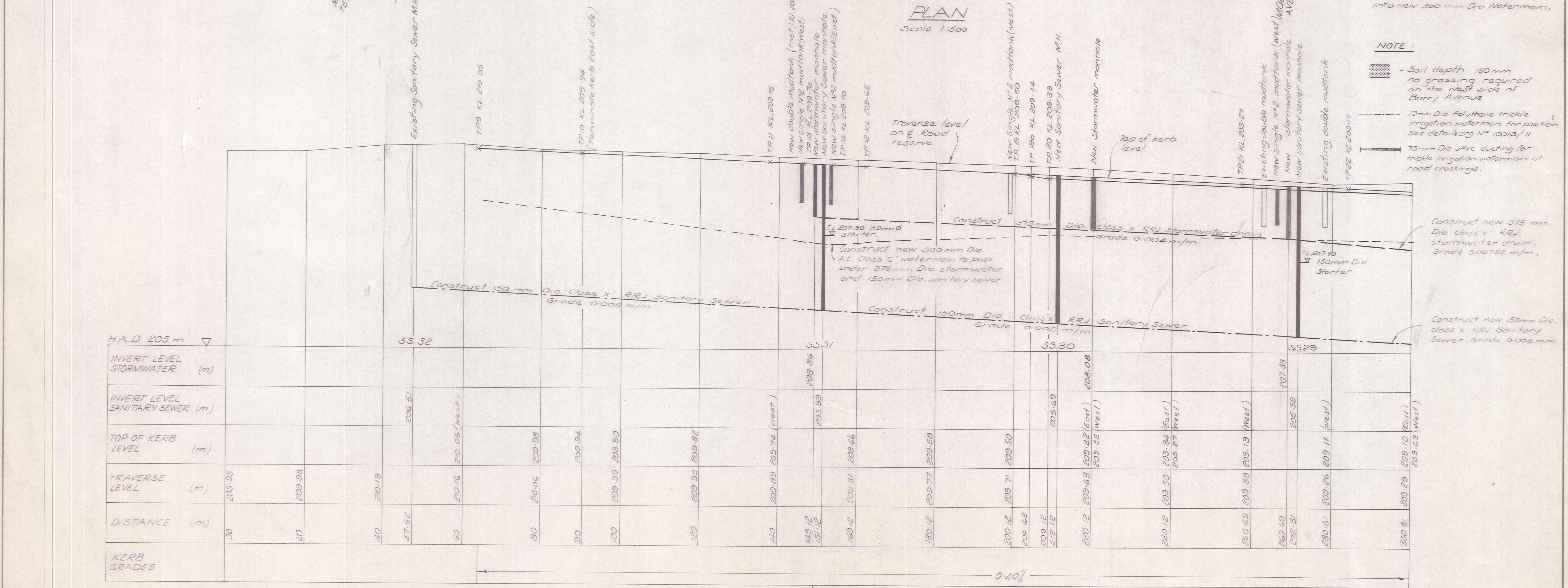


PLAN  
Scale 1:500



LONGITUDINAL SECTION  
Scale: HORIZ 1:500  
VERT 1:50

- NOTE:
- Soil depth 150mm no grassing required on the West side of Barry Avenue
  - 19mm Dia Polythene trickle irrigation watermain. For position see detail 10/100 N° 10013/11
  - 75mm Dia UPVC ducting for trickle irrigation watermain at road crossings.

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MINISTRY OF WORKS & DEVELOPMENT

CLUTHA VALLEY DEVELOPMENT  
CROMWELL EXPANSION  
CONTRACT No. 203

BARRY AVENUE DEVELOPMENT  
PLAN AND LONGITUDINAL SECTION

AMENDMENTS			NAME	DATE
NO.	BY	DATE		
			Surveyed	M. BLAKIE 10-82
			Drawn	M. B. N.J.
			Calculations	
			Traced	M. COOPER 1-83
			Checked	[Signature] 29/7/82
			Approved	[Signature]

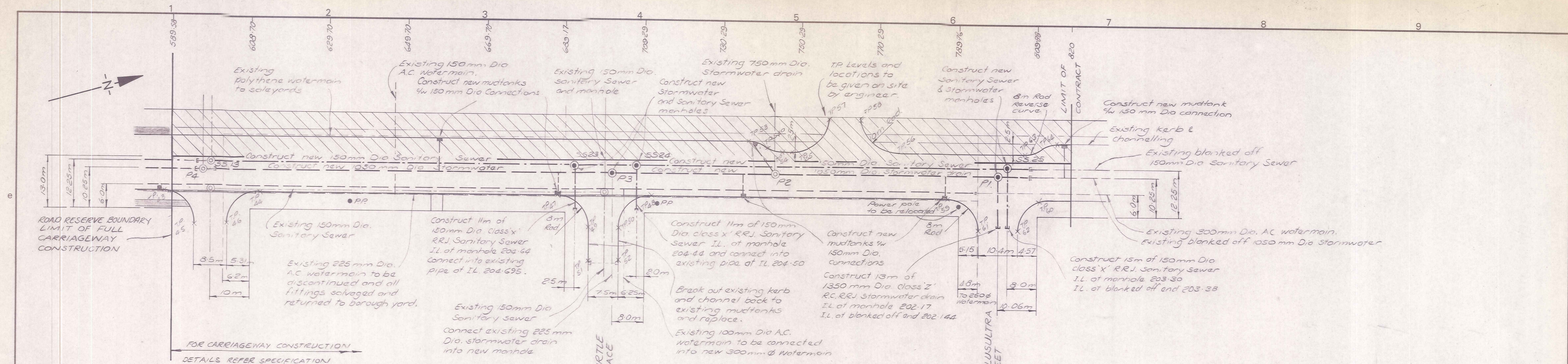
JOB NO.	Sheet No
10013	1
	of 12 sheets
File 67/2/39	L.B. 416 F.B.

CONTRACT # 203 - BARRY AVE.

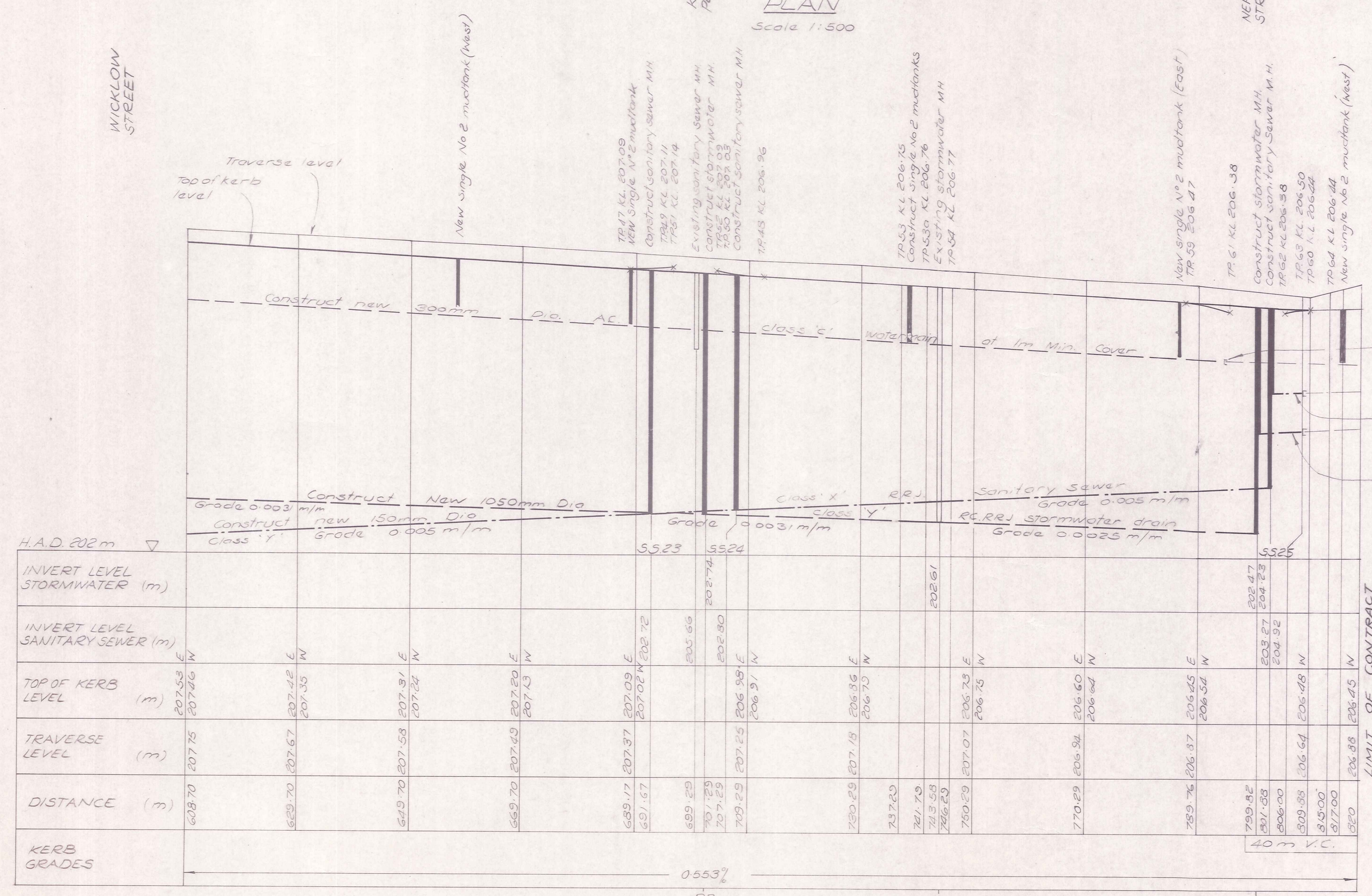








PLAN  
Scale 1:500



LONGITUDINAL SECTION  
Scale 1:500  
Part 1:50

NOTE:  
- No carriageway construction in this area.

- NOTES:
- All levels based on MWD B.M. P.M.2 (Barry Avenue) Reduced level 203.291m. Coordinates 665 701.35 N. 278647.50 E.
  - See drg. N° 10013/4 for watermain details.
  - Telephone poles along the West side of Barry Avenue will be relocated by others outside construction area prior to underground cabling.

300  
200  
150  
100  
50  
0  
mm  
INCHES  
ORIGINAL SIZE

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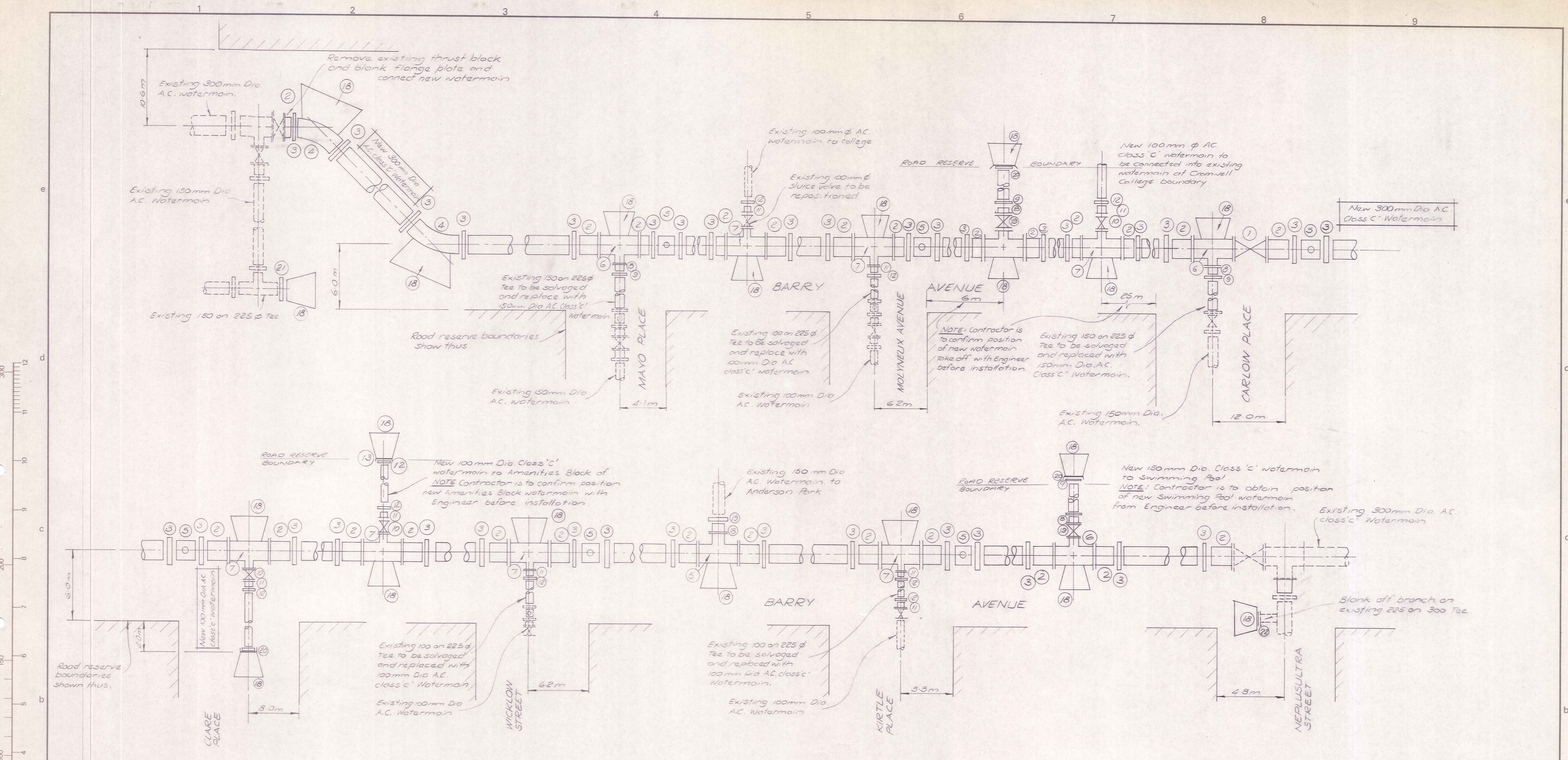
MINISTRY OF WORKS  
& DEVELOPMENT

CLUTHA VALLEY DEVELOPMENT  
CROMWELL EXPANSION  
CONTRACT No. 203

BARRY AVENUE DEVELOPMENT  
PLAN AND LONGITUDINAL SECTION

AMENDMENTS				NAME		DATE	JOB NO.	Sheet No	
NO.	BY	DATE	Appvd.	Surveyed	M. BLAKIE	10-82	10013	3	
				Drawn	M. B. N. J.	"			of 12 sheets
				Calculations	"	"			
				Traced	M. COOPER	1-83			
				Checked		27/1/83			
				Approved		File 57/ 2/39	L.B. 416	F.B.	





