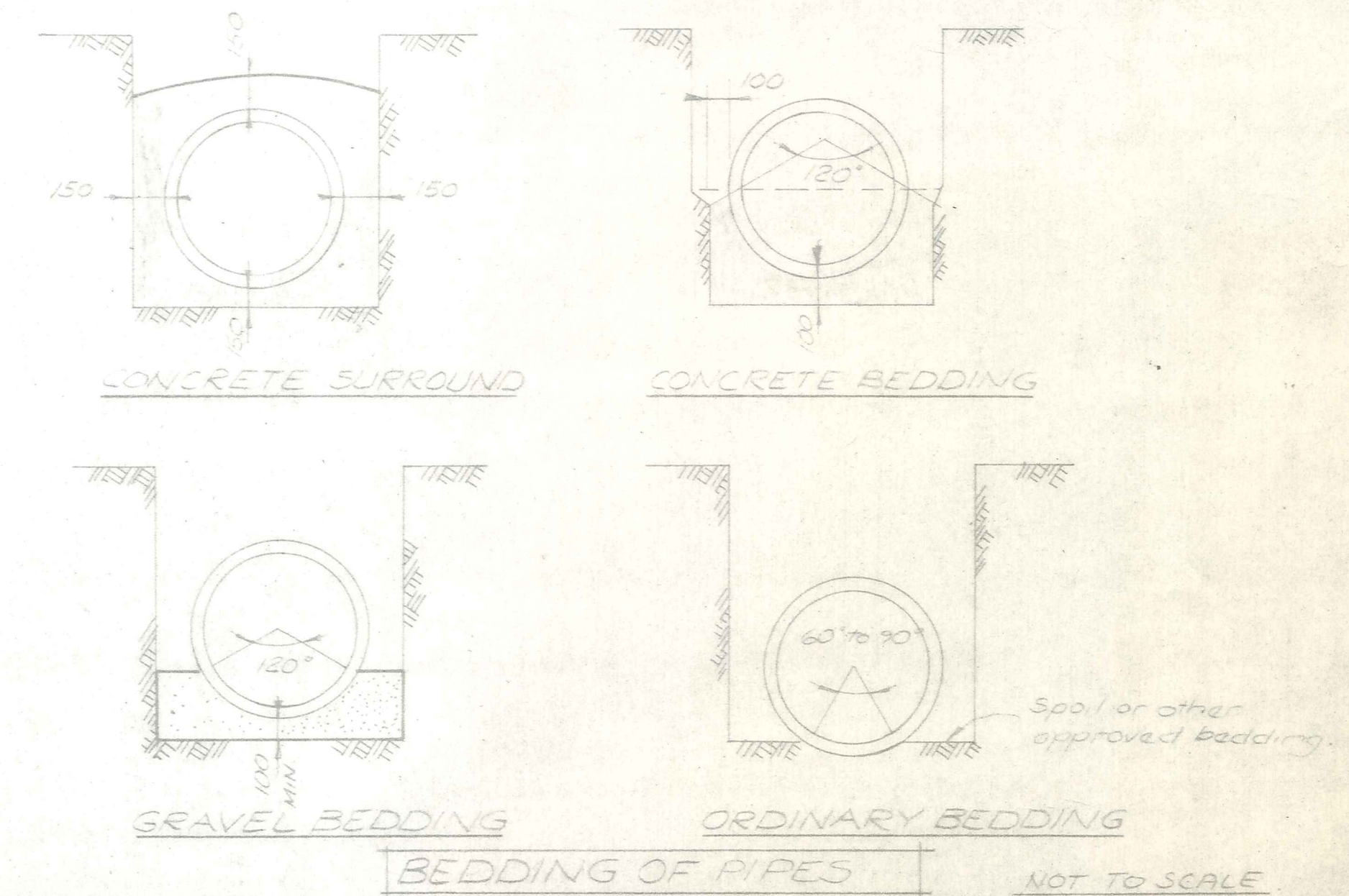
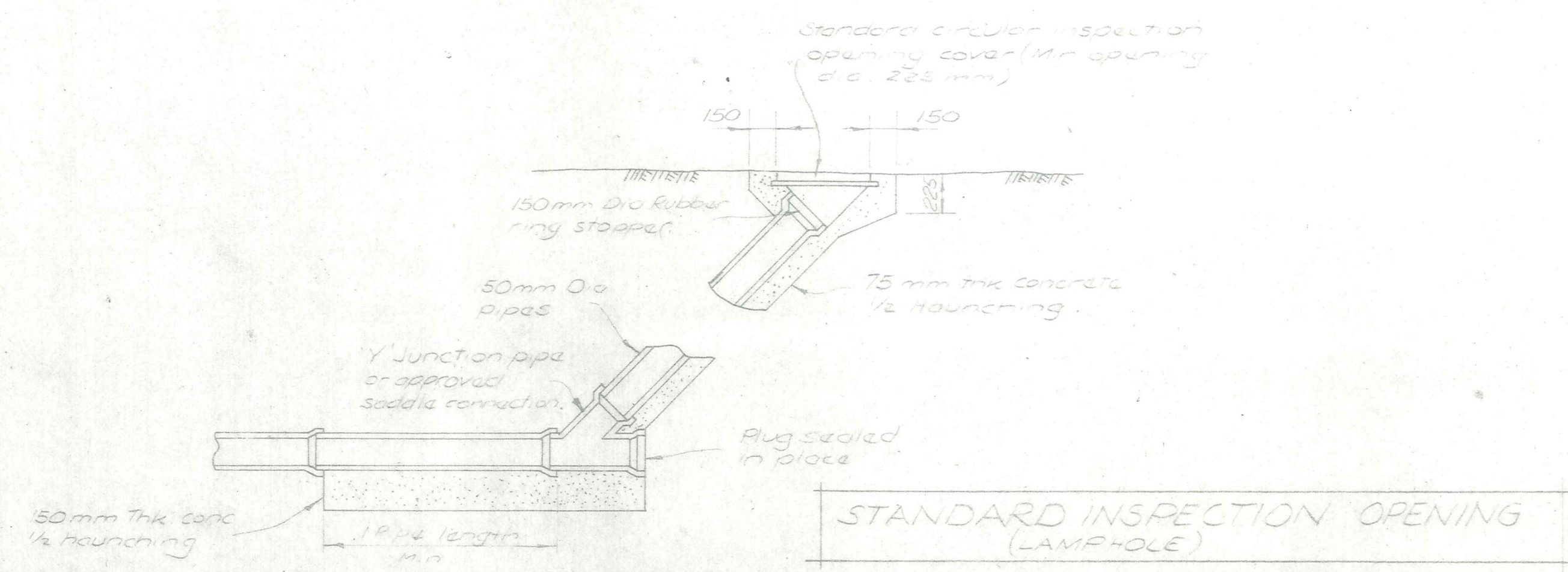


