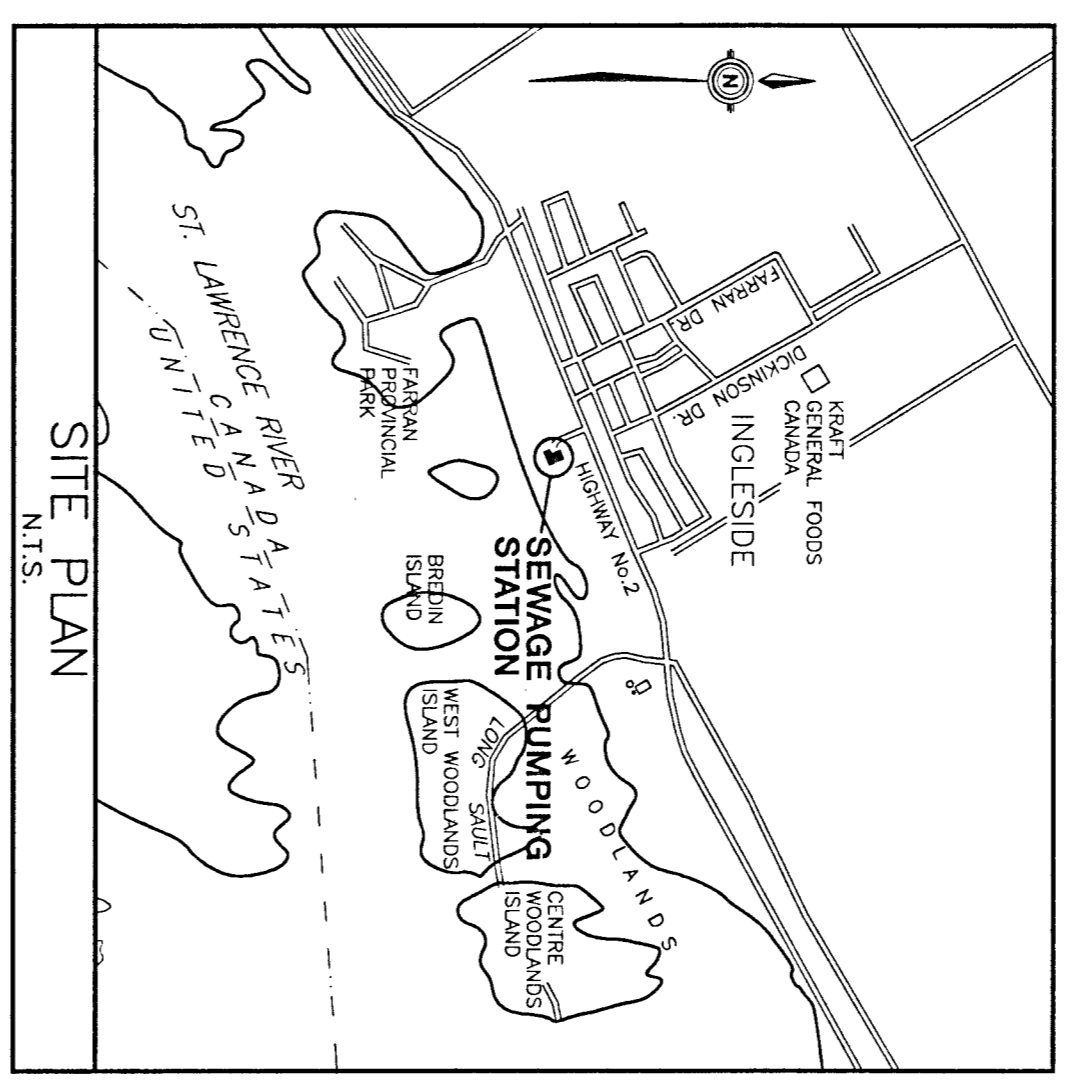
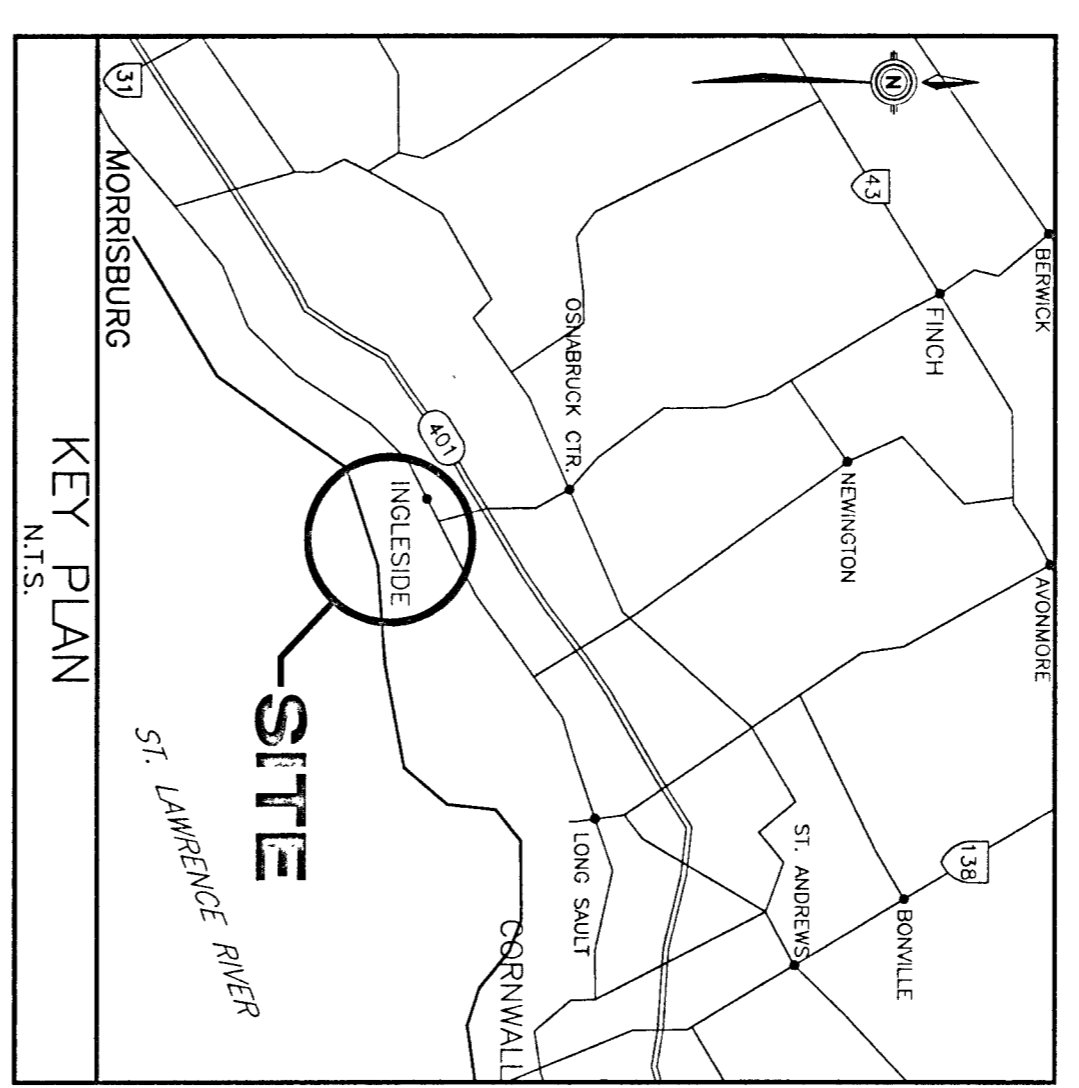


TOWNSHIP OF OSNABROCK

GORDON ROSS
REEVE



INGLESIDE

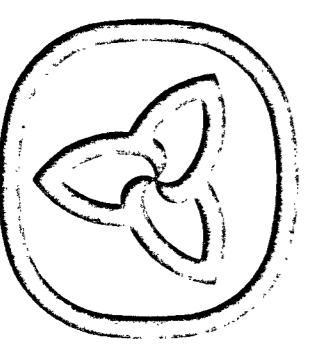
SEWAGGE PUMPING STATION MODIFICATIONS

M.O.E.E. PROJECT NO. 40-0797

CONTRACT NO. 2

AS BUILT BY MCNEELY ENGINEERING CONSULTANTS LTD.

MCNEELY ENGINEERING CONSULTANTS LTD.
CONSULTING ENGINEERS



Ministry of the
Environment
And Energy
Ontario

AS BUILT FEB/98

SYMBOLS

DESCRIPTION	EXISTING	PROPOSED	REMOVALS
EDGE OF ROAD AND TYPE			
CONCRETE CURB AND TYPE			
CONCRETE CURB AND TYPE			
DITCHES AND CREEKS OVER 0.6m WIDE			
DITCH			
STORM SEWER AND MANHOLE			
SANITARY SEWER AND MANHOLE			
WATERMAIN AND VALVE CHAMBER			
WATERMAIN AND VALVE BOX			
GAS MAIN AND VALVE			
CULVERT			
CULVERT WITH HEADWALLS			
BELL TELEPHONE CONDUIT & MANHOLE			
HYDRO CONDUIT & MANHOLE			
HYDRO STREET LIGHTING CONDUIT			
SINGLE CATCH BASIN OR DITCH INLET			
DOUBLE CATCH BASIN			
HYDRANT AND VALVE BOX			
BELL UTILITY POLE			
HYDRO UTILITY POLE			
STREET LIGHT			
TRAFFIC MANHOLE			
TRAFFIC HANDHOLE			
TRAFFIC SPRING PIT			
TRAFFIC MAST ARM FOUNDATION			
TRAFFIC TUBULAR FOUNDATION			
OVERHEAD SIGN FOUNDATION			
TYPE 170 CONTROLLER			
DETECTOR LOOP			
50mm (2") RIGID PVC CONDUIT			
75mm (3") RIGID PVC CONDUIT			
125mm (5") FPE CONDUIT			
ANCHOR			
STEEL HYDRO TOWER			
TREES			
HEDGE			
BUSH AREA			
PROPERTY			
CENTRE LINE			
REFERENCE POINT H.O.T.			
P.I. (POINT OF INTERSECTION)			
FENCE			
GUIDE RAIL			
RETAINING WALL			
ADJUST OR REBUILD SURFACE IRON WORKS			
SIDEWALKS & BOULEVARDS			
ASPHALT PAVEMENT			
PERFORATED PIPE SUBDRAIN			
SOD			

REFERENCE POINTS

	BENCH MARK
	CONCRETE MONUMENT
	ROCK BAR
	IRON TUBE OR PIPE
	IRON BAR
	WOOD STAKE
	2ND ORDER INTEGRATED SURVEY CONTROL MONUMENT
	3RD ORDER INTEGRATED SURVEY CONTROL MONUMENT
	CUT CROSS
	CUT VEE
	ROUND IRON BAR
	REINFORCING BAR
	STANDARD IRON BAR
	SHORT STANDARD IRON BAR

RAILWAYS

1:500, 1:1000 SCALE SINGLE (MULTIPLE TRACK)

	GATE FLASHING LIGHT AND BELL
	WIG-WAG
	WIG-WAG AND BELL
	RAILWAY CROSSING SIGN
	FLASHING LIGHT
	FLASHING LIGHT AND BELL

MISCELLANEOUS

	AREA TO BE CLEARED
	AREA TO BE GRUBBED
	AREA TO BE CLEARED AND GRUBBED
	STUMP REMOVAL
	SWAMP AND EDGE OF SWAMP
	ROCK SECTION IN PROFILE
	CUT
	EMBANKMENT
	OVERHEAD SIGN FOOTING
	OVERHEAD SIGNS
	FOUNDATION ONLY
	BOREHOLE
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE

INDEX

DRAWING NO.	DESCRIPTION
G-1	COVER
G-2	LEGEND & INDEX
G-3	EXISTING CONDITIONS AND REMOVALS
G-4	MODIFIED FLOOR PLANS
A-1	ARCHITECTURAL PLAN & BUILDING SECTION
A-2	STRUCTURAL PLANS
A-3	ELEVATIONS
A-4	WALL SECTIONS
A-5	DETAILS
P-1	PROCESS PIPING PLAN
P-2	PROCESS PIPING SECTIONS
P-3	TEMPORARY BY-PASS CONNECTION
M-1	H.V. SYSTEMS PLAN AND SECTIONS
M-2	CONTROLS - SCHEMATIC
SP-1	SEWAGE PUMPING STATION & FORCEMAIN SITE PLAN
SP-2	SEWAGE PUMPING STATION SITE PLAN
PRO-1	PLAN AND PROFILE - FORCEMAIN EASEMENT STA. 1+000 TO STA. 1+350
PRO-2	PLAN AND PROFILE - FORCEMAIN EASEMENT STA. 1+350 TO STA. 1+700
PRO-3	PLAN AND PROFILE - FORCEMAIN EASEMENT STA. 1+700 TO STA. 2+050
E-1	SITE PLAN, LEGEND, ONE LINE DIAGRAM AND DETAILS
E-2	FLOOR PLAN, WELL LAYOUT, WET WELL SECTION
E-3	MOTOR CONTROL PANEL, HEATER SCHEDULES AND MCC ELEVATIONS
E-4	CONTROL AND INSTRUMENTATION

TOWNSHIP OF OSNABRUCK

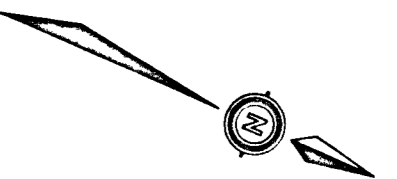
INGLESIDE
SEWAGE PUMPING STATION MODIFICATIONS
M.O.E.E. PROJECT No.40-0797

LEGEND & INDEX

Design	R.G.	Scale	AS SHOWN	Proj. No.	M2544-2	Dwg No.	G-2
Drawn	E.C.	Check	R.G.	Date	AUG. 1993		

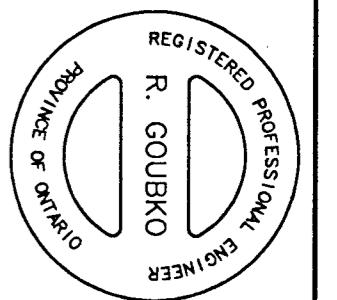
MONEELY ENGINEERING CONSULTANTS LTD.

NOTE:
 THE LOCATION OF UTILITIES IS APPROXIMATE ONLY, AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE THE LOCATION OF UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION FROM DAMAGE DURING CONSTRUCTION.



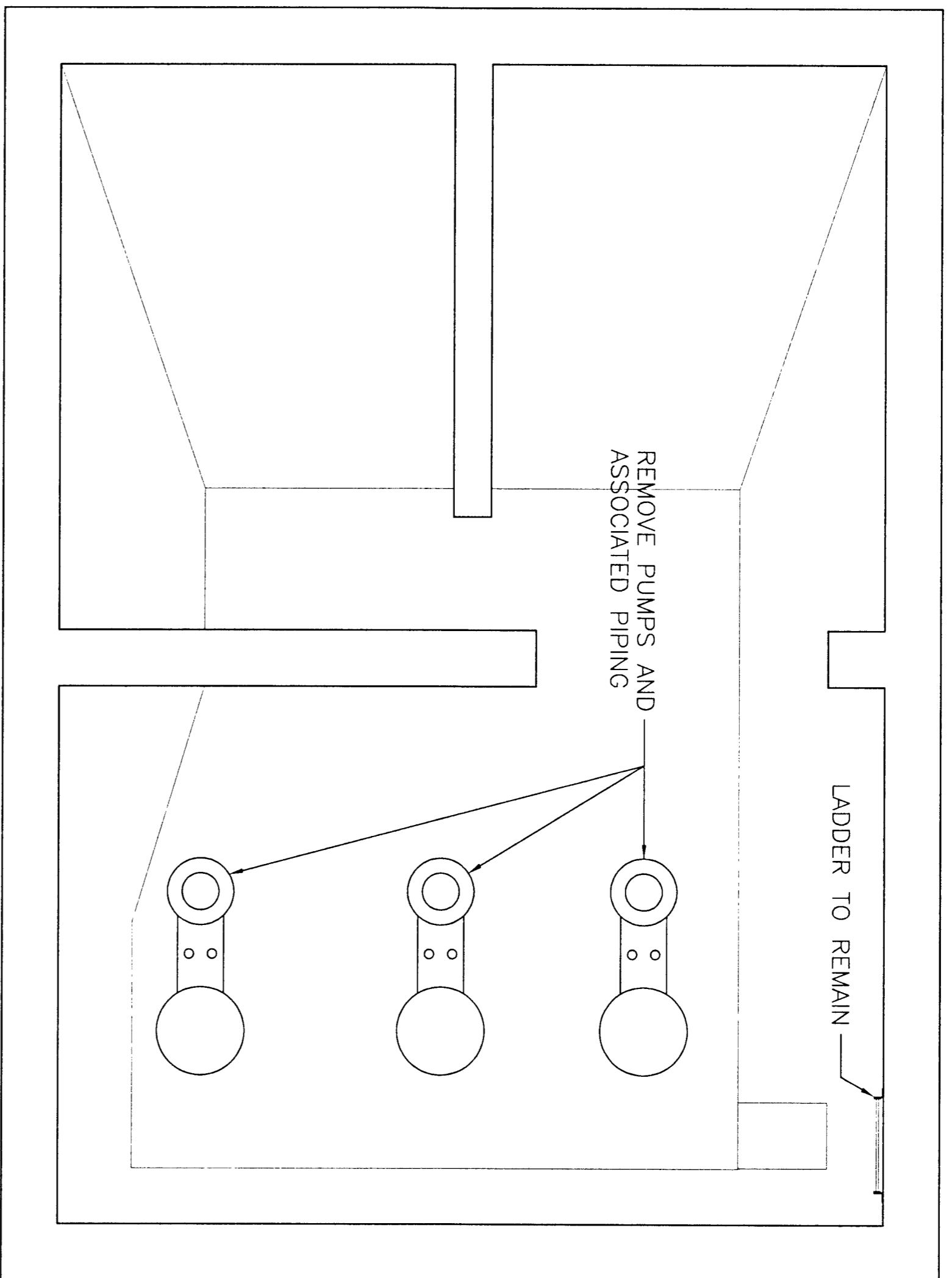
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1	AUG 1997	AS BUILT BY MANEELY ENGINEERING
0	SEPT. 1993	ISSUED FOR M.O.E. REVIEW

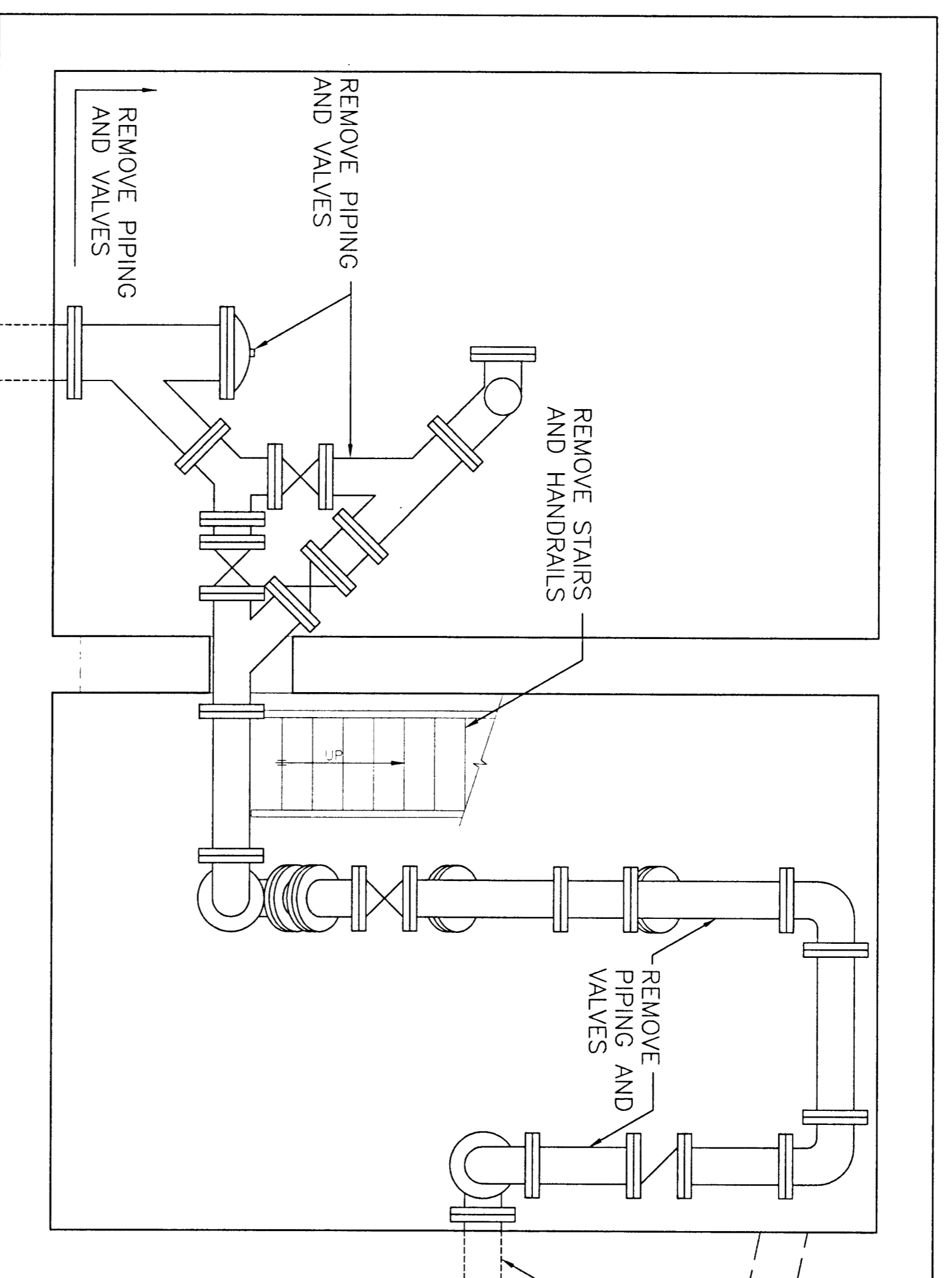


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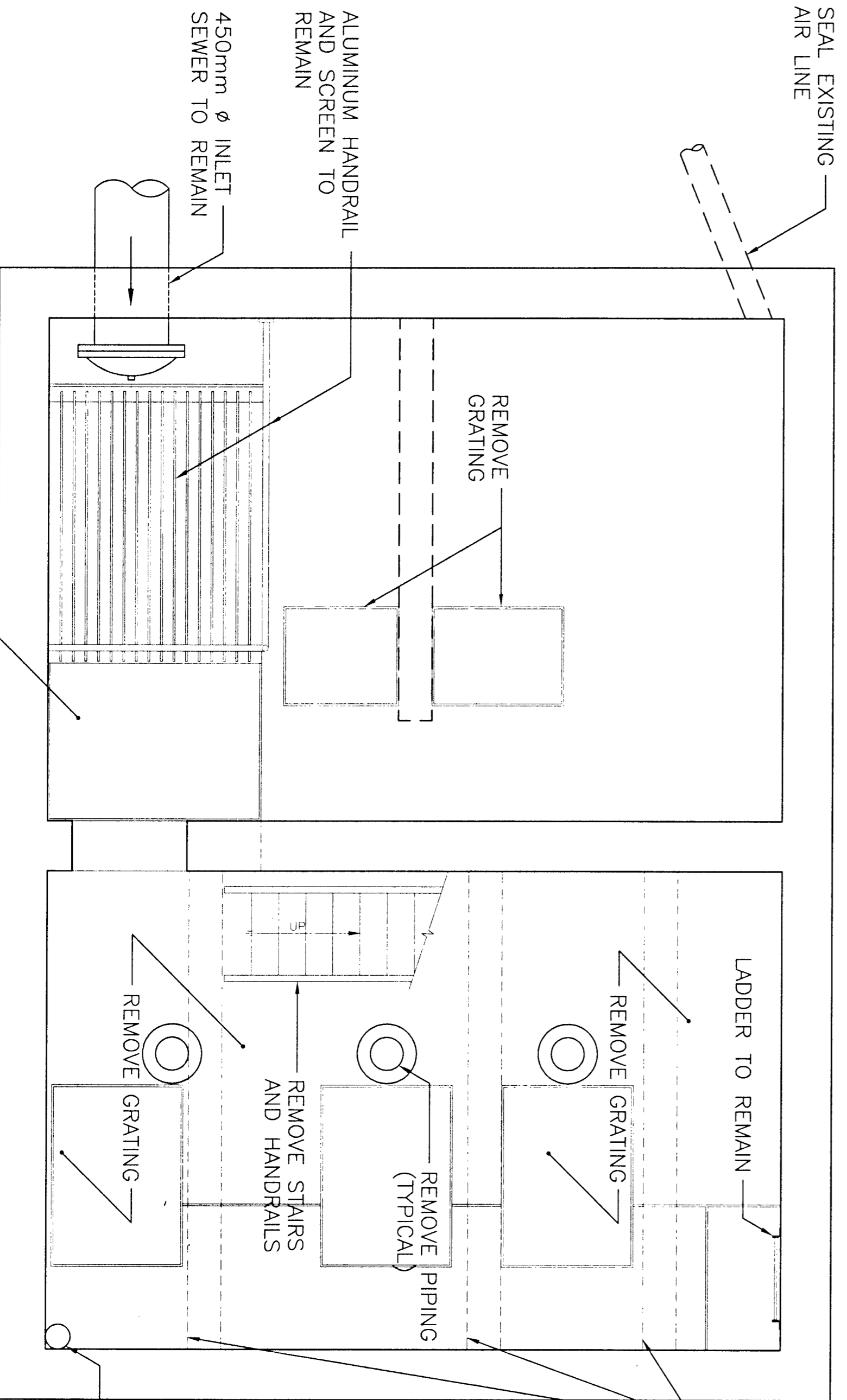
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Project	INGLESIDE SEWAGE PUMPING STATION MODIFICATIONS
Title	M.O.E. PROJECT No.40-0797
EXISTING CONDITIONS AND REMOVALS	
Design	R.G.
Scale	AS SHOWN
Proj. No.	M2544-2
Drawn	G.R.L.
Check	R.G.
Date	AUG. 1993
Dwg No.	G-3



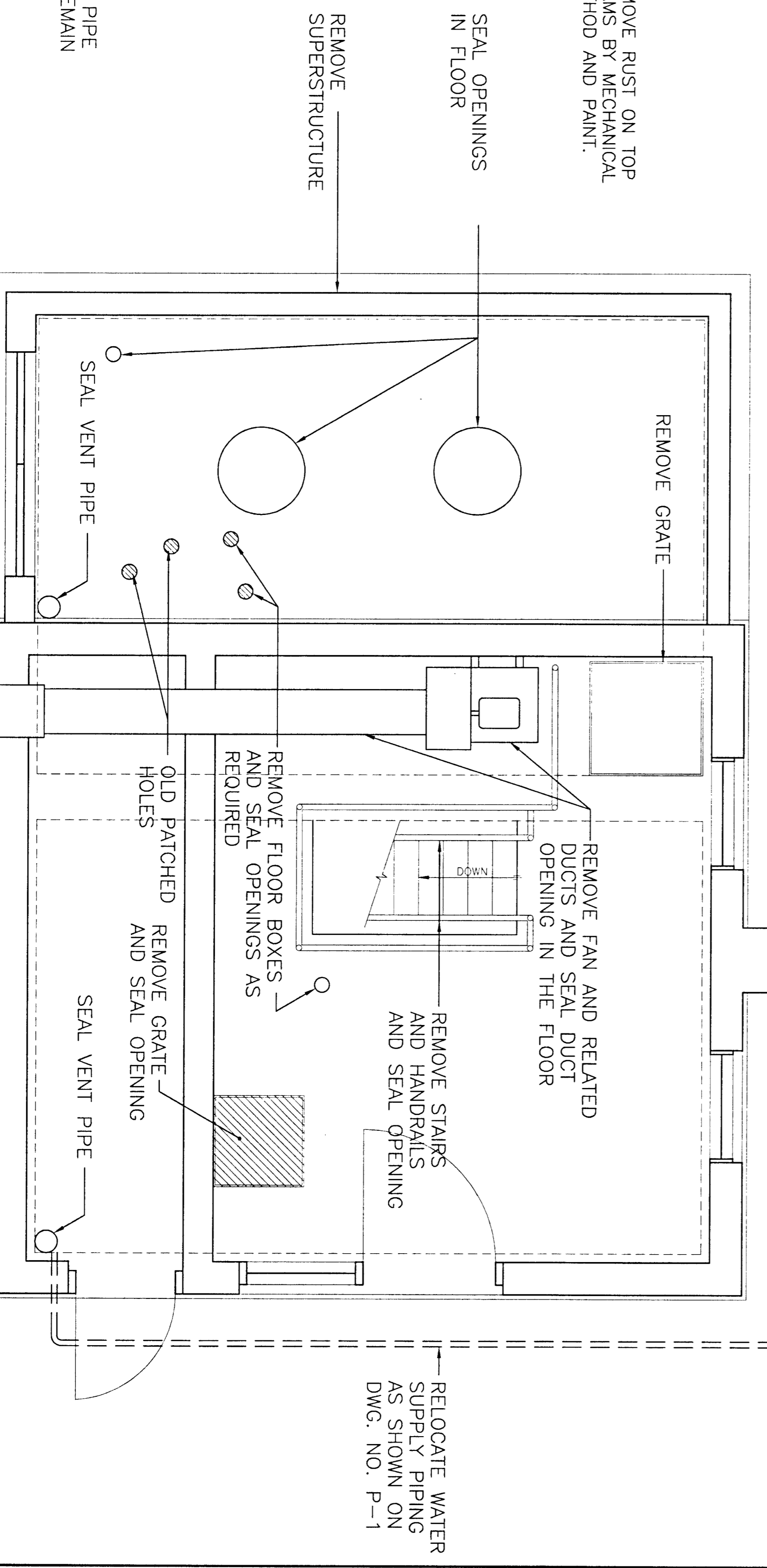
PUMP LEVEL
 ELEV. 69.19



PIPING LEVEL
 ELEV. 74.98

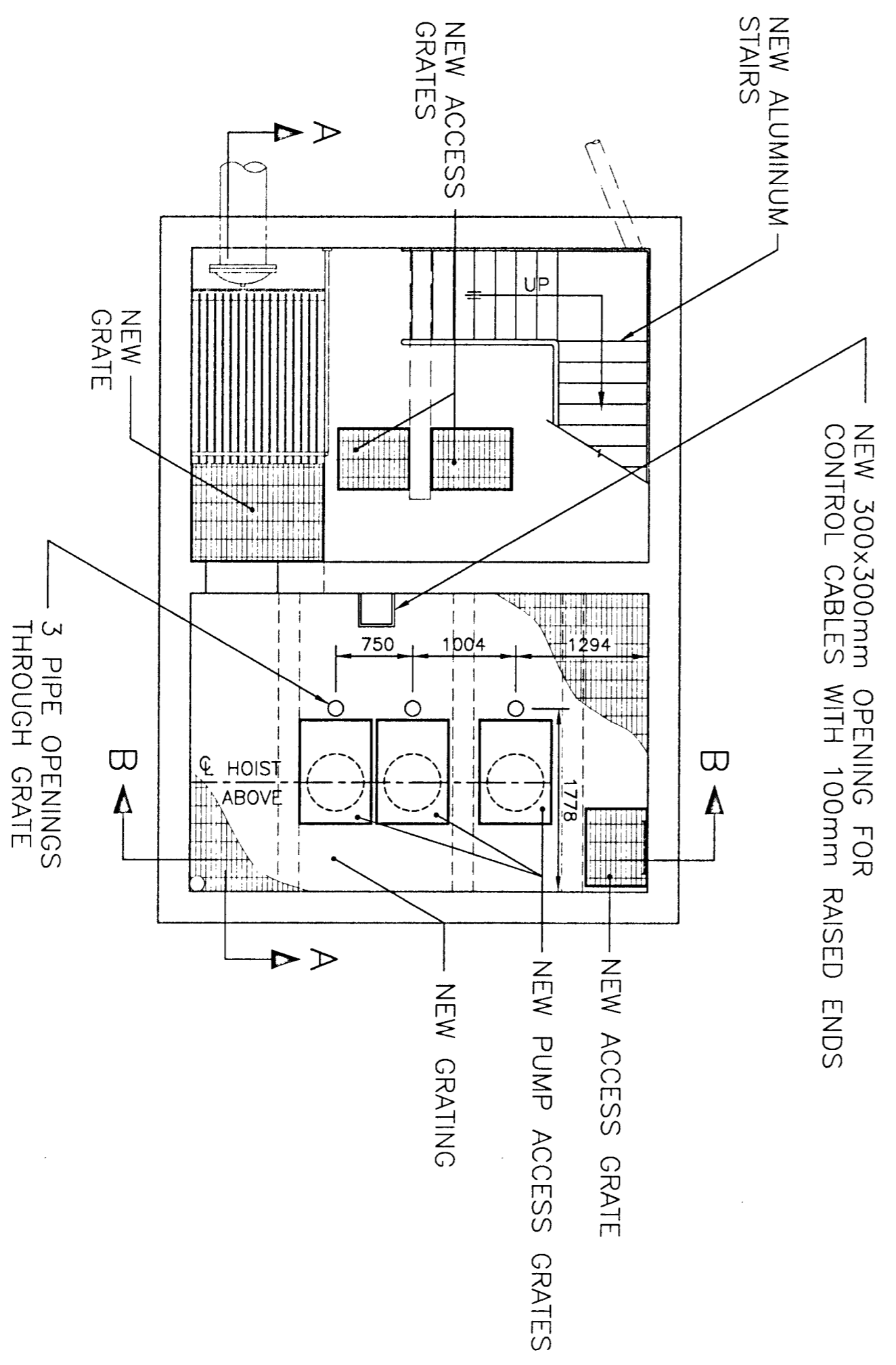


PLATFORM LEVEL
 ELEV. 72.85



GROUND LEVEL
 ELEV. 76.50

NOTE:
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 FROM DAMAGE DURING CONSTRUCTION.



