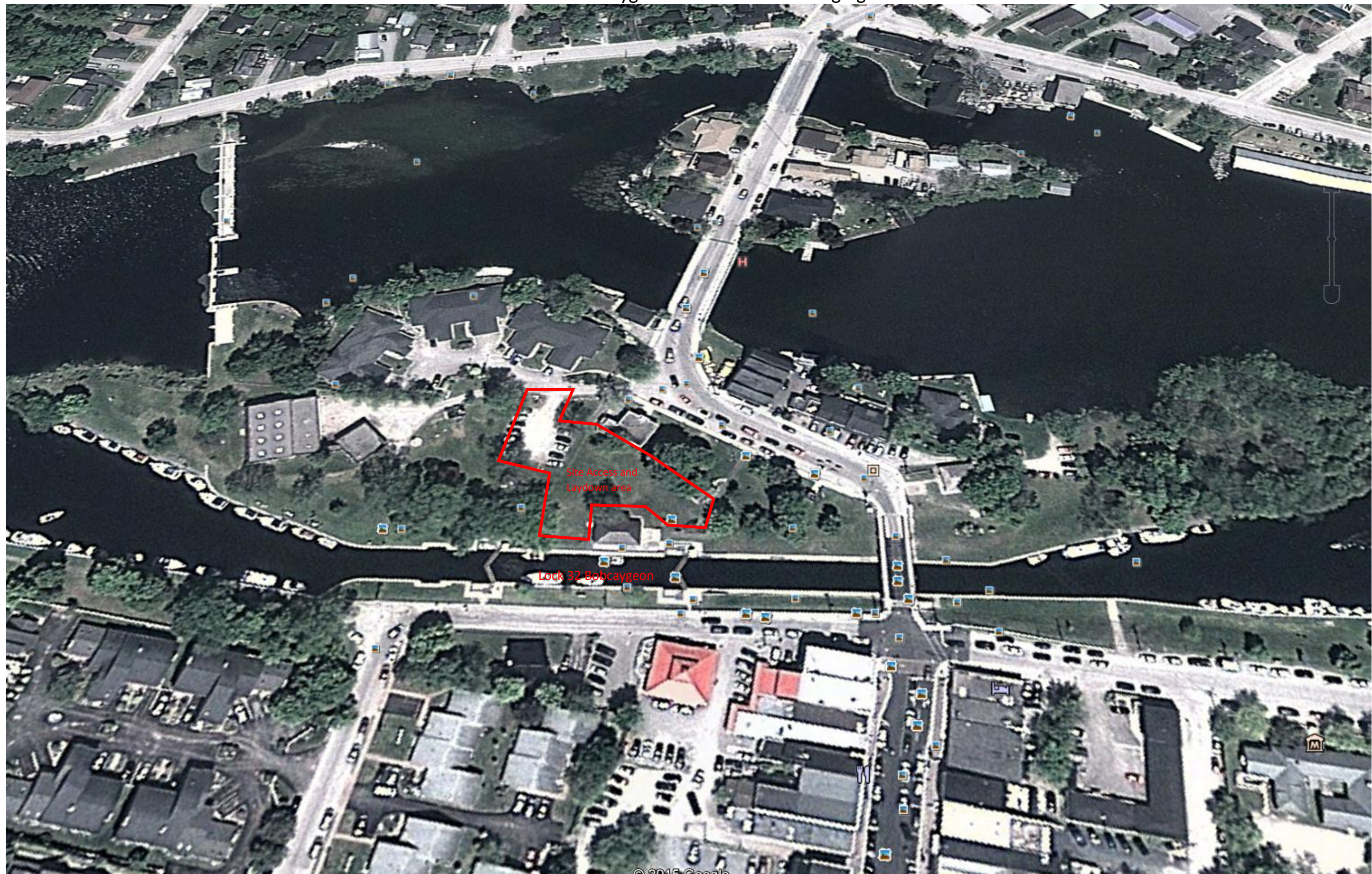


Bobcaygeon Site Access and Staging Area

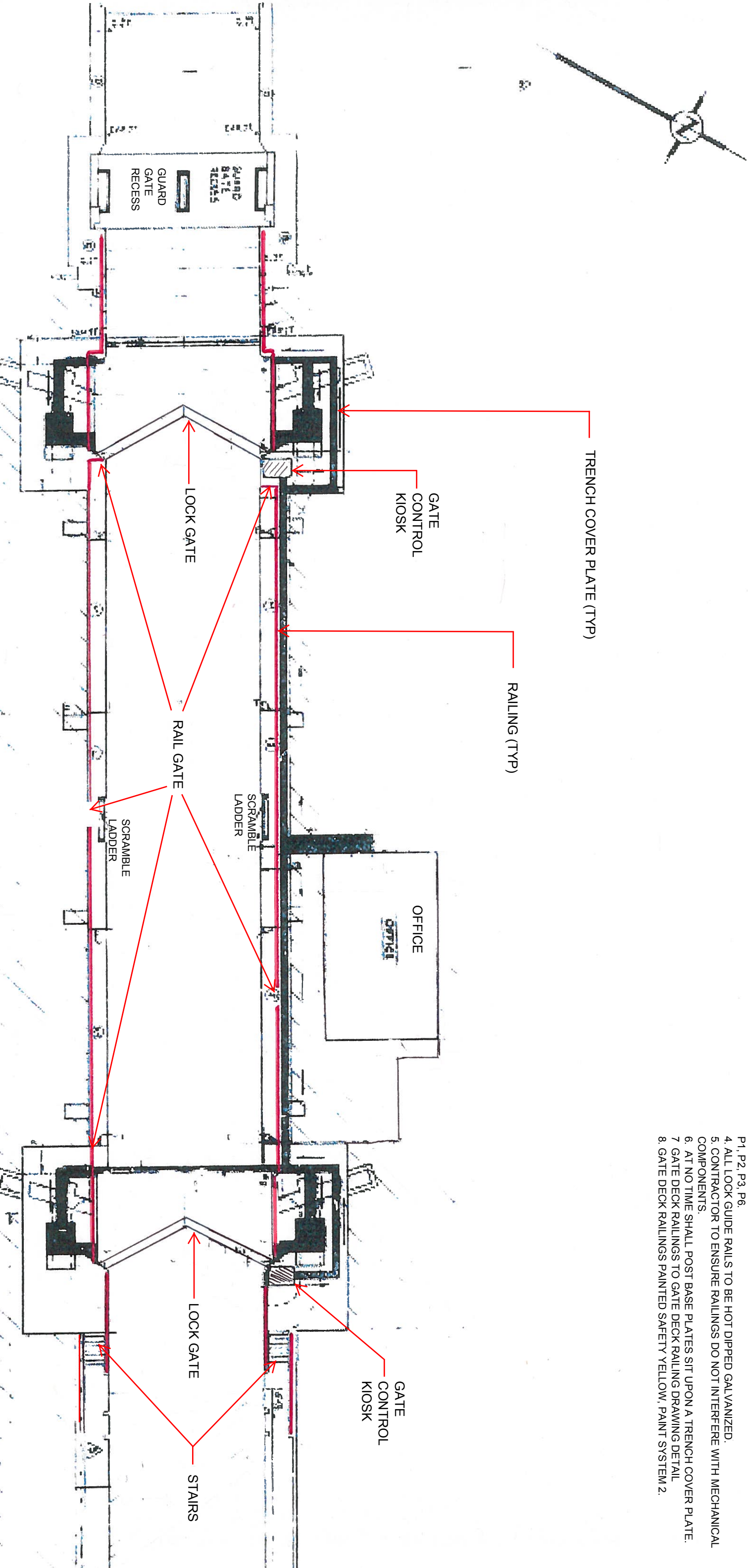




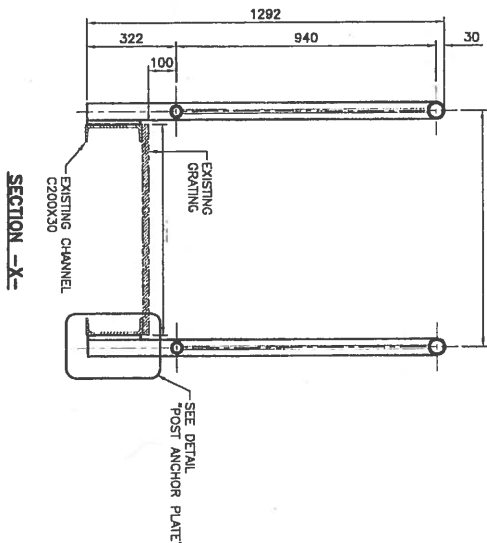
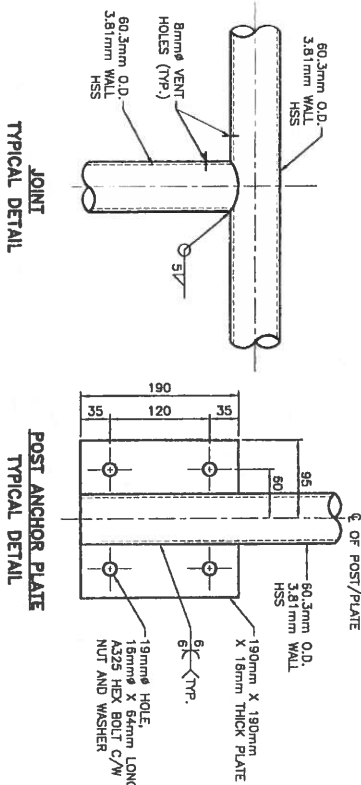
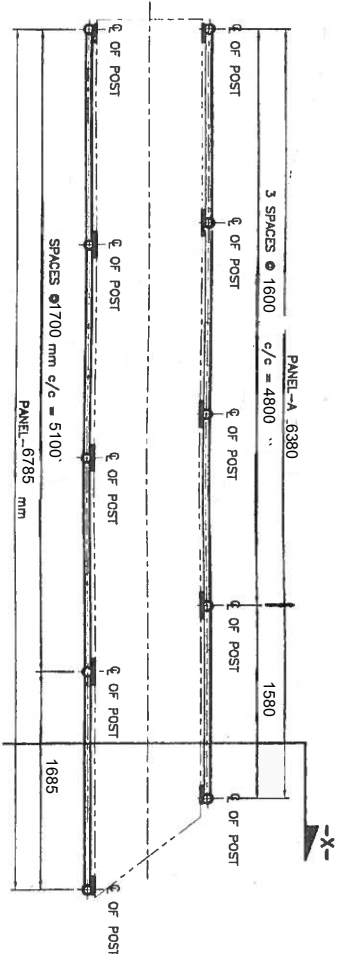
# BOBCAYGEON LOCK 32

## RAILING GENERAL LAYOUT

- NOTES:
- 1. CONTRACTOR TO VERIFY LAYOUT WITH DEPARTMENT REPRESENTATIVE. PRIOR TO FABRICATING RAIL.
  - 2. CONTRACTOR TO FIELD MEASURE AND SUBMIT SHOP DRAWINGS.
  - 3. LOCK GUIDE RAILS AND GATES TO PARKS CANADA STANDARD RAIL DETAILS P1, P2, P3, P6.
  - 4. ALL LOCK GUIDE RAILS TO BE HOT DIPPED GALVANIZED.
  - 5. CONTRACTOR TO ENSURE RAILINGS DO NOT INTERFERE WITH MECHANICAL COMPONENTS.
  - 6. AT NO TIME SHALL POST BASE PLATES SIT UPON A TRENCH COVER PLATE.
  - 7. GATE DECK RAILINGS TO GATE DECK RAILING DRAWING DETAIL
  - 8. GATE DECK RAILINGS PAINTED SAFETY YELLOW, PAINT SYSTEM 2.



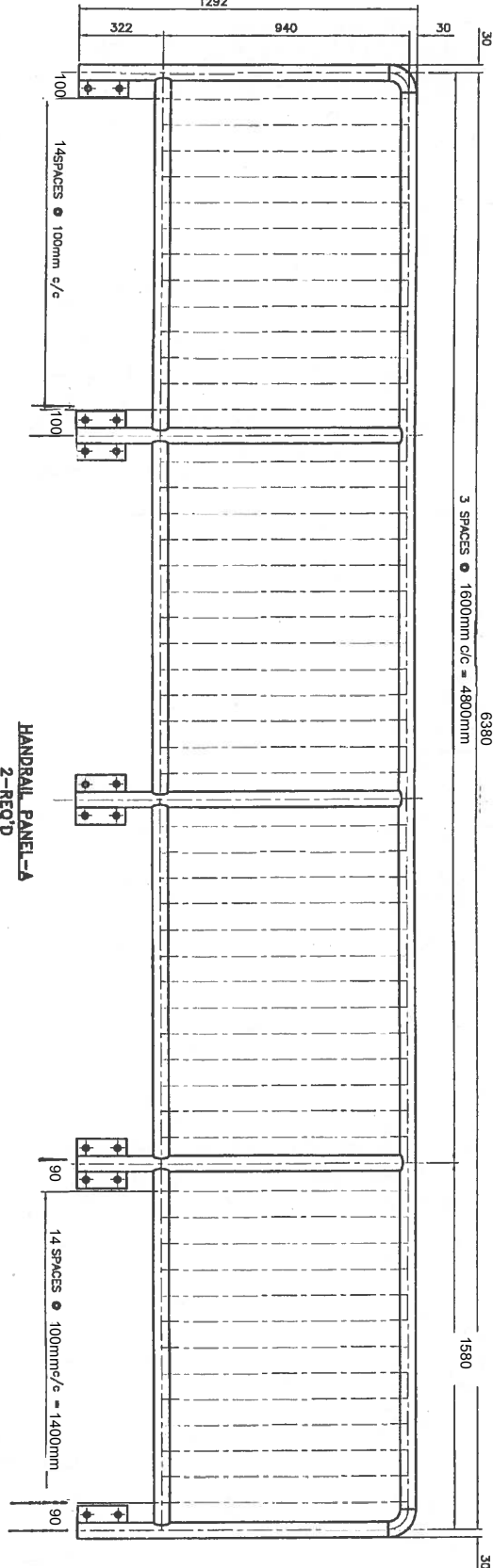
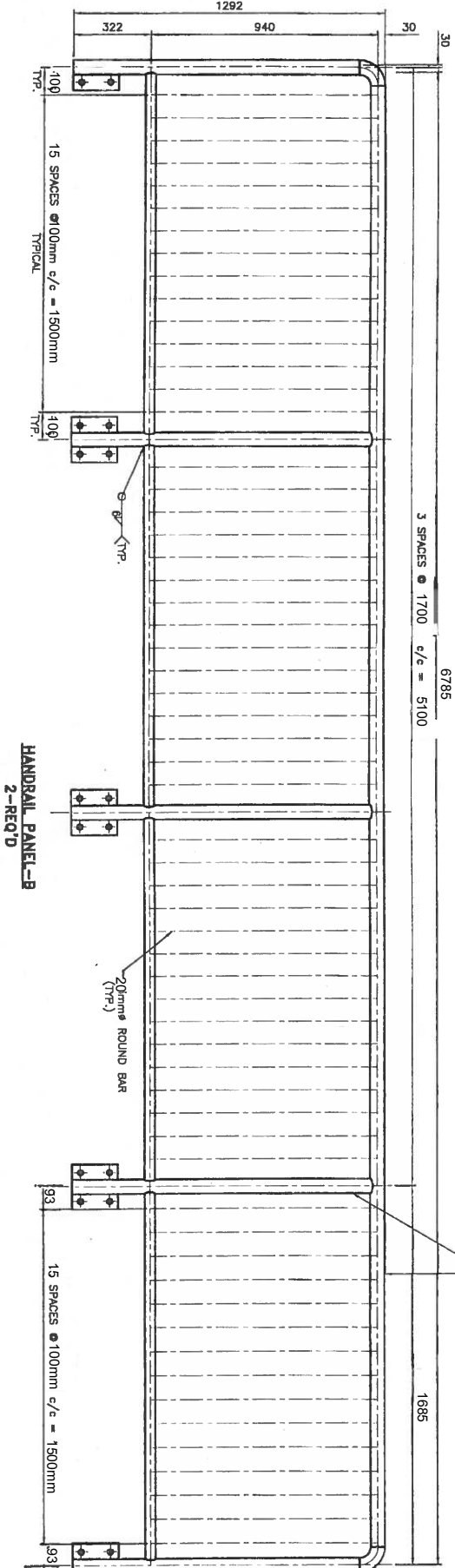
# BOBCAYGEON LOCK 32 GATE DECK RAILINGS

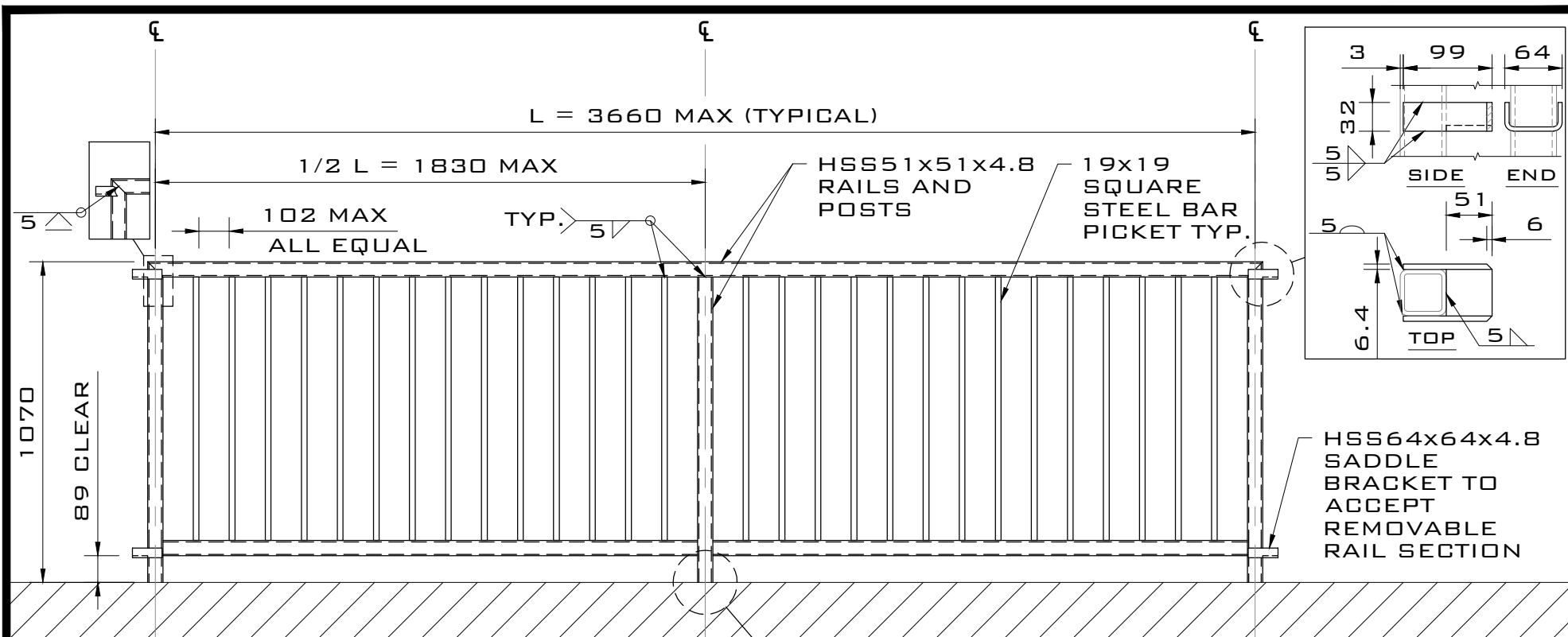


NOTE TO CONTRACTOR:  
1. CONTRACTOR TO CHECK ALL RELEVANT DIMENSIONS AND ELEVATIONS AS SHOWN ON THE DRAWINGS, AND ADJUST DIMENSIONS AND ELEVATIONS AS REQUIRED TO MATCH EXISTING STRUCTURE/SITE AS APPROVED BY THE ENGINEER.

90° ELBOW 60.3mm O.D. 3.81mm WALL (TYP.)

- NOTES:**
- 1) PAINTING ON SECTOR GATES SHALL BE FINISHED USING PAINT SYSTEM 2. COLOR SHALL BE SAFETY YELLOW.
  - 2) ALL OTHER RAILINGS TO BE HOT DIP GALVANIZED AFTER FABRICATION IN CONFORMANCE WITH CSA G-164.
  - 3) POSTS SHALL BE VERTICAL. ALL EXPOSED CORNER TO BE ROUND SMOOTH.
  - 4) Brm# HOLES ARE TO PERMIT GASES TO ESCAPE DURING GALVANIZING.
  - 5) WELDING SHALL CONFORM TO THE LATEST ISSUE OF CSA SPECIFICATION W 59.
  - 6) HSS SHALL CONFORM TO CSA STANDARD CAN3-G40.21-M92 GRADE 350W CLASS C.
  - 7) ALL STEEL CONFORM TO CSA STANDARD G40.21-M92.
  - 8) ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.





