

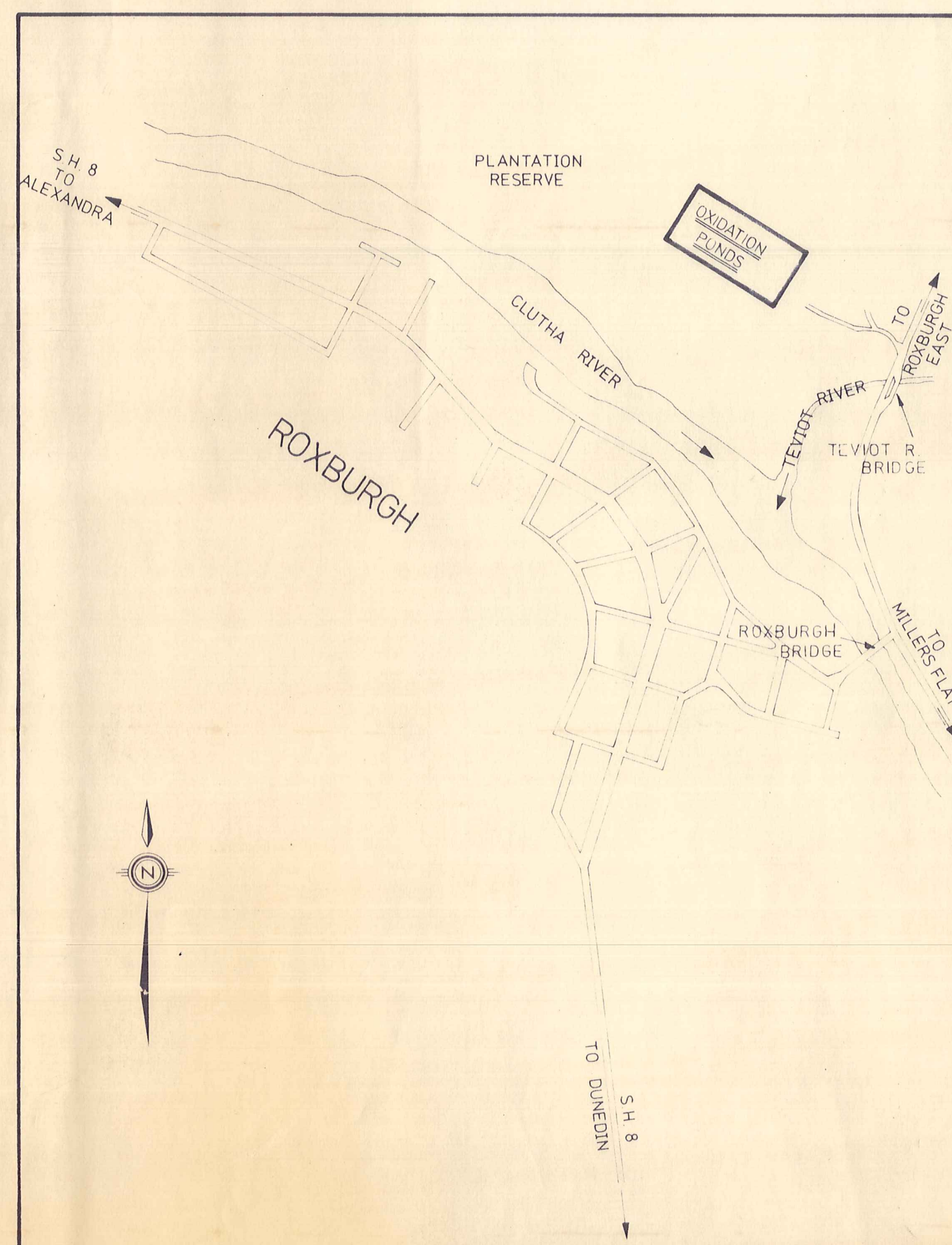
ROXBURGH BOROUGH COUNCIL

SEWERAGE 1978

CONTRACT N° 2 – OXIDATION PONDS

SHEET INDEX

DRAWING N°	DESCRIPTION
3062/1	LAYOUT PLAN
3062/2	SETTING OUT DETAILS
3062/3	CONTOUR PLAN
3062/4	CROSSECTIONS
3062/5	CROSSECTIONS
3062/6	EMBANKMENT SECTIONS
3062/7	EMBANKMENT SECTIONS
3062/8	RAW POND INLET & DETAILS
3062/9	RAW POND OUTLET, TYPICAL EMBANKMENT & SEALING DETAILS
3062/10	SECONDARY POND INLET & WAVEBAND DETAILS
3062/11	SECONDARY POND OUTLET DETAILS
3062/12	RAW POND SCOUR LINE
3062/13	MANHOLE N°s 17 & 23 DETAILS
3062/14	PONDS SEALING DETAILS & SIGNS FOR PONDS
3062/15	STANDARD MANHOLE DETAILS

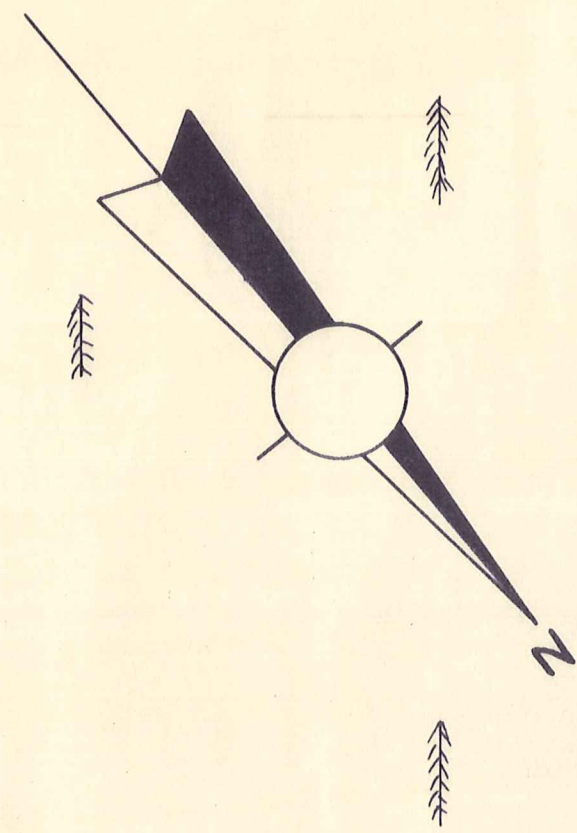


LOCATION PLAN

E. R. GARDEN & PARTNERS
CONSULTING ENGINEERS
DUNEDIN & INVERCARGILL

SET N° 11.

ORIGINAL



PINE TREE PLANTATION

TO CLUTHA RIVER

202250

PLANTATION

33550

9400

9400

51000 TREE

150 mm ϕ A/C OUTFALL LINE

MANHOLE N^o 22 (REFER 3062/11 FOR DETAIL)

SCOUR LINE 10m R.
(SEE 3062/11)
OUTLET ~ REFER
3062/11 FOR
DETAILS

R.L. 93.70 ALONG TOE
OF END EMBANKMENT

POND (REFER 3062/12
FOR SETTING OUT DETAILS)

150 mm ϕ A/C SEWER CLASS
OUTFALL LINE
CONTRACT ENDS THREE
PIPE LENGTHS PAST
SLUICE VALVE ~ POSITION & GRADE
WILL BE GIVEN ON SITE

NEW FENCE
(REFER SPEC.)

ACCESS RAMP

ACCESS TRACK
TO RIVER

B.M. N^o 23 ~
TOP OF CONCRETE
STRAINER POST

M.O.W. & DEVELOPMENT
YARD

P&W FENCE

ACCESS TRACK

NEW 200 mm ϕ CLASS 'B' A/C
PUMPING MAIN ~ NOT
IN CONTRACT

END OF CONTRACT
AT 11 1/4^o BEND (NOT
IN CONTRACT)

MANHOLE N^o 17
I.L. 95.05 ~ SEE
3062/13

INLET ~ REFER
3062/8 FOR
DETAILS

RAW
POND

WATER LEVEL ~ 95.05
FLOOR LEVEL ~ 93.85 TO 93.70

OUTLET ~ REFER
3062/9 FOR
DETAILS

R.L. 93.85 ~ ALONG
TOE OF END EMBANK-
MENT

225 mm ϕ A/C TRANSFER
LINE

MANHOLE N^o 20 (I.L. 94.40)

CONCRETE WAVE BAND
(SEE 3062/10) (NOT SHOWN)

TOP OF EMBANKMENT ~ R.L. 95.50 m

MANHOLE N^o 19
I.L. 94.45

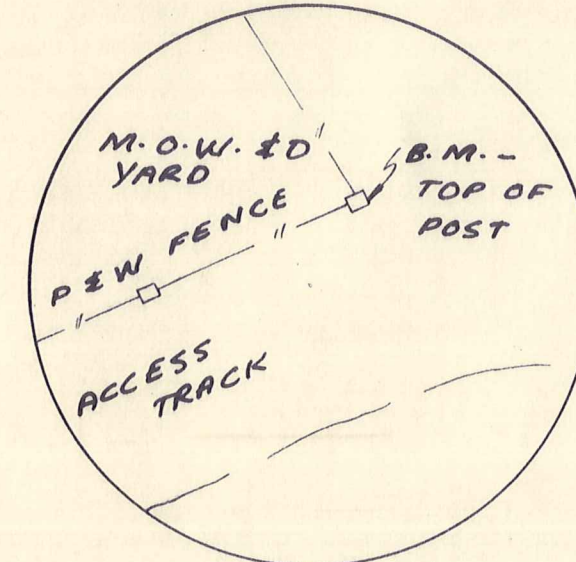
R.L. 93.85 ~ ALONG
TOE OF END
EMBANKMENT

INLET ~ REFER
3062/10 FOR
DETAILS

MANHOLE N^o 21
I.L. 94.35

CONCRETE WAVE
BAND

GRAVEL
PIT



B.M. N^o 23
R.L. ~ 95.663 m

PLAN

NOTE

1. REFER TO 3062/4,5,6,17 FOR SECTIONS
2. REFER TO 3062/9 FOR TYPICAL EMBANKMENT DETAILS.
3. 3062/14 FOR TYPICAL SEALING DETAILS.

CUT EMBANKMENT.

FILL EMBANKMENT.

3. ALL LEVELS GIVEN IN METRES
4. ALL DIMENSIONS ARE GIVEN IN mm UNLESS OTHERWISE STATED
5. FLOOR LEVELS GIVEN TO TOP OF FINISHED FLOOR
(i.e. TOP OF CLAY SEALING LAYER)

TENDER DOCUMENT

E. R. GARDEN & PARTNERS
CONSULTING ENGINEERS
DUNEDIN &
INVERCARGILL



AMENDMENTS

RELEVANT DRAWINGS ETC.

ROXBURGH BOROUGH COUNCIL

Designed JWB/GR Date DEC '77
Drawn GR Job No. 3062
Traced GR Checked
Approved

Scale: 1:500
Survey Ref: L.B.-170 F.B.-I.

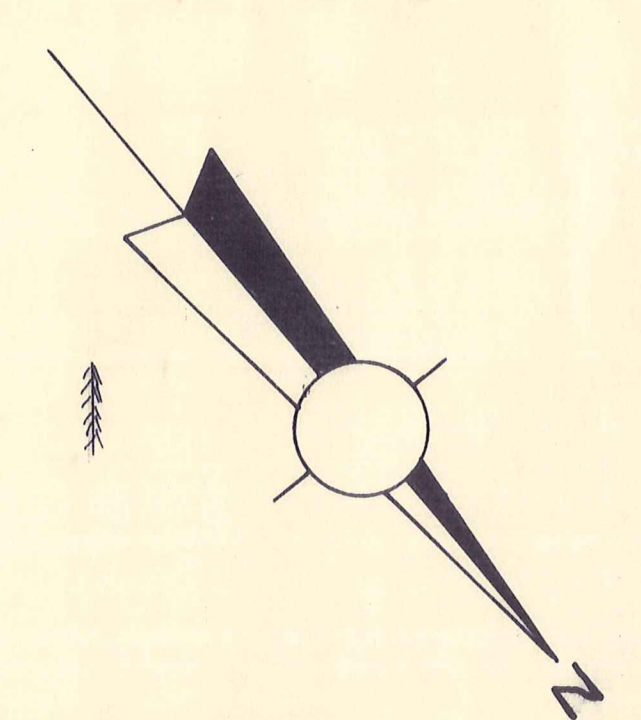
SEWERAGE 1978 — CONTRACT N^o 2

OXIDATION PONDS— LAYOUT PLAN

DRG No. 3062/1

Amendment

gry



PINE TREE PLANTATION

PLANTATION

SECONDARY POND
(FLOOR RL 93.85 - 93.10)

RAW POND
(FLOOR RL 93.85 - 93.10)

GRAVEL PIT

M.O.W. & DEVELOPMENT YARD

P&W FENCE
EXISTING ACCESS TRACK

ACCESS RAMP

PLAN

NOTE:
All contours on this plan are shown 0.3 metres too high. This has the effect of moving the join between the red & yellow towards the yellow by approx. 2/3 of one contour line.

- NOTES
- 1. REFER TO 3062/4#5 FOR SECTIONS
 - 2. REFER TO 3602/1 FOR DIMENSIONS & LEVELS
 - 3. REFER TO 3602/2 FOR SETTING OUT DETAILS.
 - 4. RED — FILL AREAS
 - 5. YELLOW — CUT AREAS

TENDER DOCUMENT

E. R. GARDEN & PARTNERS
CONSULTING ENGINEERS
DUNEDIN &
INVERCARGILL



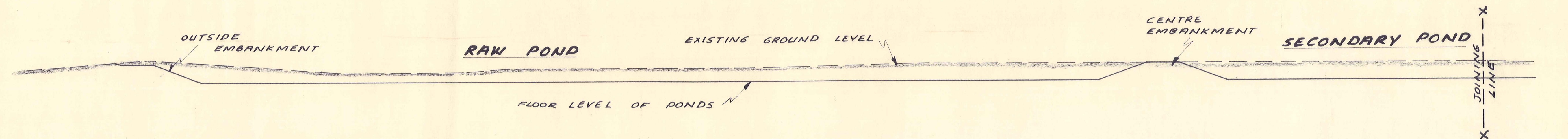
AMENDMENTS

RELEVANT DRAWINGS ETC.

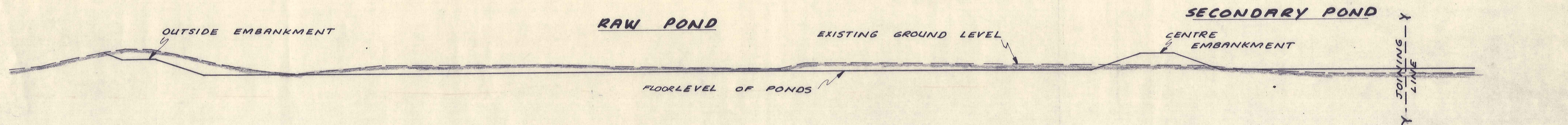
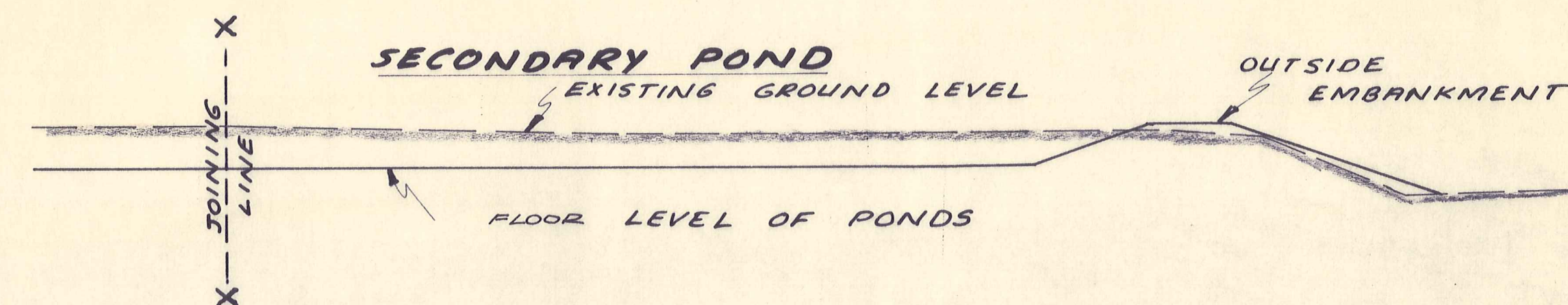
ROXBURGH BOROUGH COUNCIL	
Designed JWB/GR	Date DEC '77
Drawn G.R.	Job No. 3062
Traced G.R.	Checked 4/80
Approved J.W. Brooker JUN 21/8	Survey Ref: L.B.-170 F.B.-BI

SEWERAGE 1978 — CONTRACT N° 2	
OXIDATION PONDS — CONTOUR PLAN	
DRG No.	3062/3
Amendment	

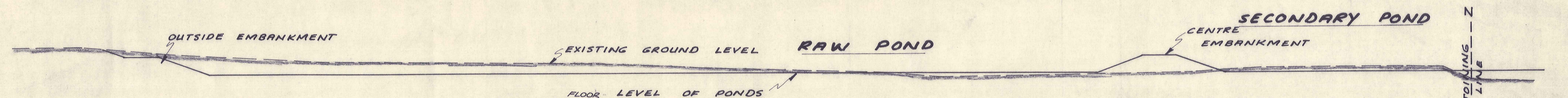
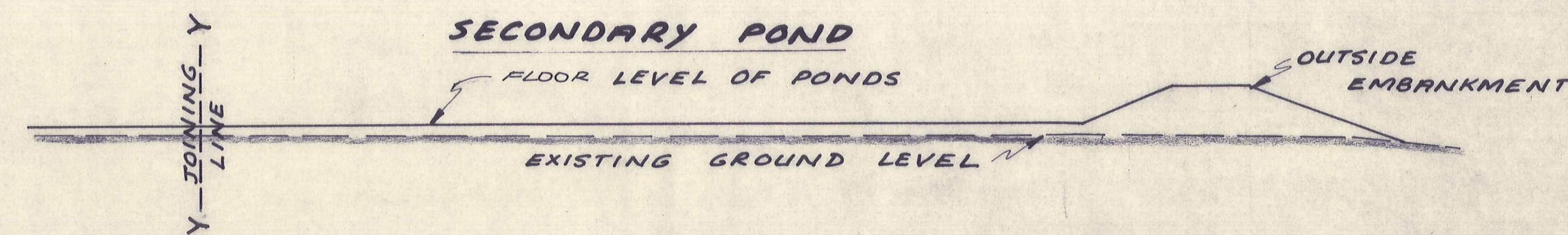
guy



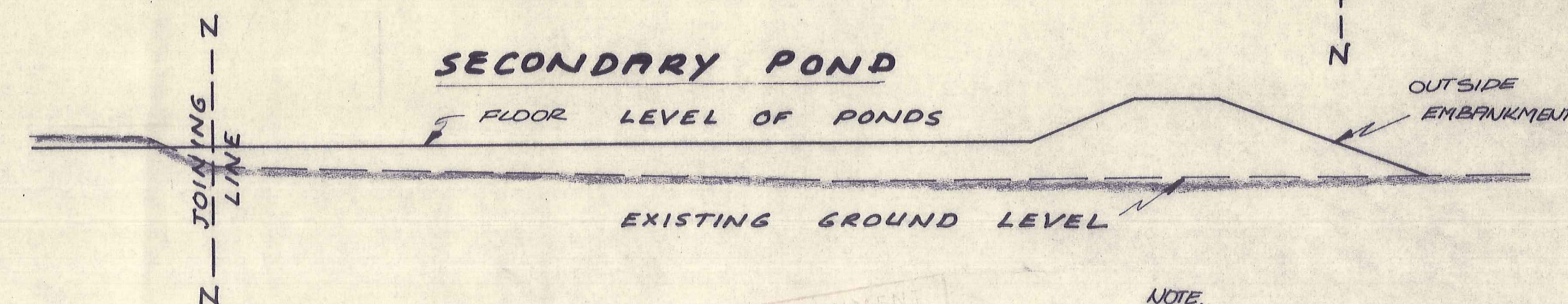
SECTION A~A



SECTION B~B



SECTION C~C



NOTE:
REFER TO 3062/3 FOR PLAN SHOWING
SECTION POSITIONS.

E. R. GARDEN & PARTNERS
CONSULTING ENGINEERS

DUNEDIN &
INVERCARGILL



AMENDMENTS

3062/3 CONTOUR PLAN.

RELEVANT DRAWINGS ETC.

ROXBURGH BOROUGH COUNCIL

Designed JWB/GR Date DEC '77

Drawn G.R. Job No. 3062

Traced G.R. Checked J.B.

Approved J.W. Garden

Scale: 1 : 250

Survey Ref:
L.B.-170

SEWERAGE 1978 — CONTRACT N° 2

OXIDATION PONDS — CROSECTIONS

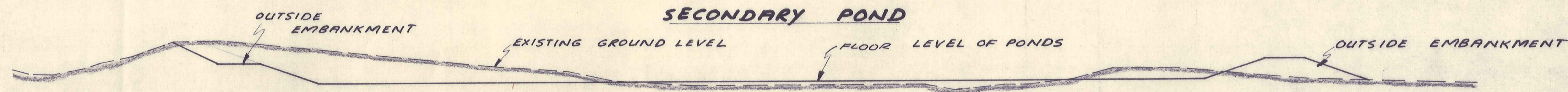
DRG No. 3062/4

Amendment

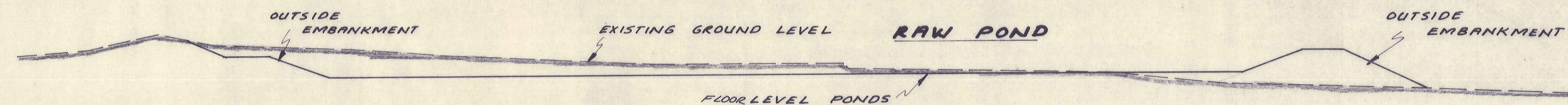
Handwritten initials and a checkmark.



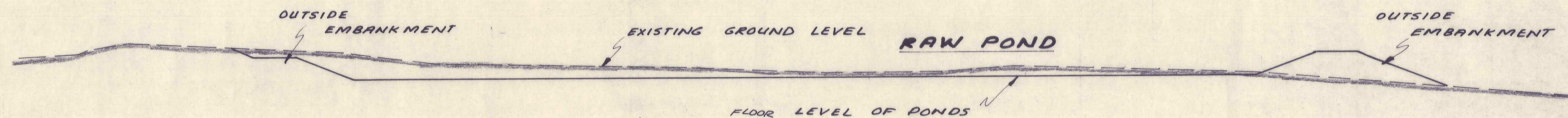
SECTION D~D



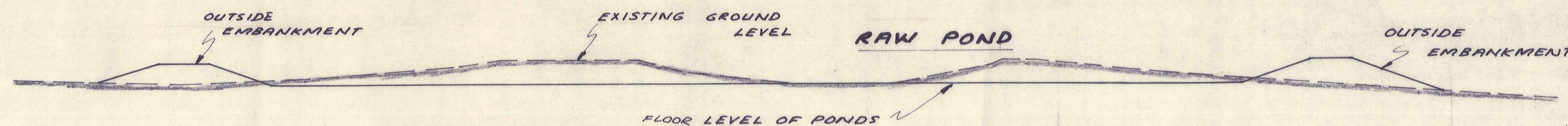
SECTION E~E



SECTION F~F



SECTION G~G



SECTION H~H

NOTE:
REFER TO 3062/3 FOR PLAN SHOWING
SECTION POSITIONS.

TENDER DOCUMENT

E. R. GARDEN & PARTNERS
CONSULTING ENGINEERS
DUNEDIN &
INVERCARGILL



AMENDMENTS

3062/3 CONTOUR PLAN.

RELEVANT DRAWINGS ETC.