PLATFORM LEVEL
 ELEV. 72.85

NOTE:
 ALL NEW GRATING TO BE ALUMINUM.

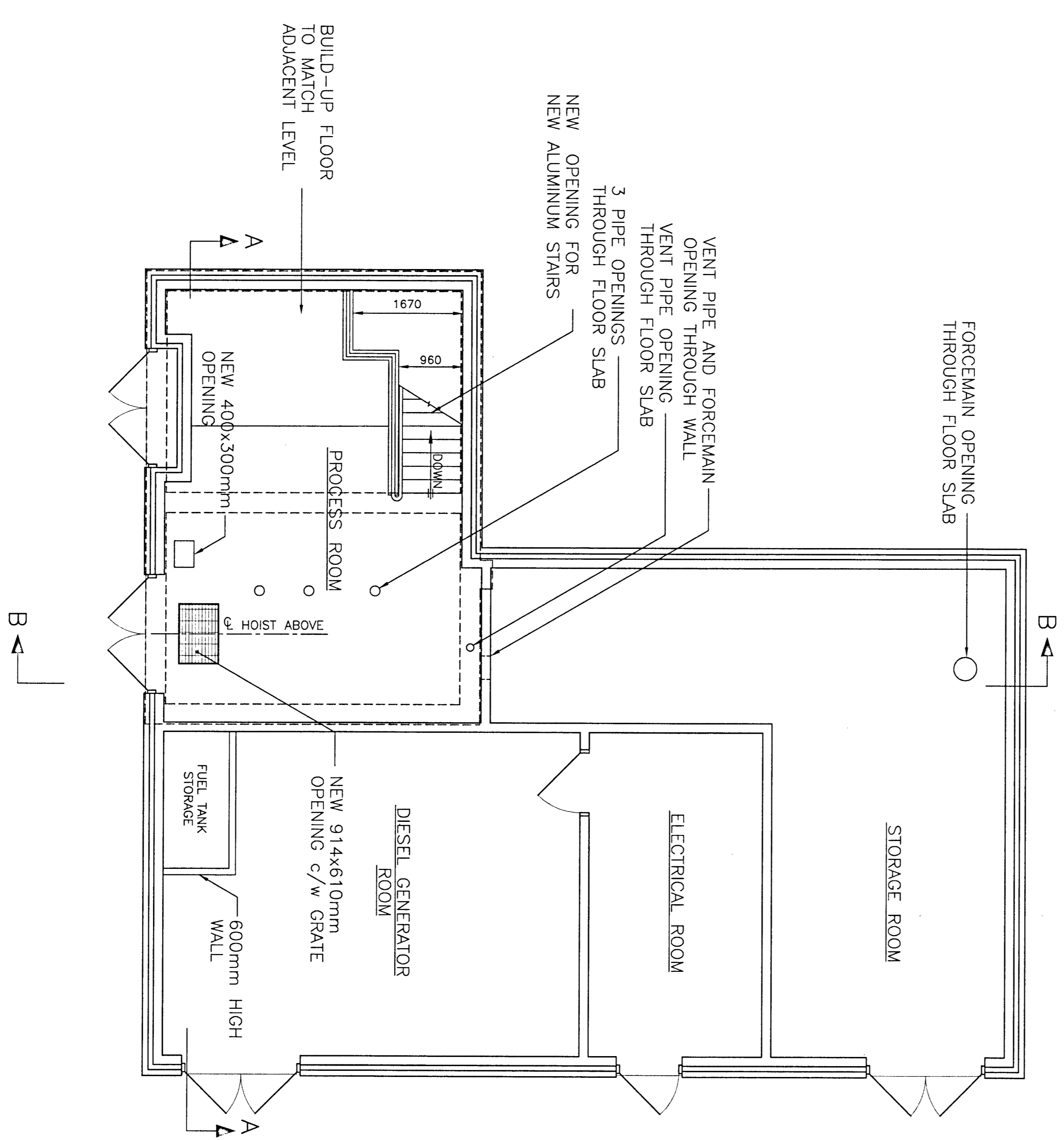
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No.	Date	Revision
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1	AUG/97	AS BUILT BY MONEELY ENGINEERING
0	SEPT. 1993	ISSUED FOR M.O.E. REVIEW

REGISTERED PROFESSIONAL ENGINEER
 R. GOUBKO
 MEMBER OF THE
 ORDER OF ENGINEERS

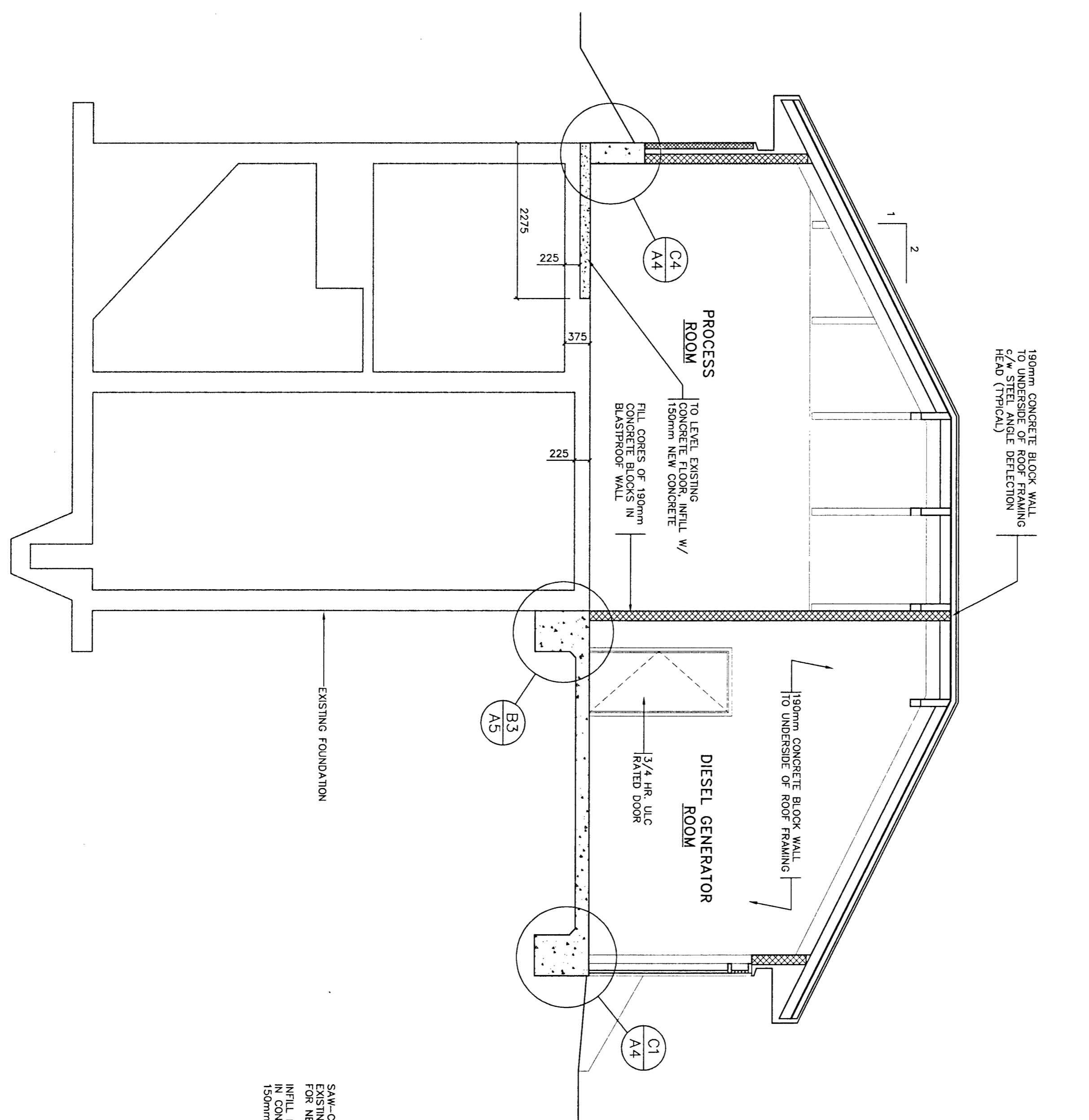
**MONEELY
 ENGINEERING
 CONSULTANTS LTD.**

Owner	TOWNSHIP OF OSNABRUCK
Project	INGLESIDE SEWAGE PUMPING STATION MODIFICATIONS
Title	M.O.E.: PROJECT No.40-0797 MODIFIED FLOOR PLANS
Design	R.G.
Scale	AS SHOWN
Proj. No.	M2544-2
Drawn	G.R.L.
Check	R.G.
Date	AUG. 1993
Dwg No.	G-4

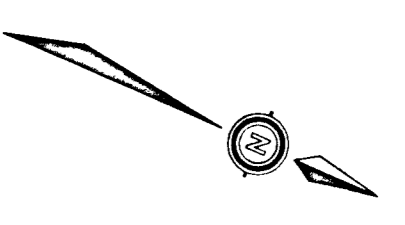
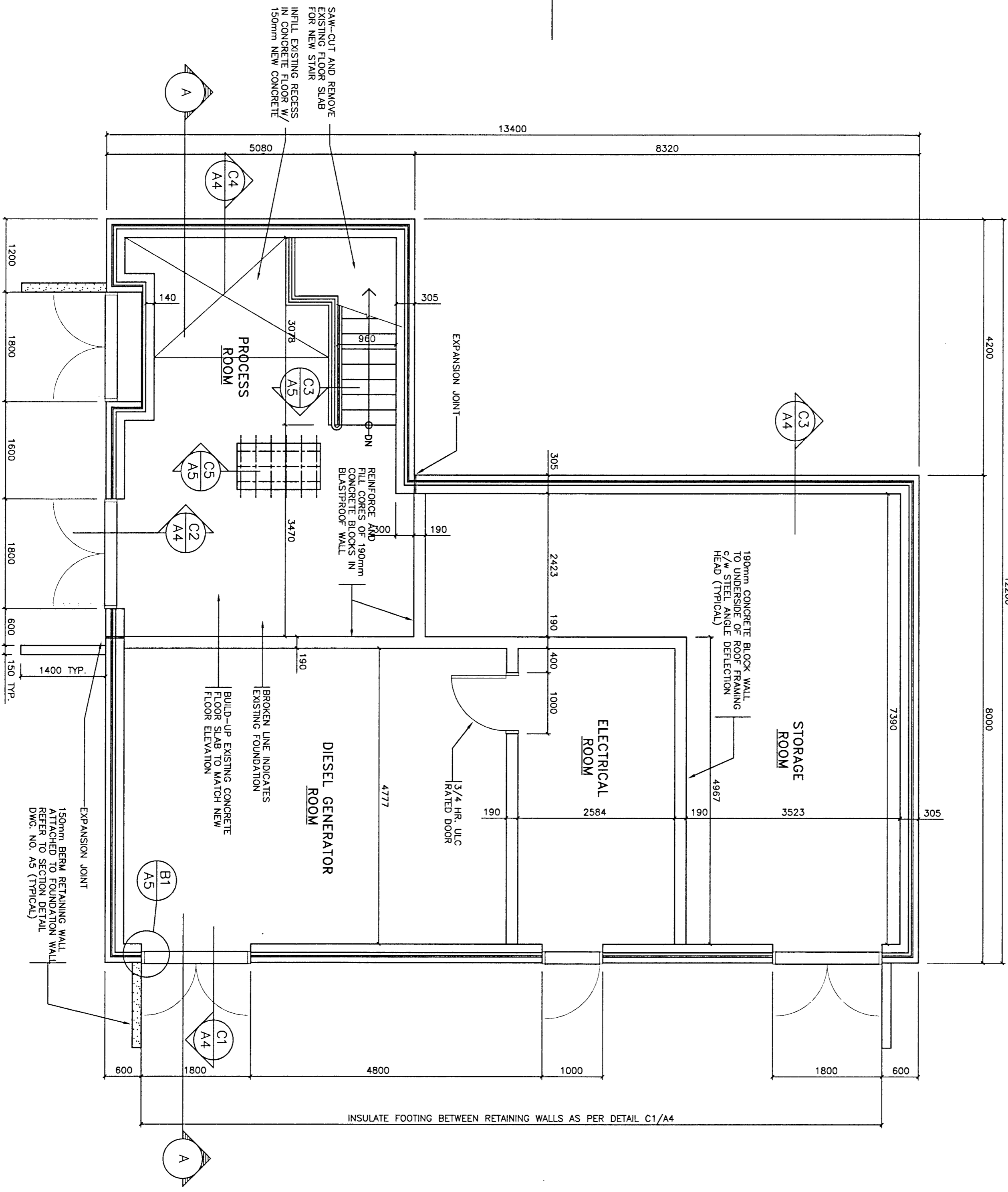


GROUND LEVEL
 ELEV. 76.50

BUILDING SECTION
SCALE 1:50



FLOOR PLAN
SCALE 1:50



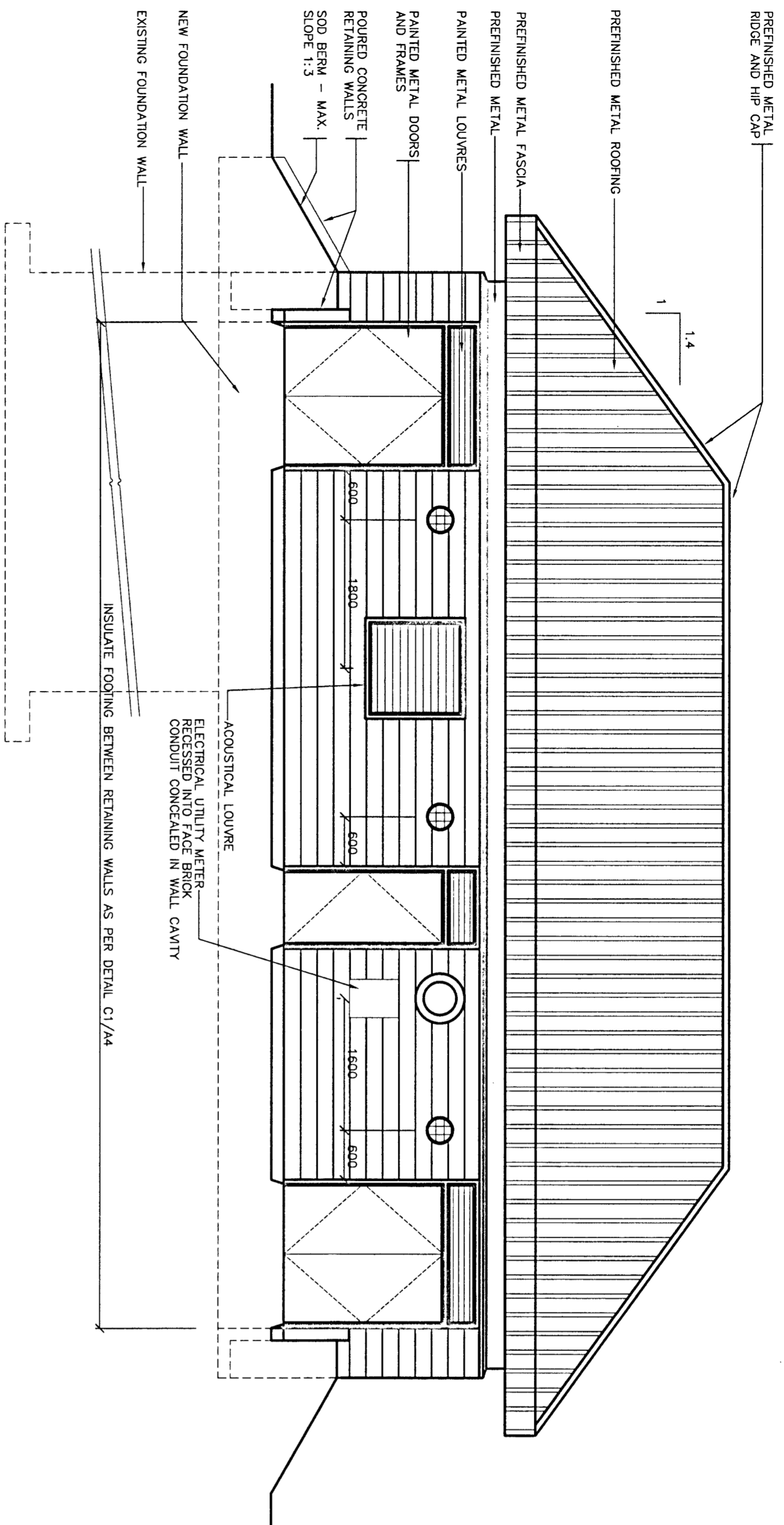
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No.	Date	Revision
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2	AUG/97	AS BUILT BY MONEELY ENGINEERING
1	SEPT. 93	ISSUED FOR TENDER
0		ISSUED FOR M.O.E. REVIEW

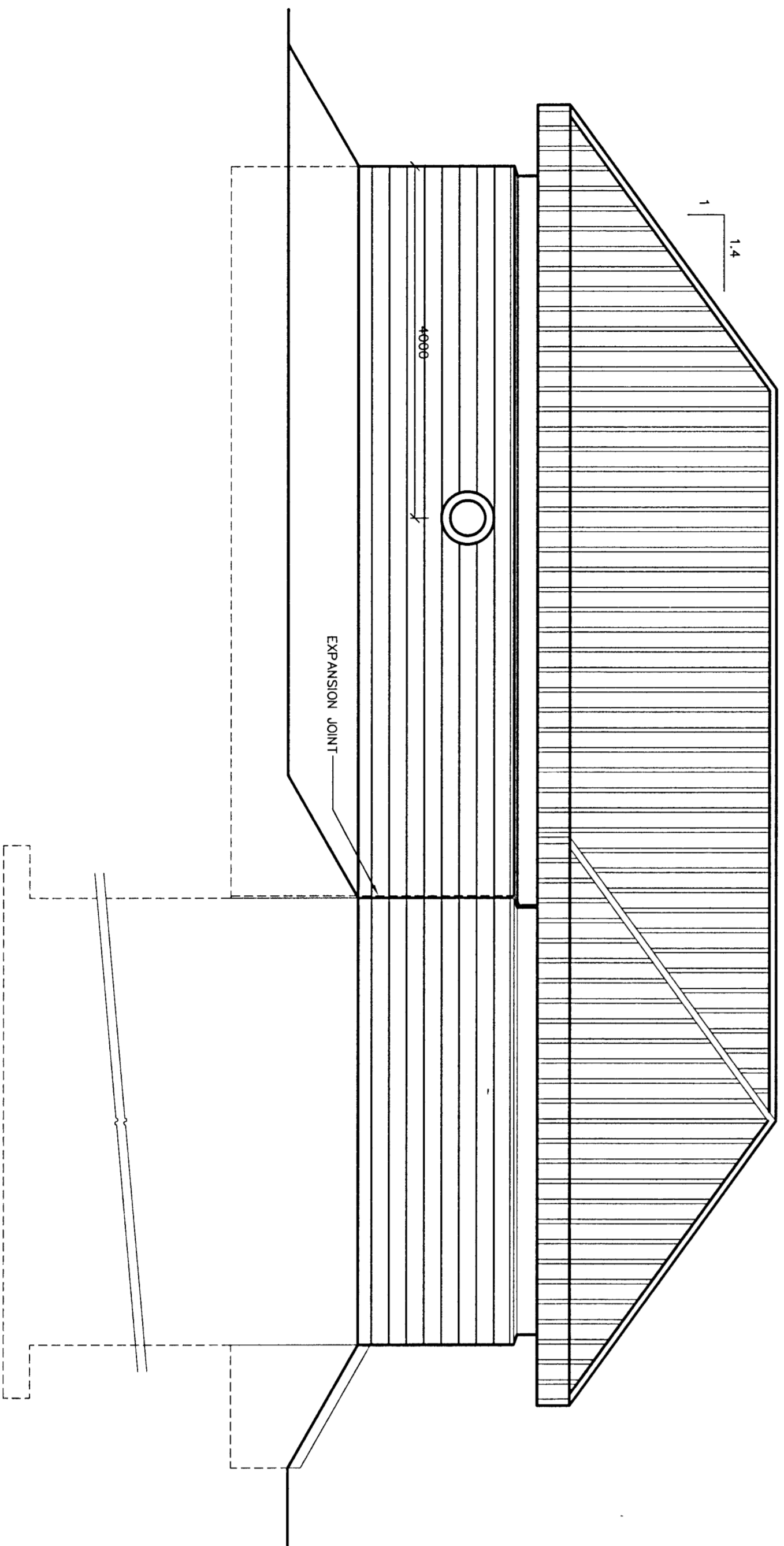
REGISTERED PROFESSIONAL ENGINEER
R. GOUBRO
OWNER OF COMPANY

MONEELY ENGINEERING CONSULTANTS LTD.

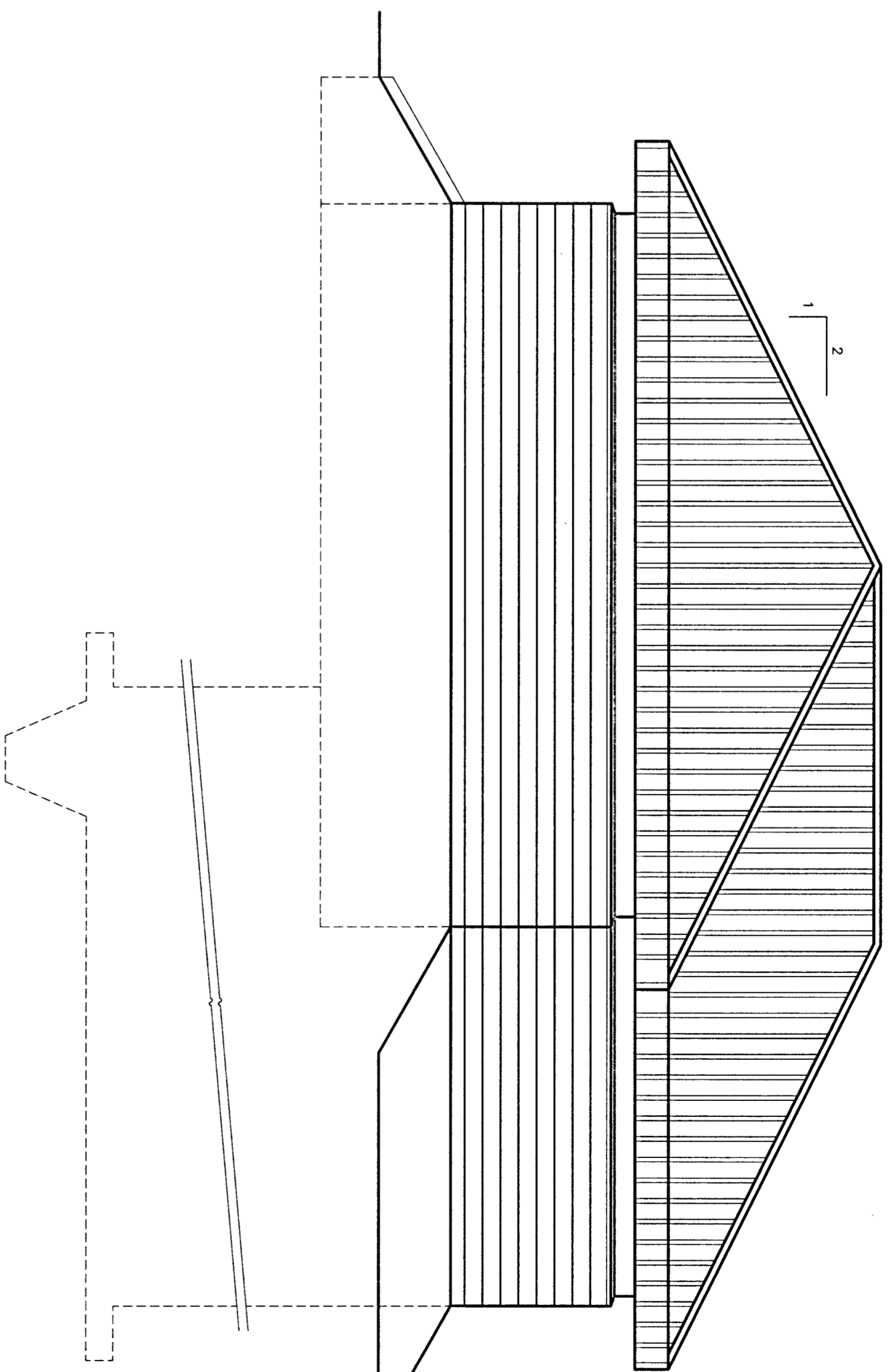
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STRUCTURAL PLANS	
Design	G.C.
Drawn	D.M.S.
Scale	AS SHOWN
Check	G.C.
Proj. No.	M2544-2
Date	AUGUST 1993
Dwg No.	A-1



