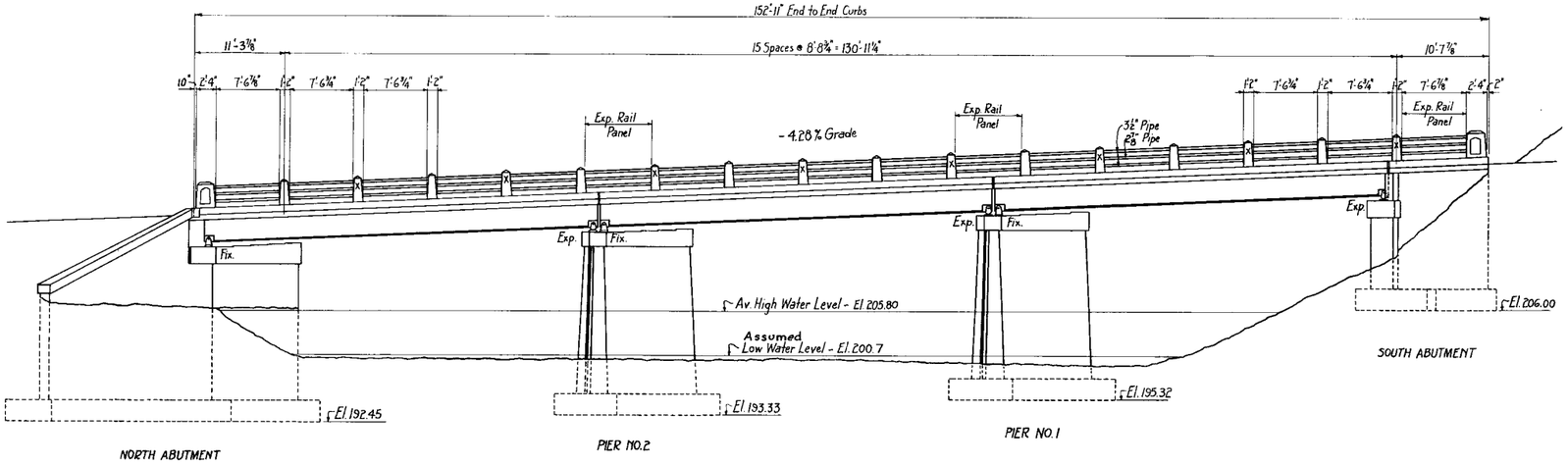
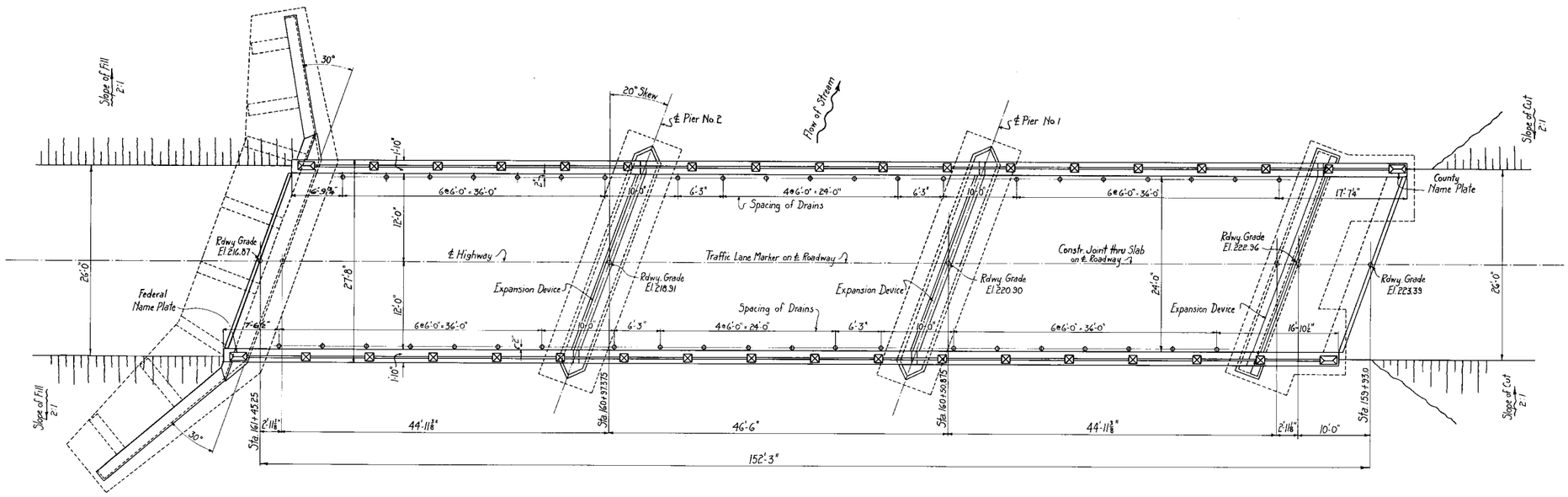


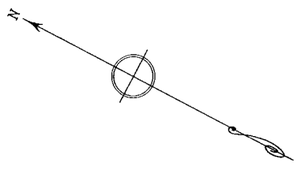
· GENERAL · ELEVATION ·

· SUMMARY · OF · QUANTITIES · IN · STRUCTURE ·

ITEM NO.	ITEM	QUANTITY	UNIT
2401.5 B	Grade "A" Concrete	585.	Cu. Yds.
2401.5 C	Grade "B" Concrete	5.	Cu. Yds.
2401.5 A	Cement	912.	Bbl.
2408.5 A	Reinforcement Bars	43300.	Lbs.
2407.5 M 3	Structural Steel	113500.	Lbs.
2407.5 E 3	Cast Iron	3780.	Lbs.
2407.5 G 1	Sheet Lead	360	Lbs
2407.5 L 3	Pipe Railing	8205	Lbs.
2407.5 H 1	Name Plates	2	Each
2121.5 D	W.R. Excavation	50.	Cu. Yds.
2121.5 C	D.R. "	120.	Cu. Yds.
2121.5 B	W.E. "	385.	Cu. Yds.
2121.5 A	D.E. "	357.	Cu. Yds.
2543.5 A	3-Ply Joint Waterproofing	46.	Lin. Ft.



· GENERAL · PLAN ·



· GENERAL · NOTES ·

Design Data: H15 Loading with impact. A.A.S.H.O. Specifications, dated 1935
Unless otherwise noted on these plans, wherever reference is made to specifications, the Minnesota Highway Department's Standard Specifications, dated July 1, 1938, shall apply.
Bench Mark, El. 212.74, at X on N.W. Bearing Plate on North end of present bridge truss, 75 Ft. right of Sta. 160 + 85.

MICRO-FILMED

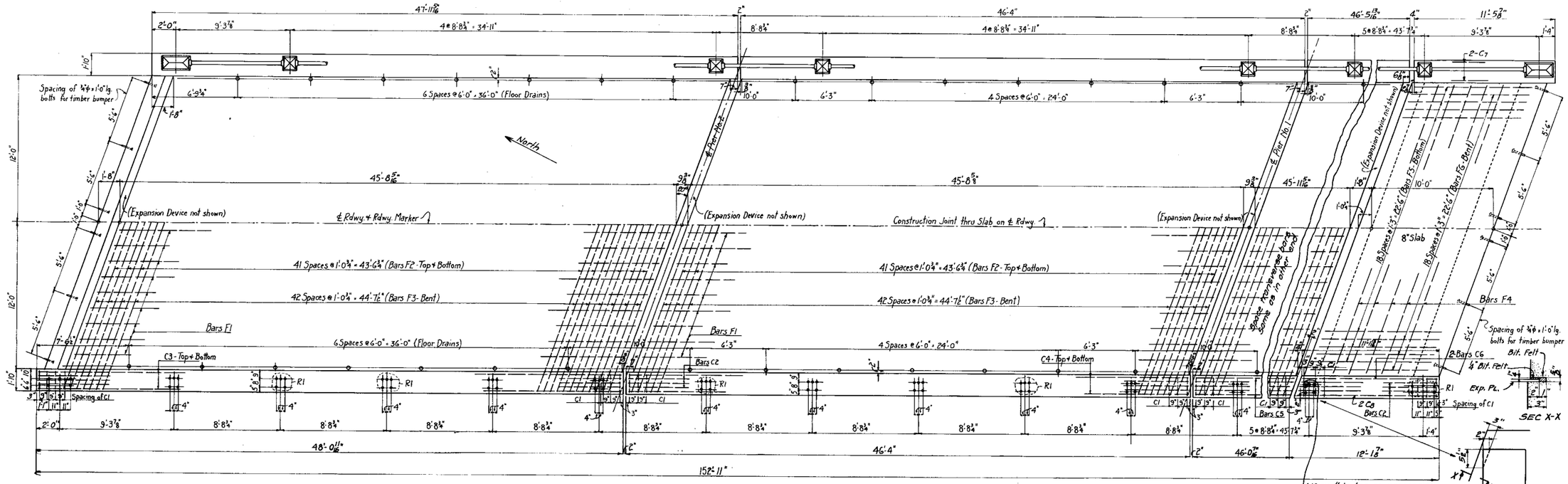
P.W.A. DOCKET NO. MINN. 1208-F

GENERAL PLAN & ELEVATION
FOR 3-46 FT. BEAM SPANS - 24 FT. ROADWAY
BRIDGE NO. 5877

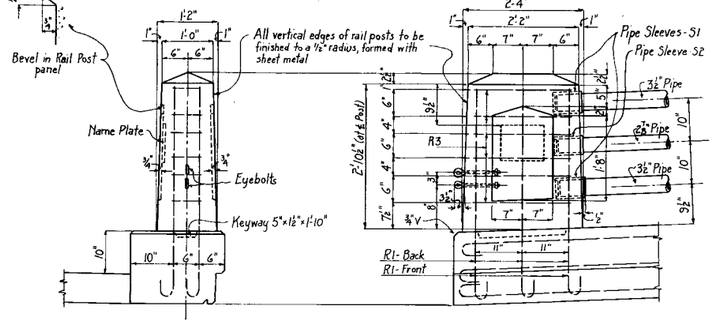
SEC. 13 TWP 105 N R 13 W PLEASANT GROVE TOWNSHIP, OLMSTED COUNTY
S.A.R. NO. 19 STATE OF MINNESOTA

