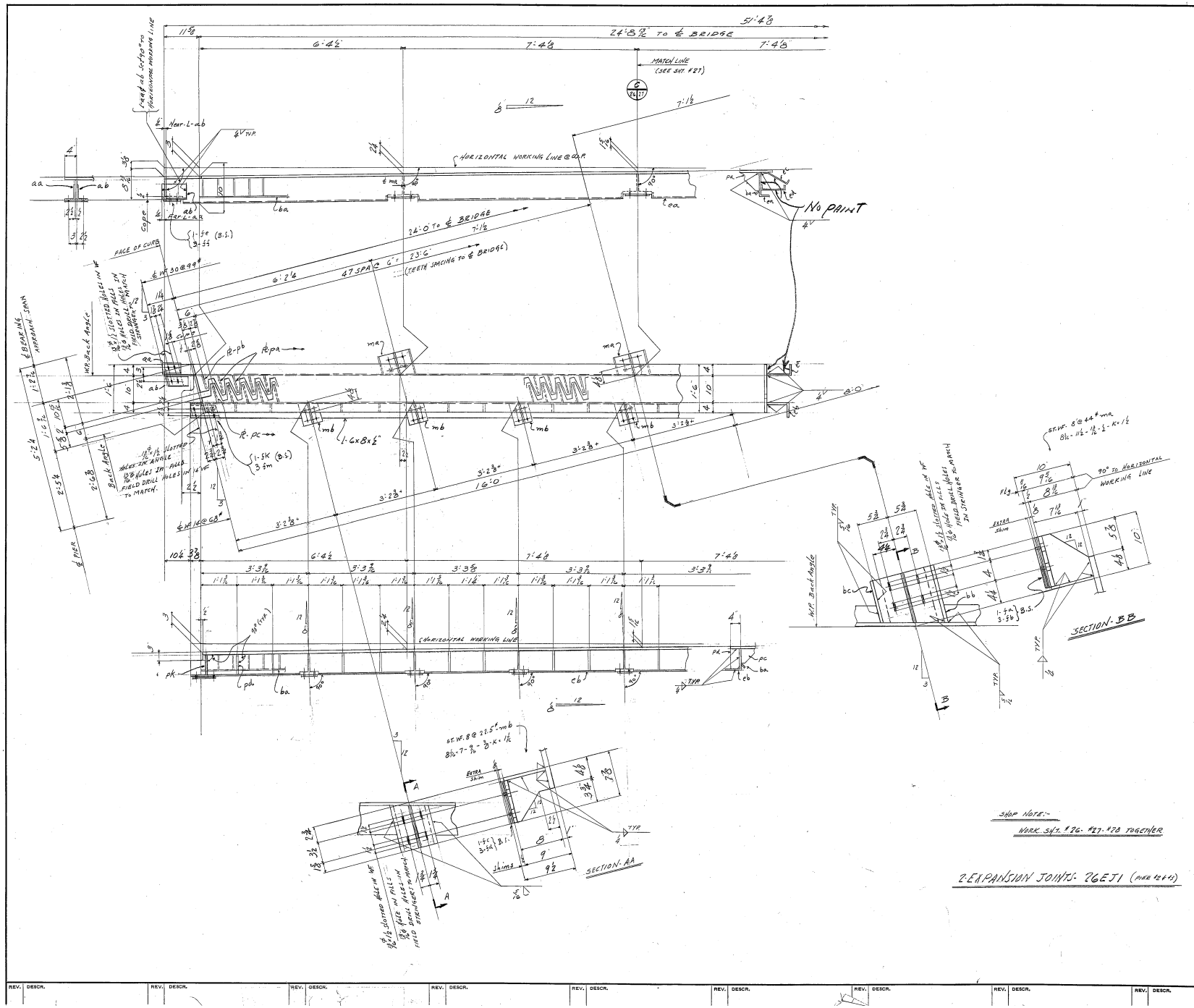
MADE BY DB DATE 11/9/66
CHECKED BY FS DATE 11/11/66
RIVETS
OPEN HOLES NOTED
MAX. SHIPPING LGTH.
CUST. ORDER NO.

CONT. NO. 8412
SHEET NO. 25

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.
												4	ADDED P13 25P13 R.B. 2-15-66	4	ADDED P12 - 25P10-25P11-25P12 R.B. 1-31-66

REVISION 1 2 3 4 5 6 7 8 9



ITEM	NO. PIECES	ASSEM. MARKS	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT EA. UNIT LB.	TOTAL SHIP. WEIGHT	F.A.
1										
2			2-EXPANSION JOINTS- 26EJ1							
3	2		A242 #1	16½×1"	49	9½	PL 2½ OVD-5'-10"			
4	2	ea	A242 #1	7×4×½	51	4½	PL 2½ for 20'-0" (WHEEL) OVD-20'-0"			
5	2	eb	A242 #1	8×6×½	50	3½	PL 2½ OVD-20'-0" (WHEEL)			
6	4	ea	CONTRACT BARS	1¼×3/16	49	5⅜	for 10'-0"			
7	95	pa	A242 #1	7½×½	0	8⅝	(1-cut) PL 2½ for 22'-0"			
8	1	pb	A242 #1	7½×½	0	6⅞	(1-cut-2)			
9	95	pc	A242 #1	6½×½	0	8⅝	(1-cut-2)			
10	60	pd	A242 #1	3½×½	0	7½	PL 2½ for 22'-0"			
11	70	ec	Bar 1	1¼×¼	1	0				
12	56	ed	Bar 1	1¼×¼	1	0				
13	12	ma	ST. WF	8 @ 44°	0	10⅝	Bevel Cut			
14	24	mb	ST. WF	8 @ 22.5°	0	8¼	Bevel Cut PL 2½ for 10'-0"			
15	4	mc	ST. WF	8 @ 44°	0	9⅝	Bevel Cut			
16	12	bar 1	bb	1×¼	0	11	" "			
17	12	bar 1	bc	1×½	0	5⅞	" "			
18	2	aa	L:	6×4×3/8	0	6¾				
19	2	ab	L:	6×4×3/8	0	9	Bevel Cut.			
20	2	ac	L:	6×4×3/8	0	5¼				
21	2	ad	L:	5×3×3/8	0	9				
22	12	fa	A242 Shim	10¾×¼	0	8¼	B.S. PL 1/2 for 10'-0" x 10'-0"			
23	36	fb	A242 Shim	10¾×⅜	0	8¼	B.S. PL 1/2 for 48" x 12'-0"			
24	24	fc	A242 Shim	6½×¼	0	8⅜	B.S. PL 1/2 - for 48" x 10'-0"			
25	72	fd	A242 Shim	6½×⅜	0	8⅜	B.S. PL 1/2 - for 48" x 12'-0"			
26	2	fe	A242 Shim	4¾×¼	0	10	B.S. for 48" x 10'-0"			
27	6	ff	A242 Shim	4¾×⅜	0	10	B.S. for 48" x 12'-0"			
28	4	fk	A242 Shim	8¼×¼	0	8½	B.S. for 48" x 10'-0"			
29	12	fm	A242 Shim	8¼×⅜	0	8½	B.S. for 48" x 12'-0"			
30	2	fn	A242 Shim	4¾×¼	0	9	B.S. for 48" x 10'-0"			
31	6	fo	A242 Shim	4¾×⅜	0	9	B.S. for 48" x 12'-0"			
32	4	fs	A242 Shim	8½×¼	0	9⅛	B.S. for 48" x 10'-0"			
33	12	ft	A242 Shim	8½×⅜	0	9⅛	B.S. for 48" x 12'-0"			
34	4	fu	A242 Shim	8½×7/16	0	9⅛	B.S.			
35	4	pk	A242 #1	3½×⅜	0	7½	Bevel Cut for 10'-0"			
36										
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SHOP NOTE:-
WORK SHT. # 26. #27. #28 TOGETHER

2-EXPANSION JOINTS- 26EJ1 (PIER #2 & #3)

WISCONSIN BRIDGE & IRON CO.
3023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

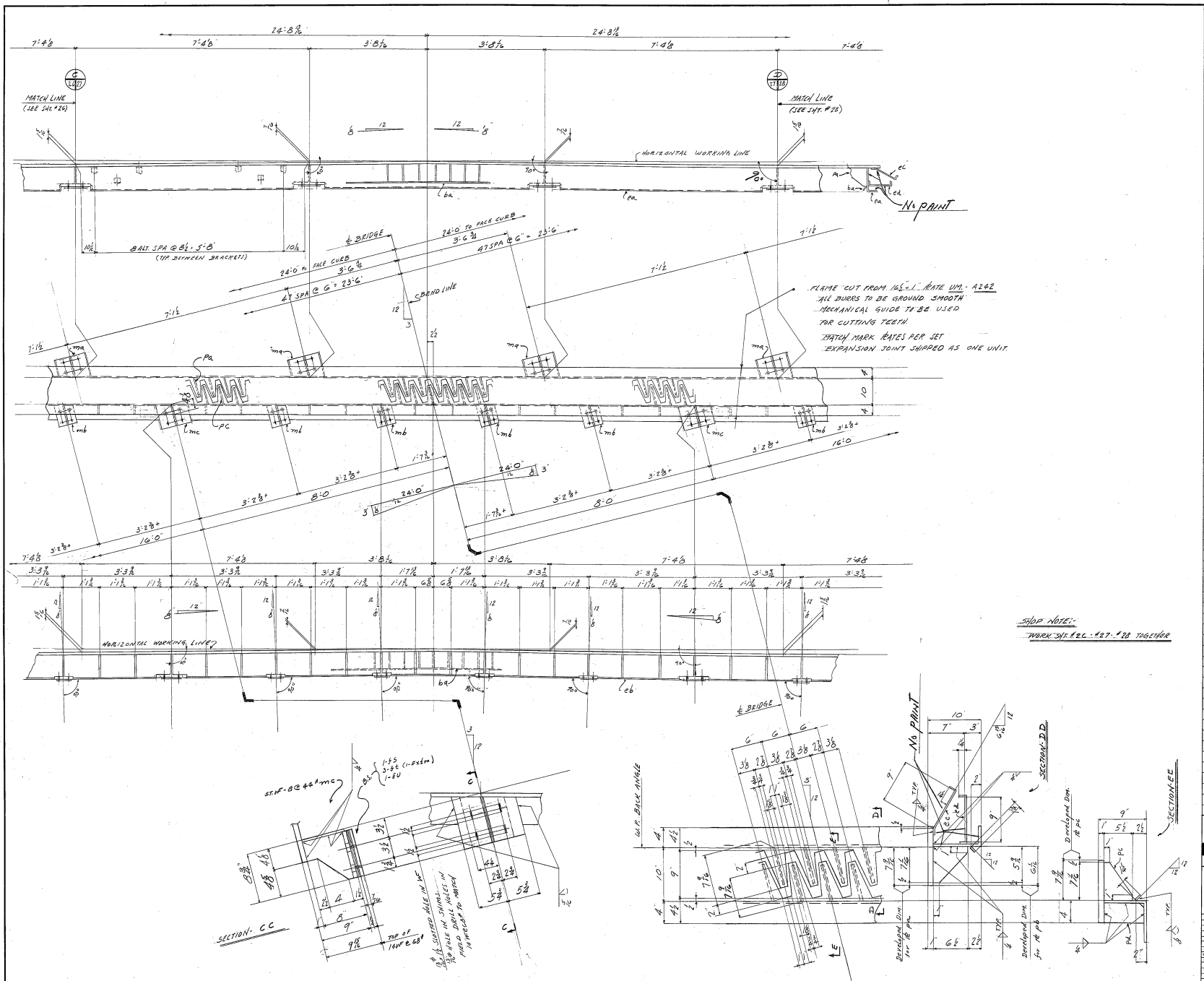
CUSTOMER J.C. THELACKER MILWAUKEE WIS
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION W. ST. PAUL AVE. & EAST DETROIT ST. MILWAUKEE WIS.
DETAILS OF EXPANSION JOINTS PIER #2 & #3
SHOP PAINT 1-CT. TYP-SEE-SPEC'S. AS NOTED

MADE BY R. Bond DATE 1-8-66
CHECKED BY F. S DATE 2-23-66
RIVETS OPEN HOLES AS NOTED
MAX. SHIPPING LGTH. 51'-4⅞ CUST. ORDER NO.

CONT. NO. 8412 SHEET NO. 26

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.



FOR MATL. SEE DRG 2/6

ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.

WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

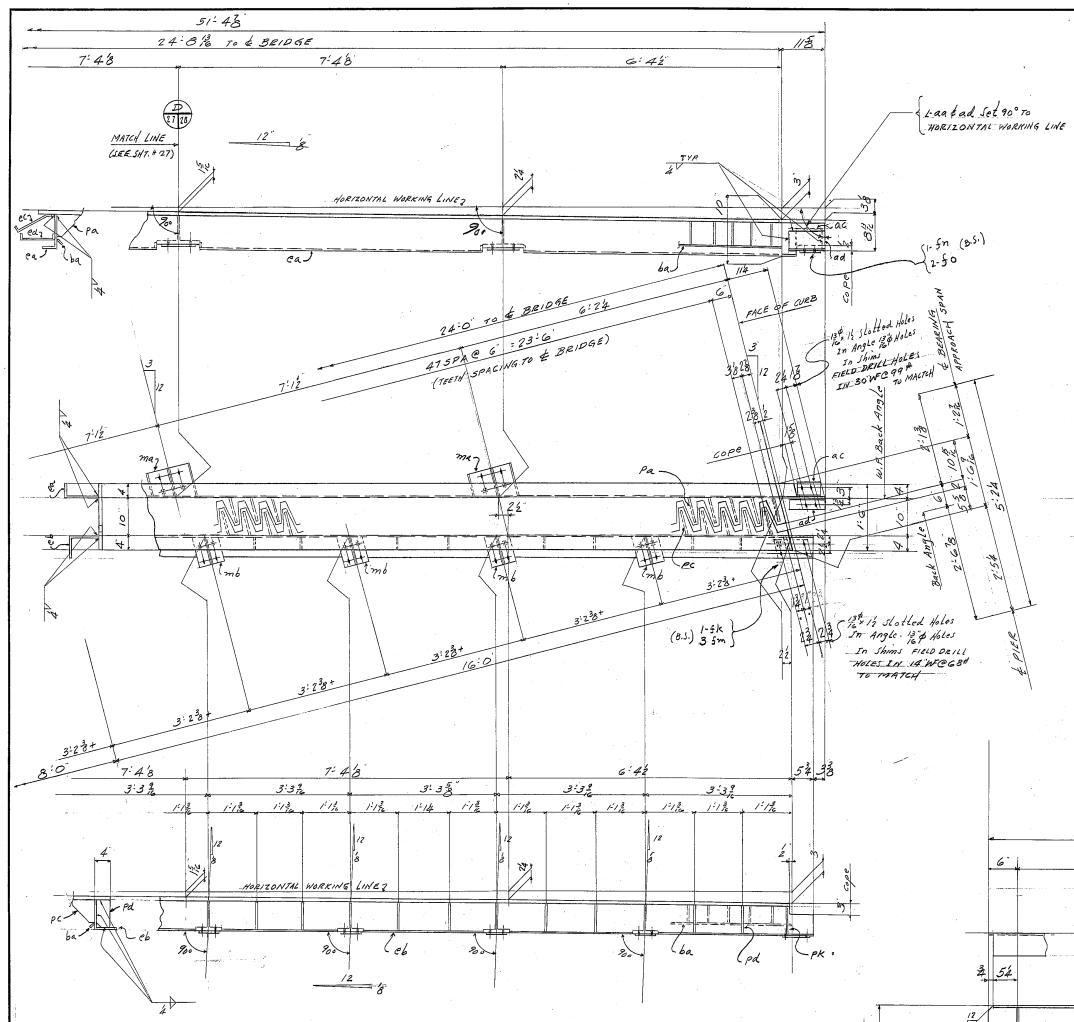
CUSTOMER J. C. THEILACKER MILWAUKEE WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION W. ST. PAUL AVE & EAST DETROIT ST. MILWAUKEE WIS.
DETAILS OF EXPANSION JOINTS PIER #2 & #3
SHOP PAINT I. CT. TTP-86C - SEE SPEC'S. AS NOTED

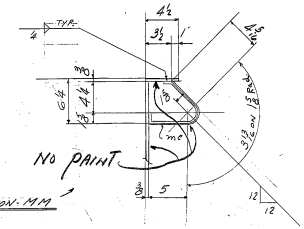
MADE BY R. BUCH DATE 1-10-66
CHECKED BY F.S. DATE 2-23-66
RIVETS _____ OPEN HOLES AS NOTED
MAX. SHIPPING LGTH. _____ CUST. ORDER NO. _____

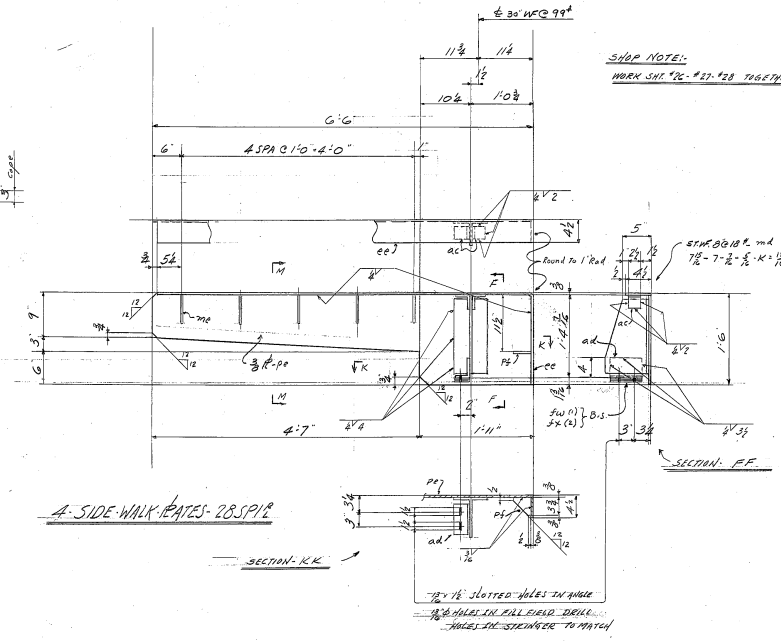
CONT. NO. 8412 SHEET NO. 27

Member of AISC

REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR.







SHOP NOTE:-
WORK SHT. #26-#27-#28 TOGETHER

ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
1										
2										
3			4-SIDE WALK GATES-28 SPIR							
4	4	pc	Rt.	11 7/8 × 3/8	6	5 3/8				
5	4	ee	Rt.	4 1/2 × 3/8	7	10 2				
6	4	md	St. Wf	8 @ 18#	1	4				
7	4	pf	Rt.	3 3/4 × 4	0	3 3/4				
8	8	ac	Ls	3 × 3 × 3/8	0	2 1/2				
9	4	ad	Ls	4 × 3 × 3/8	0	6 1/2				
10	20	me	Bars	3/8 ⌀	1	3 3/4				
11	4	fw	Shims	3 × 4	0	6 1/2				
12	12	fx	Shims	3 × 3/8	0	6 1/2				
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WISCONSIN BRIDGE & IRON CO.
3023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J. C. THEILACKER MILWAUKEE WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION W. ST. PAUL AVE & EAST DETROIT ST. MILWAUKEE WIS.
DETAILS OF EXPANSION JOINTS PIER #2-#3
SHOP PAINT 1 CT. TTP-BGC · SEE SPECS. AS NOTED

a	b	c	d	e	f	g	h	m	n	p	s	t	u	w	y
a															
b															
c															
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w															
y															

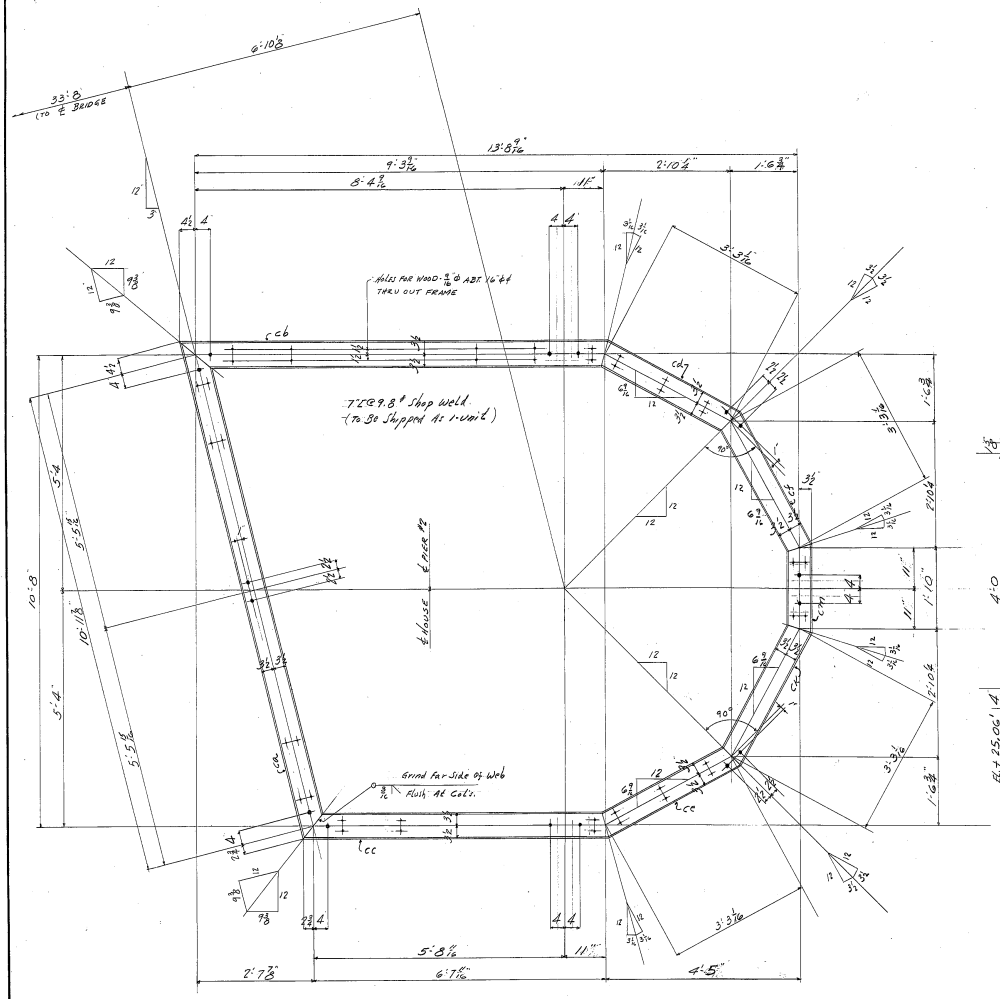
MADE BY R. Bull DATE 1-11-66
CHECKED BY F.S. DATE 2-23-66
RIVETS _____ OPEN HOLES A. Nitro
MAX. SHIPPING LGTH. 6'-6" CUST. ORDER NO. _____

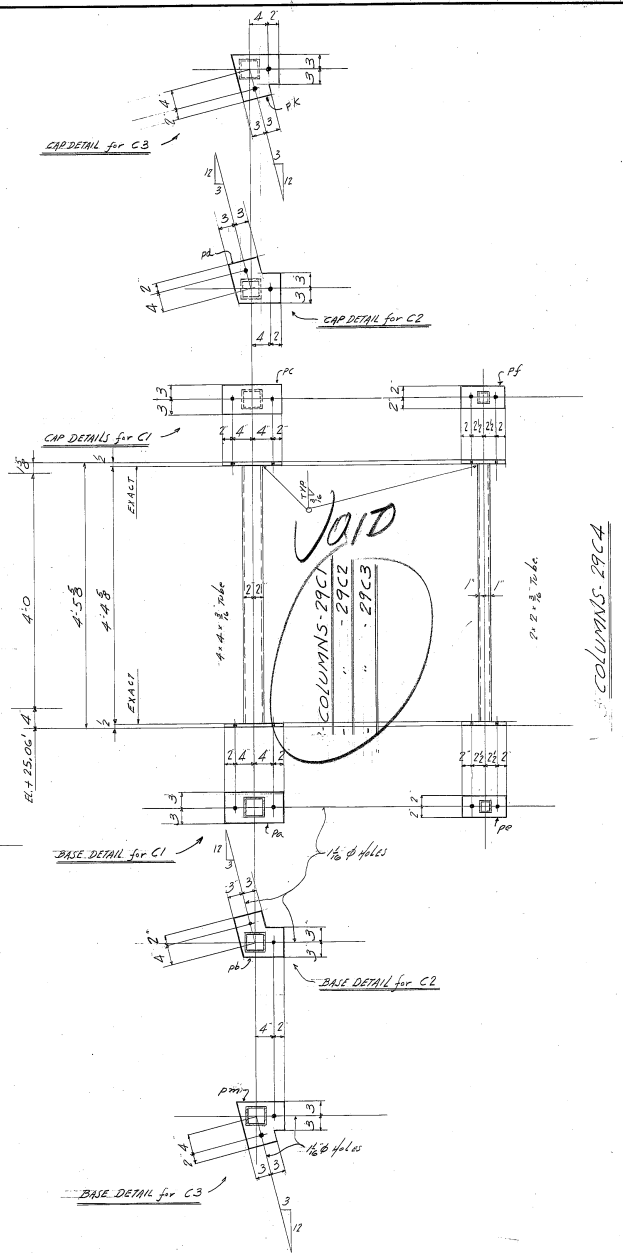
CONT. NO. 8412
SHEET NO. 28

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.

REVISION 1 2 3 4 5 6 7 8 9





ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
1			ROOF FRAME - 29RF1							
2		ca	∠	7"@9.8#	11	7 1/8	Bevel cut 2 E.E.			
3		cb	∠	7"@9.8#	9	8 9/16				
4		cc	∠	7"@9.8#	6	11 5/16				
5		cd	∠	7"@9.8#	3	4 15/16				
6		ce	∠	7"@9.8#	3	4 9/16				
7		cf	∠	7"@9.8#	3	4 9/16				
8		ck	∠	7"@9.8#	3	4 9/16				
9		cm	∠	7"@9.8#	1	1 1/2				
10										
11										
12										
13										
14										
15										
16										
17										
18										
19			COLUMNS - 29C1							
20			"			- 29C2				
21			"			- 29C3				
22	5		TUBES	4 x 4 x 3/16	4	4 3/8	2 E.E.			
23		pa	PL's	6 x 1/2	1	0	C1			
24		pb	PL's	9 3/8 x 1/2	0	10 3/8	C2			
25		pc	PL's	6 x 1/2	1	0	C1			
26		pd	PL's	9 5/8 x 1/2	0	10 3/8	C2			
27		pm	PL	9 3/8 x 1/2	0	9 7/8	C3			
28		pk	PL	9 3/8 x 1/2	0	9 7/8	C3			
29										
30										
31										
32										
33										
34			COLUMNS - 29C4							
35	3		TUBES	2 x 2 x 1/4	4	4 3/8	2 E.E. Mfg. See 4-4 3/8			
36		pe	PL's	4 x 1/2	0	9				
37		pf	PL's	4 x 1/2	0	9				
38										
39										
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WISCONSIN BRIDGE & IRON CO.
3023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J.C. TWEILACKER MILWAUKEE WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION W. ST. PAUL AVE. & EAST DETROIT ST. MILWAUKEE WIS.
DETAILS OF BRIDGE OPERATOR'S HOUSE STEEL FRAMING
SHOP PAINT ACC. TTP-96C - SEE SPEC'S

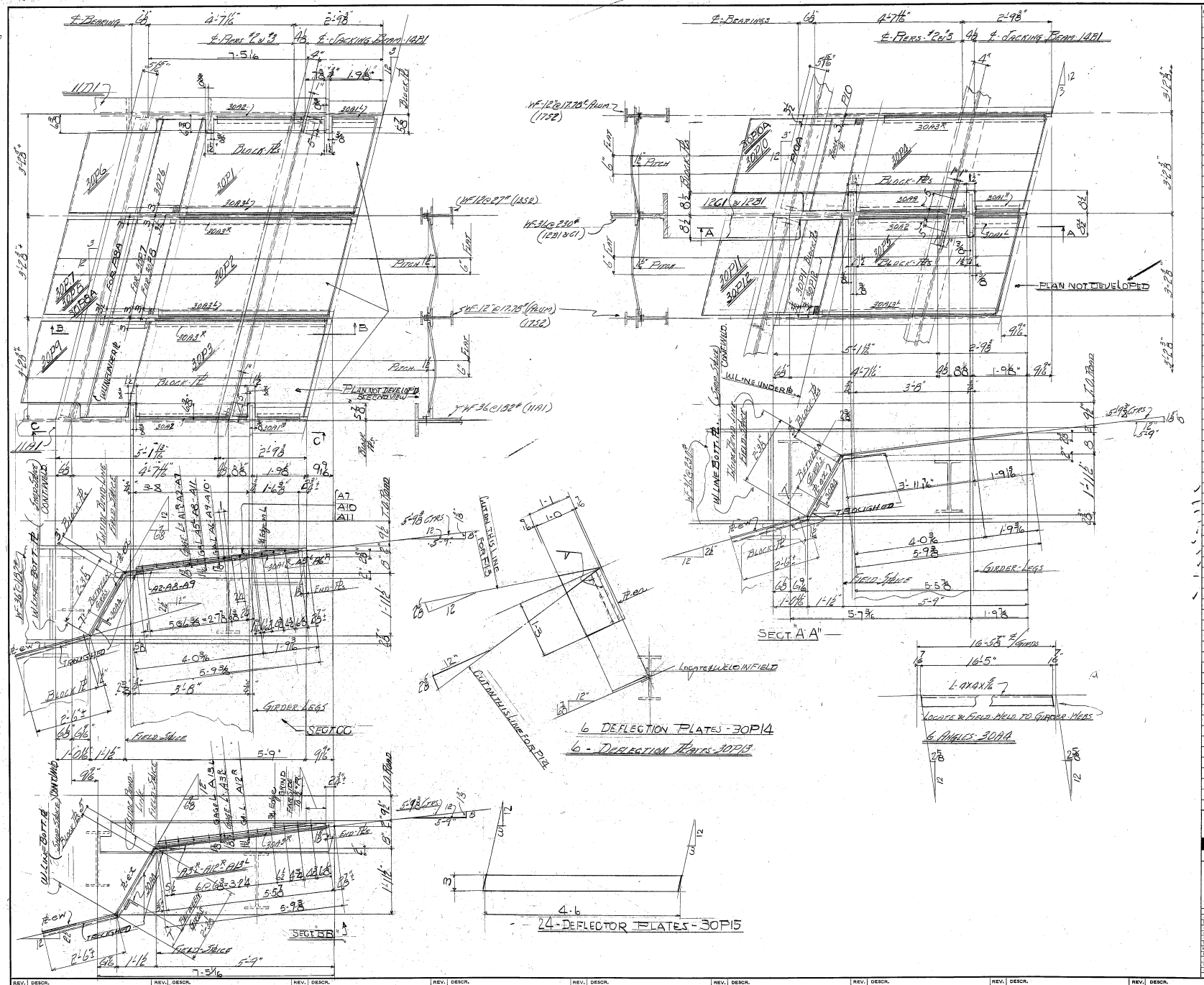
MADE BY R. Buck DATE 1-17-66
CHECKED BY F.S DATE 2-24-66
RIVETS OPEN HOLES 13/16" Ø A.N.C.
MAX. SHIPPING LGTH. 14'-4" CUST. ORDER NO.

CONT. NO. 8412 SHEET NO. 29

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.

REVISION 1 2 3 4 5 6 7 8 9

Member of AISC



ITEM	NO. PIECES	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT OF UNITS	TOTAL SHIP. WEIGHT	P.A.
1										
2			2 - Plates - 30P1							
3			18 - do - 30P2							
4			2 - do - 30P3							
5			4 - do - 30P4							
6			4 - do - 30P5							
7										
8	30		Pls	37½x½ Corten	6	6¾	Bev. Cut - Both Ends (3)	42"x12-0		P91
9										
10										
11										
12										
13			1 - Plate - 30P8A							
14			1 - Do - 30P10A							
15			2 - Plates - 30P6							
16			16 - do - 30P7							
17			1 - do - 30P8							
18			2 - do - 30P9							
19			3 - do - 30P10							
20			1 - do - 30P11							
21			3 - do - 30P12							
22										
23	30	EN	Pls	37½x½ Corten	2	6¾	Bev. Cut - From 42"x12'0"			
24			Corten -	(Shop Weld or Bend)						
25	30	EX	Pl	37½x½ Corten	2	3¼	Bev. Cut From 42"x12-0			
26			Corten	(Shop Bend or Weld)						
27										
28										
29			6 - Deflection Plates 30P14							
30			6 - Deflection Plates 30P13							
31	6	PB	Pl	12x½ Corten	1	5¾	Corten From 42"x12-0"			
32	6	PA	Pl	12x½ Corten	1	3	Corten			
33	12	ea	Pls	5x⅜	1	3				
34										
35			12 - Angles - 30A12							
36			2 - Angles - 30A9							
37			2 - Angles - 30A8							
38			2 - Angles - 30A6							
39			2 - Angles - 30A5							
40			8 - Angles - 30A1							
41			8 - do - 30A3							
42			24 - do - 30A3							
43			6 - do - 30A4							
44			12 - do - 30A13							
45	8	A1	L	2x2x¼	1	5¾	(A16)			
46	8	A2	L	2x2x¼	2	9¾				
47	24	A3	L	2x2x¼	5	5¾				
48	6	A4	L	4x4x¼	16	5¾				
49										
50	2	A5	L	2x2½x¼	1	5¾				
51	2	A8	L	2x2½x¼	2	9¾				
52	2	A9	L	2x2½x¼	2	9¾				
53	12	A12	L	2x2½x¼	5	5¾				
54	12	A13	L	Do	5	5¾				
55	2	A6	L	2x2½x¼	1	5¾				
56										
57			8 - Angles - 30A7							
58			2 - Do - 30A10							
59			2 - Do - 30A11							
60	12		L	2½x2x¼	0	4½				
61										
62										
63			24 - Deflector Plates - 30P15							
64	24		Pl	3x½ Corten	1	6¾	Corten From 42"x12'0"			
65										
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75										

WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE WIS 53209
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER: C. G. Theilacker
DESCRIPTION: St. Paul-Ave. Detroit Sr. Vertical-Lift Bridge
LOCATION: Milwaukee Wis
DETAILS OF: Deflector Plates at Pier #2 & #3
SHOP PAINT: 1 Coat TTP 860 (See Spec.)

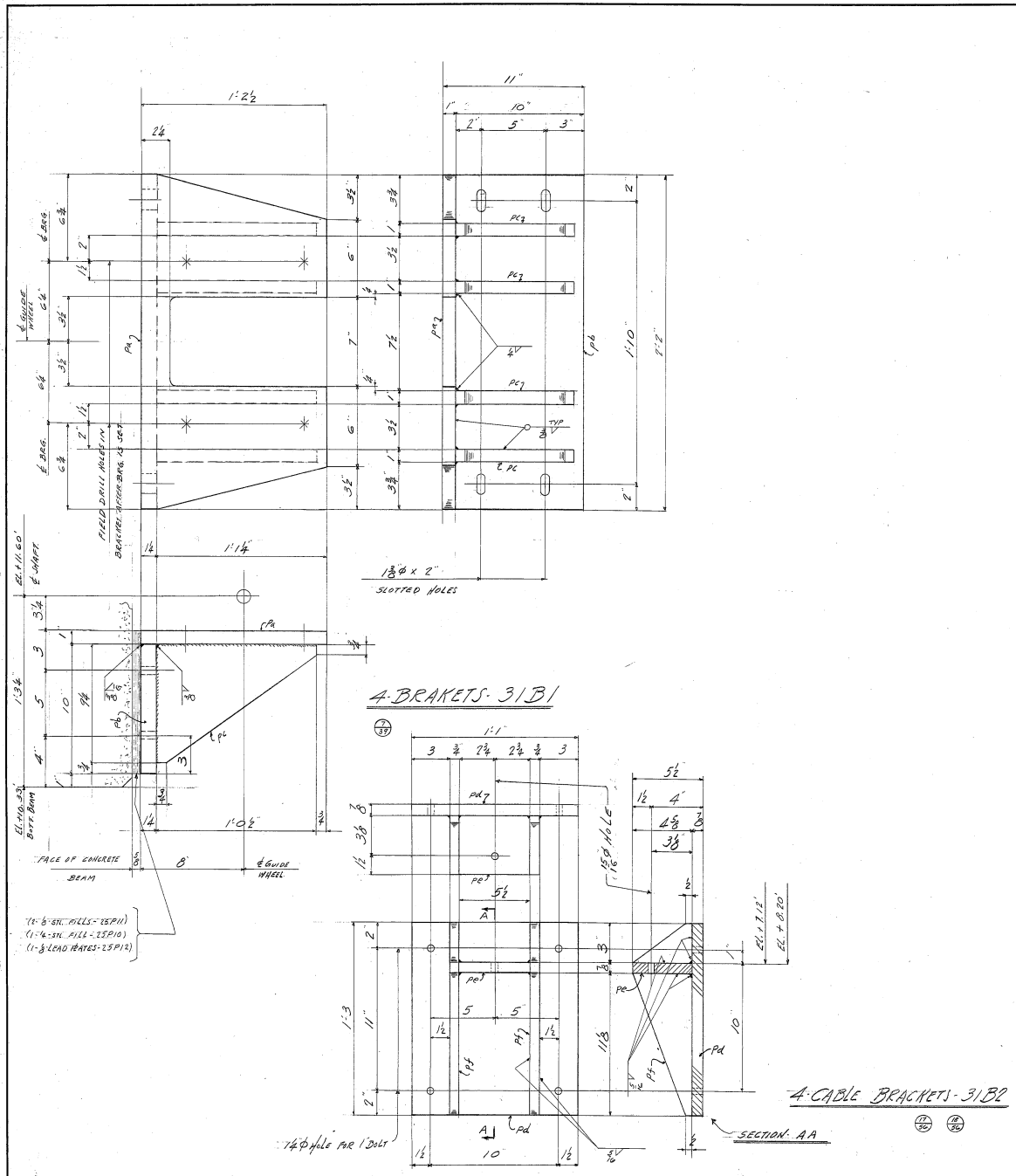
MADE BY: Paul Dunne DATE: 12/21/66
CHECKED BY: D.B. DATE: 3/10/66
RIVETS: —— OPEN HOLES: 7/16
MAX. SHIPPING LGTH.: 16'-5½" CUST. ORDER NO.:

CONT. NO. 8412 | SHEET NO. 30

Member of AISC

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.

