

CROMWELL BOROUGH COUNCIL

NEIGHBOURHOOD ONE DEVELOPMENT



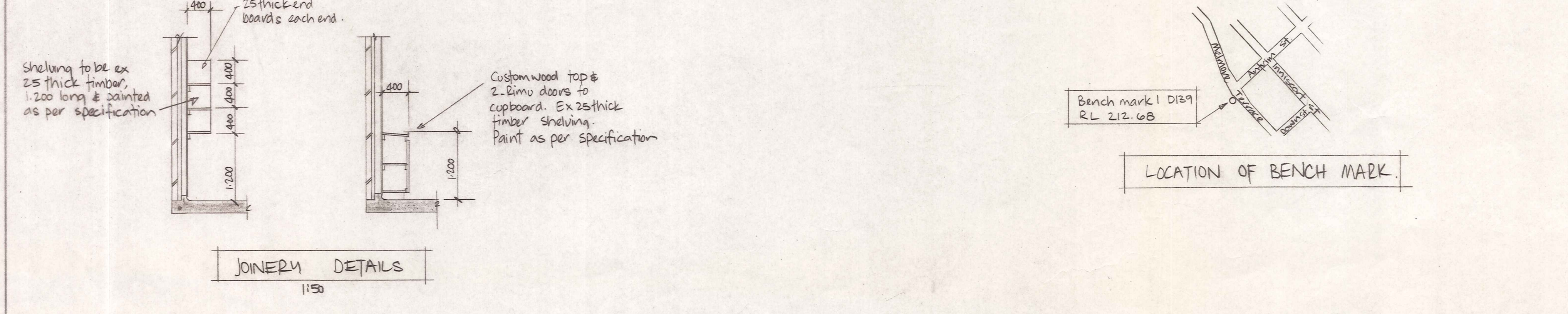
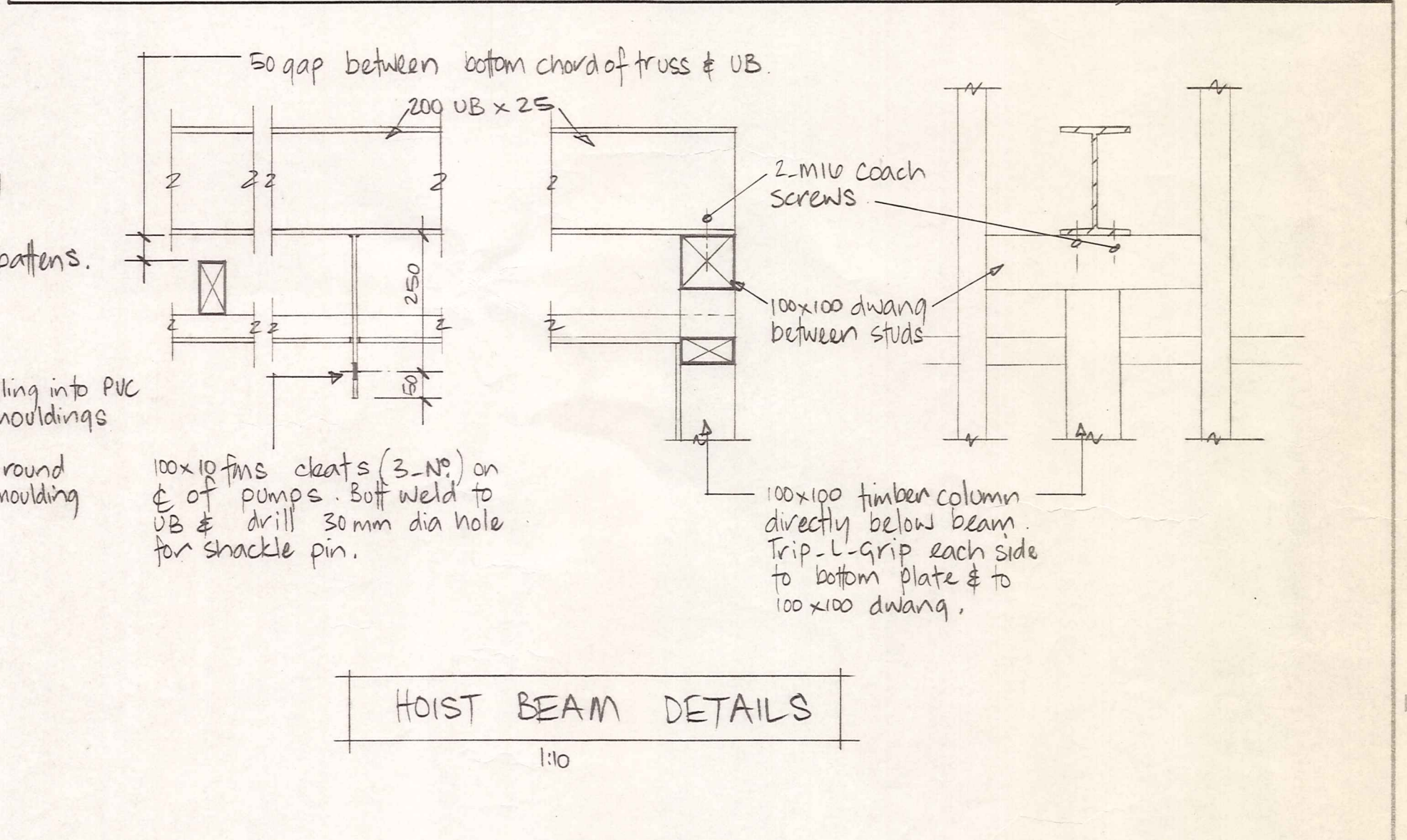
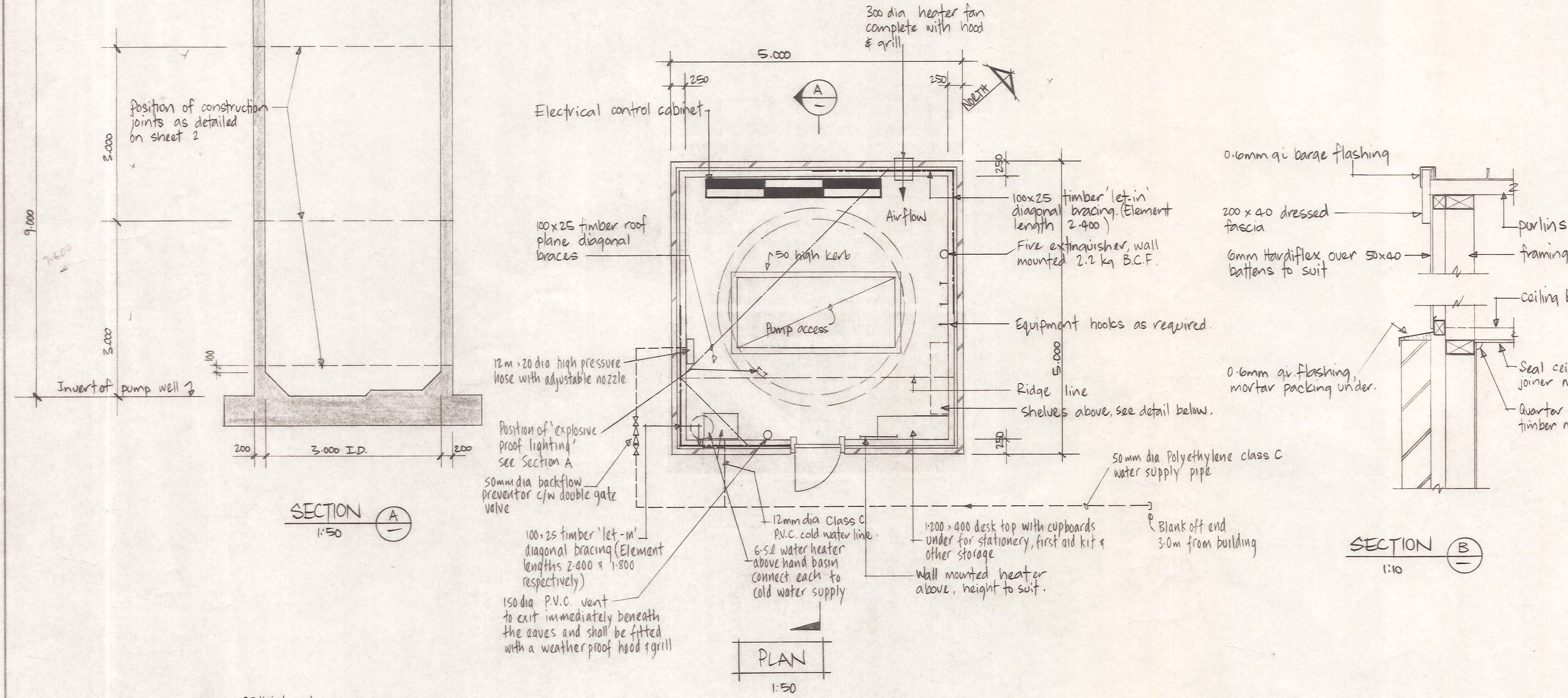
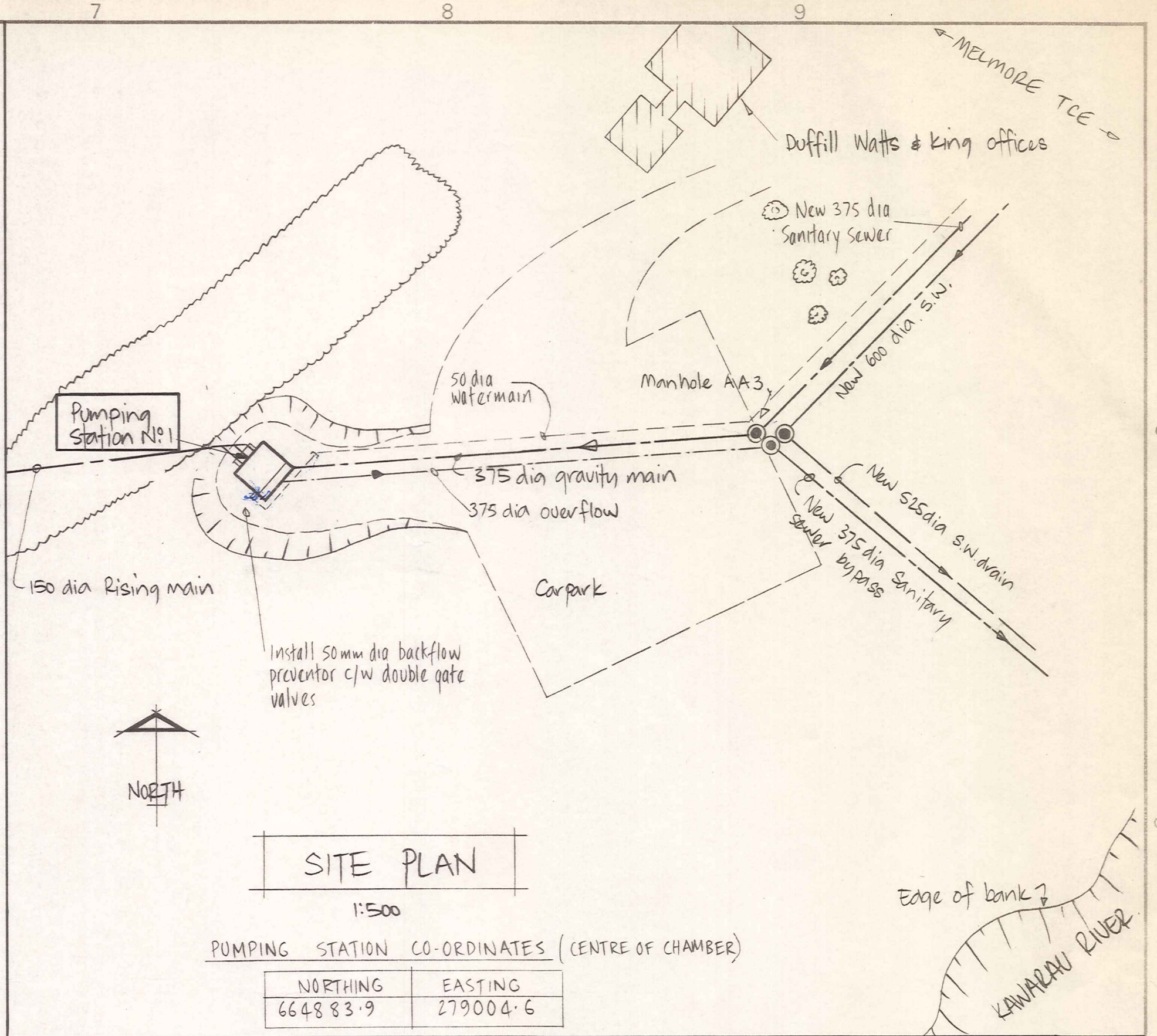
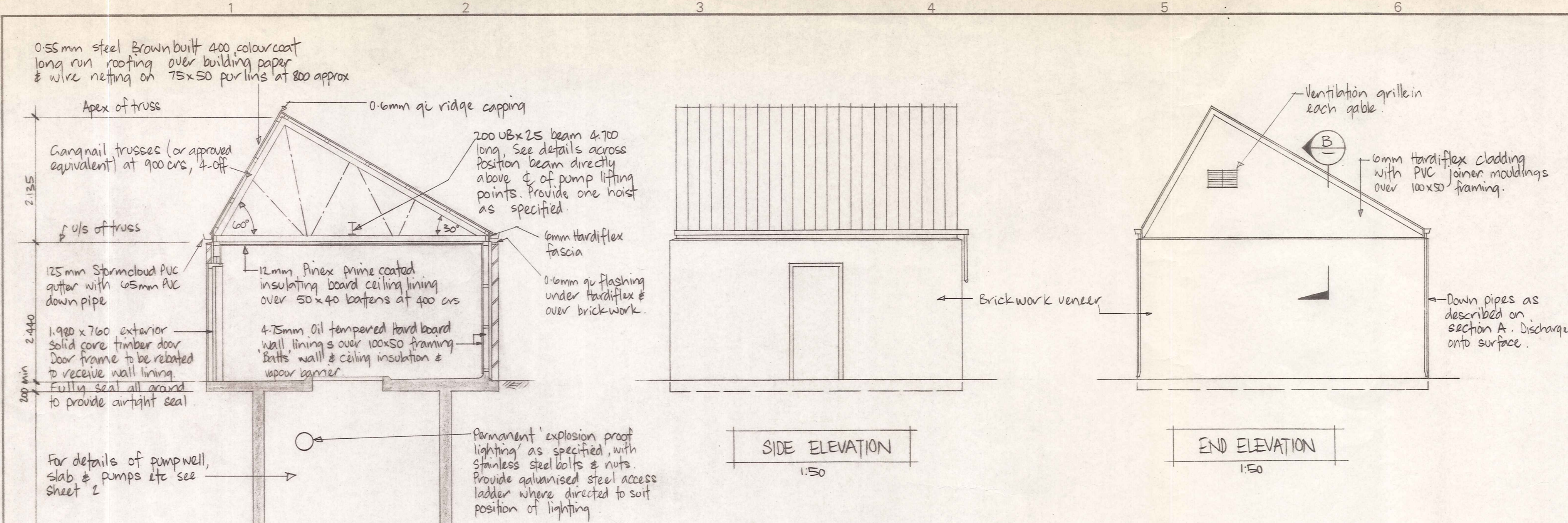
DUFFILL WATTS & KING LTD
Consulting Engineers

CONTRACT NO 9

SEWERAGE
PUMPING STATIONS
ALPHA ST.
MELMORE TER.