SHEET NO.		JOB NO.
1 OF 10	JAMES R. GOETZ LICENSED STRUCTURAL ENGINEER MINNEAPOLIS, MINNESOTA.	104
	SCALE: 1/8" = 1'-0" · DWG. BY: J.R.G. · CHKD. BY: J.R.G. · DATE: 5-31-1939	

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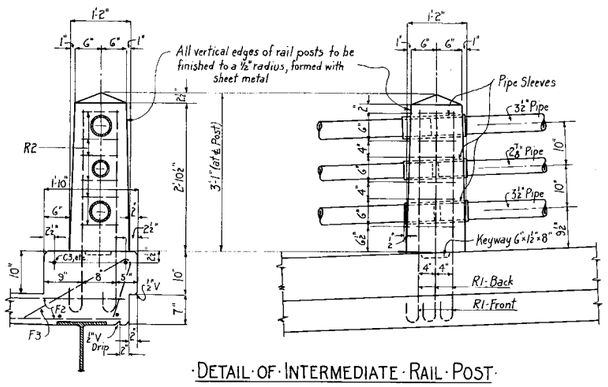


PLAN OF FLOOR SLABS & CURBS



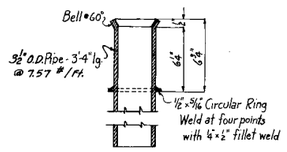
DETAIL OF END RAIL POST

(Rail Posts to be vertical)



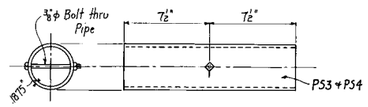
DETAIL OF INTERMEDIATE RAIL POST

(Rail Posts to be vertical)

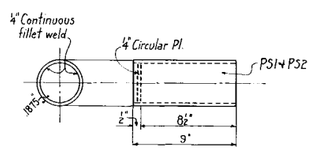


DETAIL OF PIPE DRAINS

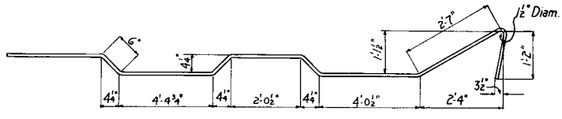
42 REQUIRED



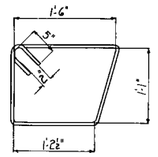
DETAIL OF PIPE SLEEVES FOR POSTS MARKED "X"



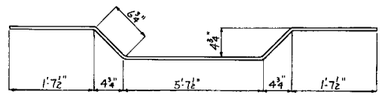
DETAIL OF PIPE SLEEVES FOR END POSTS



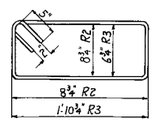
BARS F3



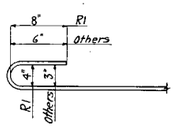
BARS C1



BARS F6



BARS R2 & R3



HOOK FOR BARS R1, C2 & C3

C4, C5, C6, C7, & C8

BILL OF REINFORCING BARS FOR SUPERSTRUCTURE

MARK	NO.	SIZE	LENGTH	TYPE	LOCATION
F1	108	½"ϕ	23'-9"	Straight	Slab, longitudinal
F2	252	⅝"ϕ	28'-9"	"	" transverse
F3	258	⅝"ϕ	18'-0"	Bent	" "
F4	5	½"ϕ	25'-3"	Straight	" " end panel
F5	19	⅝"ϕ	10'-0"	"	" longitudinal, " "
F6	19	⅝"ϕ	10'-0"	Bent	" " " "
C8	2	8"ϕ	12'-6"	2 Hks	Curb, Longit. - End panel
C1	50	½"ϕ	5'-10"	Bent	Stirrups, end of curbs
C2	112	½"ϕ	6'-0"	One Hook	End of curbs
C3	16	½"ϕ	26'-0"	"	Curb, longitudinal
C4	16	½"ϕ	25'-0"	"	" "
C5	16	½"ϕ	25'-0"	"	" "
C6	2	½"ϕ	12'-0"	Two Hooks	" " end panel
C7	4	8"ϕ	12'-6"	2 Hks	" " " "
R1	180	¾"ϕ	5'-0"	One Hook	Rail post verticals
R2	192	⅝"ϕ	4'-0"	Bent	" " hoops
R3	24	⅝"ϕ	6'-0"	"	" "

BILL OF PIPE FOR RAILING & SLEEVES

MARK	NO.	O.D.	LENGTH	DESCRIPTION	LOCATION	WEIGHT PER FT.
P1	28	2⅜"	8'-8¼"	Plain Pipe		5.79
P2	56	3½"	8'-8¼"	" "		7.57
P3	6	2⅜"	8'-6¾"	" "	Expansion Rail Panels	5.79
P4	12	3½"	8'-6¾"	" "	" " "	7.57
PS1	4	3½"	0'-9"	Pipe Sleeves - welded pl.	End Posts	6.63
PS2	8	4"	0'-9"	" " "	" "	7.68
PS3	16	3½"	1'-3"	" " with ⅜" bl.	Posts marked "X"	6.63
PS4	32	4"	1'-3"	" " "	" " "	7.63
PS5	16	3½"	1'-3"	" " plain		6.63
PS6	32	4"	1'-3"	" " "		7.63

NOTES FOR RAILING AND DRAINS

Pipe for railing and drains shall be electric welded pipe, high grade, as per M.H.D. 3362.
Paint: Shop paint - Red lead M.H.D. 3501
Finish field coat - Grey M.H.D. 3503
Second field coat - Aluminum M.H.D. 3505
Pipe sleeves and drains to be painted with red lead in shop on inside and outside surfaces.
Ends of pipe inside of pipe sleeves to be given their two coats of field paint and allowed to dry before erection.
Rail posts shall be Grade "B" concrete. Class A coarse aggregate will not be required.
Field paint for drains same as for structural steel.

SUMMARY OF SUPERSTRUCTURE QUANTITIES

Concrete - Grade "A"	104.4 Cu. Yds.
" - " - "B"	5 Cu. Yds.
Reinforcing Steel	18190 Lbs.
Structural Steel (Billed on Sh. #5)	
Pipe Railing & Pipe Drains	8205 Lbs.
Cast Iron	3780 Lbs.
Sheet Lead (@ 8# per sq. ft.)	360 Lbs.
8-¾"ϕ Galv. Hubbard Eye Bolts No. 3386	
Oak Wedges (see detail)	
1-Bronze County Name Plate	
1-Bronze P.W.A. " "	

○ Include cost in price bid for other items

MICRO-FILMED

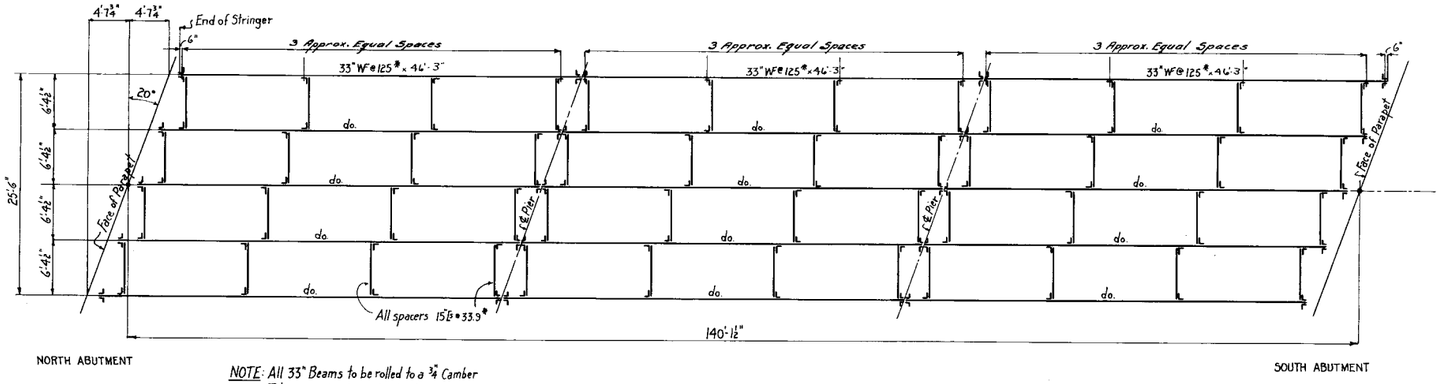
P.W.A. DOCKET NO. MINN. 1208-F

SUPERSTRUCTURE DETAILS

BRIDGE NO. 5877

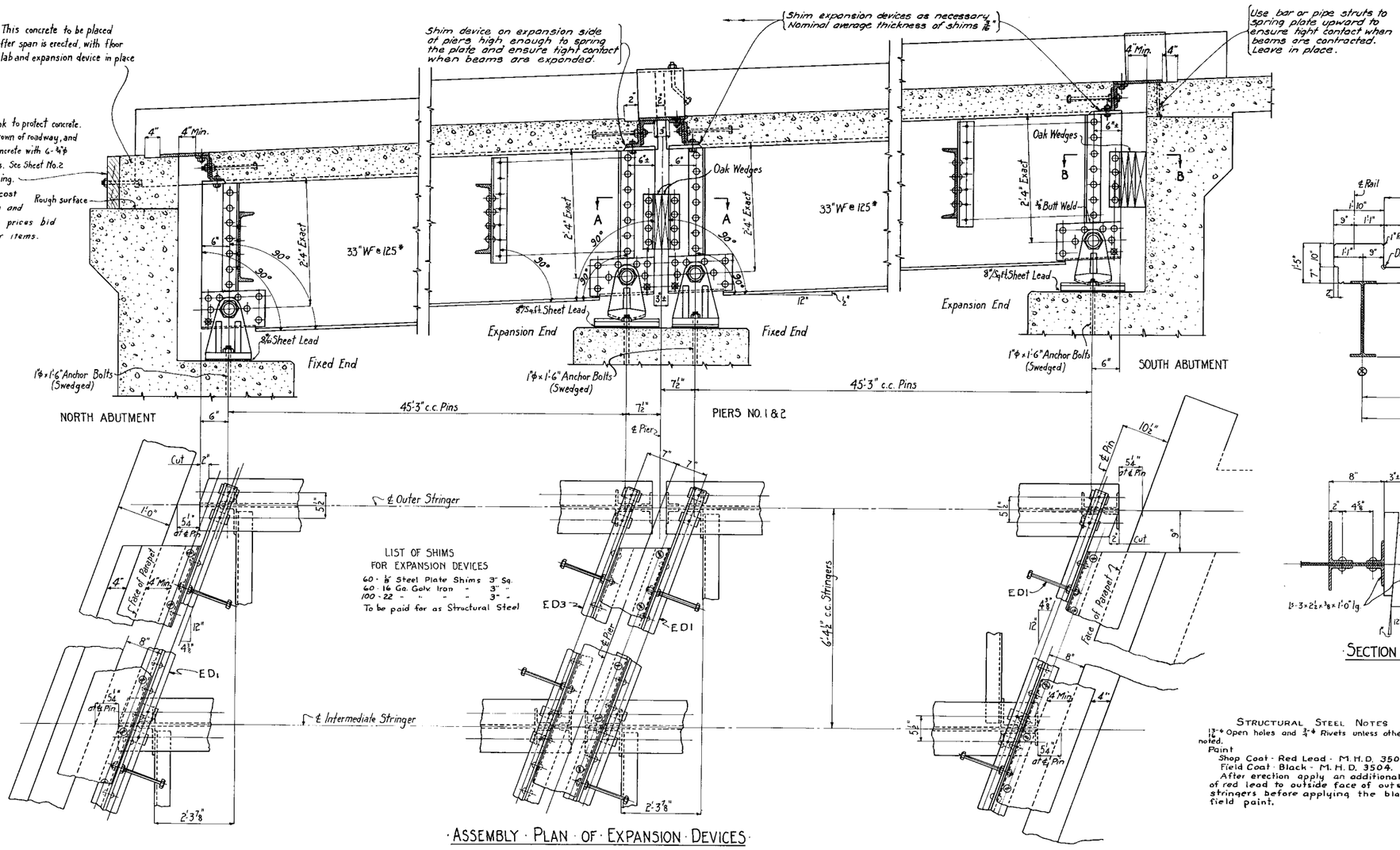
SEC. 13 TWP. 105 N R13W — PLEASANT GROVE TOWNSHIP, OLMSTED COUNTY
S.A.R. NO. 19 — STATE OF MINNESOTA