REVISION 1 2 3 4 5 6 7 8 9



ITEM	NO. OF PCS	ASSEM. MARK	DESCR.	SIZE	LENGTH FT.	LENGTH IN.	PROVISIONS AND REMARKS	WEIGHT SP. WATER	TOTAL SIND WEIGHT	P.A.
1										
2										
3				4-BRACKETS-31B1						
4	4	pa	PLs	14½×1	2	2				
5	4	pb	PLs	10×1¼	2	2				
6	16	pc	PLs	9¼×1	1	0½				
7										
8										
9										
10										
11										
12										
13				4-CABLE BRACKETS-31B2						
14	4	pd	PLs	13×⅞	1	3				
15	4	pe	PLs	4⅝×⅞	0	5½				
16	8	pf	PLs	4⅝×¾	1	3				
17										
18										
19										
20										
21										
22										
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WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

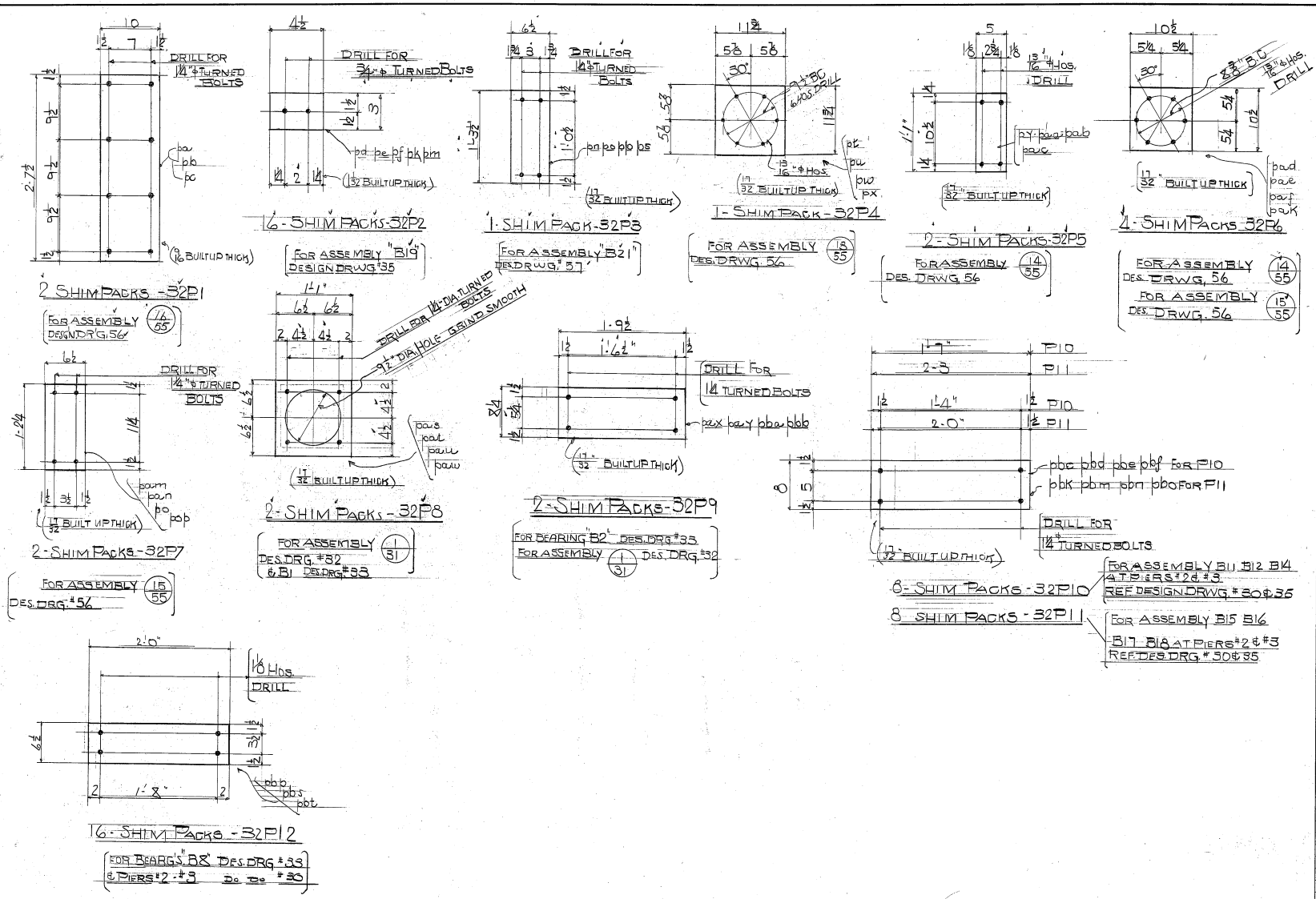
CUSTOMER J.C. THEILACKER MILWAUKEE WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION W. ST. PAUL AVE. & EAST DETROIT ST. MILWAUKEE WIS.
DETAILS OF WELDMENTS
SHOP PAINT 1 CT. TTP-86C - SEE SPEC'S.

MADE BY R. BUCH DATE 1-29-66
CHECKED BY DATE
RIVETS OPEN HOLES AS NOTED
MAX. SHIPPING LGTH. 2'-2" CUST. ORDER NO.

CONT. NO. 8412 SHEET NO. 31

Member of AISC

REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REV. DESCR. REVISION 1 2 3 4 5 6 7 8 9



ITEM	NO. REQ'D	ASSEM. MARK	DESCR.	SIZE	LENGTH FT. & IN.	PROVISIONS AND REMARKS	WEIGHT EACH	TOTAL WEIGHT
			2 - SHIM PACKS - 32P1					
	2	pa	PL	10 x ¼	2 7½			
	4	pb	PL	10 x ⅛	2 7½			
	2	pc	PL	10 x 1/16	2 7½			
			16 - SHIM PACKS - 32P2					
	16	pd	PL	3 x 1/2	0 4½			
	16	pe	PL	3 x ¼	0 4½			
	16	pf	PL	3 x ⅛	0 4½			
	32	pk	PL	3 x 1/16	0 4½			
	16	pm	PL	3 x 1/32	0 4½			
			1 - SHIM PACK - 32P3					
	1	pn	PL	6½ x ¼	1 3½			
	1	po	PL	6½ x ⅛	1 3½			
	2	pp	PL	6½ x 1/16	1 3½			
	1	pq	PL	6½ x 1/32	1 3½			
			1 - SHIM PACK - 32P4					
	1	pt	PL	11¾ x ¼	0 11¾			
	1	pu	PL	11¾ x ⅛	0 11¾			
	2	pw	PL	11¾ x 1/16	0 11¾			
	1	px	PL	11¾ x 1/32	0 11¾			
			2 - SHIM PACKS - 32P5					
	2	py	PL	5 x ¼	1 1			
	2	pay	PL	5 x ⅛	1 1			
	4	pab	PL	5 x 1/16	1 1			
	2	pac	PL	5 x 1/32	1 1			
			4 - SHIM PACKS - 32P6					
	4	pad	PL	10½ x ¼	0 10½			
	4	pae	PL	10½ x ⅛	0 10½			
	8	paf	PL	10½ x 1/16	0 10½			
	4	pak	PL	10½ x 1/32	0 10½			
			2 - SHIM PACKS - 32P7					
	2	pam	PL	6½ x ¼	1 2½			
	2	pan	PL	6½ x ⅛	1 2½			
	4	pao	PL	6½ x 1/16	1 2½			
	2	pap	PL	6½ x 1/32	1 2½			
			2 - SHIM PACKS - 32P8					
	2	paq	PL	13 x ¼	1 1"			
	2	par	PL	13 x ⅛	1 1"			
	4	pas	PL	13 x 1/16	1 1"			
	2	pat	PL	13 x 1/32	1 1"			
			2 - SHIM PACKS - 32P9					
	2	pax	PL	8¼ x ¼	1 9½			
	2	pay	PL	8¼ x ⅛	1 9½			
	4	pba	PL	8¼ x 1/16	1 9½			
	2	pbb	PL	8¼ x 1/32	1 9½			
			8 - SHIM PACKS - 32P10					
	8	pbc	PL	8 x ¼	1 7			
	8	pbd	PL	8 x ⅛	1 7			
	16	pbe	PL	8 x 1/16	1 7			
	8	pbf	PL	8 x 1/32	1 7			
			8 - SHIM PACKS - 32P11					
	8	pbh	PL	8 x ¼	2 3			
	8	pbm	PL	8 x ⅛	2 3			
	16	pbn	PL	8 x 1/16	2 3			
	8	pbo	PL	8 x 1/32	2 3			
			16 - SHIM PACKS - 32P12					
	16	pbp	PL	6½ x ¼	2 0			
	32	pbs	PL	6½ x 1/16	2 0			
	16	pbt	PL	6½ x 1/32	2 0			

WEST ST. PAUL AVE. - E. DETROIT ST.

JOB. 522-001

WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant

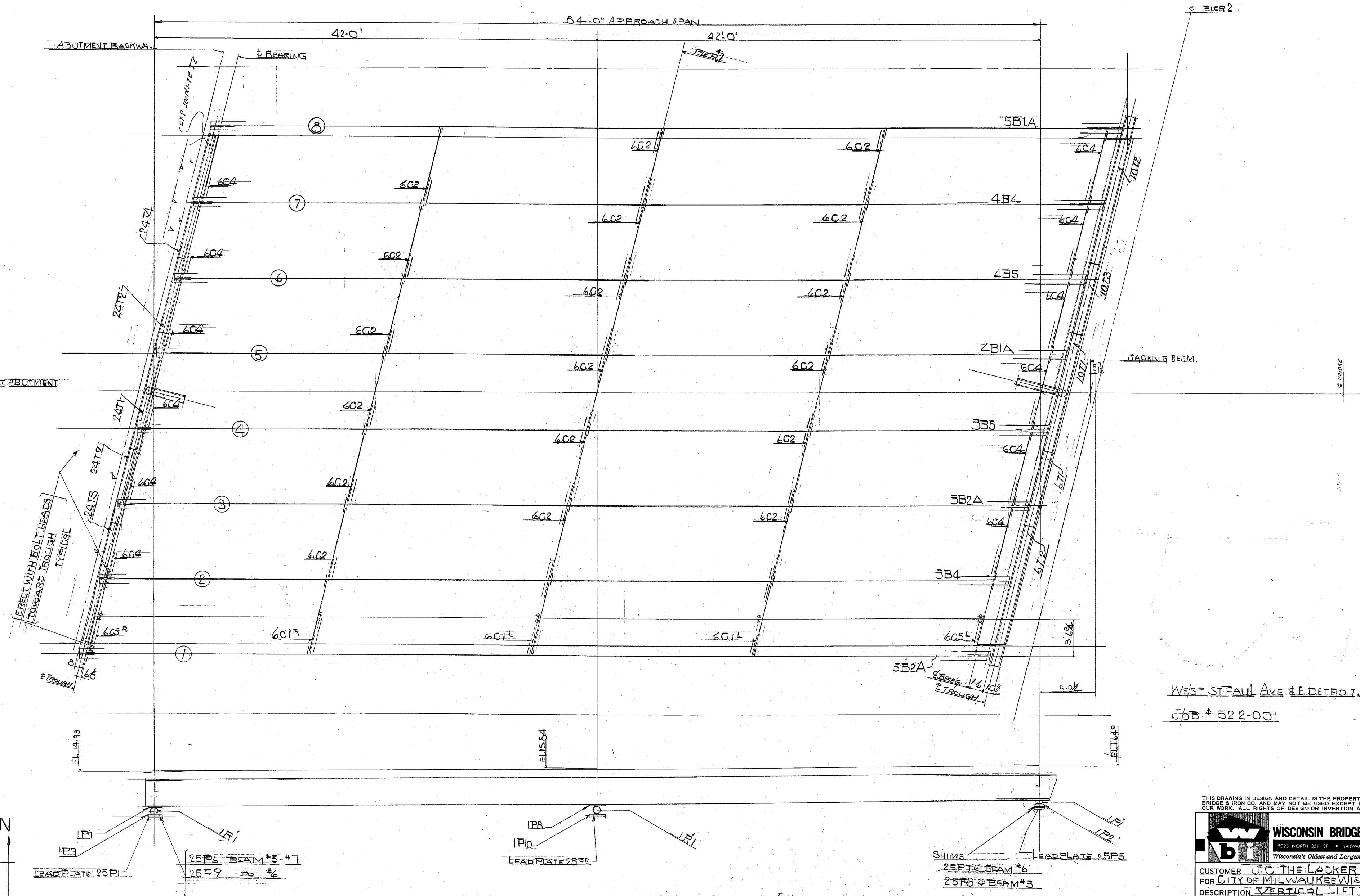
CUSTOMER J.C. THEILACKER MILWAUKEE WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION WEST ST. PAUL AVE. E. DETROIT ST
DETAILS OF MACHINERY SHIMS
SHOP PAINT No Paint

MADE BY D.S. DATE 5/1/46
CHECKED BY H.S. DATE
RIVETS
OPEN HOLES
MAX. SHIPPING LGTH.
CUST. ORDER NO.

CONT. NO. 8412-7-X
SHEET NO. 32

REVISION 1 2 3 4 5 6 7 8 9

Member of AISC



APPROACH SPAN WEST END

WEST ST. PAUL AVE. & E. DETROIT ST.

JOB # 522-001

APPROACH
- SUMMARY BOLT LIST APPROACH SPAN "Q2" CONT 8412
- ERECTORS BOLT LIST APPROACH SPAN 301-302 CONT. 8412

LIFT
- SUMMARY BOLT LIST CONT. 8412 Q3
- SUMMARY BOLT LIST CONT. 8412 1X Q6 Q7
- ERECTORS BOLT LIST LIFT SPAN 303-304-305-306 CONT 8412
- ERECTORS BOLT LIST DO DO 301-302-303-304 305 CONT. 8412 1X

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WISCONSIN BRIDGE & IRON CO.

5023 NORTH 35th ST • MILWAUKEE, WIS. 53209

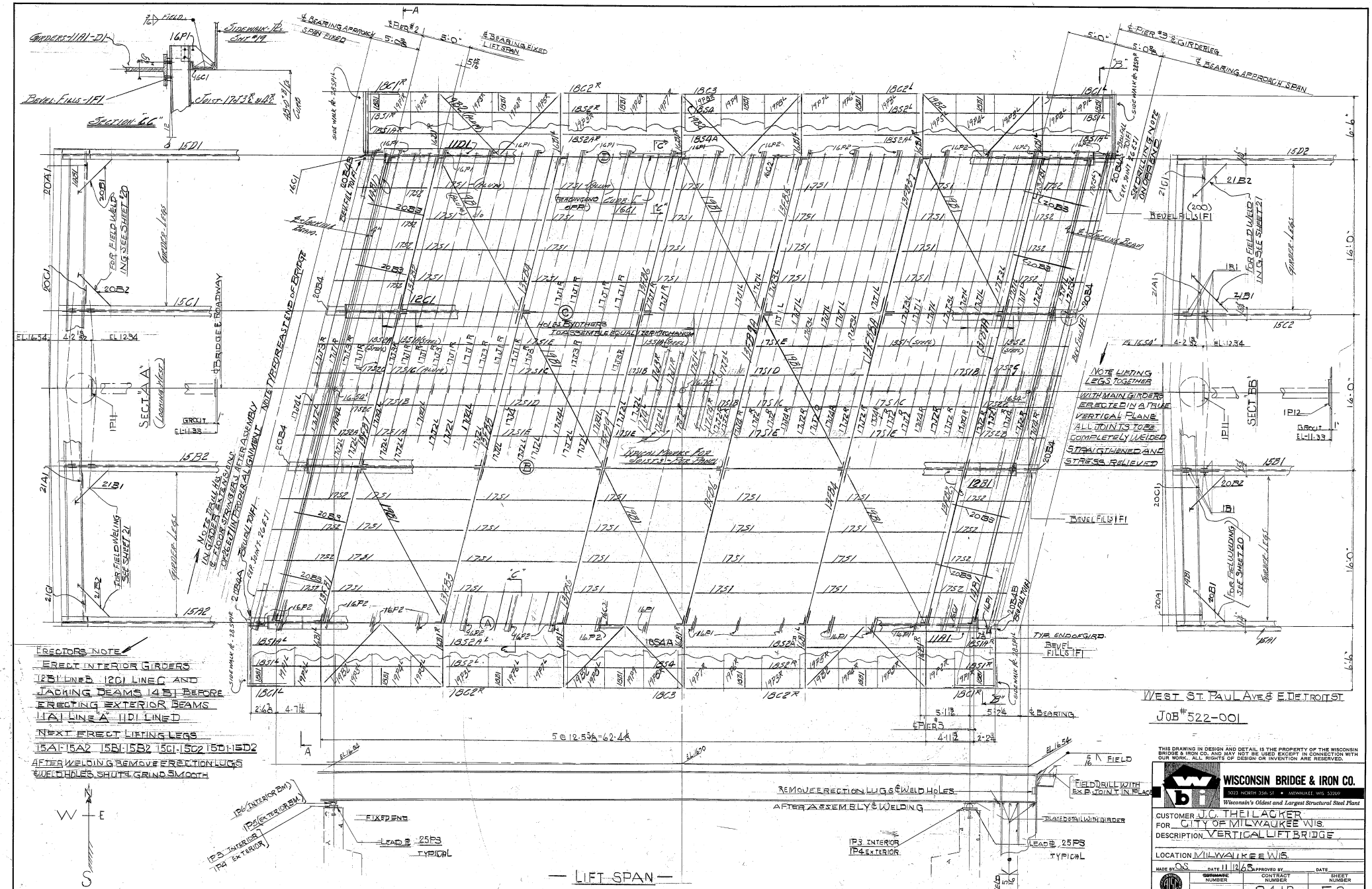
Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J.C. THEILACKER
FOR CITY OF MILWAUKEE WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION MILWAUKEE, WIS.
MADE BY O.S. DATE 11/12/65 APPROVED BY ___ DATE ___

ESTIMATE NUMBER	CONTRACT NUMBER	SHEET NUMBER
	8412	E1

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.

REVISION DATE	1	2	3	4	5	6	7	8	9


SECTION "AA"
SECT "BB"
BRIDGE ROADWAY
GROUT
FOR FIELD WELDING SEE SHEET 20
FOR FIELD WELDING SEE SHEET 21
BEVEL FILLS (F)
NOTE LIFTING LEGS TOGETHER WITH MAIN GIRDERS ERECTED IN A TRUE VERTICAL PLANE ALL JOINTS TO BE COMPLETELY WELDED STRAIGHTENED AND STRESS RELIEVED
NOTE TWO FULL HIGH INTERIOR GIRDERS ERECTED AFTER ASSEMBLY OF FLOOR STRINGERS IN ORDER TO PROVIDE ALIGNMENT
EQUAL FULL TOP
FOR JOINT TO BE FIT
TYP. END OF GIRD.
BEVEL FILLS (F)
HOLES BY OTHERS TO ASSEMBLE EQUAL PER MECHANISM
TYPICAL MARK FOR JOINTS - SEE PLANS
ERECTORS NOTE
ERECT INTERIOR GIRDERS (2B1) LINE B (2C1) LINE C AND JACKING BEAMS (4B1) BEFORE ERECTING EXTERIOR BEAMS (1A1) LINE "A" (1D1) LINE D
NEXT ERECT LIFTING LEGS (5A1-5A2 5B1-5B2 5C1-5C2 5D1-5D2)
AFTER WELDING REMOVE ERECTION LUGS & WELD HOLES, SHUT & GRIND SMOOTH
REMOVE ERECTION LUGS & WELD HOLES AFTER ASSEMBLY & WELDING
FIXED END
LEAD ⊥ 25P3 TYPICAL
— LIFT SPAN —
WEST ST. PAUL AVE. & E. DETROIT ST.
JOB # 522-001
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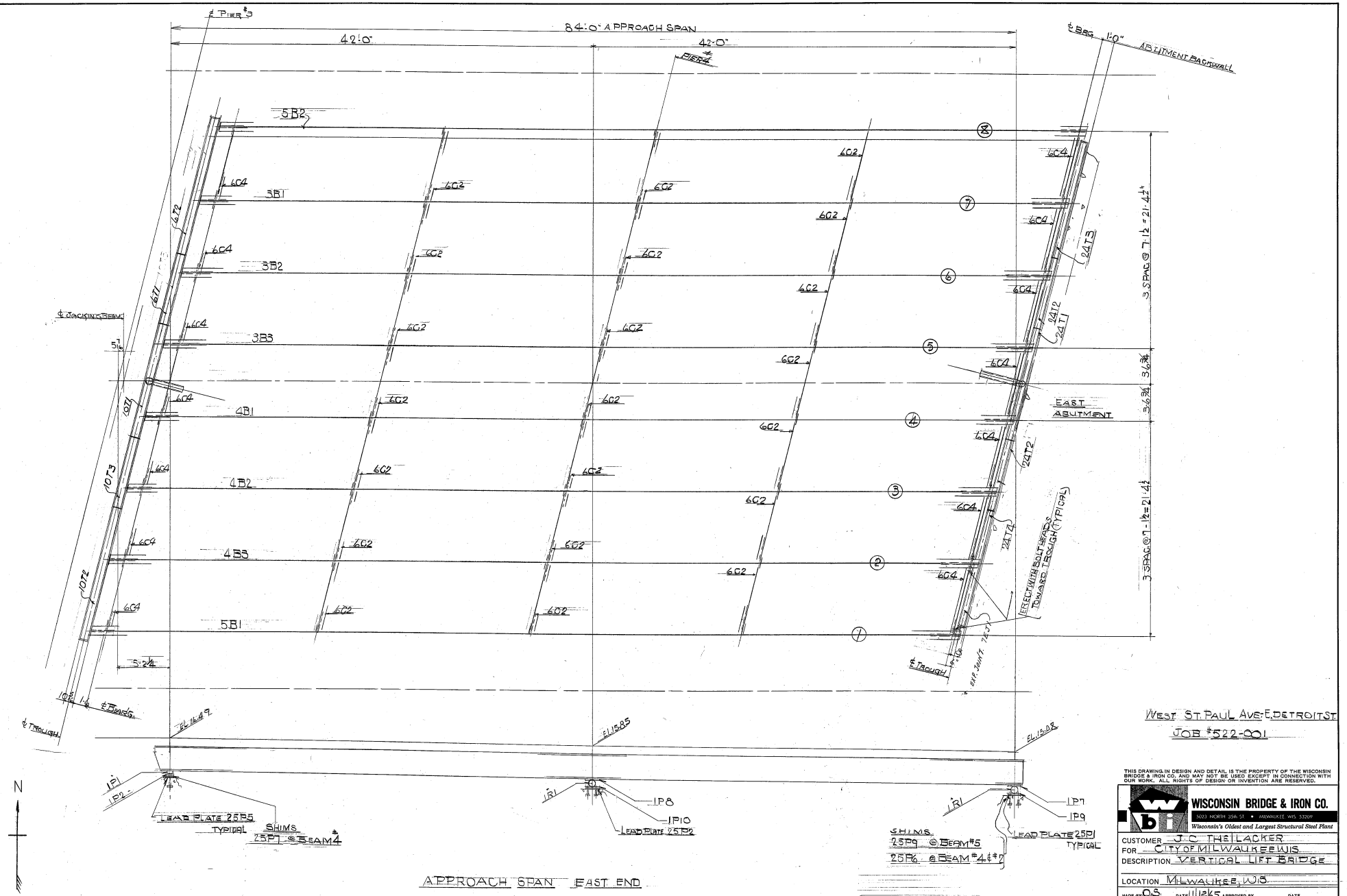
WISCONSIN BRIDGE & IRON CO.
5023 NORTH 35th ST. • MILWAUKEE WIS. 53209
Wisconsin's Oldest and Largest Structural Steel Plant
CUSTOMER J.C. THEILACKER
FOR CITY OF MILWAUKEE WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
LOCATION MILWAUKEE WIS.
MADE BY OS DATE 11 12 65 APPROVED BY DATE
CONTRACT NUMBER 8412
SHEET NUMBER E2
REV. DESCR.
REVISION DATE 1 2 3 4 5 6 7 8 9



APPROACH SPAN EAST END

WEST ST. PAUL AVE. & E. DETROIT ST.

JOB #522-001

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WISCONSIN BRIDGE & IRON CO.

5023 NORTH 35th ST. • MILWAUKEE, WIS. 53209

Wisconsin's Oldest and Largest Structural Steel Plant

CUSTOMER J. C. THELACKER

FOR CITY OF MILWAUKEE, WIS.

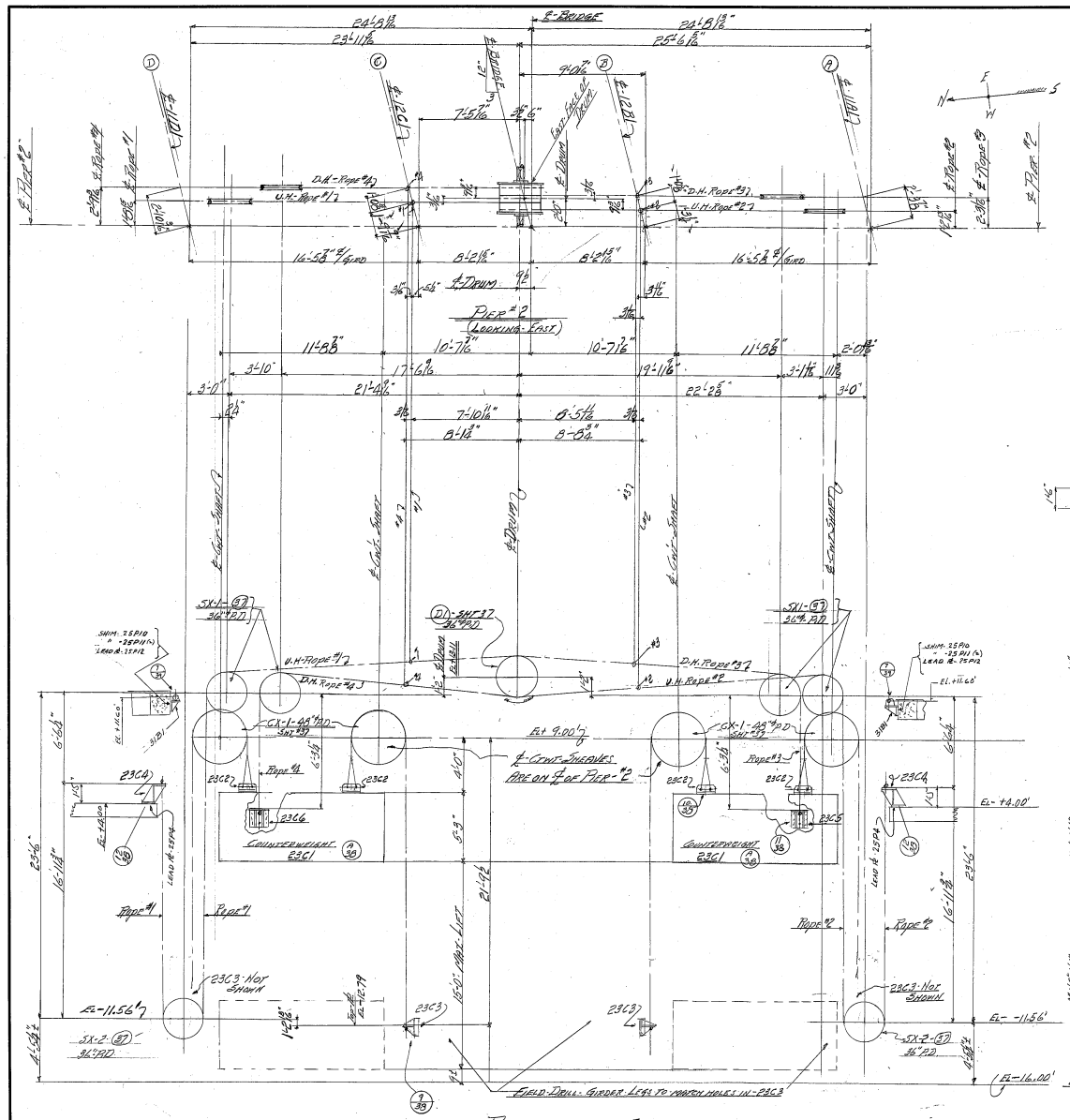
DESCRIPTION VERTICAL LIFT BRIDGE

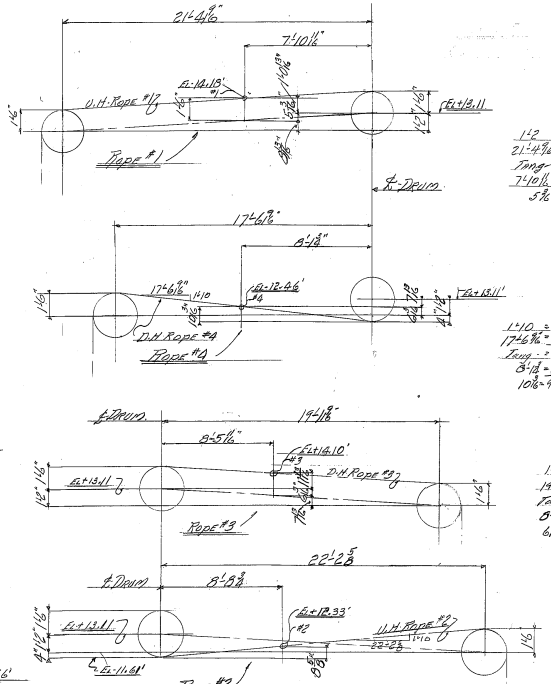
LOCATION MILWAUKEE, WIS.

MADE BY O.S. DATE 11/2/65 APPROVED BY _____ DATE _____

NUMBER	CONTRACT NUMBER	SHEET NUMBER
	8412	E3

REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REV.	DESCR.	REVISION DATE	1	2	3	4	5	6	7	8	9





1'-2" = 0.06695
21'-4 9/16" = 1.83001
Tang = 0.73694
7'-10 11/16" = 0.89711
5 7/16" = 9.63405

1'-10" = 0.26324
17'-6 9/16" = 1.84420
Tang = 7.61904
8'-1 3/8" = 0.91698
10 7/8" = 9.72918

1'-2" = 0.06695
19'-1 1/16" = 1.28172
Tang = 8.78523
8'-5 1/16" = 0.92809
6 1/8" = 9.71332

1'-10" = 0.26324
22'-2 5/8" = 1.34632
Tang = 8.91652
8'-3 3/8" = 0.94097
8 3/8" = 9.85749

WEST ST. PAUL AVE. E. DETROIT ST.

JOB. # 522-001

Wisconsin's Oldest and Largest Structural Steel Plant
Member of AISC

Max. Shipping Lgth. .....
End Distance ..... Unless Noted

Date					
Revised					

WISCONSIN BRIDGE & IRON CO.
MILWAUKEE, WIS.

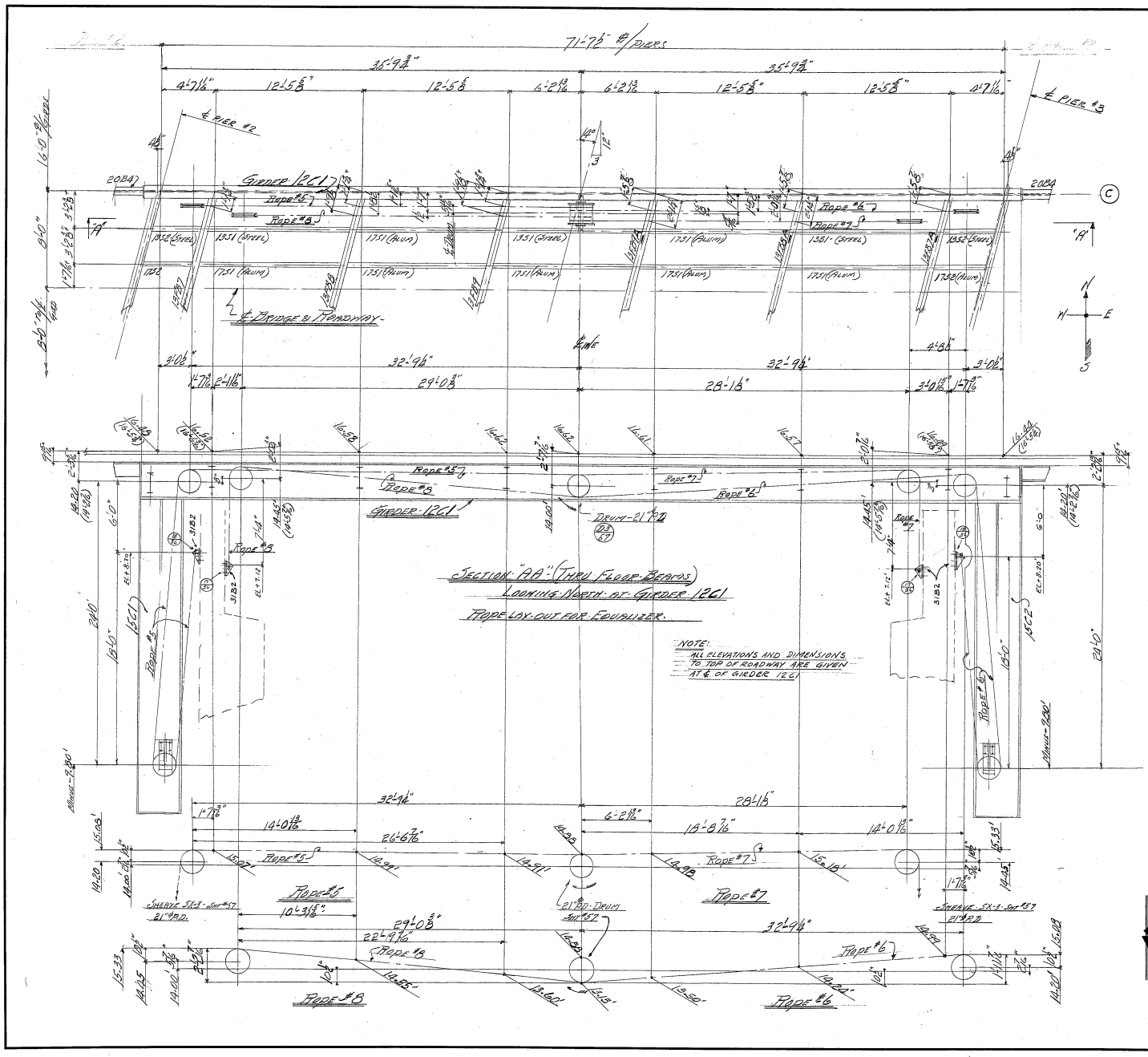
FOR J. C. THELACKER
LOCATION
DESCRIPTION CABLE ARRANGEMENT FOR VERTICAL LIFT PIER #2
DRAWING
SPECIFICATIONS ..... REAMING .....
INSPECTED BY ..... ERECTED BY .....
SHOP PAINT .....
FIELD PAINT .....
MADE BY A. D. Dunne DATE 1/14/66 RIVETS .....
TRACED BY ..... DATE ..... OPEN HOLES .....
CHECKED BY R. Buck DATE 1/24/66 UNLESS NOTED .....
SCALE
SECTION

Number	Sheet	Dwg.	Dwg.	Sheet	Sheet	Check	Check

CONT. No.

SHEET No. E4
8412

DESIGN PRODUCTS CO.—1020—2000-5-63



WEST ST. PAUL AVE. & E. DETROIT ST.

JOB # 522-001

Wisconsin's Oldest and Largest Structural Steel Plant
Member of

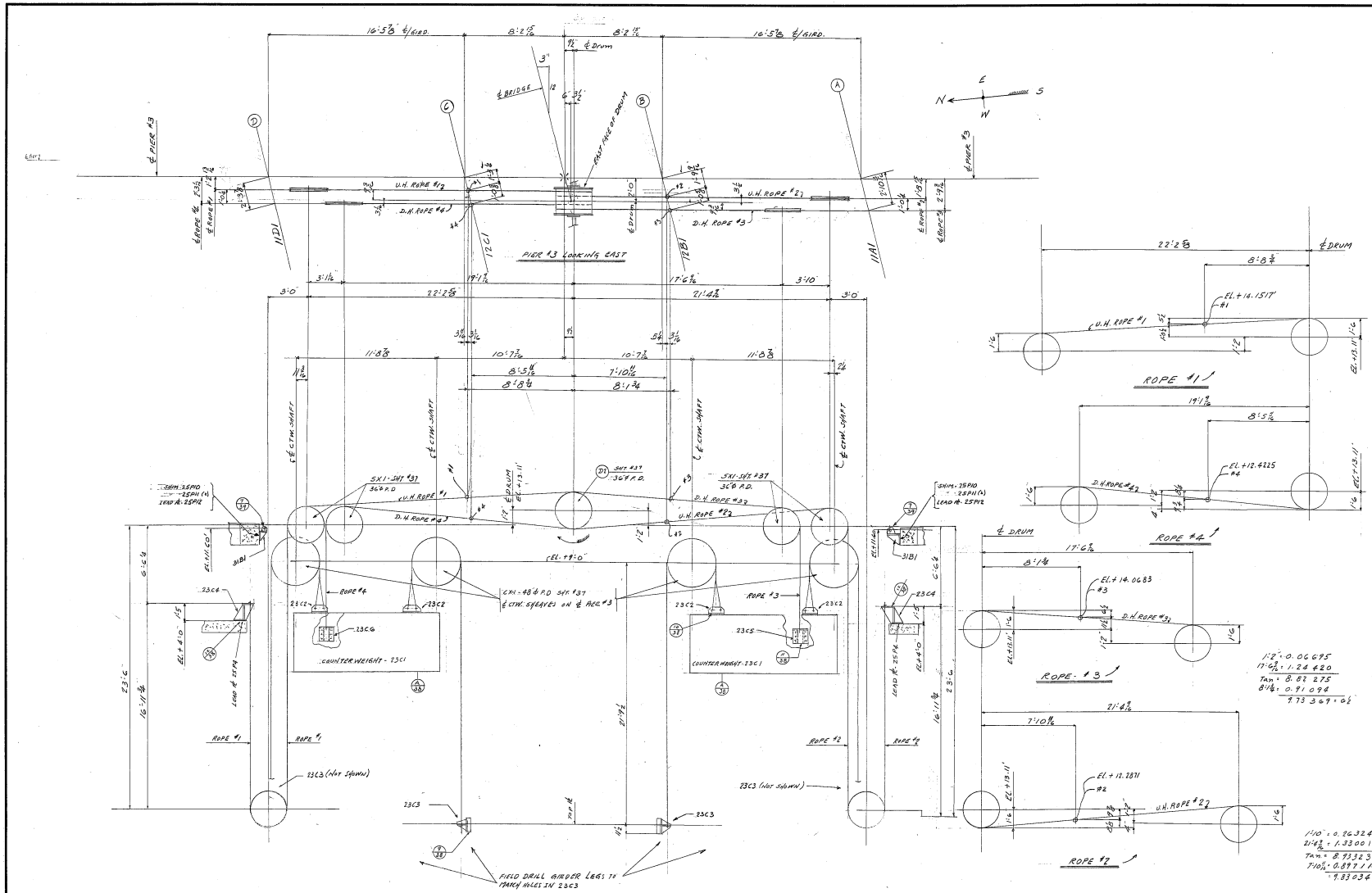
Max. Shipping Lgth. .....
End Distance ..... Unless Noted

Date
Revised

WISCONSIN BRIDGE & IRON CO.
MILWAUKEE, WIS.

FOR J.C. THEILACKER
LOCATION
DESCRIPTION CABLE ARRANGEMENT FOR EQUALIZER
~~DETAILS OF~~
SPECIFICATIONS ..... REAMING
INSPECTED BY ..... ERECTED BY
SHOP PAINT
FIELD PAINT
MADE BY A.F. DUNN DATE 1/15/66 RIVETS
TRACED BY ..... DATE ..... OPEN HOLES
CHECKED BY R. BUCK DATE 1-22-66 UNLESS NOTED
SCALE
SECTION
Market | Bldg. Shop | Bldg. Shop | Wkg. Shop | Mech. Shop | Prod. Dept. | CONT. No.
SHEET No. E5
8412

DESIGN PRODUCTS CO.—1020—2000-5-62



1'2" = 0.06695
22'2 5/8" = 1.34672
Tan = 8.72023
8'8 3/4" = 0.94097
9.66120 = 5½

1'10" = 0.26324
19'1 9/16" = 1.28172
Tan = 8.98152
8'5 5/16" = 0.92809
9.90961 = 9¾

1'2" = 0.06695
17'6 9/16" = 1.24420
Tan = 8.82275
8'1 3/4" = 0.91094
9.73369 = 6½

1'10" = 0.26324
21'4 9/16" = 1.33001
Tan = 8.93323
7'10 11/16" = 0.89711
9.83034 = 8⅛

WEST ST. PAUL AVE. E. DETROIT ST
JOB # 522-001

Wisconsin's Oldest and Largest Structural Steel Plant
Member of

Max. Shipping Lgth. .....
End Distance ..... Unless Noted

Date
Revised

	a	b	c	d	e	f	k	m	n	o	p	s	t	u	w	x	y
a																	
b																	
c																	
d																	
e																	
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k																	
m																	
n																	
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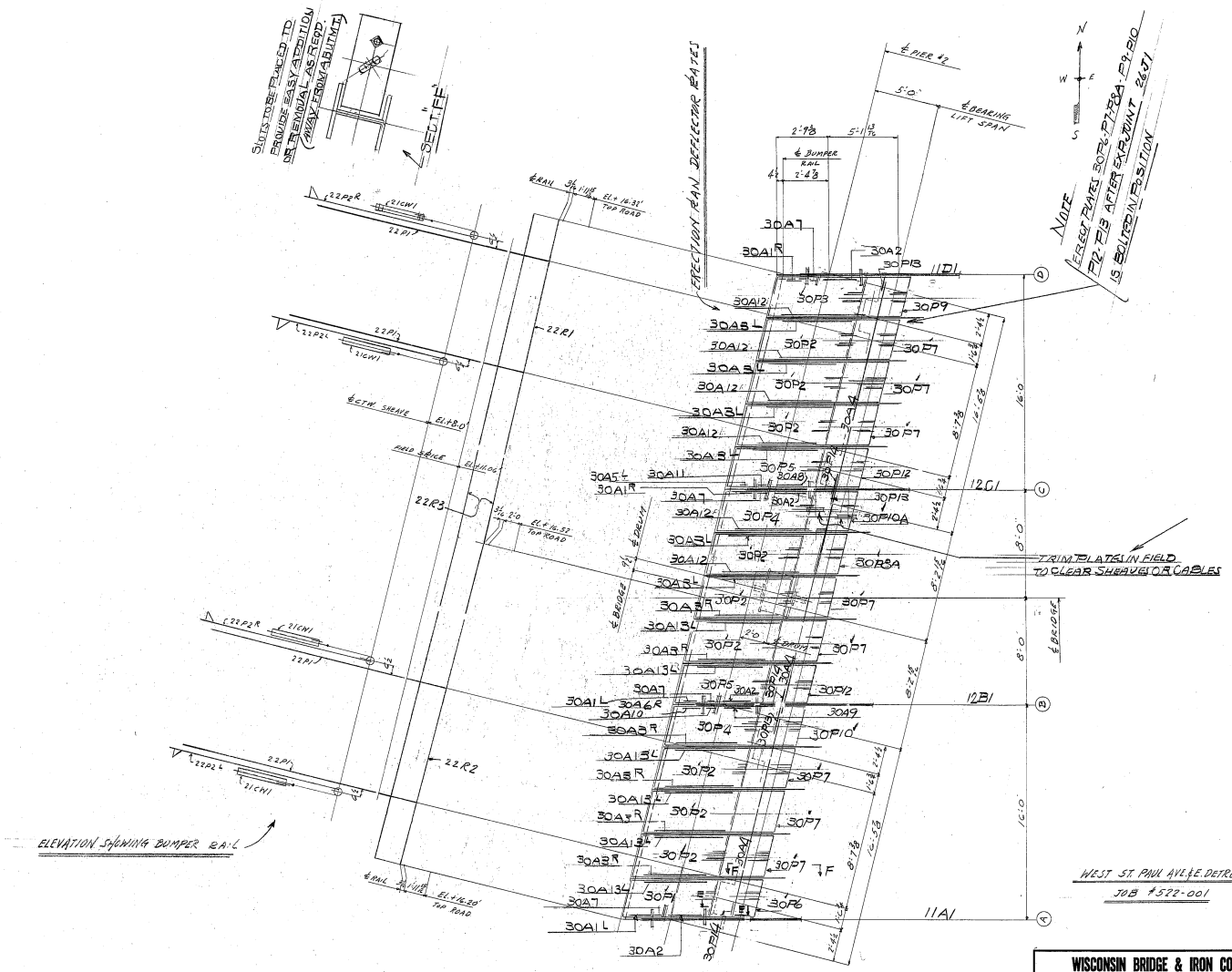
s																	
t																	
u																	
x																	

WISCONSIN BRIDGE & IRON CO.
MILWAUKEE, WIS.