#### GENERAL NOTES

1. THIS DETAIL TYPICALLY APPLIES TO AREAS ACCESSIBLE TO PUBLIC WHERE A FALL GREATER THAN 600mm OR WHERE A FALL INTO A HAZARD SUCH AS A DAM INTAKE OR SPILLWAY EXISTS. GUARD RAILS ARE TYPICALLY INTENDED TO BE INSTALLED AT THE EDGE OF AN IDENTIFIED FALL HAZARD.
2. TYPICALLY A RUN OF GUARD RAIL SHALL CONSIST OF ALTERNATING FIXED AND REMOVABLE SECTIONS.
3. COMPLETE ASSEMBLED SECTION IS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION
4. ALL DIMENSIONS IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE

Canada Parks Canada



Project Name:  
STANDARD DETAILS FOR PUBLIC AND OPERATOR  
SAFETY INSTALLATIONS ON DAMS

Drawing Name:  
STANDARD PUBLIC STYLE GUARD RAIL  
FABRICATION DETAILS - FIXED RAIL SECTION

Drawn by: S.Gauthier

Drawing date: August 19, 2014

Checked by:

Check date:

Approve date:

Approved:

Drawing Scale:

1:20

Plot Scale:

1:1

Plot Size:

Letter

Drawing No:

**P1**

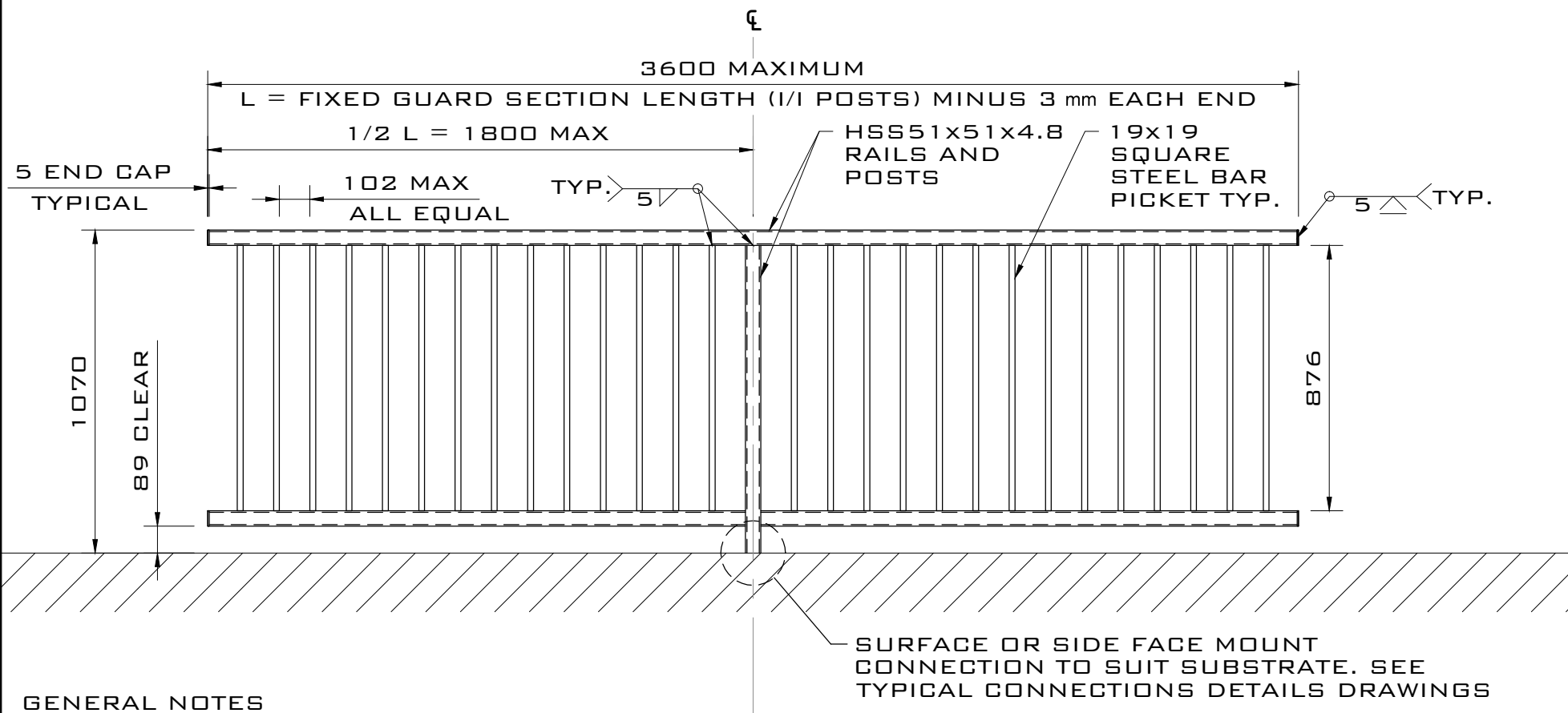
REV.A

Canada

Office of the Executive Director, Waterways

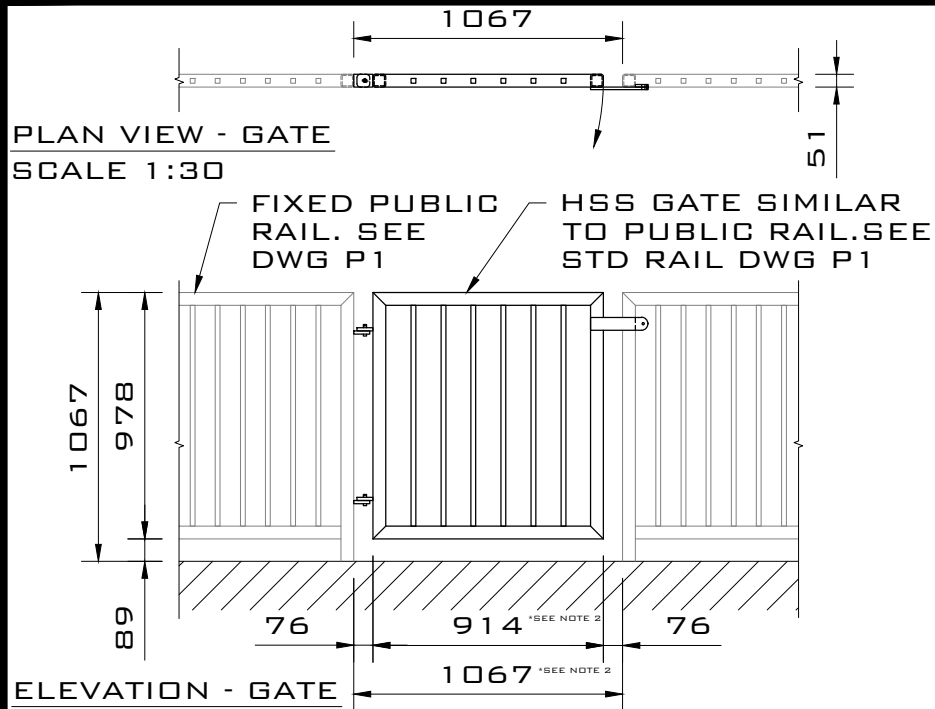
Parks Canada Agency

Government of Canada



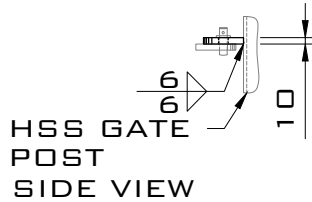
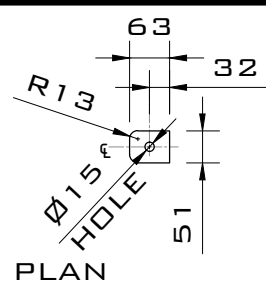
#### GENERAL NOTES

1. THIS DETAIL TYPICALLY APPLIES TO AREAS ACCESSIBLE TO PUBLIC WHERE A FALL GREATER THAN 600mm OR WHERE A FALL INTO A HAZARD SUCH AS A DAM INTAKE OR SPILLWAY EXISTS. GUARD RAILS ARE TYPICALLY INTENDED TO BE INSTALLED AT THE EDGE OF AN IDENTIFIED FALL HAZARD.
2. TYPICALLY A RUN OF GUARD RAIL SHALL CONSIST OF ALTERNATING FIXED AND REMOVABLE SECTIONS.
3. COMPLETE ASSEMBLED SECTION IS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION
4. ALL DIMENSIONS IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE

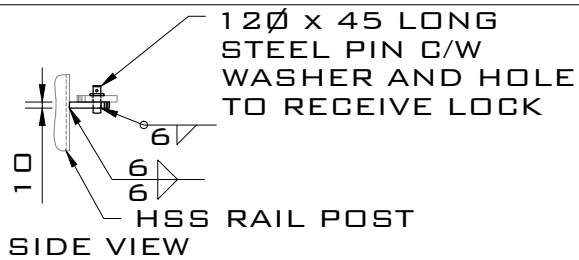
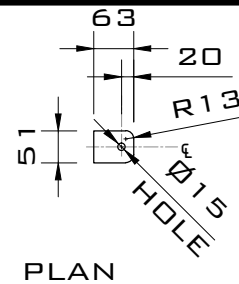


#### GENERAL NOTES

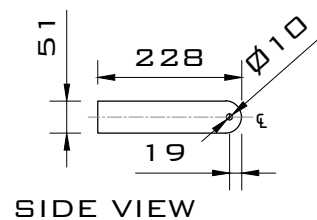
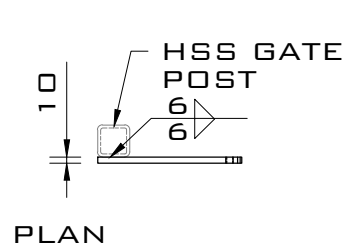
1. THIS GATE IS INTENDED TO BE COMPATIBLE WITH PUBLIC STYLE GUARD RAILS. WHERE GATES ARE TO BE INSTALLED ON GUARDRAIL RUNS, EFFORT SHALL BE MADE TO MATCH PICKET SPACING OF ADJACENT RAILS.
2. THE TYPICAL GATE WIDTH OF 914 mm OR 1067 mm CLEAR OPENING BETWEEN POSTS SHOWN IS CONSIDERED IDEAL AND IS ALSO A MAXIMUM. WHERE GATE WIDTH MUST BE REDUCED 610 mm SHALL BE TAKEN AS A MINIMUM.
3. COMPLETE ASSEMBLED SECTION IS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION
4. ALL DIMENSIONS IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE



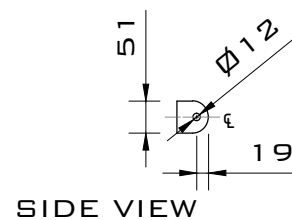
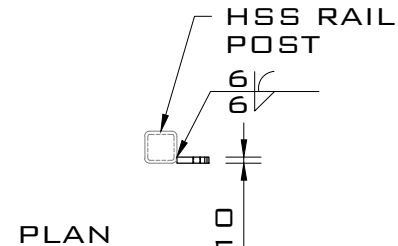
**TOP HINGE PLATE**  
SCALE 1:12



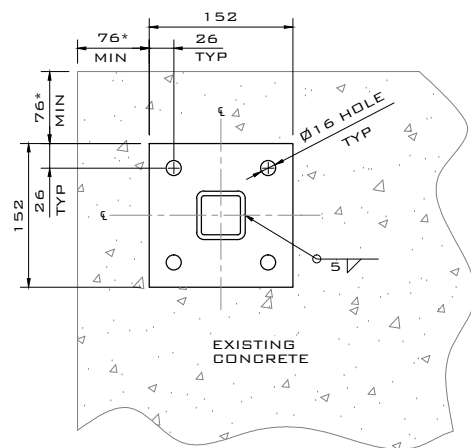
**BOTTOM HINGE PLATE**  
SCALE 1:12



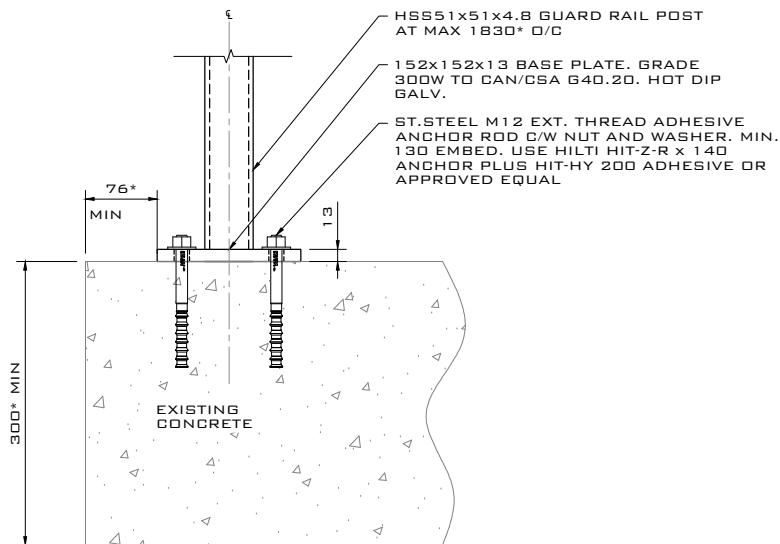
**GATE LATCH PLATE**  
SCALE 1:12



**RAIL LATCH PLATE**  
SCALE 1:12



PLAN VIEW

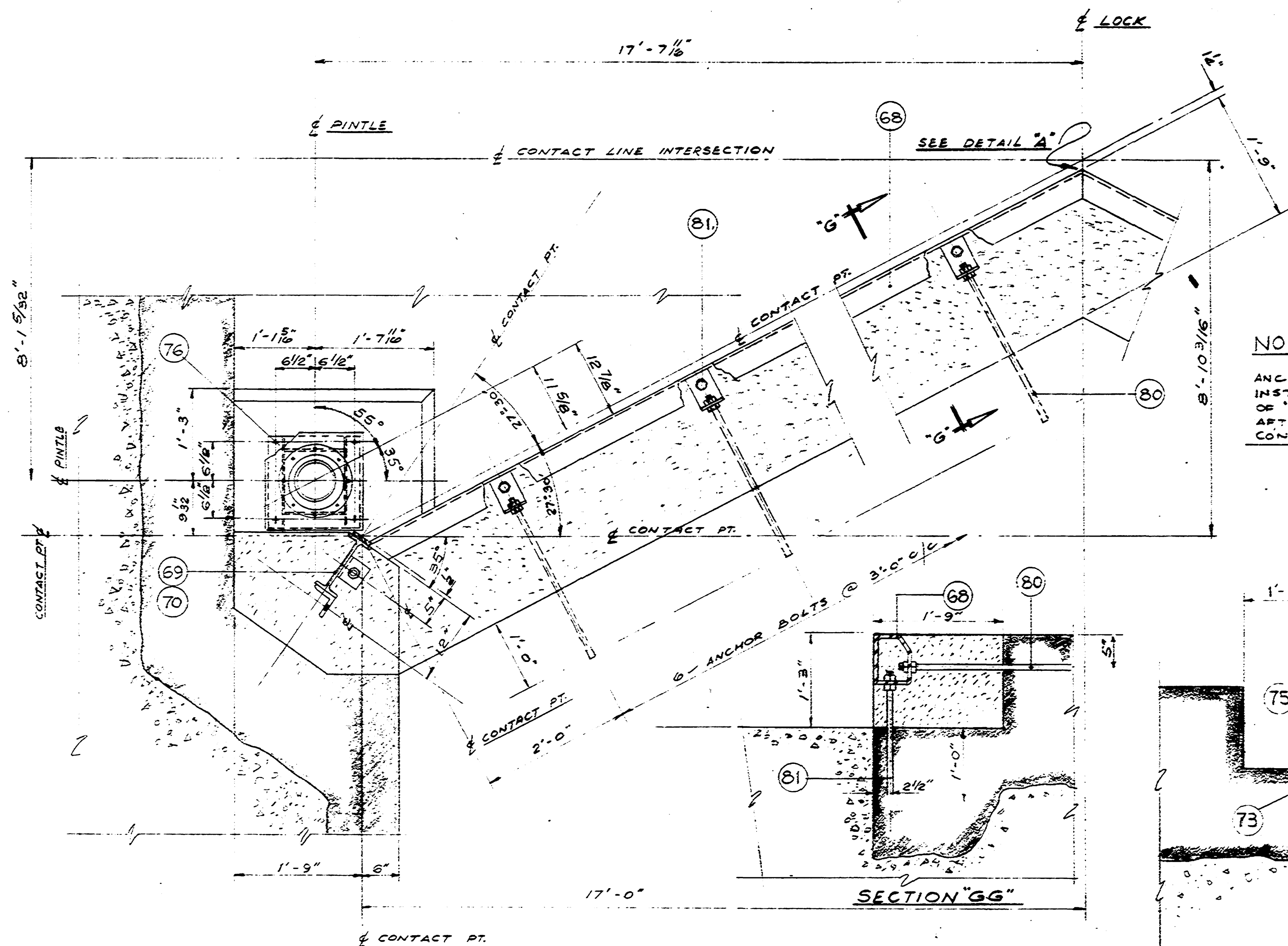


ELEVATION VIEW

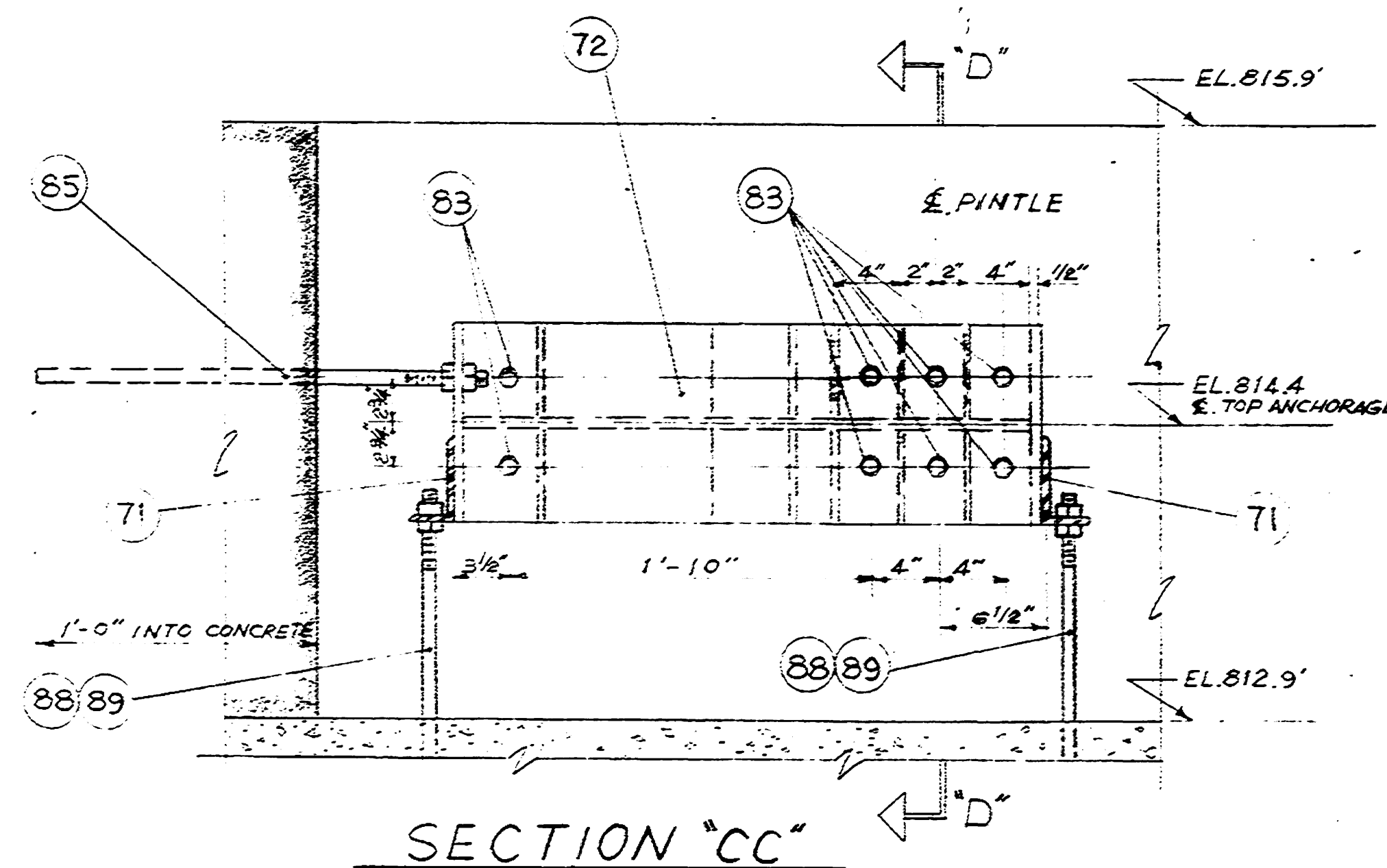
**GENERAL NOTES:**

- 1) ALL DIMENSIONS GIVEN ARE IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE
- 2) BASE PLATES SHALL BE LEVELED TO PLUMB GUARD RAIL POSTS AS REQUIRED. WHERE SHIM AMOUNT EXCEEDS 13 mm, USE OF LEVELING NUT AND A BED OF NON-SHRINKABLE GROUT OF THICKNESS MIN 25 mm TO MAX 32mm SHALL BE USED AT UNDERSIDE OF PLATE. SLOPE SIDES OF GROUT BED AT 1:1 DOWN TO SURFACE. REFER TO SLOPED SURFACE MOUNT CONNECTION DETAIL FOR SLOPED SURFACE INSTALLATIONS SUCH AS STAIR RAILS, ETC.
- 3) DIMENSIONS ATTACHED TO AN ASTERISK (\*) ARE CONSIDERED MINIMUM DESIGN CONSTRAINTS. SHOULD THESE DIMENSIONS NOT BE SATISFIED CONTACT AN ENGINEER TO CONFIRM FEASIBILITY OF CONNECTION.
- 4) INSPECT SURFACE PRIOR TO INSTALLATION. WHERE SURFACE CONCRETE IS CRACKED OR SCALED IN EXCESS OF 6 mm DEPTH THE SURFACE MUST BE REPAIRED PRIOR TO BASE PLATE INSTALLATION. REFER TO TYPICAL LOCAL CONCRETE REPAIR DETAILS AND/OR CONTACT AN ENGINEER

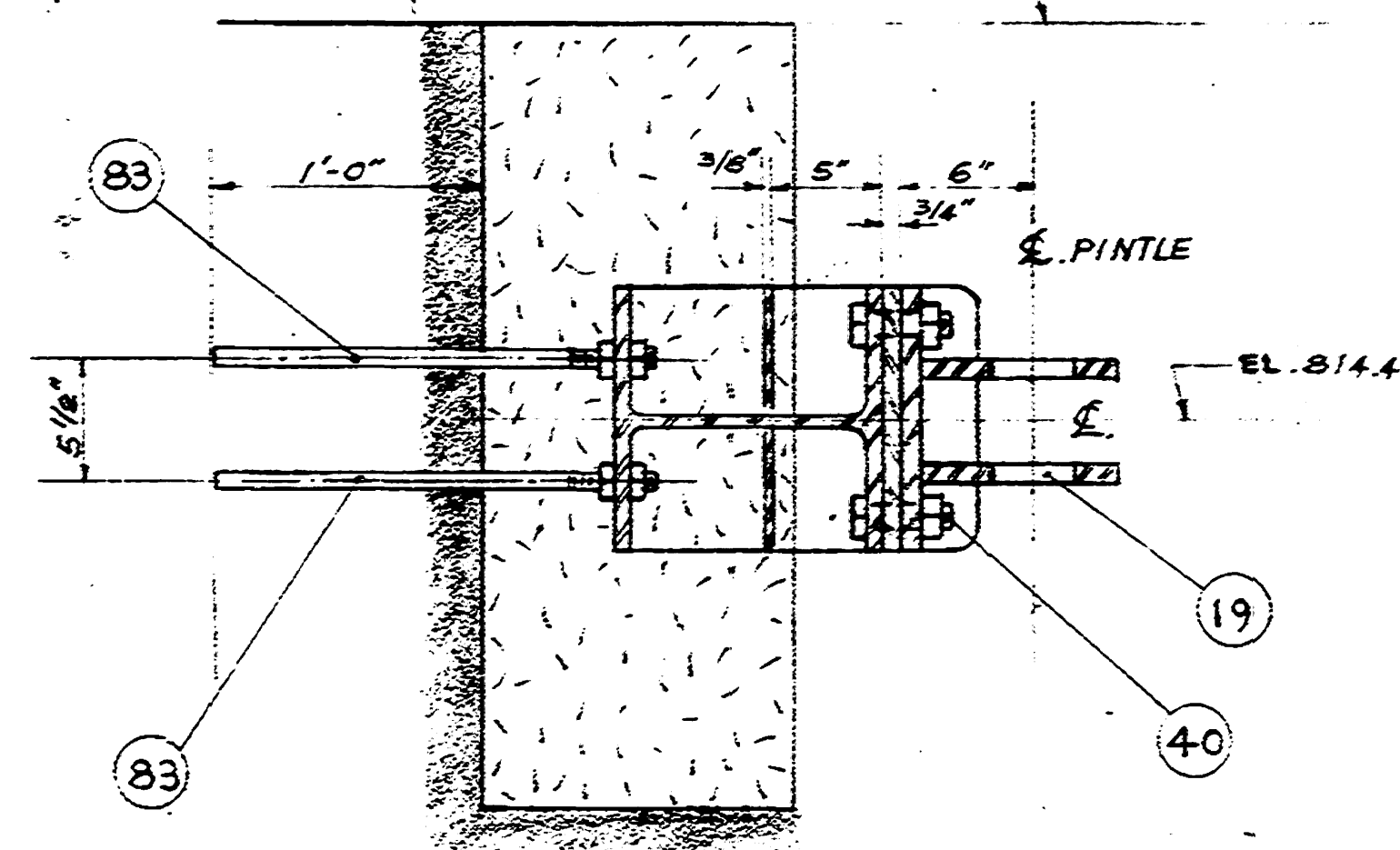




SECTION 'FF'