ROXBURGH BOROUGH COUNCIL

Digned	JWB/GR	Date	DEC '77	Scale:	1 : 250
Drawn	G.R.	Job No.	3062		
Traced	G.R.	Checked	J.P.	Survey Ref:	
Approved	J. W. GARDEN			L.B.-170	

SEWERAGE 1978 — CONTRACT N°2
OXIDATION PONDS — CROSSECTIONS

DRG No. 3062/5

Amendment

404 5

A

8 inches

B

C

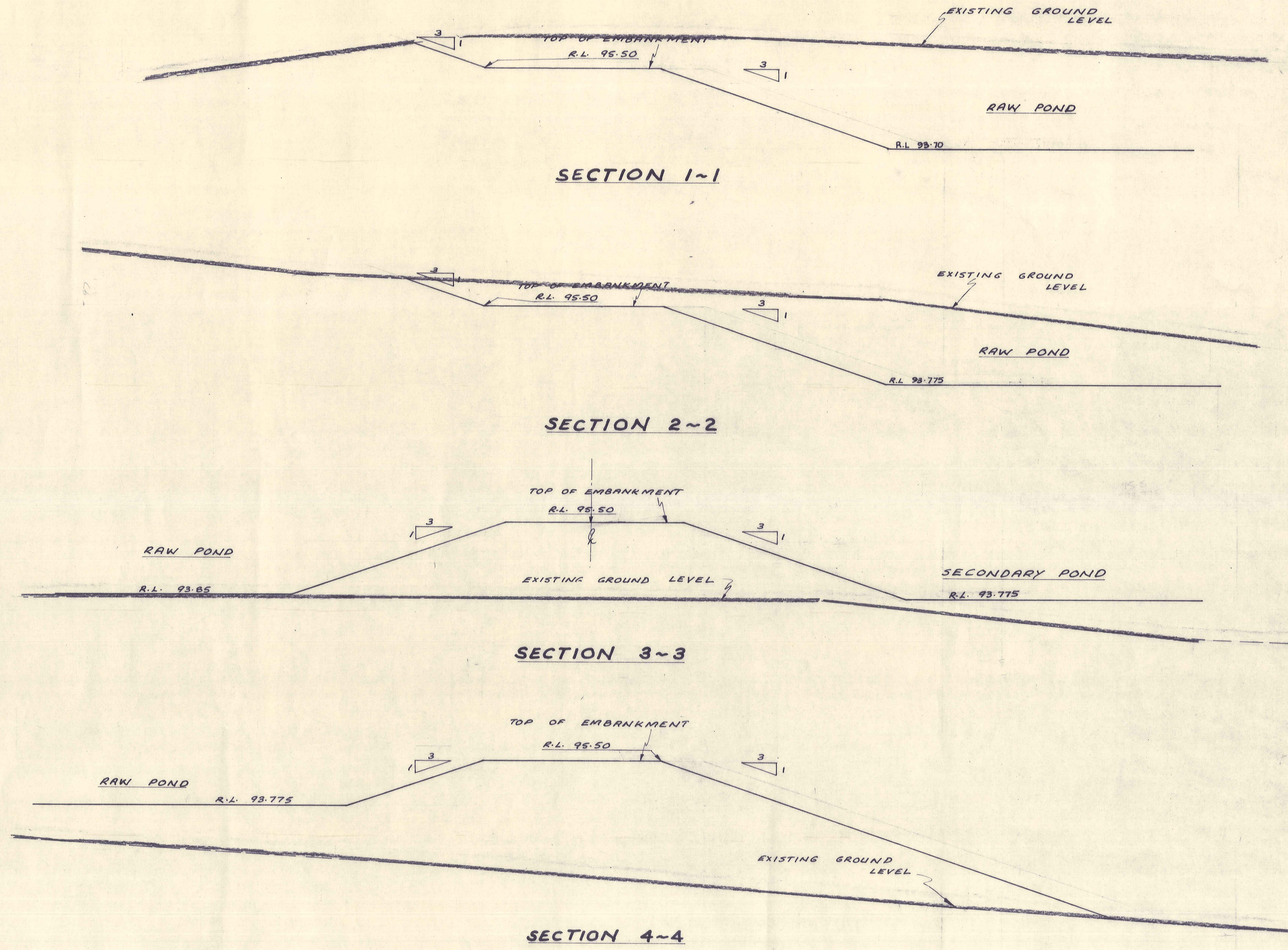
D

A

B

C

D



NOTES
1. REFER ALSO TO 3062/9 FOR TYPICAL EMBANKMENT DETAIL.
2. REFER TO 3062/1 FOR PLAN SHOWING SECTION POSITIONS.

E. R. GARDEN & PARTNERS CONSULTING ENGINEERS DUNEDIN & INVERCARGILL						3062/1	LAYOUT PLAN.	ROXBURGH BOROUGH COUNCIL		SEWERAGE 1978 — CONTRACT N° 2	
								Designed	JWB/G.R.	Date	DEC'77
								Drawn	G.R.	Job No.	3062
								Traced	G.R.	Checked	<i>[Signature]</i>
								Approved	<i>[Signature]</i>	Survey Ref.	L.B.-170
						AMENDMENTS		RELEVANT DRAWINGS ETC.		SECTIONS	
										DRG No. 3062/6	
										Amendment	

TENDER DOCUMENT

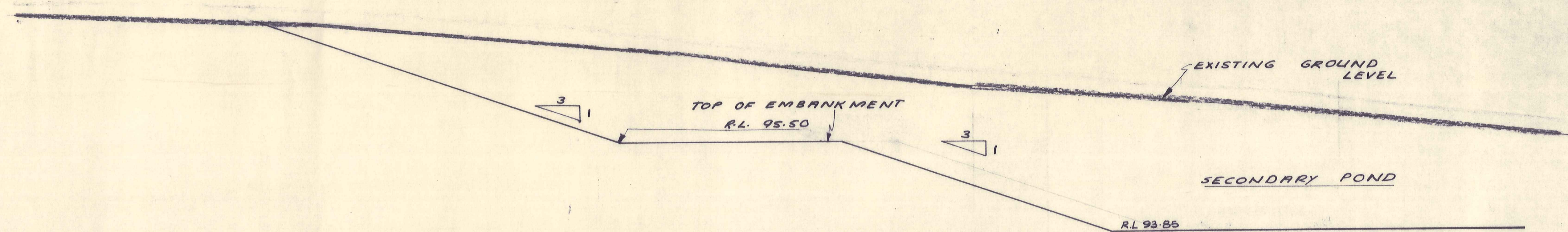
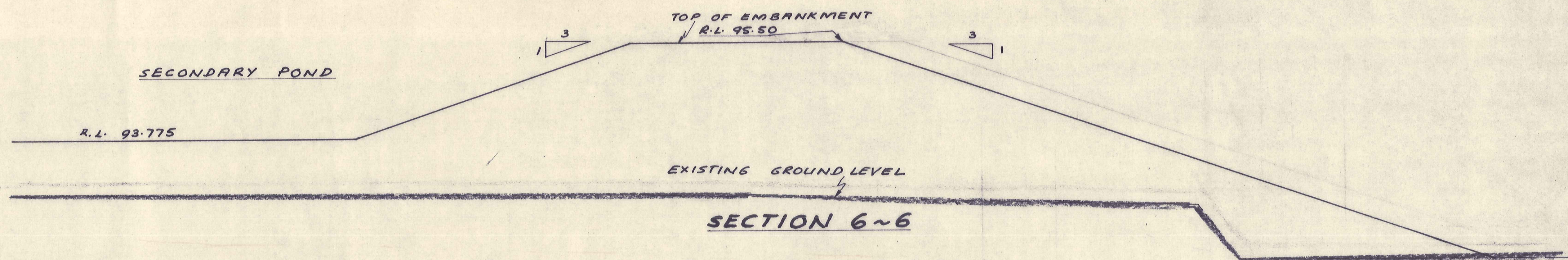
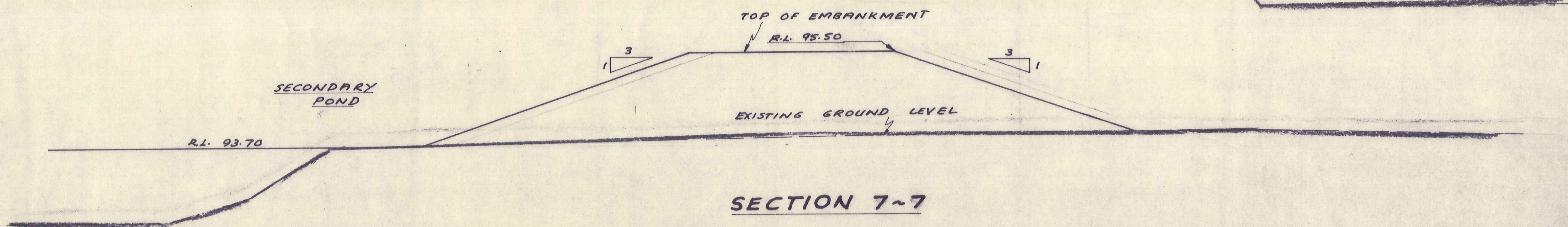
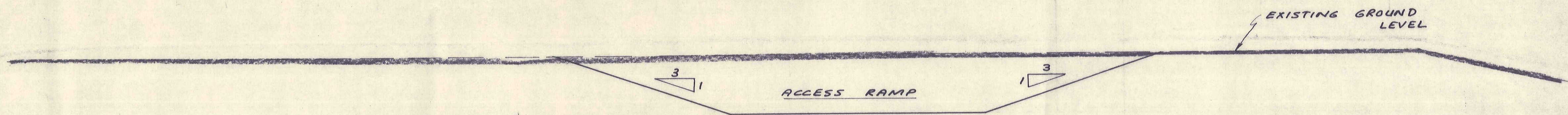
[Handwritten signature]

1

2

3

4

**SECTION 5~5****SECTION 6~6****SECTION 7~7****SECTION 8~8**

- NOTES:
1. REFER TO 3062/1 FOR PLAN SHOWING SECTION POSITIONS.
 2. REFER TO 3062/9 FOR TYPICAL EMBANKMENT DETAILS

TENDER DOCUMENT

E. R. GARDEN & PARTNERS
CONSULTING ENGINEERS
DUNEDIN &
INVERCARGILL



3062/1 LAYOUT PLAN.

ROXBURGH BOROUGH COUNCIL

SEWERAGE 1978 — CONTRACT N°2

Designed JWB/GR Date DEC '77

Scale: 1 : 50

Drawn G.R. Job No. 3062

Traced G.R. Checked JWB

Survey Ref: L.B.-170

Approved J.W. Bradley 22.10.

OXIDATION PONDS — EMBANKMENT

SECTIONS DRG No. 3062/7

Amendment

AMENDMENTS

RELEVANT DRAWINGS ETC.

JWB

A

B

C

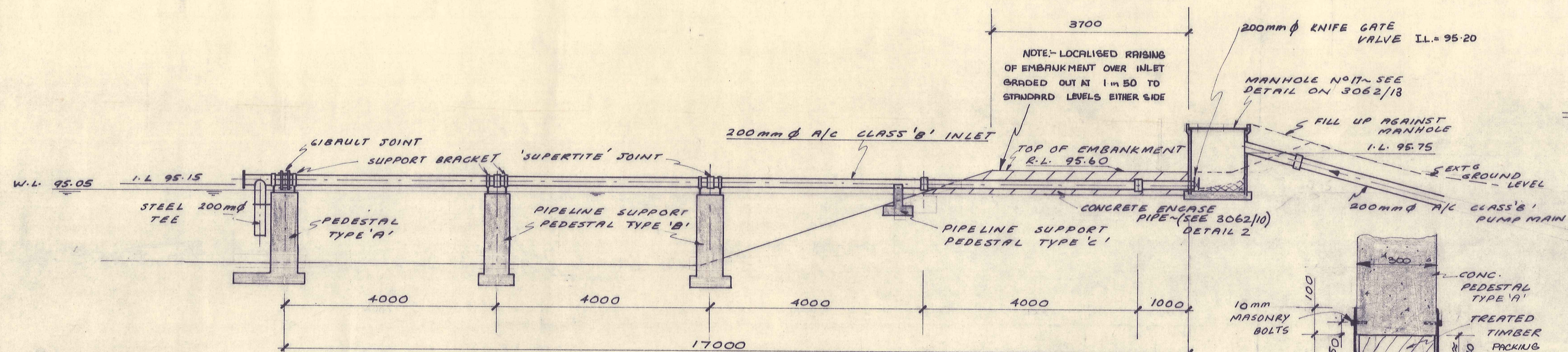
D

A

B

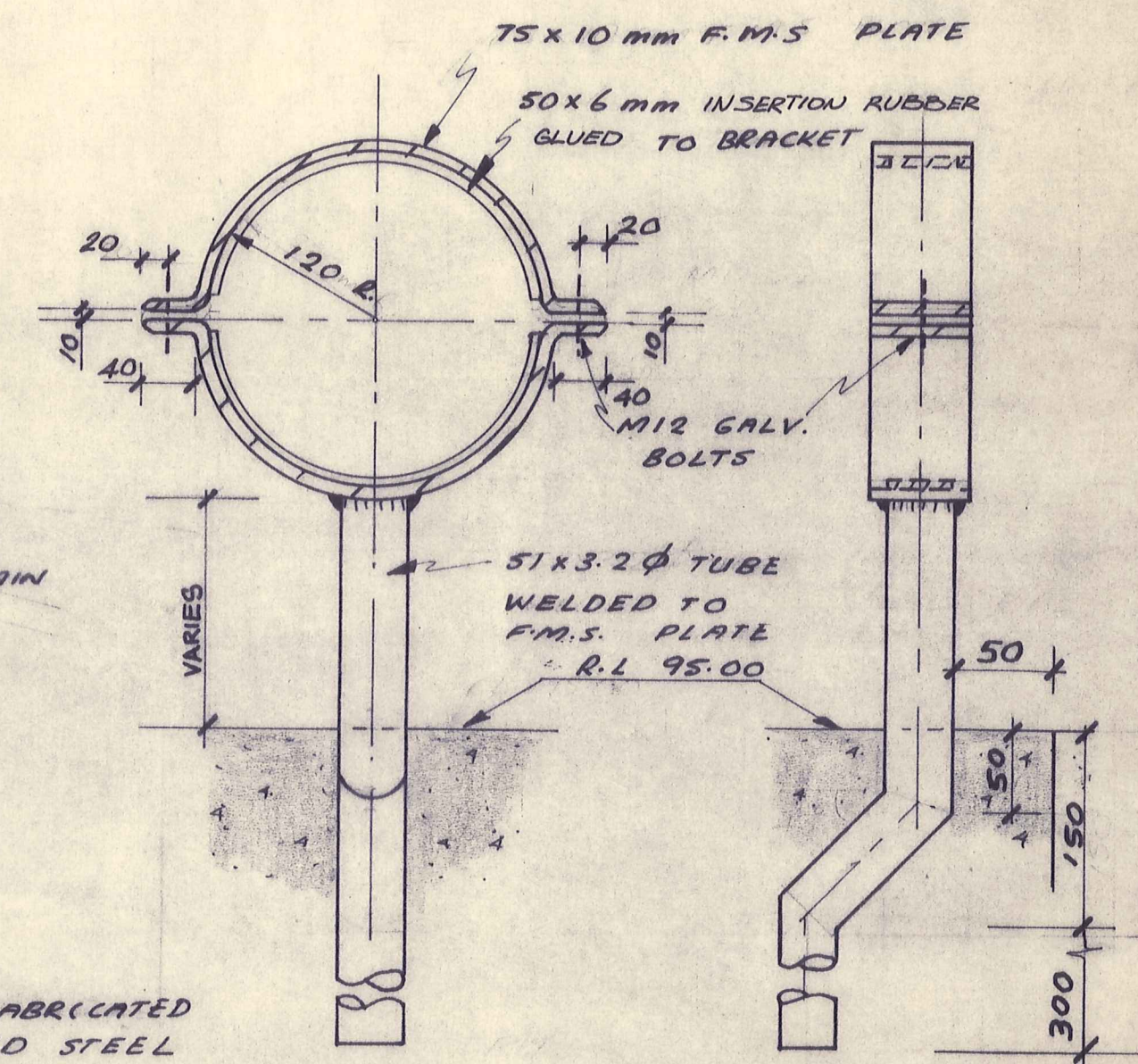
C

D



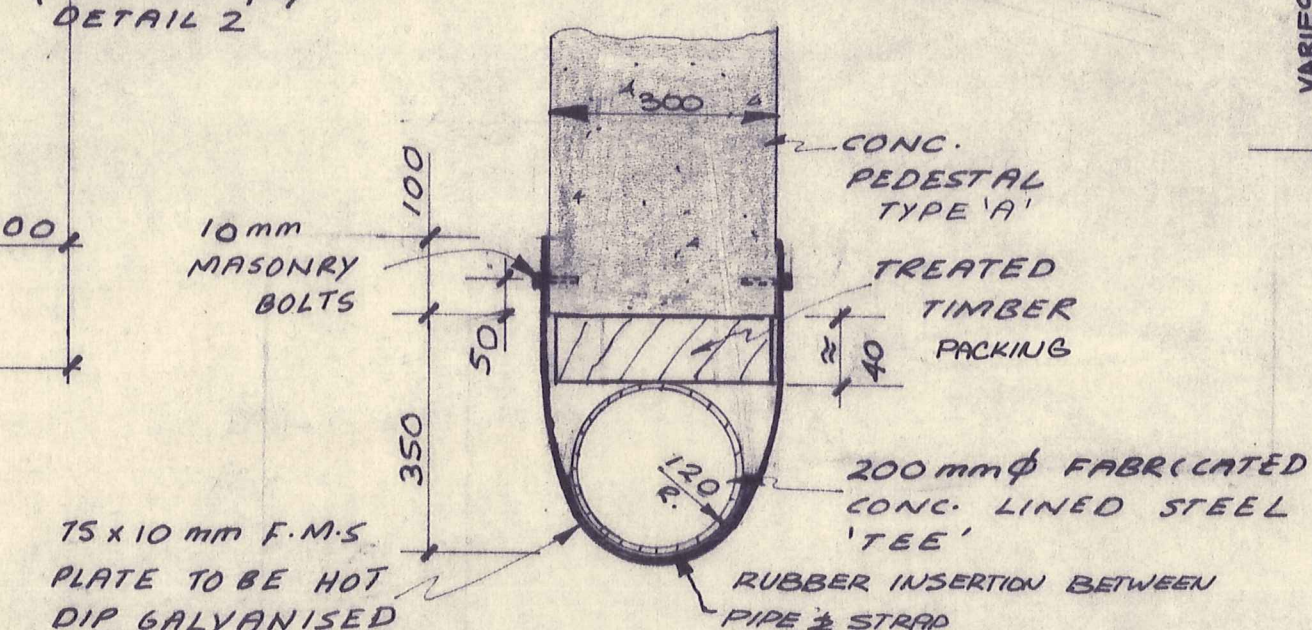
RAW POND INLET DETAIL

Scale 1:50



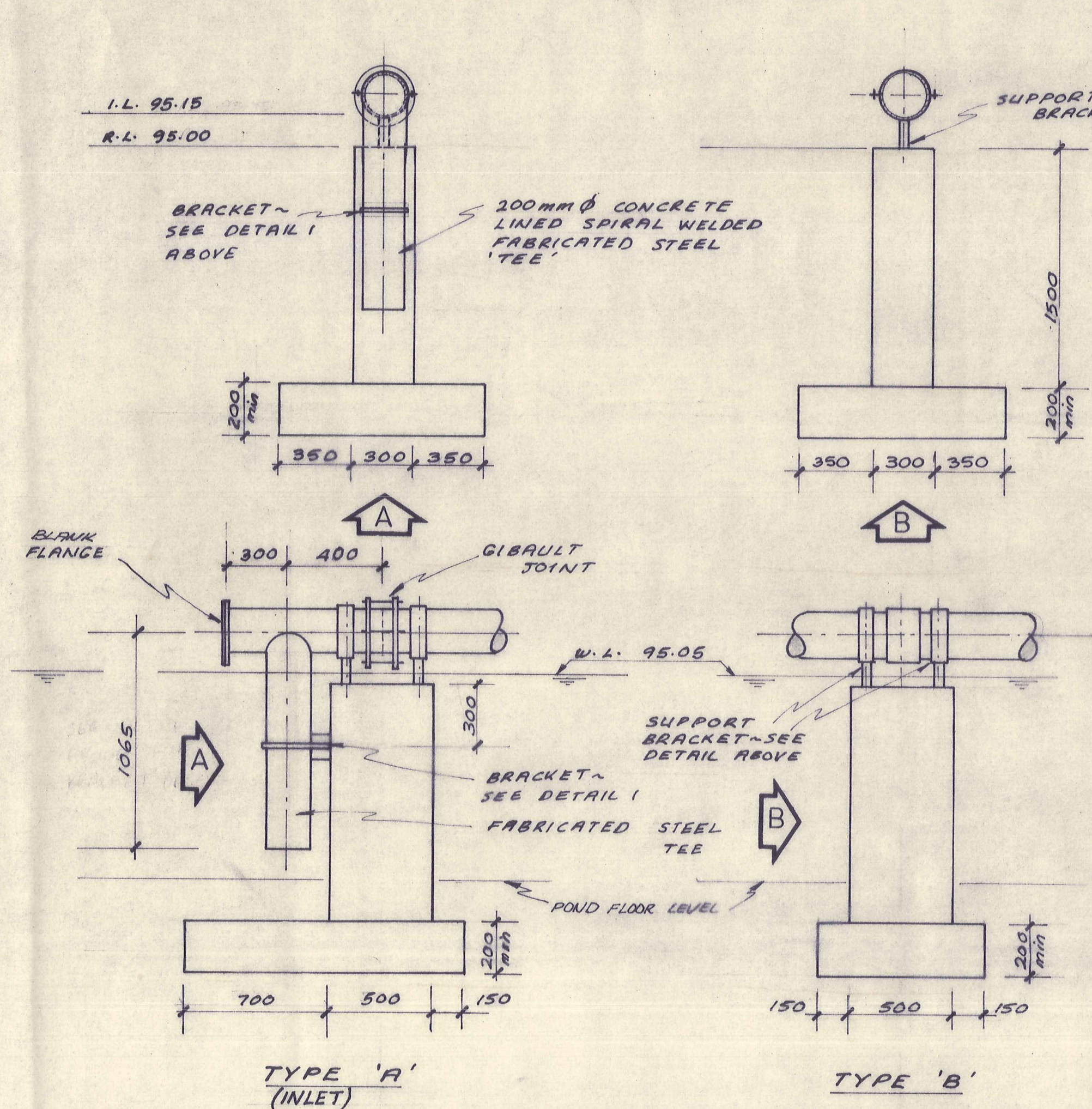
PIPE SUPPORT BRACKET

Scale 1:5 (HOT DIP GALVANISED)