FOR J. C. THEILACKER
LOCATION
DESCRIPTION CABLE ARRANGEMENT & ERECTION PLAN
~~DETAILS OF~~ OF WELDMENTS FOR VERTICAL LIFT PIER #3
SPECIFICATIONS ..... REAMING .....
INSPECTED BY ..... ERECTED BY .....
SHOP PAINT .....
FIELD PAINT .....
MADE BY R. BUCH DATE 1-26-66 RIVETS .....
TRACED BY ..... DATE ..... OPEN HOLES .....
CHECKED BY A. T. DOWE DATE 2-18-66 UNLESS NOTED .....
SCALE
SECTION
Material | Bolt Shop | Shop Insp. | Weld. Shop | Mach. Shop | Fwd. Insp.
CONT. No.
SHEET No. E6
8412

DESIGN PRODUCTS CO.—1020—2000-5-63



NOTE
WORK WITH DRWG. "E8"

Wisconsin's Oldest and Largest Structural Steel Plant
Member of AISC

Max. Shipping Lgth. .....
End Distance ..... Unless Noted

Date					
Revised					

	B	S	A	H	B	R	D	S	P	I	N	W	F
8													
7													
6													
5													
4													
3													
2													
1													
0													

WISCONSIN BRIDGE & IRON CO.
MILWAUKEE, WIS.

FOR J.C. THEILACKER MILWAUKEE WIS.
LOCATION
DESCRIPTION Erection Ran of Deflector Plates
~~DETAILED BY~~ & Bumper Rails for Pier #2
SPECIFICATIONS ..... REAMING .....
INSPECTED BY ..... ERECTED BY .....
SHOP PAINT .....
FIELD PAINT .....
MADE BY R. Buck DATE 2-2-66 RIVETS .....
TRACED BY ..... DATE ..... OPEN HOLES .....
CHECKED BY ..... DATE ..... UNLESS NOTED .....
SCALE
SECTION

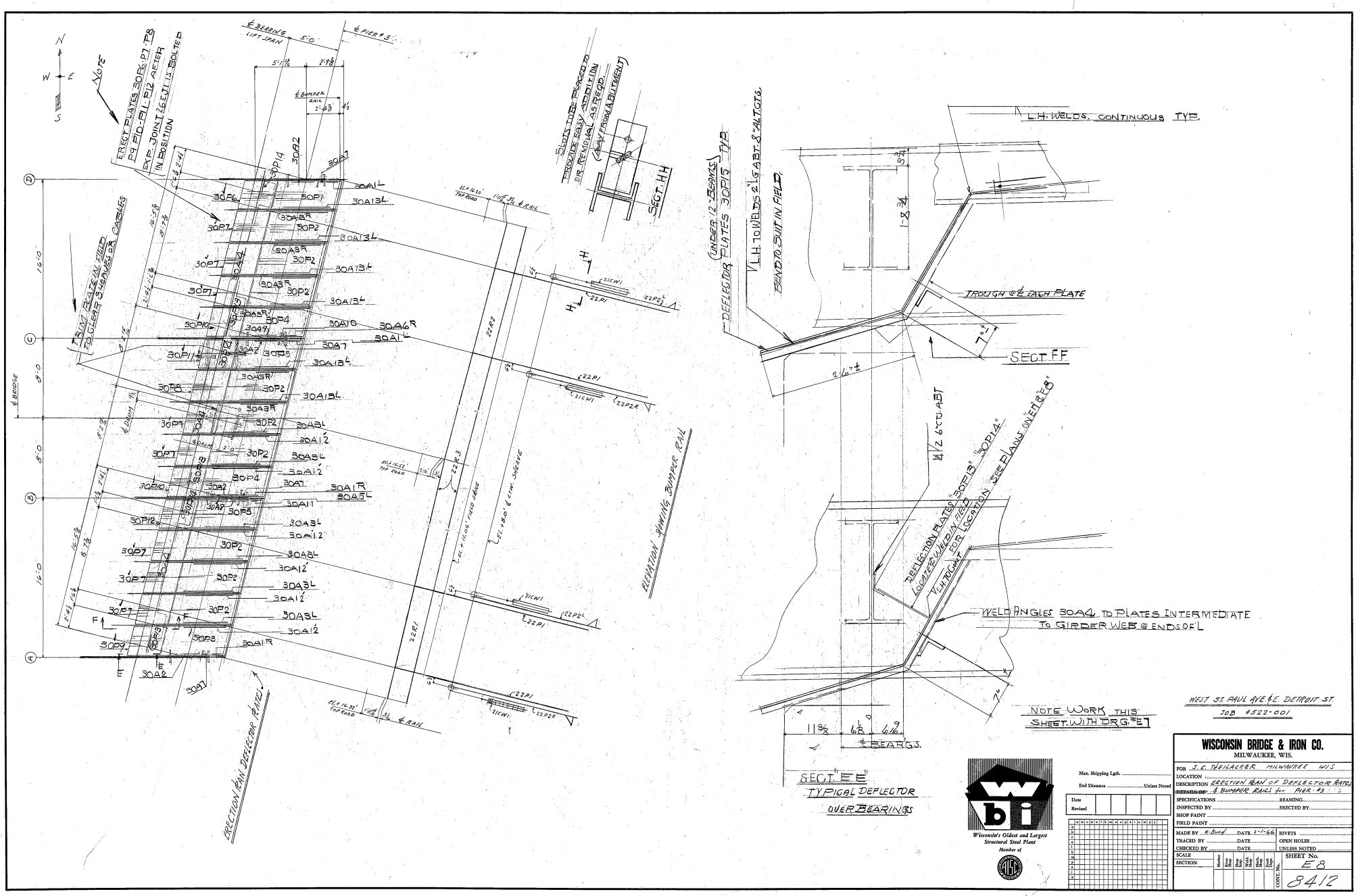
Member	Shop Bills	Bridge Bills	Work Bills	Mach. Bills	Erect. Bills

CONT. No.

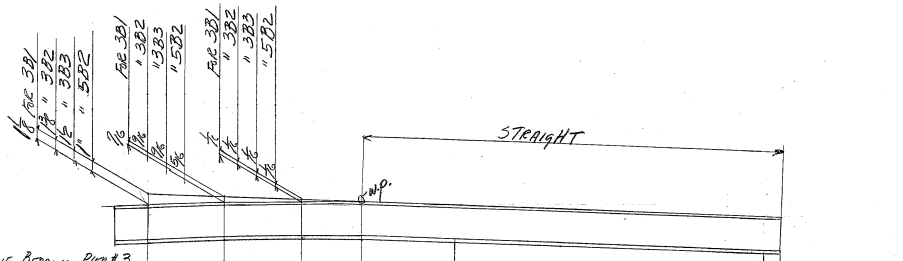
SHEET No. E7

8412

DESIGN PRODUCTS CO.—1020—2000-2-63



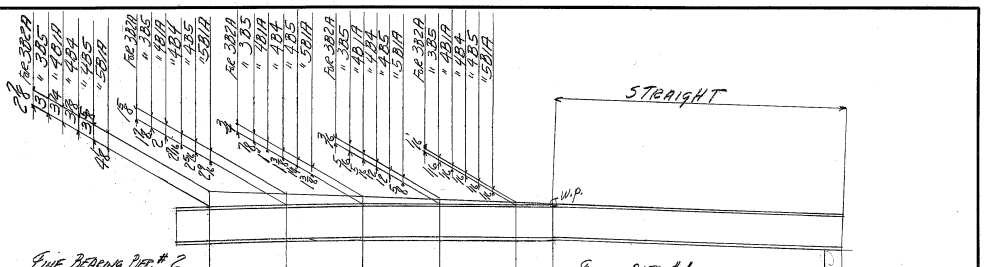
DESIGN PRODUCTS CO.—1020—2000-5-63



FOR 3B1	10'-6	10'-6	6'-6¾		
" 3B2	10'-6	10'-6	8'-4"		
" 3B3	10'-6	10'-6	10'-1⅞		
" 5B2	10'-6	10'-6	4'-9⅞		
FOR 3B1	27'-6¾		56'-5¼		9
" 3B2	29'-4		54'-8'		9
" 3B3	31'-1⅜		52'-10⅝		9
" 5B2	25'-9⅜		58'-2⅝		9
	42'-0		42'-0'		
	84'-0"				

1-WF 30 ℔ 99#

1-BEAM - 3B1
1- " - 3B2
1- " - 3B3
1- " - 5B2

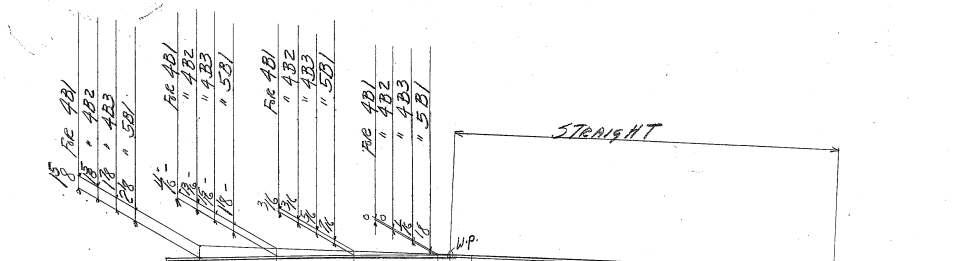


FOR 3B2A	10'-6	10'-6"	10'-6	10'-6	1'-4
" 3B5	10'-6	10'-6	10'-6	10'-6	3'-7⅜
" 4B1A	10'-6'	10'-6	10'-6	10'-6	4'-10⅝
" 4B4	10'-6'	10'-6	10'-6	10'-6	5'-5¼
" 4B5	10'-6'	10'-6	10'-6	10'-6	6'-8
" 5B1A	10'-6'	10'-6	10'-6	10'-6	10'-2⅝
FOR 3B2A	43'-4		40'-8'		9
" 3B5	45'-1⅜		38'-10⅝		9
" 4B1A	46'-10⅝		37'-1⅜		9
" 4B4	50'-5¼		33'-6¾		9
" 4B5	48'-8		35'-4		9
" 5B1A	52'-2⅝		31'-9⅜		9
	42'-0		42'-0"		
	84'-0				

1-BEAM-3B2A
1- " -3B5
1- " 4B1A

1-BEAM-4B4
1- " -4B5
1- " -5B1A

1-WF 30 ℔ 99#X

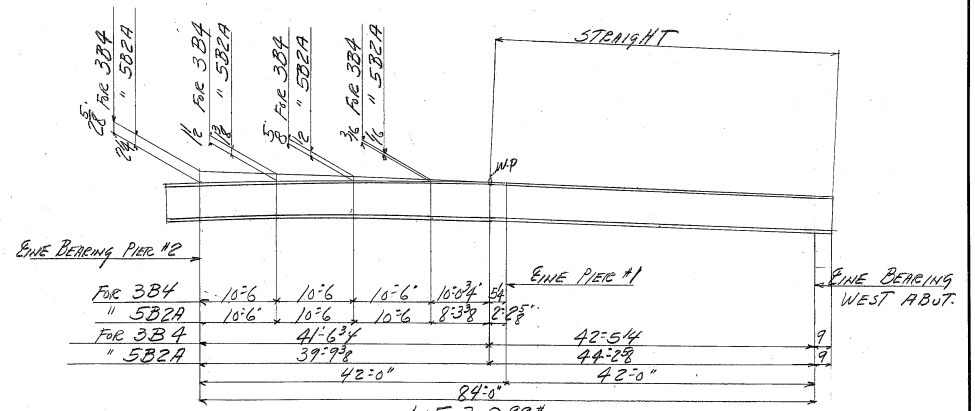


FOR 4B1	10'-6	10'-6	10'-6	1'-4⅝	
" 4B2	10'-6	10'-6	10'-6	3'-2	
" 4B3	10'-6	10'-6	10'-6	4'-1¼	
" 5B1	10'-6	10'-6	10'-6	6'-9⅝	
FOR 4B1	32'-10⅝		51'-1⅜		9
" 4B2	34'-8		49'-4'		9
" 4B3	36'-5¼		47'-6¾		9
" 5B1	38'-2⅝		45'-9⅜		9
	42'-0		42'-0		
	84'-0				

1-WF 30 ℔ 99#X

1-BEAM-4B1
1- " - 4B2

1-BEAM-4B3
1- " - 5B1



FOR 3B4	10'-6	10'-6	10'-6'	10'-0¾'	5¼'
" 5B2A	10'-6'	10'-6	10'-6	8'-3⅜	2'-2⅝'
FOR 3B4	41'-6¾		42'-5¼		9
" 5B2A	39'-9⅜		44'-2⅝		9
	42'-0"		42'-0"		
	84'-0"				

1-WF 30 ℔ 99#X

1-BEAM- 3B4
1- " - 5B2A

Wisconsin's Oldest and Largest Structural Steel Plant
Member of AISC

Max. Shipping Lgth. .....
End Distance ..... Unless Noted

Date					
Revised					

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
a																
b																
c																
d																
e																
f																
g																
h																
i																
j																
k																
l																
m																
n																
o																
p																

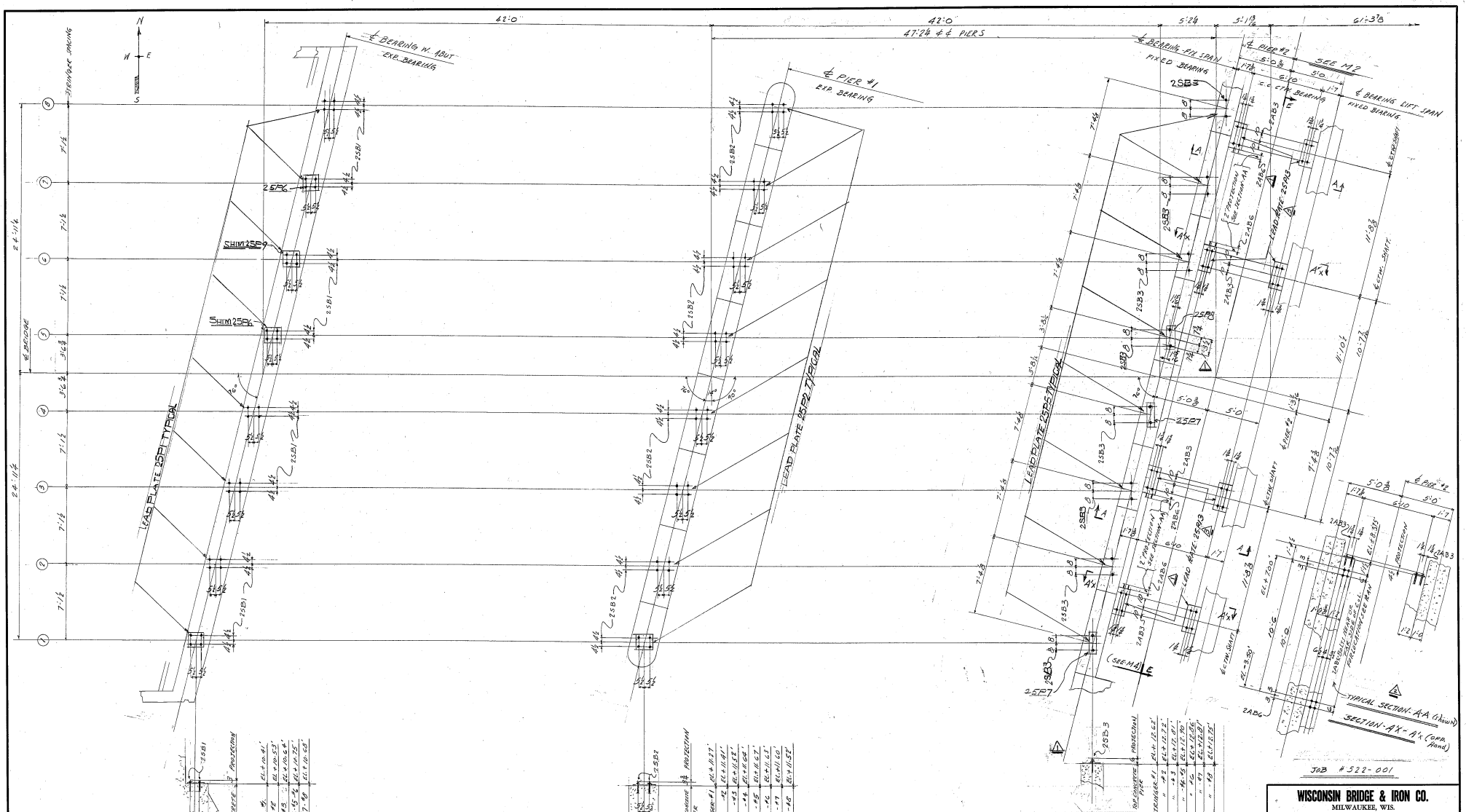
WISCONSIN BRIDGE & IRON CO.
MILWAUKEE, WIS.

FOR J. C. THEILACKER
LOCATION CITY OF MILWAUKEE WIS.
DESCRIPTION MILWAUKEE WIS
DETAILS OF CAMBER DIAGRAM
SPECIFICATIONS ..... REAMING .....
INSPECTED BY ..... ERECTED BY .....
SHOP PAINT .....
FIELD PAINT .....
MADE BY F.S. DATE 5/9/66 RIVETS .....
TRACED BY ..... DATE ..... OPEN HOLES .....
CHECKED BY ..... DATE ..... UNLESS NOTED .....
SCALE
SECTION

Material	Shop Bolts	Shop Rivets	Field Bolts	Field Rivets	Paint

CONT. No. .....
SHEET No. F1
8412

DESIGN PRODUCTS CO.—1020—2000-9-63



JOB # 522-001

WISCONSIN BRIDGE & IRON CO.
MILWAUKEE, WIS.

FOR J.C. THEILACKER MILWAUKEE WIS.
LOCATION WEST ST. PAUL AVE. & EAST DETROIT ST. MILW. WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
DETAILS OF ANCHOR BOLT JETTING PLAN WEST APPROACH SPAN
SPECIFICATIONS ..... BEAMING .....
INSPECTED BY ..... ERECTED BY .....
SHOP PAINT .....
FIELD PAINT .....
MADE BY R. Buch DATE 11-20-65 RIVETS .....
TRACED BY ..... DATE ..... OPEN HOLES .....
CHECKED BY O.S. DATE 12/14/65 UNLESS NOTED .....
SCALE
SECTION
Material | Shop Dwg. | Shop Mark | Work Mark | Mach. Mark | Erect. Mark | CONT. No.
SHEET No. M1
8412

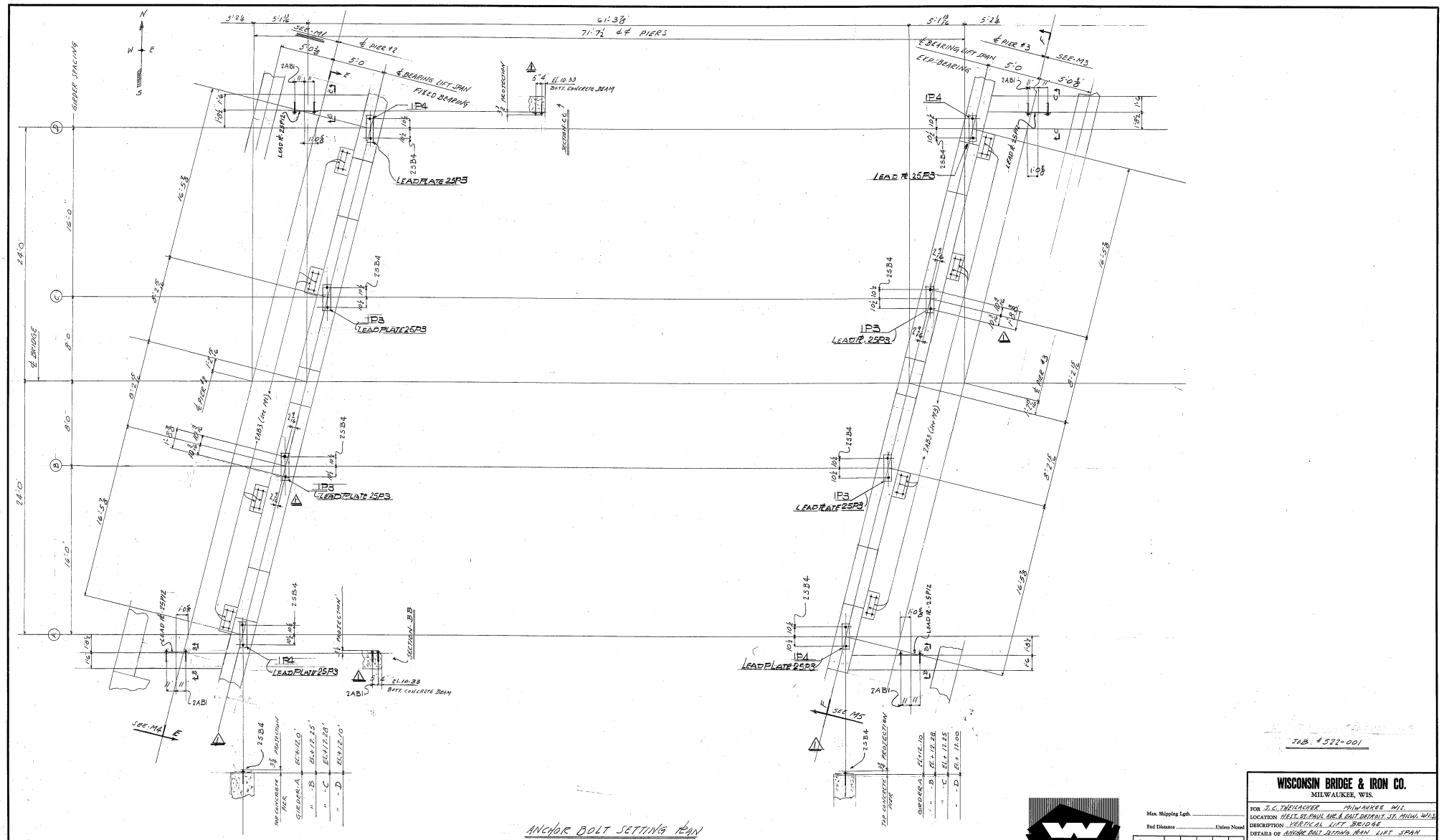
Max. Shipping Lgth. .....
End Distance ..... Unless Noted

Date					
Revised					

Wisconsin's Oldest and Largest Structural Steel Plant
Member of AISC

REV.		REV.		REV.	
3	ADDED LEAD PL. 2SP13 AT CTR. BEARING R.B. 2-15-66	4	REVISED SECTION - AA AT PIER #2 R.B. 1-17-66	5	REVISED ANCHORS ON PIER #2

DESIGN PRODUCTS CO.—1020—2000-5-63



ANCHOR BOLT SETTING PLAN

LIFT SPAN

JOB. #522-001

Wisconsin's Oldest and Largest Structural Steel Plant

Member of

Max. Shipping Lgth. .....

End Distance ..... Unless Noted

Date

Revised

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y
a																									
b																									
c																									
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WISCONSIN BRIDGE & IRON CO.

MILWAUKEE, WIS.

FOR T. C. THEILACKER MILWAUKEE WIS.

LOCATION WEST ST. PAUL AVE. & EAST DETROIT ST. MILW. WIS.

DESCRIPTION VERTICAL LIFT BRIDGE

DETAILS OF ANCHOR BOLT SETTING PLAN LIFT SPAN

SPECIFICATIONS ..... REAMING .....

INSPECTED BY ..... ERECTED BY .....

SHOP PAINT .....

FIELD PAINT .....

MADE BY R. Buch DATE 11-23-65 RIVETS .....

TRACED BY ..... DATE ..... OPEN HOLES .....

CHECKED BY O.S. DATE 12/15/65 UNLESS NOTED .....

SCALE

SECTION

Maker | Rivet Shop | Shop Insp. | Weld. Shop | Mech. Shop | Pnd. Dept.

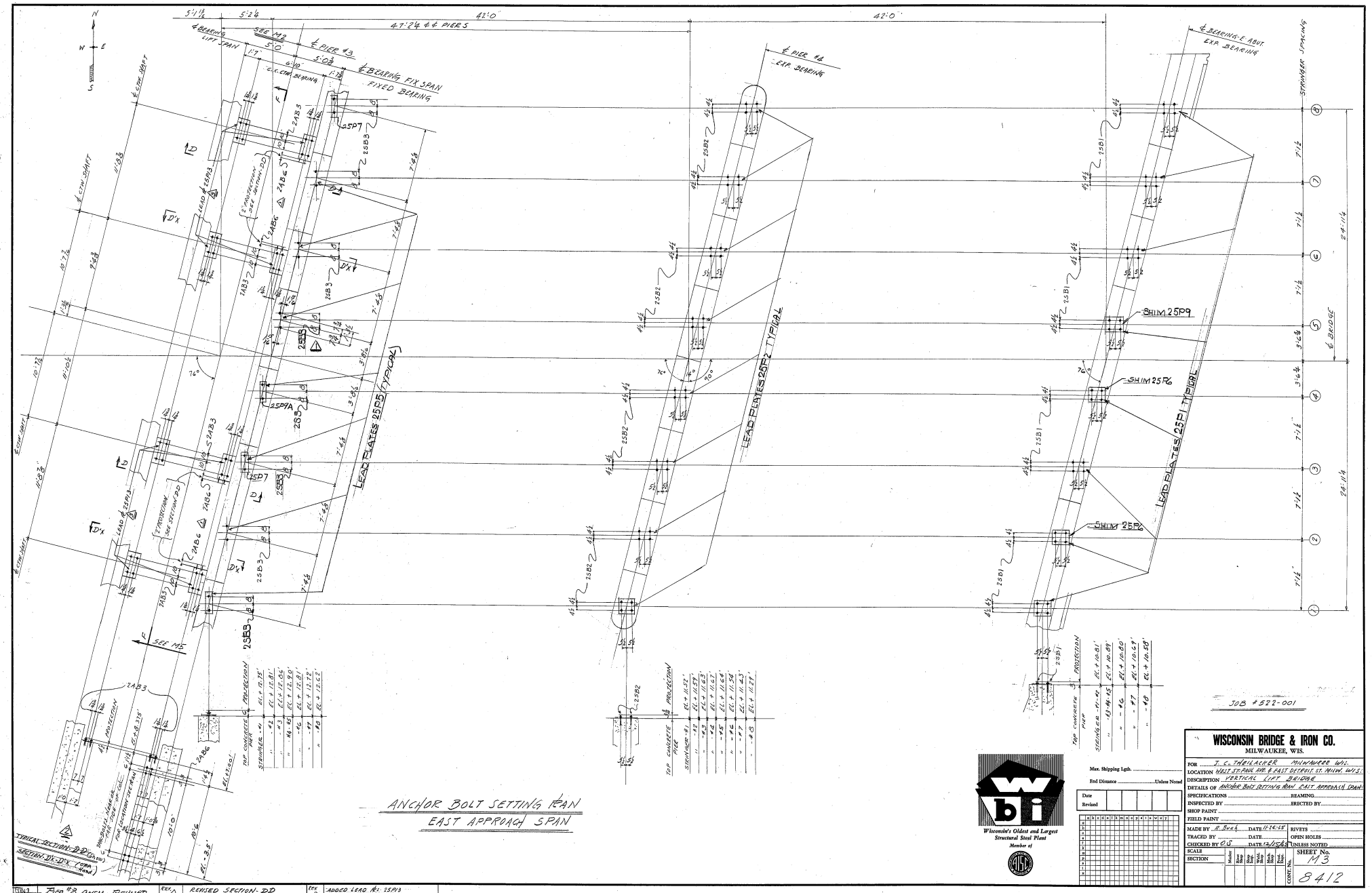
CONT. No.

SHEET No. M2

8412

REV. REVISED ANCH. SETTING

DESIGN PRODUCTS CO.—1020—2000-5-63



STRINGER	TOP CONCRETE PIER	PROJECTION
-#1	EL+ 12.75'	
" -#2	EL+ 12.81'	
" -#3	EL+ 12.84'	
" -#4	EL+ 12.80'	
" -#5	EL+ 12.77'	
" -#6	EL+ 12.72'	
" -#7	EL+ 12.62'	
" -#8		

STRINGER	TOP CONCRETE PIER	PROJECTION
-#1	EL+ 11.72'	
" -#2	EL+ 11.79'	
" -#3	EL+ 11.83'	
" -#4	EL+ 11.82'	
" -#5	EL+ 11.84'	
" -#6	EL+ 11.84'	
" -#7	EL+ 11.83'	
" -#8	EL+ 11.81'	

STRINGER	TOP CONCRETE PIER	PROJECTION
-#1	EL+ 10.81'	
" -#2	EL+ 10.89'	
" -#3	EL+ 10.80'	
" -#4	EL+ 10.81'	
" -#5	EL+ 10.80'	
" -#6		

Wisconsin's Oldest and Largest Structural Steel Plant
Member of AISC

Max. Shipping Lgth. .....
End Distance .....Unless Noted

Date					
Revised					

WISCONSIN BRIDGE & IRON CO.
MILWAUKEE, WIS.

FOR J. C. THIELACKER MILWAUKEE WIS.
LOCATION WEST ST. PAUL AVE. & EAST DETROIT ST. MILW. WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
DETAILS OF ANCHOR BOLT SETTING PLAN EAST APPROACH SPAN
SPECIFICATIONS ..... REAMING .....
INSPECTED BY ..... REJECTED BY .....
SHOP PAINT .....
FIELD PAINT .....

MADE BY R. Beck DATE 12-24-65
TRACED BY ..... DATE .....
CHECKED BY OS DATE 1/25/66
SCALE
SECTION

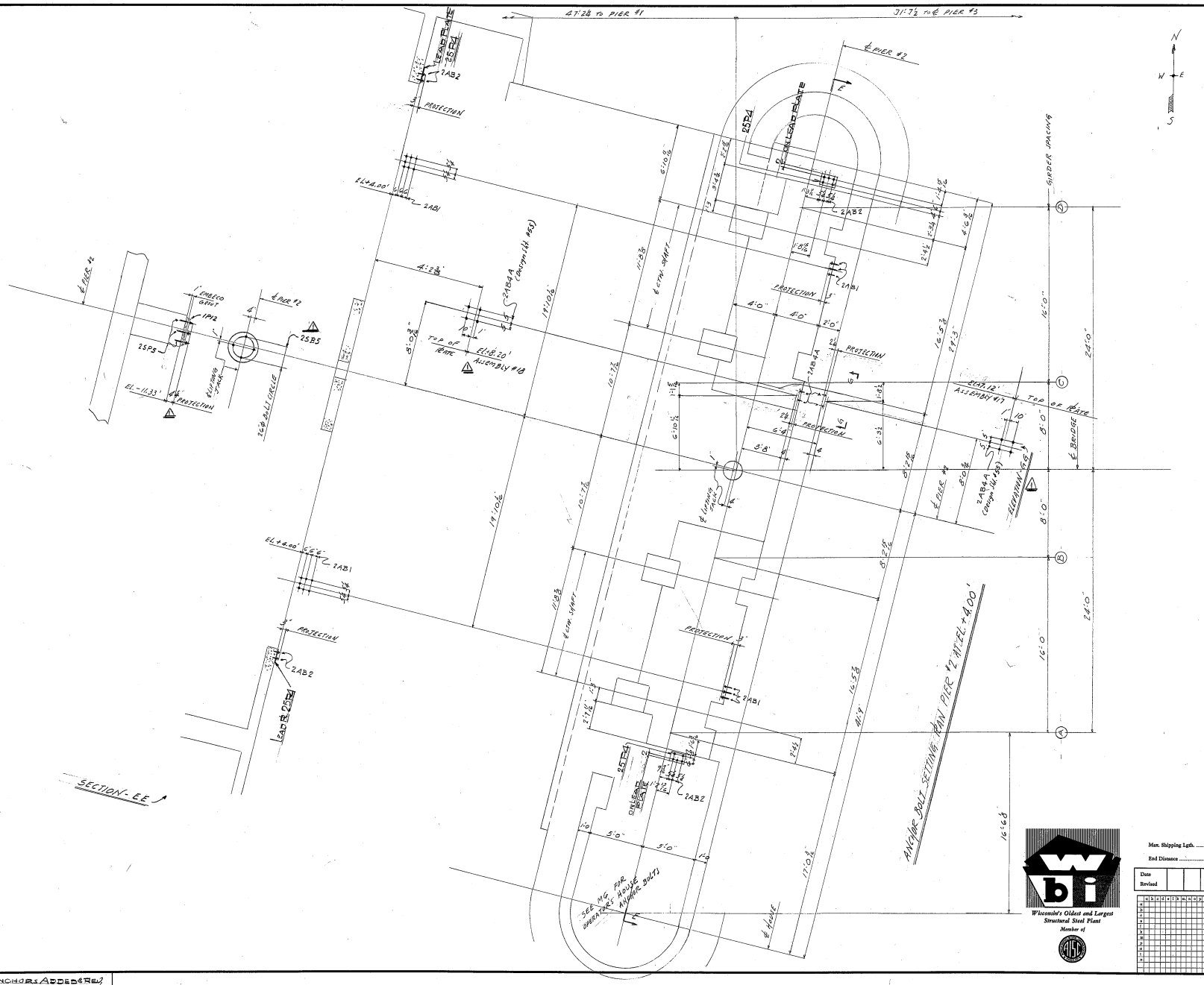
RIVETS .....
OPEN HOLES .....
UNLESS NOTED .....

Release	Shop Bldg.	Ship Bldg.	Shop Bldg.	Shop Bldg.	Shop Bldg.

SHEET No. 113
CONT. No. 8412

REV.		REV.	
1	PER #8 ANCH. REVISED	2	REVISED SECTION-DD AT PIER #3 R.B. 1-27-66
3	ADDED LEAD #: 25P13 AT CTR. BEARINGS R.B. 2-15-66		

DESIGN PRODUCTS CO.—1050—2000-5-63



Corrd Rect

JOB # 572-001

WISCONSIN BRIDGE & IRON CO.
MILWAUKEE, WIS.

FOR J.C. HELLACKER MILWAUKEE WIS.
LOCATION FIRST ST. PAUL AVE. & EAST DETROIT ST. MILW. WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
DETAILS OF ANCHOR BOLT SETTING PLAN PIER #2 AT EL + 4.00'
SPECIFICATIONS ..... REAMING .....
INSPECTED BY ..... ERECTED BY .....
SHOP PAINT .....
FIELD PAINT .....
MADE BY R. Buck DATE 11-18-65 RIVETS .....
TRACED BY ..... DATE ..... OPEN HOLES .....
CHECKED BY O.S. DATE 12/1/65 UNLESS NOTED .....
SCALE
SECTION

Max. Shipping Lgth. .....
End Distance ..... Unless Noted

Date						
Revised						

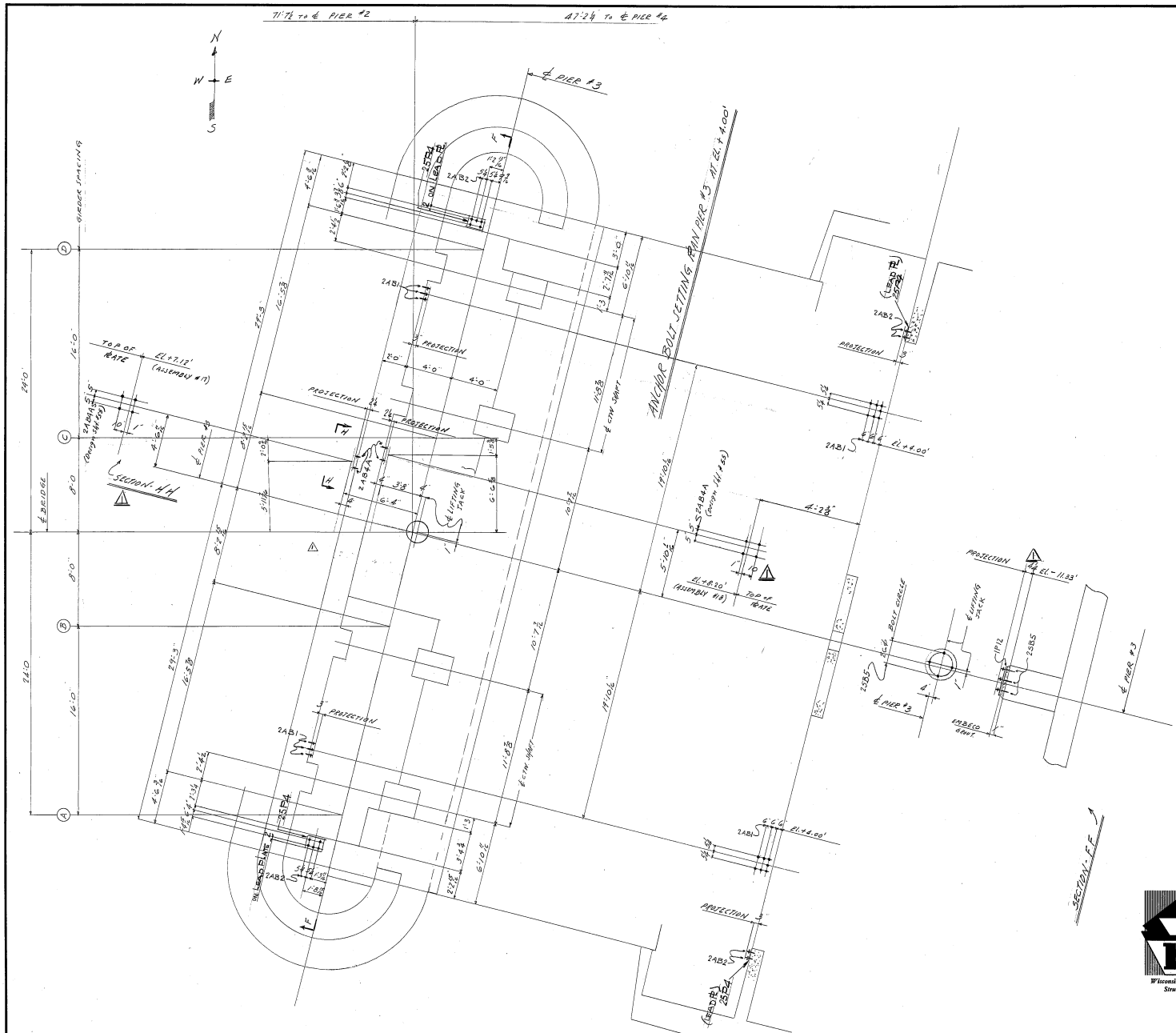
Wisconsin's Oldest and Largest Structural Steel Plant
Member of AISC

SHEET No. 14
CONT. No. 8412

REV. ANCHORS ADDED & REV.

DESIGN PRODUCTS CO.—1020—2000-9-63

REV. △ ADDED CABLE ASSEMBLY 12-13-65



JOB # 522-001

Wisconsin's Oldest and Largest Structural Steel Plant
Member of

Max. Shipping Lgth. .....

End Distance ..... Unless Noted

Date
Revised

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y
a																									
b																									
c																									
d																									
e																									
f																									
g																									
h																									
i																									
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q																									
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y																									

WISCONSIN BRIDGE & IRON CO.
MILWAUKEE, WIS.