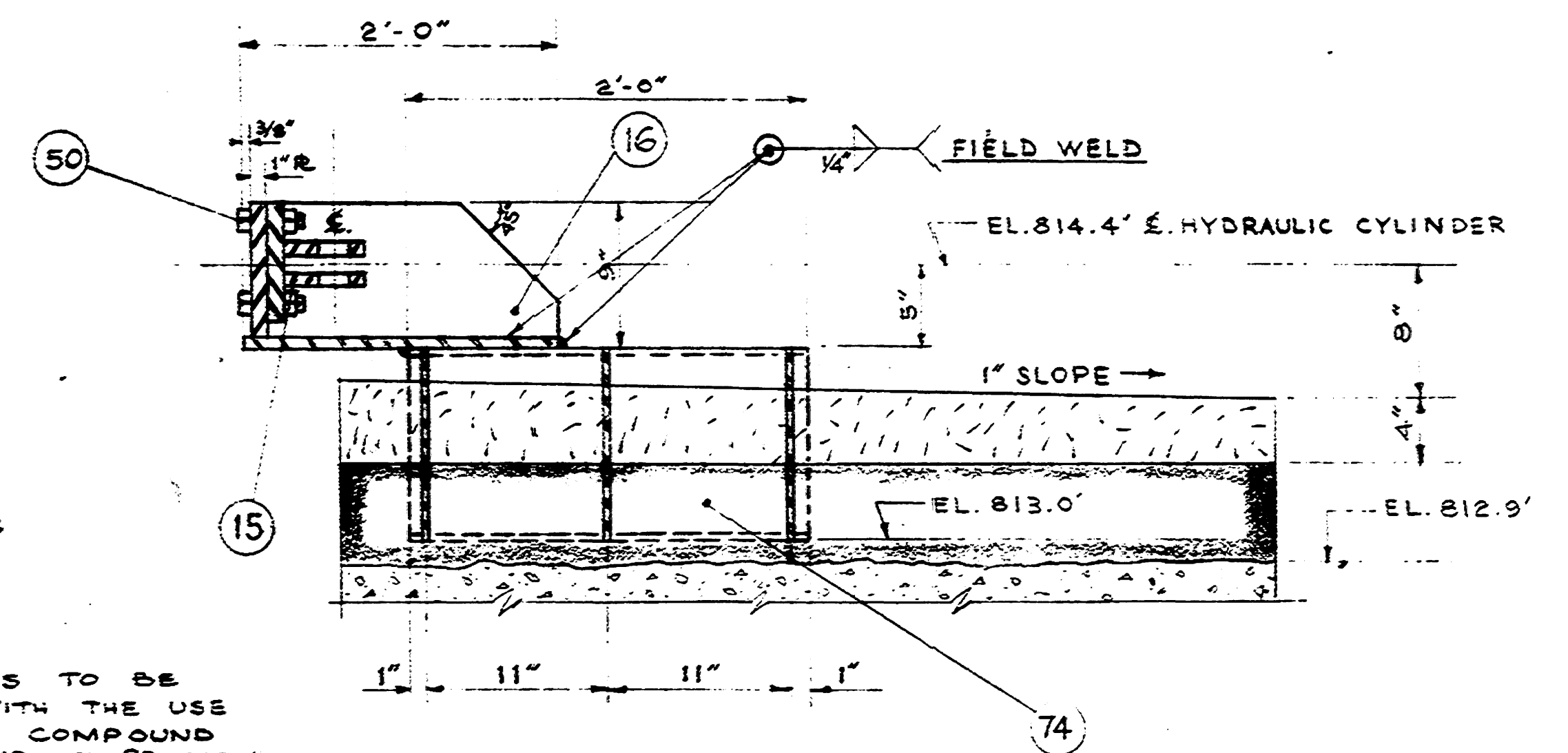
SECTION 'CC'



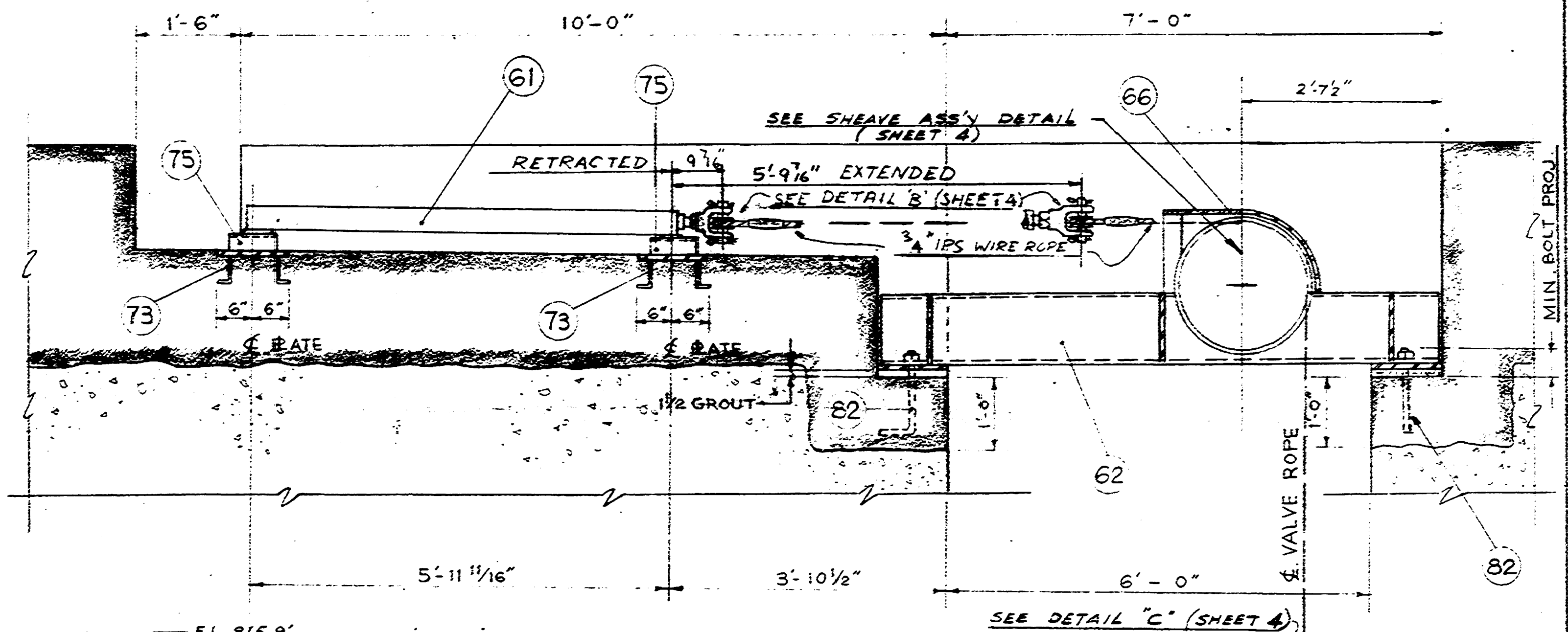
SECTION 'DD'

NOTE:

ANCHOR BOLTS TO BE INSTALLED WITH THE USE OF "ROCLAC" COMPOUND AFTER SET UP OF PRIMARY CONCRETE.



SECTION 'HH'



SECTION 'AA'

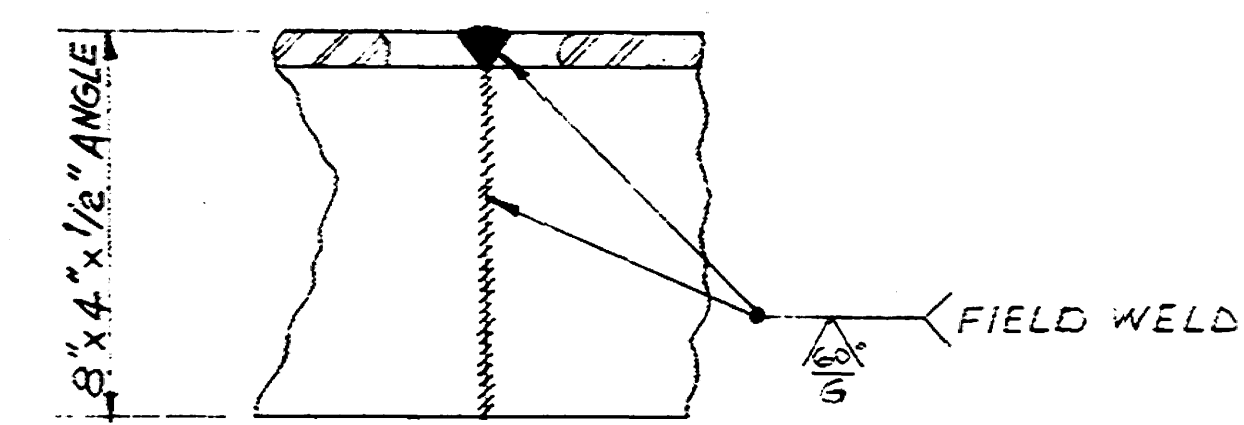
NOTES:

1. REFER TO DRAWINGS 3-50 SHEET 2 AND 5 FOR FURTHER DETAILS AND MATERIAL LIST.

LEGEND

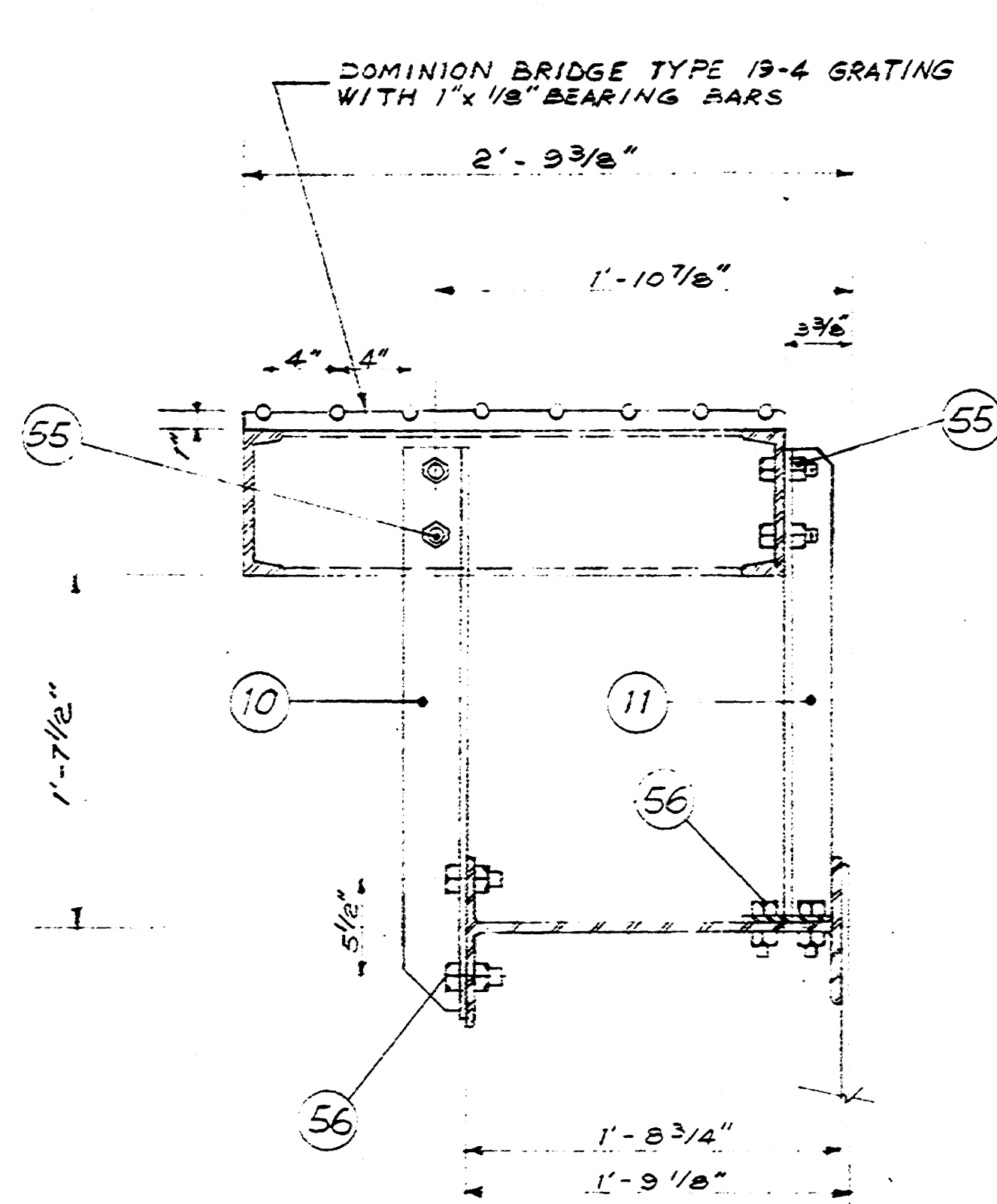
- EXISTING CONCRETE (SECTION)
- FIRST POUR CONCRETE (SECTION)
- SECOND POUR CONCRETE (SECTION)

REV. NO.	DATE	REVISIONS	MADE BY
C	MAY 68	ANG. BOLT INSTAL. REV.	Y.S.
B	2/5/68	SECTION A-A REVISED	WD
A	APR 4/68	REVISED IN ACCORDANCE WITH DOT	M.J.
REV. NO.	DATE	REVISIONS	MADE BY
RULIFF GRASS CONSTRUCTION CO. LTD.			
(TOWER DIVISION) - THORNHILL, ONTARIO			
EMBEDMENT DETAILS			
LOCK NO 32 BOBCAYCEON			
DEPARTMENT OF TRANSPORT			
MARINE WORKS CANAL DIVISION			
DRAWN BY	DATE	CHECKED BY	DATE
M.J.	FEB/68	C.L.	FEB/68
PREP. APP.	DATE	SCALE	
			DRAWING NUMBER
			3-50
			SHEET NO 3

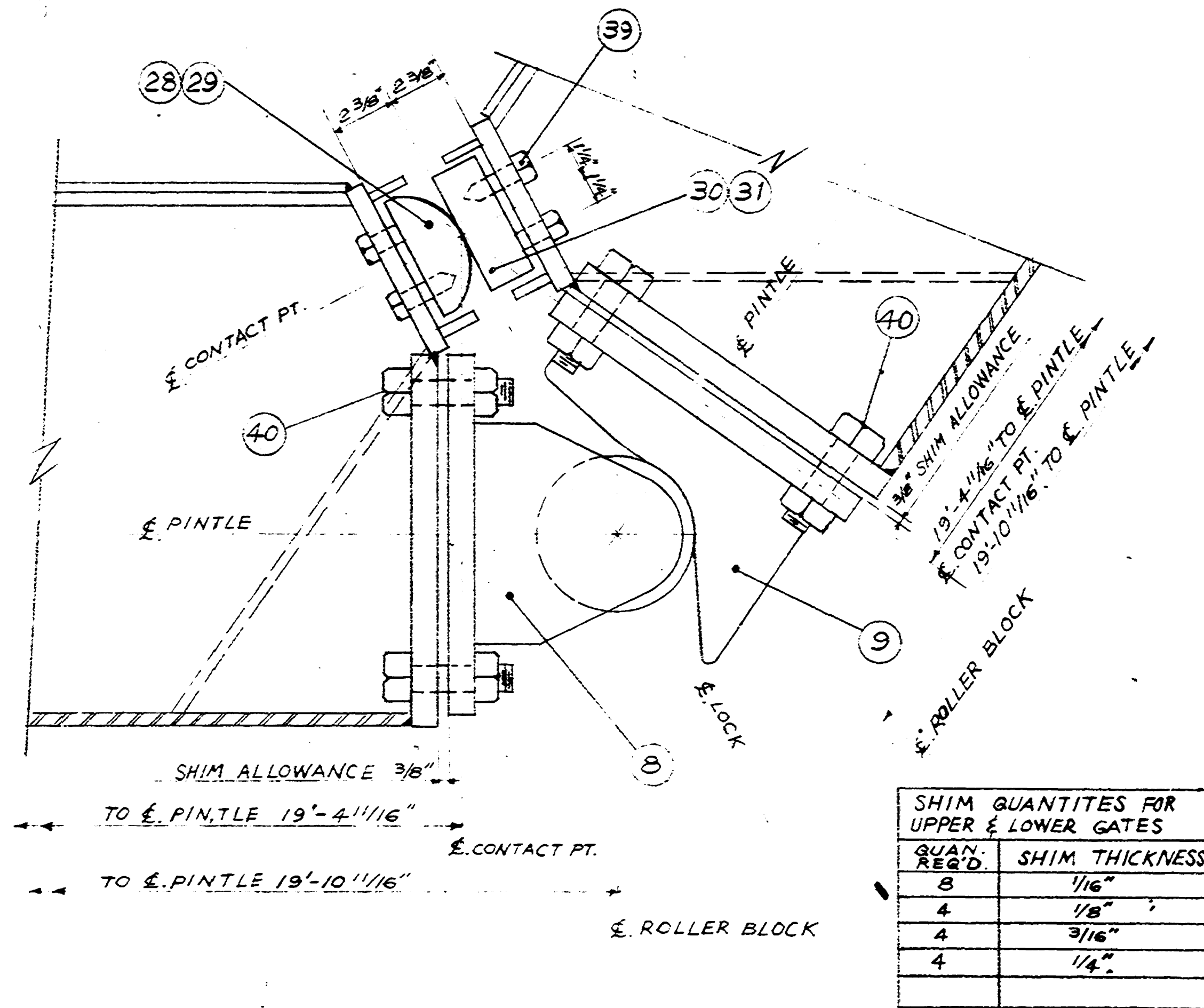


DETAIL 'A'

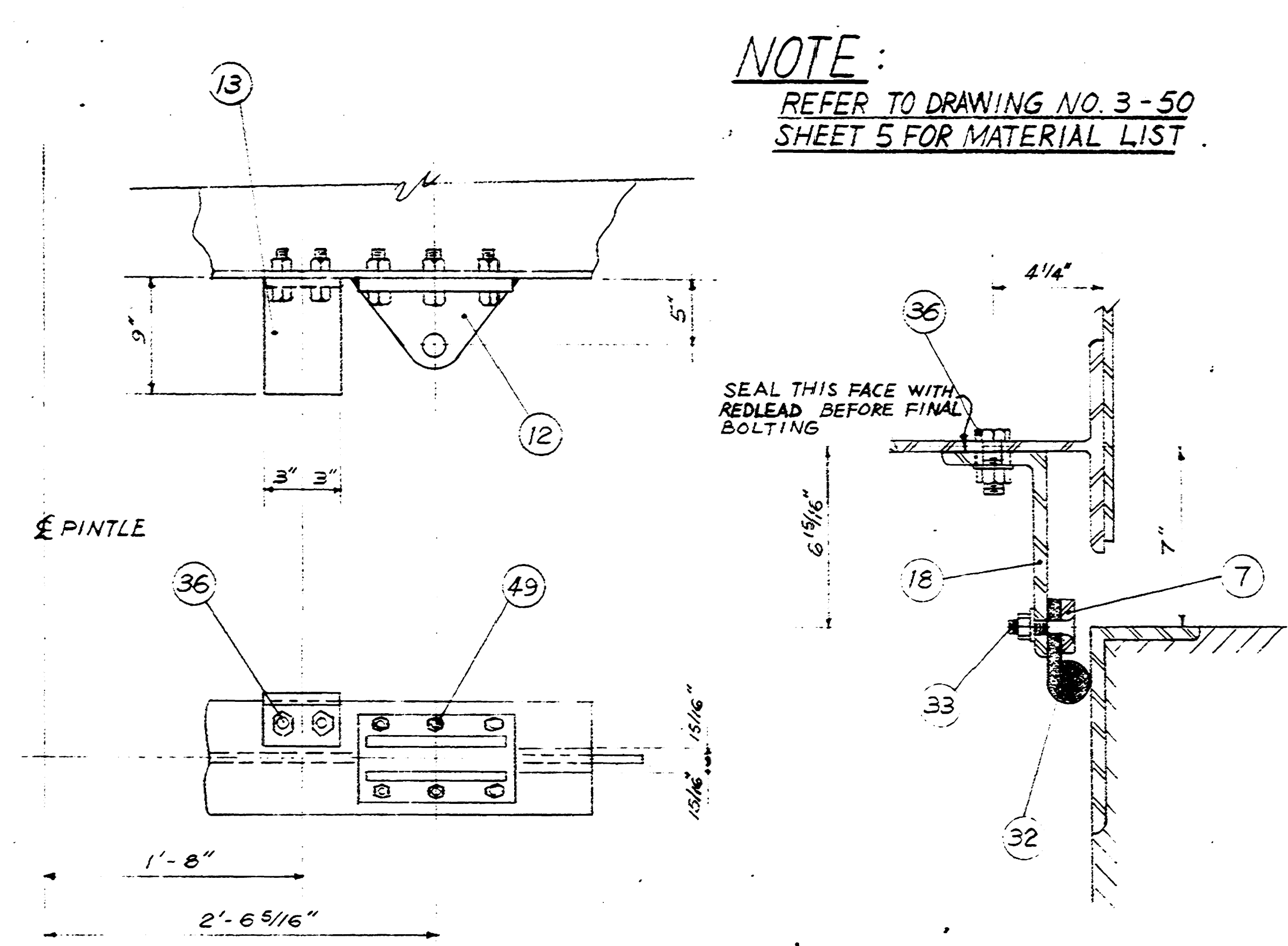




TYPICAL WALKWAY SUPPORT DETAIL  
SCALE: 1 1/2" = 1'-0"