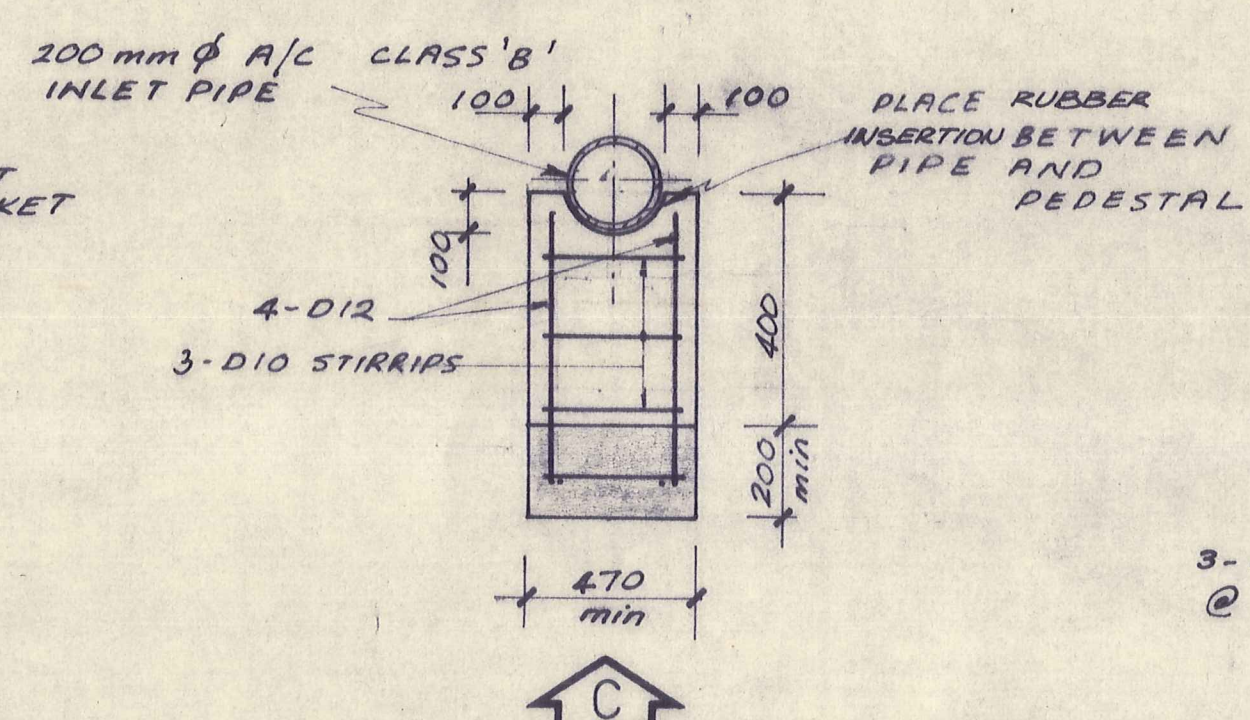
BRACKET - DETAIL 1

Scale 1:10



PIPE SUPPORT PEDESTALS

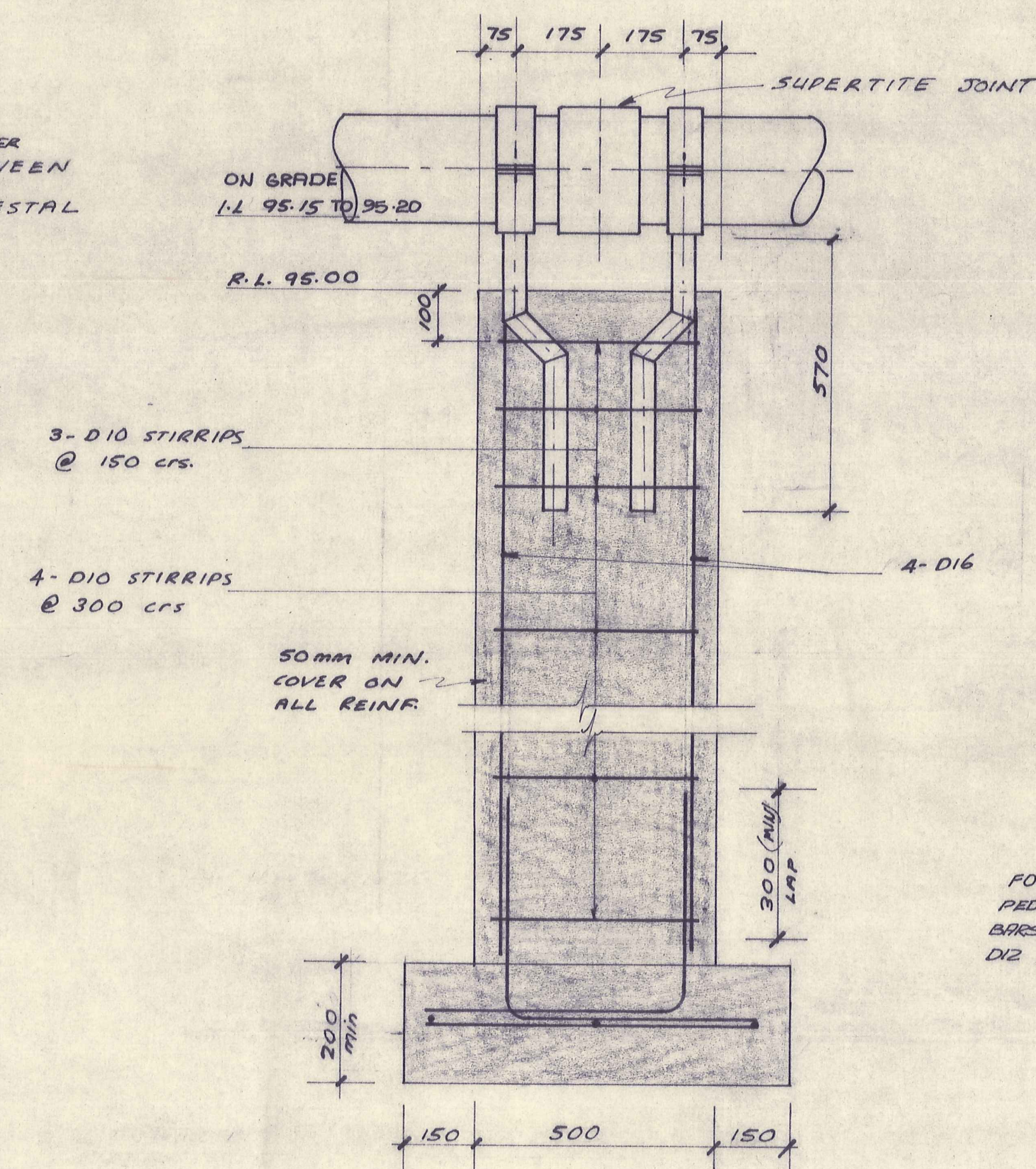
Scale 1:20



TYPE 'C'

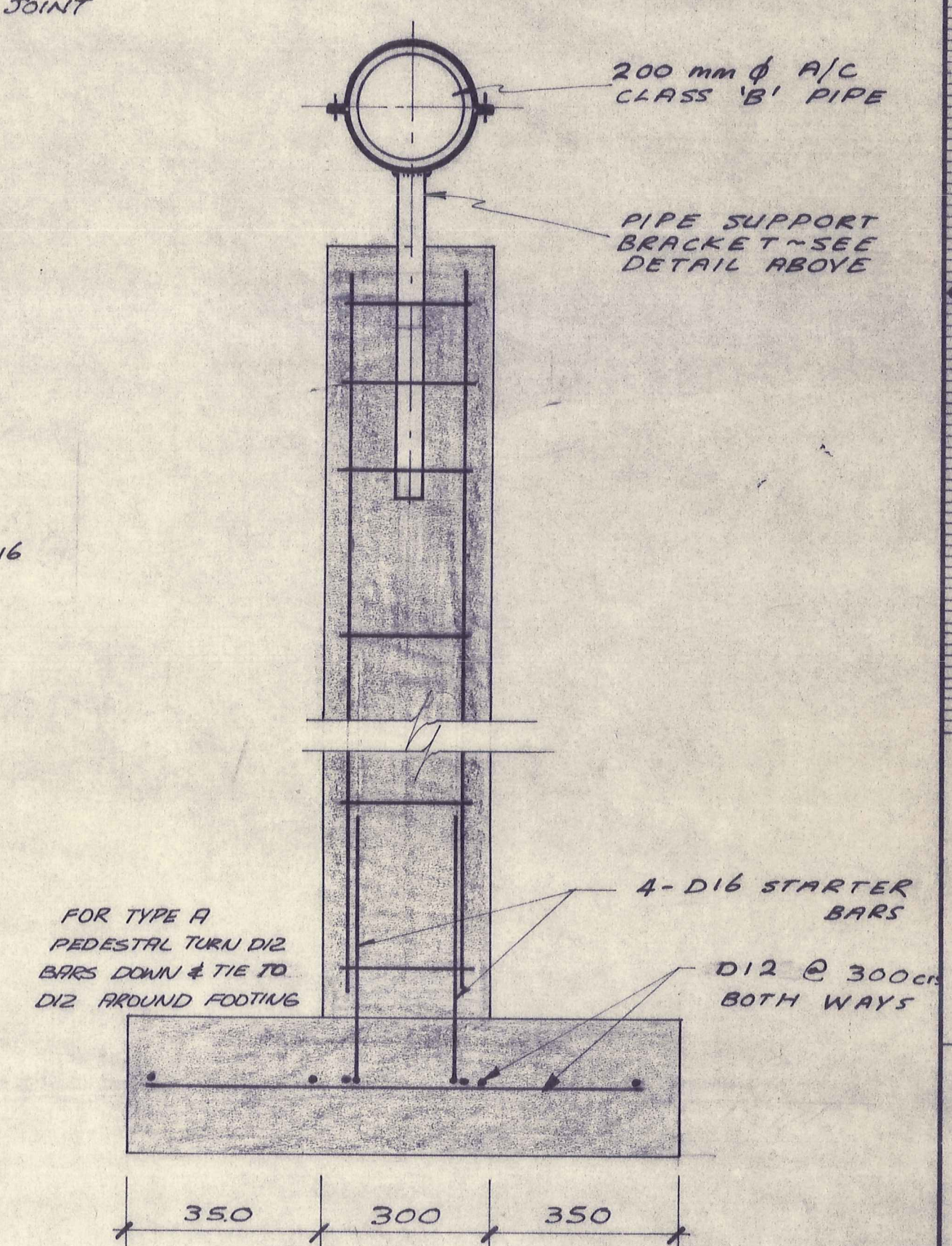
NOTE

1. 50mm MIN COVER TO ALL REINFORCING
2. REFER 3062/9 FOR FOOTING DETAILS & CLAY SEALING AROUND.



PEDESTAL TYPE 'A' & 'B' REINFORCING

Scale 1:10



E. R. GARDEN & PARTNERS
CONSULTING ENGINEERS
DUNEDIN &
INVERCARGILL



AMENDMENTS

RELEVANT DRAWINGS ETC.

ROXBURGH BOROUGH COUNCIL

Designed G.L./G.R. Date DEC '77 Scale: AS SHOWN
 Drawn G.R. Job No. 3062
 Traced G.R. Checked J.W.B. Survey Ref:
 Approved J.W.B. 14/12/77

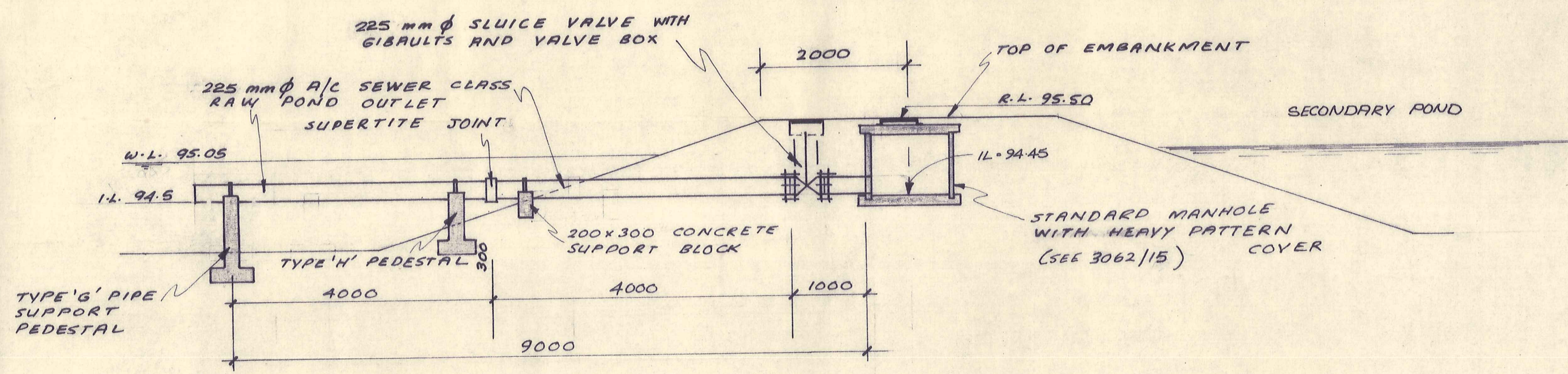
SEWERAGE 1978 — CONTRACT N° 2

OXIDATION PONDS — RAW POND

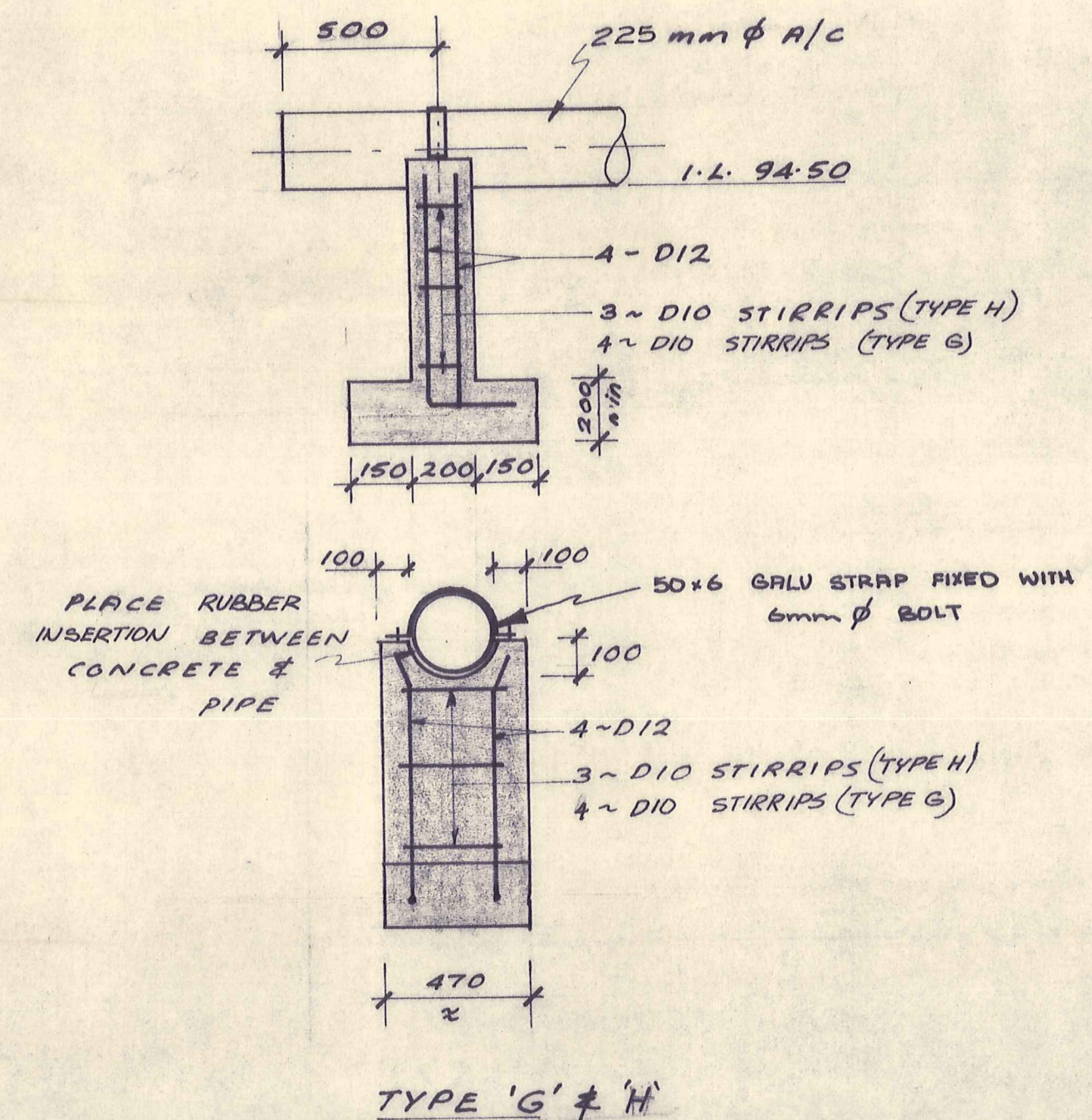
INLET & DETAILS DRG No. 3062/8

Amendment

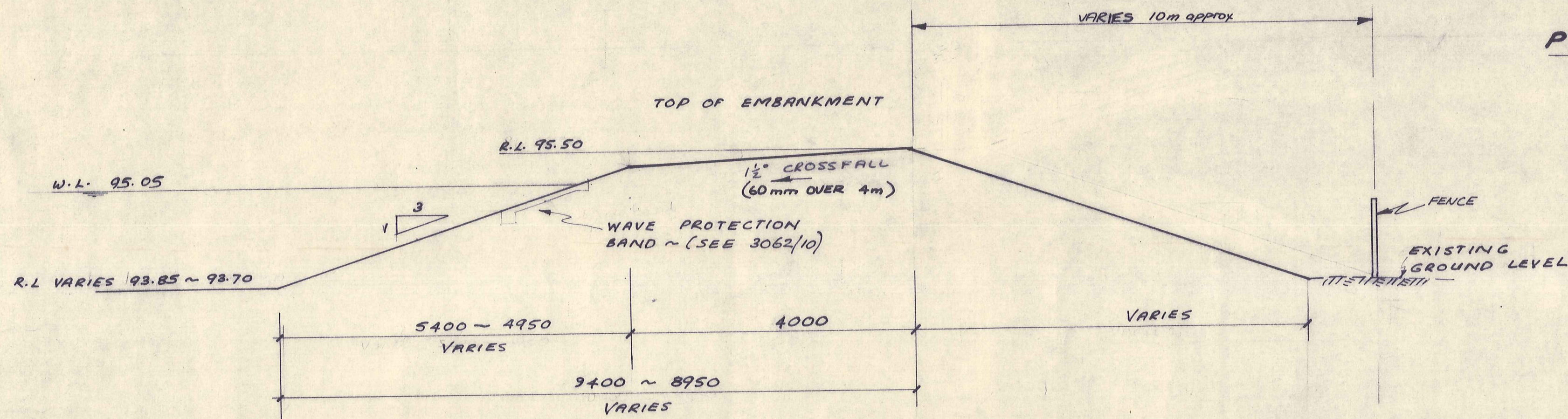
1/1/78
 J.W.B.



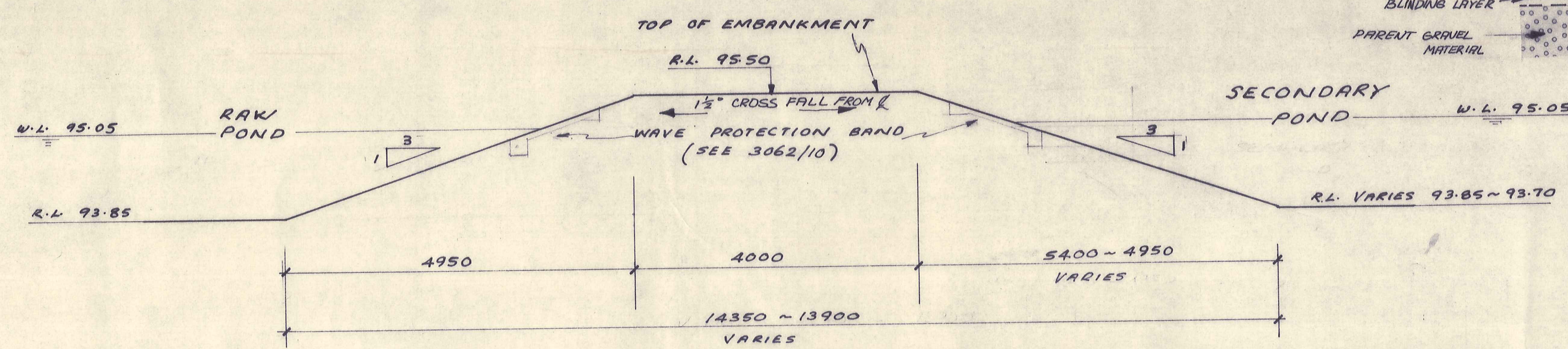
RAW POND OUTLET DETAIL
Scale 1:50



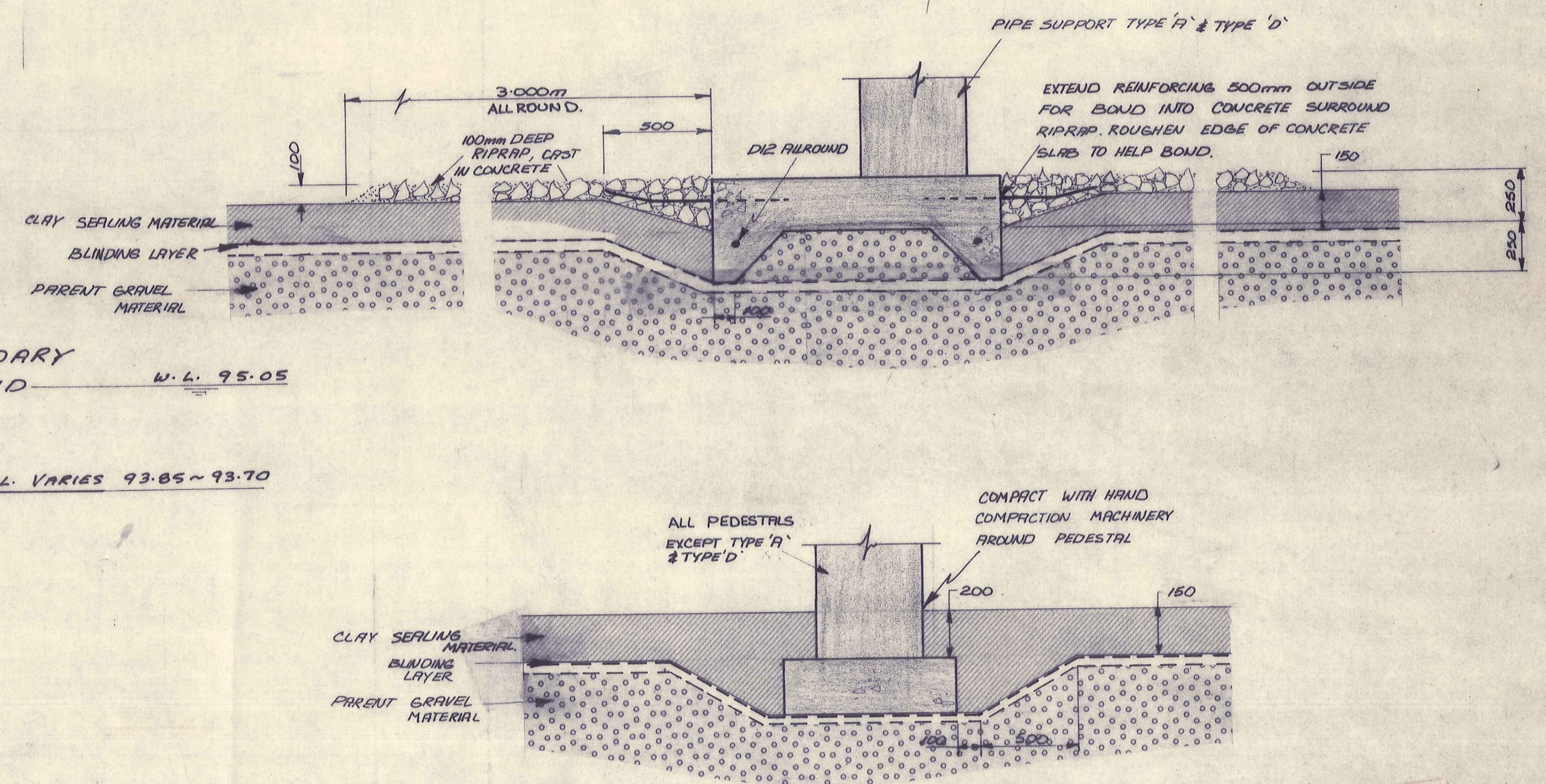
PIPE SUPPORT PEDESTALS
Scale 1:20



TYPICAL OUTSIDE EMBANKMENT
Scale 1:50



TYPICAL CENTRE EMBANKMENT
Scale 1:50



POND SEALING AT PEDESTALS

E. R. GARDEN & PARTNERS
CONSULTING ENGINEERS
DUNEDIN & INVERCARGILL



AMENDMENTS

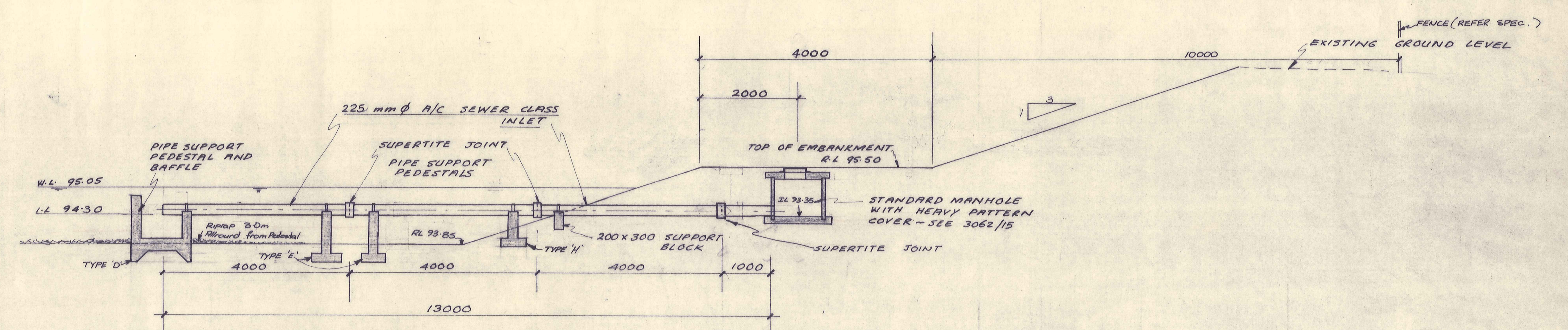
RELEVANT DRAWINGS ETC.