SHEET NO.		JOB NO.
2 OF 10	JAMES R. GOETZ LICENSED STRUCTURAL ENGINEER — MINNEAPOLIS, MINNESOTA	104
SCALE: Various	DWG. BY: J.R.G. / CHKD BY: J.R.G.	DATE: 5- -1939

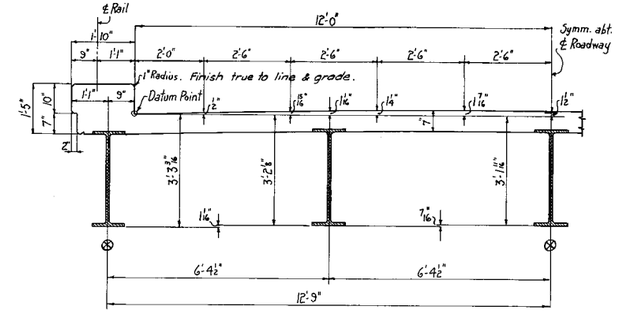


NOTE: All 33" Beams to be rolled to a ¾" Camber
Tolerance - Nothing under, to ½" over.

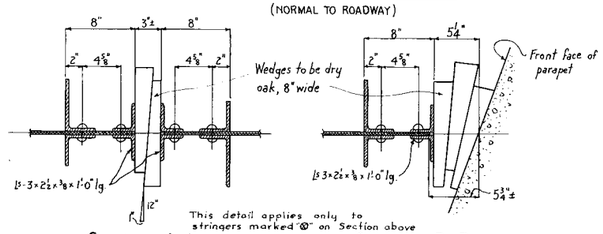
·ASSEMBLY · PLAN·



·ASSEMBLY · PLAN · OF · EXPANSION · DEVICES·



·HALF · TRANSVERSE · SECTION·
(NORMAL TO ROADWAY)



·SECTION · A-A·

·SECTION · B-B·

STRUCTURAL STEEL NOTES

12"ϕ Open holes and ¾"ϕ Rivets unless otherwise noted.
Paint
Shop Coat - Red Lead - M.H.D. 3501.
Field Coat - Black - M.H.D. 3504.
After erection apply an additional coat of red lead to outside face of outside stringers before applying the black field paint.

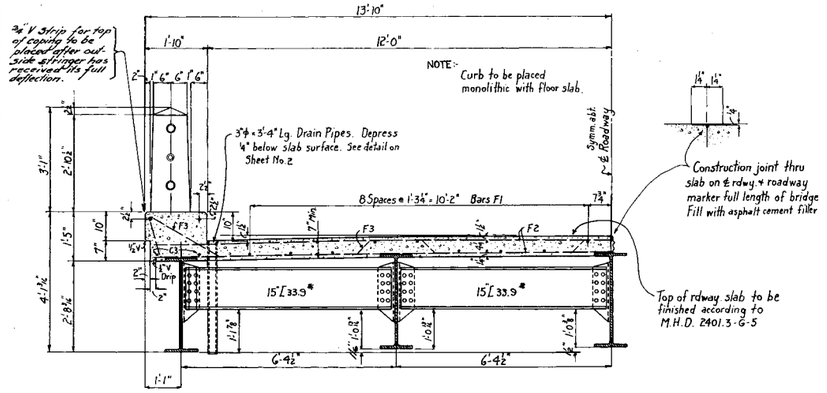
MICRO-FILMED
P.W.A. DOCKET NO. MINN 1208-F

SUPERSTRUCTURE DETAILS
BRIDGE NO. 5877

SEC. 13 TWP 105N R13W — PLEASANT GROVE TOWNSHIP, OLMSTED COUNTY
S.A.R. NO. 19 — STATE OF MINNESOTA

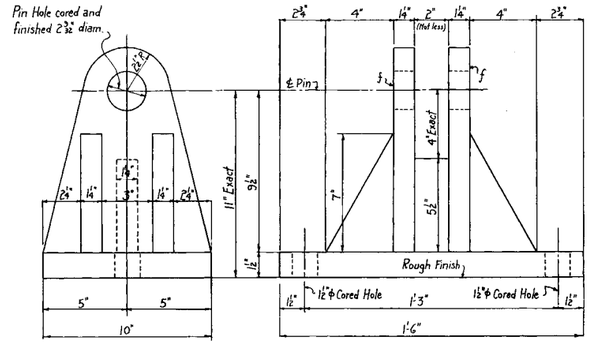
SHEET NO.		JOB NO.
3 OF 10	JAMES R. GOETZ LICENSED STRUCTURAL ENGINEER — MINNEAPOLIS, MINNESOTA	104
SCALE: ⅛", ½"=1'-0"	DWG BY: J.R.G. / CHKD BY: J.R.G.	DATE: 5- -1939

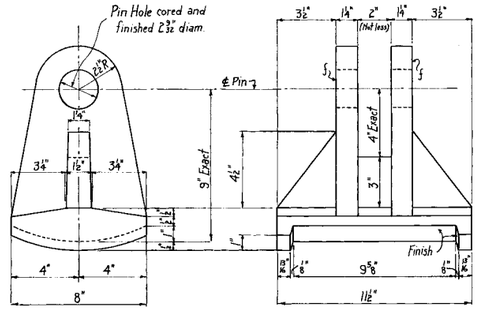
MICRO-FILMED



· HALF · TRANSVERSE · SECTION ·

(SHOWING REINFORCING)

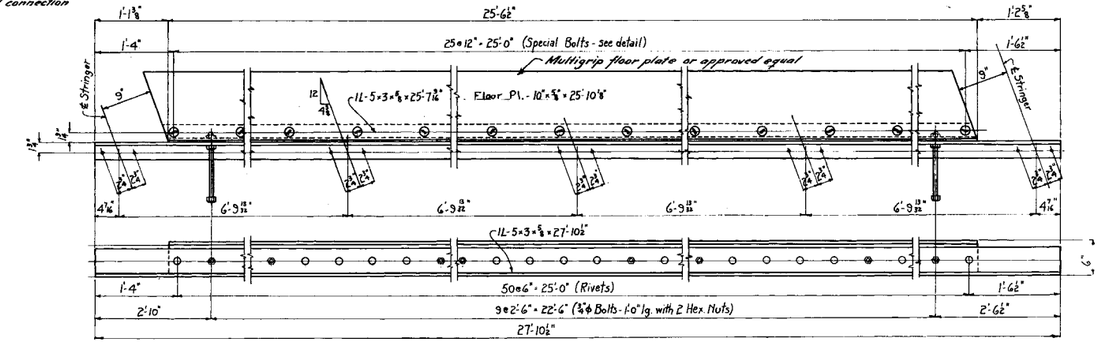




NOTE:
Ribbed rivet bolts may be used instead of rivets for all spacer field connections. See note on spacer details for interchange of open holes and shop rivets in case ribbed rivet holes are used.
◊ Fabricator to consult with contractor to determine which type field connection shall be used.

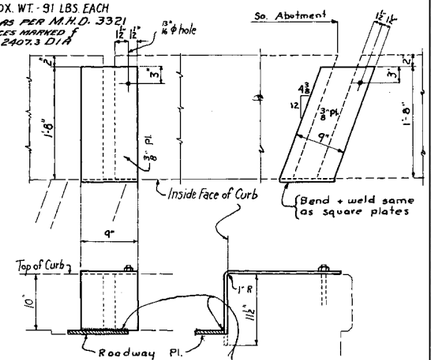
· BOLSTER · FOR · FIXED · END ·

15 REQUIRED APPROX. WT. - 161 LBS. EACH
MATERIAL - CAST IRON AS PER M.H.D. 3321
FULL ANNEALING - SURFACES MARKED f
FINISHED AS PER M.H.D 2407.3 D1A



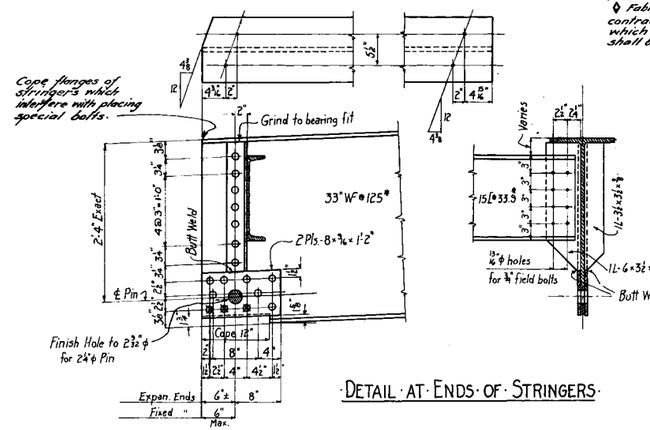
· ROCKER · FOR · EXPANSION · END ·

15 REQUIRED APPROX. WT. - 91 LBS. EACH
MATERIAL CAST IRON AS PER M.H.D. 3321
FULL ANNEALING - SURFACES MARKED f
FINISHED AS PER M.H.D. 2407.3 D1A