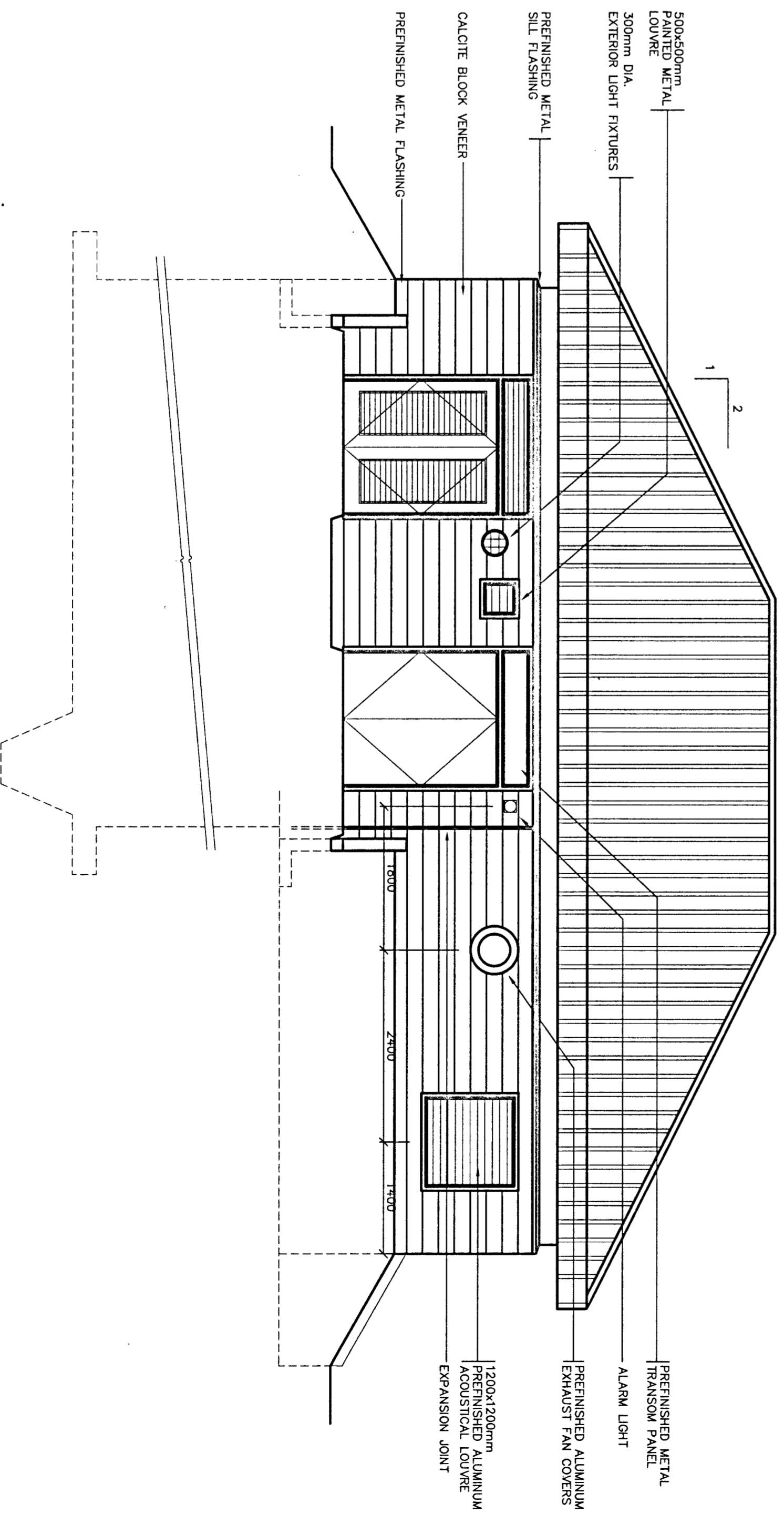
EAST ELEVATION
SCALE 1:50



WEST ELEVATION
SCALE 1:50



NORTH ELEVATION
SCALE 1:50

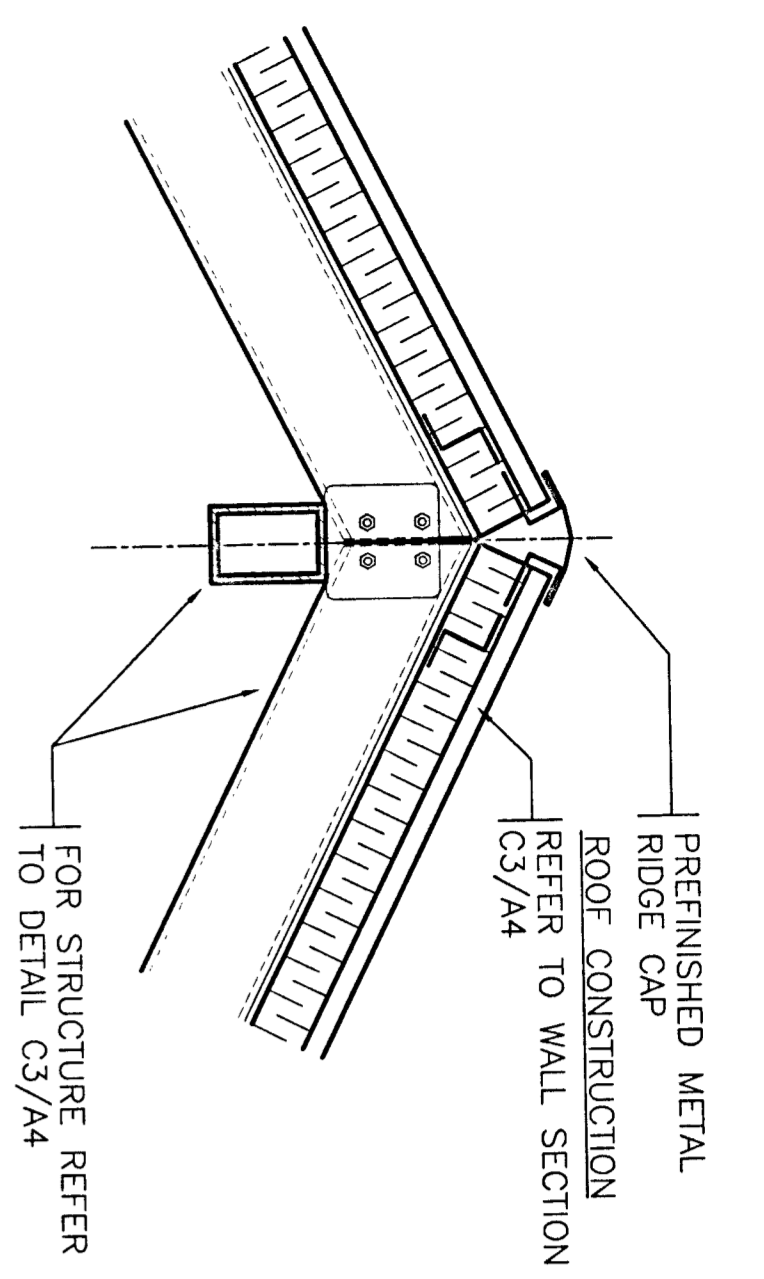


SOUTH ELEVATION
SCALE 1:50

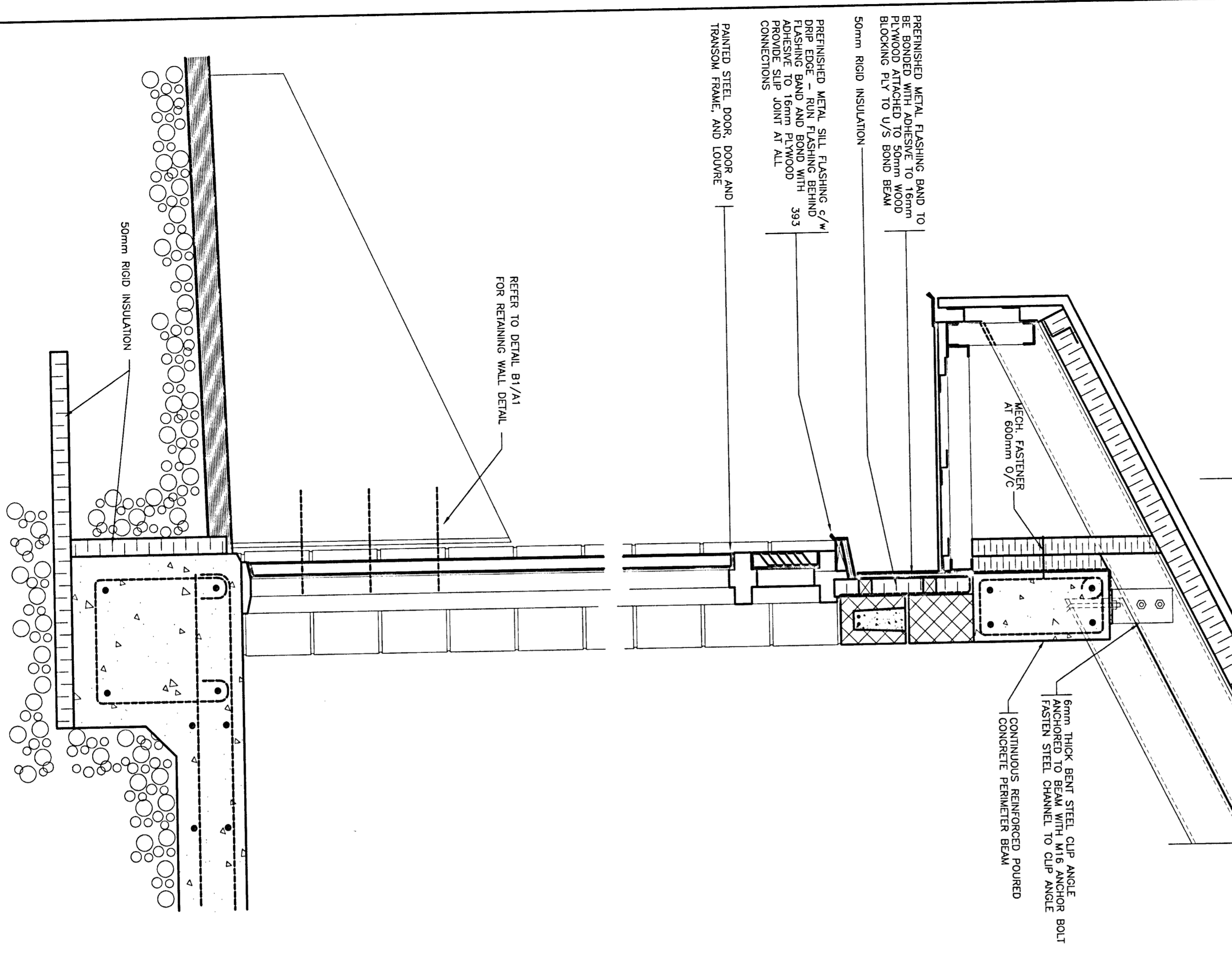
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0	SEPT. 93	ISSUED FOR M.O.E. REVIEW

REGISTERED PROFESSIONAL ENGINEER
R. COUBKO
Member of
MCNEELY ENGINEERING CONSULTANTS LTD.

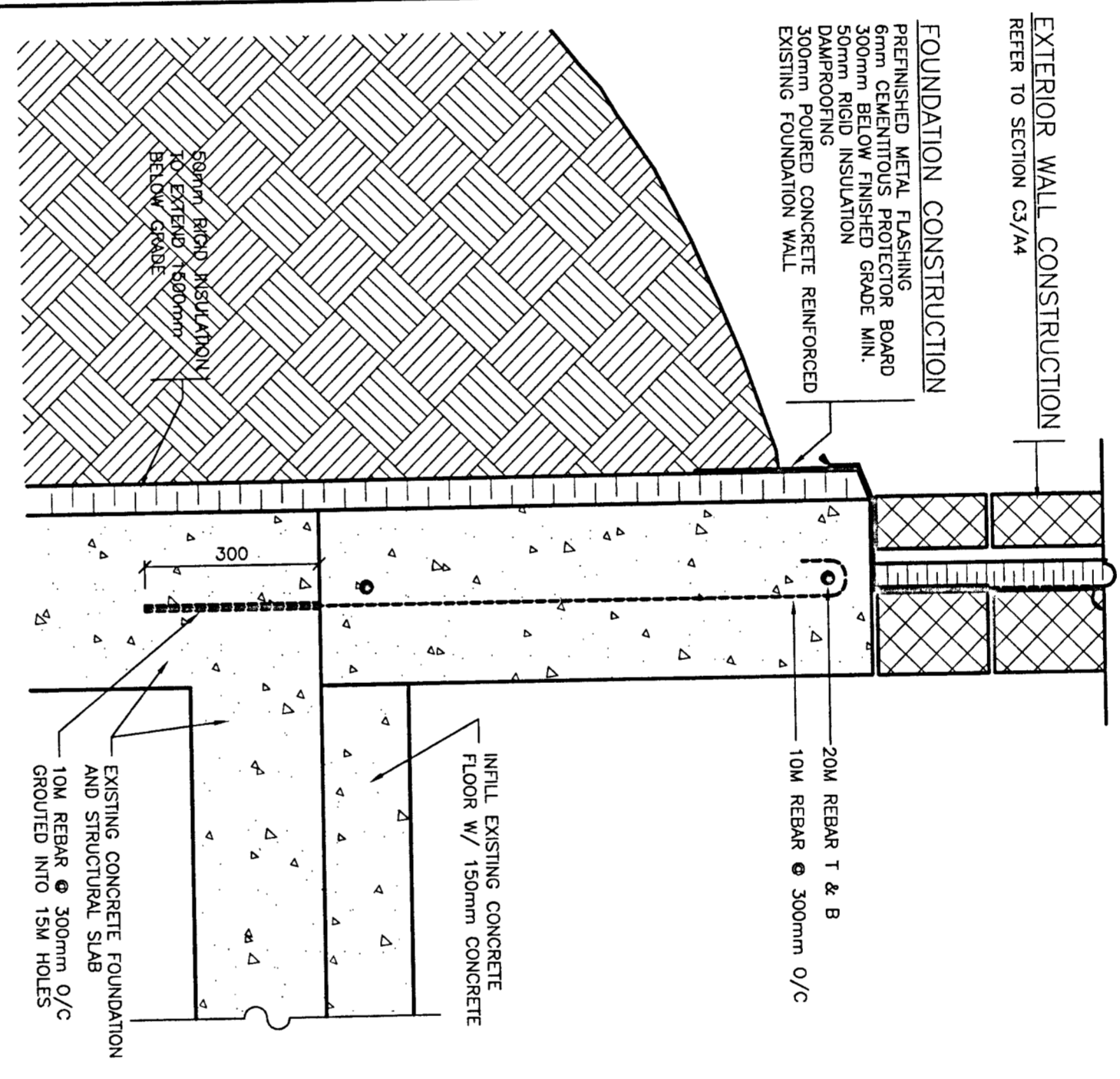
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Title	M.O.E. PROJECT No.40-0797			
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Drawn	D.M.S.	Check	G.C.	Date AUGUST 1993
Dwg No.				A-3



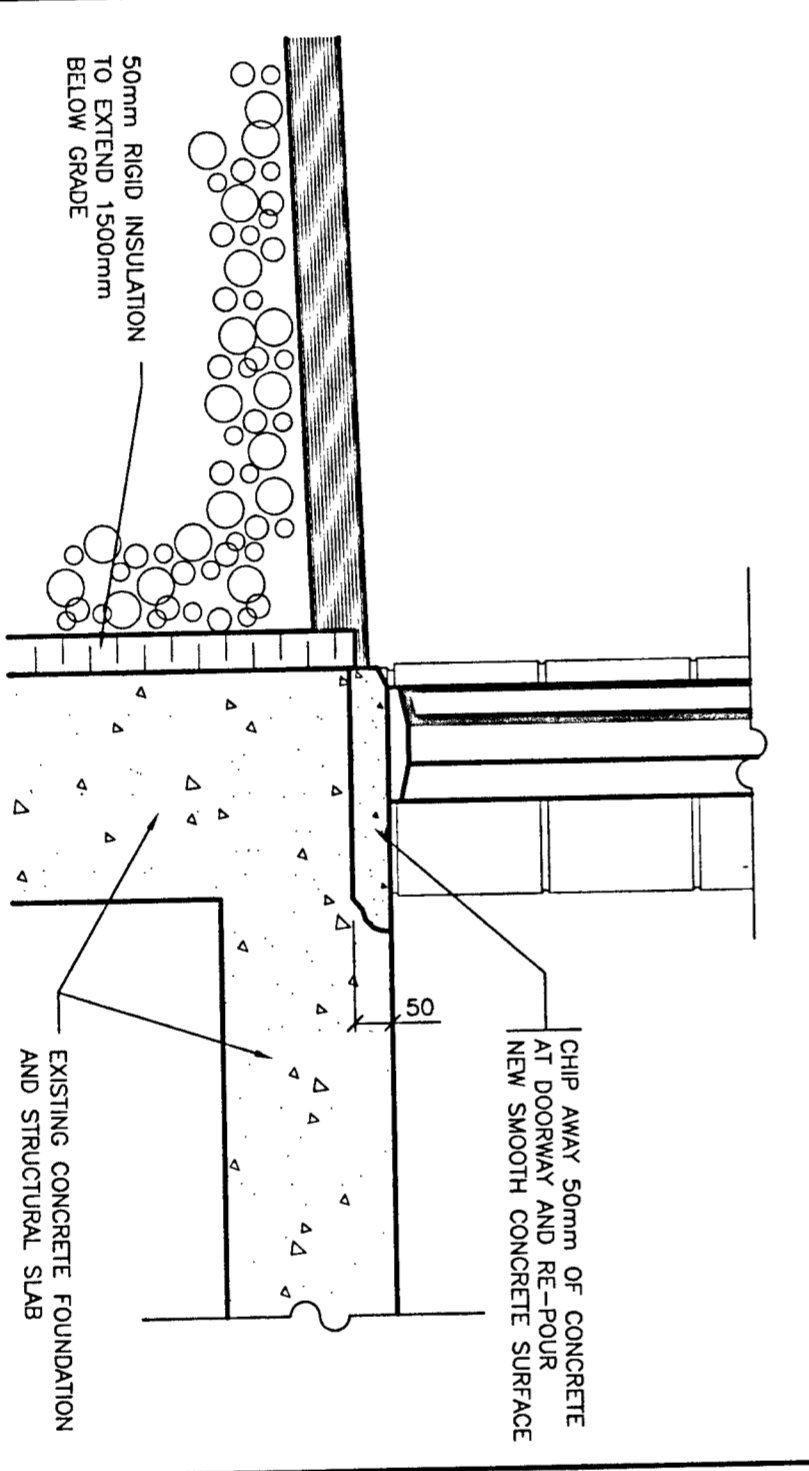
A1
RIDGE DETAIL
SCALE 1:10



C1
WALL SECTION
SCALE 1:10



C4
WALL SECTION
SCALE 1:10



C2
WALL SECTION
SCALE 1:10

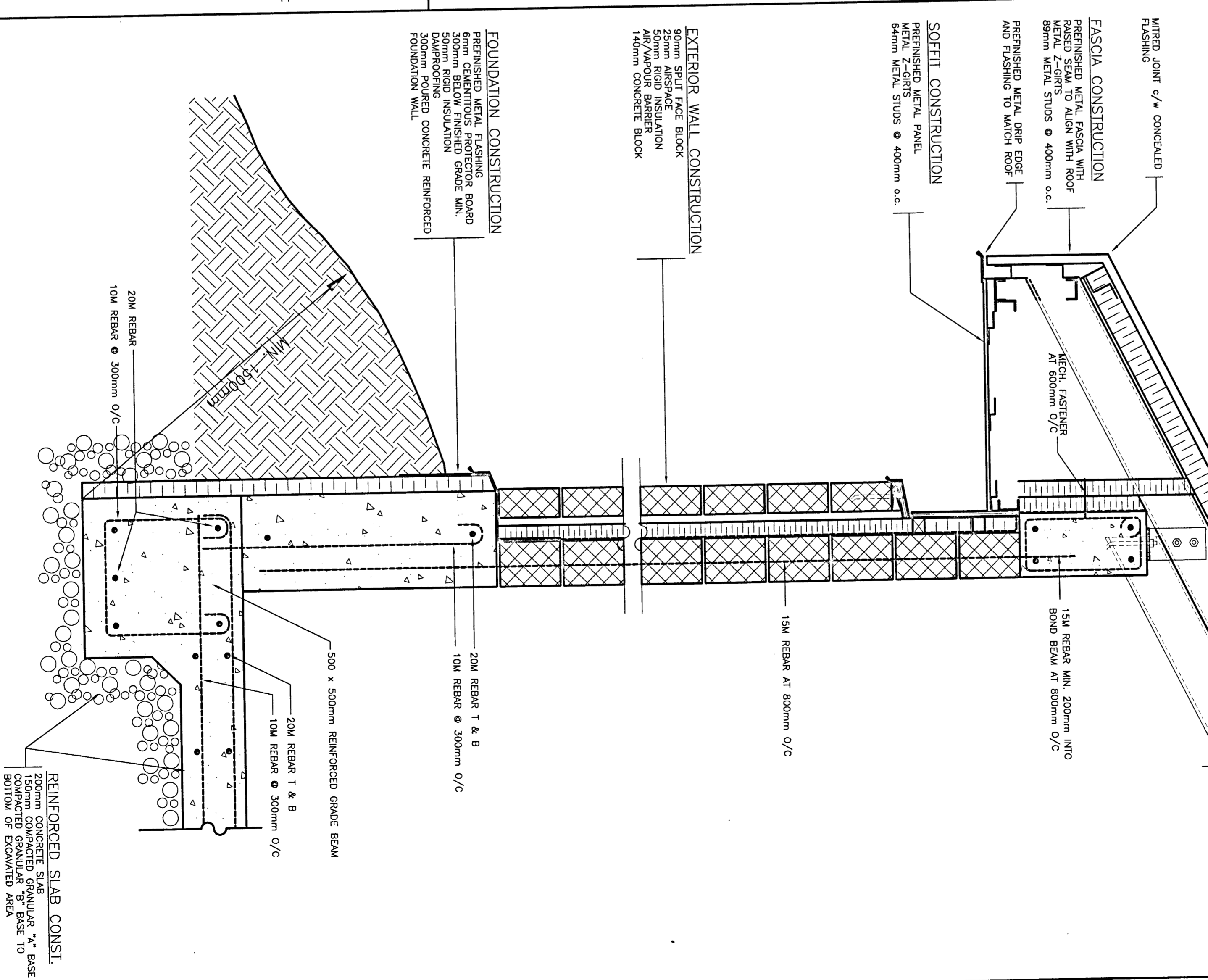
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1		ISSUED FOR TENDER
0	SEPT. 93	ISSUED FOR M.O.E. REVIEW

REGISTERED PROFESSIONAL ENGINEER
R. COURKO
PROVINCE OF ONTARIO

MCNEELY ENGINEERING CONSULTANTS LTD.