ROXBURGH BOROUGH COUNCIL			
Designed	JWB/GR	Date	DEC '77
Drawn	G.R.	Job No.	3062
Traced	G.R.	Checked	4/10
Approved	J.W. Brouley		
Scale:		AS SHOWN	
Survey Ref:			

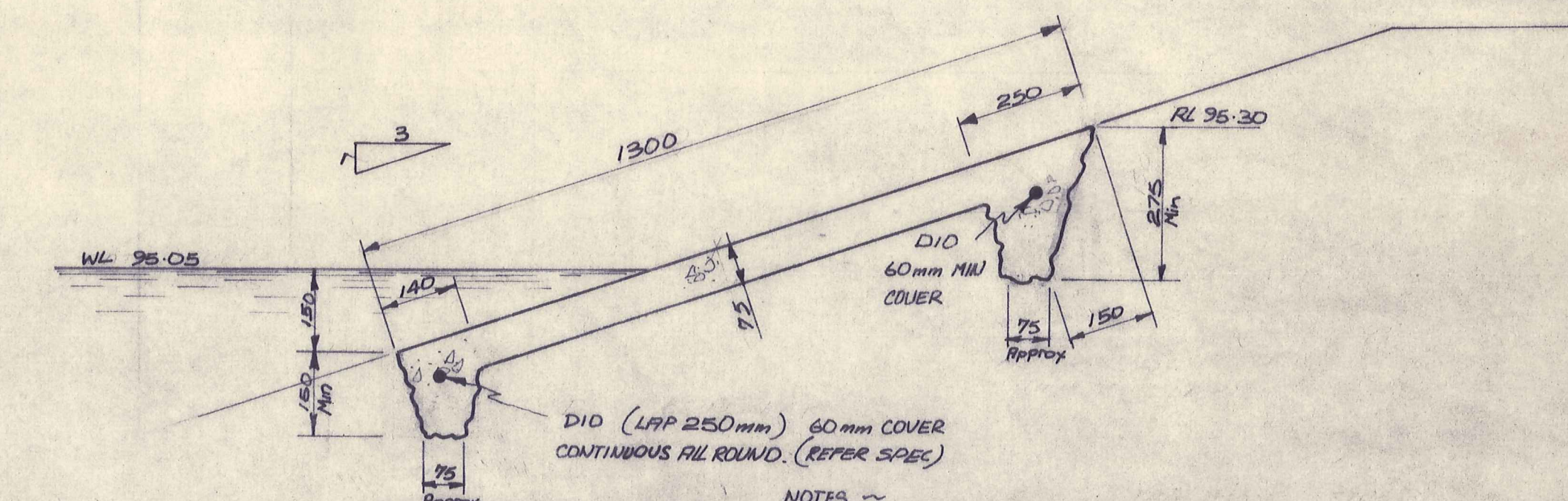
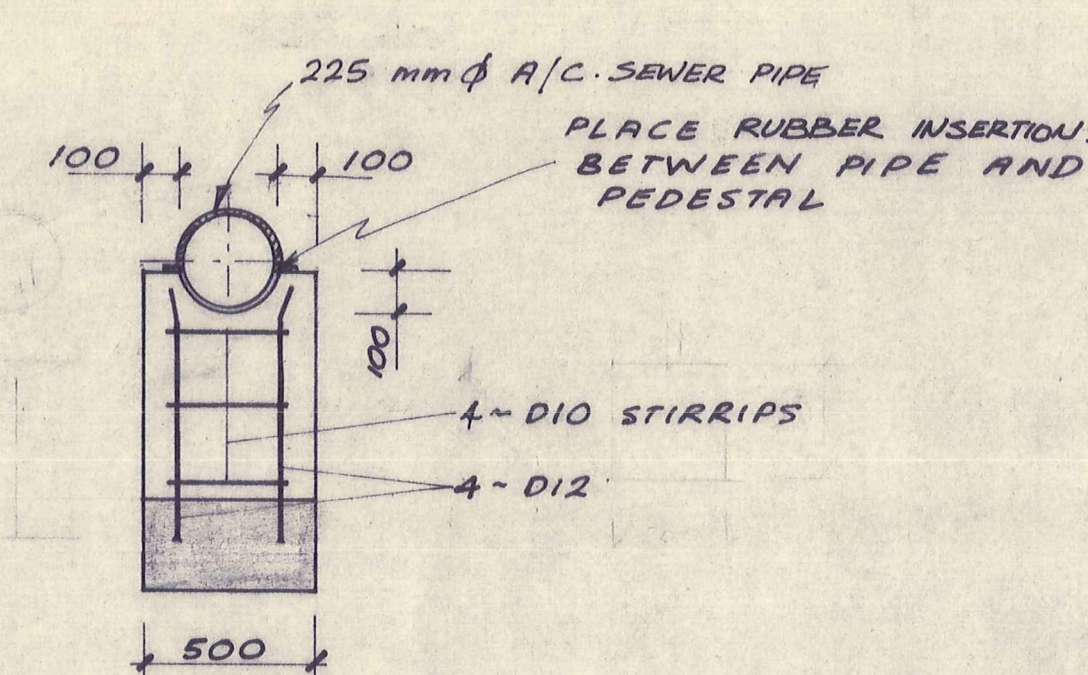
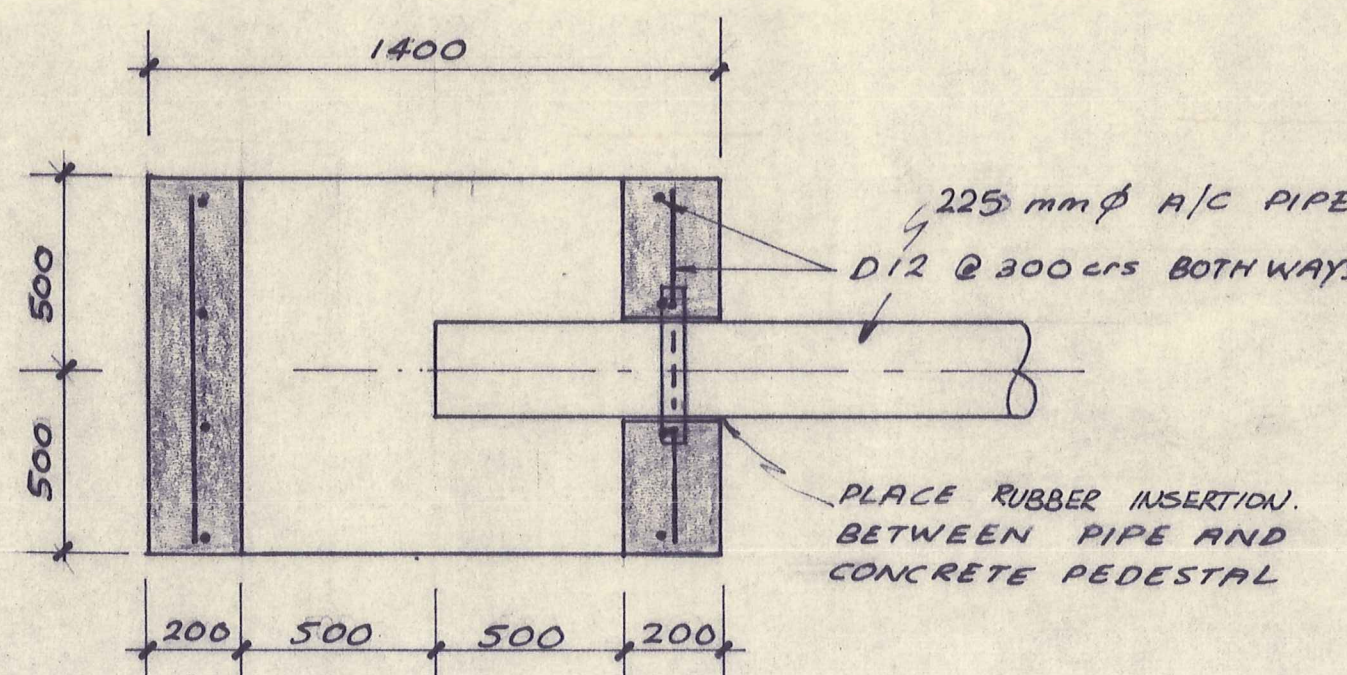
SEWERAGE 1978				CONTRACT N° 2			
RAW POND OUTLET, TYPICAL EMBANK'M,							
SEALING DETAILS				DRG No.		3062/9	
Amendment							

TENDER DOCUMENT

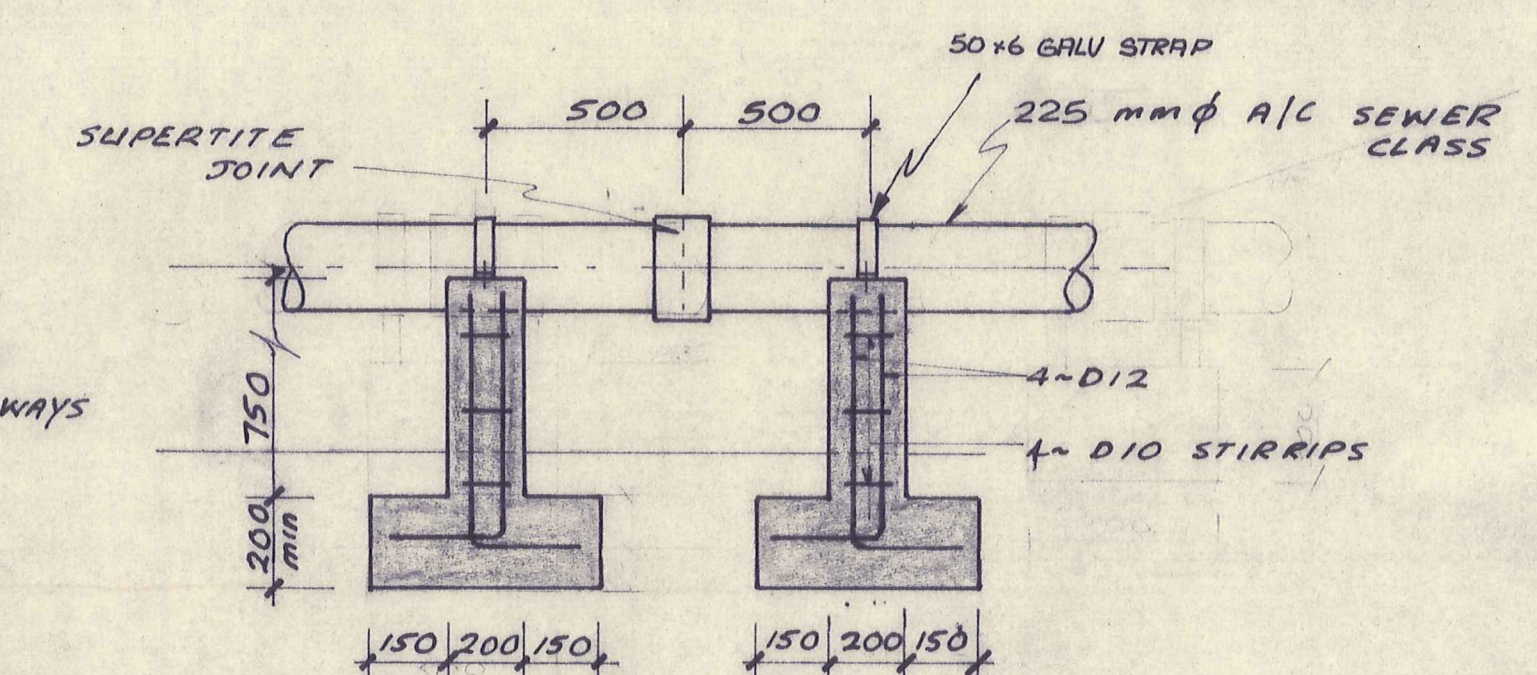
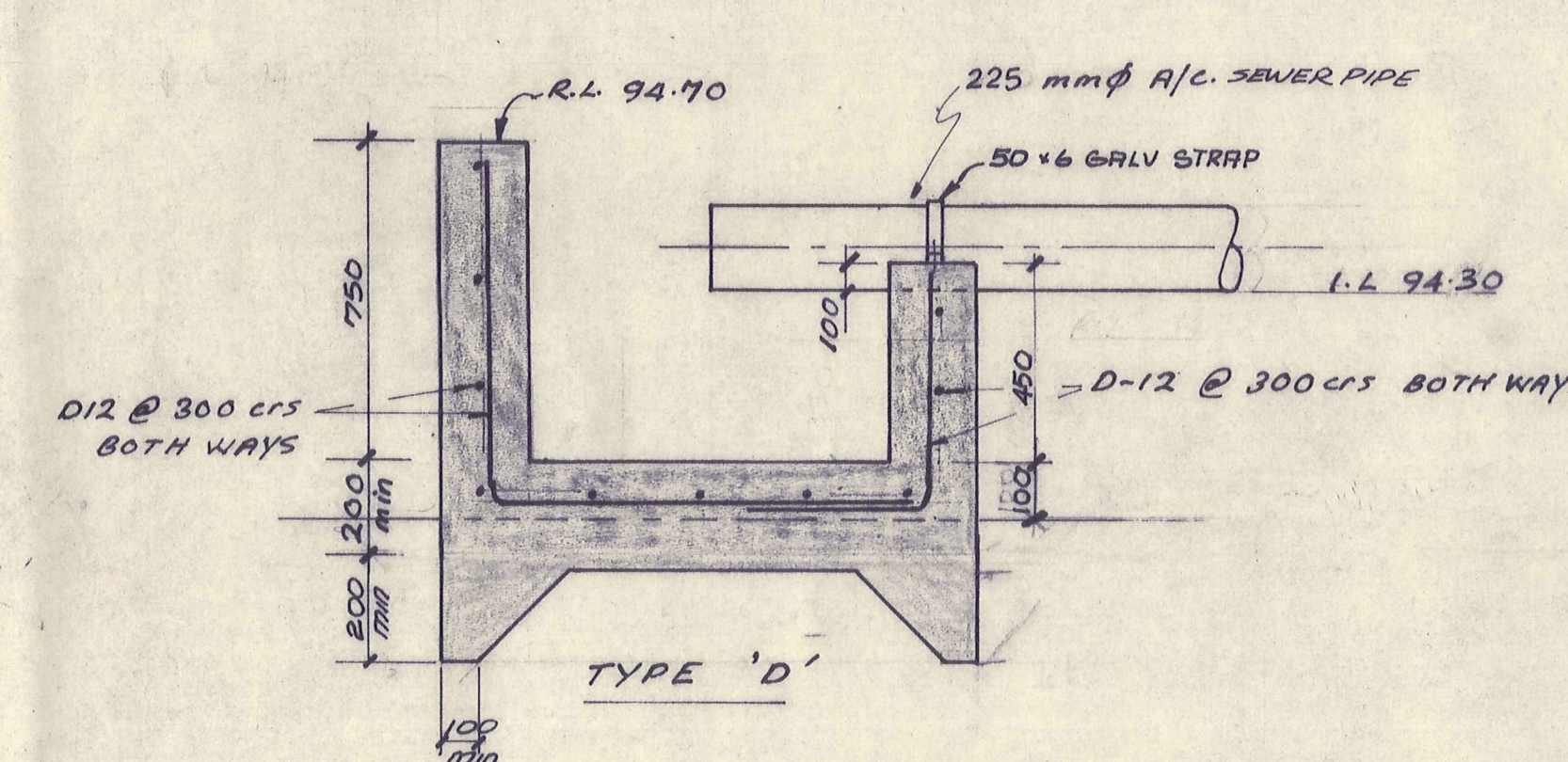
July



SECONDARY POND INLET DETAIL
Scale 1:50

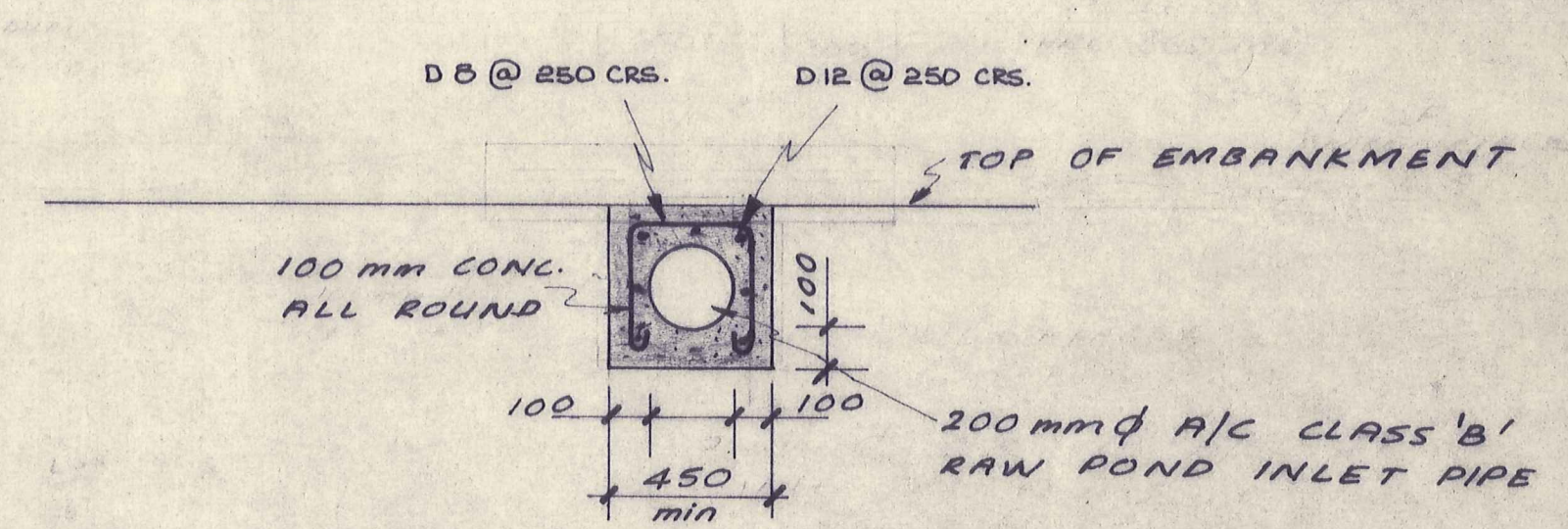


WAVE PROTECTION SLAB
SCALE 1:10
FULL PERIMETER OF BOTH PONDS

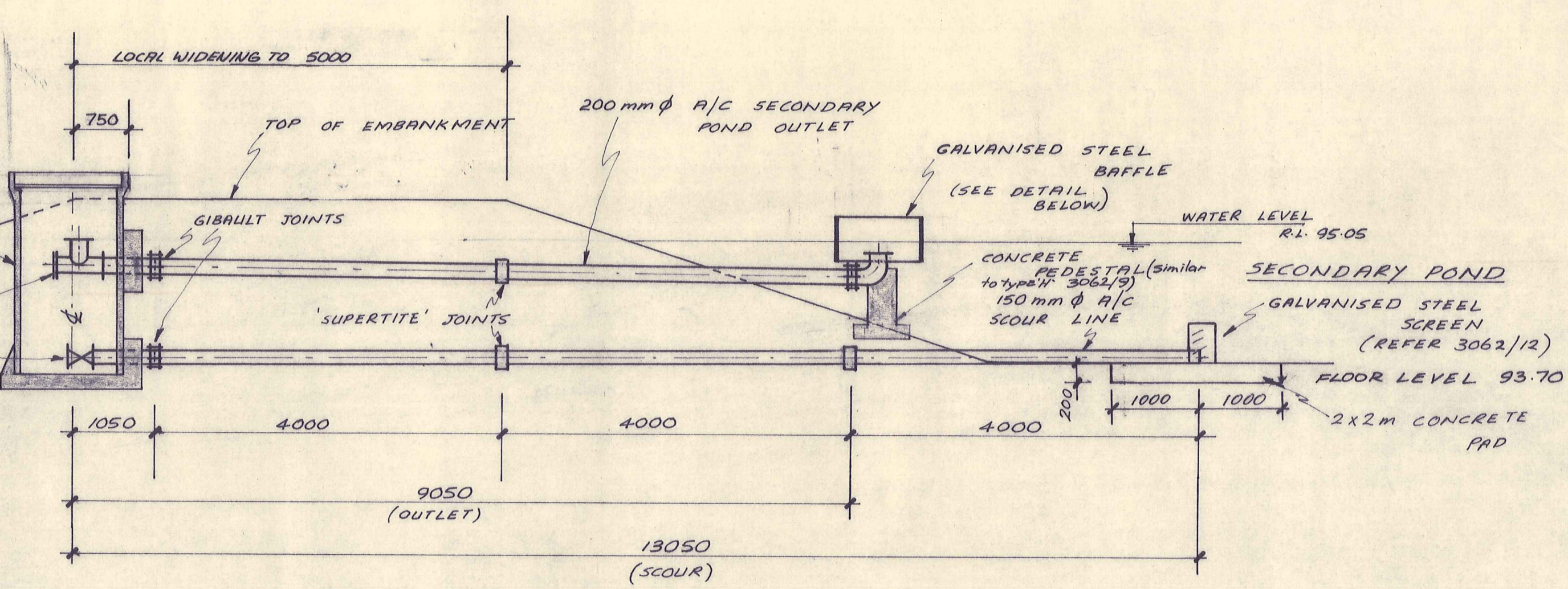


TYPE 'E'
NOTE
TYPE 'F' PEDESTAL SIMILAR
EXCEPT ONLY 2-D10 STIRRIPS

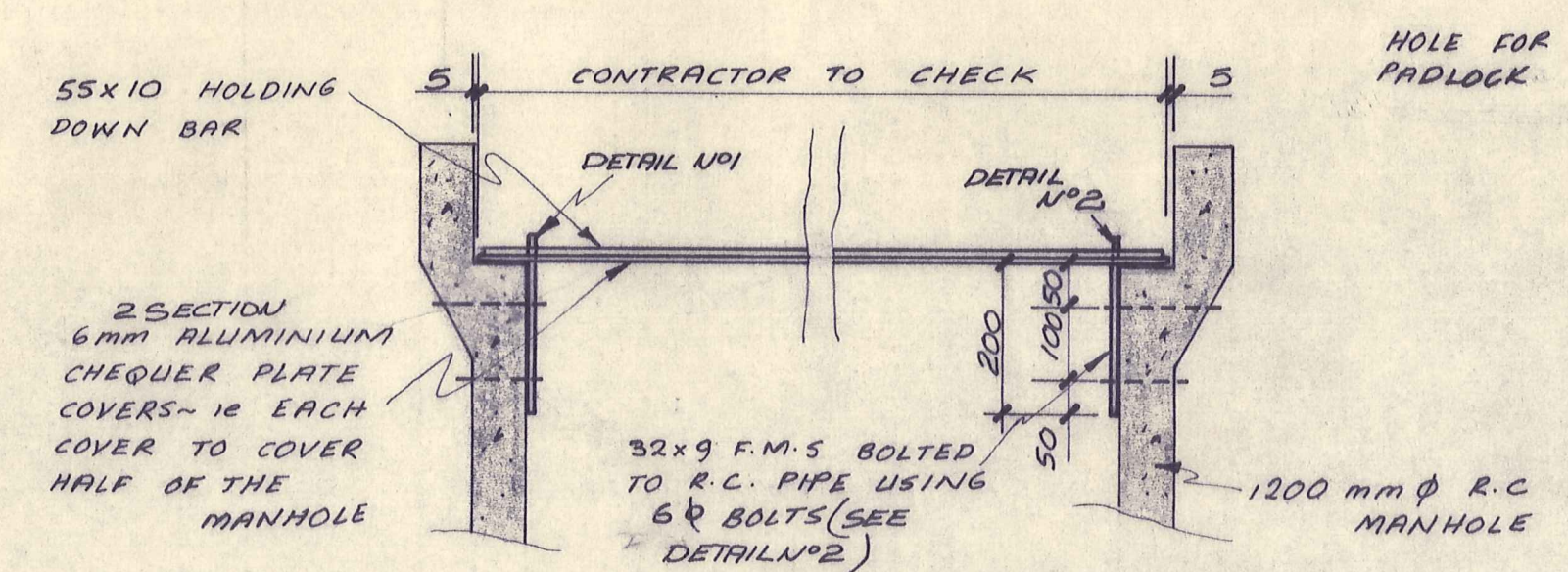
PIPE SUPPORT PEDESTALS
Scale 1:20



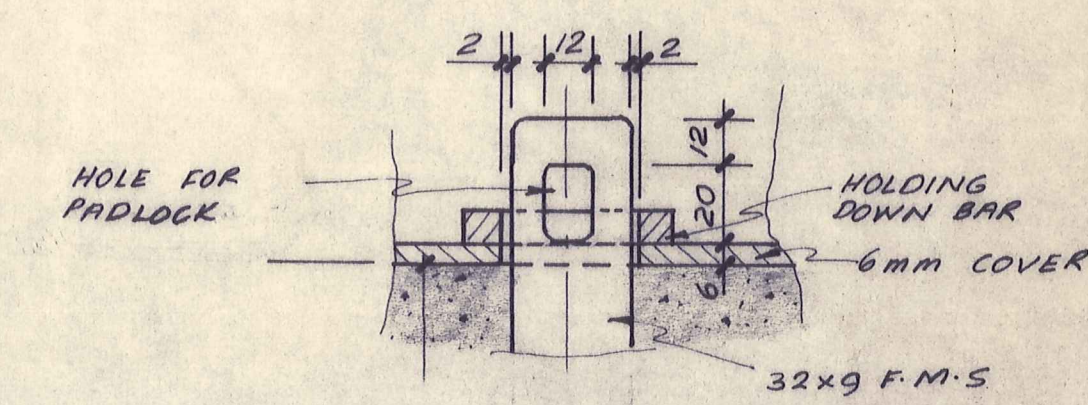
RAW POND INLET - DETAIL 2
Scale 1:20 (REFER 3062/8)



