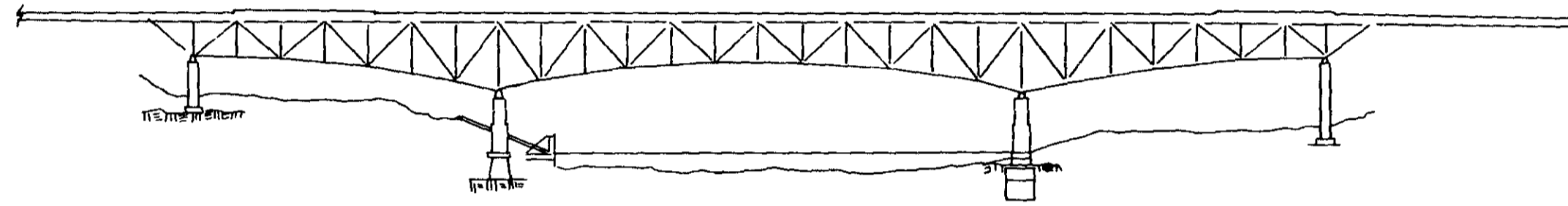


GENERAL PLAN
PART PLANS, ELEVATIONS & SECTIONS
SHOWN ON SHEETS 2 THRU 6



GENERAL ELEVATION

NOTES:

LIMITS OF CONTRACT

1. THE DRAINAGE SYSTEM, AS DETAILED ON THESE SHEETS, INCLUDES ALL DECK DRAINAGE AND STEEL PIPE DOWN SPOUTS, TOGETHER WITH REQUIRED FITTINGS. THESE DETAILS DO NOT INCLUDE ANY MATERIALS BELOW THESE STEEL PIPE DOWN SPOUTS. THIS ELIMINATES FROM THESE DETAILS ALL UNDERGROUND WORK SUCH AS CAST IRON PIPE, REINFORCED CONCRETE PIPE AND APPURTENANCES

DOWN SPOUTS

- 2. STEEL PIPE AND FITTINGS SHALL BE "YOLLOY" AS MANUFACTURED BY YOUNG-TOWN SHEET & TUBE CO. PIPE SHALL BE 10" STANDARD, WEIGH 40.48 LB/LF AND SHALL BE GALVANIZED.
- 3. STEEL PIPE COUPLINGS SHALL BE "GRUVAJOINT" AS MANUFACTURED BY GUSTIN-BACON MFG. CO. AND SHALL BE GALVANIZED.
- 4. CONCENTRIC AND RECTANGULAR PIPE REDUCERS TO BE FABRICATED FROM PLATE CONFORMING TO M.H.D. 3309 AND SHALL BE GALVANIZED.
- 5. GASKETS USED WITH PIPE CLEANOUTS SHALL BE BUNA-N RUBBER 1/8" THICK CONFORMING TO ASTM D 735-61T, TYPE SB 410.
- 6. ALL PIPE SUPPORTS TO BE FABRICATED FROM MATERIAL CONFORMING TO M.H.D. 3305. THESE SUPPORTS SHALL BE GALVANIZED EXCEPT AS NOTED TO BE PAINTED.
- 7. BOLT ANCHORAGE SHALL BE 3 UNIT PLAIN TYPE CONFORMING TO M.H.D. 3387.

ROADWAY DRAINS AND SCUPPERS

- 8. ROADWAY DRAINS AND SCUPPERS SHALL BE FABRICATED FROM MATERIAL CONFORMING TO M.H.D. 3309 EXCEPT THAT ANCHOR BARS AND SHIMS WILL BE FABRICATED FROM MATERIAL CONFORMING TO M.H.D. 3305. ROADWAY DRAINS AND SCUPPERS SHALL BE GALVANIZED.
- 9. FASTENINGS TO HOLD THE GRATES INTO THE FRAMES OF THE ROADWAY DRAINS AND SCUPPERS SHALL BE HEX SOCKET STAINLESS STEEL SCREWS WITH HEX NUTS AND LOCK WASHERS MADE FROM 18-8 STAINLESS STEEL CONFORMING TO ASTM A 276.

FLUMES AND BAFFLE PLATES

- 10. FLUMES AND BAFFLE PLATES, TOGETHER WITH THEIR INTEGRAL BRACKETS AND SPLICE PLATES, TO BE FABRICATED FROM MATERIAL CONFORMING TO M.H.D. 3309 AND SHALL BE GALVANIZED. SEPARATE BRACKETS (H12 & H13) SHALL BE FABRICATED FROM MATERIAL CONFORMING TO M.H.D. 3305 AND SHALL BE GALVANIZED.
- 11. GASKET MATERIAL USED IN JOINING SECTIONS OF THE FLUMES AND BAFFLE PLATES SHALL BE BUNA-N RUBBER 1/8" THICK, CONFORMING TO ASTM D 735-61T, TYPE SB 410.

GENERAL

- 12. ALL WELDING ON YOLLOY PIPE AND ON MATERIAL CONFORMING TO M.H.D. 3309 SHALL BE PERFORMED USING LOW HYDROGEN RODS WHICH DO NOT CONTAIN IRON POWDER.
- 13. ALL FASTENINGS, EXCEPT STAINLESS STEEL, AS NOTED ABOVE, SHALL CONFORM TO M.H.D. 3391 A, EXCEPT BOLTS SHALL HAVE REGULAR HEX HEADS OR HEADS AS OTHERWISE NOTED ON DETAILS.
- 14. ALL MATERIALS, EXCEPT THOSE SPECIFICALLY NOTED TO BE PAINTED, SHALL BE GALVANIZED AFTER FABRICATION. FASTENINGS SHALL BE GALVANIZED IN ACCORDANCE WITH M.H.D. 3392. ALL OTHER MATERIAL TO BE GALVANIZED IN ACCORDANCE WITH M.H.D. 3394.
- 15. MATERIALS SPECIFIED TO BE PAINTED SHALL BE GIVEN A SHOP COAT OF RED LEAD CONFORMING TO M.H.D. 3506 AND IN ACCORDANCE WITH M.H.D. 2471. 3L1.
- 16. MATERIALS AND WORKMANSHIP FOR ALL FABRICATION TO BE IN ACCORDANCE WITH M.H.D. 2471.
- 17. SHOP INSPECTION BY M.H.D. BEFORE GALVANIZING OR PAINTING AND AFTER GALVANIZING.
- 18. ALL WORK IN ACCORDANCE WITH M.H.D. SPECIFICATIONS DATED 1/1/64 AND SPECIAL PROVISIONS.

LIST OF SHEETS	
NO.	DESCRIPTION
1	GENERAL LAYOUT AND NOTES
2	ERECTION PLAN
3	ERECTION PLAN
4	ERECTION PLAN
5	ERECTION PLAN
6	ERECTION PLAN
7	BAFFLE DETAILS
8	FLUME DETAILS
9	FLUME DETAILS
10	FLUME DETAILS
11	DOWN SPOUT DETAILS
12	DOWN SPOUT DETAILS
13	DOWN SPOUT DETAILS
14	DOWN SPOUT DETAILS
15	DOWN SPOUT DETAILS
16	HANGER DETAILS
17	ROADWAY DRAIN DETAILS
18	SCUPPER DETAILS

MICRO-FILMED

GEORGE R. LEWIS COMPANY
3305 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55405

BRIDGE NO. - 9340

STATE PROJECT NO. - 2783-9340 B (T.H. 35W = 394)

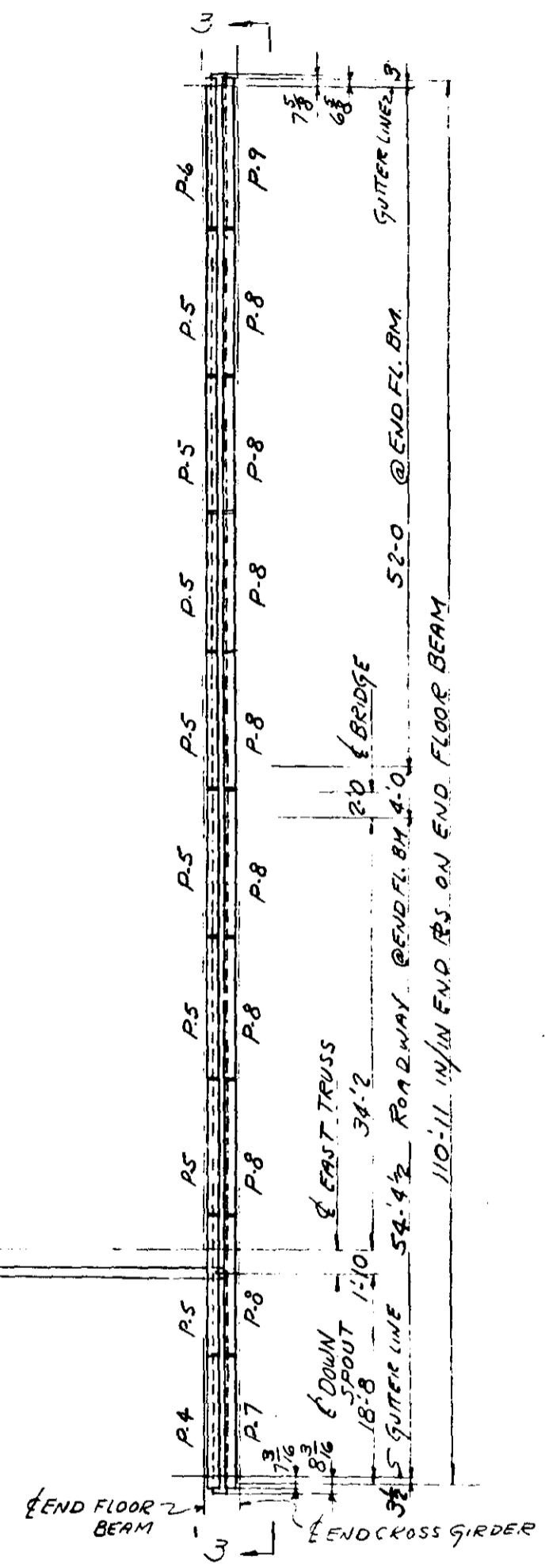
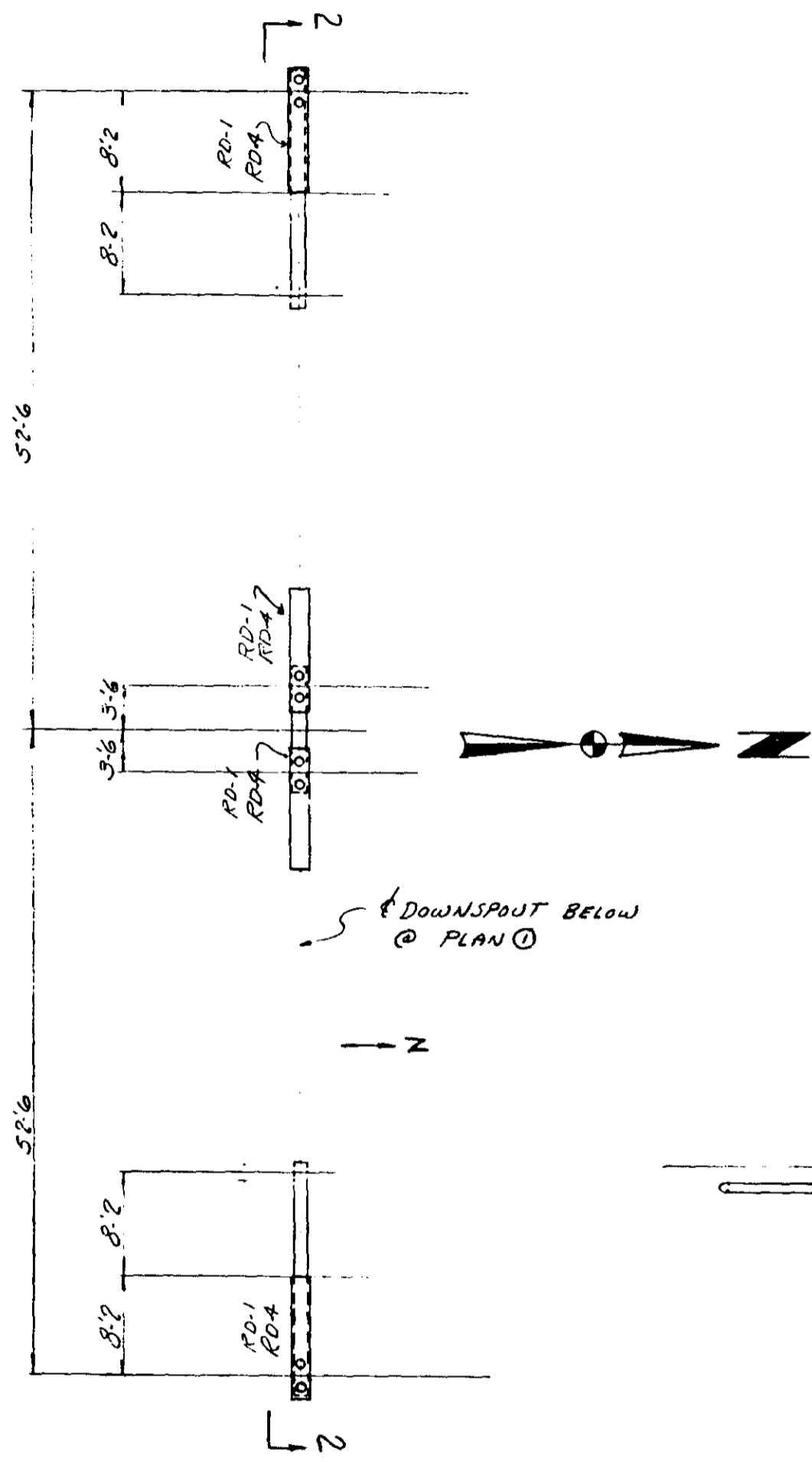
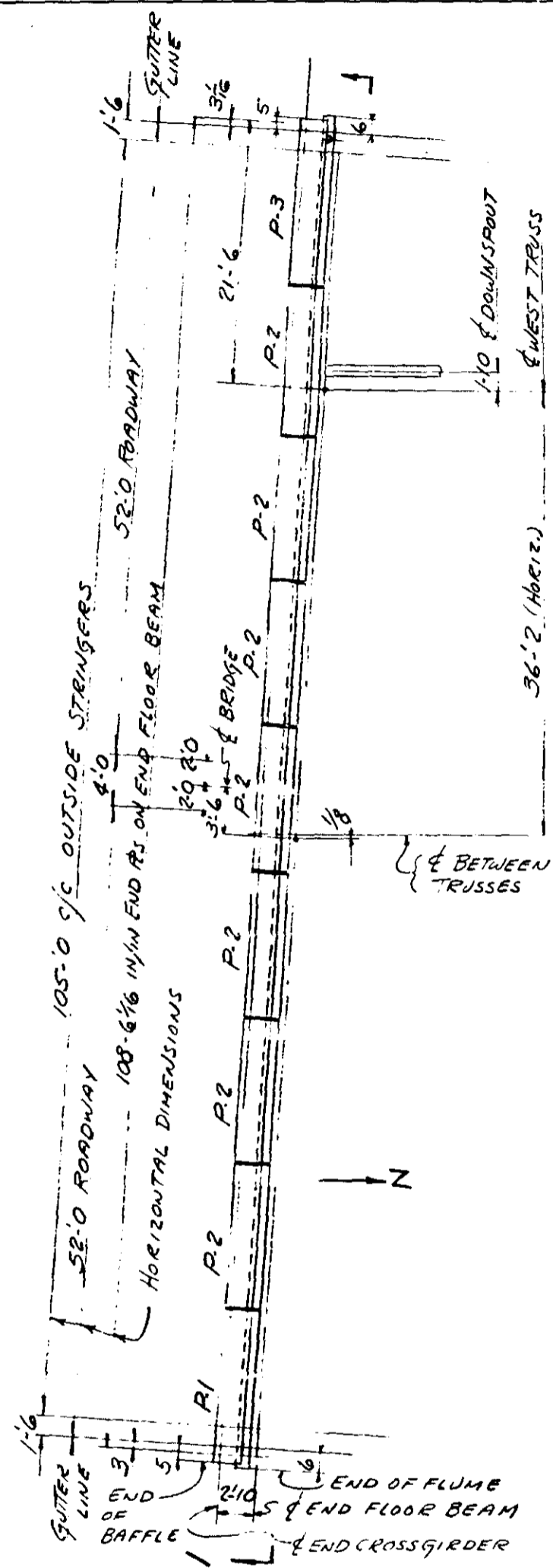
MINNESOTA PROJECT NO. - I-IG 35W-3(58)112

CONTRACTOR - INDUSTRIAL CONSTR. DIV.