NOTE: Wall thickness increases to 225 mm for manholes greater than 3.0 m deep

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



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MANIOTOTO COUNTY COUNCIL

SUBDIVISION STANDARDS
 LAND ROADING AND SERVICING
 ENGINEERING DETAILS

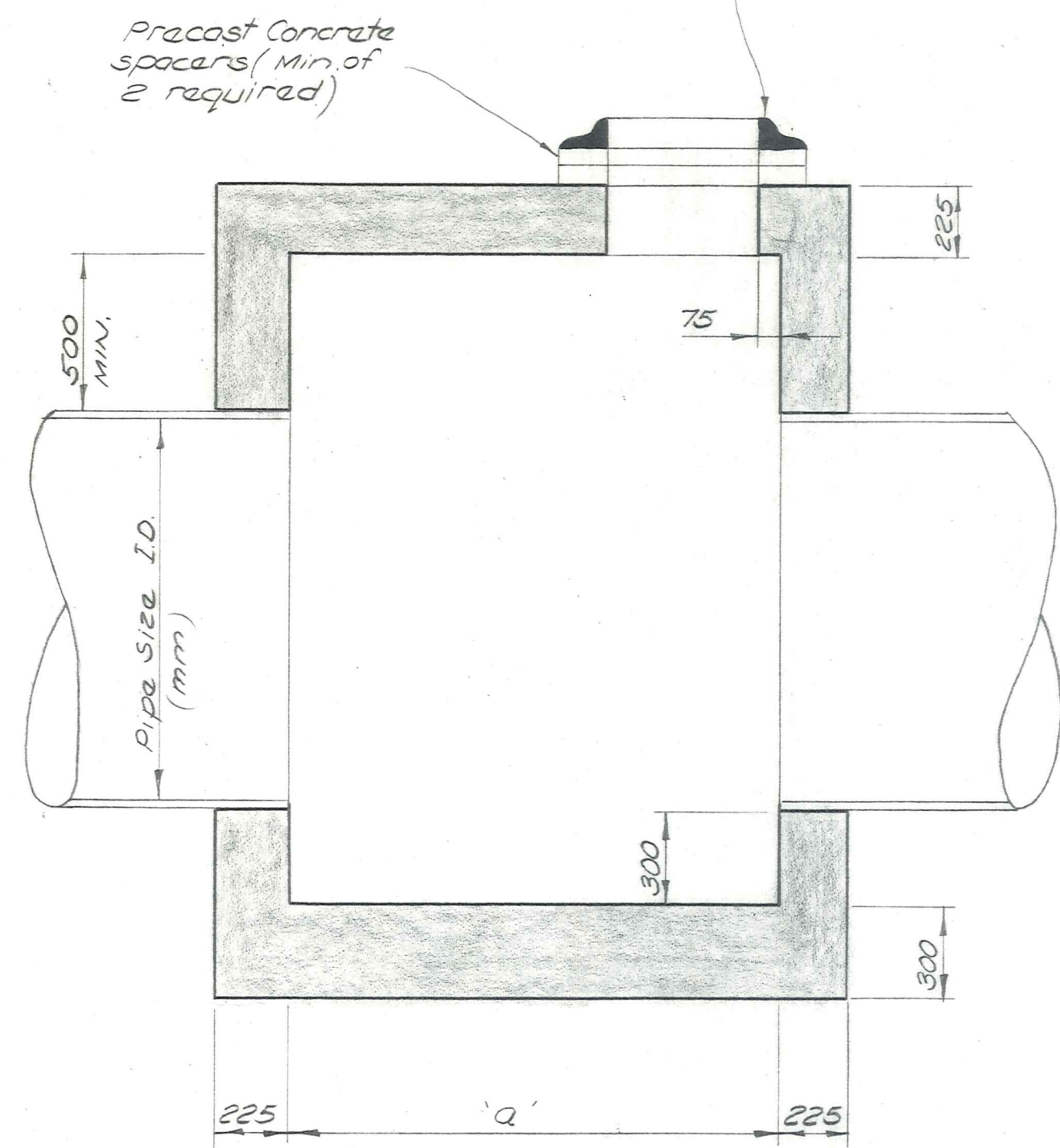
AMENDMENTS		NAME		DATE	JOB NO	Sheet No
NO	BY	DATE	Drawn	6-82	10108	1
			Checked	6-82		
			Traced			
			Approved			
PRELIMINARY					File 6/3/5	L.B.

ORIGINAL SIZE INCHES

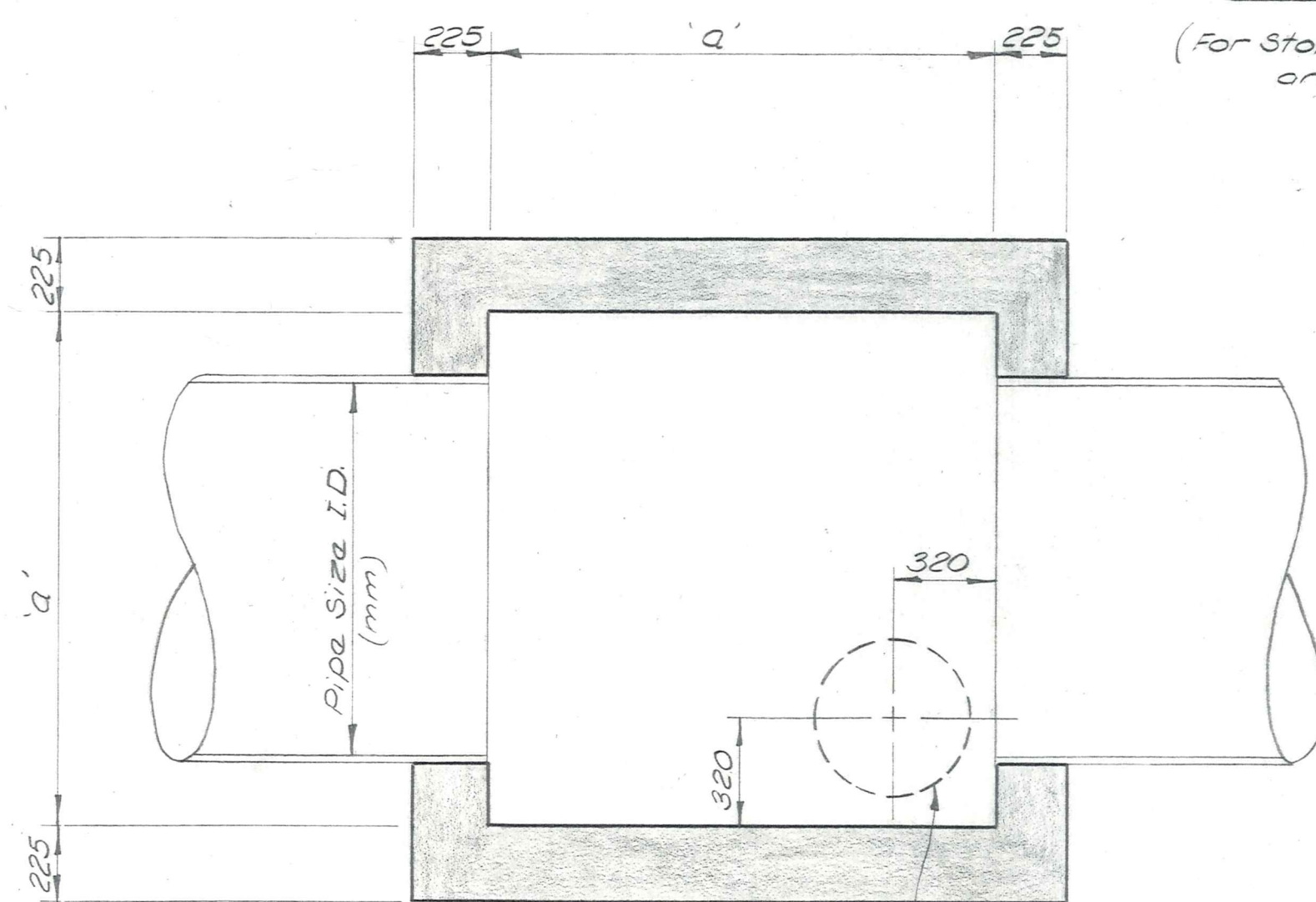
ORIGINAL SIZE INCHES

300
200
100
50
10

12
11
10
9
8
7
6
5
4
3
2
1



SECTION A-A



PLAN

MANHOLE COVER SPECIFICATION CONTINUED:

FINISH:
Castings shall be neatly dressed and carefully and fully fettled. Pick holes shall be clean and to dimension. The clean castings shall then be coated with bituminous enamel to approval.

NOTES:
1. Weight of finished frame - 82 kg, weight of finished cover - 68 kg
2. Allow standard fillets at all corners of cover and frame.

Heavy duty C.I. Manhole frame and cover as detailed.