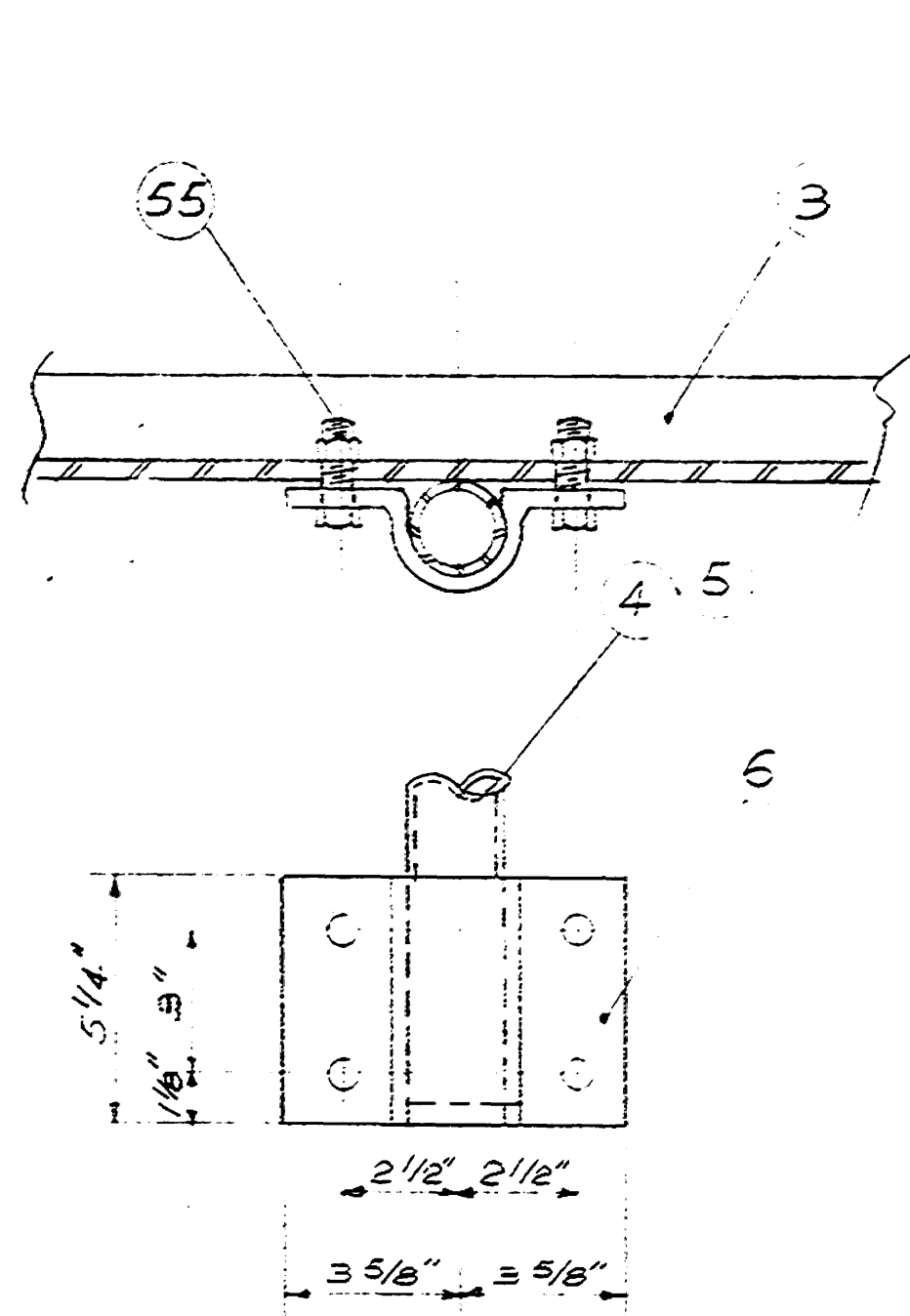


ROLLER BLOCK ASSEMBLY DETAIL  
SCALE: 3" = 1'-0"

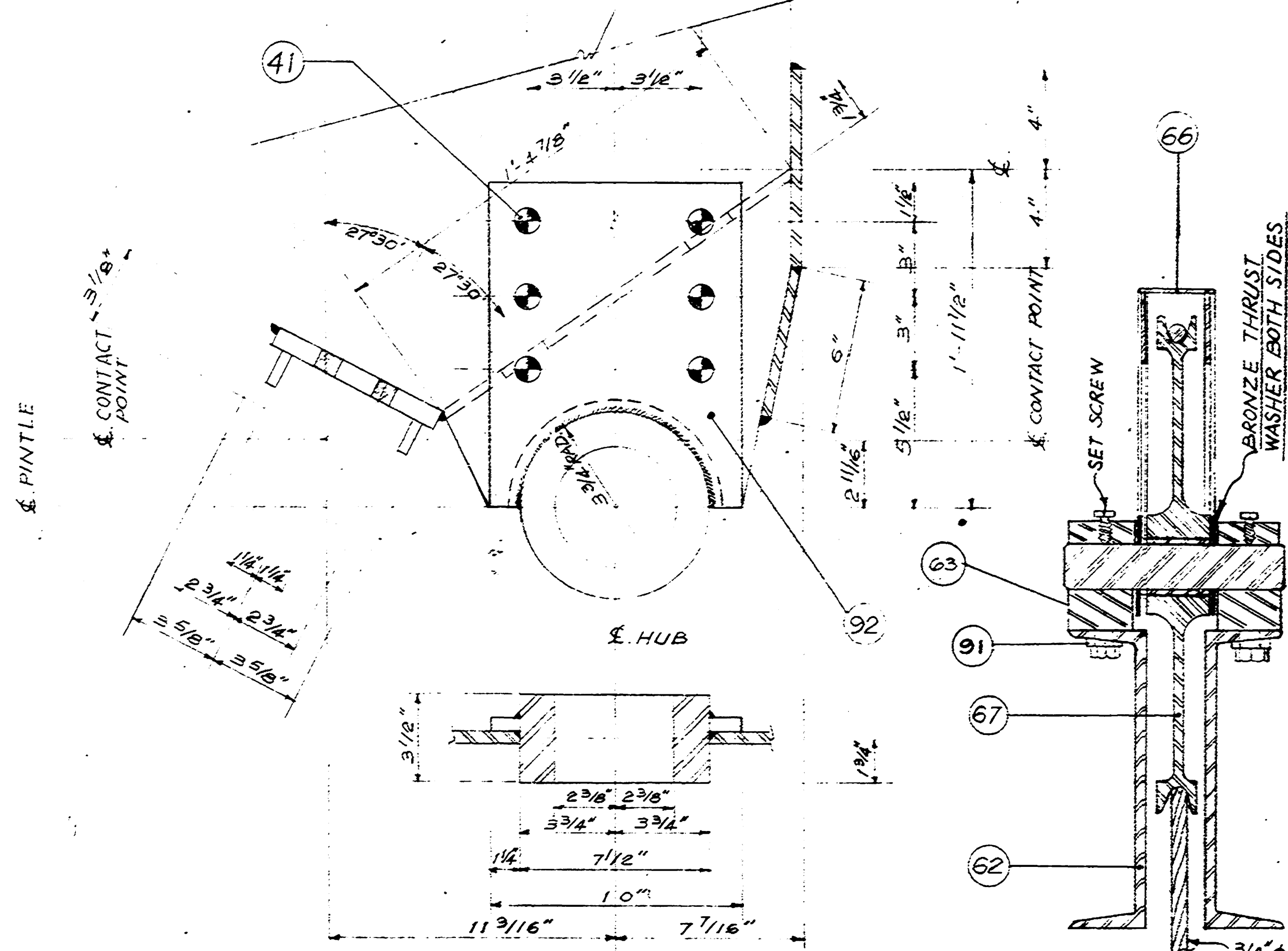


GATE CYLINDER BRACKET DETAIL  
SCALE: 1 1/2" = 1'-0"

J-SEAL DETAIL  
SCALE: 3" = 1'-0"

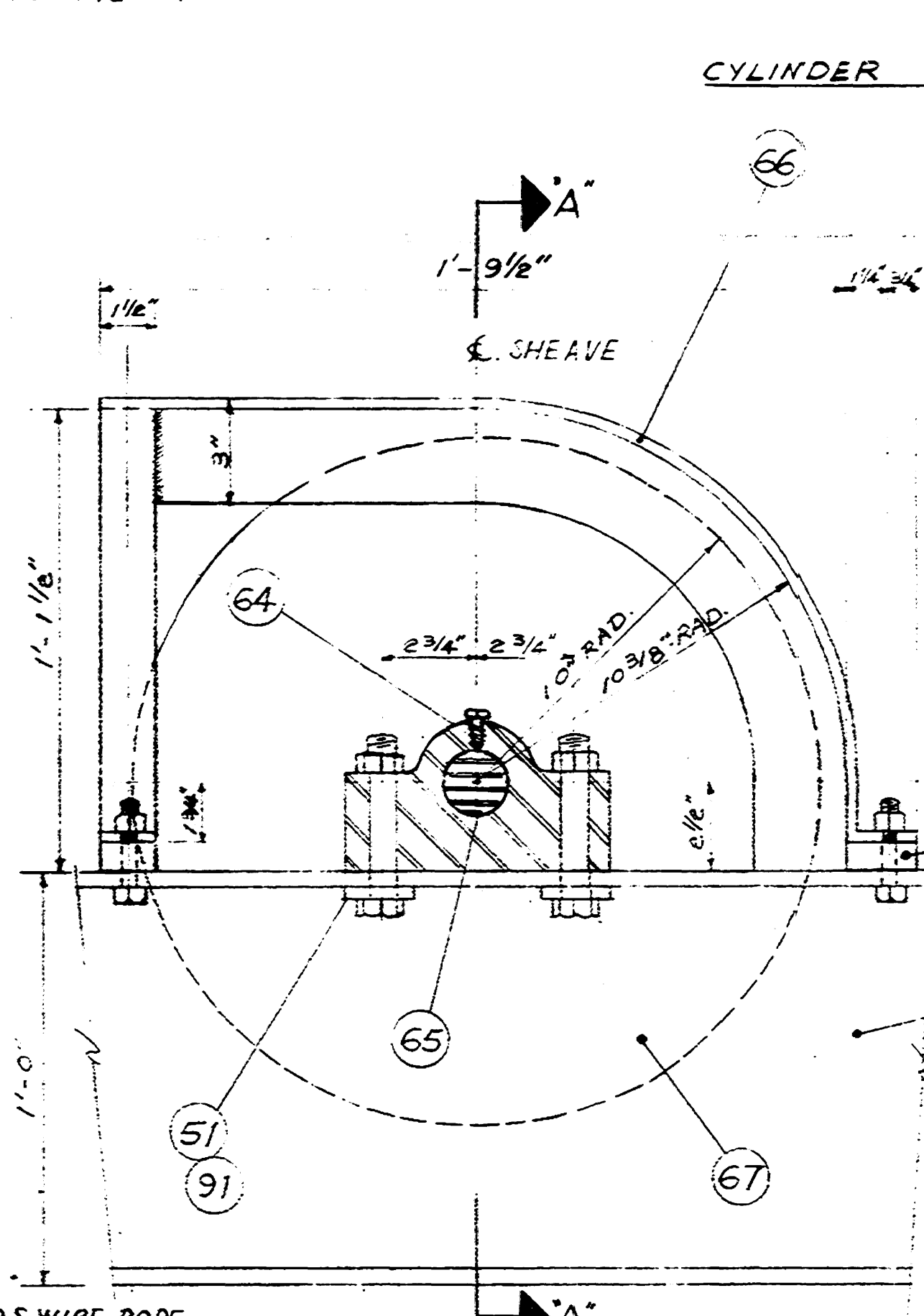


HANDRAIL CONNECTION DETAIL  
SCALE: 3" = 1'-0"

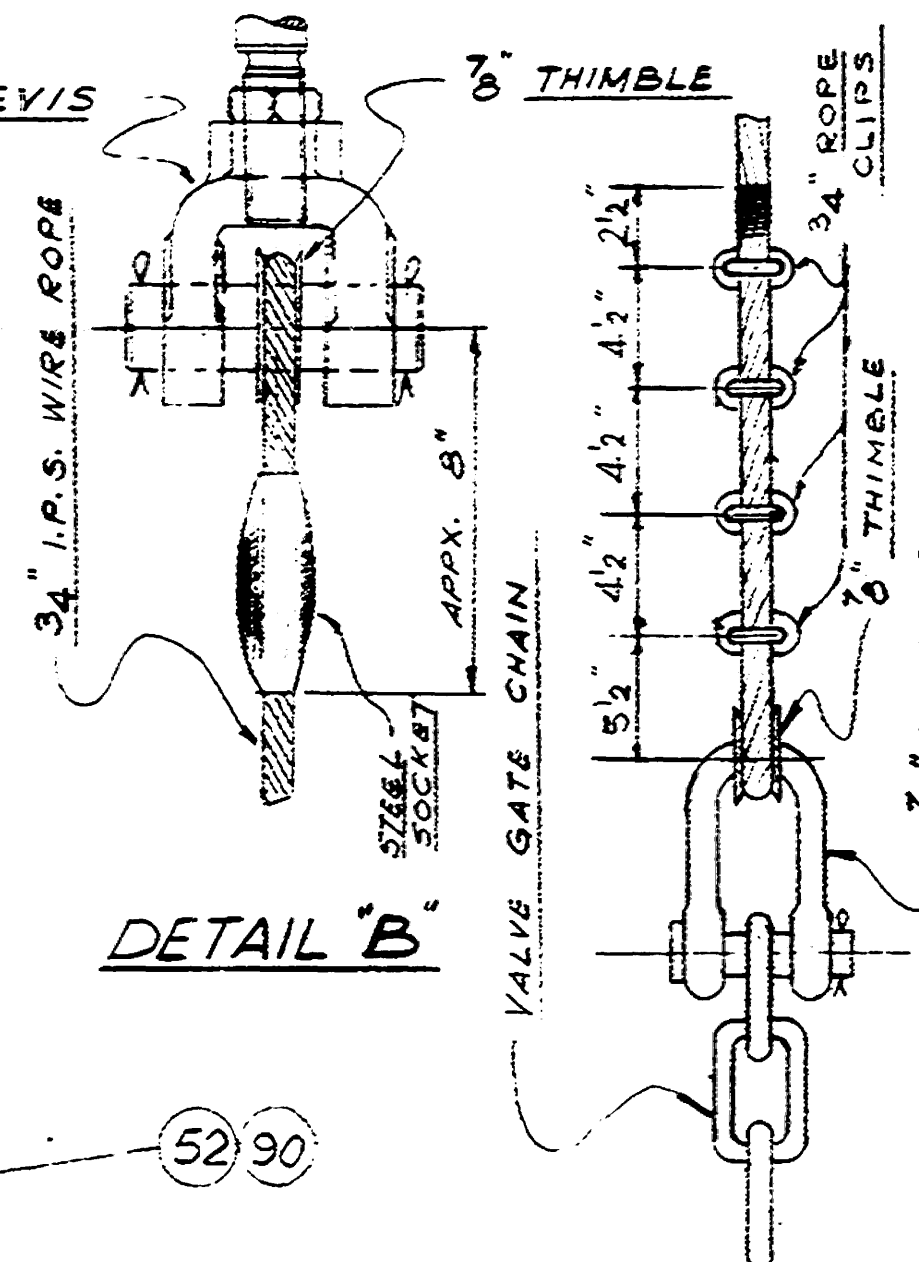


TOP HINGE HUB DETAIL  
SCALE: 3" = 1'-0"

SECTION "A-A"  
SCALE: 3" = 1'-0"



SHEAVE ASSEMBLY DETAIL  
SCALE: 3" = 1'-0"



DETAIL "C"

REV.	DATE	DETAILS B & C REVISED	W. DOWNAR
B	2/15/68	DETAILS B & C REVISED	W. DOWNAR
A	1/8/68	REVISED IN ACCORDANCE WITH DEPARTMENT OF TRANSPORT	J. MA

REVISIONS

MADE BY

GATE ASSEMBLY DETAILS

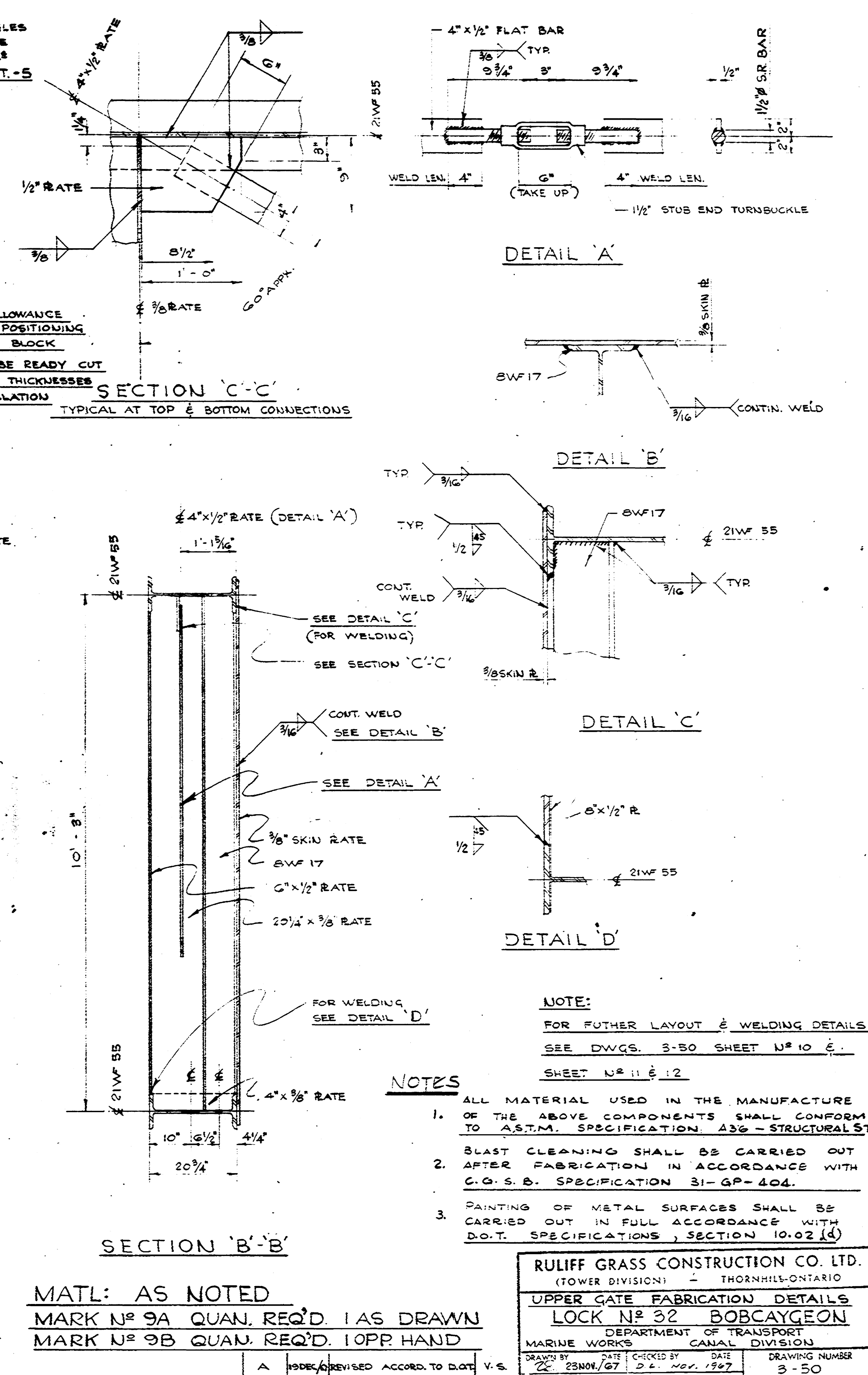
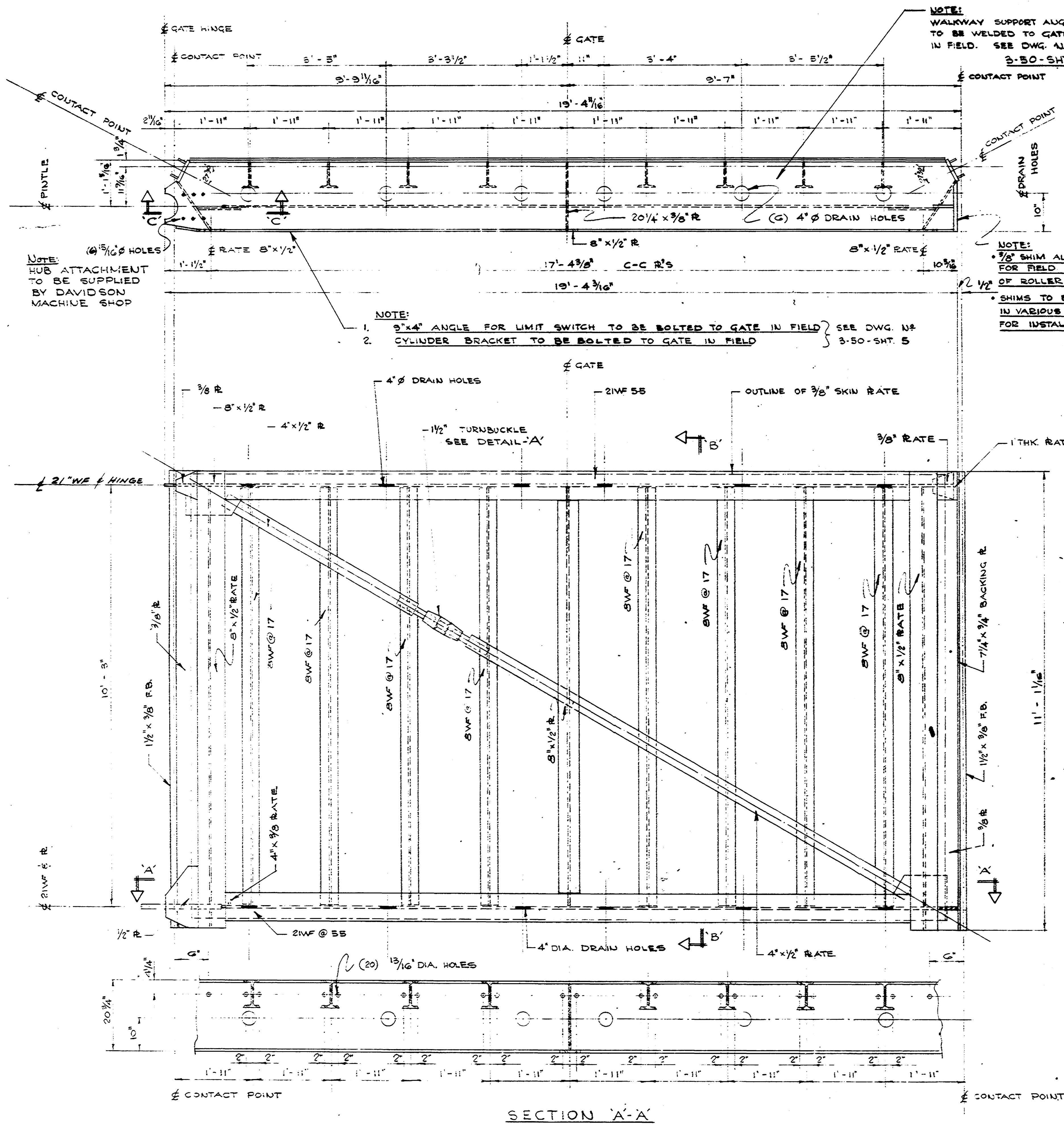
LOCK NO 32 BOBCAYGEON