LOCATION - T.H. 35W & MISSISSIPPI RIVER - MINNEAPOLIS

DESCRIPTION - DRAINAGE SYSTEM

Drawn by: E.A.J.
Checked by: W.J.W.
M.H.D. Approved:
12-5-C2



- ① PLAN OF ROADWAY DRAIN FLUMES & PIPE DOWNSPOUTS @ PIER #6
- ② PLAN OF ROADWAY DRAINS 253'-0" SOUTH OF PIER #7
- ③ PLAN OF ROADWAY DRAINS 25'-0" SOUTH OF PIER #7

NOTE:
 FOR PLANS ② & ③ FOR BOLTING TO STRINGERS SEE DETAIL X ON SHEET 4 OF 18, ALSO AT EACH ROADWAY DRAIN - BOLT 2 - SHIMS SH-2 & 2 - SHIMS SH-3, WITH 6 - 7/8" MACH. BOLTS & 6 - LOCK WASHERS EXCEPT AS NOTED IN SECTION 2-2

FOR SECTION 1-1 SEE SHEET 3
 FOR SECTION 2-2 SEE SHEET 4
 FOR SECTION 3-3 SEE SHEET 5

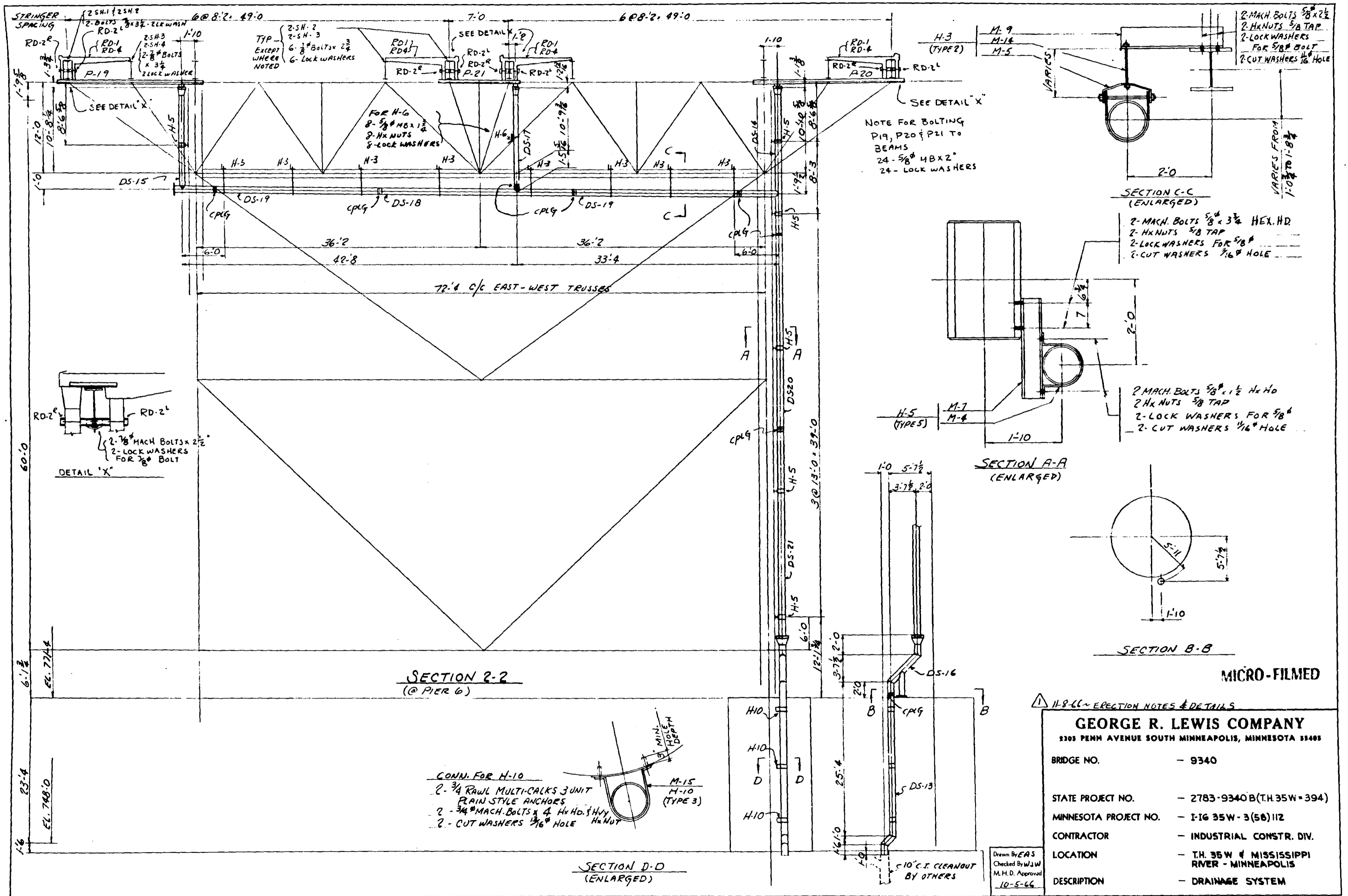
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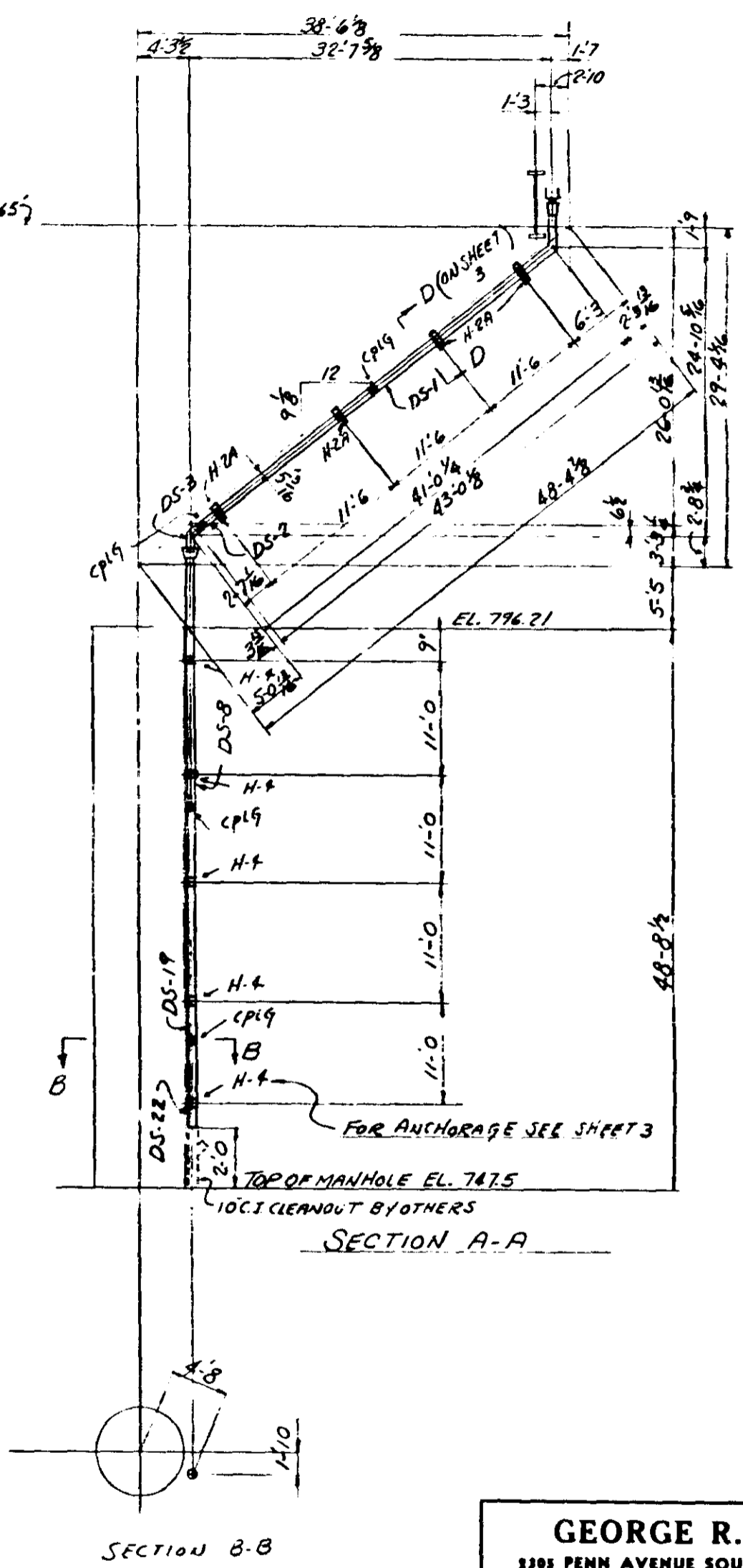
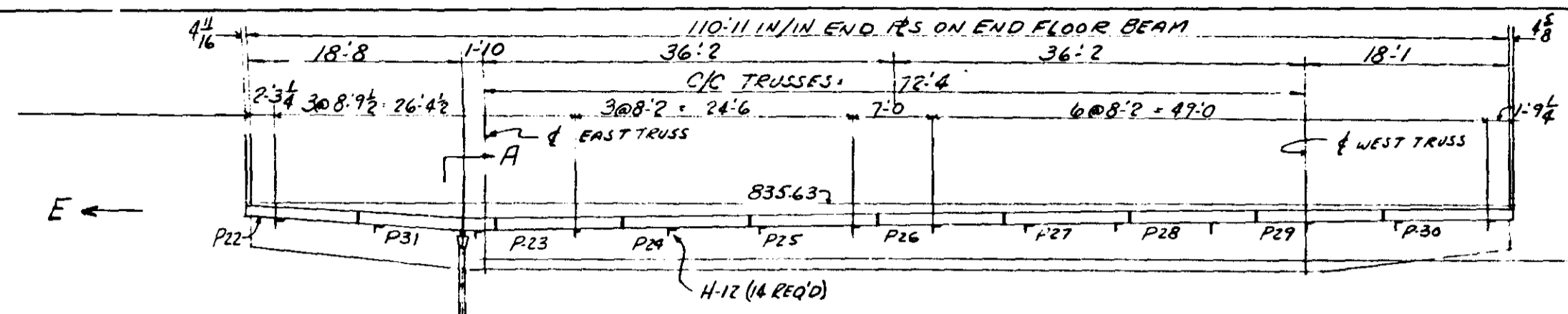
PLAN OF BAFFLE PLATES NEAR PIERS 5-6, 8, 253'-0" & 253'-0" SOUTH OF PIER 7

GEORGE R. LEWIS COMPANY	
2305 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55405	
BRIDGE NO.	- 9340
STATE PROJECT NO.	- 2783-9340 B (T.H.35W-394)
MINNESOTA PROJECT NO.	- I-IG 35W-3(5B)112
CONTRACTOR	- INDUSTRIAL CONSTR. DIV.
LOCATION	- T.H. 35W & MISSISSIPPI RIVER - MINNEAPOLIS
DESCRIPTION	- DRAINAGE SYSTEM

Drawn By: EAS
 Checked By: W.J.W.
 M.H.D. Approved
 10-5-66

11-8-66 - ERECT. NOTES

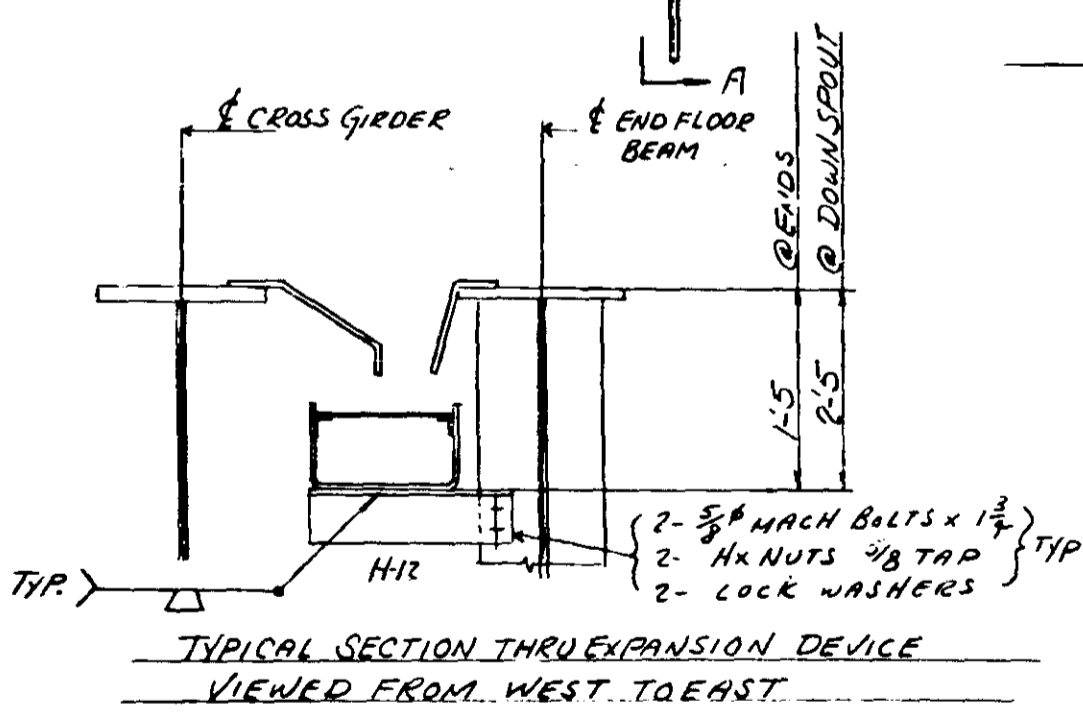




LOG TAN. 7.88186
 LOG COS. 7.90061
 LOG SIN. 7.78247

- SUMMARY OF FIELD BOLTS FOR HANGERS**
- 53- 3/4" RING-MULTI-CALK 3-UNIT PLAIN ANCHORS
 - 53- 3/4" MACH BOLTS HxHD.
 - 53- CUT WASHER 1 3/16" HOLE
 - 56- MACH BOLTS 5/8" x 1 1/2" HxHD f NUT
 - 24- MACH BOLTS 5/8" x 3 3/4" HxHD f NUT
 - 16- MACH BOLTS 5/8" x 2 1/2" HxHD f NUT
 - 56- MACH BOLTS 5/8" x 1 3/4" HxHD f NUT
 - 6- MACH BOLTS 5/8" x 2" HxHD f NUT
 - 190- LOCK WASHERS FOR 5/8" BOLT
 - 130- CUT WASHERS 1/16" HOLE
 - 8- 7/8" MACH BOLTS x 2" HxHD f NUT (AVI, HX, NUT)
 - 8- LOCK WASHERS - 7/8" BOLT
 - 16- MACH. BOLTS 5/8" x 2 1/4" HxHD f NT.
 - 16- MACH. BOLTS 5/8" x 2 1/4" HxHD f NT.
- ORDER FROM ABOVE LIST