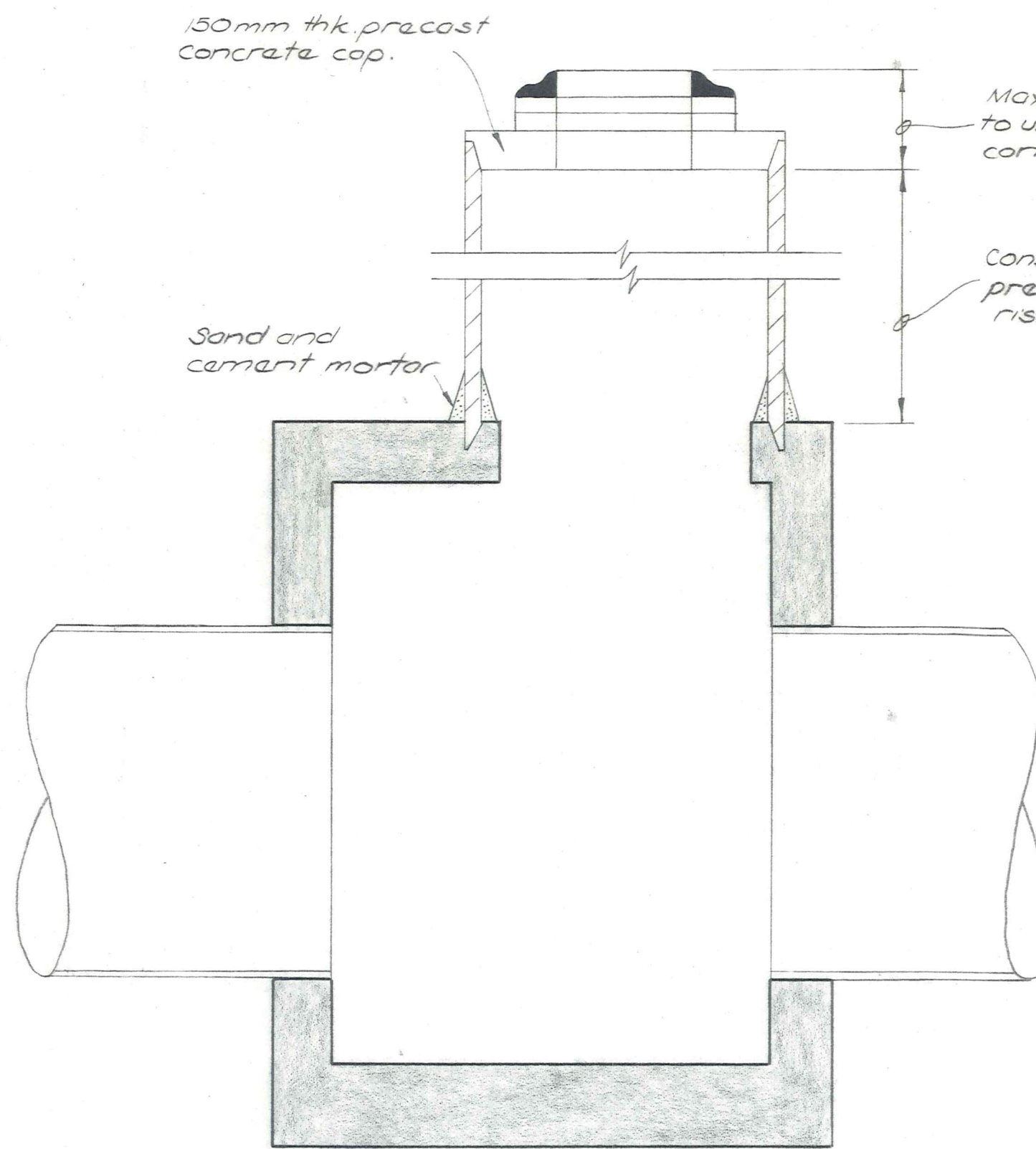
Precast Concrete spacers (Min. of 2 required)

150mm thk. precast concrete cap.

Sand and cement mortar

Maximum of 465 mm to underside of precast concrete cap.

Construct 1050 mm Dia precast concrete manhole riser as shown.



SECTION A1-A1
(Showing precast riser)

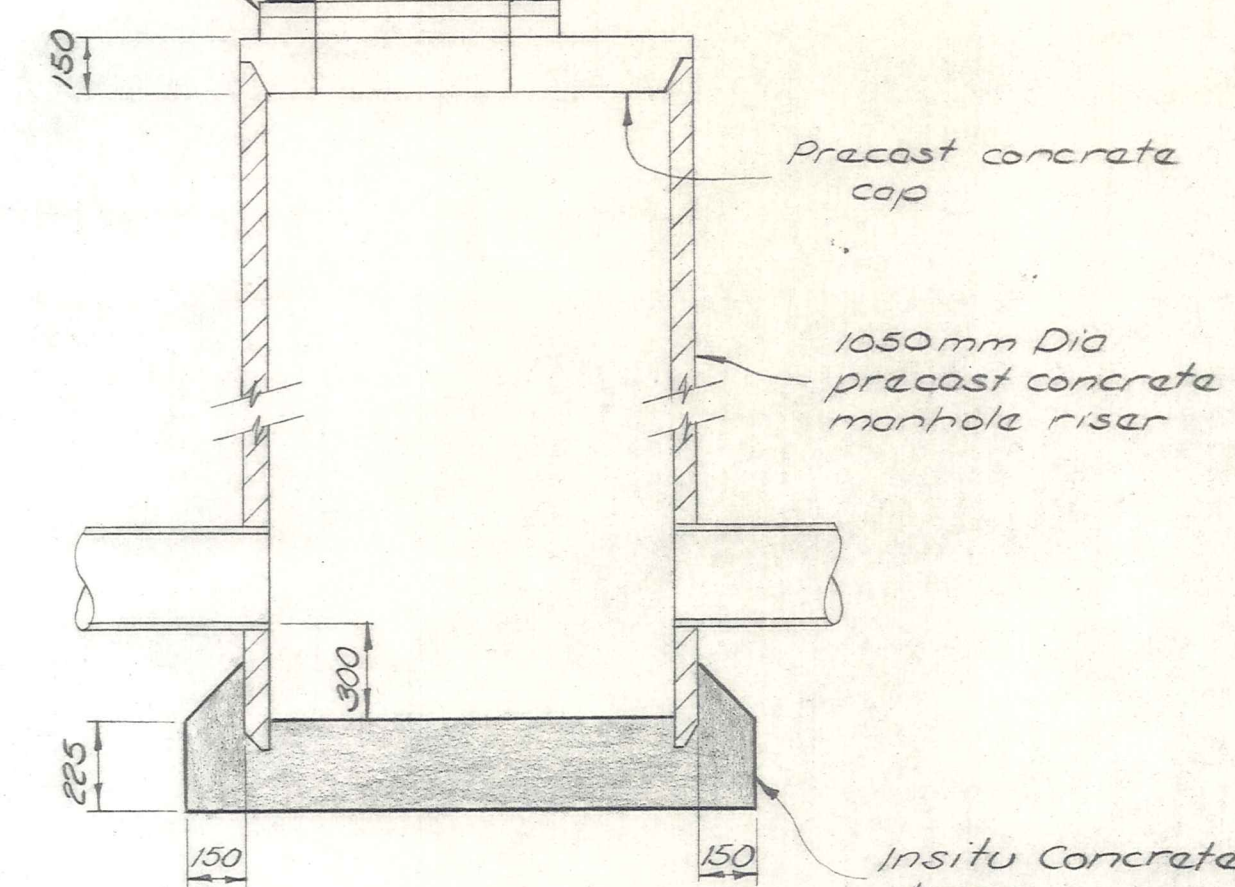
Precast Concrete spacers (min. of 2 required)

Heavy duty C.I. Manhole frame and cover as detailed

Precast concrete cap

1050 mm Dia precast concrete manhole riser

In situ concrete base



SECTION PRECAST MANHOLE

STANDARD STORMWATER DRAIN MANHOLE

(For stormwater drains less than 450 mm Dia)

Scale 1:20

DIMENSIONS		REINFORCING
Pipe size I.D. (mm)	'b' (mm)	
1350	1750	ROOF D12 @ 150 crs. each way (50 cover)
1200	1600	
1050	1600	
900	1300	
750	1200	Walls D12 @ 300 crs. Horiz. D12 @ 450 crs. Vert. (centrally placed)
600	1200	
525	1200	
450	1050	

NOTES:

1. Precast riser shaft to be positioned before insitu concrete of base is poured. The riser is to be supported such that a minimum 75 mm is embedded into concrete. A sand and cement mortar is to be placed completely around base of riser.

