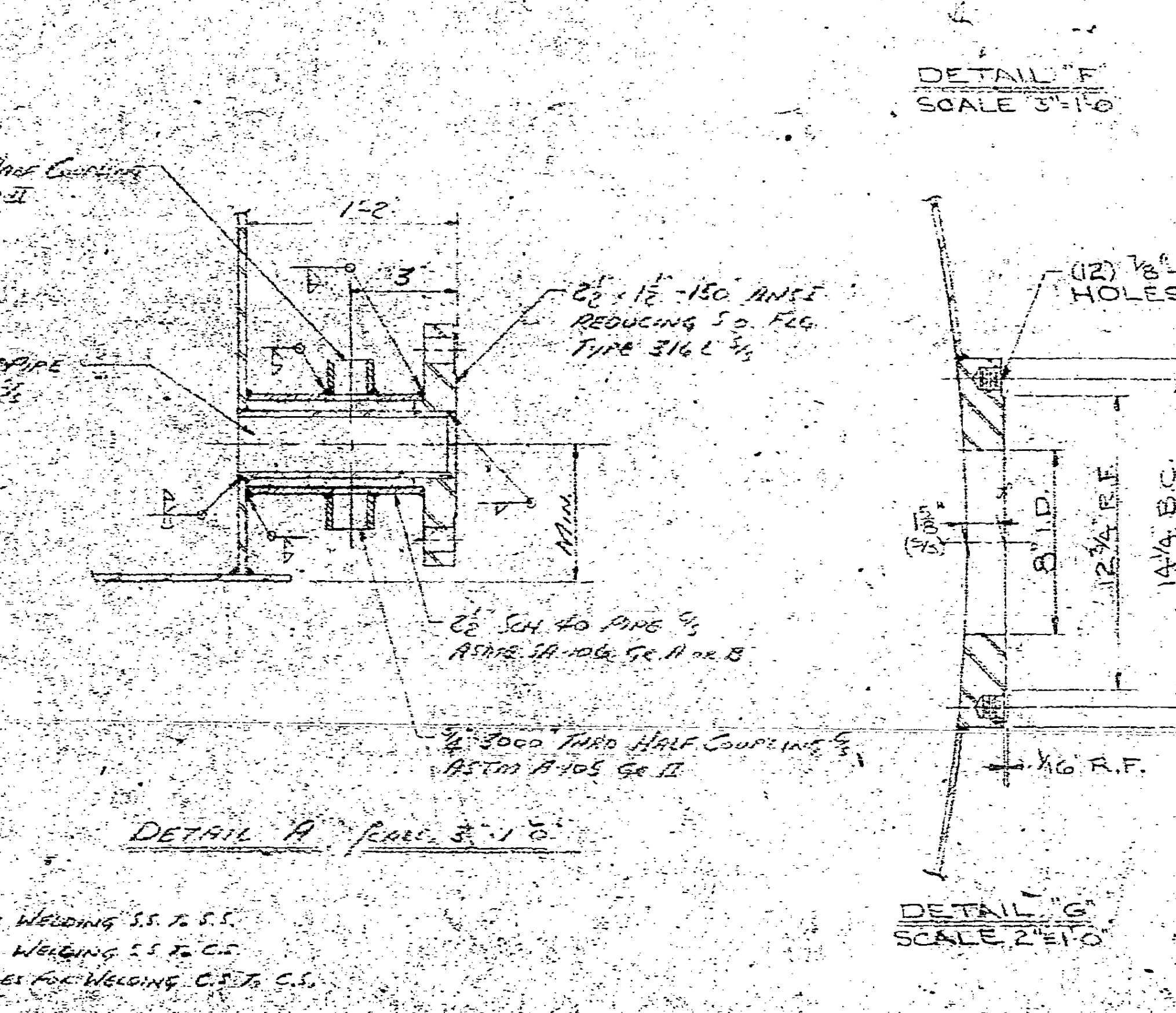
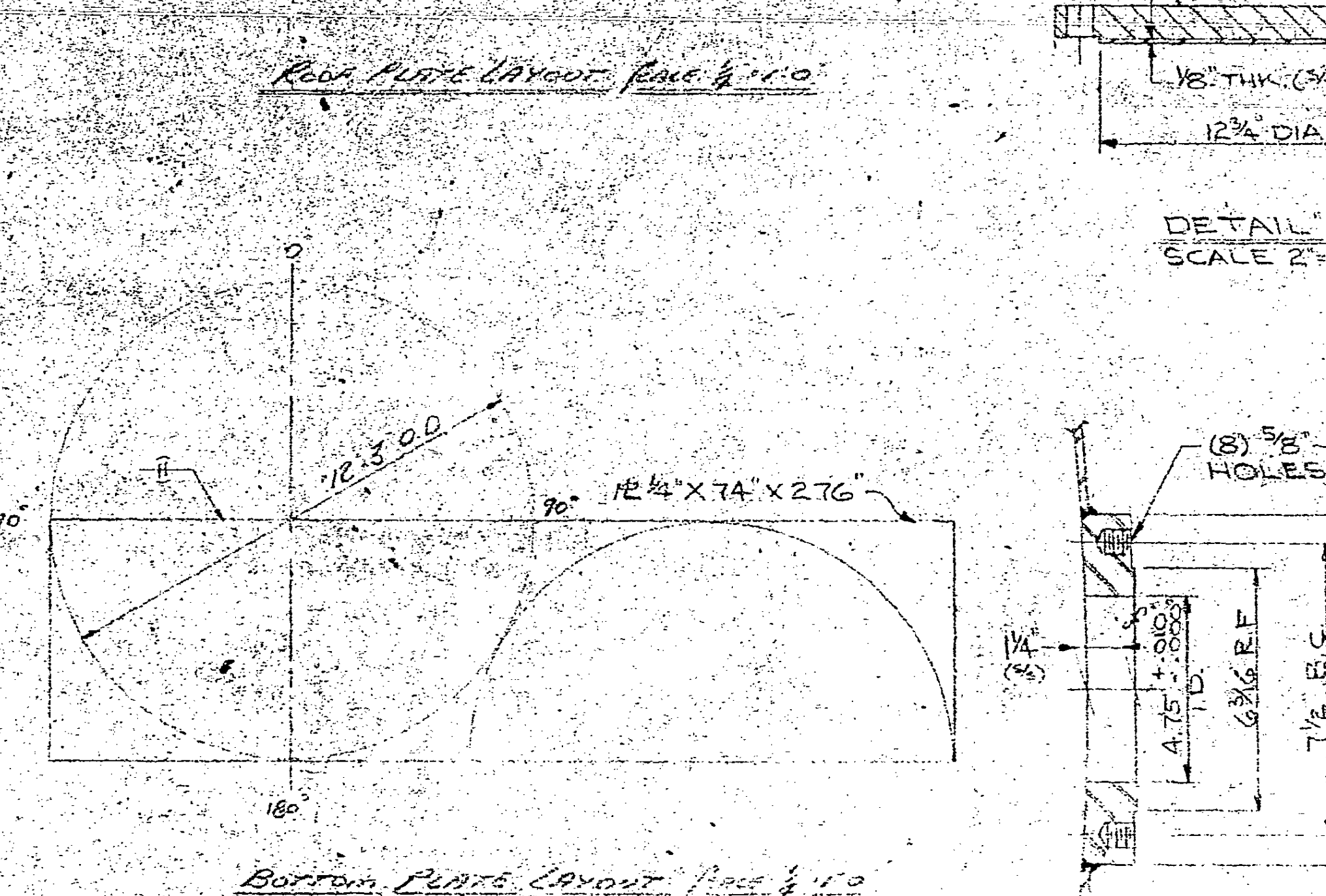
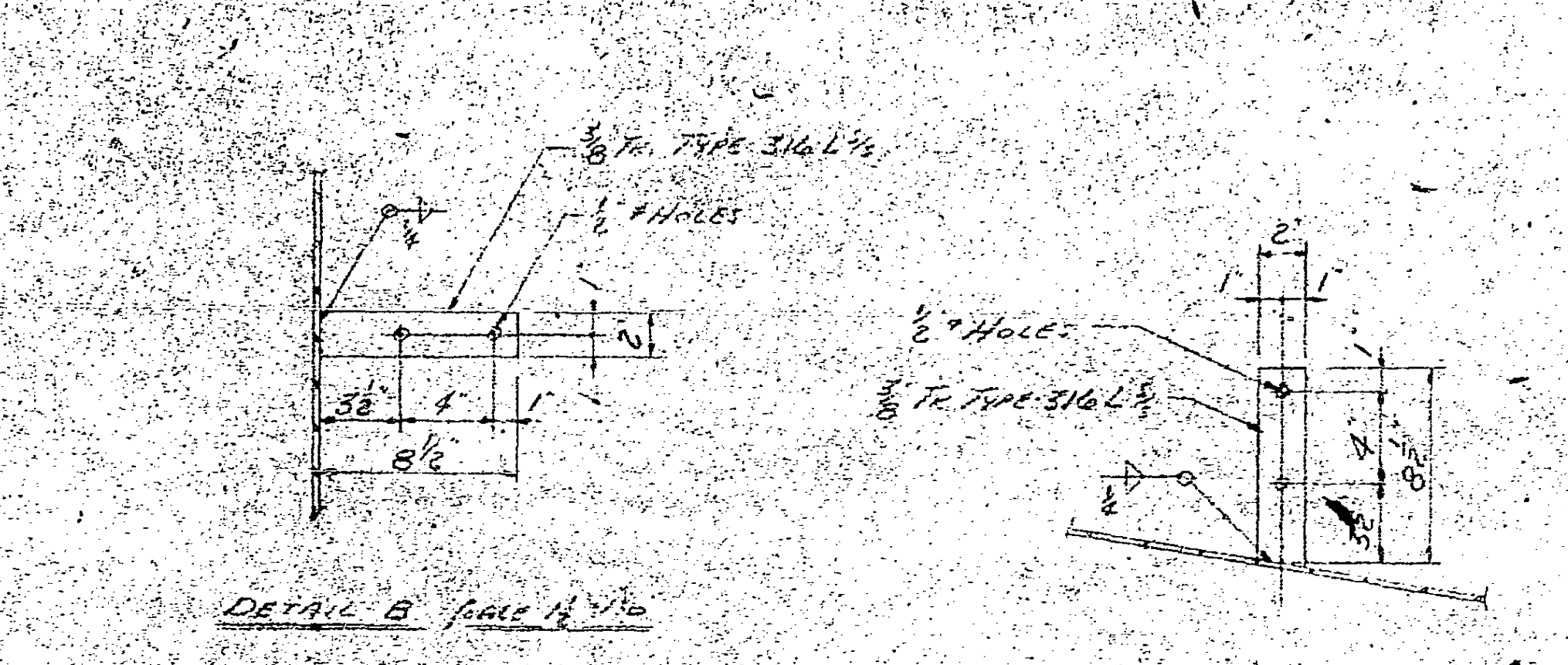