SECTION 3-3
 (NEAR PIER 8)



GEORGE R. LEWIS COMPANY
 1305 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55405

BRIDGE NO. - 9340

STATE PROJECT NO. - 2783-9340 B (T.H. 35W = 394)

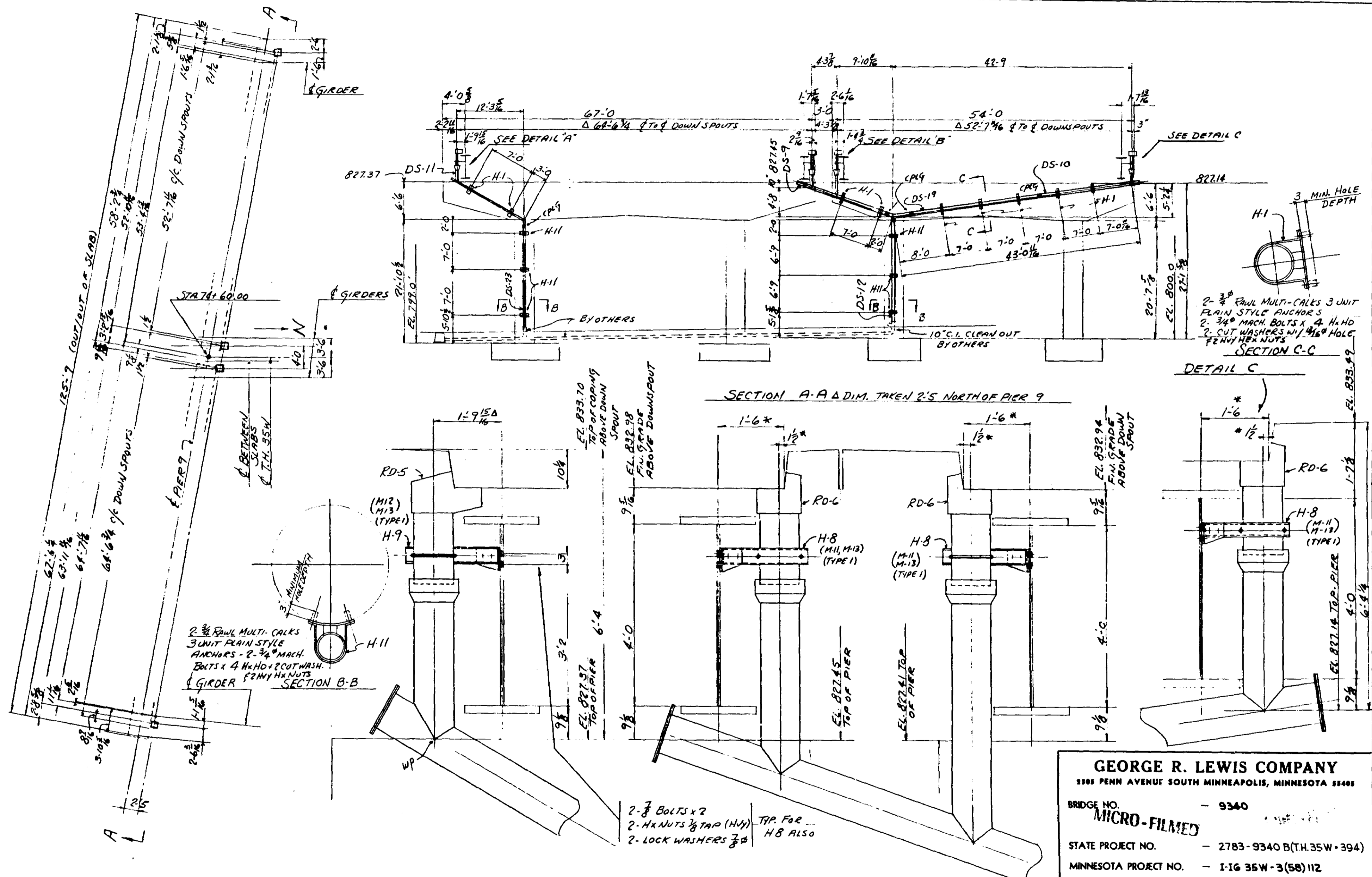
MINNESOTA PROJECT NO. - I-16 35W - 3(58) 112

CONTRACTOR - INDUSTRIAL CONSTR. DIV.

LOCATION - T.H. 35W & MISSISSIPPI RIVER - MINNEAPOLIS

DESCRIPTION - DRAINAGE SYSTEM

Drawn By E.A.S.
 Checked By W.Jul
 M.H.D. Approved
 10-5-66



2- 3/8" RAWL MULTI-CALKS 3 UNIT RAIN STYLE ANCHORS - 2- 3/4" MACH. BOLTS x 4 H.H.O. + 2 CUT WASH. F2 NY H X NUTS
 SECTION B-B

DETAIL A
 A DIMENSIONS PARALLEL & PIER

DETAIL B
 * DIMENSIONS NORMAL TO GIRDERS

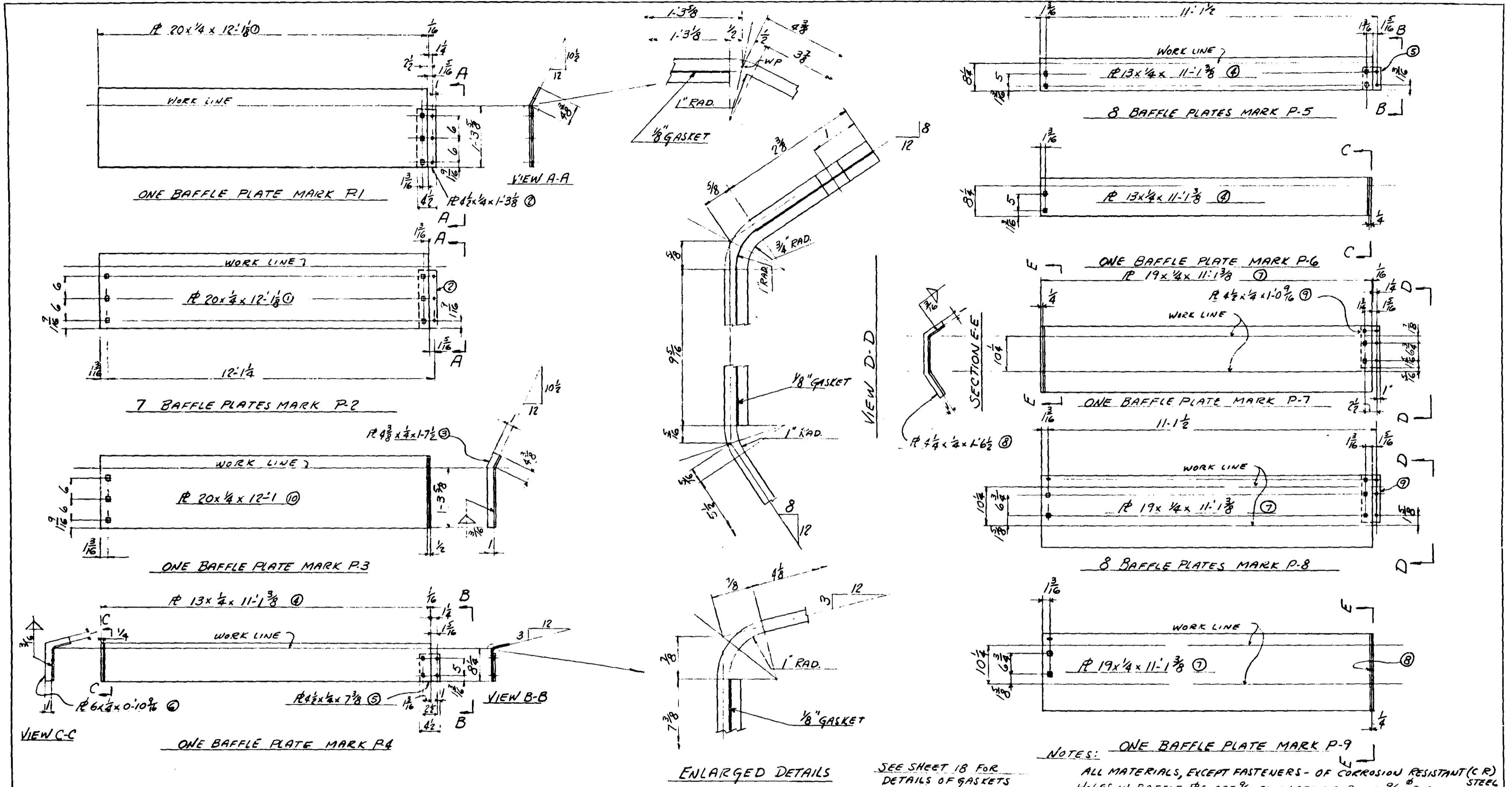
SECTION C-C
 DETAIL C

GEORGE R. LEWIS COMPANY
 5305 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55405

BRIDGE NO. - 9340
MICRO-FILMED

STATE PROJECT NO. - 2783-9340 B(T.H.35W-394)
 MINNESOTA PROJECT NO. - I-16 35W-3(58)112
 CONTRACTOR - INDUSTRIAL CONSTR. DIV.
 LOCATION - T.H.35W & MISSISSIPPI RIVER - MINNEAPOLIS
 DESCRIPTION - DRAINAGE SYSTEM

Drawn By: E.A.S.
 Checked By: M.H.D.
 M.H.D. Approved
 10-5-66



QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS
1	ONE BAFFLE PLATE P-1	①	BENT	1	ONE BAFFLE PLATE P-4	④	BENT	1	ONE BAFFLE PLATE P-7	⑦	BENT
1	R 20x 1/4 x 12'-1 1/8	①		1	R 13x 1/4 x 11'-1 3/8	④		1	R 19x 1/4 x 11'-1 3/8	⑦	BENT
1	R 4 1/2 x 1/4 x 1'-3 1/8	②		1	R 4 1/2 x 1/4 x 0'-7 3/8	③		1	R 4 1/2 x 1/4 x 1'-0 1/8	③	BENT
3	1/2" CARRIAGE BOLTS x 1 1/2 + HEX NUT & LOCK WASHER			1	R 6x 1/4 x 0'-10 1/8	⑥		3	1/2" CARRIAGE BOLTS x 1 1/2 + HEX NUT & LOCK WASHER		
7	7 BAFFLE PLATES P-2	②		2	8 BAFFLE PLATES P-5	⑤		8	8 BAFFLE PLATES P-8	⑧	
7	R	②		8	R	⑤		8	R	⑧	
21	1/2" CARRIAGE BOLTS x 1 1/2 + HEX NUT & LOCK WASHER			8	R	⑤		28	1/2" CARRIAGE BOLTS x 1 1/2 + HEX NUT & LOCK WASHER		
1	ONE BAFFLE PLATE P-3	⑩	BENT	16	1/2" CARRIAGE BOLTS x 1 1/2 + HEX NUT & LOCK WASHER			28	ONE BAFFLE PLATE P-9	⑨	
1	R 20x 1/4 x 12'-1	⑩		1	ONE BAFFLE PLATE P-6	⑥		1	R	⑦	
1	R 4 1/2 x 1/4 x 1'-7 1/2	③		1	R	⑥		1	R	⑧	
									FIELD BOLTS		
								69	1/2" CARRIAGE BOLTS x 1 1/2 + HEX NUT & LOCK WASHER		

GEORGE R. LEWIS COMPANY
2305 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55405

BRIDGE NO. - 9340

STATE PROJECT NO. - 2783-9340 B (TH 35W=394)

MINNESOTA PROJECT NO. - I-16 35W-3(58)112

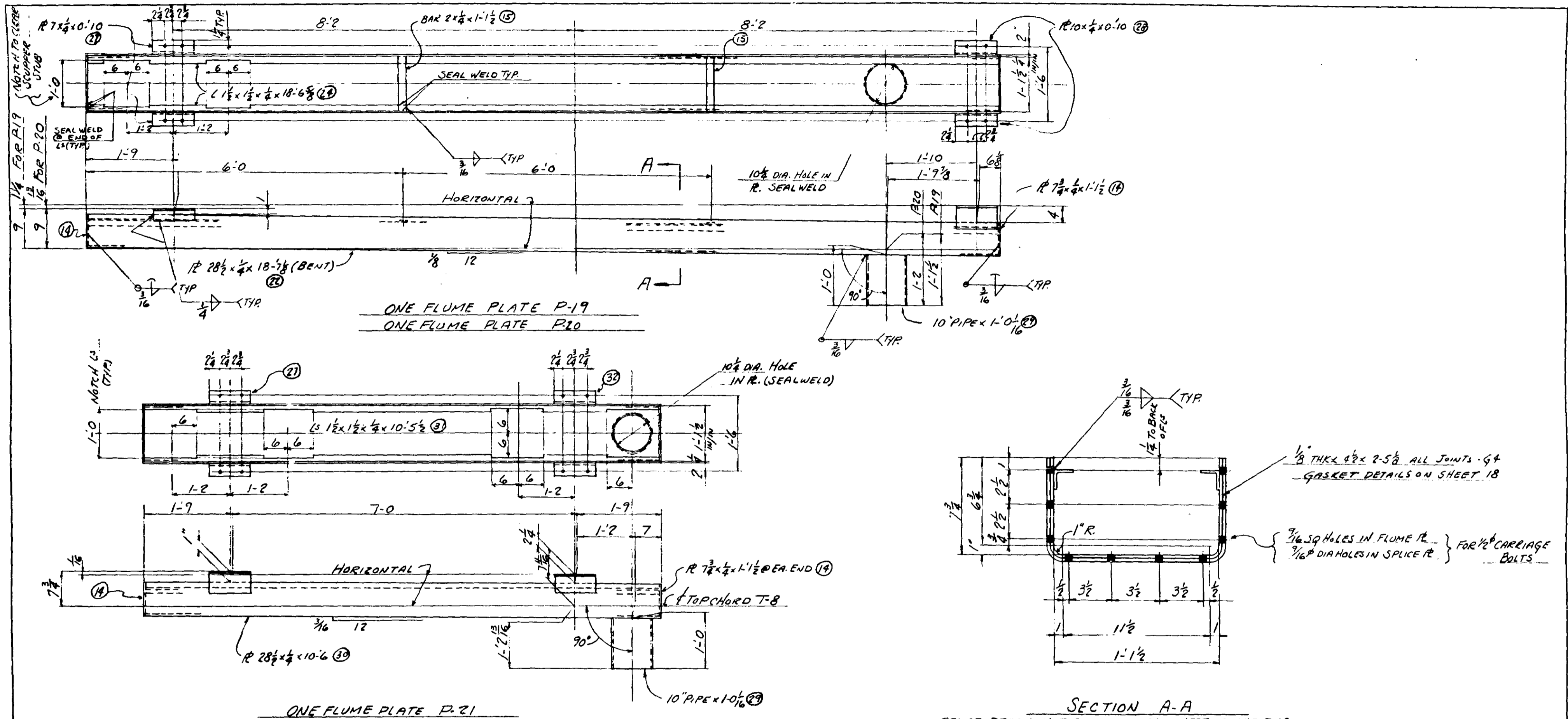
CONTRACTOR - INDUSTRIAL CONSTR. DIV.