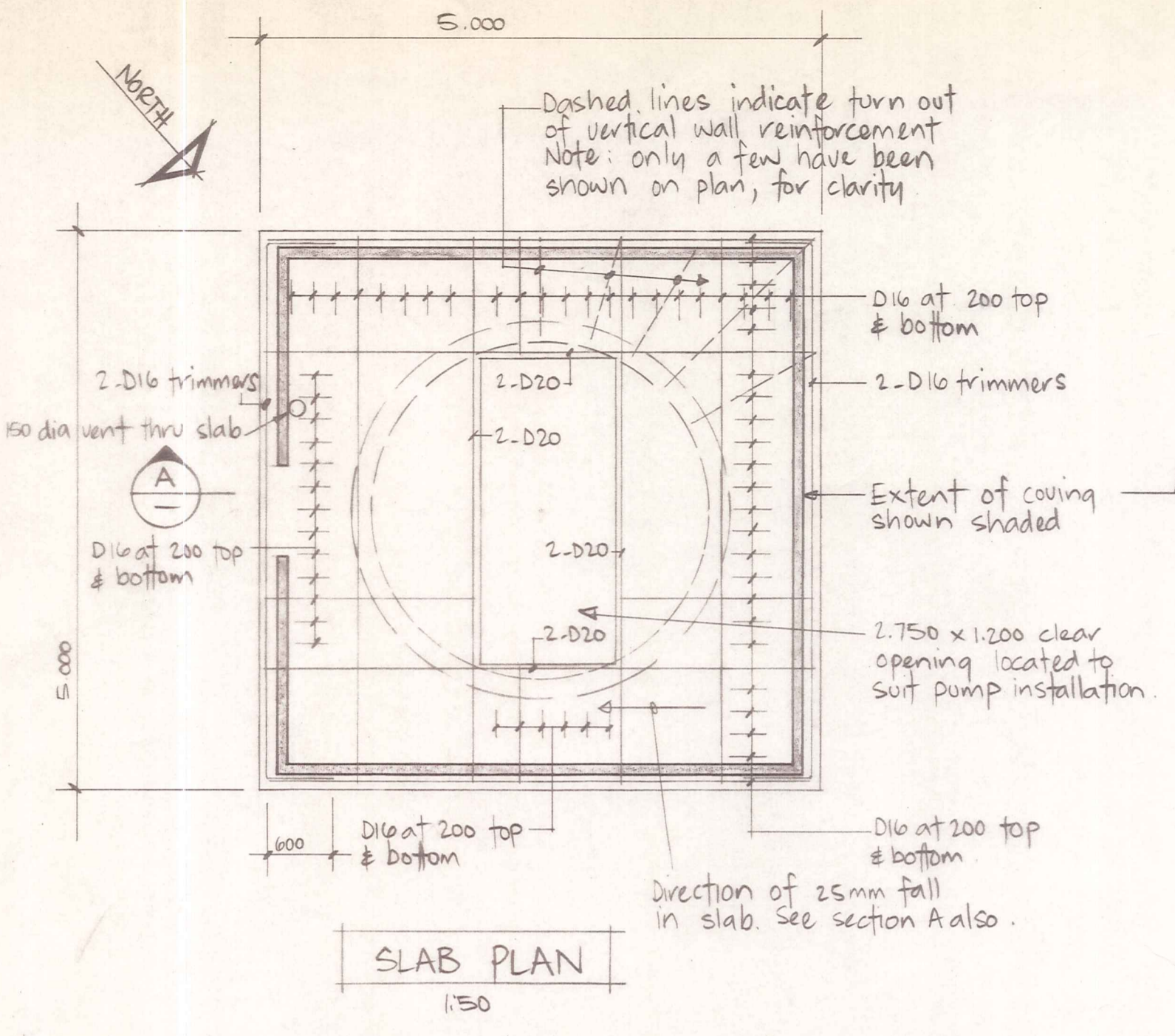
Set No

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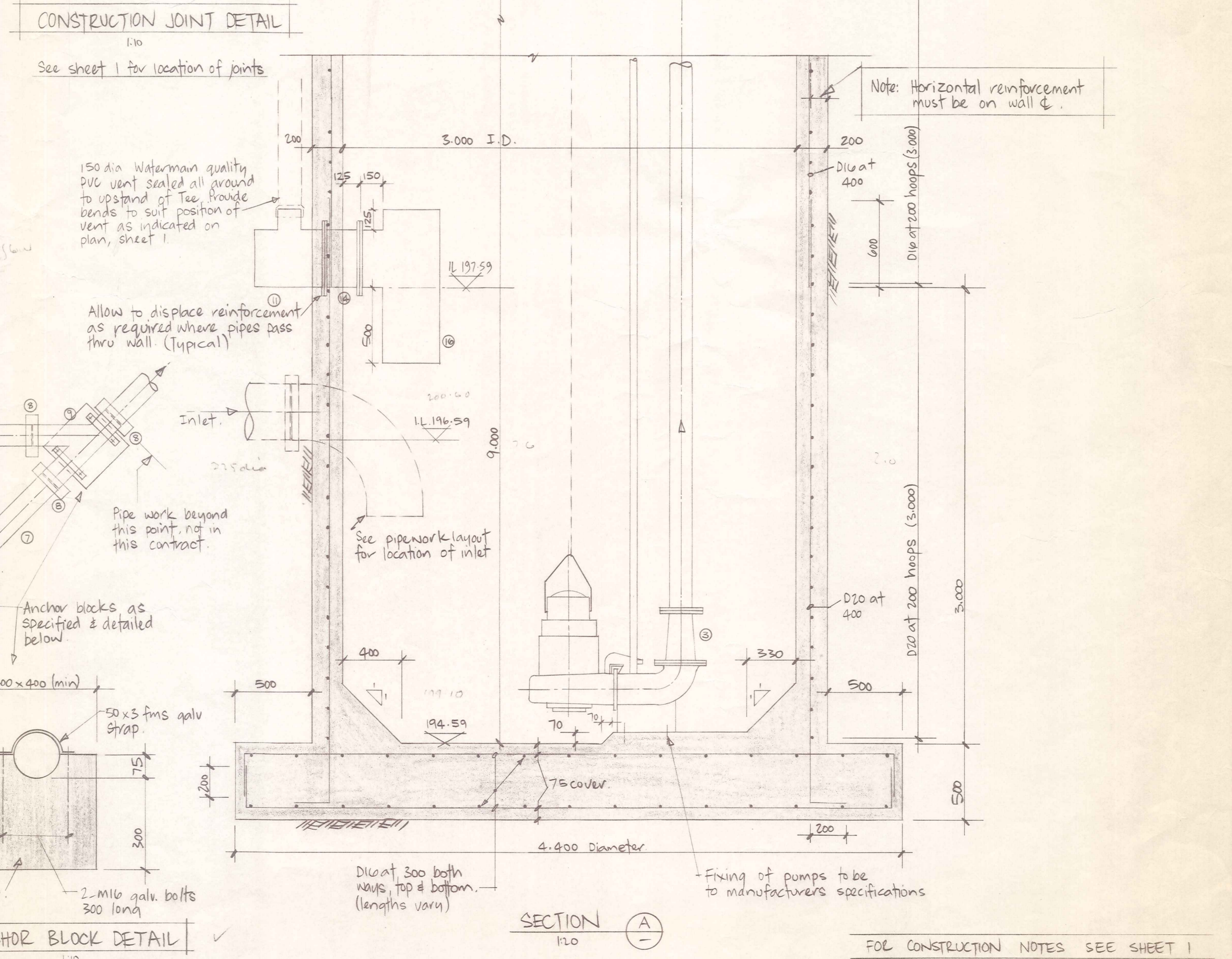
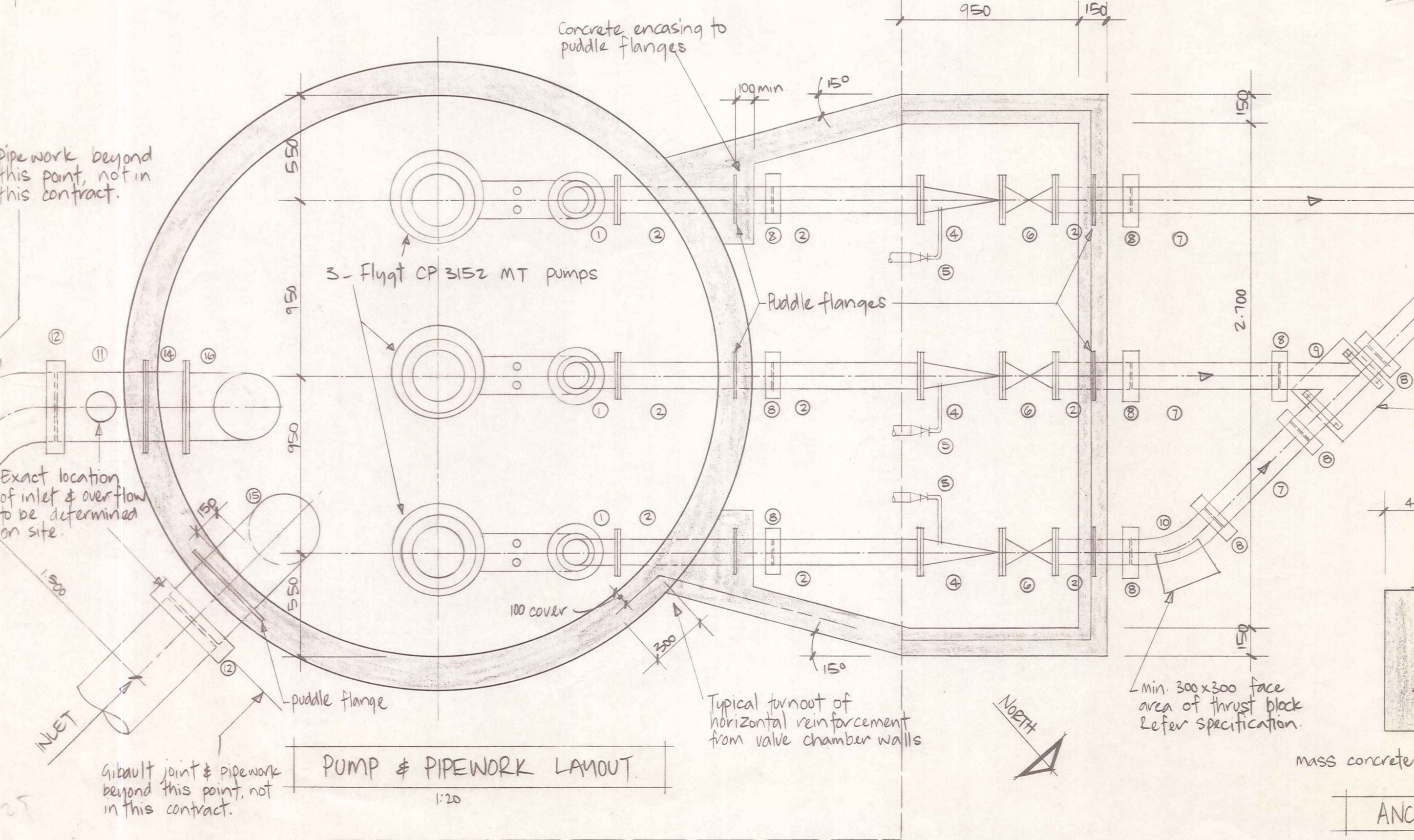
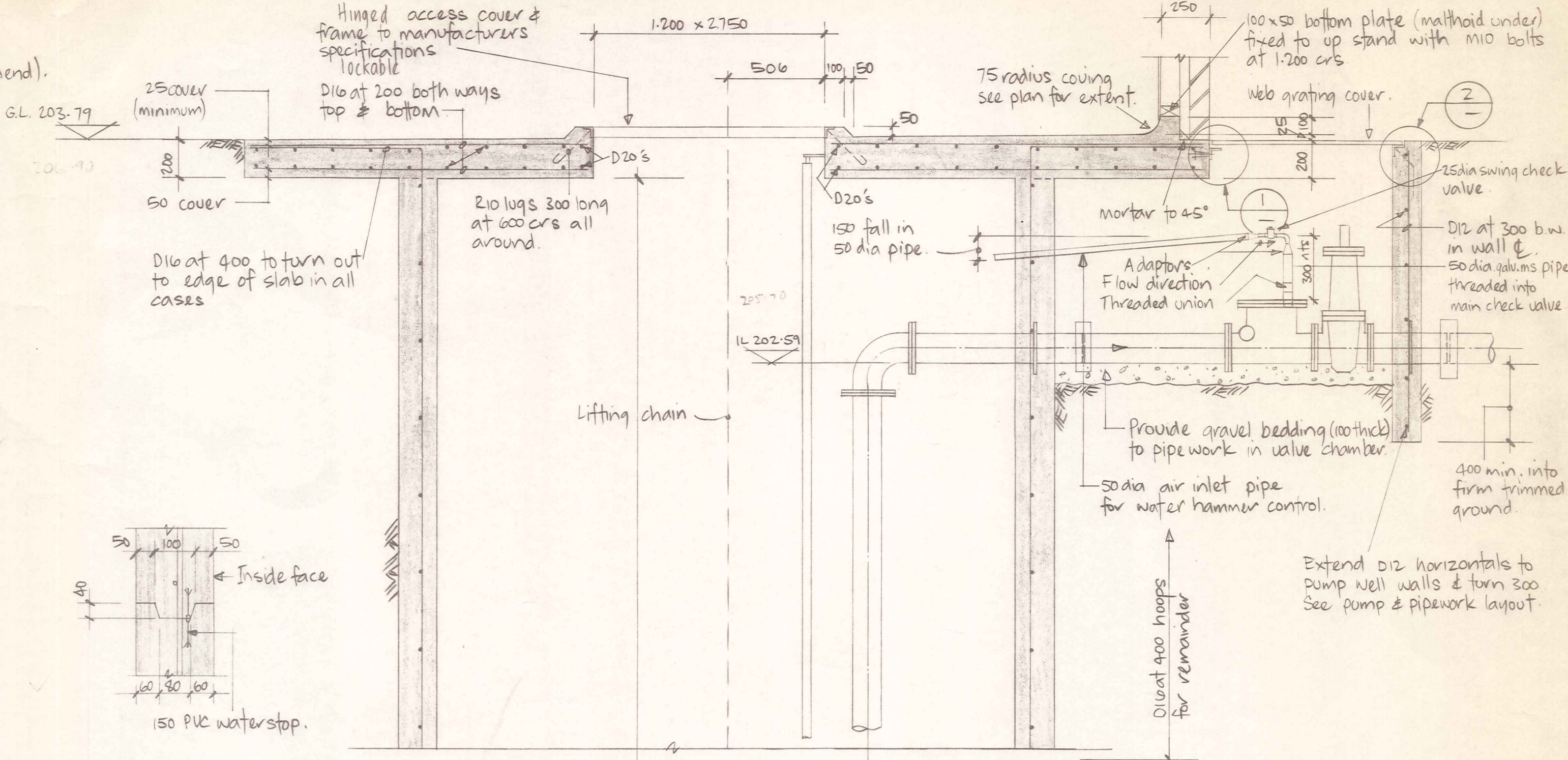
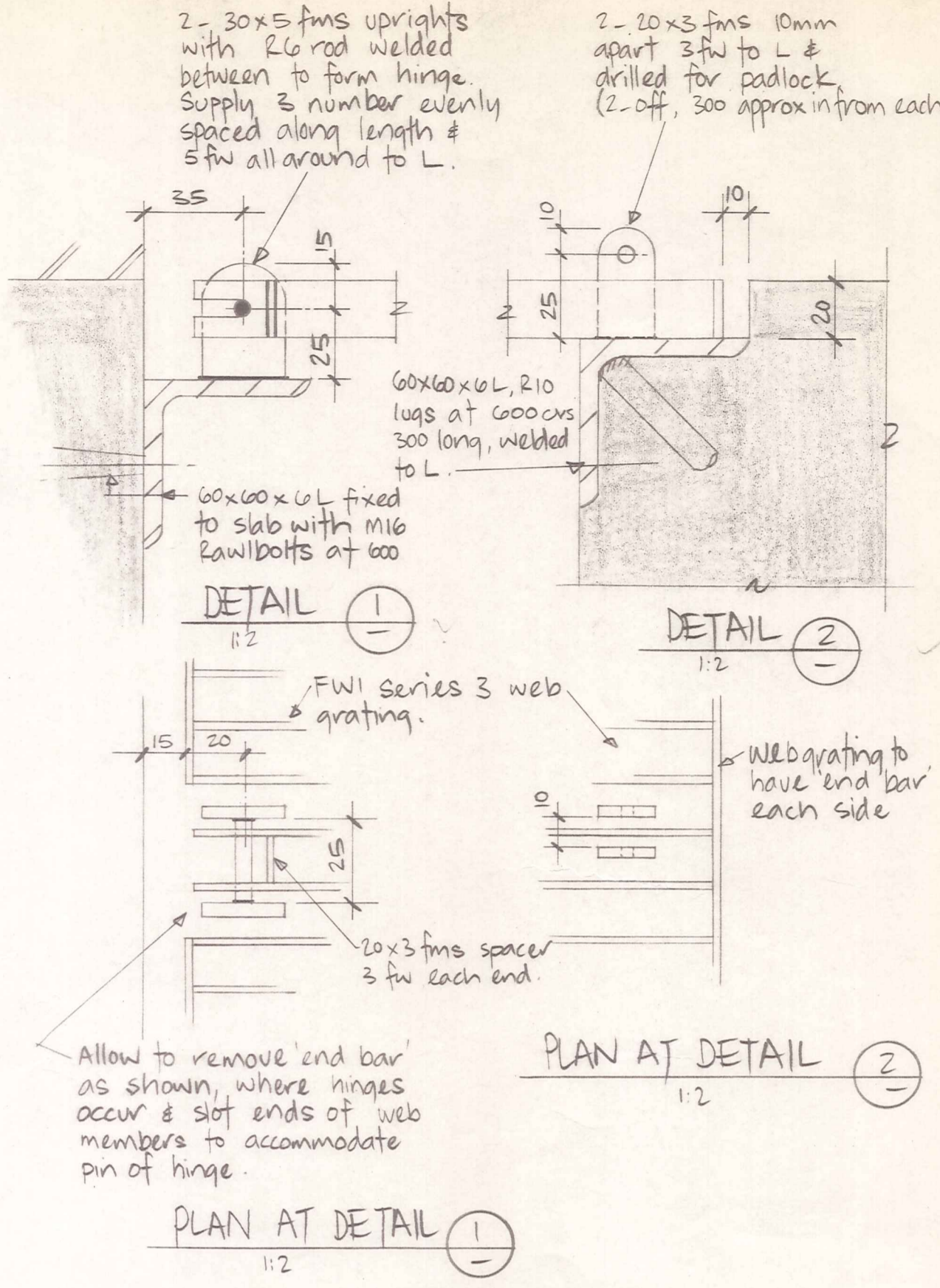
- Construction notes.**
- Do not scale this drawing
 - All dimensions are to be verified on site
 - Foundation material to have an allowable bearing capacity of 200 kPa
 - Construction joints other than those indicated, may be made only in positions approved by the Engineer
 - Care should be taken to ensure correct concrete cover to reinforcement as detailed.
 - Design concrete strength at 28 days $F'_c = 25 \text{ M.Pa}$.
 - Back filling is not to be carried out behind walls until concrete has reached its design strength.
 - All structural steel work to be hot dipped galvanized as specified.
 - For electrical services, see sheets 3 & 8.

