

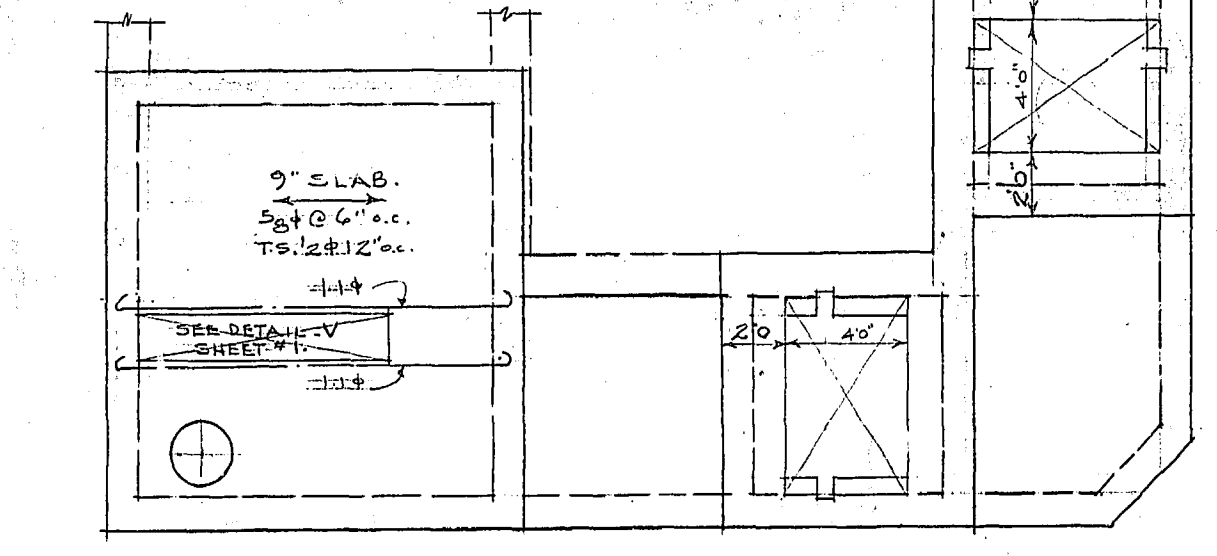
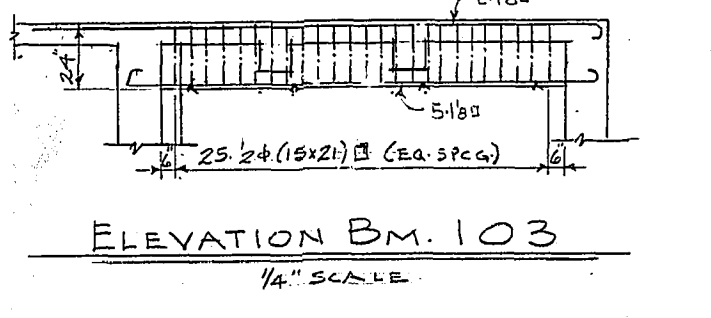
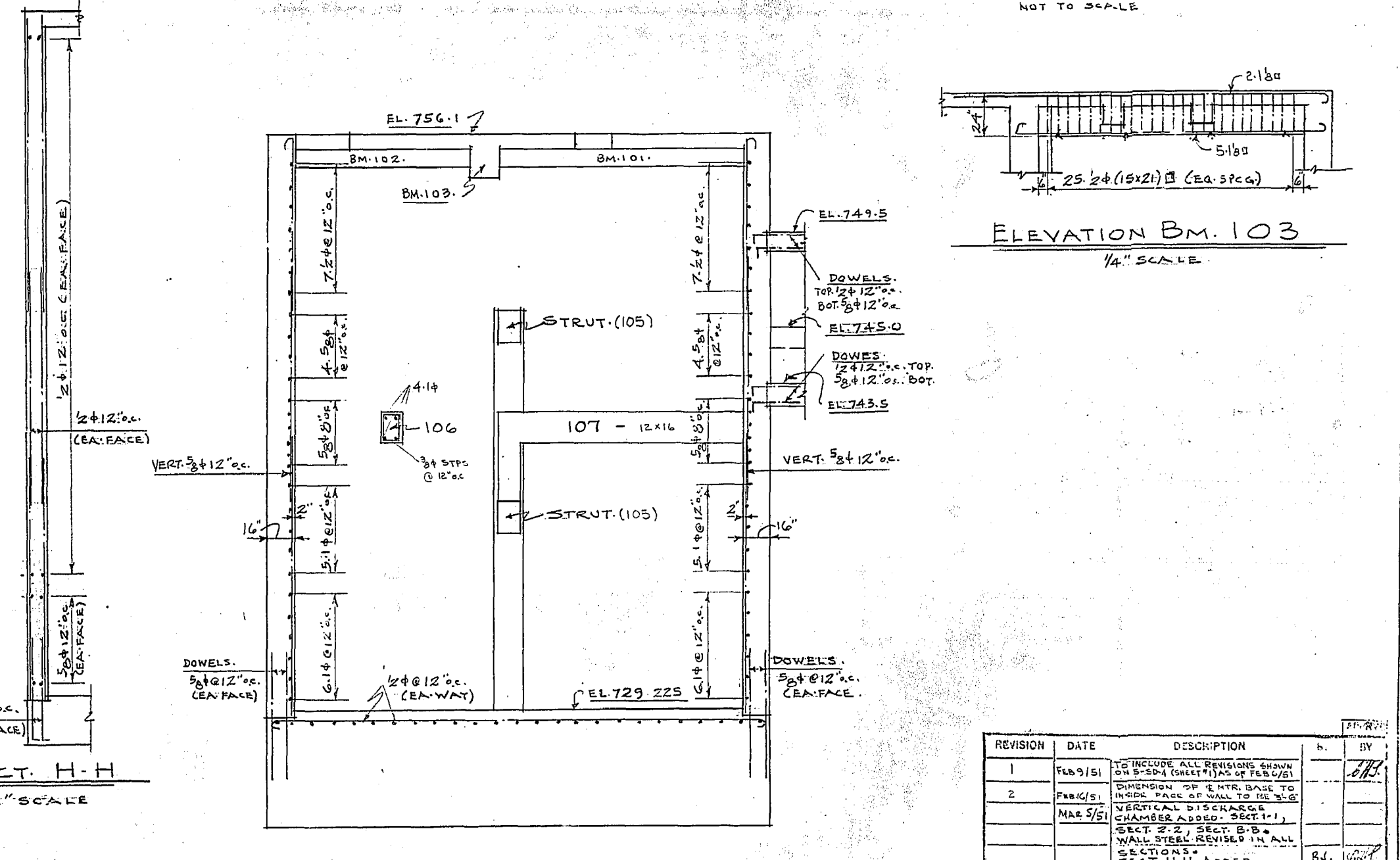
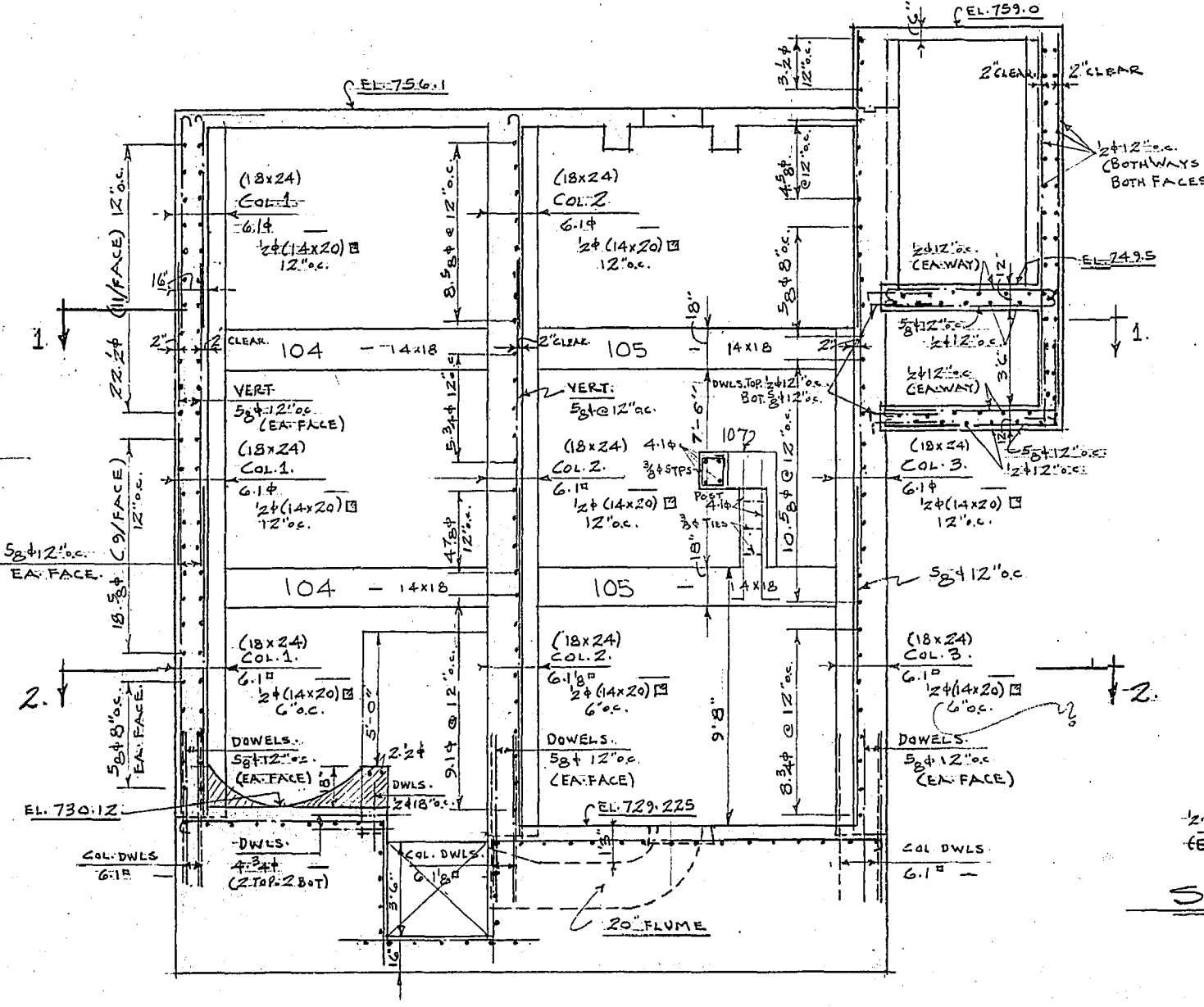
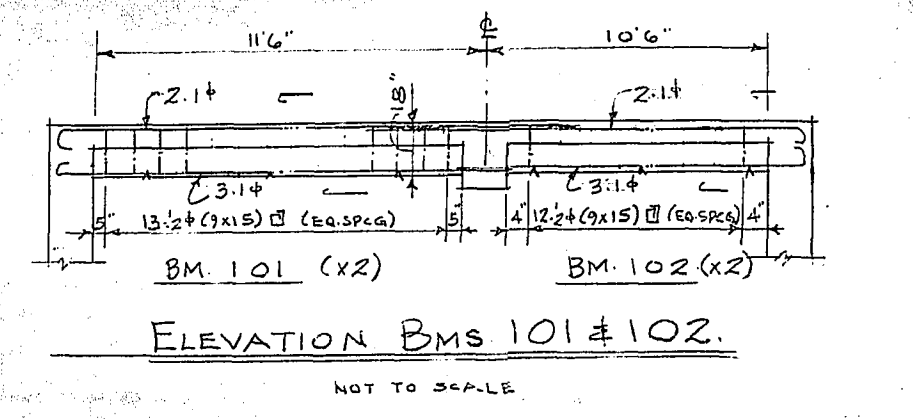
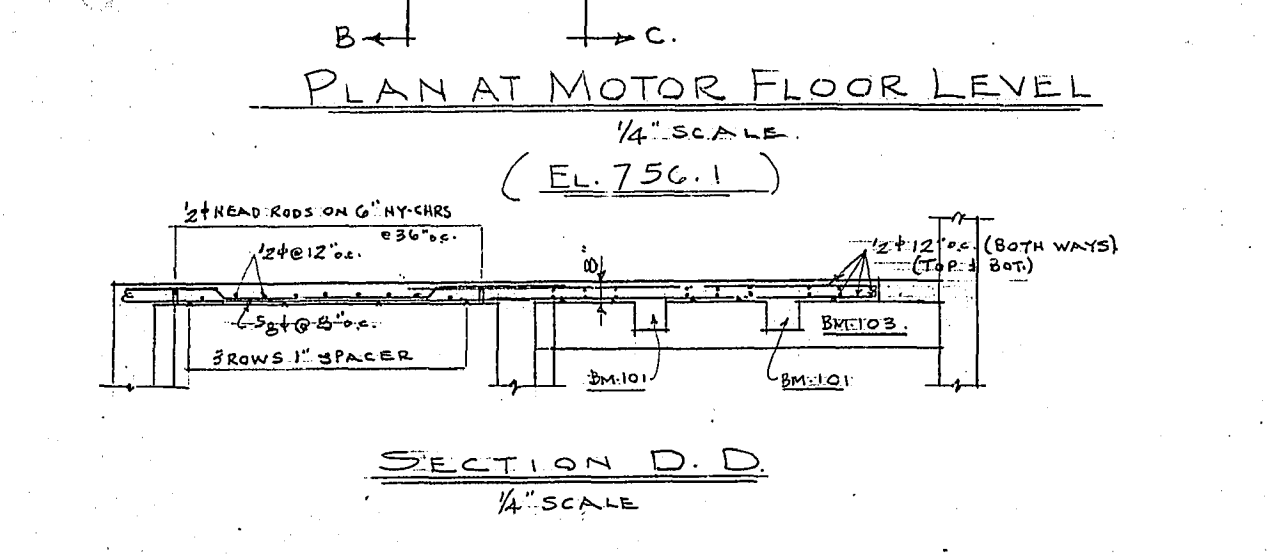
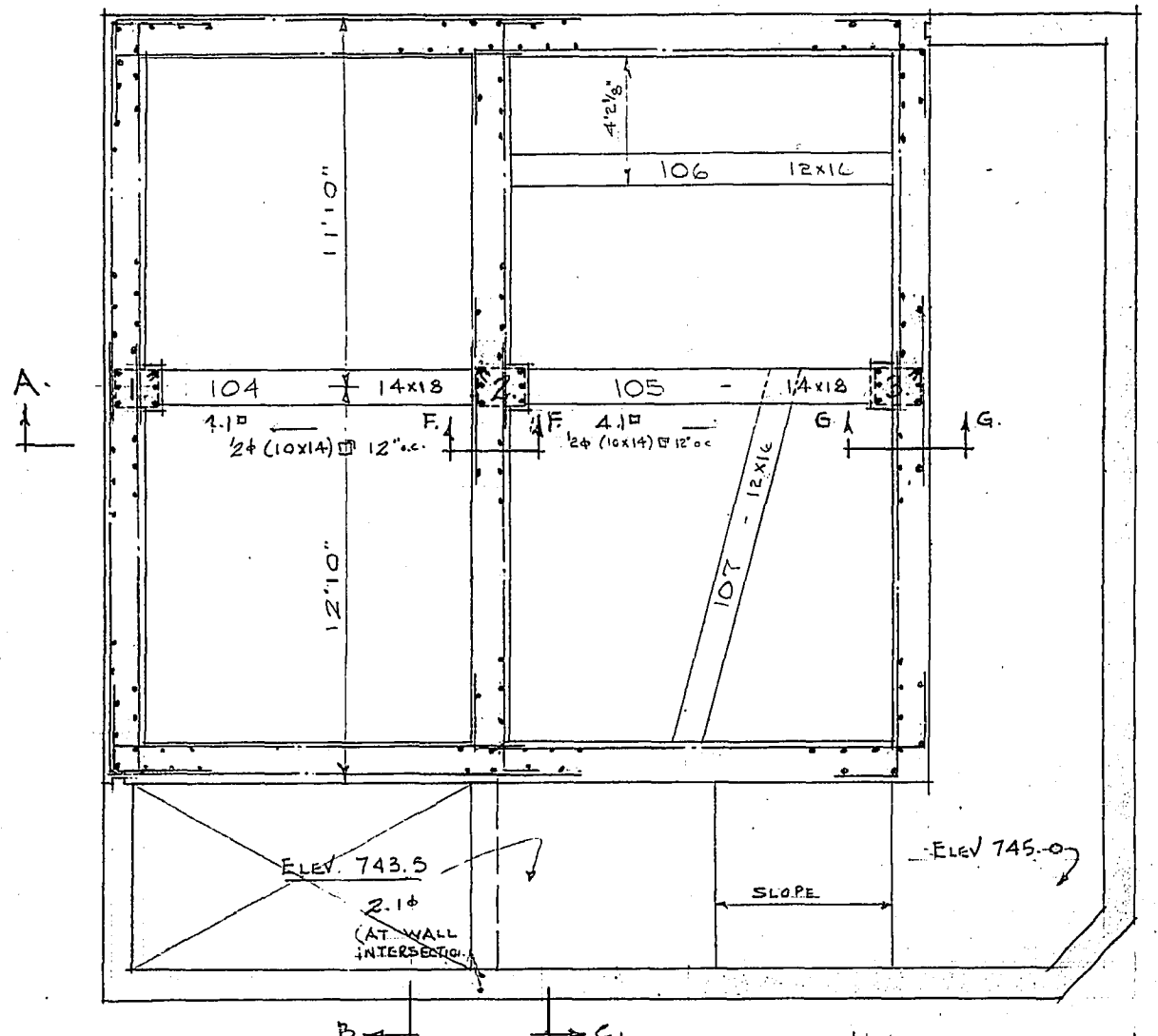
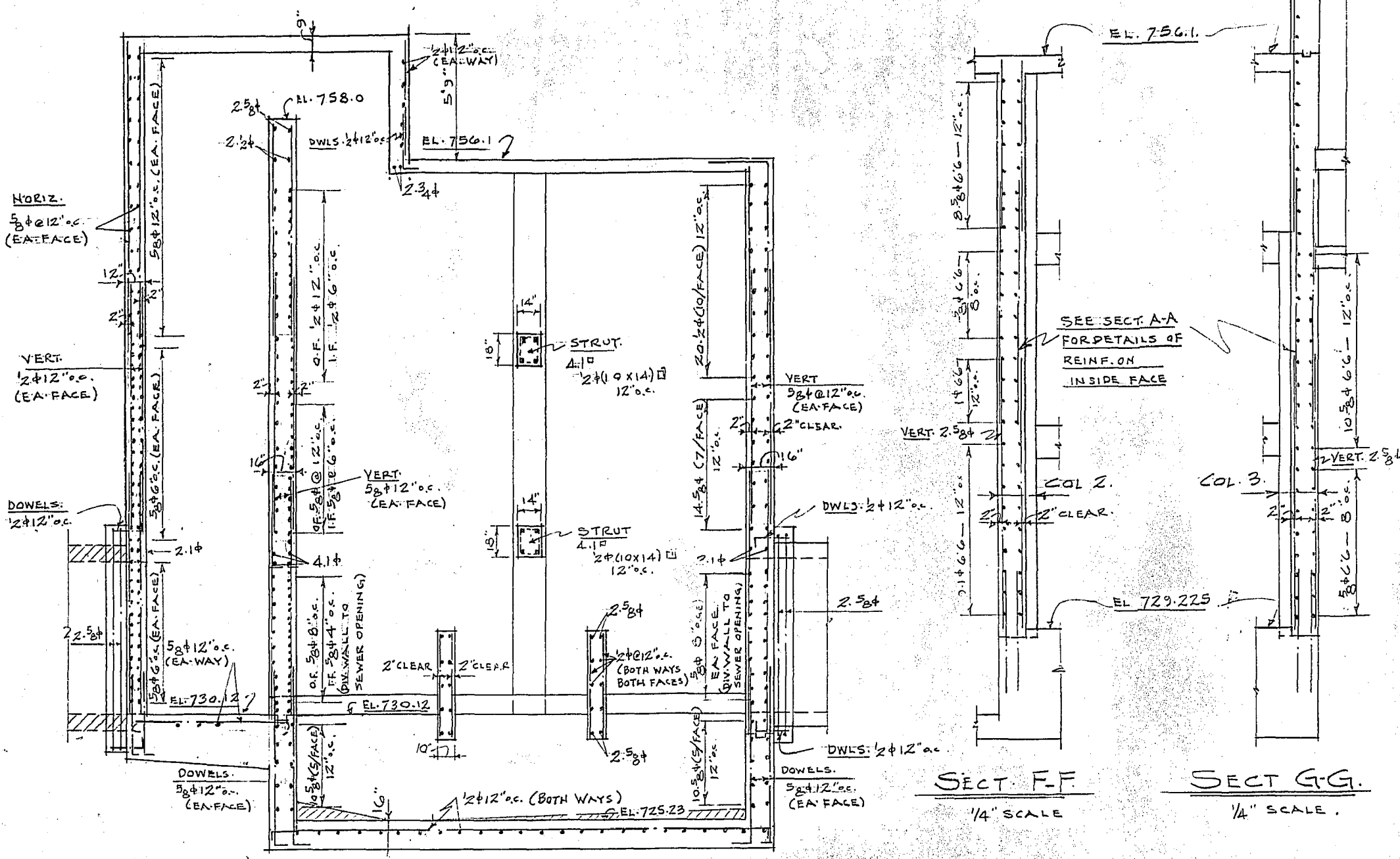
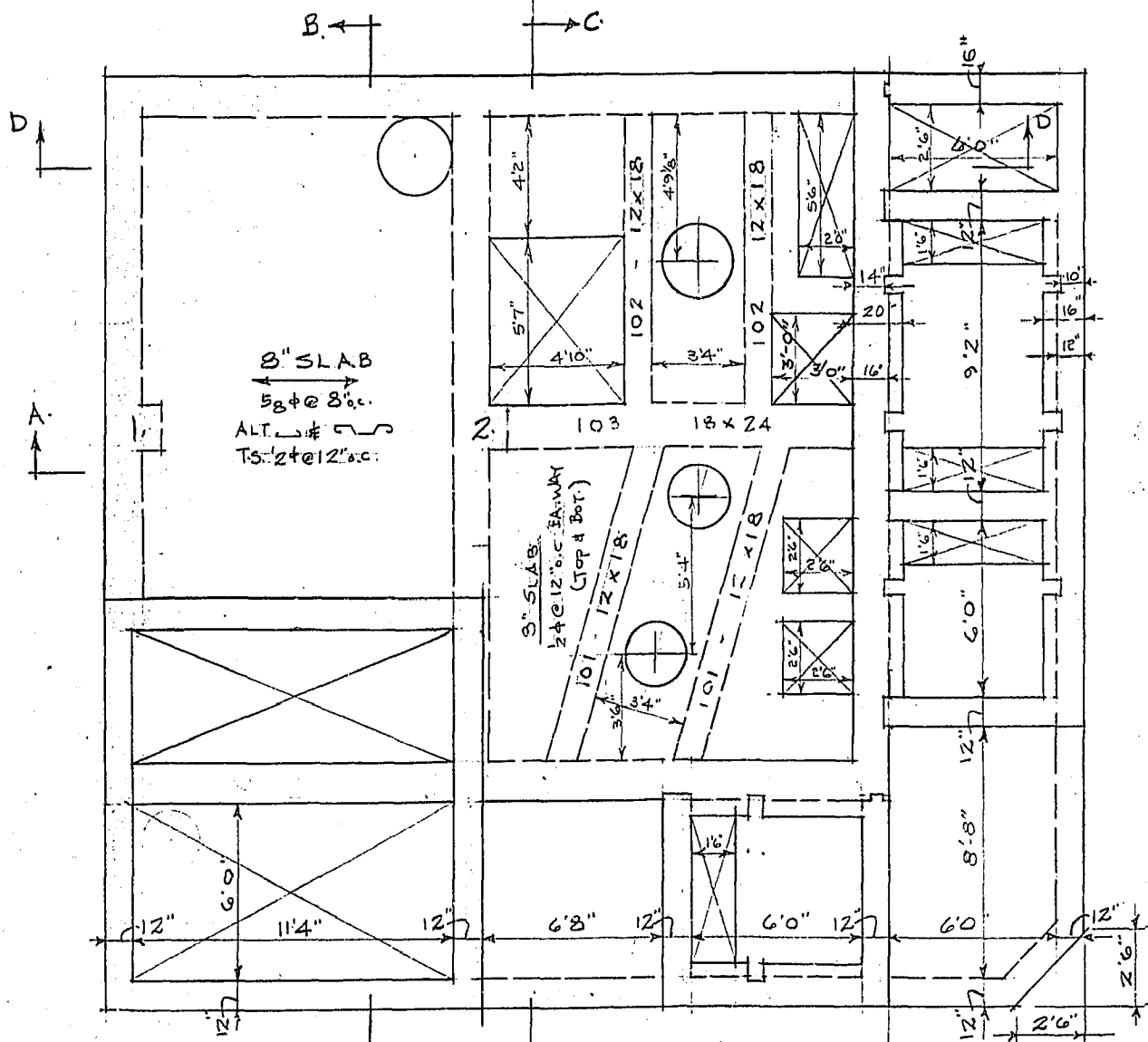
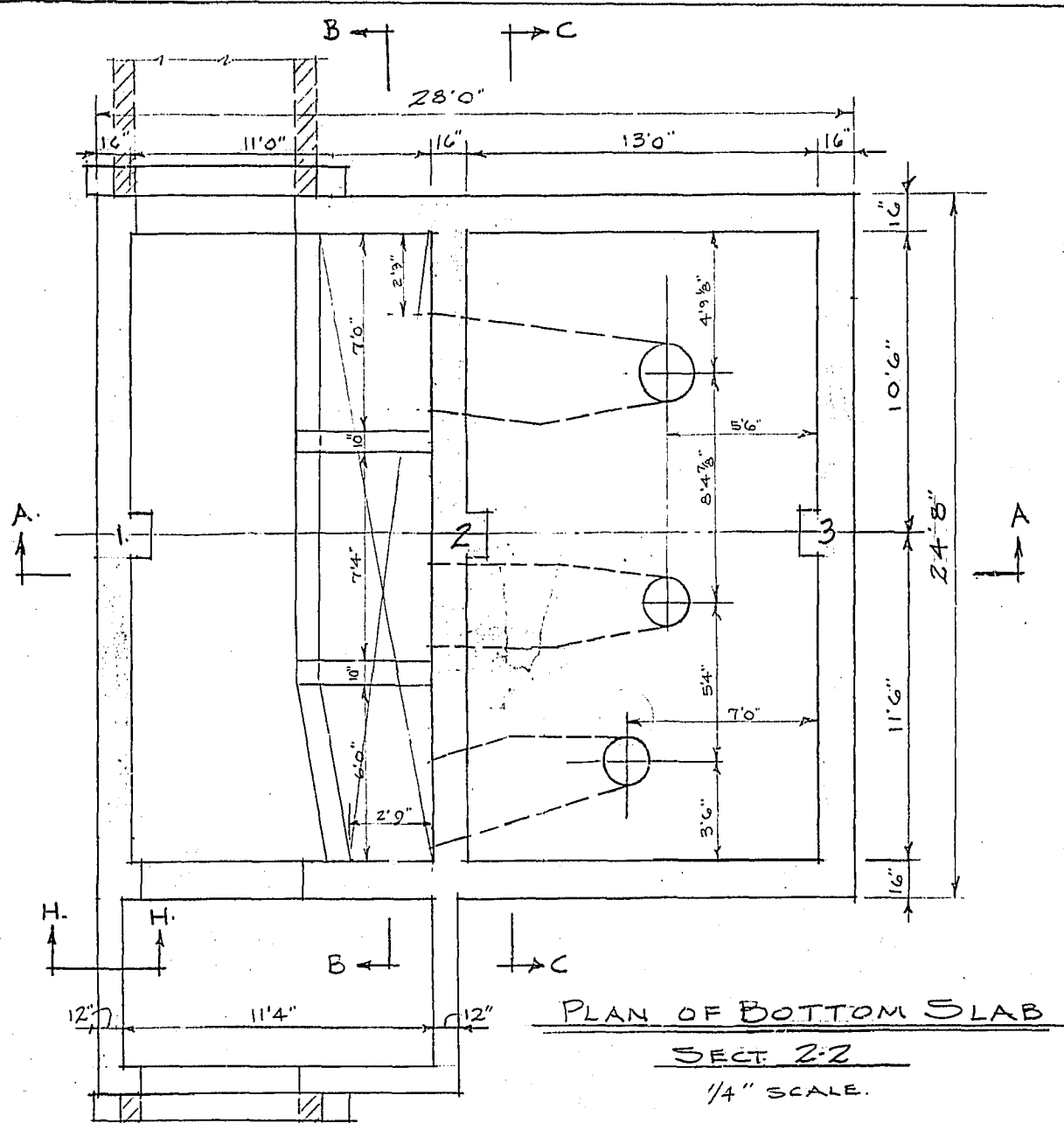
ARC FLASH VALUES CALCULATED ARE BASED ON THE PROTECTION SETTINGS SPECIFIED IN THIS DRAWING. ALL PHASE 1 REQUIRED WORK MUST BE COMPLETED PRIOR TO APPLYING ARC FLASH LABELS.