ITEM	DESCRIPTION	N <sup>o</sup> REQ'D
1	300mm Dia. Flanged Sluice Valve	1
2	300mm Dia. Flanged adaptor	26
3	300mm Dia. gibault joints	35
4	300mm Dia. 45° Bend. Plain and	2
5	300mm Dia Hydrant Tee, Plain ended	6
6	150 on 300 all Flanged Tee	5
7	100 on 300 all Flanged Tee	7
8	150mm Dia. Flanged adaptor	5
9	150mm Dia Gibault Joint	6
10	100mm Dia. Flanged Sluice Valve	3
11	100mm Dia Flanged Adaptor	8

ITEM	DESCRIPTION	N <sup>o</sup> REQ'D
12	100mm Dia. Gibault Joint	10
13	100mm Dia. Gibault Joint Blank Cap	1
14	HYDRANT	6
15	HYDRANT RISER	6
16	HYDRANT BOX 1/4" MARKER POST	6
17	VALVE BOX 1/4" MARKER POST	4
18	TYPE 'A' THRUST BLOCK	20
19	150mm Dia. Flanged sluice valve	2
20	150mm Dia. Gibault Joint. Blank Cap	3
21	225mm Dia Gibault Joint Blank cap	1
22	225mm Dia Blank Flange Plate	1

ITEM	DESCRIPTION	N <sup>o</sup> REQ'D
23	75mm Dia Blank Flange Plate (Blank off existing hydrant Tees)	6

NOTE: All existing Hydrants in Barry Avenue on side street branch lines (Mayo Place - Kirtle Place) shall be salvaged and stored in Cromwell Borough Council yard. Hydrant Tees to remain in service with branch blanked off.

ORIGINAL SIZE  
mm INCHES

NOT TO SCALE

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MINISTRY OF WORKS  
& DEVELOPMENT

CLUTHA VALLEY DEVELOPMENT  
CROMWELL EXPANSION  
CONTRACT No. 203

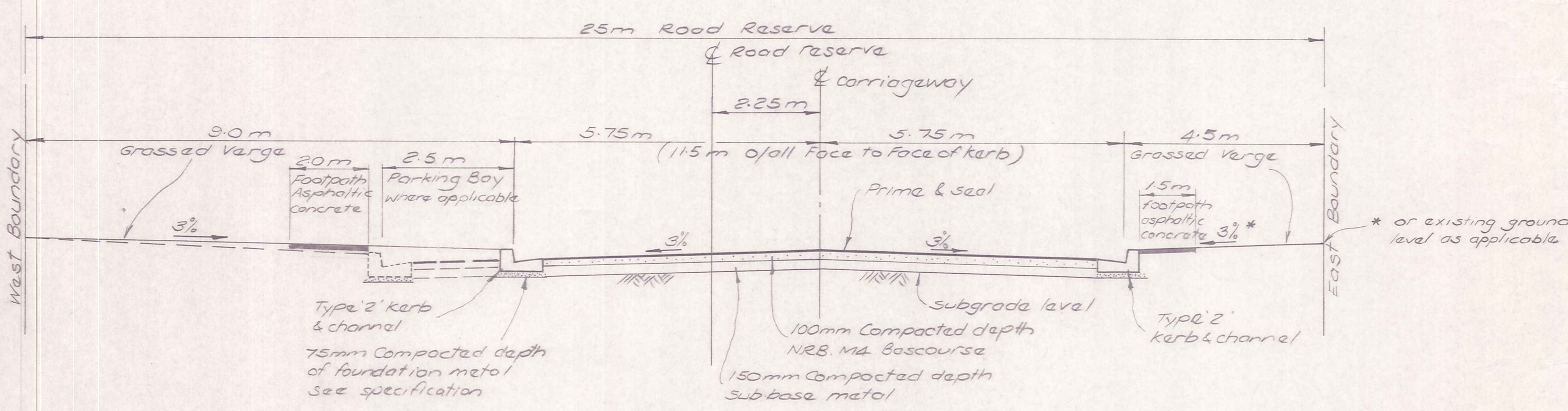
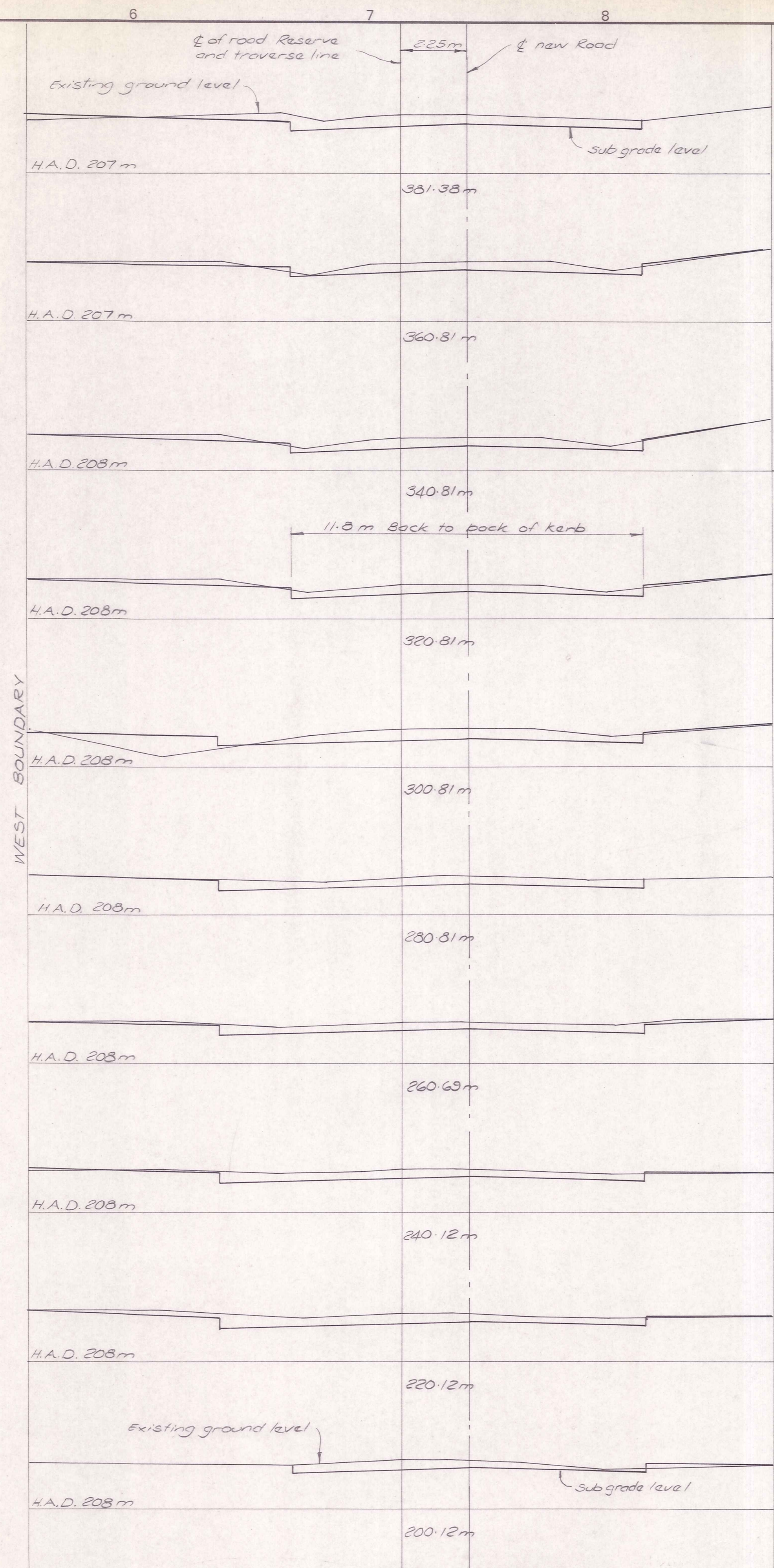
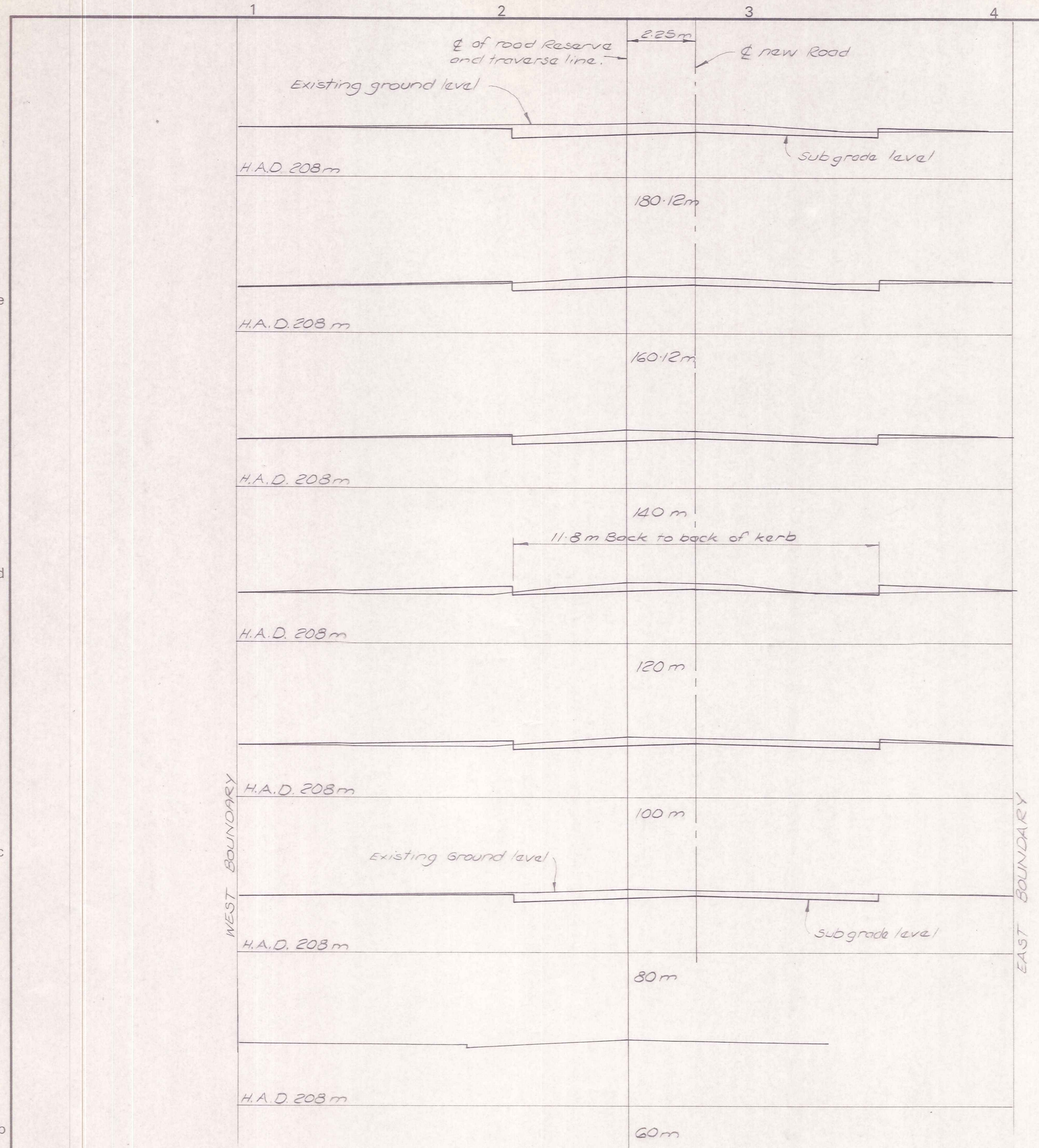
BARRY AVENUE DEVELOPMENT  
WATERMAIN DETAILS

AMENDMENTS			NAME		DATE	JOB NO.	Sheet No
NO.	BY	DATE	Appvd.	Surveyed	M. BLAKIE	10-82	10013
				Drawn			4
				Calculations			of 12 shts
				Traced	M. COOPER	1-83	
				Checked		23/7/83	
				Approved			

File 67/2/39 L.B. 416 F.B.



ORIGINAL SIZE  
mm INCHES



TYPICAL CROSS SECTION  
(N.T.S.)

CROSS SECTIONS  
Scale 1:100

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Cromwell P.O. Box 82 Ph. 50-391