FOR J.C. THEILACKER MILWAUKEE WIS.
LOCATION WEST ST. PAUL AVE. & EAST DETROIT ST., MILW. WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
DETAILS OF ANCHOR BOLT SETTING RAN PIER #3 AT EL. + 4.00'
SPECIFICATIONS ..... REAMING .....
INSPECTED BY ..... ERECTED BY .....
SHOP PAINT .....
FIELD PAINT .....
MADE BY R. Buch DATE 11-30-65 RIVETS .....
TRACED BY ..... DATE ..... OPEN HOLES .....
CHECKED BY O.S. DATE 12/13/65 UNLESS NOTED .....
SCALE .....
SECTION .....

Member	Shop Sign	Shop Sign	Wed. Sign	Mach. Sign	Prod. Dwg.

CONT. No.

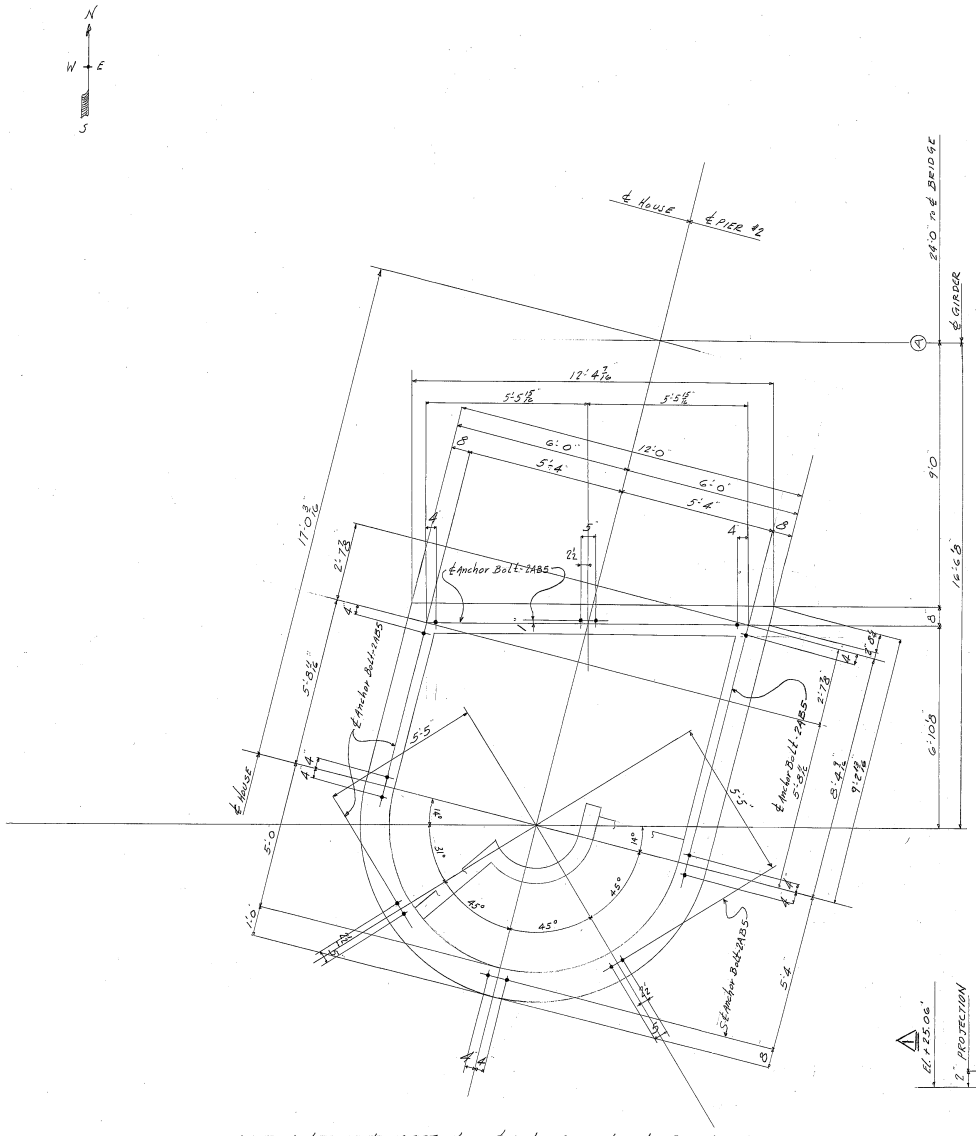
SHEET No. M5

8412

REV. ANCH. ADDED

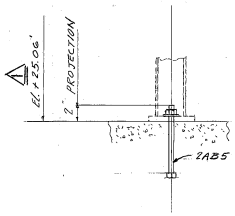
DESIGN PRODUCTS CO.—1020—2000-5-63

REV. △1 ADDED CABLE ASSEMBLY (17/59) (18/57) 12-15-65



ANCHOR BOLT SETTING PLAN AT CONTROL ROOM FLOOR

BRIDGE OPERATOR'S HOUSE



TYPICAL ELEVATION
SHOWING ANCHOR BOLT SETTING

JOB # 522-001

WISCONSIN BRIDGE & IRON CO.
MILWAUKEE, WIS.

FOR J.C. THELACKER MILWAUKEE WIS.
LOCATION WEST ST. PAUL AVE. & EAST DETROIT ST. MILW. WIS.
DESCRIPTION VERTICAL LIFT BRIDGE
DETAILS OF Anchor Bolt Setting Plan of Bridge Operator's House
SPECIFICATIONS ..... REAMING .....
INSPECTED BY ..... ERECTED BY .....
SHOP PAINT .....
FIELD PAINT .....
MADE BY R. Buch DATE 12-4-63 RIVETS .....
TRACED BY ..... DATE ..... OPEN HOLES .....
CHECKED BY OK DATE 12/6/63 UNLESS NOTED .....
SCALE
SECTION

Max. Shipping Lgth. .....
End Distance ..... Unless Noted

Date					
Revised					

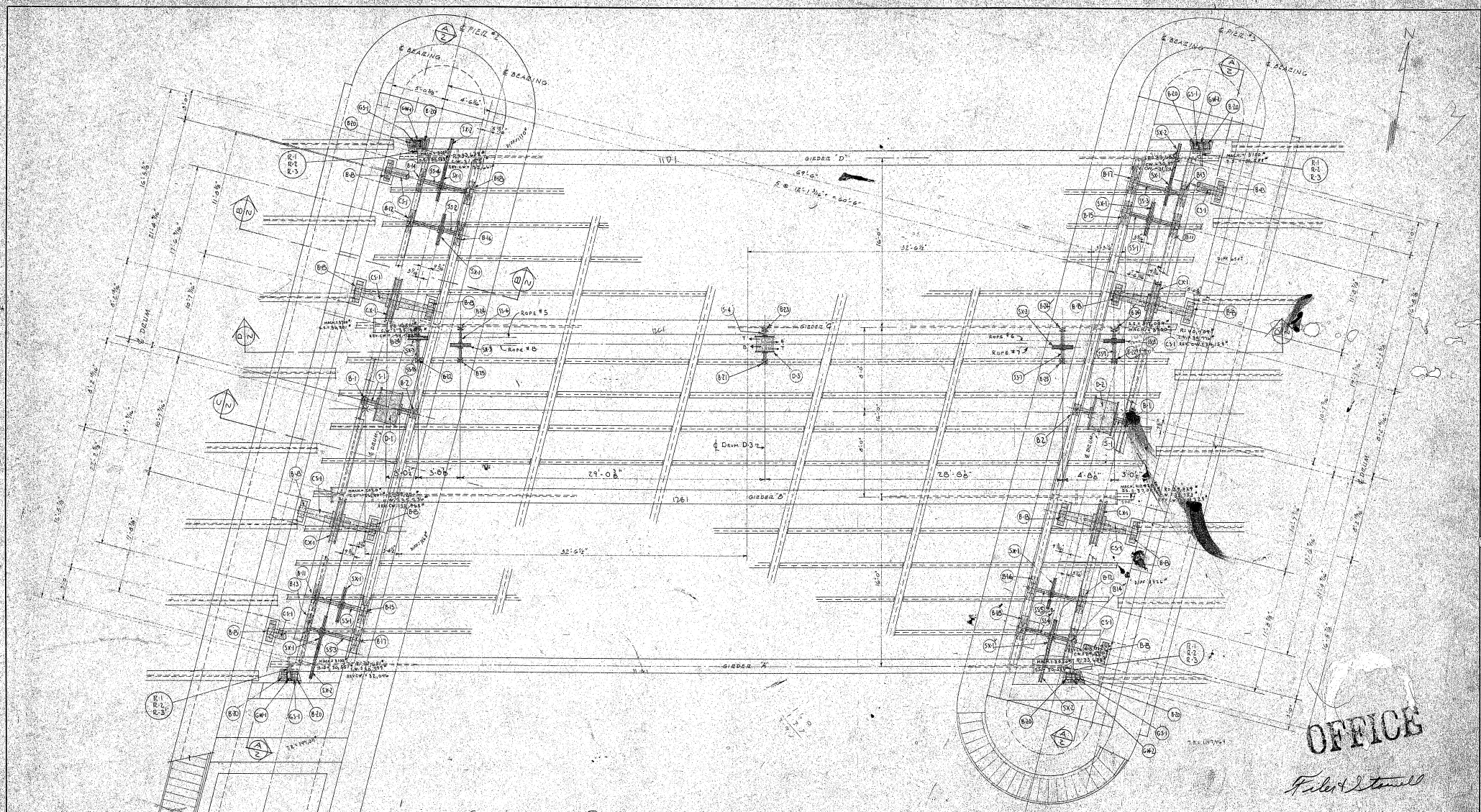
Wisconsin's Oldest and Largest Structural Steel Plant
Member of AISC

Mark	Sheet Mkg	Bldg Mkg	Bldg Mkg	Bldg Mkg	Bldg Mkg	Dwg. Mkg

SHEET No. 146
CONT. No. 8412

REV.	
1	ELEV. was 24'-3 8 CHANGE TO 25.06

DESIGN PRODUCTS CO.—1020—2000-5-63



GENERAL PLAN OF MACHINERY

SCALE: 1/4" = 1'-0"

ADDITIONAL MATERIAL TO BE FURNISHED NOT DETAILED

1 - BEARING B-23	LINK BELT SERIES 2200	176-46-AD	-NEED
4 - BEARINGS B-24	LINK BELT SERIES 2200	176-46-Z	-NEED
2 - BEARINGS B-25	LINK BELT SERIES 1400	446-5-L	-NEED
8 - BEARINGS B-20	LINK BELT SERIES 1400	446-6-E	
1 - OILITE BRONZE DISC	3/8" x 3 15/16" ϕ FOR B-23		-NEED
4 - OILITE BRONZE DISCS	3/8" x 3 7/16" ϕ FOR B-24		-NEED

OFFICE

Filer & Stowell

APPROVED

1966

George C. Ashton Supt.
Bureau of Engineers and Public Buildings
MILWAUKEE, WIS.

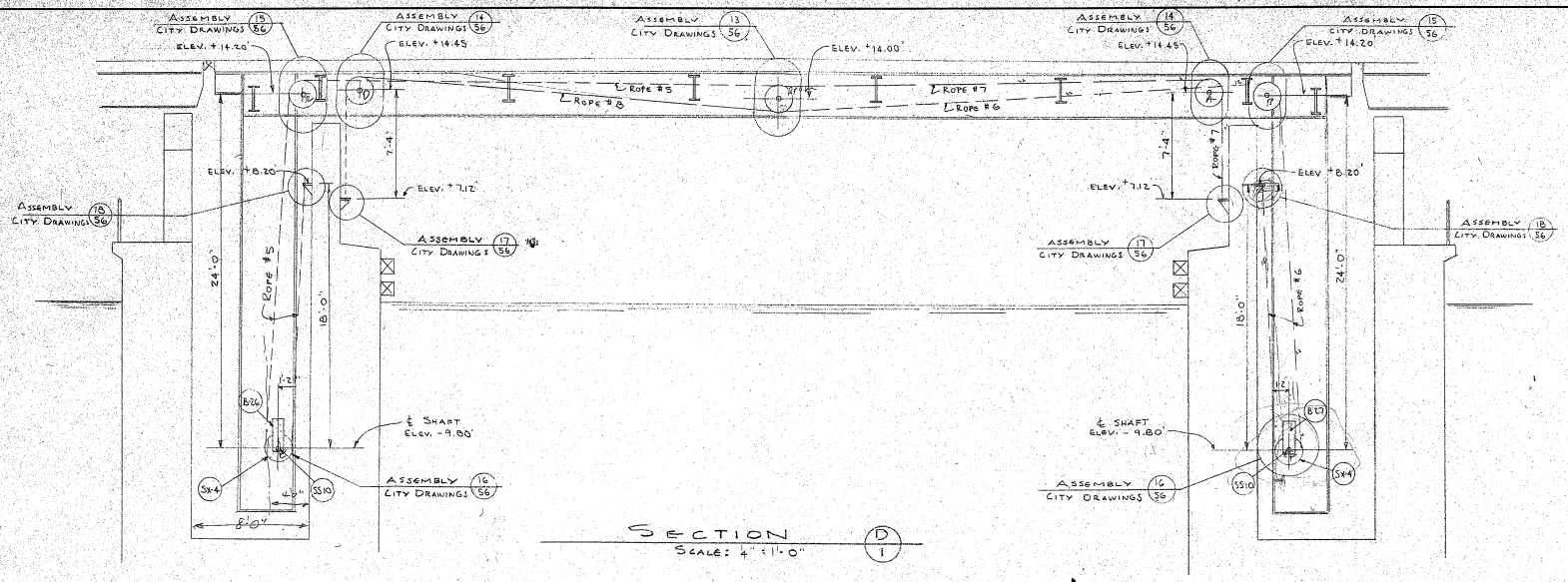
Checked N.A.B. 1-5-66

ST. PAUL - DETROIT LIFT BRIDGE
FOR - CITY OF MILWAUKEE

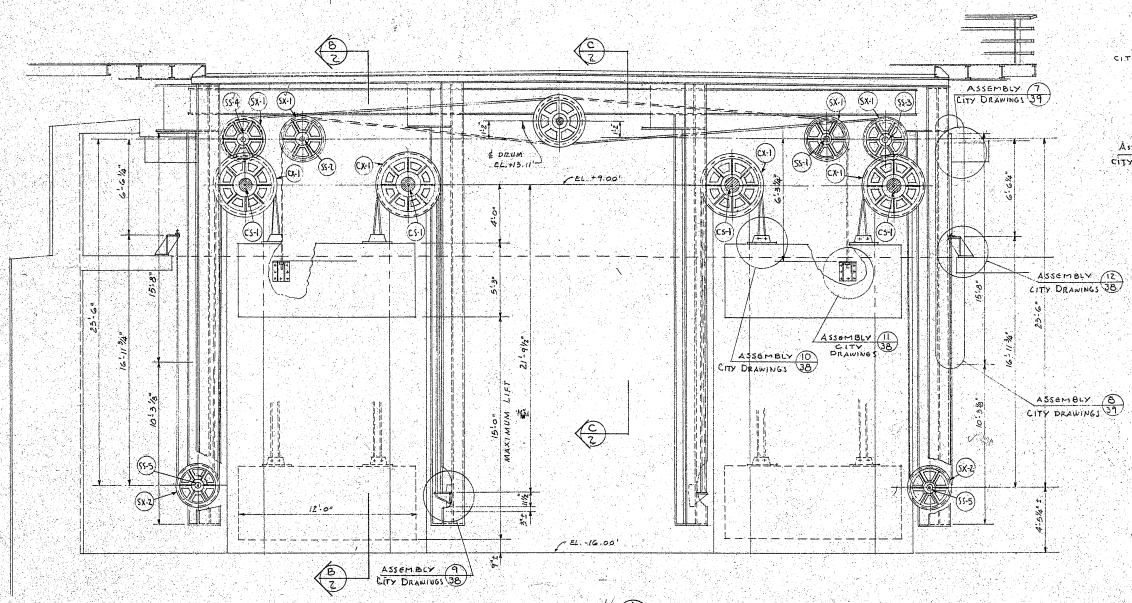
SCALE: AS NOTED	APPROVED BY:	DRAWN BY: B.J.M.
DATE: DEC 1965		REV. SEC.

J. C. THEILACKER
5924-W. WASHINGTON BLVD.

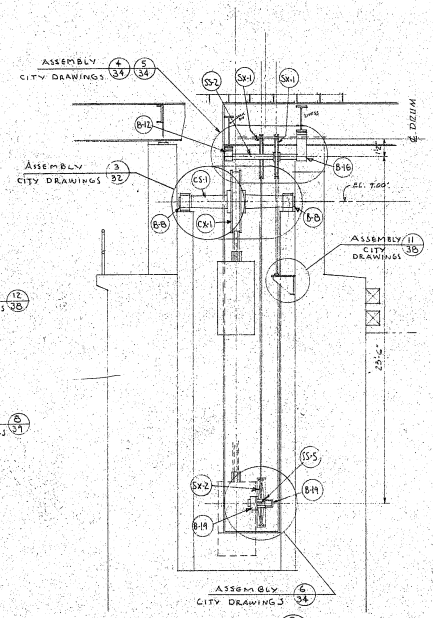
DRAWING NUMBER 1 OF 7



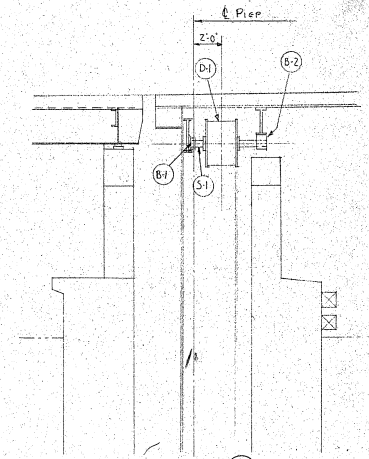
SECTION D/1
SCALE: 1/4" = 1'-0"



CROSS - SECTION A/1
SCALE 1/4" = 1'-0"



SECTION B/1
1/4" = 1'-0"



SECTION C/1
1/4" = 1'-0"

APPROVED
JAN 5 1966
George C. Ashton Supt.
Bureau of Bridge and Public Buildings
MILWAUKEE, WIS.

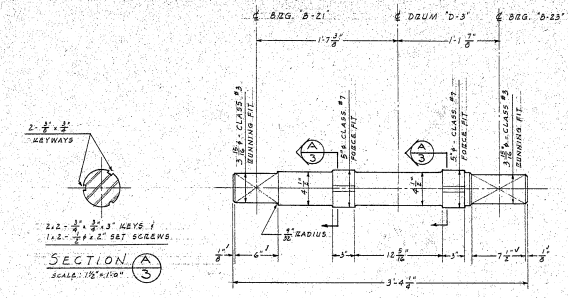
ST. PAUL - DETROIT LIFT BRIDGE
FOR: CITY OF MILWAUKEE

SCALE: As NOTED	APPROVED BY:	DRAWN BY BJ
DATE: Dec. 1965		REVISED

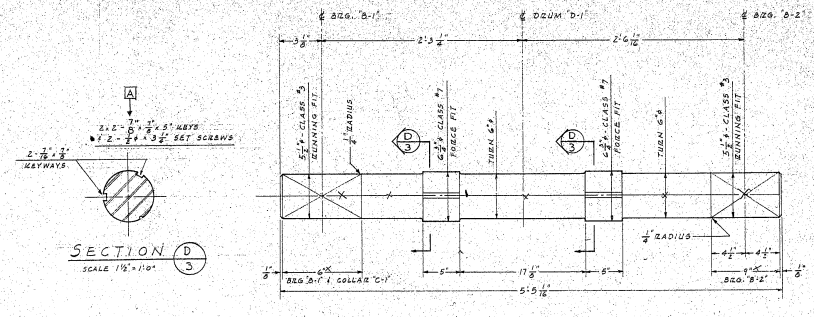
J. C. THEILACKER
5924 - W. WASHINGTON BLVD.

DRAWING NUMBER 2 OF 7

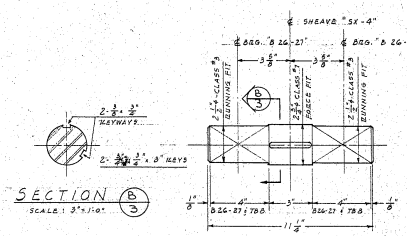
SCHILLING 102



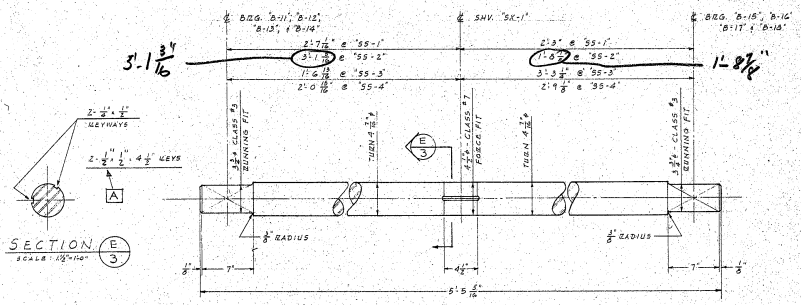
1 - SHAFT S-4 -NEED
5" ϕ SHAFT
A151 C 1018 STEEL



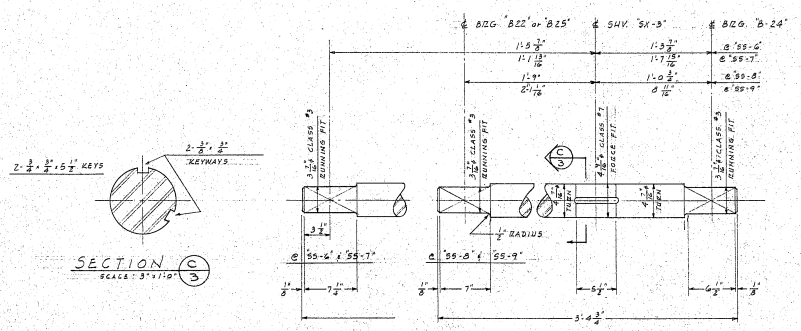
2 - SHAFTS S-1 -NEED
6 3/8" ϕ SHAFT
A151 C 1018 STEEL



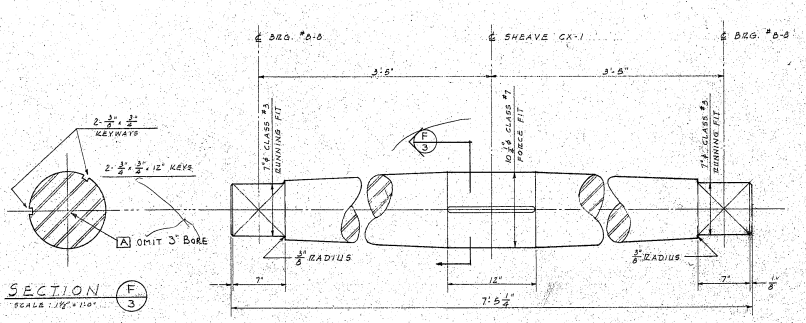
2 - SHAFTS "SS-10"
2 3/4" ϕ SHAFT
A151 C 1018 STEEL



2 - SHAFTS SS-1 2 - SHAFTS SS-2
2 - SHAFTS SS-3 2 - SHAFTS SS-4 -NEED
A151 C 1018 STEEL



1 - SHAFT SS-6 -NEED
1 - " SS-7 -NEED
1 - " SS-8 -NEED
1 - " SS-9 -NEED
4 1/2" ϕ SHAFT
A151 C 1018 STEEL



8 - SHAFTS CS-1 DON'T INCLUDE BY EXPANDED BY STRUCT. STEEL.
FORGED STEEL (ANNEALED)

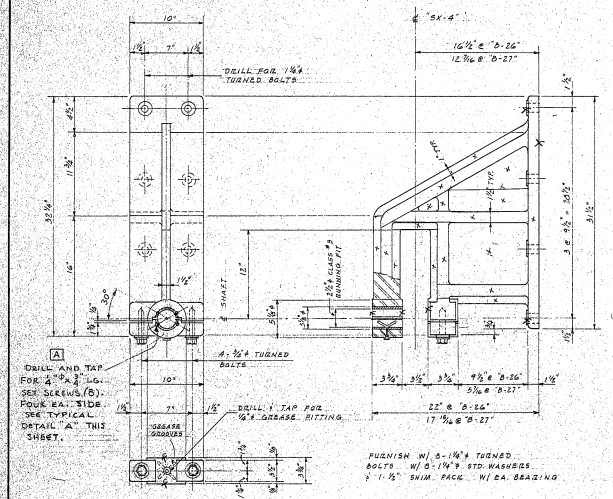
APPROVED
JAN 5 1966
George C. Ashton Supt.
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

REVISED MARK A 12-31-65

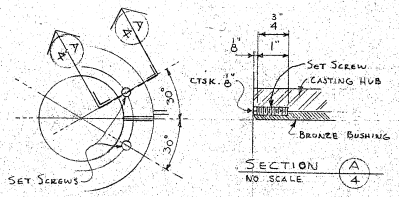
ST. PAUL - DETROIT LIFT BRIDGE
FOR: CITY OF MILWAUKEE

SCALE: AS NOTED	APPROVED BY:	DRAWN BY: BJ
DATE: Nov. 17, 1965		REVISED:
J. C. THEILACKER 5924 W. WASHINGTON BLVD.		DRAWING NUMBER: 3 OF 7

SCHILLING 102

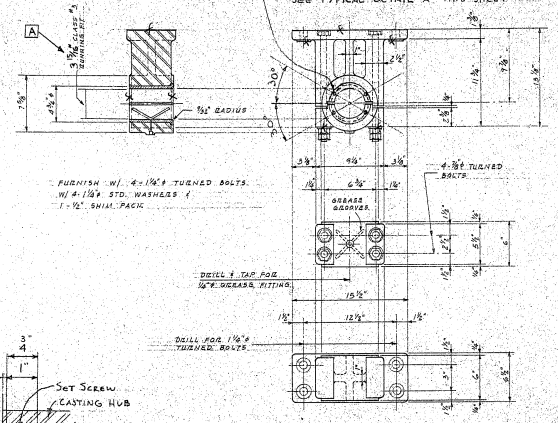


1-BEARING "B-26" Shown at Bridge Shop
1-BEARING "B-27"
CAST STEEL
PHOSPHOR BRONZE BUSHINGS

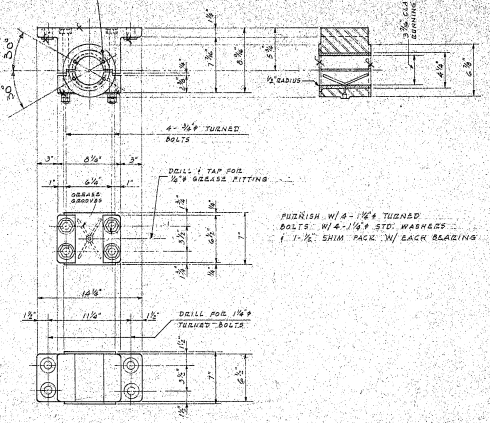


DETAIL "A"
TYPICAL DETAIL SHOWING FASTENING OF BUSHING TO BEARING
NO SCALE

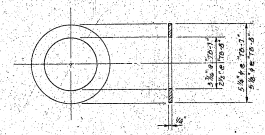
SECTION A/4
NO SCALE



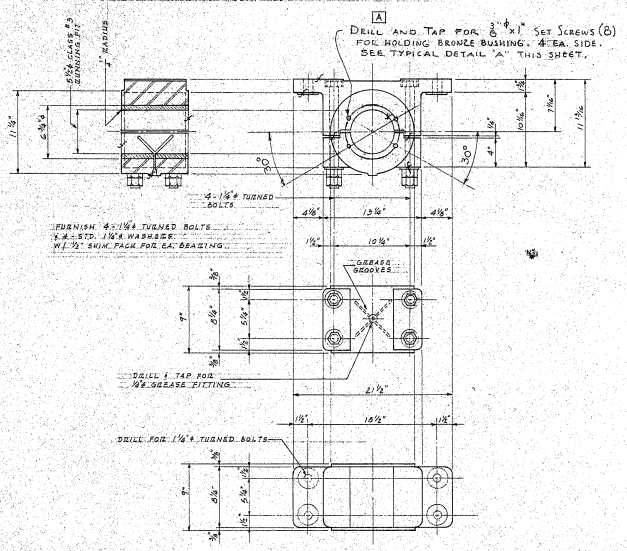
1-BEARING "B-21" NEED
CAST STEEL
PHOSPHOR BRONZE BUSHING



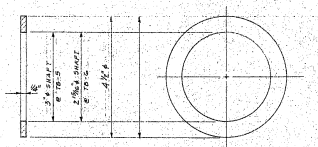
2-BEARINGS "B-22" NEED
CAST STEEL
PHOSPHOR BRONZE BUSHINGS



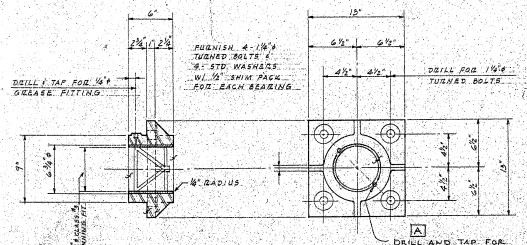
2-THRUST BEARINGS "TB-7"
2- " " "TB-8"
SELF LUBRICATING OILITE BRONZE
AMPLEX DIVISION - CHRYSLER CORPORATION



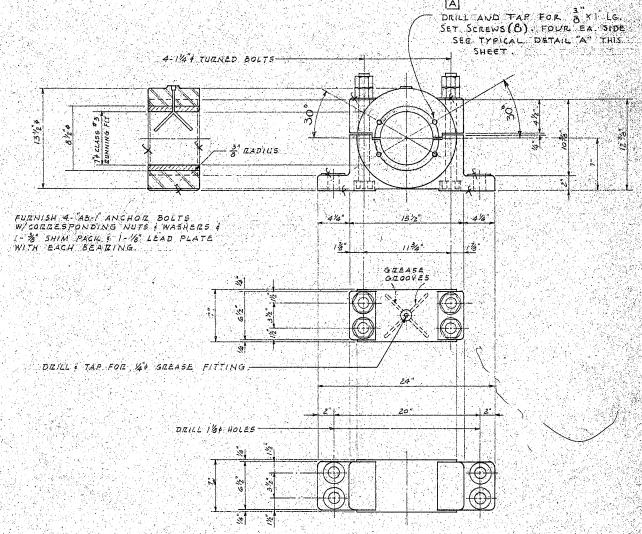
2-BEARINGS "B-2" NEED
CAST STEEL
PHOSPHOR BRONZE BUSHINGS



2-THRUST BEARINGS TB-5
2- " " TB-6
SELF LUBRICATING OILITE BRONZE
AMPLEX DIVISION - CHRYSLER CORPORATION



2-BEARINGS "B-1" NEED
CAST STEEL
PHOSPHOR BRONZE BUSHINGS



16-BEARINGS "B-8" NEED SEPARATE BY CONCR. STEEL
CAST STEEL
PHOSPHOR BRONZE BUSHINGS

APPROVED
JAN. 5 1968
George C. Ashton
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

OMIT ANCHOR BOLTS

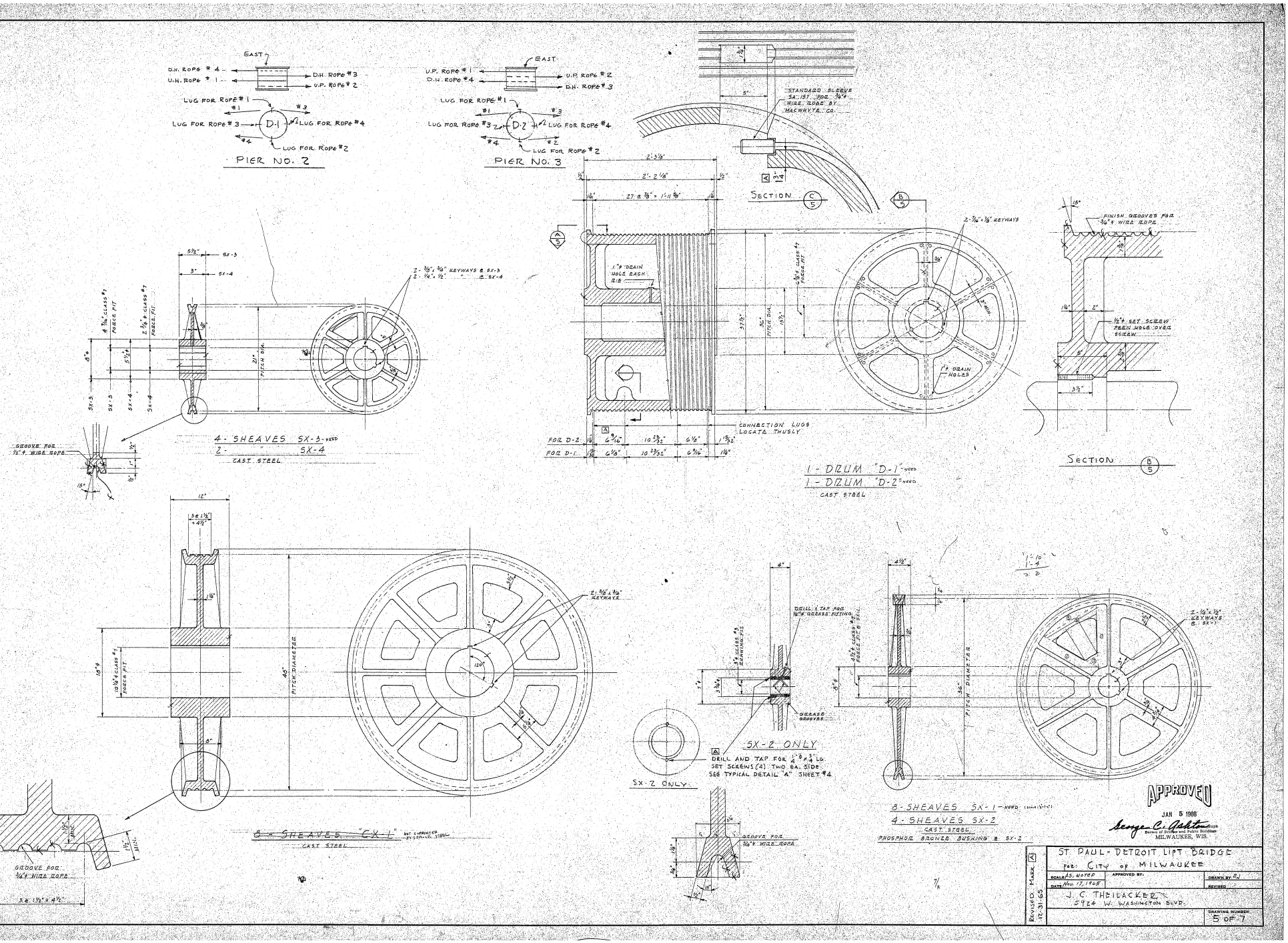
REVISED MARK DATE

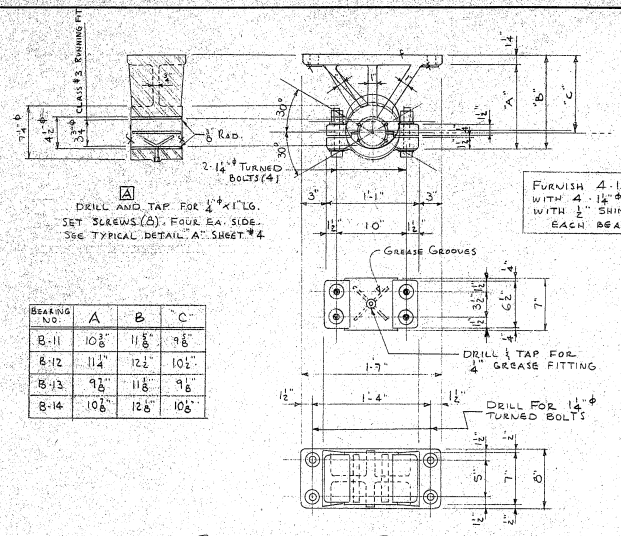
ST. PAUL - DETROIT LIFT BRIDGE
FOR: CITY OF MILWAUKEE

SCALE: AS NOTED	APPROVED BY:	DRAWN BY: B
DATE: Nov. 17, 1965		REVISED:

J. C. THEILACKER
5924 W. WASHINGTON BLVD.

DRAWING NUMBER 4 OF 7

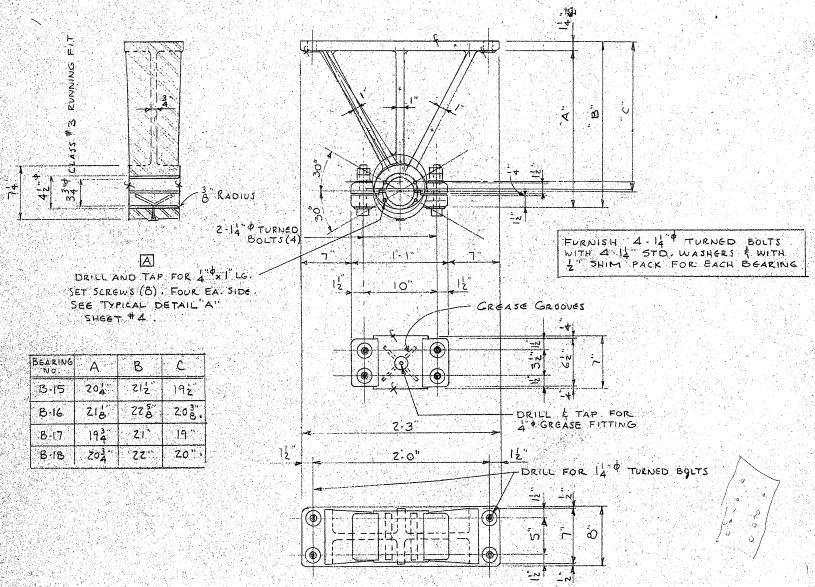

PIER NO. 2
PIER NO. 3
EAST
D.H. ROPE #4
U.H. ROPE #1
D.H. ROPE #3
U.P. ROPE #2
LUG FOR ROPE #1
LUG FOR ROPE #3
LUG FOR ROPE #4
LUG FOR ROPE #2
D-1
D-2
SECTION C/5
STANDARD SLEEVE SA. 157 FOR 3/4" ϕ WIRE ROPE BY MACWHYTE CO.
4 - SHEAVES SX-3 - NEED
2 - " SX-4
CAST STEEL
GROOVE FOR 1/2" ϕ WIRE ROPE
1 - DRUM "D-1" - NEED
1 - DRUM "D-2" - NEED
CAST STEEL
CONNECTION LUGS LOCATE THUSLY
FOR D-2
FOR D-1
FINISH GROOVES FOR 3/4" ϕ WIRE ROPE
1/2" ϕ SET SCREW PEEN HOLE OVER SCREW
SECTION B/5
8 - SHEAVES "CX-1" NOT SUPPORTED BY STAINLESS STEEL
CAST STEEL
GROOVE FOR 3/4" ϕ WIRE ROPE
SX-2 ONLY
DRILL AND TAP FOR 1/4" ϕ x 3/4" LG. SET SCREWS (4) TWO EA. SIDE SEE TYPICAL DETAIL "A" SHEET #4
GREASE GROOVES
8 - SHEAVES SX-1 - NEED
4 - SHEAVES SX-2
CAST STEEL
PHOSPHOR BRONZE BUSHING @ SX-2
APPROVED
JAN 5 1966
George C. Ashton
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.
ST. PAUL - DETROIT LIFT BRIDGE
FOR: CITY OF MILWAUKEE
SCALE AS NOTED
DATE NOV. 17, 1965
APPROVED BY:
DRAWN BY RJ
REVISED
J. C. THEILACKER
5924 W. WASHINGTON BLVD.
DRAWING NUMBER 5 OF 7
REVISED MARK A 12-31-65



BEARING NO.	A	B	C
B-11	10 3/8"	11 5/8"	9 5/8"
B-12	11 1/4"	12 1/2"	10 1/2"
B-13	9 3/8"	11 5/8"	9 1/8"
B-14	10 3/8"	12 5/8"	10 5/8"

2 - BEARINGS B-11 Pattern at Br. Shop
2 - BEARINGS B-12 - NEED
2 - BEARINGS B-13
2 - BEARINGS B-14 - NEED

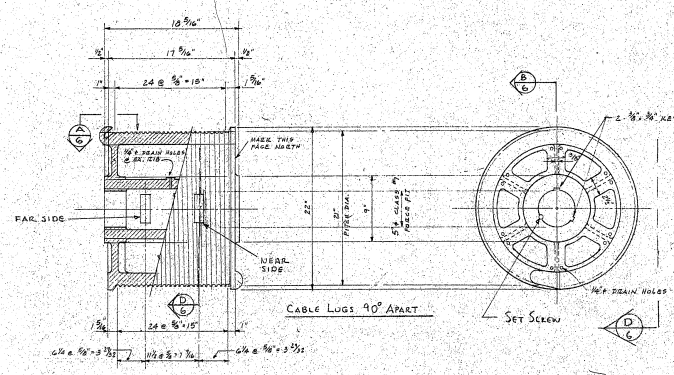
CAST STEEL
PHOSPHOR BRONZE BUSHINGS



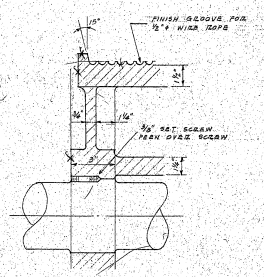
BEARING NO.	A	B	C
B-15	20 1/4"	21 1/2"	19 1/2"
B-16	21 1/8"	22 5/8"	20 3/8"
B-17	19 1/4"	21"	19"
B-18	20 3/4"	22"	20"

2 - BEARINGS B-15 Standard Bridge Shop
2 - BEARINGS B-16 - NEED
2 - BEARINGS B-17
2 - BEARINGS B-18 - NEED

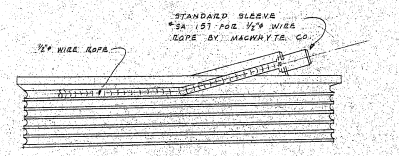
CAST STEEL
PHOSPHOR BRONZE BUSHINGS



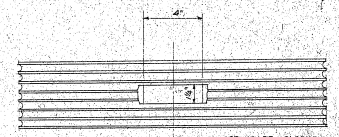
1 - DRUM "D-3" - NEED
CAST STEEL

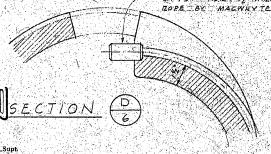


SECTION B/6
SCALE 3"=1'-0"



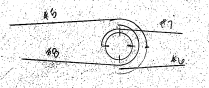
SECTION A/6

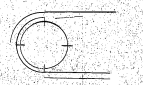




SECTION D/6

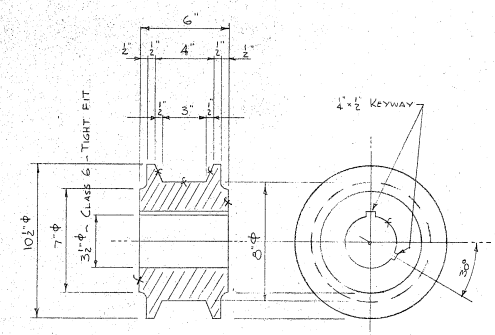
APPROVED
JAN 5 1966
George C. Ashton Supt.
Bureau of Marine and Public Buildings
MILWAUKEE, WIS.