DUFFILL WATTS & KING LTD CONSULTING CIVIL & STRUCTURAL ENGINEERS Dunedin PO Box 5269 Ph. 777-133 Invercargill PO Box 576 Ph. 83-049 Cromwell PO Box 82 Ph. 80-391	CROMWELL BOROUGH COUNCIL	NEIGHBOURHOOD 1 DEVELOPMENT	CONTRACT No 9	PUMPING STATION No 1 MELMORE TERRACE GENERAL ARRANGEMENT & SITE PLAN.	AMENDMENTS		NAME	DATE	JOB NO. 9865	Sheet No 1 of 3 sheets
			SANITARY SEWERAGE PUMPING STATIONS		NO. BY DATE	Appvd.	Surveved	Drawn		



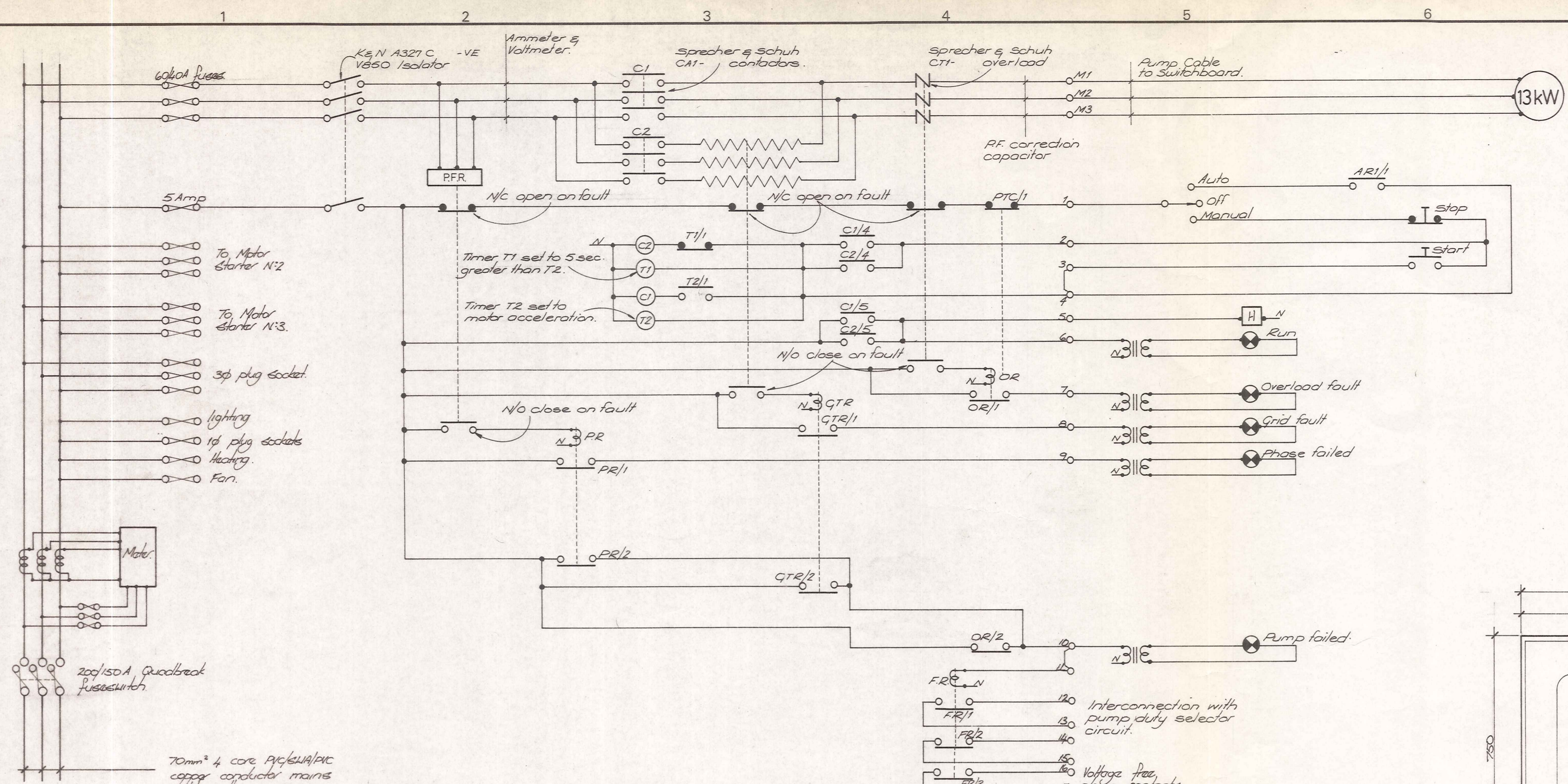
Key to pipe work layout.

Item	Description
1	150 dia flanged short bend
2	150 dia lengthening piece flanged one end
3	150 to 200 flanged reducer
4	150 dia flanged swing check valve
5	25 dia swing check valve
6	150 dia flange sluice valve
7	150 dia lengthening piece, plain ended
8	150 dia gibault joint
9	150 to 150 wye, plain ended
10	150 dia 45° bend, plain ended
11	150 to 375 Tee, flanged one end
12	375 dia gibault joint
13	375 dia 45° bend, plain ended
14	375 dia lengthening piece, flanged both ends
15	375 dia 90° bend plain ended
16	375 dia Fabricated P.V.C. Tee flanged one end

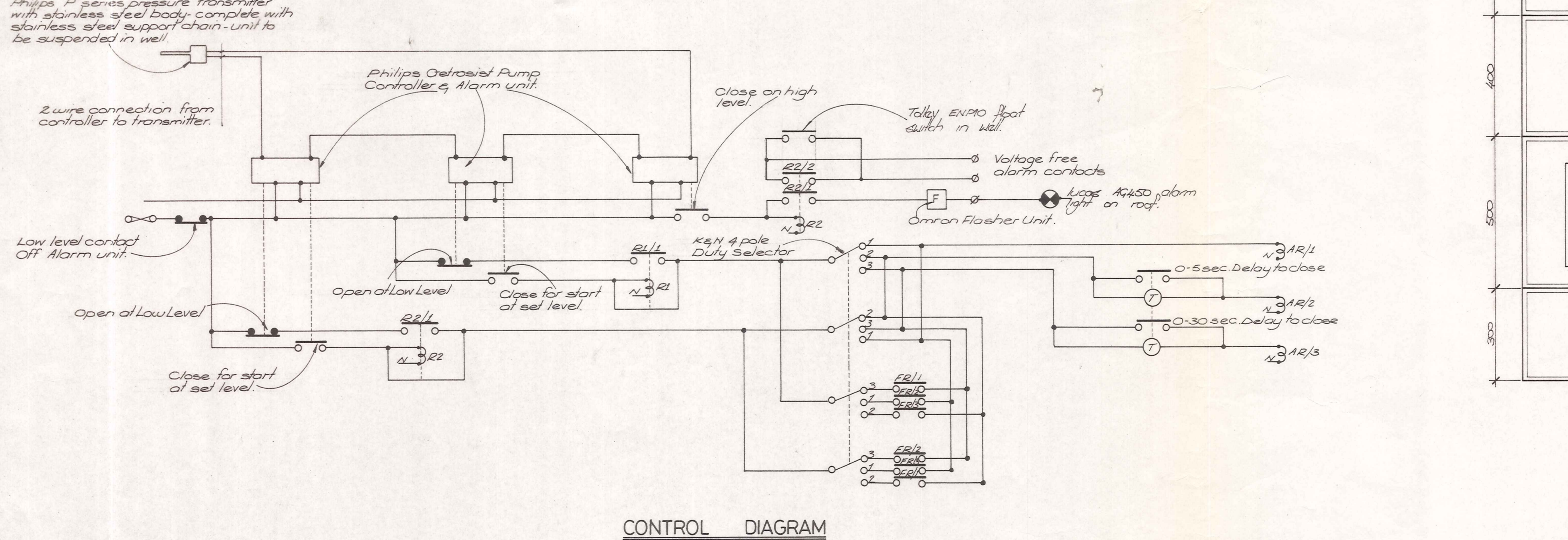


DUFFILL WATTS & KING LTD CONSULTING CIVIL & STRUCTURAL ENGINEERS Dunedin PO Box 5269 Ph.777-133 Invercargill PO Box 576 Ph.83049 Cromwell PO Box 82 Ph. 50-391	CROMWELL BOROUGH COUNCIL	NEIGHBOURHOOD 1 DEVELOPMENT	CONTRACT No 9	PUMPING STATION No 1 MELMORE TERRACE STRUCTURAL AND PIPEWORK DETAILS.	AMENDMENTS		NAME DATE Approved: [Signature] 23.6.82	JOB NO. 9865	Sheet No 2
			SANITARY SEWERAGE PUMPING STATIONS		NO. BY DATE [Table with 3 columns]	Approved: [Signature]			