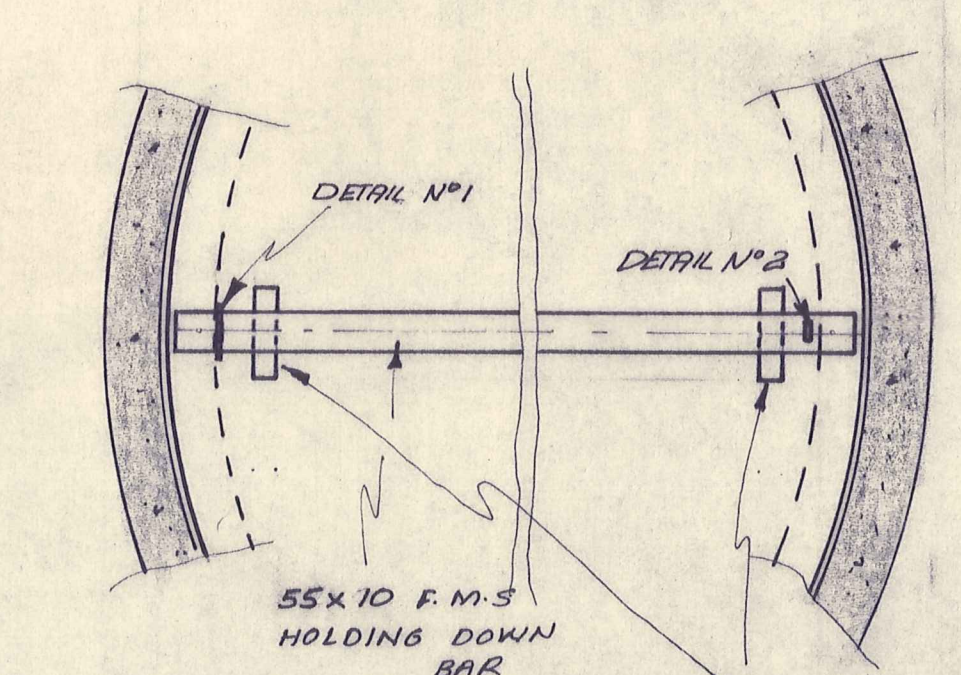
SECONDARY POND OUTLET & SCOUR LINE DETAIL
Scale 1:50



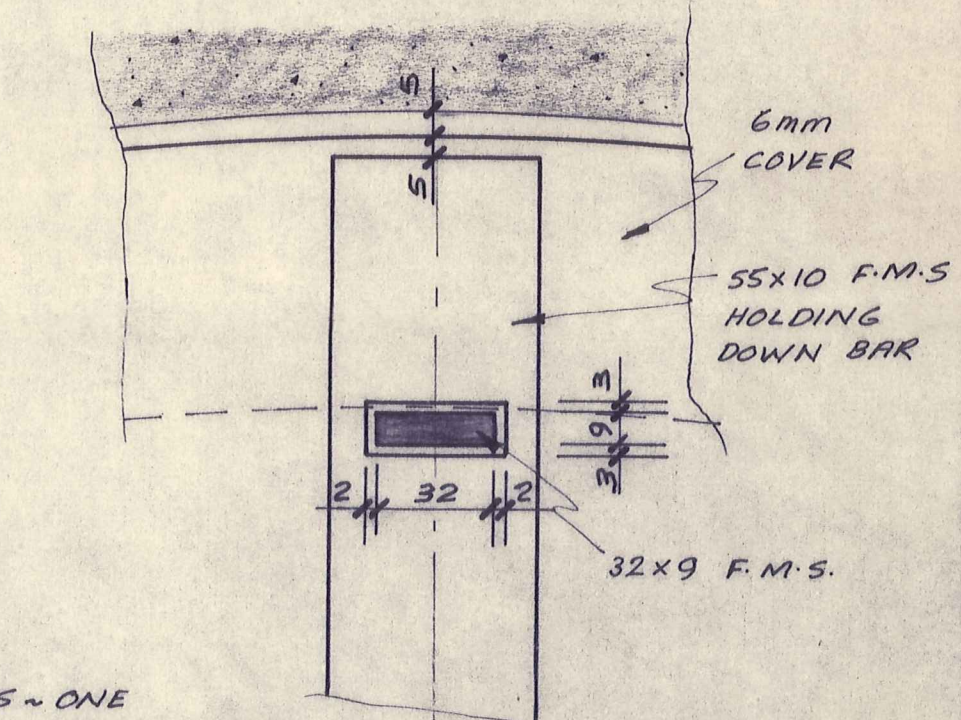
ELEVATION
Scale 1:10



ELEVATION DETAIL N°2
Scale 1:2

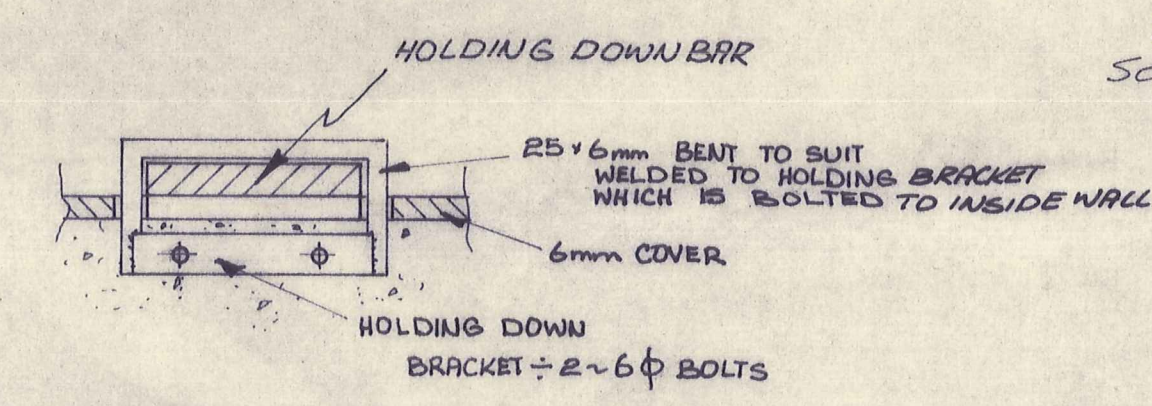


PLAN
Scale 1:10



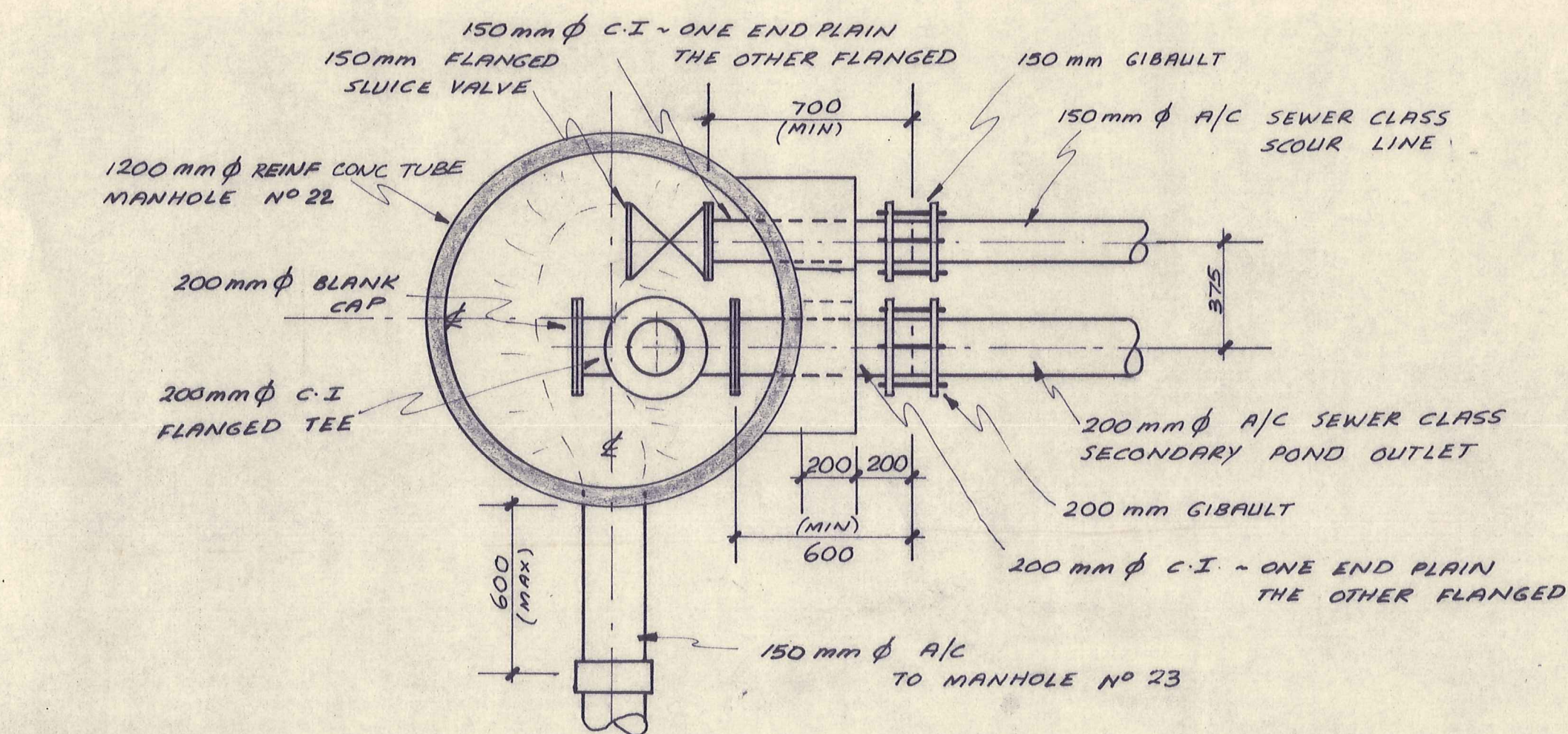
PLAN DETAIL N°2
Scale 1:2

NOTE
ALL STEEL TO BE HOT-DIP GALVANISED

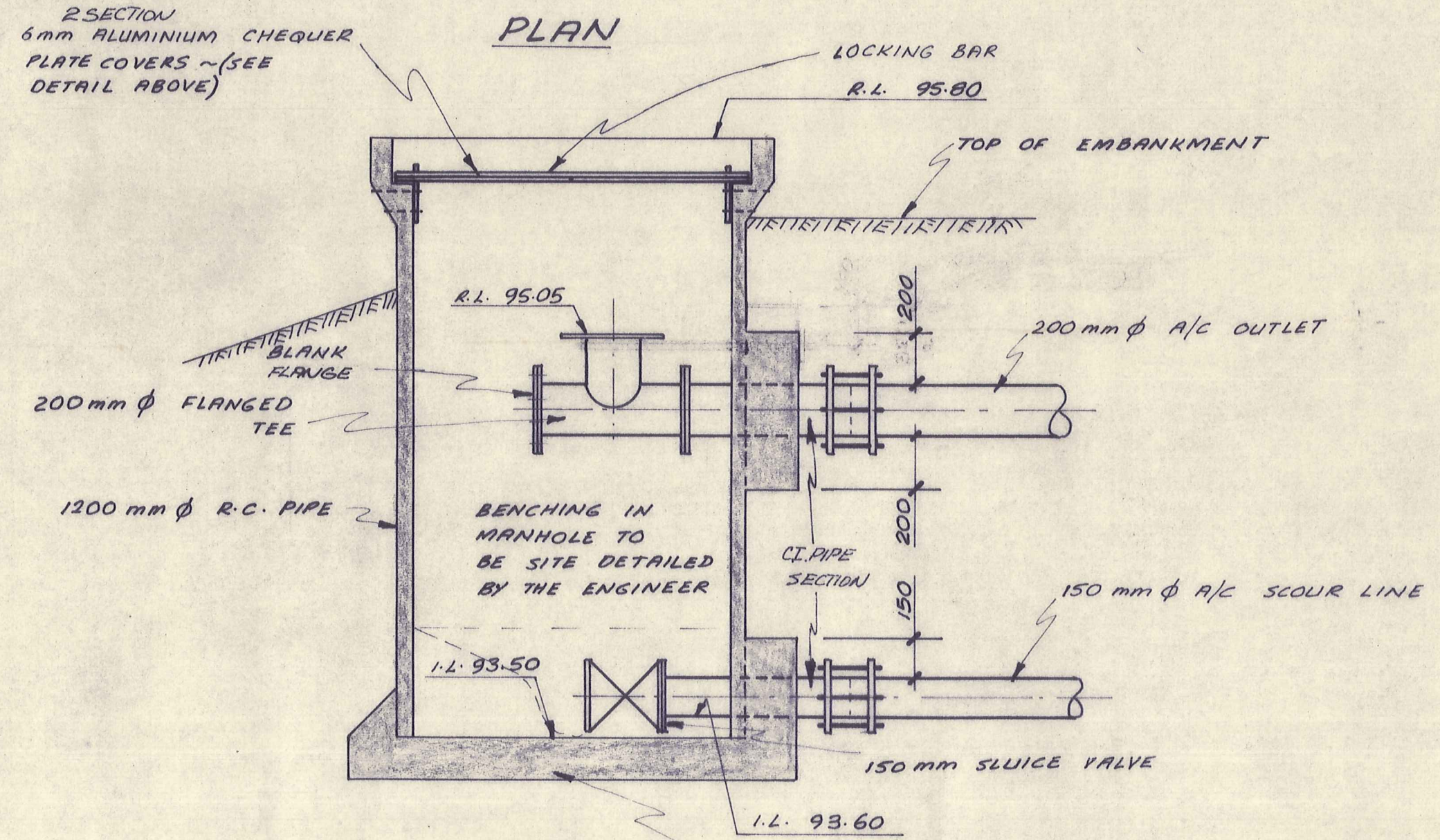


DETAIL N°1
Scale 1:2

MANHOLE COVER DETAILS
(MANHOLE 17 & 22)

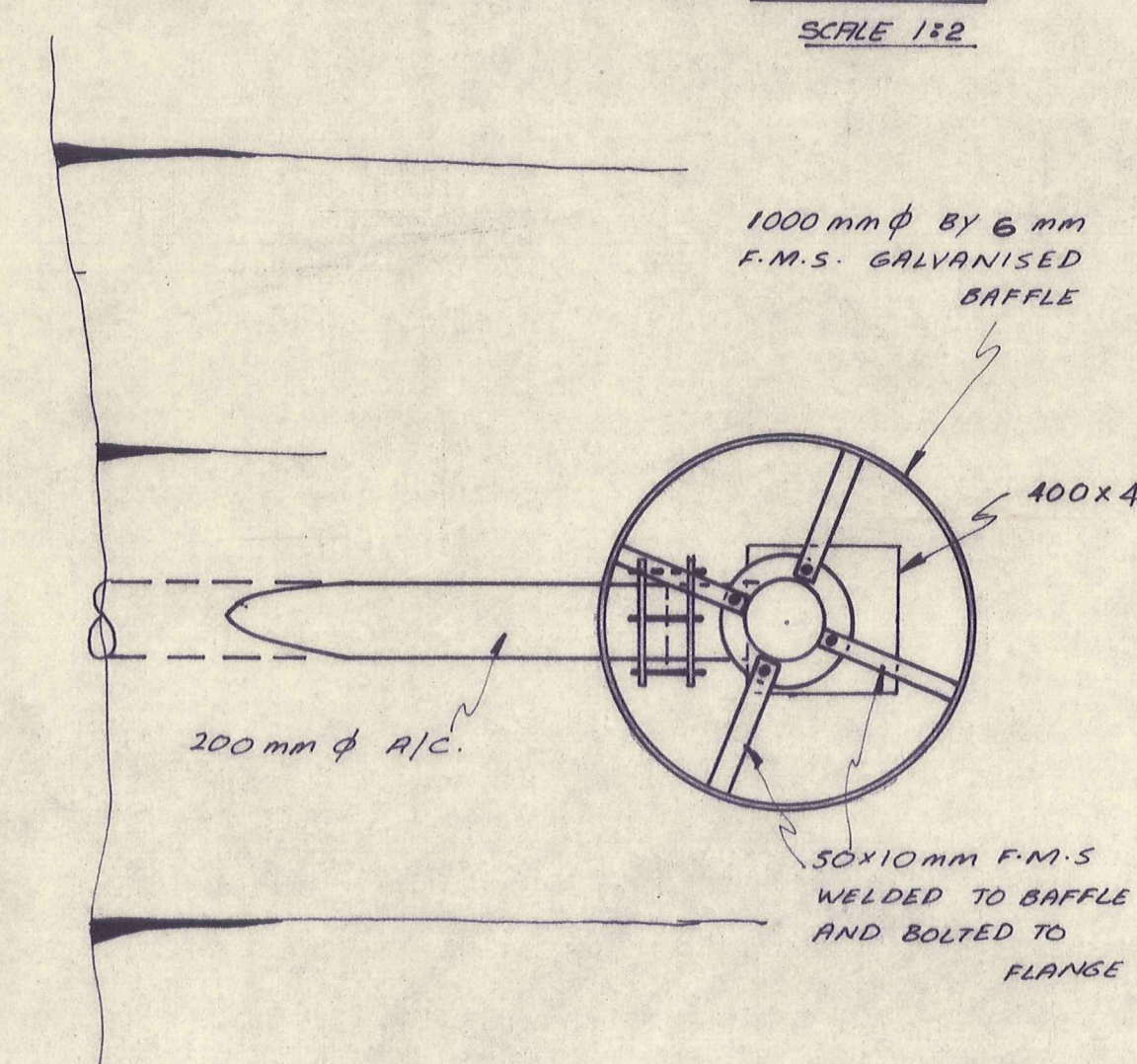


PLAN

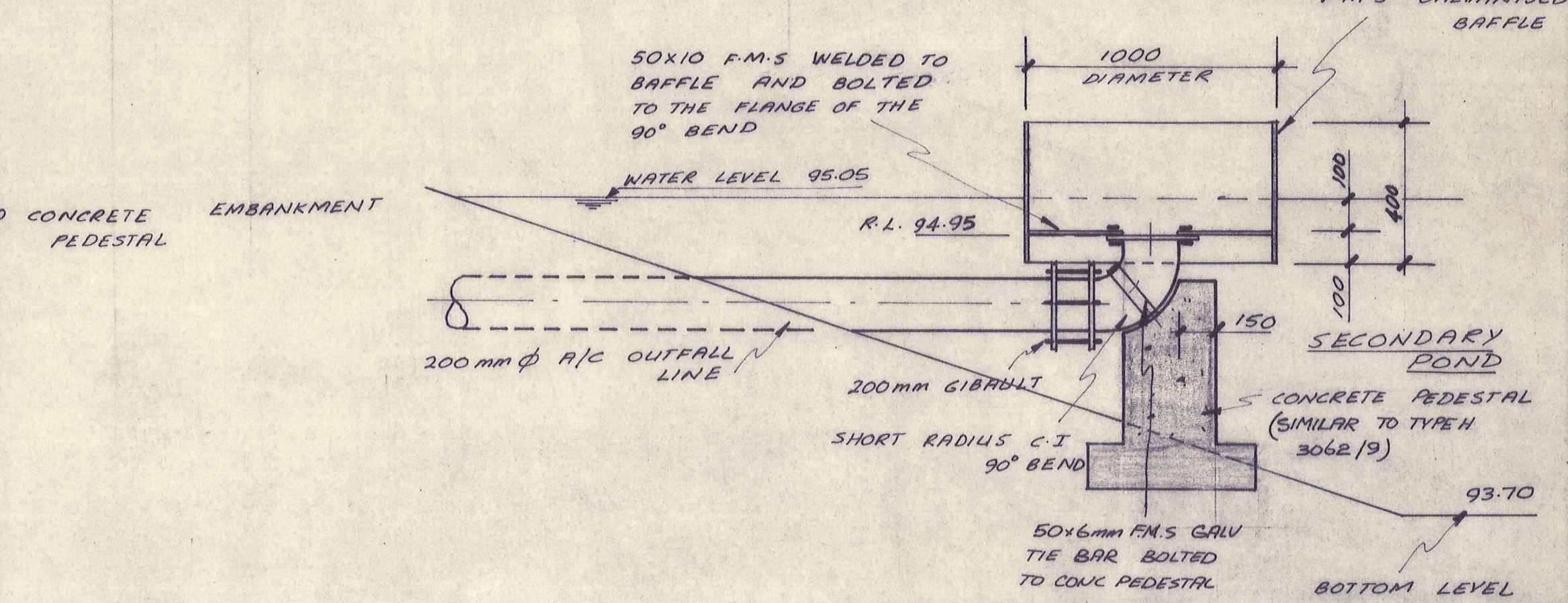


ELEVATION
BASE CONSTRUCTION TO BE AS SHOWN ON 3060/13

MANHOLE N°22 DETAILS - Scale 1:20



PLAN



ELEVATION

BAFFLE DETAIL
Scale 1:20

E. R. GARDEN & PARTNERS CONSULTING ENGINEERS DUNEDIN & INVERCARGILL		3062/1 & 12 3060/13		ROXBURGH BOROUGH COUNCIL		SEWERAGE 1978 — CONTRACT N° 22	
Designed JWB/GR		Date DEC '78		Scale: AS SHOWN		OXIDATION PONDS — SECONDARY POND	
Drawn G.R.		Job No. 3062		Traced G.R.		OUTLET & SCOUR	
Checked G.R.		Survey Ref.		Approved J.W. Garden		DRG No. 3062/11	
AMENDMENTS		RELEVANT DRAWINGS ETC.					