MINISTRY OF WORKS  
& DEVELOPMENT

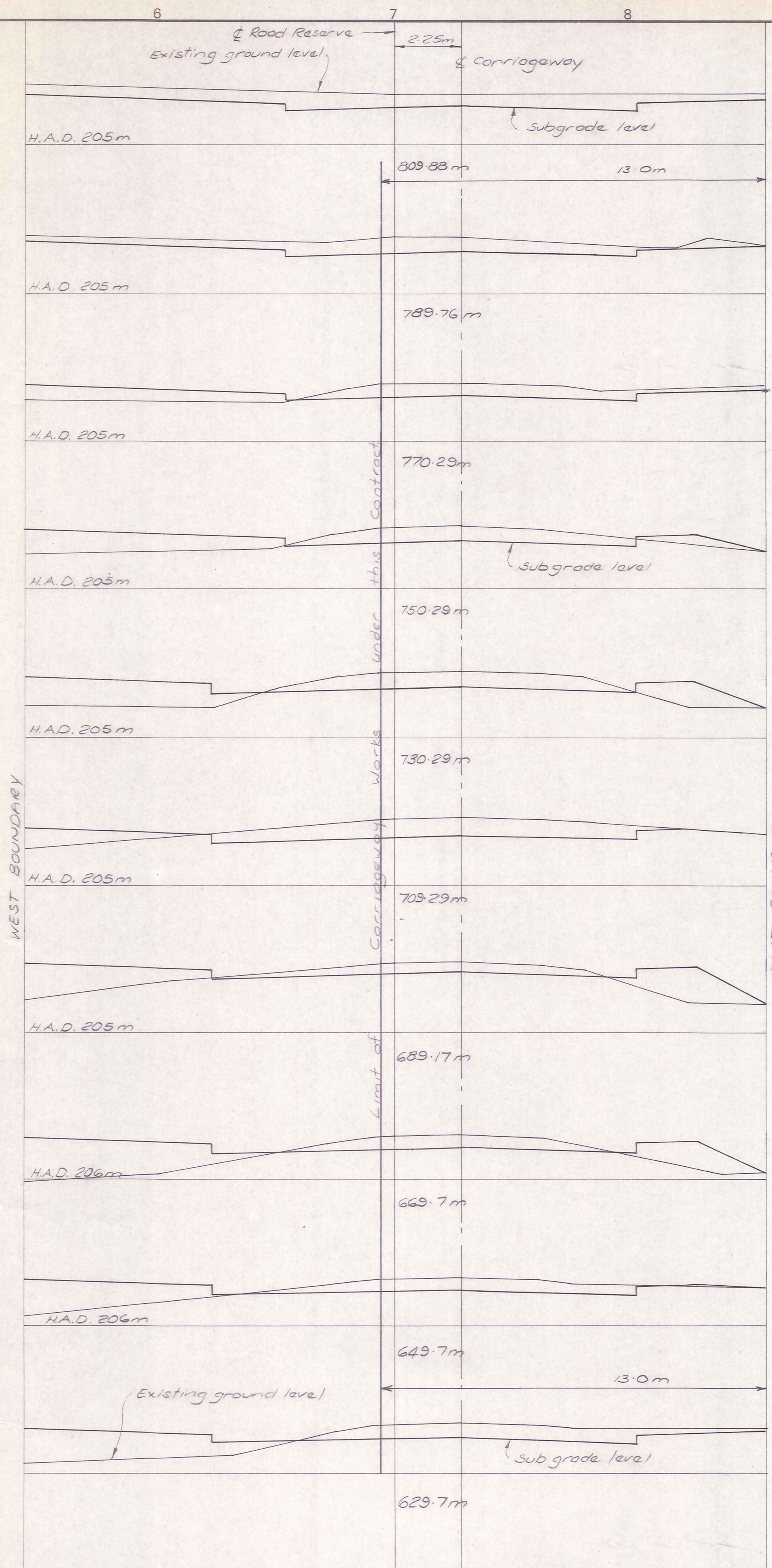
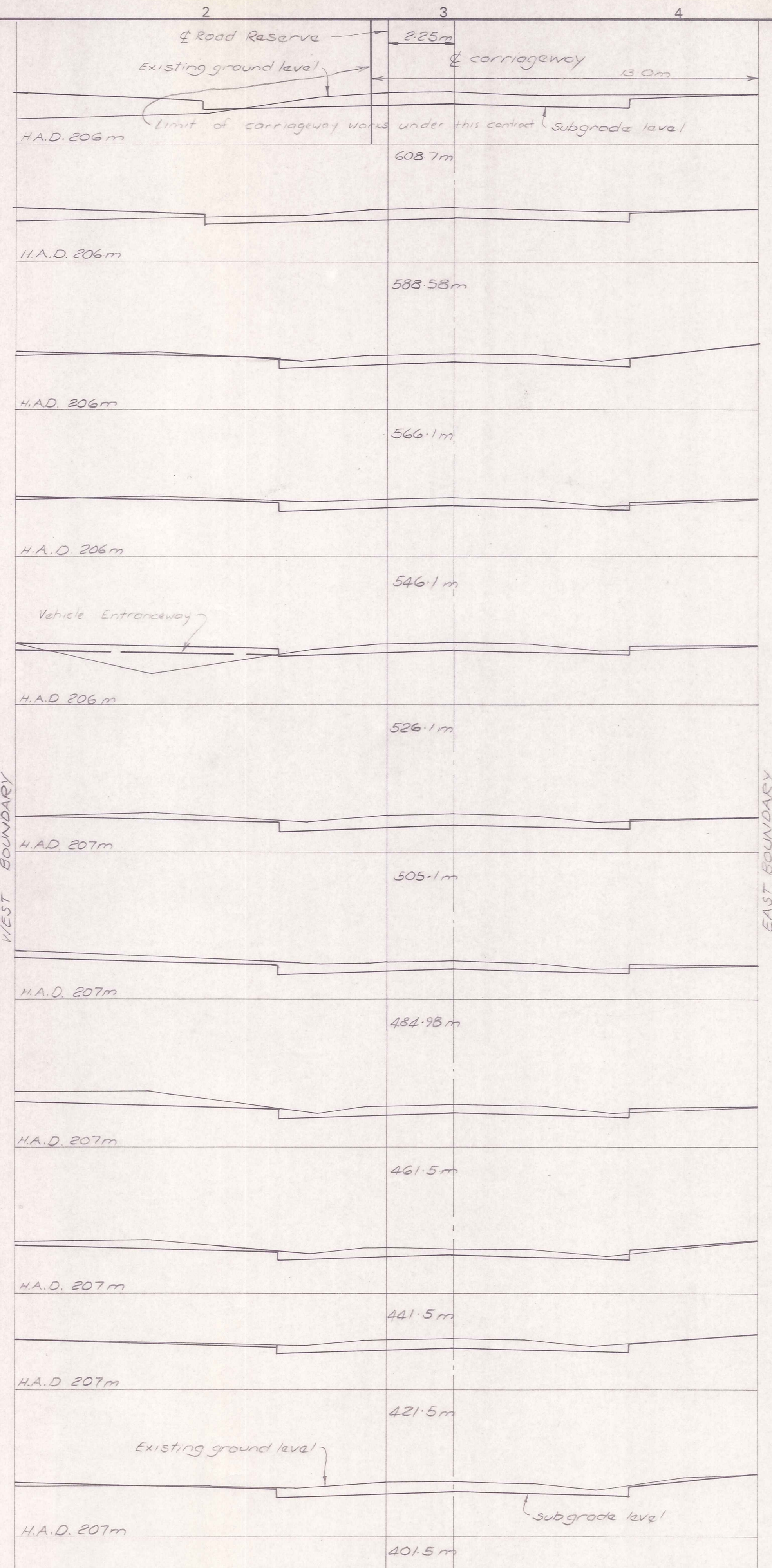
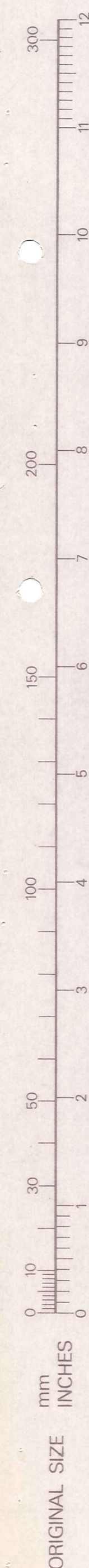
CLUTHA VALLEY DEVELOPMENT  
CROMWELL EXPANSION  
CONTRACT No. 203

BARRY AVENUE DEVELOPMENT  
CROSS SECTIONS

AMENDMENTS				NAME		DATE	JOB NO.	Sheet No
NO.	BY	DATE	Appvd.	Surveyed	M. BLAKIE	10-82	10013	5
				Drawn	"	"		
				Calculations	"	"		
				Traced	M. COOPER	1-83		
				Checked		29/7/83		
				Approved				

File 67/2/39 L.B. 416 F.B.





CROSS SECTIONS  
Scale 1:100

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MINISTRY OF WORKS  
& DEVELOPMENT

CLUTHA VALLEY DEVELOPMENT  
CROMWELL EXPANSION  
CONTRACT No. 203

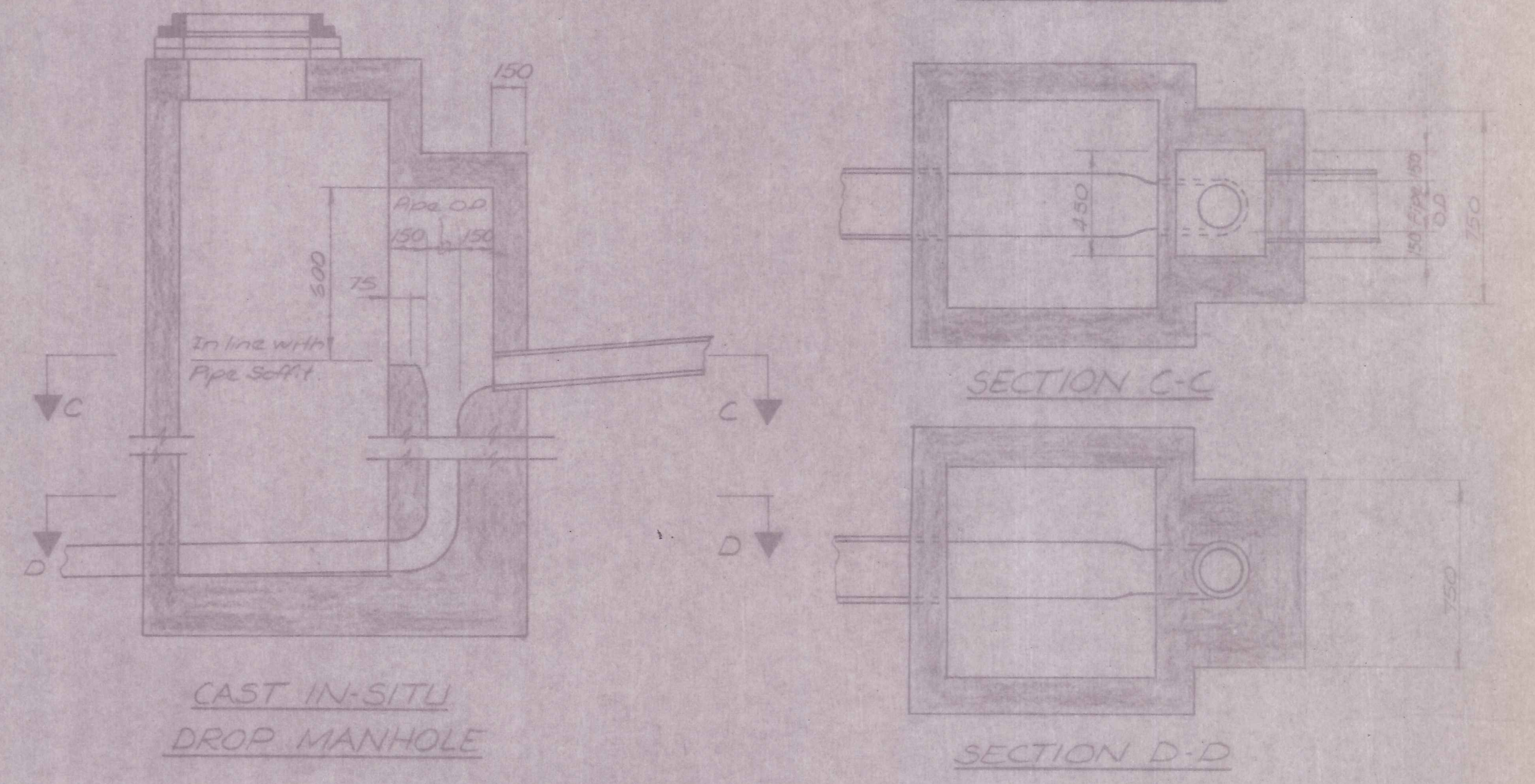
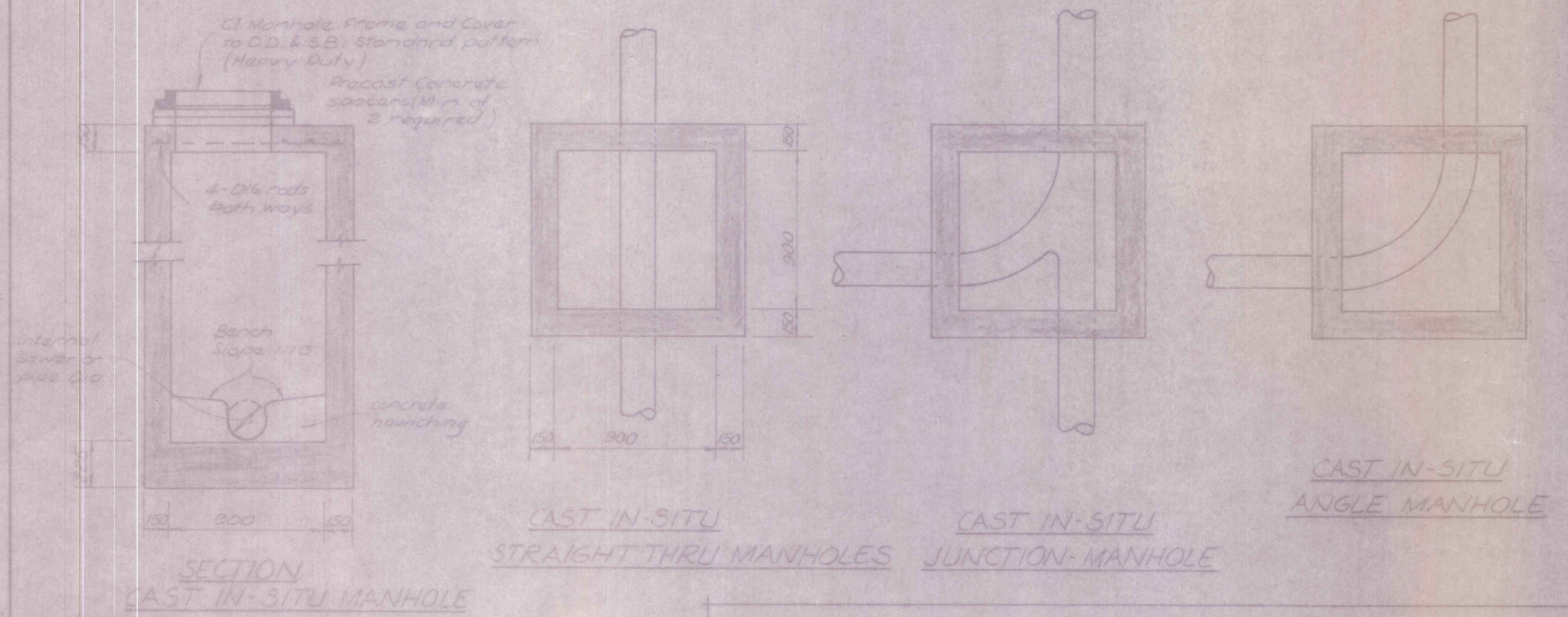
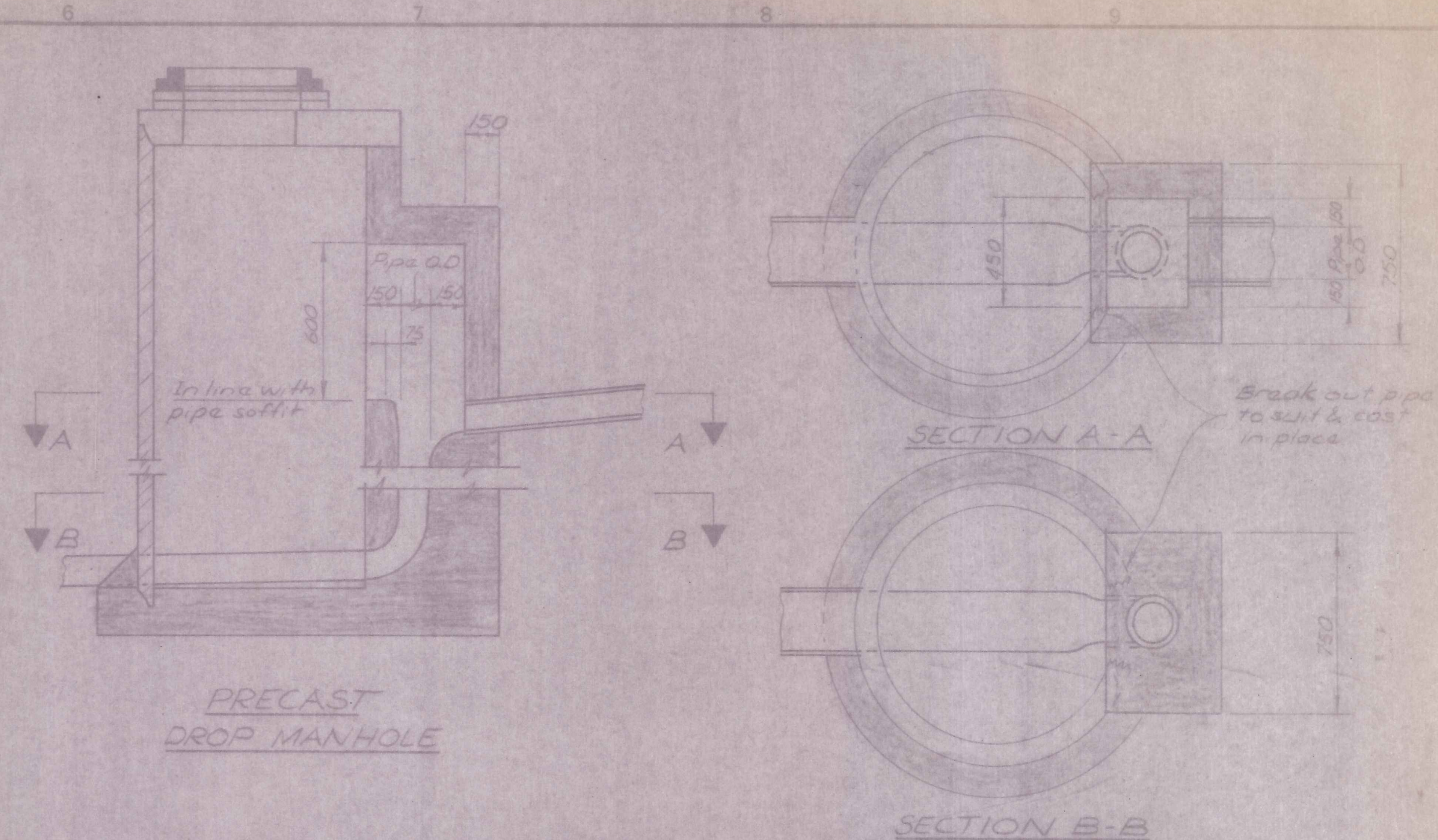
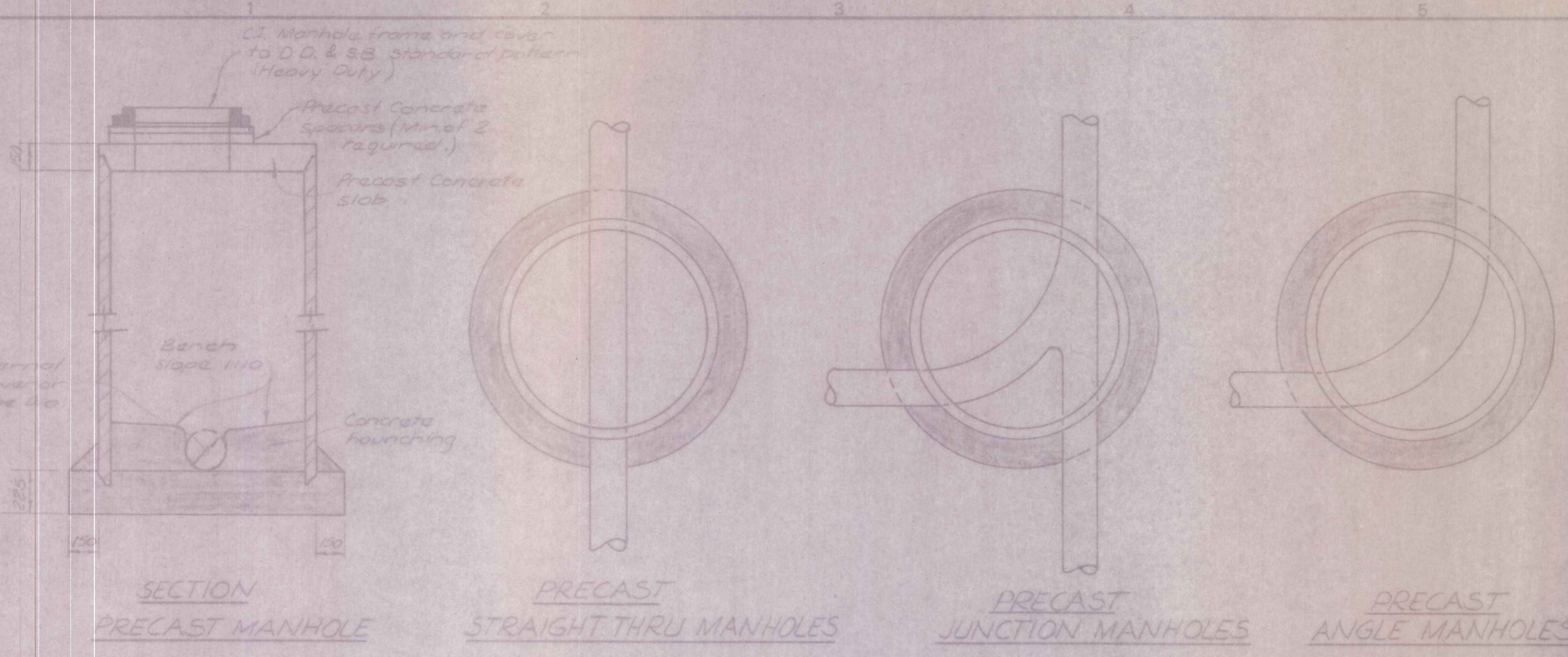
**BARRY AVENUE DEVELOPMENT**  
CROSS SECTIONS