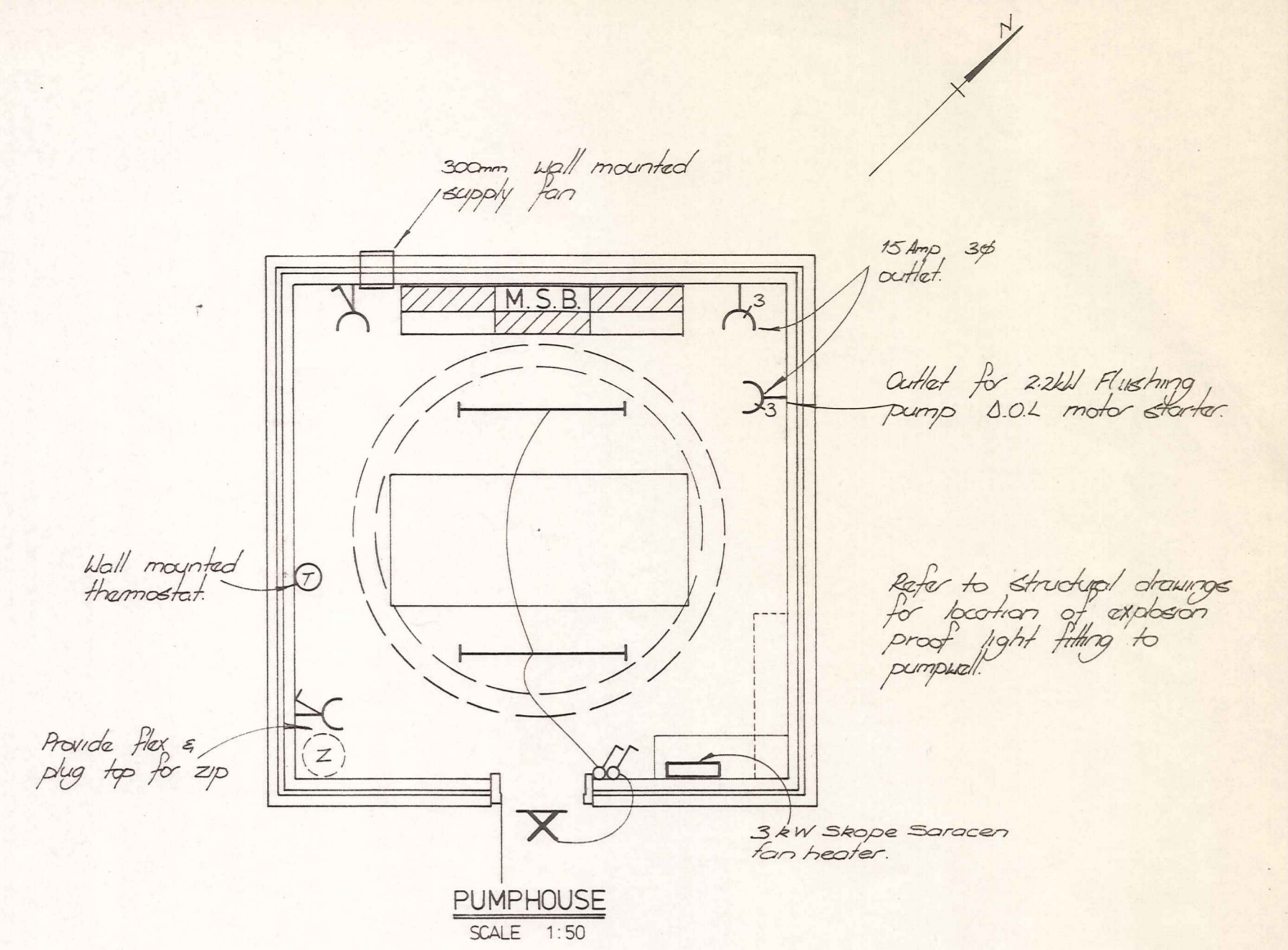
FOI CONSTRUCTION NOTES SEE SHEET 1



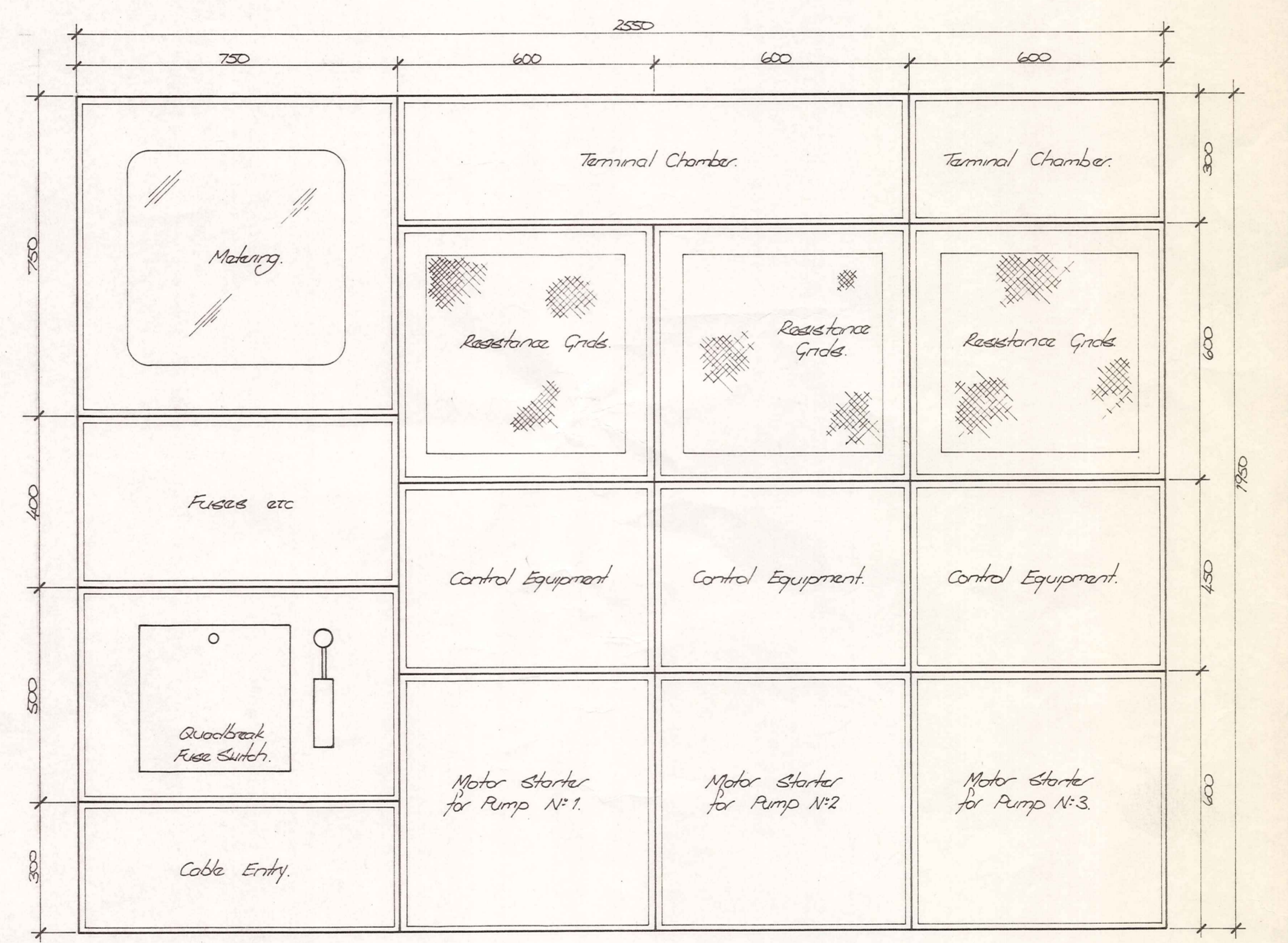
SCHEMATIC CONTROL DIAGRAM FOR 13kW MOTOR STARTER N°1
N°s 2 & 3 are SIMILAR



CONTROL DIAGRAM



PUMPHOUSE
SCALE 1:50



MAIN SWITCHBOARD
SCALE 1:10

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PEDERSEN & PARTNERS LTD
CONSULTING ELECTRICAL ENGINEERS
DUNEDIN CHRISTCHURCH