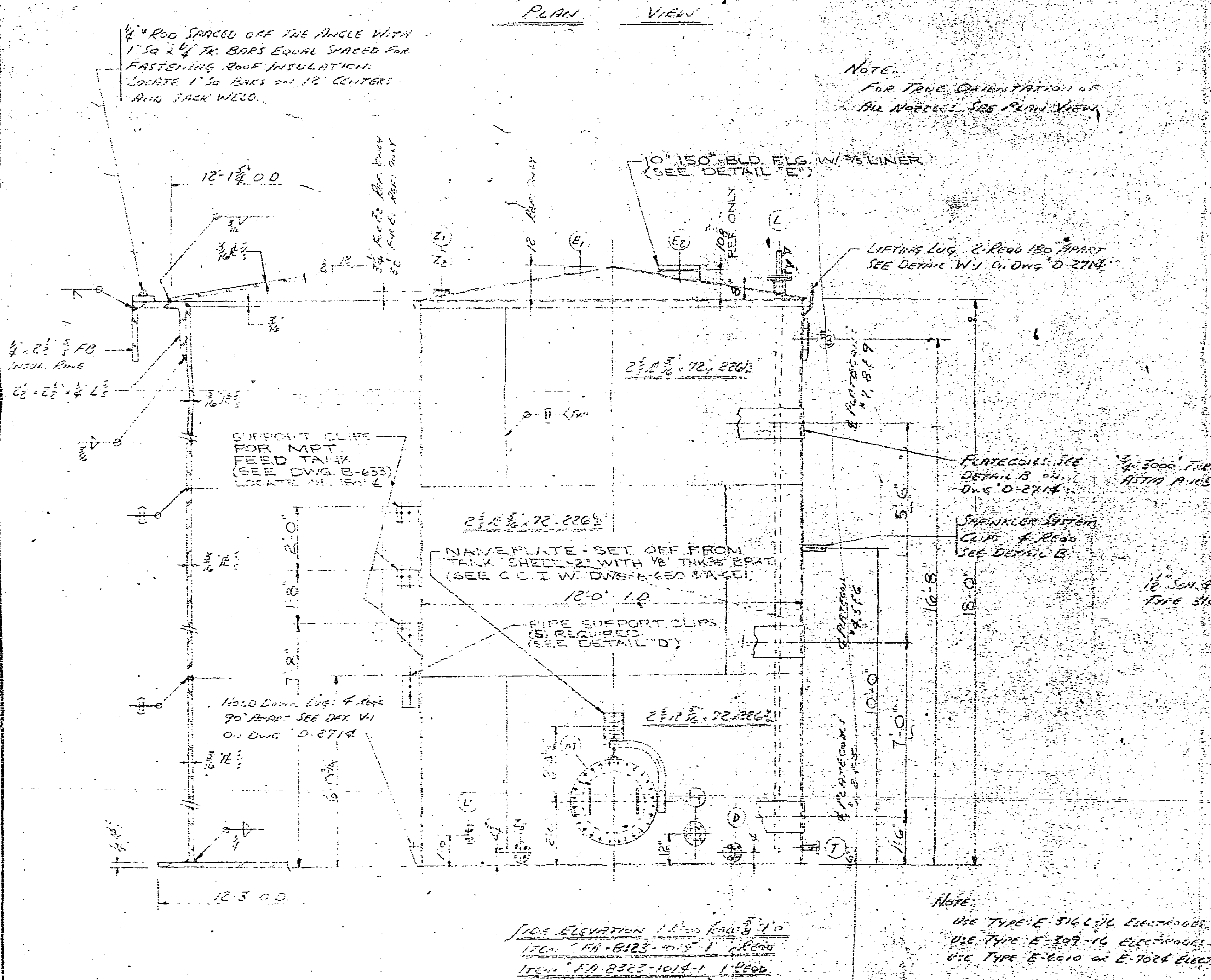
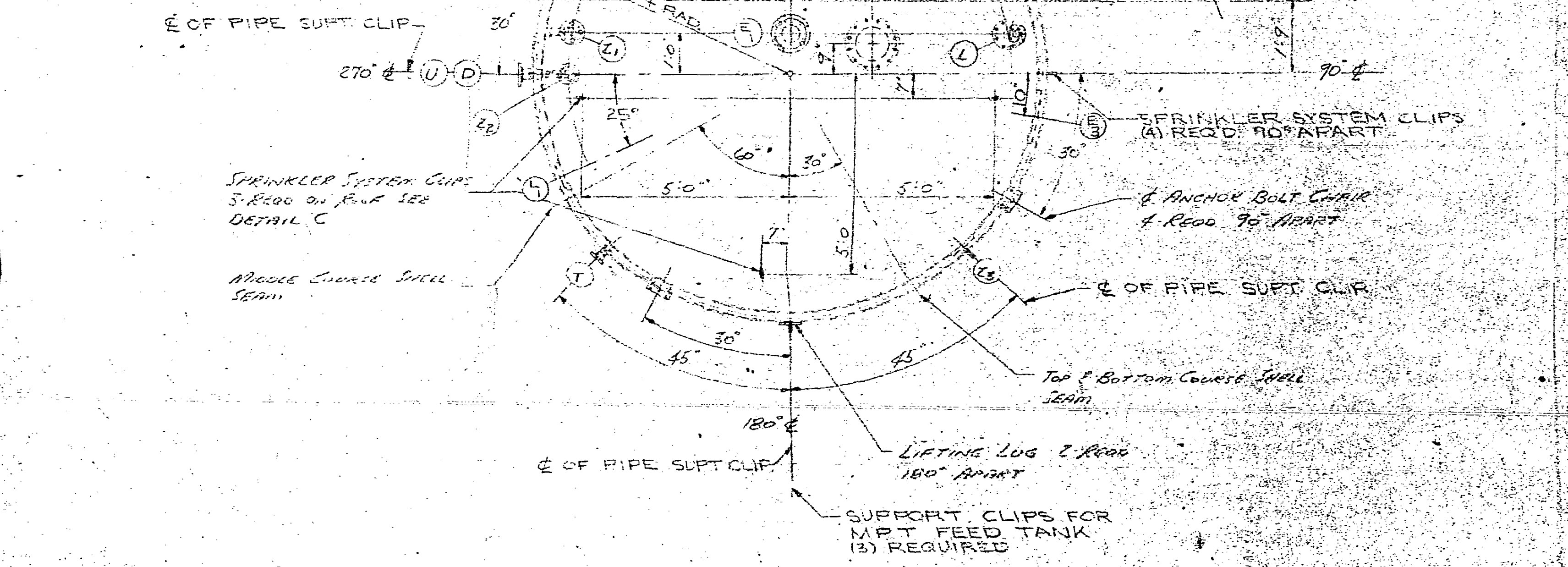
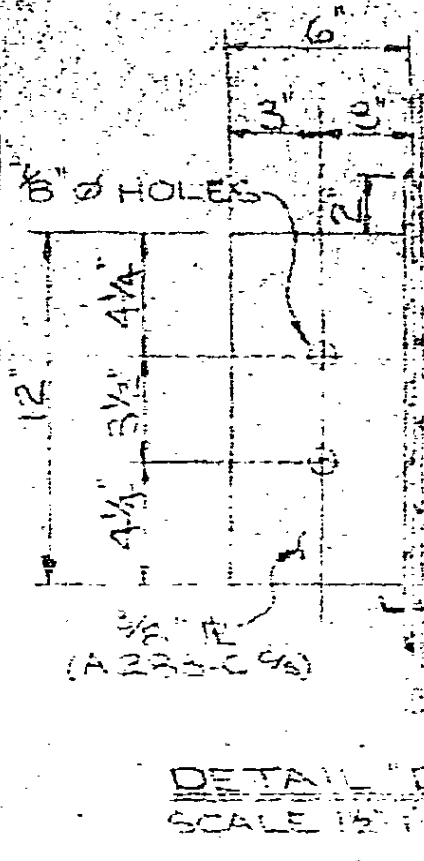