1

2

3

4

A

B

C

D

A

B

C

D

**RAW
POND**

RAW POND INLET
(SEE 3062/8)

200 mm ϕ KNIFE GATE VALVES (SEE 3062/13 FOR DETAIL)

MANHOLE NO 18 I.L. 95.05

200 mm ϕ A/C CLASS 'B' PUMPING MAIN

TOP OF EMBANKMENT
R.L. 95.50

225 mm ϕ A/C

ACCESS
RAMP

4m WIDE BY 1.2m HIGH
CYCLONE GATE OR SIMILAR
(REFER SPEC)

1.2m HIGH POST & WIRE
BOUNDARY
FENCE OR SIMILAR (REFER SPEC)

MANHOLE NO 18 I.L. 94.50

2x2m CONCRETE
PAD

GALV. SCREEN (SEE DETAIL
TO SIDE)

150 mm ϕ A/C SEWER
CLASS SCOUR LINE

150 ϕ SLUICE VALVE AND
VALVE BOX

150 mm ϕ SLUICE VALVE
AND VALVE BOX

150 mm ϕ A/C SEWER CLASS
OUTFALL LINE - CONTRACT
ENDS THREE PIPE LENGTHS
PAST SLUICE VALVE

MANHOLE NO 23 I.L. 93.00
REFER 3062/15
HEAVY PATTERN COVERS.

PLAN

Scale 1:200

GALV. SCREEN - SEE
DETAIL BELOW
R.L. 93.70

2x2m CONCRETE
PAD

W.L. 95.05

2000

150 mm ϕ SLUICE VALVE
WITH GIBBULTS AND
VALVE BOX

300 mm ϕ R.C. PIPE

150 mm A/C SEWER
CLASS SCOUR LINE

TOP OF EMBANKMENT
R.L. 95.50

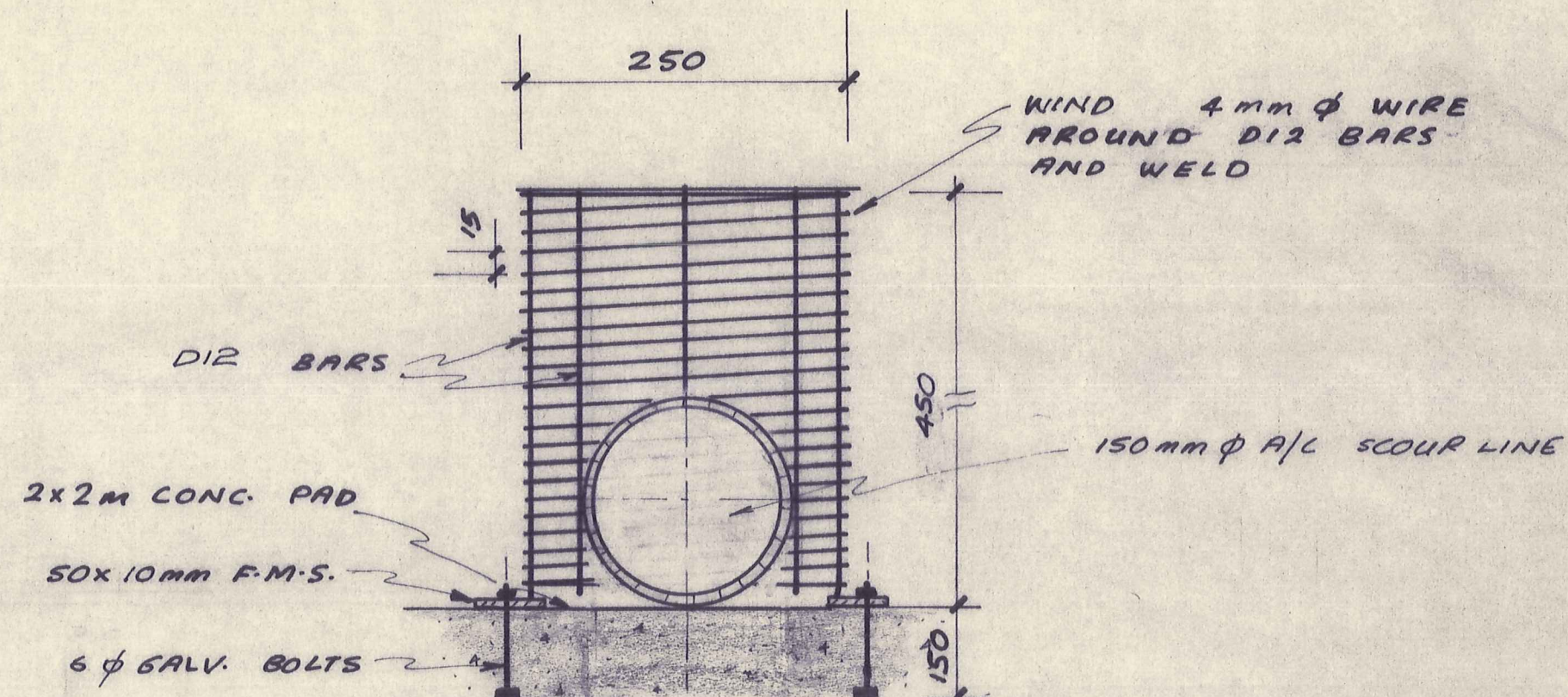
STANDARD MANHOLE NO 23
WITH HEAVY PATTERN COVER
(SEE 3060/13) I.L. 93.25

150 mm ϕ OUTFALL LINE

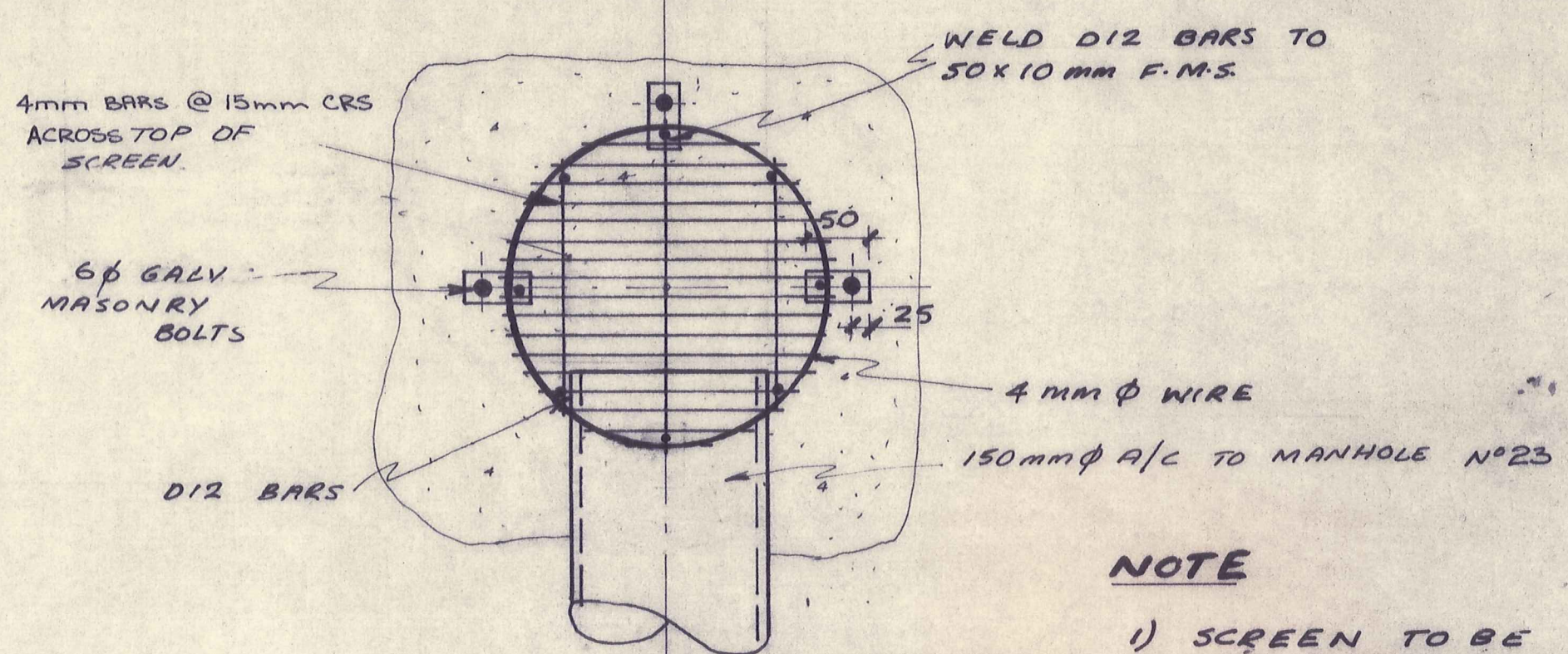
I.L. 93.25

RAW POND SCOUR LINE DETAIL

Scale 1:50



SECTION



PLAN

SCREEN DETAIL

Scale 1:5

NOTE

1) SCREEN TO BE
HOT DIP GALV.

E. R. GARDEN & PARTNERS
CONSULTING ENGINEERS

DUNEDIN &
INVERCARGILL



AMENDMENTS

RELEVANT DRAWINGS ETC.

ROXBURGH BOROUGH COUNCIL

Designed	J.W.B./G.R.	Date	DEC '77	Scale:	AS SHOWN
Drawn	G.R.	Job No.	3062		
Traced	G.R.	Checked	J.W.B.	Survey Ref:	
Approved	J.W. Brooking	4/12/77			

SEWERAGE 1978 — CONTRACT NO 2

OXIDATION PONDS — RAW POND

SCOUR LINE

DRG No. 3062/12

A

8 inches

B

C

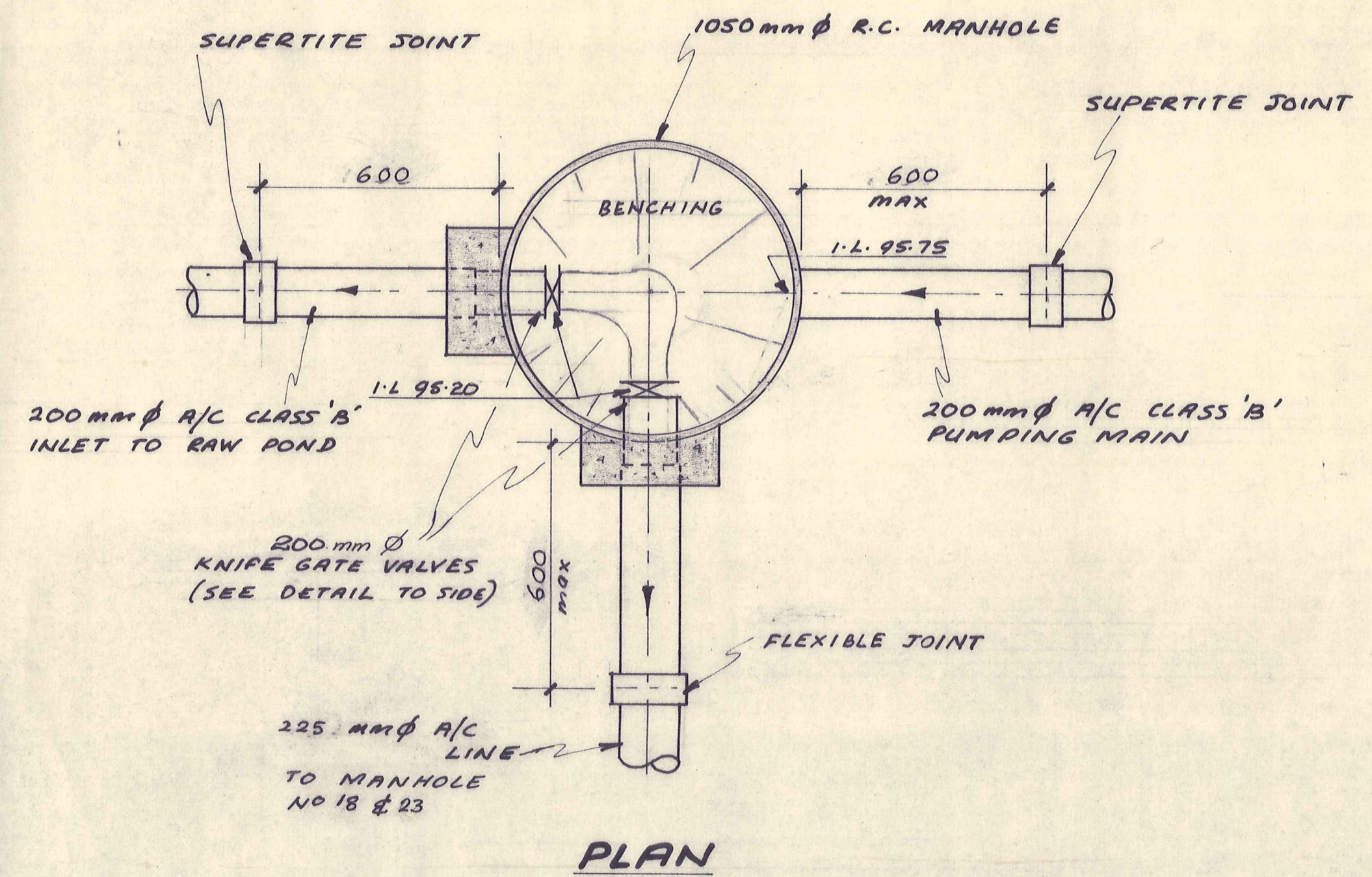
D

A

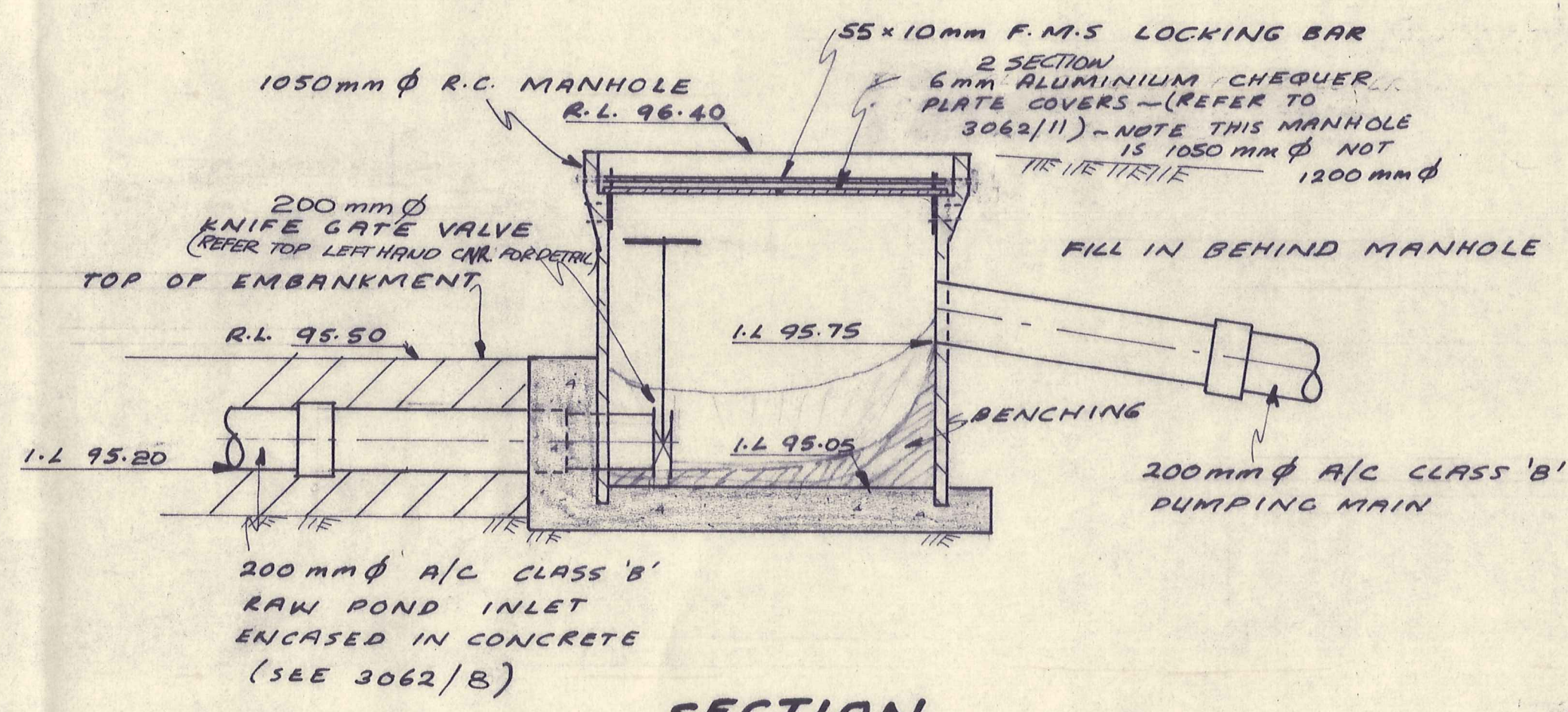
B

C

D



PLAN

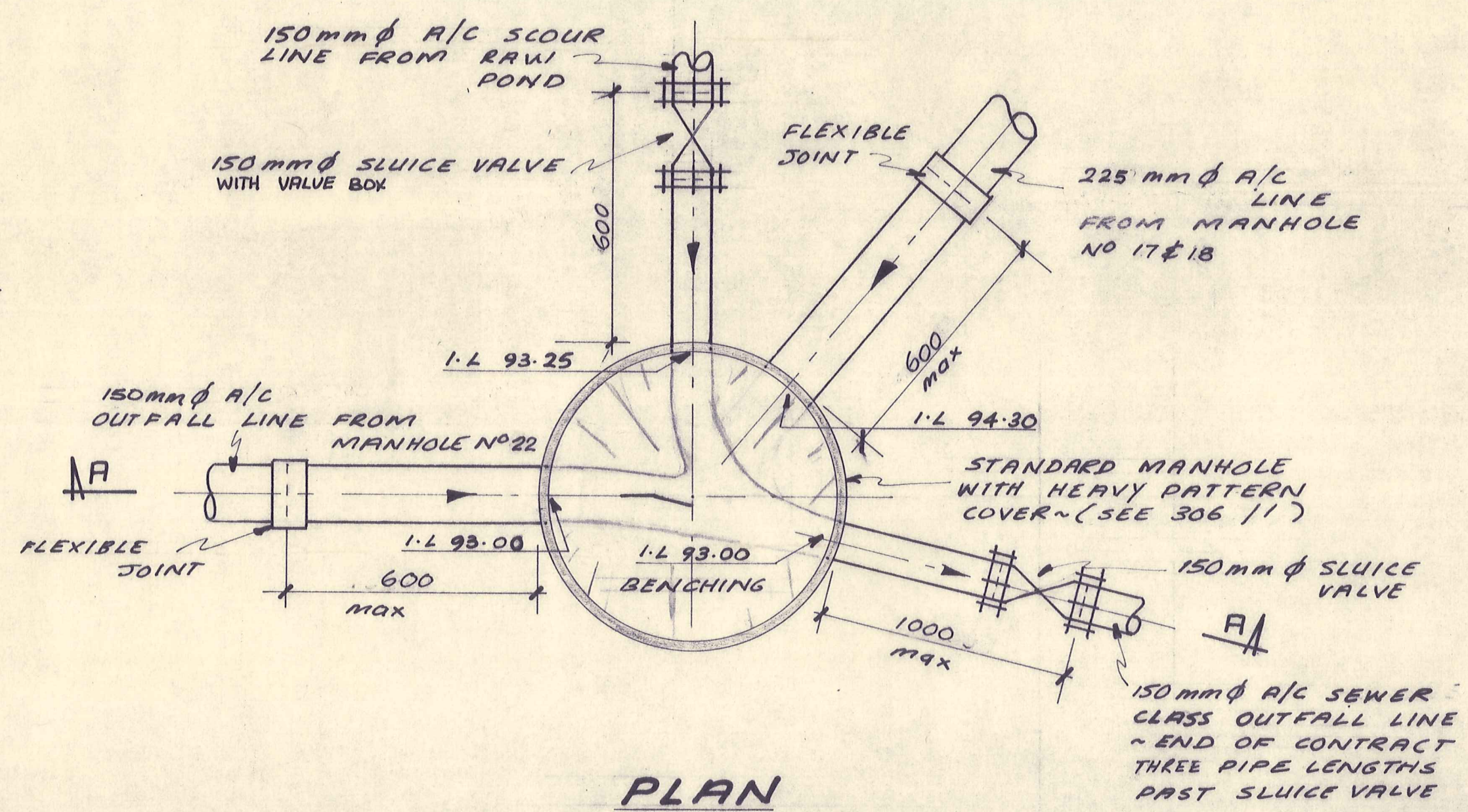


SECTION

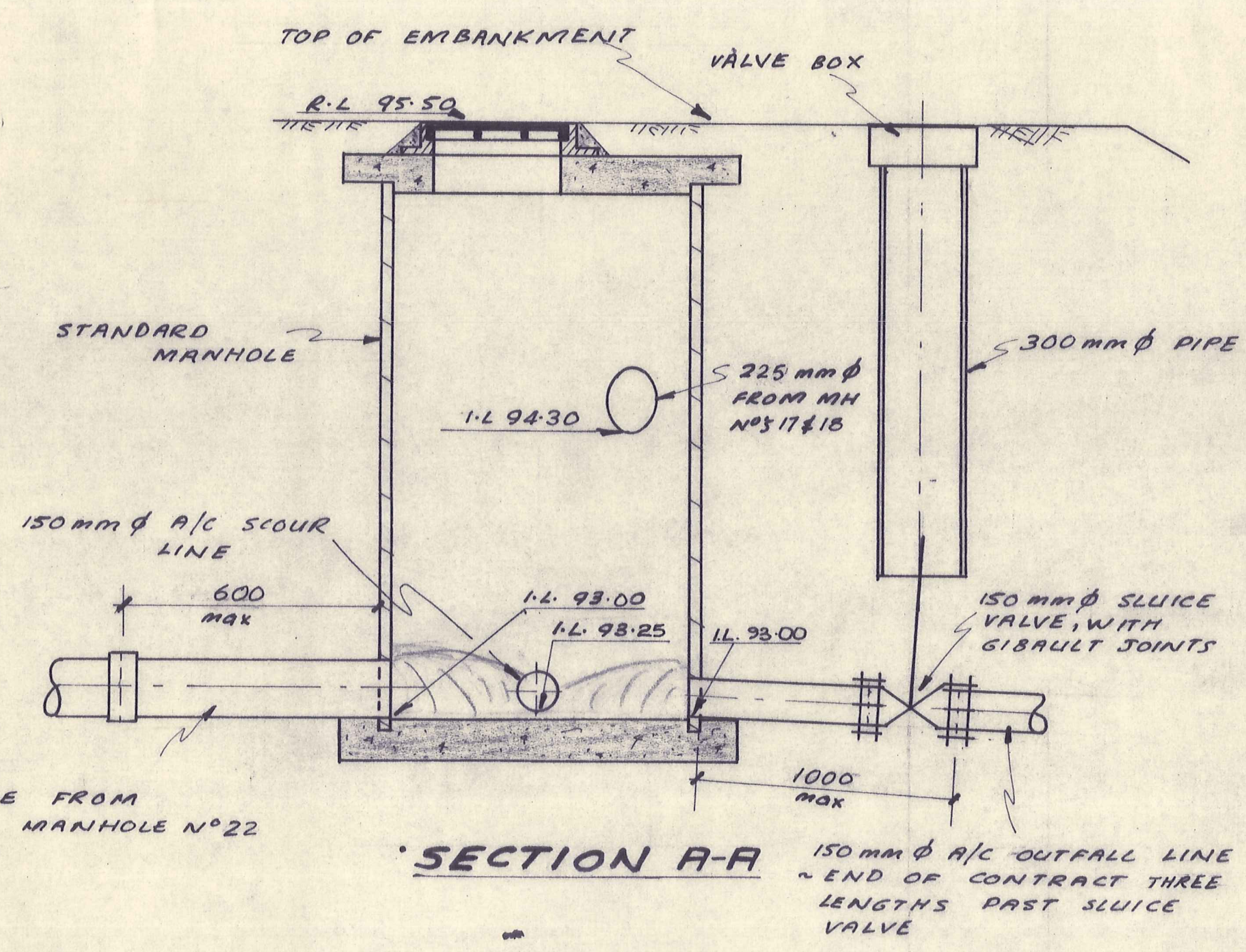
MANHOLE NO 17 (INLET MANHOLE)

Scale 1:20

NOTE
ALSO REFER TO 3062/15
FOR MANHOLE DETAILS,
AND BASE CONSTRUCTION.