LEGEND:
 PPE: 4 — HAZARD/RISK CATEGORY
 29 cal/cm² — INCIDENT ENERGY

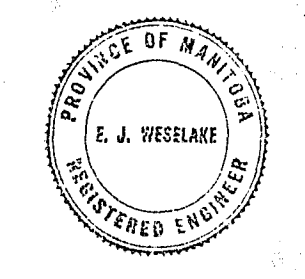
- PHASE 1 REQUIRED WORK:**
- (A) ADJUST THE CB-CSTE LONG TIME DELAY TO C (12 SEC).
 - (B) REPLACE FUSES IN FDS-SF-F1 AND FDS-EF-F1 WITH 2A FUSES AS REQUIRED.
 - (C) AFFIX IDENTIFICATION LAMACOIDS TO:
 FDS-EF-F1
 FDS-SF-F1
 FDS-XFMR-F10
 MCP-P-F1
 MCP-P-F2
 MCP-P-F3
 MS-P-F1
 MS-P-F2
 MS-P-F3
 MS-SF-F1
 PNL-F10
 RLY-F1
 SPL-F1
 VFD-EF-F1
 XFMR-F1
 XFMR-F10

- NOTES:**
1. THIS DRAWING SUPERCEDES KGS DRAWING (DOES NOT HAVE A NUMBER).
 2. THIS DRAWING CONTAINS UNVERIFIED INFORMATION FROM EXISTING DOCUMENTATION.
 3. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE ARC FLASH STUDY AND RECOMMENDED MITIGATION.

SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080				ENGINEER'S SEAL ORIGINAL DRAWING SEALED BY: C. J. REIMER SNC-LAVALIN INC. MEMBER #21968 2011/12/01 REV. 00		THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT POLSON FLOOD PUMPING STATION ARC FLASH STUDY SINGLE LINE DIAGRAM					
DESIGNED BY: V. ELIMBAN		CHECKED BY: C. REIMER		CITY DRAWING NUMBER: 1-0173F-E0001		SHEET: 001		REV: 00		SIZE: A1	
DRAWN BY: S. COATES		APPROVED BY: C. REIMER		DATE: 2009/09/04		RELEASING FOR CONSTRUCTION BY: DATE:		CONSULTANT NO.:		1-0173F-E0001-001-00.dwg	
SCALE: NTS		DATE: 2011/11/23		DESIGN: VE		CHECK: CJR		NO. REVISIONS			



REVISION	DATE	DESCRIPTION	BY
1	FEB 9/51	TO INCLUDE ALL REVISIONS SHOWN ON 5-204 (SHEET 1) AND 5-205 (SHEET 2) DIMENSIONS FOR 4" STEEL BASE TO INCLUDE REVISIONS AT WALL TO THE WALL VERTICAL DIMENSIONS CHANGES ADDED. SECT 1-1 SECT 2-2 SECT B-B WALL STEEL REVISION IN ALL SECTIONS SECT H-H ADDED.	84
2	MAY 5/51		

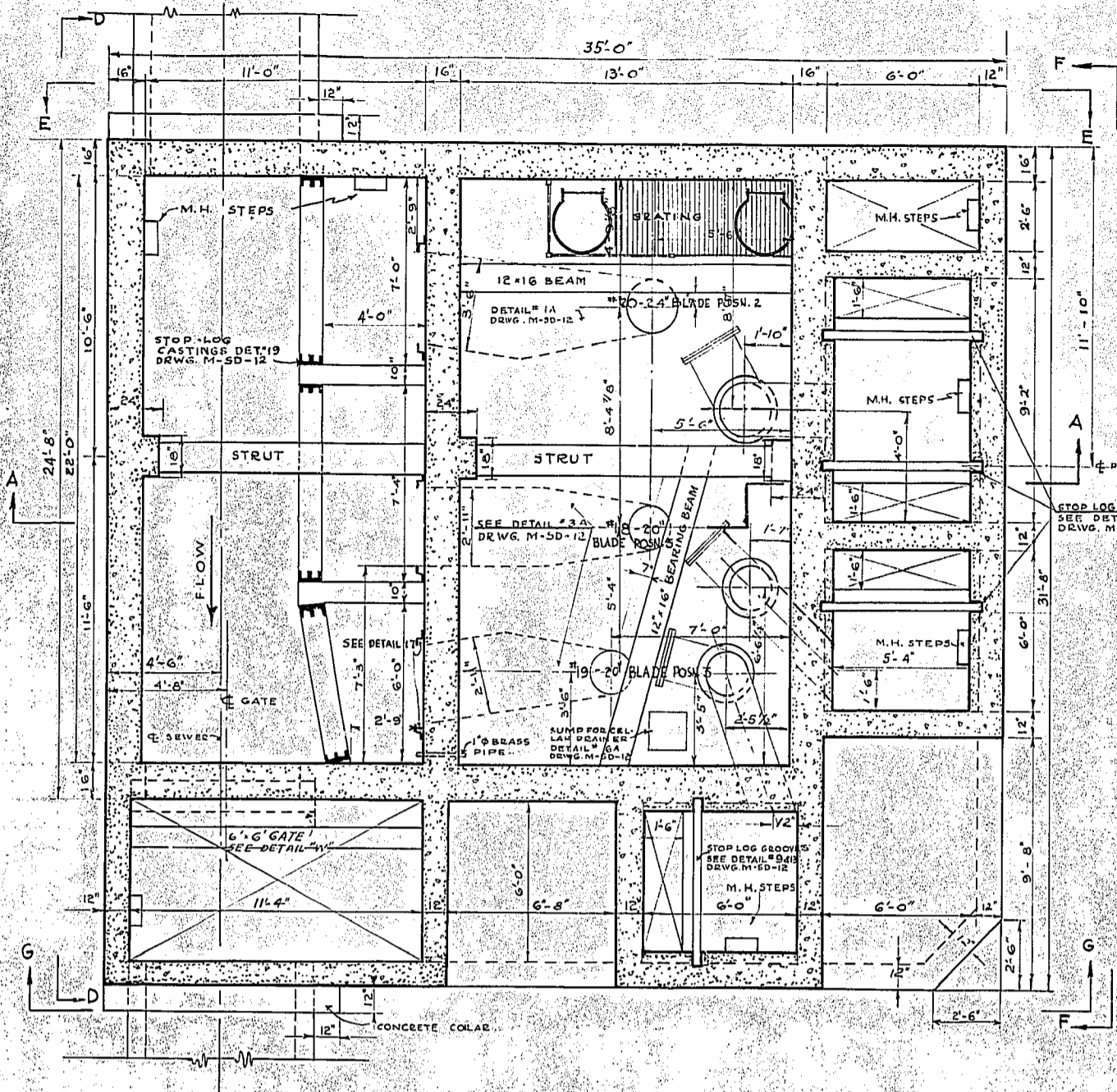


COWIN & CO. LTD.
REINFORCED CONCRETE ENGINEERS
WINNIPEG, MAN.

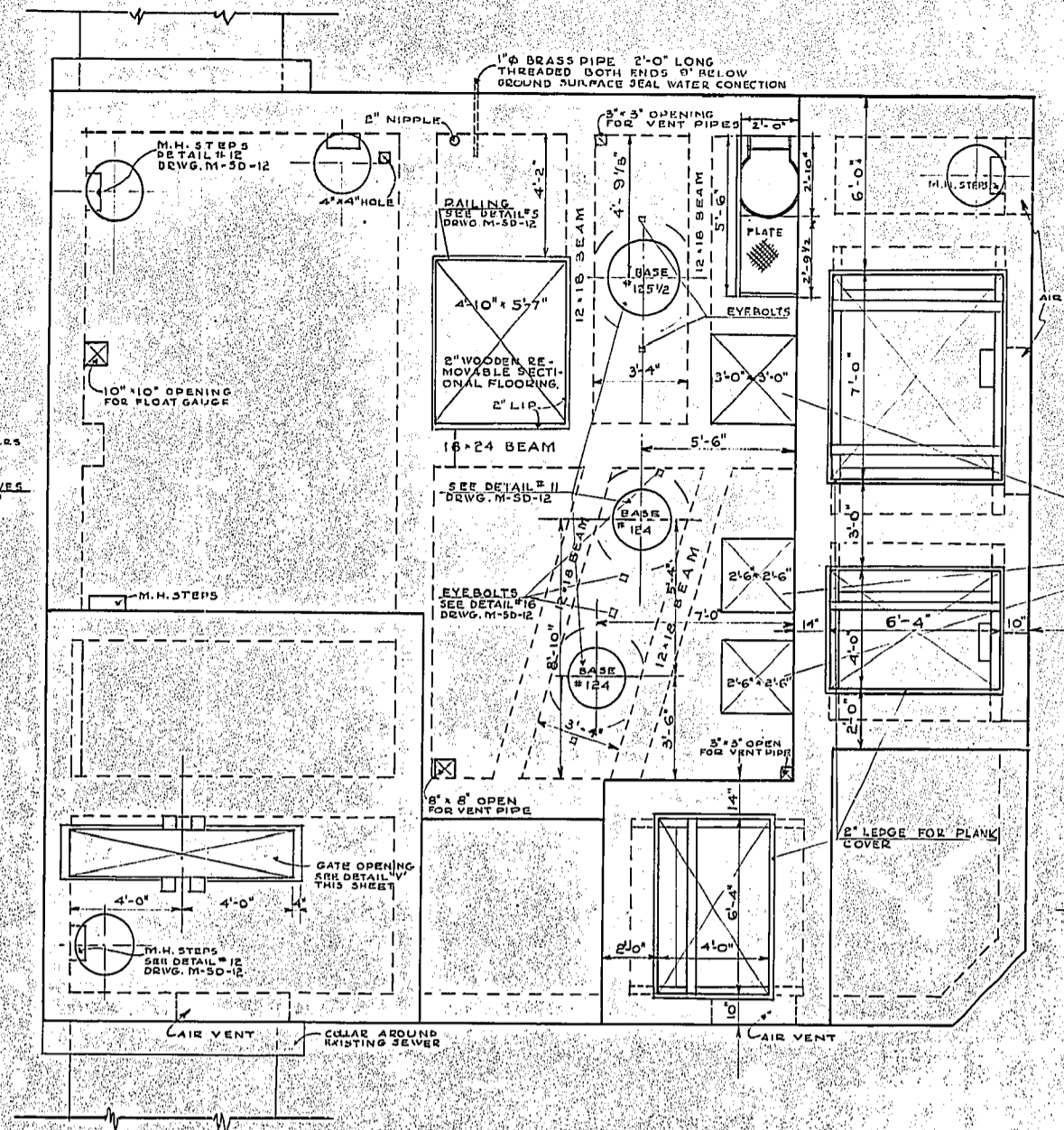
GREATER WINNIPEG DYKING BOARD
20 CUMBER ST. W. WINNIPEG, MANITOBA

POLSON AVE
PULPING STATION

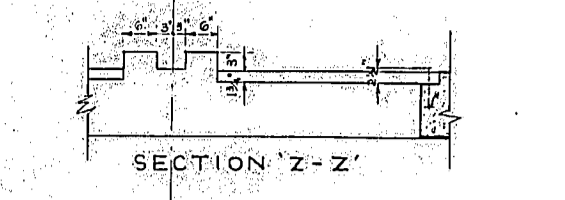
SCALE: 1/4" = 1'-0"
SHEET No. 2 of 2
APPROVED: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature] DATE: []
DRG. No. 5-50-4



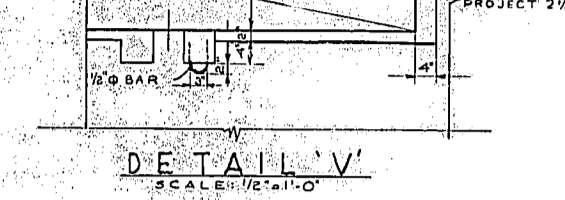
SECTION 1-1
SCALE 1/4"=1'-0"



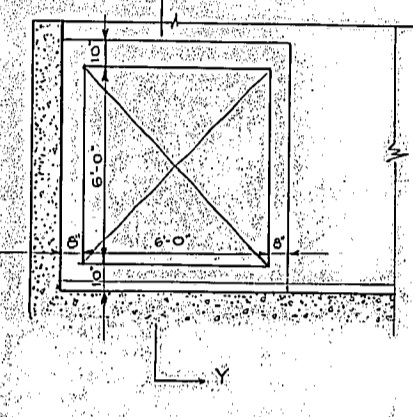
SECTION 2-2
MOTOR FLOOR PLAN - SCALE 1/4"=1'-0"



SECTION Z-Z

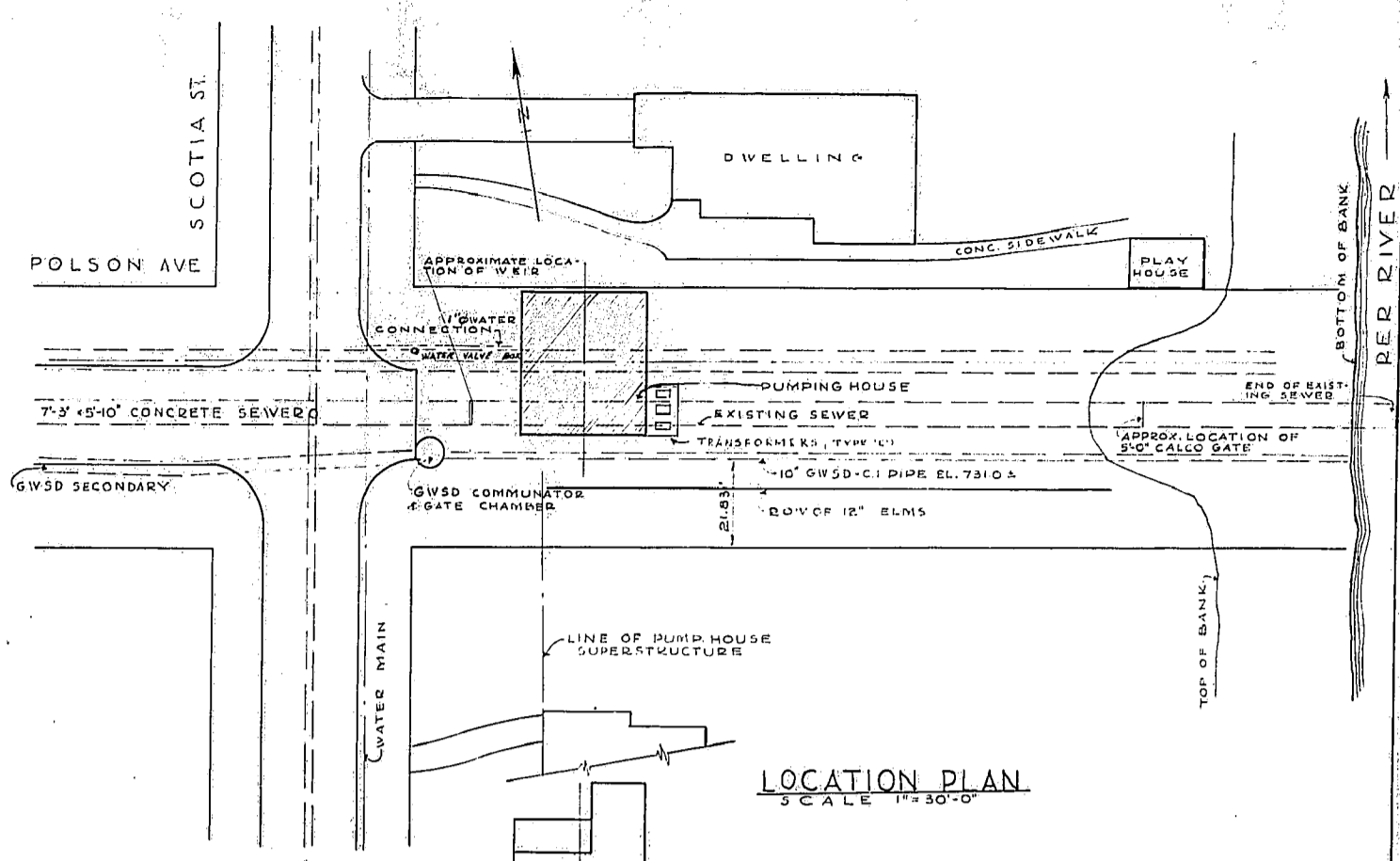


DETAIL V
SCALE 1/2"=1'-0"

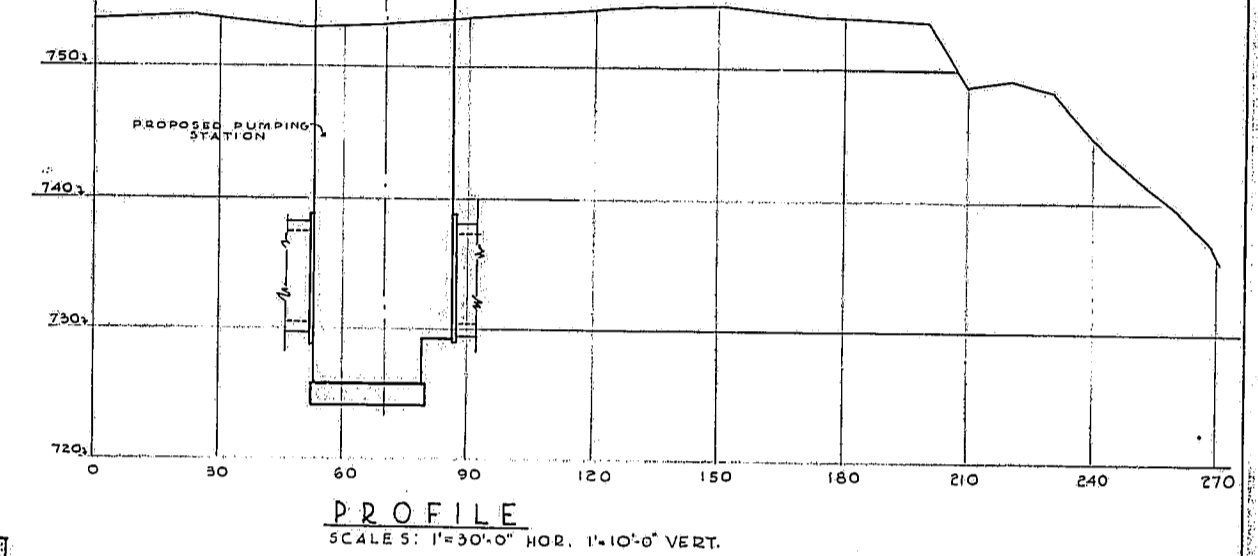


SECTION Y-Y

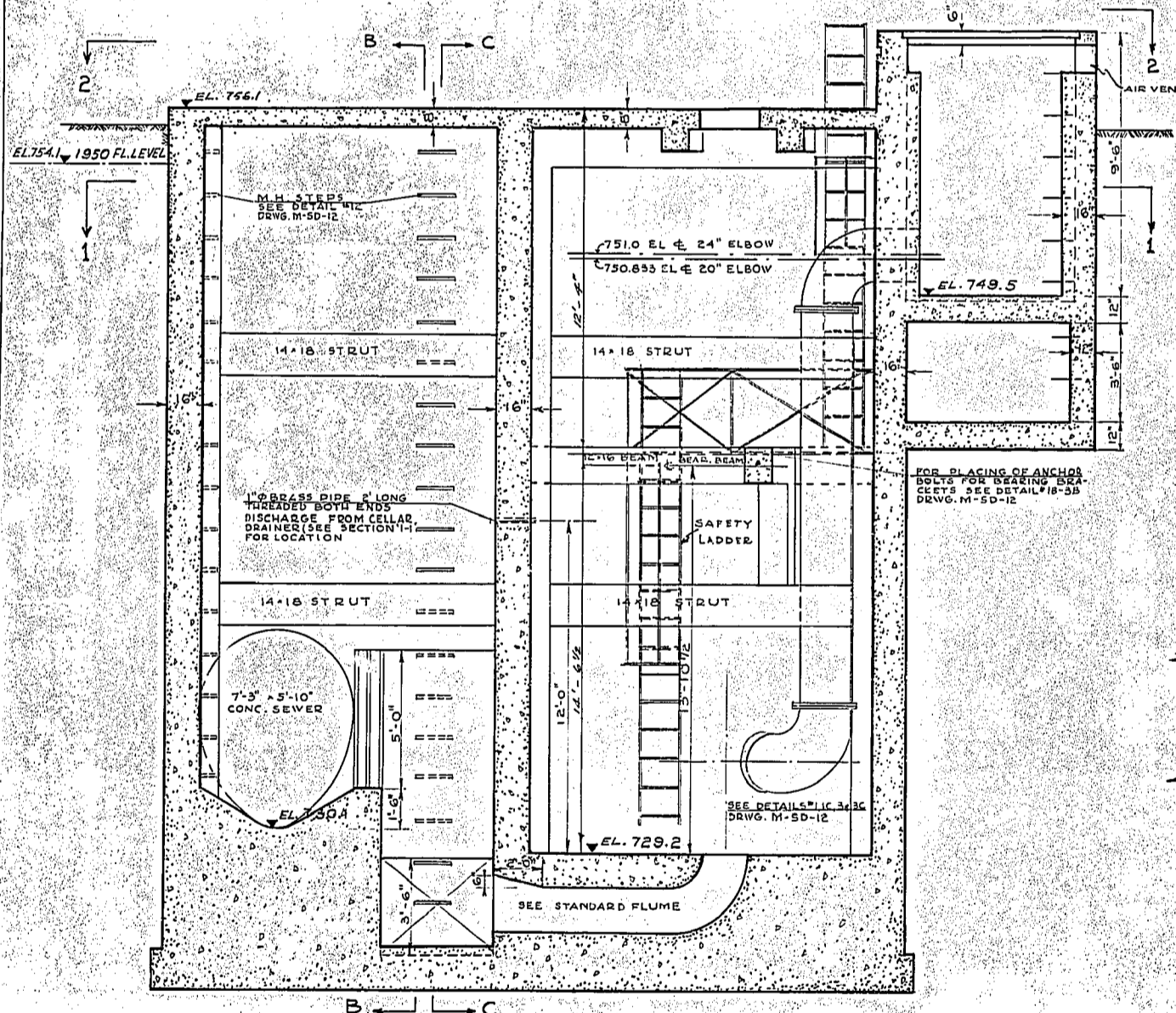
DETAIL W
SCALE 1/4"=1'-0"