SPECIFICATION FOR HEAVY CIRCULAR MANHOLE COVERS AND FRAMES

(To Dunedin Drainage and Sewerage Board Pattern)

PATTERN AND DIMENSIONS:

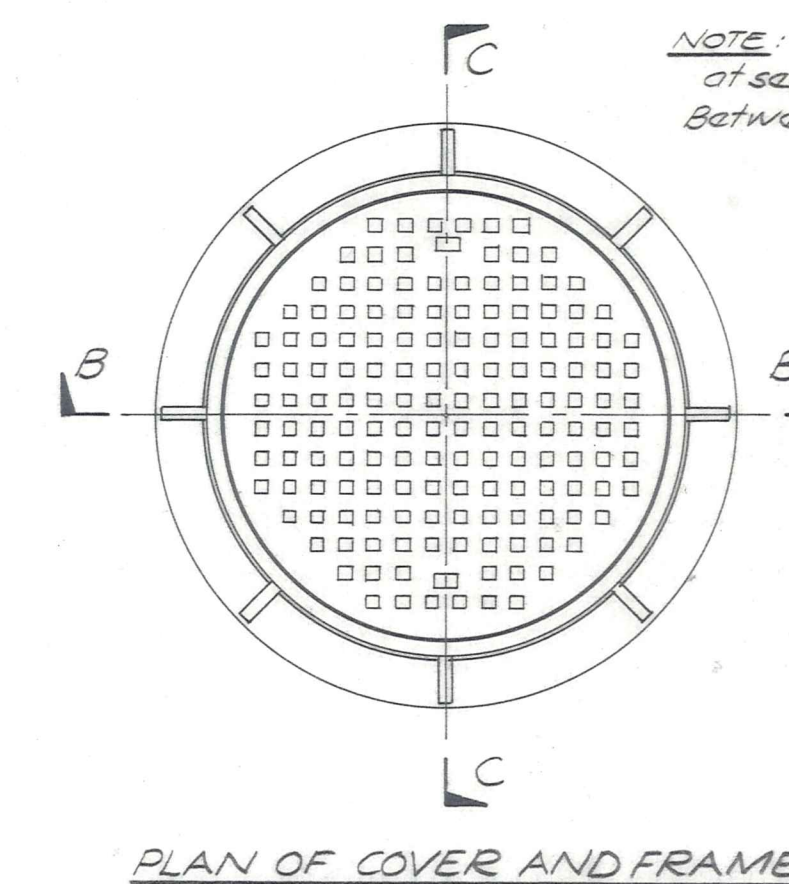
The finished castings shall have the dimensions and clearances shown. An aluminium pattern is available for inspection at the D.D. & S.B.

CASTINGS:

The material for castings shall be a suitable mixture of pig and clean scrap iron. Castings shall be clearly moulded and free from gas holes, intrusions of slag and other imperfections. Castings shall not be white or vitreous on fracture.

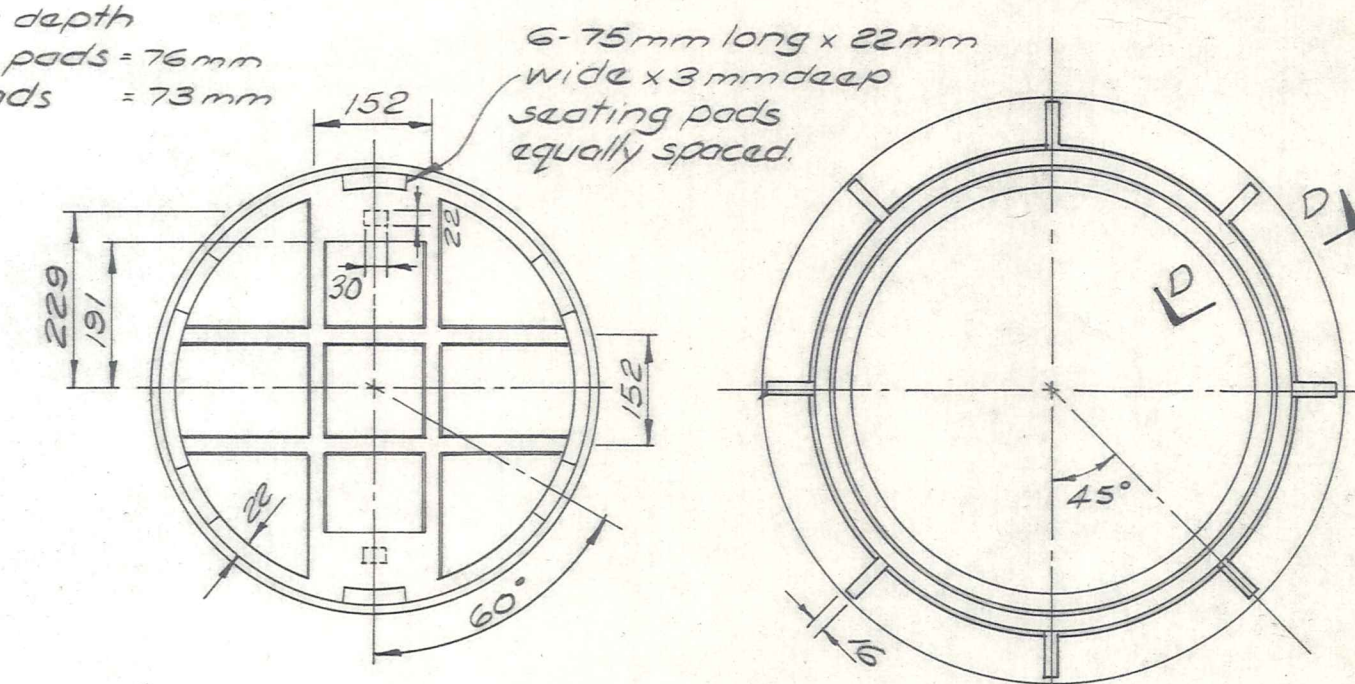
FIT:

Covers and frames shall be carefully cast to be free of warping. The seating ring of frames shall be in a true plane as shall be the seating pads on the covers. Covers shall be tested in frames to check that they are free from racking and those not complying shall have their seating surfaces ground or machined to give plane bedding and proper seating. Covers shall not sit proud of frames.