AMENDMENTS				NAME		DATE	JOB NO.	Sheet No
NO.	BY	DATE	Appvd.	Surveyed	M. BLAKIE	10-82	10013	6
				Drawn				
				Calculations				
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				Approved				F.B.



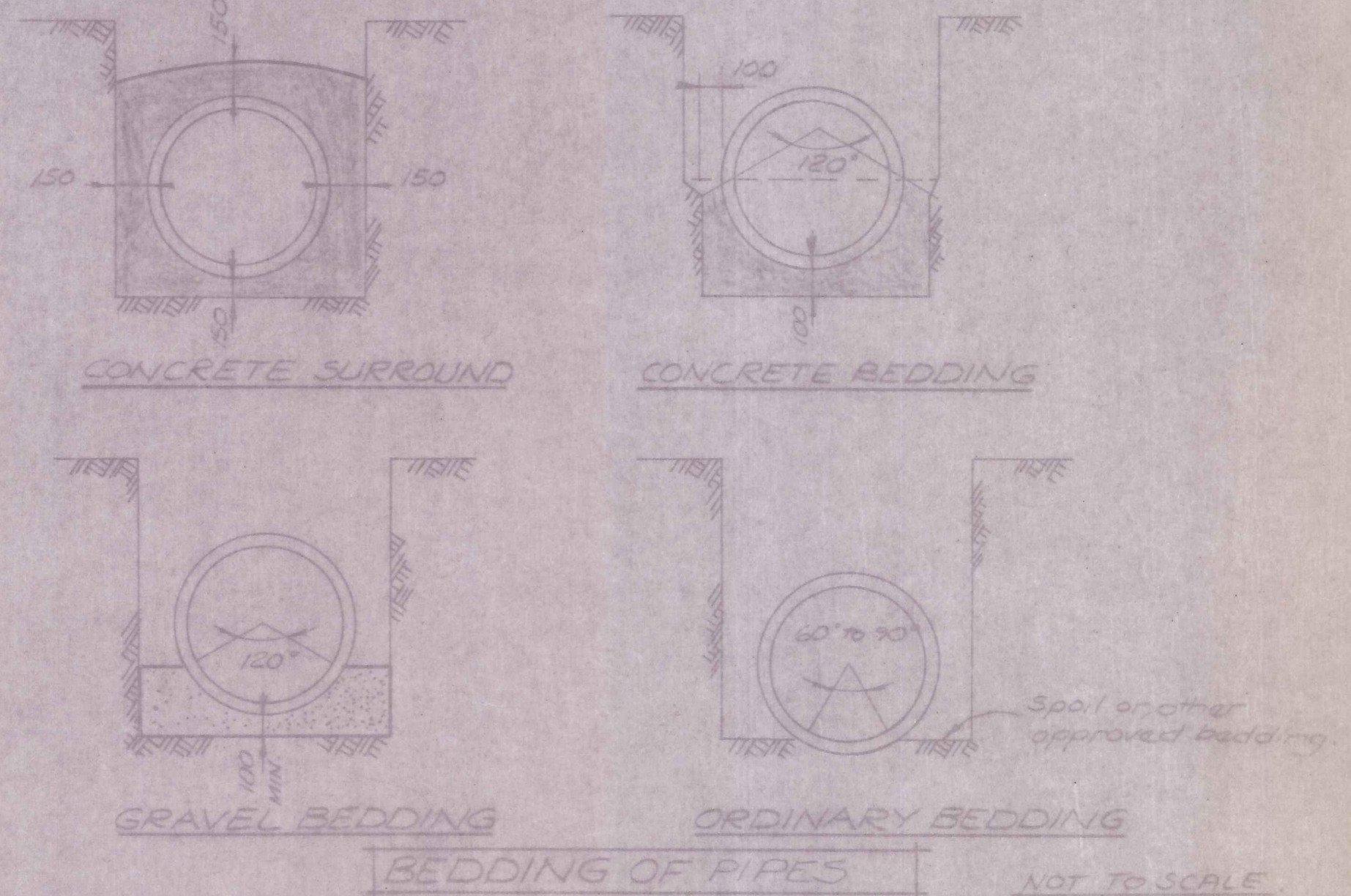
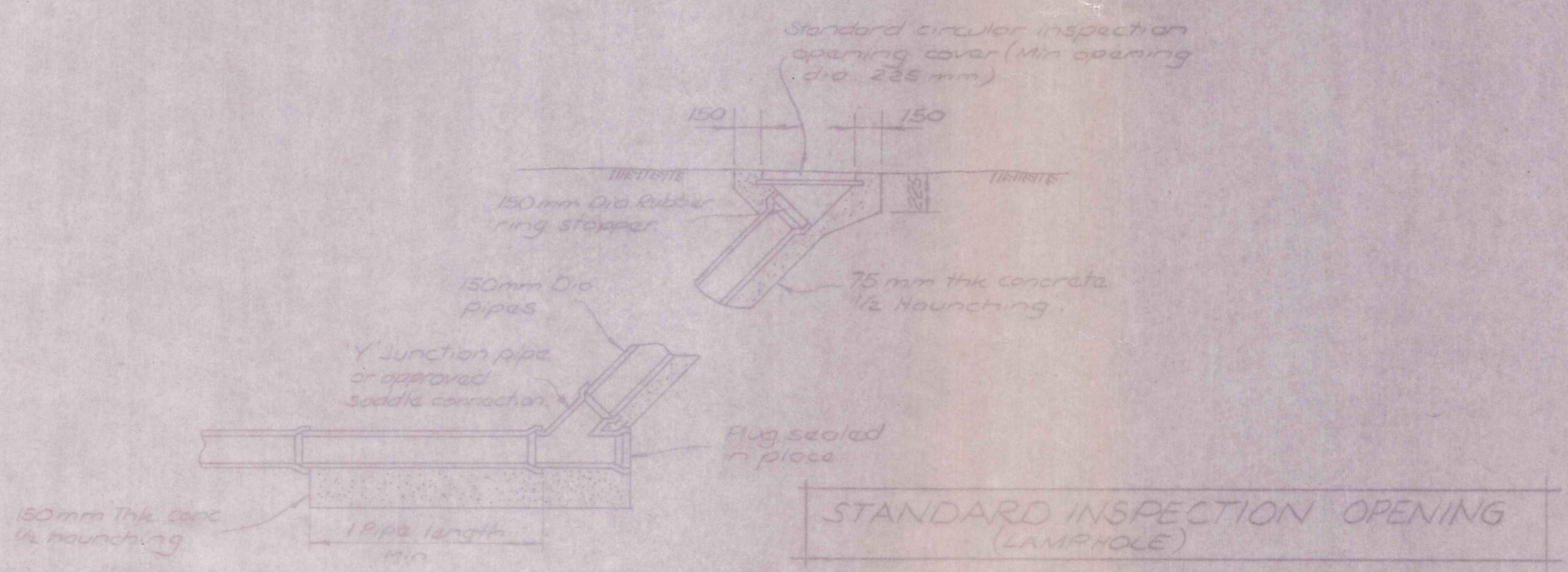






NOTE: Wall thickness increases to 225mm for manholes greater than 3.0m deep.