LOCATION - T.H. 35W & MISSISSIPPI RIVER - MINNEAPOLIS

DESCRIPTION - DRAINAGE SYSTEM

MICRO-FILMED

Drawn By E.A.S.
Checked By W.J.W.
M.H.D. Approved
10-5-66



SECTION A-A
 SPLICE DETAILS NOT APPLICABLE THIS SHEET. SEE SHEET-10

- NOTES:
1. ALL HOLES $\frac{1}{16}$ " UNLESS NOTED.
 2. ALL MATERIALS THIS SHEET, EXCEPT FASTENERS & PIPE TO BE CORROSION RESISTANT (C.R.) STEEL
 3. PIPE TO BE YALLOY

QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS
	ONE FLUME PLATE P-19				ONE FLUME PLATE P-21						
	ONE FLUME PLATE P-20			1	R 28 1/2 x 1/4 x 10.6	22	(BENT)				
2	R 28 1/2 x 1/4 x 18.7 1/2	22	(BENT)	2	L 1 1/2 x 1 1/2 x 1/4 x 10.5 1/2	23	(BENT)				
4	L 1 1/2 x 1 1/2 x 1/4 x 18.6 3/8	23		2	R 7 1/2 x 1/4 x 0.10	27	(BENT)				
4	R 7 1/2 x 1/4 x 1.1 1/2	27		2	R 7 1/2 x 1/4 x 1.1 1/2	28					
4	R 7 x 1/4 x 0.10	27	(BENT)	1	10" PIPE 10 3/4 O.D. W/ .365 WALL X 1.0 1/2	29					
4	R 5.10 x 1/4 x 0.10	28	(BENT)	2	R 5 8 1/2 x 1/4 x 0.10	29	(BENT)				
2	10" PIPE 10 3/4 O.D. W/ .365 WALL X 1.0 1/2	29			FIELD BOLTS FOR CONN. TO SUPPORTING STEEL BEAMS						
4	BAR 2 x 1/4 x 1.1 1/2	35		24	5/8" A.B. x 2" H.R. HD. NUT						
				24	LOCK WASHERS FOR 5/8" BOLT						

Drawn By E.A.S.
 Checked By W.J.W.
 M.H.D. Approved
 10-5-66

GEORGE R. LEWIS COMPANY
 2305 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55405

BRIDGE NO. - 9340 **MICRO-FILMED**

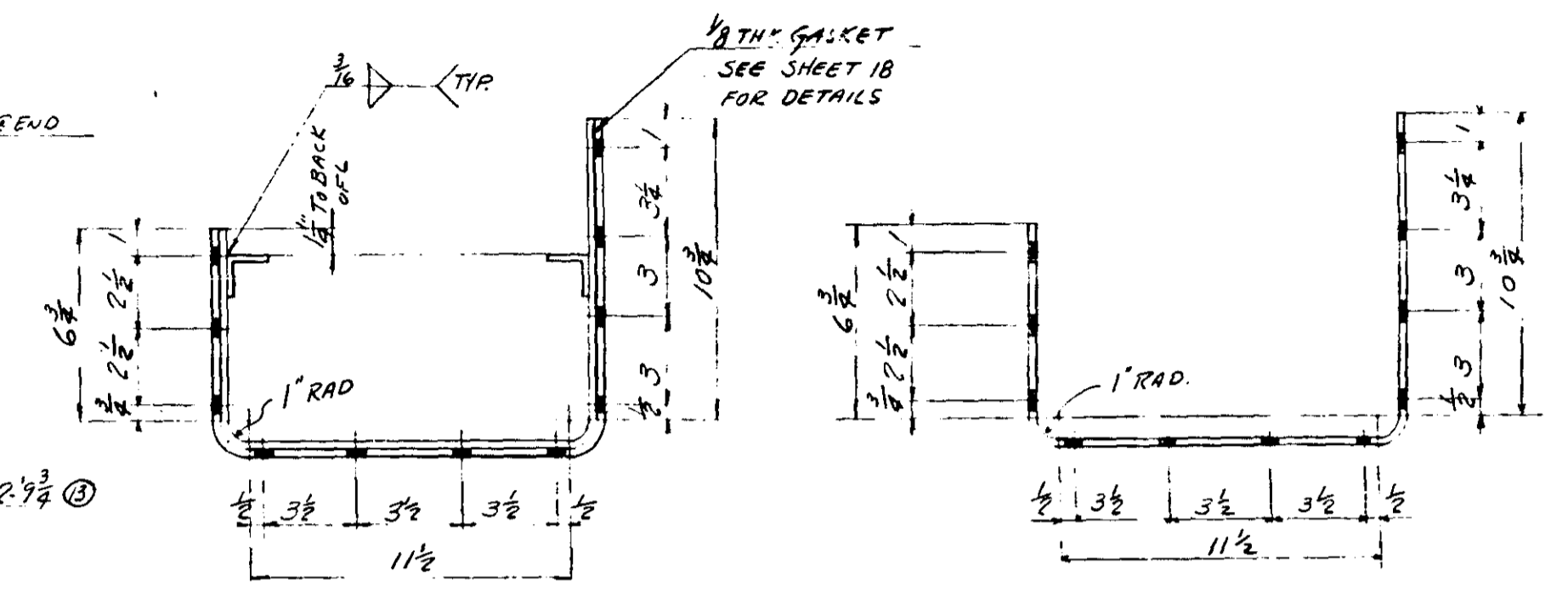
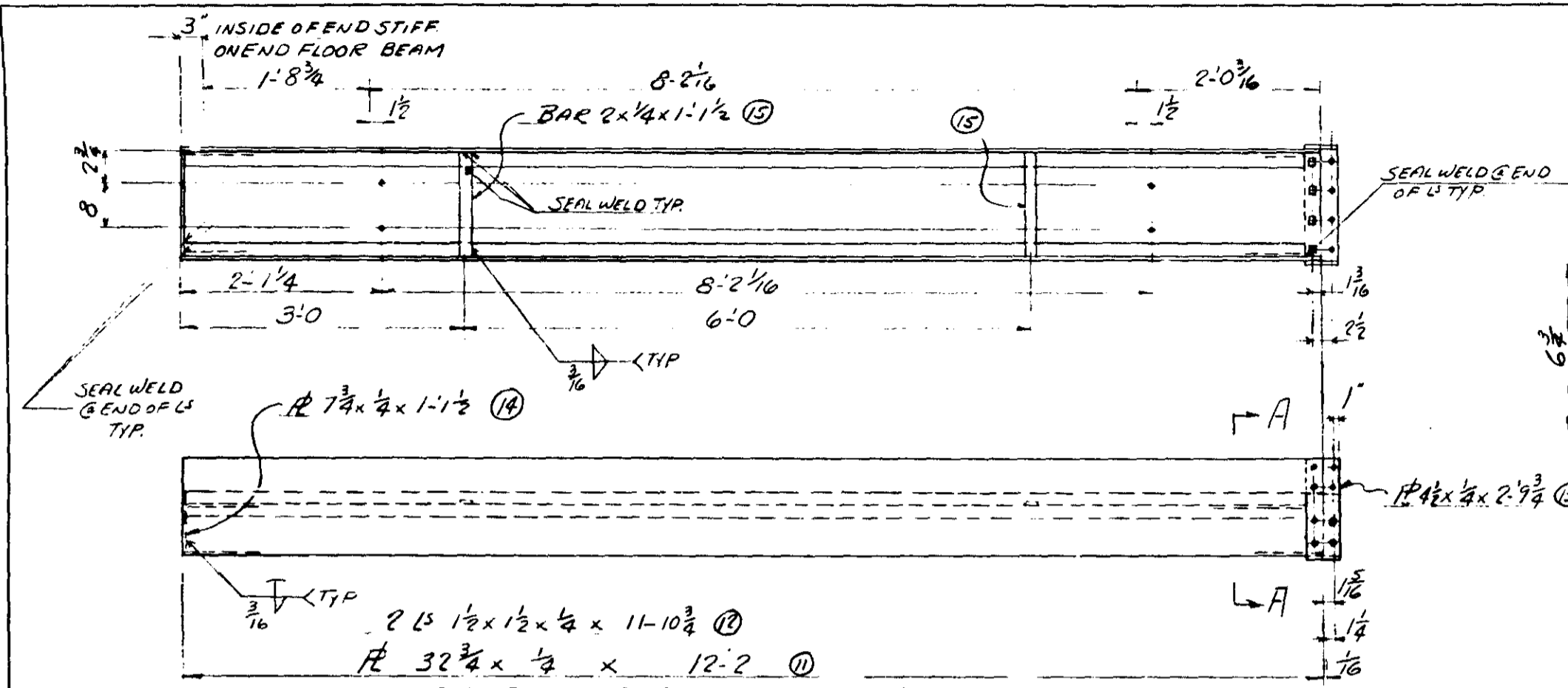
STATE PROJECT NO. - 2783-9340 B(T.H.35W + 394)

MINNESOTA PROJECT NO. - I-IG 35W - 3(58)112

CONTRACTOR - INDUSTRIAL CONST. DIV.

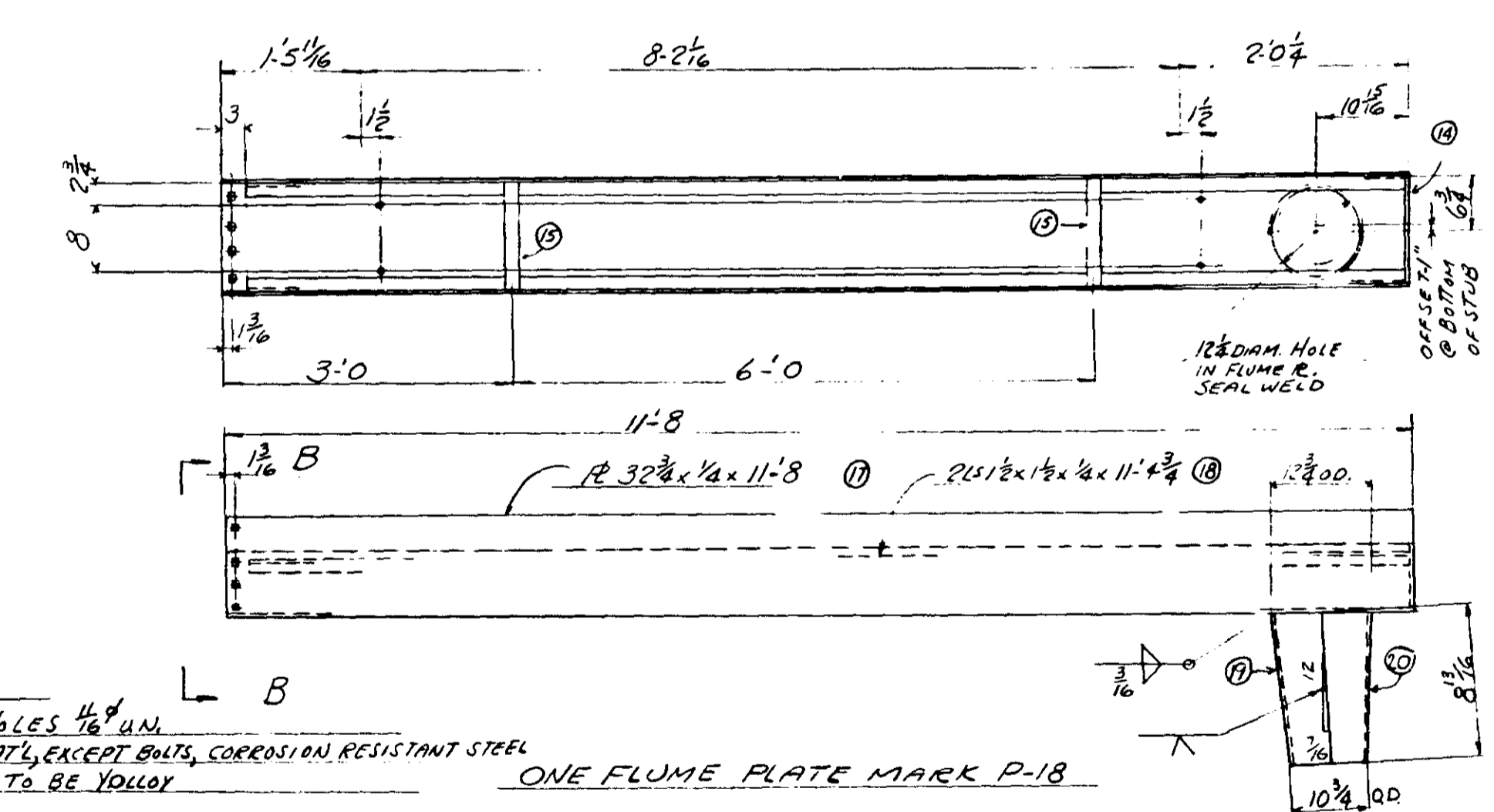
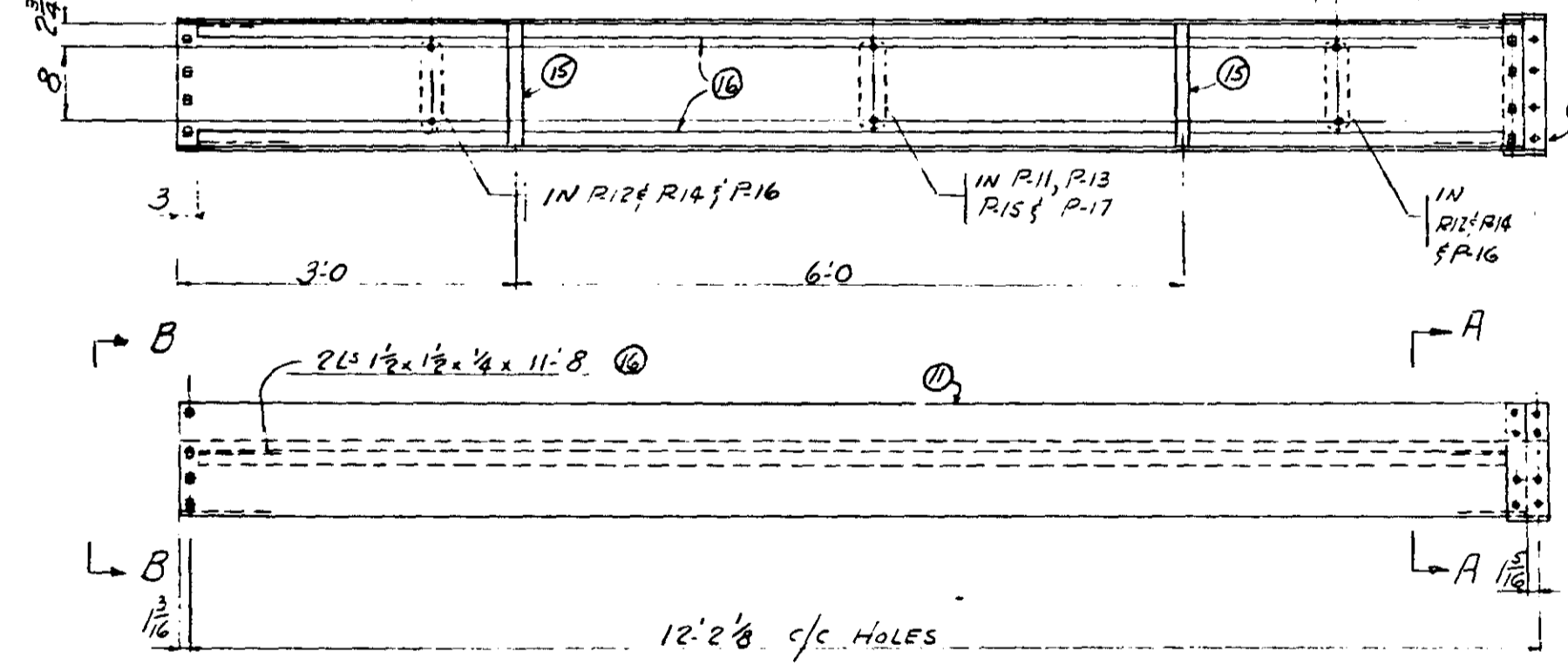
LOCATION - T.H.35W & MISSISSIPPI RIVER - MINNEAPOLIS