CROMWELL BOROUGH COUNCIL

NEIGHBOURHOOD 1 DEVELOPMENT

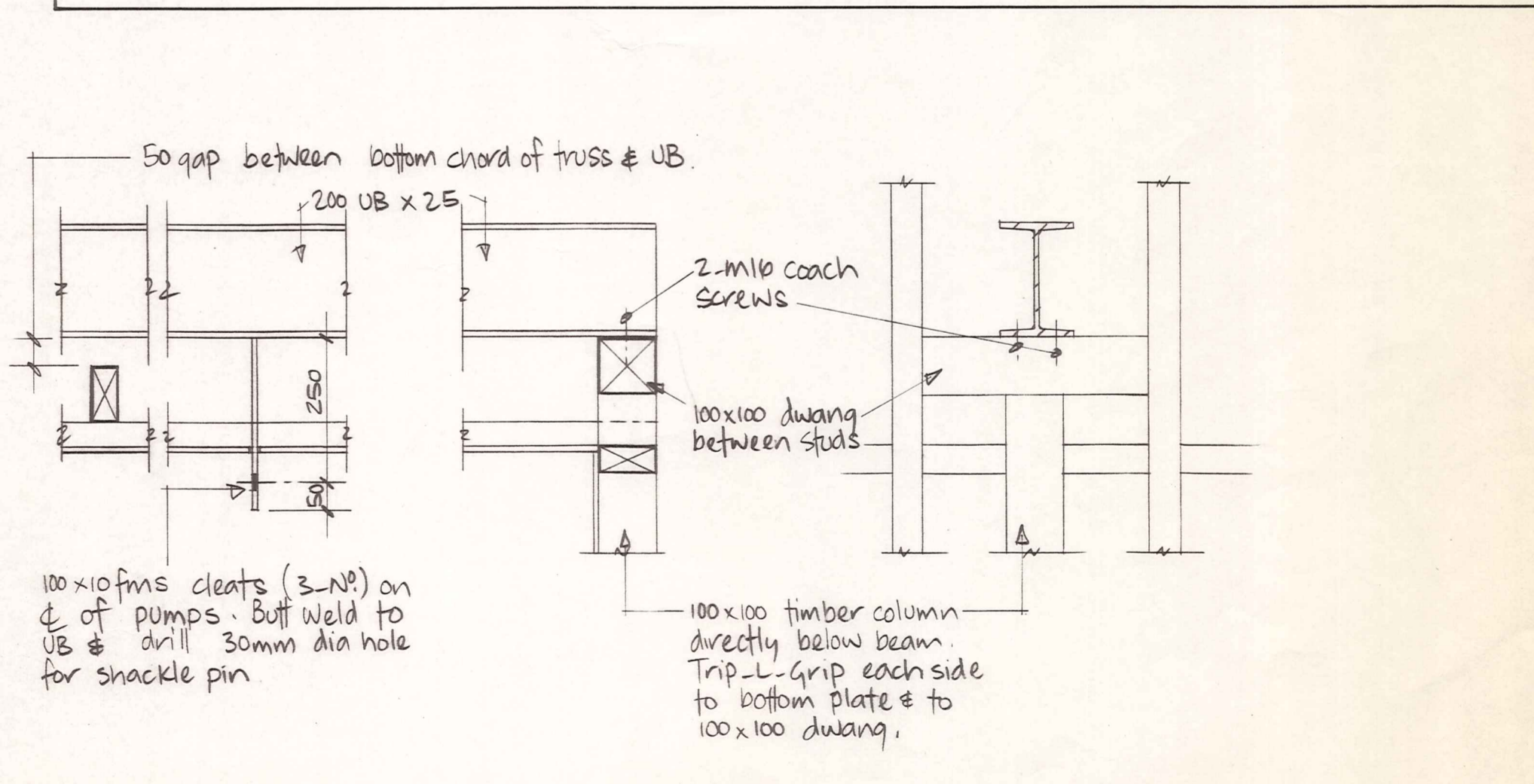
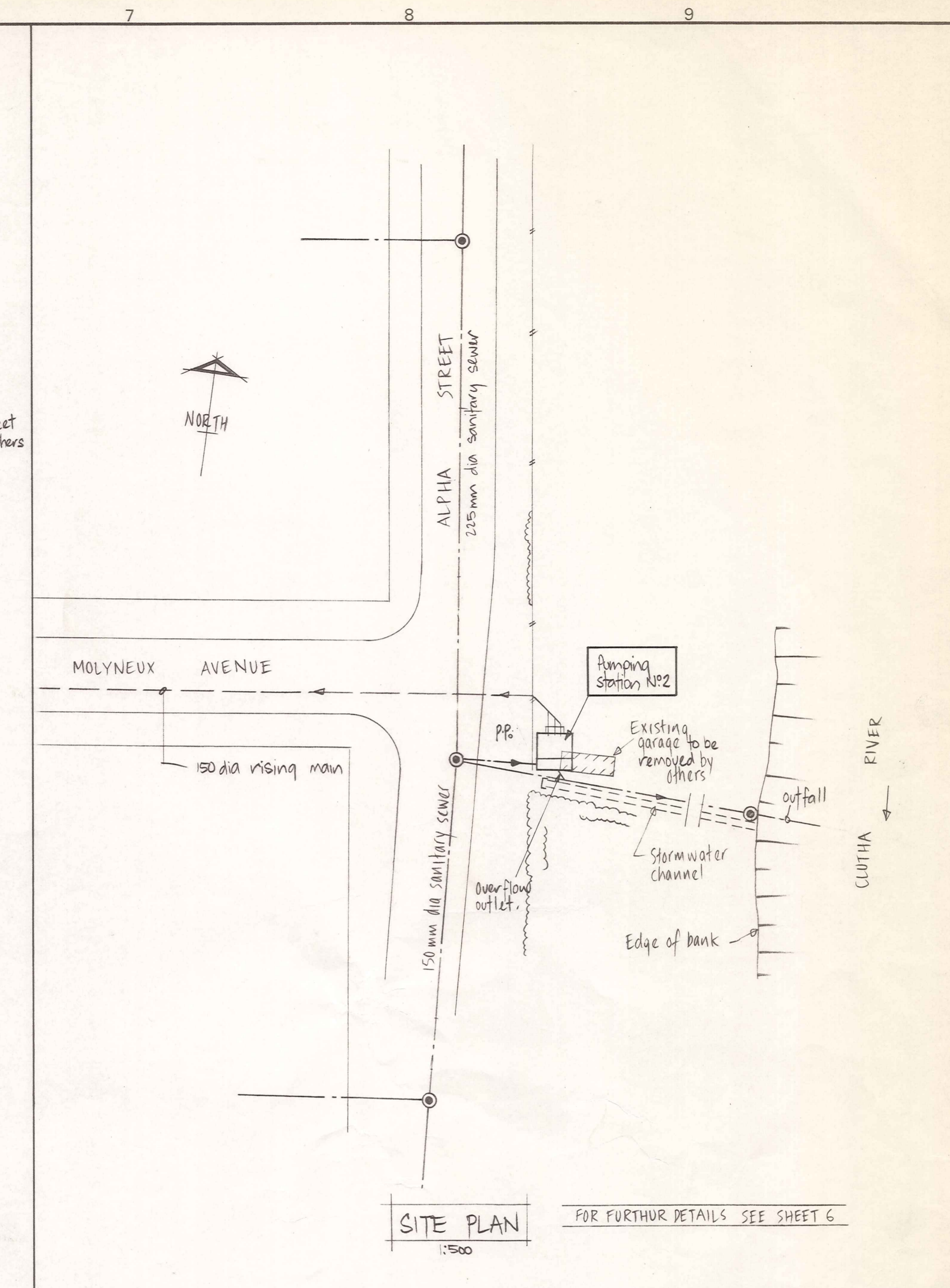
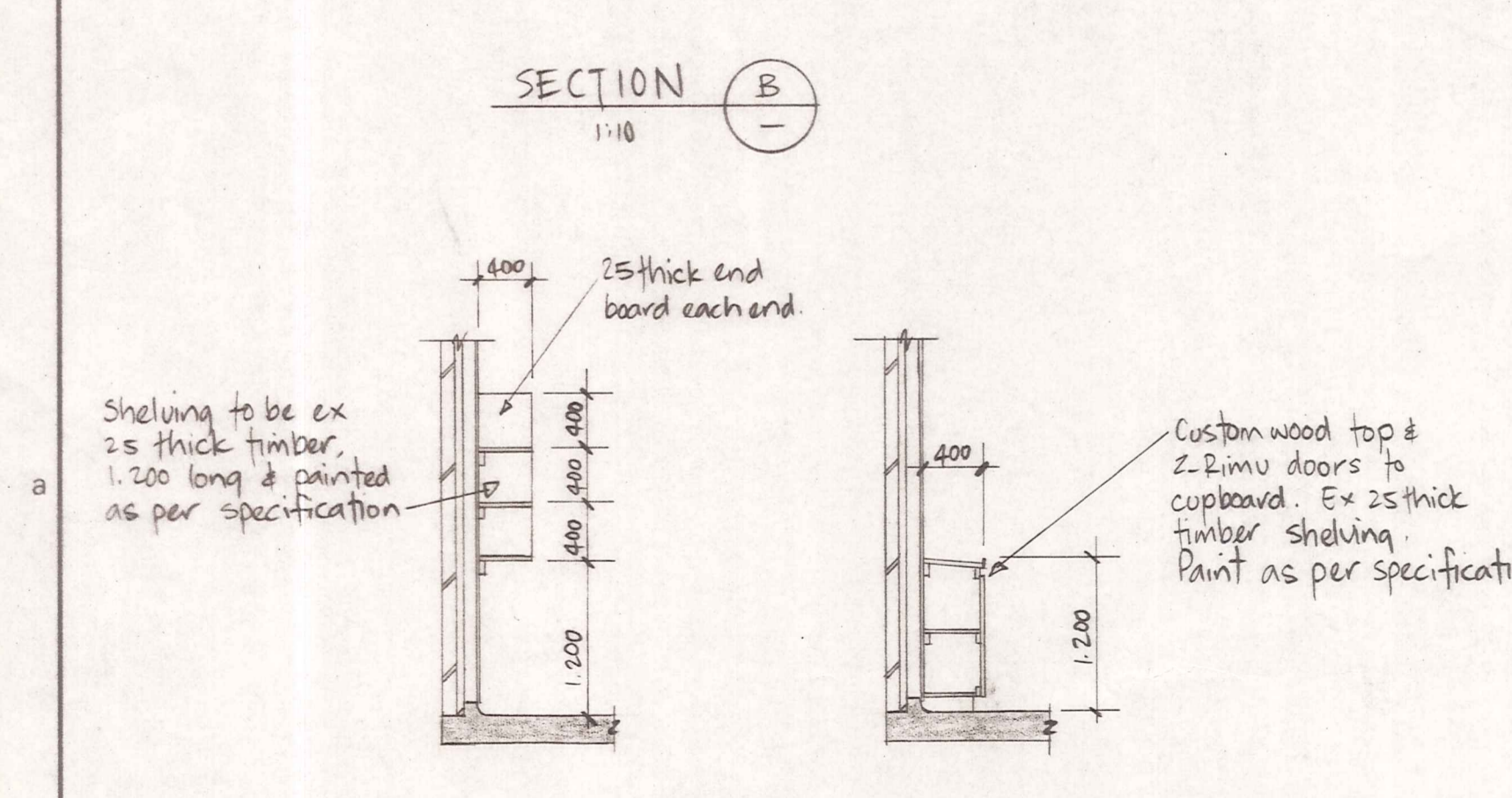
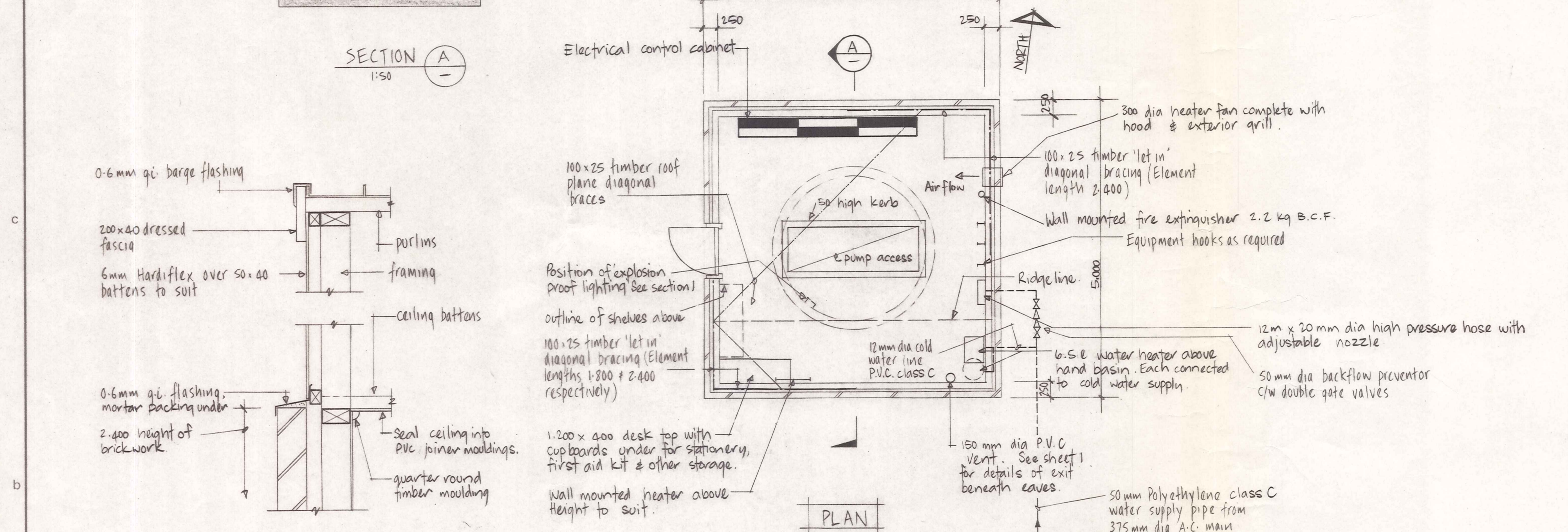
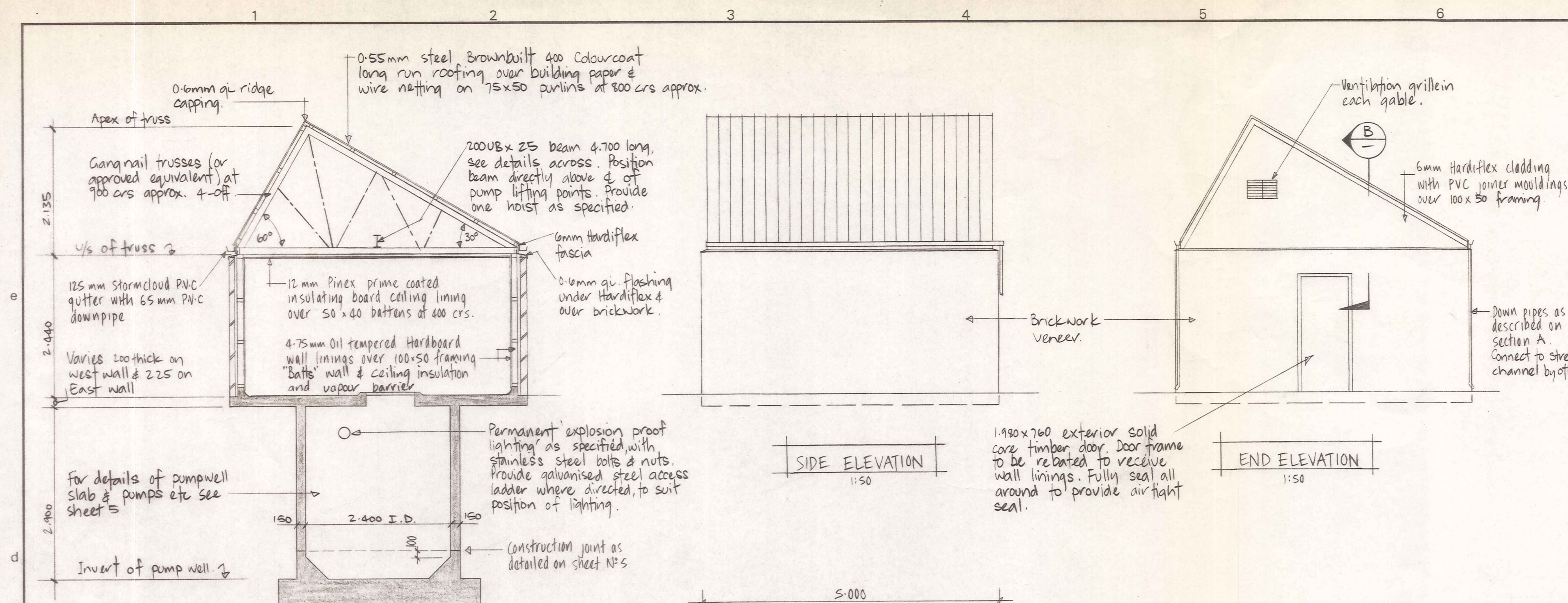
CONTRACT N° 9
SANITARY SEWERAGE
PUMPING STATIONS

PUMPING STATION N° 1
MELMORE TERRACE
ELECTRICAL SERVICES

AMENDMENTS			NAME	DATE
NO.	BY	DATE		
			J. Rutherford	June '82
			M. Gill	June '82
			J. Rutherford	June '82

Appvd.	Surveyed	9865	JOB NO.	3	Sheet No
Drawn	Checked				
Calculations	Approved				
Traced	File 9/19/10				