· CURB · PLATES ·

2 REQUIRED - AS SHOWN Square Pl.
3 " - OPP. HAND " "
1 " - AS SHOWN Skewed Pl.

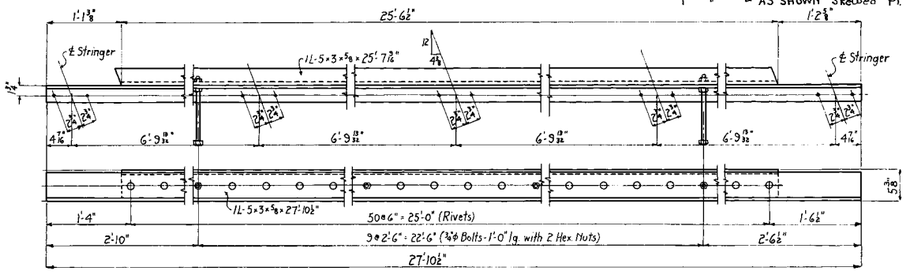


· DETAIL · AT · ENDS · OF · STRINGERS ·

· EXPANSION · DEVICE · ED1 ·

4 REQUIRED

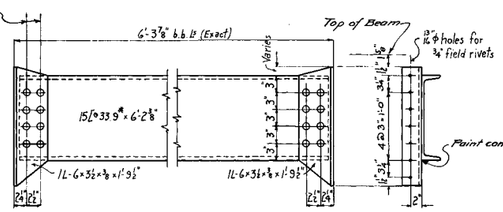
NOTE: Expansion devices to be fabricated to fit roadway crown. See Sheet No. 3



· EXPANSION · DEVICE · ED3 ·

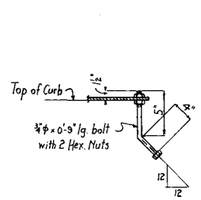
2 REQUIRED

NOTE: If bolted field connections are chosen by contractor, change spacer details as follows. Ship rivet angles to stringers and use ribbed rivet bolts in these holes.



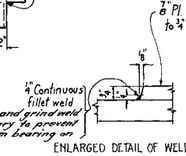
· DETAIL · OF · INTERMEDIATE · SPACERS ·

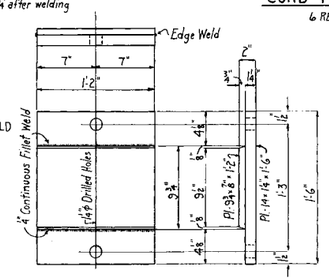
24 REQUIRED



· CURB · PLATE · BOLTS ·

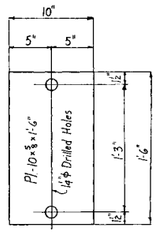
6 REQUIRED





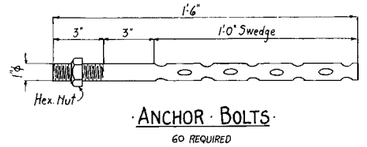
· ROCKER · BEARING · PLATE ·

15 REQUIRED



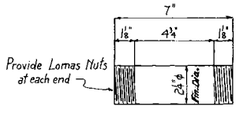
· FILLER · PLATE · FOR · FIXED · ENDS · (AT PIERS)

10 REQUIRED



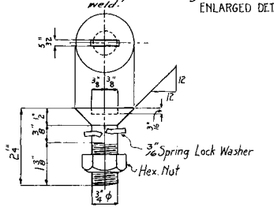
· ANCHOR · BOLTS ·

60 REQUIRED



· DETAIL · OF · PIN ·

30 REQUIRED



· DETAIL · OF · SPECIAL · BOLT ·

104 REQUIRED

MICRO-FILMED

PWA DOCKET NO. MINN. 1208-F

SUPERSTRUCTURE DETAILS

BRIDGE NO. 5877

SEC 13 TWP 105N R 19W — PLEASANT GROVE TOWNSHIP, OLMSTED COUNTY
S.A.R. NO. 19 — STATE OF MINNESOTA

SHEET NO.		JOB NO.
4 OF 10	JAMES R. GOETZ LICENSED STRUCTURAL ENGINEER MINNEAPOLIS, MINNESOTA	104
	SCALE: Various — DWG. BY: J.R.G. — CHKD. BY: J.R.G. — DATE: 5- -1939	

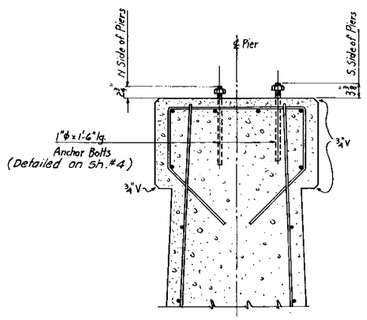
· BILL · OF · REINFORCING · BARS · FOR · TWO · PIERS ·

MARK	NO.	SIZE	LENGTH	TYPE	LOCATION
P1	70	$\frac{5}{8}$"ϕ	8'-3"	2 Hooks	Footing - Transverse
P2	10	$\frac{3}{4}$"ϕ	34'-6"	Straight	" - Longitudinal
P3	24	$\frac{5}{8}$"ϕ	5'-0"	"	" - Corners
P4	96	$\frac{5}{8}$"ϕ	5'-9"	1 Hook	" - Dowels
P5	96	$\frac{5}{8}$"ϕ	18'-11"	Straight	Pier - Verticals
P6	56	$\frac{5}{8}$"ϕ	29'-0"	"	" - Horizontals
P7 to P18	See Schedule	$\frac{1}{2}$"ϕ	513'-0"	Bent	" - End Hoops
P19	66	$\frac{1}{2}$"ϕ	7'-11"	"	Pier Cap - Ties
P20	4	$\frac{3}{4}$"ϕ	33'-8"	2 Hooks	" " - Longitudinal
P21	12	$\frac{1}{2}$"ϕ	4'-8"	Bent	" " - End Ties

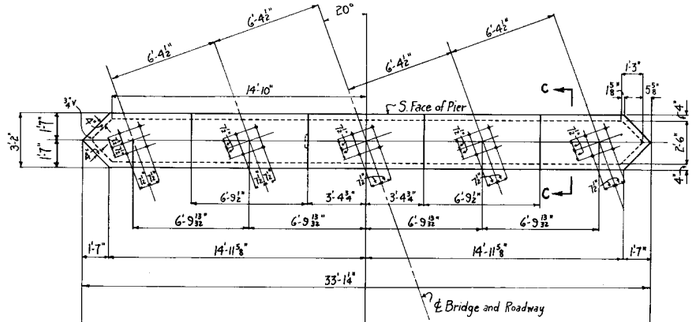
· SUMMARY · OF · QUANTITIES · FOR · TWO · PIERS ·

Concrete, Grade "A"		194.0 Cu. Yds.
Reinforcing Steel		6380 Lbs.
Structural Steel (Billed below)		
W.E. Excavation	120	Cu. Yds.
W.P. Excavation	17	Cu. Yds.

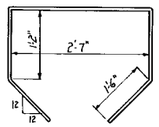
· SECTION · C-C ·



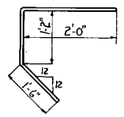
· PLAN · OF · CAP ·



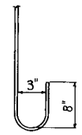
· BARS · P19 ·



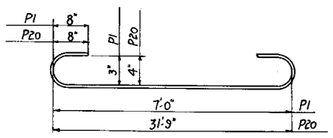
· BARS · P21 ·



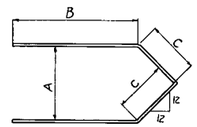
· BARS · P4 ·



· BARS · P1 & P20 ·



· BARS · P7 · TO · P18 ·



MARK	NO.	SIZE	A	B	C	LENGTH
P7	4	½"ϕ	2'-1"	2'-6"	1'-5½"	7'-11"
P8	4	"	2'-2½"	2'-6"	1'-6½"	8'-1"
P9	4	"	2'-4"	2'-6"	1'-7½"	8'-4"
P10	4	"	2'-5½"	2'-6"	1'-8½"	8'-6"
P11	4	"	2'-7½"	2'-7"	1'-10"	8'-10"
P12	12	"	2'-9"	2'-7½"	1'-11"	9'-1"
P13	4	"	2'-10½"	2'-7½"	2'-0"	9'-3"
P14	4	"	3'-0"	2'-8"	2'-1"	9'-6"
P15	4	"	3'-1⅛"	2'-8½"	2'-2½"	9'-10"
P16	4	"	3'-3⅛"	2'-8½"	2'-3½"	10'-0"
P17	4	"	3'-5"	2'-9"	2'-4½"	10'-3"
P18	4	"	3'-6⅞"	2'-9⅝"	2'-5½"	10'-6"
for 2 Piers, Total length = 513'-0"						

· END · VIEW ·

Any pockets of unsuitable foundation material encountered below bottom of footings, to be excavated and backfilled with Grade "A" concrete

· HALF · ELEVATION ·

· HALF · ELEVATION ·

SHOWING REINFORCING

· SECTION · A-A ·

SHOWING REINFORCING

· SECTION · B-B ·

Bars 2"x4"x2'-0" lg. No paint. Alt. spaces @ 1'-6" 11 Required. Bead weld bars to ℓs on three edges

· DETAIL · OF · ICE · BREAKER ·

2 REQUIRED

TOTAL COMPUTED WEIGHT - 595 LBS.

2 REQUIRED THUS

NOTE:

Anchor bolt holes to be drilled after stringers have been erected. Bolts to be grouted in place.