NOZZLE SCHEDULE									
ITEM	QTY	SIZE	FRANSE	NOZZLE	SERVICE	REMARKS			
E-1	1	3"	PAD 150°	316-L	-	DET. NO. DWS. D-2714			
L	1	4"	L-3	316-L	DIP PIPE	DET. NO. DWS. D-2714			
M	1	24"	FAB	316-L	SMALL DIAPHRAGM	DET. NO. DWS. D-2714			
T	1	1/2"	R.F. HUB	150°	316-L	DET. NO. DWS. D-2714			
U	1	2"	PAD	150°	316-L	DET. NO. DWS. D-2714			
31	1	2 1/2"	PAD	150°	316-L	DET. NO. DWS. D-2714			
28	1	2"	PAD	150°	316-L	DET. NO. DWS. D-2714			
23	1	3"	PAD	150°	316-L	DET. NO. DWS. D-2714			
D	1	1/2"	PAD	150°	316-L	DET. NO. DWS. D-2714			
E-2	1	10"	PAD	150°	316-L	EMERGENCY VENT DET. NO. DWS. D-2714			
E-3	1	8" X 10"	PAD	150°	316-L	EMERGENCY VENT DET. NO. DWS. D-2714			
E-4	1	4"	PAD	150°	316-L	SEE DETAIL 'E'			