DESCRIPTION - DRAINAGE SYSTEM



ONE FLUME PLATE MARK P-10

P-11	6'-1 ³ / ₁₆	6'-0 ⁵ / ₁₆
P-12	2'-1 ³ / ₄	8'-2 ¹ / ₁₆
P-13	6'-3 ³ / ₄	5'-10 ³ / ₈
P-14	2'-3 ³ / ₄	7'-0 ¹ / ₈
P-15	5'-3 ³ / ₈	6'-10 ¹ / ₄
P-16	1'-3 ¹³ / ₁₆	8'-2 ¹ / ₁₆
P-17	5'-5 ⁹ / ₁₆	6'-8 ⁵ / ₁₆



NOTES
 1. ALL HOLES 1/16\"/>

QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS
1	ONE FLUME PLATE P-10			7	ONE FLUME PLATE P-11		
1	R 32 3/4 x 1/4 x 12-2	①	BENT	14	LS 1 1/2 x 1 1/2 x 1/4 x 11-8	②	
2	L 1 1/2 x 1 1/2 x 1/4 x 11-10 3/4	③		7	RS	③	
1	R 4 1/2 x 1/4 x 2-9 3/4	④	BENT	14	BAR	④	
1	R 7 3/4 x 1/4 x 1-1 1/2	⑤		7	1/2\"/>		

FIELD BOLTS FOR SPLICES
 88 - 1/2\"/>

GEORGE R. LEWIS COMPANY
 5305 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55405

BRIDGE NO. - 9340

STATE PROJECT NO. - 2783-9340 B(T.H.35W+394)

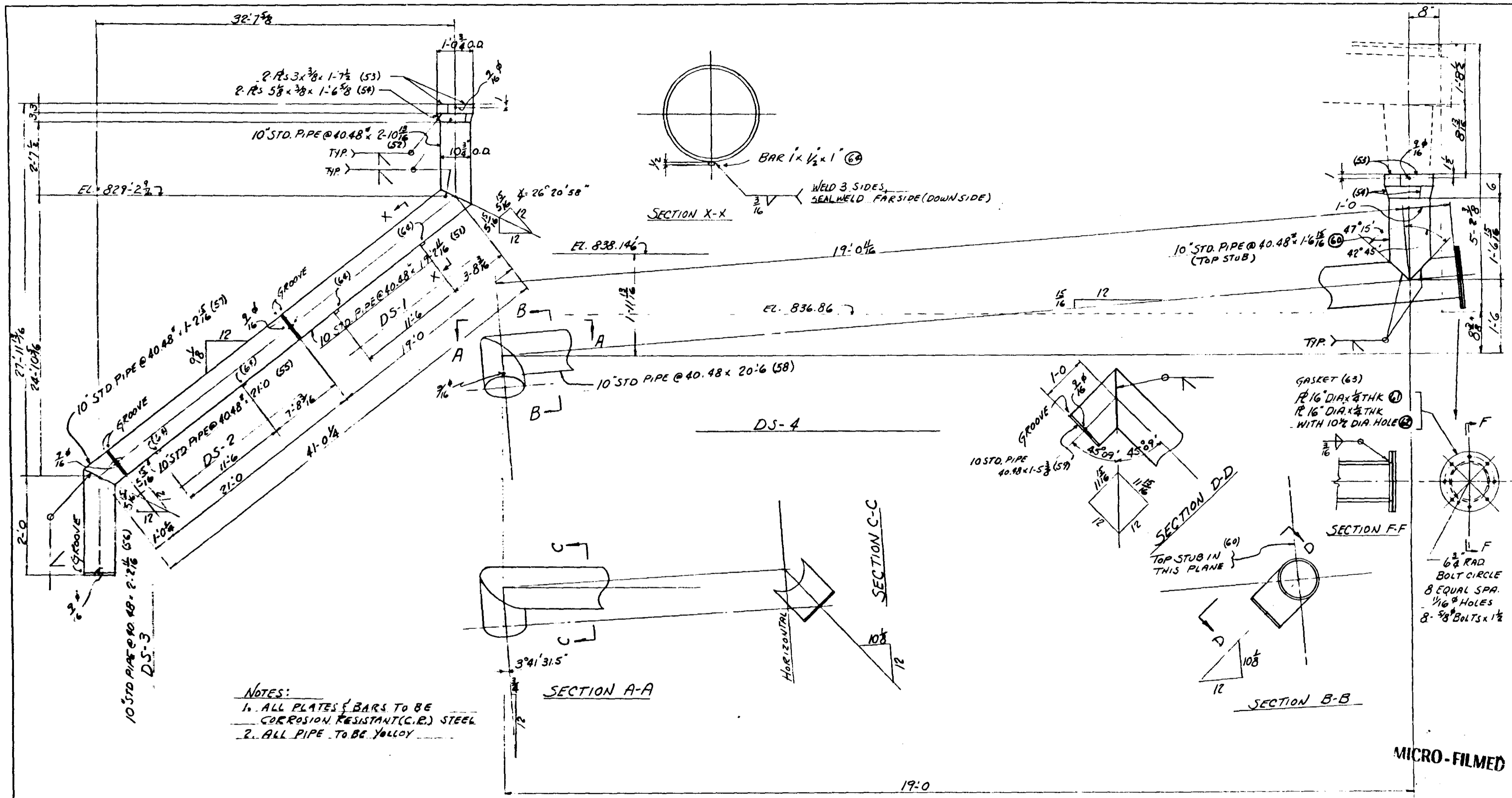
MINNESOTA PROJECT NO. - I-1G 35W - 3(58) 112

CONTRACTOR - INDUSTRIAL CONSTR. DIV.

LOCATION - T.H.35W & MISSISSIPPI RIVER - MINNEAPOLIS

DESCRIPTION - DRAINAGE SYSTEM

Drawn By: E.A.S.
 Checked By: M.H.D.
 M.H.D. Approved
 10-5-66



NOTES:
 1. ALL PLATES & BARS TO BE CORROSION RESISTANT (C.R.) STEEL
 2. ALL PIPE TO BE YOLLOY

QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS
ONE DOWNSPOUT DS-1							
1	10" STD. PIPE @ 40.48" x 19'-2 1/4"	(51)	BEV. I.E.	1	10" STD. PIPE @ 40.48" x 2'-2 1/4"	(56)	BEV. I.E.
1	10" STD. PIPE @ 40.48" x 2'-10 1/16"	(52)	BEV. I.E.	1	10" STD. PIPE @ 40.48" x 1'-2 1/4"	(57)	GROOVE I.E.
2	RS 3x 3/8 x 1-7 1/2	(53)					
2	RS 5/8 x 3/8 x 1-6 5/8	(54)					
2	BAR 1 x 1/2 x 0'-1	(64)					
ONE DOWNSPOUT DS-2							
1	10" STD. PIPE @ 40.48" x 21'-0"	(55)	GROOVE R.E.				
2	BAR 1 x 1/2 x 0'-1	(64)					
ONE DOWNSPOUT DS-3							
1	10" STD. PIPE @ 40.48" x 20'-6"	(58)	BEV. I.E.				
1	10" STD. PIPE @ 40.48" x 1'-5 3/8"	(59)	BEV. I.E.				
1	10" STD. PIPE @ 40.48" x 1'-6 3/8"	(60)	BEV. I.E.				
1	RS 16" DIA x 1/4" THK	(61)					
2	RS 16" DIA x 1/4" THK	(62)	10 1/2" DIA. HOLE				
2	RS	(53)					
2	RS	(54)					
1	GASKET 16" DIA x 1/2" THK	(63)					
8	3/8" BOLTS x 1 1/2" TH NUT LOCK WASHER	(65)	SEE SHEET 18				

GEORGE R. LEWIS COMPANY
 3385 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55403

BRIDGE NO. - 9340

STATE PROJECT NO. - 2783-9340 B (TH.35 W-394)

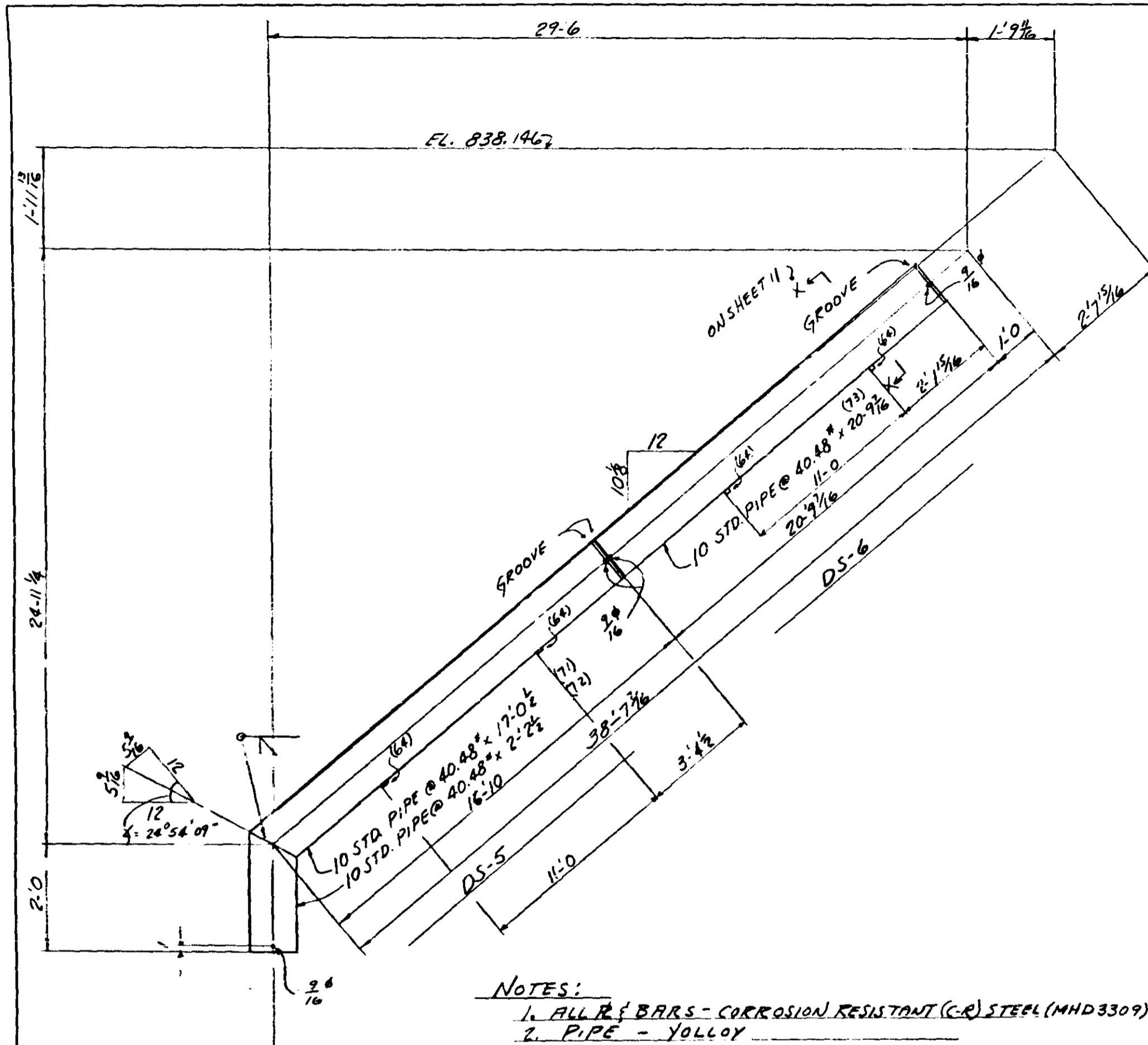
MINNESOTA PROJECT NO. - I-IG 35W-3(58) 112

CONTRACTOR - INDUSTRIAL CONSTR. DIV.