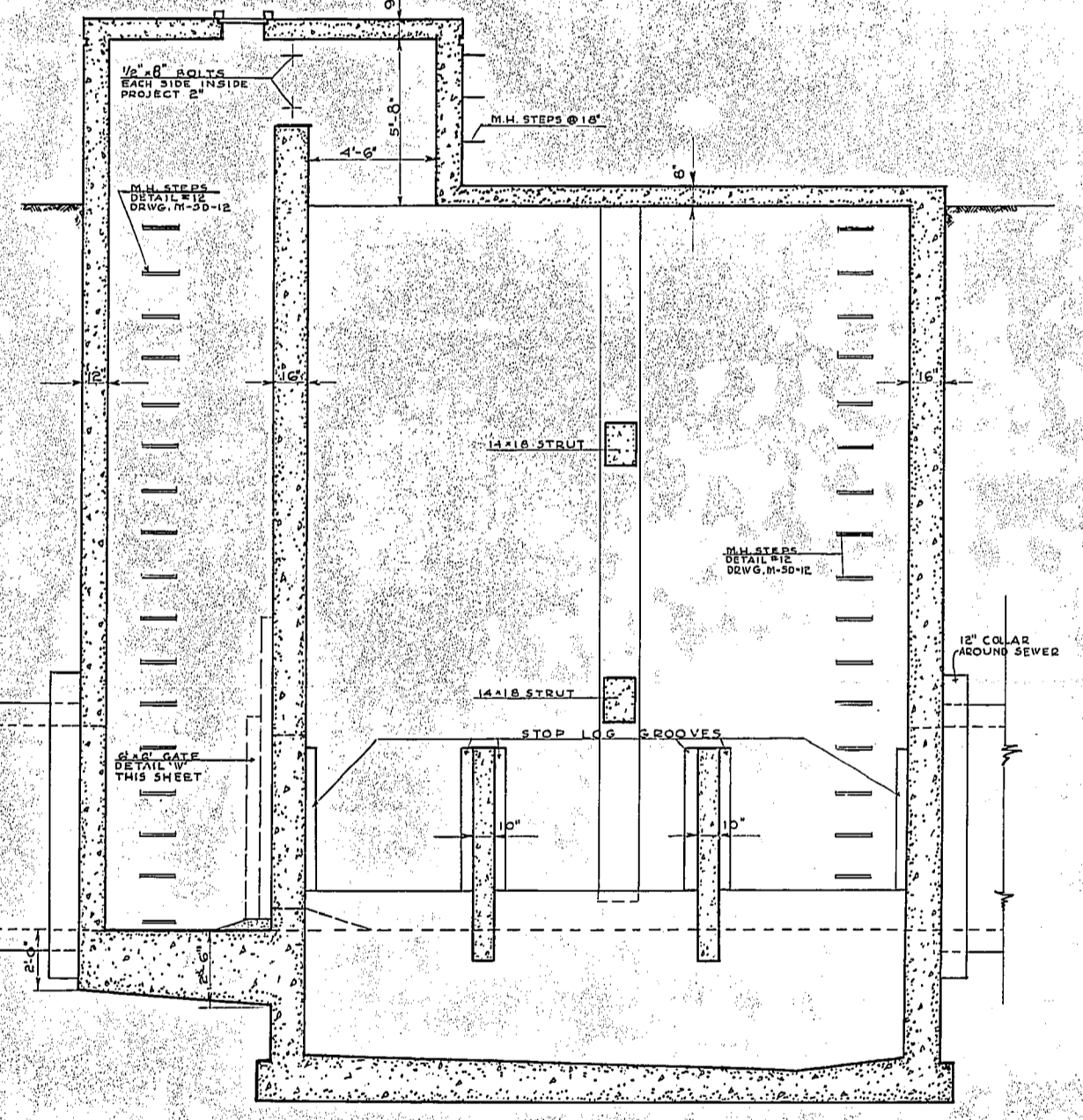
LOCATION PLAN
SCALE 1"=30'-0"



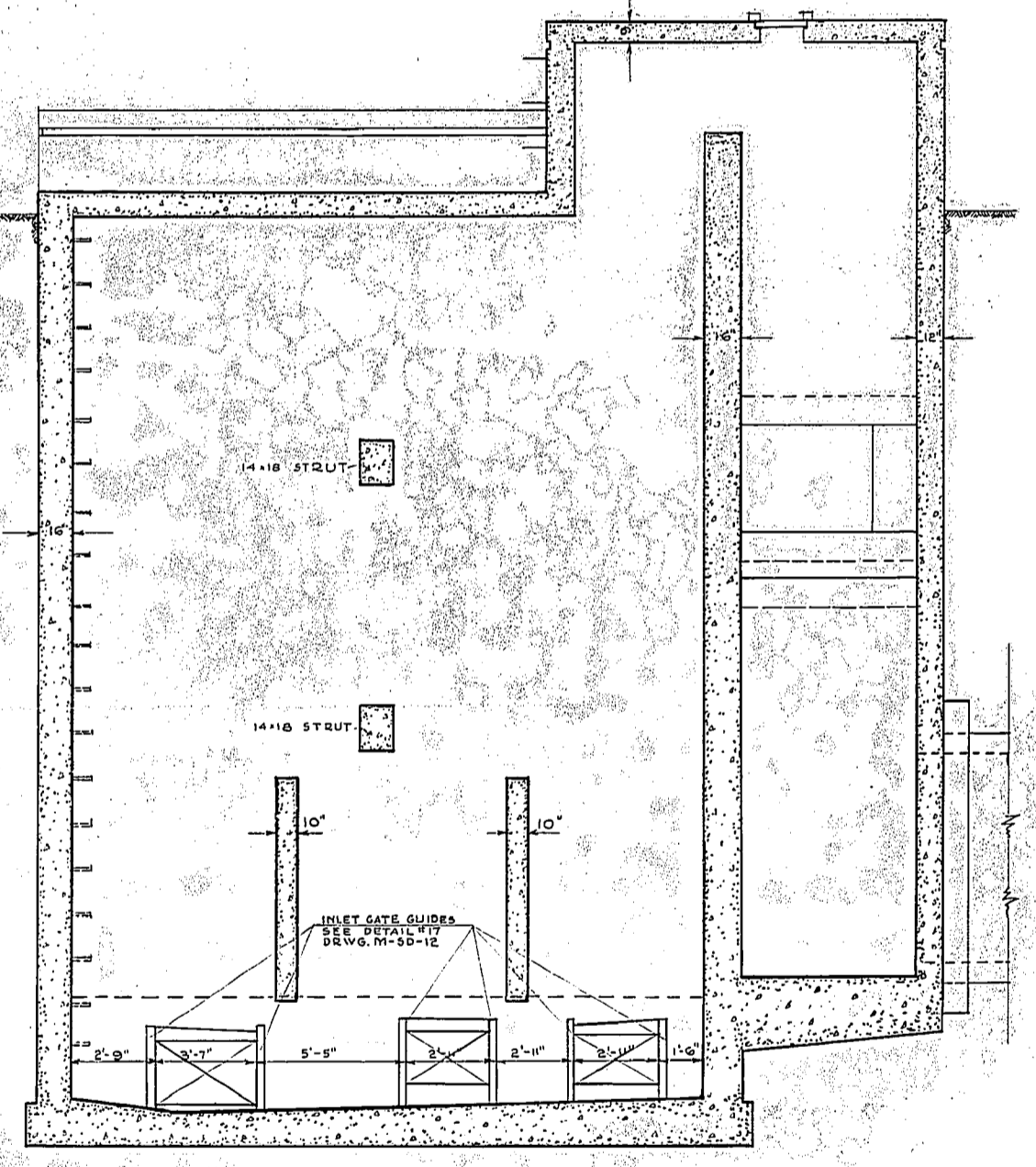
PROFILE
SCALE: 1"=30'-0" HOR. 1"=10'-0" VERT.



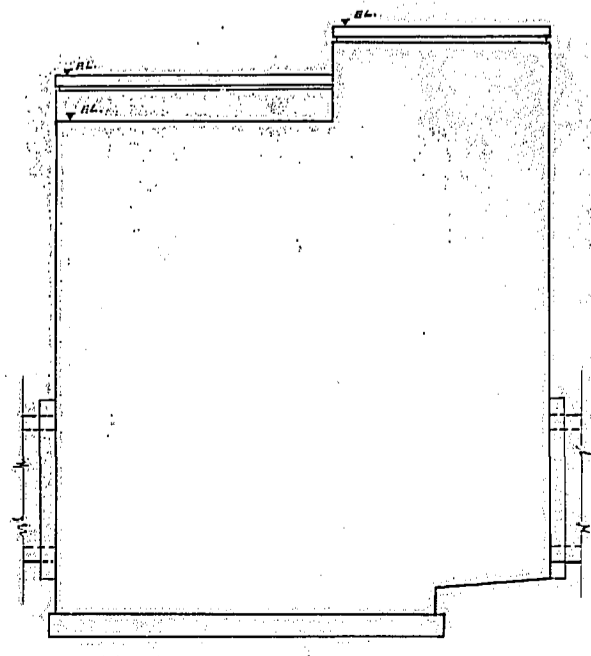
SECTION 'A-A'



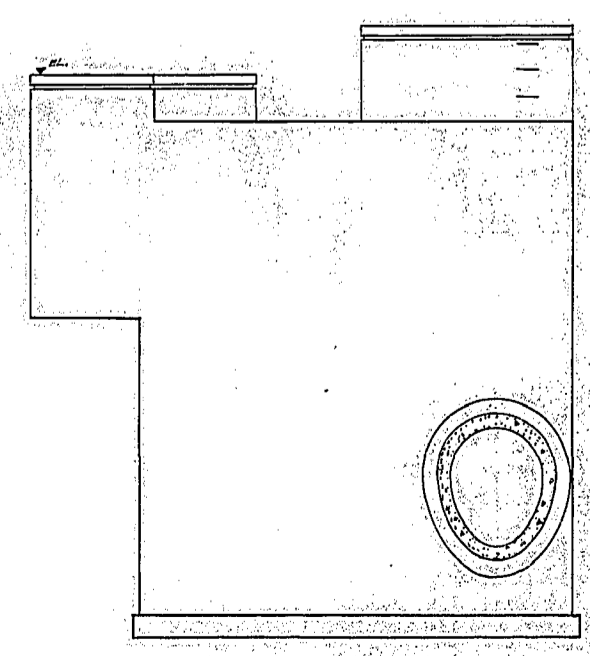
SECTION 'B-B'
SCALE 1/4"=1'-0"



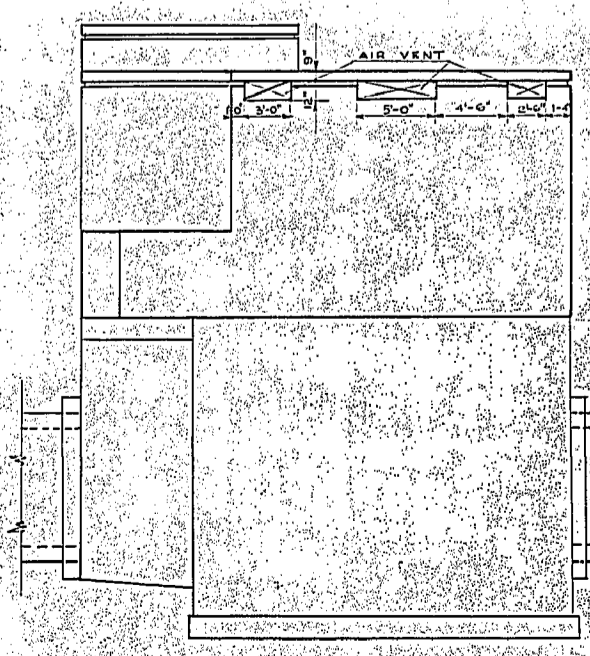
SECTION 'C-C'



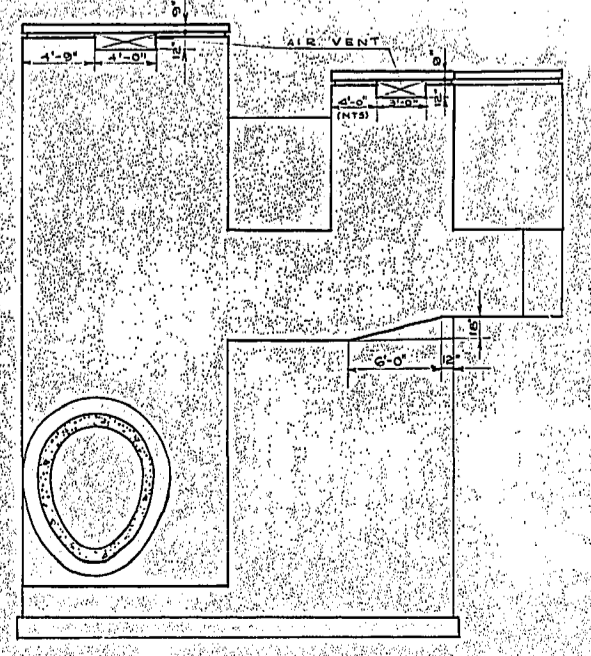
VIEW 'D-D'



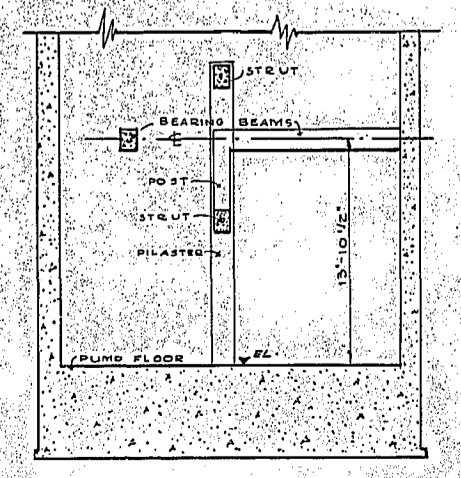
VIEW 'E-E'



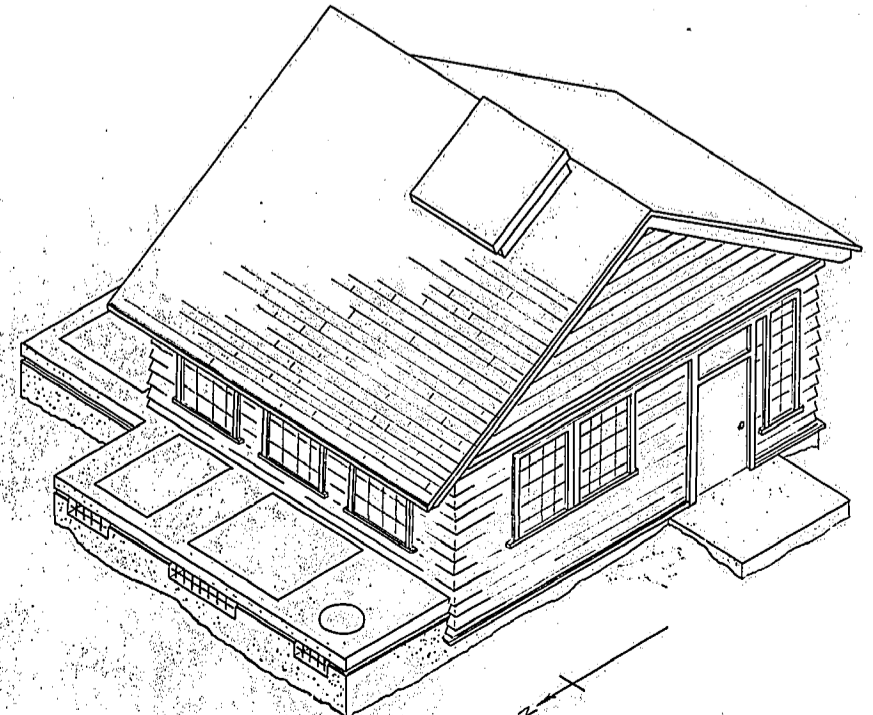
VIEW 'F-F'



VIEW 'G-G'