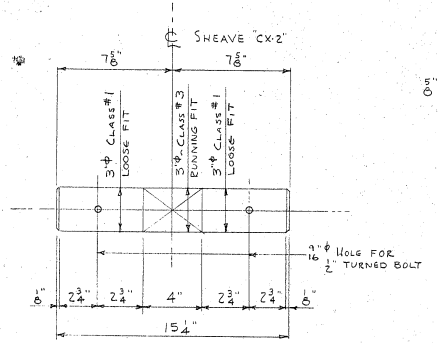


REVISED MARK 12-31-65	ST. PAUL - DETROIT LIFT BRIDGE
	FOR: CITY OF MILWAUKEE
	SCALE: AS NOTED — APPROVED BY: — DRAWN BY: RJ
	DATE: NOV 17, 1965 — REVISED
	J. C. THEILACKER, 5924 W. WASHINGTON BLVD.
	DRAWING NUMBER 6 OF 7

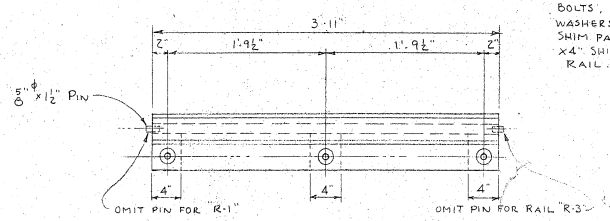
SCHILLING 102



2- GUIDE WHEELS ~ "GW-1"
CAST STEEL

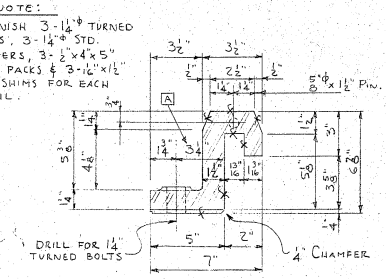


4- SHAFTS ~ "SS-5"
AISC C-1018 STEEL

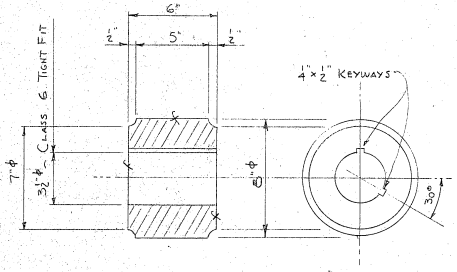


4 - GUIDE RAILS ~ R-1
8 - GUIDE RAILS ~ R-2
4 - GUIDE RAILS ~ R-3
CAST STEEL

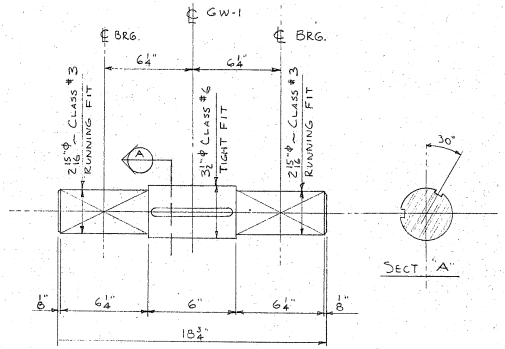
NOTE:
FURNISH 3-1 1/4"φ TURNED BOLTS, 3-1 1/4"φ STD. WASHERS, 3-1/2"×4"×5" SHIM PACKS & 3-1/16"×1 1/2"×4" SHIMS FOR EACH RAIL.



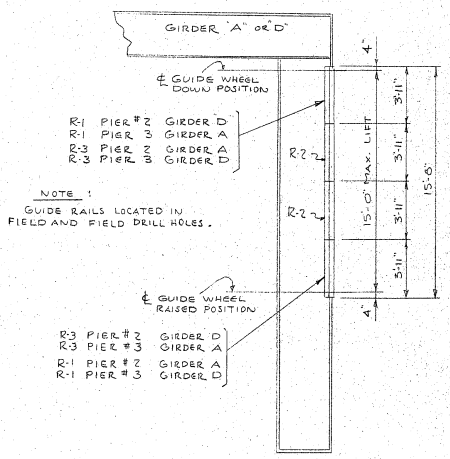
SECTION "B"



2- GUIDE WHEELS ~ "GW-2"
CAST STEEL



4- SHAFTS ~ "GS-1"
AISC C-1018 STEEL



NOTE:
GUIDE RAILS LOCATED IN FIELD AND FIELD DRILL HOLES.

GUIDE RAIL ASSEMBLY

APPROVED
JAN 5 1966
George C. Ashton Supt.
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

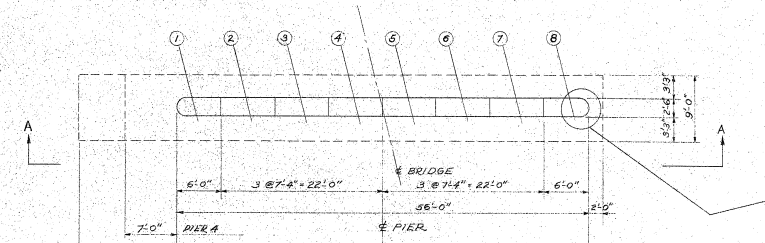
REVISED MARK A 12-31-65	ST. PAUL ~ DETROIT LIFT BRIDGE FOR ~ CITY OF MILWAUKEE
	SCALE: As Noted — APPROVED BY: — DRAWN BY H
	DATE: Dec. 1965 — REVISED
	J. C. THEILACKER 5924 W. WASHINGTON BLVD.
	DRAWING NUMBER 7 OF 7

SCHILLING 102

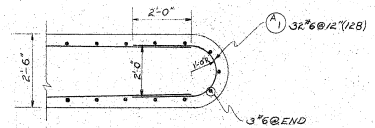
BENDING DETAILS			
MARK	SIZE	LENGTH	DETAIL
A_1	6	7'-2	3'-4" 2'-0" 1'-0"
A_2	6	6'-2	2'-0" 2'-2" 2'-0"
A_3	6	8'-7	7'-7" 1'-0"

TOP OF PIER ELEVATIONS

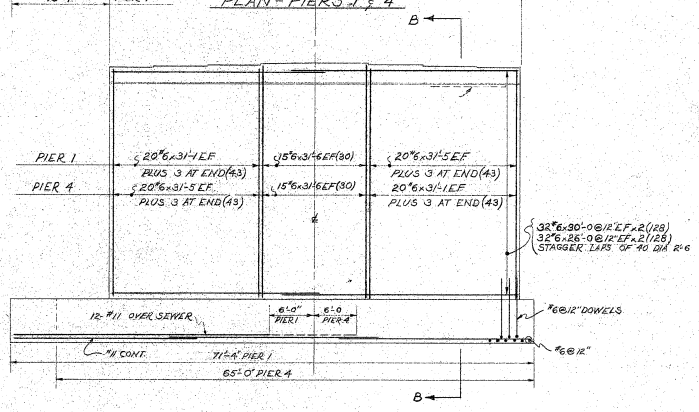
STRINGER	1	2	3	4	5	6	7	8
PIER 1	11.27	11.41	11.52	11.64	11.67	11.63	11.60	11.52
PIER 4	11.52	11.59	11.63	11.67	11.64	11.54	11.43	11.29



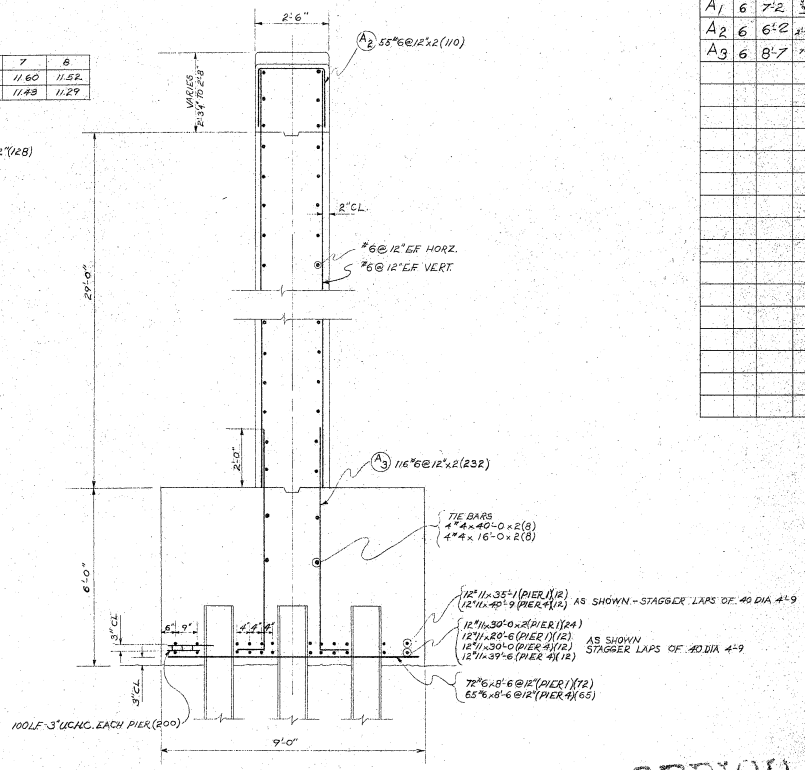
PLAN - PIERS 1 & 4



PIER END DETAIL



ELEVATION VIEW AA
PIERS 1 & 4



SECTION B-B

OFFICE

APPROVED
JAN 7 1966
George C. Ashton Supt.
Bureau of Offices and Public Buildings
MILWAUKEE, WIS.

ALL STEEL REINFORCING TO BE ASTM A15

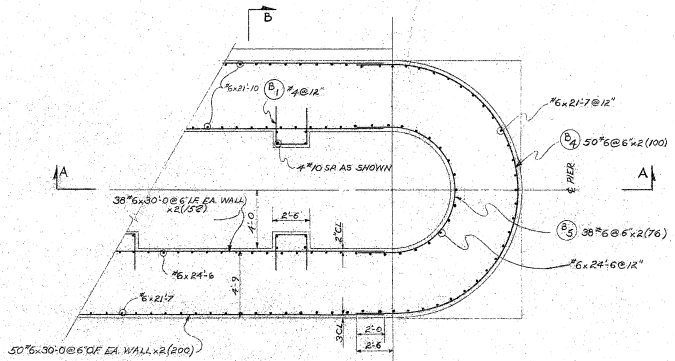
PIERS 1 & 4

Wisconsin WIRE & STEEL INC.
4320 N. 126th ST. BROOKFIELD, WIS.
SU. 1-4600

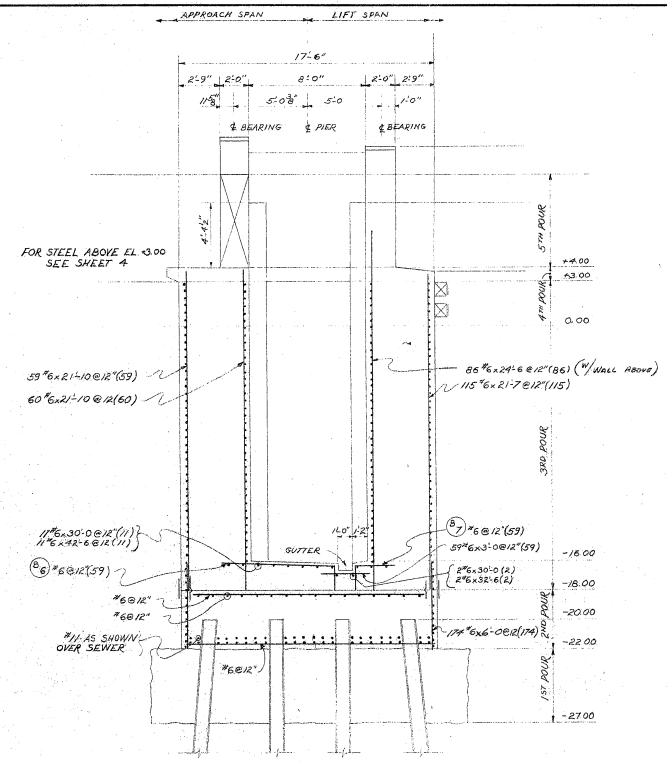
PROJECT: VERTICAL LIFT BRIDGE
W. ST PAUL AVE - E. DETROIT ST. MIL. WIS
CONTRACTOR: ED KRAEMER & SONS
ARCHITECT: CITY OF MILWAUKEE
DRAWN BY: D.A.K. DATE: 10/6/65
REVISED: 1-6-66
SHEET: 1

SCHILLING 102 800-8-64

724-A

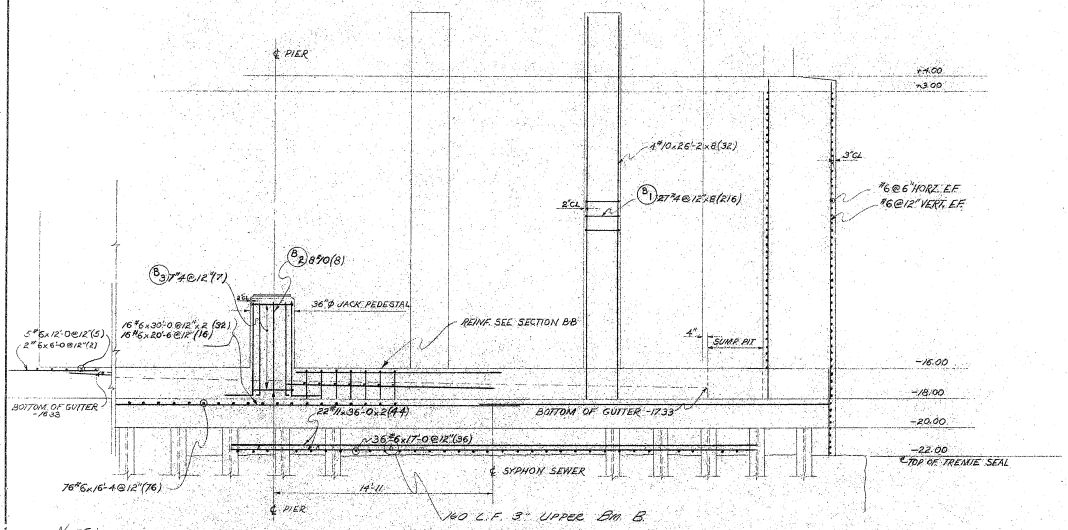


PARTIAL PLAN VIEW



SECTION BB

BENDING DETAILS			
MARK	SIZE	LENGTH	DETAIL
B1	4	7'-2	2'-6 / 2'-2
B2	10	8'-3	6'-4 / 1'-11
B3	4	9'-5	1'-10 / 33" O.A.
B4	6	31'-9	2'-6 / 2'-6
B5	6	18'-6	4'-8 / 2'-6
B6	6	9'-5	7'-8 / 1'-9
B7	6	4'-9	3'-0 / 1'-9



NOTE: SPACE TRANSVERSE BAR TO AVOID PILES.

LONGITUDINAL SECTION AA

APPROVED
NOV 26 1965
George C. Ashton, Supt.
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

OFFICE

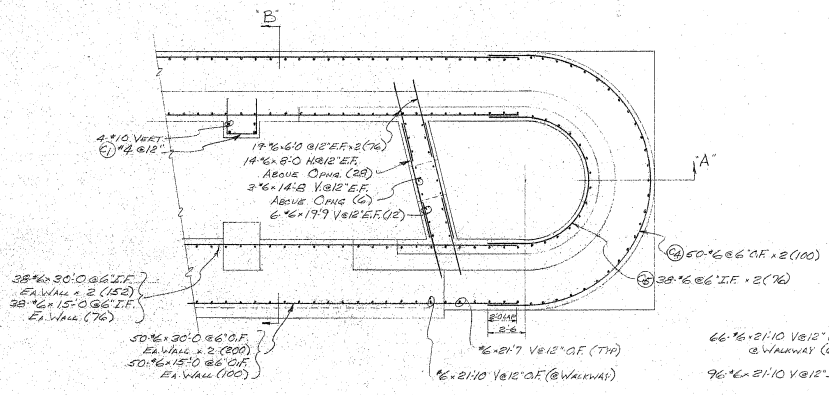
ALL STEEL REINFORCING TO BE ASTM A15

PIER 3 - BELOW EL. +3.00

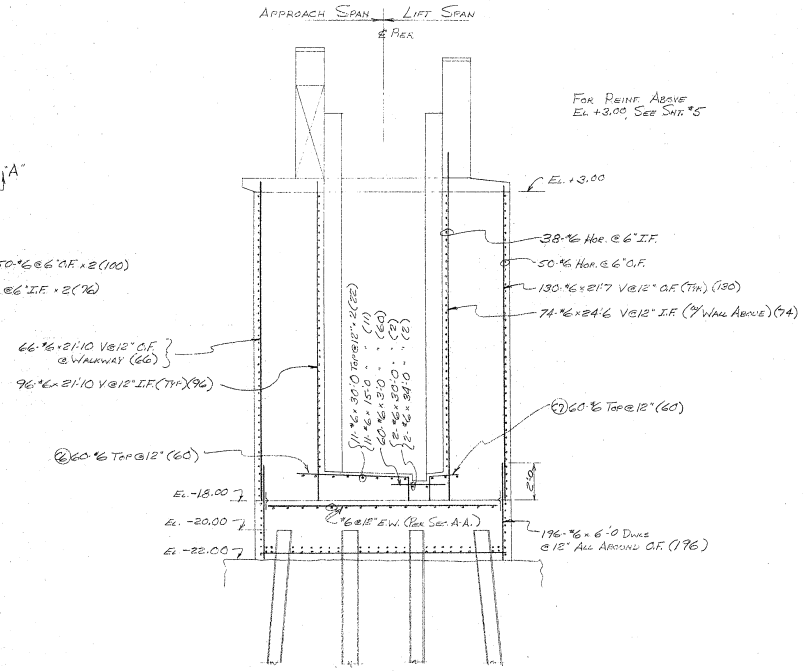
Wisconsin WIRE & STEEL INC.
4320 N. 126th ST. BROOKFIELD, WIS. SU. 1-4600

PROJECT: VERTICAL LIFT BRIDGE
W. ST. PAUL AVE - E. DETROIT ST.
CONTRACTOR: ED KRAEMER & SONS
ARCHITECT: CITY OF MILWAUKEE
DRAWN BY: D.A.K. DATE: 10/12/65
REVISED: 11-20-65
SHEET: 2

DRILLING 102 500-9-64

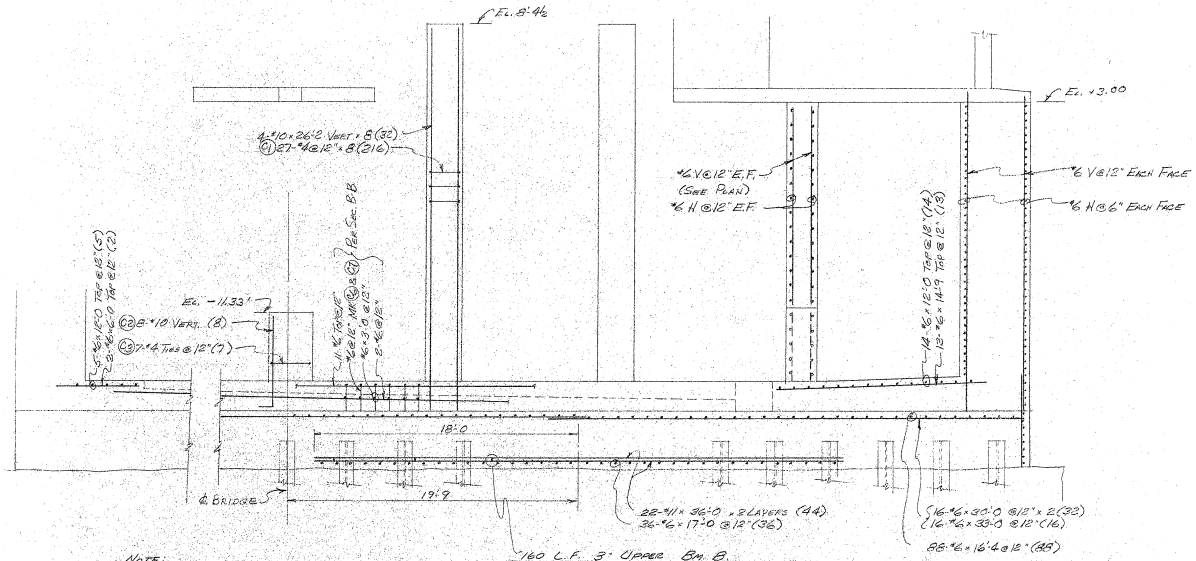


PARTIAL PLAN



SECTION "B-B"

BENDING DETAILS			
MARK	SIZE	LENGTH	DETAIL
C1	#4	7'2	2'6 / 3'2 / 2'6
C2	#10	8'3	6'4
C3	#4	9'5	TYP. 2'-8 DIA.
C4	#6	31'9	8'2 / 8'2
C5	#6	18'6	8'2 / 2'6 / 4'8
C6	#6	9'5	7'2 / 1'9
C7	#6	4'9	3'0 / 1'9



NOTE:
SPACE TRANSVERSE BARS TO AVOID PILES.

SECTION "A-A" - PIER 2

OFFICE

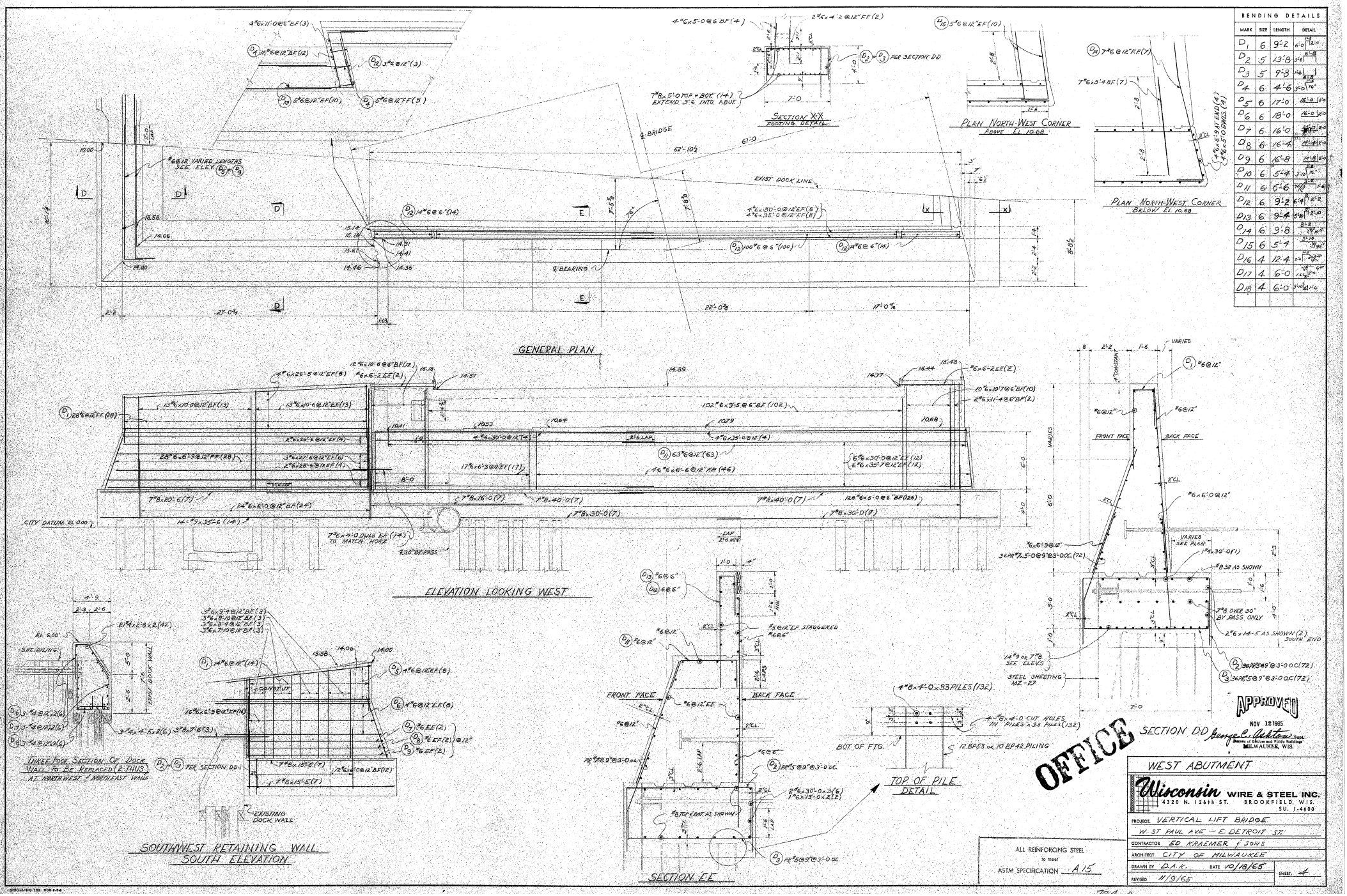
APPROVED
NOV 26 1965
George C. Sutton
Supt. of Bldgs. & Public Buildings
MILWAUKEE, WIS.

ALL REINF. A.S.T.M. A15

PIER #2 - BELOW EL. +3.00

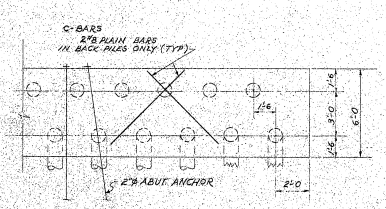
Wisconsin WIRE & STEEL INC.
4320 N. 126th ST. BROOKFIELD, WIS.
SU. 1-4600

PROJECT: VERTICAL LIFT BRIDGE
W. ST. PAUL AVE. - E. DETROIT ST.
CONTRACTOR: ED. KRAEMER & SONS
ARCHITECT: CITY OF MILWAUKEE
DRAWN BY: T.J.W. DATE: 10-12-65
REVISED: 11-30-65
SHEET: 3

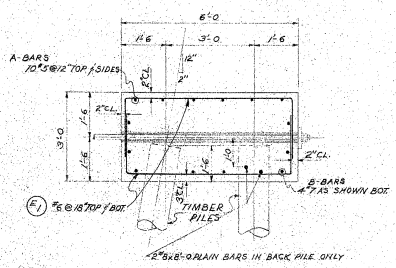


BENDING DETAILS

MARK	SIZE	LENGTH	DETAIL
D1	6	9'-2	6'-0
D2	5	13'-8	3'-6
D3	5	9'-8	1'-6
D4	6	4'-6	3'-0
D5	6	17'-0	15'-0
D6	6	18'-0	16'-0
D7	6	16'-0	14'-0
D8	6	16'-4	14'-4
D9	6	16'-8	14'-8
D10	6	5'-4	3'-10
D11	6	6'-6	4'-6
D12	6	9'-2	6'-4
D13	6	9'-4	5'-10
D14	6	9'-8	8'-2
D15	6	5'-4	3'-10
D16	4	12'-4	2'-0
D17	4	6'-0	2'-0
D18	4	6'-0	3'-10



PARTIAL PLAN
(TYP) DEAD MAN REINF.



(TYP) SECTION (DEAD MAN)

BENDING DETAILS			
MARK	SIZE	LENGTH	DETAIL
E1	6	9'-8	A9 3'-8 1'-10

DEAD MAN REINF.					
WEST ABUTMENT			EAST ABUTMENT		
MARK	REINF EACH DEAD MAN	NO. BTHS	REINF EACH DEAD MAN	NO. BTHS	
A-BARS	10#5x30'-0x2(20) 10#5x34'-4(10)	40 20	10#5x30'-0(10) 10#5x39'-0(10)	20 20	
B-BARS	4#7x30'-0x2(8) 4#7x36'-0(4)	16 8	4#7x30'-0(4) 4#7x40'-0(4)	8 8	
C-BARS	2"⌀x8'-0x22(44) *	88	2"⌀x8'-0x21(42) *	84	* PAIR BARS
E1-BARS	(E1) #5 TOP & BOT x 61(122)	244	(E1) #5 TOP & BOT x 45(90)	180	

OFFICE

APPROVED
NOV 12 1965
George C. Ashton Supt.
Bureau of Engineering Public Buildings
MILWAUKEE, WIS.

ALL REINFORCING STEEL
to meet
ASTM SPECIFICATION A 15

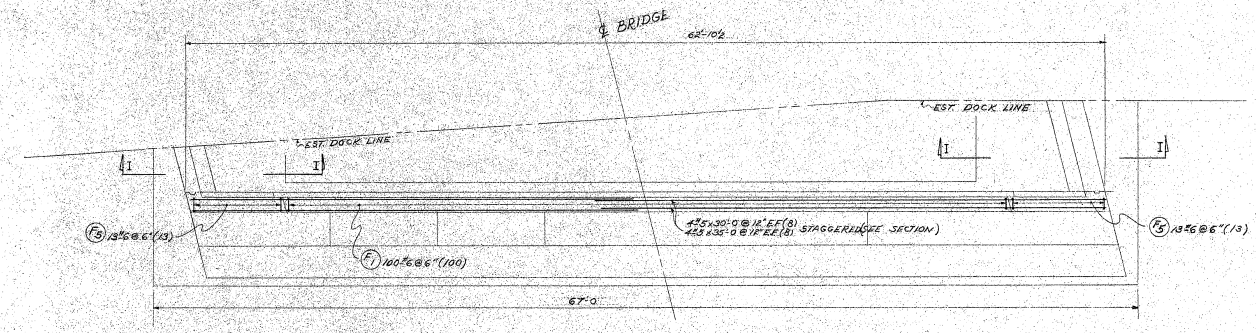
DEAD MAN DETAILS FOR EAST & WEST ABUTMENTS

Wisconsin WIRE & STEEL INC.
4320 N. 126th ST. BROOKFIELD, WIS.
SU. 1-4600

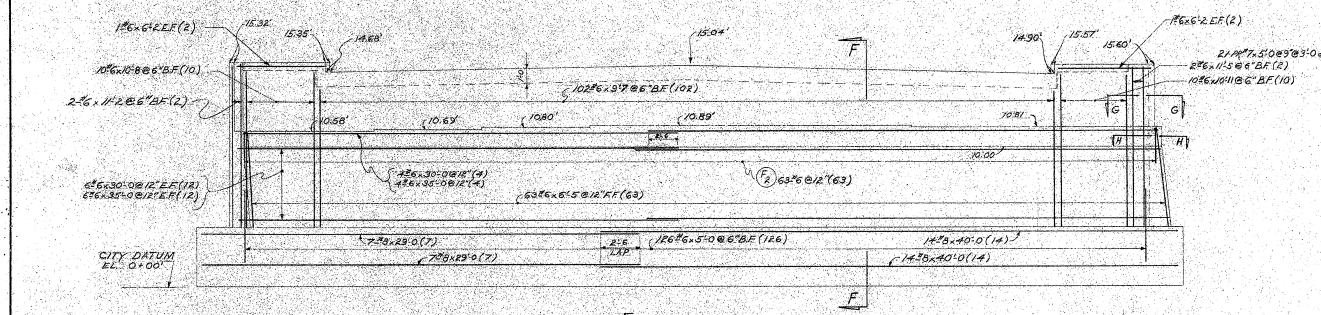
PROJECT: VERTICAL LIFT BRIDGE
W. ST. PAUL AVE. - E. DETROIT ST.
CONTRACTOR: ED. KRAEMER & SONS
ARCHITECT: CITY OF MILWAUKEE
DRAWN BY: D.A.K. DATE: 10/18/65
REVISED:
SHEET: 5

72 d-12

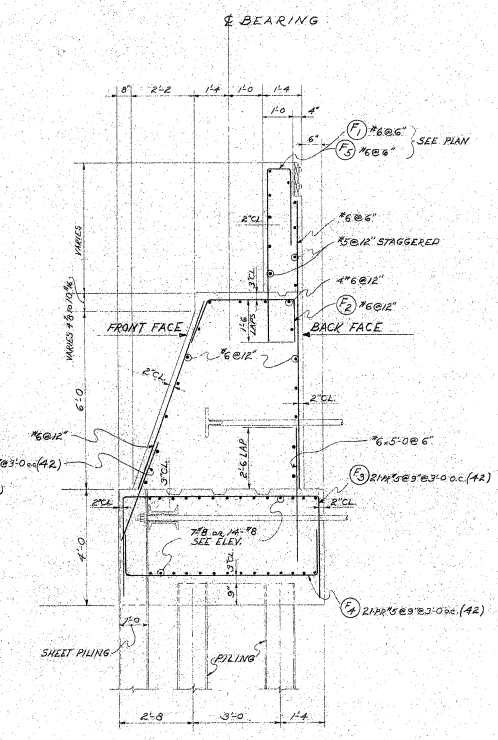
SCHILLING 102 900-3-64



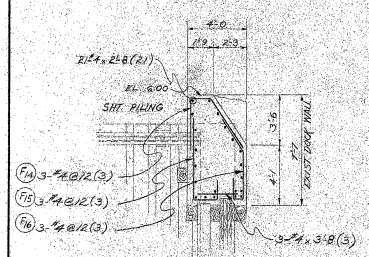
GENERAL PLAN



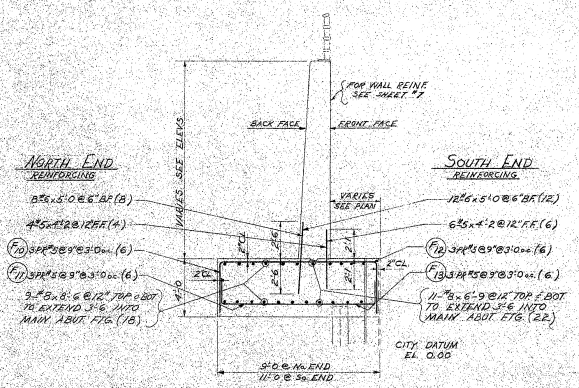
ELEVATION
LOOKING EAST



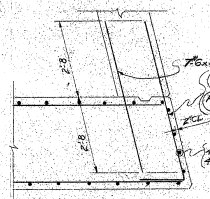
SECTION F-F



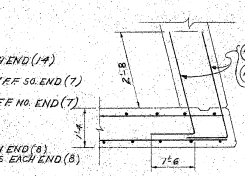
THREE FOOT SECTION OF DOCK WALL
TO BE REPLACED
NORTH END ONLY



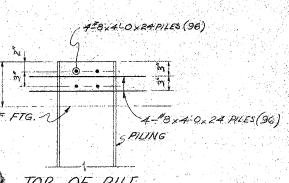
SECTION II
FOOTING DETAIL



SECTION H-H
SOUTH END SHOWN. NORTH END SIMILAR



SECTION GG
SOUTH END SHOWN - NORTH END SIMILAR



TOP OF PILE
DETAIL

OFFICE

APPROVED
NOV 12 1965
George C. Ashton Engr.
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

BENDING DETAILS			
MARK	SIZE	LENGTH	DETAIL
F1	6	9'-4	6'-10 / 2'-6
F2	6	6'-6	3'-6 / 7'-10 / 1'-6
F3	5	13'-8	6'-8 / 3'-4 / 3'-4
F4	5	9'-8	1'-4 / 6'-8 / 1'-4
F5	6	9'-2	6'-4 / 2'-2
F6	6	5'-4	3'-10 / 1'-4 / 90°
F7	6	5'-4	3'-10 / 1'-4 / 90°
F8	6	9'-8	8'-2 / 1'-4 / 90°
F9	6	9'-8	8'-2 / 1'-4 / 90°
F10	5	15'-8	3'-4 / 8'-8 / 3'-4
F11	5	11'-8	1'-4 / 8'-8 / 1'-4
F12	5	17'-8	1'-4 / 10'-8 / 3'-4
F13	5	13'-8	1'-4 / 10'-8 / 1'-4
F14	4	8'-11	3'-4 / 1'-5 / 90°
F15	4	8'-9	2'-4 / 1'-6
F16	4	7'-4	1'-4 / 3'-8 / 90°

ALL REINFORCING STEEL
to meet
ASTM SPECIFICATION A 15

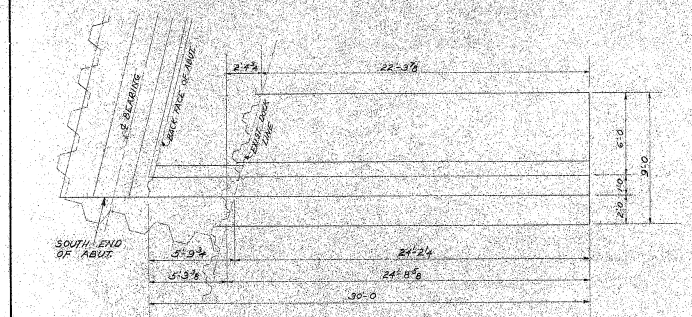
EAST ABUTMENT (REINFORCING)

Wisconsin WIRE & STEEL INC.
4320 N. 126th ST. BROOKFIELD, WIS.
SU. 1-4600

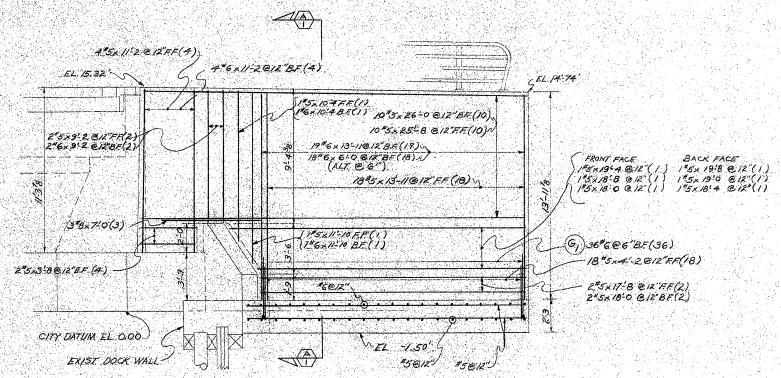
PROJECT: VERTICAL LIFT BRIDGE
W. ST. PAUL AVE – E. DETROIT ST.
CONTRACTOR: E.O. KRAEMER & SONS
ARCHITECT: CITY OF MILWAUKEE
DRAWN BY: D.A.K. DATE: 11/11/65
REVISED
SHEET 6

724-F

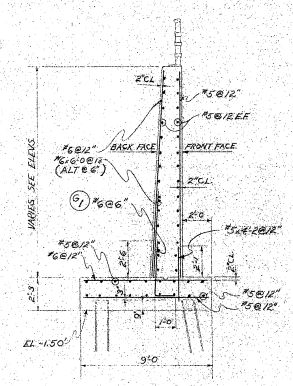
SCHILLING 103 R10-8-64



SOUTHEAST RETAINING WALL
GENERAL PLAN

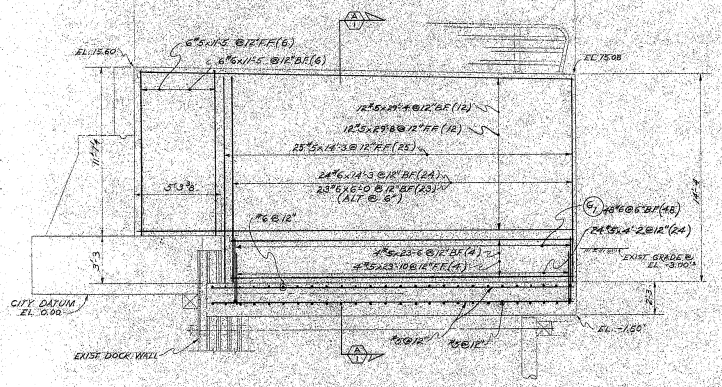


NORTHEAST RETAINING WALL
SOUTH ELEVATION

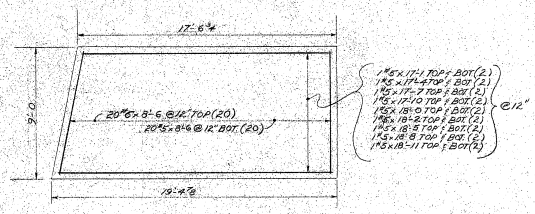


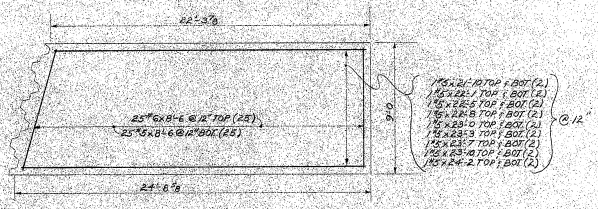
SECTION A/1

BENDING DETAILS			
MARK	SIZE	LENGTH	DETAIL
G1	6	4'-9	2'-9



SOUTHEAST RETAINING WALL
SOUTH ELEVATION





SOUTHEAST RETAINING WALL
FOOTING PLAN

OFFICE

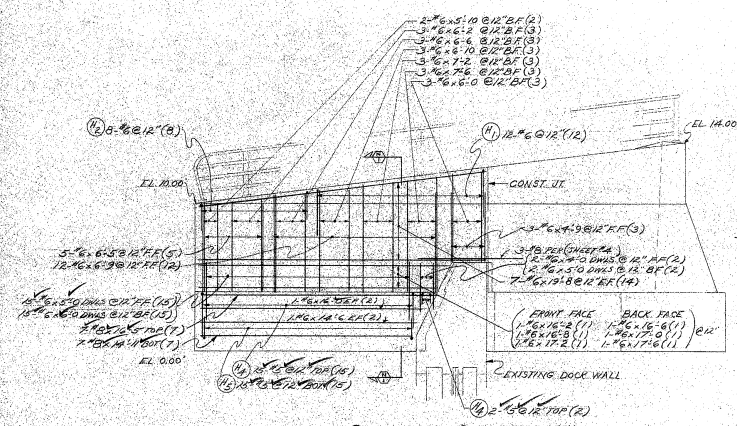
APPROVED
NOV 12 1965
George C. Gerbner Supt.
Bureau of Engineering Maint. Buildings
MILWAUKEE, WIS.