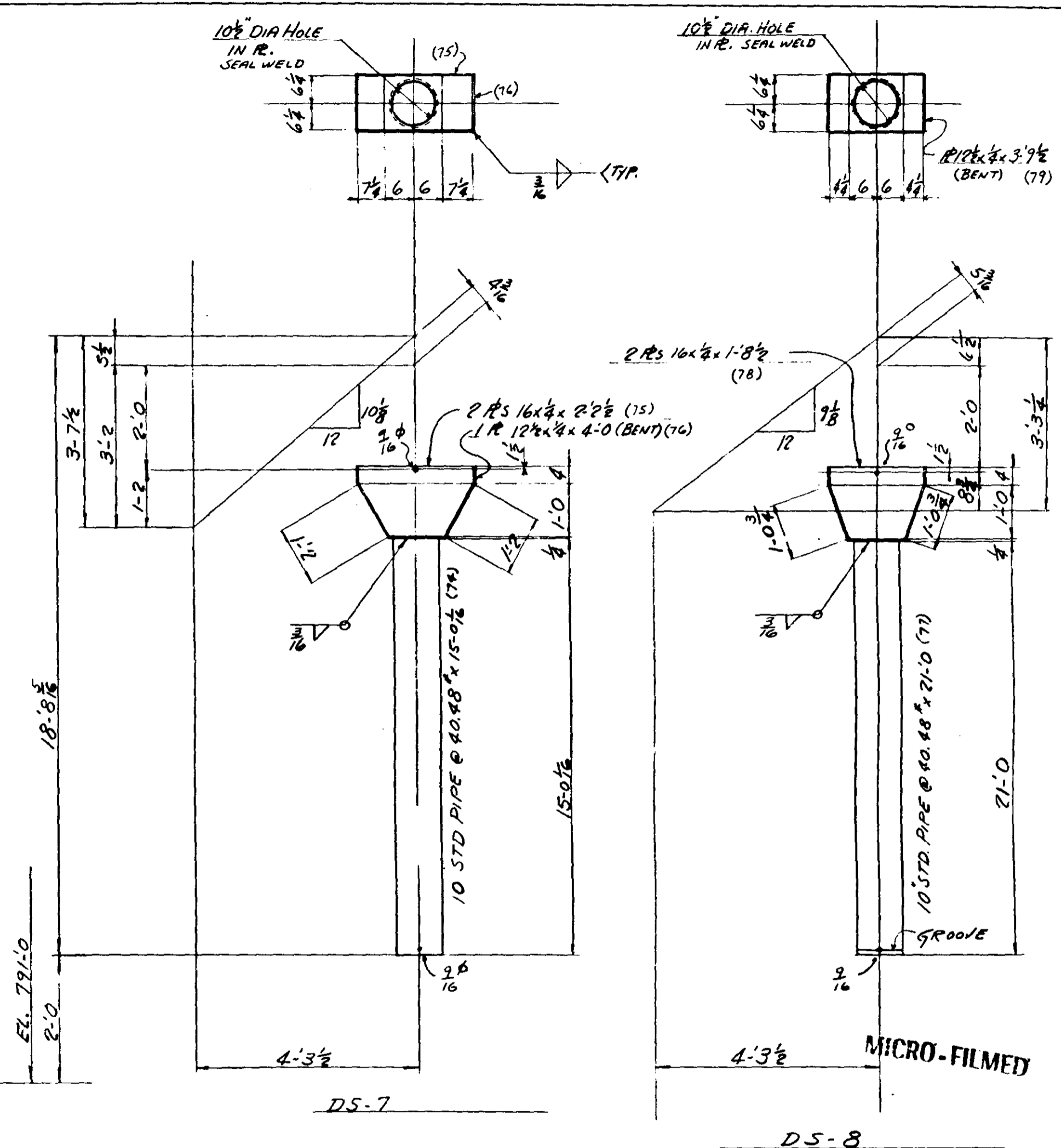
LOCATION - TH.35 W & MISSISSIPPI RIVER - MINNEAPOLIS

DESCRIPTION - DRAINAGE SYSTEM

Drawn By: E.A.S.
 Checked By: M.J.W.
 M.H.D. Approved
 10-5-66



NOTES:
 1. ALL REINFORCING BARS - CORROSION RESISTANT (C.R.) STEEL (MHD3309)
 2. PIPE - GALVANIZED



QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS
	ONE DOWNSPOUT DS-5				ONE DOWNSPOUT DS-7		
1	10" STD. PIPE @ 40.48" x 17.0"	(71)	BEV. I.E.	1	10" STD. PIPE @ 40.48" x 15.0"	(74)	
1	10" STD. PIPE @ 40.48" x 2.2"	(72)	BEV. I.E.	2	RS 16x 1/4 x 2.2"	(75)	
2	BAR 1x 1/2 x 0.1	(64)		1	R 12 1/2 x 1/4 x 4.0	(76)	BENT
	ONE DOWNSPOUT DS-6				ONE DOWNSPOUT DS-8		
1	10" STD. PIPE @ 40.48" x 20.9"	(73)	GROOVE R.E.	1	10" STD. PIPE @ 40.48" x 21.0"	(77)	GROOVE I.E.
2	BAR 1x 1/2 x 0.1	(64)		2	RS 16x 1/4 x 1.8 1/2	(78)	
				1	R 12 1/2 x 1/4 x 3.9 1/2	(79)	BENT

GEORGE R. LEWIS COMPANY
 3305 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55408

BRIDGE NO. - 9340

STATE PROJECT NO. - 2783-9340B(T.H.35W-394)

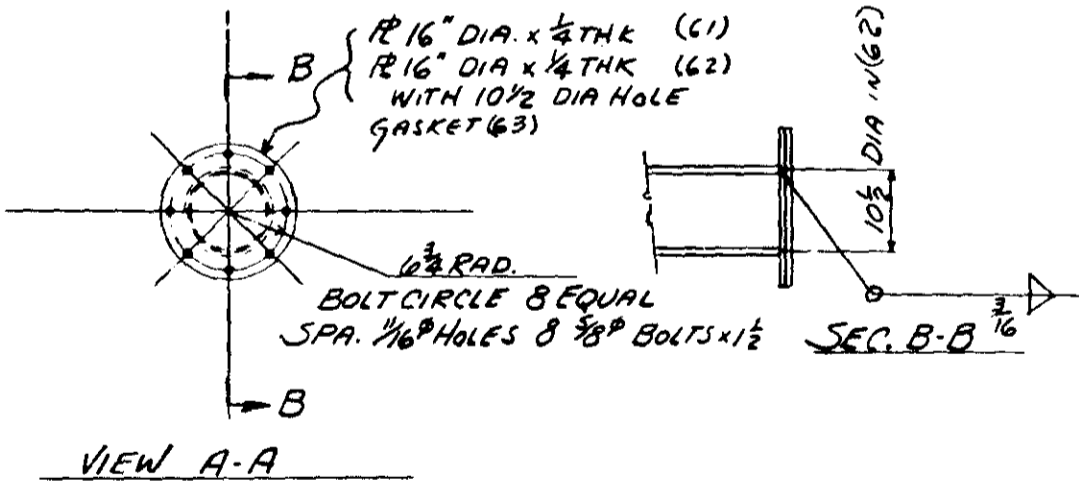
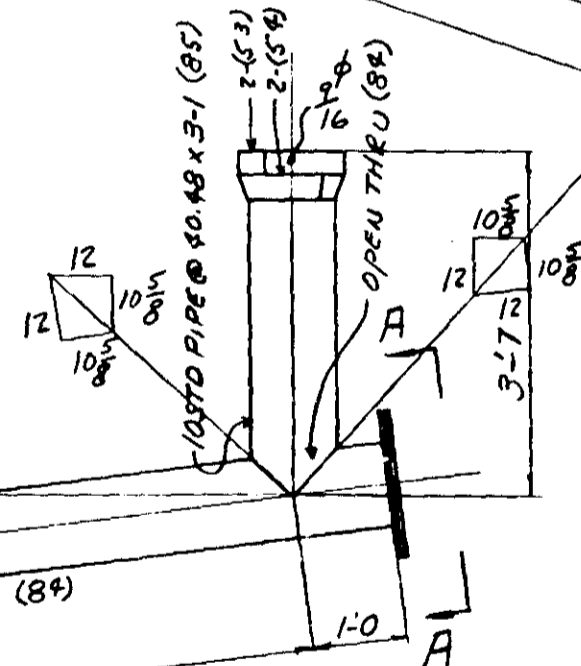
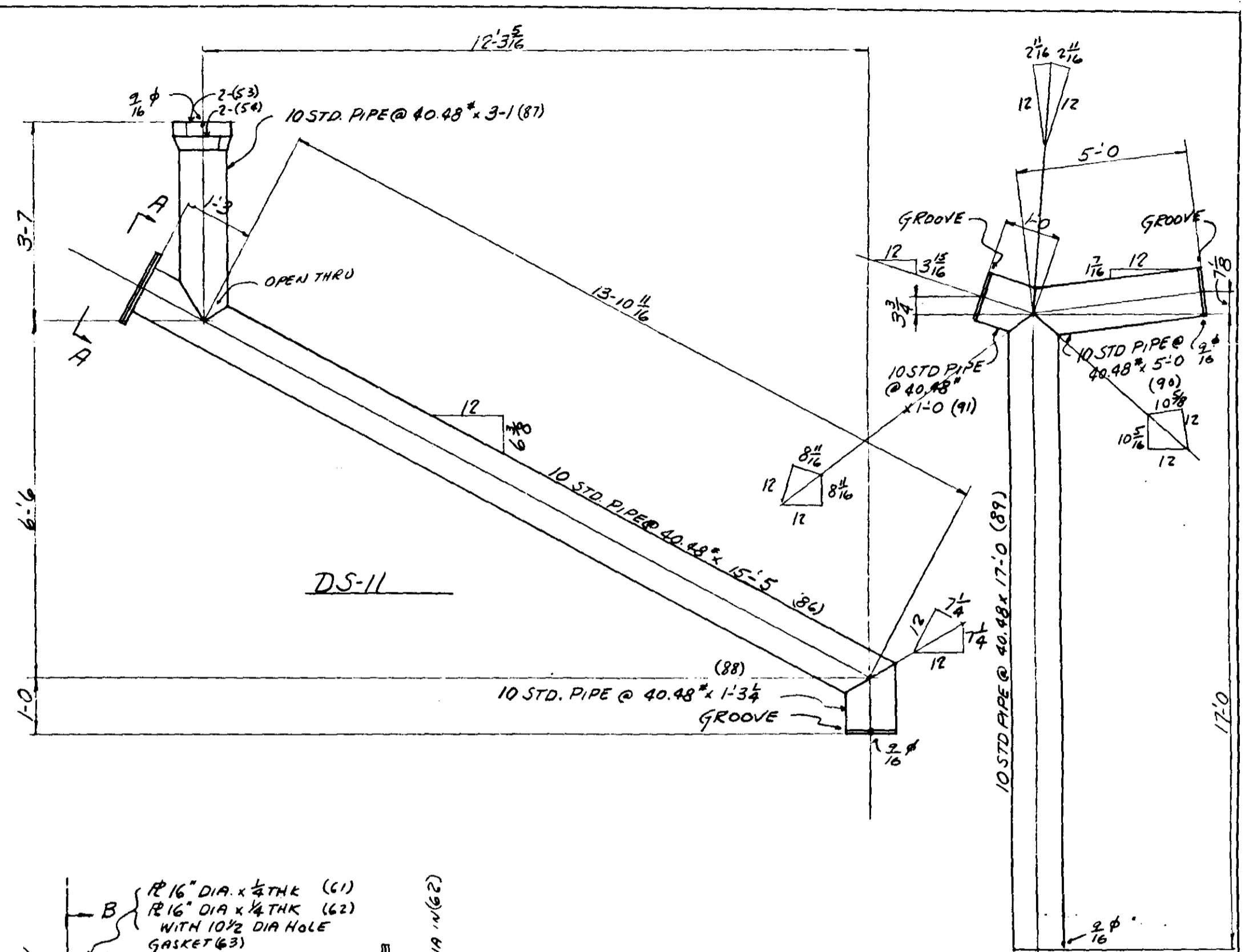
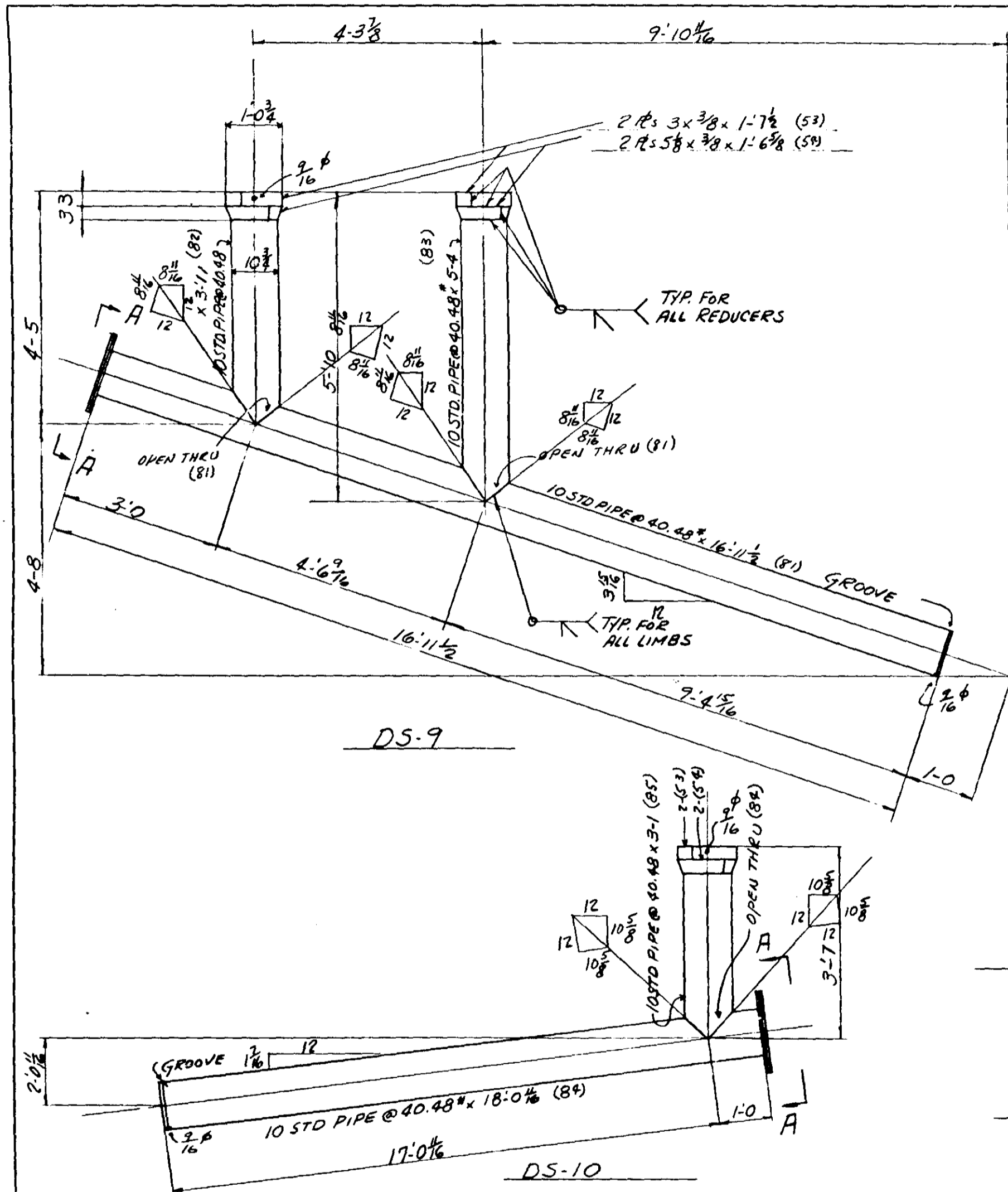
MINNESOTA PROJECT NO. - I-IG 35W-3(58)112

CONTRACTOR - INDUSTRIAL CONSTR. DIV.