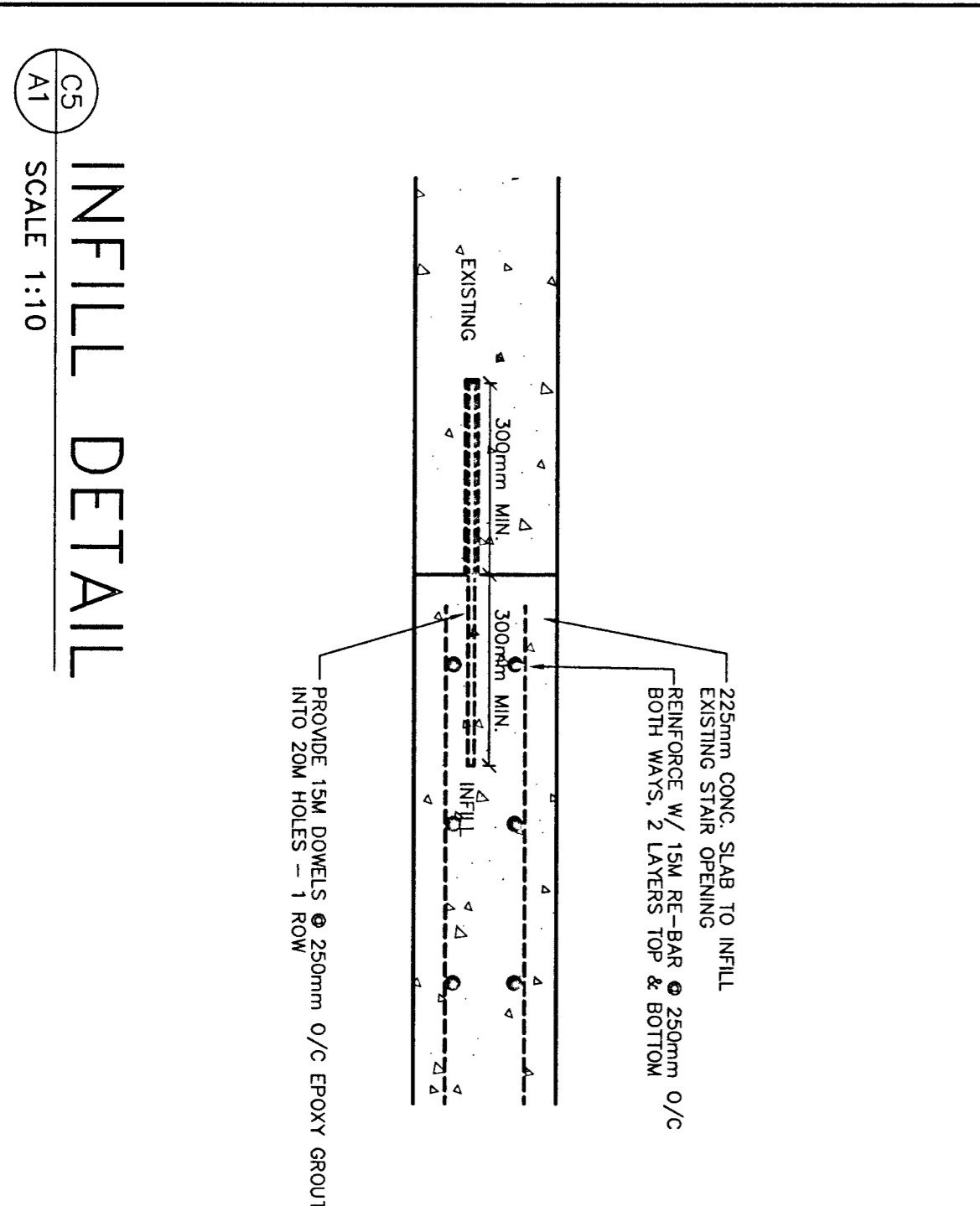
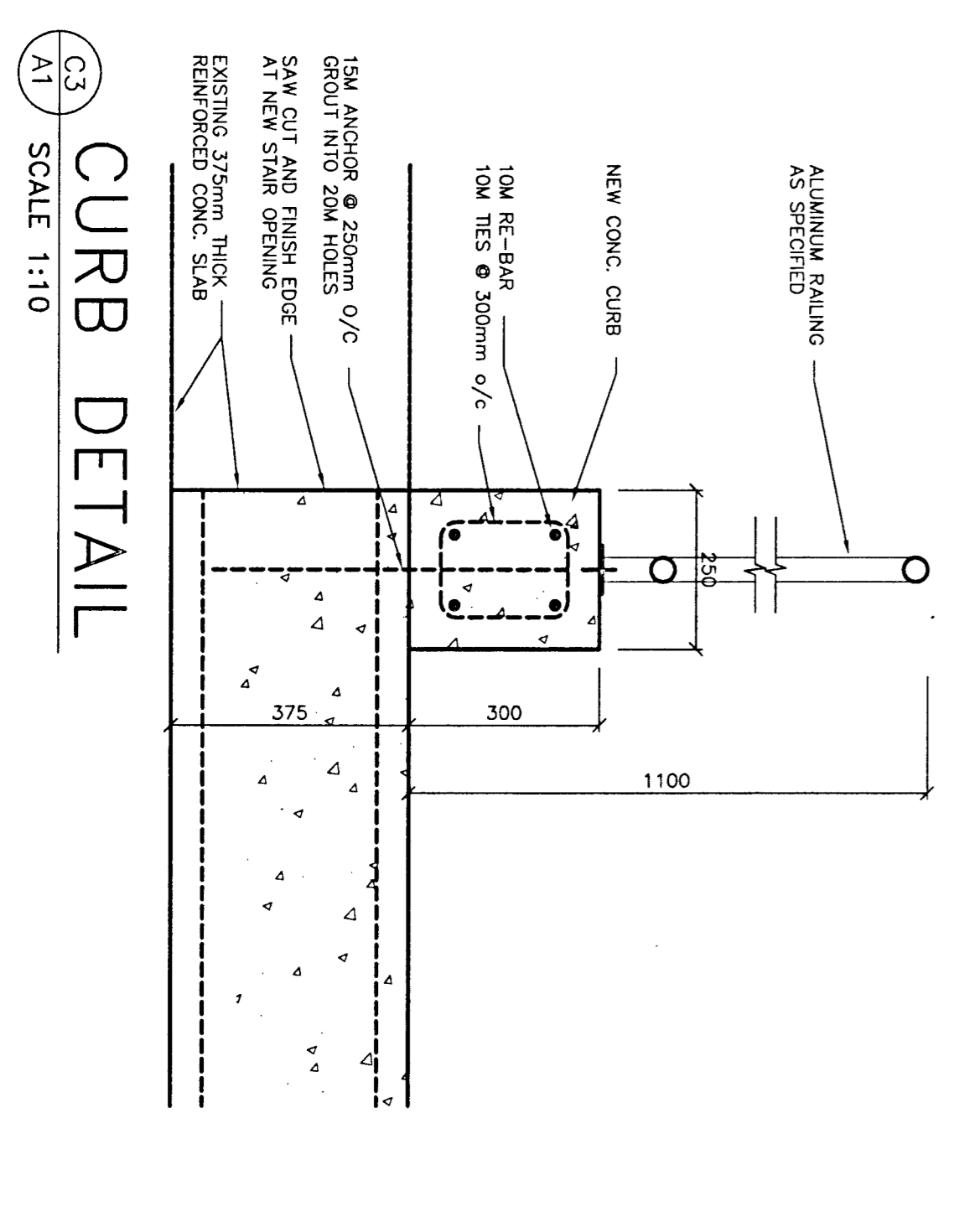
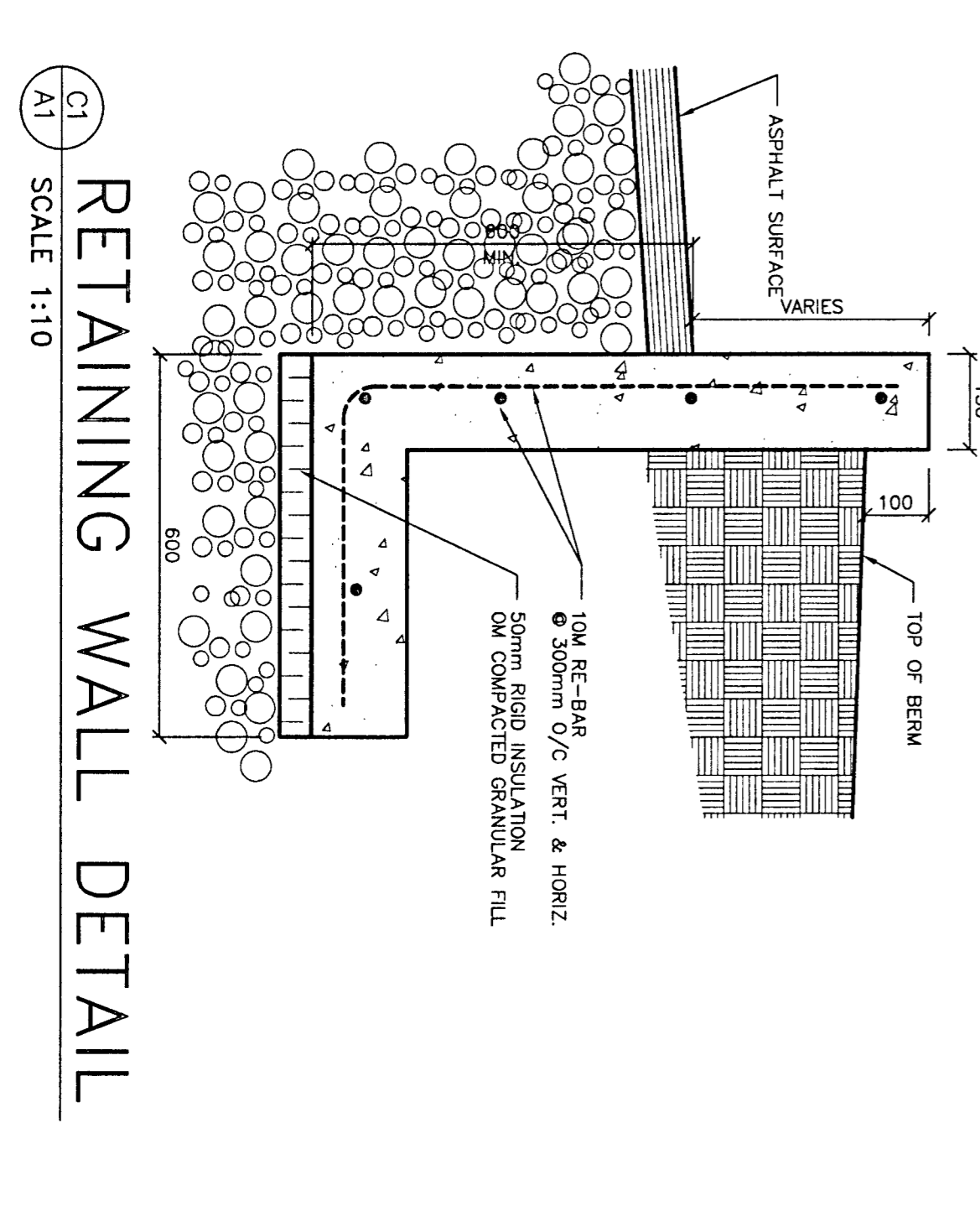
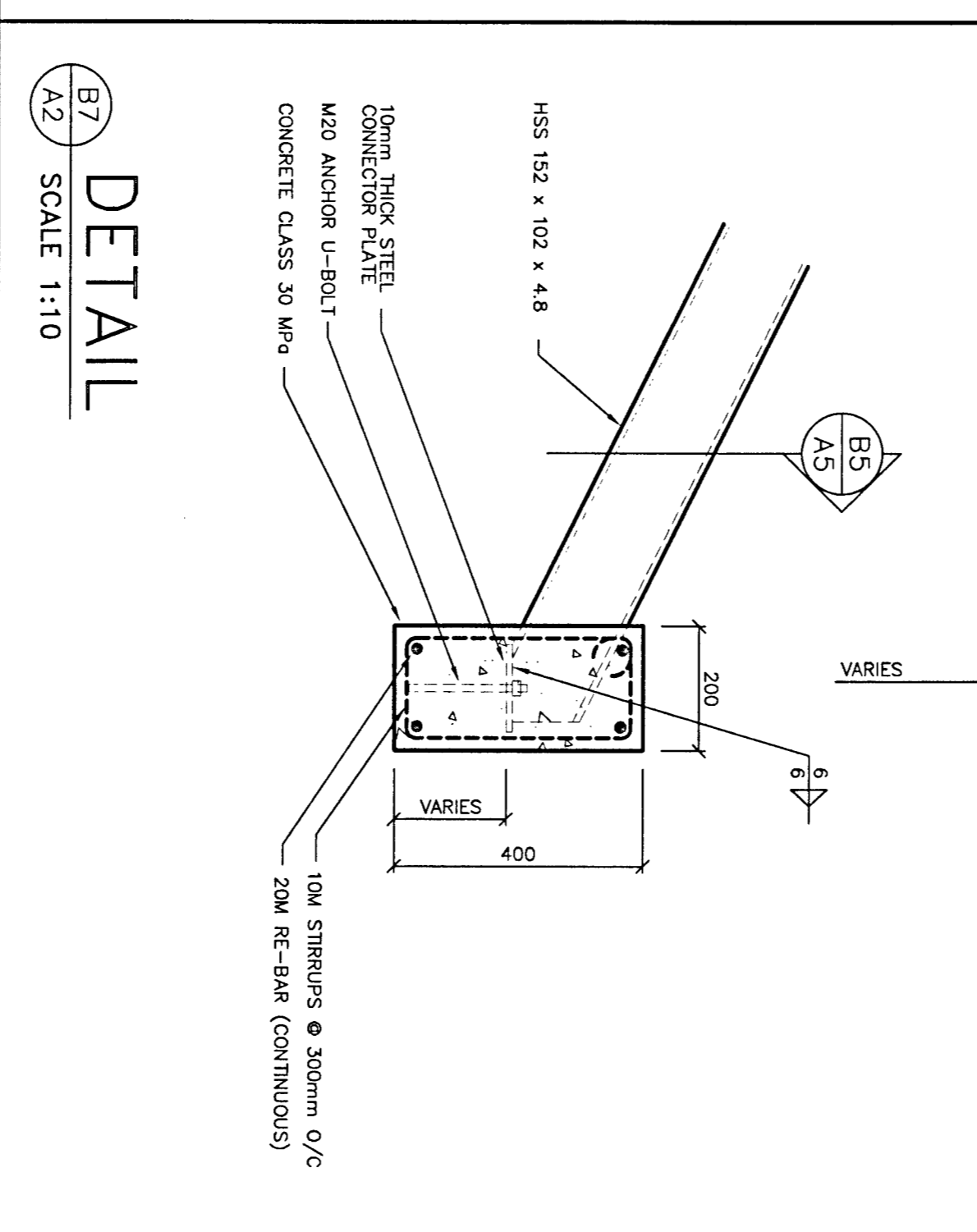
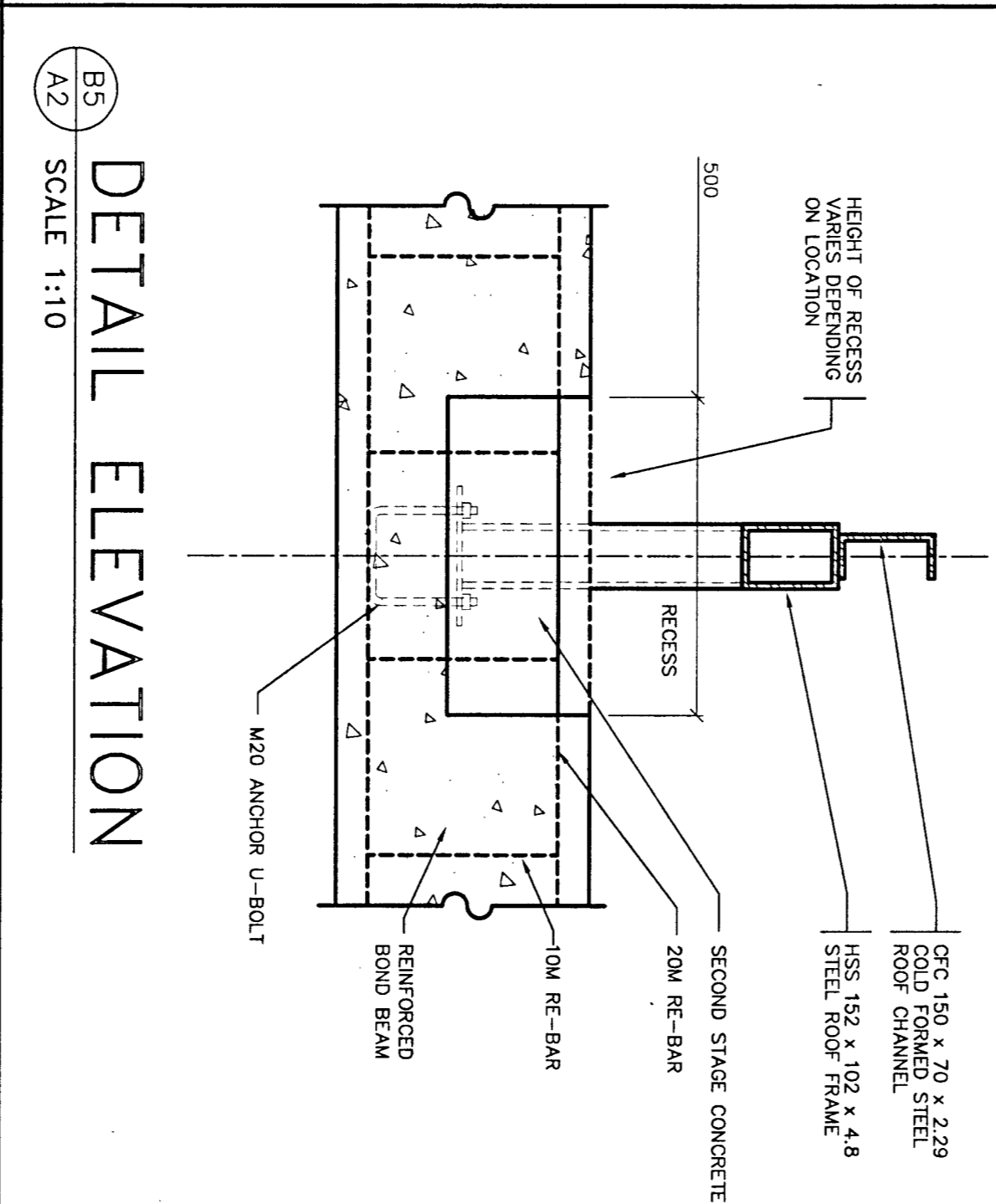
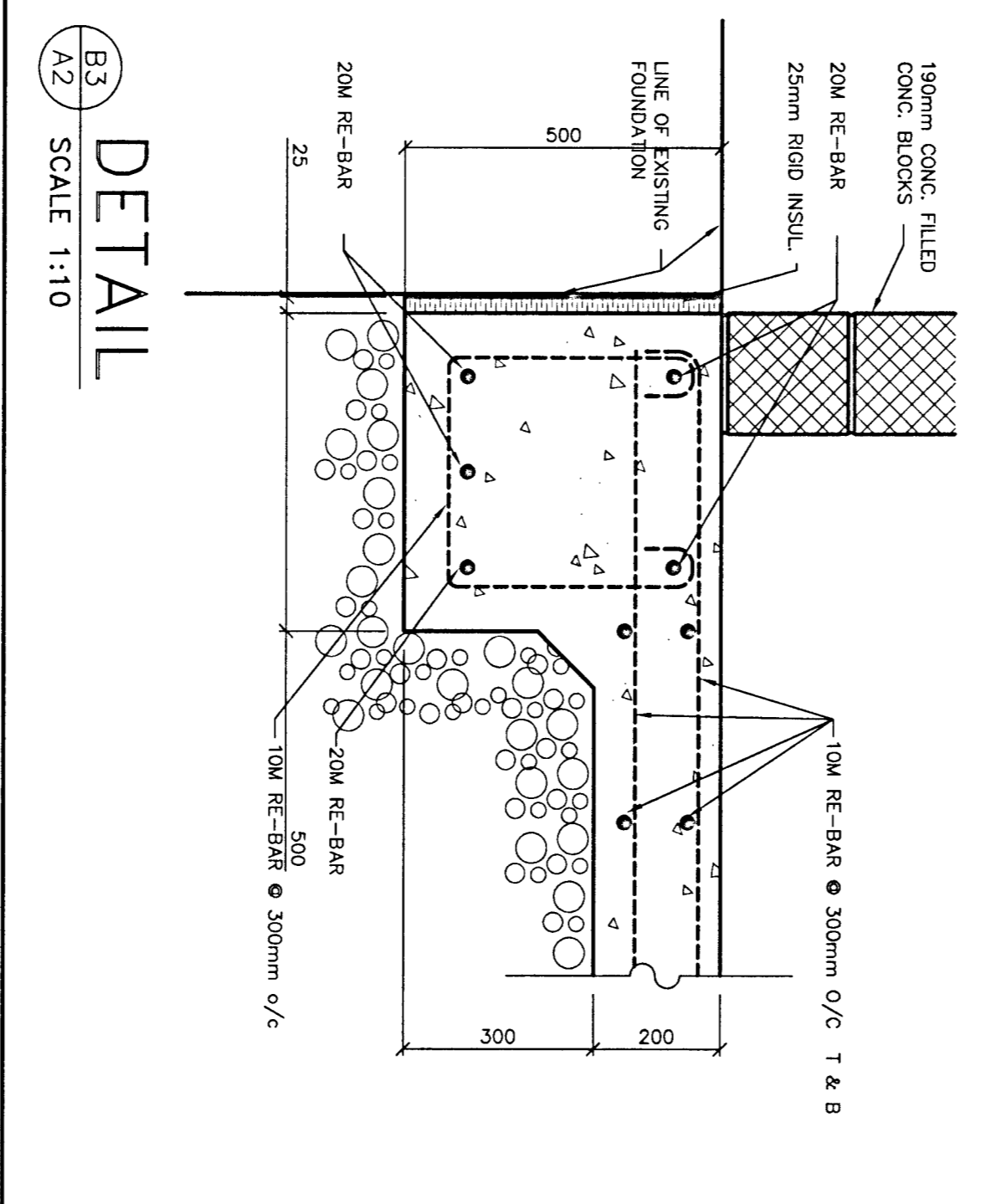
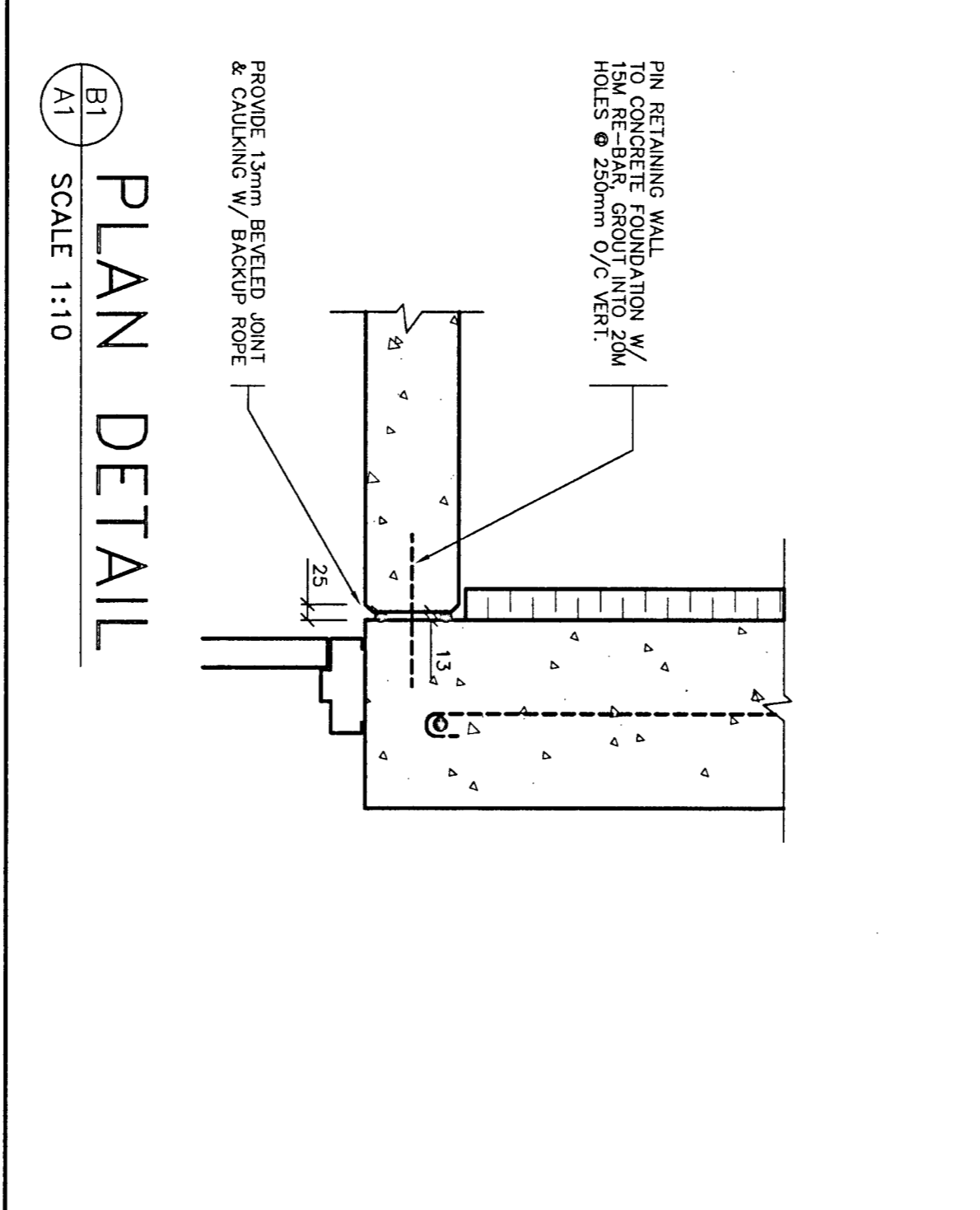
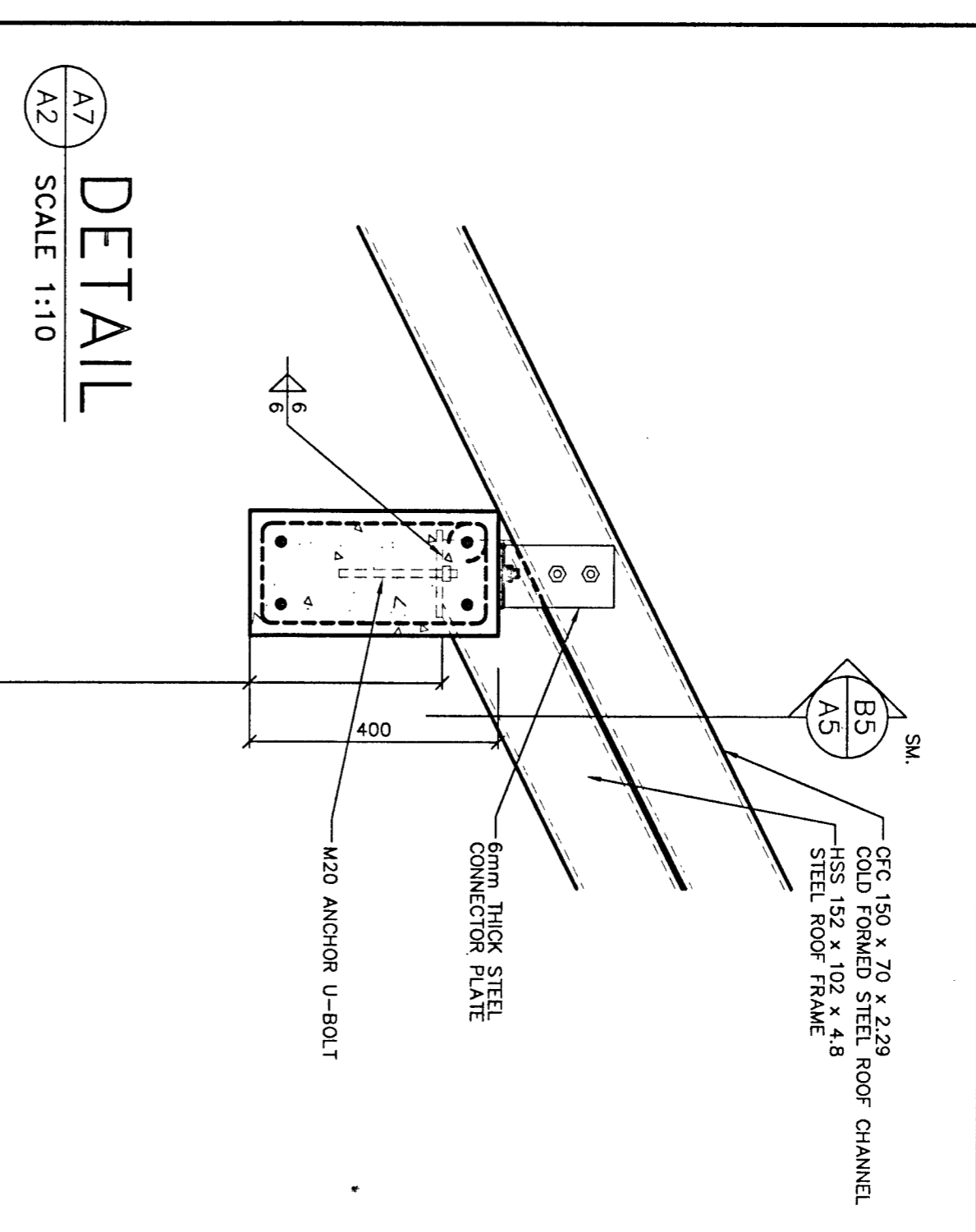
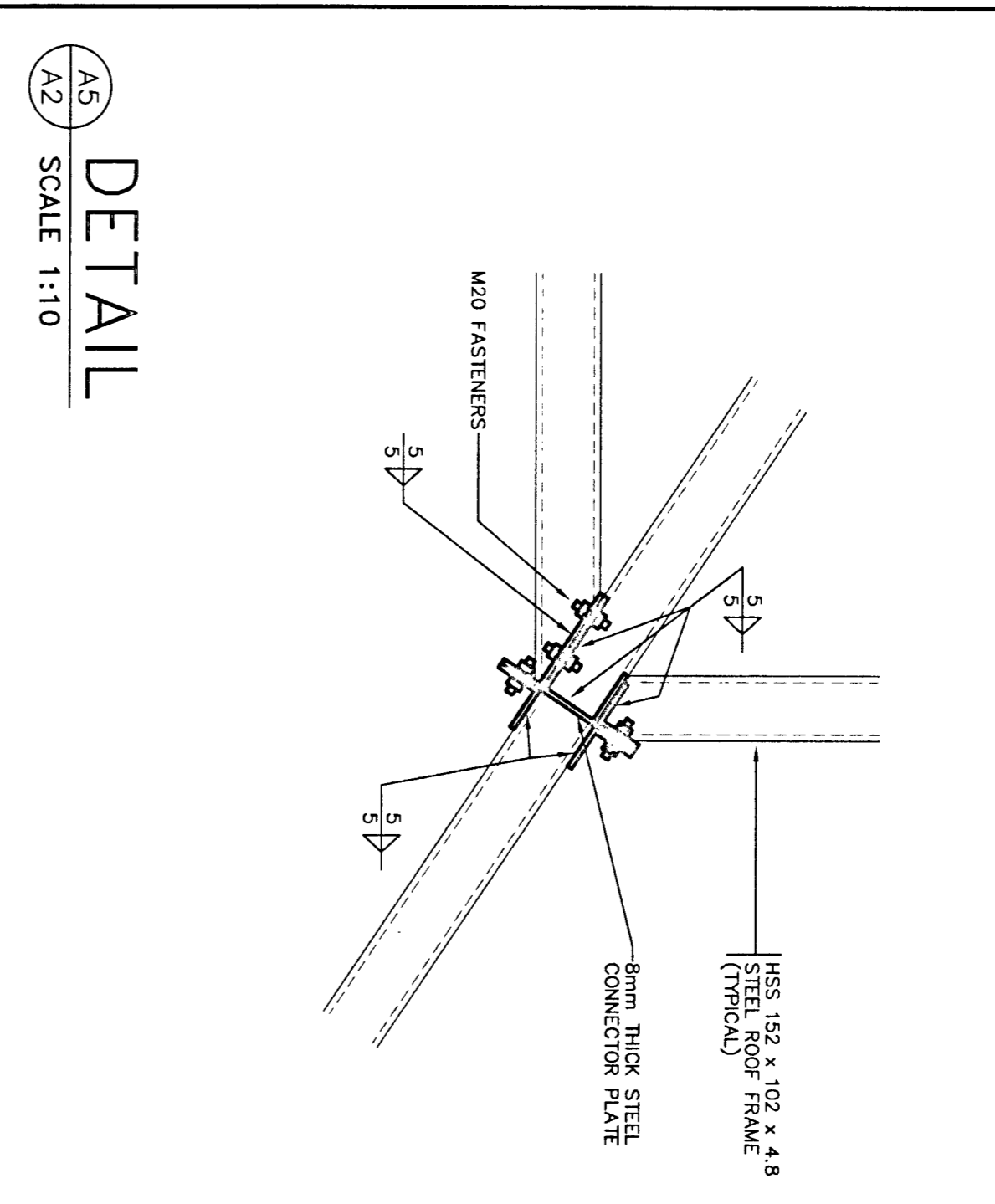
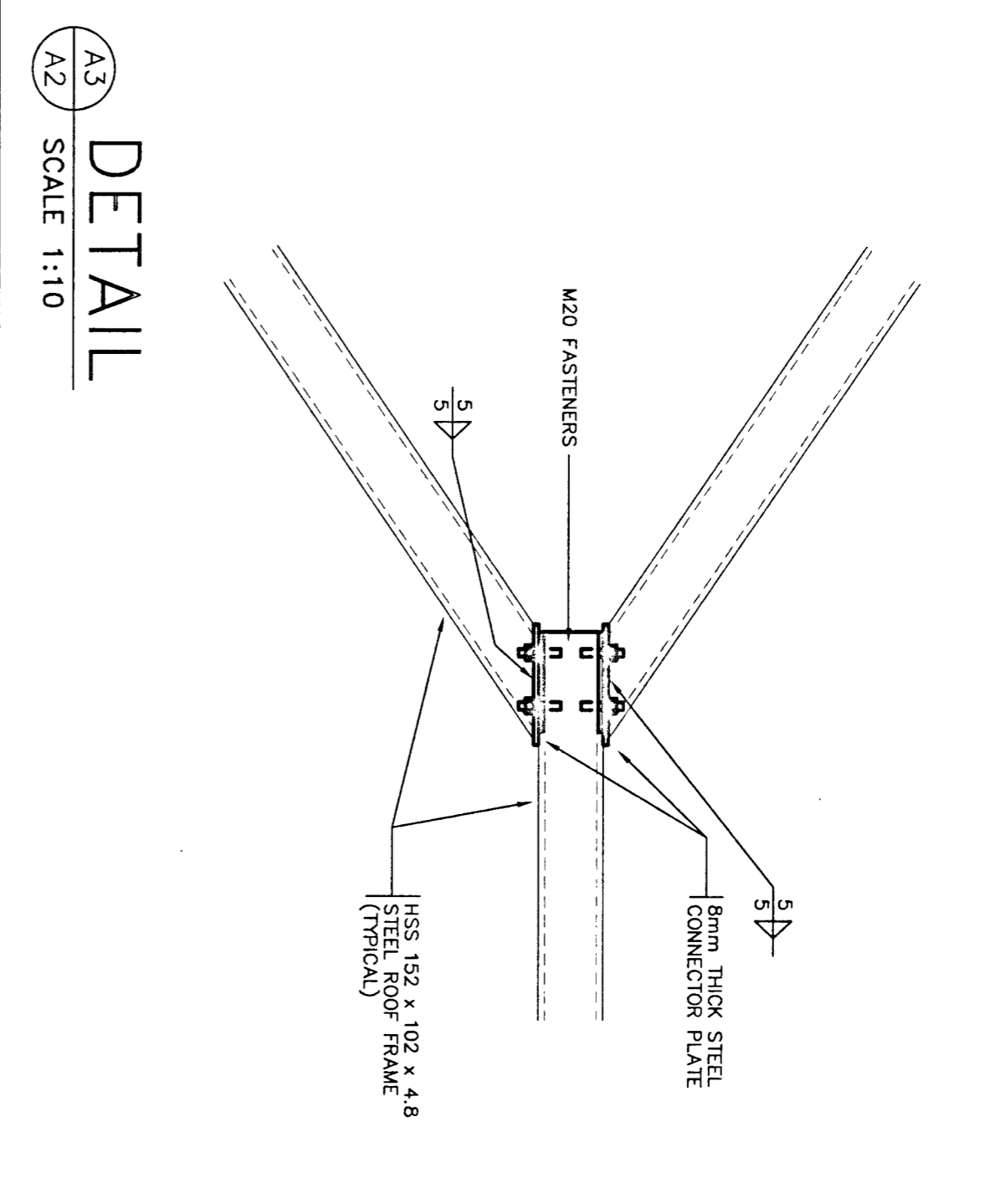
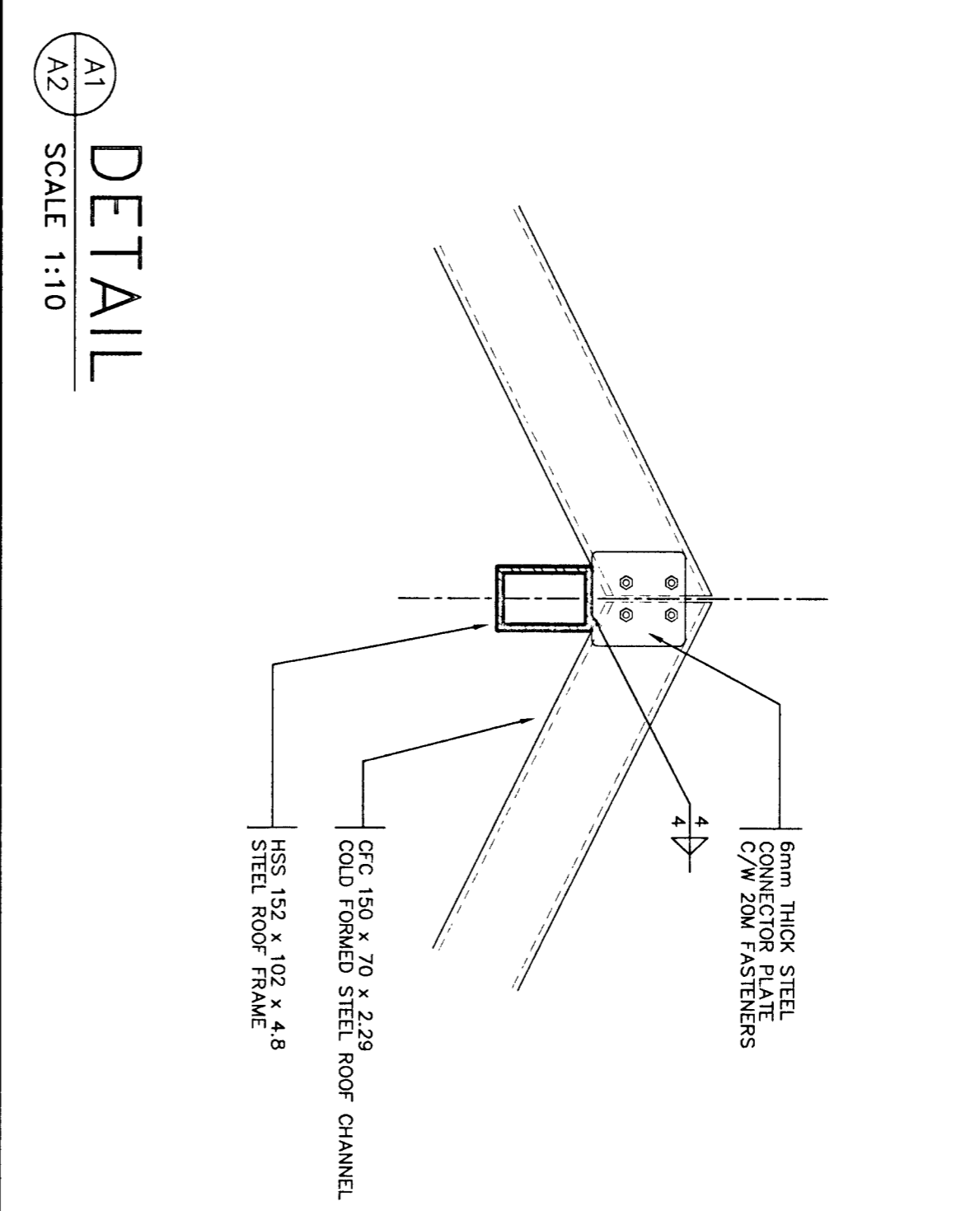
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Project	INGLESIDE SEWAGE PUMPING STATION MODIFICATIONS
M.O.E. PROJECT No.	40-0797
Title	WALL SECTIONS
Design	G.C.
Scale	AS SHOWN
Check	D.M.S.
Date	AUGUST 1993
Draw No.	A-4

TYPICAL ROOF CONSTRUCTION
PREFINISHED METAL ROOF WITH RAISED SEAM 75mm METAL Z-GIRTS @ 1200mm o.c. WITH NEOPRENE ISOLATION WASHERS WITH 75mm POLYURETHANE INSULATION 75mm GYPSUM BOARD VAPOR BARRIER PREFINISHED METAL LINER PANEL 150 x 70 x 225mm STEEL CHANNEL @ 200mm o.c. 4.8mm HSS ROOF FRAME PAINT FINISH

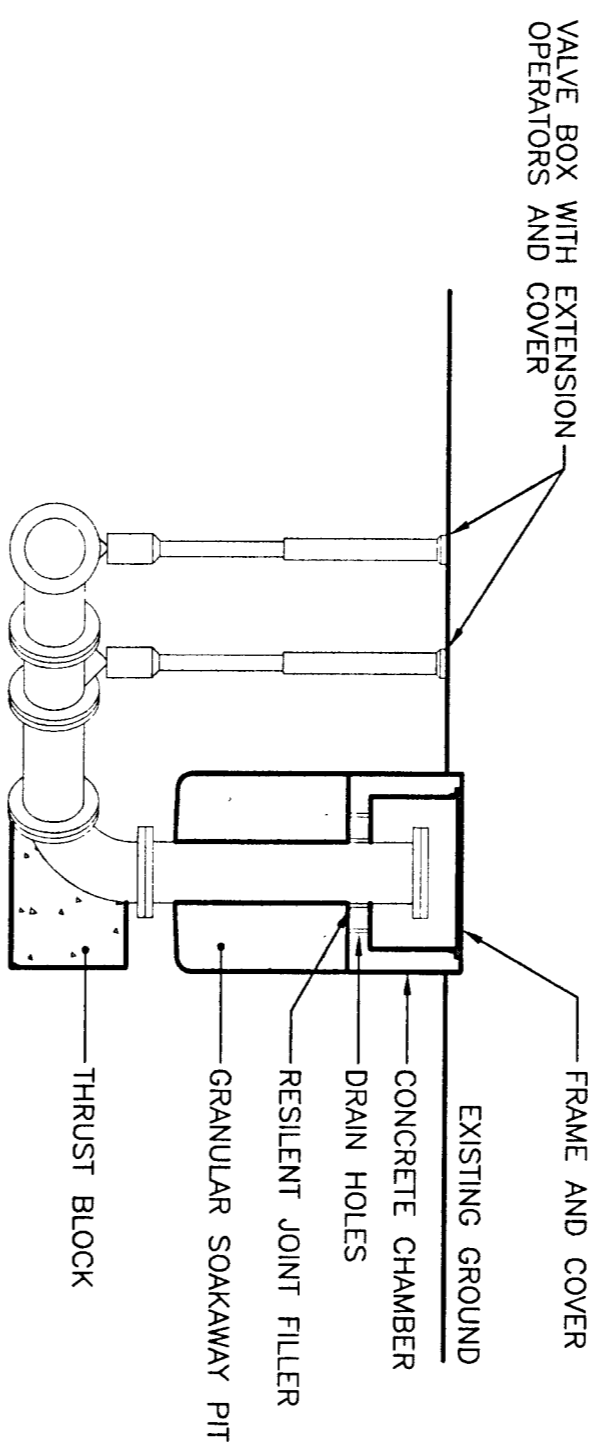
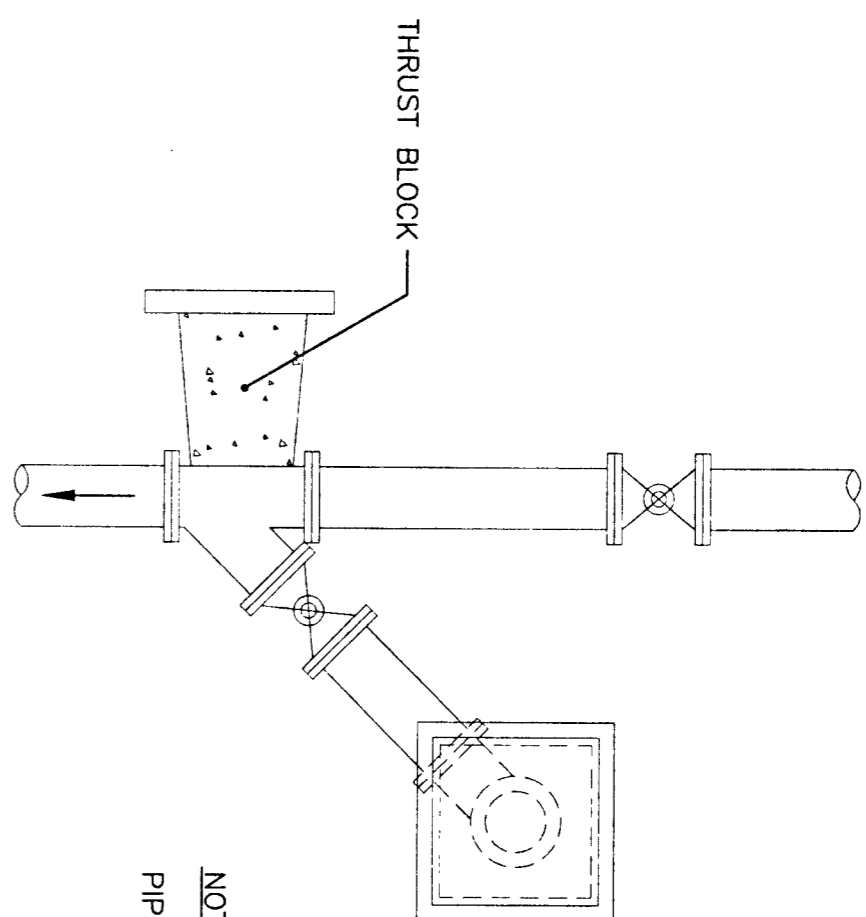