Summary of Structural Steel on Entire Bridge

2 Pier Noses	595 lbs
60 Anchor bolts	265 lbs
Masonry Plates	1,850 lbs
Filler Plates	920 lbs
Superstructure	108,770 lbs
Total Computed Weight =	111,800 lbs
12% as per M.H.D. 2407.42(a) =	4,677 lbs
Total Estimated Pay Weight =	113,477 lbs
For bidding purposes use	113,500 lbs

MICRO-FILMED

P.W.A. DOCKET NO. MINN. 1208-F

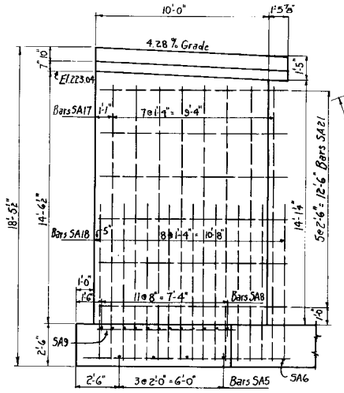
DETAILS OF PIERS

BRIDGE NO. 5877

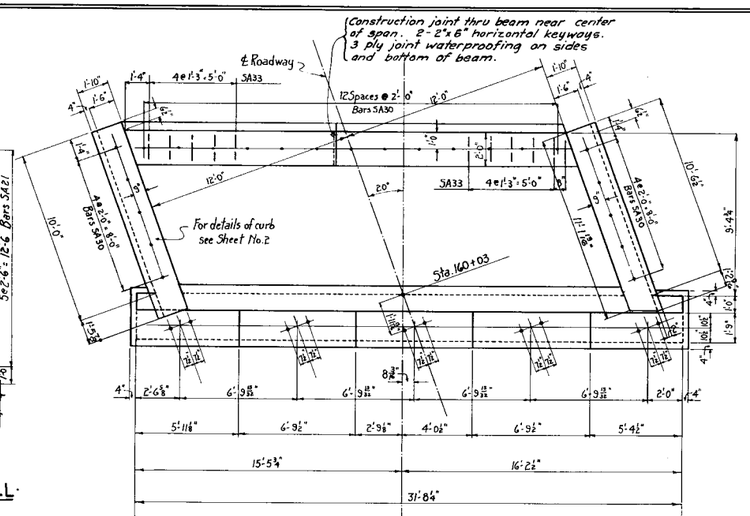
SEC. 13 TWP 105 N R13W PLEASANT GROVE TOWNSHIP, OLMSTED COUNTY

S.A.R. NO. 19 STATE OF MINNESOTA

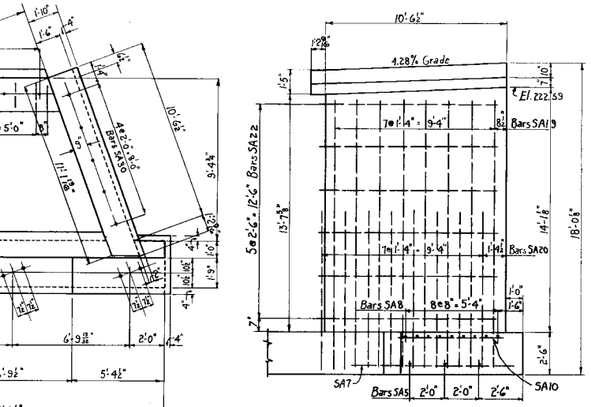
SHEET NO.	JAMES R. GOETZ	JOB NO.
5 OF 10	LICENSED STRUCTURAL ENGINEER MINNEAPOLIS, MINNESOTA	104
	SCALE: ¼" = 1'-0" DWG BY: J.R.G. CHKD. BY: J.R.G. DATE: 5- -1939	



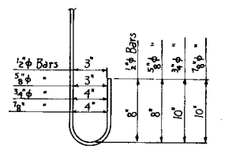
·ELEVATION·OF·EAST·WING·WALL·



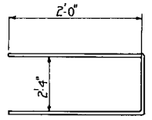
·PLAN·



·ELEVATION·OF·WEST·WING·WALL·



·DETAIL·OF·HOOKED·BARS·



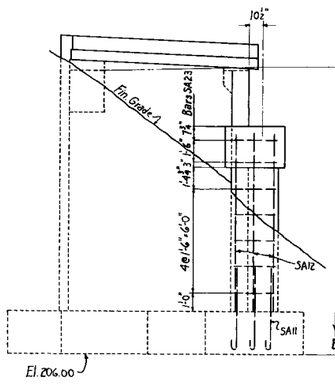
·BARS·SA23·

·BILL·OF·REINFORCING·BARS·FOR·SOUTH·ABUTMENT·

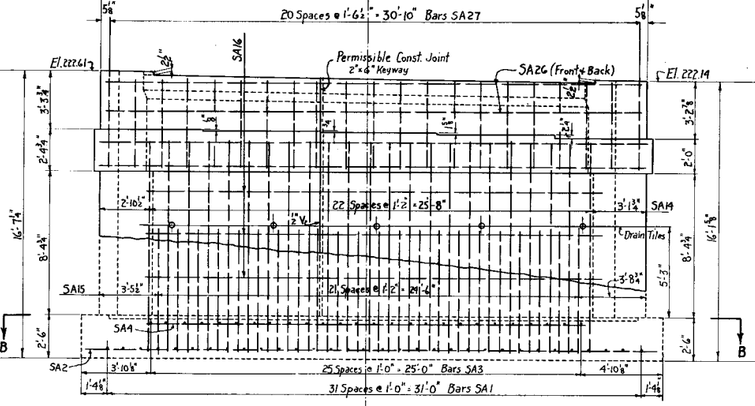
MARK	NO.	SIZE	LENGTH	TYPE	LOCATION
SA1	32	1"ϕ	7'-2"	1 Hook	Footing - Transverse, bottom
SA2	6	¾"ϕ	33'-2"	Str.	" - Longitudinal, "
SA3	26	⅝"ϕ	8'-2"	1 Hook	" - Transverse, top
SA4	3	½"ϕ	25'-6"	Str.	" - Longitudinal "
SA5	7	⅝"ϕ	5'-0"	1 Hook	" - Transverse, bottom
SA6	6	¾"ϕ	12'-6"	Str.	" - Longitudinal, "
SA7	6	¾"ϕ	9'-6"	"	" - " "
SA8	21	¾"ϕ	9'-2"	1 Hook	" - Transverse, top
SA9	3	1"ϕ	8'-0"	Str.	" - Longitudinal "
SA10	3	½"ϕ	6'-0"	"	" - " "
SA11	40	⅝"ϕ	5'-0"	1 Hook	" - Dowels
SA12	25	⅝"ϕ	10'-2"	Str.	Front Wall - Vertical
SA13	5	⅝"ϕ	31'-2"	"	" " - Horizontal
SA14	23	⅞"ϕ	13'-4"	1 Hook	" " - Vertical
SA15	22	⅞"ϕ	8'-2"	"	" " - "
SA16	3	⅝"ϕ	26'-6"	Str.	" " - Horizontal
SA17	8	⅝"ϕ	16'-9"	1 Hook	Wing Wall - Vertical
SA18	9	⅝"ϕ	10'-0"	"	" " - "
SA19	8	⅝"ϕ	14'-3"	"	" " - "
SA20	8	⅝"ϕ	10'-0"	"	" " - "
SA21	6	⅝"ϕ	11'-0"	Str.	" " - Horizontal
SA22	6	⅝"ϕ	10'-6"	"	" " - "
SA23	14	⅝"ϕ	6'-4"	Bent	Front Wall - End Hoops
SA24	33	½"ϕ	7'-10"	"	Cap - Ties
SA25	6	⅝"ϕ	31'-10"	Str.	" - Longitudinal
SA26	4	⅝"ϕ	31'-0"	"	Breast Wall - Horizontal
SA27	21	⅝"ϕ	11'-0"	Bent	" - Vertical
SA28	3	1¼"□	28'-0"	Str.	Beam
SA29	3	1¼"□	32'-10"	Bent	"
SA30	23	¾"ϕ	3'-0"	Str.	" & Curb - Dowels
SA31	10	⅝"ϕ	10'-3"	"	Wing Wall - Horizontal
SA32	10	⅝"ϕ	10'-9"	"	" " - "
SA33	10	½"ϕ	7'-9"	Bent	Beam - Stirrups

·SUMMARY·OF·QUANTITIES·IN·ABUTMENT·

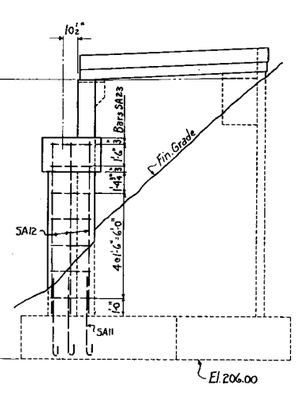
Concrete - Grade "A"	93.6 Cu.Yds.
Reinforcing Steel	5770 Lbs.
D.E. Excavation	120. C.Y.
D.E. Excavation	192.0 C.Y.
3 Ply Joint Waterproofing	23. Lin. Ft.



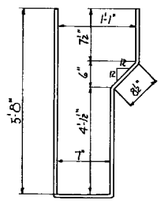
·END·VIEW·



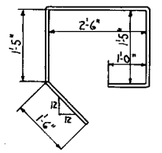
·ELEVATION·



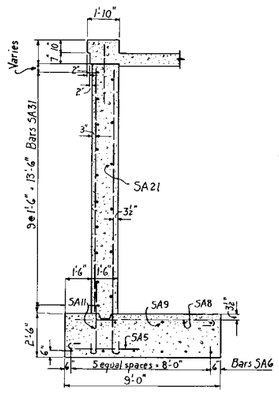
·END·VIEW·



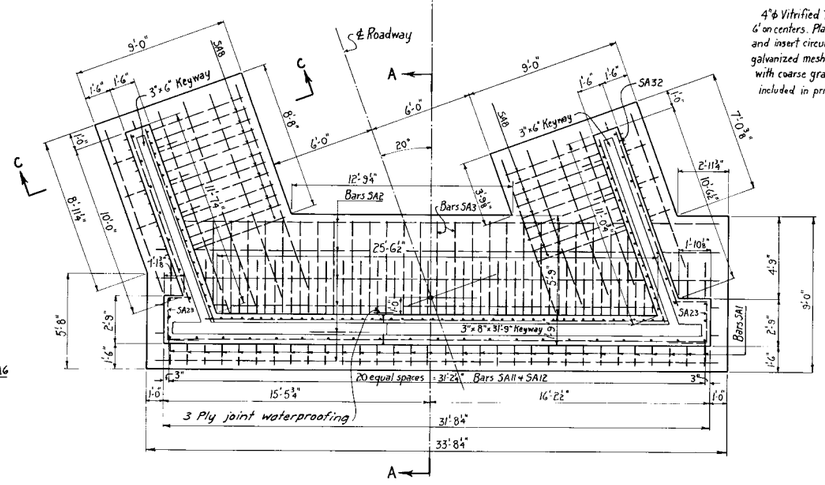
·BARS·SA27·



·BARS·SA24·

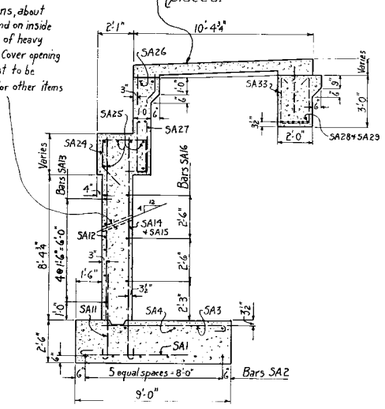


·SECTION·C-C·

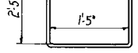


·SECTION·B-B·

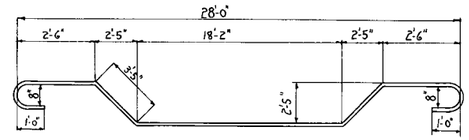
4"ϕ Vitrified Tile Drains, about 6' on centers. Place bell end on inside and insert circular piece of heavy galvanized mesh screen. Cover opening with coarse gravel. Cost to be included in price bid for other items