NOTE: ALL 150° FLANGES TO BE ANSI RATED

GENERAL NOTES:

- VESEL TO BE DESIGNED, FABRICATED & INSPECTED IN ACCORDANCE WITH THE RPI, '630 CODE EXCEPT FOR MATERIALS & DUPONT SPEC. TO 1125. RPI MONOGRAM NOT REQUIRED. TANK TO BE WELDED BY DUPONT.
- MATERIALS:
 - a. SHELL ROOF & BOTTOM: A192 SA-240 TYPE 316L
 - b. NOZZLE NECKS: A192 SA-312 TYPE 316L
 - c. NOZZLE FLANGES: A192 SA-182 F-316L & SA-240 TYPE 316L
 - d. M.H. NECK: A192 SA-240 TYPE 316L
 - e. M.H. FLANGE & COVER: A192 SA-240 TYPE 316L
 - f. EXTERNAL BOLT & NUTS: A192 SA-193 B7 BOLTS & SA-193 B7 NUTS
 - g. LIFTING LUGS: A192 SA-240 TYPE 316L
 - h. GASKETS: J.M. '61
- ALL NOZZLES SHALL BE FLUSH WITH THE SURFACE OF THE TANK AND SHALL PROJECT 6" FROM OUTSIDE OF TANK TO FACE OF NOZZLE EXCEPT AS NOTED.
- ALL BOLT HEADS SHALL SPAN ACROSS CENTER LINES WHICH ARE PARALLEL TO THE VESSEL CENTER LINES EXCEPT NOZZLES E1, F & E2.
- ALL FLANGES ARE TO HAVE FACE FINISHED TO 125 RA.
- THERE SHALL BE NO DIRECT WELDING OF CARBON STEEL TO STAINLESS STEEL WITHOUT INTERMEDIATE STAINLESS STEEL PAWS.
- NO SHELL OR PAWS SEAMS SHALL PASS THROUGH ANY NOZZLE OR NOZZLE COVER.
- HYDROSTATIC TEST SHALL BE HELD FOR A MINIMUM OF 4 HOURS. TEST WATER SHALL BE OBTAINED FROM THE VESSEL AND THE VESSEL DRIED AFTER HYDROSTATIC TEST ACCEPTANCE.
- DATA:
 - a. DESIGN PRESSURE: 12" WATER @ 2" WATER VAC.
 - b. DESIGN TEMPERATURE: 450°F
 - c. TEST PRESSURE: FULL WITH WATER
 - d. CORROSION ALLOWANCE: NONE
 - e. CAPACITY (GAL): 15,230 GAL.
 - f. WEIGHT (EMPTY): 9400 LB
 - g. WEIGHT FULL OF WATER: 136,321 LB
 - h. DUPONT P. O. NO.: D1C-2374-W
 - i. DUPONT PLANT: CAPE FEAR
 - j. DUPONT PROJECT NO.: 7482
 - k. DUPONT P.A. NO.: 8123-10-1-1
 - l. JOINT EFF.: 85%
 - m. X-RAY: SPOT PER RPI '650, CODE
- PAINT: ALL CARBON STEEL PARTS FOR DUPONT PLANT PLANT 152-6.
- WATERING NOT SHOWN ON MATERIAL LIST IS TO BE SHOWN ON DETAIL.
- CEW TO FURNISH: PLATFORM, GEARING, HANDRAIL & LADDERS FOR CARBON STEEL. 85% DEN. 95% 5-86Y. GEARING TO BE 3/8" (STD. 50% DEN.) AND TO BE GALVANIZED PER DUPONT SPEC. 5297. WELDING OF CARBON STEEL PARTS TO BE REMOVED WITH GALVANIC PAINT.
- ALL 316L MATERIALS NOT TO EXCEED .030% CARBON CONTENT. WELDING TO BE PERMITTED NOZZLES TO BE HYDROSTATICALLY TESTED FOR VIBRATION.
- HYDROSTATICALLY TESTED NOZZLES TO BE HYDROSTATICALLY TESTED FOR VIBRATION.

FABRICATION RELEASED FOR GENERAL COMPANY TO DIMENSIONS AND MATERIALS SPECIFIED BY DU PONT FOR 18

APPROVED

DATE: 4/24/72

ORIGINAL SHEET # 1048

APR 24 1972

227141

CAPITAL CITY IRON WORKS INCORPORATED RICHMOND, VIRGINIA

CUSTOMER: E.I. DUPONT-DE Nemours & Co. Inc.

ADDRESS: CAPE FEAR, N.C.

TITLE: STAINLESS STEEL TANK 227141

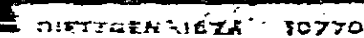
NO. REQD: ONE

DATE: 3-28-74

SCALE: MINOR

ORDER NO. 55281

D-2714



INCORPORATED
RICHMOND VIRGINIA

38241-17

12" H₂O F
2" H₂O VAC

450

FILL WITH WATER

7482

8123-1014-1

DIC-2394-W

MAT'L SA-240 TYPE 316-L V

API STD 650

MAR 8 1972

NOMINAL
DIAMETER 12'-0" I.D.

NOMINAL
CAPACITY 15,230 GAL

BPF 227141

ORIGINAL SHEET #

FABRICATION RELEASED
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FOR GENERAL CONFORMITY TO
DIMENSIONS AND
MATERIALS SPECIFIED
BY DU PONT FOR THIS ORDER

CABRUK 3/6/72

FABRICATED
BY

CAPITAL CITY
IRON WORKS
INC.

ERECTED
BY

CAPITAL CITY
CONSTRUCTION
CORP.

CERTIFICATE
AUTHORITY

CAPITAL CITY IRON WORKS, INC.
RICHMOND VIRGINIA

DO NOT SCALE

SCALE

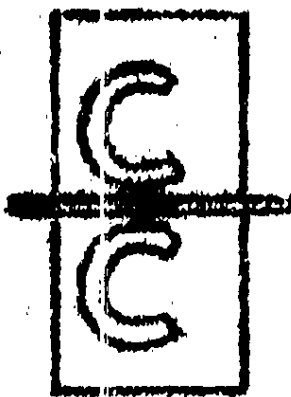
DR

DATE

S O NO

A-650

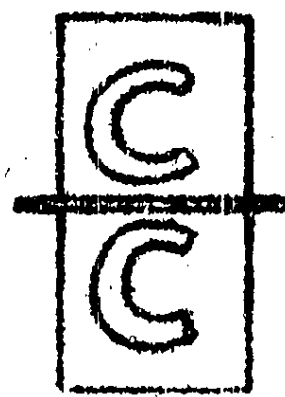
38241



MANUFACTURED BY
CAPITAL CITY IRON WORKS

INCORPORATED

RICHMOND VIRGINIA



Metal Fabricators and Erectors Since 1913

SERIAL NO 3B241-18 DATE

DESIGN PRESS. P.S.I. 12,420 TEMP. °F 750

TEST PRESS. P.S.I. FILL WITH WATER

E. I. du Pont de Nemours & Company
INCORPORATED

PROJECT NO 8437

EQUIPMENT Pg. No. 8323-1014-1

PURCHASE ORD. N DIC-8394-W

INSPECTOR [REDACTED] 172

172-6: 5A-270 Type 3/6-2 1/2

API STD. 650

YEAR 102

NOMINAL
DIAMETER

12:00 12.

NOMINAL
HEIGHT

1800

NOMINAL
CAPACITY

15250 GAL

FABRICATED
BY

CAPITAL CITY
IRON WORKS,
INC.