ALL REINFORCING STEEL
to meet
A.S.T.M. SPECIFICATION A 15

SOUTHEAST & NORTHEAST RETAINING WALLS

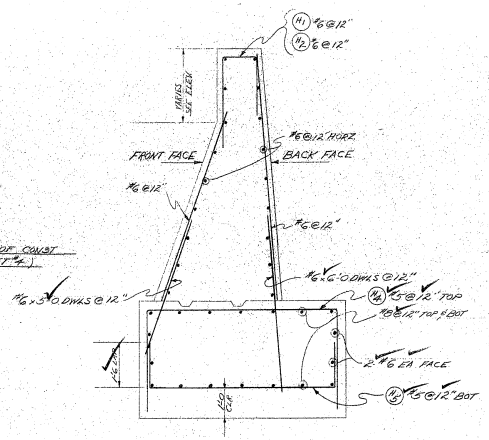
Wisconsin WIRE & STEEL INC.
4320 N. 126th ST. BROOKFIELD, WIS.
SU. 1-4600

PROJECT: VERTICAL LIFT BRIDGE
W. ST. PAUL AVE - EDETROIT ST. MIL. WIS.
CONTRACTOR: ED. KREAMER & SONS
ARCHITECT: CITY OF MILWAUKEE
DRAWN BY: DAK DATE: 11/11/65
REVISED
SHEET: 7



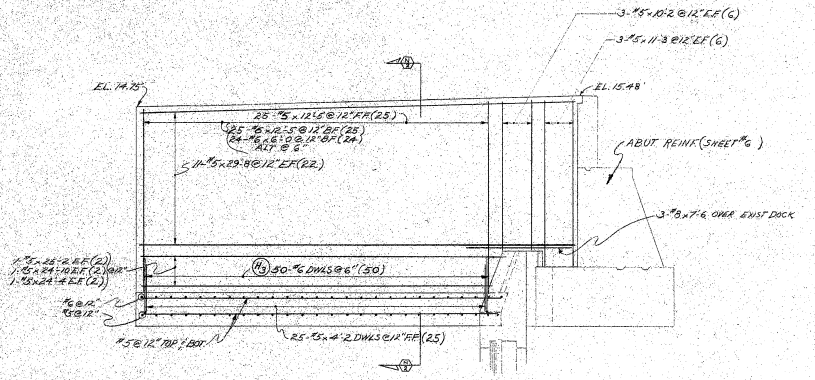
SOUTHWEST RETAINING WALL
SOUTH ELEVATION

NOTE:
FOR REINF. EAST OF CONST. JOINT SEE (SHEET #4)

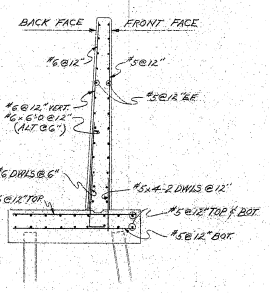


SECTION N 1

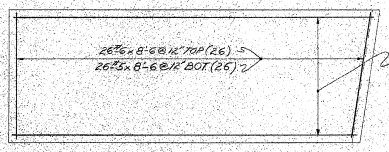
BENDING DETAILS			
MARK	SIZE	LENGTH	DETAIL
H1	#6	6'-2	3'-0 2'-0
H2	#6	5'-2	2'-0 2'-0
H3	#6	4'-10	3'-10 1'-0
H4	#5	13'-6	12'-6 1'-6
H5	#5	9'-6	8'-0 1'-6



NORTHWEST RETAINING WALL
SOUTH ELEVATION



SECTION N 2



PARTIAL PLAN FIG.

BOTTOM	TOP
1-#5x24:0 (1)	1-#5x24:4 (1)
1-#5x23:10 (1)	1-#5x24:2 (1)
1-#5x23:7 (1)	1-#5x23:11 (1)
1-#5x23:5 (1)	1-#5x23:9 (1)
1-#5x23:3 (1)	1-#5x23:7 (1) } @12"
1-#5x23:1 (1)	1-#5x23:5 (1)
1-#5x22:10 (1)	1-#5x23:2 (1)
1-#5x22:8 (1)	1-#5x23:0 (1)
1-#5x22:6 (1)	1-#5x22:10 (1)

OFFICE

APPROVED
DEC 14 1965
George C. Ashton
Bureau of Bridge and Public Buildings
MILWAUKEE, WIS.

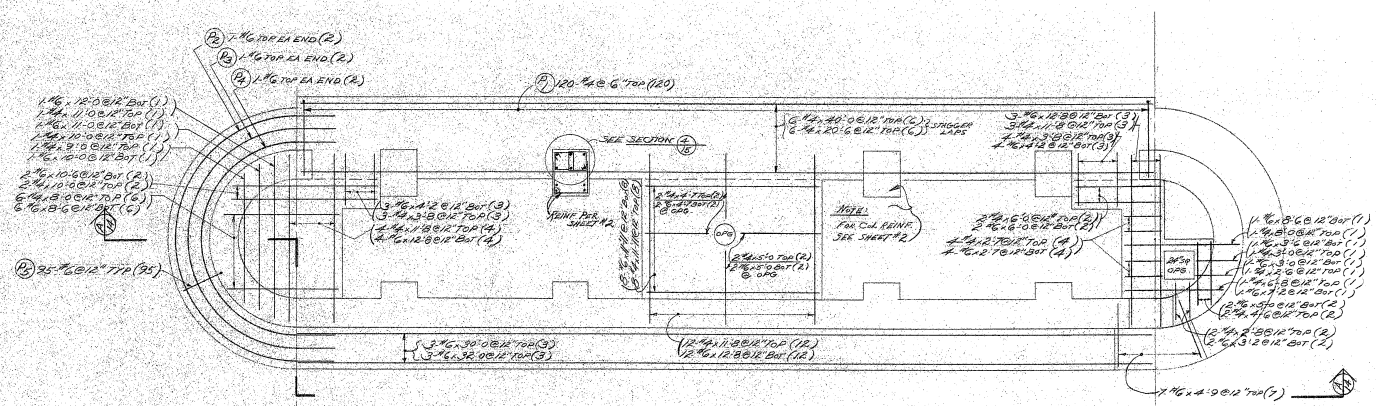
ALL REINFORCING STEEL to meet ASTM SPECIFICATION A-15

SOUTHWEST & NORTHWEST RETAINING WALL

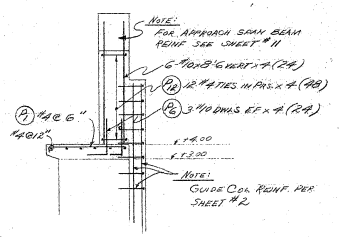
Wisconsin WIRE & STEEL INC.
4320 N. 126th ST. BROOKFIELD, WIS.
SU. 1-4600

PROJECT. VERTICAL LIFT BRIDGE
W. ST. PAUL AVE - E. DETROIT ST.
CONTRACTOR ED KRAEMER & SONS
ARCHITECT CITY OF MILWAUKEE
DRAWN BY D.A.K. DATE 11/12/65
REVISED 12/10/65
SHEET #8

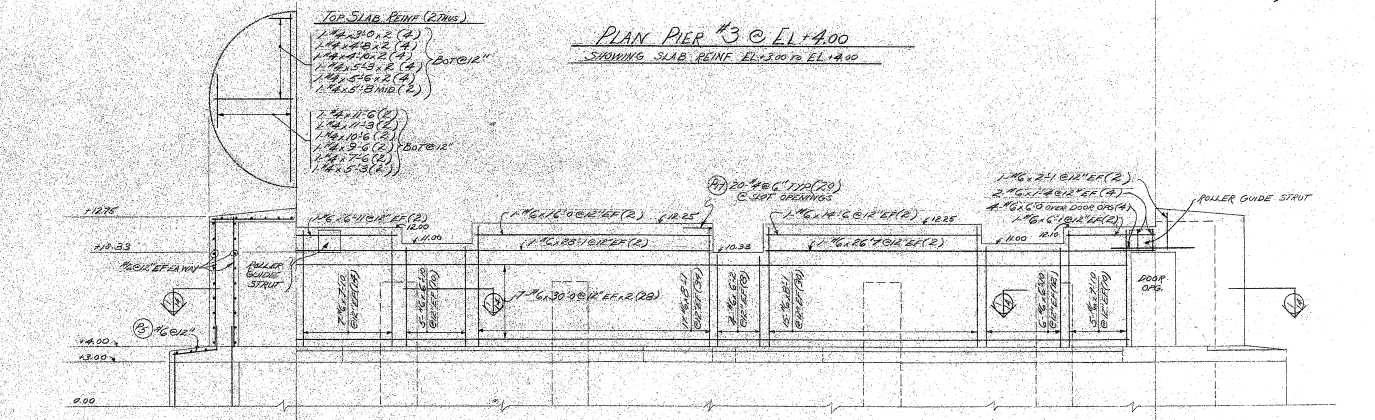
SCHILLING 102 800-8-64

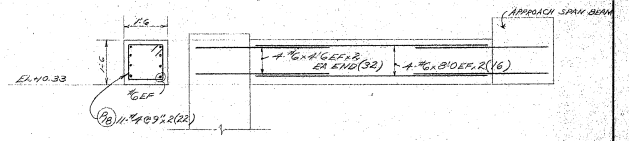


PLAN PIER #3 @ EL +4.00
SHOWING SLAB REINF EL +3.00 TO EL +4.00

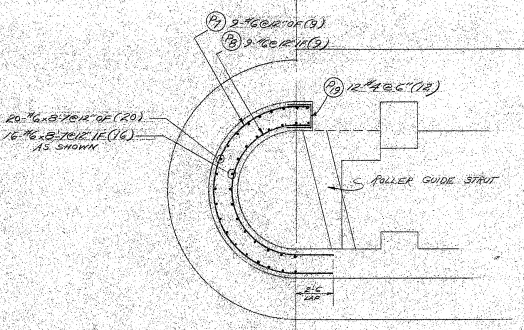


SECTION 4/15
(TYP.) APPROACH SPAN COL (4 THUS)
SHOWING REINF ABOVE EL +3.00

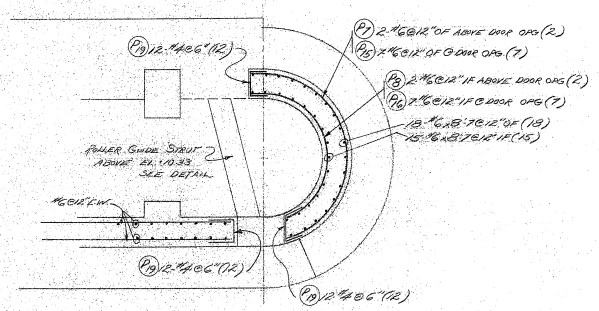




ROLLER GUIDE STRUT
PIER #3 (2 THUS)



SECTION 1/14
NORTH END



SECTION 1/14
SOUTH END

BENDING DETAILS			
MARK	SIZE	LENGTH	DETAIL
P1	#4	5'-6	4 5'-2
P2	#6	27'-3	2'-6
P3	#6	26'-5	2'-6
P4	#6	25'-2	2'-6
P5	#6	4'-2	2'-8 1'-6
P6	#10	4'-10	1'-6 3'-4
P7	#6	21'-8	2'-6
P8	#6	16'-4	2'-6
P12	#4	6'-10	1'-3 1'-9
P15	#6	17'-8	2'-6
P16	#6	12'-2	2'-6
P17	#4	4'-8	1'-6 1'-6
P18	#4	5'-10	1'-3 1'-3
P19	#4	5'-0	1'-8 1'-8

OFFICE

APPROVED
FEB 14 1966
George C. Nelson Supt.
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

OK/LFR

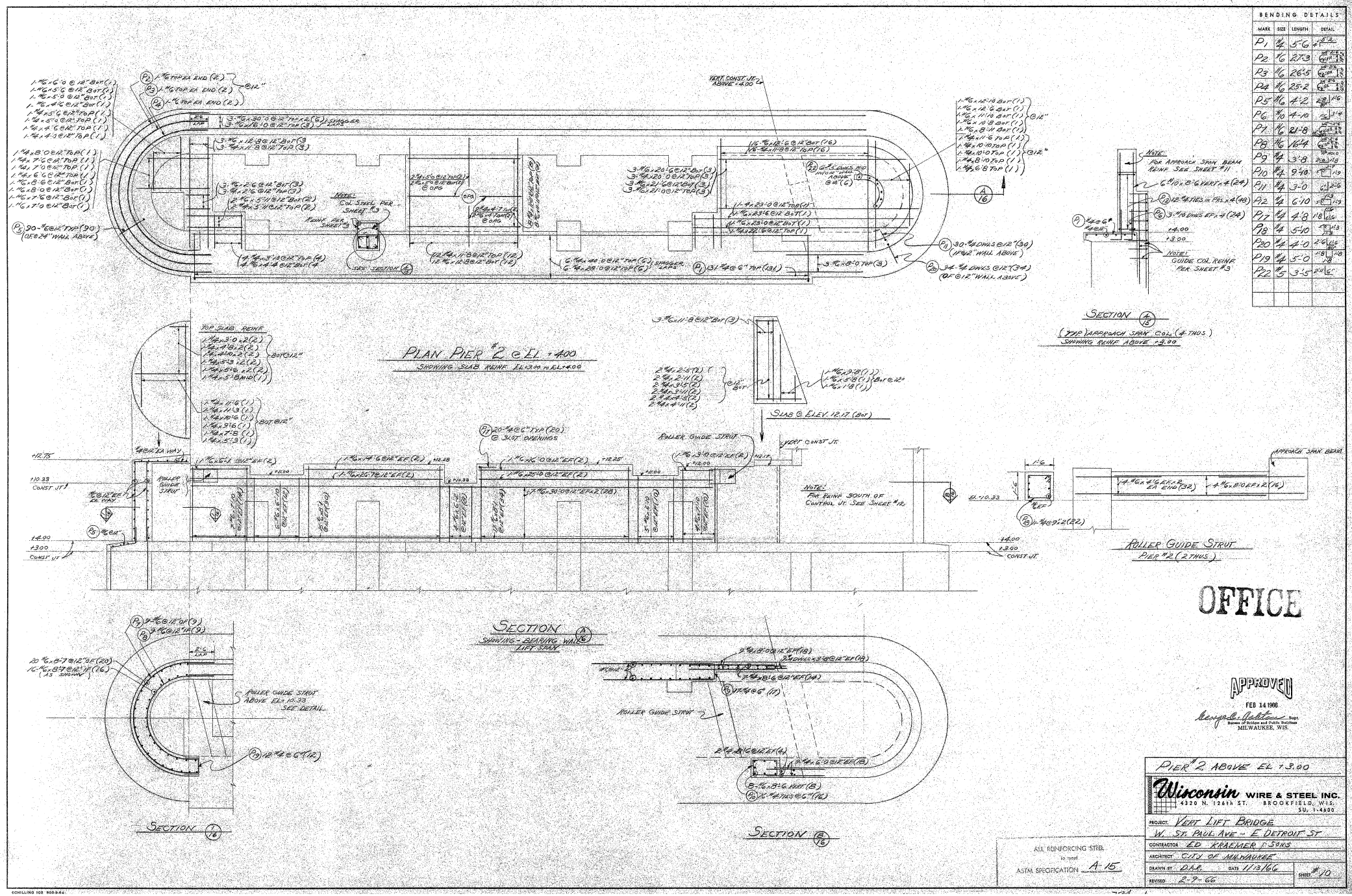
PIER #3 ABOVE EL. +3.00

Wisconsin WIRE & STEEL INC.
4320 N. 126th ST. BROOKFIELD, WIS. SU. 1-4600

PROJECT: VERT. LIFT BRIDGE
W. ST PAUL AVE. — E DETROIT ST.
CONTRACTOR: ED KRAEMER & SONS
ARCHITECT: CITY OF MILWAUKEE
DRAWN BY: D.A.K. DATE: 1/13/66
REVISED: 2-9-66
SHEET #9

ALL REINFORCING STEEL to meet ASTM SPECIFICATION A-15

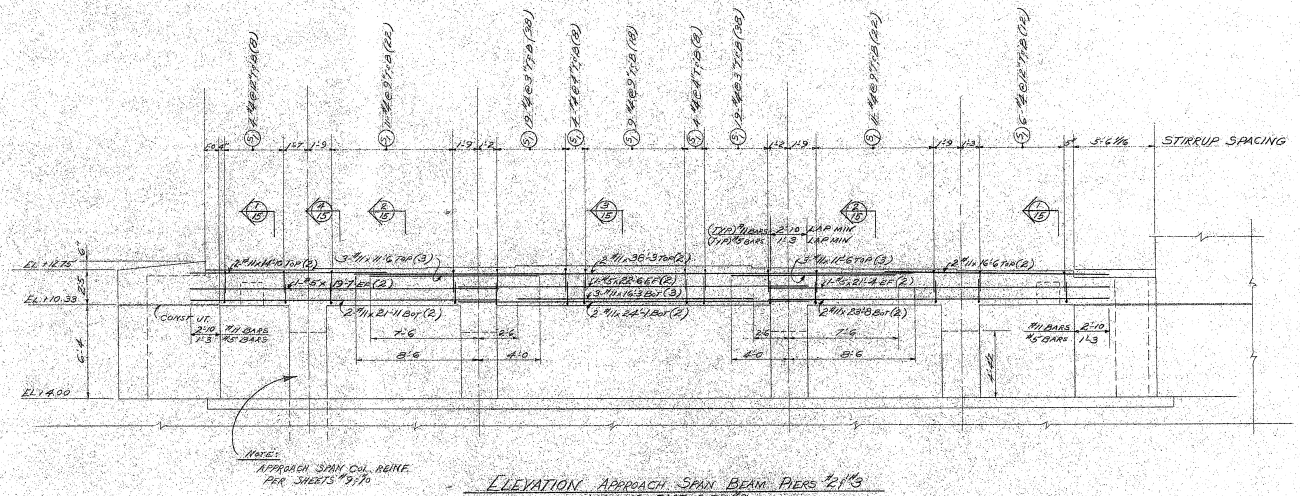
SCHILLING 103 900-9-64



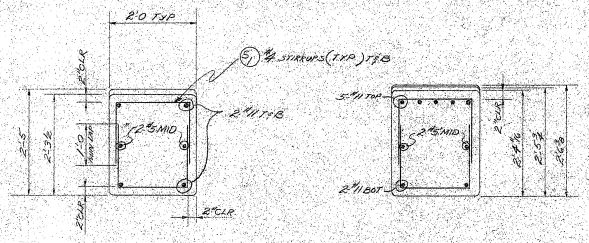
BENDING DETAILS

MARK	SIZE	LENGTH	DETAIL
P1	#4	5'-6	4 5'-2
P2	#6	27'-3	
P3	#6	26'-5	
P4	#6	25'-2	
P5	#6	4'-2	2'-8 / 80° / 1'-6
P6	#10	4'-10	1'-6 / 3'-4
P7	#6	21'-8	
P8	#6	16'-4	
P9	#4	3'-8	2'-0 / 1'-8
P10	#4	9'-10	5'-0 / 1'-9
P11	#4	3'-0	6" / 2'-6
P12	#4	6'-10	5'-0 / 1'-9
P17	#4	4'-8	1'-8 / 1'-6
P18	#4	5'-10	5'-0 / 1'-3
P20	#4	4'-0	2'-6 / 1'-6 / 80°
P19	#4	5'-0	1'-8 / 1'-8
P22	#5	3'-5	2'-11 / 6"

BENDING DETAILS			
MARK	SIZE	LENGTH	DETAIL
S1	#4	5'-0	1'-8 / 1'-8

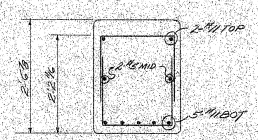


ELEVATION APPROACH SPAN BEAM PIERS #2 & #3
LOOKING EAST PIER #2
LOOKING WEST PIER #3
QUANTITIES SHOWN ARE FOR ONE BEAM ONLY



SECTION 1/15

SECTION 2/15



SECTION 3/15

OFFICE

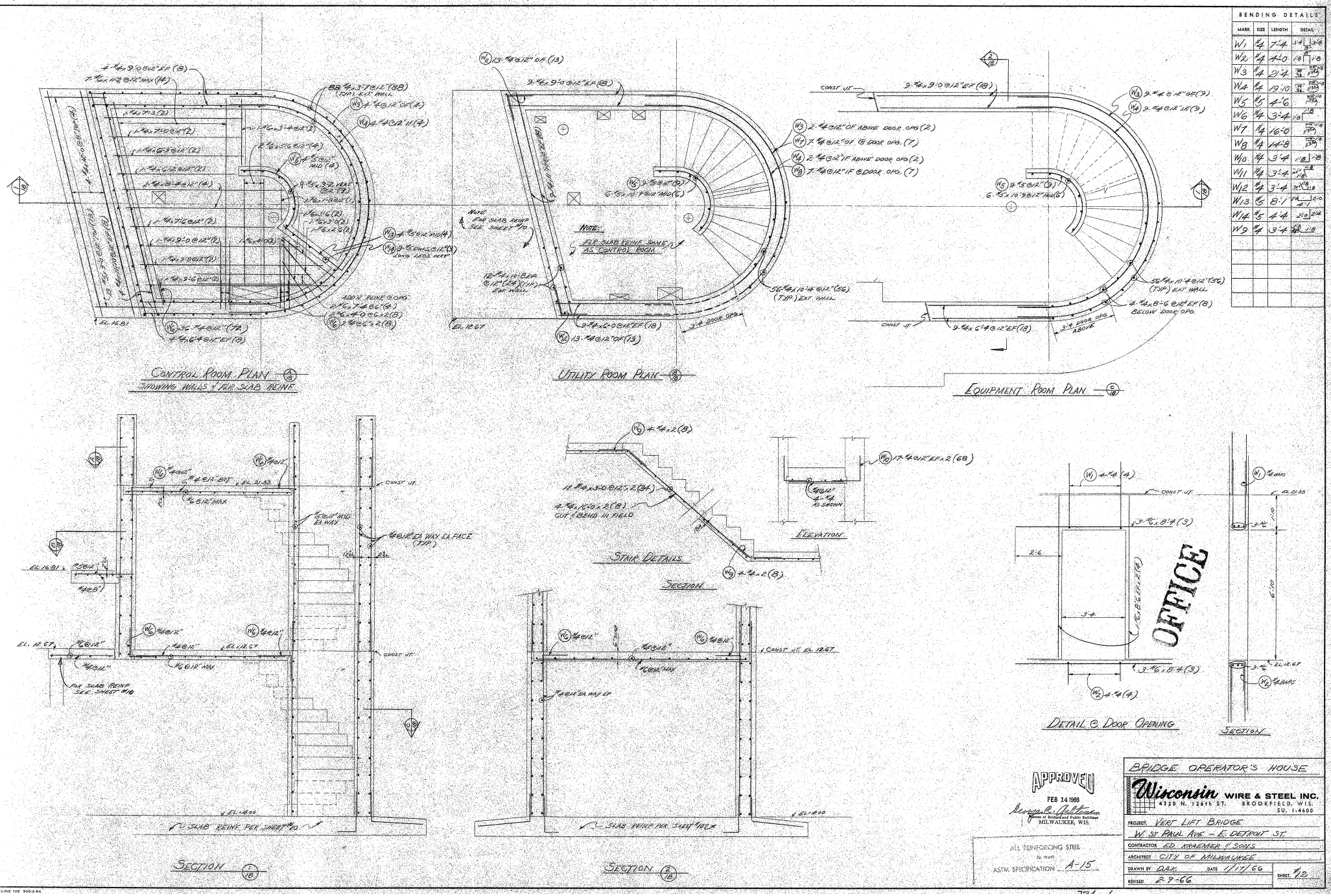
APPROVED
FEB 14 1966
George C. Gaetano Supt.
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

ALL REINFORCING STEEL
to meet
ASTM SPECIFICATION A-15

APPROACH SPAN BEAM

Wisconsin WIRE & STEEL INC.
4320 N. 126th ST. BROOKFIELD, WIS.
SU. 1-4600

PROJECT: VERT LIFT BRIDGE
W. ST PAUL AVE. - E. DETROIT ST.
CONTRACTOR: ED KRAEMER & SONS
ARCHITECT: CITY OF MILWAUKEE
DRAWN BY: D.A.K. DATE: 1/19/66
REVISED: 2-9-66
SHEET: #11



APPROVED
FEB 14 1996
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

ALL REINFORCING STEEL to meet ASTM. SPECIFICATION A-15

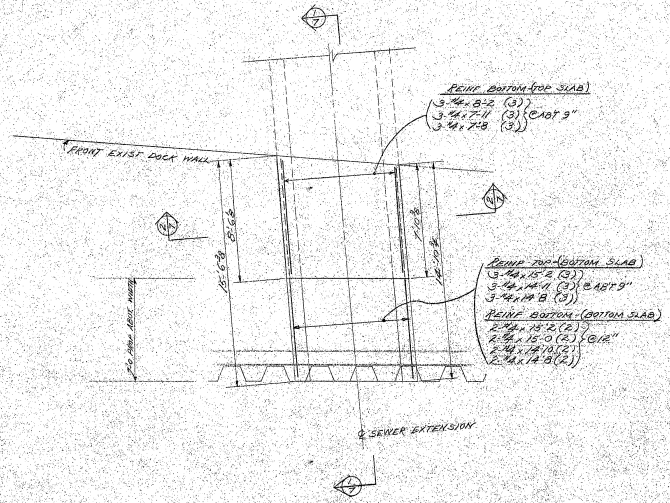
BRIDGE OPERATOR'S HOUSE

Wisconsin WIRE & STEEL INC.
4320 N. 126th ST. BROOKFIELD, WIS.
SU. 1-4600

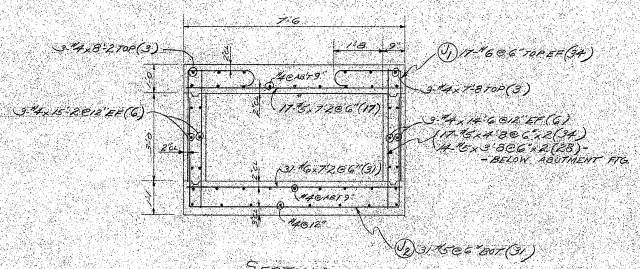
PROJECT: VERT LIFT BRIDGE
W. ST PAUL AVE – E. DETROIT ST.
CONTRACTOR: ED. KRAEMER & SONS
ARCHITECT: CITY OF MILWAUKEE
DRAWN BY: DAK DATE: 1/17/66
REVISED: 2-9-66
SHEET: #12

SCHILLING 102 800-2-64

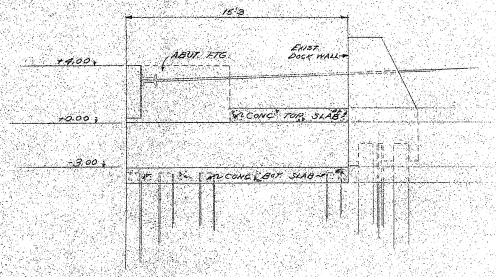
BENDING DETAILS			
MARK	SIZE	LENGTH	DETAIL
J1	#6	6'-8	7' 2'-3 3'-0
J2	#5	14'-6	3'-8 7'-2 3'-8



PLAN - STORM SEWER EXTENSION



SECTION 2/7



SECTION 1/7

OFFICE

APPROVED
FEB 14 1966
George C. Nahten, Supt.
Bureau of Sewers and Public Buildings
MILWAUKEE, WIS.

BOX SEWER EXTENSION

Wisconsin WIRE & STEEL INC.
4320 N. 126th ST. BROOKFIELD, WIS.
SU. 1-4600

PROJECT: VERTICAL LIFT BRIDGE
W. ST. PAUL AVE. - E. DETROIT ST.

CONTRACTOR: ED KRAEMER & SONS

ARCHITECT: CITY OF MILWAUKEE

DRAWN BY: D.A.K. DATE: 1-17-66

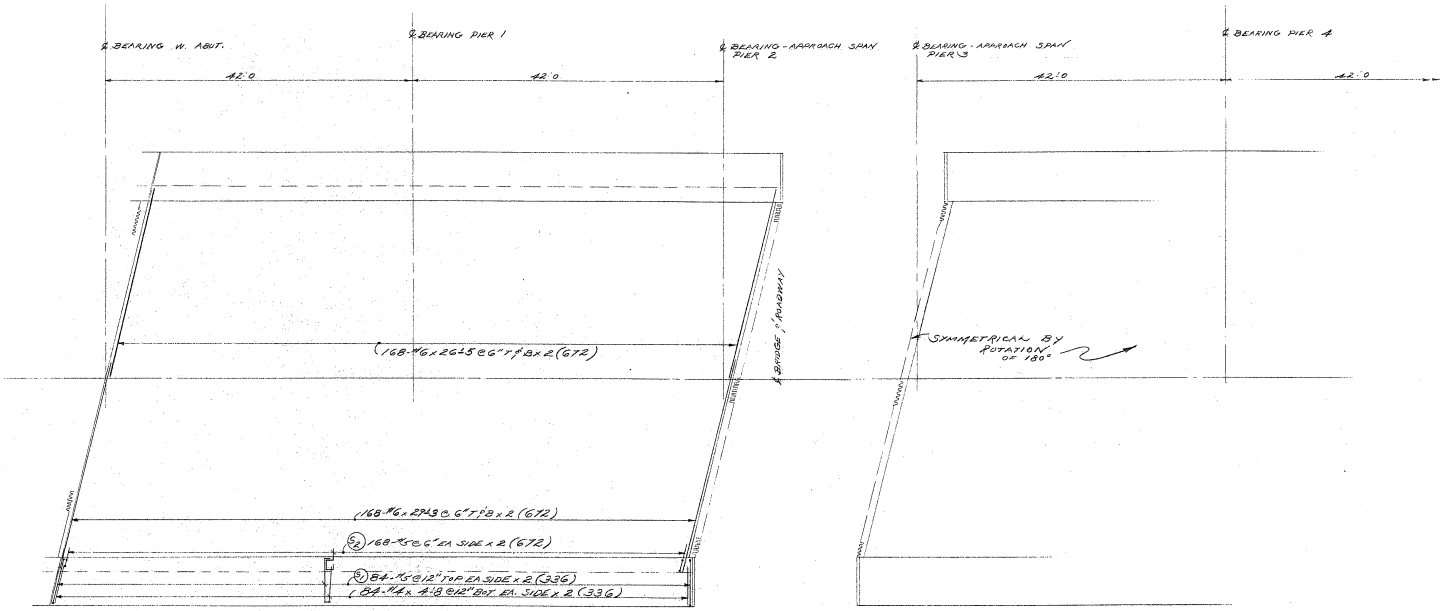
REVISED: 2-9-66

SHEET: #13

ALL REINFORCING STEEL (to Rest)
ASTM SPECIFICATION A-15

SCHILLING 102 500-8-64

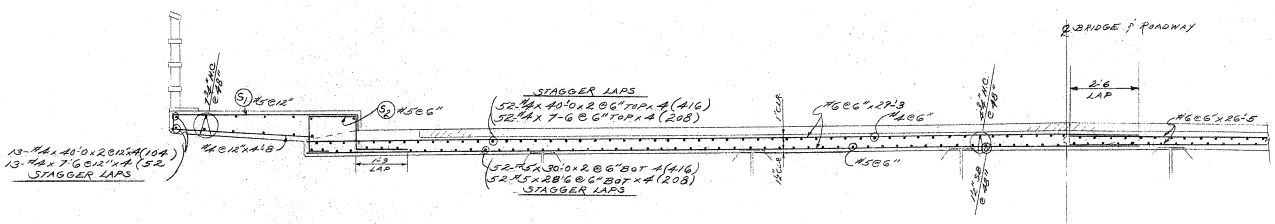
BENDING DETAILS			
MARK	SIZE	LENGTH	DETAIL
S1	#5	7'-2	6'-2 / 6"
S2	#5	6'-9	1'-8 / 1'-3 / 1'-9



DECK PLAN
(SHOWING TRANSVERSE STEEL)
(2 THUS)

NOTE:
LAP BARS 40 DIA. MIN
#6 = 2'-6
#5 = 2'-1
#4 = 1'-8

ACCESSORIES
3000 LF 1½" SB
600 PCS 4¾" H.C.
90 PCS 6½" H.C.