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



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Christchurch PO Box 82 Ph 90381

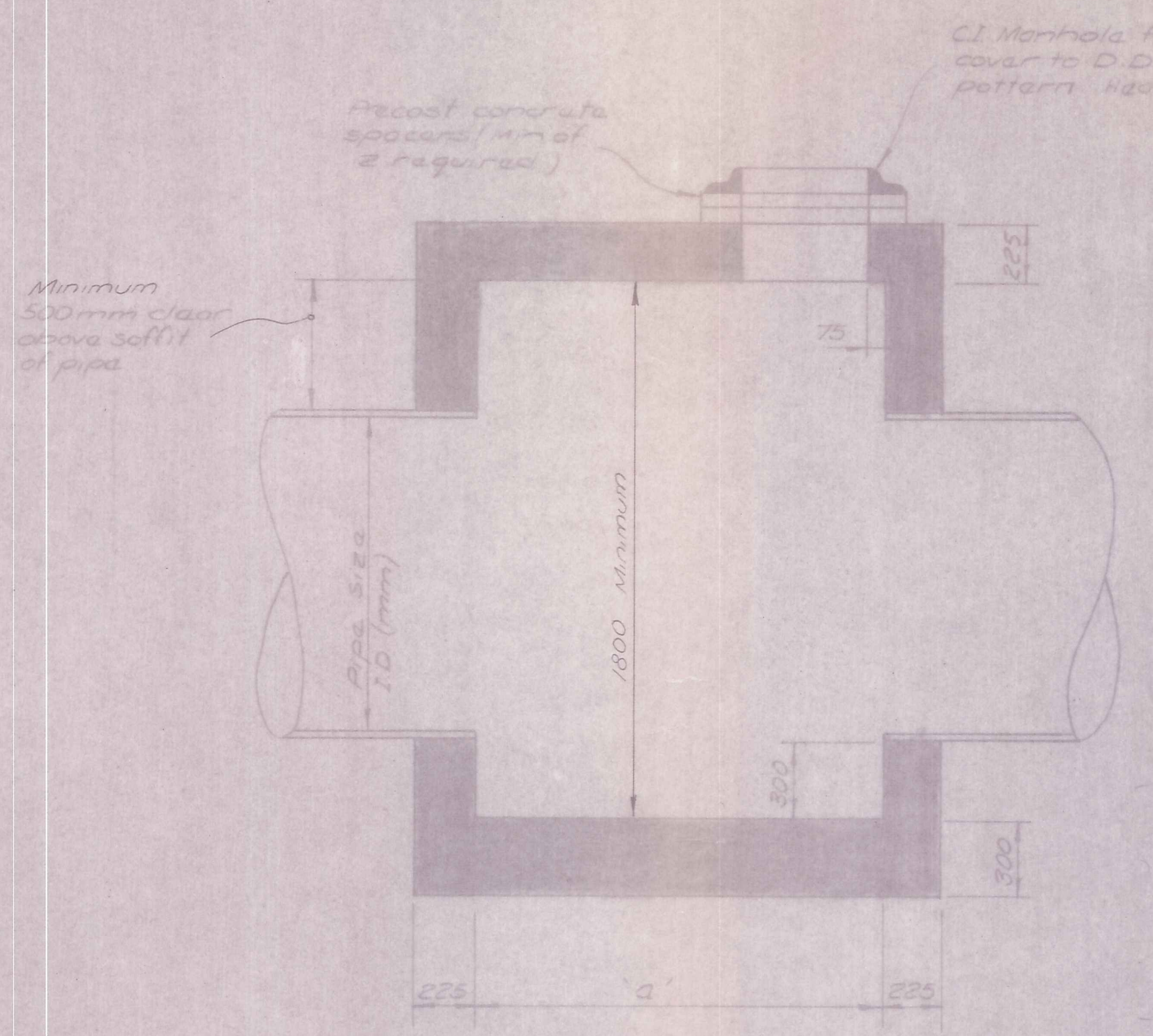
MINISTRY OF WORKS  
& DEVELOPMENT

CLUTHA VALLEY DEVELOPMENT  
CROMWELL EXPANSION  
CONTRACT No. 203

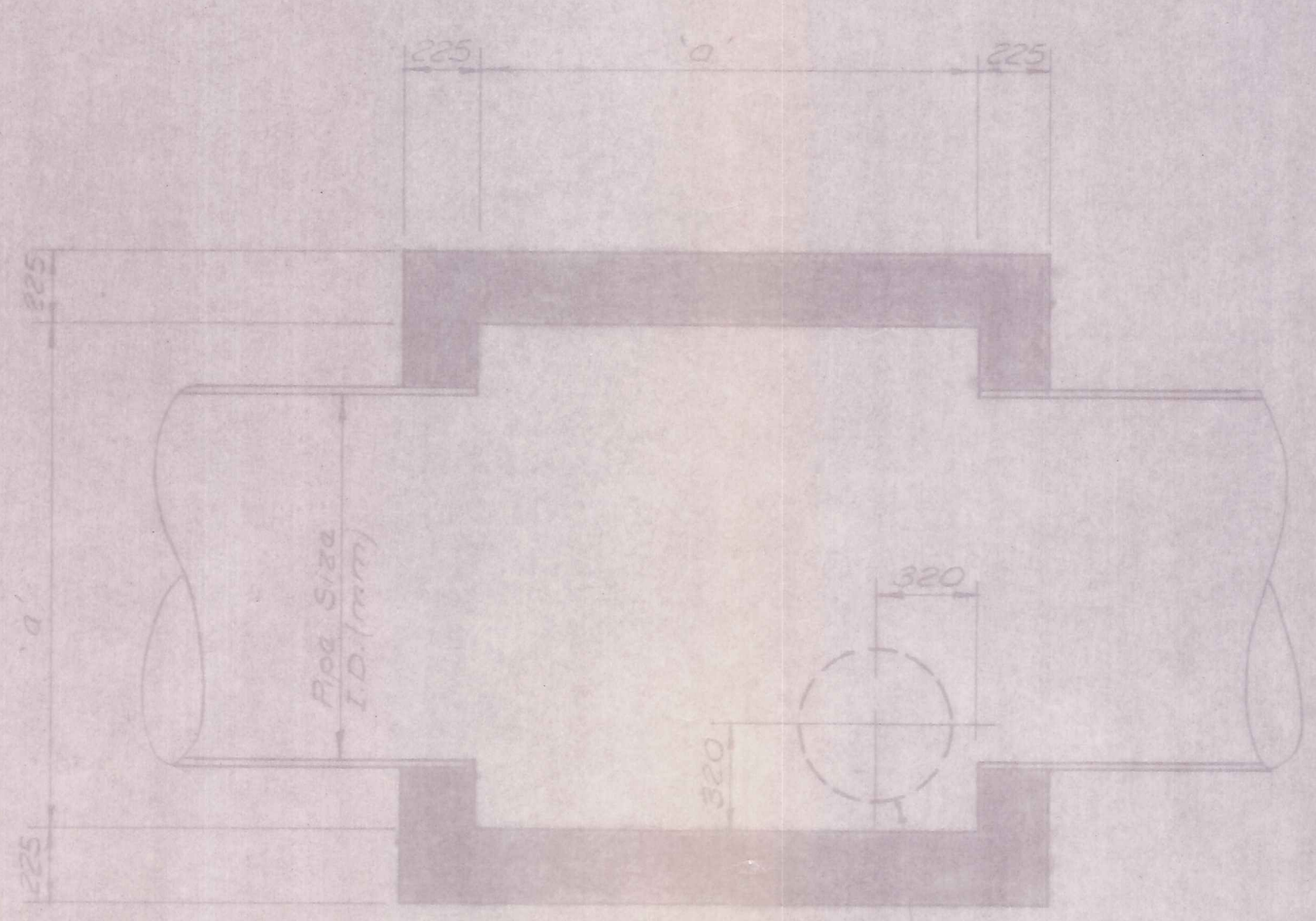
BARRY AVENUE DEVELOPMENT  
STANDARD DETAILS

AMENDMENTS		NAME		DATE	JOB NO.	Sheet No.
NO.	BY	DATE	Appvd.	Surveyed	10013	8
				Drawn		
				Calculations		
				Traced		
				Checked		
				Approved	27/12/82	67/12/39

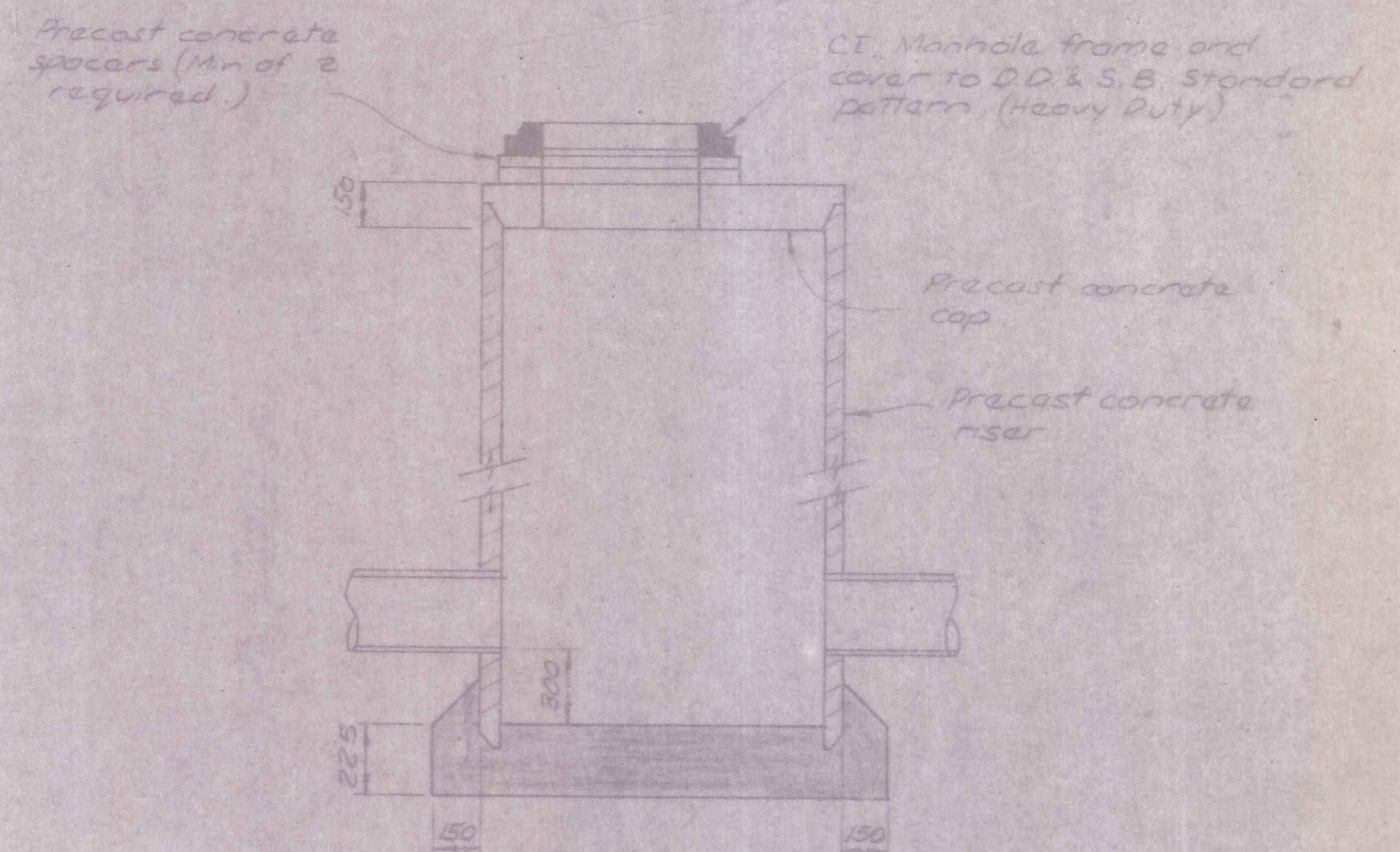
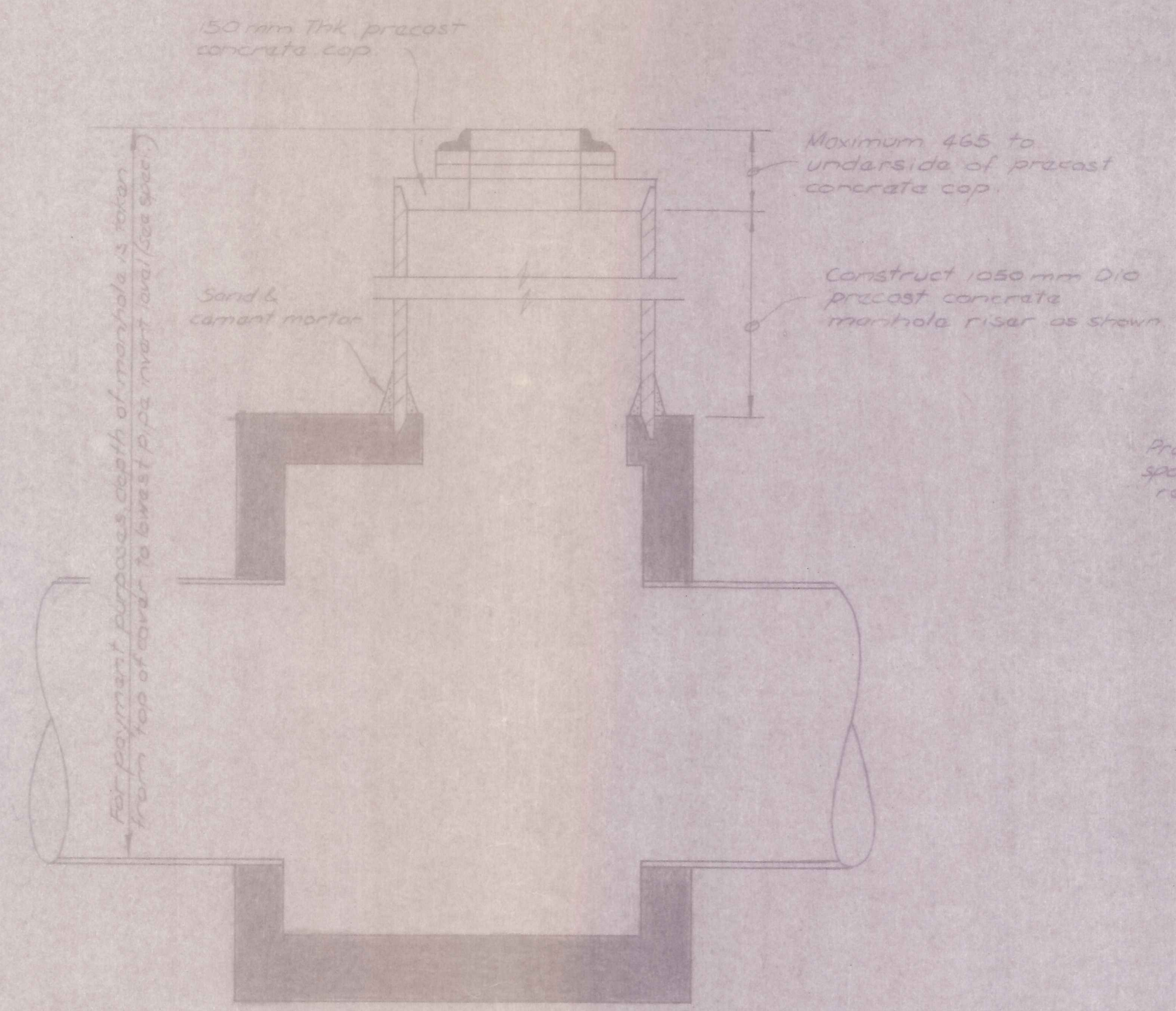




ELEVATION



PLAN



SECTION PRECAST MANHOLE

DIMENSIONS		REINFORCING
Pipe Sizes I.D. (mm)	'a' (mm)	
1350	1750	300F1 D12 @ 150 cns Both way (50 cover)
1200	1600	
1050	1600	
900	1300	Walls: D12 @ 300 cns Horz. D12 @ 450 cns Vert. (alternately placed)
750	1200	
600	1200	
525	1200	
450	1050	

STANDARD STORMWATER DRAIN MANHOLE  
(FOR STORMWATER DRAINS LESS THAN 450 mm Dia.)