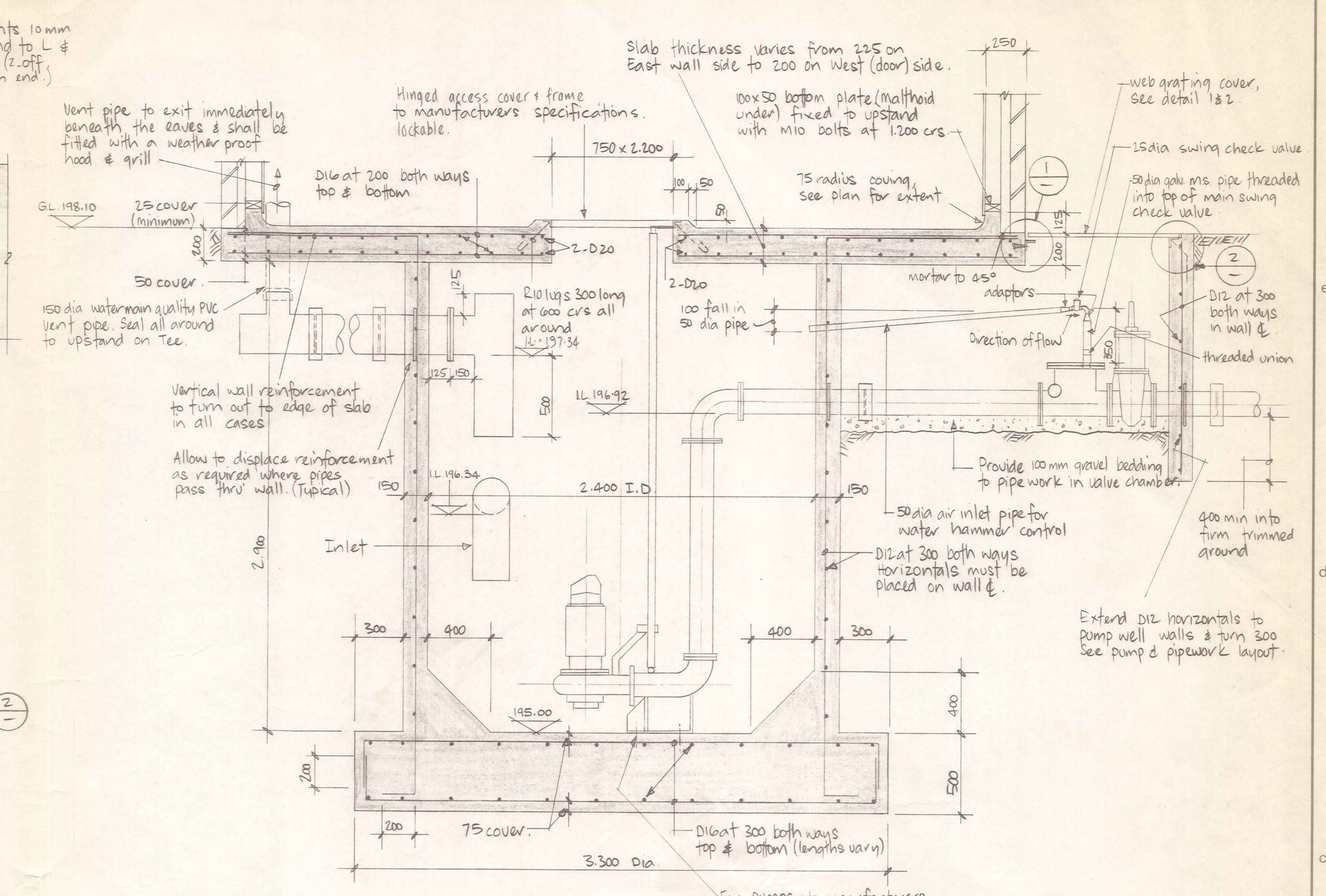
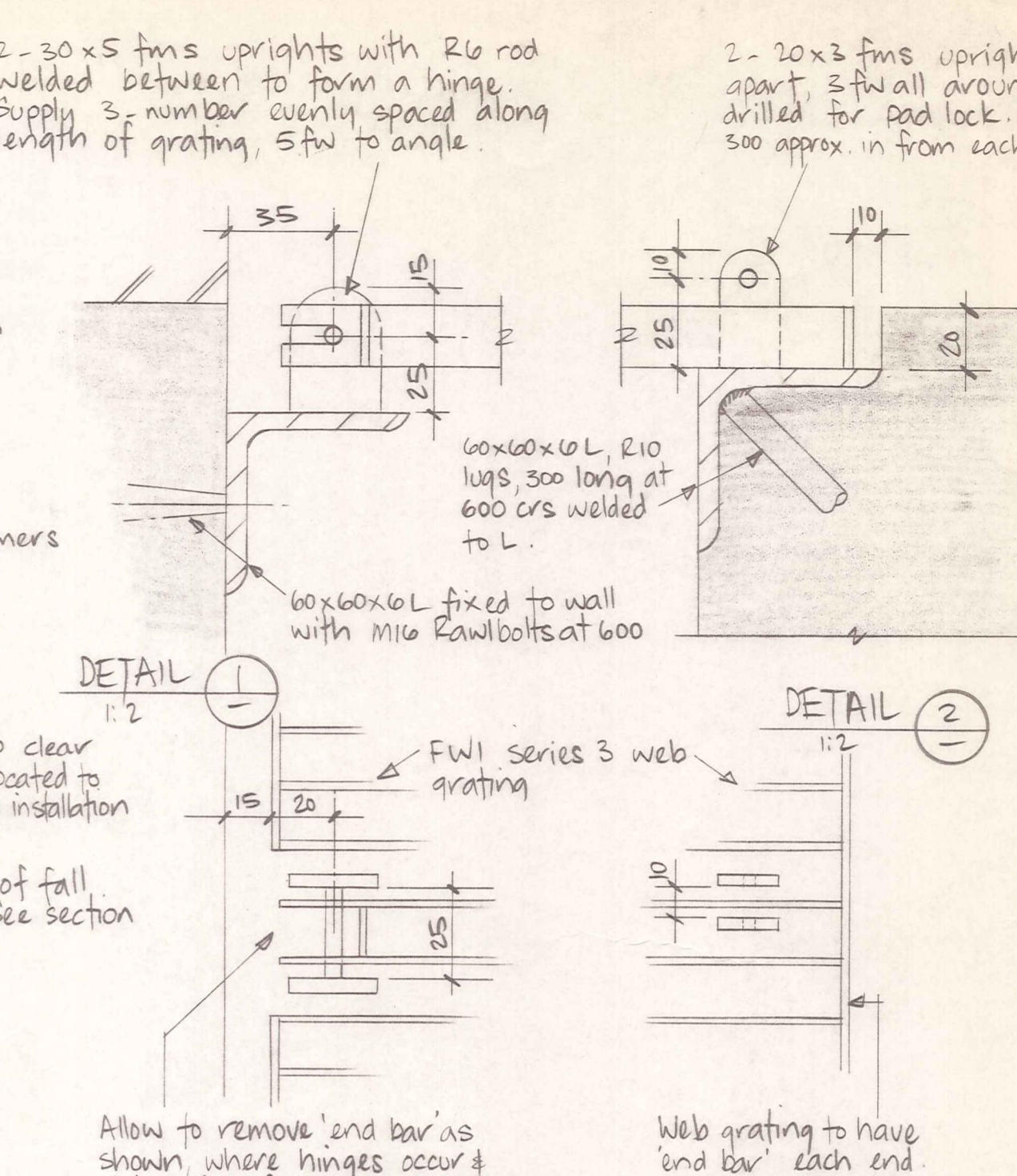
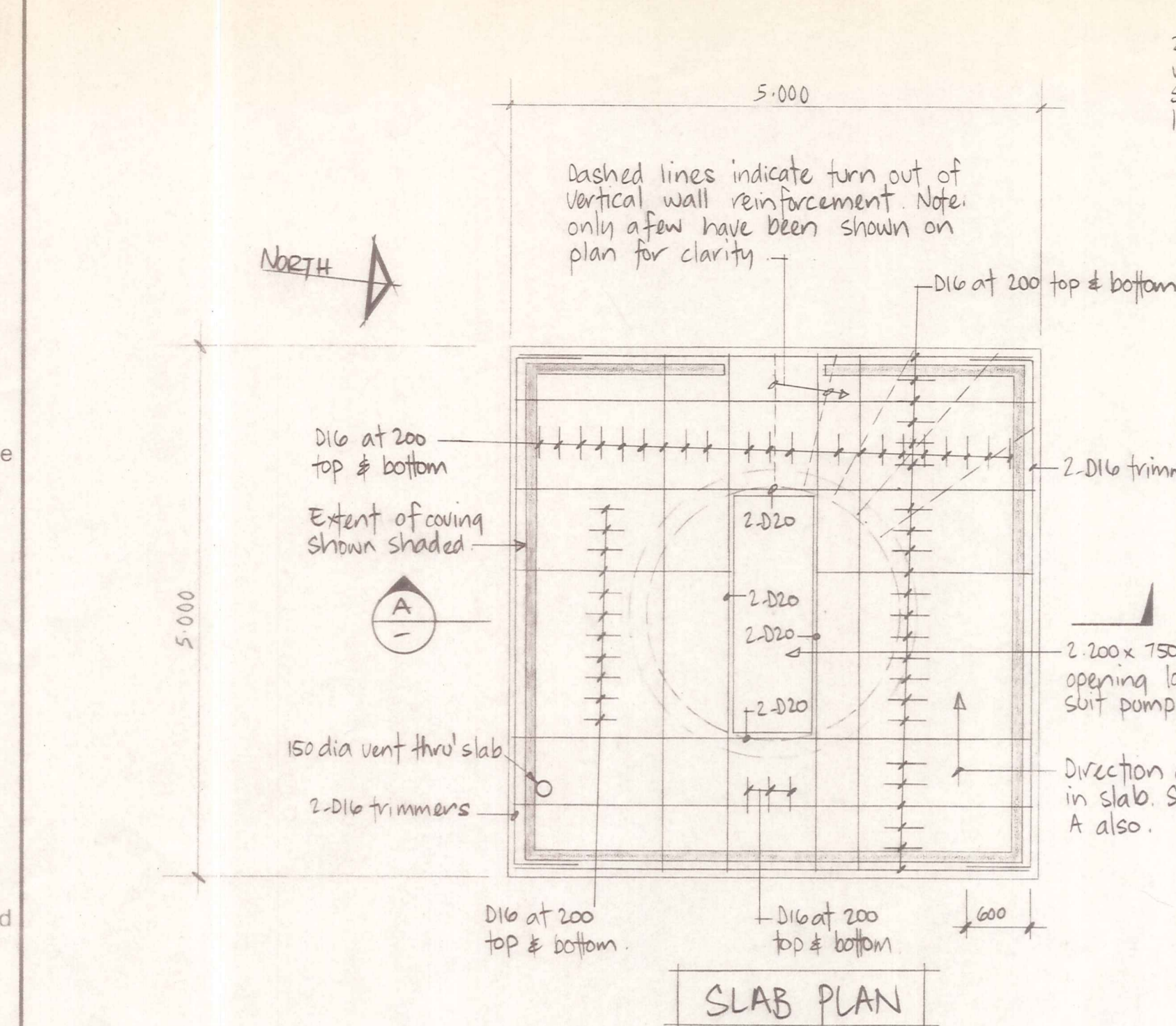
J. Rutherford



ORIGINAL SIZE
mm INCHES
300
200
150
100
50
0

JOINERY DETAILS 1:50
LOCATION OF BENCH MARK
HOIST BEAM DETAILS 1:10
FOR CONSTRUCTION NOTES SEE SHEET 1

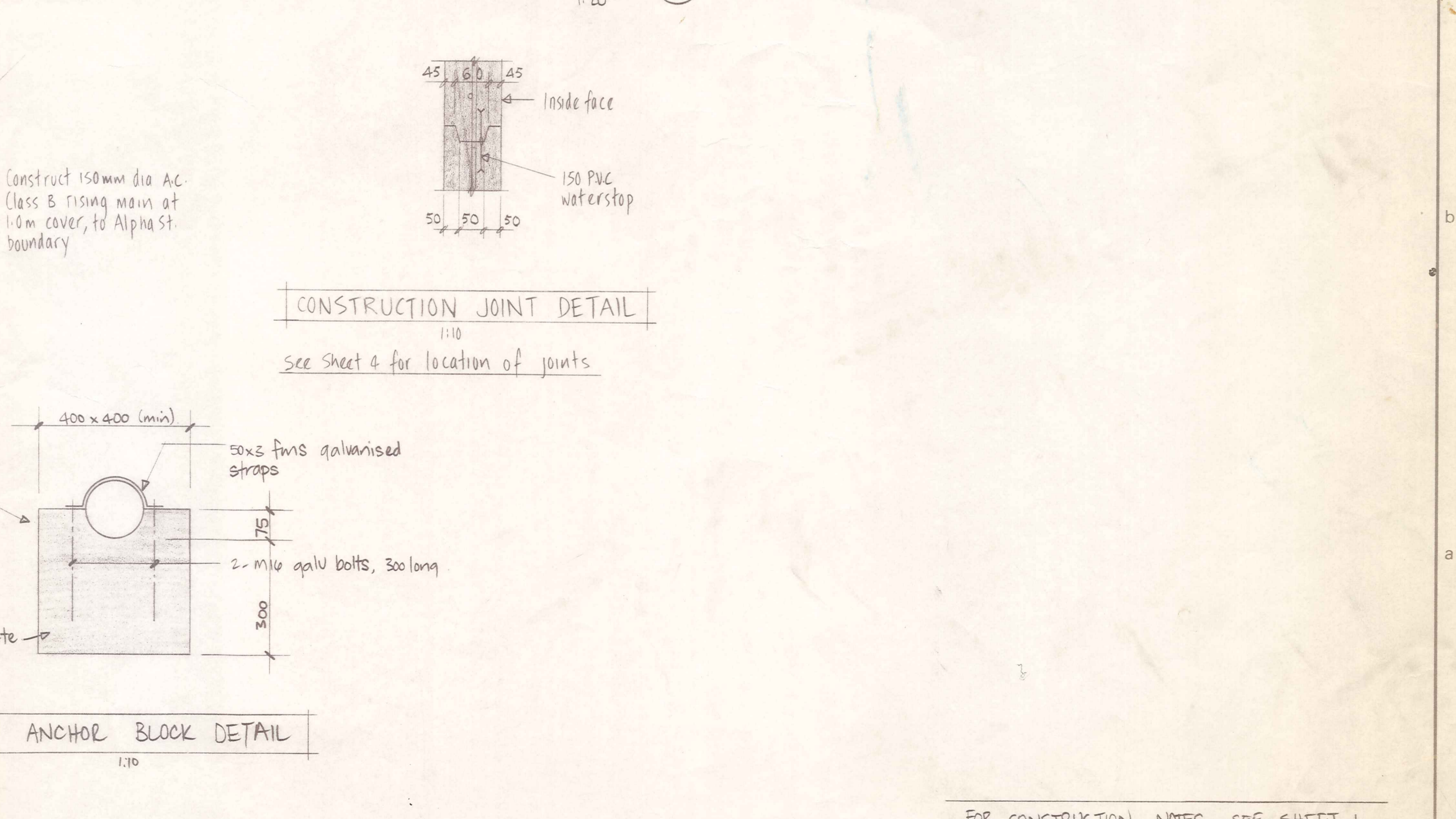
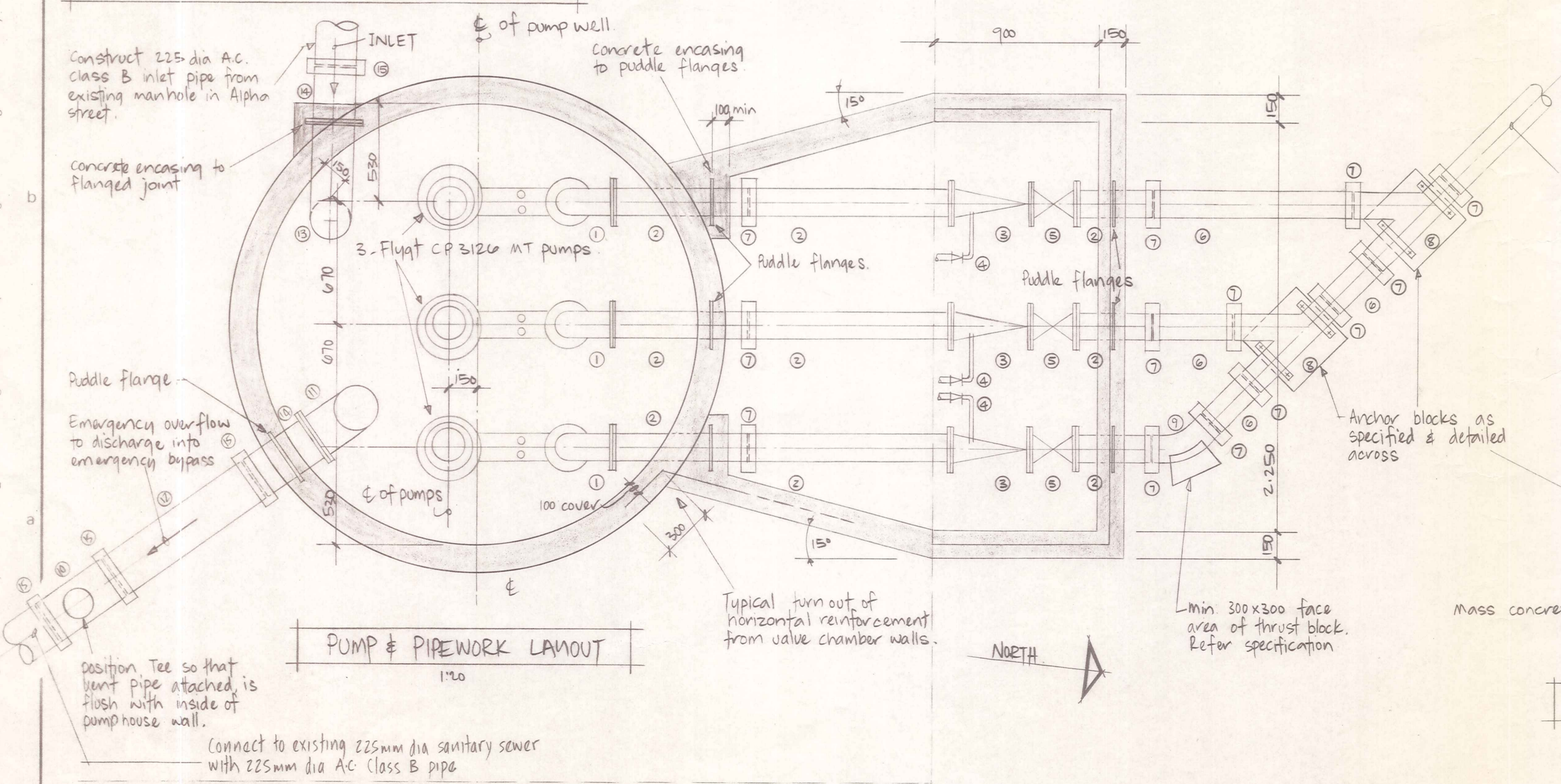
DUFFILL WATTS & KING LTD CONSULTING CIVIL & STRUCTURAL ENGINEERS Dunedin P.O. Box 5269 Ph. 777-133 Invercargill P.O. Box 576 Ph. 83049 Cromwell P.O. Box 82 Ph. 50-391	CROMWELL BOROUGH COUNCIL	NEIGHBOURHOOD 1 DEVELOPMENT	CONTRACT N° 9	PUMPING STATION N° 2 ALPHA STREET GENERAL ARRANGEMENT & SITE PLAN.	AMENDMENTS			NAME DATE	JOB NO.	Sheet No
			SANITARY SEWERAGE PUMPING STATIONS		NO. BY DATE	Appvd.	Surveied Drawn Calculations Traced Checked Approved	ER WILSON MAY 1982 J.B.F. PIDCOCK MAY 1982 J. KNOX MAY 1982 23.6.82	9865	4 of 8 sheets