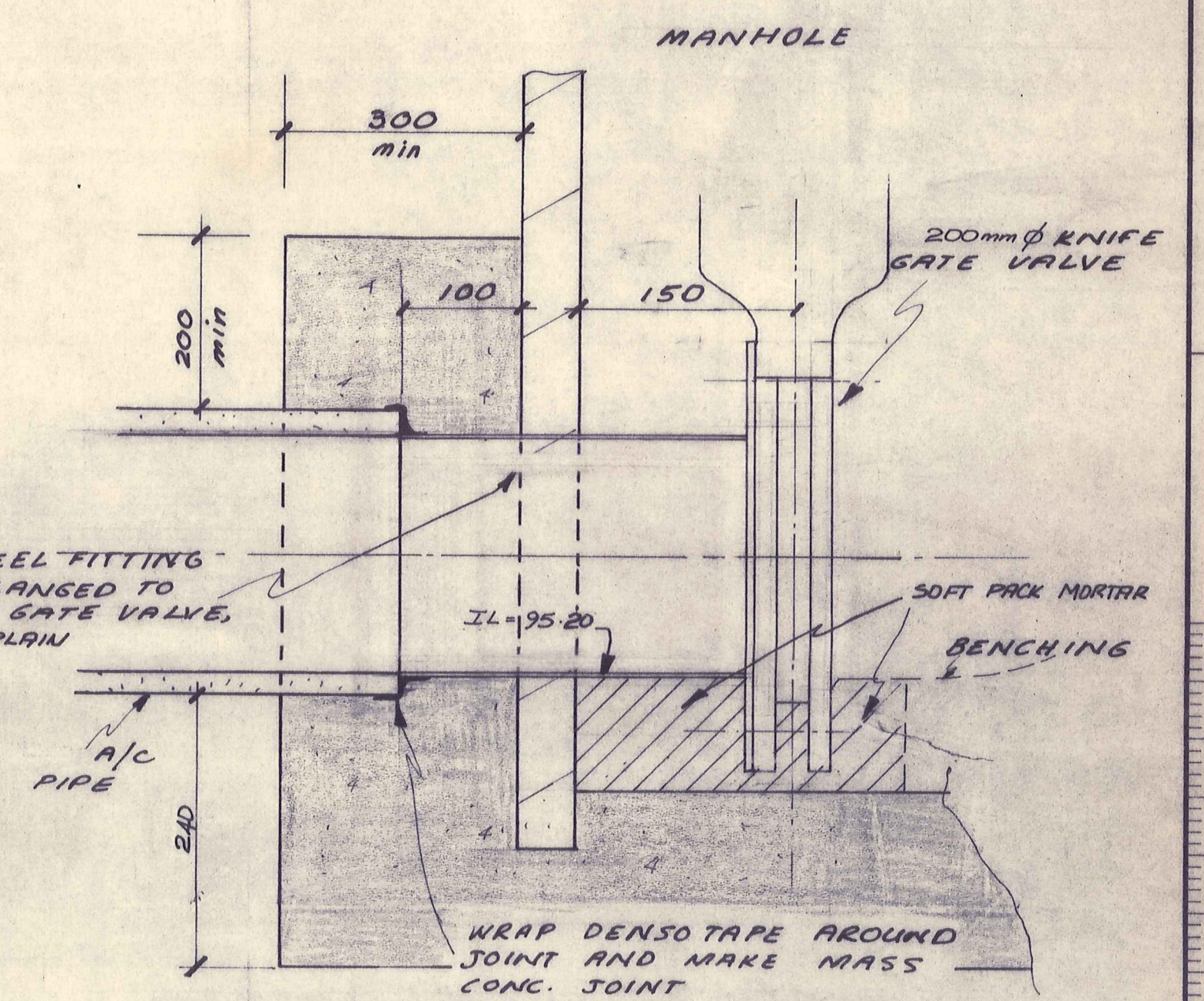
PLAN



SECTION A-A

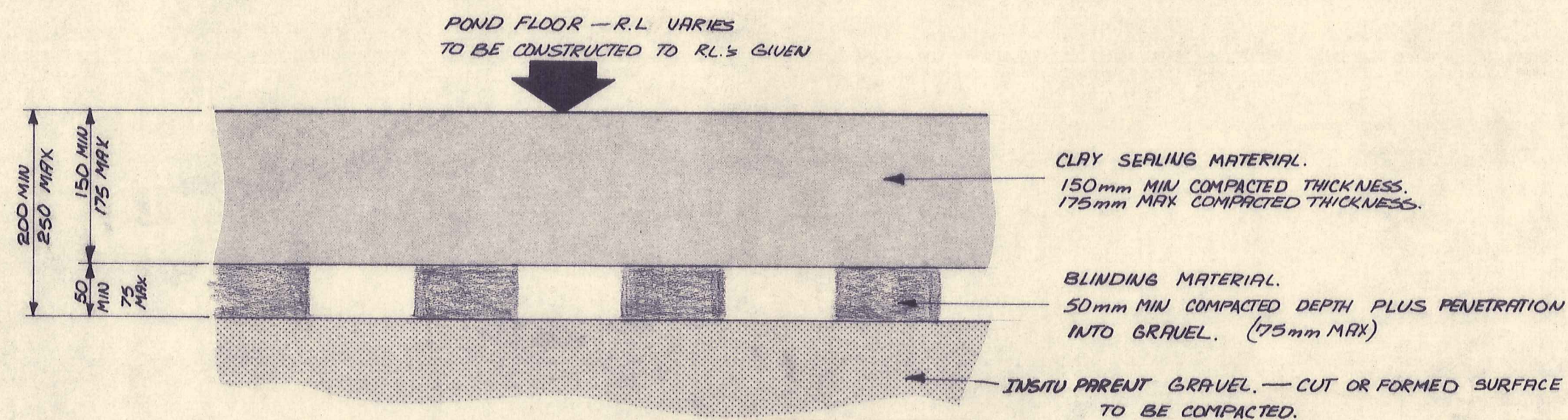
MANHOLE NO 23

Scale 1:20



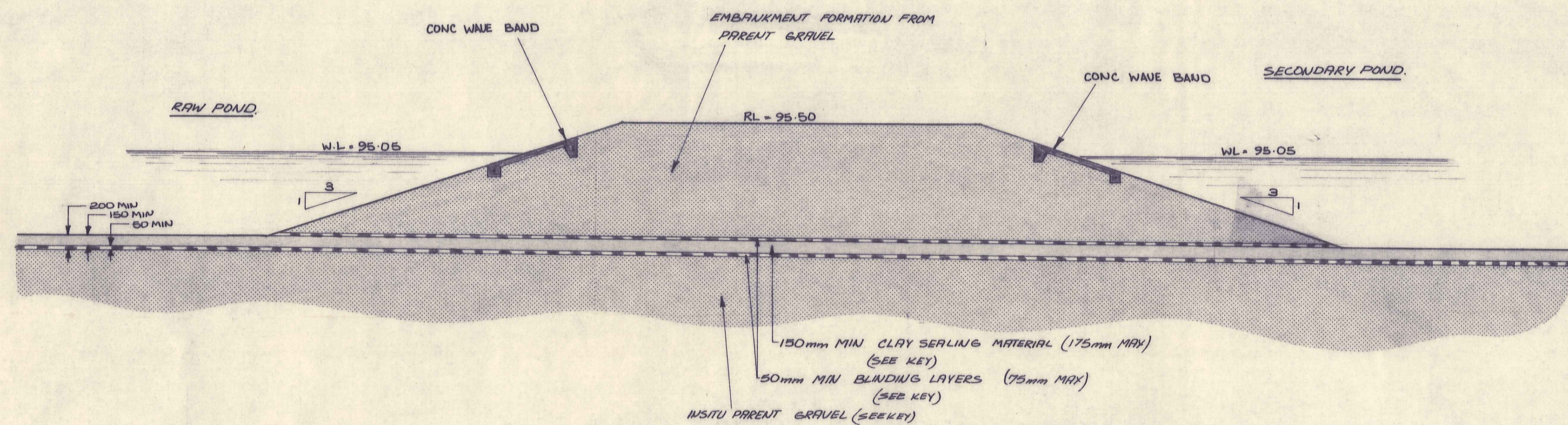
KNIFE GATE VALVE FIXING
Scale 1:5
DETAIL

E. R. GARDEN & PARTNERS CONSULTING ENGINEERS DUNEDIN & INVERCARGILL		AMENDMENTS				RELEVANT DRAWINGS ETC.		ROXBURGH BOROUGH COUNCIL		SEWERAGE 1978 — CONTRACT NO 2	
								Designed JWB/G.R.	Date DEC '77	Scale: AS SHOWN	OXIDATION PONDS — MANHOLE NO's
								Drawn G.R.	Job No. 3062		17 & 23 DETAILS
								Traced G.R.	Checked	Survey Ref:	DRG No. 3062/13
								Approved			



TYPICAL FLOOR CONSTRUCTION
— SEALING DETAILS

SCALE 1:5

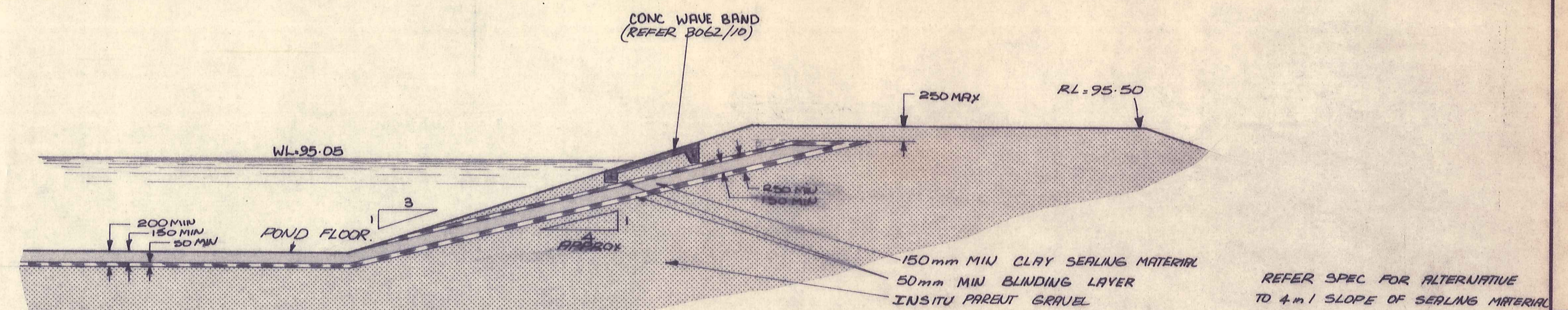


CENTRE EMBANKMENT

— SEALING DETAILS (SECTION 3-3)

SCALE 1:50 (APPROX.)

EMBANKMENT GEOMETRY, LEVELS
PIPELINES & STRUCTURES ARE
NOT SHOWN — REFER OTHER DRAWINGS.



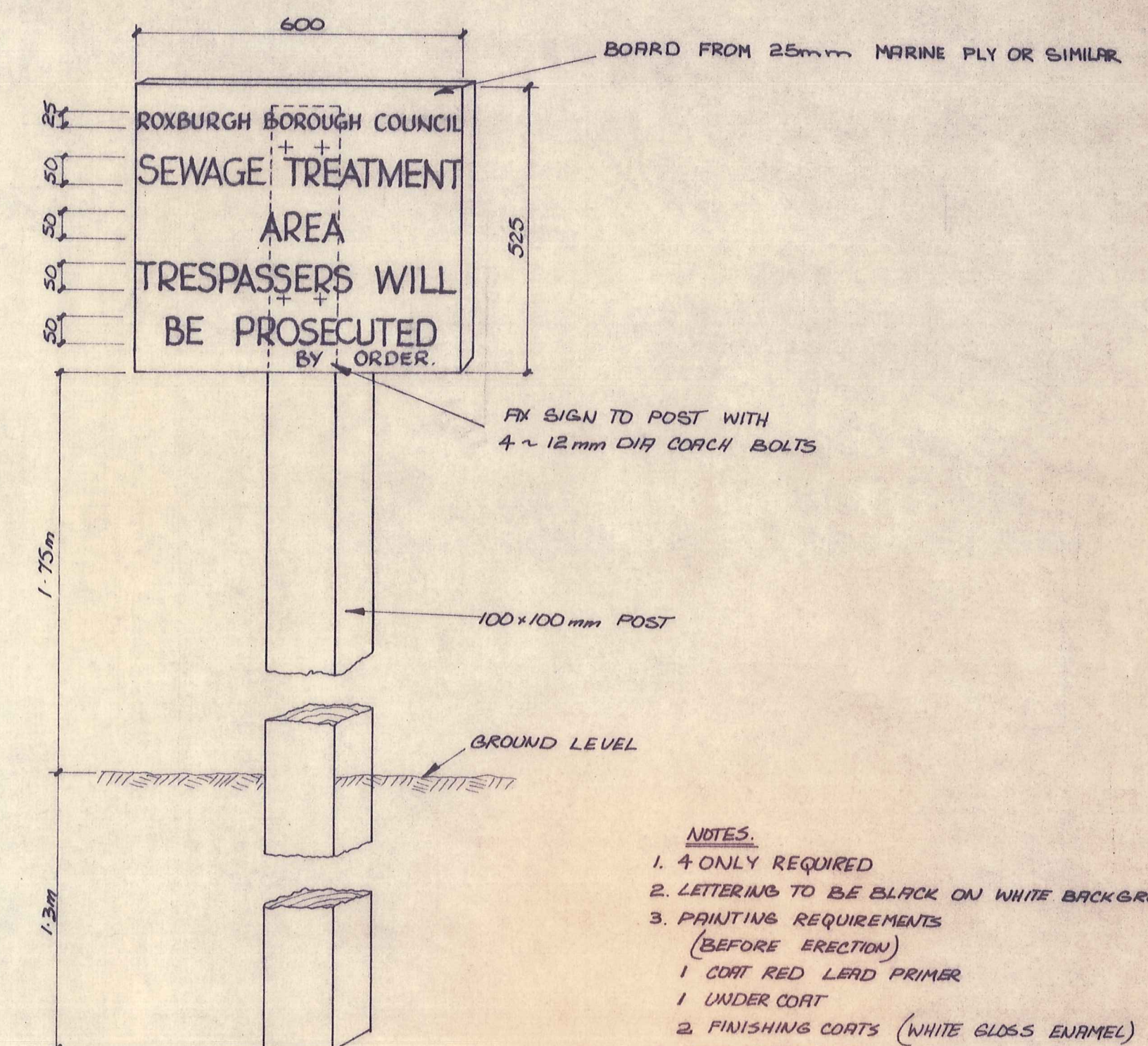
TYPICAL PERIMETER EMBANKMENT

— SEALING DETAILS SCALE 1:50 (APPROX.)

KEY FOR SEALING MATERIALS

	150mm MIN CLAY SEALING MATERIAL (COMPACTED THICKNESS) (175mm MAX)
	50mm MIN BLINDING LAYER — (COMPACTED DEPTH PLUS PENETRATION INTO GRAVEL) (75mm MAX)
	INSITU GRAVEL — CUT OR FORMED SURFACE TO BE COMPACTED. (REFER SPEC)

REFER SPECIFICATION FOR COMPACTION & METHOD OF
PLACING REQUIREMENTS.



- NOTES:
- 4 ONLY REQUIRED
 - LETTERING TO BE BLACK ON WHITE BACKGROUND
 - PAINTING REQUIREMENTS (BEFORE ERECTION)
 - 1 COAT RED LEAD PRIMER
 - 1 UNDER COAT
 - 2 FINISHING COATS (WHITE GLOSS ENAMEL)
 - POST TIMBER TO BE JARRAH DRESSED OR SIMILAR.

SIGNS FOR OXIDATION POND

SCALE 1:10

E. R. GARDEN & PARTNERS
CONSULTING ENGINEERS

DUNEDIN &
INVERCARGILL



AMENDMENTS.

RELEVANT DRAWINGS ETC.

ROXBURGH BOROUGH COUNCIL

Designed JWB Date JULY 78
Drawn JWC Job No. 3062
Traced JWC Checked JWB
Approved JWB

Scale: 1:5 1:10 1:50

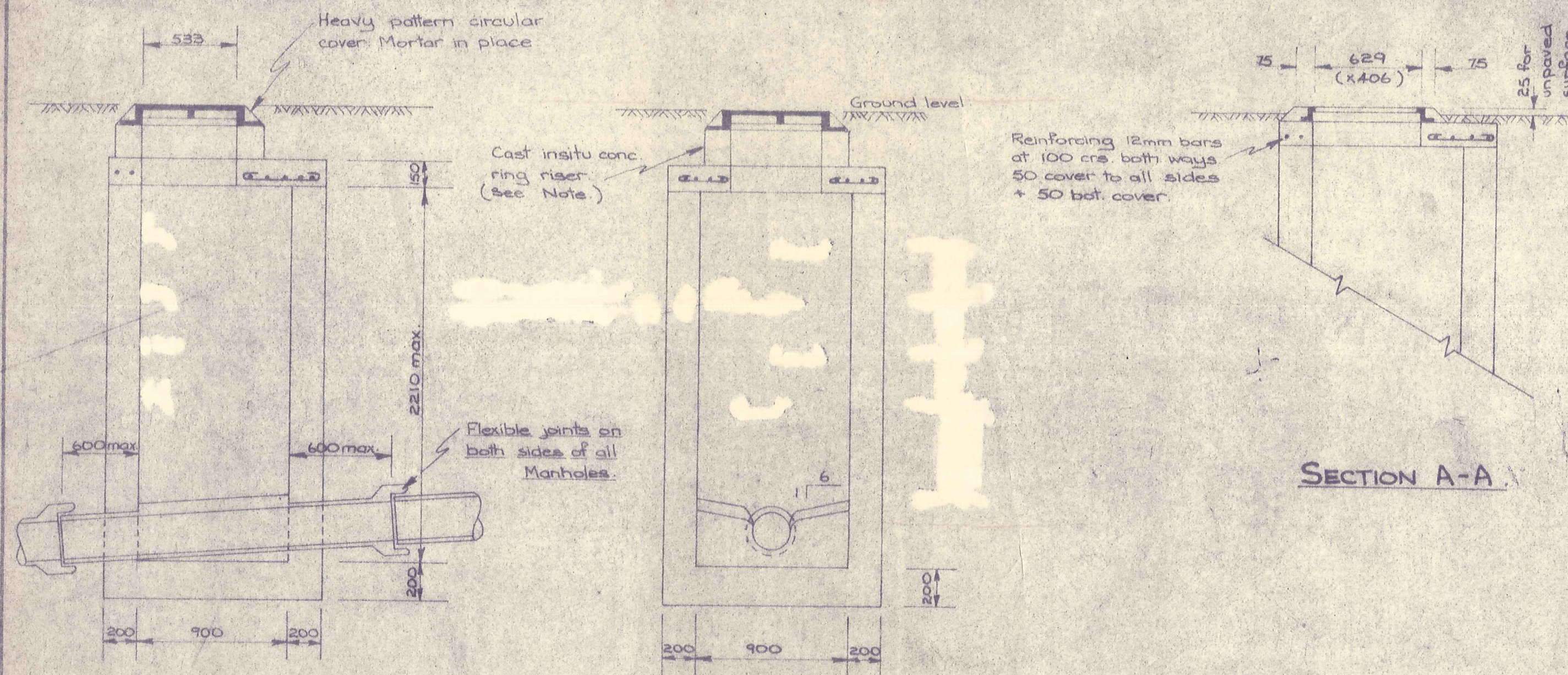
Survey Ref:

SEWERAGE 1978 — CONTRACT N°2

POND SEALING DETAILS & SIGNS FOR POND

DRG No. 3062/14

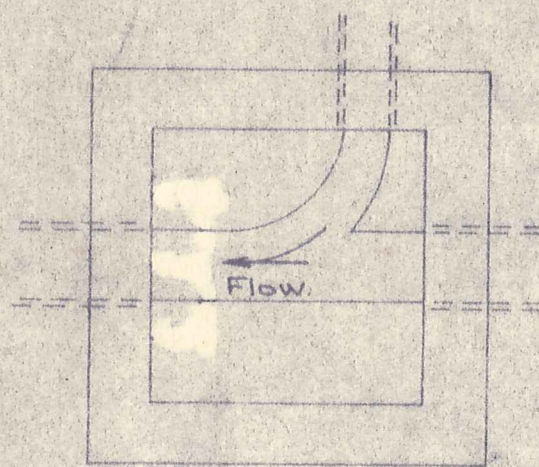
Amendment



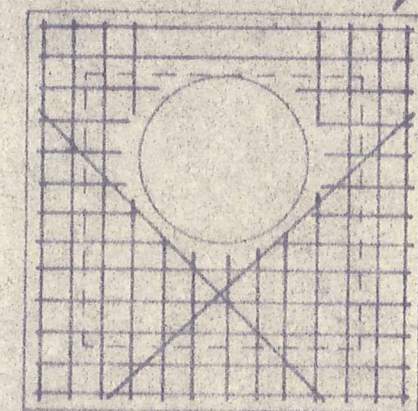
LONGITUDINAL SECTION.

CROSS SECTION.

SECTION A-A

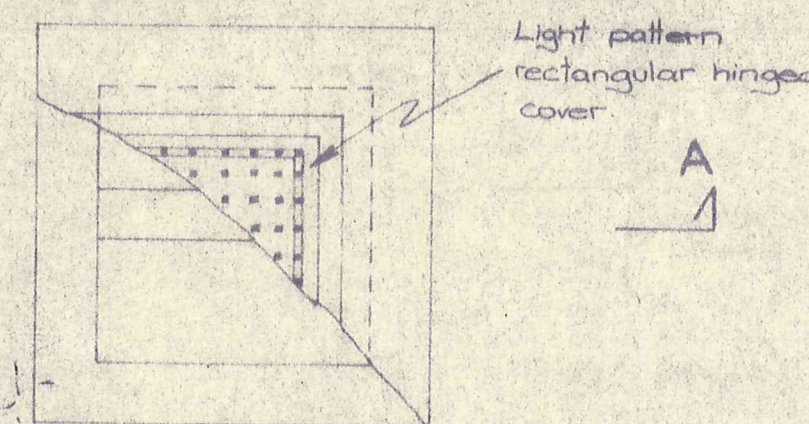


PLAN AT SEWER INTERSECTION.



PLAN REINFORCED COVER SLAB.

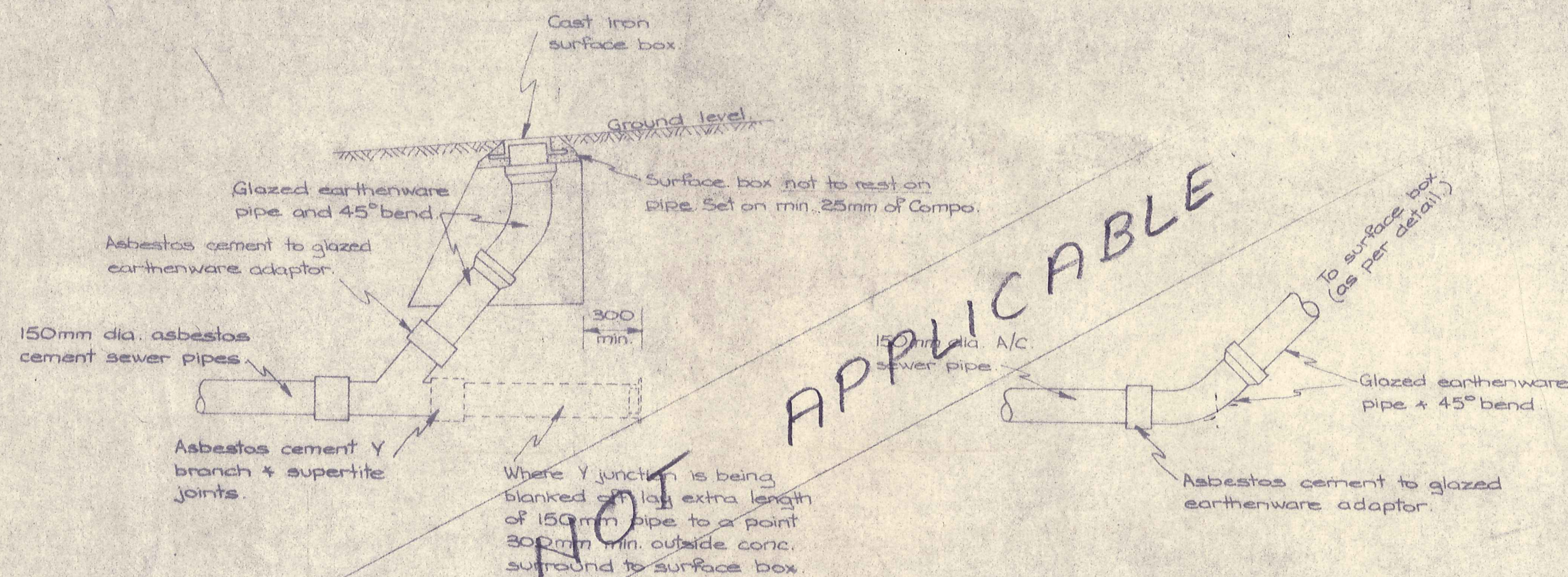
N.B. Cover may be precast.