NOTE: Precast riser shaft to be positioned before in situ concrete at 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 as shown.

STANDARD STORMWATER DRAIN MANHOLE  
(FOR STORMWATER DRAINS 450 mm Dia & LARGER)

SCALE 1:20

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Cromwell, P.O. Box 82, Pk 60-391

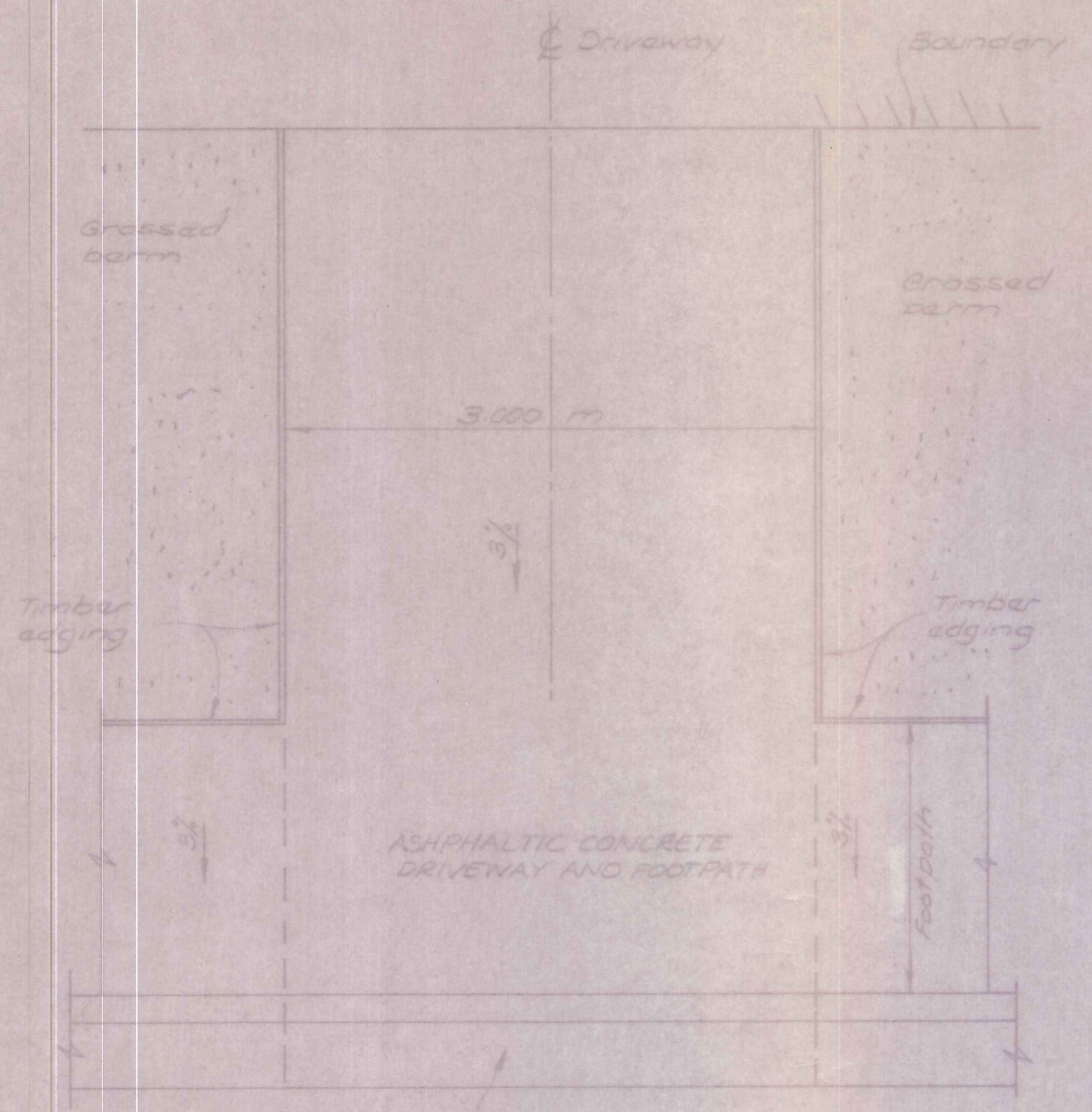
MINISTRY OF WORKS  
& DEVELOPMENT

CLUTHA VALLEY DEVELOPMENT  
CROMWELL EXPANSION  
CONTRACT No. 203

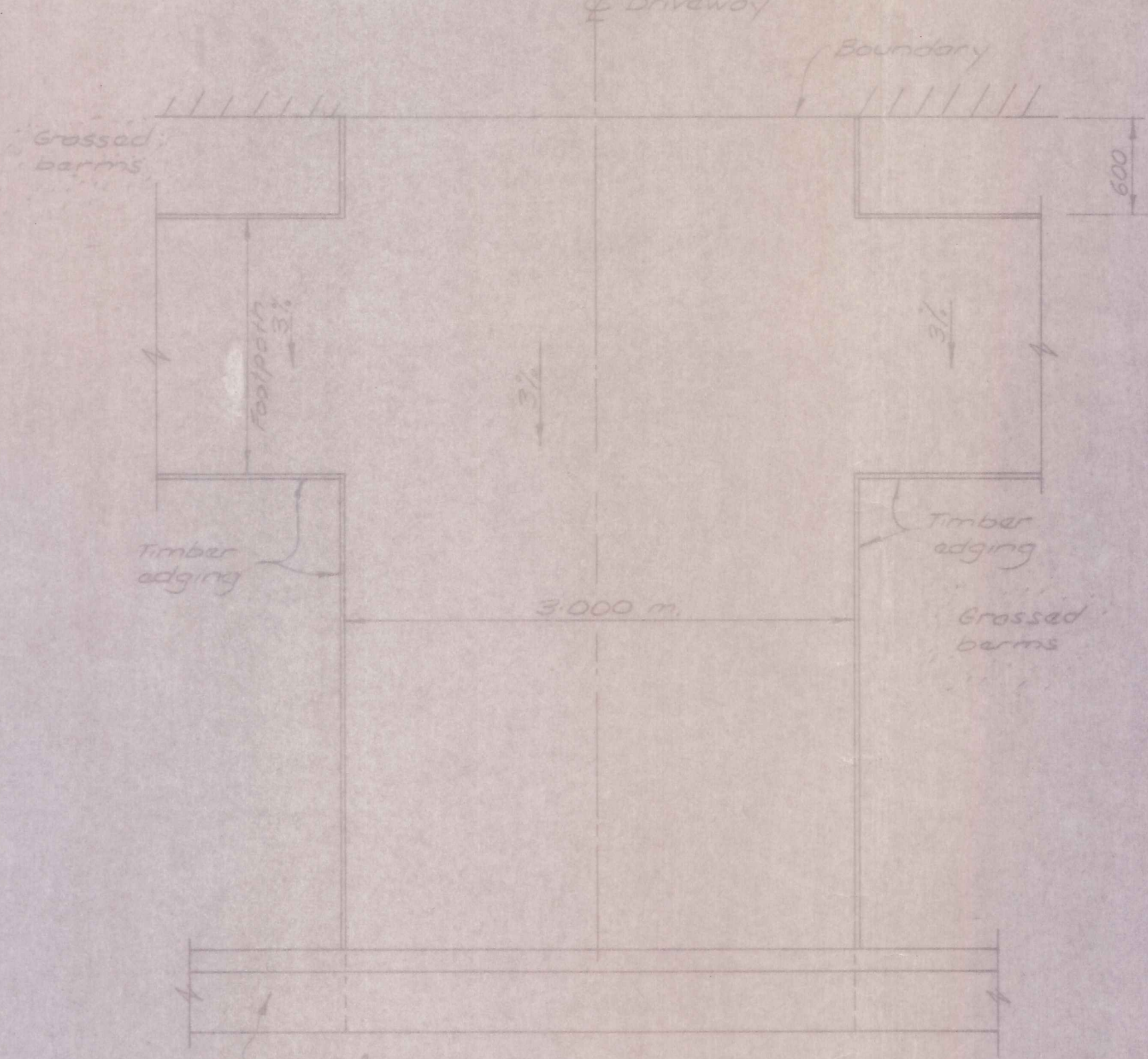
BARRY AVENUE DEVELOPMENT  
STANDARD DETAILS

AMENDMENTS			NAME	DATE	JOB NO.	Sheet No.
NO.	BY	DATE			10013	9
			Surveyed			
			Drawn	B. HAWKINS 6-82		
			Calculations			
			Traced	N. COOPER 6-82		
			Checked	27/7/82		
			Approved	6/12/89		

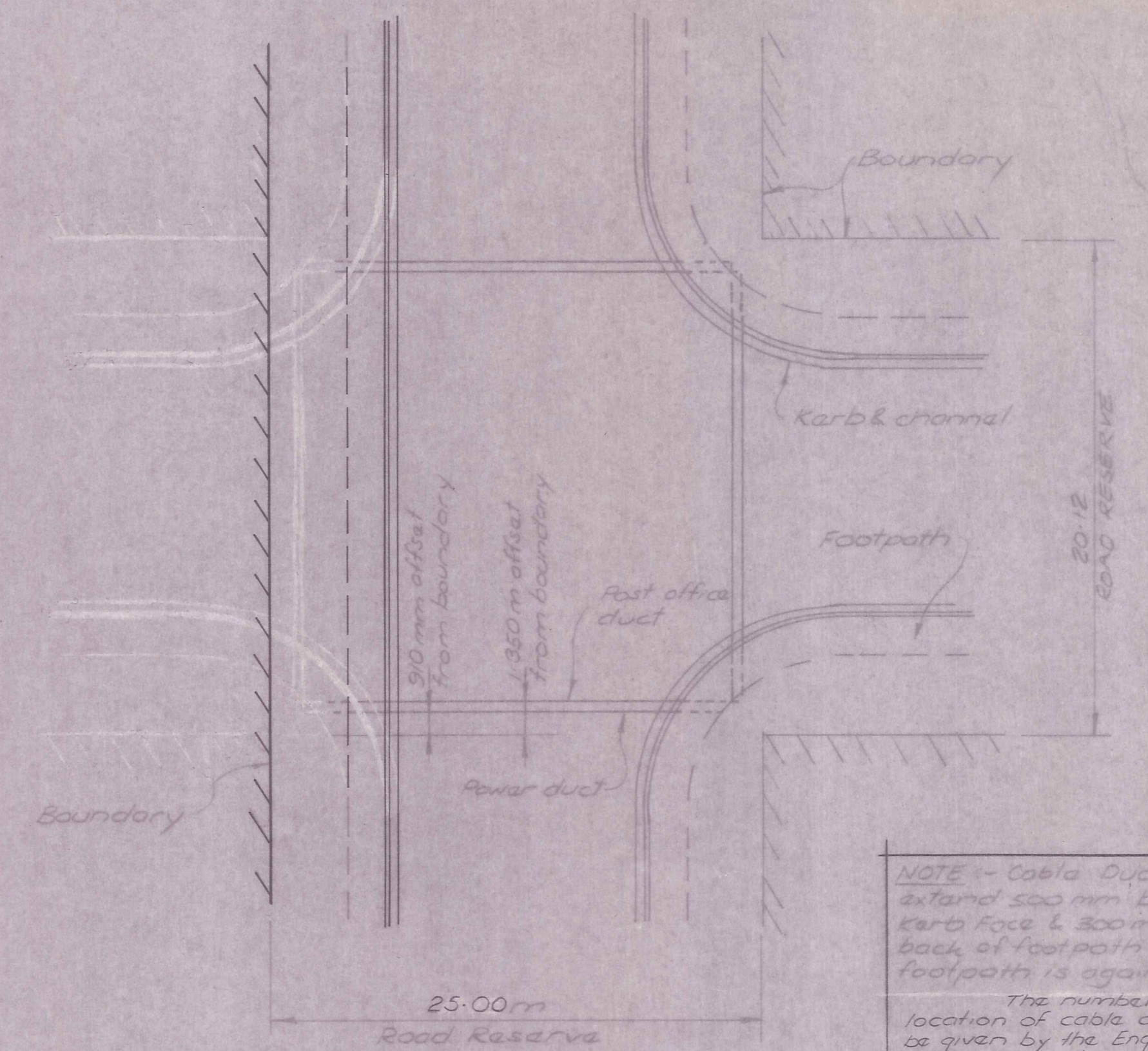




TYPICAL PLAN OF DRIVEWAY WITH FOOTPATH ADJACENT TO KERB  
N.T.S.

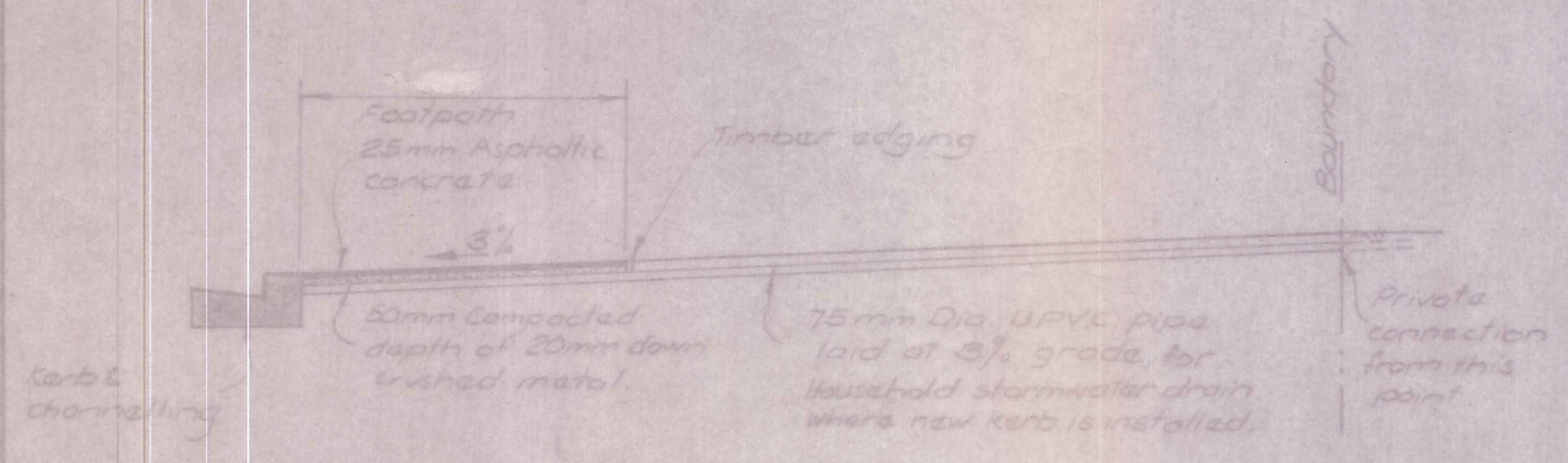


TYPICAL PLAN OF DRIVEWAY WITH FOOTPATH 600 mm OUT FROM THE BOUNDARY  
N.T.S.