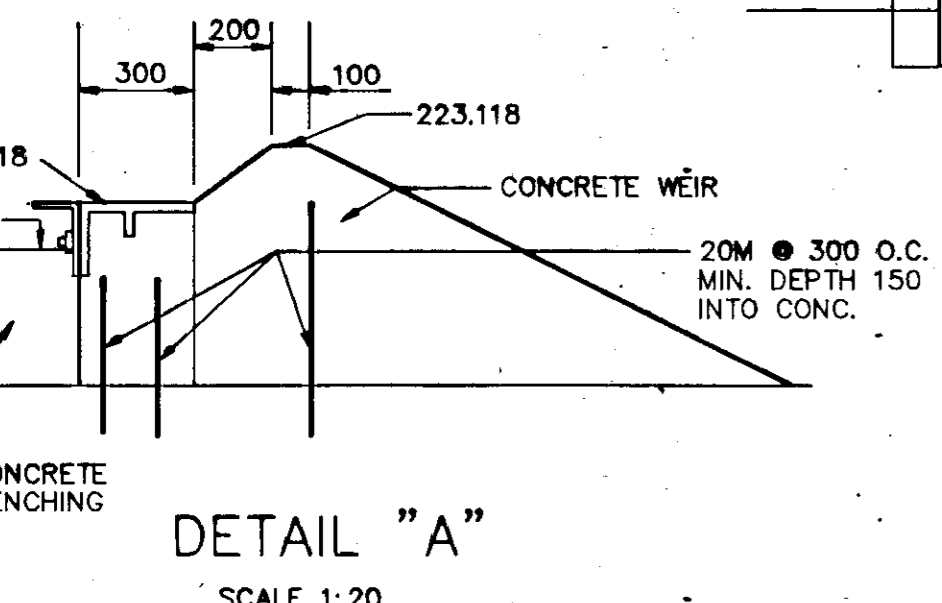
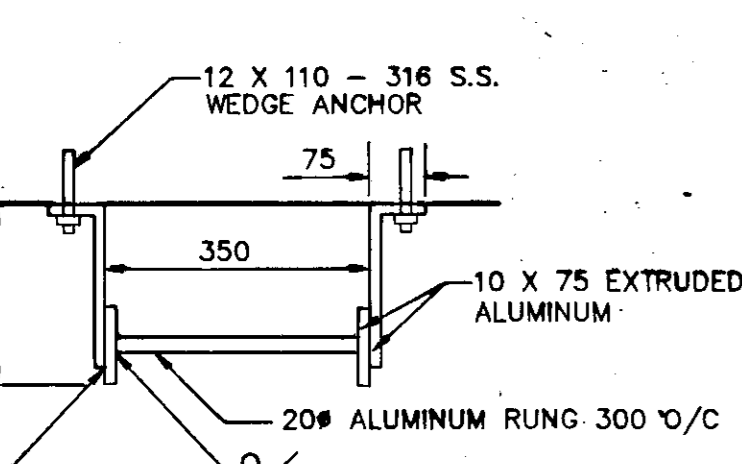
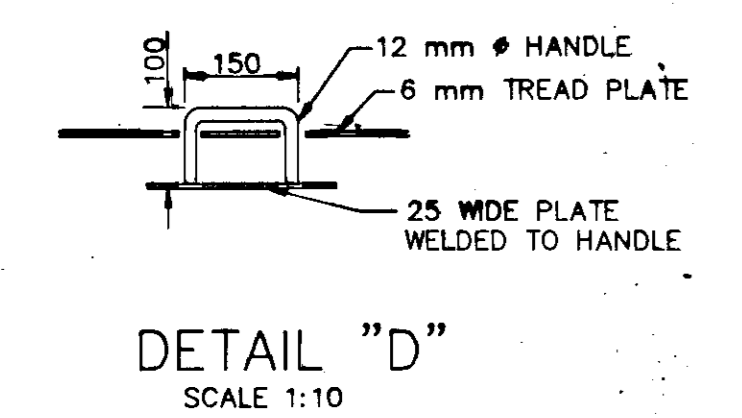
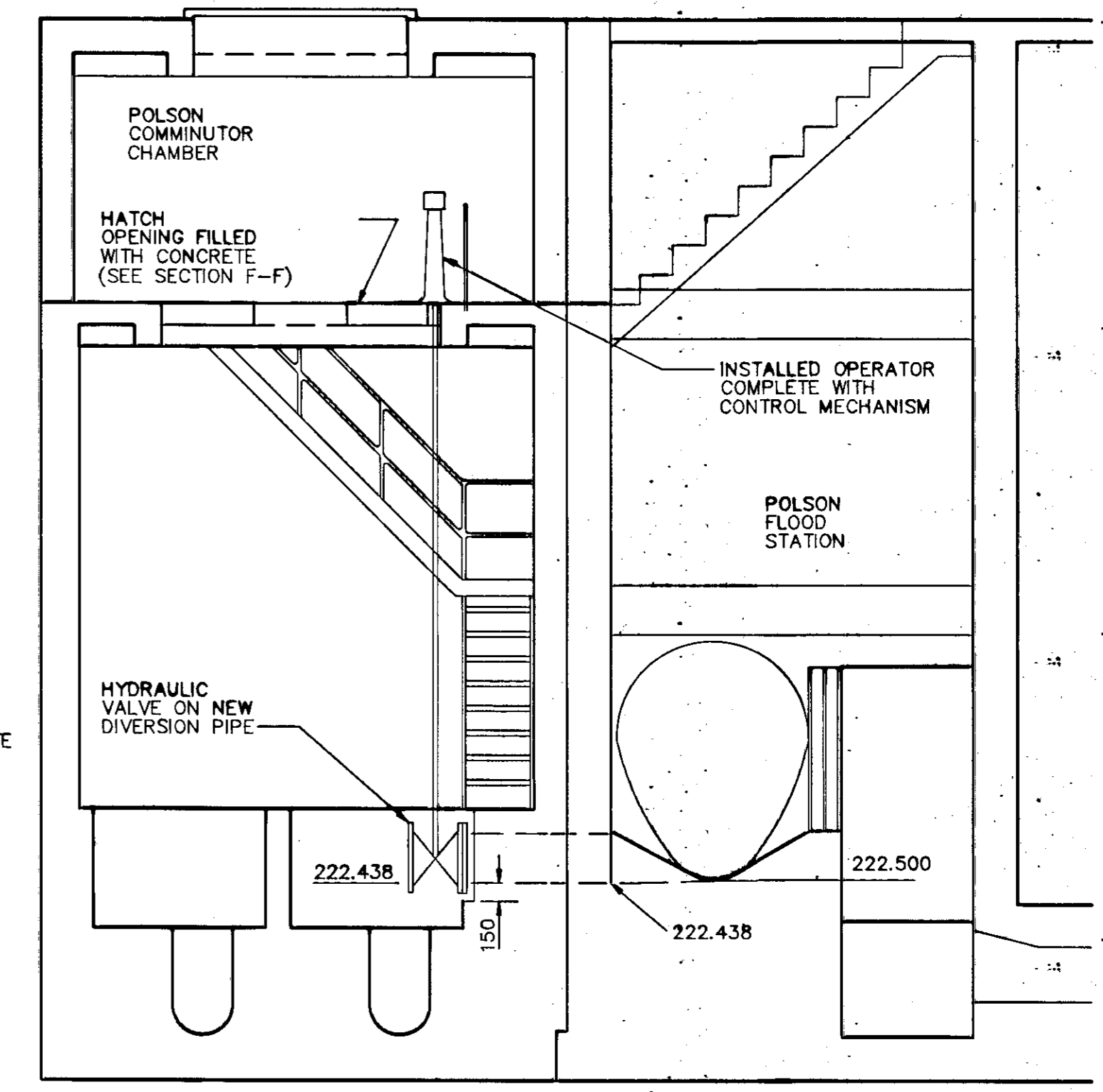
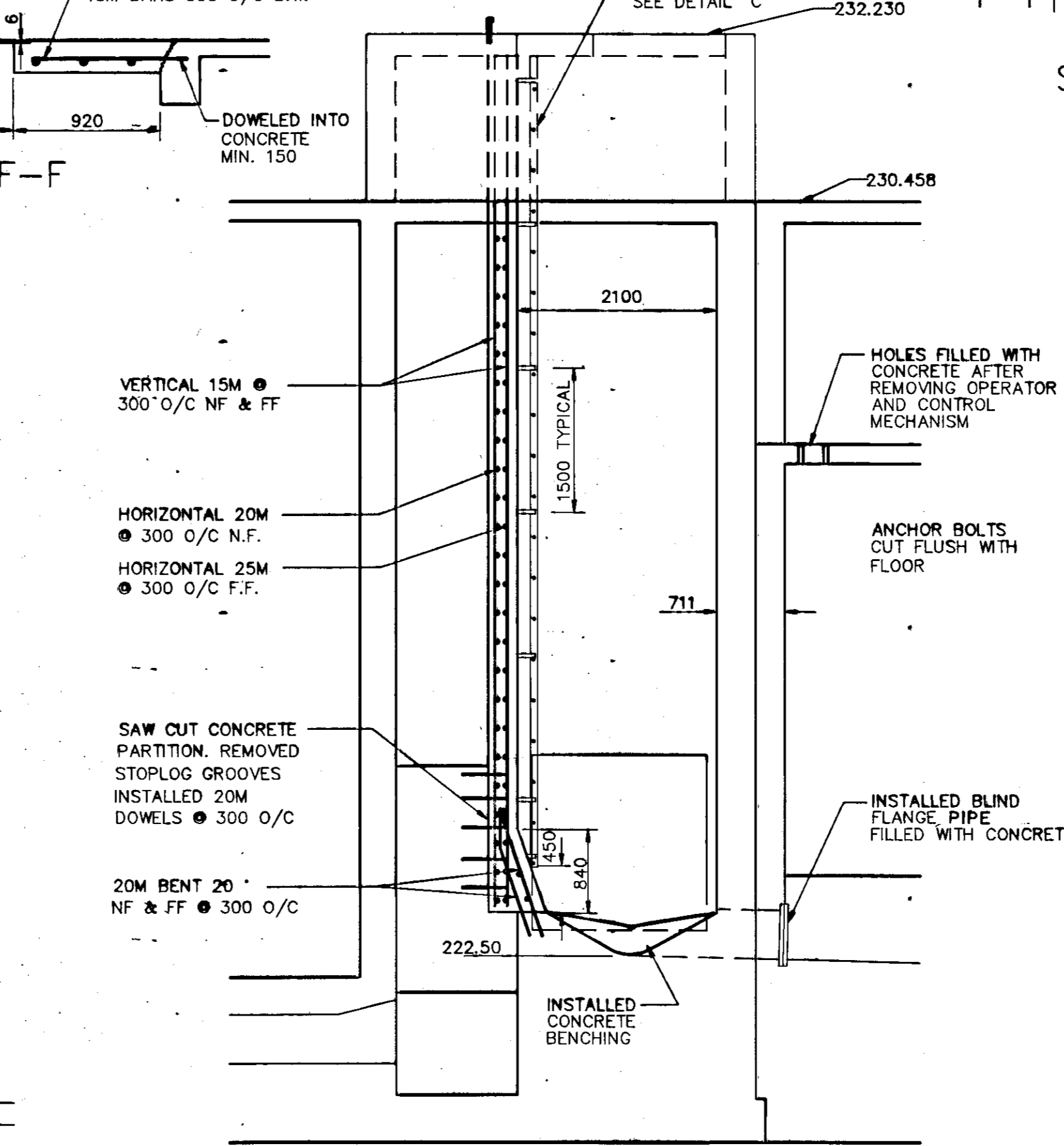
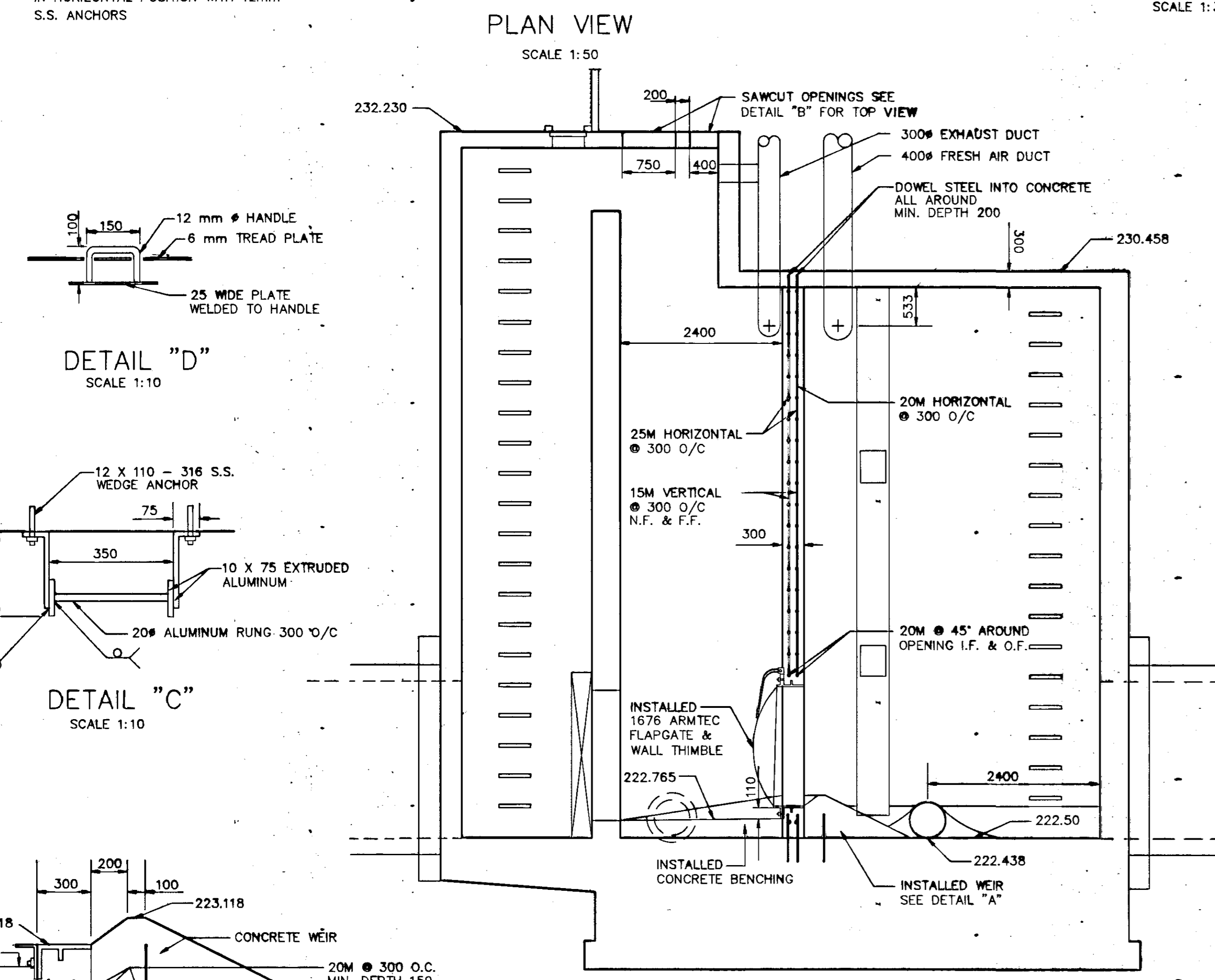
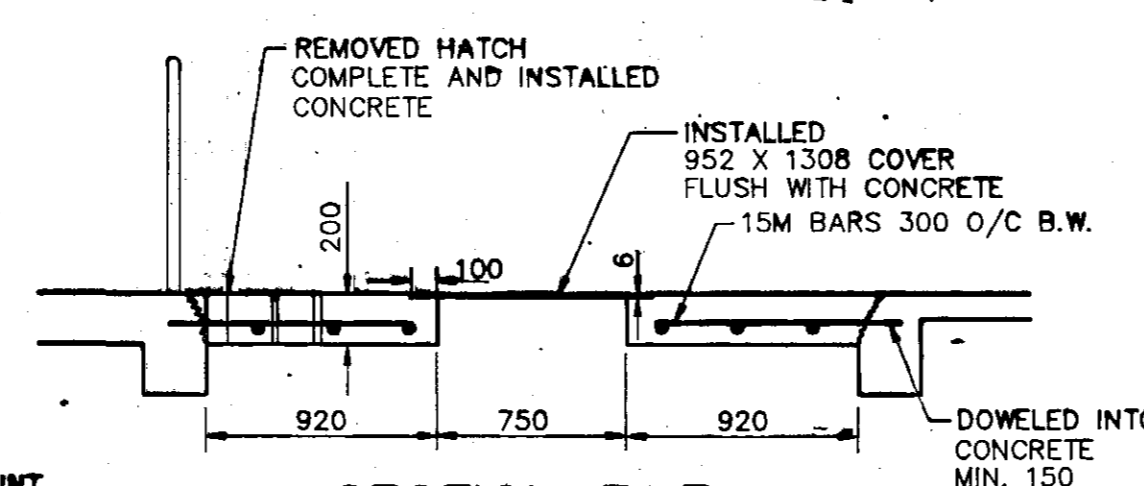
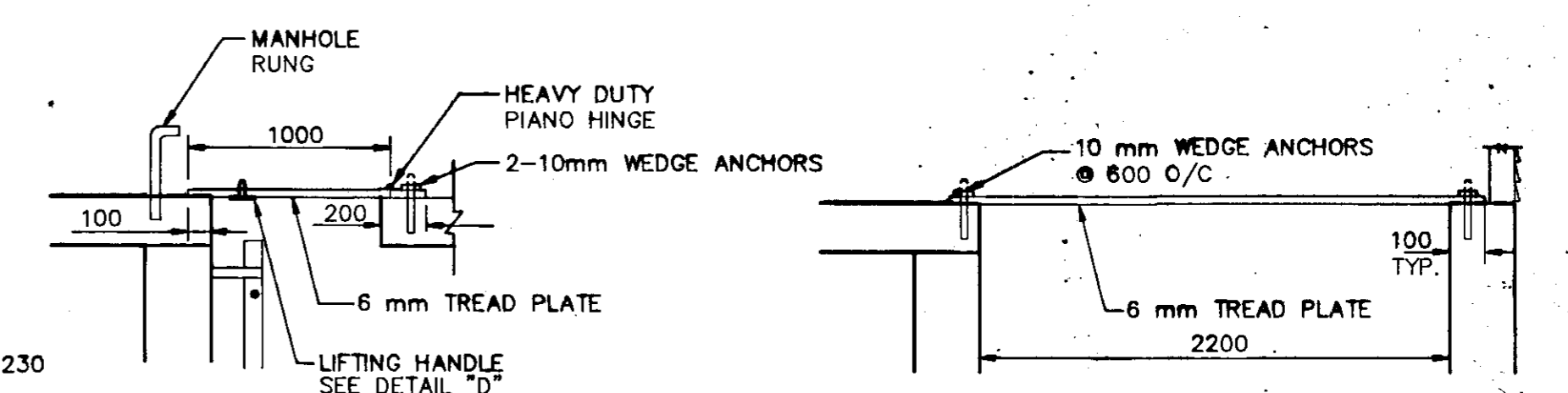
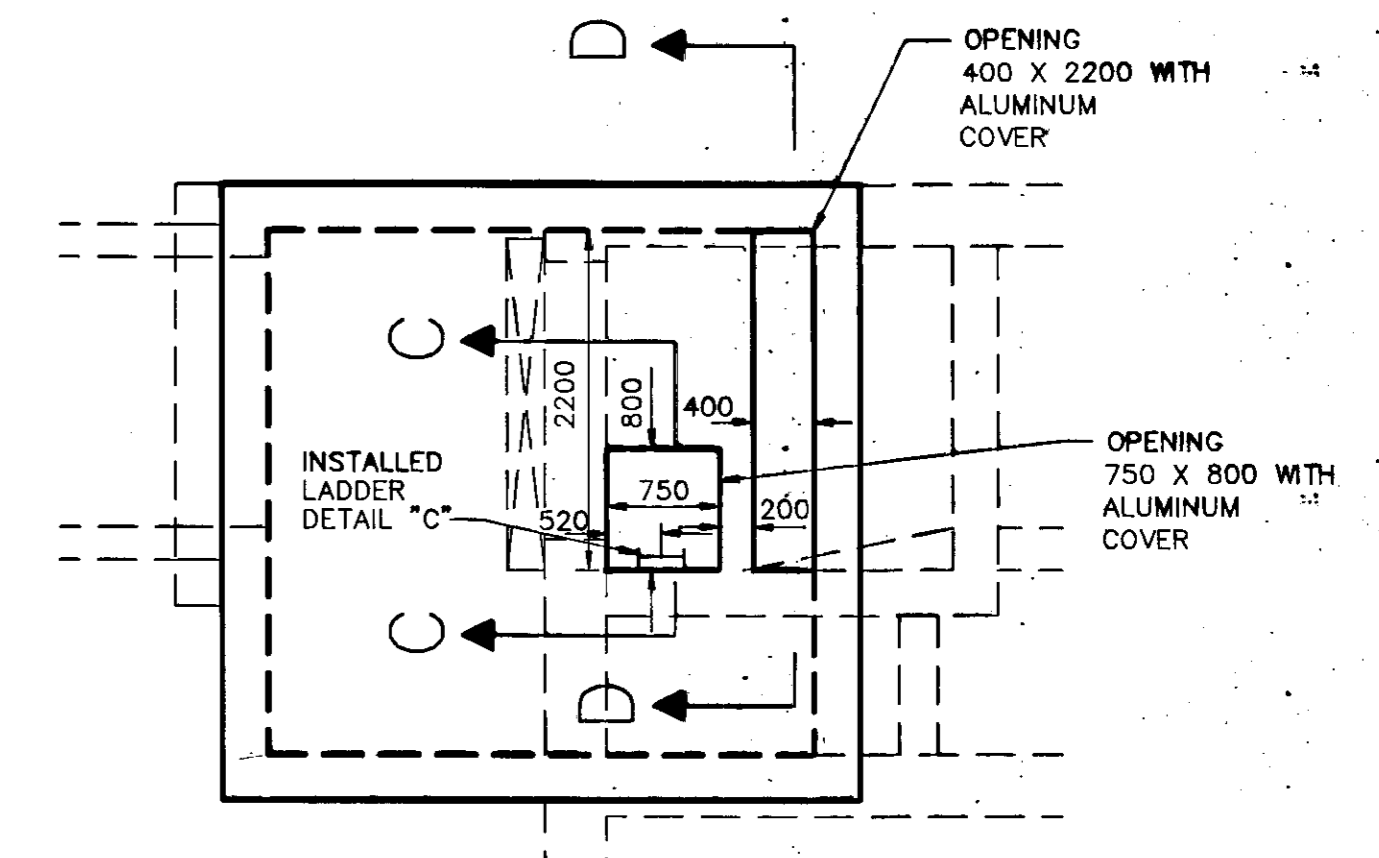
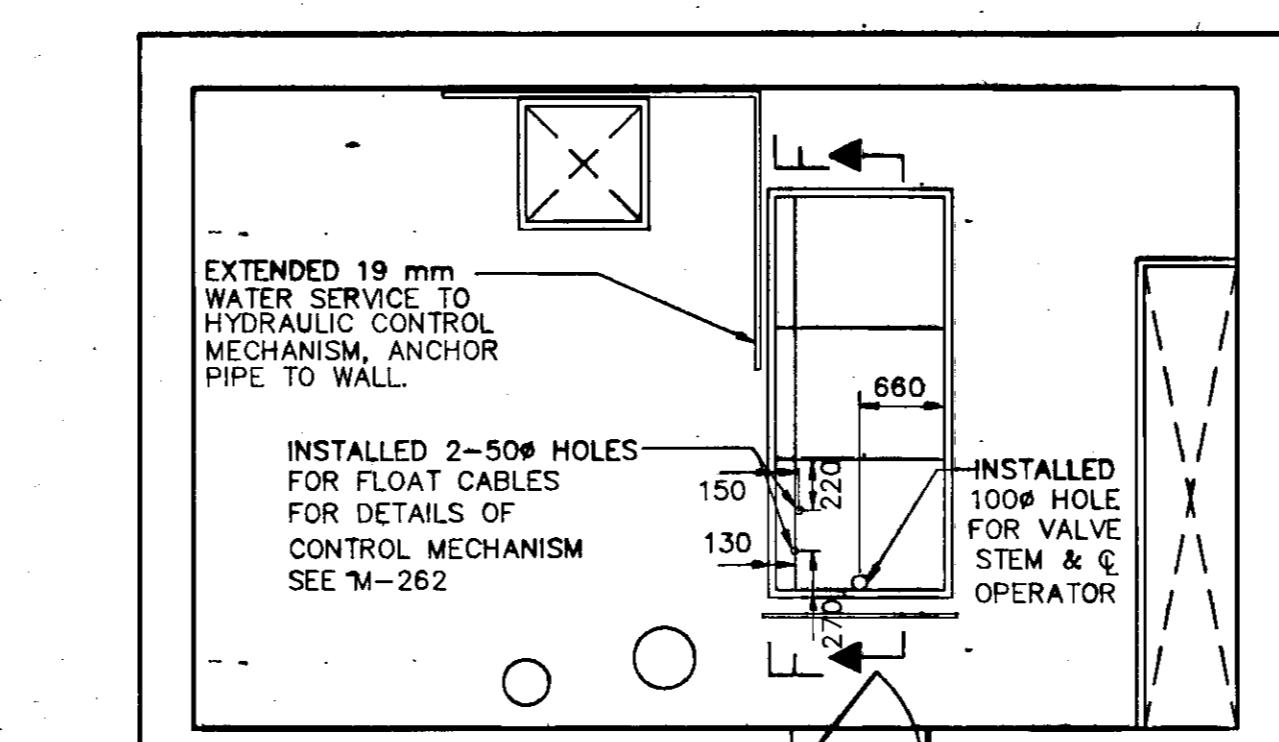
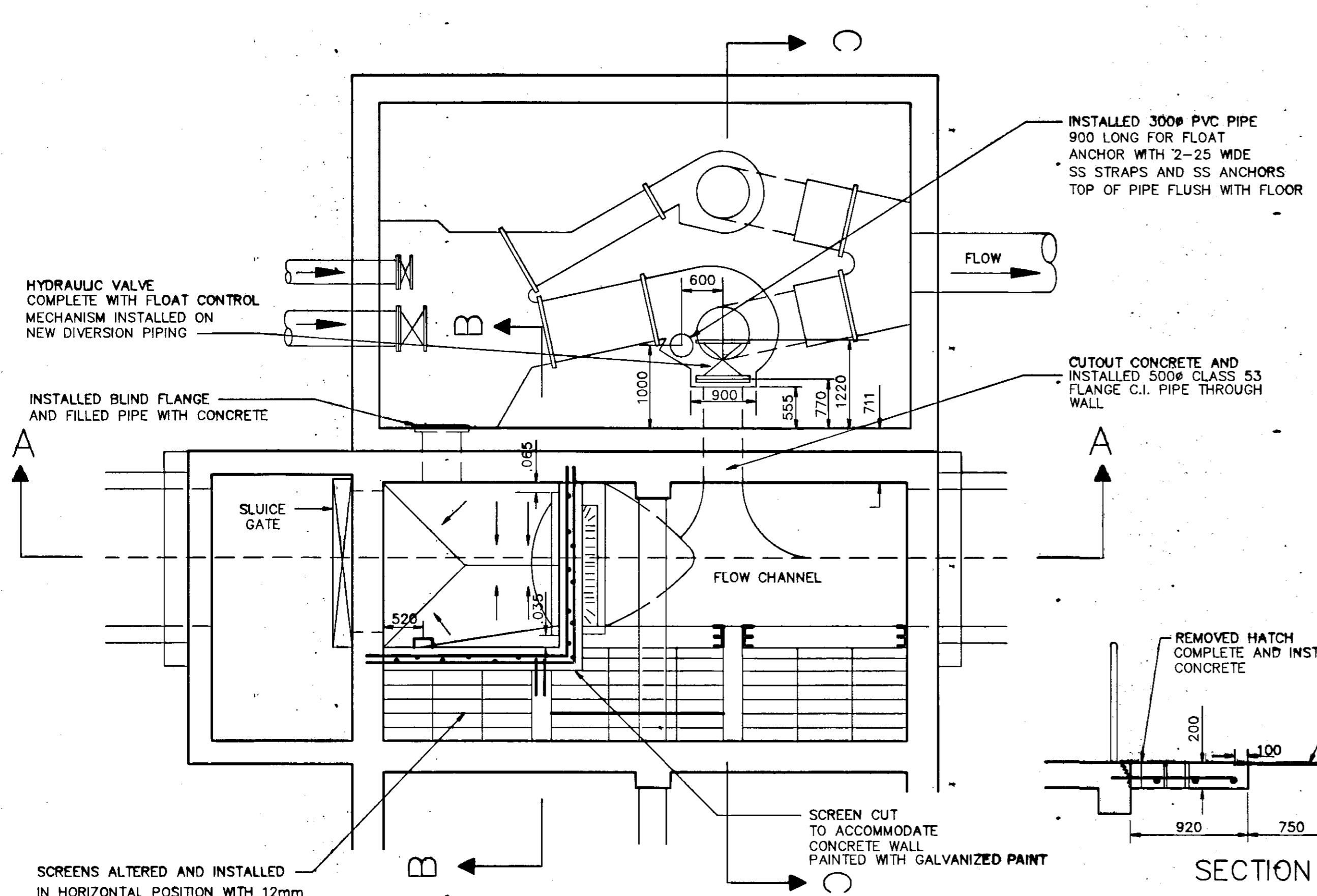


SECTION THRU DRY WELL
SHOWING BEARING BEAMS
SCALE: 1/8"=1'-0"



ISOMETRIC OF
SUPERSTRUCTURE
SCALE: 1/8"=1'-0"

GREATER WINNIPEG DYKING BOARD 221 OSBORNE ST. N. WINNIPEG, MANITOBA			
POLSON AVE PUMPING STATION			
SCALE 1/4"=1'-0" OR AS SHOWN	SHEETNO. 1 OF 2 SHEETS	DESIGNED BY J.T.	DATE FEB. 51
DRAWN BY R.M.	DATE FEB. 51	APPROVED: <i>[Signature]</i>	CHIEF ENGINEER
CHECKED BY E.O.	DATE JULY 51		
	DATE NOV. 51		DRG. No 5-SD-4

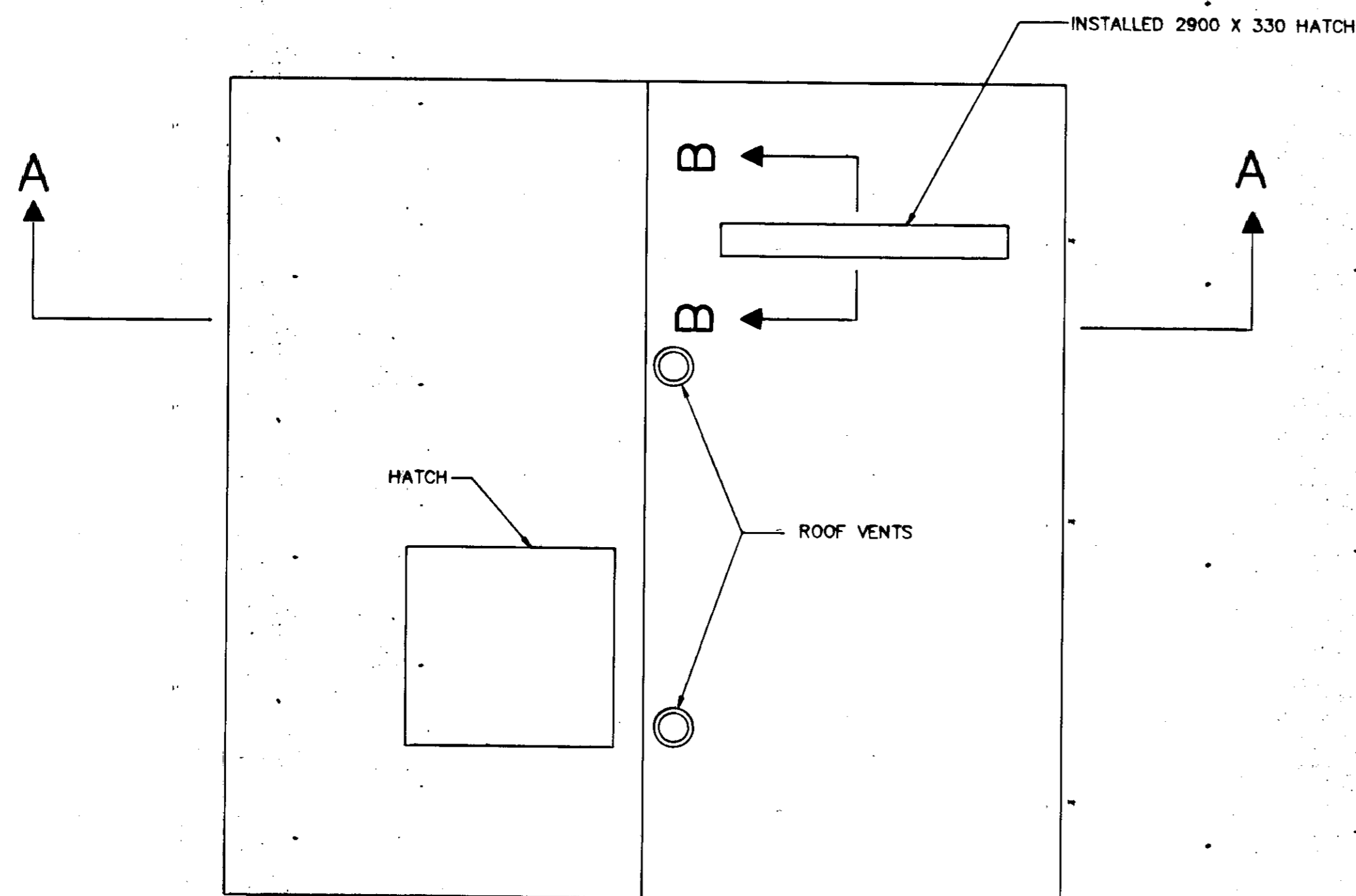


NOTES

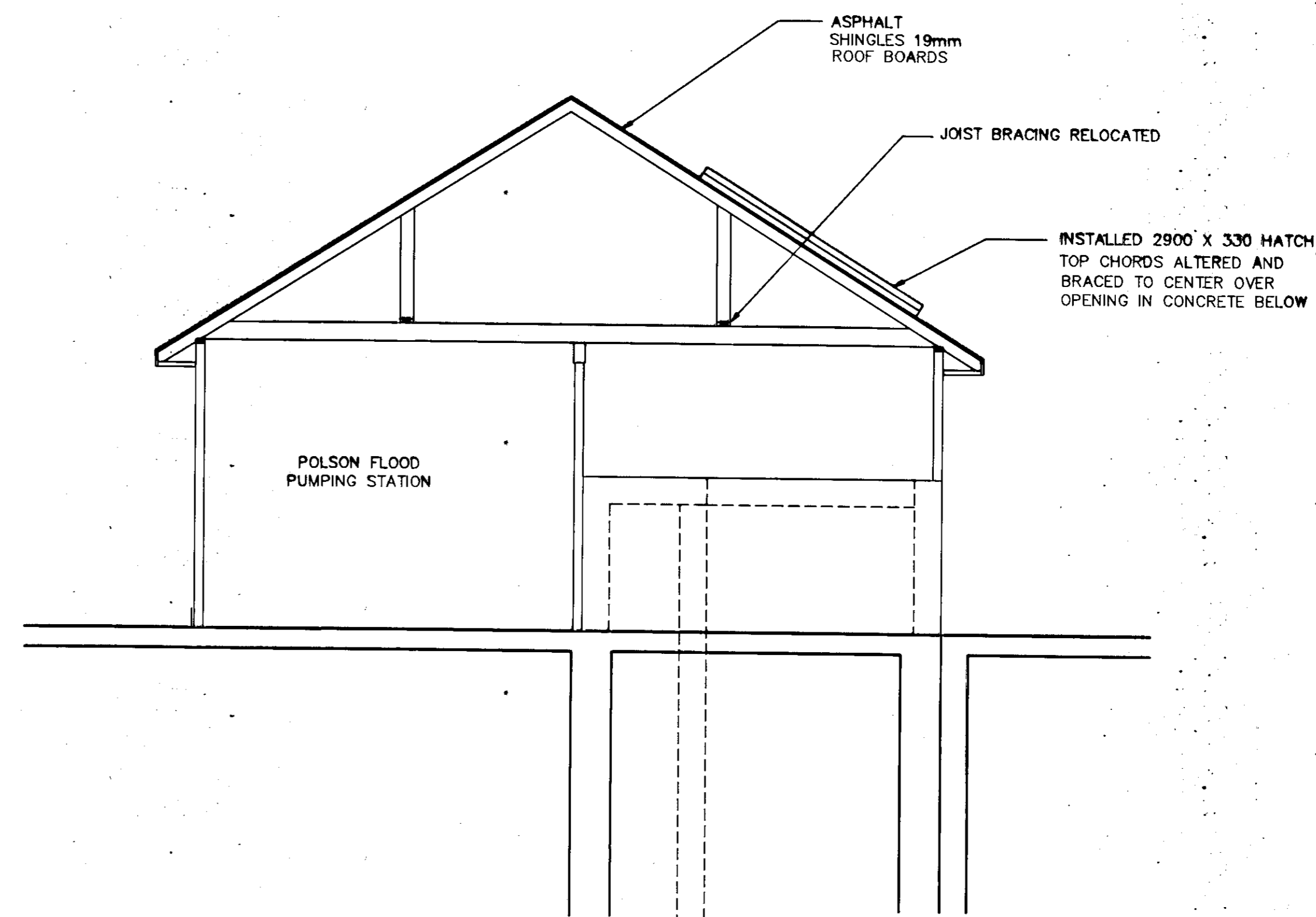
- 1). REINFORCEMENT IS NEW DEFORMED STEEL GRADE fy=400 MPa CONFORMING TO CSA G30.12M
- 2). CLEAR COVER FOR REINFORCEMENT IN CONCRETE IS 50mm
- 3). HATCH & LADDER ARE ALUMINUM WITH 316 S.S. FASTENERS
- 4). FOR DETAILS OF STRUCTURE SEE DRAWING 5-SD-4, 5-SD-4(B), 511, 512, 514 & M-262