DEPARTMENT OF TRANSPORT

MARINE WORKS CANAL DIVISION

11 J. FEB/68 D. L. FEB/68 3-50

AS NOTED SHEET NO 4



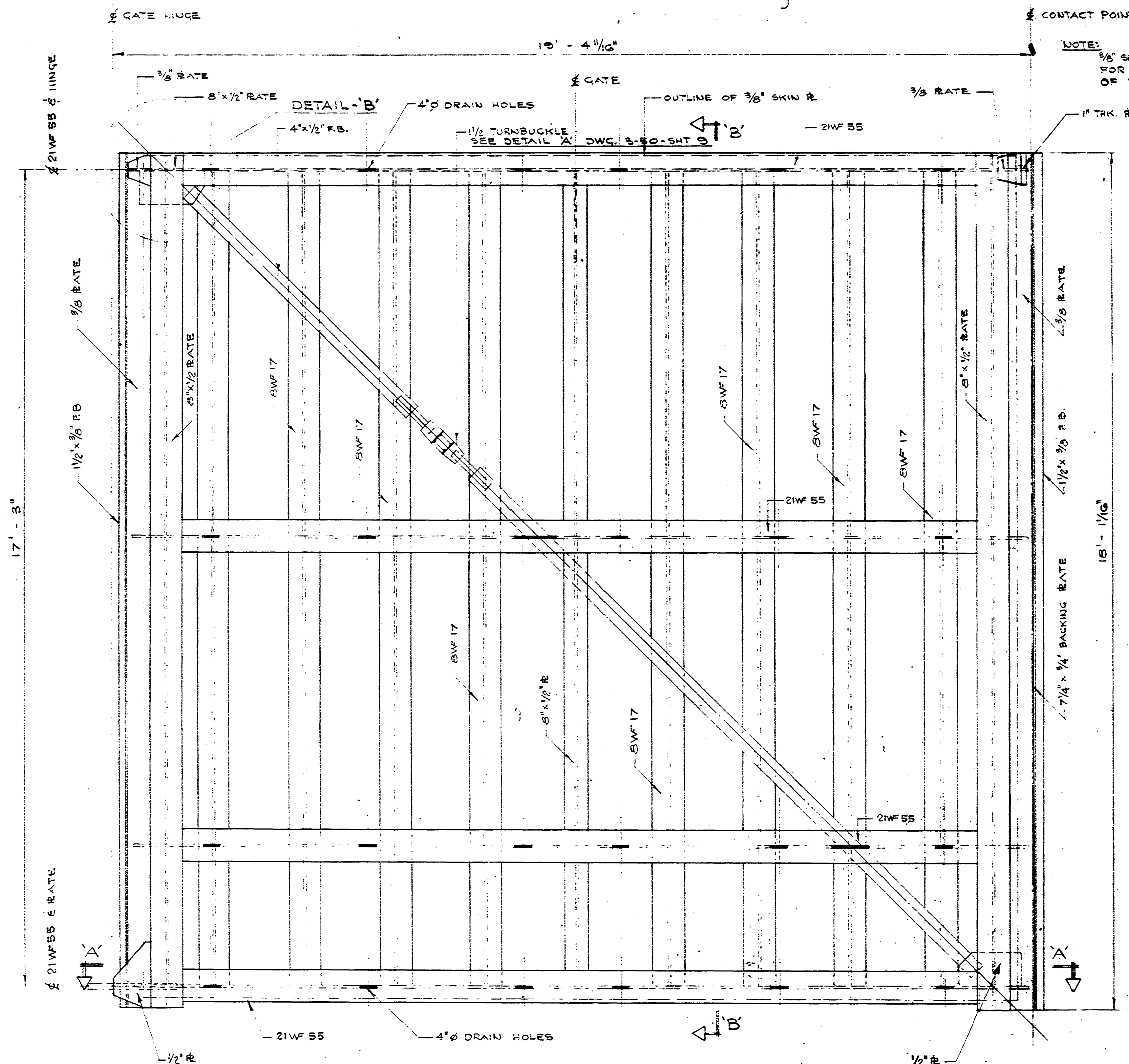
MATL: AS NOTED  
 MARK NO 9A QUAN. REQ'D. 1 AS DRAWN  
 MARK NO 9B QUAN. REQ'D. 1 OPP. HAND

RULIFF GRASS CONSTRUCTION CO. LTD. (TOWER DIVISION) - THORNHILL, ONTARIO			
UPPER GATE FABRICATION DETAILS			
LOCK NO 32 BOBCAYGEON			
DEPARTMENT OF TRANSPORT			
MARINE WORKS CANAL DIVISION			
DRAWN BY	DATE	CHECKED BY	DATE
22	23NOV/67	D.L.	NOV. 1967
ENG. APP.	DATE	SCALE	
DRAWING NUMBER		SHEET NO 9	
3-50			



NOTE:

1. 3"x4" ANGLE FOR LIMIT SWITCH TO BE BOLTED TO GATE IN FIELD } SEE DWG. NO 3-30  
2. CYLINDER BRACKET TO BE BOLTED TO GATE IN FIELD } SHEET NO 5



MATL: AS NOTED

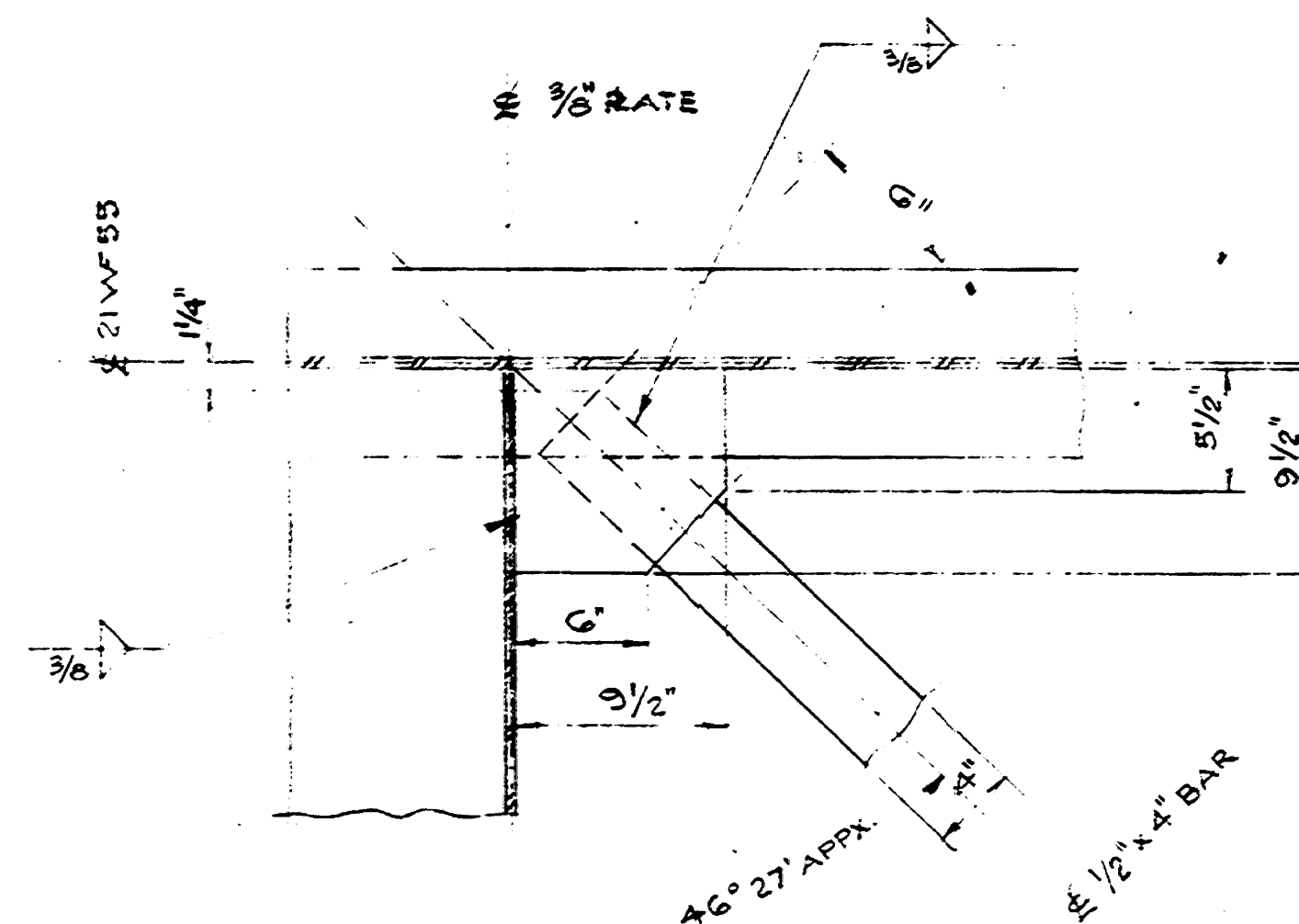
MARK N° 10A QUAN. REQ'D. 1 AS DRAWN

MARK N° 10B QUAN. REQ'D. 1 OPP. HAND

CONTACT POINT

NOTE:

3/8" SHIM ALLOWANCE  
FOR FIELD POSITIONING  
OF ROLLER BLOCK



DÉTAIL - 'B'  
TYPICAL AT TOP & BOTTOM CONNECTIONS

6" x 1/2" RATE

- 8WF 17

- 3/8" SKIN RATE

— 21WF 55 TO BE SLOTTED  
TO ALLOW 4" x 1/2 FB. TO  
PROTRUDE

CUT & TRIM SWF AT ALL  
INTERSECTIONS TO SUB 21WF

4<sup>th</sup> HOLES (TYP)

FOR WELDING  
SEE DETAIL 'D'

SECTION 'B'-'B'

## GENERAL NOTES

1. ALL MATERIAL USED IN THE MANUFACTURE OF THE ABOVE COMPONENTS SHALL CONFORM TO A.S.T.M. SPECIFICATION A36 FOR STRUCTURAL STEEL
2. BLAST CLEANING SHALL BE CARRIED OUT AFTER FABRICATION IN ACCORDANCE WITH C.Q.S.B. SPECIFICATION 31-GP-404
3. PAINTING OF METAL SURFACES SHALL BE CARRIED IN FULL ACCORDANCE WITH D.O.T. SPECIFICATIONS, SECTION 10.02 (d)

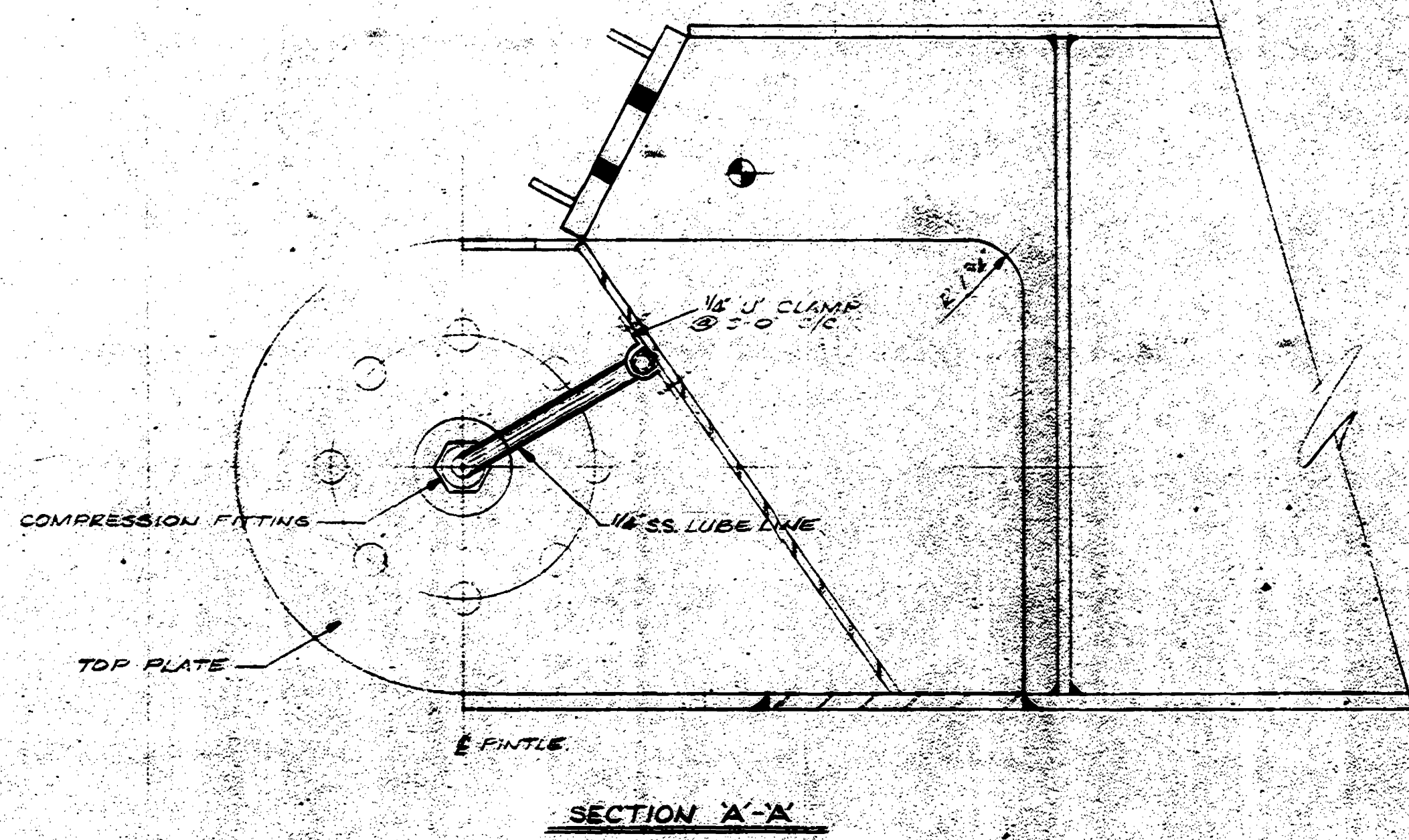
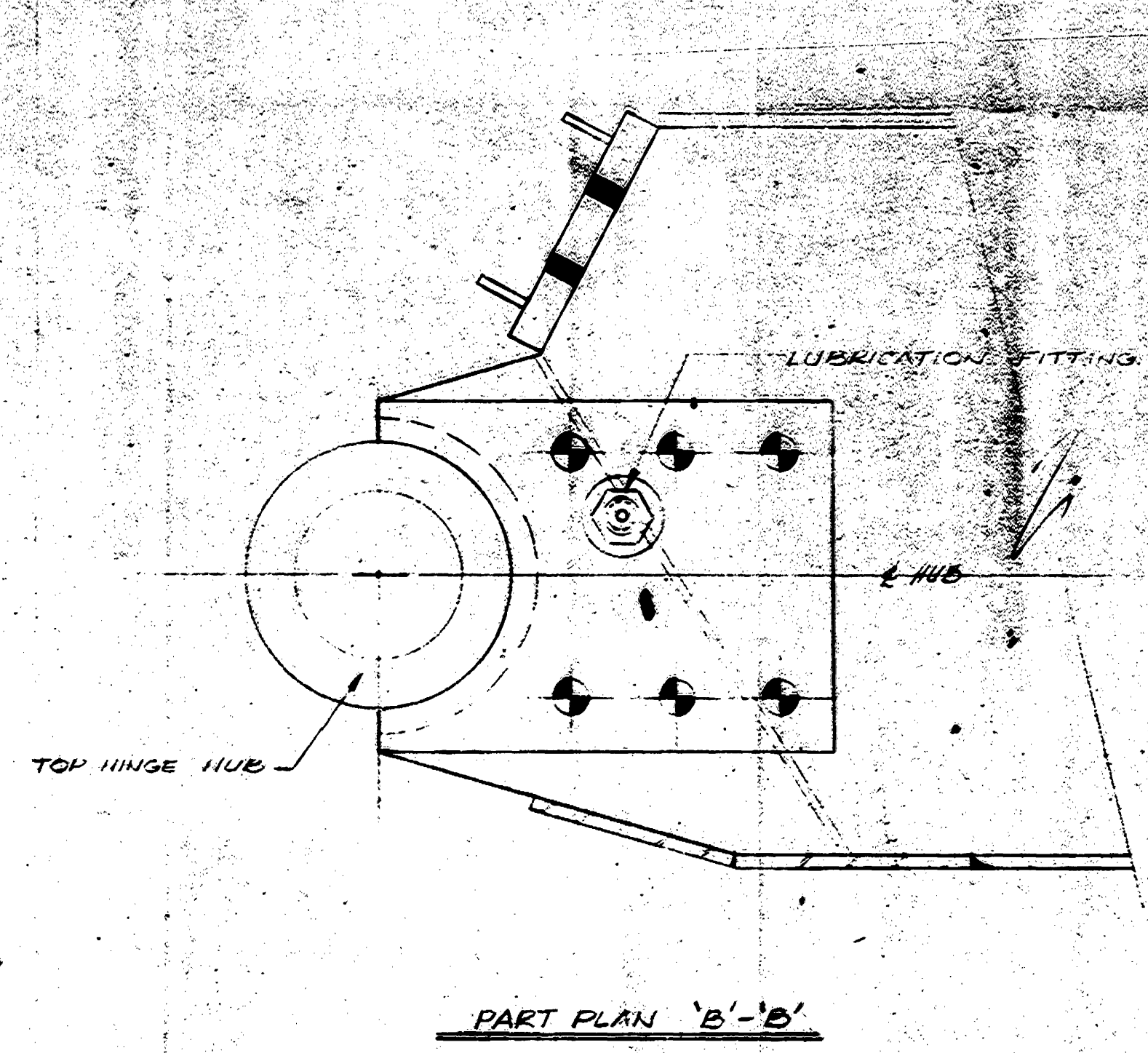
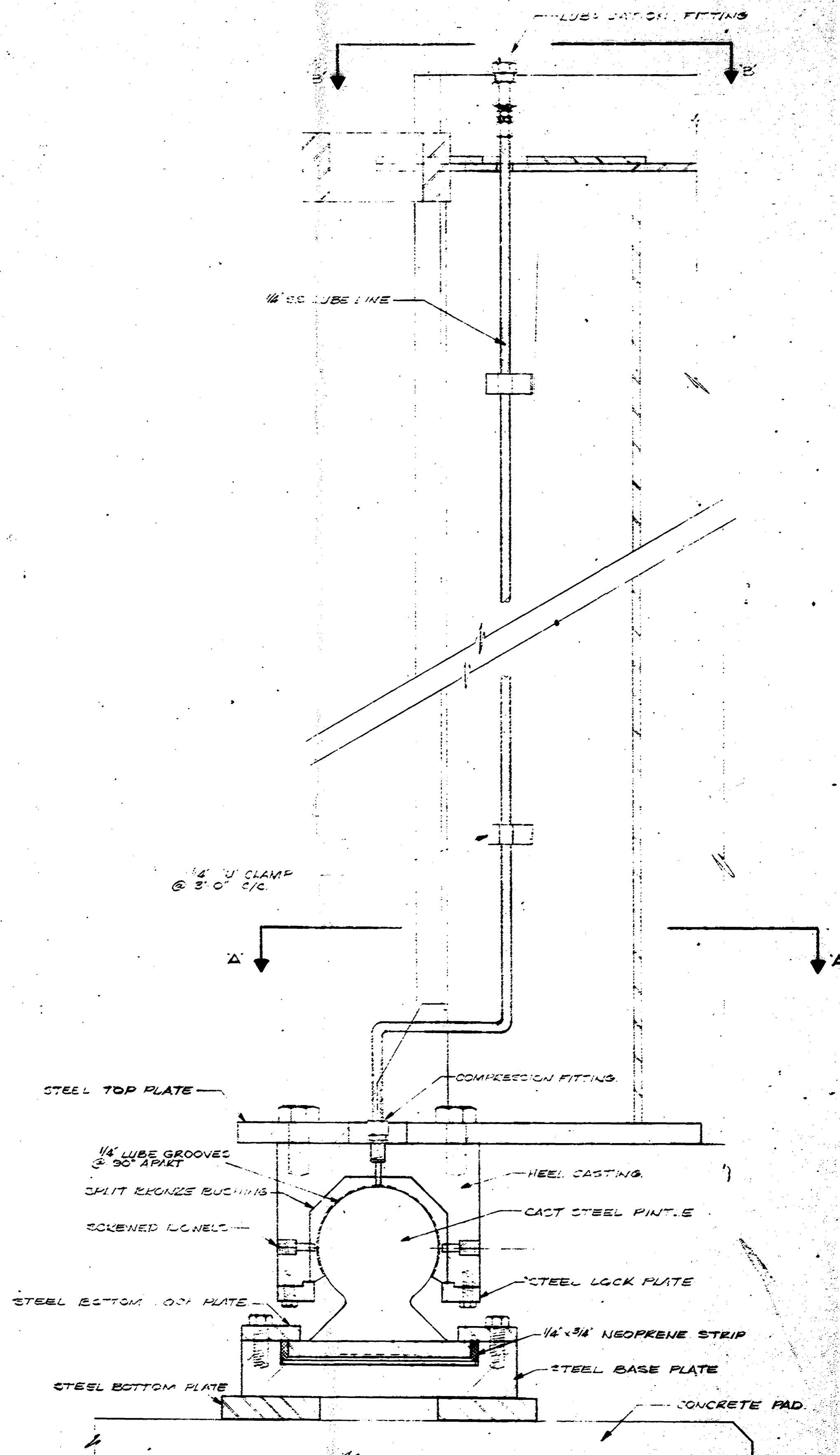
NOTE:

1. PLAN VIEW & SECTIONAL VIEW 'A'-A' OF LOWER GATE IDENTICAL TO THOSE SHOWN ON DWG. 3-50 SHEET 3, UPPER GATE.
2. FOR FURTHER DIMENSIONAL & WELDING DETAILS REFER TO DWG'S. 3-50 SHEETS NO 3, 11 & 12

A	DEC./67	REVISED IN ACCORD. WITH. D. O. T.	V. S.
REV N°	DATE	REVISION	MADE BY
<b>RULIFF GRASS CONSTRUCTION CO. LTD.</b> (TOWER DIVISION) — THORNHILL-ONTARIO			
<u>LOWER GATE FABRICATION DETAILS</u> <u>LOCK N°32 BOBCAYGEON</u> DEPARTMENT OF TRANSPORT MARINE WORKS CANALS DIVISION			
DRAWN BY	DATE	CHECKED BY	DATE
ENG. APP. <i>28 Nov. 67</i>	<i>DATE</i>	<i>D.L. 401. 1967</i>	<i>DATE</i>
	SCALE		
			DRAWING NUMBER
			3-50
			SHEET N° 10

T-23-108.10



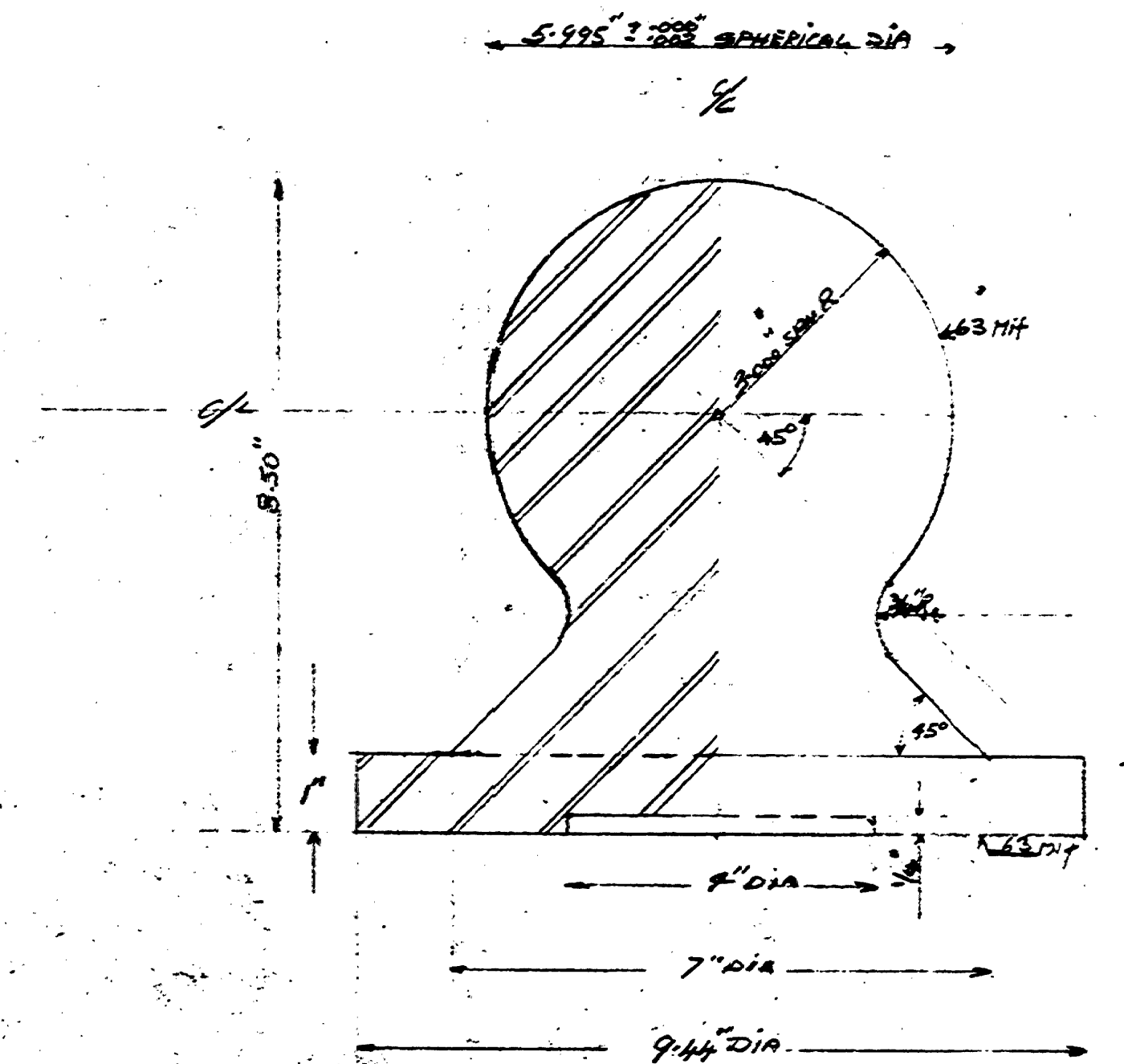
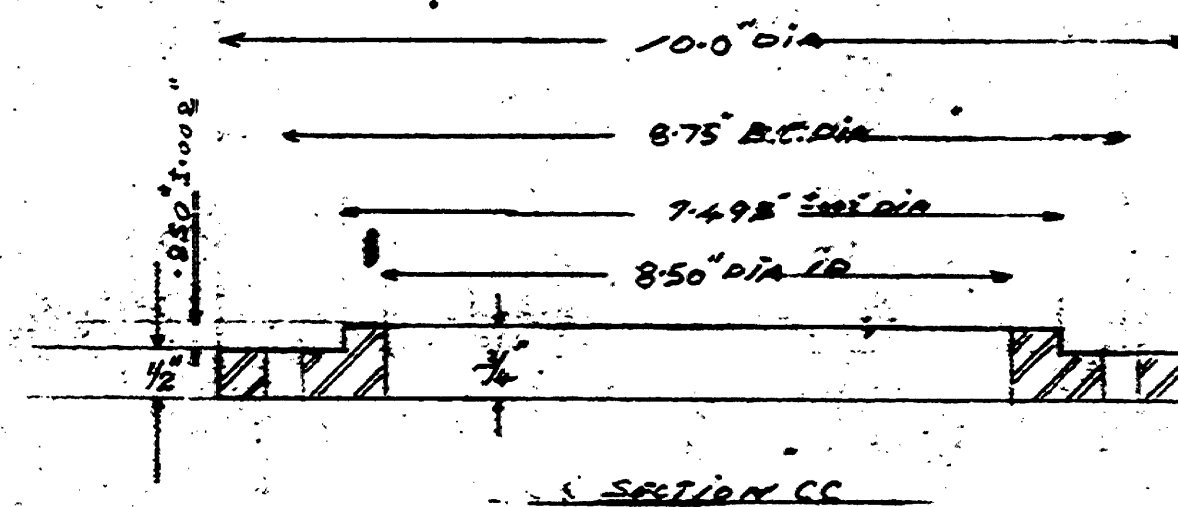
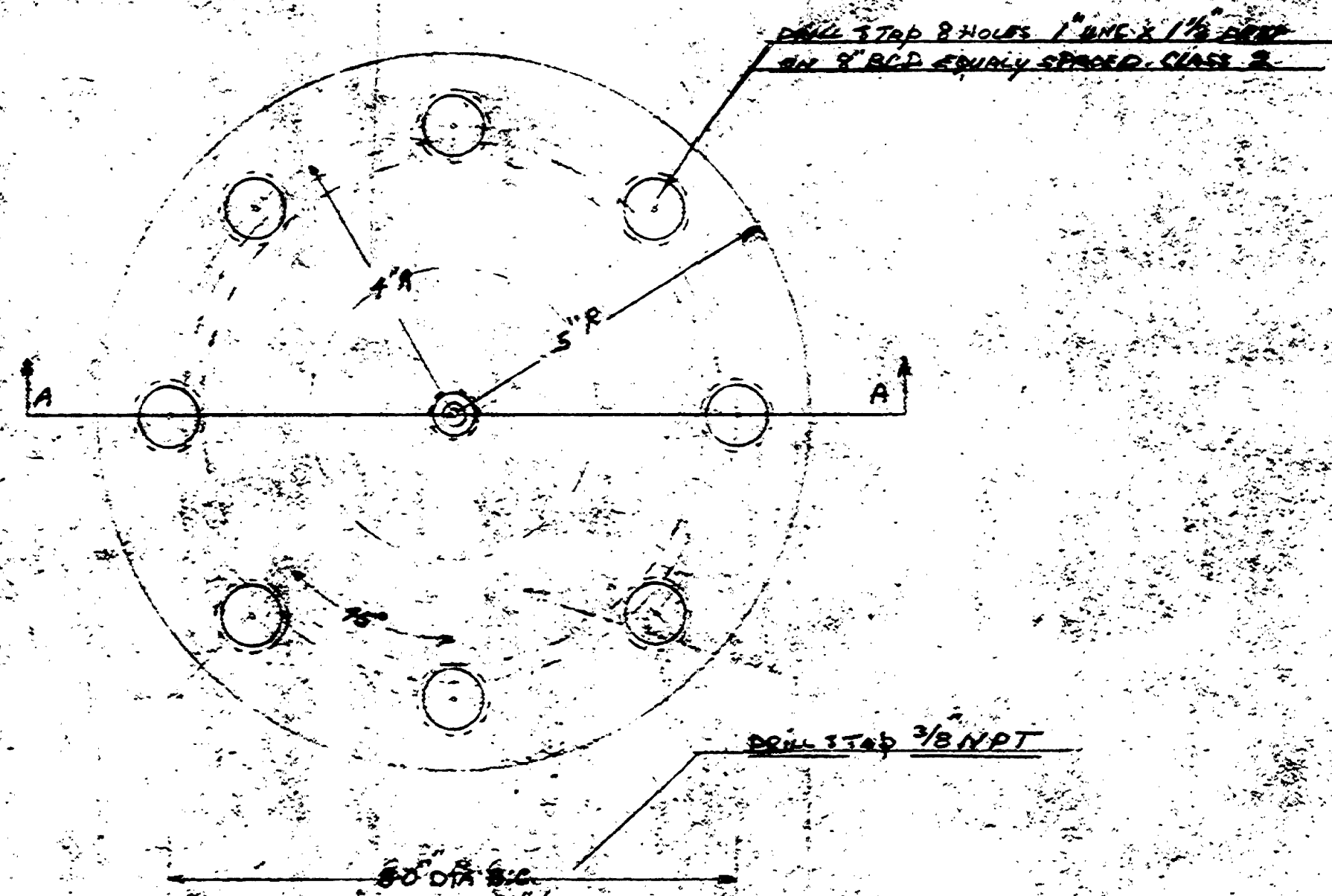


**LUBRICATION LINE LAYOUT.**  
 UPPER & LOWER GATE SIM.  
 MATERIAL: 1/4" STAINLESS STEEL LINE, FIXED TO  
 STEEL & VIA 1/4" U CLAMPS @ 3'-0" C/C.

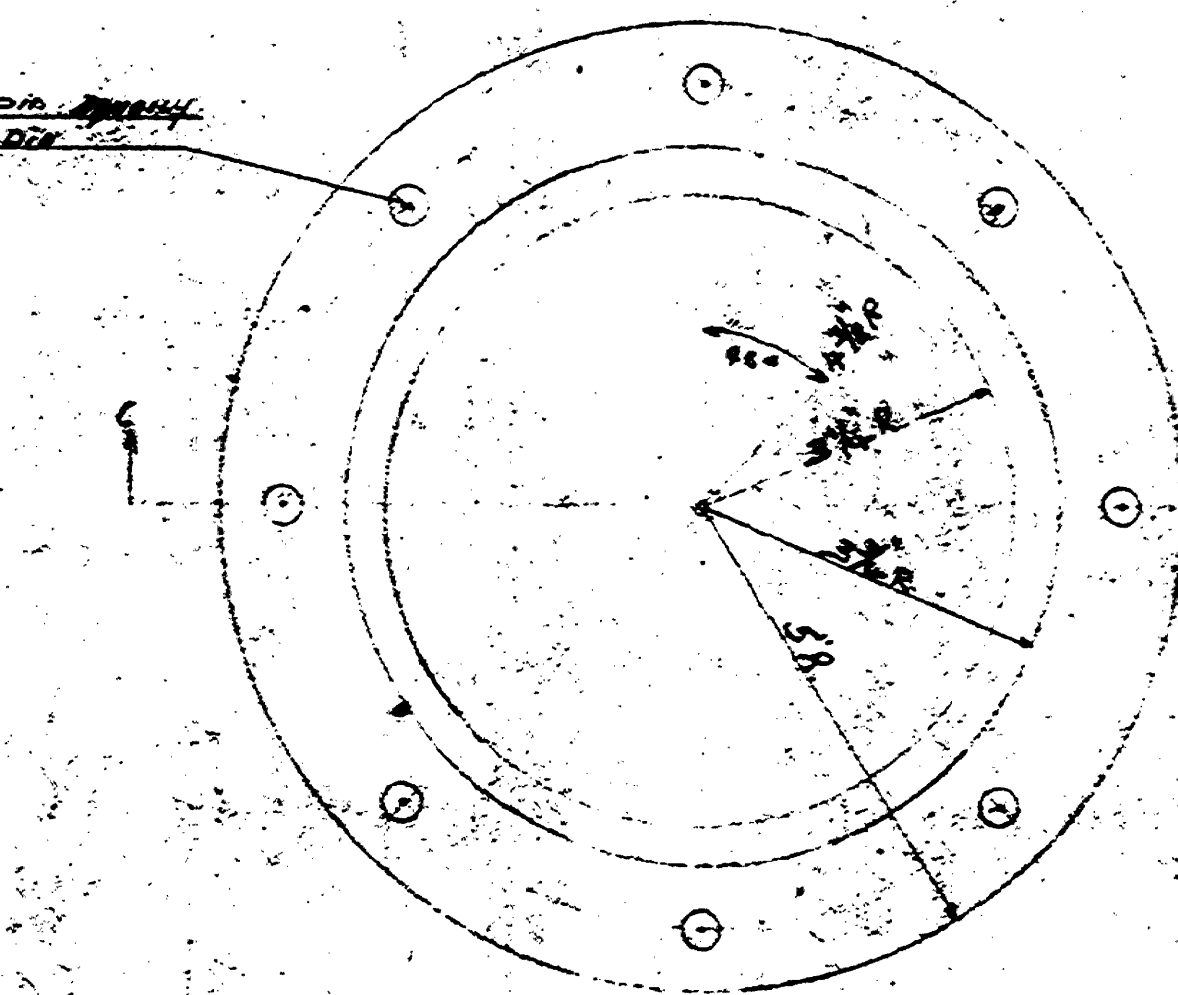
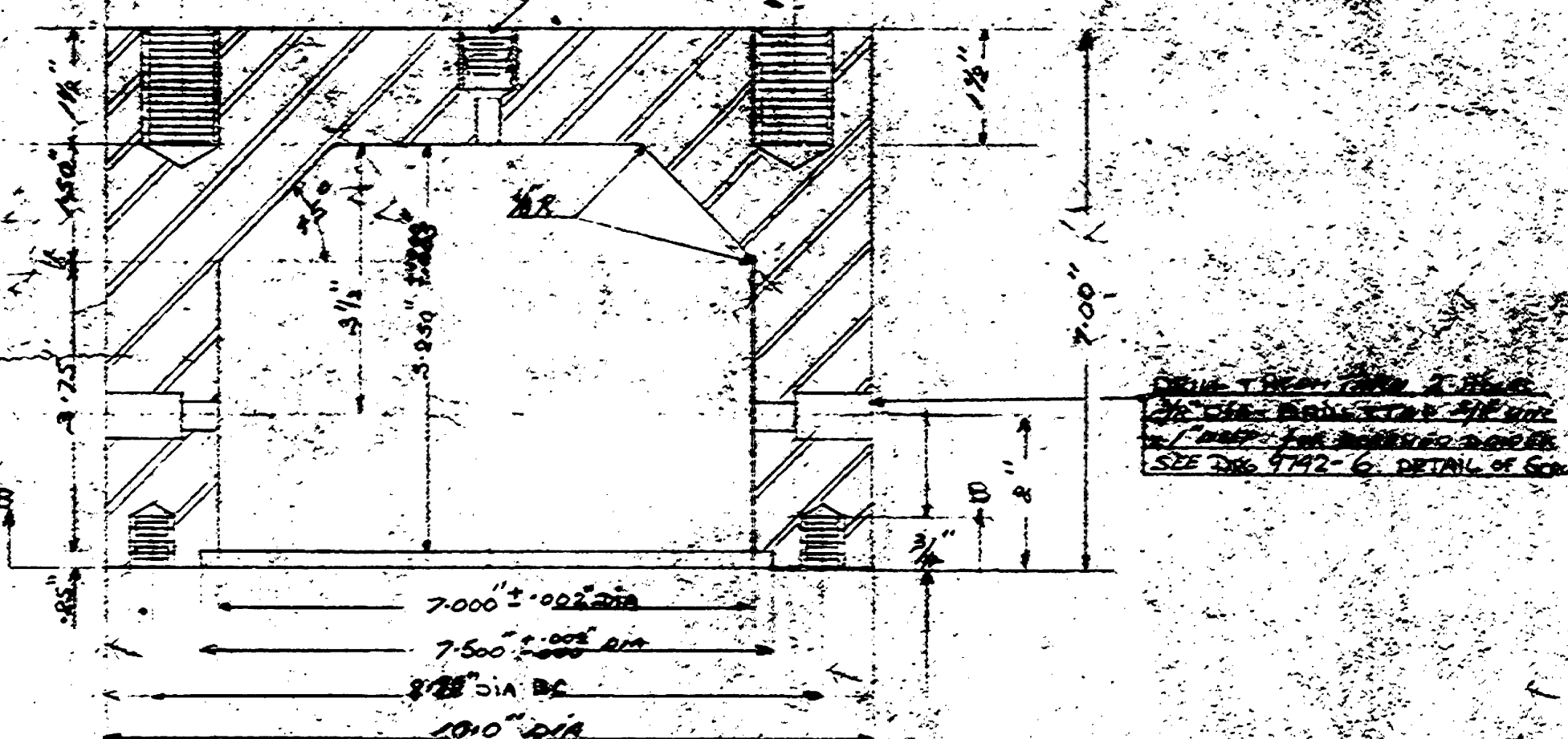
<b>RULIFF GRASS CONSTRUCTION CO. LTD.</b>			
THORNHILL, ONTARIO			
UPPER & LOWER GATES FAB DETAILS			
<b>LOCK N° 32 BOBCAYGEON</b>			
DEPARTMENT of TRANSPORT			
MARINE WORKS		CANAL DIVISION	
DRAWN BY	DATE	CHKD BY	DATE
A.O.H.	SEPT/68	D. Lindsay	05/01
ENG. APP.	DATE	SCALE	3-50
			SHEET N° 15

T-23-108.17



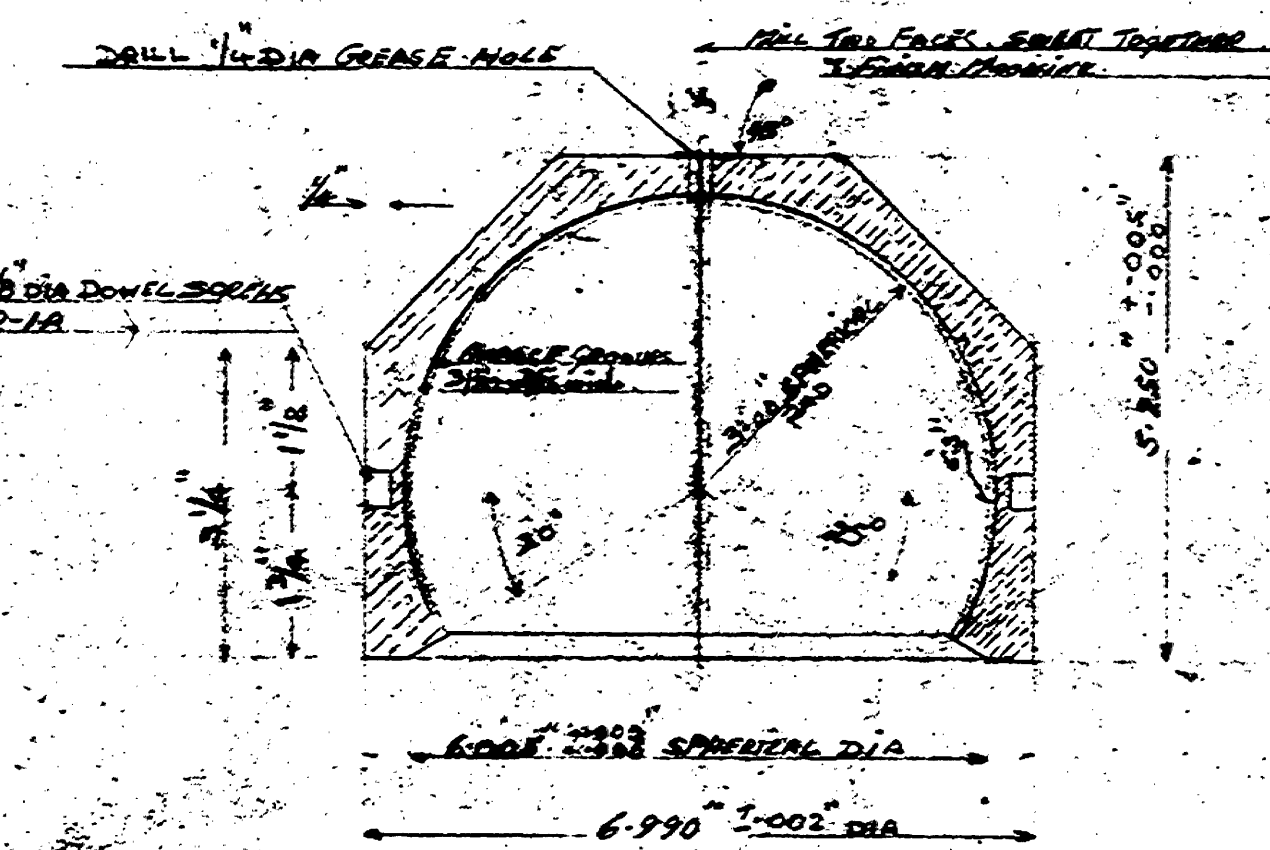


PIN L.E. SAE STEEL ASTM A-217 GRADE H.C.-4. SEE NOTE  
 4-REG 125 MIT A.O. EXCEPT WHERE NOTED  
 PART N° 9742-1/D  
 NOTE: BY COMMENT THIS PART MADE FROM SAE 4140 STEEL