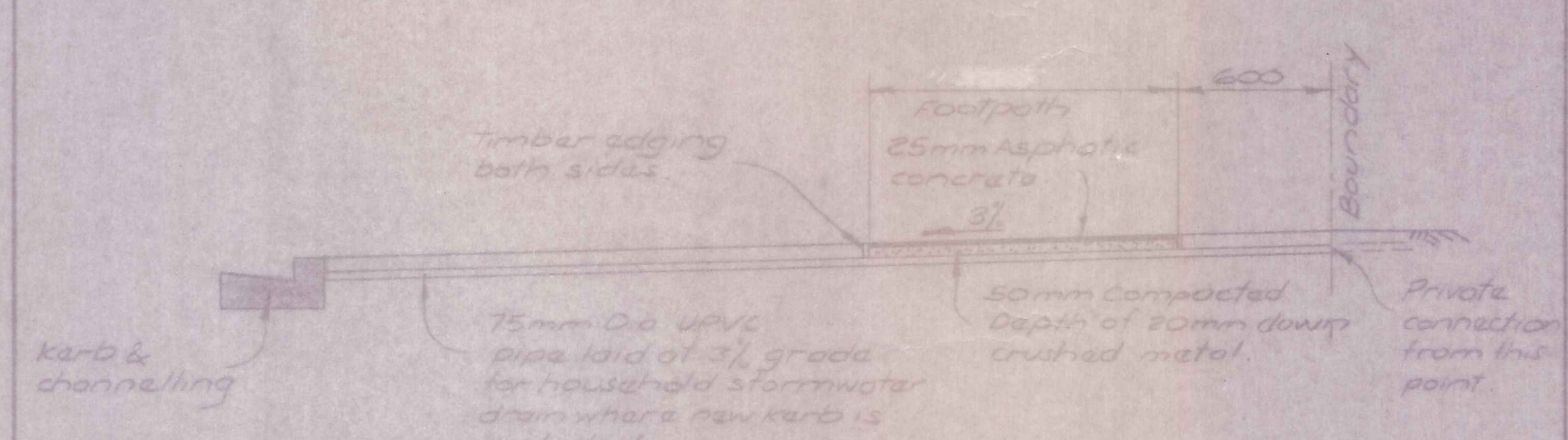


PLAN  
N.T.S.

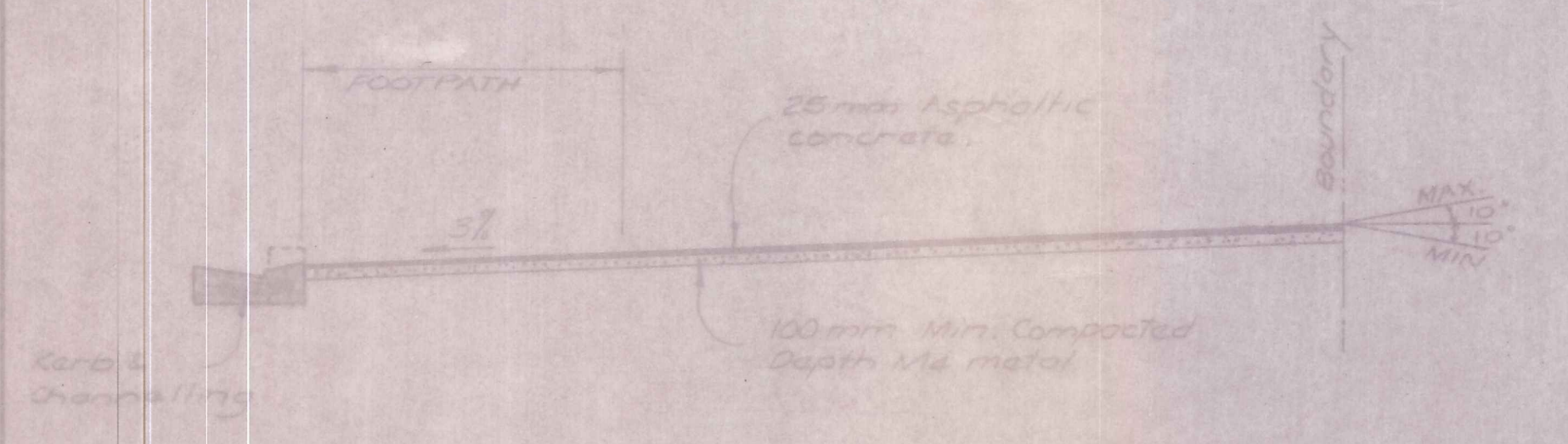
NOTE - Cable Ducts to extend 500 mm behind kerb face & 300 mm from back of footpath where footpath is against kerb.  
The number and location of cable ducts will be given by the Engineer at each intersection and at other locations in Barry Avenue as required.



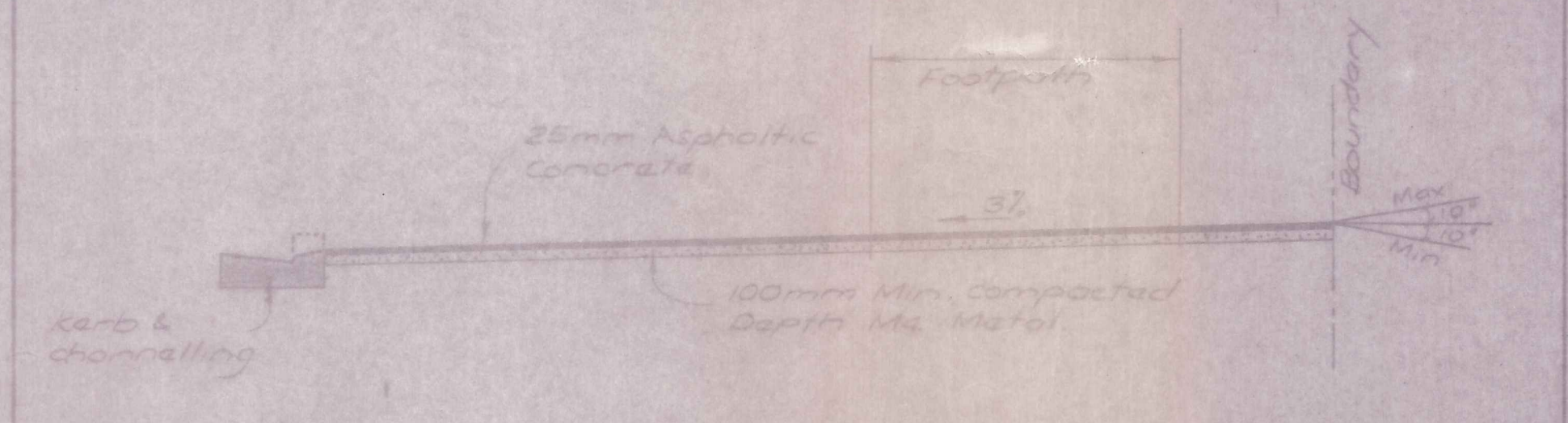
TYPICAL SECTION BETWEEN DRIVEWAYS (SHOWING HOUSEHOLD STORMWATER CONNECTION)