AS-CONSTRUCTED
 Inspection / Technical Services
 Survey / Services
 WATERWORKS, WASTE & DISPOSAL DEPARTMENT

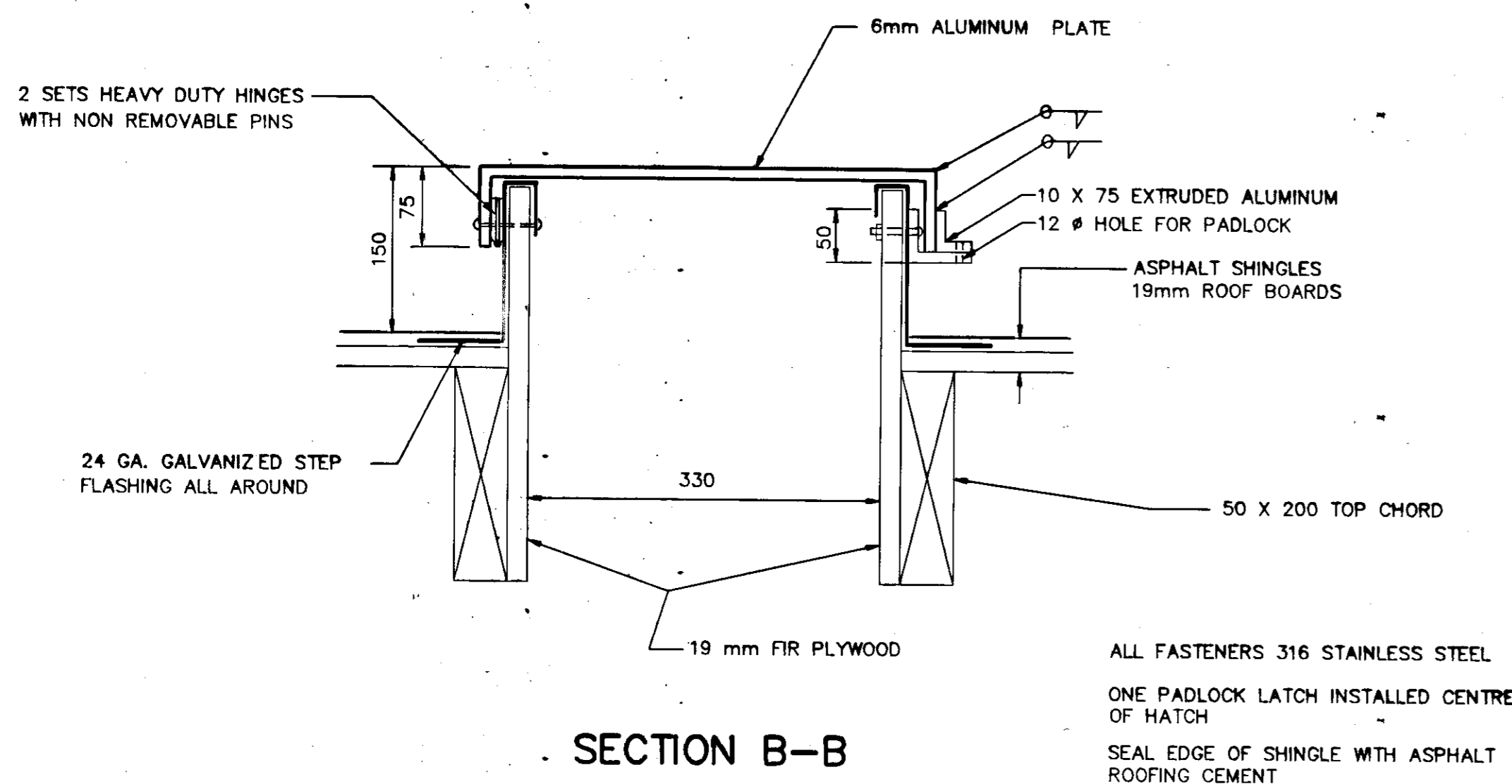
B.M. ELEV. --- DESIGNED BY J.E. DRAWN BY M.B. DAHL HOR. SCALE AS NOTED VERTICAL SCALE 1 AS CONSTRUCTED 92-02 MBD NO. REVISIONS DATE BY DATE APRIL 1990	 WORKS & OPERATIONS DIVISION WATERWORKS, WASTE & DISPOSAL DEPARTMENT CHECKED BY J.E. APPROVED BY W.D.W. RELEASED FOR CONSTRUCTION ORIGINALLY SIGNED BY R.M.G. DATE OCTOBER 10, 1990	 ENGINEER'S M.B. DAHL REGISTERED ENGINEER DEC. 09, 1992	 THE CITY OF WINNIPEG WORKS AND OPERATIONS DIVISION WATERWORKS WASTE AND DISPOSAL DEPARTMENT POLSON FLOOD PUMPING STATION FLAPGATE INSTALLATION CITY DRAWING NUMBER SHEET 1 OF 2 1320 LD-2643



TOP VIEW OF ROOF



SECTION A-A



SECTION B-B

SCALE 1:10

AS-CONSTRUCTED
 Inspection: *[Signature]* 92-12-15
 TECHNICAL SERVICES
 WATERWORKS, WASTE & DISPOSAL DEPARTMENT

NO.	REVISIONS	DATE	BY
1.	AS CONSTRUCTED	92-02	MBD

W WORKS & OPERATIONS DIVISION WATERWORKS, WASTE & DISPOSAL DEPARTMENT	DESIGNED BY: J.E.	CHECKED BY: J.E.
	DRAWN BY: M.B. DAHL	APPROVED BY: W.D.W.
HOR. SCALE: 1:50	RELEASED FOR CONSTRUCTION VERTICAL: ORIGINALY SIGNED BY R.M.G. DATE: OCT. 10, 1992	

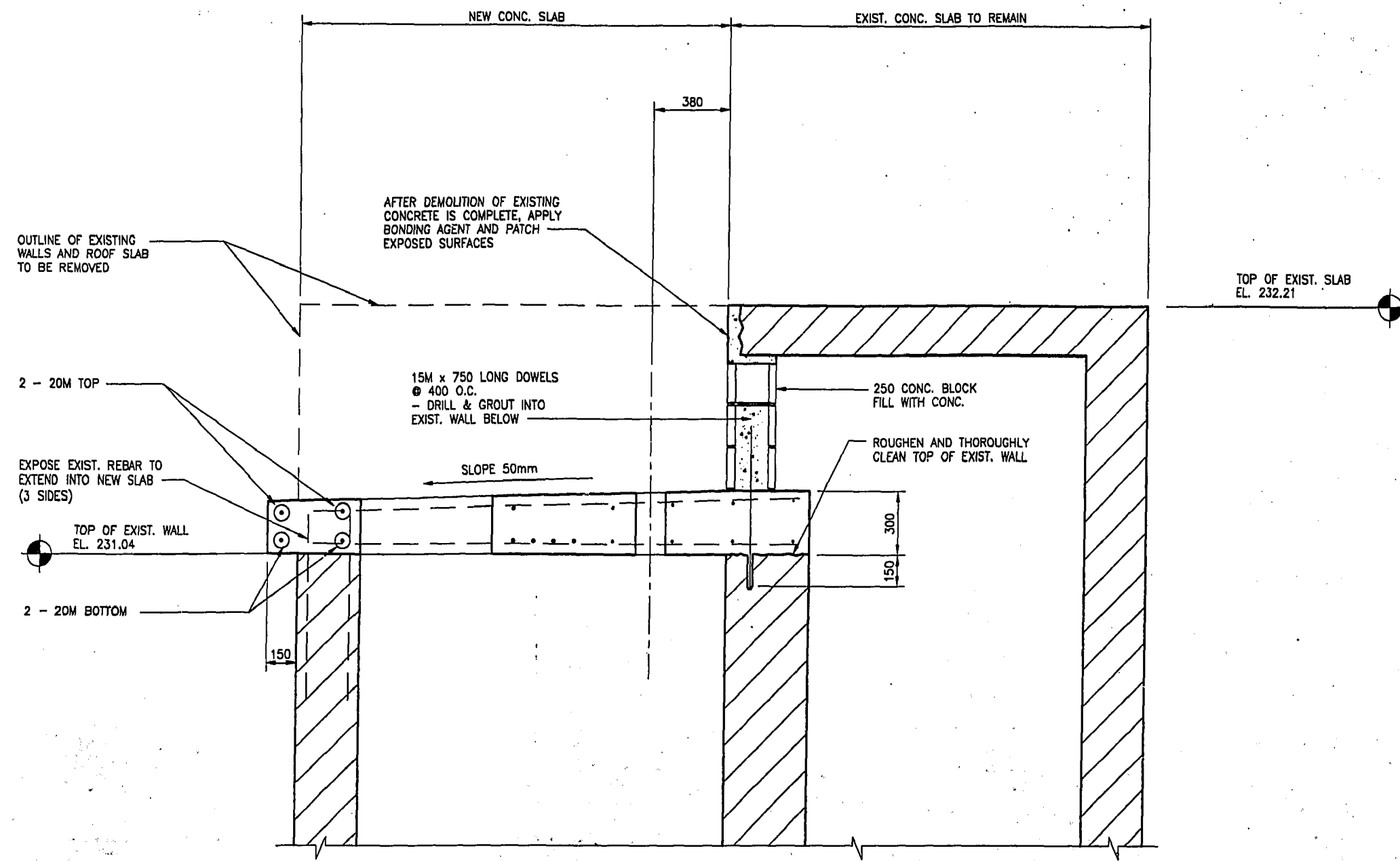
ENGINEER
PROVINCE OF MANITOBA
WATERS
 REGISTERED ENGINEER
[Signature]
 10/10
 PLOT DATE:
 DEC. 09, 1992

THE CITY OF WINNIPEG
 WORKS AND OPERATIONS DIVISION
 WATERWORKS WASTE AND DISPOSAL DEPARTMENT

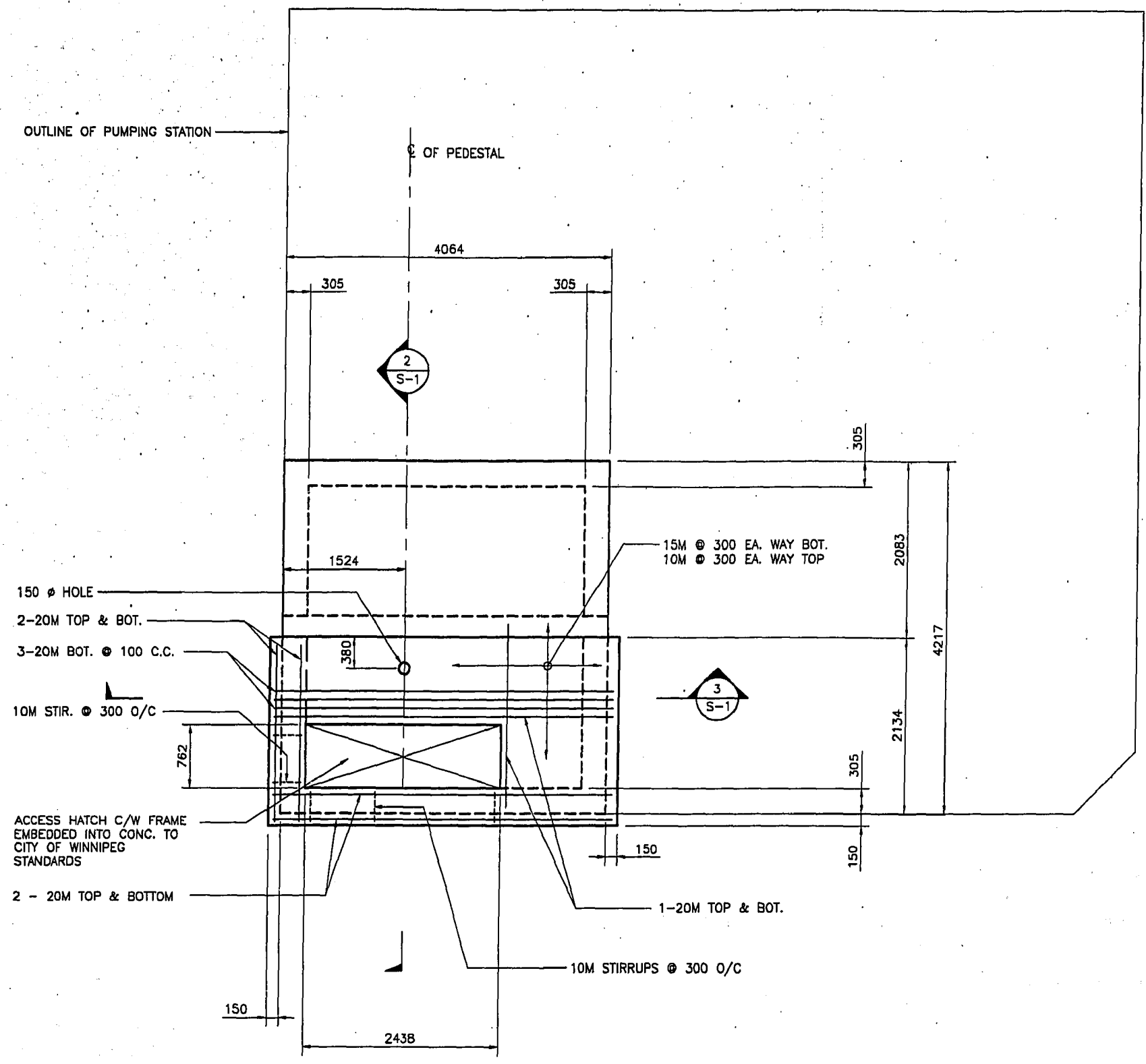
POLSON FLOOD PUMPING STATION ACCESS HATCH

CITY DRAWING NUMBER
 SHEET 2 OF 2
1321
LD-2644

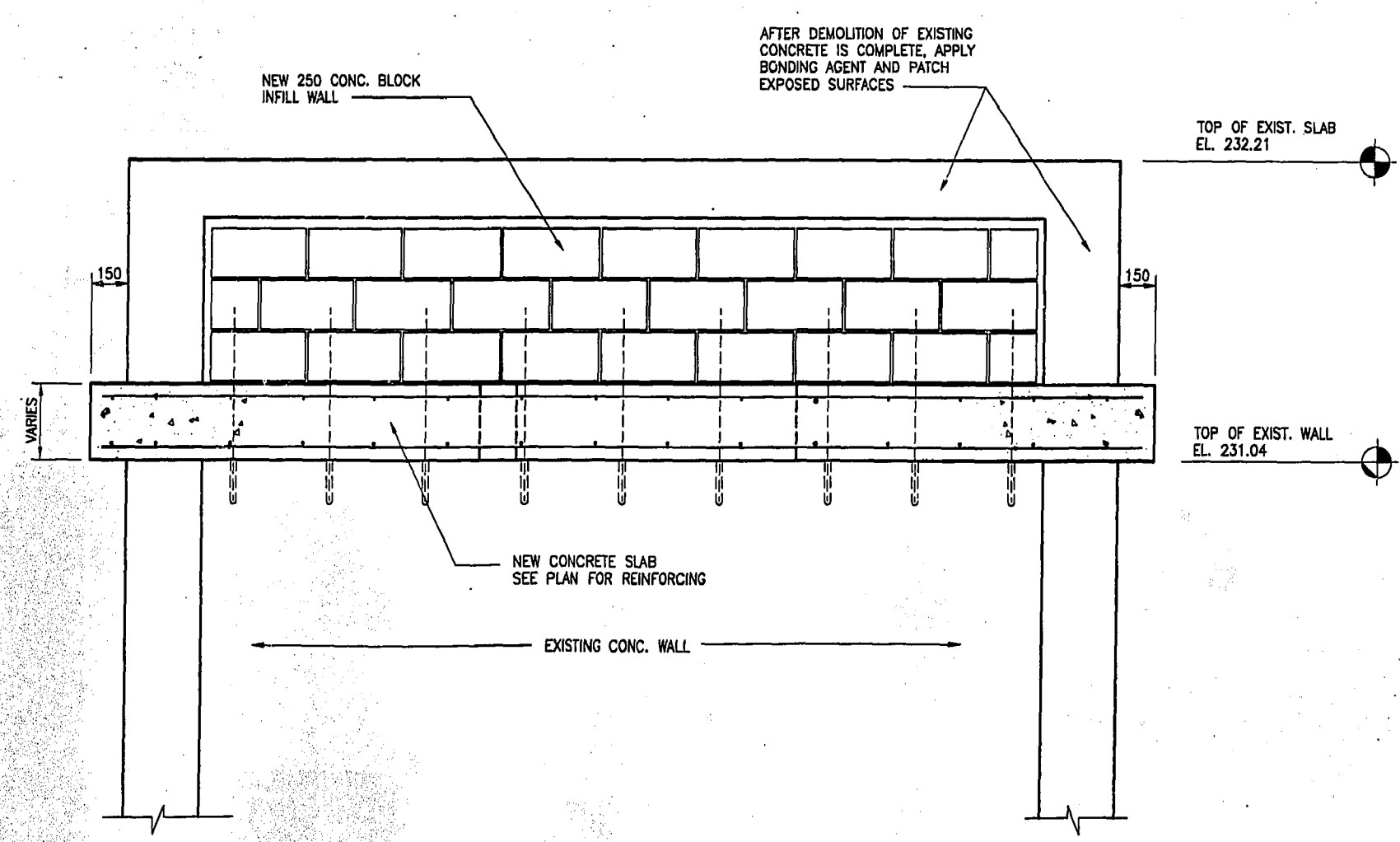
FILE # FP10041



2 SECTION
SCALE: 1:20



1 PLAN @ EL. 232.21
SCALE: 1:50



3 SECTION
SCALE: 1:20

GENERAL NOTES
 ALL WORK TO BE DONE IN ACCORDANCE WITH THE MANITOBA BUILDING CODE AND ALL STANDARDS REFERENCED THEREIN.
 GENERAL CONTRACTOR TO VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, SLOPES AND CONDITIONS ON SITE PRIOR TO STARTING CONSTRUCTION.
 IF ANY UNSOUND STRUCTURAL CONDITIONS ARE CREATED OR OBSERVED DURING CONSTRUCTION, REPORT THEM IMMEDIATELY TO THE ENGINEER.

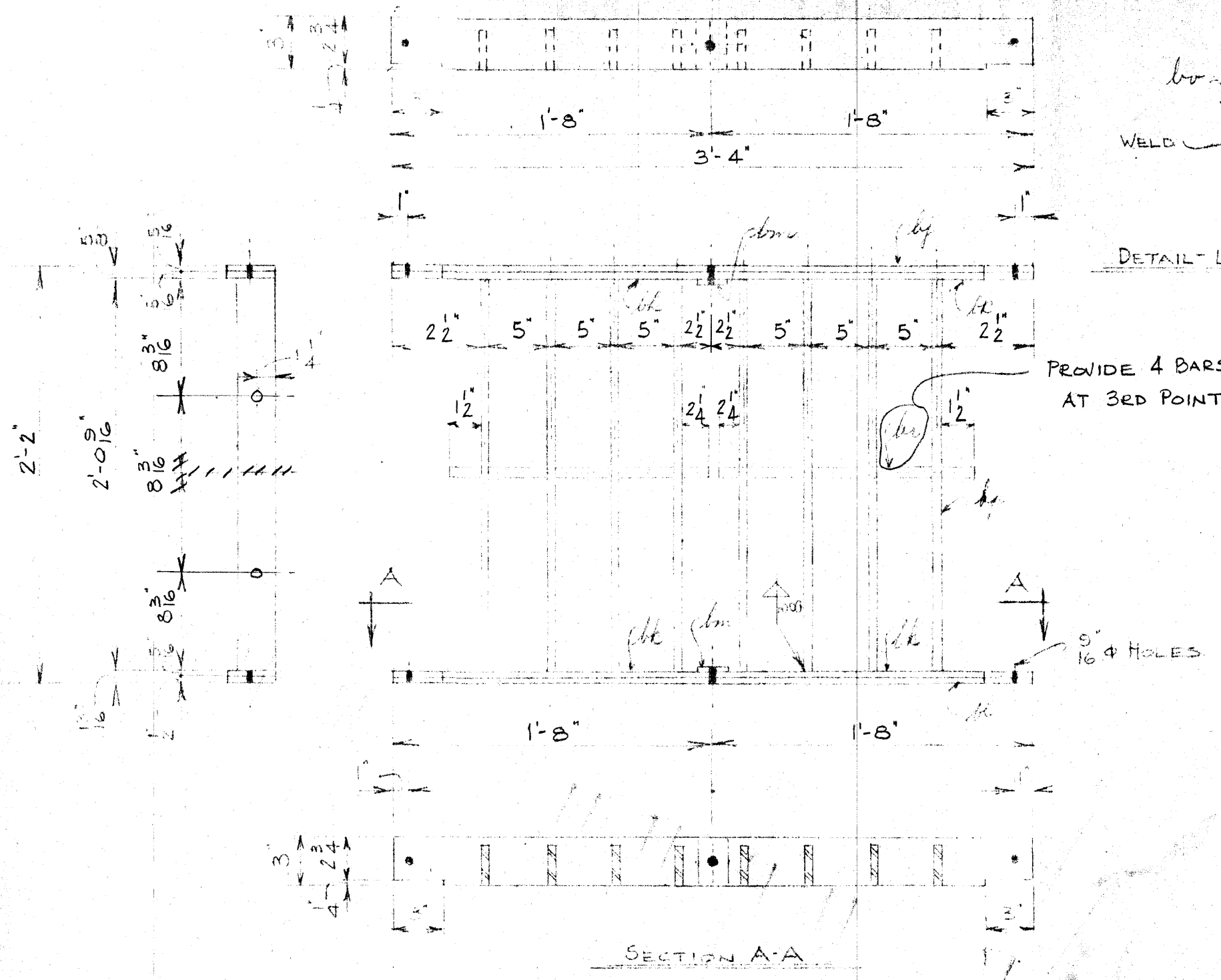
CONCRETE
 ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF CAN3-A23.1-M2000 FOR "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION".
 CALCIUM CHLORIDE IS NOT PERMITTED.
 CEMENT SHALL BE TYPE 10 NORMAL PORTLAND CEMENT

CONCRETE:
 MINIMUM CONCRETE STRENGTH @ 28 DAYS TO BE 25 MPa
 MAXIMUM AGGREGATE SIZE TO BE 3/4"
 MAXIMUM SLUMP TO BE 3" (± 1")
 AIR ENTRAINMENT TO BE 4% - 7%.