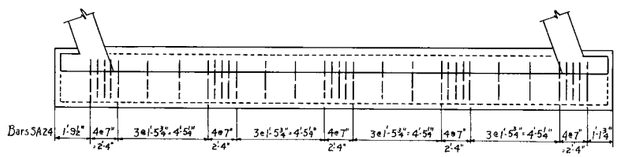
·SECTION·A-A·



·BARS·SA33·



·BARS·SA29·



·PLAN·OF·FRONT·WALL·CAP·

NOTE:

Anchor bolt holes to be drilled after stringers have been erected. Bolts to be grouted in place.

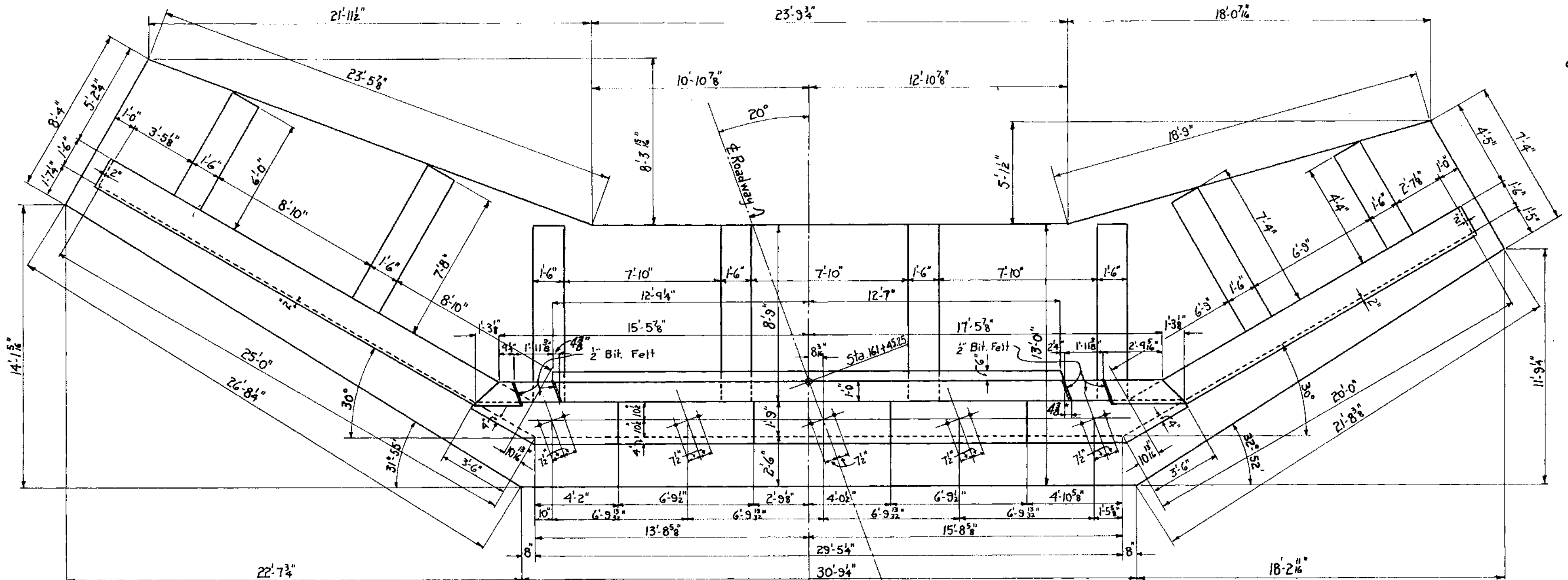
MICRO-FILMED

P.W.A. DOCKET NO. MINN. 1208-F

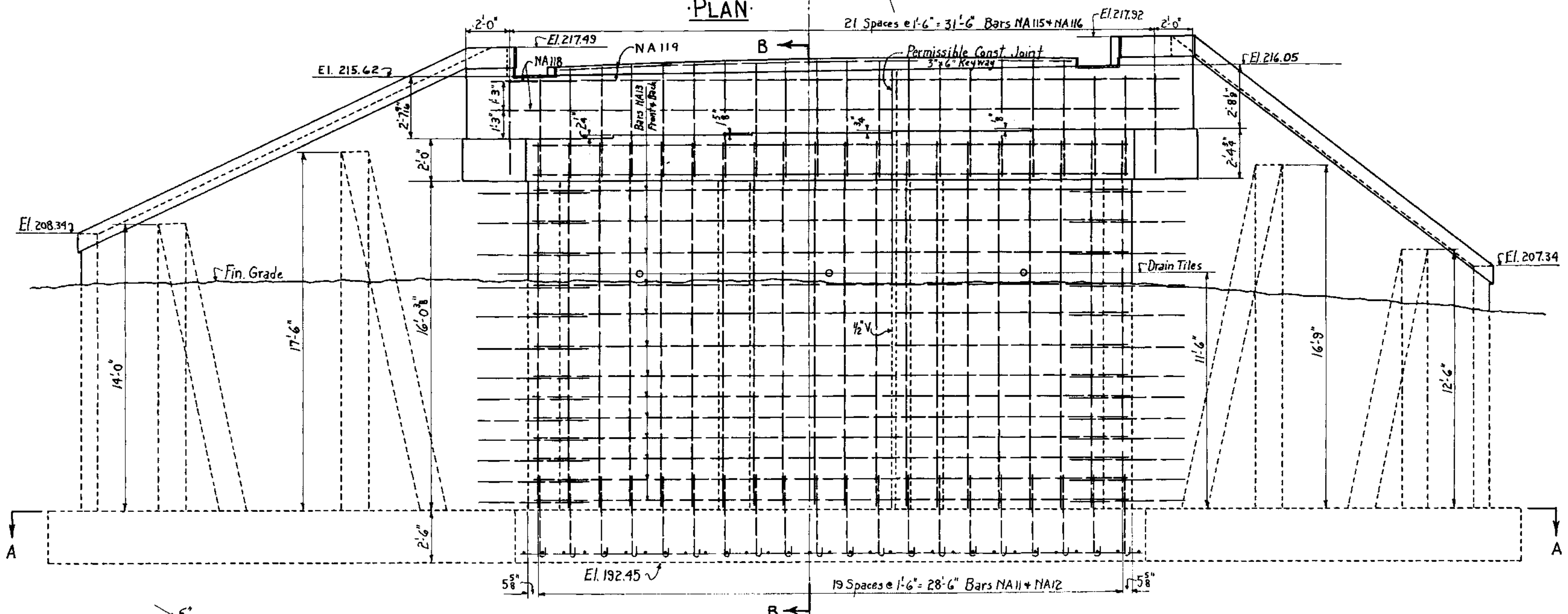
DETAILS OF SOUTH ABUTMENT
BRIDGE NO. 5877

SEC. 13 TWP 105 N R 13 W — PLEASANT GROVE TOWNSHIP, OLMSTED COUNTY
S.A.R. NO. 19 — STATE OF MINNESOTA

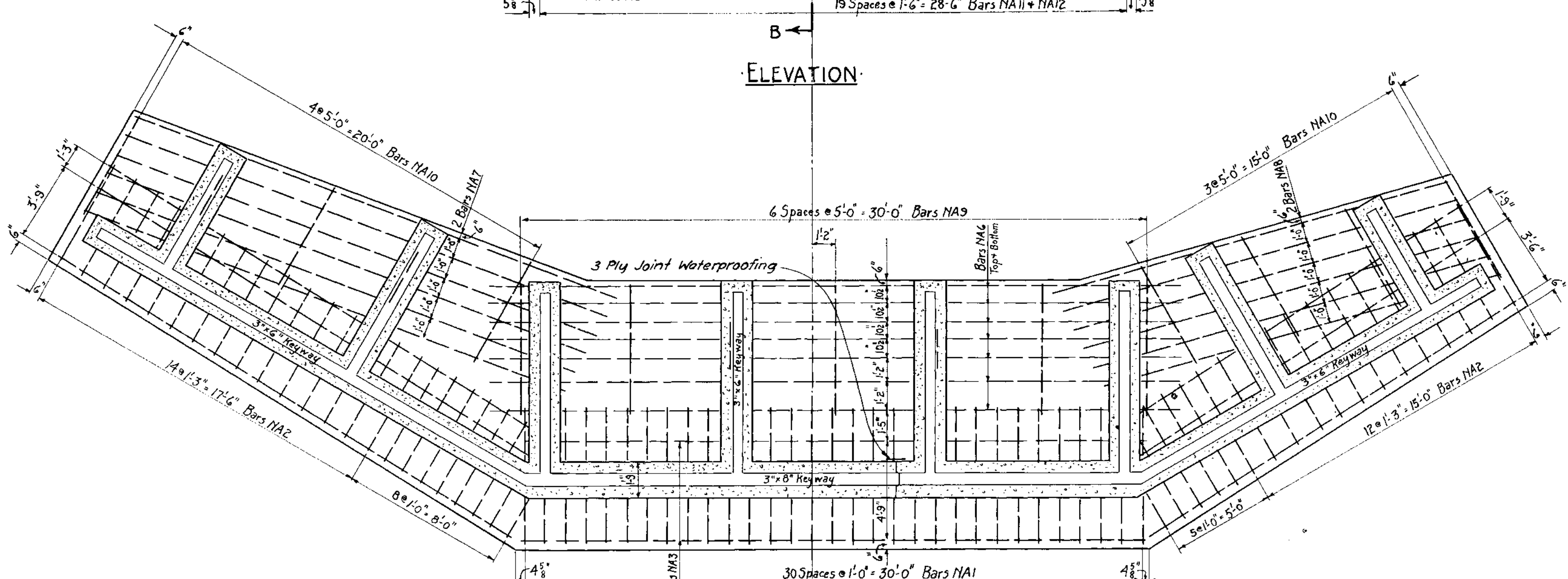
SHEET NO.		JOB NO.
6 OF 10	JAMES R. GOETZ LICENSED STRUCTURAL ENGINEER — MINNEAPOLIS, MINNESOTA	104
	SCALE: ¼" = 1'-0" — DWG. BY: J.R.G. — CHKD. BY: J.R.G. — DATE: 5- -1933	