PLAN OF COVER AND FRAME

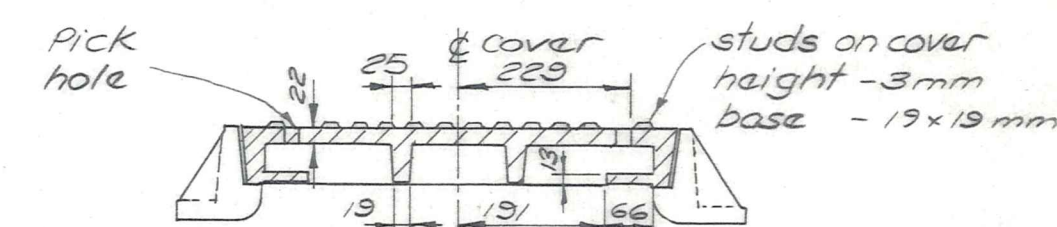
NOTE: Cover depth of seating pads = 76 mm
Between pads = 73 mm



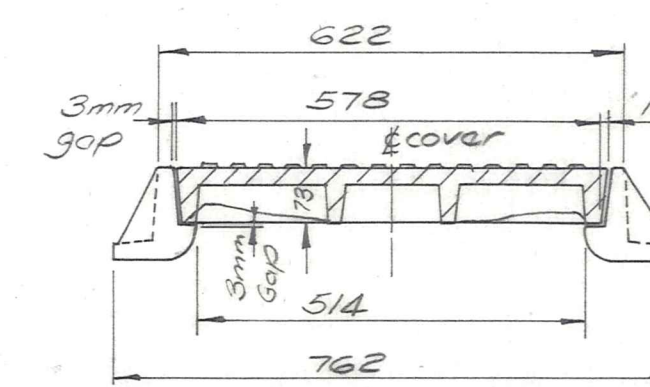
PLAN OF UNDERSIDE OF COVER

PLAN OF FRAME

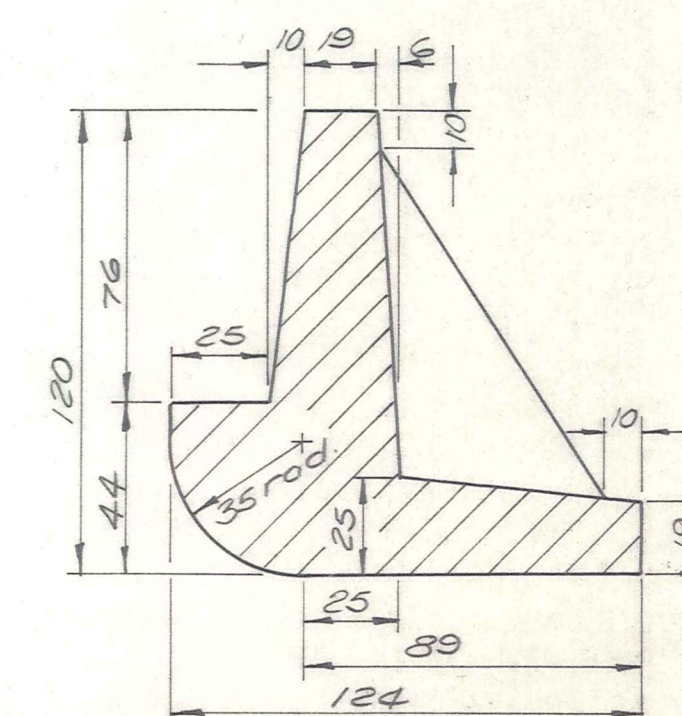
Scale 1:10



SECTION C-C



SECTION B-B



SECTION D-D

Scale 1:2

PRELIMINARY

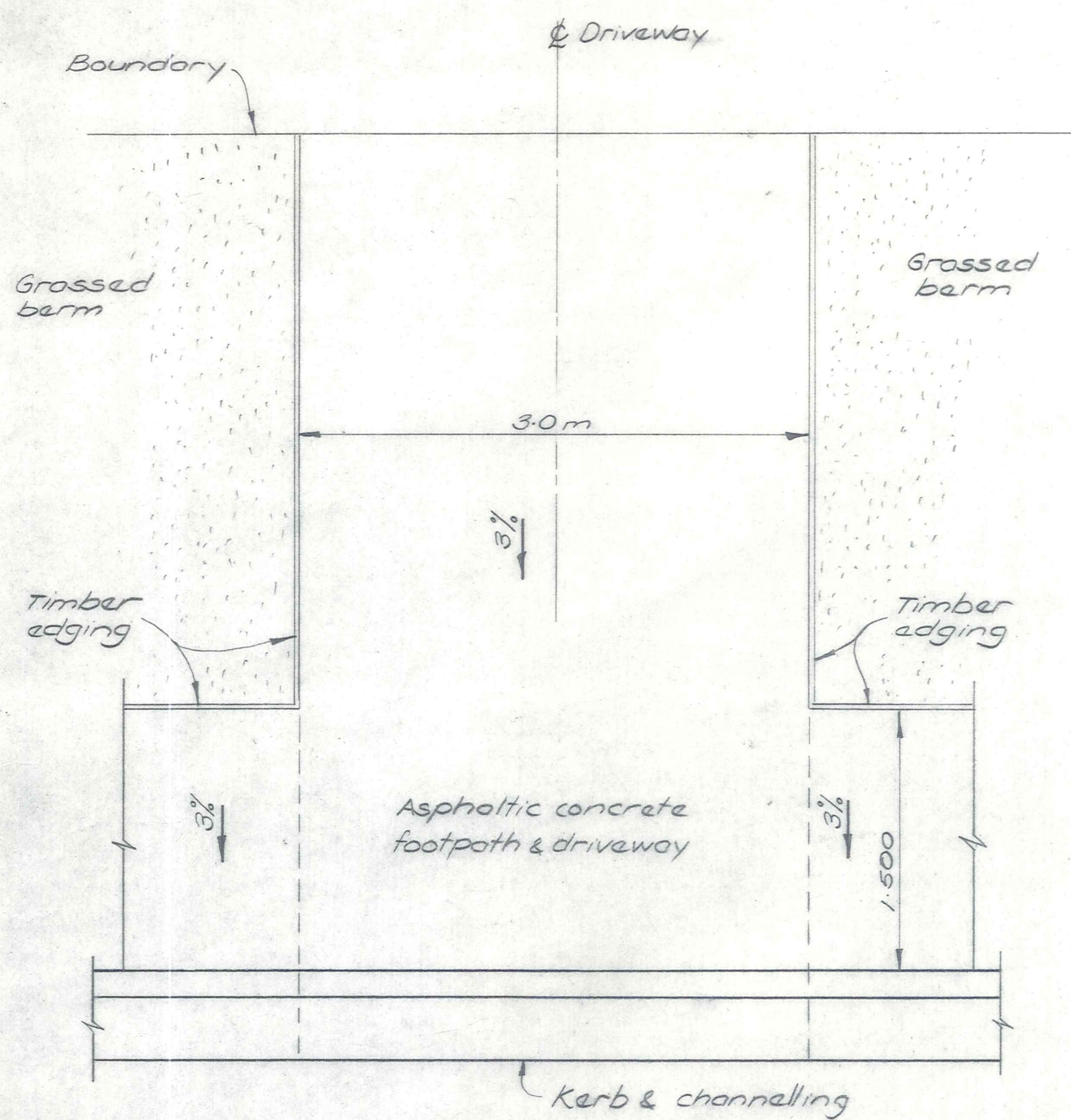
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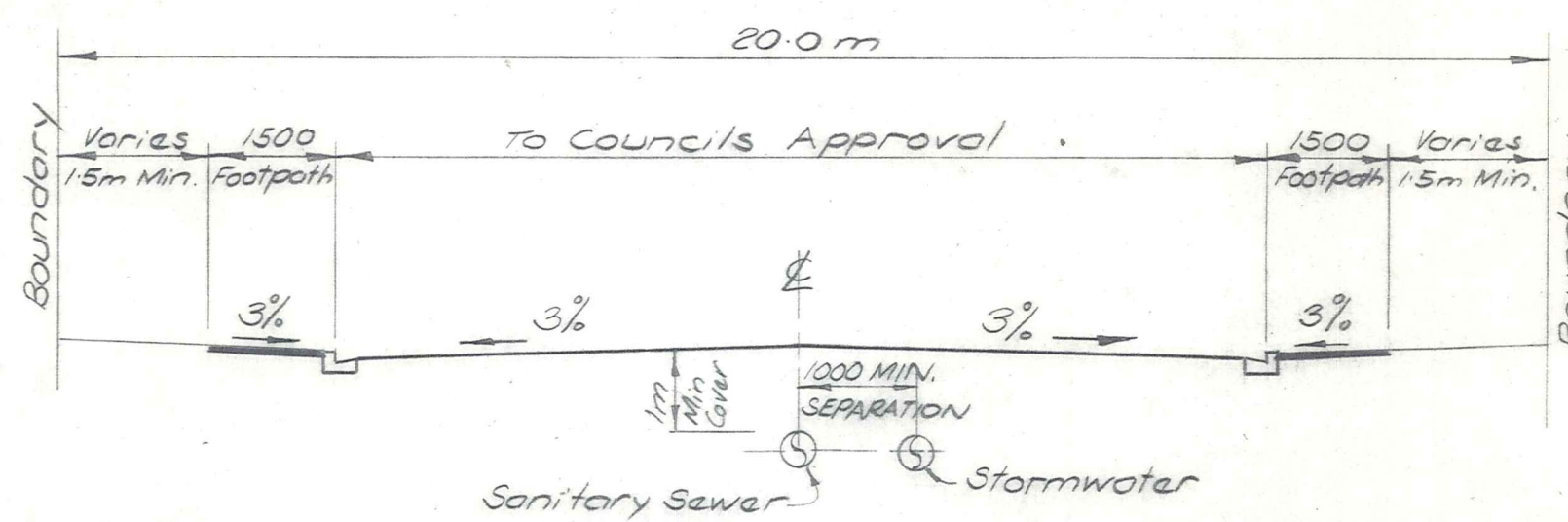
SUBDIVISION STANDARDS
LAND ROADING AND SERVICING
ENGINEERING DETAILS