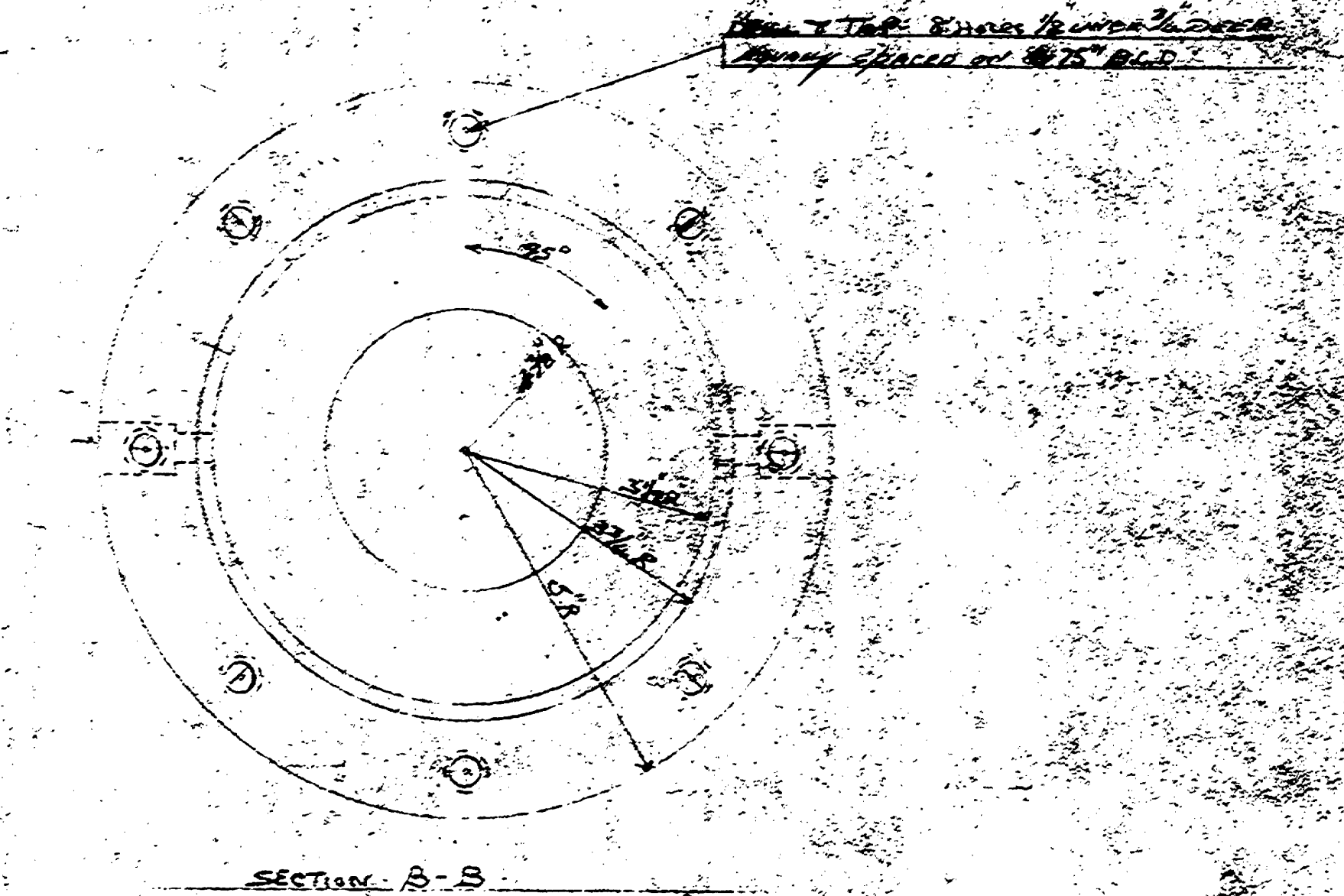


LOCK PLATE PART N° 9742-1/B 4-REG 6-4-4 C-1045 M.S. PLT  
 125 MIT A.O.

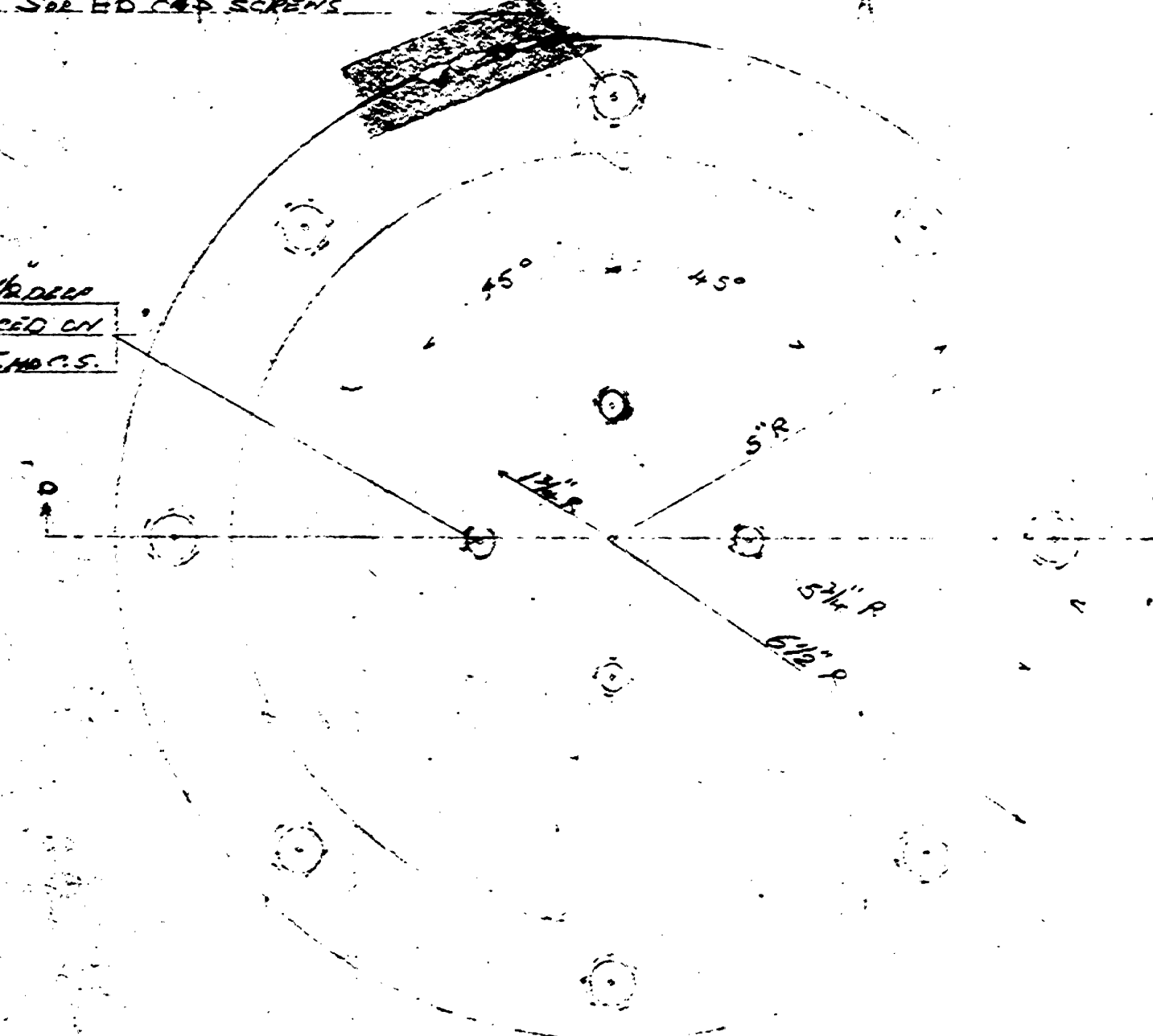
DRILL TAP 5/8\"/>



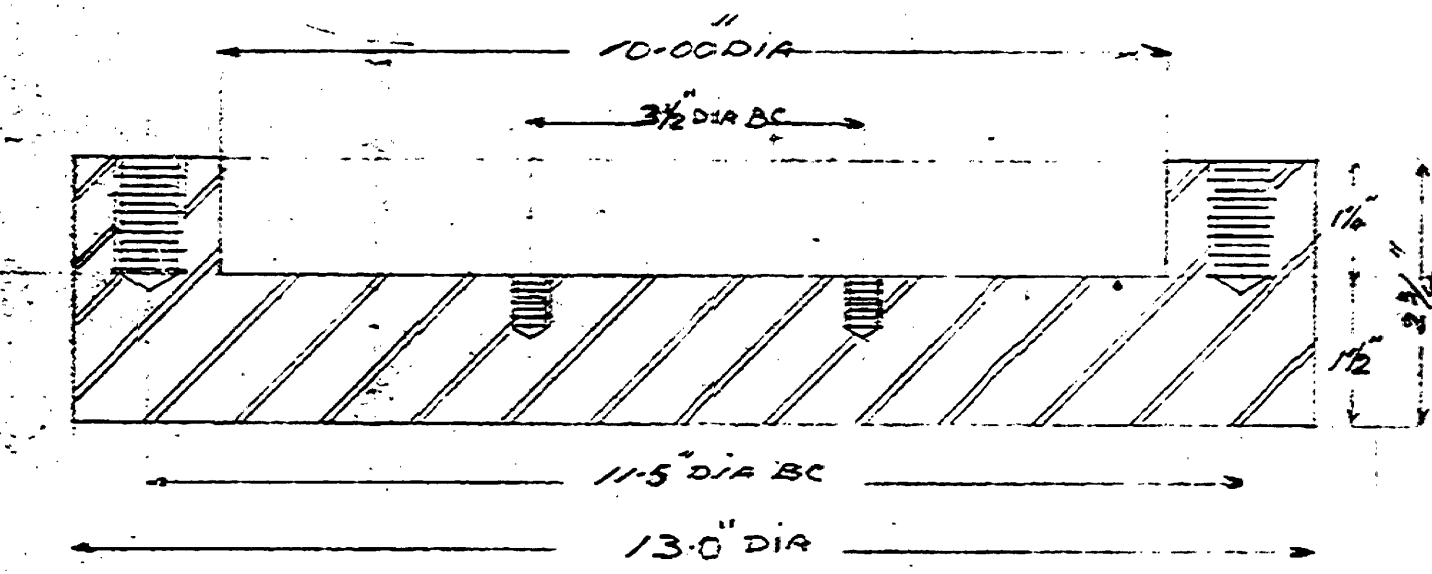
DRILL TAP 1/4\"/>



SAFETY SEMI-ROTOR BRONZE. ASTM B-147 ALLOY B.R. BUSHING  
 PART N° 9742-1/C 8-HOLE CASTING R3  
 F.A.O. 125 MIT A.O. EXCEPT WHERE NOTED  
 FOR DETAIL SEE DEC 9742-6



DAVIDSON MACHINE SHOPS LTD  
 123 MANVILLE ROAD - SCARBOROUGH - ONT.  
 TRERT CAMBER SYSTEM. BOB CROFT LOCK N° 32  
 PIN L.E. DETAILS  
 SCALE: HALF SIZE  
 DRAWN T.F. 10/1/67  
 9742-1



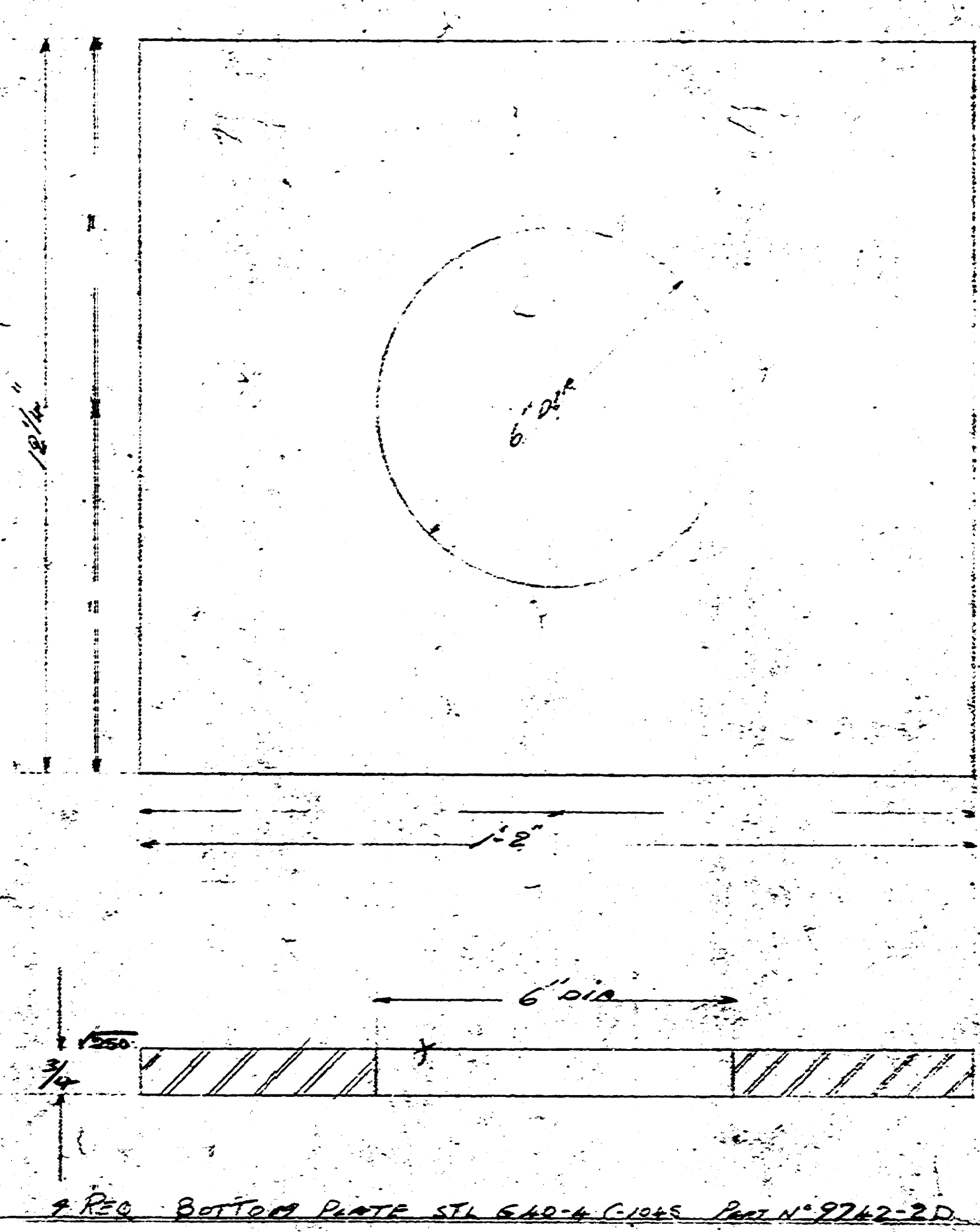
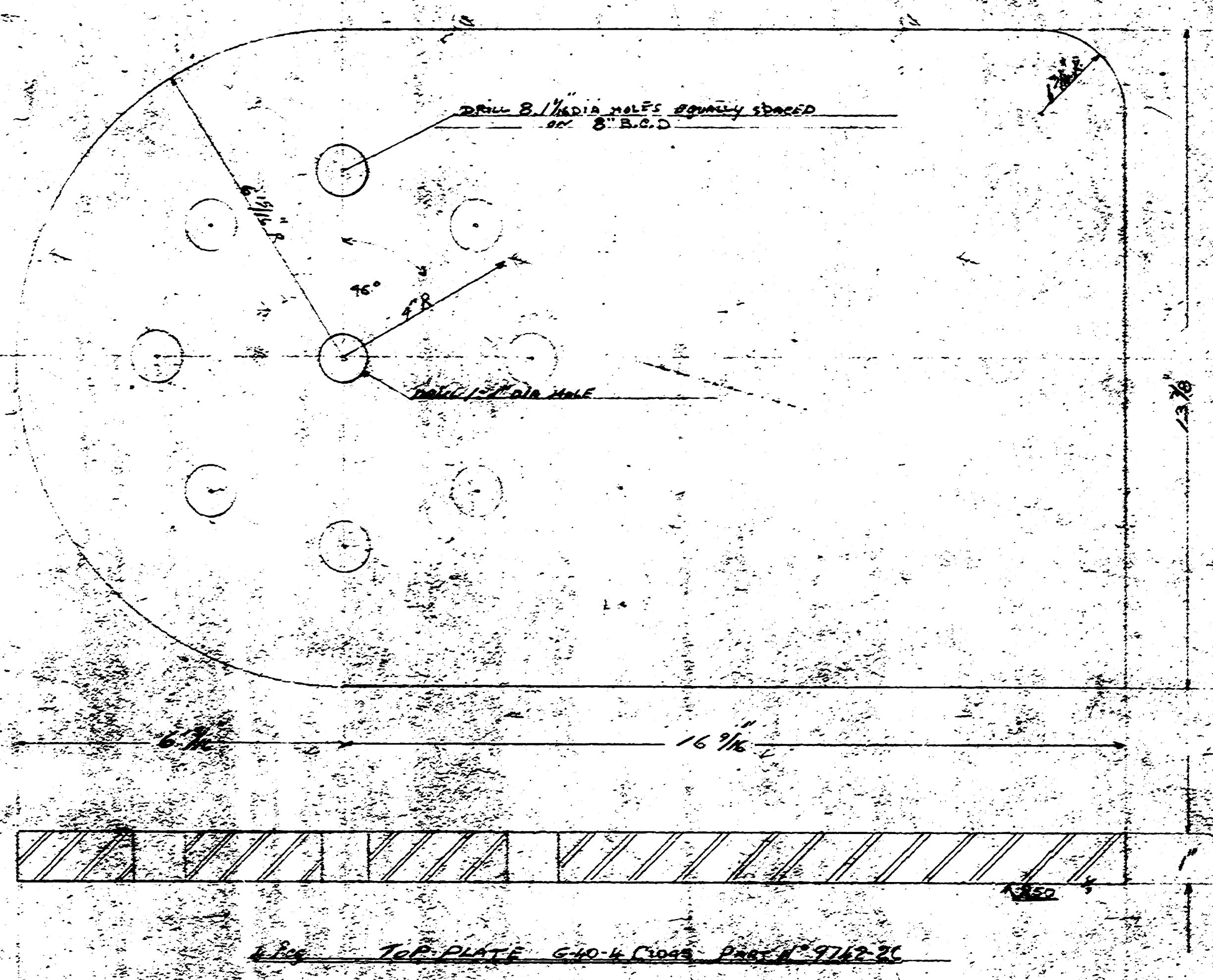
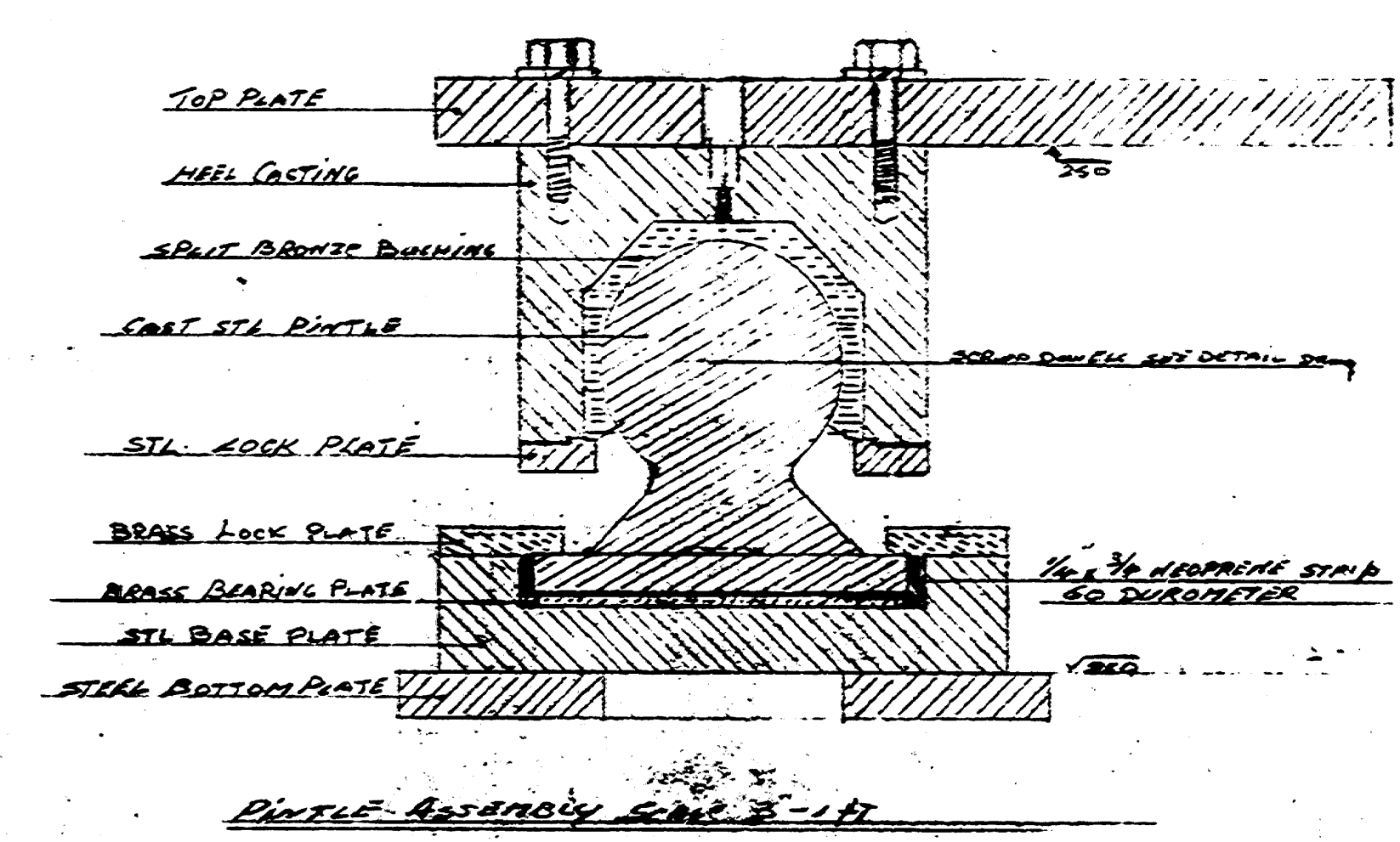
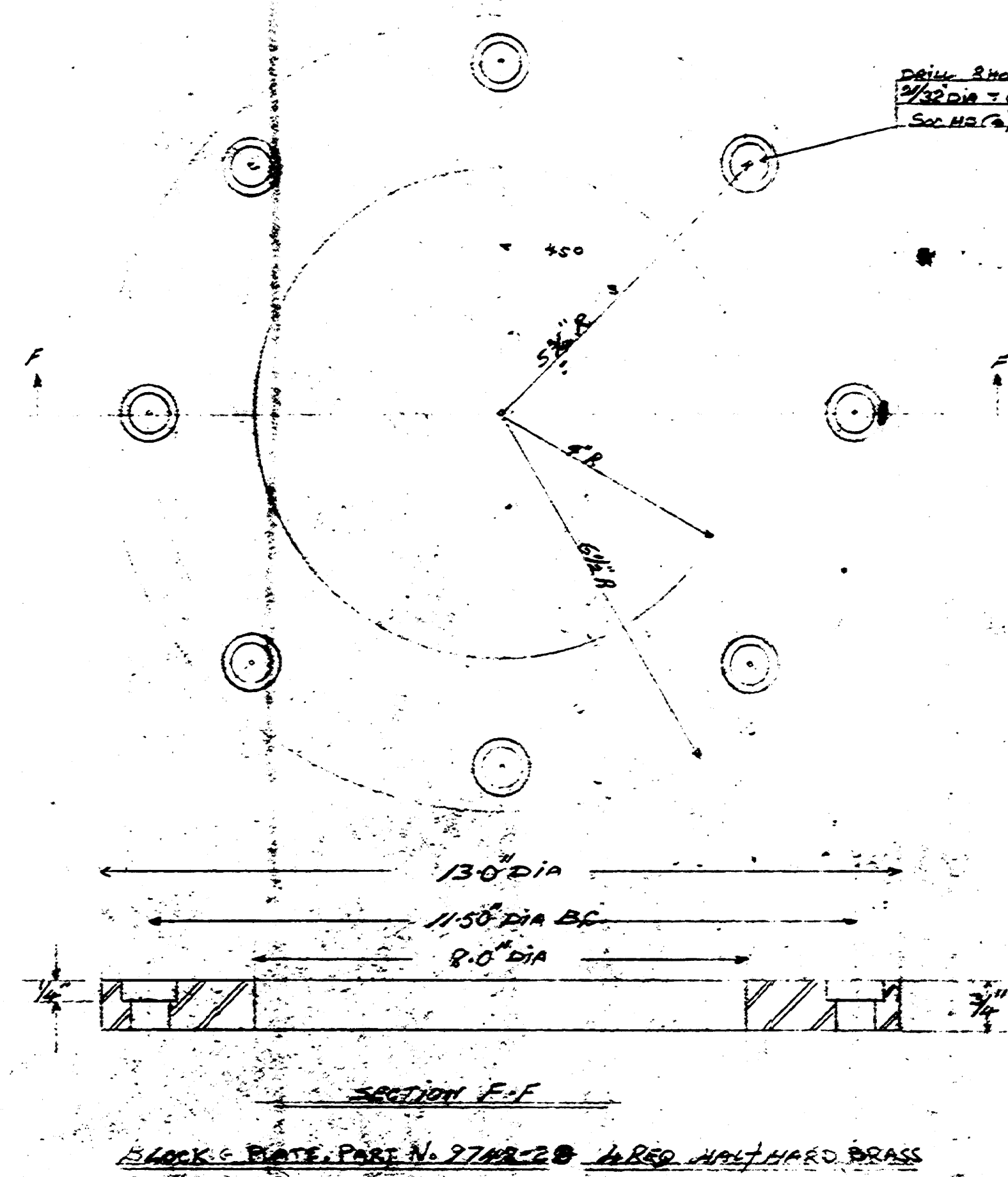
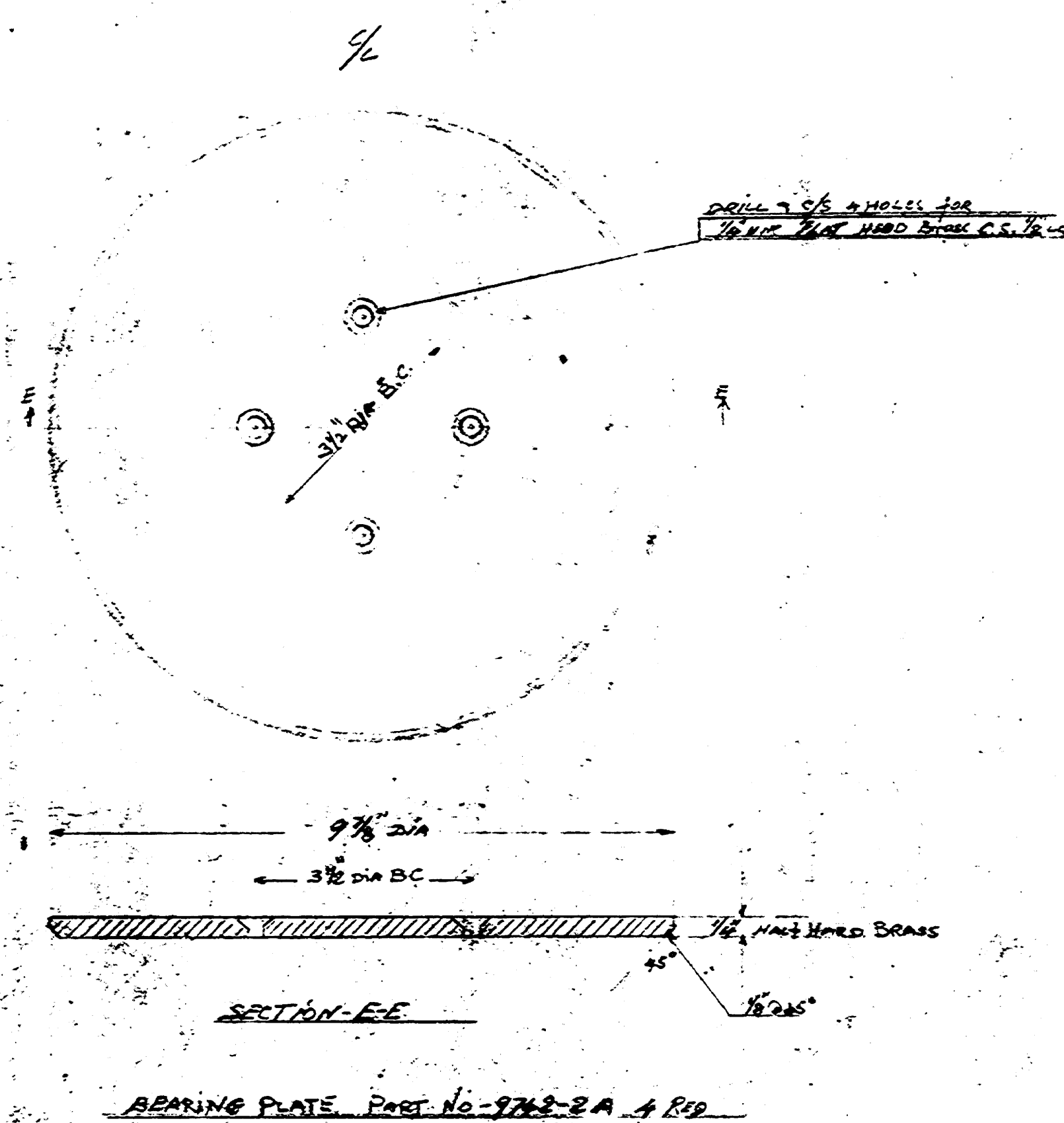
BASE PLATE. SAE 4140 C1045 M.S. PLT  
 PART N° 9742-1/E 4-REG 125 MIT A.O.