SECTION THRU ROADWAY
(SHOWING LONGITUDINAL STEEL)

OFFICE

APPROVED
JUL 5 1966
George C. Ashton Supt.
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

WALKWAY, CURB & ROADWAY SLAB

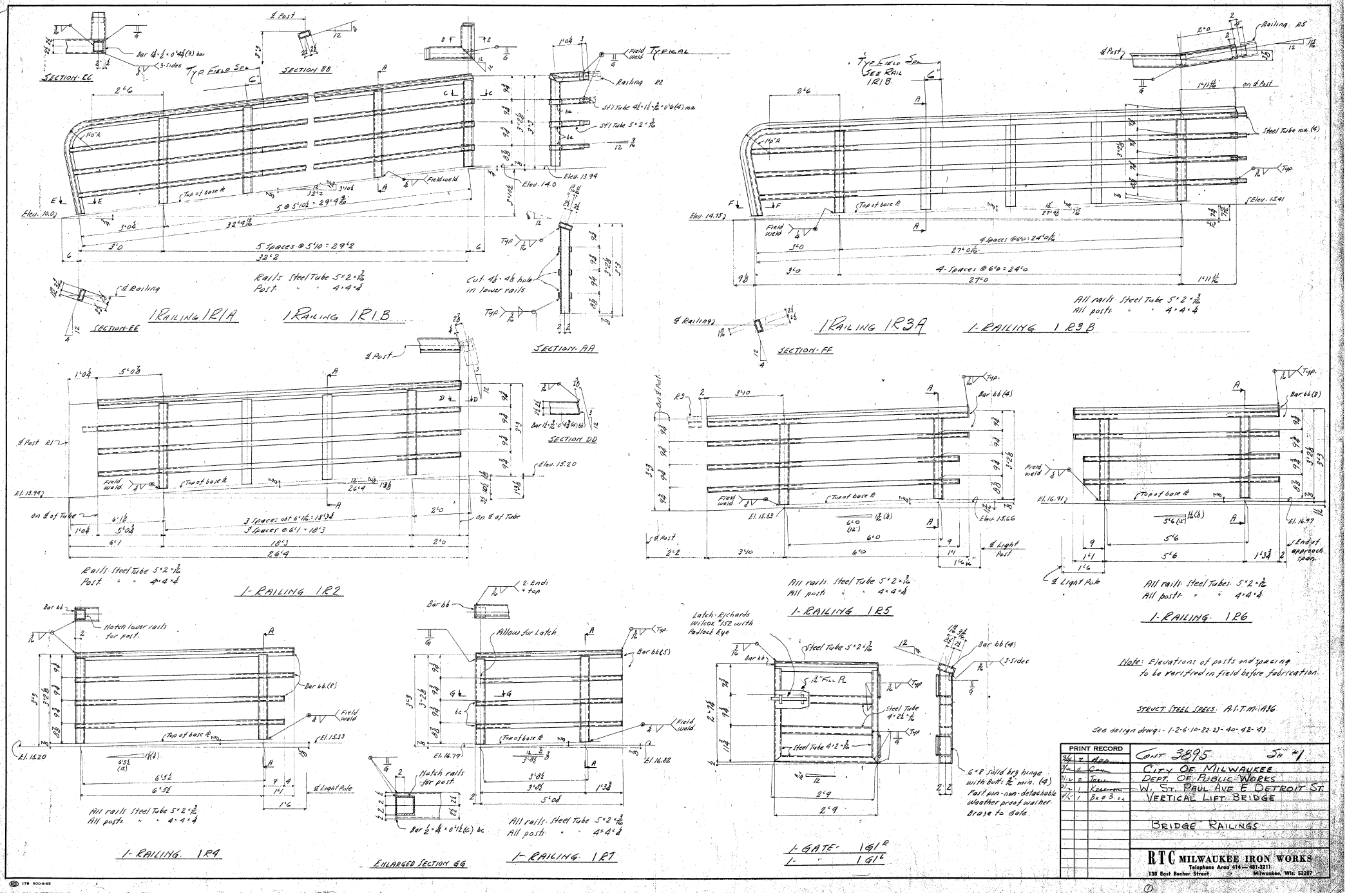
Wisconsin WIRE & STEEL INC.
4320 N. 126th ST. BROOKFIELD, WIS.
SU. 1-4600

PROJECT. VERTICAL LIFT BRIDGE
W. ST. PAUL AVE - E. DETROIT ST.
CONTRACTOR ED KRAEMER & SONS
ARCHITECT CITY OF MILWAUKEE
DRAWN BY D.A.K. DATE 5-10-66
REVISED 6-3-66
SHEET #14

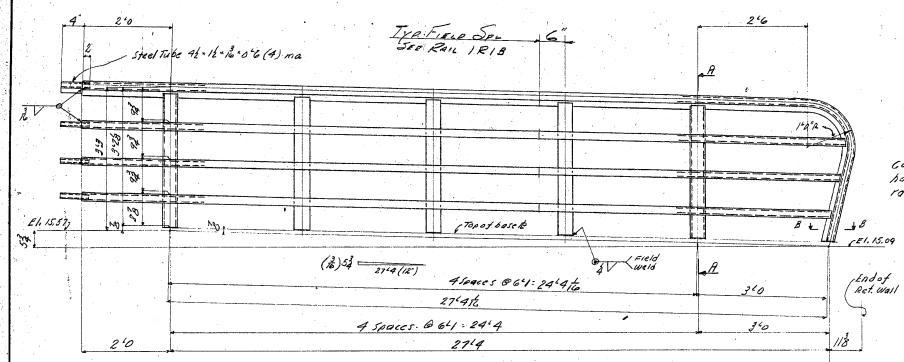
ALL REINFORCING STEEL
ASTM SPECIFICATION A-15

SCHILLING 102 500-8-64

724. N

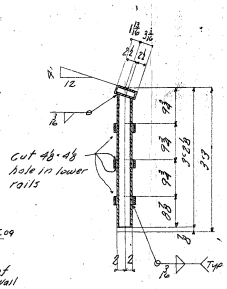


SECTION-CC
SECTION BB
SECTION-EE
SECTION-AA
SECTION-FF
SECTION DD
1 RAILING 1R1A
1 RAILING 1R1B
1 RAILING 1R3A
1-RAILING 1R3B
1-RAILING 1R2
1-RAILING 1R5
1-RAILING 1R6
1-RAILING 1R4
1-RAILING 1R7
1-GATE 1G1R
1- " 1G1L
ENLARGED SECTION GG
Rails Steel Tube 5×2×3/16
Post " " 4×4×1/4
All rails Steel Tube 5×2×3/16
All posts " " 4×4×1/4
Note: Elevations of posts and spacing to be verified in field before fabrication.
STRUCT STEEL SPECS. A.S.T.M. A36.
See design drwgs - 1-2-6-10-22-23-40-42-43
PRINT RECORD
CONT 3895 SH #1
CITY OF MILWAUKEE
DEPT. OF PUBLIC WORKS
W. ST. PAUL AVE E DETROIT ST.
VERTICAL LIFT BRIDGE
BRIDGE RAILINGS
RTC MILWAUKEE IRON WORKS
Telephone Area 414 — 481-3211
138 East Becher Street Milwaukee, Wis. 53207

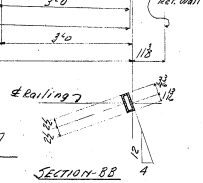


1 Railing 2R1B

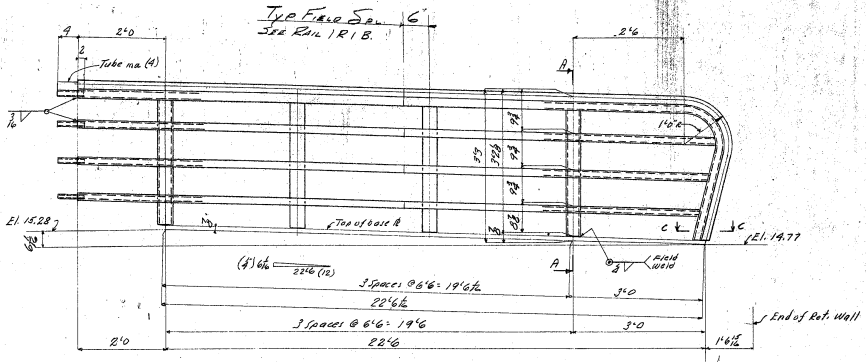
1 Railing 2R1A



Section AA



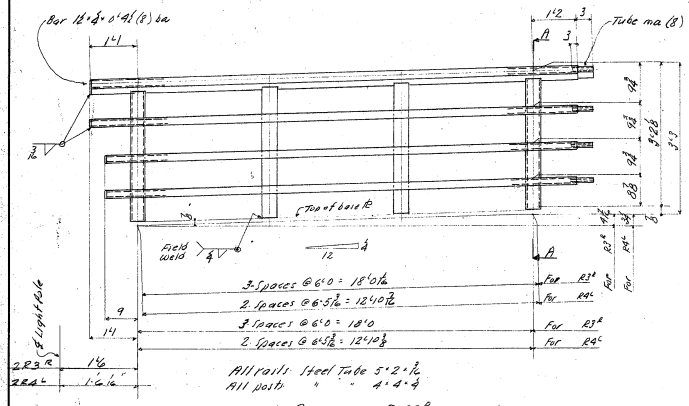
Section-BB



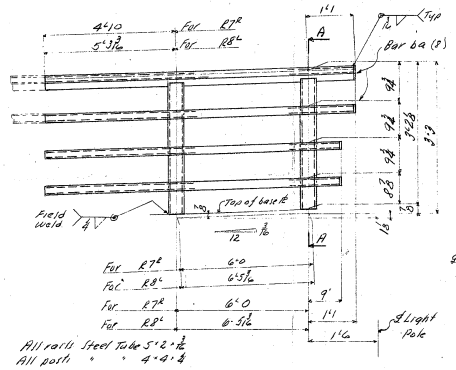
1 Railing 2R2B

1 Railing 2R2A

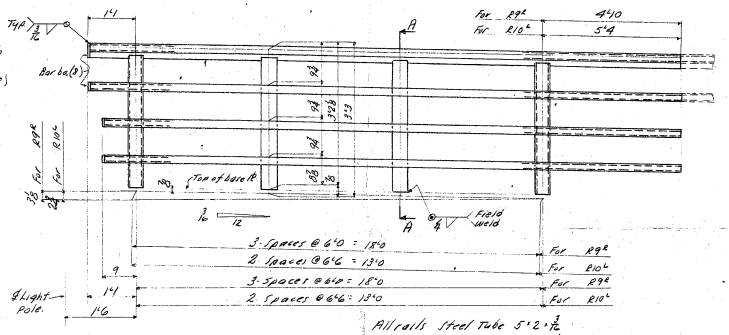
Section-CC



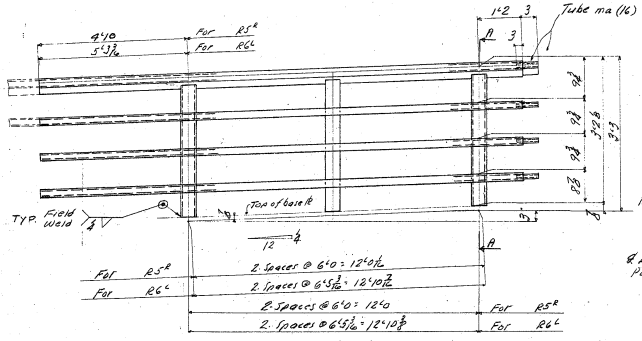
1 - Railing: 2R3R (As shown)
1 - " 2R4L (opp. hand)



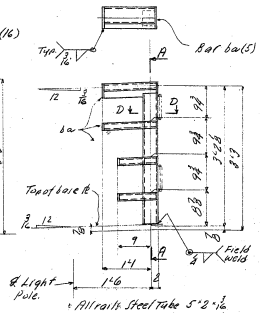
1 - Railing: 2R7R (As shown)
1 - " 2R8L (opp hand)



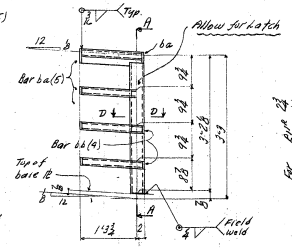
1 - Railing 2R9R (As shown)
1 - " 2R10L (opp. hand)



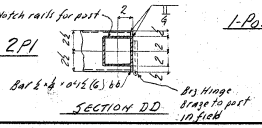
2 - Railings: 2R5R (As shown)
2 - " 2R6L (opp. hand)



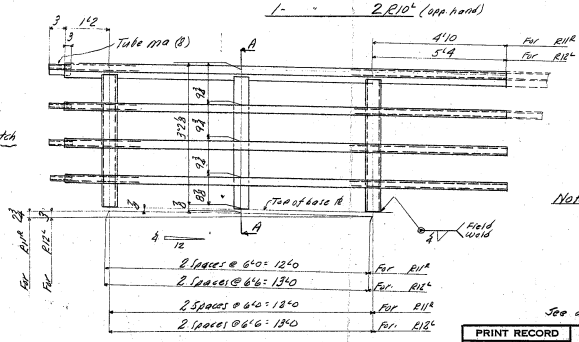
1 - Post 2P1



1 - Post 2P2



Section DD



1 - Railing: 2R11R (As shown)
1 - " 2R12L (opp hand)

Note: Elevations of posts and spacing to be verified in field before fabrication.

Struct. Steel Specs. A36

See design drawings: 1-2-6-10-22-23-40-42-43

PRINT RECORD			
3/12	2	Add	
3/12	2	[illegible]	
3/12	2	[illegible]	
3/12	2	Reset	
1/15	1	Bl. & Co.	

Cont. 3895 Sh. 2

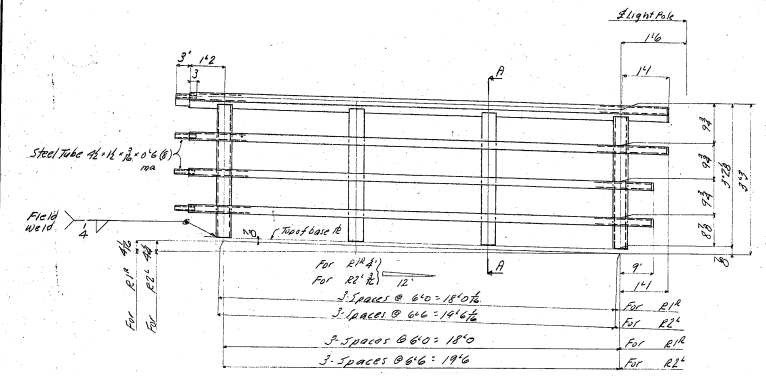
City of Milwaukee
Dept. of Public Works
W. St. Paul Ave & E. Detroit St.
Vertical Lift Bridge

Bridge Railings

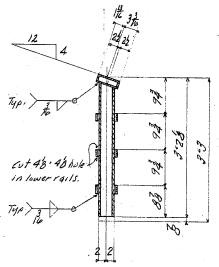
RTC Milwaukee Iron Works
Telephone Area 414 — 481-3211
138 East Becher Street Milwaukee, Wis. 53207

178 500-545

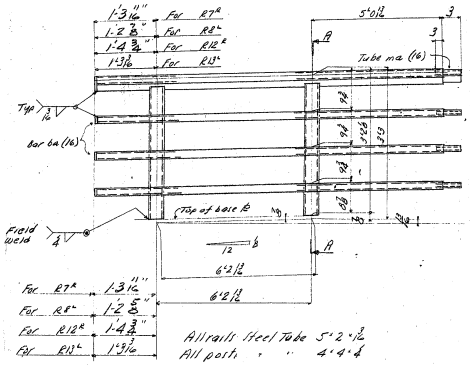
2



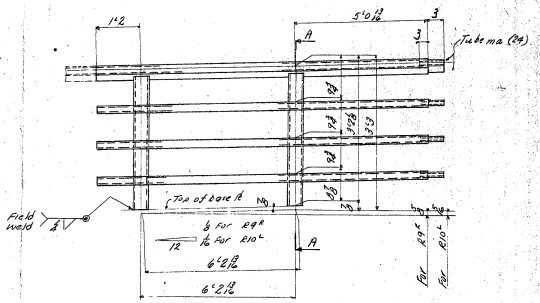
1-RAILING 3R1R (As shown)
1- " 3R2L (App. hand)



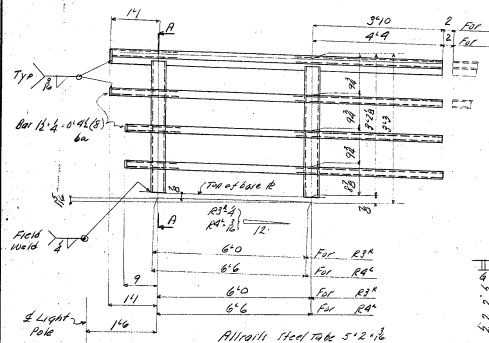
SECTION AA



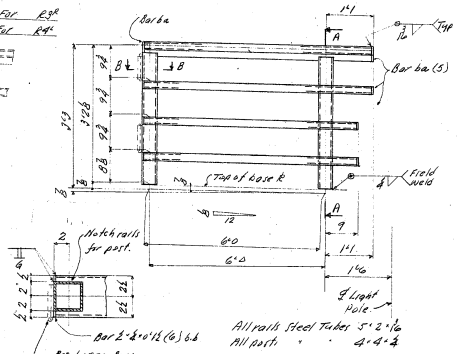
1-RAILING - 3R7R (As shown)
1- " - 3R8L (app. hand)
1- " - 3R12R (As shown)
1- " - 3R13L (app. hand)



4-RAILING - 3R9R (As shown)
2- " 3R10L (App. hand)

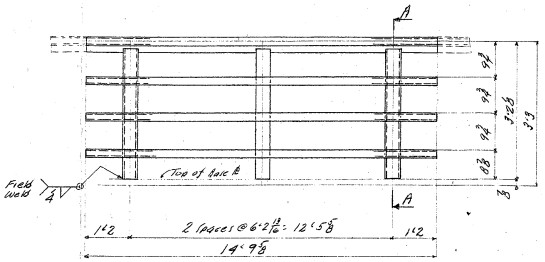


1-RAILING 3R3R (As shown)
1- " 3R4L (App. hand)

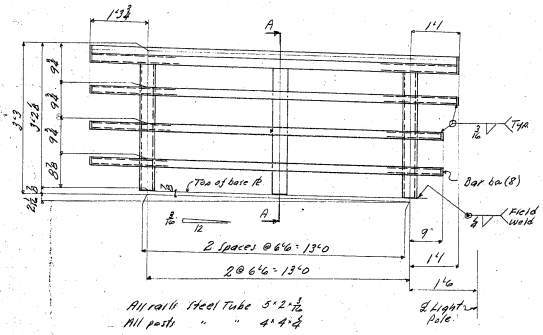


ENLARGED SECT. BB

1-RAILING 3R5



2-RAILING 3R11



1-RAILING 3R6

Note: Elevations of posts and spacing to be verified in field before fabrication

Struct Steel Specs A.S.T.M. A36

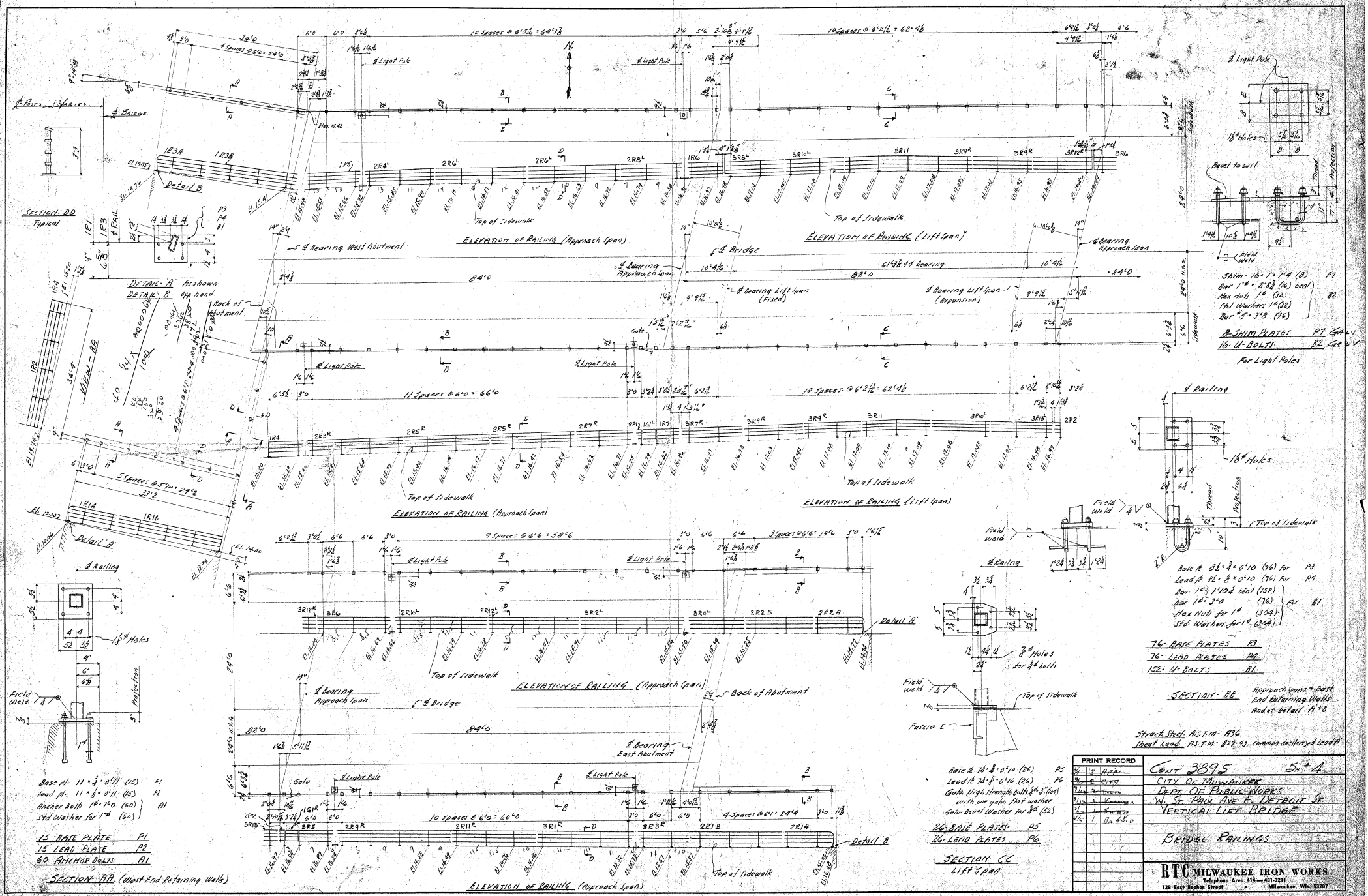
See design dwgs: 1-2-6-10-22-23-40-42-43

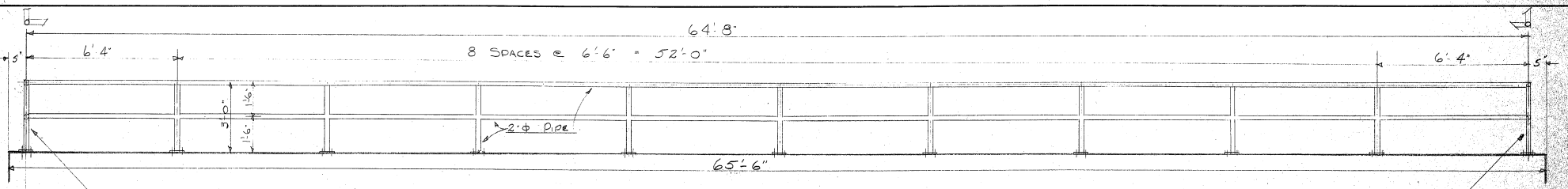
PRINT RECORD			
3/4	8	Apr	CONT. 3895 Sh #3
3/14	8	~~Cityf~~	CITY OF MILWAUKEE
9/14	2	Tabulated	DEPT. OF PUBLIC WORKS
9/14	1	~~Checked~~	W. ST PAUL AVE. E. DETROIT ST.
11/-	1	Bal & Bal	VERTICAL LIFT BRIDGE
			BRIDGE RAILINGS

RTC MILWAUKEE IRON WORKS
Telephone Area 414 — 481-3211
138 East Becher Street Milwaukee, Wis. 53207

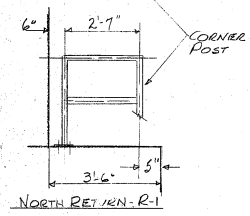
178 500-8-65

(7)

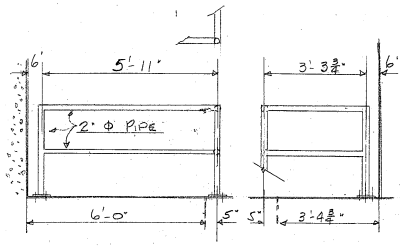

ELEVATION OF RAILING (Approach span)
ELEVATION OF RAILING (Lift span)
ELEVATION OF RAILING (Approach span)
ELEVATION OF RAILING (Lift span)
ELEVATION OF RAILING (Approach span)
ELEVATION OF RAILING (Approach span)
SECTION DD Typical
DETAIL 'A' As shown
DETAIL 'B' opp. hand
SECTION AA (West End Retaining Walls)
SECTION BB Approach Spans + East End Retaining Walls And at Detail 'A' + 'B'
SECTION CC Lift Span
Top of Sidewalk
Back of Abutment
℄ Bearing West Abutment
℄ Bearing East Abutment
℄ Bearing Approach span
℄ Bearing Lift span (Fixed)
℄ Bearing Lift span (Expansion)
℄ Bridge
℄ Light Pole
℄ Railing
Detail 'A'
Detail 'B'
Gate
Field Weld
Fascia C
Bevel to suit
Shim - 16 - 1" x 7/4 (8) P7
Bar 1" x 2 3/8 (16) bent
Hex Nuts 1" (32) B2
Std Washers 1" (32)
Bar #5 - 3'8 (16)
8-SHIM PLATES P7
16-U-BOLTS B2
For Light Poles
Base Pl. 8 1/2 x 1/2 x 0'10 (76) For P3
Lead Pl. 8 1/2 x 1/2 x 0'10 (76) For P4
Bar 1" 1'10 1/2 bent (152)
Bar 1" 3'0 (76) For B1
Hex Nuts for 1" (304)
Std. Washers for 1" (304)
76-BASE PLATES P3
76-LEAD PLATES P4
152-U-BOLTS B1
Base Pl. 7 1/2 x 1/2 x 0'10 (26) P5
Lead Pl. 7 1/2 x 1/2 x 0'10 (26) P6
Galv. High Strength Bolts 3/4 x 3" (104) with one galv. flat washer
Galv. Bevel washer for 3/4 (52)
26-BASE PLATES P5
26-LEAD PLATES P6
Base Pl. 11 x 1/2 x 0'11 (15) P1
Lead Pl. 11 x 1/2 x 0'11 (15) P2
Anchor Bolt 1" x 1'0 (60) A1
Std Washer for 1" (60)
15 BASE PLATE P1
15 LEAD PLATE P2
60 ANCHOR BOLTS A1
Struct. Steel A.S.T.M. - A36
Sheet Lead A.S.T.M. - B29-43, common desilverized lead
PRINT RECORD
Cont 3895 Sh # 4
CITY OF MILWAUKEE
DEPT OF PUBLIC WORKS
W. ST. PAUL AVE & DETROIT ST.
VERTICAL LIFT BRIDGE
BRIDGE RAILINGS
RTC MILWAUKEE IRON WORKS
Telephone Area 414 — 481-3211
138 East Becher Street • Milwaukee, Wis. 53207



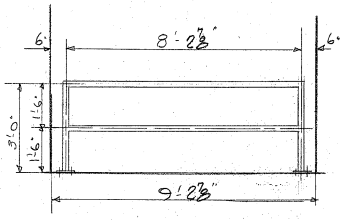
MAKE-1-RAIL-MARK R1



NORTH RETURN-R-1

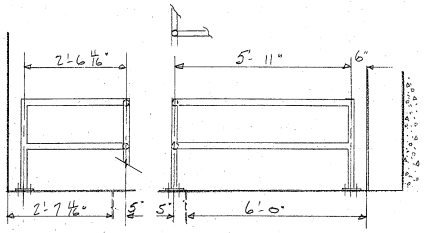


MAKE-1-RAIL-MARK R-3

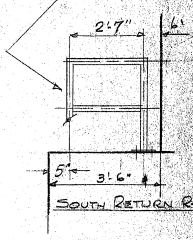


MAKE-1-RAIL-MARK R-4

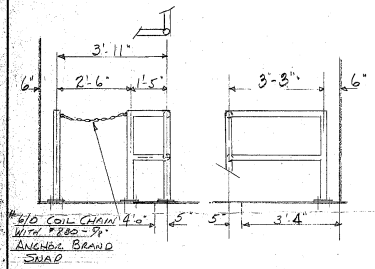
MAKE-1-RAIL-MARK R-7



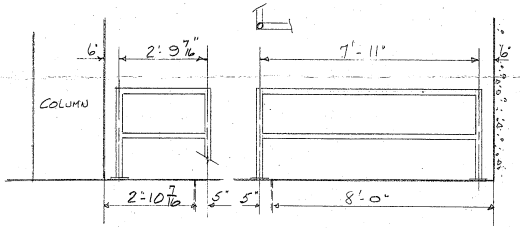
MAKE-1-RAIL-MARK R-8



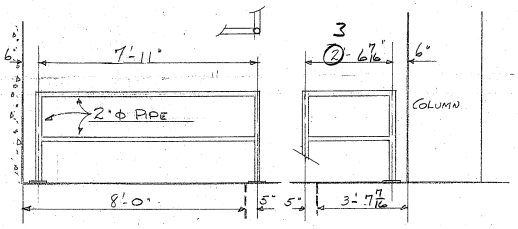
SOUTH RETURN-R1



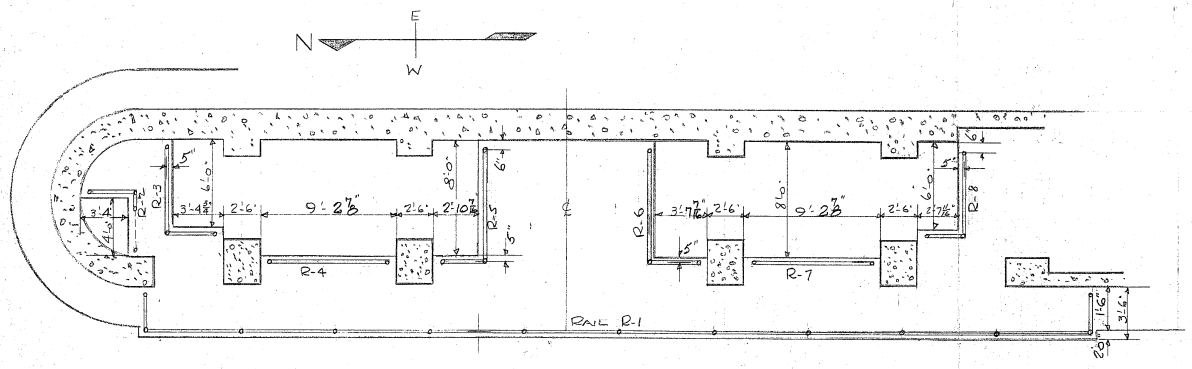
MAKE-1-RAIL-MARK R-2



MAKE-1-RAIL-MARK R-5

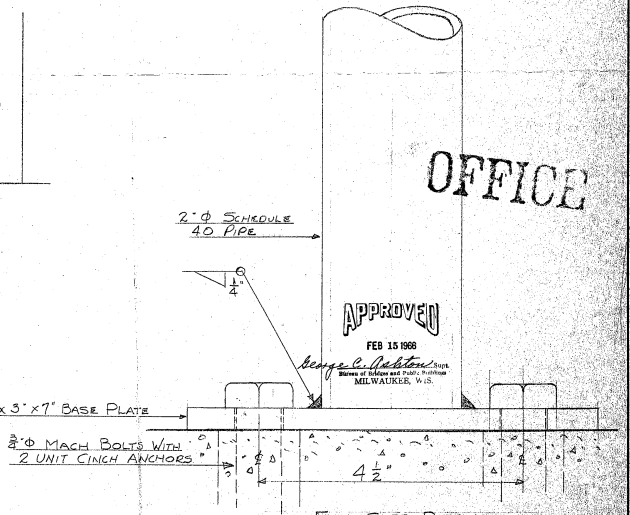


MAKE-1-RAIL-MARK R-6



PLAN - PIER #2

ELEVATION +4.00 FT



FULL SIZE DETAIL
FASTENING TO CONCRETE

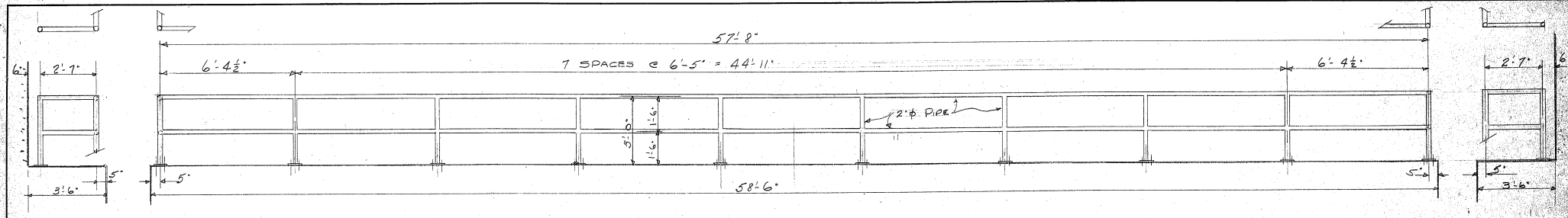
OFFICE

APPROVED
FEB 15 1966
George C. Ackstrom Supt.
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

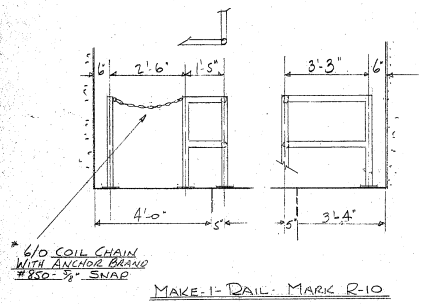
PRINT RECORD			
2	WMK	1-28-66	Cont 3895 SH 6
3	FAH APPR	2-14-66	CITY OF MILWAUKEE
			DEPT OF PUBLIC WORKS
			W. S. PAUL AVE & DETROIT ST.
			VERTICAL LIFT BRIDGE

RTC MILWAUKEE IRON WORKS
Telephone Area 414 — 481-3211
138 East Becher Street • Milwaukee, Wis. 53207

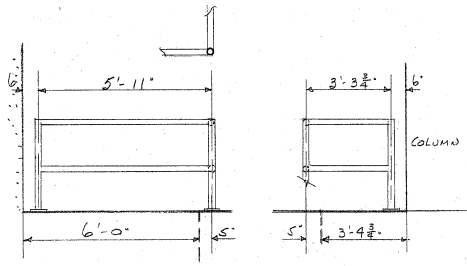
178 500-8-65



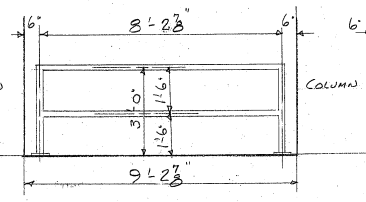
MAKE -1- RAIL - MARK R-9



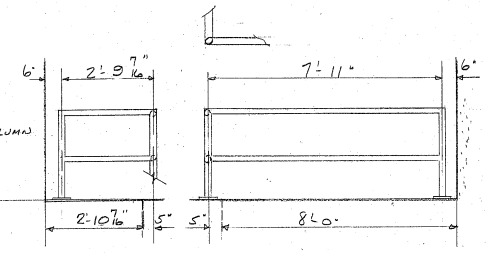
MAKE-1-RAIL-MARK R-10



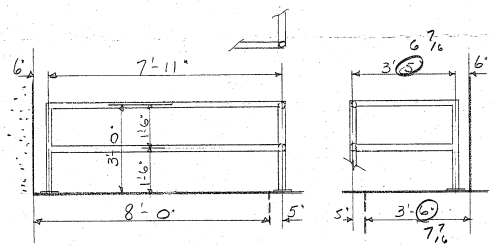
MAKE-1-RAIL-MARK R-11



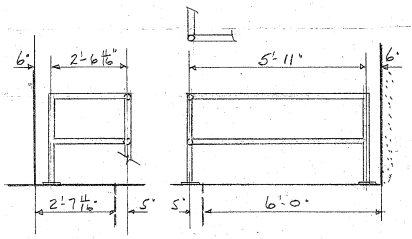
MAKE-1-RAIL-MARK R-12
MAKE-1-RAIL-MARK R-15



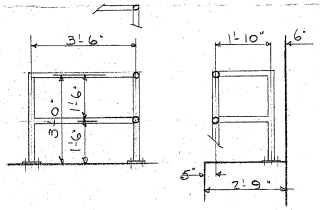
MAKE-1-RAIL-MARK R-13



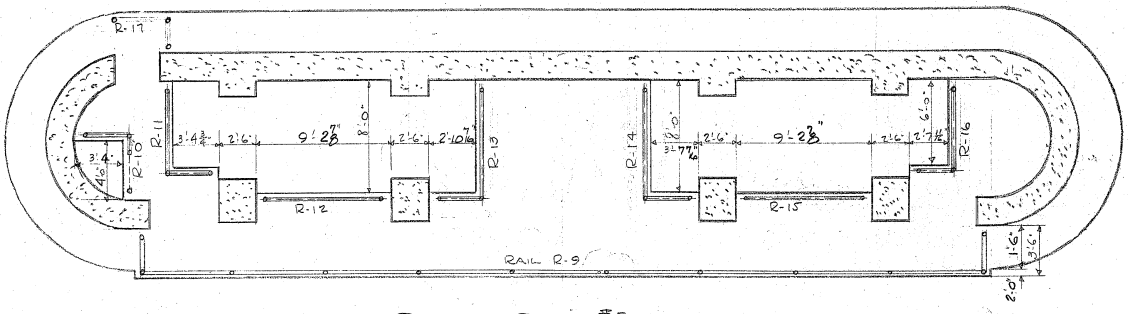
MAKE-1-RAIL-MARK R-14



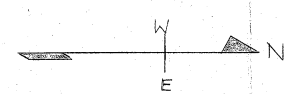
MAKE-1-RAIL-MARK R-16



MAKE-1-RAIL-MARK R-17



PLAN - PIER #3
ELEVATION +4.00 FEET



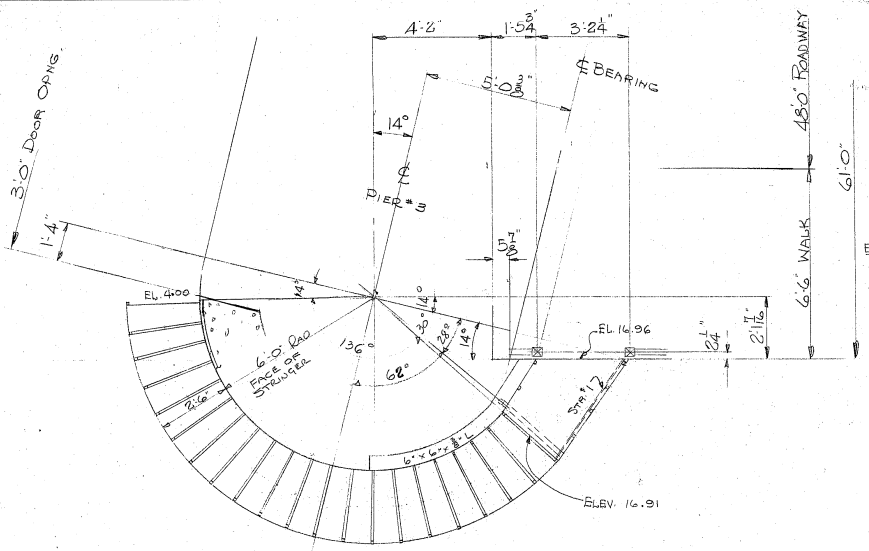
OFFICE

APPROVED
FEB 15 1966
George C. Ashton
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.