AMENDMENTS			NAME		DATE	JOB NO.	Sheet No		
NO.	BY	DATE	Appvd.	Surveyed		10108	2		
				Drawn					
				Calculations					
				Traced	M. COOPER			12-82	of 4 sheets
				Checked					
				Approved					

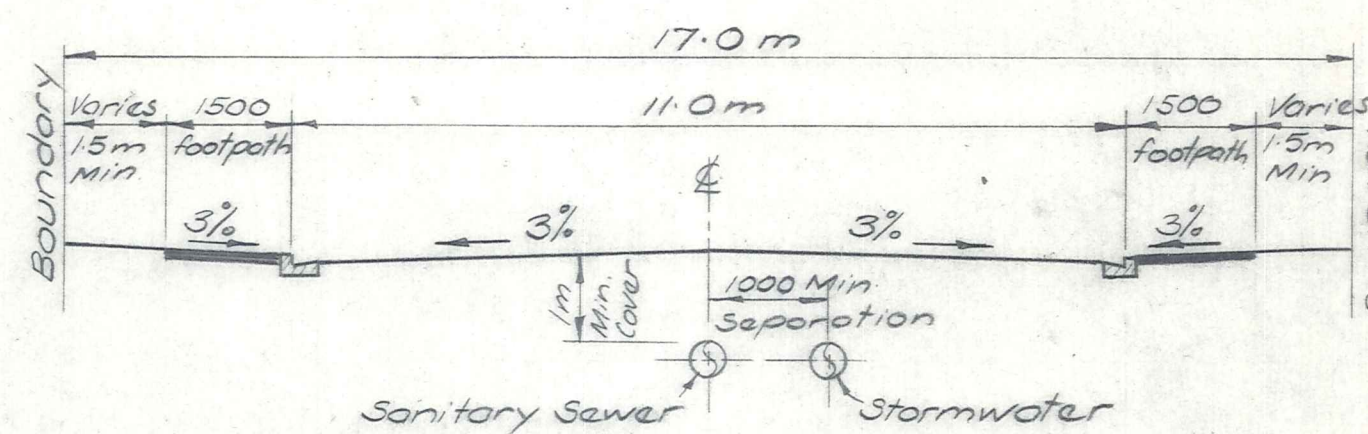
File 6/9/15 L.B. F.B.