C3
WALL SECTION
SCALE 1:10

TOWNSHIP OF OSNABRUCK INGEISIDE SEWAGE PUMPING STATION MODIFICATIONS M.O.E. PROJECT No.40-0797		OWNER TOWNSHIP OF OSNABRUCK PROJECT INGEISIDE SEWAGE PUMPING STATION MODIFICATIONS M.O.E. PROJECT No.40-0797	REGISTERED PROFESSIONAL ENGINEER R. GOUBRO MEMBER OF THE ORDER OF ENGINEERS												
MCNEELY ENGINEERING CONSULTANTS LTD.		DETAILS													
Design: G.C. Drawn: D.M.S.	Scale: AS SHOWN Check: G.C.	Proj. No: M2544-2 Date: AUGUST 1993	Dwg No: A-5												
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No.	Date	Revision													
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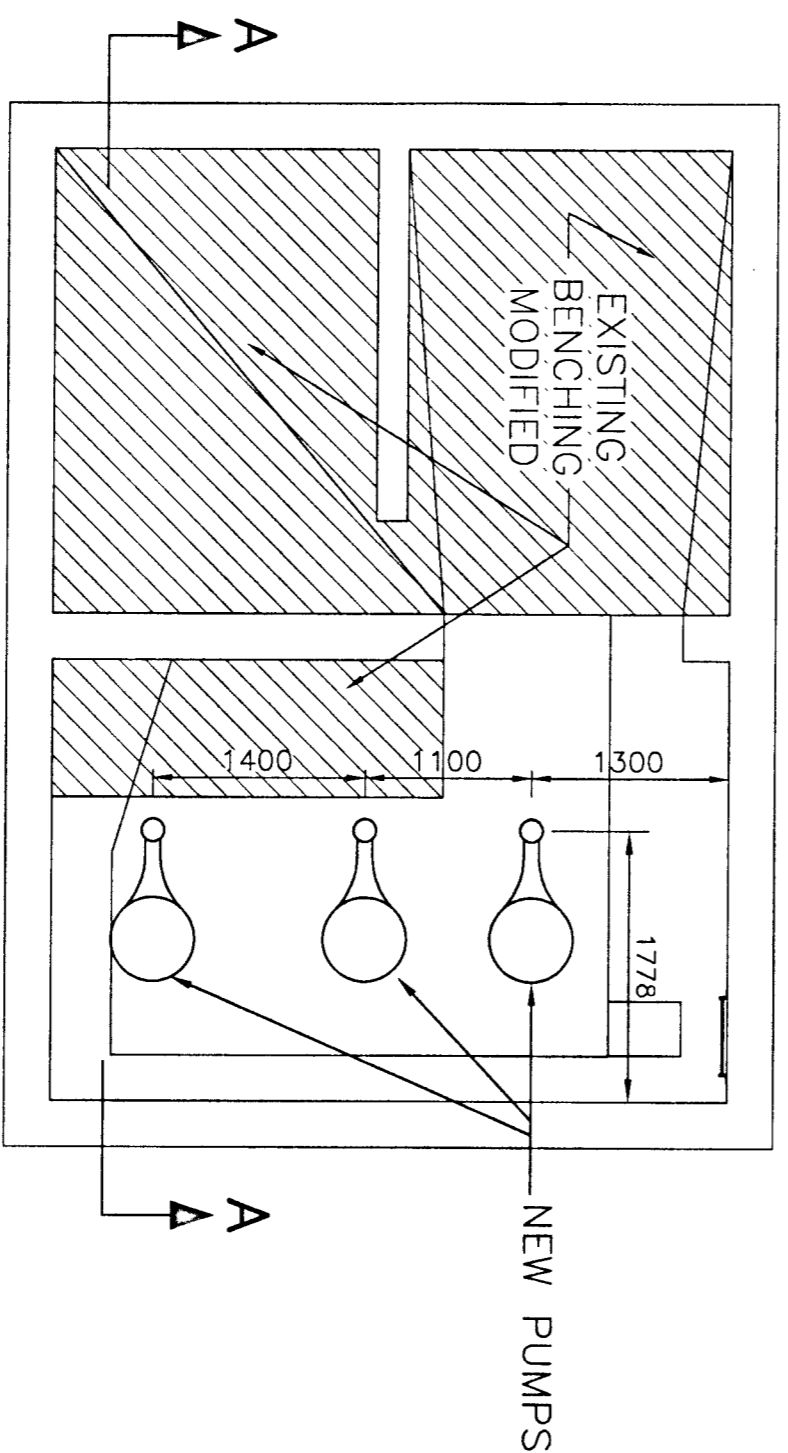


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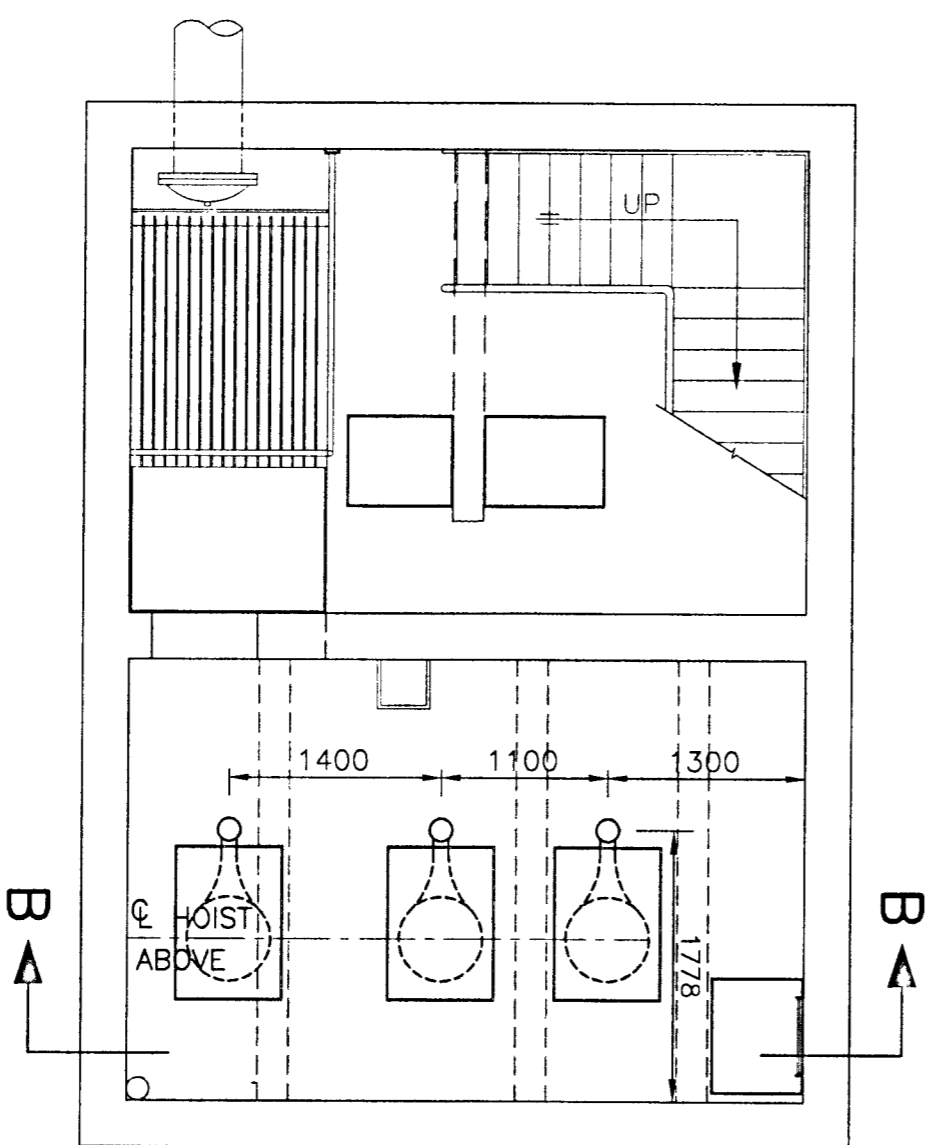


NEW SEWAGE PUMPING STATION BY-PASS CHAMBER

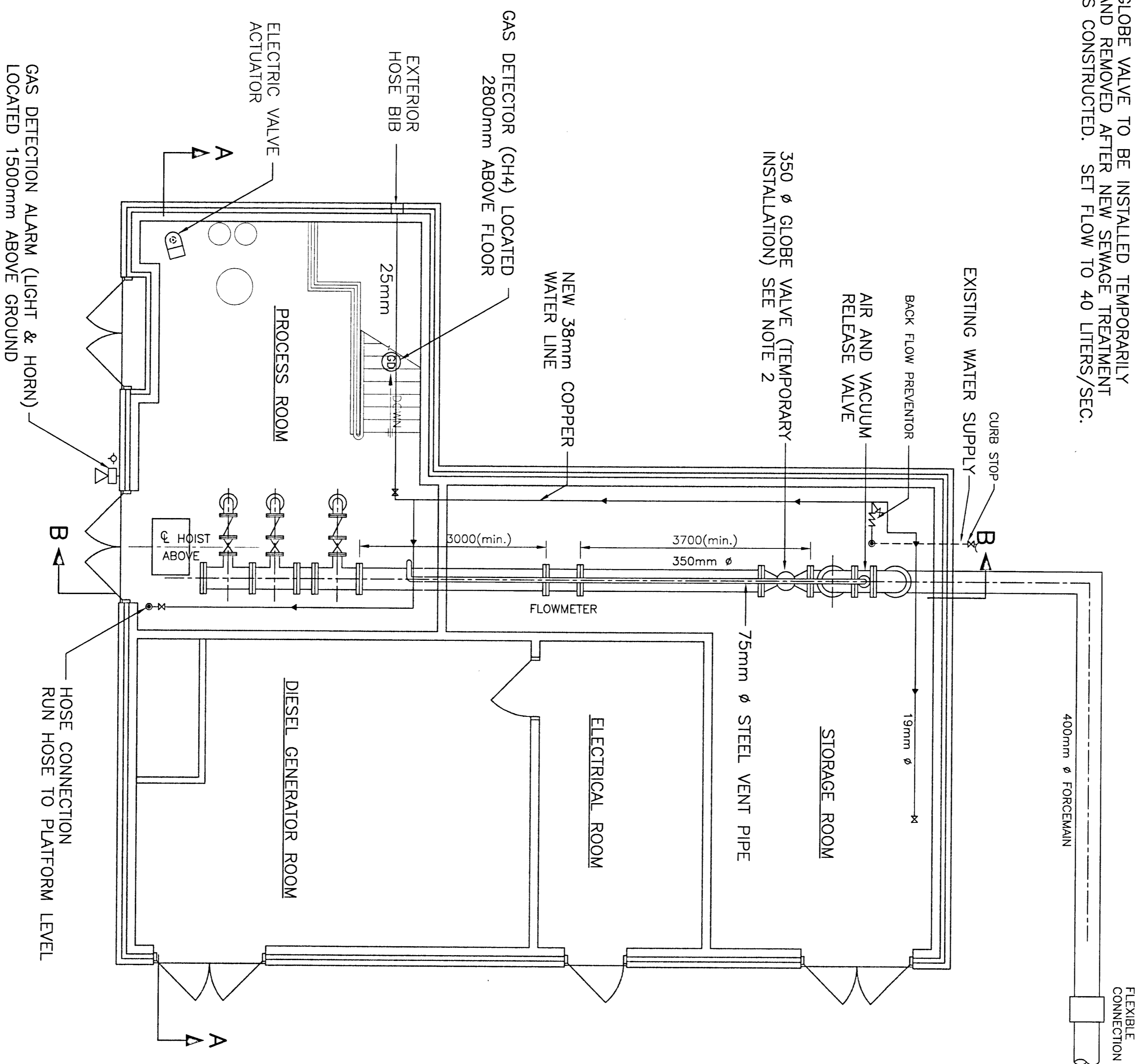
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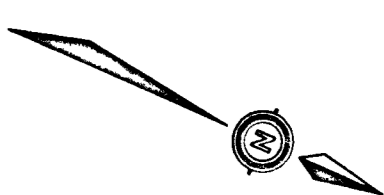
PUMP LEVEL
ELEV. 69.19



PLATFORM LEVEL
ELEV. 72.85



GROUND LEVEL
ELEV. 76.50



SCALE
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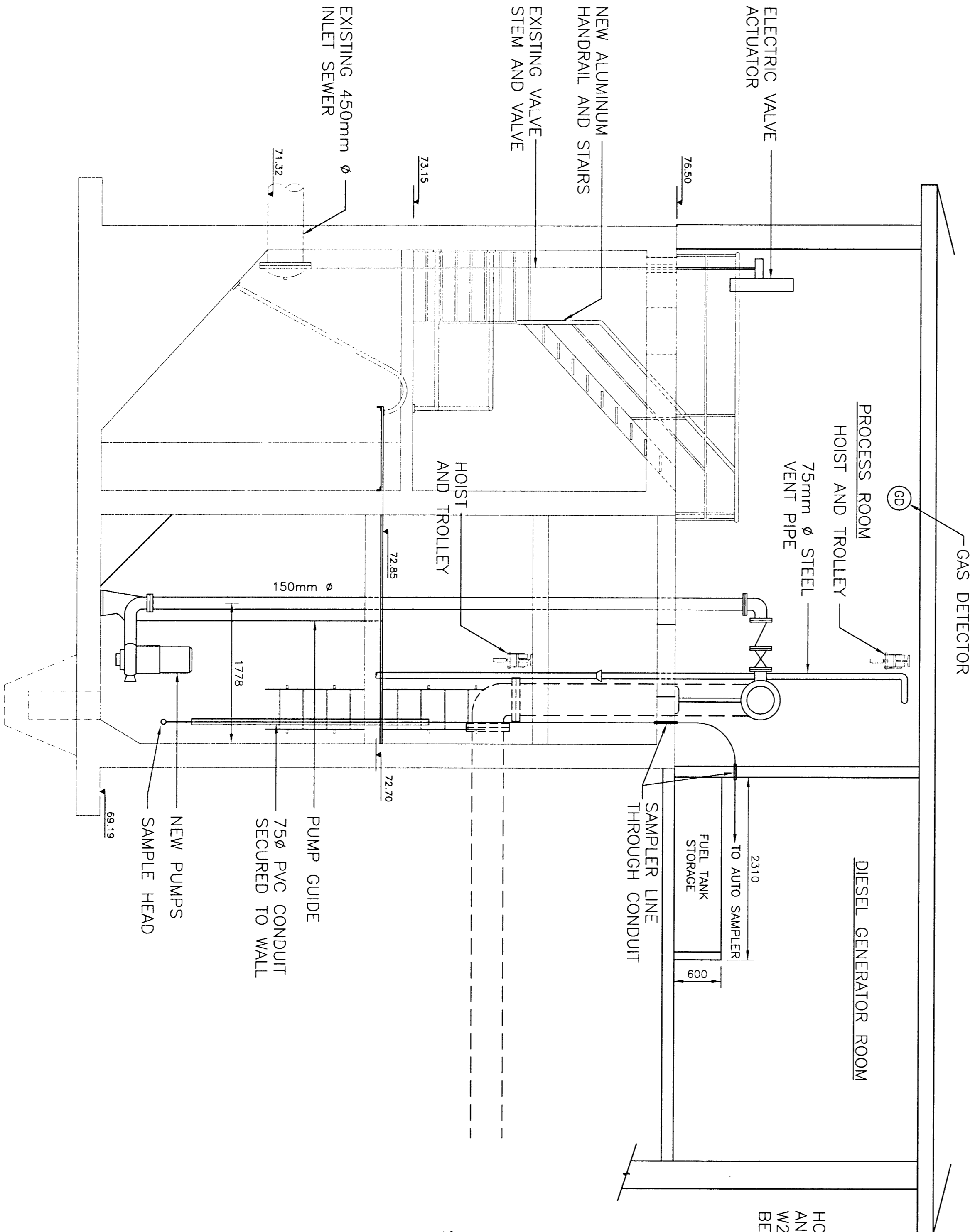
No.	Date	Revision
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1	AUG/97	AS BUILT BY MONEELY ENGINEERING
0	SEPT. 1993	ISSUED FOR M.O.E. REVIEW

REGISTERED PROFESSIONAL ENGINEER
R. GOUBKO
Member of
MONEELY ENGINEERING CONSULTANTS LTD.

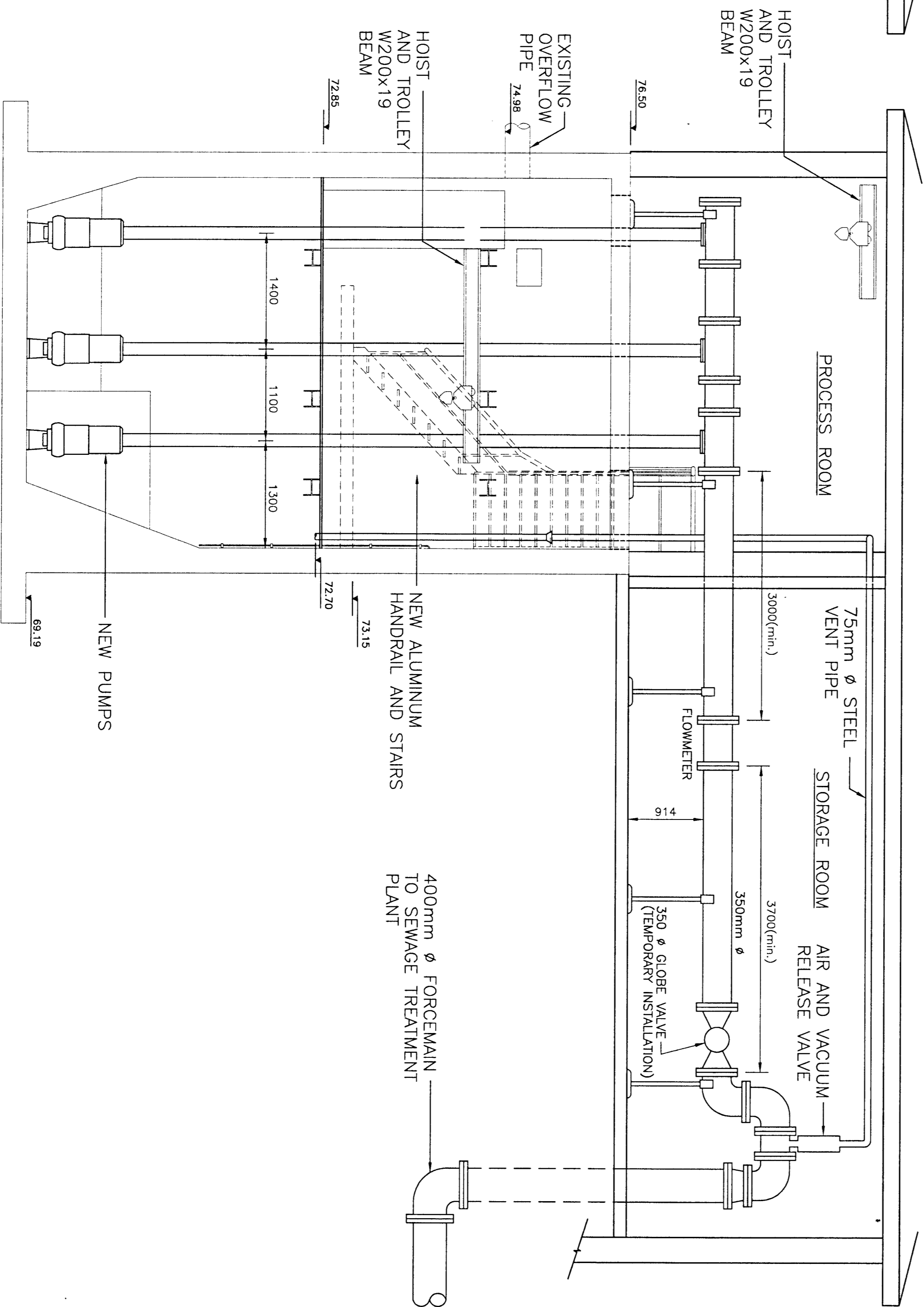
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Project	INGSIDE SEWAGE PUMPING STATION MODIFICATIONS		
Title	PROCESS PIPING PLAN		
Design	R.G.	Scale	AS SHOWN
Drawn	G.R.L.	Check	R.G.
Proj. No.	M2544-2	Date	AUG. 1993
Dwg No.	P-1		

- NOTE:
1. ALL PROCESS PIPING INSIDE SEWAGE PUMPING STATION AND UP TO FLEXIBLE CONNECTION TO BE STEEL PIPE.
 2. GLOBE VALVE TO BE INSTALLED TEMPORARILY AND REMOVED AFTER NEW SEWAGE TREATMENT IS CONSTRUCTED. SET FLOW TO 40 LITERS/SEC.

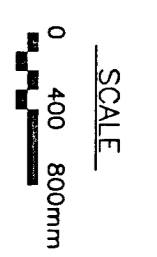
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 FROM DAMAGE DURING CONSTRUCTION.



SECTION A-A



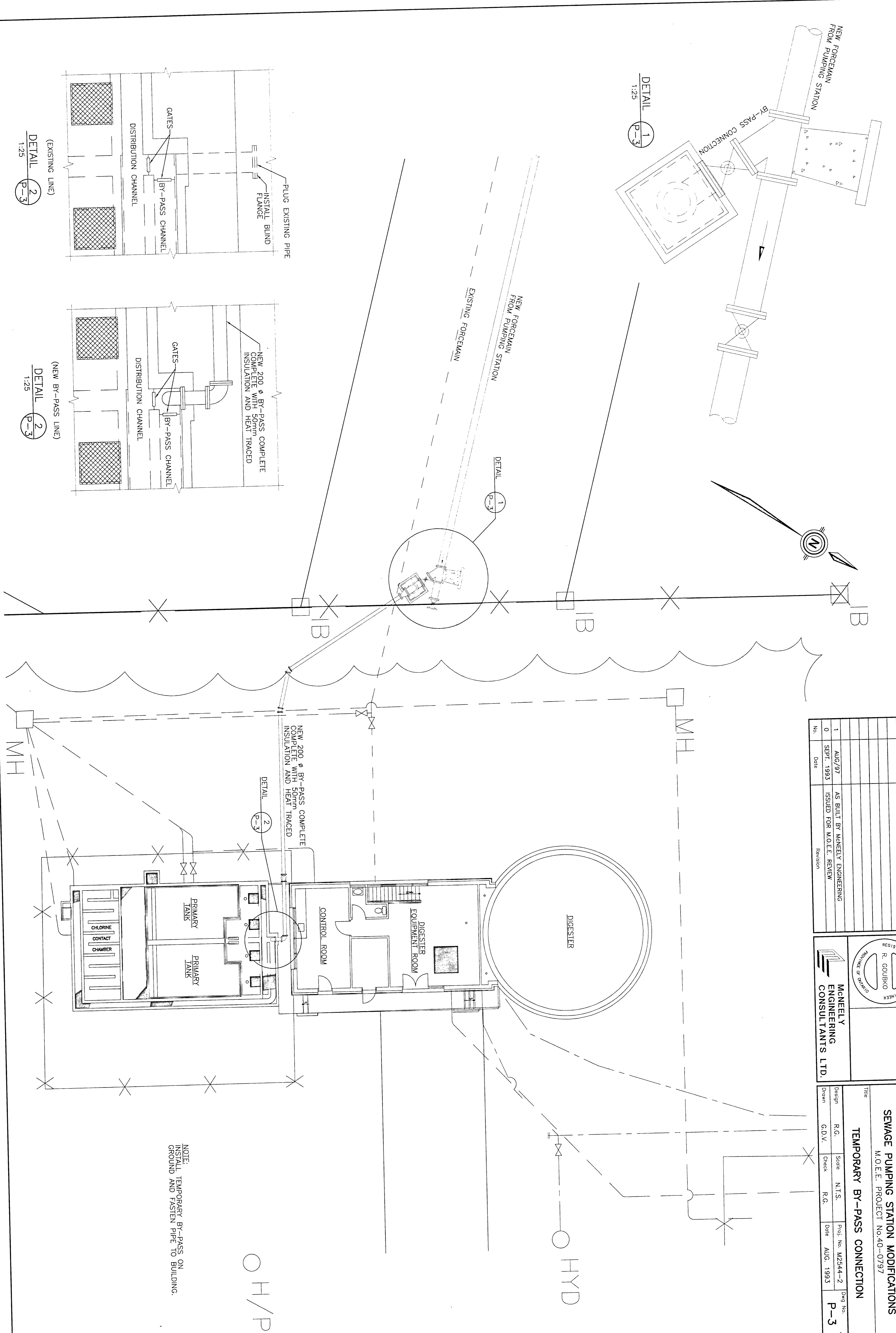
SECTION B-B



No.	Date	Revision
2	FEB/98	AS BUILT BY MCNEELY ENGINEERING
1	AUG/97	AS BUILT BY MCNEELY ENGINEERING
0	SEPT. 1993	ISSUED FOR M.O.E. REVIEW

REGISTERED PROFESSIONAL ENGINEERS
 R. GOJBKO
 MEMBER OF THE ORDER OF ENGINEERS
McNEELY ENGINEERING CONSULTANTS LTD.

Owner	TOWNSHIP OF OSNABRUCK
Project	INGLESIDE SEWAGE PUMPING STATION MODIFICATIONS
	M.O.E. PROJECT No.40-0797
Title	PROCESS PIPING SECTIONS
Design	R.G.
Drawn	G.R.L.
Scale	AS SHOWN
Check	R.G.
Proj. No.	M2544-2
Date	AUG. 1993
Draw'g No.	P-2



No.	Date	Revision
1	AUG/97	AS BUILT BY MCNEELY ENGINEERING
0	SEPT. 1993	ISSUED FOR M.O.E. REVIEW

REGISTERED PROFESSIONAL ENGINEER
 R. GOUBKO
 PROJECT ENGINEER

McNEELY ENGINEERING CONSULTANTS LTD.

Owner	TOWNSHIP OF OSNABRUCK						
Project	INGLESIDE SEWAGE PUMPING STATION MODIFICATIONS						
	M.O.E. PROJECT No.40-0797						
Title	TEMPORARY BY-PASS CONNECTION						
Design	R.G.	Scale	N.T.S.	Proj. No.	M2544-2	Dwg No.	P-3
Drawn	G.D.V.	Check	R.G.	Date	AUG. 1993		

NOTE:
 INSTALL TEMPORARY BY-PASS ON
 GROUND AND FASTEN PIPE TO BUILDING.

NOTE:
THE LOCATION OF UTILITIES IS APPROXIMATE ONLY, AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE THE LOCATION OF UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION FROM DAMAGE DURING CONSTRUCTION.