LOCATION - T.H.35W @ MISSISSIPPI RIVER - MINNEAPOLIS

DESCRIPTION - DRAINAGE SYSTEM

Drawn By: E.A.S.
 Checked By: M.J.W.
 M.H.D. Approved
 10-5-66



NOTES:
 1. ALL RS & BARS CORROSION RESISTANT (C-R) STEEL
 2. PIPE YOLLOY

MICRO-FILMED

QUANT	DESCRIPTION	MARK	REMARKS	QUANT	DESCRIPTION	MARK	REMARKS	QUANT	DESCRIPTION	MARK	REMARKS
ONE DOWNSPOUT DS-9											
1	10 STD. PIPE @ 40.48" x 16'-11 1/2"	(81)	GROOVE I.E.	1	10 STD. PIPE @ 40.48" x 18'-0 1/4"	(84)	GROOVE I.E.	1	10 STD. PIPE @ 40.48" x 15'-5"	(86)	BEV. I.E.
1	10 STD. PIPE @ 40.48" x 3-11"	(82)	BEV. I.E.	1	10 STD. PIPE @ 40.48" x 3-1"	(85)	BEV. I.E.	1	10 STD. PIPE @ 40.48" x 3-1"	(87)	BEV. I.E.
1	10 STD. PIPE @ 40.48" x 5-4"	(83)	BEV. I.E.	1	5/8" BOLTS x 1 1/2" w/ Hx Hd & NUT & LOCK WASHER	(54)		2	10 STD. PIPE @ 40.48" x 1-3 1/4"	(88)	BEV. GROOVE
4	RS 3x 3/8 x 1-7 1/2	(53)	BENT	1	16" DIA x 1/4 THK	(61)		2		(53)	
4	RS 5/8 x 3/8 x 1-6 3/8	(54)	BENT	1	16" DIA x 1/4 THK	(62)	10 1/2 DIA HOLE	2		(54)	
1	16" DIA x 1/4 THK	(61)		8	5/8" BOLTS x 1 1/2" w/ Hx Hd & NUT & LOCK WASHER	(54)		2		(61)	
1	16" DIA x 1/4 THK	(62)	10 1/2 DIA HOLE	2		(53)		1		(62)	
1	GASKET 16" DIA x 1/8 THK	(63)	SEE SHEET 18	2		(54)		1		(63)	
8	5/8" BOLTS x 1 1/2" w/ Hx Hd & NUT & LOCK WASHER							8	5/8" BOLTS x 1 1/2" w/ Hx Hd & NUT & LOCK WASHER		
ONE DOWNSPOUT DS-12											
1	10 STD. PIPE @ 40.48" x 17'-0"	(89)	BEV. I.E.								
1	10 STD. PIPE @ 40.48" x 5'-0"	(90)	BEV. I.E.								
1	10 STD. PIPE @ 40.48" x 1'-0"	(91)	GROOVE I.E.								

Drawn By EAS
 Checked By WJSW
 M.H.D. Approved
 10-5-66

GEORGE R. LEWIS COMPANY
 2305 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55405

BRIDGE NO. - 9340

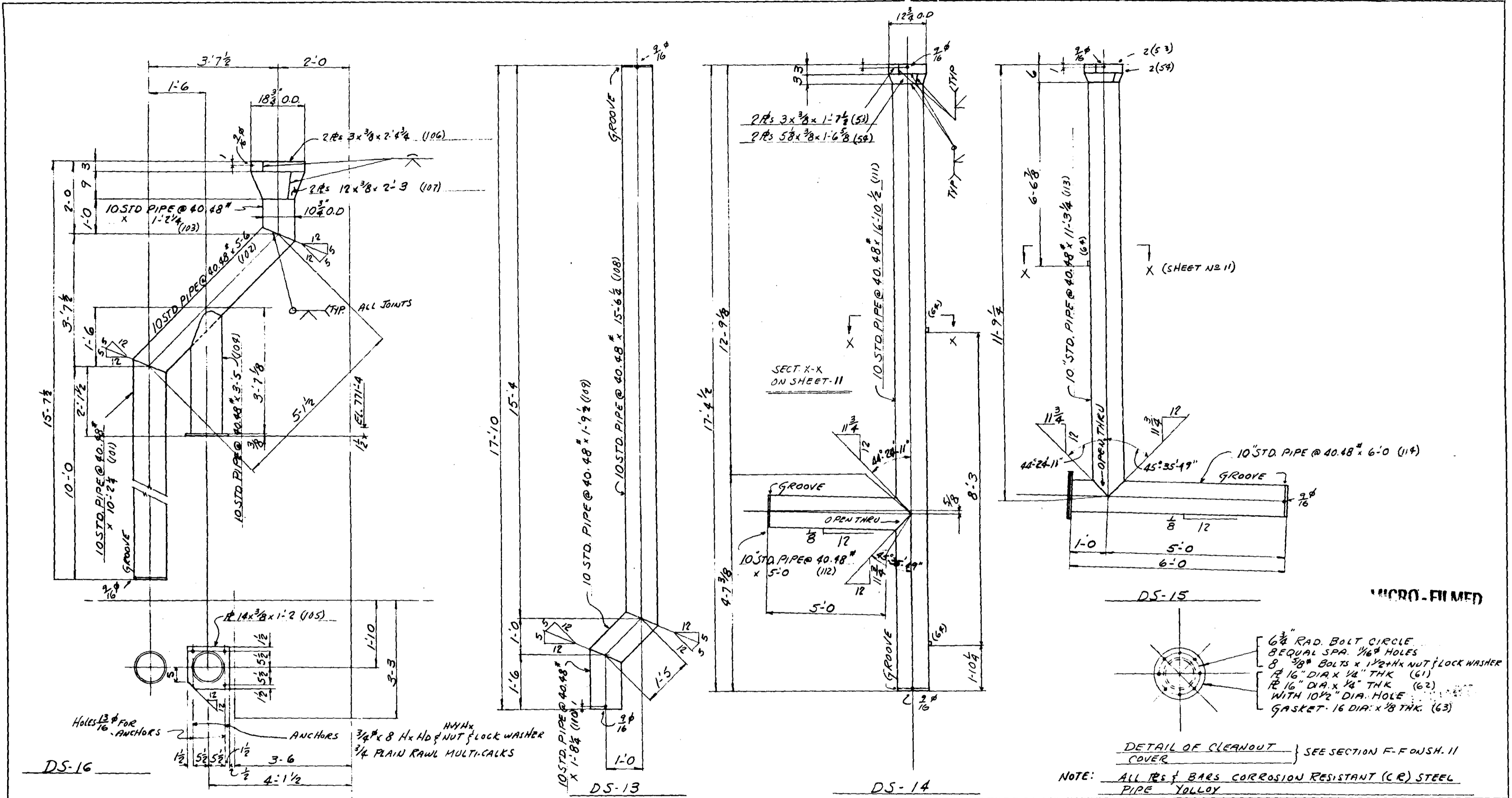
STATE PROJECT NO. - 2783-9340 B(T.H.35W+394)

MINNESOTA PROJECT NO. - I-IG 35W-3(58)112

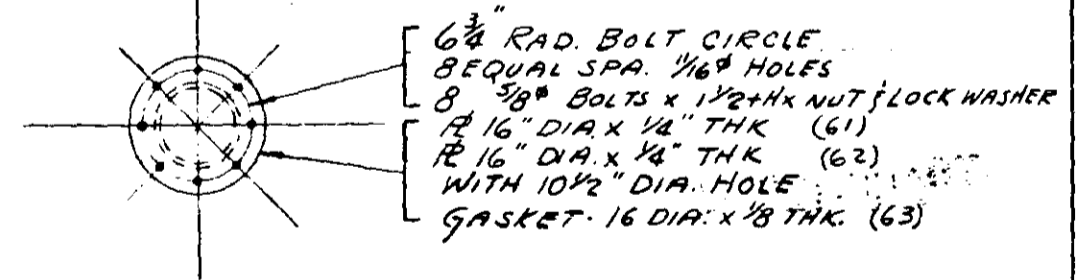
CONTRACTOR - INDUSTRIAL CONSTR. DIV.

LOCATION - T.H.35W & MISSISSIPPI RIVER - MINNEAPOLIS

DESCRIPTION - DRAINAGE SYSTEM



QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS
ONE DOWNSPOUT DS-16				ONE DOWNSPOUT DS-14			
1	10 STD. PIPE @ 40.48" x 10'-2 1/4"	(101)	BEV. I.E.	1	10 STD. PIPE @ 40.48" x 16'-10 1/2"	(111)	GROOVE I.E.
1	10 STD. PIPE @ 40.48" x 5'-6"	(102)	BEV. 2.E.	1	10 STD. PIPE @ 40.48" x 5'-0"	(112)	GROOVE I.E.
1	10 STD. PIPE @ 40.48" x 1'-2 1/4"	(103)	BEV. I.E.	2	RS 3 x 3/8 x 1'-7 1/2"	(51)	BENT
1	10 STD. PIPE @ 40.48" x 3'-5"	(104)	BEV. I.E.	2	RS 5/8 x 3/8 x 1'-6 3/8"	(54)	BENT
1	R 14 x 3/8 x 1'-2"	(105)		2	BARS 1 x 1/2 x 0'-1"	(64)	
2	R 3 x 3/8 x 2'-4 3/4"	(106)	BENT	ONE DOWNSPOUT DS-15			
2	R 12 x 3/8 x 2'-3"	(107)	BENT	1	10 STD. PIPE @ 40.48" x 11'-3 1/4"	(113)	BEV. I.E.
ONE DOWNSPOUT DS-13				1	10 STD. PIPE @ 40.48" x 6'-0"	(114)	GROOVE I.E.
1	10 STD. PIPE @ 40.48" x 15'-6 1/4"	(108)	BEV. I.E.	1	R 16" DIA. x 1/4" THK	(61)	
1	10 STD. PIPE @ 40.48" x 1'-9 1/2"	(109)	BEV. 2.E.	1	R 16" DIA. x 1/4" THK	(62)	WITH 10% DIA. HOLE
1	10 STD. PIPE @ 40.48" x 1'-8 1/4"	(110)	BEV. I.E.	1	GASKET 16" DIA. x 1/8" THK	(63)	SEE SHEET 18
				8	BOLTS 3/8" x 1 1/2" Hx Hd w/ Hx NUT & LOCK WASHER	(64)	
				2	RS	(53)	
				2	RS	(54)	
				1	BAR	(64)	



DETAIL OF CLEANOUT COVER SEE SECTION F-F ON SH. 11
 NOTE: ALL RS & BARS CORROSION RESISTANT (CR) STEEL PIPE GALVANIZED

GEORGE R. LEWIS COMPANY
 2305 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55405

BRIDGE NO. - 9340

STATE PROJECT NO. - 2783-9340 B (TH. 35W-394)

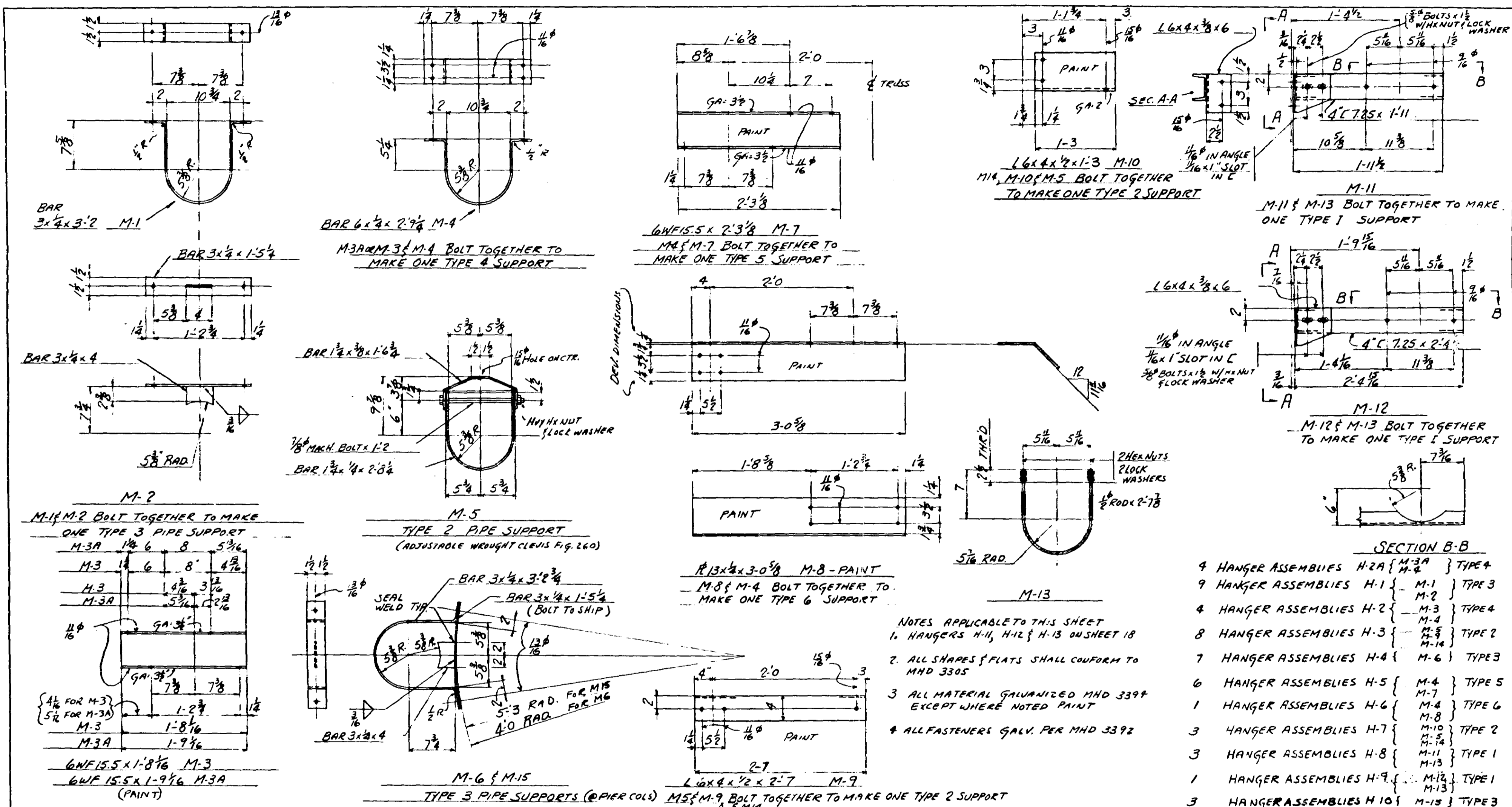
MINNESOTA PROJECT NO. - I-IG 35W-3(56)112

CONTRACTOR - INDUSTRIAL CONSTR. DIV.