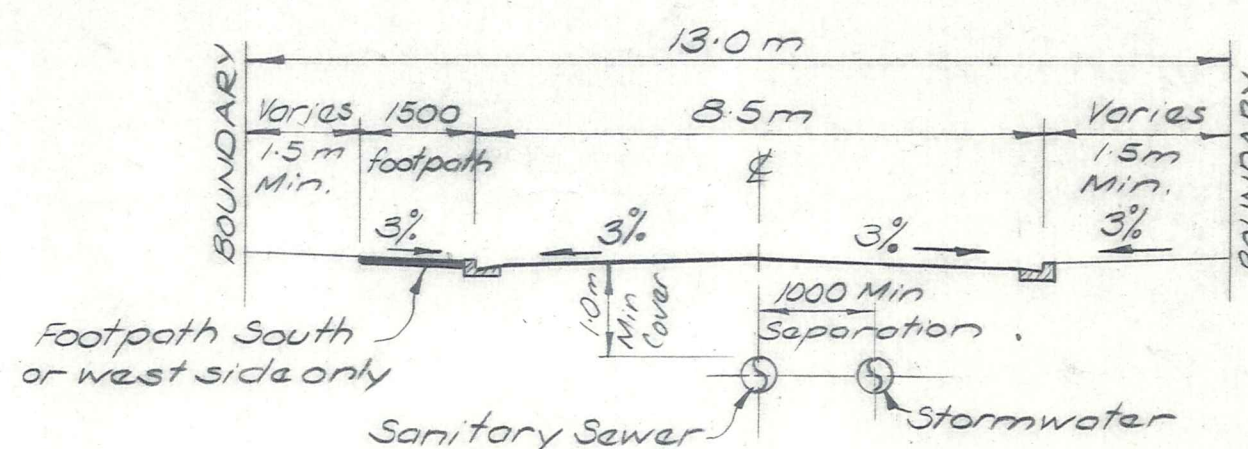
PLAN



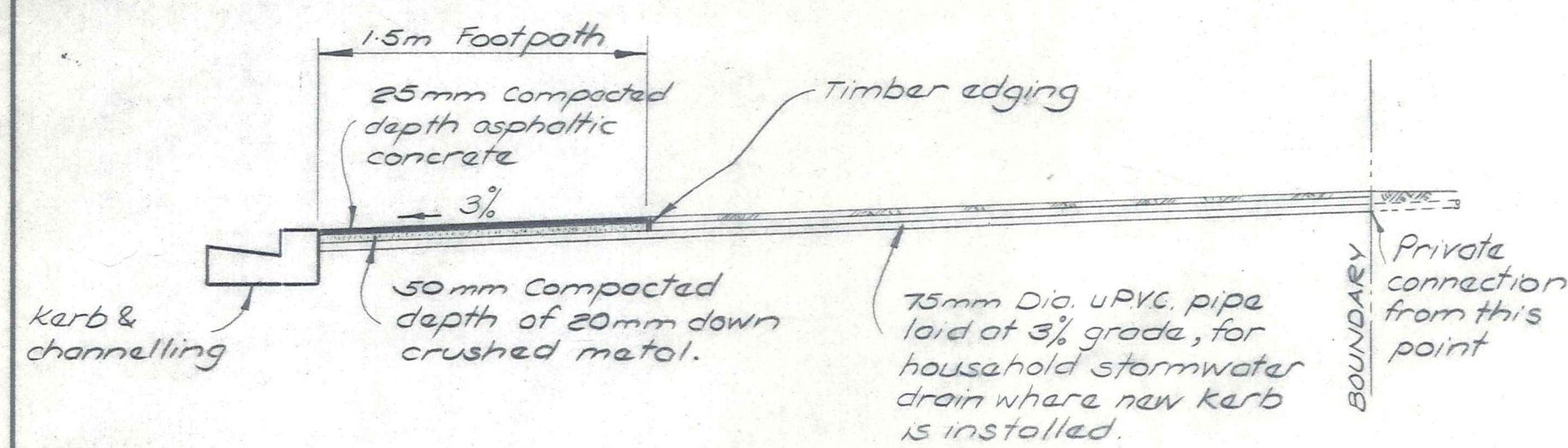
ARTERIAL ROAD



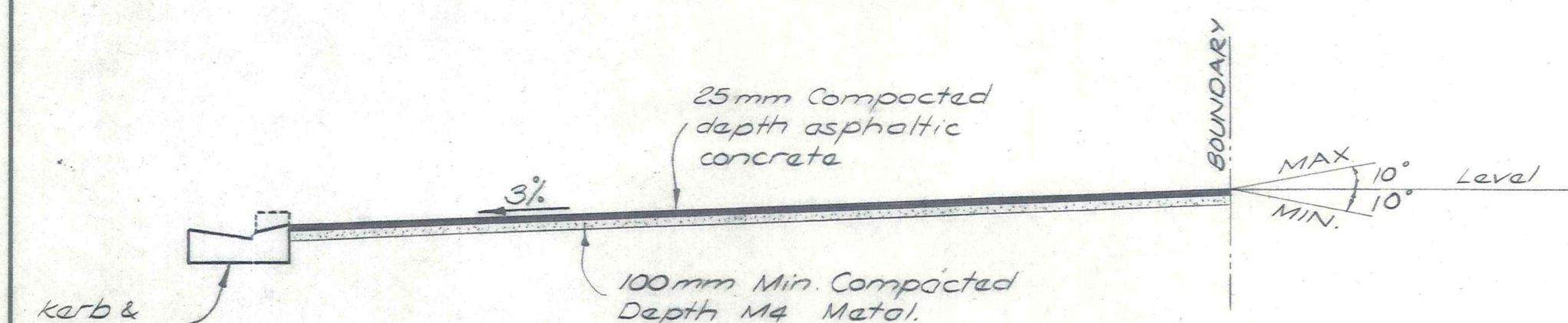
COLLECTOR ROAD



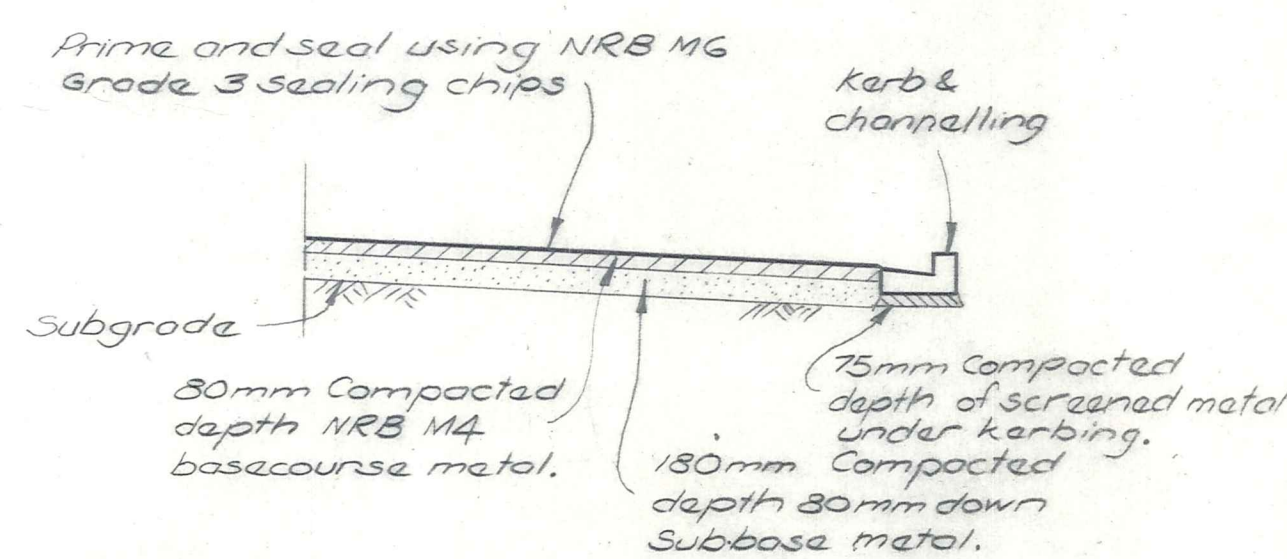
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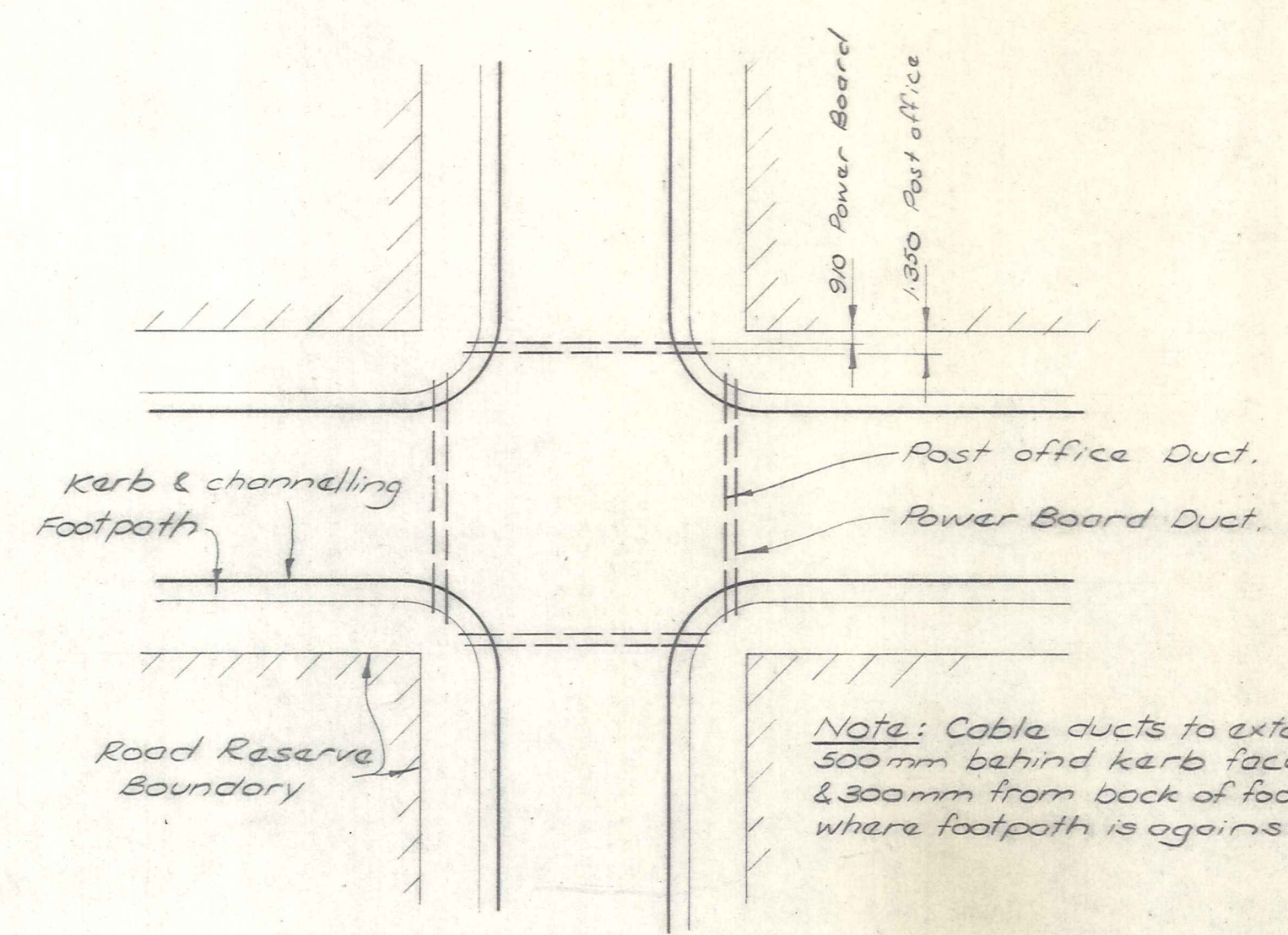
TYPICAL SECTION BETWEEN DRIVEWAYS (N.T.S.)