CERTIFICATE OF
AUTHORITY #

70

ERECTED
BY

CAPITAL CITY
CONSTRUCTION
CORP

**CERTIFICATE OF
AUTHORITY***

271

CAPITAL CITY IRON WORKS, INC.
RICHMOND, VIRGINIA

CONFIDENTIAL

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APPROVED
FOR GENERAL CONFORMITY TO
DIMENSIONS AND
MATERIALS SPECIFIED
BY BU PONT FOR THIS ORDER**

CaB rika
3/6/72

THE

API - GSO COMPUTATIONS

PROJ. 7482 F8434
CAPE FEAR
P.O. DIC-2394-W

S.O. # 38241

DWG # D-2712

FA # 8123-1014-1
FA 8323-1014-1

3.3.3 TANK SHELL (INT. PRESS)

$$t = \frac{2.6(D)(H-1)(G)}{.85 \times 14,700} = \frac{2.6(113)(19-1)(1.0)}{.85 \times 14,700} = .045" \quad 3/16" \text{ OK}$$

4 UG-28C (USE ASME, SINCE API DOES NOT COVER VACUUM)

$$P = 2" \text{ H}_2\text{O} = .0361 \times 2 = .072 \text{ PSI}$$

$$\frac{L}{D_o} = \frac{216}{144.375} = 1.49 \quad \frac{D_o}{t} = \frac{144.375}{.188} = 768$$

$$P_R = \frac{B}{D_o/t} = \frac{575}{768} = .73 \text{ PSI} \quad \text{OK}$$

3.5.5 CONICAL ROOFS

$$t = \frac{D}{400 \sin \theta} = \frac{12}{400 \times .1644} = .182"$$

4 F.5 ROOF TO SHELL JUNCTION

$$A = \frac{D^2(P-Bt)}{30,800 \tan \theta} = \frac{(12)^2(2 - 2 \times .188)}{30,800 \times .1644} = .0141" = \text{AREA REQ'D}$$

$$\text{AREA AVAILABLE} = A_A = \text{AREA OF } 2\frac{1}{2} \times 2\frac{1}{2} \times \frac{1}{4} \text{ L} = \text{JAN 7 1972}$$

SINCE $A_A > A$ JUNCTION IS ADEQUATE

4 J.3 C. OPENINGS

SINCE THE REQUIRED SHELL THICKNESS IS LESS THAN $\frac{1}{2}$ THE ACTUAL THICKNESS ($2 \times .045 < .188$) NO EXTRA REINFC IS REQ'D.

ROOF OPENINGS ARE INHERENTLY REINFORCED, "SEE NOTE" 4 J.3-6.

ANCHOR BOLTS

$$\text{UPLIFT DUE TO INT. PRESS.} = \pi R^2 P = 3.14 \times 72^2 \times .433 = 7048"$$

$$\text{WEIGHT OF SHELL, ROOF FITTINGS, BOLTS} = 8500"$$

SINCE WT. OF TANK IS GREATER THAN THE UPLIFT FORCE, ANCHOR BOLTS ARE NOT REQ'D. FOR INT PRESS, HOWEVER USE ANCHOR. BOLTS AS NOTED CN DWG D-2712.

REV.
10-12-71
2-1-72

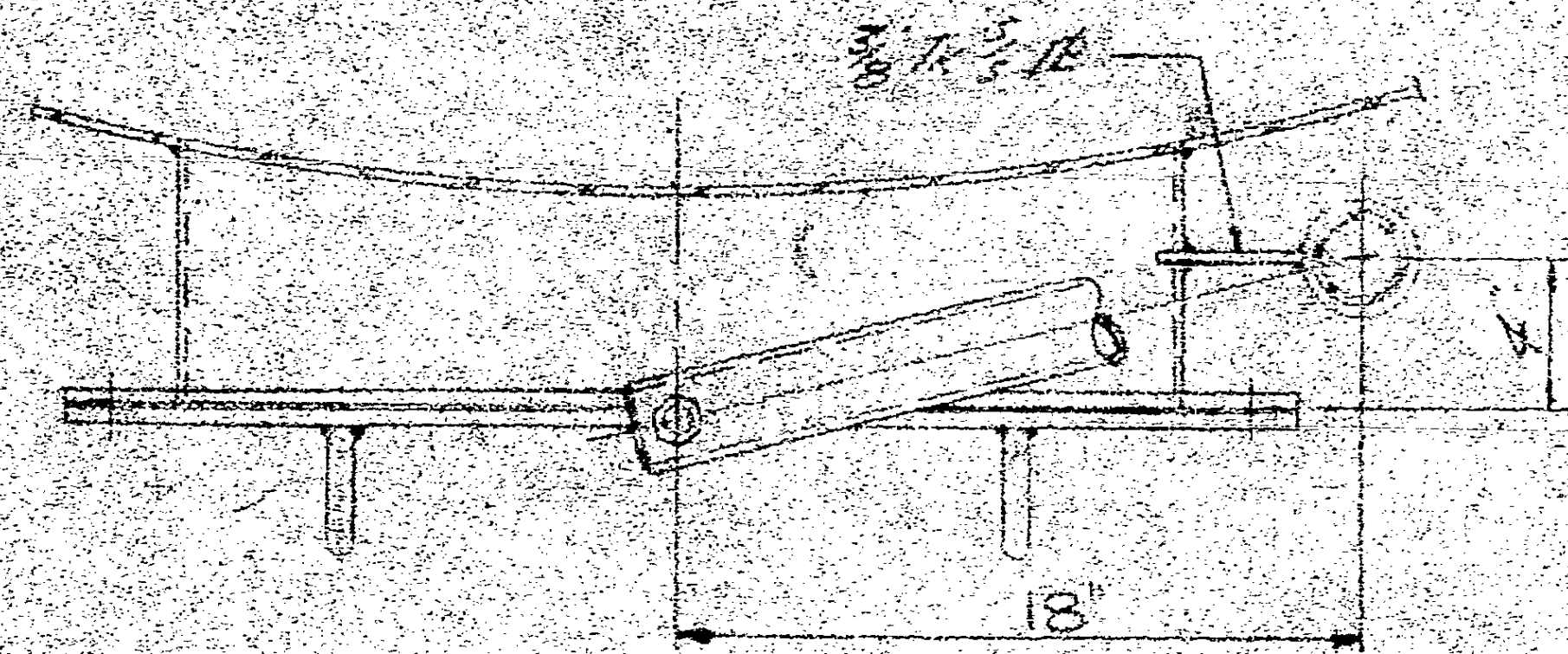
DWG 1001/BPF

FABRICATION RELEASED
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BY DU PONT FOR THIS ORDER
E. I. du PONT de NEMOURS & CO.
50 Jan 72