- Key to pipework layout**
- | Item | Description |
|------|---|
| 1 | 150 dia flanged short bend |
| 2 | 150 dia lengthening piece flanged one end |
| 3 | 150 dia flanged swing check valve |
| 4 | 25 dia swing check valve |
| 5 | 150 dia flanged sluice valve |
| 6 | 150 dia lengthening piece, plain ended |
| 7 | 150 dia gibault joint |
| 8 | 150 to 150 wye, plain ended |
| 9 | 150 dia 45° bend, plain ended |
| 10 | 150 on 225 Tee, plain ended |
| 11 | 225 dia fabricated PVC Tee, flanged one end |
| 12 | 225 dia lengthening piece, plain ended |
| 13 | 225 dia 90° bend, flanged one end |
| 14 | 225 dia lengthening piece, flanged on end |
| 15 | 225 dia gibault joint |

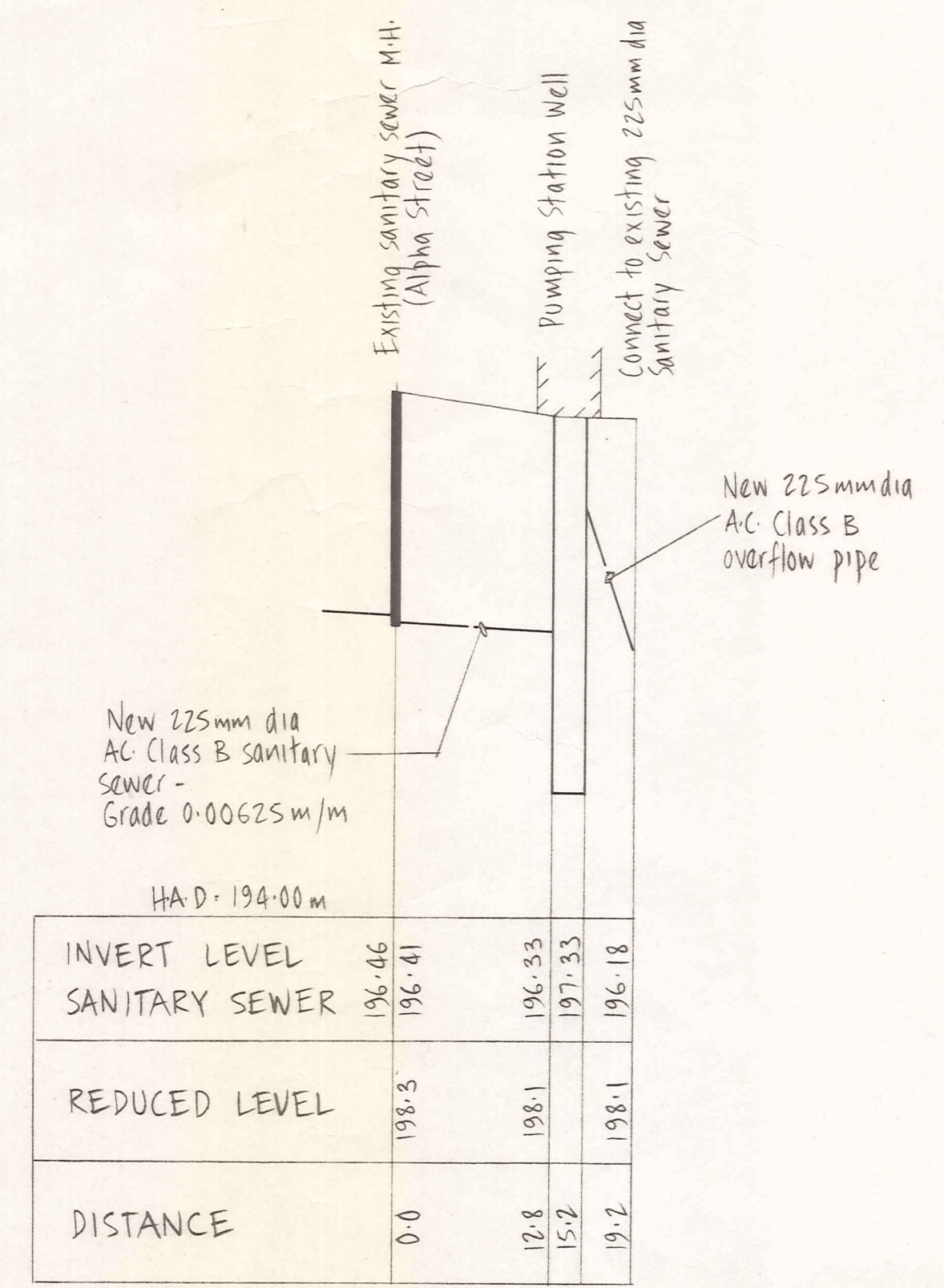
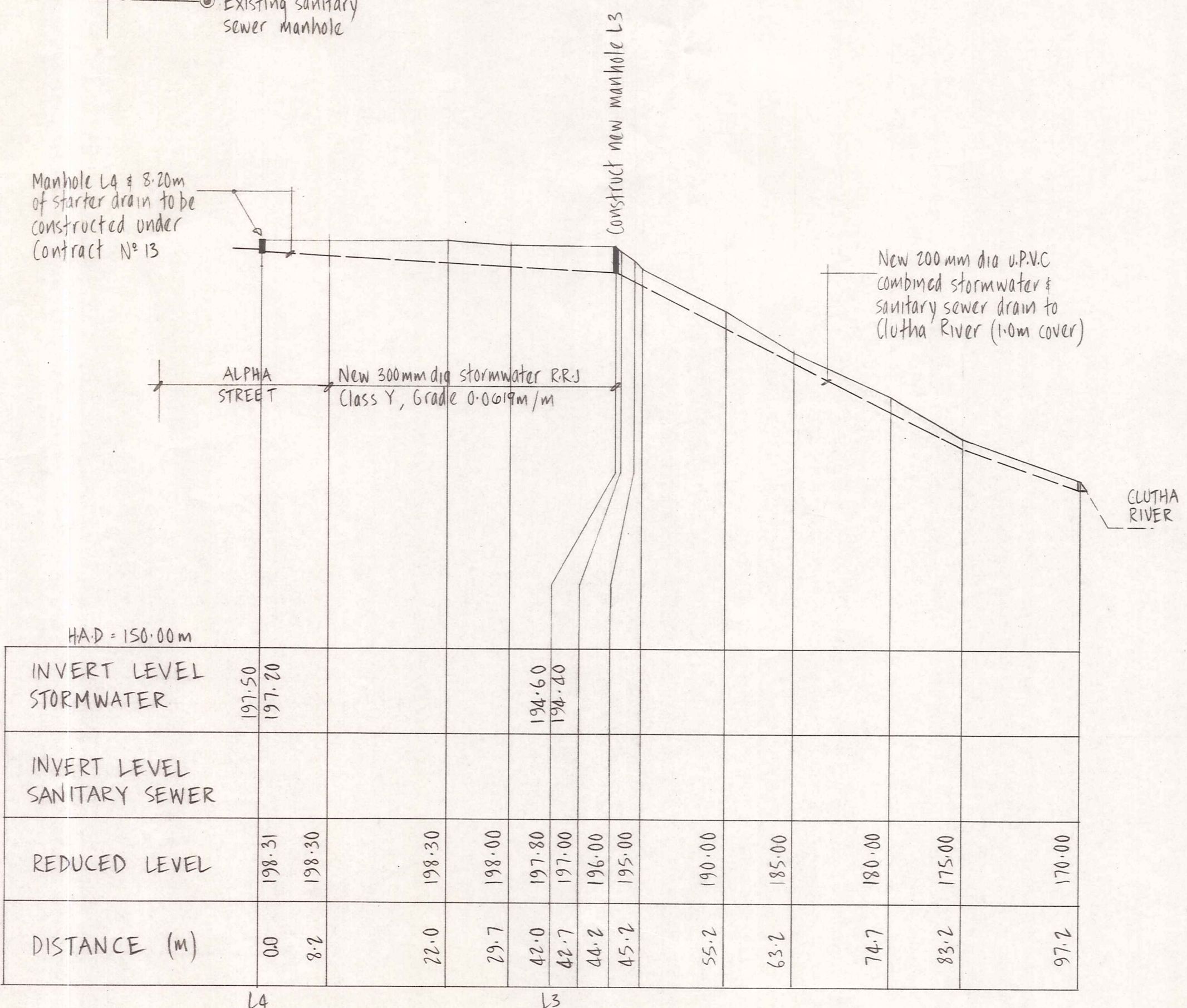
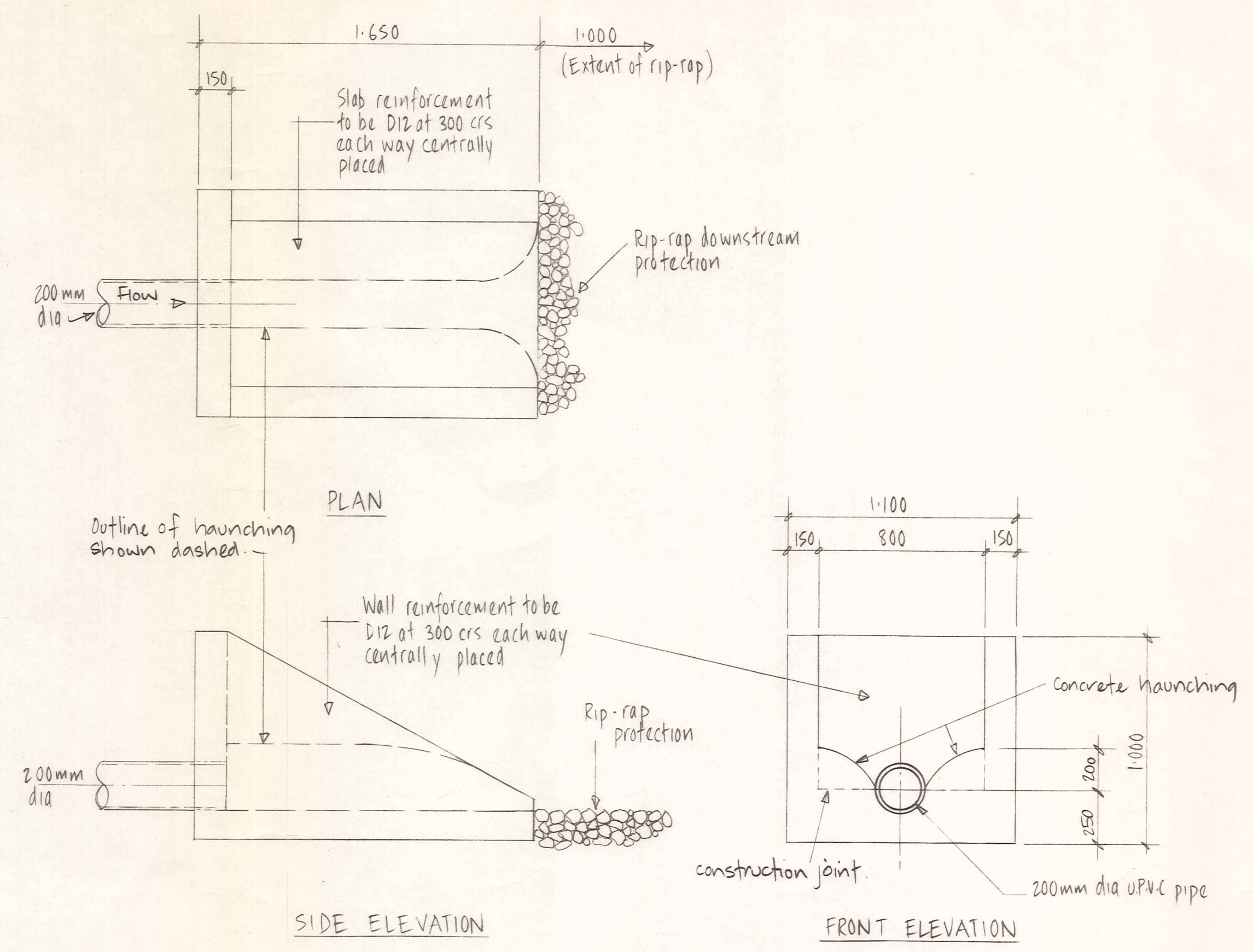
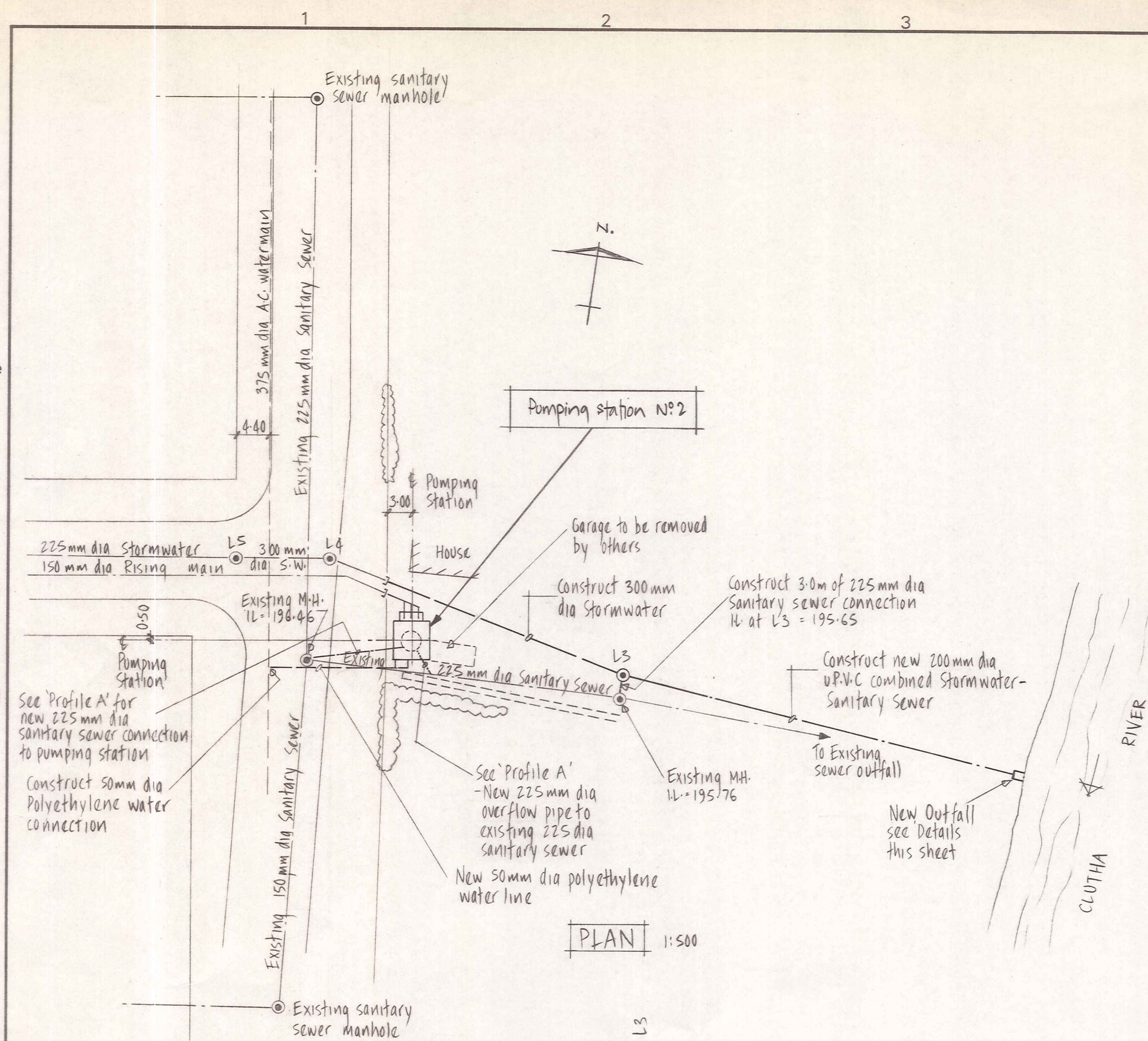
PLAN AT DETAIL 1
PLAN AT DETAIL 2