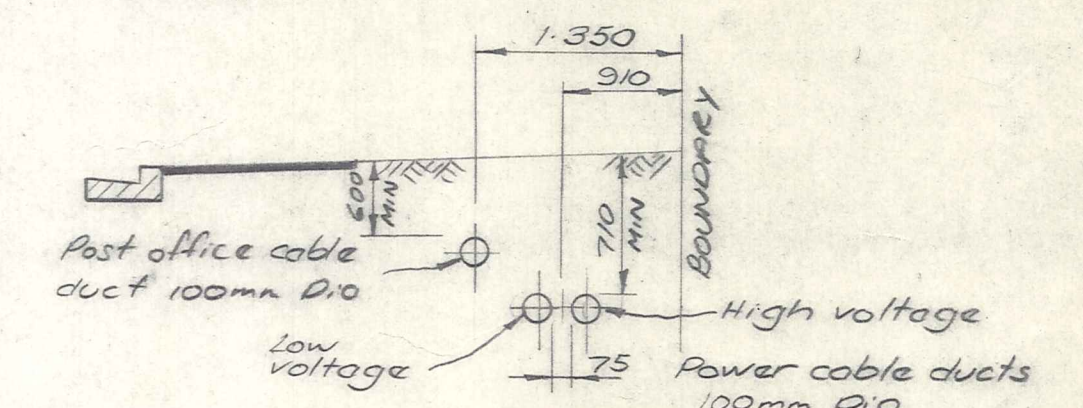
TYPICAL DETAIL OF DRIVEWAY AND FOOTPATH ADJACENT TO KERB (N.T.S.)



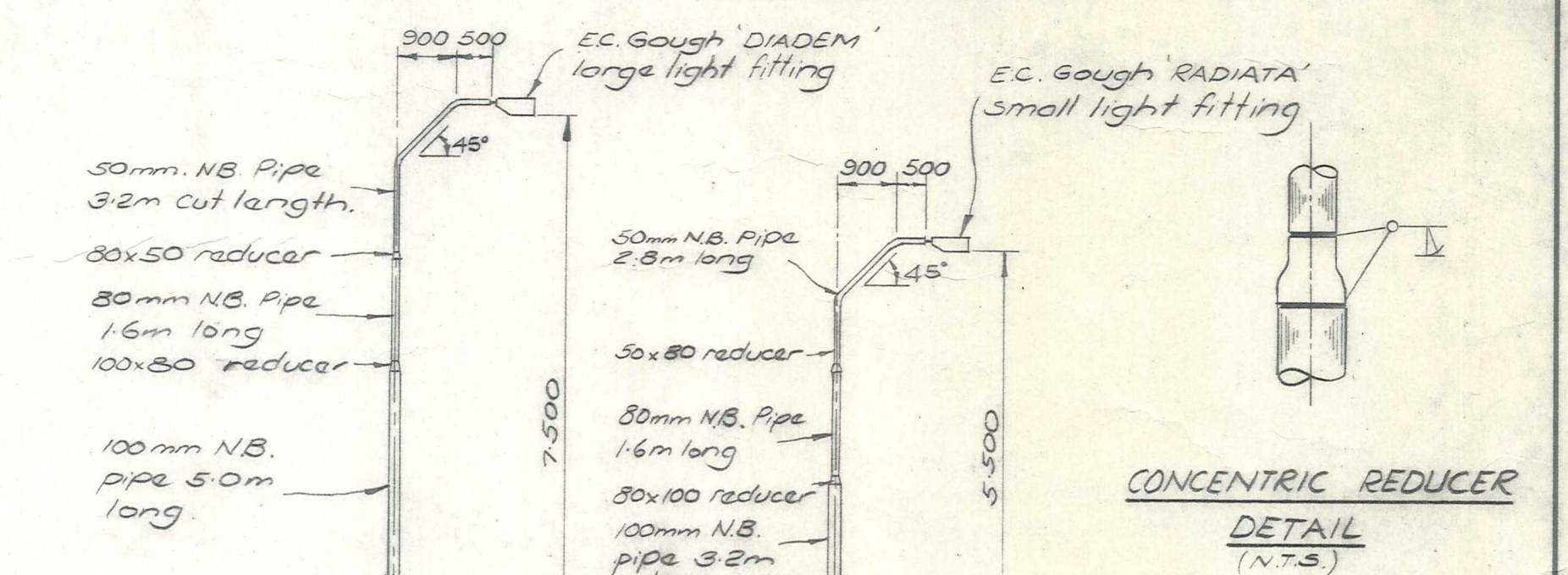
CARRIAGEWAY CONSTRUCTION DETAILS (N.T.S.)



PLAN - CABLE DUCTING AT INTERSECTIONS (N.T.S.)



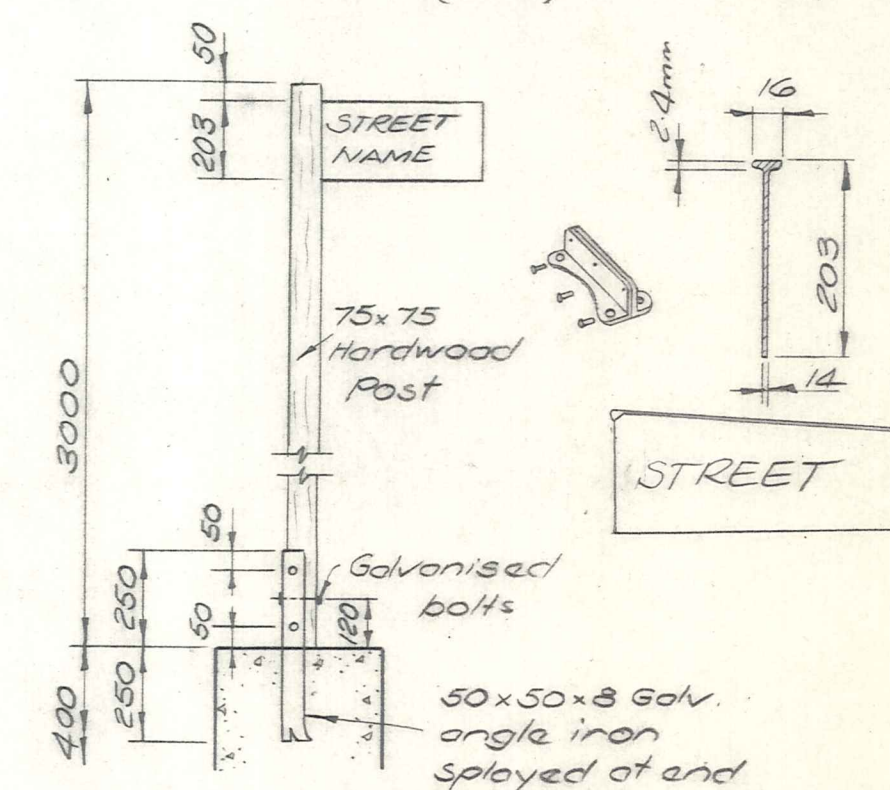
TYPICAL DUCT LAYOUT



STEEL POLE FOR 250W LAMP

STEEL POLE FOR 125W LAMP

STREET LIGHTING POLE DETAILS (N.T.S.)



STREET NAMEPLATE DETAILS (N.T.S.)

NOTES:
1. Pipe to be B.S. 1307 (Medium grade Galvanized) with 150mm Min. inside radius bands.
2. Concentric reducers to be to B.S. 1640 Outside Dia. of reducers to be flush with outside Dia. of pipe.

DE NEEFE street name plate model FR T.B. 4 Bracket B.C.A.S. Signs to be of baked enamel with black Helvetica medium lettering 100 high on white background.

NOTE: Signs shall be fixed at the top of a 75x75 Hardwood post 3m long. This shall be fixed to a 50x50x8 Galv. Angle set in concrete (See detail). Timber posts to be painted with 3 coats of white acrylic paint.

AMENDMENTS			NAME		DATE	JOB NO.	Sheet No
NO.	BY	DATE	PRELIMINARY	Appvd.	Surveyed	10108	4
				Drawn	M. COOPER		
				Calculations	12-52		
				Traced			
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				Approved		File 6/3/15	L.B.