NOTIFY ENGINEER AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.

REINFORCING STEEL
 ALL REINFORCING STEEL TO BE IN ACCORDANCE WITH CSA 30.18-M92 GRADE 400.
 ALL REINFORCING STEEL TO BE FREE FROM RUST, OIL, MUD OR OTHER COATINGS WHICH WOULD REDUCE BOND.

B.M. ELEV.	FIELD BOOK #:	CITY OF WINNIPEG WATER AND WASTE ENGINEERING DIVISION			THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT
POSTED TO LBIS					



MR	NO	DESCRIPTION	QTY	REMARKS
		FOR ONE SCREEN		
bf	1	FL. BAR 3" x 1/2" x	3'-4"	
bk	4	" " 3" x 1/2" x	1'-8"	
bl	1	" " 3" x 2" x	3'-4"	
bm	2	" " 3" x 1/2" x	2'	
bp	8	2 1/2" x 1/2" x	2'-0 9/16"	
bu	4	ES. BAR 1/2" x	1'-7 1/4"	
	6	BOLTS & NUTS 1/2" x	2	STAINLESS STEEL
bv	1	ES. BAR 1/2" x	11"	

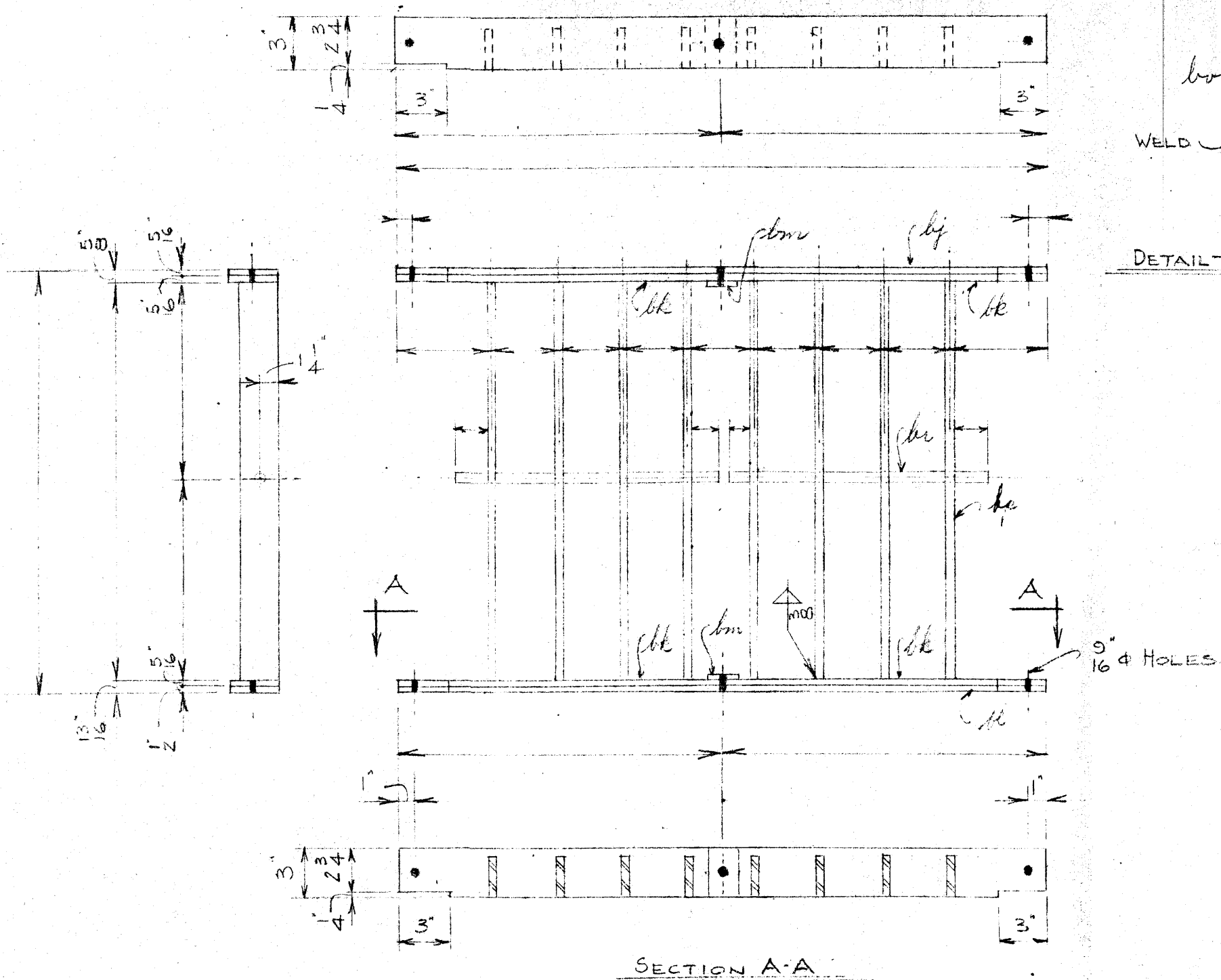
NOTE:
 1 FINISH FLAIN-BOLTS & NUTS TO BE STAINLESS STEEL.

file #
 FP 10352

Micro-Filmed 1965

2-SCREENS REQD AS SHOWN OR NOTED - MR. POLSON 20"

GREATER WINNIPEG SANITARY DISTRICT		
DRAWN WCH	DATE 22/2/65	TITLE: TEMPORARY
TRACED	CHECKED	SEWAGE SCREEN FOR
APPROVED		20" PUMSAT POLSON
		FLOOD PUMPING STATION.
		WINNIPEG, M181.
	GEN. MGR.	SCALE: N.T.S.



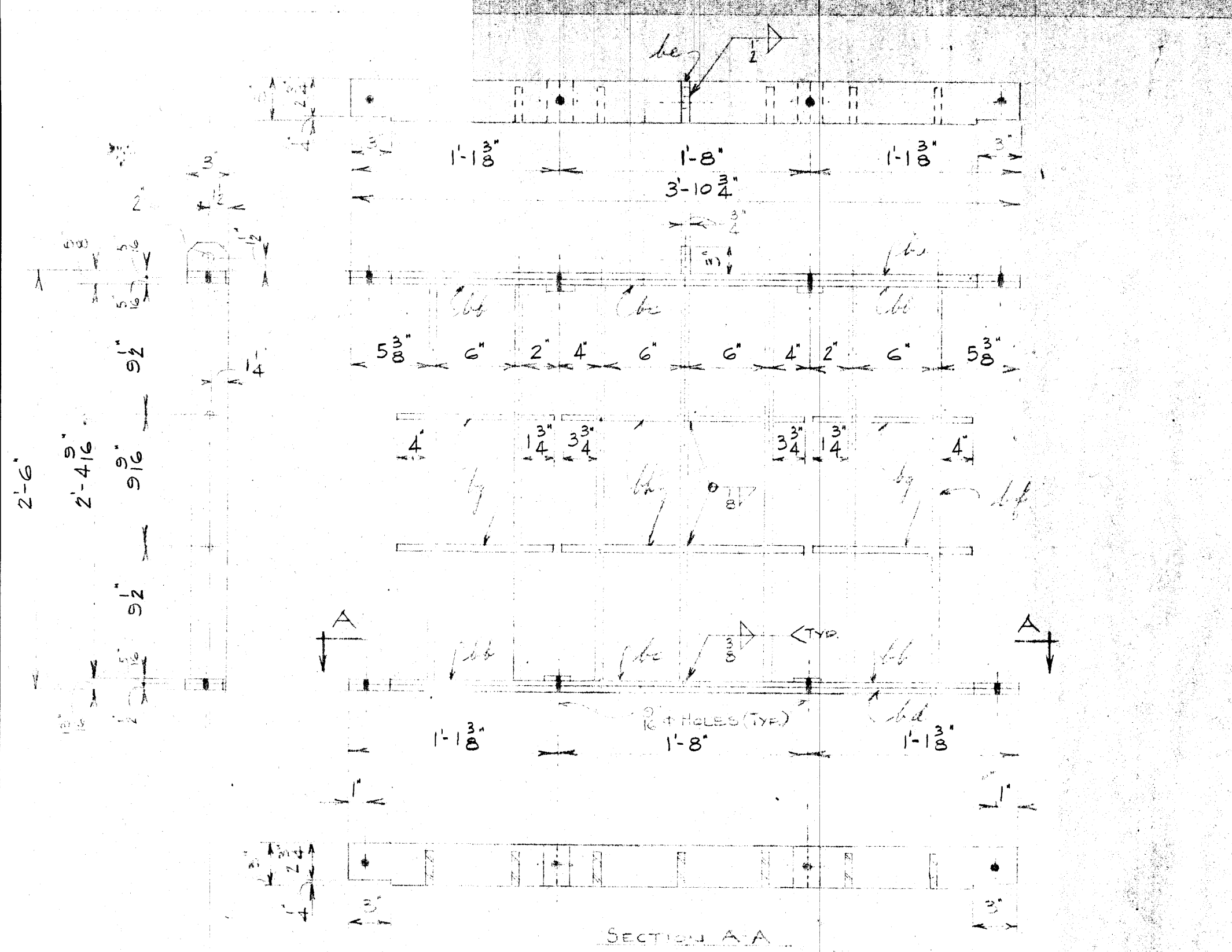
MR	NO. REQD.	DESCRIPTION	LGTH.	REMARKS.
FOR ONE SCREEN.				
bj	1	FL. BAR 3" x 5/16" x		
bk	4	" " 3" x 5/16" x		
bl	1	" " 3" x 1" x		
bm	2	" " 3" x 5/16" x	2"	
bp	8	" " 2 1/2" x 1/2" x		
bu	2	RD. BAR 2" φ x		
	6	BOLTS & NUTS 1/2" φ x	1/2"	STAINLESS STEEL.
bv	1	RD. BAR 1" φ x	11"	

NOTE:

1. FINISH PLAIN-BOLTS & NUTS TO BE STAINLESS STL.

SCREEN REQ'D AS SHOWN OR NOTED-MR.

GREATER WINNIPEG SANITARY DISTRICT		
DRAWN W.R.H.	DATE 22/2/52	TITLE: TEMPORARY SEWAGE SCREEN FOR FLOOD PUMPING STATION.
TRACED	CHECKED	
APPROVED	SUPT.	SCALE 1/2" = 1'-0" DWG. NO. M 151
	GEN. MGR.	



2'-6"
2'-4 1/16"
9 1/16"
9 1/2"
9 1/16"
9 1/2"

SECTION A-A

1- SCREEN REQ'D AS SHOWN OR NOTED - MR. POLSON 24"

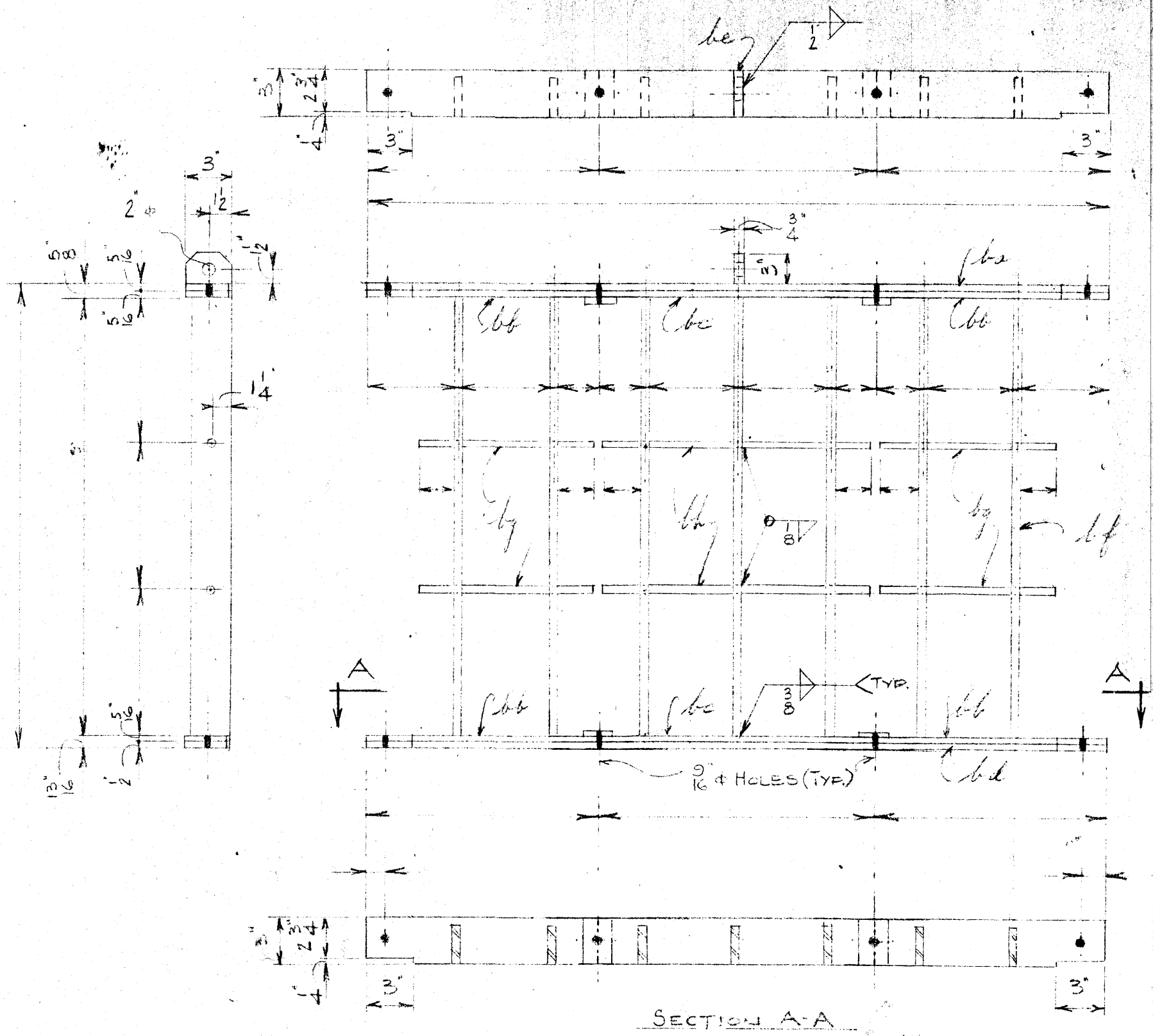
MR.	NO REQ'D	DESCRIPTION	LGTH.	REMARKS
FOR ONE SCREEN.				
ba	1	FL. BAR 3" x 1/2" x	3'-10 3/4"	
bb	4	" " 3" x 5/16" x	1'-1 3/8"	
bc	2	" " 3" x 5/16" x	1'-8"	
bd	1	" " 3" x 1/2" x	3'-10 3/4"	
be	1	" " 3" x 3/4" x	3"	
bf	7	" " 2 1/2" x 3/4" x	2'-4 9/16"	
bg	4	RD. BAR 2" x	1'-0"	
bh	2	" " 2" x	1'-8"	
	3	BOLTS & NUTS 1/2" x	1/2"	STAINLESS STEEL
bt	4	FL BAR 5" x 5/16" x	2"	

NOTE:
1 FINISH PLAIN - BOLTS & NUTS TO BE STAINLESS STEEL.

file #
FP 10353

Micro-Filmed 1965

GREATER WINNIPEG SANITARY DISTRICT		
DRAWN W.P.H.	DATE 12/2/52	TITLE: TEMPORARY SEWAGE SCREEN FOR 24" PUMP AT POLSON FLOOD PUMPING STATION.
TRACED	CHECKED	WINNIPEG, M182
APPROVED	<i>[Signature]</i> SUPT.	SCALE N.T.S. 1/16"
	<i>[Signature]</i> GEN. MGR.	DWG. NO. 1111



SECTION A-A

SCREEN REQ'D AS SHOWN OR NOTED - MK.

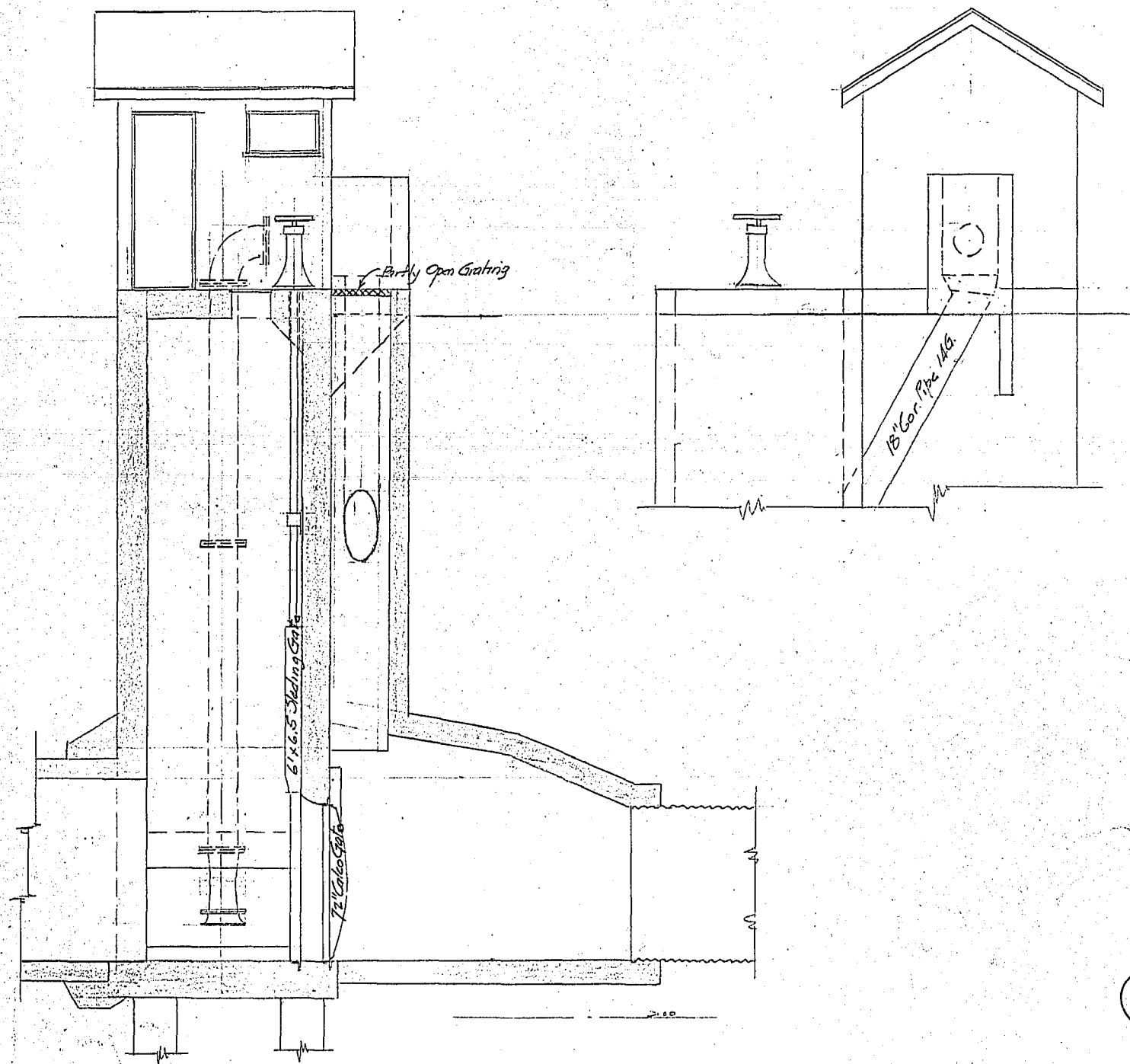
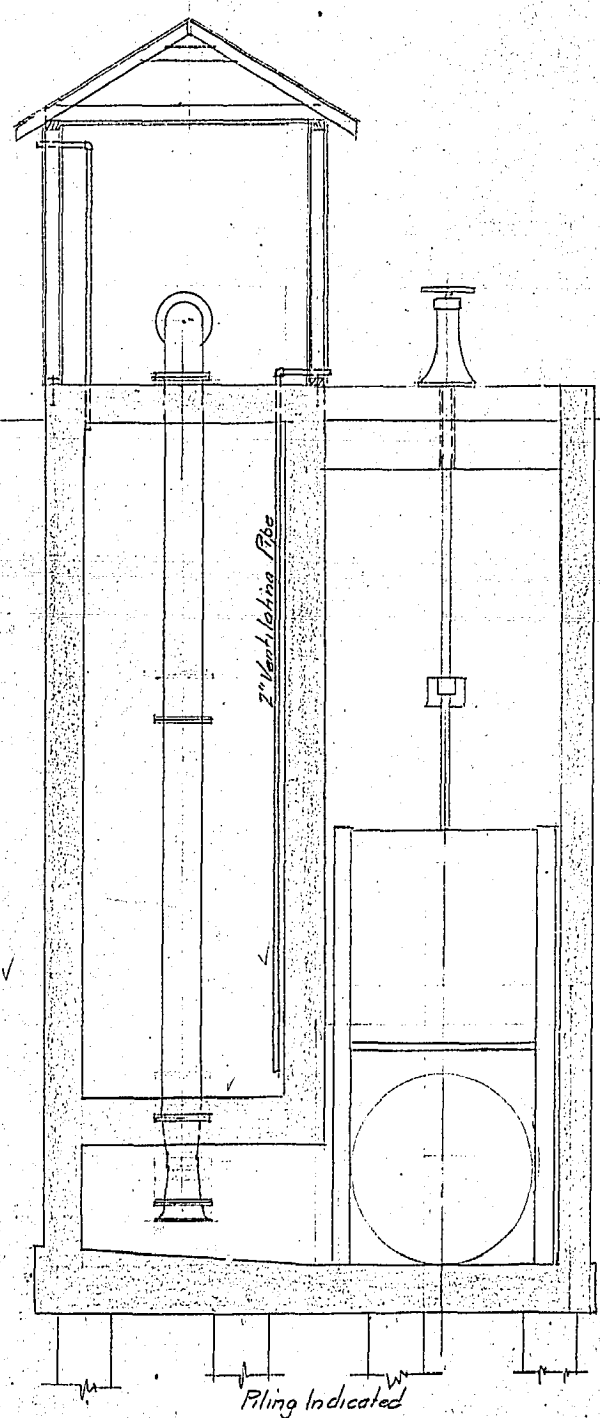
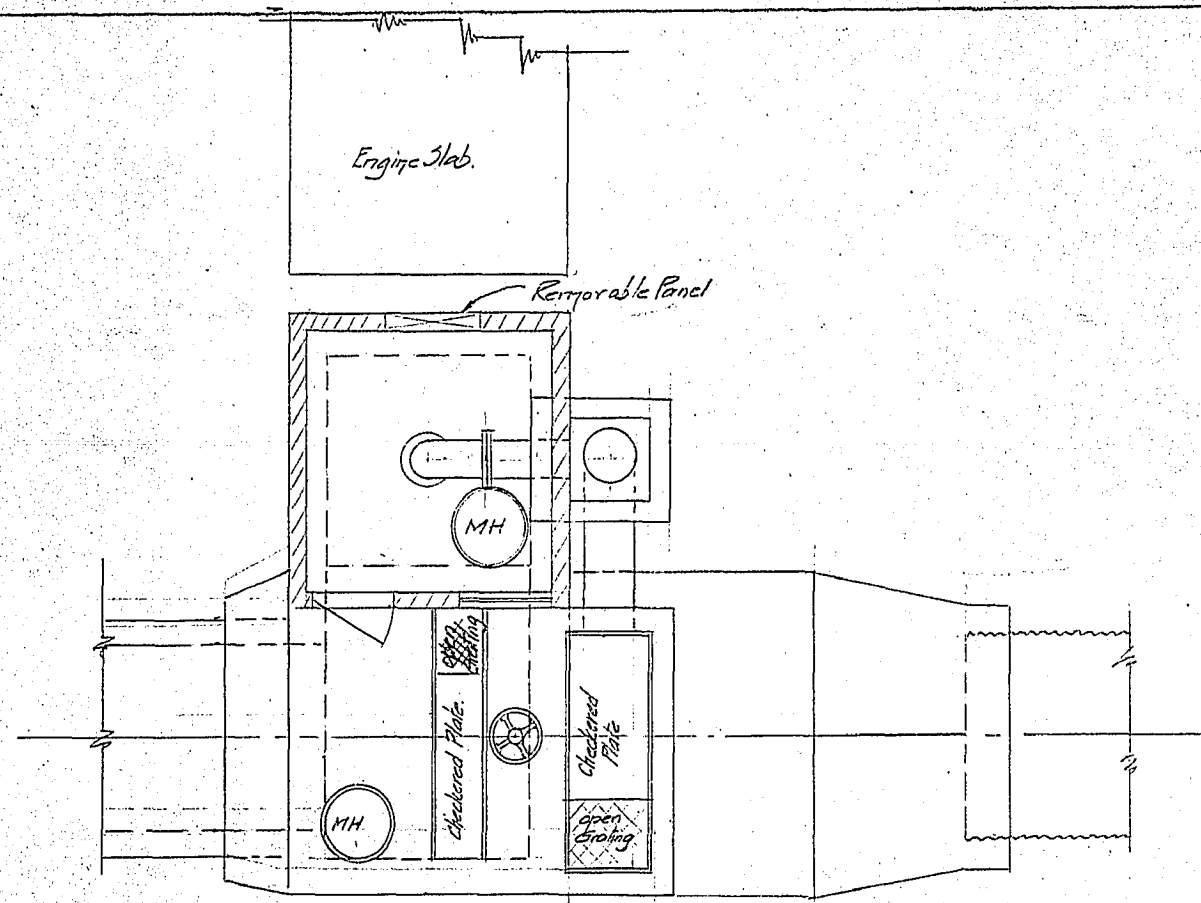
MK.	NO PERG.	DESCRIPTION	LGTH.	REMARKS
FOR ONE SCREEN.				
ba	1	FL BAR 3" x 5/16" x		
bb	4	" " 3" x 5/16" x		
bc	2	" " 3" x 5/16" x		
bd	1	" " 3" x 1/2" x		
be	1	" " 3" x 3/4" x	3"	
bf	7	" " 2 1/2" x 1/2" x		
bg	4	RD. BAR 1/2" x		
bh	2	" " 1/2" x		
	8	BOLTS & NUTS 1/2" x	1 1/2"	STAINLESS STEEL
bt	4	FL BAR 3" x 5/16" x	2"	