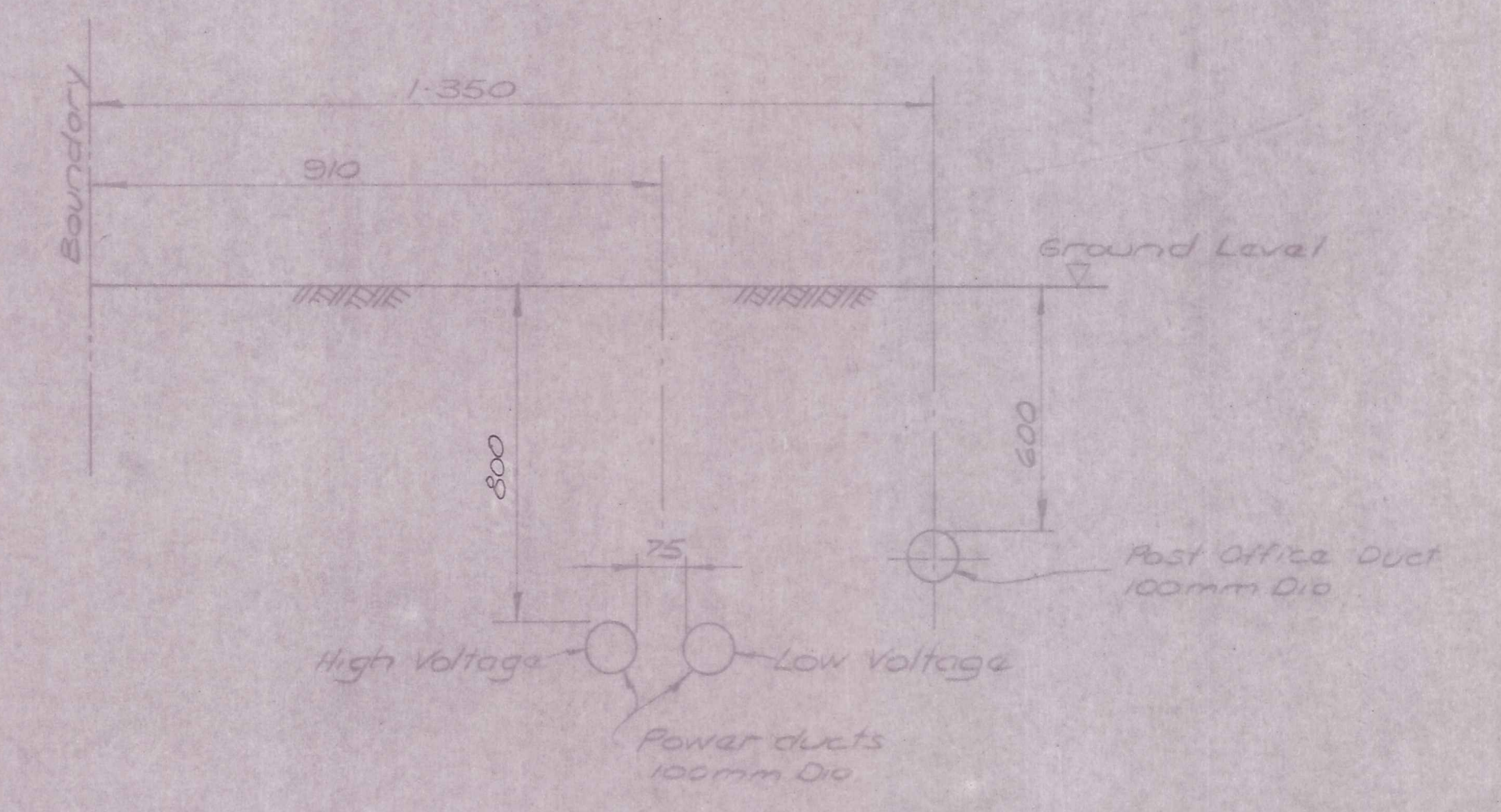
TYPICAL SECTION BETWEEN DRIVEWAYS



TYPICAL SECTION ALONG & DRIVEWAYS



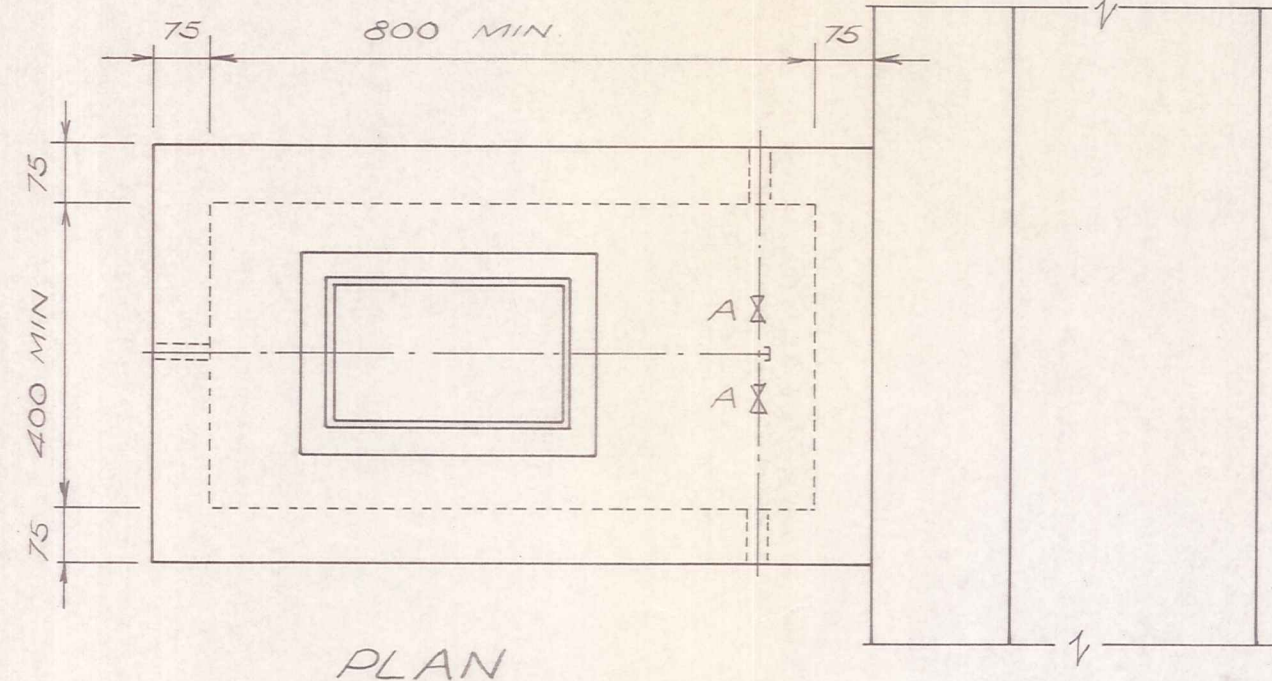
TYPICAL SECTION ALONG & DRIVEWAYS



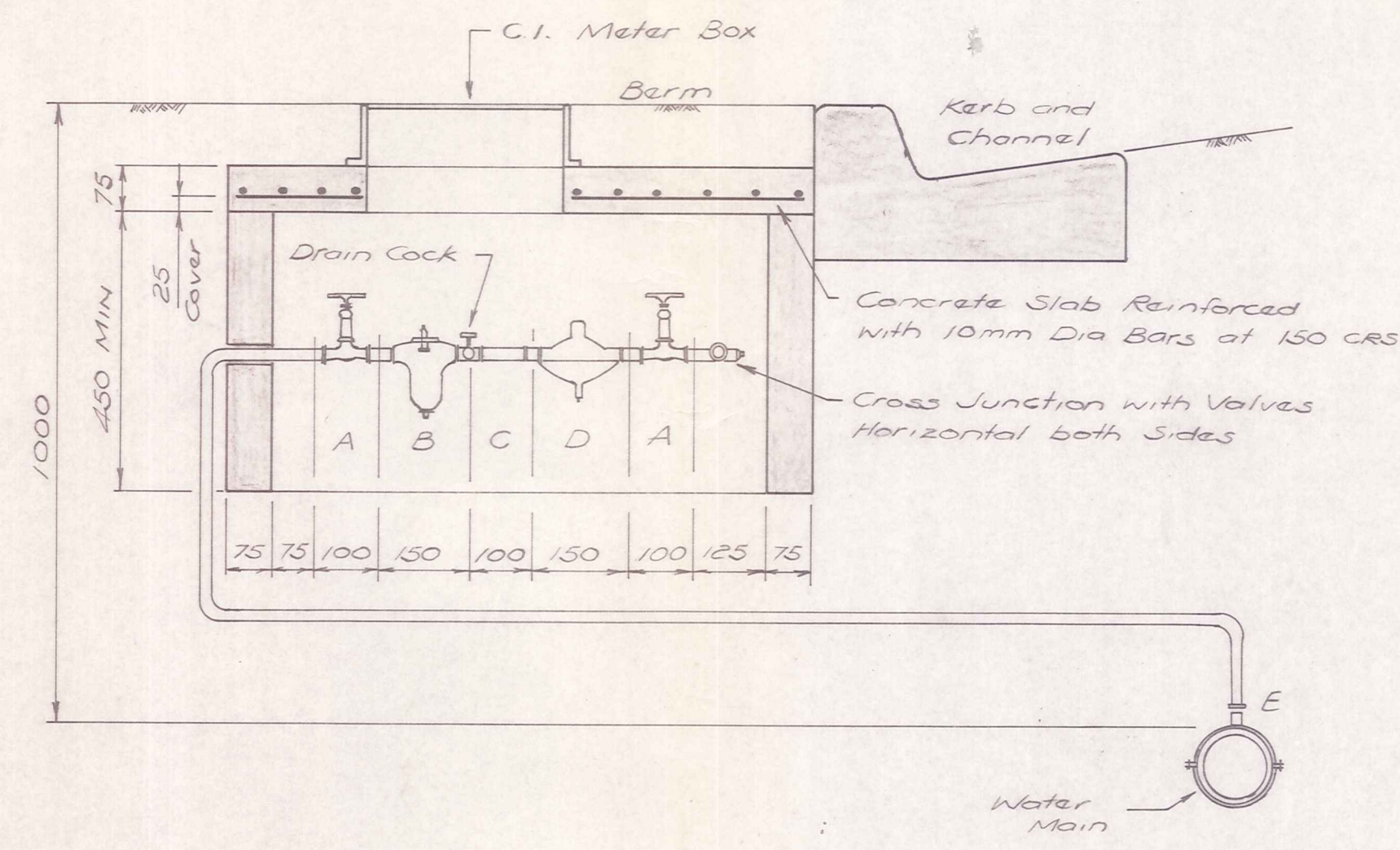
POWER AND TELEPHONE CABLE DUCTS INTERSECTION DETAILS  
N.T.S.

AMENDMENTS			NAME		DATE	JOB NO.	Sheet No.
NO.	BY	DATE	Appvd	Surveyed	Drawn		
				B. HAWKINS	6-82	10013	10
				N. COOPER	6-82		of 12 sheets
					33/7/83		
					July 83		
					6/12/89		



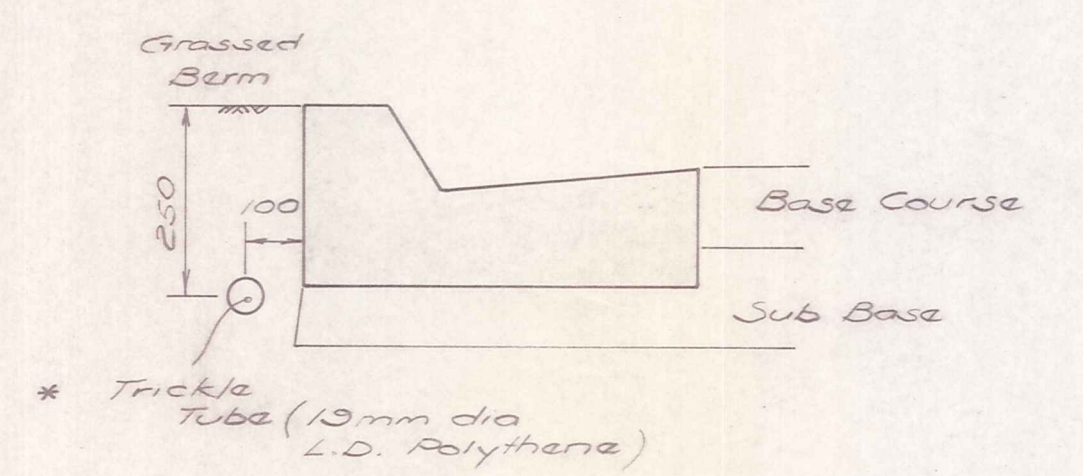


NOTE: Meter Box Opening to be 180mm x 330mm Min. Size. Opening Centred over Filter



- CODE
- A - Full Way Gate Valve 19mm Dia
  - B - Gilberto Filter or Equal with 80 Micron Element
  - C - Backflow Preventer
  - D - Pressure Reducer, NEFA or Equal
  - E - Topping Band and Fittings per Household Connection

TRICKLE CONTROL BOX



\* Trickle tube to be offset 1 metre behind footpath where footpath is constructed against kerb

POSITION OF TRICKLE TUBE BEHIND KERB AND CHANNEL OR FOOTPATH.

ORIGINAL SIZE mm INCHES

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MINISTRY OF WORKS & DEVELOPMENT

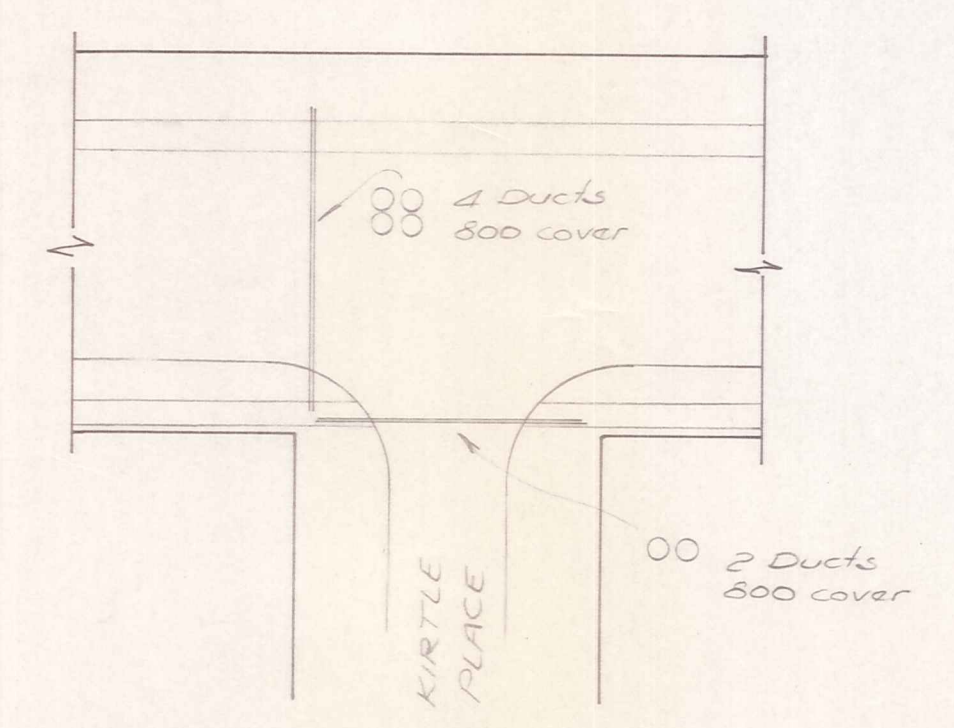
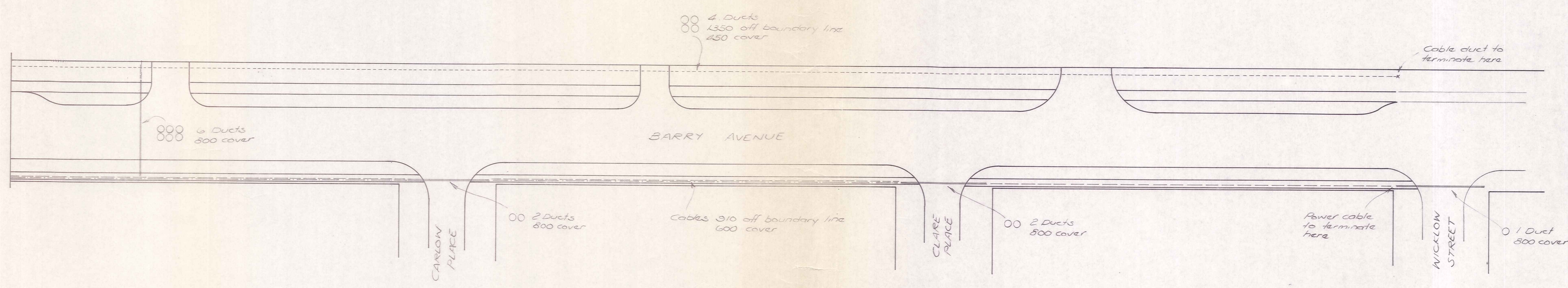
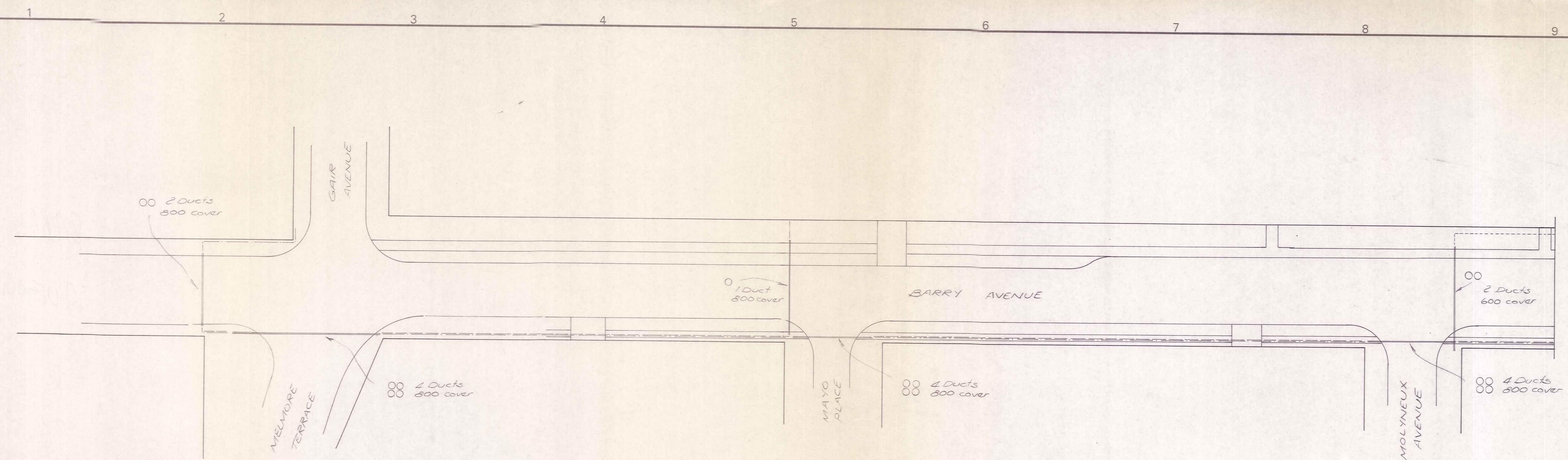
CLUTHA VALLEY DEVELOPMENT  
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CONTRACT No. 203

BARRY AVENUE DEVELOPMENT  
TRICKLE IRRIGATION DETAILS

AMENDMENTS				NAME		DATE	JOB NO.	Sheet No		
NO.	BY	DATE	Appvd.	Surveyed	Drawn	Checked	10013	11		
					N. Jolley	6.83			of 12 shts	F.B.
					N. Jolley	6.83				
					[Signature]	29/7/83				
					[Signature]	29/7/83				
							File 67/2/139	LB.		



300  
200  
150  
100  
50  
30  
10  
0  
mm  
INCHES



**LEGEND**  
 - - - - - Telephone cable duct  
 - - - - - Low voltage power cable  
 - - - - - High voltage power cable

**NOTE :**  
 1. All ducts are 100 mm dia UPVC.  
 2. Depth of cover on power ducts to be increased to 1100 mm where intersecting telephone ducts.  
 3. See Drawing No 10013/10 for duct layout details.

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MINISTRY OF WORKS  
& DEVELOPMENT

CLUTHA VALLEY DEVELOPMENT  
 CROMWELL EXPANSION  
 CONTRACT No.203

**BARRY AVENUE DEVELOPMENT**  
 CABLE AND DUCTING LAYOUT PLAN

AMENDMENTS			NAME		DATE
NO.	BY	DATE	Appvd.	Surveyed	
				Drawn	N.J. 7.83
				Calculations	
				Traced	N.J. 7.83
				Checked	29/7/83
				Approved	

JOB NO. **10013**  
 Sheet No **12**  
 of 12 shts  
 F.B.