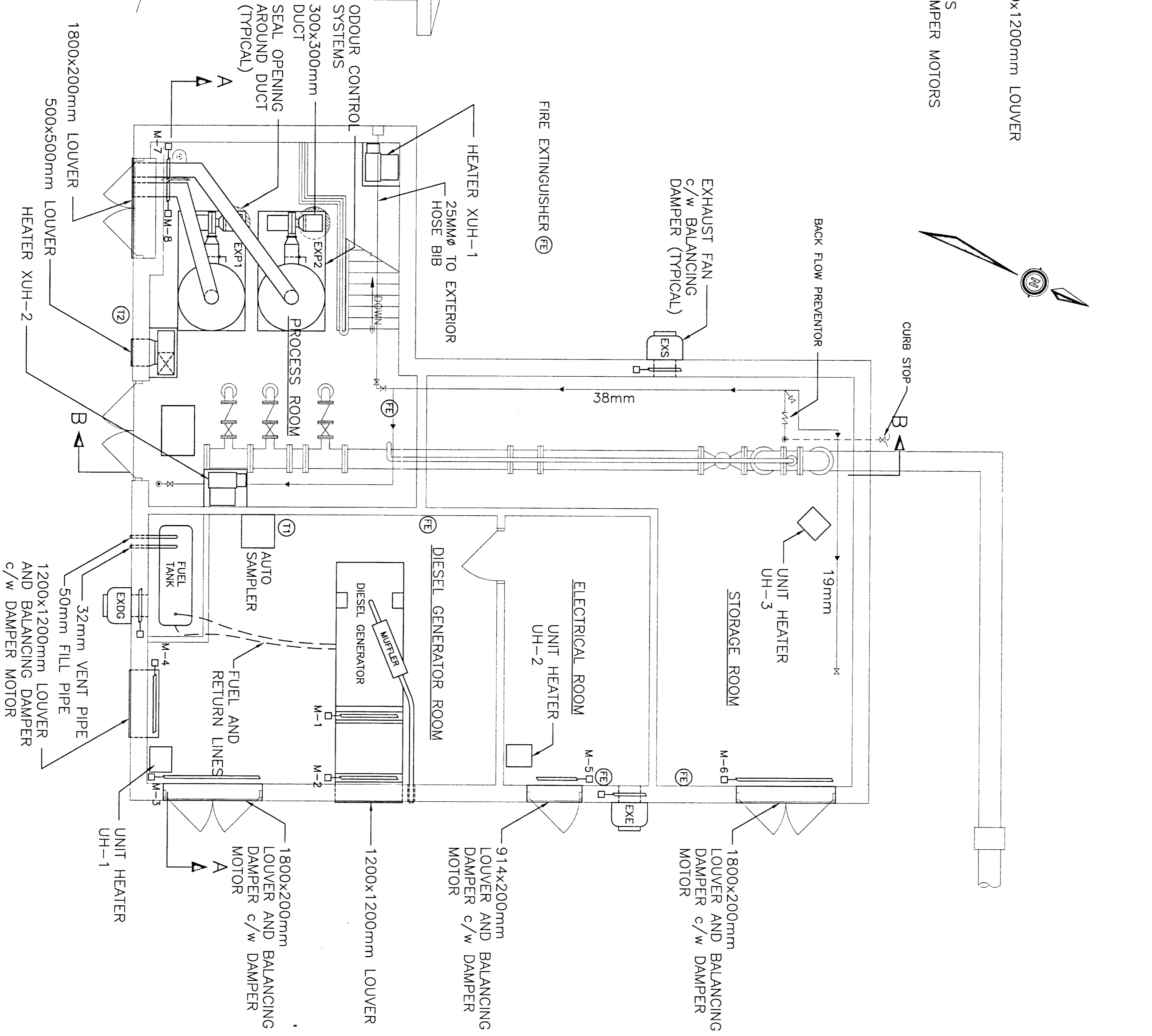
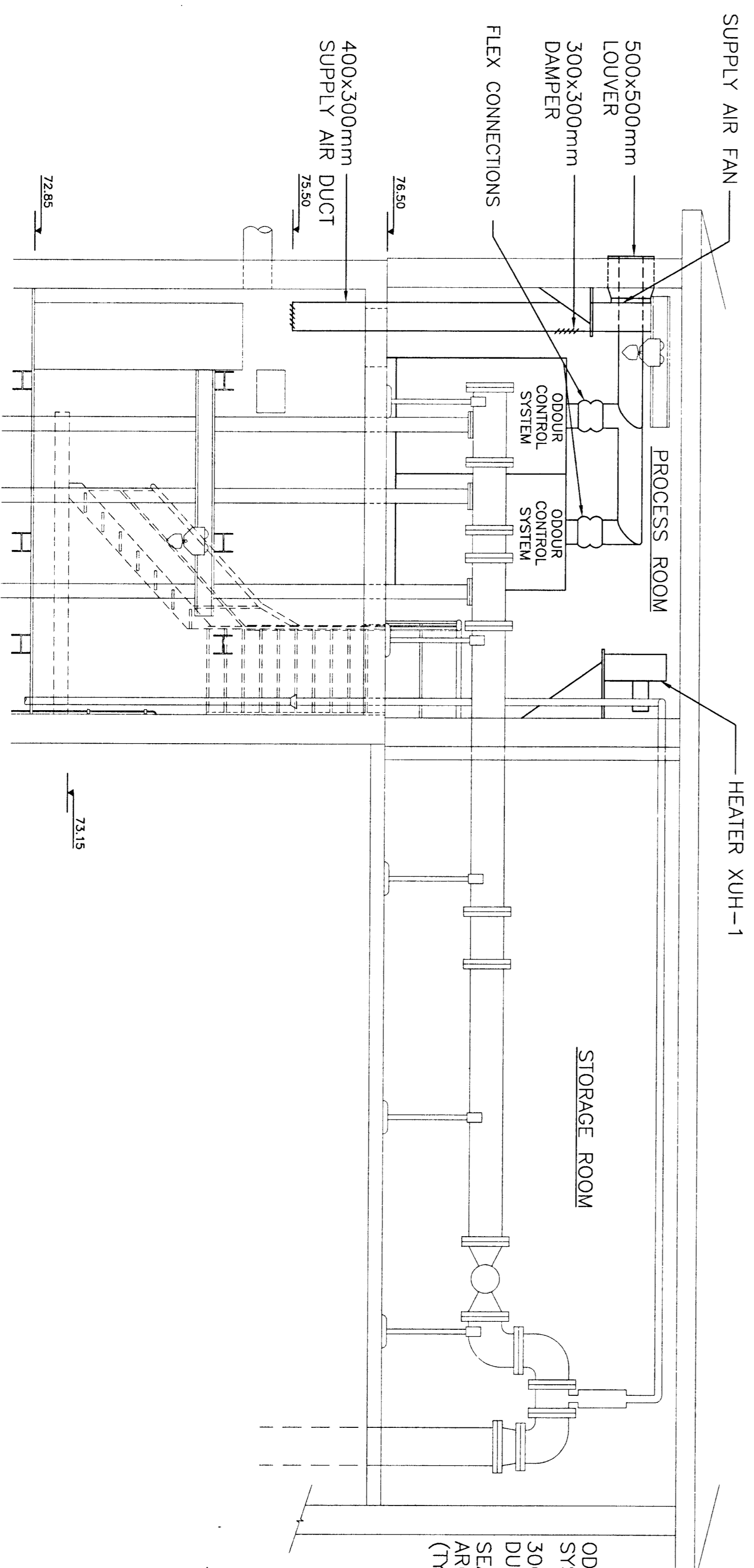
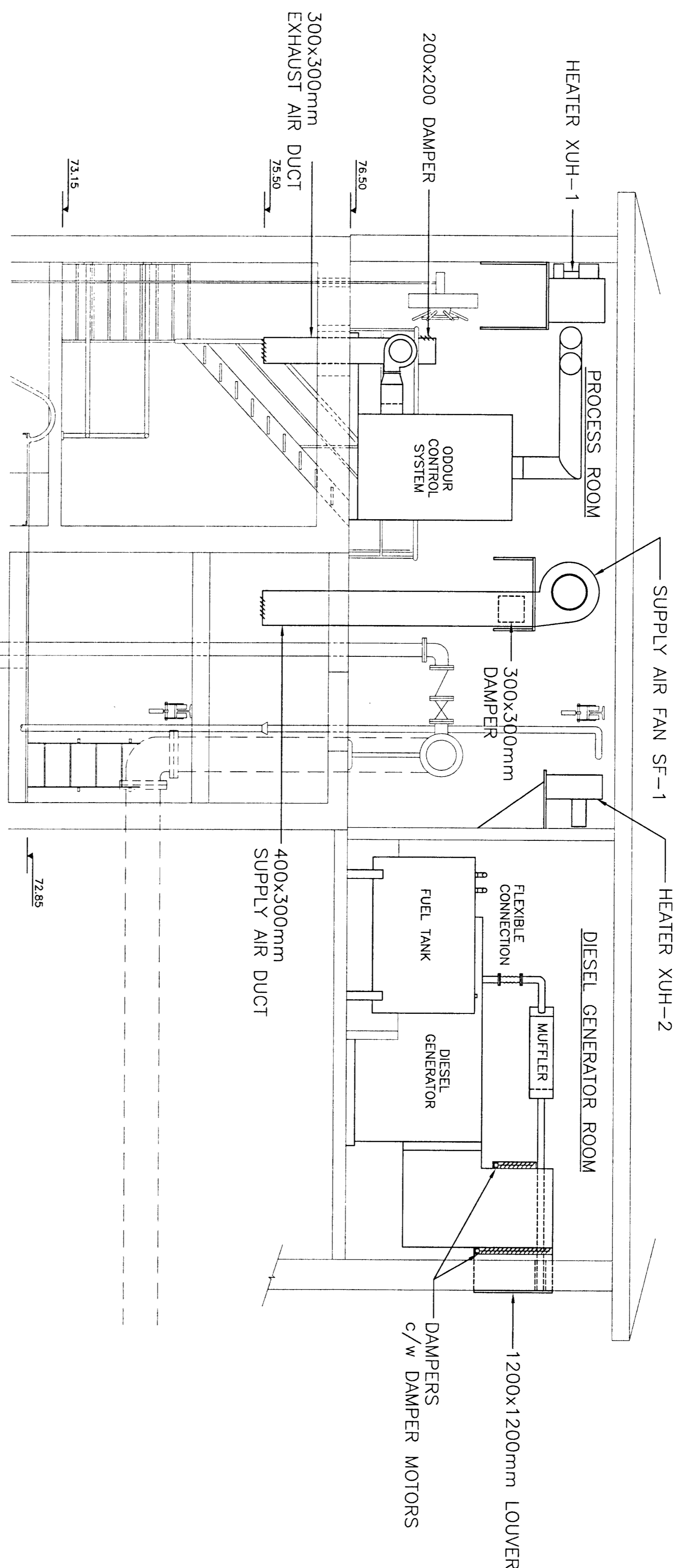
SCALE
0 400 800mm

No.	Date	Revision
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1	AUG/97	AS BUILT BY MCNEELY ENGINEERING
0	SEPT. 1993	ISSUED FOR M.O.E. REVIEW

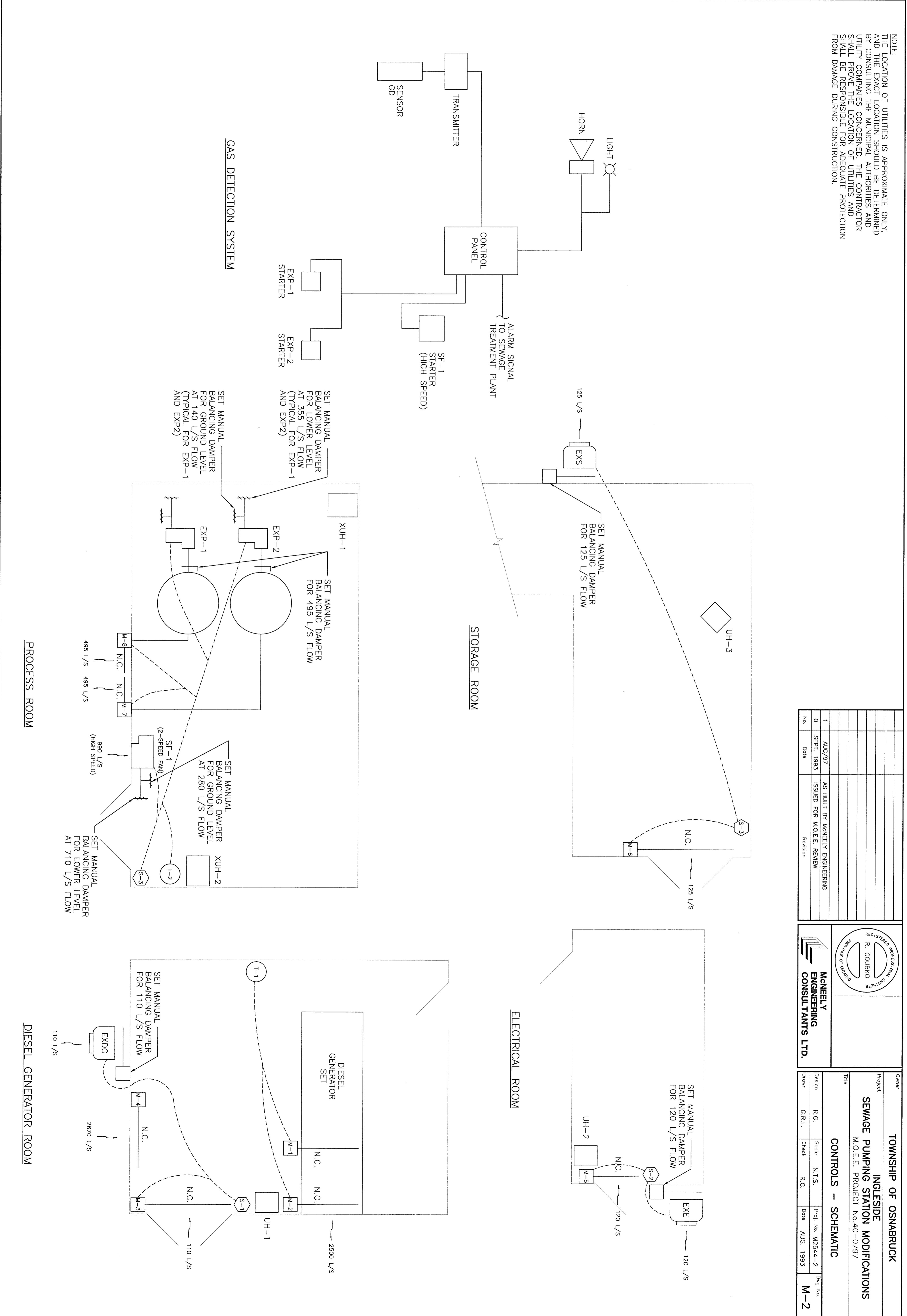
REGISTERED PROFESSIONAL ENGINEER
R. GOLUBKO
MEMBER OF THE ORDER OF ENGINEERS

MCNEELY ENGINEERING CONSULTANTS LTD.

Owner	TOWNSHIP OF OSNABRUCK
Project	INGLETSIDE SEWAGE PUMPING STATION MODIFICATIONS M.O.E. PROJECT No.40-0797
Title	H.V. SYSTEMS PLAN AND SECTIONS
Design	R.G.
Drawn	G.R.L.
Scale	AS SHOWN
Check	R.G.
Prof. No.	M2544-2
Date	AUG. 1993
Proj. No.	M-1



NOTE:
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 AND THE EXACT LOCATION SHOULD BE DETERMINED
 BY CONSULTING THE MUNICIPAL AUTHORITIES AND
 UTILITY COMPANIES CONCERNED. THE CONTRACTOR
 SHALL PROVE THE LOCATION OF UTILITIES AND
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 FROM DAMAGE DURING CONSTRUCTION.



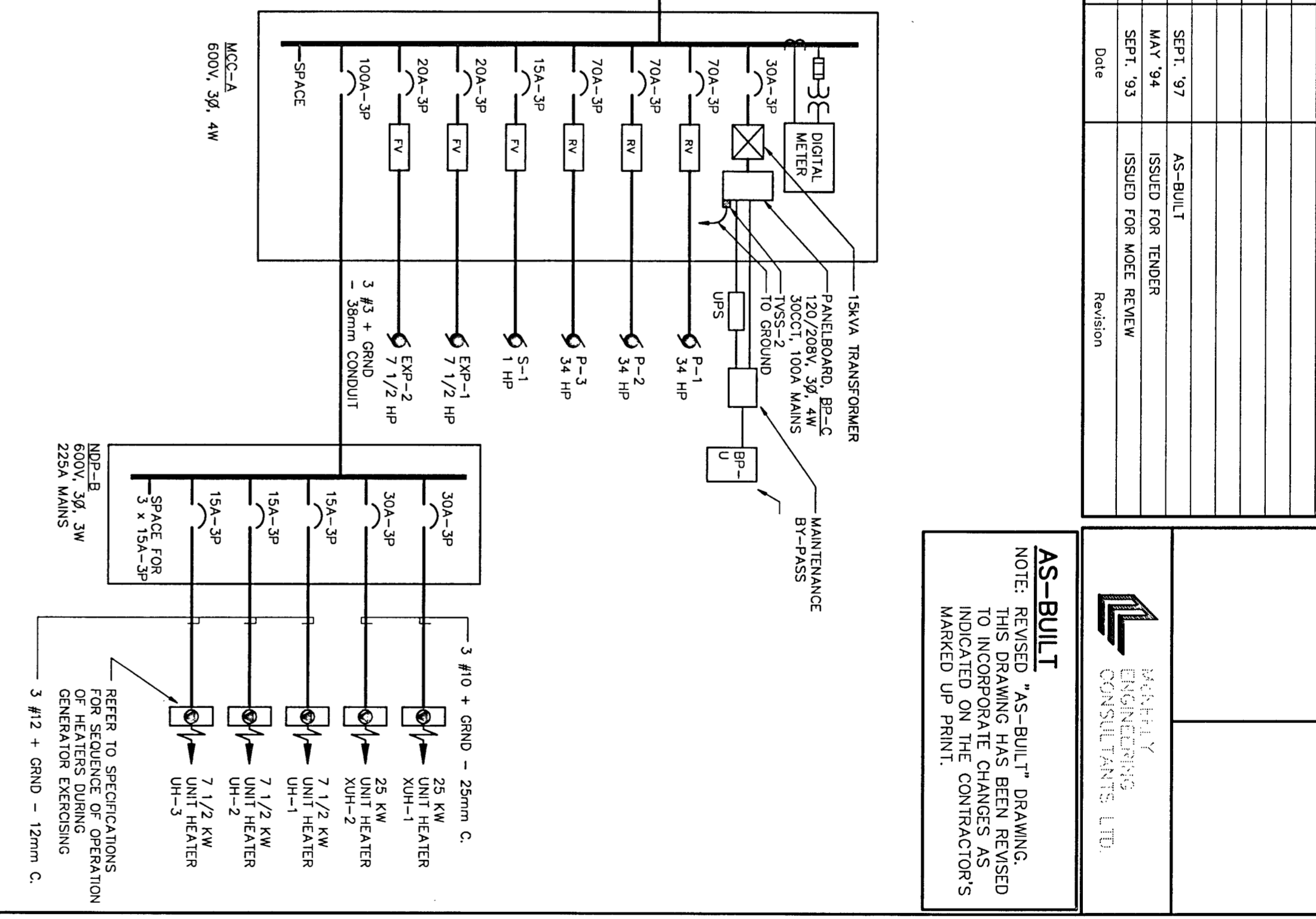
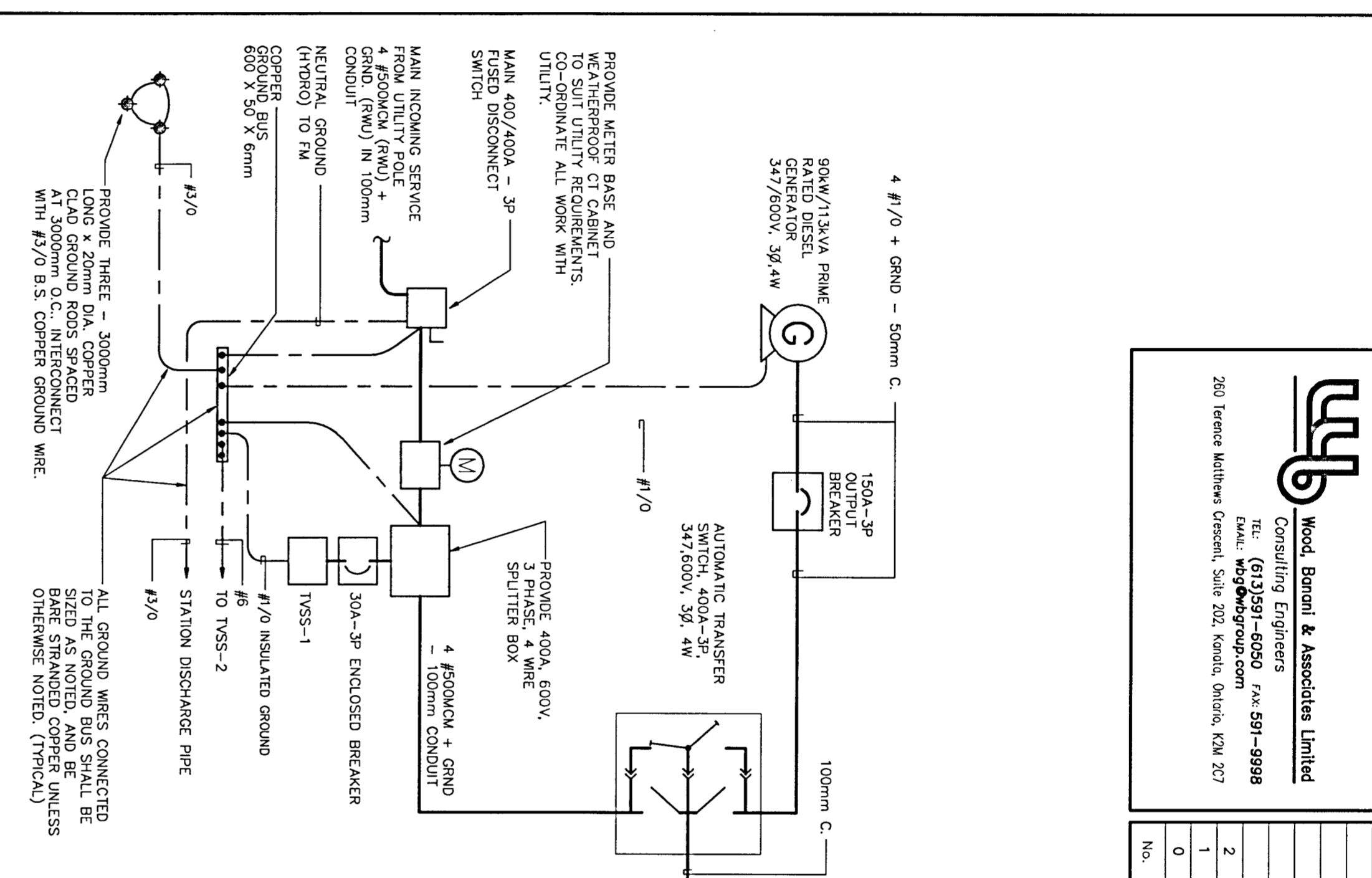
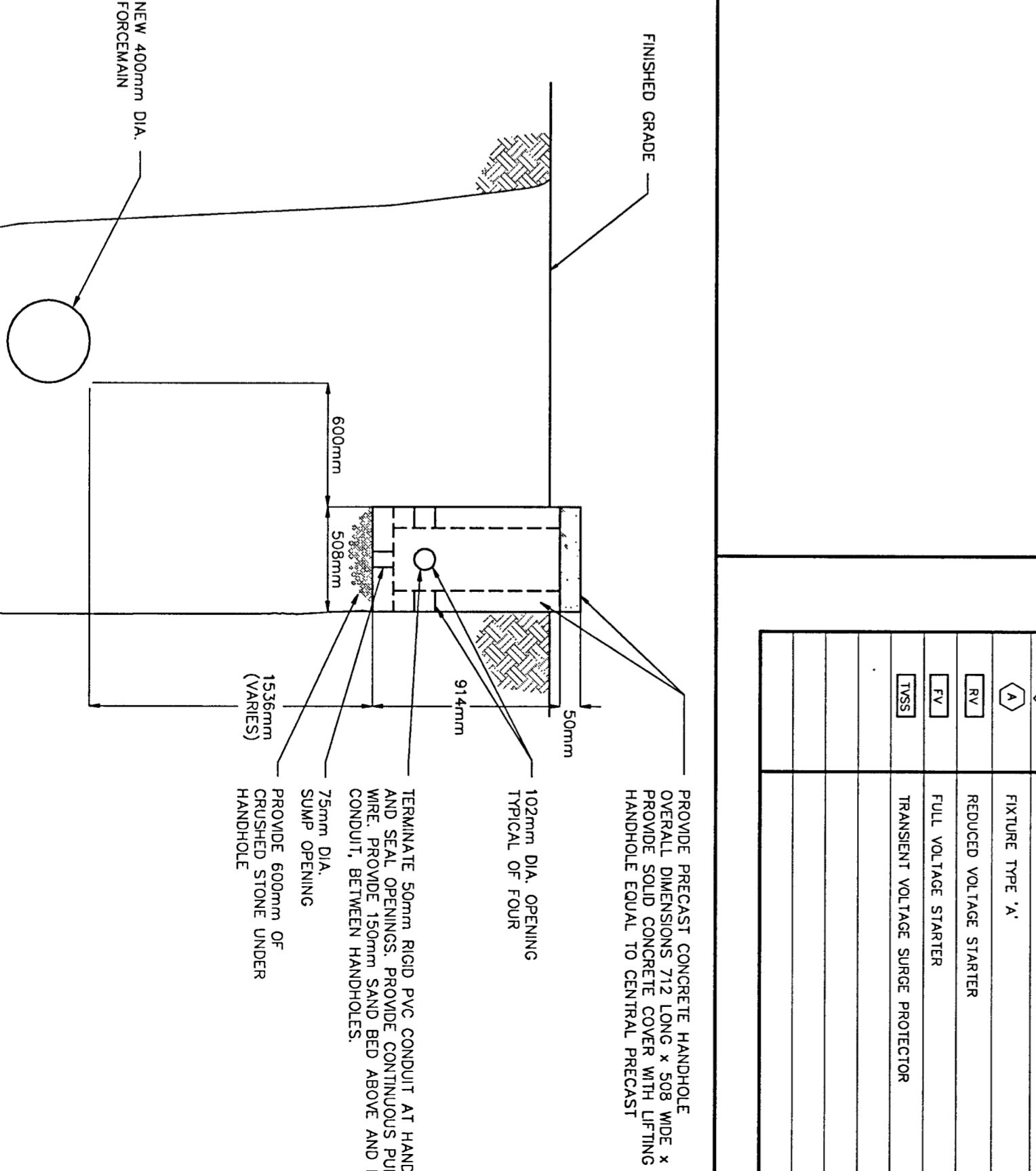
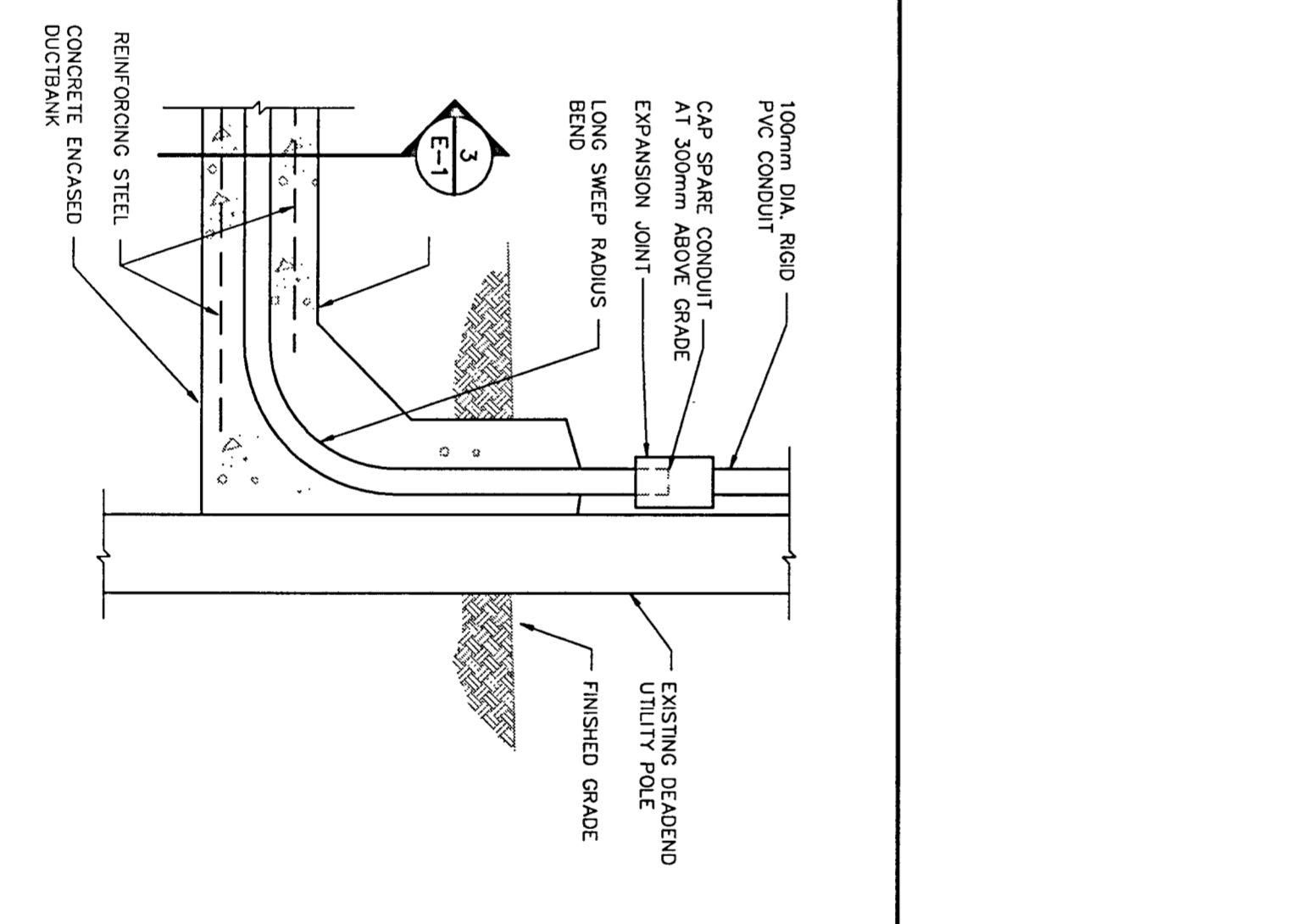
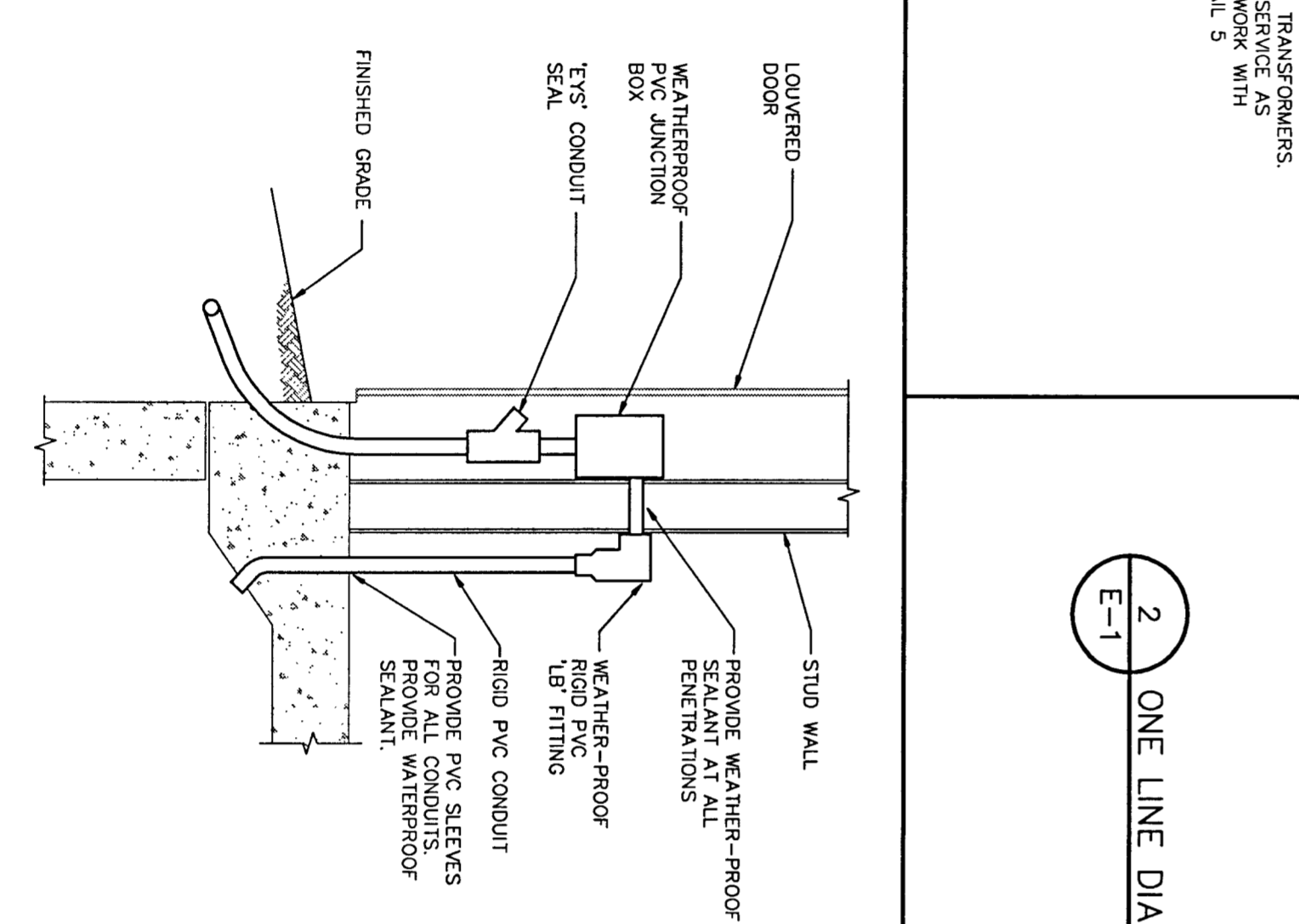
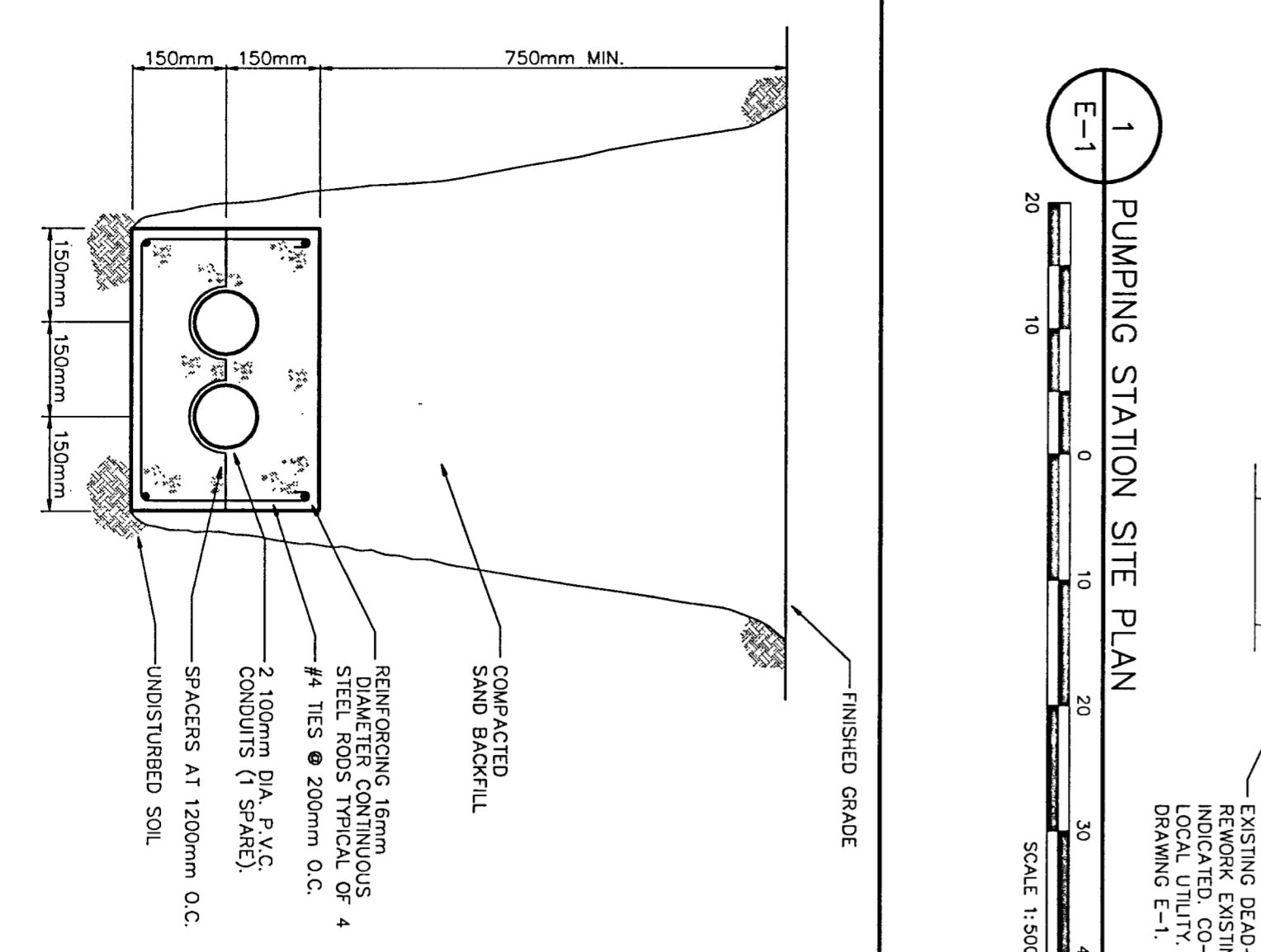
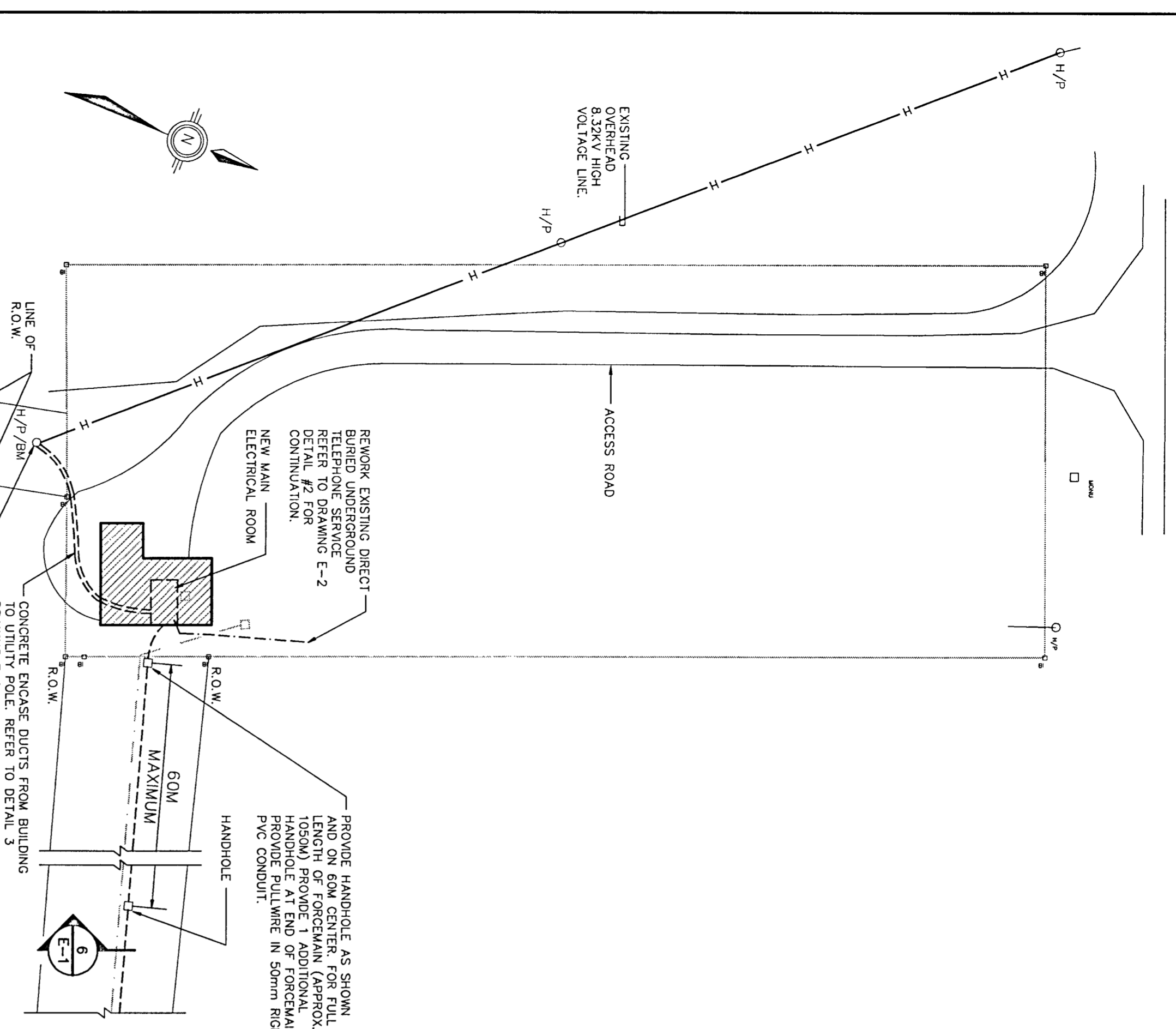
No.	Date	Revision
1	AUG/97	AS BUILT BY MCNEELY ENGINEERING
0	SEPT. 1993	ISSUED FOR M.O.E.E. REVIEW