NOTE:

1. FINISH PLAIN BOLT & NUTS TO BE STAINLESS STEEL.

GREATER WINNIPEG SANITARY DISTRICT

DRAWN W.R.H.	DATE 22/2/52	TITLE: TEMPORARY SEWAGE SCREEN FOR FLOOD PUMPING STATION.
TRACED	CHECKED	
APPROVED		
Supt. <i>W. S. Rubley</i> Gen. Mgr.		
SCALE 1/2" = 1'-0"		DWG. NO. M150



11

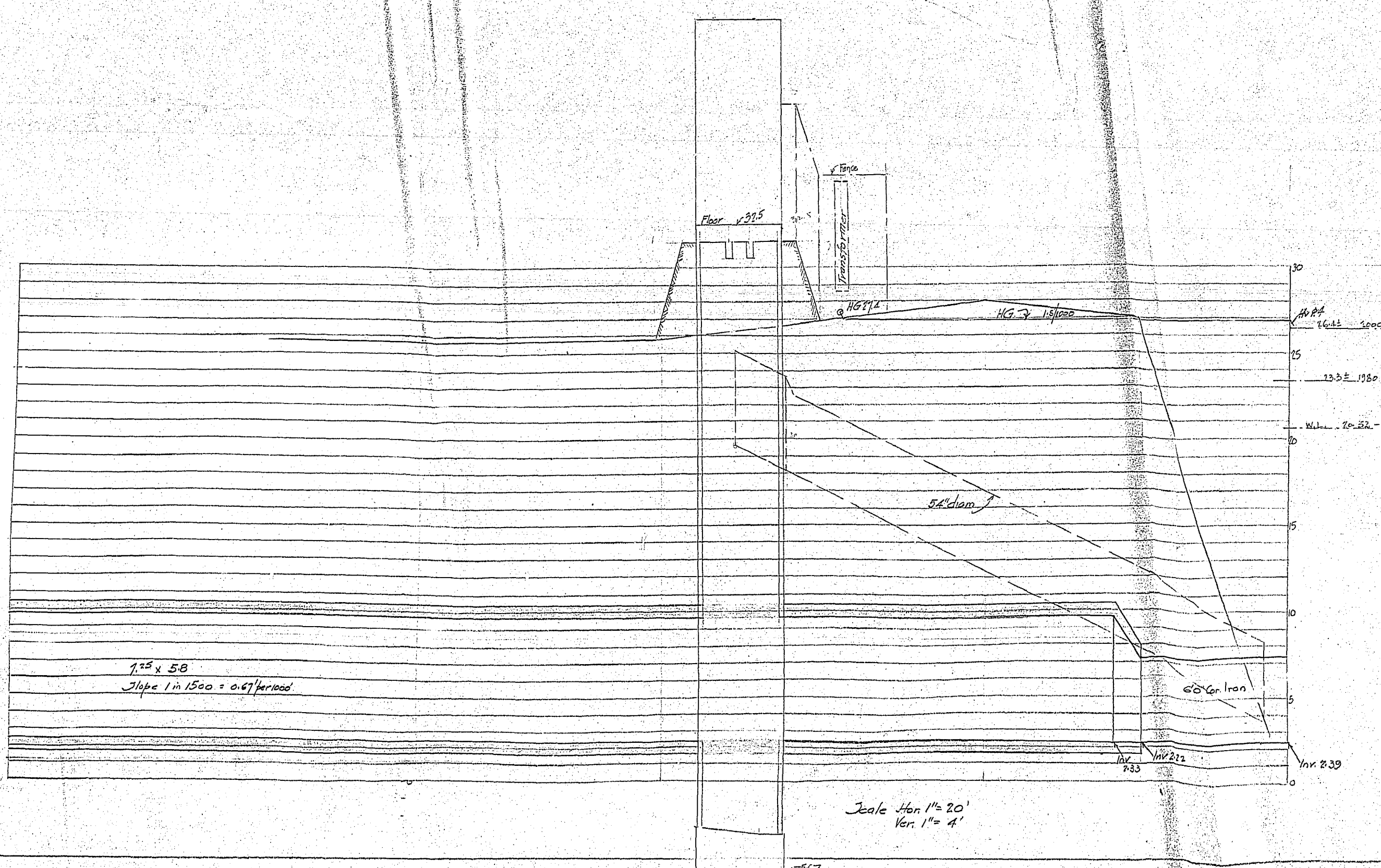
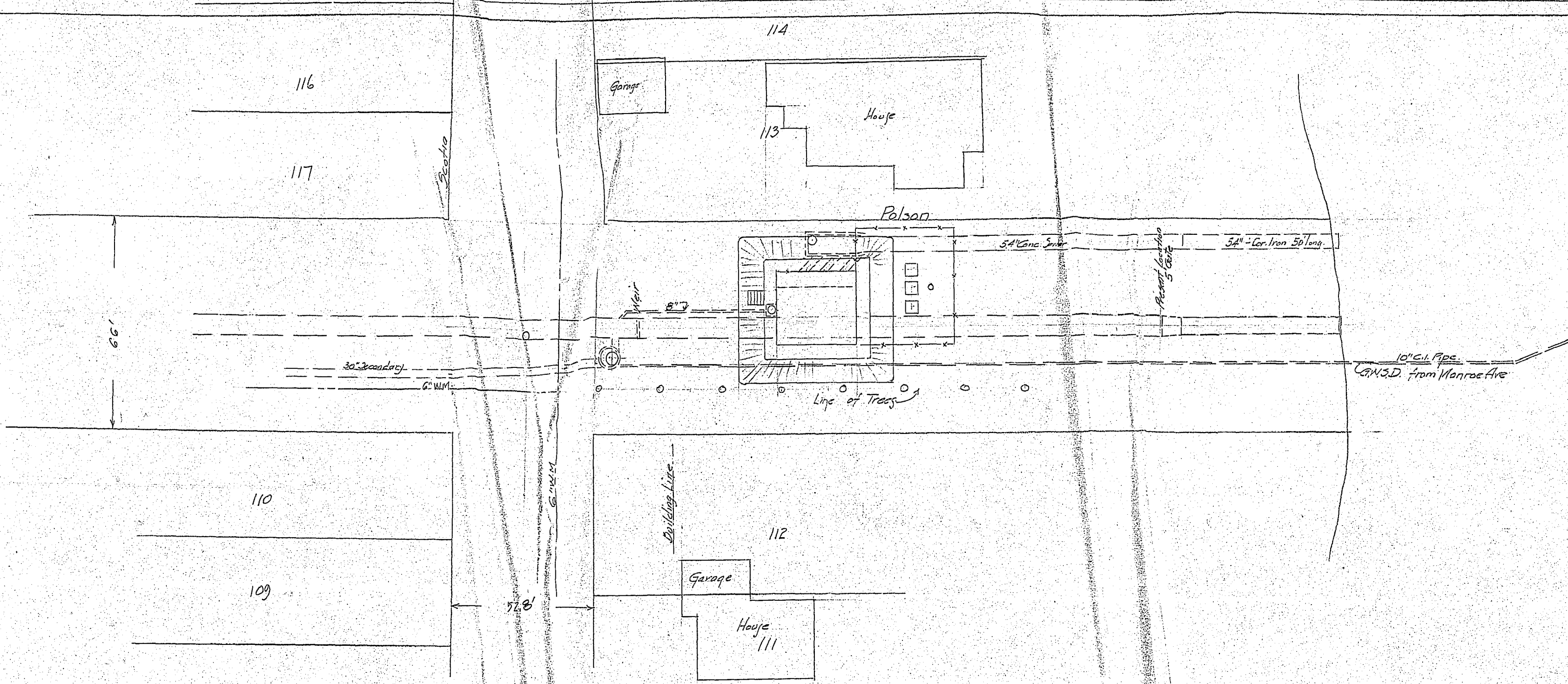
Flood Pumping Station
Gasoline Operated
Polson-Hart-Faltimeore Rec.

CITY OF WINNIPEG
ENGINEERING DEPARTMENT
W. D. HURST, CITY ENGINEER
A. J. S. TAUNTON, DEPUTY CITY ENGINEER

DRAWN BY..... DATE *Sept. 1913*
TRACED BY.....
CHECKED BY.....
APPROVED.....

SCALE
1/4" = 1 foot
DRAWING NO.
666-2

R-40



7.25 x 5.8
Slope 1 in 1500 = 0.67 per foot

City of Winnipeg
Proposed Flood Pumping Station - Polson Ave
July 1948
Automatic Station

Scale Hor. 1" = 20'
Ver. 1" = 4'

Pan3544

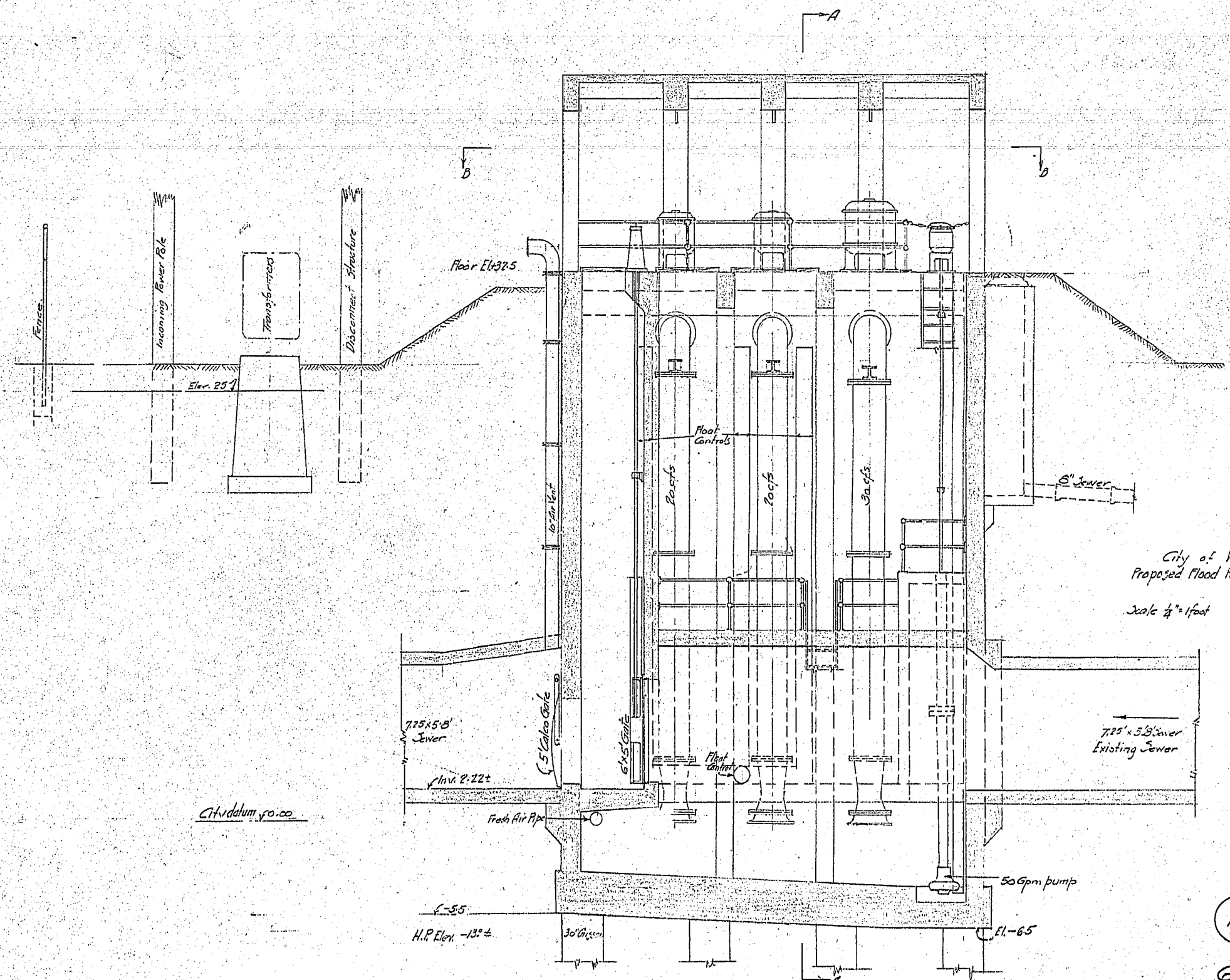
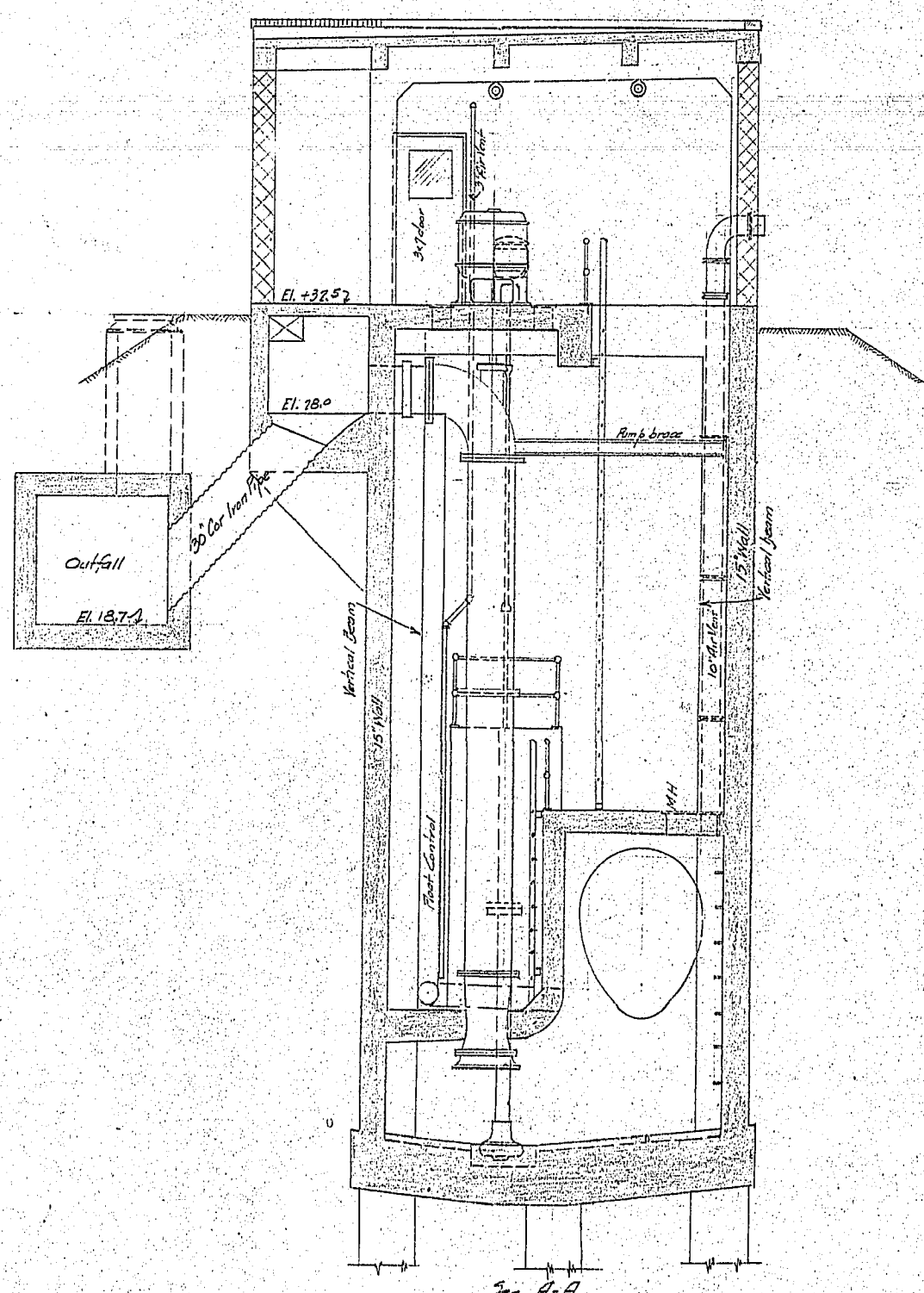
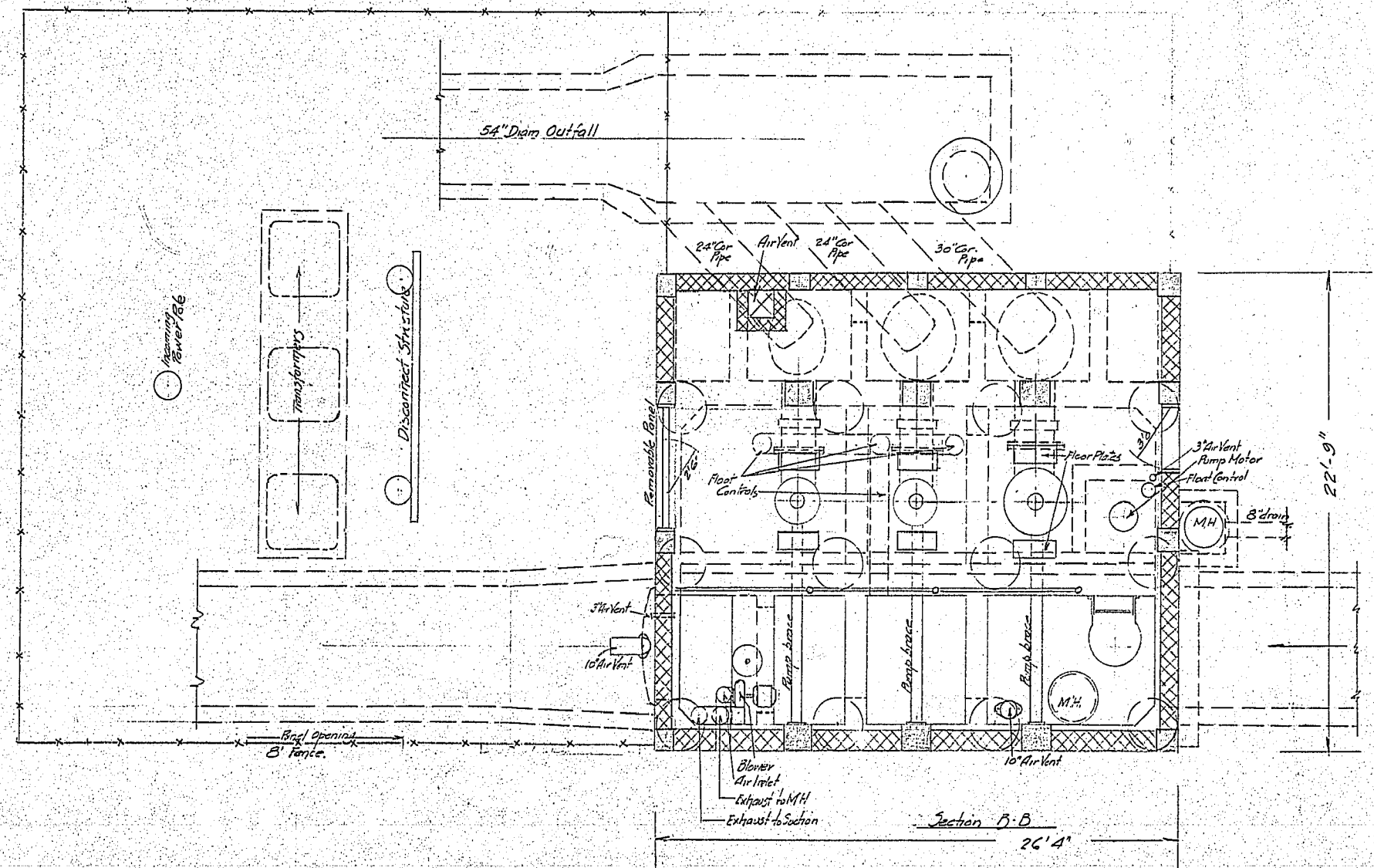
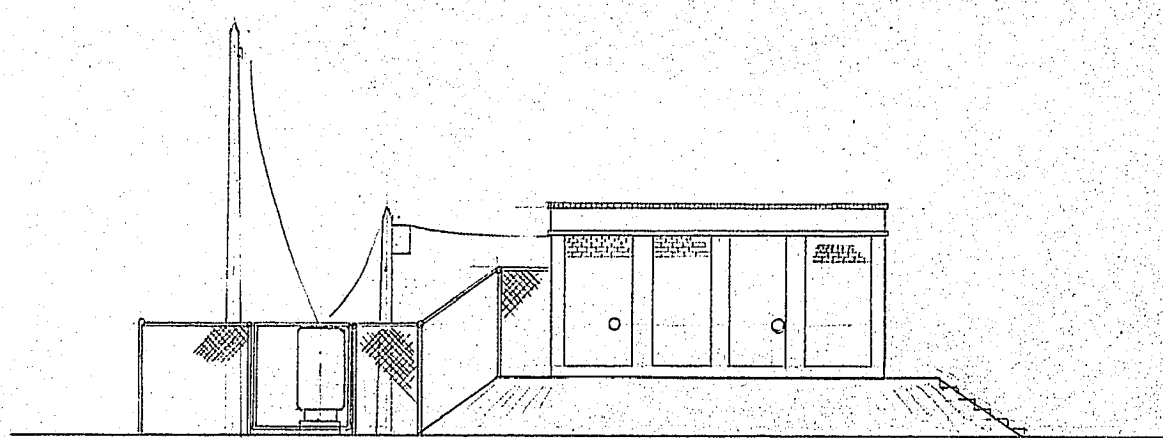
666-7