LOCATION - TH. 35W & MISSISSIPPI RIVER - MINNEAPOLIS

DESCRIPTION - DRAINAGE SYSTEM

Drawn By: EAS
 Checked By: WJW
 M.H.D. Approved
 10-5-66



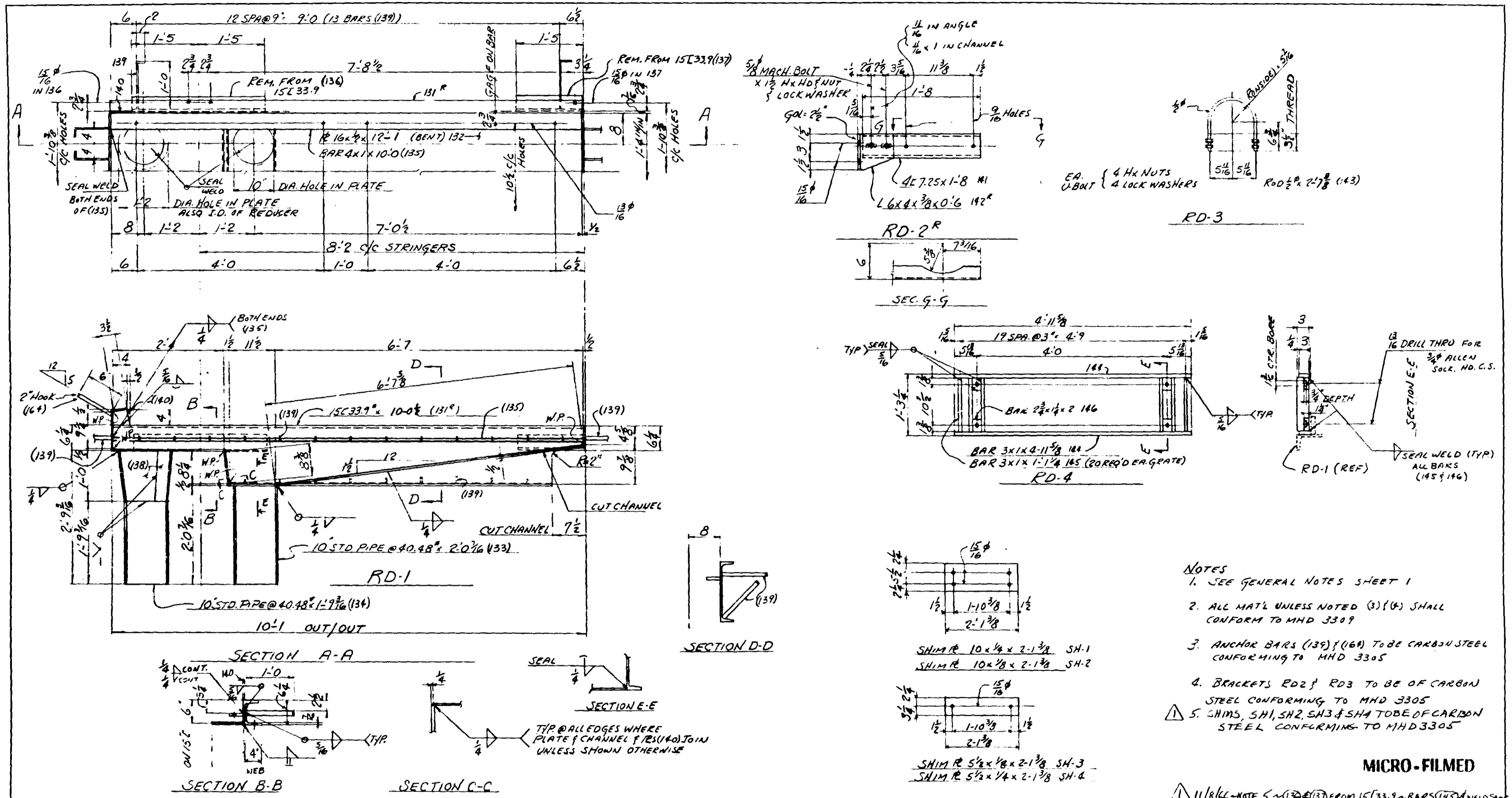
QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS
9	BAR 3x1/4x3'-2	M-1	BENT	7	BAR 3x1/4x3'-2 1/4			1	4C 7.25x2'-4 1/2	M-12	
9	BAR 3x1/4x1'-5 1/4	M-2	BENT	7	BAR 3x1/4x1'-5 1/4 (BOLT TO SHIP)	M-6		1	L 6x4x3/8x0'-6		
9	BAR 3x1/4x0'-4			7	BAR 3x1/4x0'-4			2	3/8" BOLT x 1 1/2" w/ HEX HD & NUT		
4	6WF15.5x1'-8 1/16	M-3		6	6WF15.5x2'-3 1/8	M-7		2	LOCK WASHER FOR 3/8" BOLT		
4	6WF15.5x1'-9 1/16	M-3A		1	R 13x1/4x3'-0 5/8	M-8	BENT	4	1/2" ROD x 2'-7 7/8 w/ 4 HEX NUTS	M-13	BENT
15	BAR 6x1/4x2'-9 1/4	M-4	BENT	8	L 6x4x1/2x2'-7	M-9		16	LOCK WASHER FOR 1/2" ROD		
11	BAR 1 1/4x3/8x1'-6 1/4		BENT	3	L 6x4x1/2x1'-3	M-10		3	3/8" ROD x 1-3 w/ 3 HEX NUTS	M-14	FOR H-7 ON SH. 3
11	BAR 1 1/4x3/8x2'-8 1/4	M-5	BENT	3	4"C 7.25x1'-11			33	LOCK WASHERS FOR 1/2" ROD		THRO 5" I.E
11	1/2" BOLT x 1'-2		ADJUSTABLE	3	L 6x4x3/8x0'-6	M-11		8	3/8" ROD (1'-1 TO 1'-9) w/ 3 HVY HX NUTS		FOR H-3-SHT. 4
11	HEAVY HX NUT 1/8" TAP		WRAUGHT	3	4"C 7.25x1'-11			3	BAR 3x1/4x3'-2 1/4		
11	LOCK WASHERS 1/2" BOLT		CLEVIS FIG. 260	3	L 6x4x3/8x0'-6			3	BAR 3x1/4x1'-5 1/4		
				6	3/8" BOLTS x 1 1/2" w/ HEX HD & NUT			3	BAR 3x1/4x0'-4		
				6	LOCK WASHERS FOR 3/8" BOLT						

GEORGE R. LEWIS COMPANY
 5305 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55405

BRIDGE NO. - 9340
MICRO-FILMED

STATE PROJECT NO. - 2783-9340 B (TH. 35W-394)
 MINNESOTA PROJECT NO. - 1-16 35W-3(58) 112
 CONTRACTOR - INDUSTRIAL CONSTR. DIV.
 LOCATION - TH. 35W & MISSISSIPPI RIVER - MINNEAPOLIS
 DESCRIPTION - DRAINAGE SYSTEM

Drawn By: E.A.S.
 Checked By: W.J.W.
 M.H.D. Approved
 10-5-66



- NOTES**
- SEE GENERAL NOTES SHEET 1
 - ALL MAT'L UNLESS NOTED (3) & (4) SHALL CONFORM TO MHD 3309
 - ANCHOR BARS (139) & (161) TO BE CARBON STEEL CONFORMING TO MHD 3305
 - BRACKETS RD-2 & RD-3 TO BE OF CARBON STEEL CONFORMING TO MHD 3305
 - SHIMS SH-1, SH-2, SH-3 & SH-4 TO BE OF CARBON STEEL CONFORMING TO MHD 3305

MICRO-FILMED

QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS
12	ROADWAY DRAINS	RD-1		12	DRAIN SUPPORTS	RD-2		24	DRAIN GRATES	RD-4	
24	15C33.9" x 10-0 1/2"	(131) 1/2"	6-RIGHT 6-LEFT BENT (SHIP MAY SPRUCE AT BEND WITH FULL BUTT WELD THIS)	12	DRAIN SUPPORTS	RD-2		48	BAR 3 X 1 X 4-11 3/8	144	
12	RS 16 x 1/2 x 12-1	132		24	4C 7.25" x 1-8	141		480	BAR 3 X 1 X 1-1 1/4	145	
12	10" STD PIPE @ 40.48" x 2'-0 3/16"	133		12	L 6 X 4 X 3/8 X 0-6	142R		96	BAR 2 1/2 X 1 1/2 X 2	146	
12	10" STD PIPE @ 40.48" x 1'-9 3/16"	134		12	L 6 X 4 X 3/8 X 0-6	142L		96	3/4" ALLEN SOCKET HD C.S. x 3 HX NUT C.S. HD - STAINLESS STEEL		
24	BAR 4 X 1 X 10-0	135		48	3/8" MACH. BOLTS x 1 1/2" HX HD NUT			96	LOCK WASHERS FOR 3/4" BOLT STAINLESS STEEL		
24	REMNANT OF 15C33.9 x 2-10	136		24	DRAIN SUPPORTS	RD-3		24	1/2" MACH. BOLTS x 2 1/2" HX HD NUT NY NUT		DRAINS TO SUPPORTING STEEL
24	REMNANT OF 15C33.9 x 1-5	137		24	1/2" ROD x 2-7 3/8	143	THREAD 2 E (BENT)	66	1/2" MACH BOLTS x 2 3/4" HX HD NUT		
24	RS 13 x 3/8 x 1-10	138		96	HNUTS 1/2 TAP			6	1/2" MACH BOLTS x 3 1/2" HX HD NUT		
576	BAR 1 1/2 X 3/8 X 1-1 1/4	139		96	LOCK WASHER FOR 1/2 BOLT						
24	BAR 4 1/2 X 1/2 X 0-4 1/4	140									
24	BAR 1 1/2 X 3/8 X 7 1/8	(161)									
24	SHIM 10 x 1/8 x 2-1 3/8	SH-2									
2	SHIM 10 x 1/4 x 2-1 3/8	SH-1									
24	SHIM 5 1/2 x 1/8 x 2-1 3/8	SH-3									
2	SHIM 5 1/2 x 1/4 x 2-1 3/8	SH-4									

11/8/66-NOTE 5 ~ (131) & (137) FROM 15C33.9 ~ BARS (145) & (146)

GEORGE R. LEWIS COMPANY
 3305 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55405

BRIDGE NO. - 9340

STATE PROJECT NO. - 2783-9340 B (TH 35W-394)

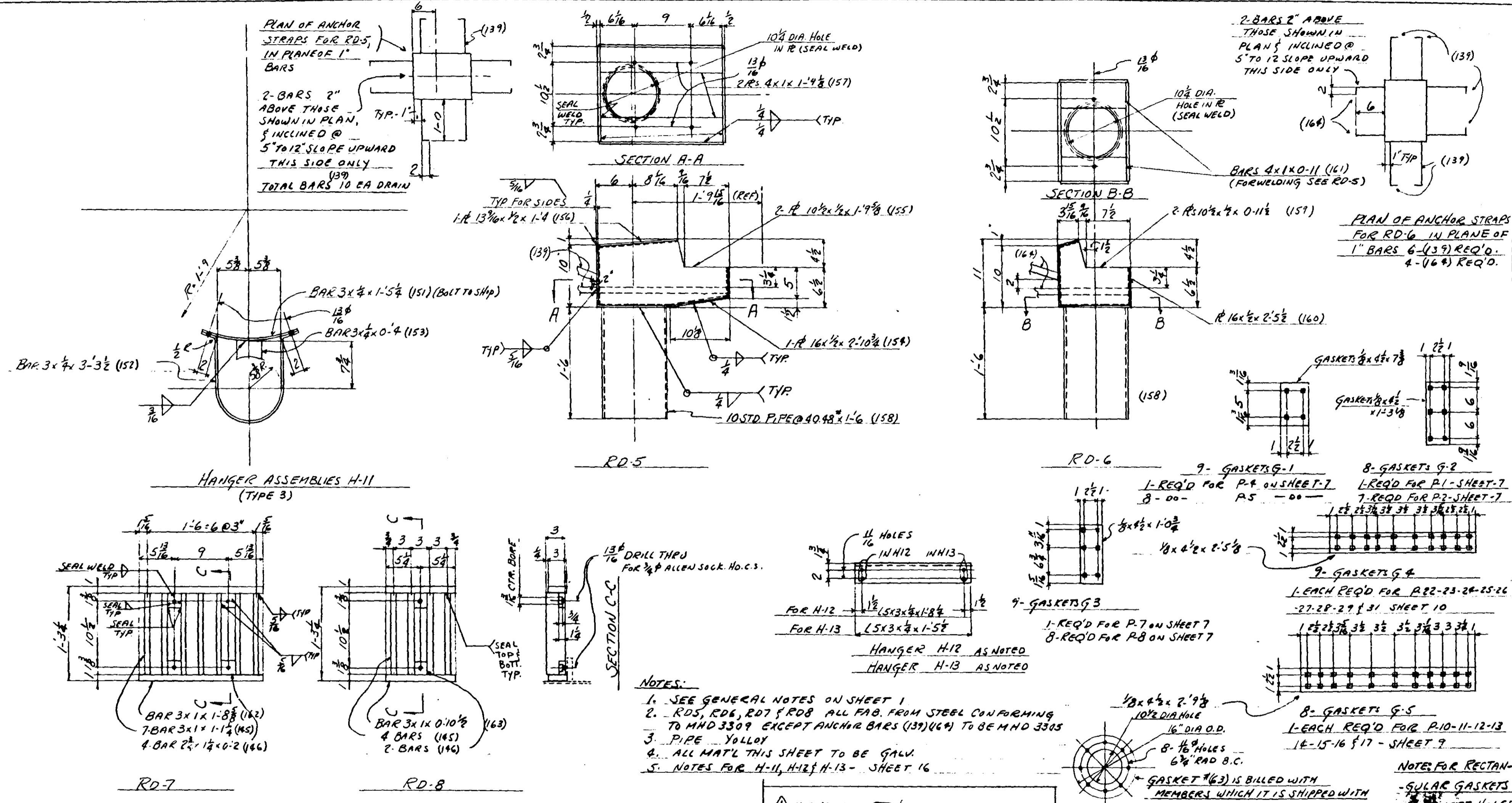
MINNESOTA PROJECT NO. - I-16 35W-3 (56) 112

CONTRACTOR - INDUSTRIAL CONSTR. DIV.

LOCATION - TH 35W & MISSISSIPPI RIVER - MINNEAPOLIS

DESCRIPTION - DRAINAGE SYSTEM

Drawn By: EAS
 Checked By: M.H.D.
 M.H.D. Approved
 10-5-66



QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS	QUANT.	DESCRIPTION	MARK	REMARKS
6	HANGER ASSEMBLY H-11		TYPE 3	3	ROADWAY DRAIN RD-6			3	DRAIN GRATES RD-8		
6	BARS 3x1/4 x 1-5/4	151	BOLT TO SHIP	6	RS 10 1/2 x 1/2 x 0-11 1/2	159		6	BARS 3x1 x 0-10 1/2	163	
6	BARS 3x1/4 x 3-3 1/2	152		3	RS 16 x 1/2 x 2-5 1/2	160	BENT	12	BARS	145	
6	BARS 3x1/4 x 0-4	153		6	BARS 4x1 x 0-11	161		6	BARS	146	
ONE ROADWAY DRAIN RD-5				ONE DRAIN GRATE RD-7							
1	RS 16x1/2 x 2-10 1/4	154	BENT	2	BARS 3x1 x 1-8 3/8	162		10	3/4" ALLEN SOCKET HD. C.S. X 3 H.NUT C.S. HD.		FOR BOLTING GRATES TO DRAINS
2	RS 10 1/2 x 1/2 x 1-9 3/8	155		7	BARS 3x1 x 1-1 1/4	(145)		10	3/4" LK. WASHER - ST. STEEL		5 ST. STEEL
1	RS 13 1/16 x 1/2 x 1-4	156		4	BARS 2 1/2 x 1 1/4 x 0-2	(146)		14	HANGERS H-12		
2	BARS 4x1 x 1-9 3/8	157						19	L5X3 x 1/4 x 1-5 1/2	H-13	
1	10 STD. PIPE @ 40.48 x 1-6	158						19	L5X3 x 1/4 x 1-8 1/4	H-12	
10	BARS 1 1/2 x 1/4 x 1-1 1/4	(139)	BENT								

GEORGE R. LEWIS COMPANY
 3305 PENN AVENUE SOUTH MINNEAPOLIS, MINNESOTA 55405

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