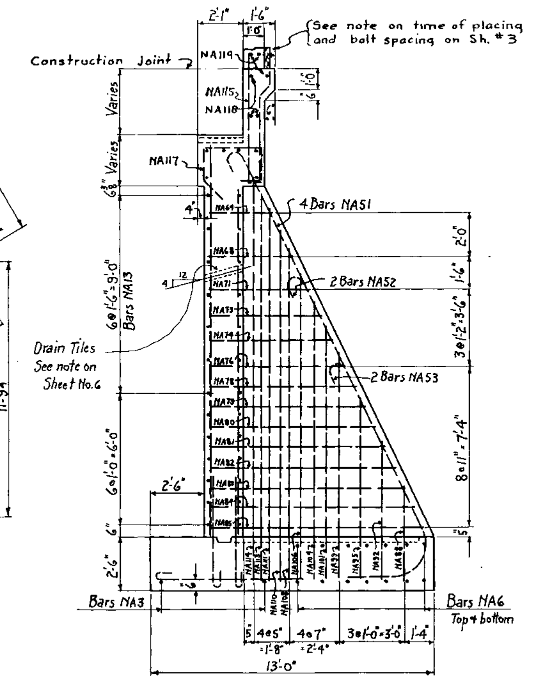
·PLAN·



·ELEVATION·

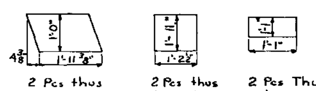


·SECTION · A-A·



·SECTION · B-B·

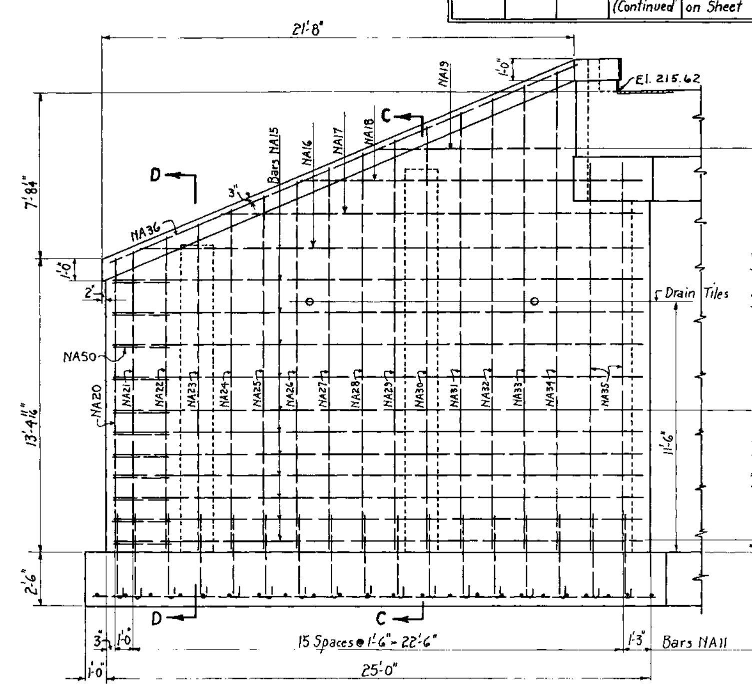
LIST OF BIT FELT



2 Pcs thus 2 Pcs thus 2 Pcs Thus
All bit felt to be ½"
Include cost in prices bid for other items

·BILL · OF · REINFORCING · BARS · IN · NORTH · ABUTMENT·

MARK	NO.	SIZE	LENGTH	TYPE	LOCATION
NA1	31	7/8"φ	7'-0"	1 Hook	Footing - Transverse
NA2	41	7/8"φ	6'-0"	"	" - "
NA3	2	5/8"φ	30'-9"	Str.	" - Longitudinal
NA4	3	5/8"φ	20'-6"	"	" - "
NA5	3	5/8"φ	26'-0"	"	" - "
NA6	14	7/8"φ	33'-6"	"	" - "
NA7	12	7/8"φ	25'-0"	"	" - "
NA8	12	7/8"φ	20'-0"	"	" - "
NA9	7	5/8"φ	6'-3"	"	" - Transverse
NA10	9	5/8"φ	5'-6"	"	" - "
NA11	100	5/8"φ	5'-0"	1 Hook	" - Dowels
NA12	40	5/8"φ	17'-9"	Str.	Front Wall - Vertical
NA13	26	5/8"φ	29'-4"	"	" " - Horizontal
NA14	26	5/8"φ	4'-0"	Bent	" " - Corner Ties
NA15	22	5/8"φ	24'-9"	Str.	West Wing Wall - Horizontal
NA16	2	5/8"φ	23'-6"	"	" " " - "
NA17	2	5/8"φ	19'-6"	"	" " " - "
NA18	2	5/8"φ	16'-0"	"	" " " - "
NA19	2	5/8"φ	8'-6"	"	" " " - "
NA20	4	5/8"φ	13'-3"	"	E.&W. " " - Vertical
NA21	2	5/8"φ	13'-8"	"	West " " - "
NA22	2	5/8"φ	14'-4"	"	" " " - "
NA23	2	5/8"φ	15'-0"	"	" " " - "
NA24	2	5/8"φ	15'-7"	"	" " " - "
NA25	4	5/8"φ	16'-3"	"	E.&W. " " - "
NA26	2	5/8"φ	16'-10"	"	West " " - "
NA27	2	5/8"φ	17'-7"	"	" " " - "
NA28	4	5/8"φ	18'-2"	"	E.&W. " " - "
NA29	2	5/8"φ	18'-10"	"	West " " - "
NA30	2	5/8"φ	19'-5"	"	" " " - "
NA31	4	5/8"φ	20'-1"	"	E.&W. " " - "
NA32	2	5/8"φ	20'-8"	"	West " " - "
NA33	2	5/8"φ	21'-4"	"	" " " - "
NA34	2	5/8"φ	22'-0"	"	" " " - "
NA35	8	5/8"φ	17'-9"	"	E.&W. " " - "
NA36	2	7/8"φ	23'-6"	"	West " " - Cap, Longitudinal
NA37	22	5/8"φ	19'-9"	"	East " " - Horizontal
NA38	2	5/8"φ	17'-3"	"	" " " - "
NA39	2	5/8"φ	15'-0"	"	" " " - "
NA40	2	5/8"φ	9'-3"	"	" " " - "
NA41	2	5/8"φ	6'-6"	"	" " " - "
NA42	2	5/8"φ	22'-2"	"	" " " - Vertical
NA43	2	5/8"φ	21'-2"	"	" " " - "
NA44	2	5/8"φ	19'-2"	"	" " " - "
NA45	2	5/8"φ	17'-4"	"	" " " - "
NA46	2	5/8"φ	15'-5"	"	" " " - "
NA47	2	5/8"φ	14'-6"	"	" " " - "
NA48	2	5/8"φ	12'-7"	"	" " " - "
NA49	2	7/8"φ	19'-6"	"	" " " - Cap, Longitudinal
NA50	22	5/8"φ	4'-11"	Bent	E.&W. " " - End Hoops
NA118	3	5/8"φ	35'-6"	Str.	Breast Wall - Horizontal
			(Continued	on Sheet	No. 8)



·ELEVATION · OF · WEST · WING · WALL·

MICRO-FILMED

P.W.A. DOCKET NO. MINN. 1208-F

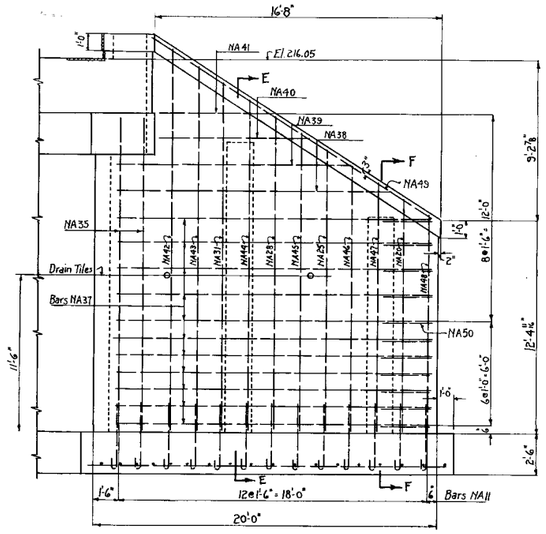
NOTE:
For additional sections and bar details, see Sheet No. 8.
Anchor bolt holes to be drilled after stringers have been erected. Bolts to be grouted in place.