SECTION A
1:20



CONSTRUCTION JOINT DETAIL
1:10
See Sheet 4 for location of joints

ORIGINAL SIZE
mm INCHES



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CROMWELL BOROUGH COUNCIL

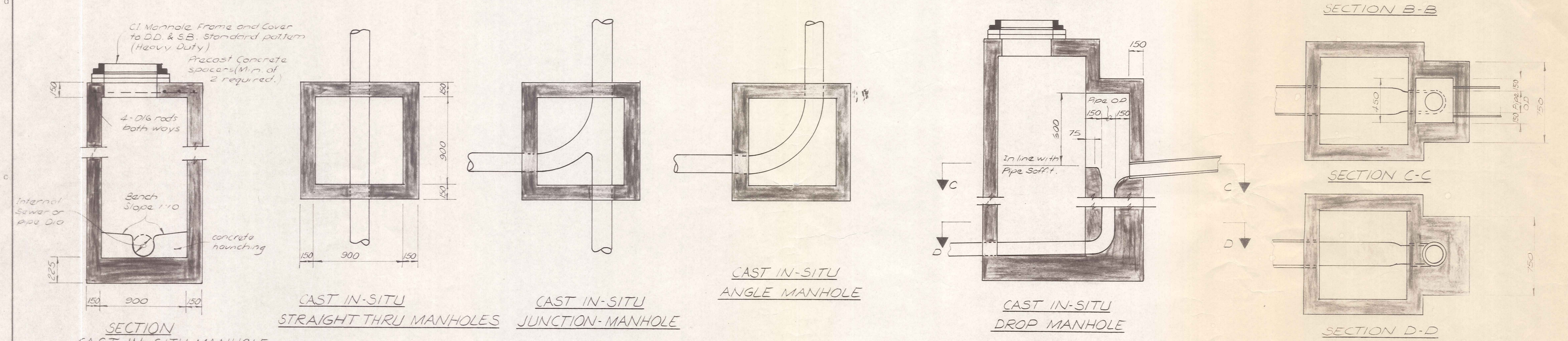
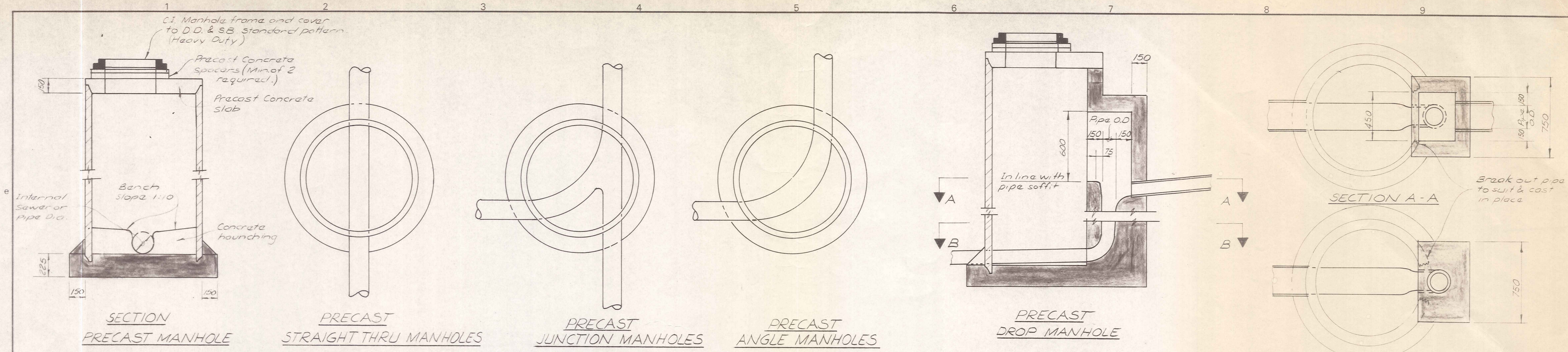
NEIGHBOURHOOD 1 DEVELOPMENT

CONTRACT N°9
SANITARY SEWERAGE
PUMPING STATIONS

PUMPING STATION N°2
ALPHA STREET
OUTFALL DETAILS

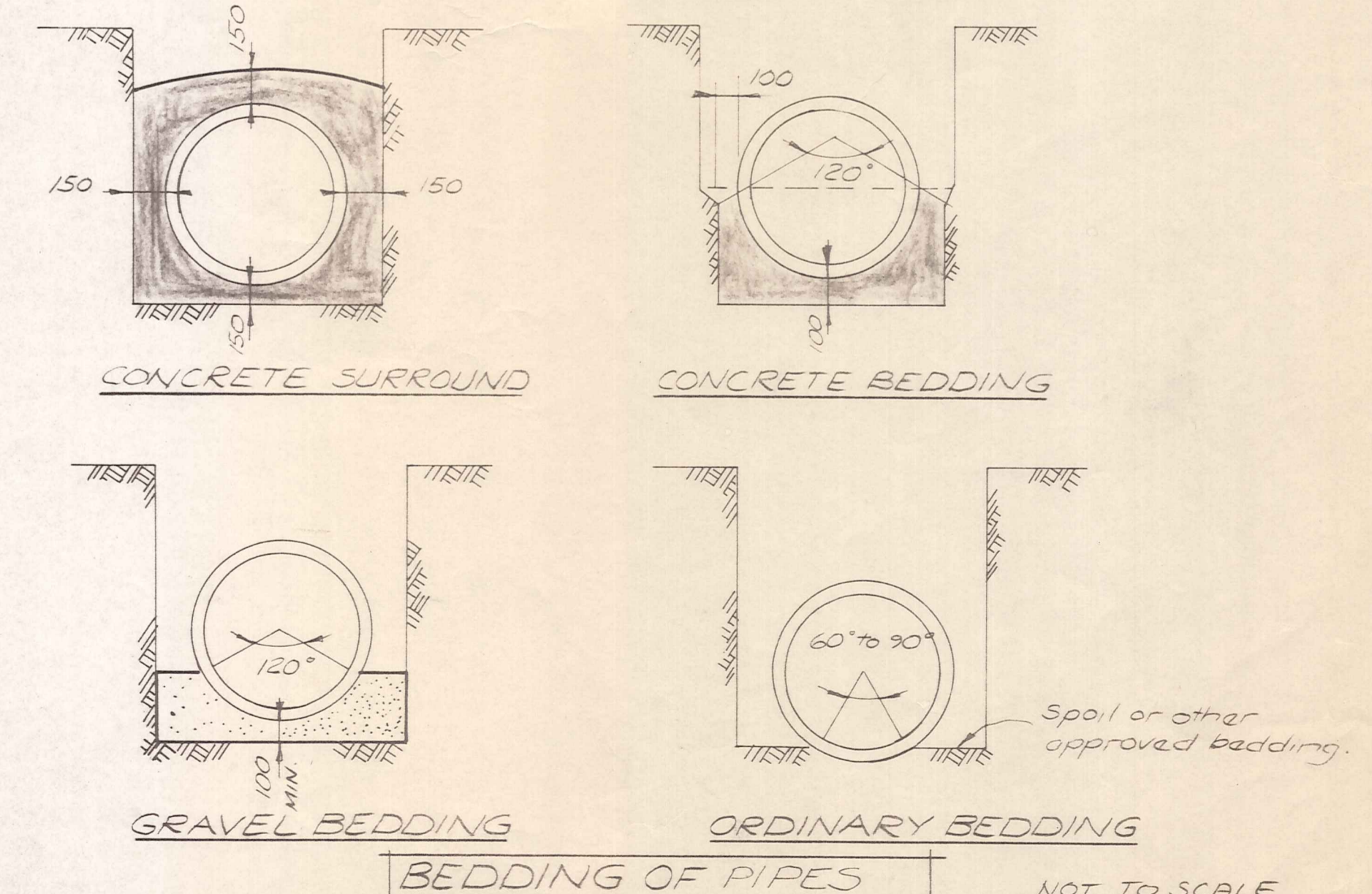
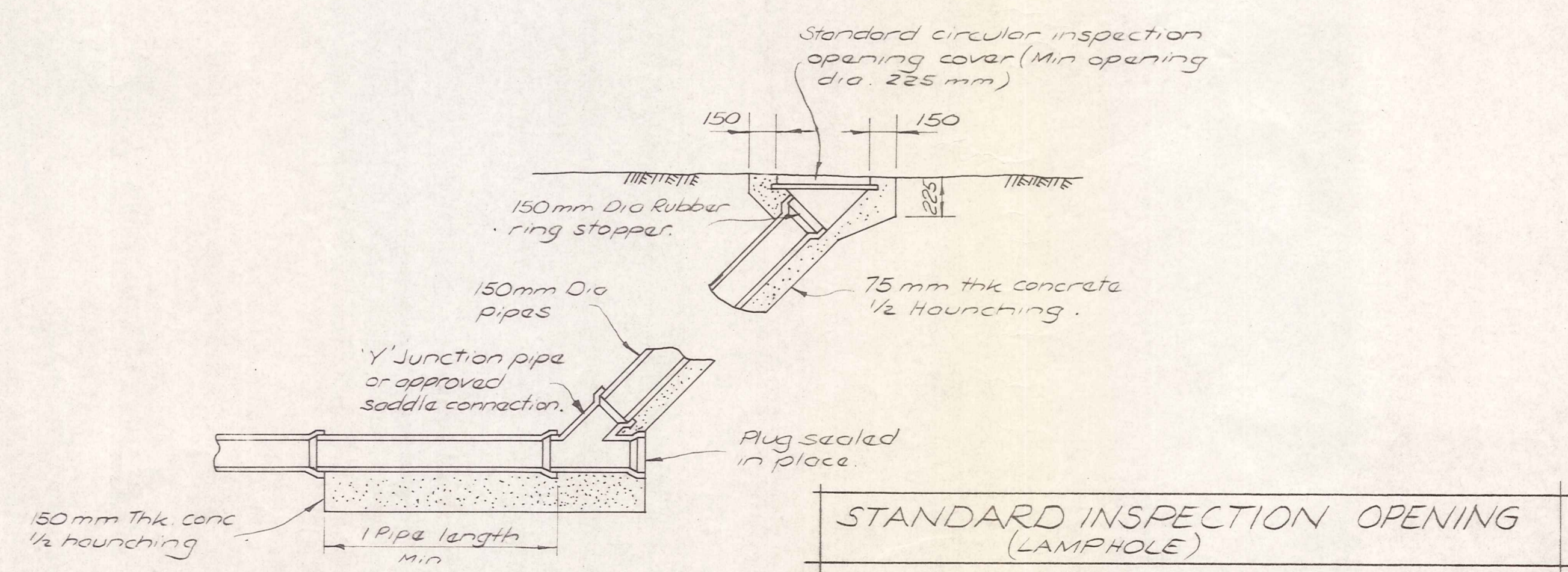
AMENDMENTS				NAME		DATE	JOB NO.	Sheet No
NO.	BY	DATE	Appvd	Drawn	N. JELLEY	JUNE 1982	9865	6
			Surveyed	Calculations	N. JELLEY	JUNE 1982		
			Traced	J. KNOX	JUNE 1982			
			Checked		22.6.82			
			Approved				File 9/19/10	L.B.

[Handwritten signature]



NOTE: Wall thickness increases to 225 mm for manholes greater than 3.0 m deep

STANDARD SANITARY SEWER MANHOLE DETAILS
(FOR DIAMETERS LESS THAN 375 mm)



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			SANITARY SEWERAGE PUMPING STATIONS		NO BY DATE	Appvd	Surveys Drawn Calculations Traced Checked Approved	B HAWKINS M COOPER	6-82 6-82	9865	7 of 8 shts
File 9/9/10 LB FB											