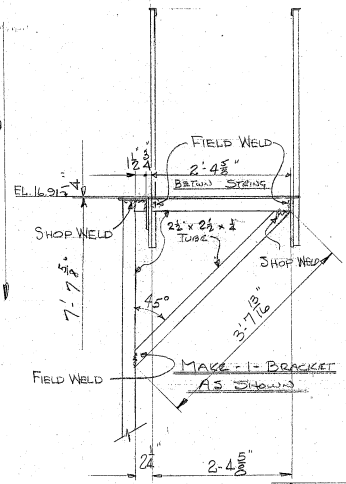
PRINT RECORD		
3	[illegible]	1-28-66
3	C.M. APPR.	2-14-66

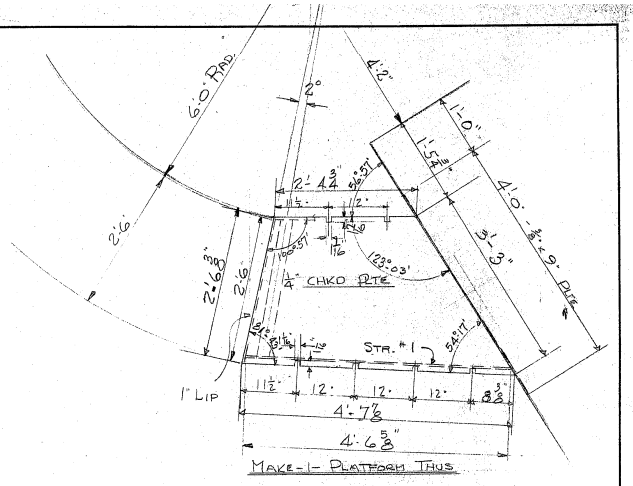
CONT 3895 SH #7
CITY OF MILWAUKEE
DEPT OF PUBLIC WORKS
W. ST PAUL AVE E DETROIT ST
VERTICAL LIFT BRIDGE

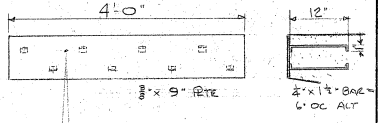
RTC MILWAUKEE IRON WORKS
Telephone Area 414 — 481-3211
138 East Becher Street • Milwaukee, Wis. 53207



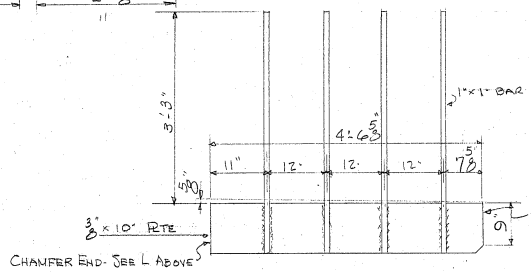
PLAN



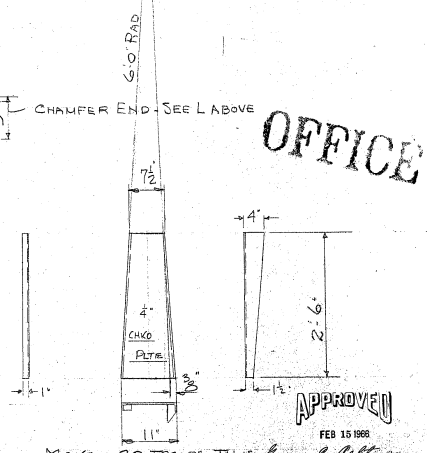




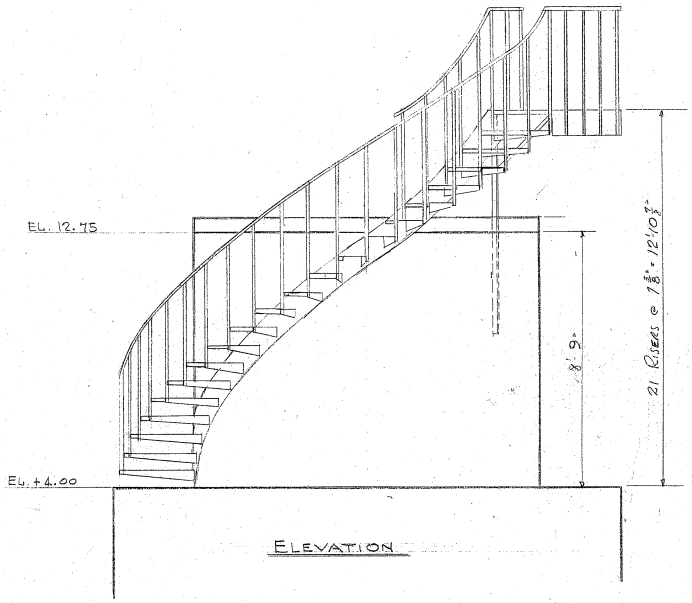
MAKE - 1 - PLATE - THUS



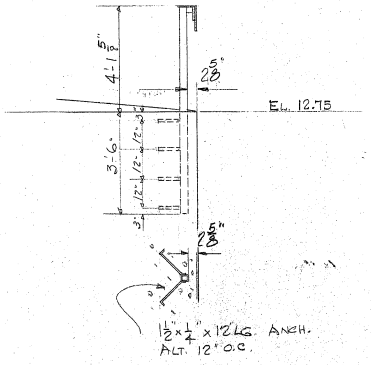
MAKE - 1 - STRINGER - THUS - #1



MAKE - 20 TREADS - THUS



ELEVATION

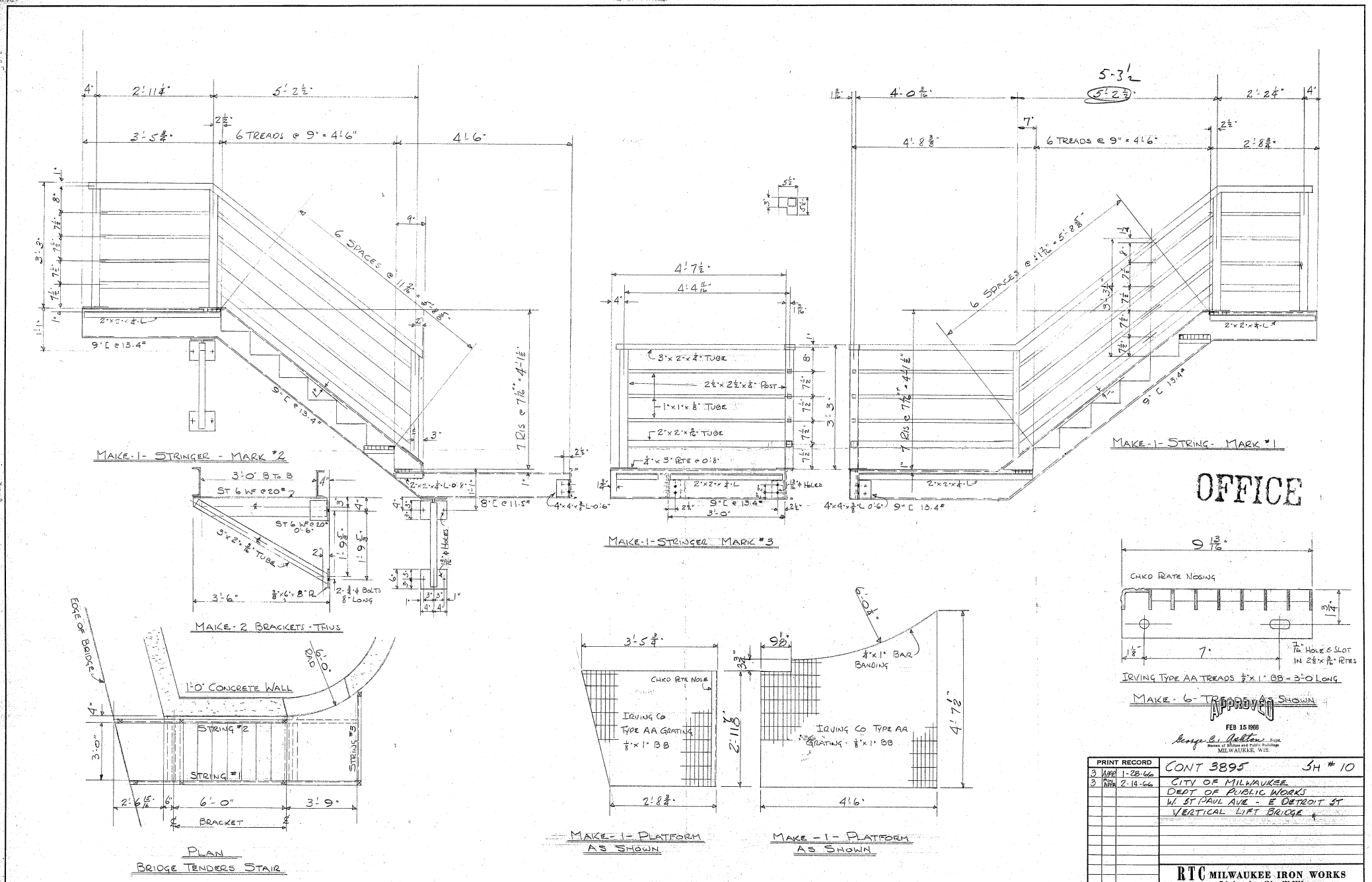


OFFICE

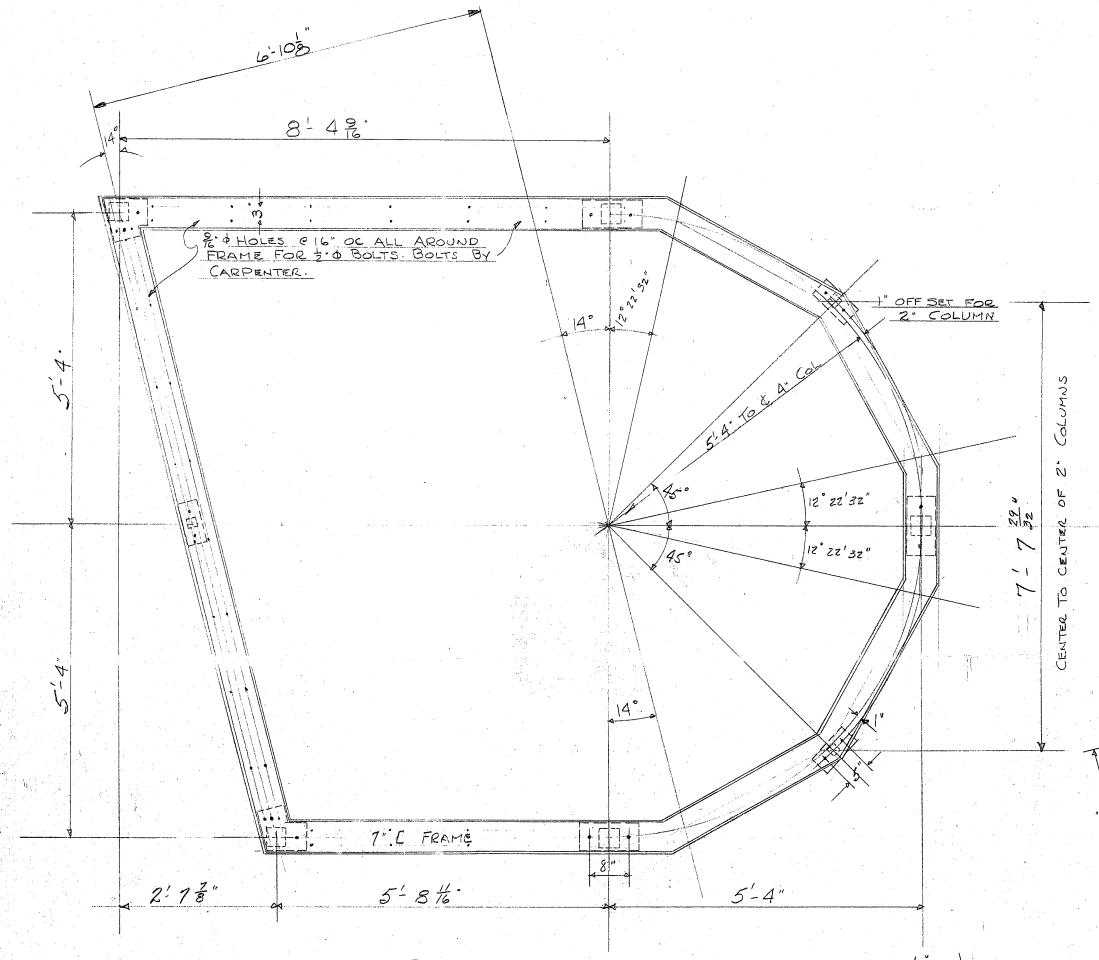
APPROVED
FEB 15 1968
MILWAUKEE, WIS.

PRINT RECORD			
3	APPR	1-28-66	CONT 3895 SH #8
3	FIN APPR	2-14-66	CITY OF MILWAUKEE
1	SHOP	2-14-66	DEPT OF PUBLIC WORKS
1	FIELD	2-14-66	W. ST PAUL AVE. E. DETROIT ST
			VERTICAL LIFT BRIDGE

RTC MILWAUKEE IRON WORKS
Telephone Area 414 — 481-3211
138 East Becher Street • Milwaukee, Wis. 53207

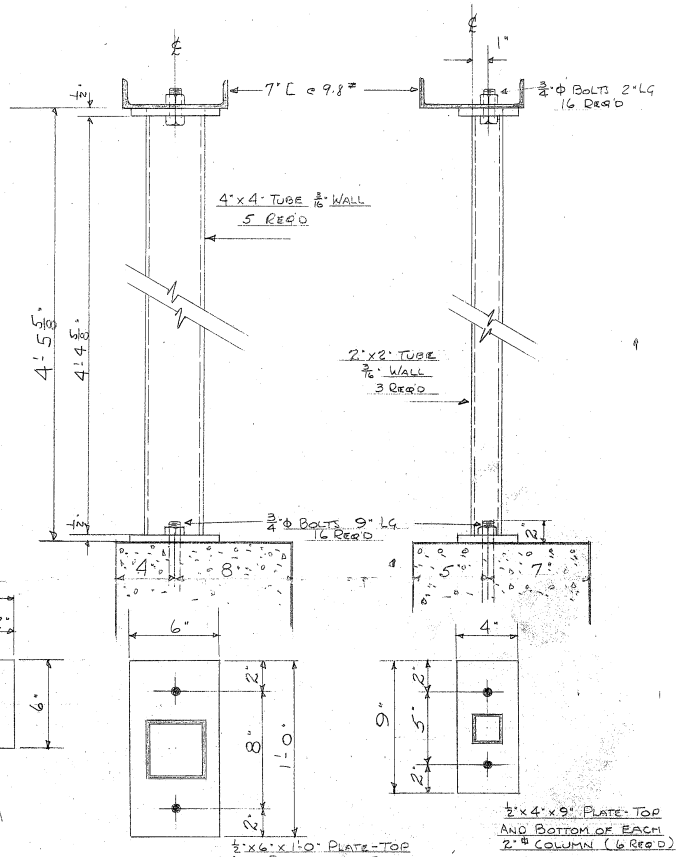


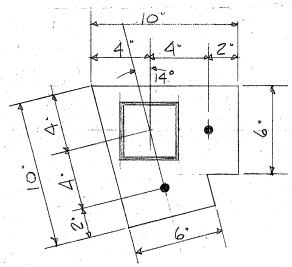
MAKE-1- STRINGER - MARK #2
MAKE-1- STRING- MARK #1
MAKE-1-STRINGER MARK #3
MAKE-2 BRACKETS - THUS
PLAN
BRIDGE TENDERS STAIR
MAKE-1- PLATFORM AS SHOWN
MAKE-1- PLATFORM AS SHOWN
IRVING TYPE AA TREADS 1/8"x1" BB - 3'-0 LONG
MAKE-6- TREADS AS SHOWN
6 TREADS @ 9" = 4'-6"
6 SPACES @ 11 7/16" = 5'-8 5/8"
6 SPACES @ 11 7/16" = 5'-8 5/8"
7 RIS @ 7 1/16" = 4'-1 1/2"
9" [@ 13.4#
3'-0" B TO B
ST 6 WF @ 20#
3"x2"x3/16" TUBE
2-3/4" BOLTS 8" LONG
3'-6"
3'-5 3/4"
4'-7 1/2"
4'-4 11/16"
3'-0"
2'-8 3/4"
4'-6"
4'-7 1/2"
2'-11 7/8"
9 13/16"
CHKD PLATE NOSING
7/16" HOLE & SLOT IN 2 1/2"x3/16" PLTES
CHKD PLTE NOSE
IRVING CO TYPE AA GRATING 1/8"x1" BB
1/4"x1" BAR BANDING
EDGE OF BRIDGE
1'-0" CONCRETE WALL
STRING #2
STRING #1
STRING #3
BRACKET
6'-0"
3'-9"
OFFICE
APPROVED
FEB 15 1966
George C. Ashton Supt.
Bureau of Bridges and Public Buildings
MILWAUKEE, WIS.
PRINT RECORD
3 APPR 1-28-66
3 MIN APPR 2-14-66
CONT 3895 SH # 10
CITY OF MILWAUKEE
DEPT OF PUBLIC WORKS
W. ST PAUL AVE - E DETROIT ST
VERTICAL LIFT BRIDGE
RTC MILWAUKEE IRON WORKS
Telephone Area 414 — 481-3211
138 East Becher Street • Milwaukee, Wis. 53207



PLAN

MAKE - 1 - FRAME - AS SHOWN



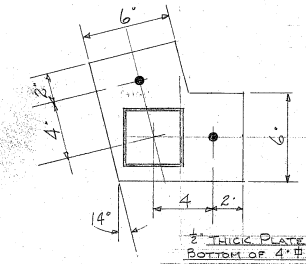


1/2" THICK PLATE TOP AND BOTTOM OF 4" ϕ COLUMN (2 REQ'D)

MAKE - 1 - COLUMN AS SHOWN

MAKE - 3 COLUMNS AS SHOWN

MAKE - 3 COLUMNS AS SHOWN



1/2" THICK PLATE TOP AND BOTTOM OF 4" ϕ COLUMN (2 REQ'D)

MAKE - 1 - COLUMN AS SHOWN

NOTE:
FRAME TO BE SHOP WELDED IN ONE PIECE.

PRINT RECORD		
3	APPR	2-18-66
4	CONTR	2-28-66
1	SHOP	2-28-66
1	FIELD	2-28-66
1	CONTR	3-8-66

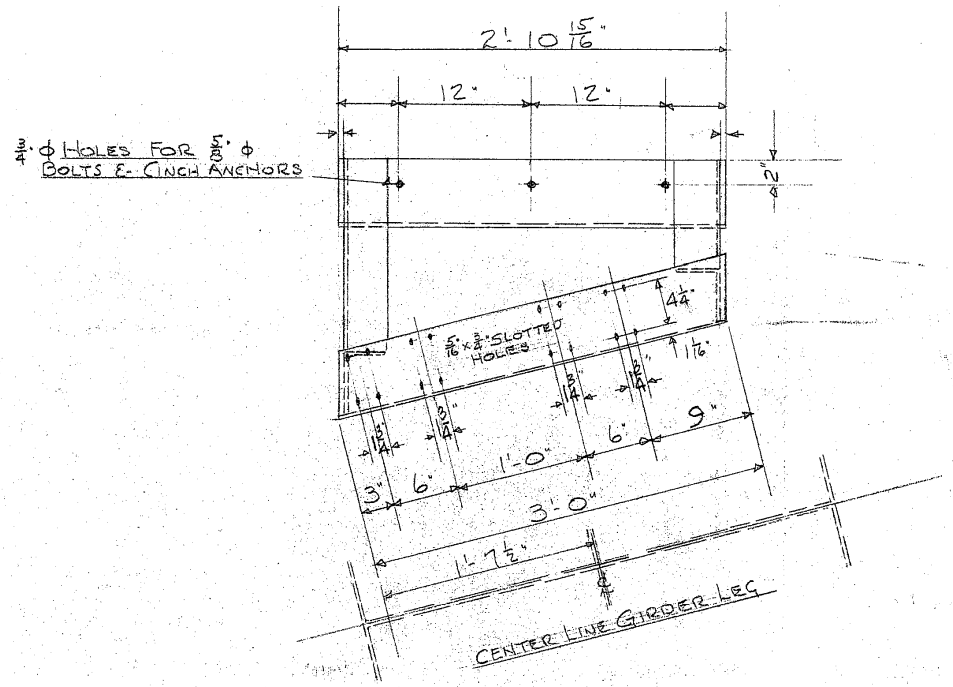
CONT 3895 SH # 11

CITY OF MILWAUKEE
DEPT OF PUBLIC WORKS
W. ST PAUL AVE - E. DETROIT ST.
VERTICAL LIFT BRIDGE

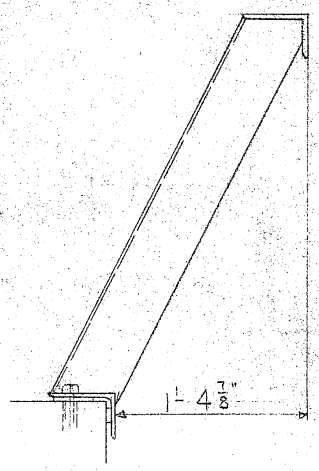
FINISH - RED LEAD & OIL

RTC MILWAUKEE IRON WORKS
Telephone Area 414 — 481-3211
138 East Becher Street · Milwaukee, Wis. 53207

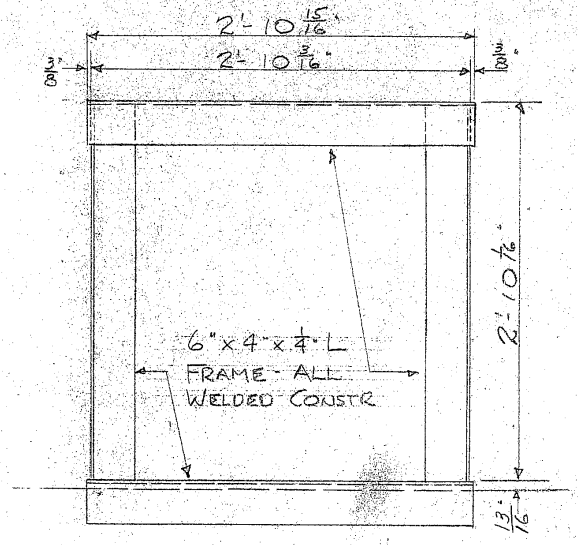
179 500-6-65



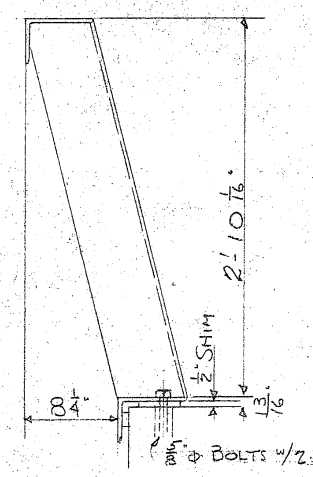
PLAN
LIMIT SWITCH SUPPORT



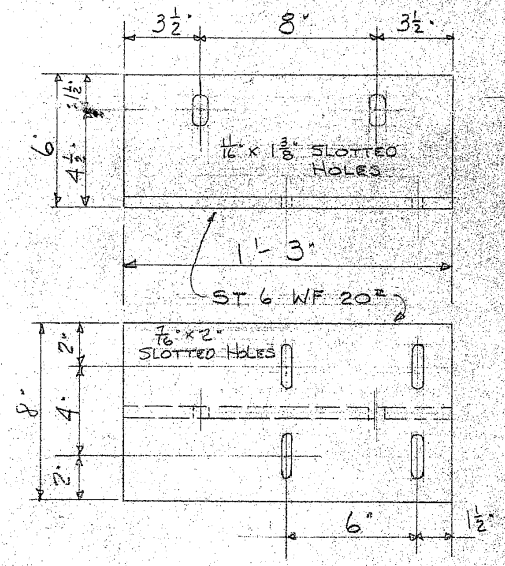
LEFT SIDE VIEW



ELEVATION
MAKE - 1 - FRAME AS SHOWN



RIGHT SIDE VIEW



MAKE 2 - CAM SUPPORTS
AS SHOWN

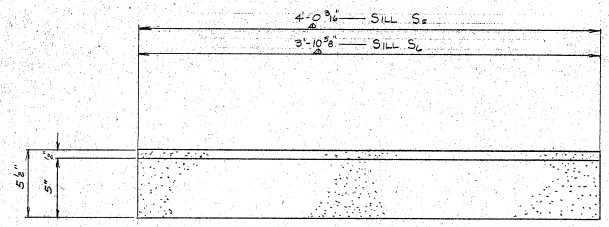
PRINT RECORD		
3	APPR	2-18-66
4	CONTR	2-28-66
1	DWFT	2-28-66
1	ERED	2-28-66
1	CONTR	3-8-66

CONT 3895 SH #12

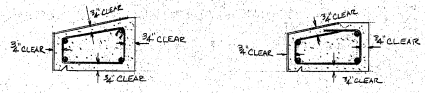
CITY OF MILWAUKEE
DEPT OF PUBLIC WORKS
W ST PAUL AVE - E DETROIT ST
VERTICAL LIFT BRIDGE

FINISH: 1ST RED LEAD & OIL

RTC MILWAUKEE IRON WORKS
Telephone Area 414 — 481-3211
138 East Becher Street • Milwaukee, Wis. 53207

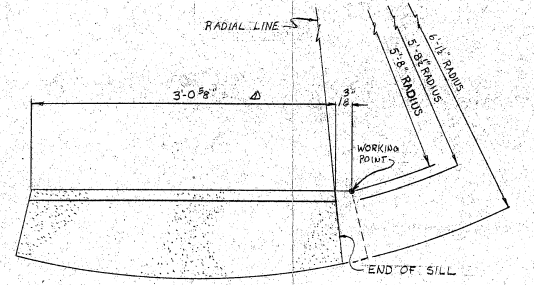


TOP VIEW OF SILLS MKD. S_5 & S_6



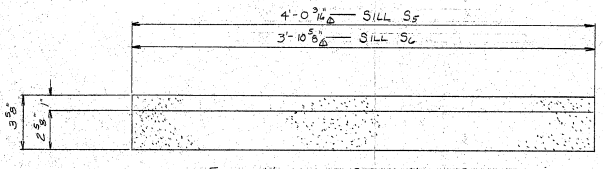
TYPICAL REINFORCING FOR SILLS

BARS ARE NO. 2 BARS - 4 PER SILL
STIRUPS ARE NO. 2 STIRUPS AT 1'-6" SPACING

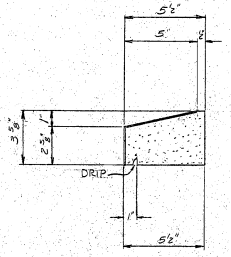


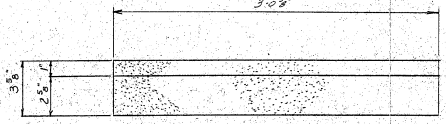
TOP VIEW OF SILL MKD. SIR

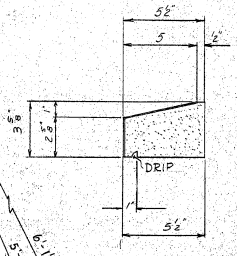
SILLS MKD. SIL ARE OPPOSITE HAND OF SILLS SIR WITH WORKING POINT 1 7/8" OUTSIDE LEFT EDGE.



FRONT VIEW OF SILLS MKD. S_5 & S_6
TWO (2) OF EACH MADE THUS

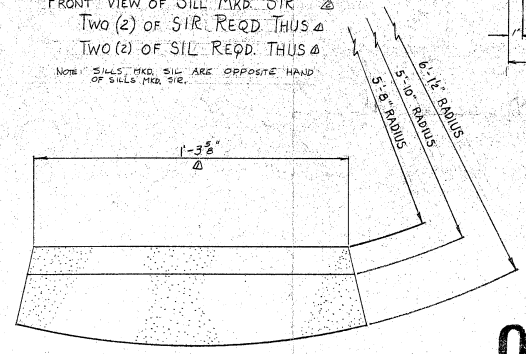




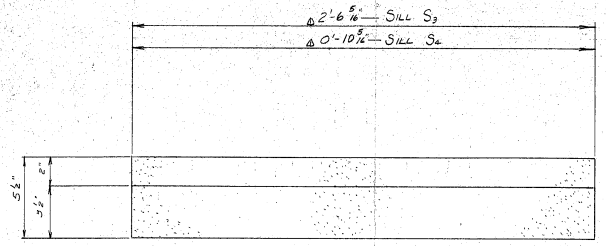


FRONT VIEW OF SILL MKD. SIR
TWO (2) OF SIR REQD. THUS
TWO (2) OF SIL REQD. THUS

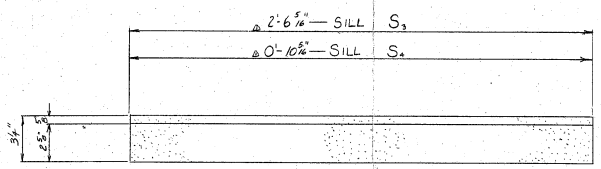
NOTE: SILLS MKD. SIL ARE OPPOSITE HAND OF SILLS MKD. SIR.



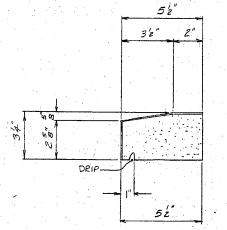
TOP VIEW OF SILL MKD. S_2

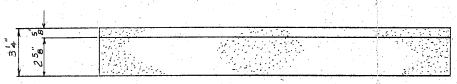


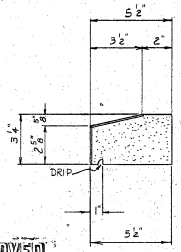
TOP VIEW OF SILLS MKD. S_3 & S_4



FRONT VIEW OF SILLS MKD. S_3 & S_4
ONE OF EACH MADE THUS.







FRONT VIEW OF SILL MKD. S_2
FOUR (4) SILLS REQD. THUS.

OFFICE

Checked 5-19-66 TES

APPROVED
MAY 19 1966
George C. Ashton
Chief, Bureau of Bridges and Public Roads
MILWAUKEE, WIS.

DATED ST. PAUL

ALL DIMENSIONS & DETAILS OF FITTINGS UNDER RAILS TO BE DETERMINED SOLELY BY APPROVED SHOP DWGS.
ALL DIMENSIONS TO BE VERIFIED AT JOB SITE, WHEN DONE BY OTHERS.

HUFSCHMIDT ENGINEERING COMPANY INC.
SUSSEX, WISCONSIN 53089 - AREA CODE 414-781-9700

MARK	DATE	BY	DESCRIPTION
4			
3	5/18	JDL	Dimensions
2	4/26	JDL	Dimensions
1	3/23	JDL	Dimensions

REVISIONS

DO NOT SCALE DRAWINGS

DESIG. | DRWN. DOL | CHKD.

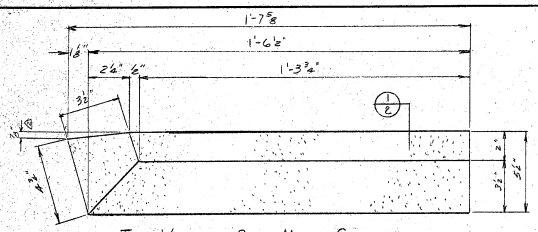
VERTICAL LIFT BRIDGE
PRECAST CONCRETE SILLS
ARCH'T. BUREAU OF BRIDGES & PUBLIC ROADS
CONTRACTOR EDWARD KEAFER & SONS

RECORD OF PRINTS

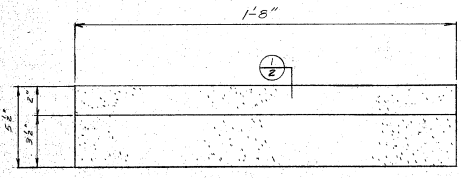
DATE	NO.	PURPOSE	DATE	NO.	PURPOSE
5/66	3	1st Submittal			
5/66	3	2nd Submittal			
5/66	3	3rd Submittal			

JOB NO. 6609
SHEET NO. 1 OF ____ SHTS.

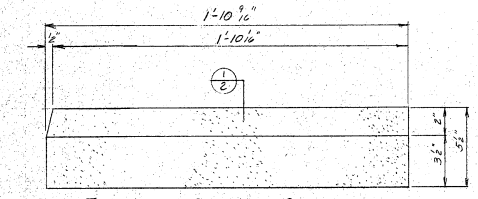
DIETZGEN PRODUCTS CO. 10-68



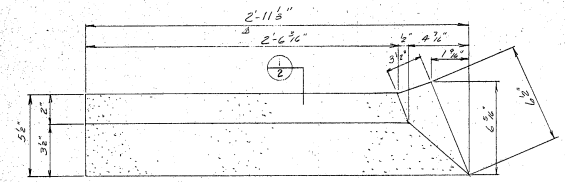
TOP VIEW OF SILL MKD. S_7
ONE REQD. THUS △



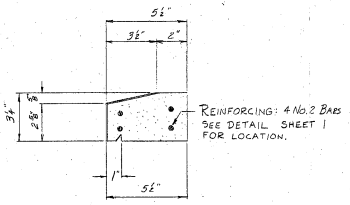
TOP VIEW OF SILL MKD. S_8
ONE REQD. THUS △



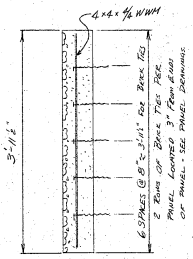
TOP VIEW OF SILL MKD. S_9
ONE REQD. THUS △



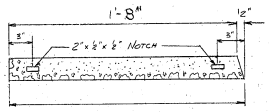
TOP VIEW OF SILL MKD. S_{10}
ONE REQD. THUS △



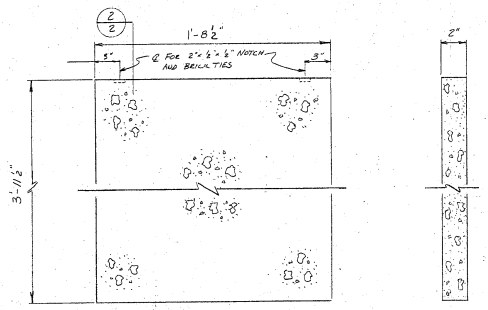
SECTION 1/2



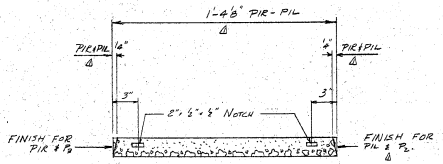
SECTION 2/2



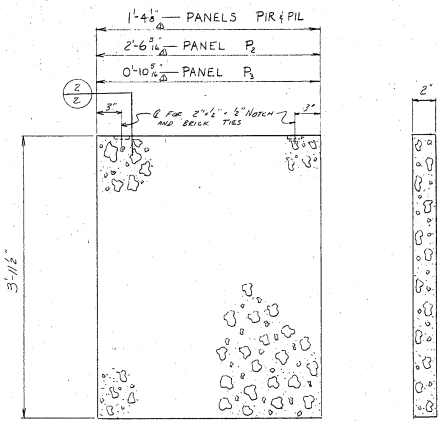
TOP VIEW PANEL P_5



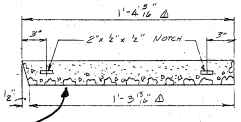
FRONT VIEW OF PANEL MKD. P_5
ONE (1) PANEL REQD. THUS
NOTE: FINISH FACE AND LEFT SIDE EXPOSED AGGREGATE
REINFORCING 4x4 - 4/4 WWM



TOP VIEW PIR, PIL, P_2 & P_3

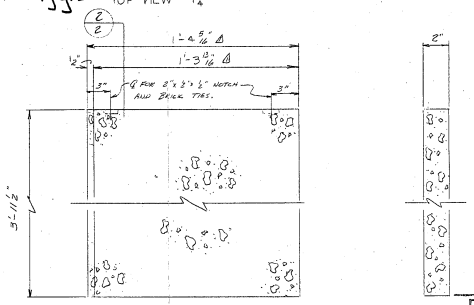


FRONT VIEW OF PANELS MKD. PIR, PIL, P_2 & P_3 △
TWO (2) PANELS MKD. PIR REQD. THUS △
TWO (2) PANELS MKD. PIL REQD. THUS △
ONE (1) PANEL MKD. P_2 REQD. THUS
ONE (1) PANEL MKD. P_3 REQD. THUS
NOTE: FINISH FACE AND SIDE AS SHOWN. EXPOSED AGGREGATE.
REINFORCING 4x4 - 4/4 WWM



WAUSAU quartz agg.

TOP VIEW — P_4



FRONT VIEW OF PANEL MKD. P_4
ONE PANEL REQD. THUS
NOTE: FINISH FACE AND BOTH SIDES. EXPOSED AGGREGATE
REINFORCING 4x4 - 4/4 WWM

OFFICE
checked 5-19-66 TES.

APPROVED
MAY 19 1966
George C. Pattison Supt.
Bureau of Offices and Public Buildings
MILWAUKEE, WIS.

NOTES:
ALL UNDERSIDES & REVERSE OF PRECAST UNITS SHALL BE REPRODUCED EXACTLY OF APPROVED PAPER PROOFS.
ALL DIMENSIONS TO BE VERIFIED AT JOB SITE, FILL DO NOT DONE BY OTHERS.

HUFSCHMIDT ENGINEERING COMPANY INC.
SUSSEX, WISCONSIN 53089 · AREA CODE 414-781-9700

DO NOT SCALE DRAWINGS

MARK	DATE	BY	DESCRIPTION
4			
3			
2	5-18	DOL	Dimensions
1	4-14	DOL	Dimensions

REVISIONS

DESIG. DRWN. DOL CHKD.

VERTICAL LIFT BRIDGE
PRECAST CONCRETE SILLS & PANELS
ARCHT. BUREAU OF BRIDGES & PUBLIC ROADS
CONTRACTOR EDWARD KRAMER & SON

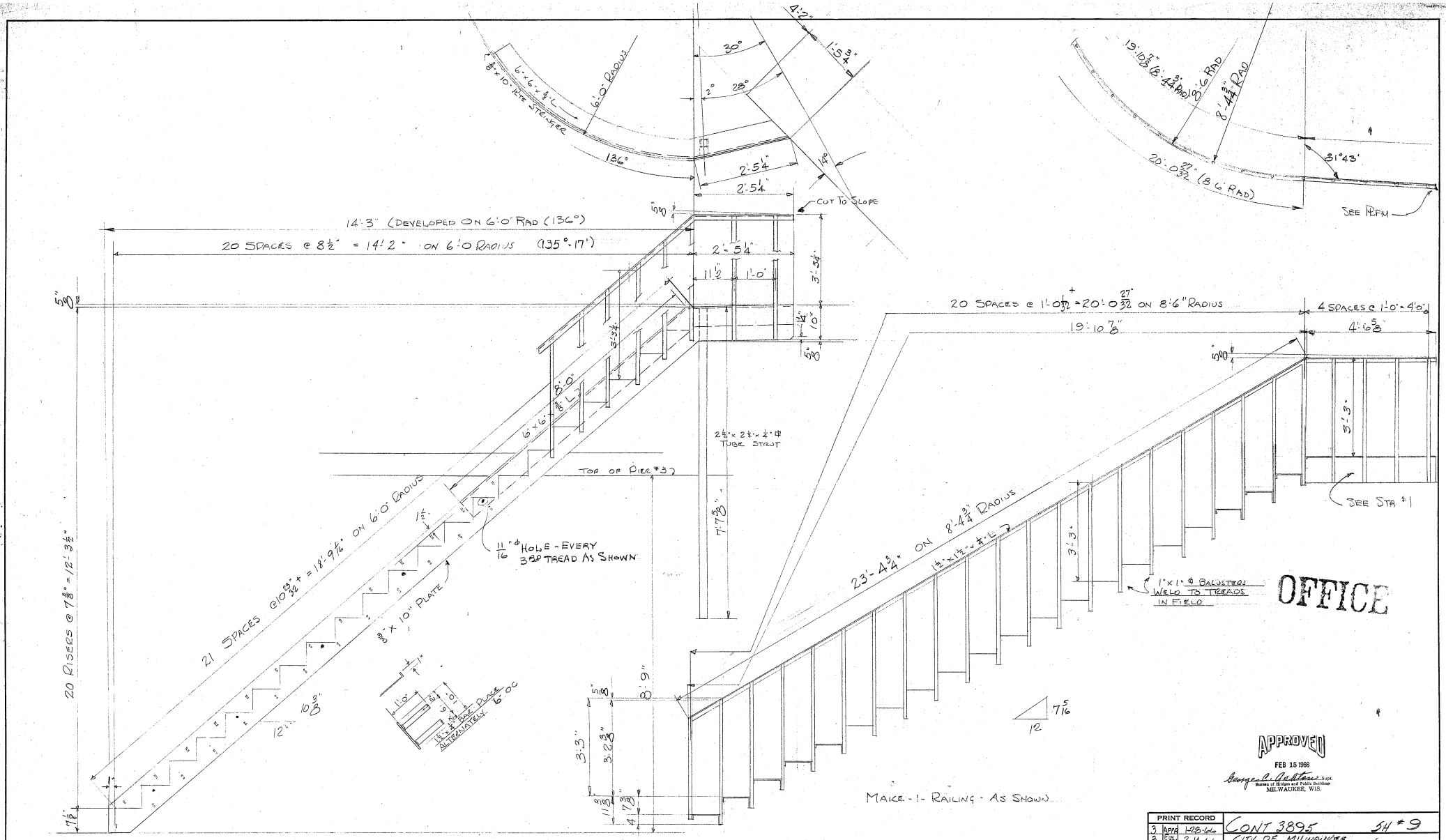
RECORD OF PRINTS

DATE NO.	PURPOSE	DATE NO.	PURPOSE
5-16-66	3	1st Submittal	
5-16-66	3	2nd Submittal	
5-25-66	3	3rd Submittal	

JOB NO. 6609

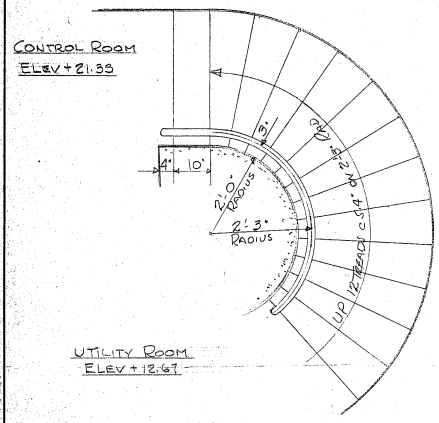
SHEET NO. 2 OF ____ SHTS.

BERNIN PRODUCTS CO. 10-68

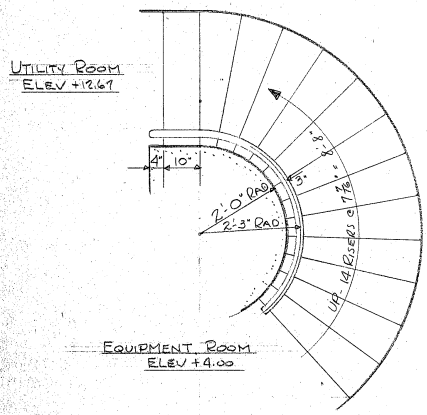


PRINT RECORD			CONT 3895 SH #9
3	APPR	1-28-66	CITY OF MILWAUKEE
3	FIN APPR	2-14-66	DEPT OF PUBLIC WORKS
1	SHOP	2-14-66	W. ST PAUL AVE E. DETROIT ST
1	ERECT	2-14-66	VERTICAL LIFT BRIDGE

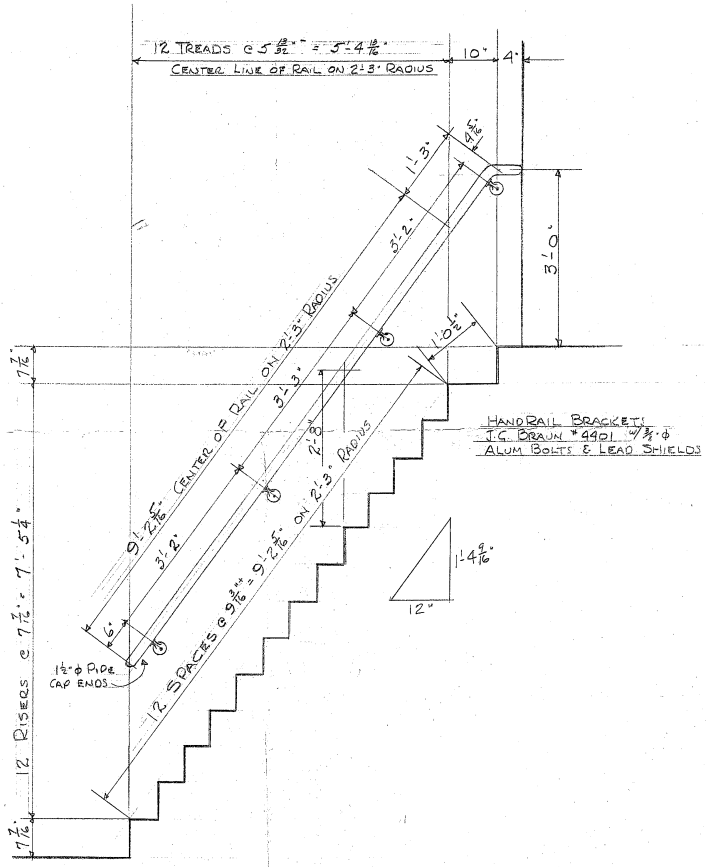
RTC MILWAUKEE IRON WORKS
Telephone Area 414 — 481-3211
138 East Becher Street • Milwaukee, Wis. 53207



PLAN



PLAN



MAKE -1- ALUMINUM PIPE RAIL - AS SHOWN
EQUIPMENT ROOM TO UTILITY ROOM

MAKE -1- ALUMINUM PIPE RAIL - AS SHOWN
UTILITY ROOM TO CONTROL ROOM

PRINT RECORD			
3	APPR	2-18-66	CONT #3895 SH #13
4	CONTR	2-28-66	CITY OF MILWAUKEE
1	CONTR	3-8-66	DEPT OF PUBLIC WORKS
			W. ST PAUL AVE - E DETROIT ST
			VERTICAL LIFT BRIDGE
			FINISH - SATIN WAXED

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138 East Becher Street • Milwaukee, Wis. 53207

178-300-8-65