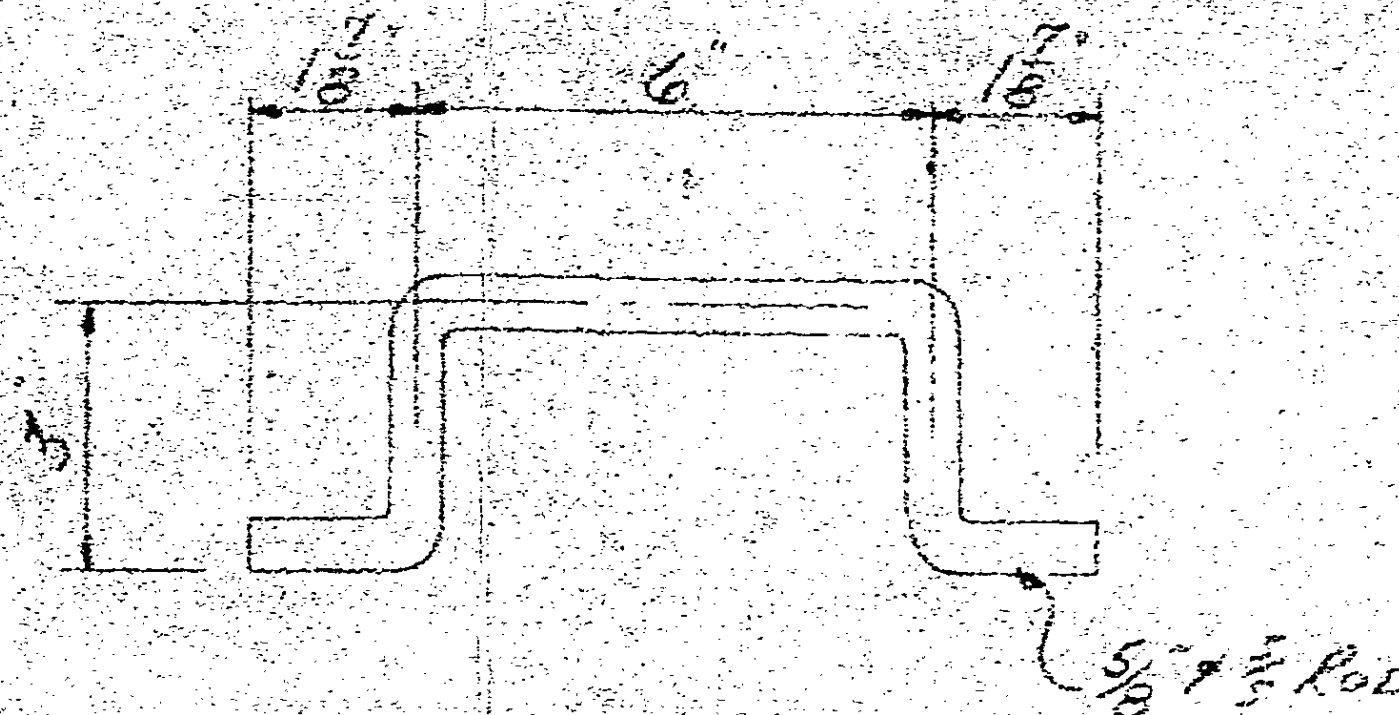
BPF 227141

ORIGINAL SHEET # 6

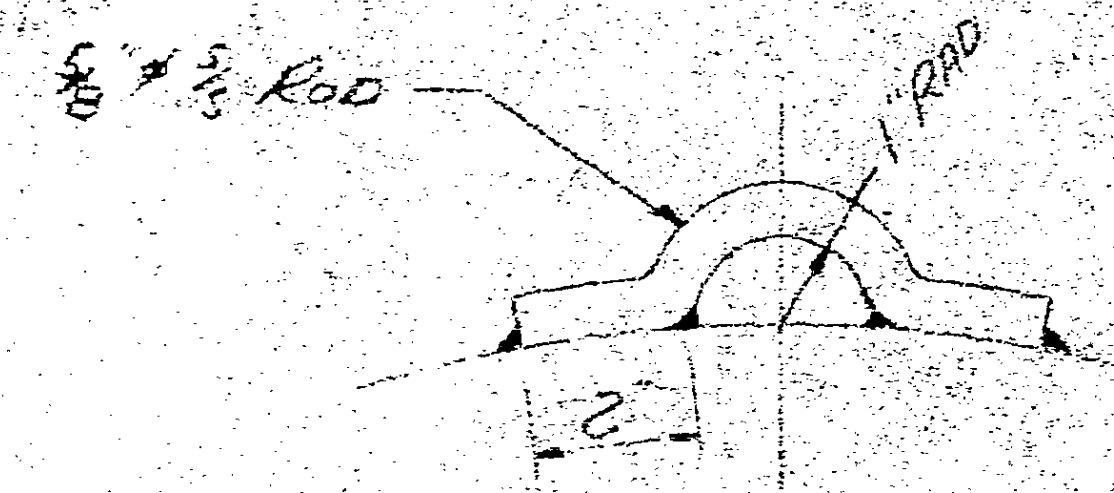
MICROFILMED BY D.F. & R. SECTION, ENG. DEPT.