REGISTERED PROFESSIONAL ENGINEER
 R. COULBKO
 PROJECT ENGINEER

McNEELY ENGINEERING CONSULTANTS LTD.

Owner	TOWNSHIP OF OSNABRUCK
Project	INGLESIDE SEWAGE PUMPING STATION MODIFICATIONS
Title	M.O.E.E. PROJECT No.40-0797
Design	R.G.
Scale	N.T.S.
Proj. no.	M2544-2
Date	AUG. 1993
Draw No.	M-2
Check	R.G.
Drawn	G.R.L.

HIGHWAY #2



DWG. #	DESCRIPTION
E-1	SITE PLAN, LEGEND, ONE LINE DIAGRAM AND DETAILS
E-2	FLOOR PLAN, WELL LAYOUTS AND WET WELL SECTION
E-3	MOTOR CONTROL, PANEL, HEATER SCHEDULES & MCC ELEVATION
E-4	CONTROL AND INSTRUMENTATION DIAGRAMS

W&P
Wood, Bonani & Associates Limited
Consulting Engineers
Tel: (913) 591-6050 Fax: 591-9998
E-mail: wpa@wpa.com
250 Terrace Walkway, Suite 202, Koolesburg, MO 64601

No.	Date	Revision
2	SEPT. 97	AS-BUILT
1	MAY 94	ISSUED FOR TENDER
0	SEPT. 93	ISSUED FOR MORE REVIEW

AS-BUILT
REVISIONS
CONSULTANTS LTD.

Design	R.D./C.M.	Scale	AS SHOWN	Prof. No.	93034	Dwg. No.	E-1
Drawn	D.A./J.S.	Check	R.D.	Date	JULY 93		

TOWNSHIP OF OSNABRUCK
INGLESIDE
SEWAGE PUMPING STATION MODIFICATIONS
M.O.E. PROJECT No. 40-0797

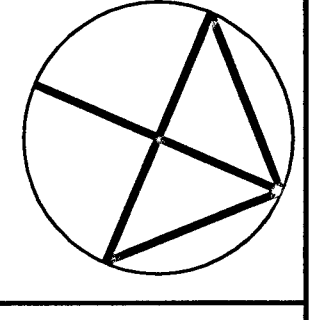
SITE PLAN, LEGEND, ONE LINE
DIAGRAM AND DETAILS

AS-BUILT
NOTE: REVISED "AS-BUILT" DRAWING. THIS DRAWING HAS BEEN REVISED TO REFLECT THE AS-BUILT CONDITIONS INDICATED ON THE CONTRACTOR'S MARKED UP PRINT.



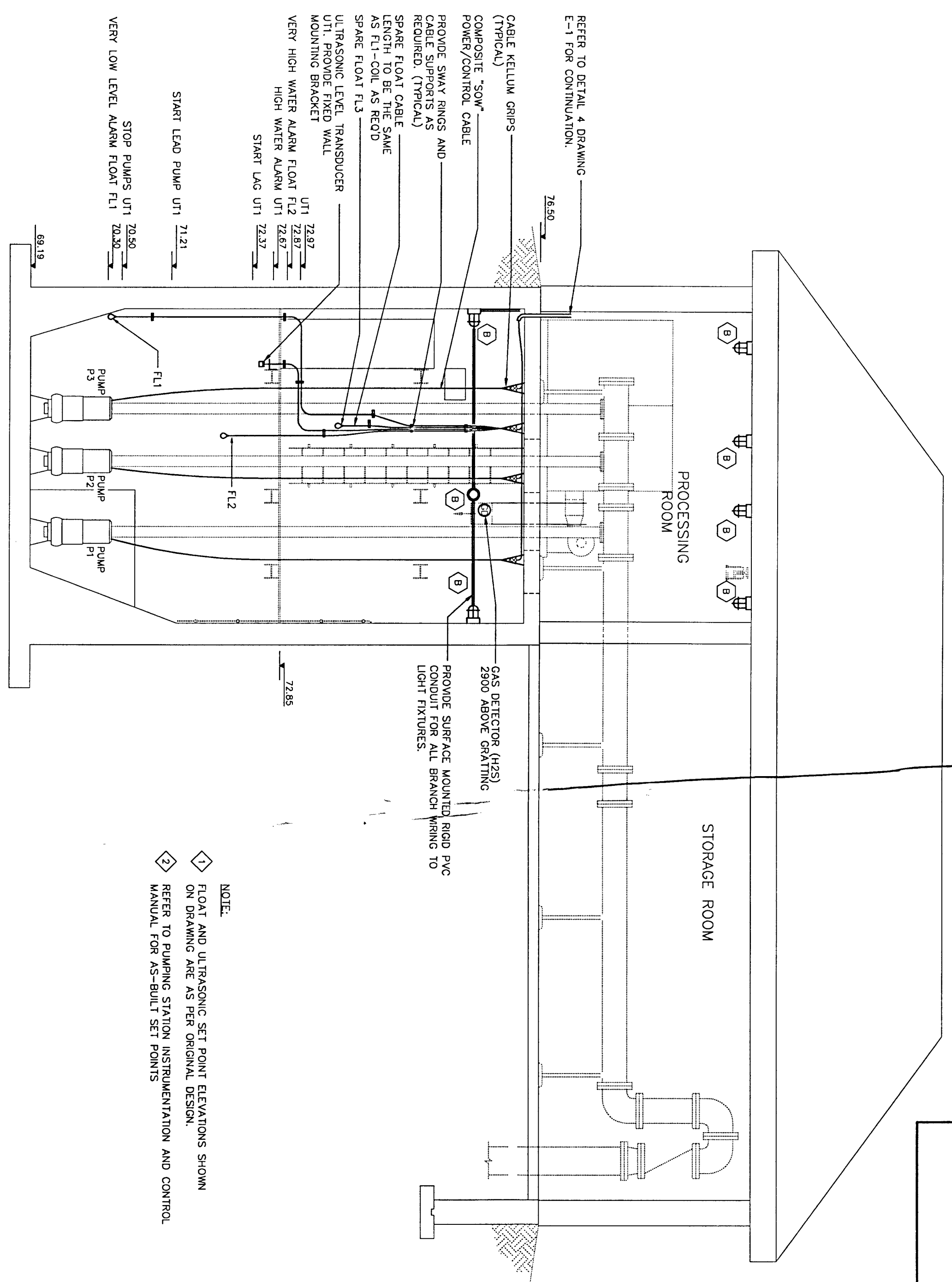
Wood, Bennell & Associates Limited
Consulting Engineers
TEL: (613) 591-6050 FAX: 591-9998
Email: info@wba.com
280 Beech Hollow Crescent, Suite 202, Kanata, Ontario, K2M 2C7

No.	Date	Revision
2	SEPT. 97	AS-BUILT
1	MAY '94	ISSUED FOR TENDER
0	SEPT. 93	ISSUED FOR MORE REVIEW

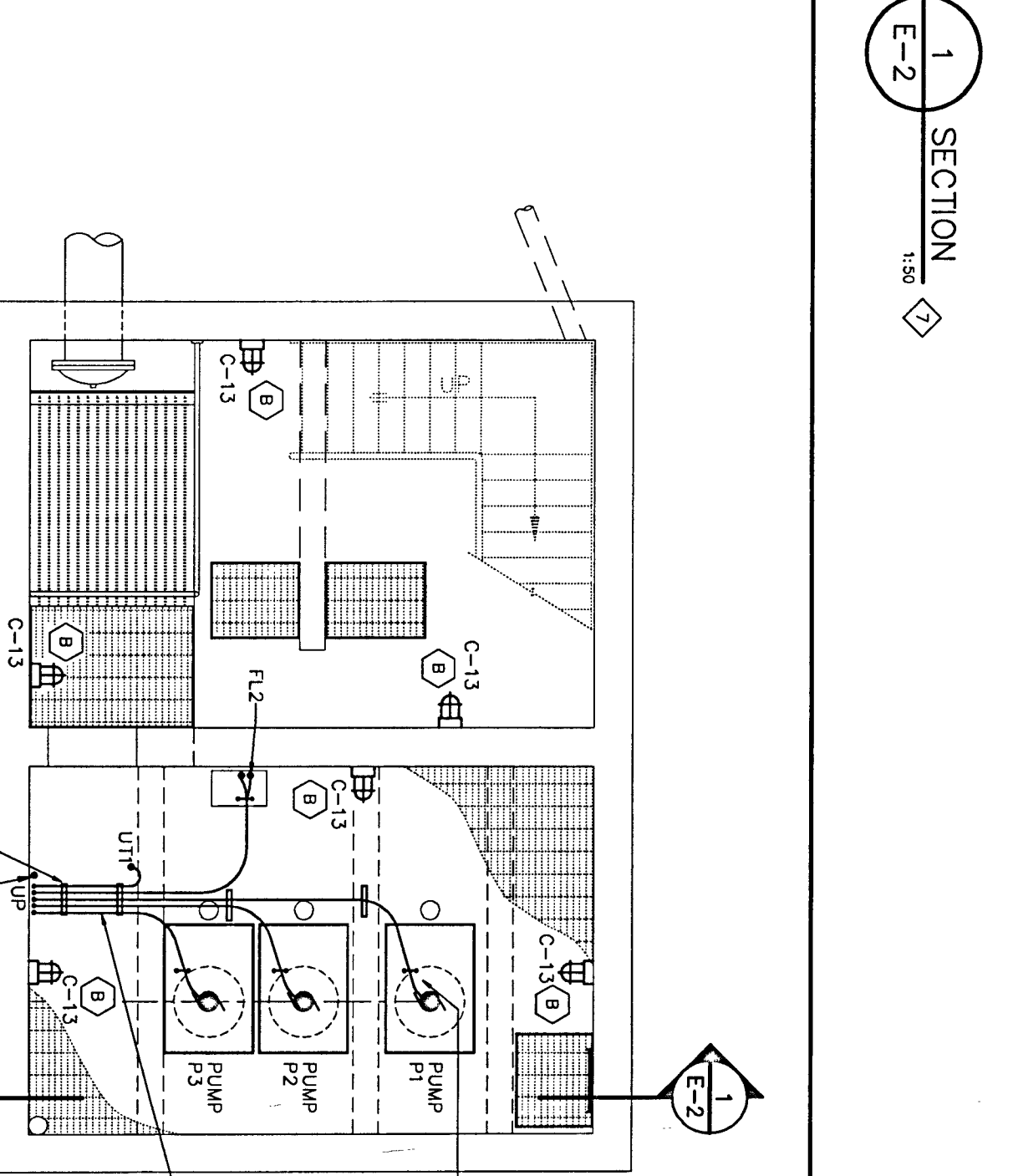


MACKELL'S
CONSULTANTS LTD.

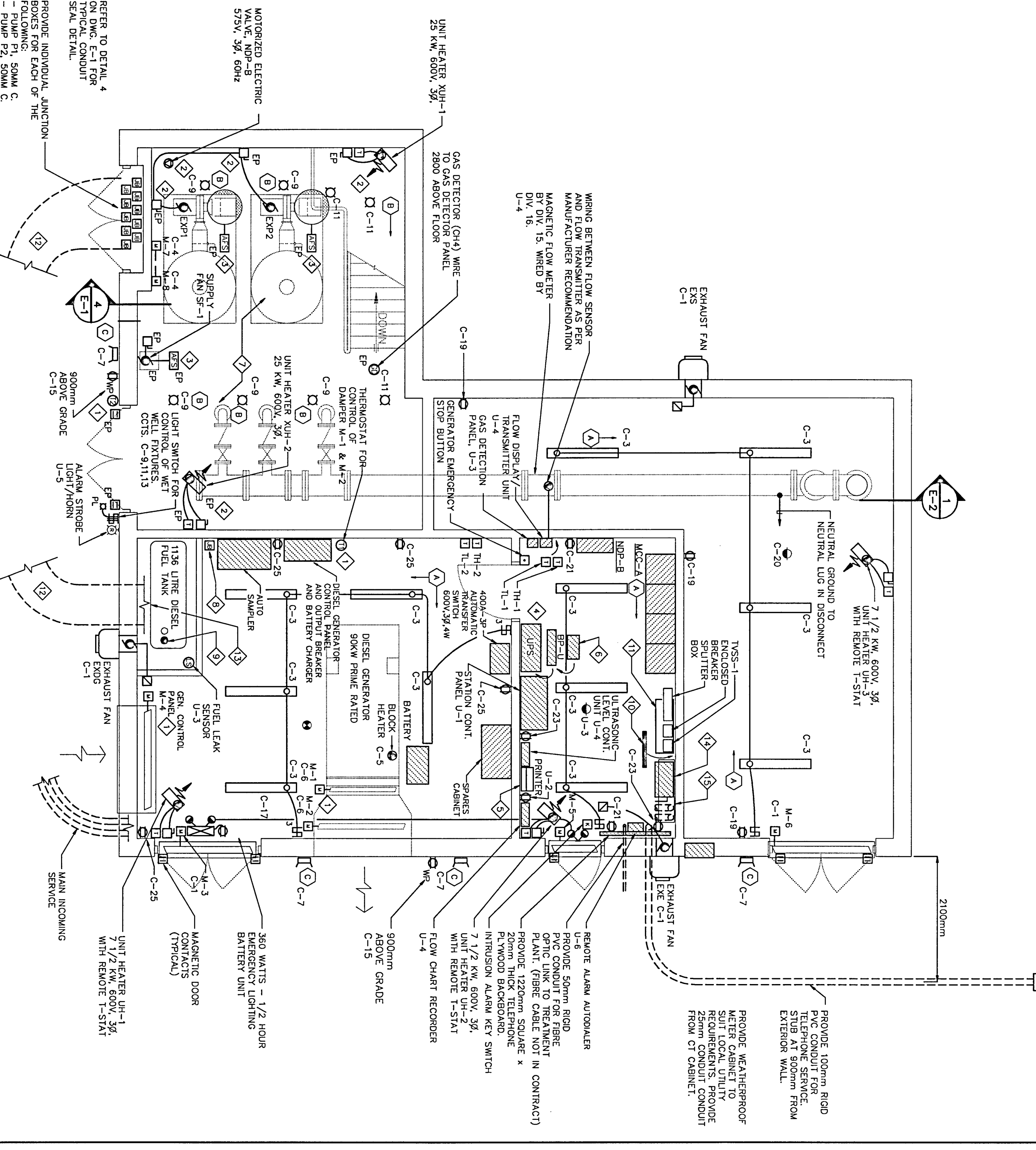
Owner	TOWNSHIP OF OSNABRUCK
Project	INGLESIDE SEWAGE PUMPING STATION MODIFICATIONS
M.O.E.F. PROJECT NO.	40-0797
Title	FLOOR PLAN, WELL LAYOUT, WET WELL SECTION
Design	R.D./G.M.
Drawn	D.A./J.S.
Scale	AS SHOWN
Check	C.L.W.
Date	JULY/93
Proj No.	93034
Dwg No.	E-2



NOTE:
1 FLOAT AND ULTRASONIC SET POINT ELEVATIONS SHOWN ON DRAWING ARE AS PER ORIGINAL DESIGN.
2 REFER TO PUMPING STATION INSTRUMENTATION AND CONTROL MANUAL FOR AS-BUILT SET POINTS



NOTE:
1 FLOAT AND ULTRASONIC SET POINT ELEVATIONS SHOWN ON DRAWING ARE AS PER ORIGINAL DESIGN.
2 REFER TO PUMPING STATION INSTRUMENTATION AND CONTROL MANUAL FOR AS-BUILT SET POINTS



REFER TO DETAIL 4 ON DWG. E-1 FOR TYPICAL CONDUIT SEAL DETAIL.
PROVIDE INDIVIDUAL JUNCTION BOXES FOR EACH OF THE PUMPS.
PUMP P1, 50MM C.
PUMP P2, 50MM C.
PUMP P3, 50MM C.
PUMP P4, 50MM C.
PUMP P5, 50MM C.
PUMP P6, 50MM C.
PUMP P7, 50MM C.
PUMP P8, 50MM C.
PUMP P9, 50MM C.
PUMP P10, 50MM C.
PUMP P11, 50MM C.
PUMP P12, 50MM C.
PUMP P13, 50MM C.
PUMP P14, 50MM C.
PUMP P15, 50MM C.
PUMP P16, 50MM C.
PUMP P17, 50MM C.
PUMP P18, 50MM C.
PUMP P19, 50MM C.
PUMP P20, 50MM C.
PUMP P21, 50MM C.
PUMP P22, 50MM C.
PUMP P23, 50MM C.
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PUMP P34, 50MM C.
PUMP P35, 50MM C.
PUMP P36, 50MM C.
PUMP P37, 50MM C.
PUMP P38, 50MM C.
PUMP P39, 50MM C.
PUMP P40, 50MM C.
PUMP P41, 50MM C.
PUMP P42, 50MM C.
PUMP P43, 50MM C.
PUMP P44, 50MM C.
PUMP P45, 50MM C.
PUMP P46, 50MM C.
PUMP P47, 50MM C.
PUMP P48, 50MM C.
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PUMP P89, 50MM C.
PUMP P90, 50MM C.
PUMP P91, 50MM C.
PUMP P92, 50MM C.
PUMP P93, 50MM C.
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PUMP P95, 50MM C.
PUMP P96, 50MM C.
PUMP P97, 50MM C.
PUMP P98, 50MM C.
PUMP P99, 50MM C.
PUMP P100, 50MM C.

NOTES:
1 MOTORIZED DAMPERS AND THERMOSTAT WIRED BY DIV. 16
2 PROVIDE EYE SEALS AS REQUIRED.
3 PROVIDE AIR FLOW SWITCH IN VENTILATION DUCT.
4 WIRE AIR FLOW SWITCH TO P.L.C.
5 MOUNT UPS 100mm ABOVE FINISHED FLOOR.
6 PROVIDE WALL MOUNTED SHELF.
7 UPS MAINTENANCE BY-PASS.
8 ALL WORK INSIDE WET WELL TO CONFORM WITH HAZARDOUS LOCATION REQUIREMENTS.
9 GROUP D, ALL EQUIPMENT, DEVICES, BRANCH WIRING ETC. TO BE EXPLOSION-PROOF.
10 TEMINATE SPARE CONDUIT ON WALL AS SHOWN, 1200MM AFF.
11 LOW LEVEL FLOATS: FIRST ALARM, SPLITTER BOX, TSSS AND ENCLOSED GENERATOR CONTROL PANEL.
12 600x90x20mm COPPER
13 900 x 900 CT CABINET TO SUIT TSSS AND ENCLOSED GENERATOR ON INSULATORS.
14 900 x 900 CT CABINET TO SUIT TSSS AND ENCLOSED GENERATOR ON INSULATORS.
15 RUN ALL PVC CONDUITS UNDER SLAB 75MM BELOW CEILING.
16 RUN ALL CONDUITS UNDER SLAB 75MM BELOW CEILING AND BELOW ALL CONDUITS.
17 400/400-3P MAIN FUSED DISCONNECT SWITCH.
18 PROVIDE PULL BOX ABOVE DISCONNECT SWITCH AND TERMINATE INCONDUIT 100MM CONDUITS.

AS-BUILT	REVISION	DATE	BY	DESCRIPTION
2	AS-BUILT	SEPT. '97		
1	ISSUED FOR TENDER	MAY '94		
0	ISSUED FOR MORE REVIEW	SEPT. '93		

STARTERS	REMOTE CONTR.
MANUAL COVER	IN COVER
TOGGLE	HAND/OFF/AUTO
PUSH BUTTON	TEST/AUTO
PILOT LTG.	PILOT LTG. RUN
MAGNETIC	PILOT LTG. STOP
COMBINATION	STOP/START
REDUCED VOLTAGE	5/17
SOFT START	INTERLOCK TO PILOT LTG.
TWO SPEED	DISC. AT MOTOR
BREAKER TYPE	FAN SHUTDOWN
FUSE TYPE	SCH. DIAG. NO.
CONTROL TRANSFORMER	
AUX. CONT. 2N.O., 2N.C.	
CEMA SIZE	
NOTES	

DESIGN	SCALE	DATE	BY	DATE	BY
R.D./G.M.	AS SHOWN	93034	AS SHOWN	93034	AS SHOWN
D.A./J.S.	CL.W.	JULY/93	CL.W.	JULY/93	CL.W.

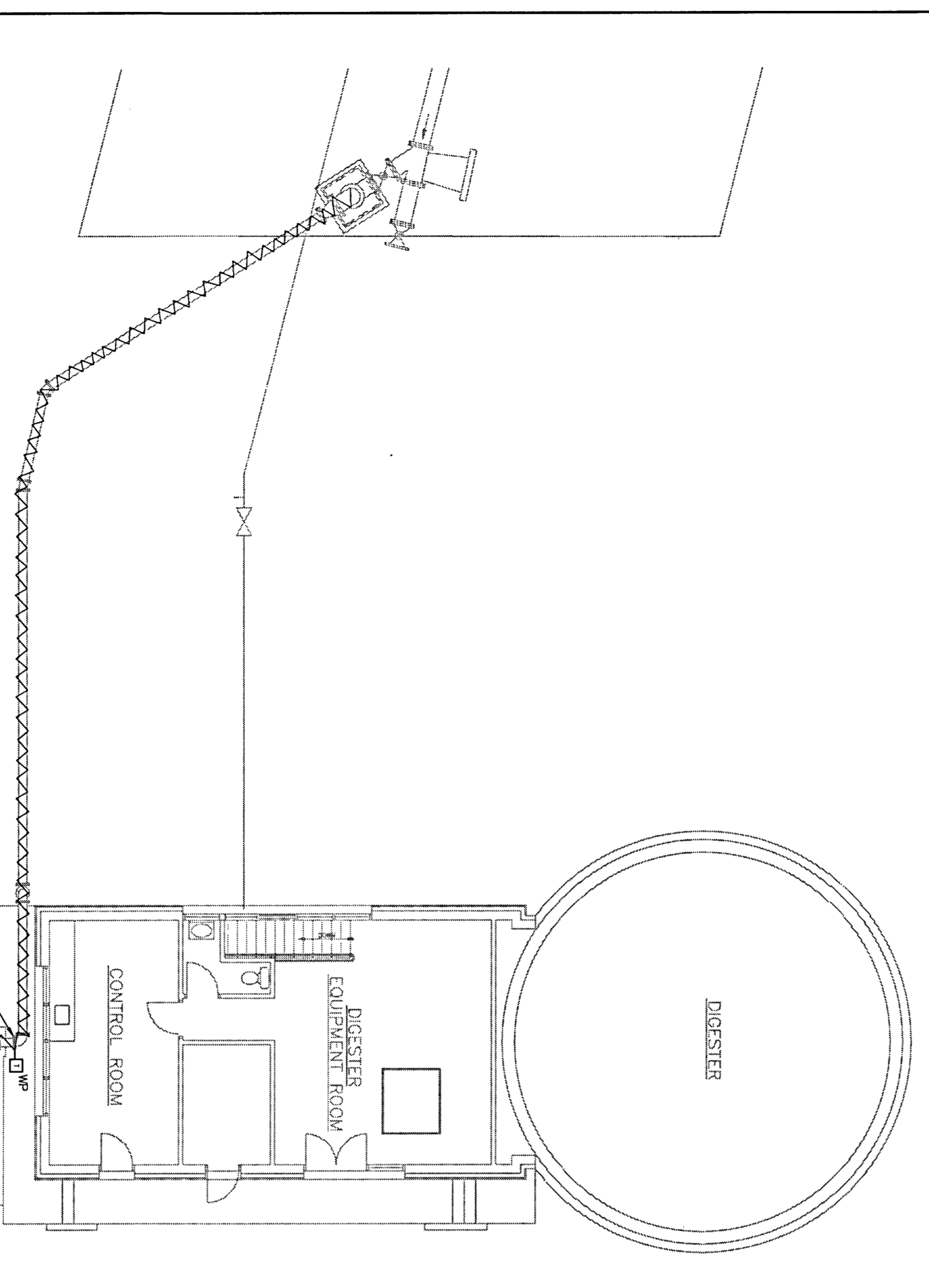
HEATER #	TYPE	WATTAGE (KW)	VOLTAGE	SOURCE	FEDER	EQUAL TO WESTERN #	DISC. AT UNIT	TOGGLE SW. AT UNIT	REMOTE T-STAT	BUILT-IN T-STAT	INTERLOCK TO
UH-1	EXP. PROOF UNIT HEATER	25	600	NDP-B	3#10 + GRND	XL230-25.0	•	•	•	•	STATION CONT. PNL.
UH-2	EXP. PROOF UNIT HEATER	25	600	NDP-B	3#10 + GRND	XL230-25.0	•	•	•	•	STATION CONT. PNL.
UH-1	FORGED AIR UNIT HEATER	7.5	600	NDP-B	3#12 + GRND	WF4023AC	•	•	•	•	STATION CONT. PNL.
UH-2	FORGED AIR UNIT HEATER	7.5	600	NDP-B	3#12 + GRND	WF4023AC	•	•	•	•	STATION CONT. PNL.
UH-3	FORGED AIR UNIT HEATER	7.5	600	NDP-B	3#12 + GRND	WF4023AC	•	•	•	•	STATION CONT. PNL.