ALTERNATIVE LIGHT PATTERN. PLAN.

DETAIL OF COVER OF MANHOLE NOT IN ROAD OR FOOTPATH AND ALSO NOT OVER 1.5m. TO INVERT.

CAST INSITU MANHOLES.



RODDING EYE WITH Y-BRANCH.

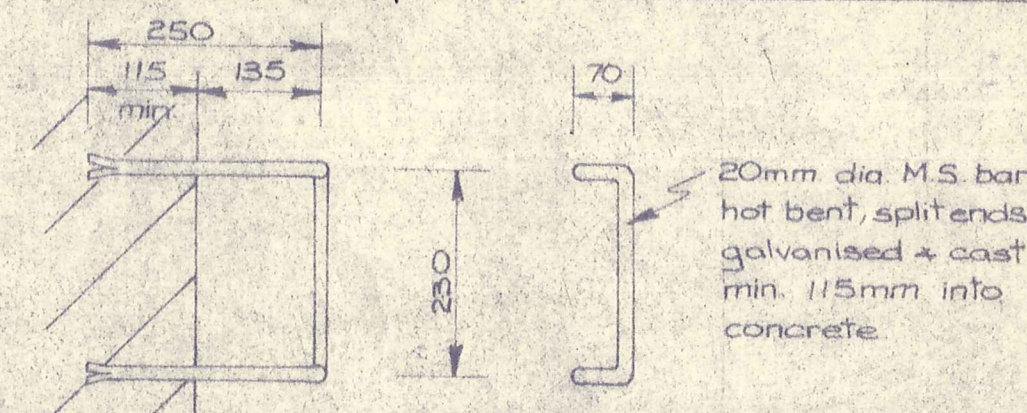
RODDING EYE WITH 45° BEND.

RODDING EYES.

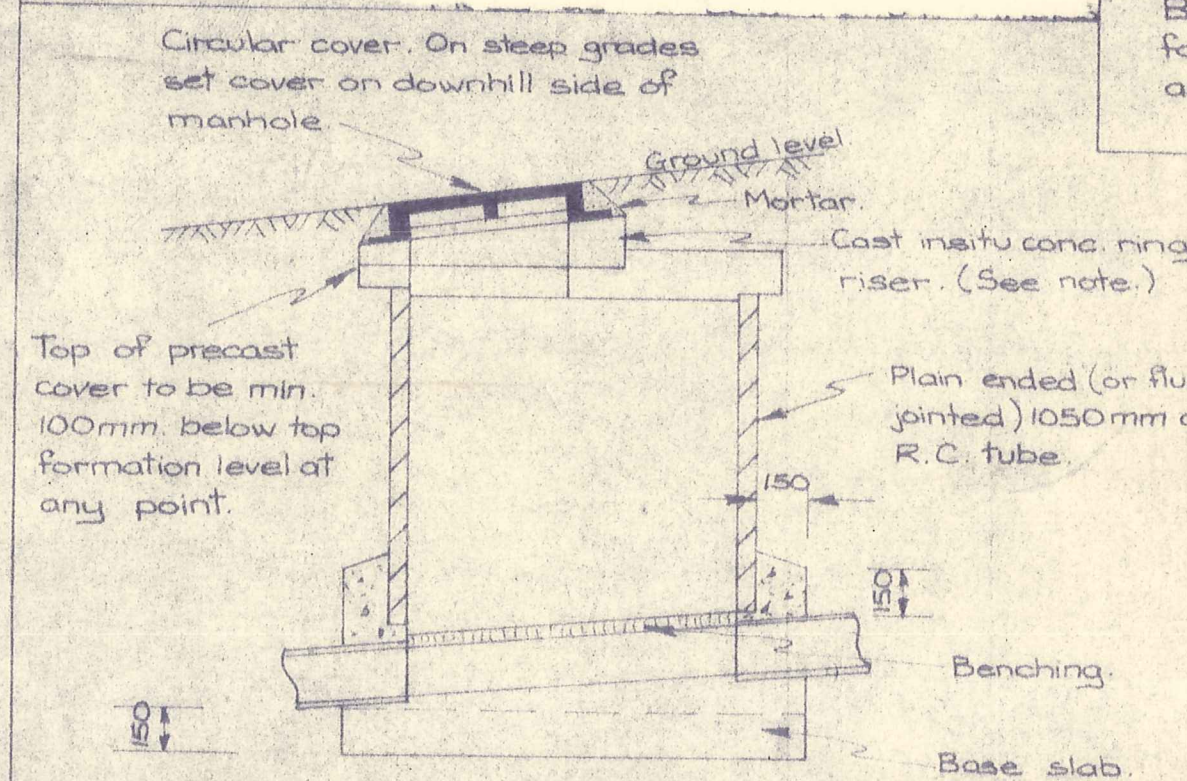
Haunching under pipes as detailed on Dwg. No. _____ where required by Engineer.

NOTES.

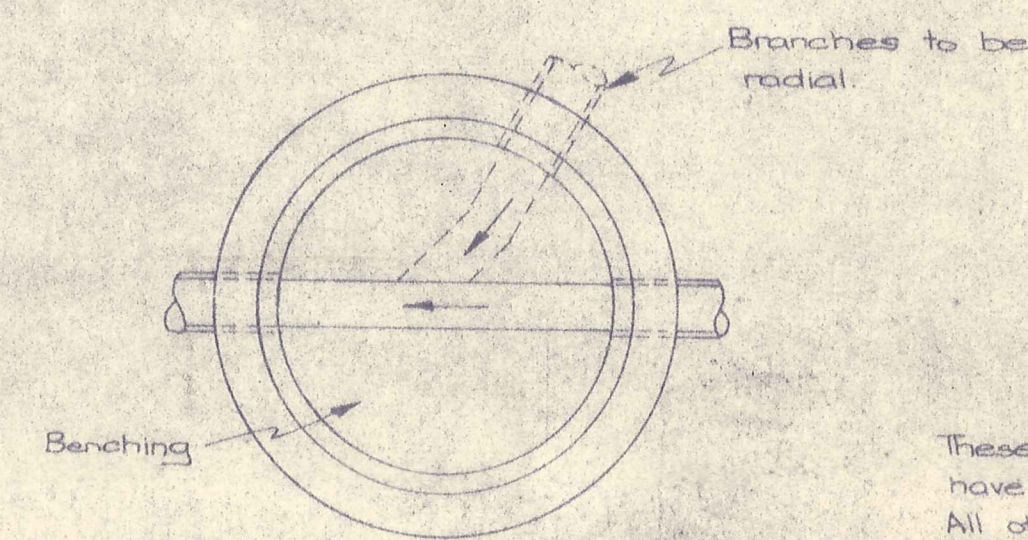
1. R.C. tubes to be 1050mm dia. Class 'S' or precast manholes supplied by an approved supplier.
2. Cast insitu conc. ring risers 150 wide * max. of 250mm high. Mortar manhole cover on top. (Use steel forms or similar for forming ring riser).



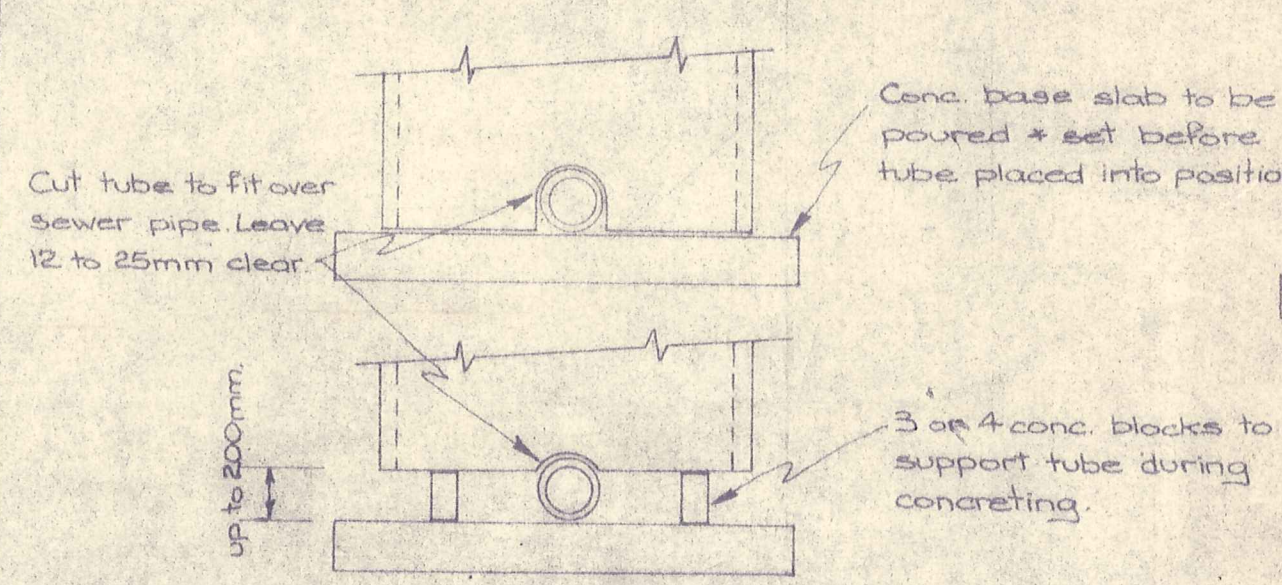
STEP FOR CAST INSITU MANHOLE



LONGITUDINAL SECTION.

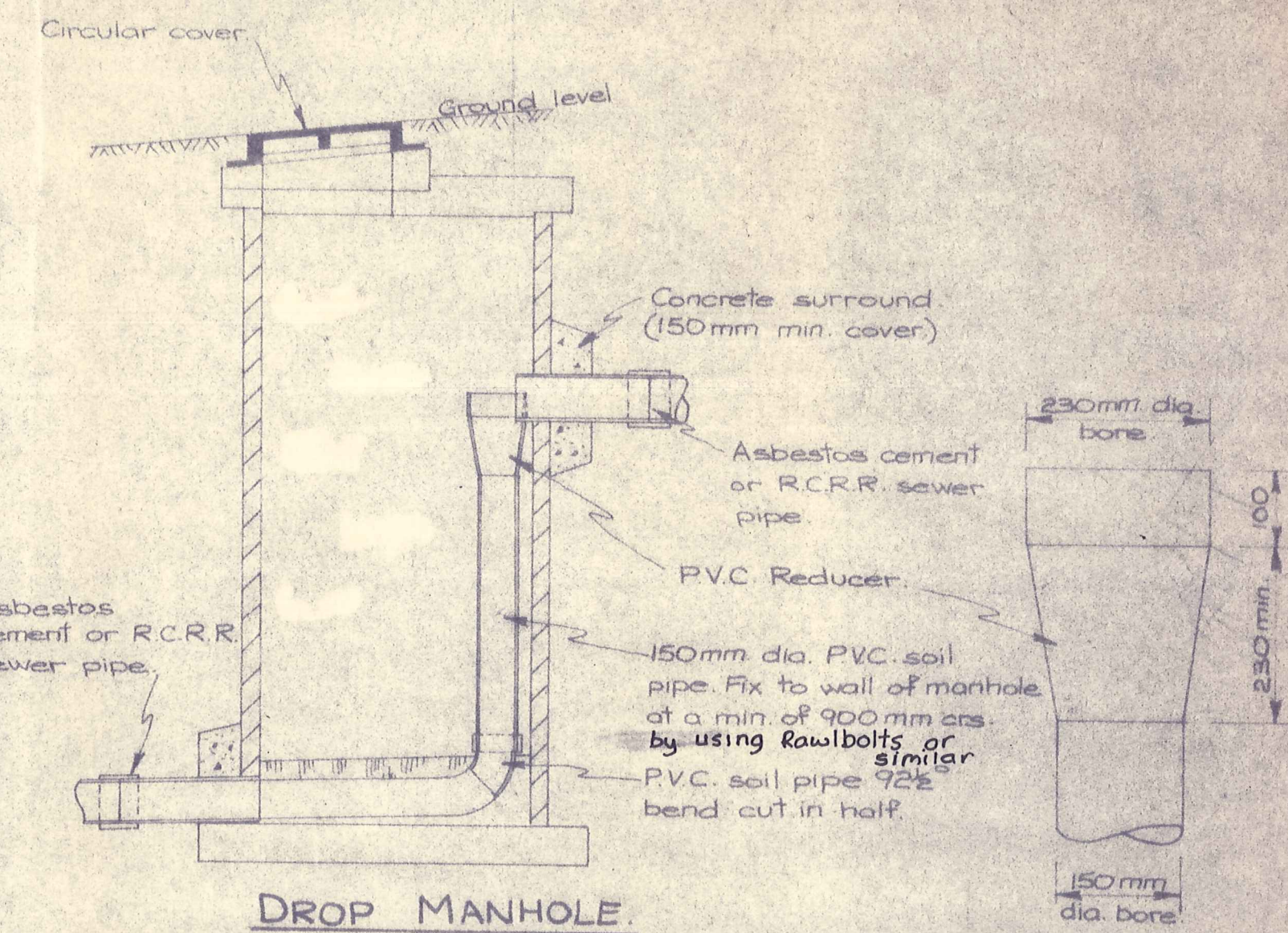


PLAN PRECAST MANHOLE.



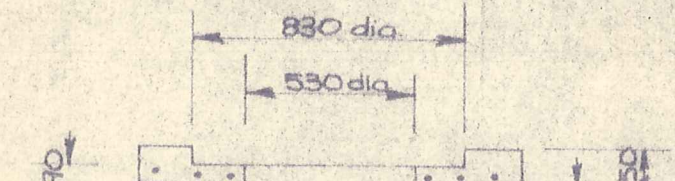
ELEVATION FROM DOWNSTREAM OF ALTERNATIVE POSITIONS OF TUBE FOR PRECAST MANHOLES.

Benching and concrete surround not shown. Alternative positions allow adjustment of tube to prevent cutting tube shorter in length.

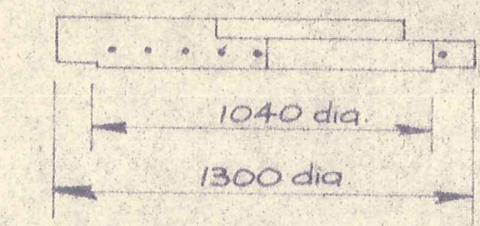


DROP MANHOLE.

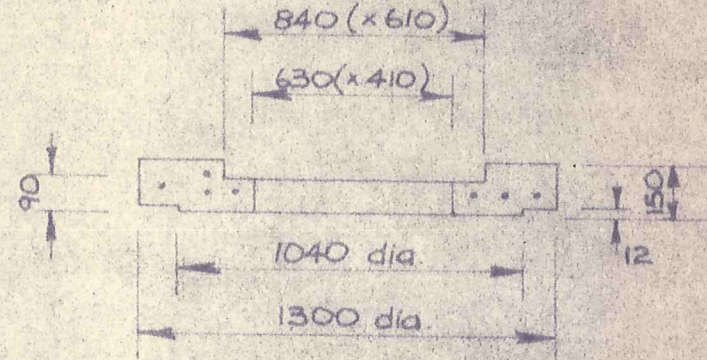
Base walls + cover for drop manhole to be constructed as detailed for ordinary precast manhole or alternatively constructed insitu as detailed on this drawing.



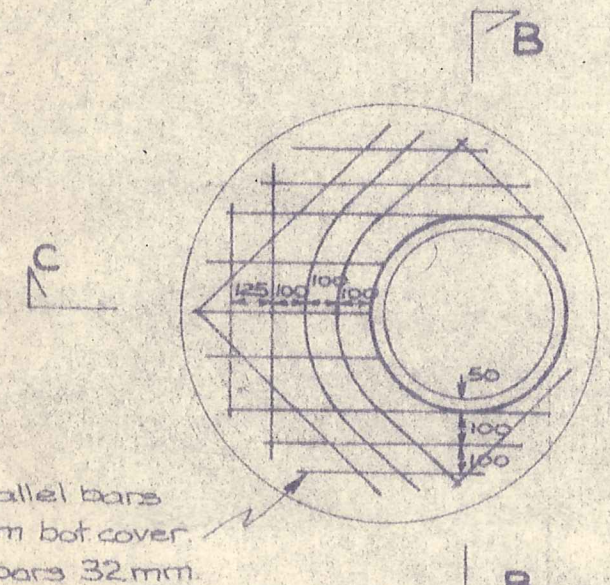
SECTION BB.



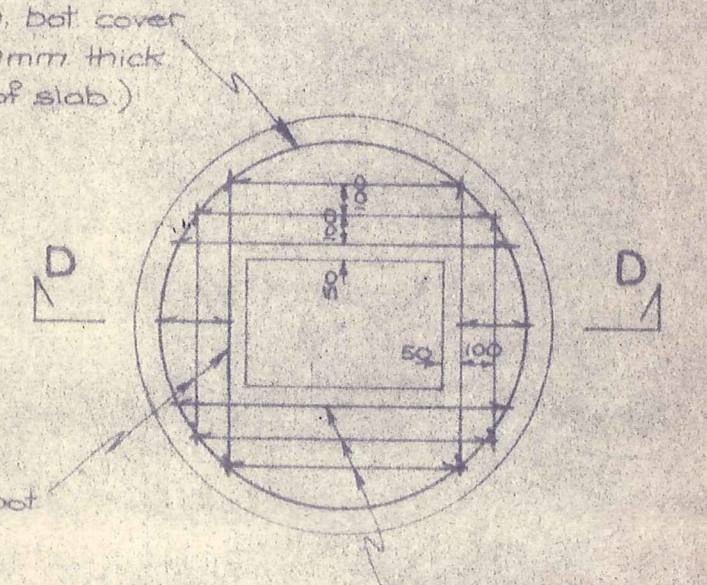
SECTION CC.



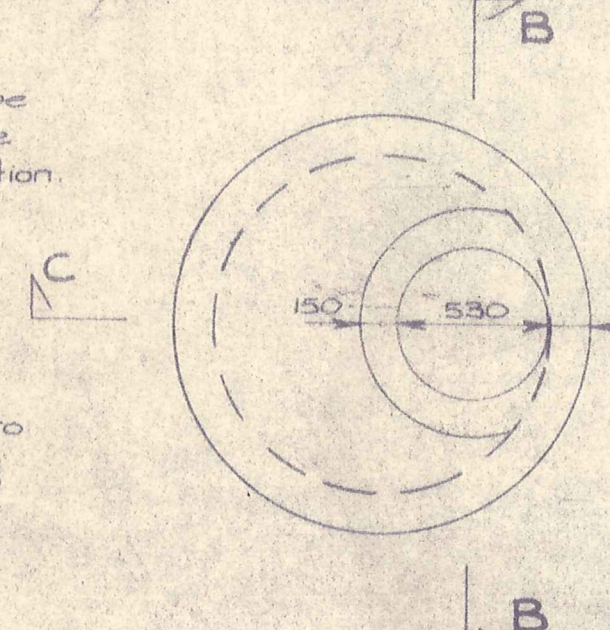
SECTION DD.



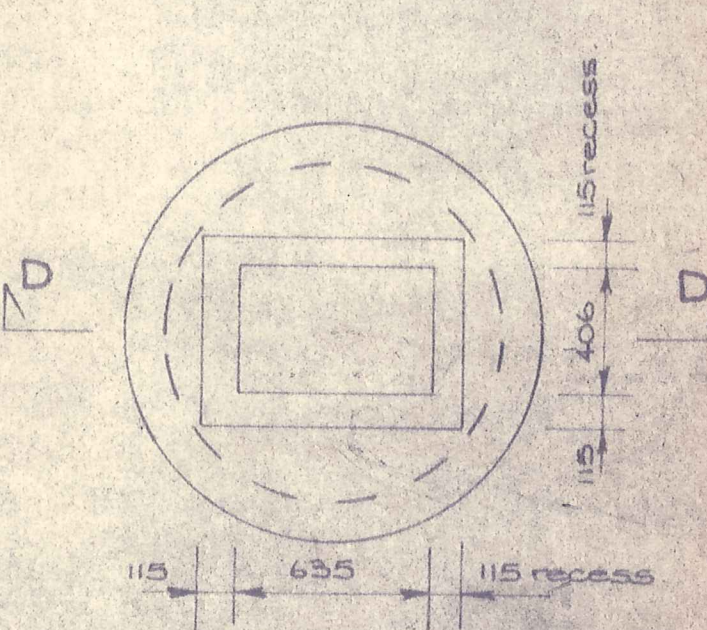
REINFORCEMENT FOR HEAVY CIRCULAR COVER.



REINFORCEMENT FOR HINGED COVER.



PLAN HEAVY CIRCULAR COVER.



PLAN HINGED COVER.

PRECAST MANHOLES.

N.B. Commercially made manhole covers may be used if approved by Engineer.

E. R. GARDEN & PARTNERS
CONSULTING ENGINEERS

DUNEDIN
INVERCARGILL



AMENDMENTS

RELEVANT DRAWINGS ETC.

ROXBURGH BOROUGH COUNCIL

Designed	Date	JAN '76	Scale	1:25
Drawn	Job No	3060		
Traced	Checked	G.C.	Survey Ref.	
Approved	J.W. Bradley	10/2/76		

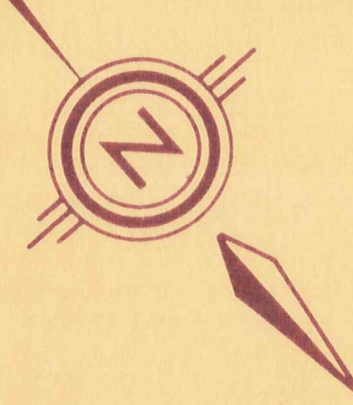
SEWERAGE 1978 — CONTRACT N°2

MANHOLE & RODDING-EYE DETAILS.

STANDARD

DRG No. 3062/15

A
B
C
D



PINE PLANTATION

M.O.W. & D. YARD

Access track to Clutha River

4m Cyclone or similar gate

No plants with large roots to be planted within 5m of pipeline

No plants with large roots to be planted within 5m of pipeline

Outlet pipe

Inlet pipe

RAW POND

SECONDARY POND

Toe of Embankment.

Edge of Quarry Pits.

1.2m high P & W fence barbed at top

NOTES

1. Vigorous trees have been chosen which have tolerance to drought and poor growing conditions.
2. Planting is to be sparse so as not to impede air flow across top of ponds.
3. Prevailing wind is from the North — West.
4. More ground cover planting will be carried out if existing thyme does not readily re-establish on embankments.
5. There will be no elevated structures around the pond.

LANDSCAPE PLAN

KEY TO LANDSCAPE PLAN

- 1. GROUND COVER JUNIPERUS HETZII.
- 2. GROUPS OF SILVER BIRCH. (Betula alba)
- 3. LARCH. (Larix decidua)
- 4. ATLAS CEDAR. (Cedrus atlantica)
- 5. CEDRUS DEODARA.
- 6. LAYLAND CYPARUS. (Cupressocypar laylandii laytons green)
- 7. EUCALYPYUS NIPHOPHILLA. (Snow gum)
- 8. ACACIA CARDIOPHYLLA. (Wattle)

E. R. GARDEN & PARTNERS CONSULTING ENGINEERS DUNEDIN & INVERCARGILL	BLUE MOUNTAIN NURSERIES BUSHY HILL STREET TAPANUI — WEST OTAGO	AMENDMENTS	RELEVANT DRAWINGS ETC.	3062/1 Layout Plan.	ROXBURGH BOROUGH COUNCIL		OXIDATION POND DEVELOPMENT.	
				3062/2 Setting out Detail.	Designed <i>A.F. Hughes</i> Date JULY 78 Scale: 1:500		LANDSCAPE PLAN.	
				3062/3 Contour Plan	Drawn J.W.C. Job No. 3062	DRG No. 3062/16		
				Traced J.W.C. Checked Survey Ref.		Amendment		