HEEL CASTING: ASTM A-27 GRADE 60-30  
 PART N° 9742-1/A 4-REG 125 MIT A.O.

SECTION B-B

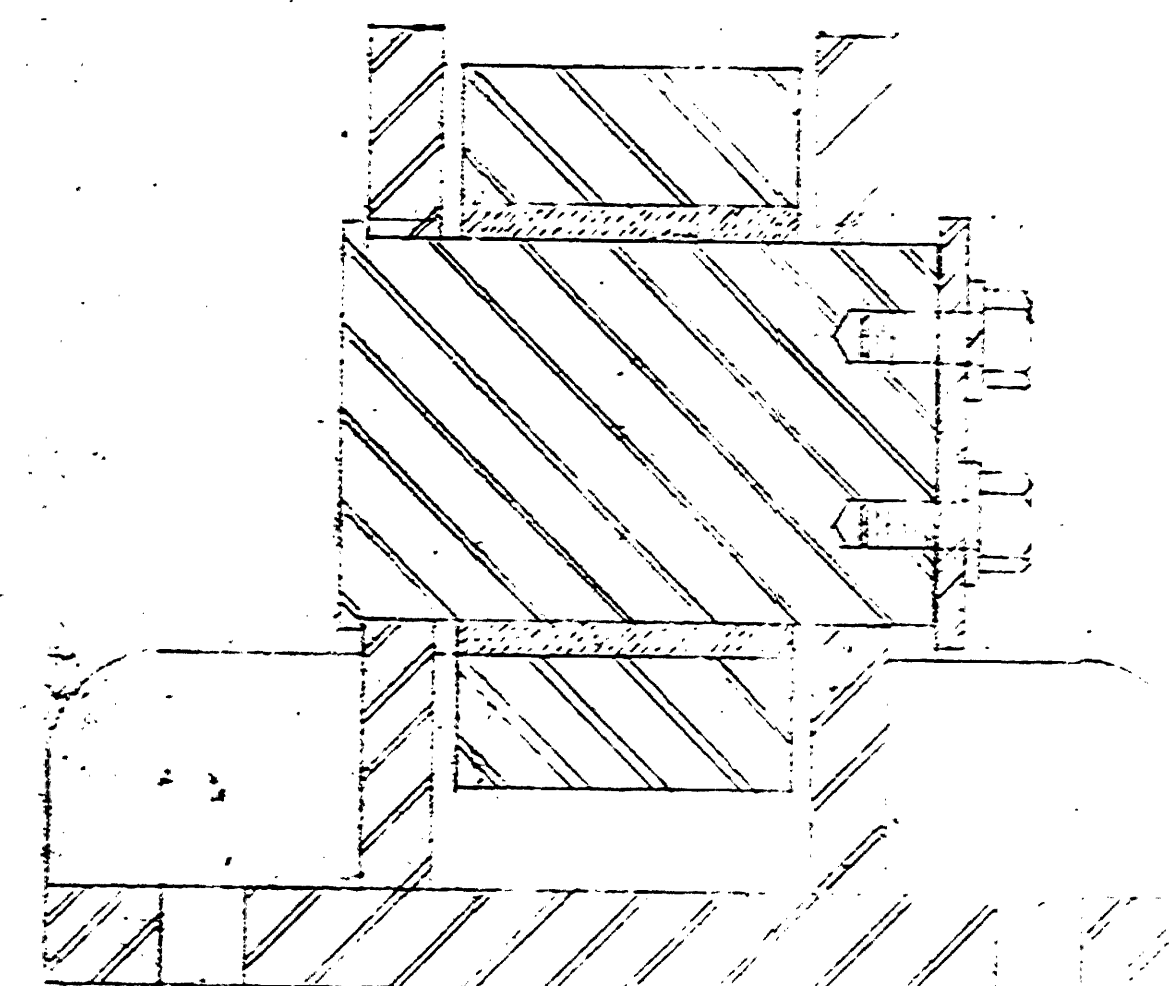
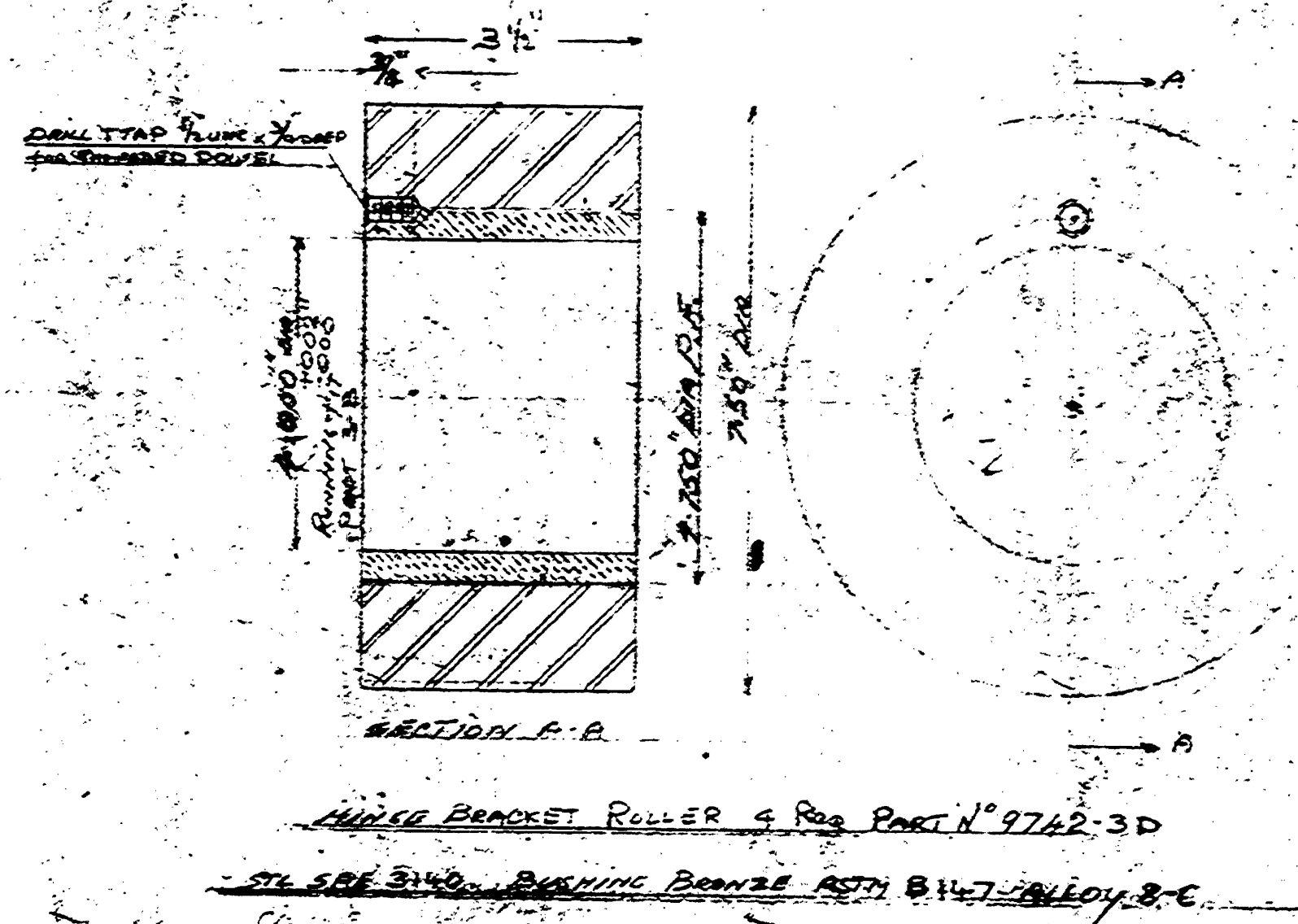
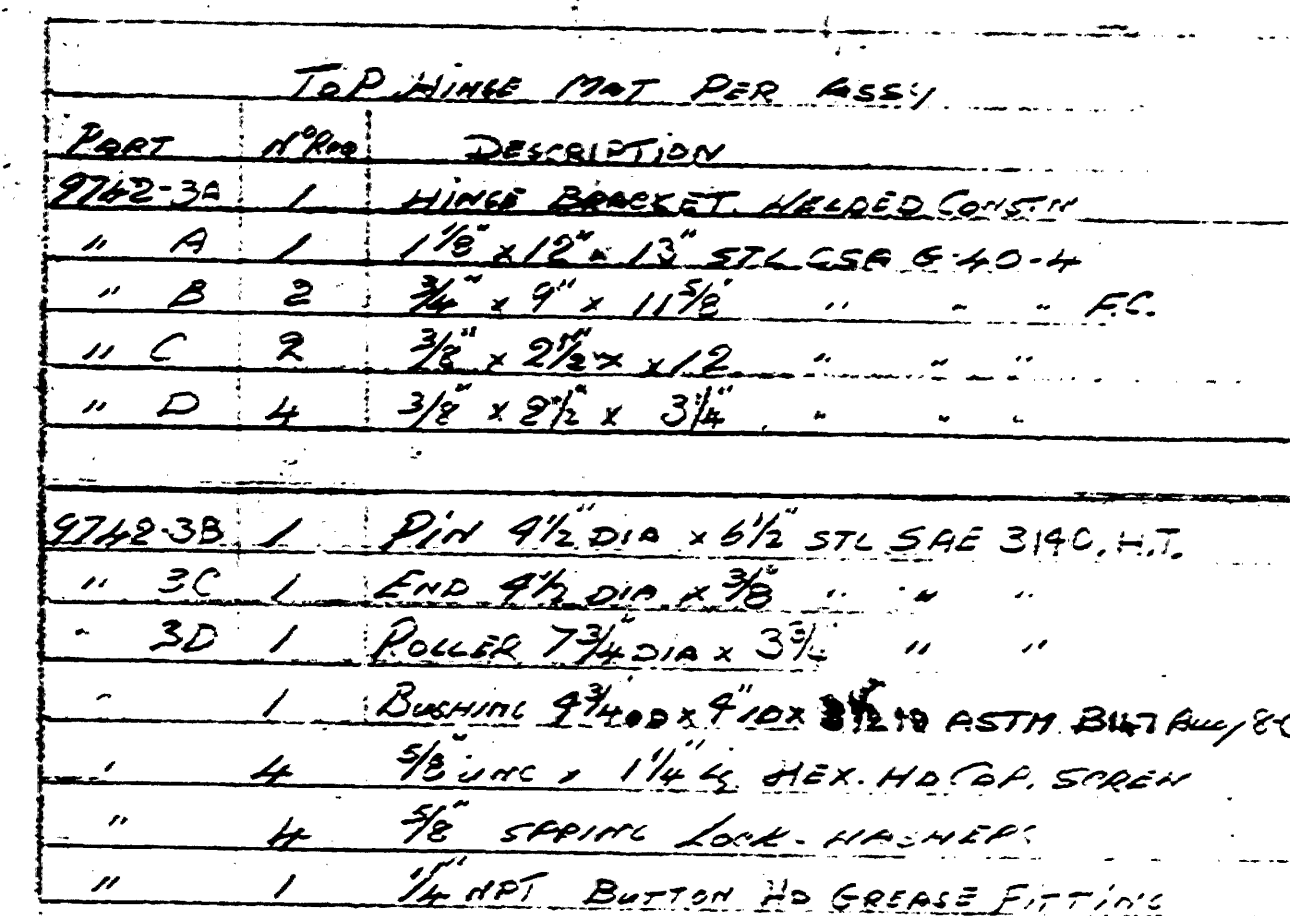


ITEM	N° REQ	DESCRIPTION	DRAWING NO
1	1	TOP PLATE STL 640-4 CIPES	1742-2C
2	1	HEEL CASTING	1742-2
3	1	SPRIT BRONZE BUSHING	1742-1C
4	1	PINTLE 3/4" STL ASTM A27 SPACE 50-30	1742-1A
5	1	LOCK PLATE WALT HARD BRASS	1742-2B
6	1	BEARING PLATE WALT HARD BRASS	1742-2A
7	1	STEEL LOCK PLATE WALT HARD BRASS	1742-1E
8	1	BOTTOM PLATE 640-4 CIPES	1742-2D
9	8	1/4" X 2 1/2" X 1/4" ALUMINUM STRIPS	
10	2	1/4" X 1/4" X 1/4" ALUMINUM STRIPS	
11	8	1" X 3" X 1/4" ALUMINUM STRIPS	
12	8	1/4" X 1 1/2" X 1/4" ALUMINUM STRIPS	
13	4	1/4" X 1/4" X 1/4" ALUMINUM STRIPS	
14	1	1/4" X 1/4" X 1/4" ALUMINUM STRIPS	



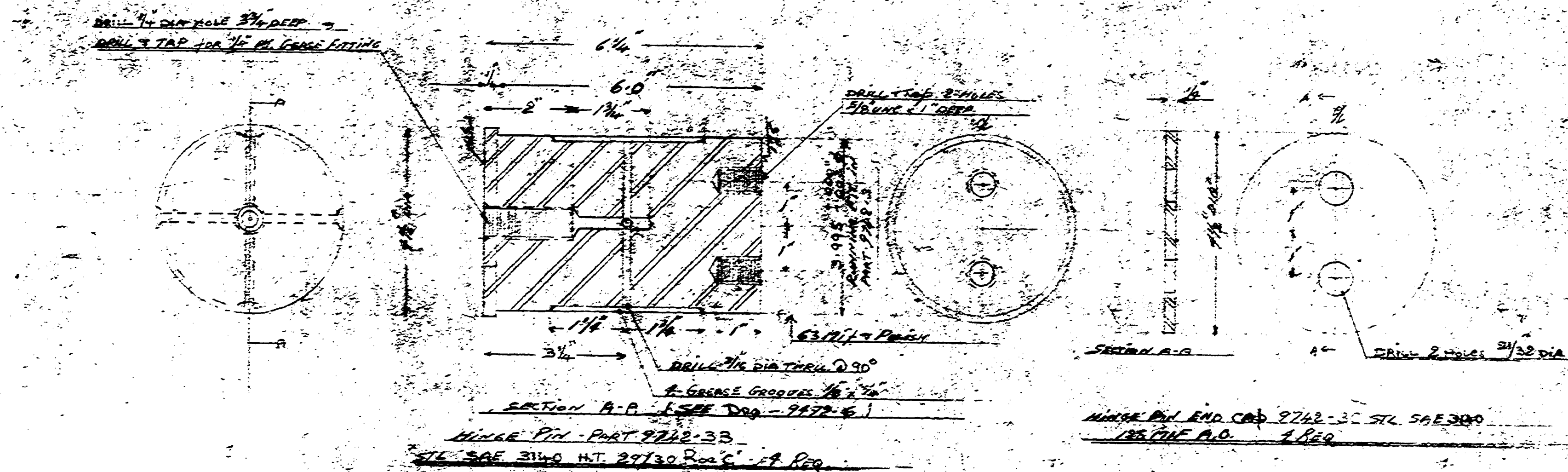
T-23-110.2  
 DAVIDSON MACHINE SHOPS LTD  
 123 MANVILLE ROAD - SCARB GNT  
 TRENT CANAL SYSTEM  
 BOBCOGEON LOCK N° 32  
 PINTLE ASSY & DETAILS  
 SCALE 3\"/>





TOP HINGE ASSEMBLY

TOP HINGE BRACKET - WELDED CONJIN PART N° 9742-3A  
STRESS RELIEVE - SAND BLAST STL CSA Q40.4  
+ REQ WELD 1/4" x 1/2"



DAVIDSON MACHINE SHOPS LTD  
123 MANVILLE ROAD - SCARBOROUGH - ONT  
TRENT CANAL SYSTEM  
BOBCAGEON LOCK N° 32  
TOP HINGE - ASSEMBLY AND DETAILS  
SCALE 6" = 1 FT  
DRAWN T FOXALL Nov 1967  
DRAW N° 9742-3  
T-23-110.3