1 HEATER SCHEDULE
 N.T.S.

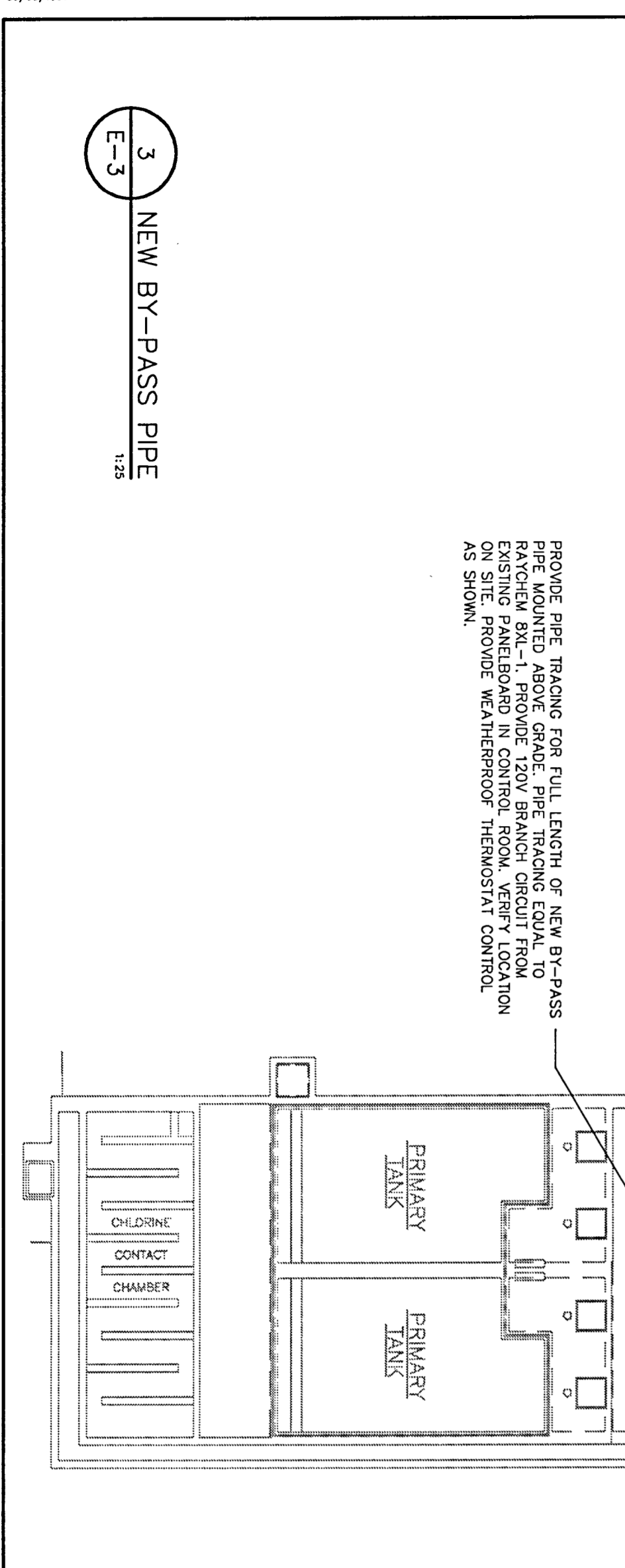
2 MCC ELEVATION
 N.T.S.

PUMP	PUMP	PUMP	INCOMING FEEDER	METERING
BP-C 3 HP 600V, 39.4W RV START	BP-A 1 HP 600V, 39.4W RV START	BP-B 1 HP 600V, 39.4W RV START	120/208V 39.4W	120/208V 39.4W
120/208V 39.4W	120/208V 39.4W	120/208V 39.4W	EXHAUST FAN EXP1 7 1/2 HP 39.4W	EXHAUST FAN EXP2 7 1/2 HP 39.4W
SPACE	SPACE	SPACE	SPACE	SPACE

NOTE: PROVIDE 100mm HIGH CONCRETE HOUSE KEEPING PAD TRANSFORMER SECONDARY TO PANEL BP-C.



3 NEW BY-PASS PIPE
 N.T.S.



MOTOR NO.	SERVICE DESCRIPTION	MOTOR CHARACTERISTICS		SOURCE	FEEDER	BREAKER SIZE	STARTERS		REMOTE CONTR.		REMARKS
		H.P.	F.L.A. VOLT				MANUAL COVER	IN COVER	INTERLOCK TO:	REMARKS	
P1	LIFT PUMP	34	600	MCC-A	3#4 + GRND -12mmC	70A-3P	•	•	•	•	OUTSIDE T-STAT 12 EXP. PROOF DAMPER M-8 SI MOTORISED
P2	LIFT PUMP	34	600	MCC-A	3#4 + GRND -12mmC	70A-3P	•	•	•	•	OUTSIDE T-STAT 12 EXP. PROOF DAMPER M-8 SI MOTORISED
P3	LIFT PUMP	34	600	MCC-A	3#4 + GRND -12mmC	70A-3P	•	•	•	•	OUTSIDE T-STAT 12 EXP. PROOF DAMPER M-8 SI MOTORISED
S1	SUPPLY FAN	1	1.4	MCC-A	3#12 + GRND -12mmC	15A-3P	•	•	•	•	PLC EXHAUST FAN CONTROLLED BY LOCAL LINE VOLTAGE THERMOSTAT
EXP1	EXHAUST FAN	7.5	9	MCC-A	3#12 + GRND -12mmC	20A-3P	•	•	•	•	PLC EXHAUST FAN CONTROLLED BY LOCAL LINE VOLTAGE THERMOSTAT
EXP2	EXHAUST FAN	7.5	9	MCC-A	3#12 + GRND -12mmC	20A-3P	•	•	•	•	PLC EXHAUST FAN CONTROLLED BY LOCAL LINE VOLTAGE THERMOSTAT
EXS	EXHAUST FAN	1/6	9	MCC-A	3#12 + GRND -12mmC	15A-1P	•	•	•	•	EXHAUST FAN CONTROLLED BY LOCAL LINE VOLTAGE THERMOSTAT
EXE	EXHAUST FAN	1/6	1.0	MCC-A	3#12 + GRND -12mmC	15A-1P	•	•	•	•	EXHAUST FAN CONTROLLED BY LOCAL LINE VOLTAGE THERMOSTAT
EXOG	EXHAUST FAN	1/6	1.0	MCC-A	3#12 + GRND -12mmC	15A-1P	•	•	•	•	EXHAUST FAN CONTROLLED BY LOCAL LINE VOLTAGE THERMOSTAT
NDP-B	15KV TRANSFORMER	-	-	MCC-A	3#12 + GRND -12mmC	20A-3P	•	•	•	•	FEEDER BREAKER UNIT
TSS	MOTORIZED SHUT-OFF VALVE	-	-	MCC-A	3 # 3	30A-3P	•	•	•	•	FEEDER BREAKER UNIT
		1/4	1.2	MCC-B		15A-3P					

4 MOTOR CONTROL SCHEDULE
 N.T.S.

DESCRIPTION	LIGHTING	RECEPT.	EQUIP.	MECH.	HEATING	BKRK AMP POLE	CCT NO.	PHASE	CCT NO.	BKRK AMP POLE	LIGHTING	RECEPT.	EQUIP.	MECH.	HEATING	DESCRIPTION
EXH. FANS EXS, EXOG	1200			360	1200	20A 1P	1	A	2	15A 1P						EXHAUST FAN EXE
FLUORESCENT LIGHTS	400					20A 1P	3	B	4	15A 1P						EXPL. PROOF MOTOR DAMPERS
EXTERIOR LIGHTING	1000					15A 1P	7	A	8	40A 1P						EXPL. PROOF MOTOR DAMPERS
WETWELL LIGHTING	600					15A 1P	9	B	10	40A 1P						UPS
WETWELL LIGHTING	600					15A 1P	11	C	12	15A 1P						BY-PASS
OFF BKR. EXTER. RECEPTS	1200					15A 1P	15	B	16	15A 1P						BATT. CHARG. GEN. CONT. PNL.
BATTERY CHARGER			200			15A 1P	17	C	18							
RECEPTACLES		400				15A 1P	19	A	20							
RECEPTACLES		600				15A 1P	21	B	22							
RECEPTACLES		600				15A 1P	23	C	24							
RECEPTACLES		600				15A 1P	25	A	26							
RECEPTACLES		600				15A 1P	27	B	28							
RECEPTACLES		600				15A 1P	29	C	30							

PROJECT NAME: INGLESIDE SEWAGE PUMP. STN.
 PANEL DESIGNATION: BP-U
 NUMBER OF POLES: 120V, 1Ø
 SYSTEM VOLTAGE: 120V, 1Ø
 MAINS CAPACITY: 100A

PROJECT No.: 93034
 PANEL LOCATION: ELECT. ROOM
 MOUNTING: 100A

PROJECT No.: 93034
 PANEL LOCATION: ELECT. ROOM
 MOUNTING: 100A

5 PANEL SCHEDULES
 N.T.S.

DESCRIPTION	LIGHTING	RECEPT.	EQUIP.	MECH.	HEATING	BKRK AMP POLE	CCT NO.	PHASE	CCT NO.	BKRK AMP POLE	LIGHTING	RECEPT.	EQUIP.	MECH.	HEATING	DESCRIPTION
STATION CONTROL PANEL			200			15A 1P	1	A	2	15A 1P						ULTRA UNIT SMOKE
GAS DETECT. PANEL						15A 1P	3	B	4	15A 1P						
SPARE						15A 1P	5	C	6	15A 1P						
SPARE						15A 1P	9	A	10	15A 1P						
SPARE						15A 1P	11	B	12							

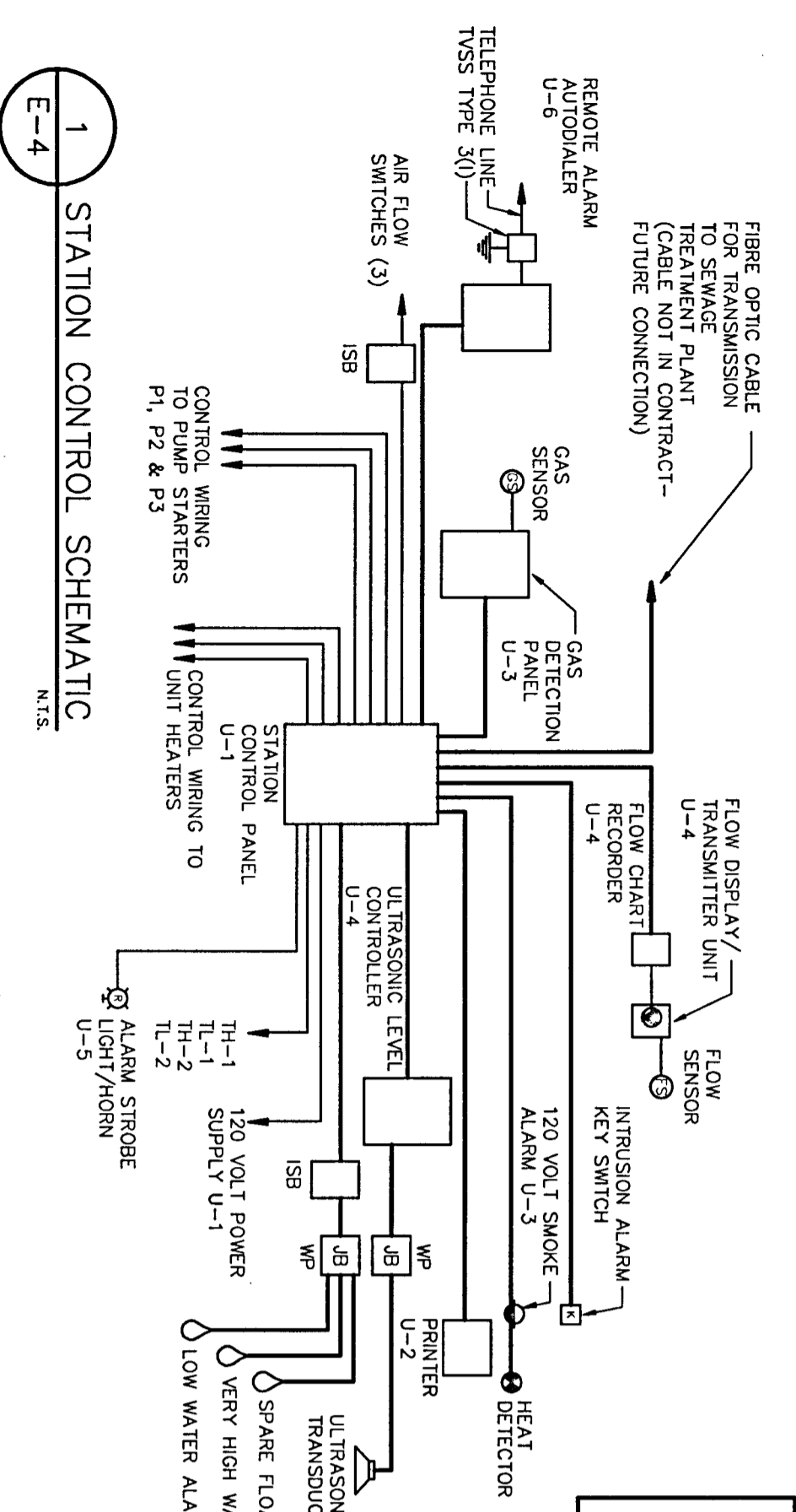
AS-BUILT
NOTE: REVISED "AS-BUILT" DRAWING. THIS DRAWING HAS BEEN REVISED TO INCORPORATE THE CHANGES MARKED UP PRINT.

W&P
Wood, Binotti & Associates Limited
Consulting Engineers
250 Terrace Walkway, Cranston, Suite 202, Cranston, NJ 07016
TEL: (908) 591-8000 FAX: 591-9998
E-MAIL: info@wbp.com

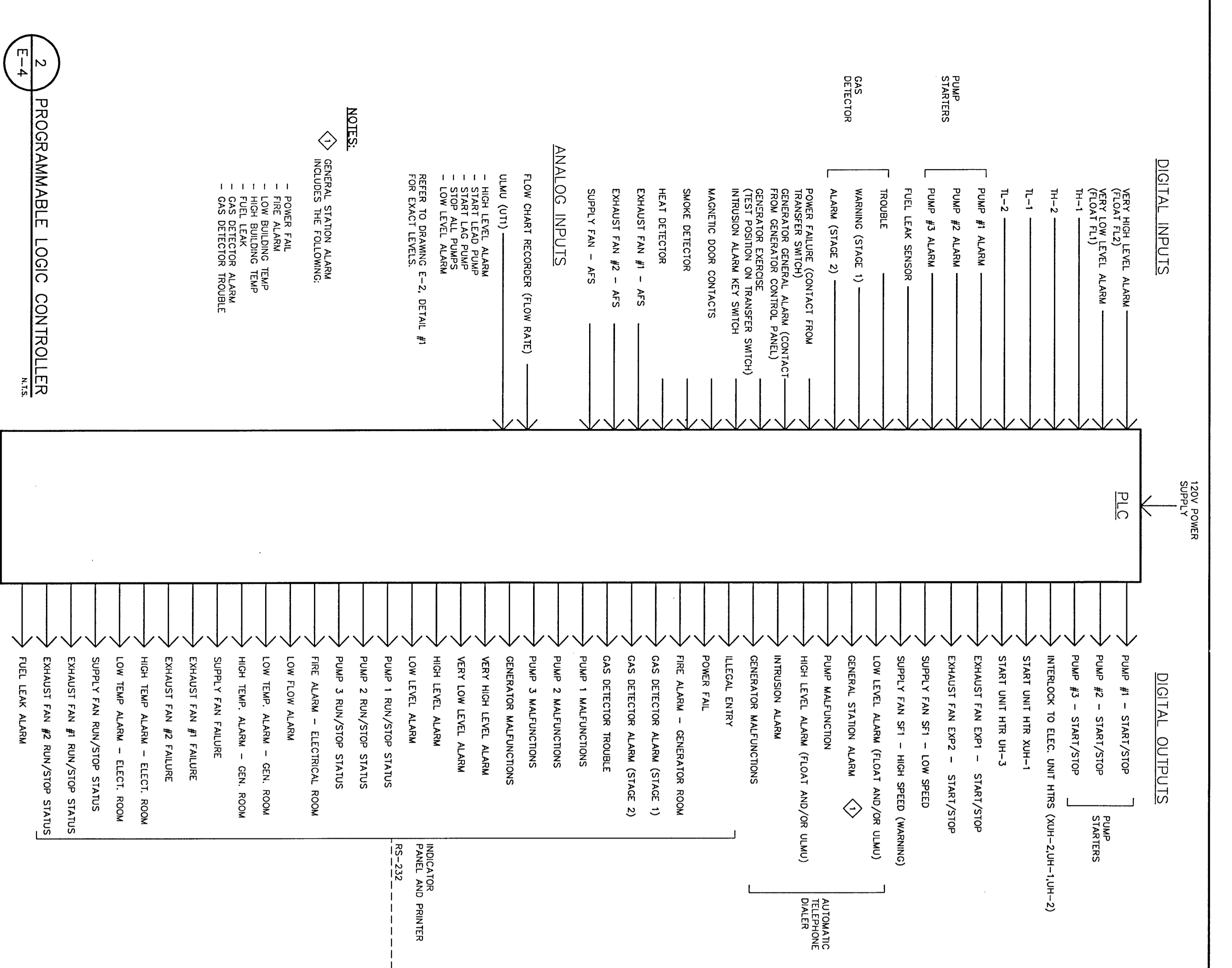
No.	Date	Revision
2	SEPT. '97	AS-BUILT ISSUED FOR TENDER
1	MAY '94	ISSUED FOR TENDER
0	SEPT. '93	ISSUED FOR NOE REVIEW

KAPTELYN
CONSTRUCTING CONSULTANTS LTD.

Owner	TOWNSHIP OF OSNABRUCK
Project	VILLAGE OF INGLESIDE SEWAGE PUMPING STATION MODIFICATIONS M.O.E.E. SEWAGE WORKS PROJECT No.40-0797
Title	CONTROL AND INSTRUMENTATION DIAGRAMS
Design	G.M.
Scale	AS SHOWN
D.A./I.S.	Check
C.L.W.	Date
	JULY/93
Dwg No.	E-4



1 STATION CONTROL SCHEMATIC
N.T.S.



2 PROGRAMMABLE LOGIC CONTROLLER
N.T.S.

NOTES:
◇ GENERAL STATION ALARM INCLUDES THE FOLLOWING:
- POWER FAIL
- FIRE ALARM
- LOW BUILDING TEMP
- LOW BUILDING TEMP
- FUEL LEAK
- GAS DETECTOR ALARM
- GAS DETECTOR TROUBLE

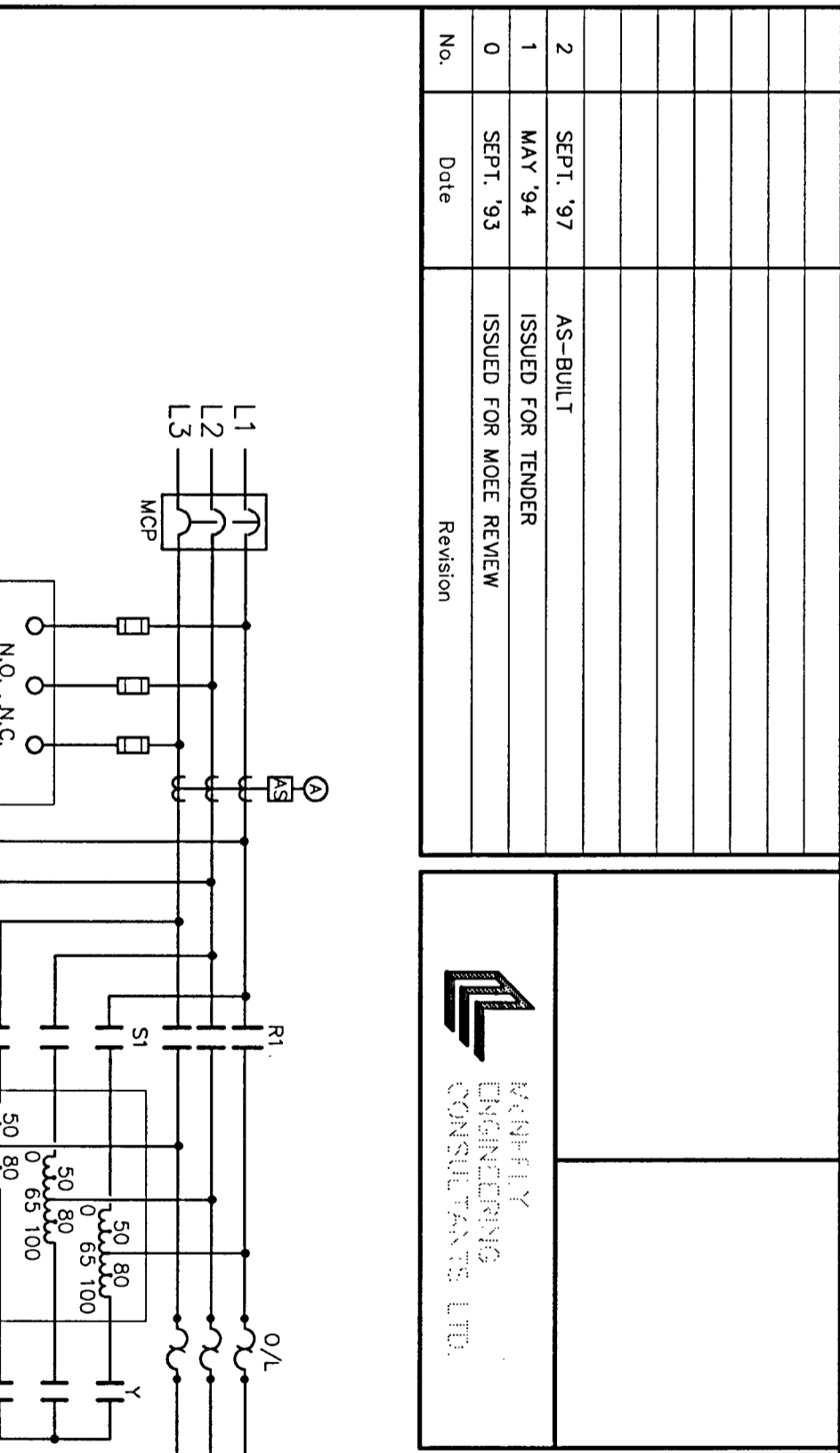
DIGITAL INPUTS
VERY HIGH LEVEL ALARM
FUEL LEVEL ALARM (FLOAT FL)
TH-1
TH-2
TL-1
TL-2
PUMP #1 ALARM
PUMP #2 ALARM
PUMP #3 ALARM
FUEL LEAK SENSOR
TROUBLE
WARNING (STAGE 1)
ALARM (STAGE 2)
POWER FAILURE (CONTACT FROM GENERATOR GENERAL ALARM (CONTACT FROM GENERATOR CONTROL PANEL) (RESISTOR POSITIVE TRANSFORMER SWITCH) INTRUSION ALARM KEY SWITCH
MAGNETIC DOOR CONTACTS
SMOKE DETECTOR
HEAT DETECTOR
EXHAUST FAN #1 - AFS
EXHAUST FAN #2 - AFS
SUPPLY FAN - AFS

DIGITAL OUTPUTS
PUMP #1 - START/STOP
PUMP #2 - START/STOP
PUMP #3 - START/STOP
INTERLOCK TO ELEC. UNIT MHS (XUH-2UH-1UH-2)
START UNIT HIR XUH-1
START UNIT HIR UH-3
EXHAUST FAN EXP1 - START/STOP
EXHAUST FAN EXP2 - START/STOP
SUPPLY FAN SFI - LOW SPEED
SUPPLY FAN SFI - HIGH SPEED (WARNING)
LOW LEVEL ALARM (FLOAT AND/OR ULMU)
◇ GENERAL STATION ALARM
PUMP MALFUNCTION
HIGH LEVEL ALARM (FLOAT AND/OR ULMU)
INTRUSION ALARM
GENERATOR MALFUNCTIONS
POWER FAIL
FIRE ALARM - GENERATOR ROOM
GAS DETECTOR ALARM (STAGE 1)
GAS DETECTOR ALARM (STAGE 2)
GAS DETECTOR TROUBLE
PUMP 1 MALFUNCTIONS
PUMP 2 MALFUNCTIONS
PUMP 3 MALFUNCTIONS
GENERATOR MALFUNCTIONS
VERY HIGH LEVEL ALARM
HIGH LEVEL ALARM
LOW LEVEL ALARM
PUMP 1 RUN/STOP STATUS
PUMP 2 RUN/STOP STATUS
PUMP 3 RUN/STOP STATUS
FIRE ALARM - ELECTRICAL ROOM
LOW FLOW ALARM
LOW TEMP ALARM - GEN. ROOM
HIGH TEMP ALARM - GEN. ROOM
SUPPLY FAN FAILURE
EXHAUST FAN #1 FAILURE
EXHAUST FAN #2 FAILURE
HIGH TEMP ALARM - ELECT. ROOM
LOW TEMP ALARM - ELECT. ROOM
SUPPLY FAN RUN/STOP STATUS
EXHAUST FAN #1 RUN/STOP STATUS
EXHAUST FAN #2 RUN/STOP STATUS
FUEL LEAK ALARM

ANALOG INPUTS
FLOW CHART RECORDER (FLOW RATE)
ULMU (U/I)
- HIGH LEVEL ALARM
- START LEAD PUMP
- STOP ALL PUMPS
- LOW LEVEL ALARM
REFER TO DRAWING E-2, DETAIL #1 FOR EXACT LEVELS.

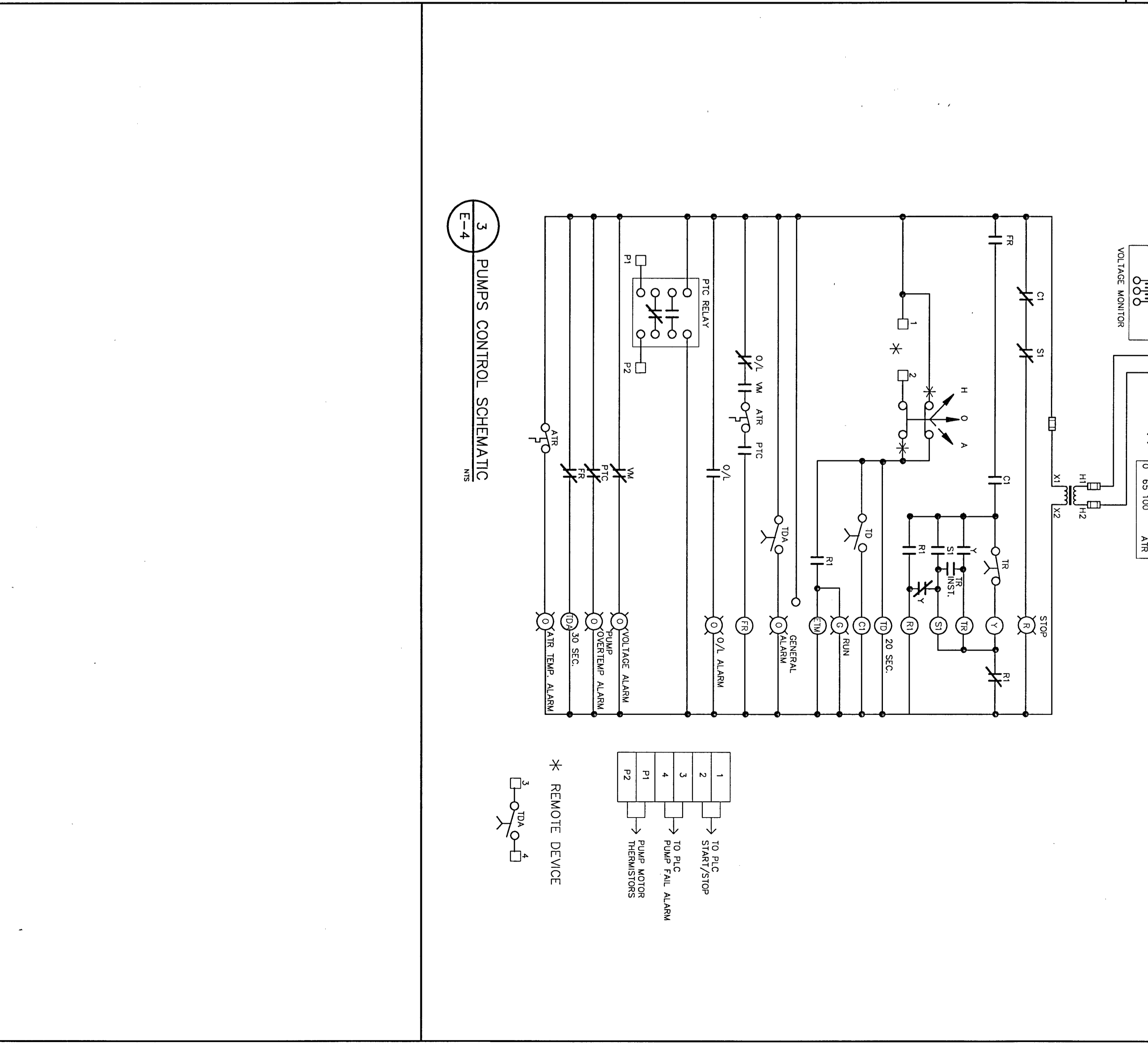
INDICATOR PANEL AND PRINTER
RS-232

AS-BUILT
PROVIDE RS-232 PORT FOR FUTURE CONNECTION OF TRANSMITTING EQUIPMENT TO TREATMENT PLANT. PROVIDE SEPARATE FUTURE CONNECTION OF TRANSMISSION EQUIPMENT. PROVIDE SPACE IN CONTROL PANEL (600 x 600) FOR FUTURE FIBRE OPTIC TRANSMITTER.



3 PUMPS CONTROL SCHEMATIC
N.T.S.

* REMOTE DEVICE



3 PUMPS CONTROL SCHEMATIC
N.T.S.

* REMOTE DEVICE