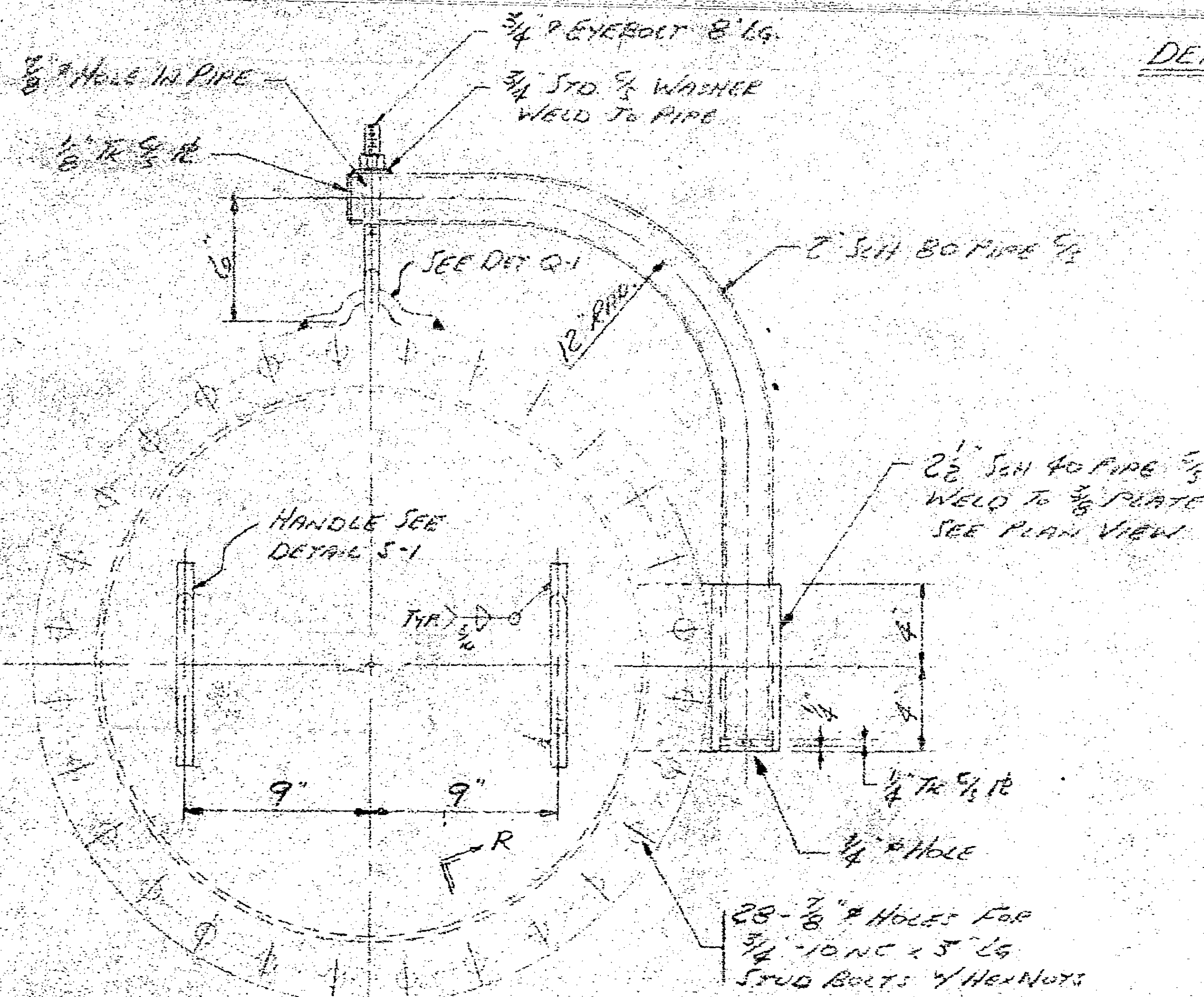
PLAN VIEW



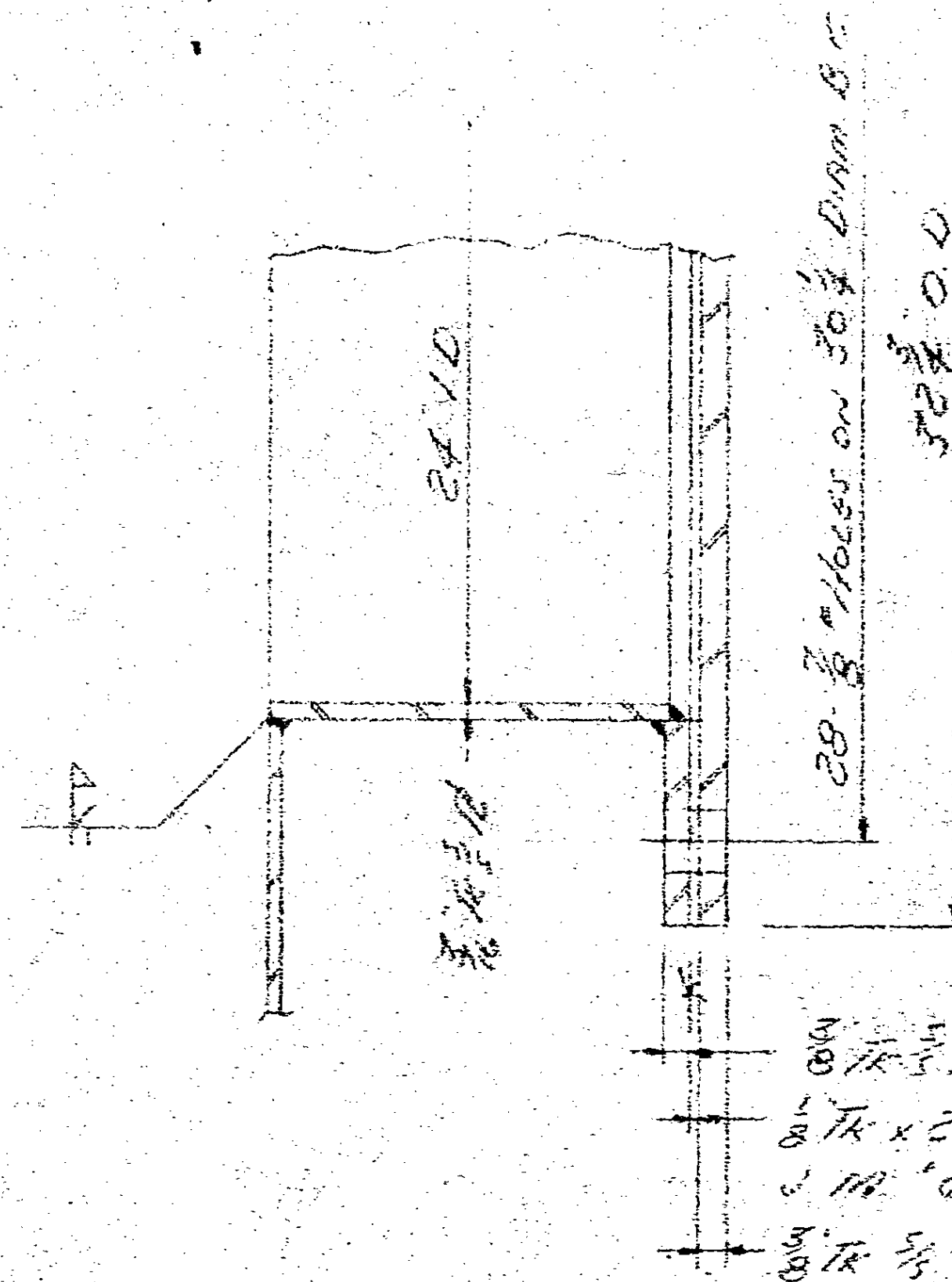
DETAIL S-1 SCALE 3"=1'-0"



DETAIL Q-1 SCALE 3"=1'-0"



DETAIL P-1 SCALE 1 1/2"=1'-0"



SECTION R-R SCALE 3"=1'-0"

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FOR GENERAL CONFORMITY TO
DIMENSIONS AND
MATERIALS SPECIFIED
BY DU PONT FOR THIS ORDER