R-44

15

4 Line

54 Line

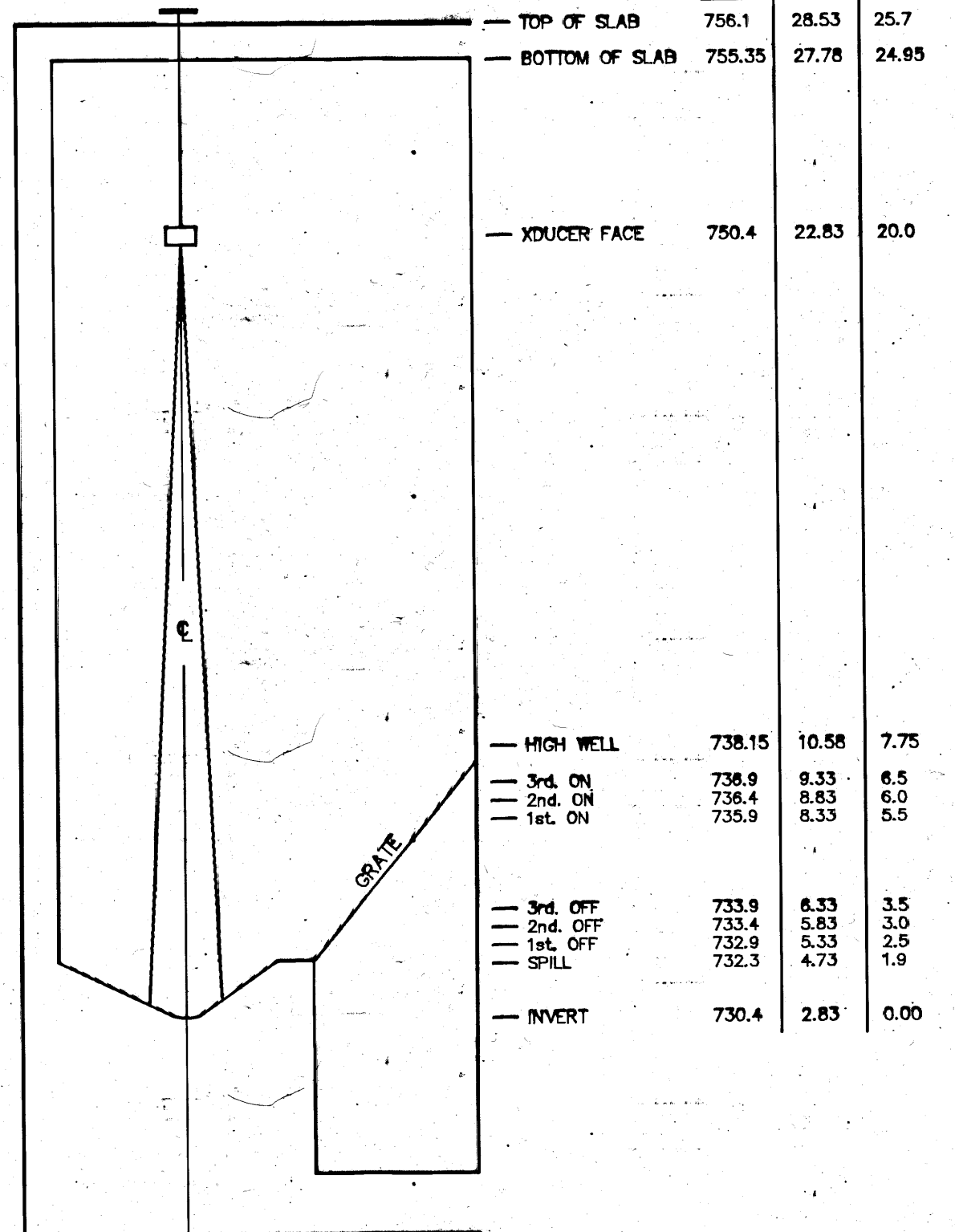
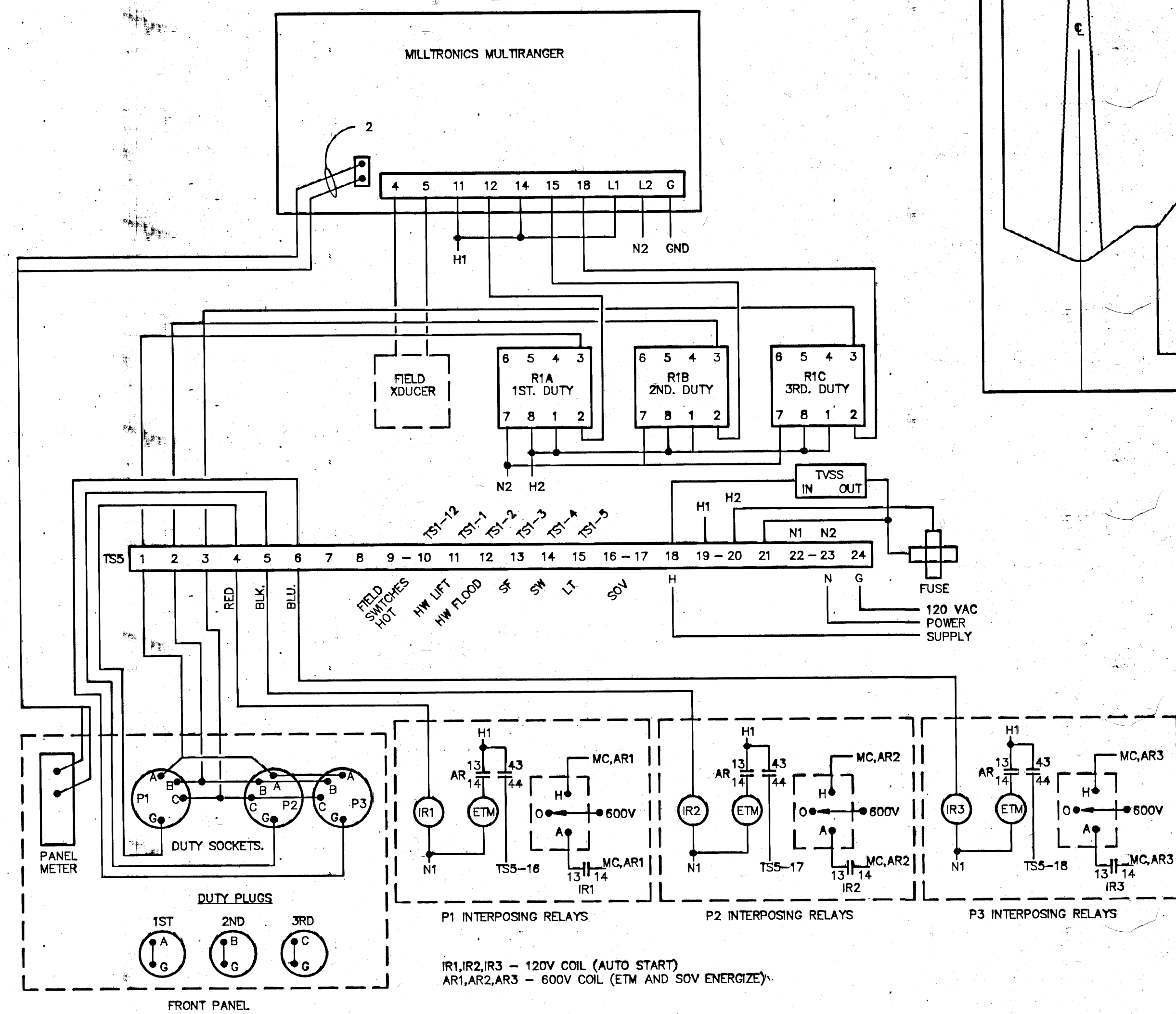
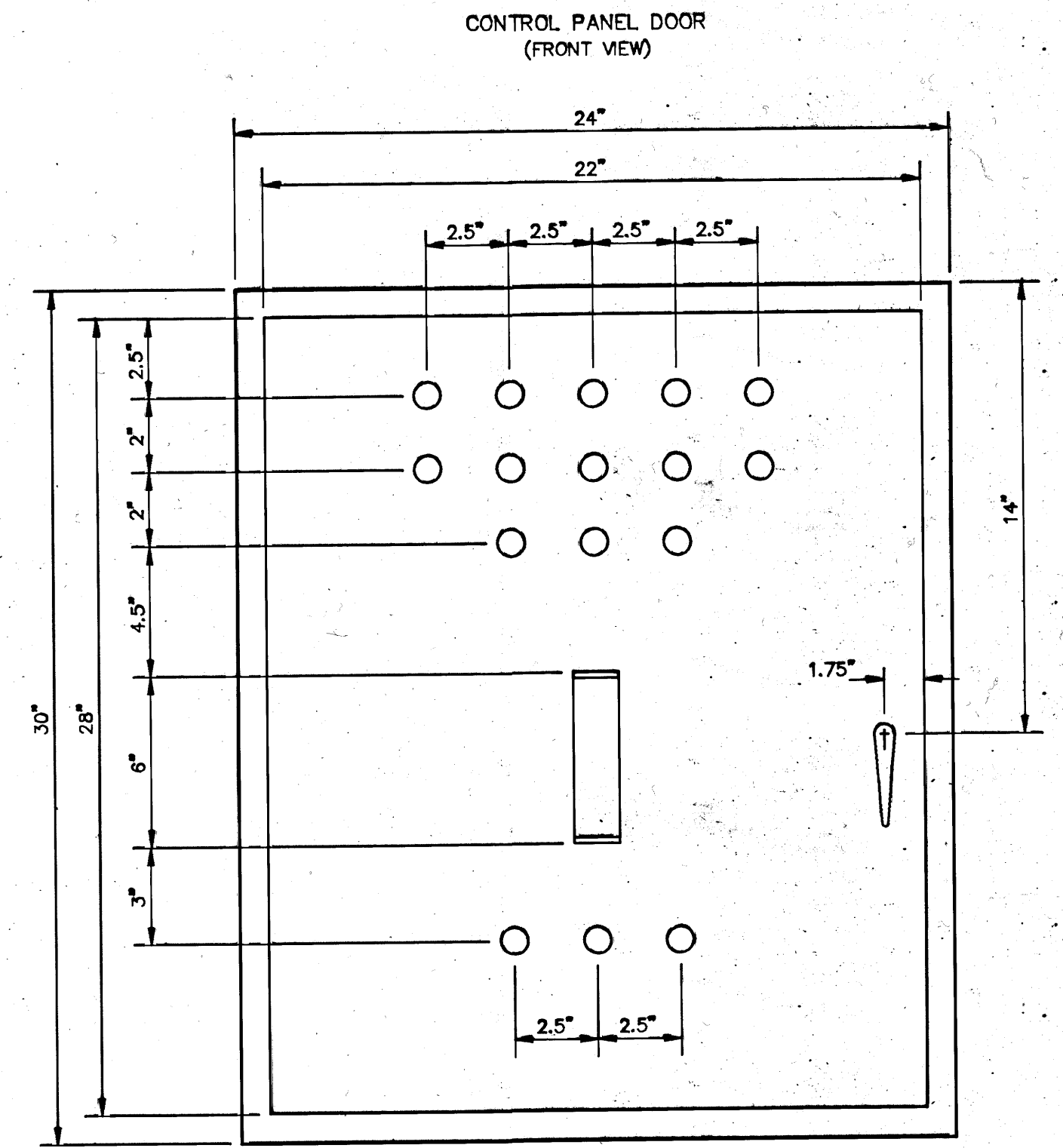
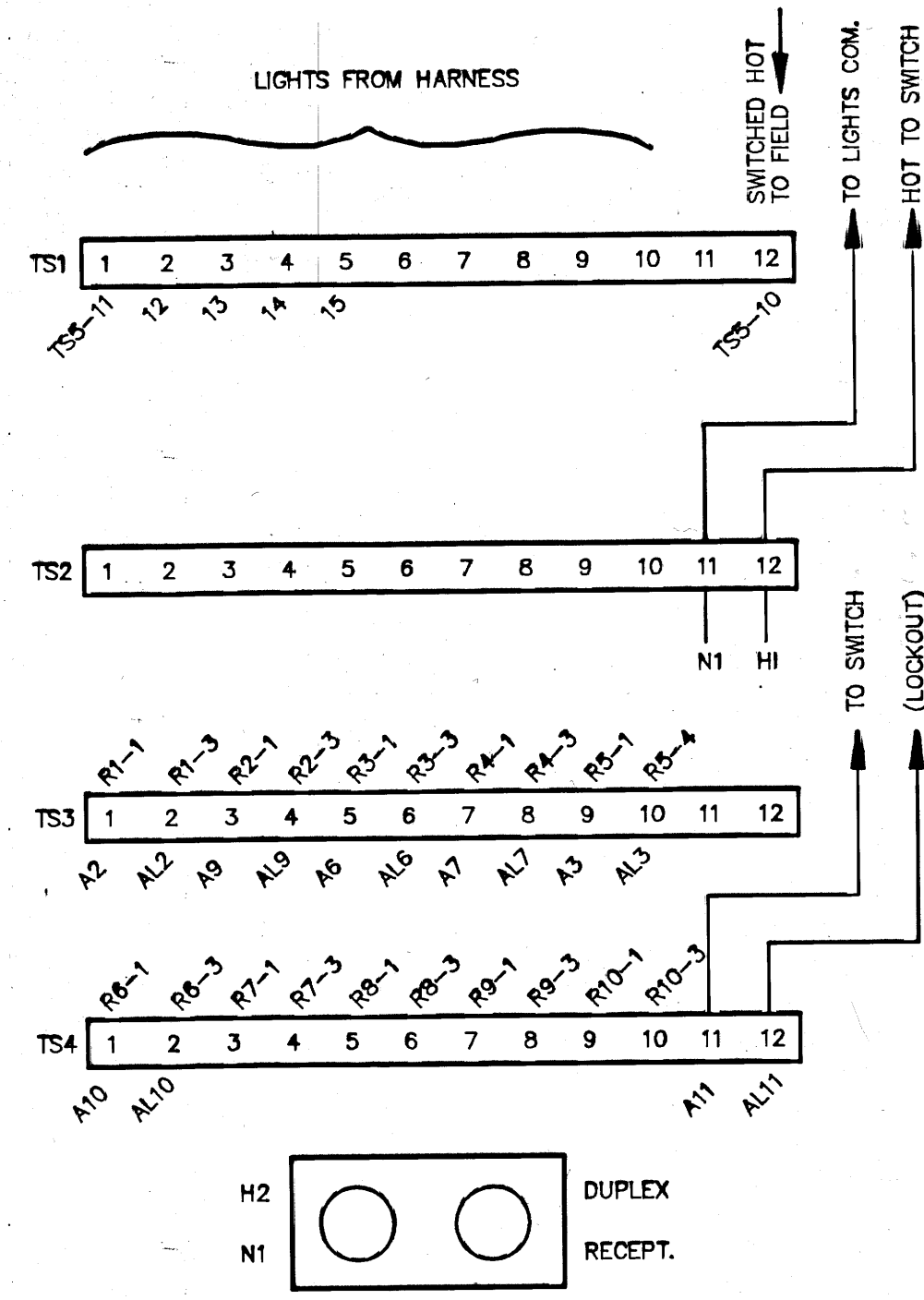
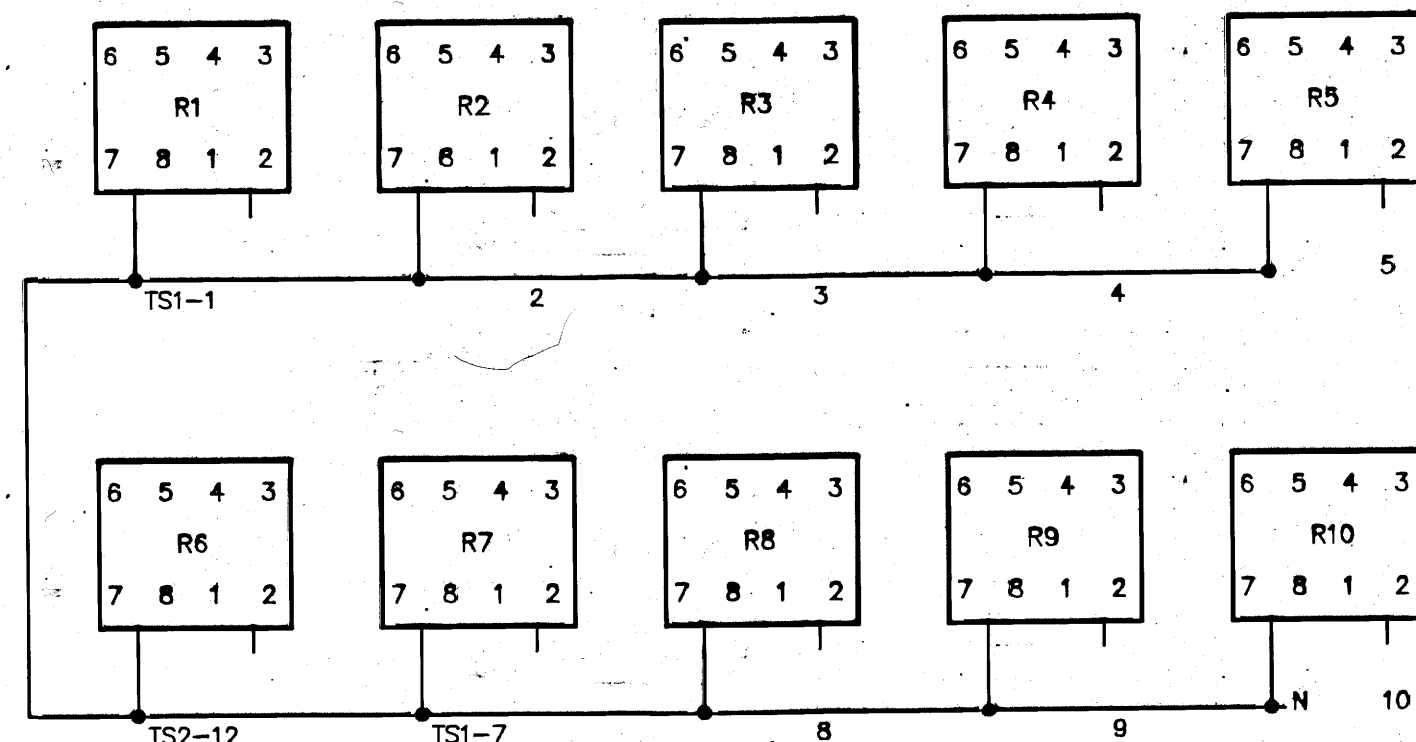
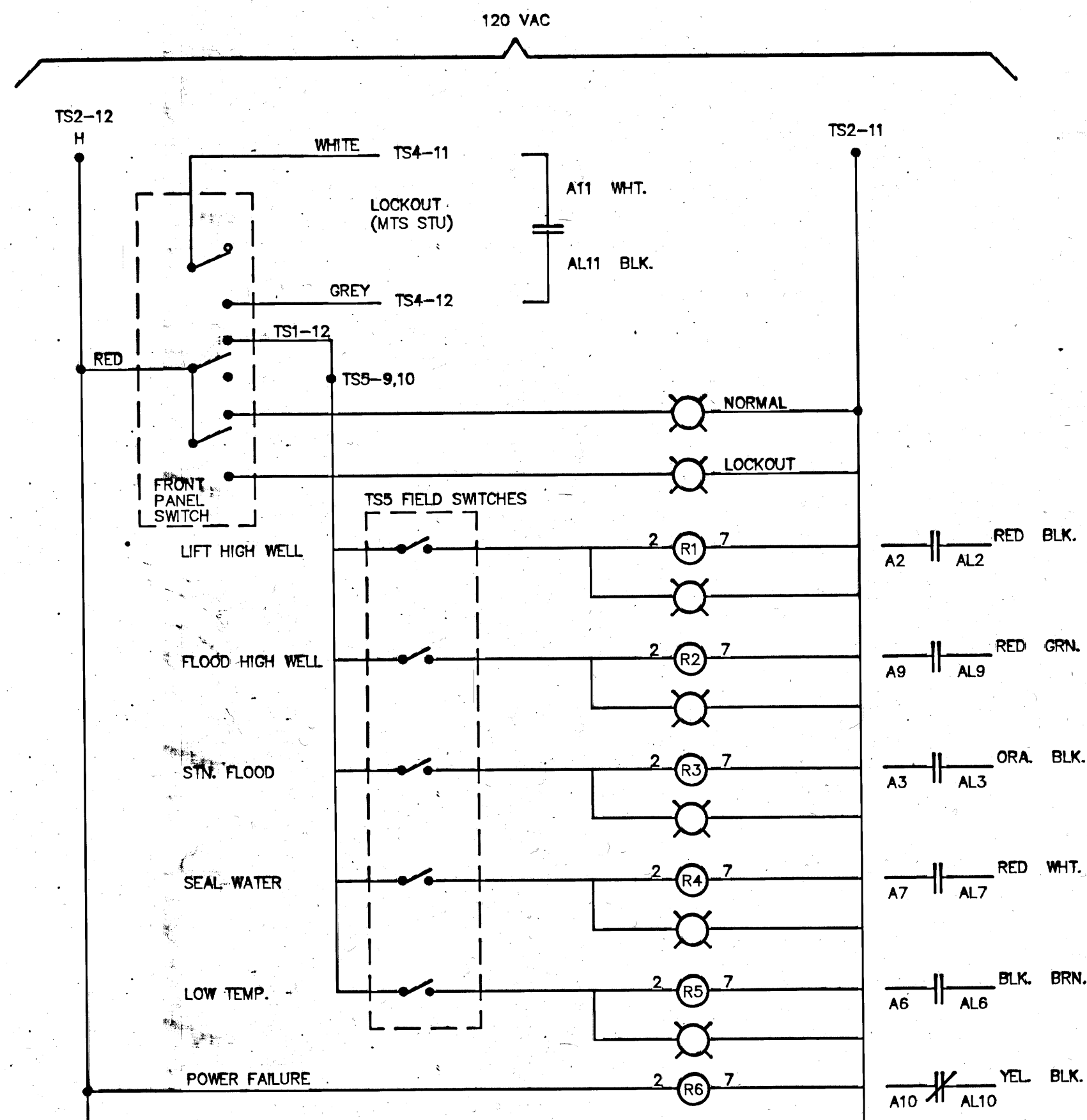


City of Winnipeg
Proposed Flood Ramping Station - Pelson Ave
Scale of 1" = 1' - 0" July 1948

16

666-8 R-15

REF. or DRAWING No. **68-FS-Q-1** File # **FP10131**
 DETAILS



NOTES:

HOLE DIMENSIONS

1. LIGHTS 3/8"
2. SWITCH 15/32"
3. DUTY SOCKETS 14 PIN - 1 3/16"
4. METER 1 3/4" X 5 5/8"
5. DOOR HANDLE 7/8" AND 5/32"

REFERENCE WINNIPEG DYKING BOARD DRAWING # 5-SD-4

	FT. ABOVE DATUM	FT. ABOVE SEA LEVEL
DATUM	0	727.57
INVERT	2.83	730.4
SPELL	4.75	732.32
HIGH WELL	10.58	738.15
STN. ACTIVATION	18.0	745.57 (747.8)

PUMP CONTROL

(LEVEL INDICATION AND CONTROL 0 - 10 FT.)

DUTY	ON	OFF
DUTY 1	5.5 FT.	2.5 FT.
DUTY 2	6 FT.	3 FT.
DUTY 3	6.5 FT.	3.5 FT.

INSTALLATION NOTES:

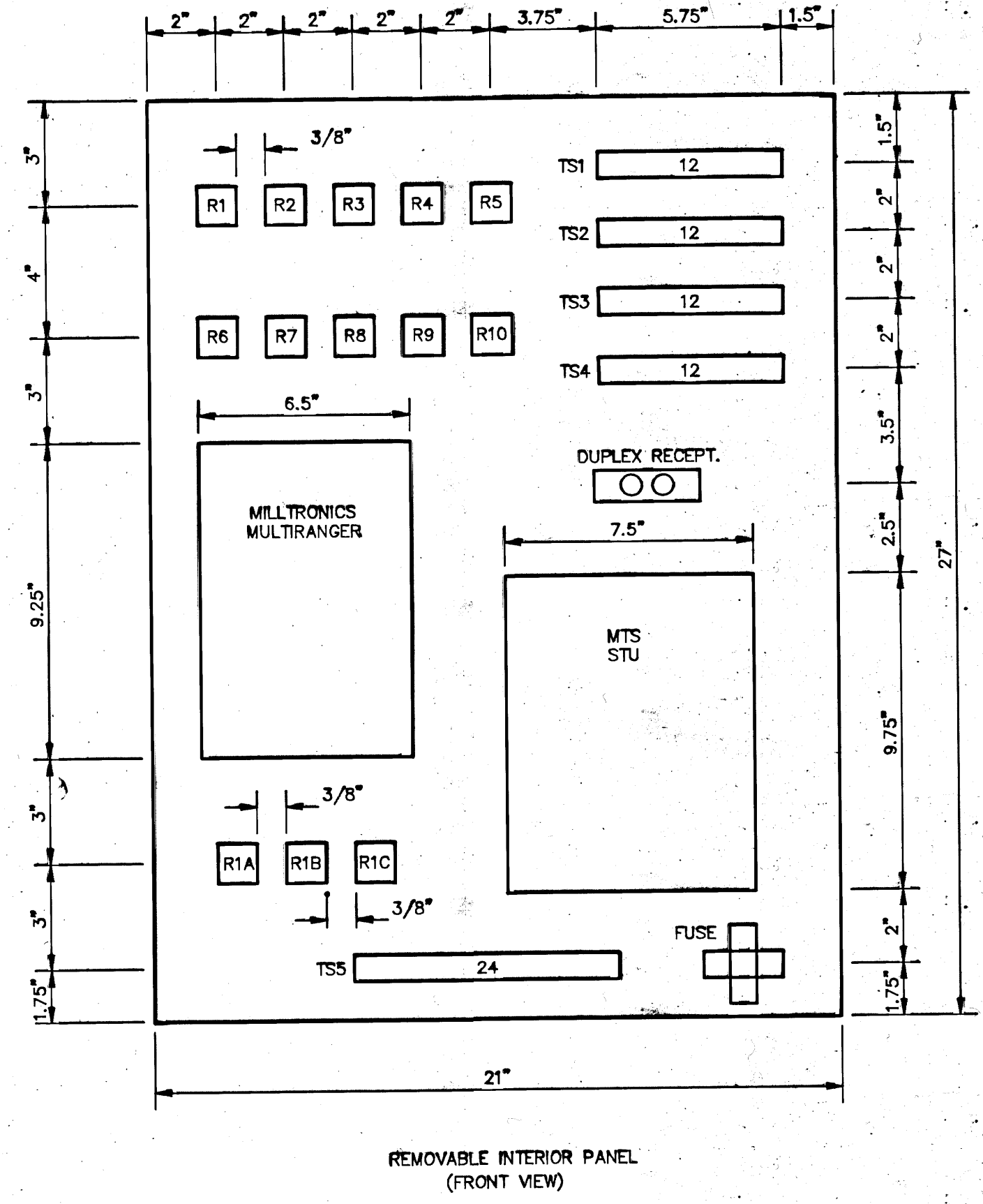
1. TRANSDUCER CABLE TO BE RUN IN ALUMINUM CONDUIT
2. PLUG CONDUITS FROM WETWELL OR DRYWELL WITH DUCT SEAL

ABBREVIATIONS:

- HW - HIGH WELL FLYGT BALL
- SW - SEAL WATER PRESSURE SWITCH
- LT - LOW TEMP. DRY WELL THERMOSTAT
- SF - STATION FLOOD FLYGT BALL
- SOV - SOLENOID VALVE
- IR - INTERPOSING RELAY
- AR - AUXILIARY RELAY
- MC - MOTOR CONTACTOR
- ETM - ELAPSED TIME METER
- TVSS - TRANSIENT VOLTAGE SURGE SUPPRESSOR

MULTIRANGE PARAMETERS:

P-1	1	9	3.0	
	2	10	6.5	
	3	21.00	11	3.5
	4	10.00	19	2
	5	10.00	20	0.1
	6	5.5	21	4
	7	2.5	22	4
	8	6.0	23	4



NO.	REVISIONS	DATE	BY
1.	REVISED TO DATE	90.01.04	TM

ENGINEER'S SEAL
 DESIGNED BY M.JEQUES
 CHECKED BY M.JEQUES
 DRAWN BY T.MANGAL
 APPROVED BY
 HOR. SCALE N.T.S.
 VERTICAL
 RELEASED FOR CONSTRUCTION
 CONSULTANT DRAWING NO.

THE CITY OF WINNIPEG
 WORKS AND OPERATIONS DIVISION
 WATERWORKS WASTE AND DISPOSAL DEPARTMENT
POLSON FLOOD STATION
 AUTOMATIC LEVEL CONTROL AND ALARM SYSTEM
WRING DIAGRAM AND PANEL LAYOUT
 CITY DRAWING NUMBER
 SHEET OF
68-FS-Q-1

file # FP10131 CAD 3/U TP/ FLSTA