DETAILS OF NORTH ABUTMENT
BRIDGE NO. 5877

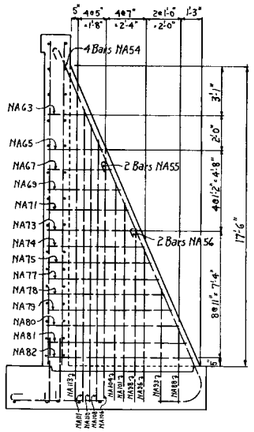
SEC. 13 TWP. 105N R13W — PLEASANT GROVE TOWNSHIP, OLMSTED COUNTY
S.A.R. NO. 19 — STATE OF MINNESOTA

JAMES R. GOETZ
LICENSED STRUCTURAL ENGINEER — MINNEAPOLIS, MINNESOTA

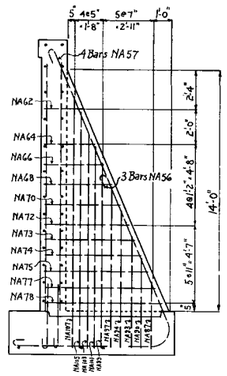
SHEET NO. 7 OF 10
SCALE: ¼" = 1'-0"
DWG. BY: J.R.G.
CHKD. BY: J.R.G.
DATE: 5- -1939
JOB NO. 104



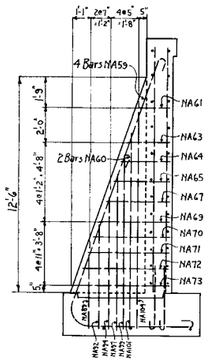
·ELEVATION · OF · EAST · WING · WALL·



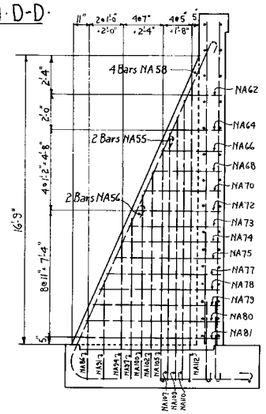
·SECTION · C-C·



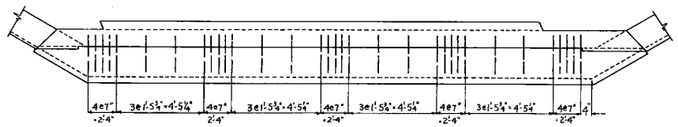
·SECTION · D-D·



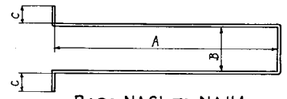
·SECTION · F-F·



·SECTION · E-E·



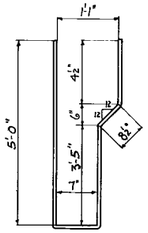
·PLAN · OF · FRONT · WALL · CAP·



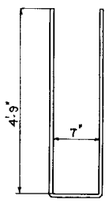
·BARS · NA61 · TO · NA114·

MARK	NO.	SIZE	A	B	C	LENGTH
NA61	1	½"ϕ	1'-8"	0'-10"	10"	4'-2"
NA62	2	"	1'-11"	"	"	4'-5"
NA63	2	"	2'-3"	"	"	4'-9"
NA64	7	"	2'-9"	"	"	5'-3"
NA65	2	"	3'-2"	"	"	5'-8"
NA66	2	"	3'-4"	"	"	5'-10"
NA67	2	"	3'-7"	"	"	6'-1"
NA68	6	"	3'-10"	"	"	6'-4"
NA69	2	"	4'-0"	"	"	6'-6"
NA70	3	"	4'-4"	"	"	6'-10"
NA71	6	"	4'-8"	"	"	7'-2"
NA72	3	"	4'-10"	"	"	7'-4"
NA73	8	"	5'-2"	"	"	7'-8"
NA74	7	"	5'-7"	"	"	8'-1"
NA75	3	"	6'-0"	"	"	8'-6"
NA76	4	"	6'-3"	"	"	8'-9"
NA77	3	"	6'-5"	"	"	8'-11"
NA78	7	"	6'-9"	"	"	9'-3"
NA79	6	"	7'-2"	"	"	9'-8"
NA80	6	"	7'-7"	"	"	10'-1"
NA81	6	"	8'-1"	"	"	10'-7"
NA82	5	"	8'-6"	"	"	11'-0"
NA83	4	"	9'-0"	"	"	11'-6"
NA84	4	"	9'-5"	"	"	11'-11"
NA85	4	"	9'-10"	"	"	12'-4"
NA86	1	5/8"ϕ	1'-11"	0'-11"	12"	4'-10"
NA87	1	"	2'-2"	"	"	5'-1"
NA88	5	"	2'-7"	"	"	5'-6"
NA89	1	"	3'-0"	"	"	5'-11"
NA90	1	"	3'-7"	"	"	6'-6"
NA91	1	"	4'-2"	"	"	7'-1"
NA92	5	"	4'-8"	"	"	7'-7"
NA93	2	"	4'-10"	"	"	7'-9"
NA94	3	"	5'-4"	"	"	8'-3"
NA95	4	"	6'-10"	"	"	9'-9"
NA96	1	"	7'-3"	"	"	10'-2"
NA97	3	"	7'-7"	"	"	10'-6"
NA98	1	"	8'-5"	"	"	11'-4"
NA99	6	"	8'-10"	"	"	11'-9"
NA100	1	"	9'-2"	"	"	12'-1"
NA101	7	"	9'-10"	"	"	12'-9"
NA102	1	"	10'-5"	"	"	13'-4"
NA103	1	"	10'-9"	"	"	13'-8"
NA104	6	"	11'-1"	"	"	14'-0"
NA105	2	"	11'-9"	"	"	14'-8"
NA106	5	"	12'-5"	"	"	15'-4"
NA107	2	"	12'-8"	"	"	15'-7"
NA108	5	"	13'-5"	"	"	16'-4"
NA109	1	"	13'-8"	"	"	16'-7"
NA110	6	"	14'-4"	"	"	17'-3"
NA111	5	"	15'-4"	"	"	18'-3"
NA112	1	"	15'-7"	"	"	18'-6"
NA113	5	"	16'-2"	"	"	19'-1"
NA114	4	"	16'-11"	"	"	19'-10"

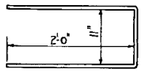
Total Length of ½"ϕ - 854'-1"
" " " 5/8"ϕ - 1132'-4"



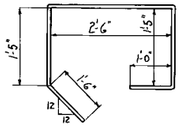
·BARS · NA115·



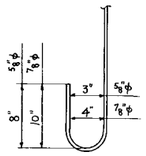
·BARS · NA116·



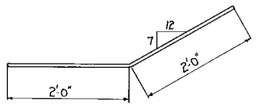
·BARS · NA50·



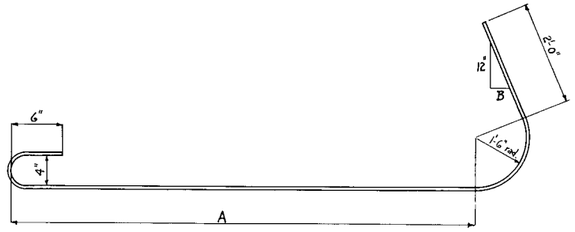
·BARS · NA117·



·DETAIL · OF · HOOKED · BARS·



·BARS · NA14·



·BARS · NA51 · TO · NA60·

MARK	NO.	SIZE	A	B	LENGTH
NA51	16	7/8"ϕ	19'-6"	5¾"	25'-2"
NA52	8	"	13'-0"	"	18'-8"
NA53	8	"	8'-6"	"	14'-2"
NA54	4	"	19'-9"	5¼"	25'-5"
NA55	4	"	13'-0"	"	18'-8"
NA56	7	"	8'-6"	"	14'-2"
NA57	4	"	16'-3"	"	21'-11"
NA58	4	"	19'-0"	"	24'-8"
NA59	4	"	14'-3"	4¼"	19'-11"
NA60	2	"	8'-6"	"	14'-2"

Total length = 1235'-2"

·BILL · OF · REINFORCING · BARS · IN · NORTH · ABUTMENT·

(CONTINUED FROM SHEET NO.7)

MARK	NO.	SIZE	LENGTH	TYPE	LOCATION
NA51 to NA60	See Schedule	⅞"ϕ	1235'-2"	Bent	Counterfort - Diagonals
NA61 to NA85	"	½"ϕ	854'-1"	"	" - Horizontal Stirrups
NA86 to NA114	"	5/8"ϕ	1132'-4"	"	" - Vertical "
NA115	17	5/8"ϕ	10'-1"	"	Breast Wall - Vertical
NA116	5	5/8"ϕ	10'-1"	"	" " "
NA117	33	½"ϕ	7'-10"	"	Cap - Ties
NA119	3	⅞"ϕ	25'-0"	Strt.	Breast wall horiz.

·SUMMARY · OF · QUANTITIES · IN · ABUTMENT·

Concrete - Grade "A"	193. Cu Yds
Reinforcing Steel	12,960 Lbs.
W.R. Excavation	33. Cu Yds.
W.E. Excavation	265. Cu Yds.
D.E. Excavation	165. Cu Yds.
3-Ply Joint Waterproofing	23. Lin Ft.

NOTE:
For location of sections "C-C" and "D-D", see Sheet No.7

MICRO-FILMED

P.W.A. DOCKET NO. MINN. 1208-F

DETAILS OF NORTH ABUTMENT
BRIDGE NO. 5877

SEC. 13 TWP. 105N R13W PLEASANT GROVE TOWNSHIP, OLMSTED COUNTY
S.A.R. NO. 19 STATE OF MINNESOTA

SHEET NO.		JOB NO.
8 OF 10	JAMES R. GOETZ LICENSED STRUCTURAL ENGINEER MINNEAPOLIS, MINNESOTA	104
	SCALE:- ¼" = 1'-0" / DWG. BY: J.R.G. / CHKD. BY: J.R.G. / DATE: 5- -1939	

BRIDGE NO. 5877

OVER THE

ROOT RIVER

SECTION 13 TOWNSHIP 105 NORTH RANGE 13 WEST S.A.R. NO. 19

PLEASANT GROVE TOWNSHIP

OLMSTED COUNTY

MINNESOTA

P.W.A. DOCKET NO. MINN. 1208-F

JAMES R. GOETZ

STRUCTURAL ENGINEER MINNEAPOLIS, MINNESOTA

OLMSTED COUNTY

MINNESOTA

BRIDGE NO. 5877

1939

·COUNTY · NAME · PLATE·

FEDERAL EMERGENCY

ADMINISTRATION OF PUBLIC WORKS

FRANKLIN D. ROOSEVELT

PRESIDENT OF THE UNITED STATES

HAROLD L. ICKES

ADMINISTRATOR OF PUBLIC WORKS

1939

·FEDERAL · NAME · PLATE·

·INDEX · TO · DRAWINGS·

SHEET NO. 1 - GENERAL PLAN & ELEVATION
" " 2 - SUPERSTRUCTURE DETAILS
" " 3 - " "
" " 4 - " "
" " 5 - DETAILS OF PIERS
" " 6 - " " S. ABUTMENT
" " 7 - " " N. "
" " 8 - " " " "
" " 9 - SURVEY
" " 10 - ALIGNMENT PLAT OF CHANNEL

APPROVED:-

MINNESOTA STATE HIGHWAY DEPT.

PUBLIC WORKS ADMINISTRATION

MICRO-FILMED

MICRO-FILMED

Br 5877