[Signature] 2 Mar 71
DuPont P.O. No. DIC 2394-W
PROJECT No. 1482 F 8434

MAR 8 1972

BPF 227141

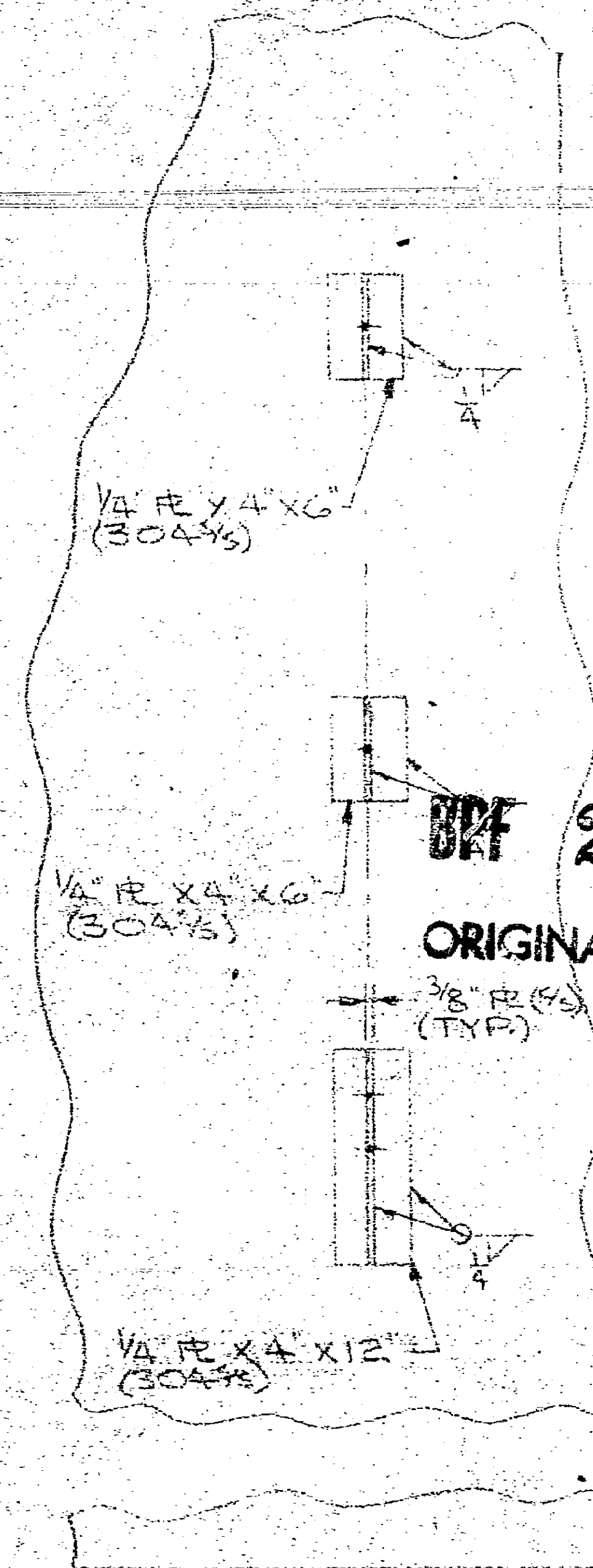
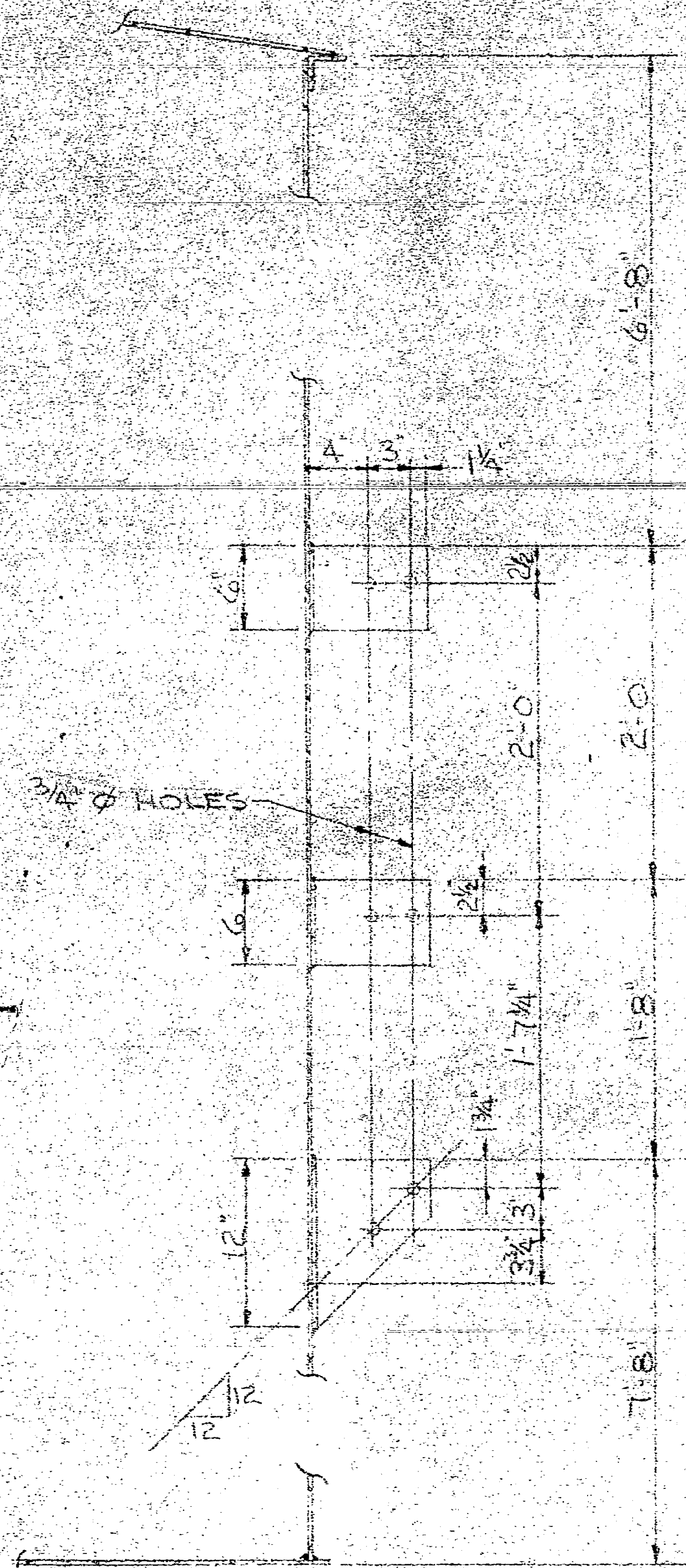
ORIGINAL SHEET # 7

CAPITAL CITY IRON WORKS, INC.
RICHMOND, VIRGINIA

E. I. DuPont
24 1/2 SHELL M.H.

DATE 10-20-71 DR. G.R.A. SCALE AS NOTED

ORDER NO. 38241 B-617



MAR 8 1972

DRF 227141

ORIGINAL SHEET # 8

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DIMENSIONS AND
MATERIALS SPECIFIED
BY DU PONT FOR THIS ORDER

DU PONT PD. DIC-2394W

PROJECT NO. 7482 & 843A

REF. DRAWING D-2712

CAPITAL CITY IRON WORKS, INC.
RICHMOND, VIRGINIA

E. I. DU PONT
CAPE FEAR, N.C.
SUPPORT CLIP DETAIL
FOR MPT FEED TANK

DATE 2-11-72	DR JMS	SCALE 1"=1'-0"
ORDER NO. 38241		B-633