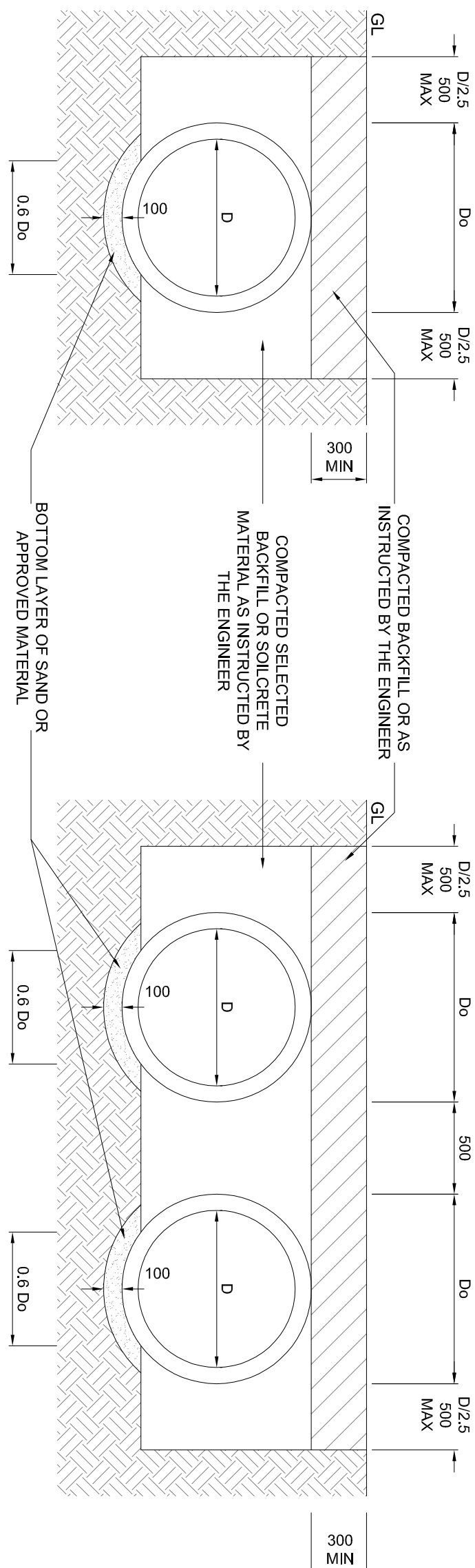


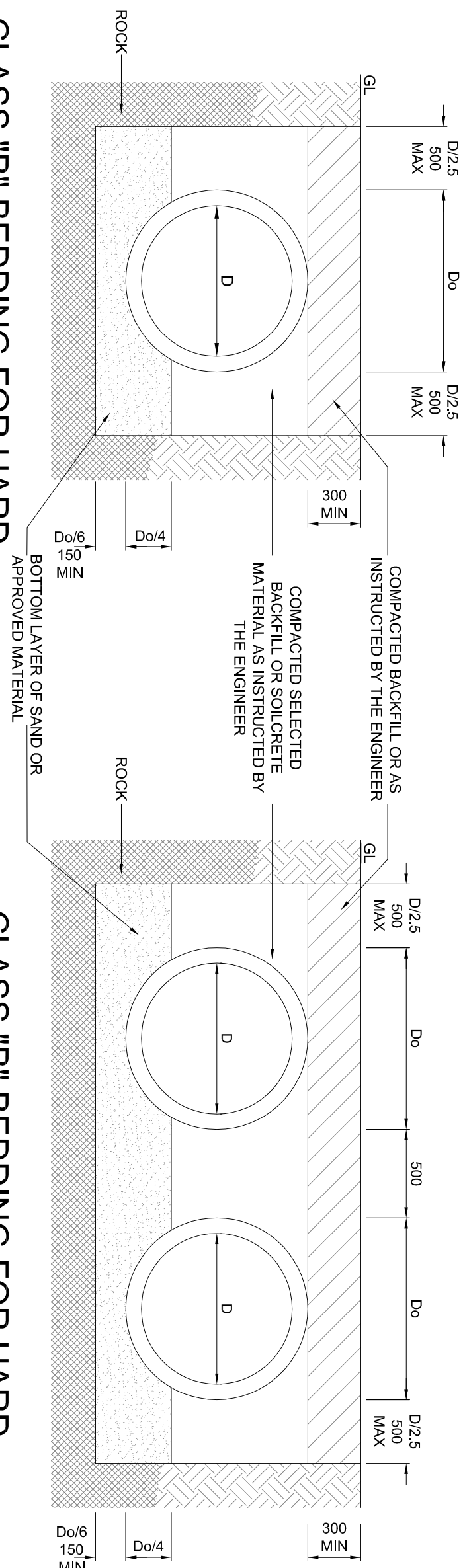
CLASS "A" BEDDING FOR SOFT
EXCAVATIONS (SINGLE PIPE)
N.T.S.

CLASS "A" BEDDING FOR SOFT
EXCAVATIONS (DOUBLE PIPE)
N.T.S.



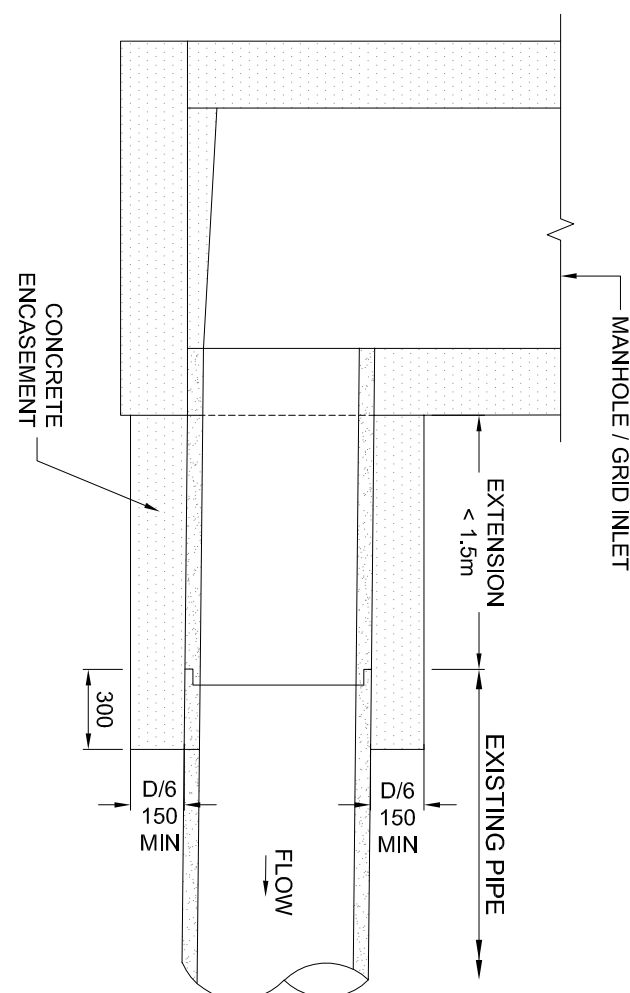
CLASS "B" BEDDING FOR SOFT EXCAVATIONS (SINGLE PIPE)

CLASS "B" BEDDING FOR SOFT EXCAVATIONS (DOUBLE PIPE)

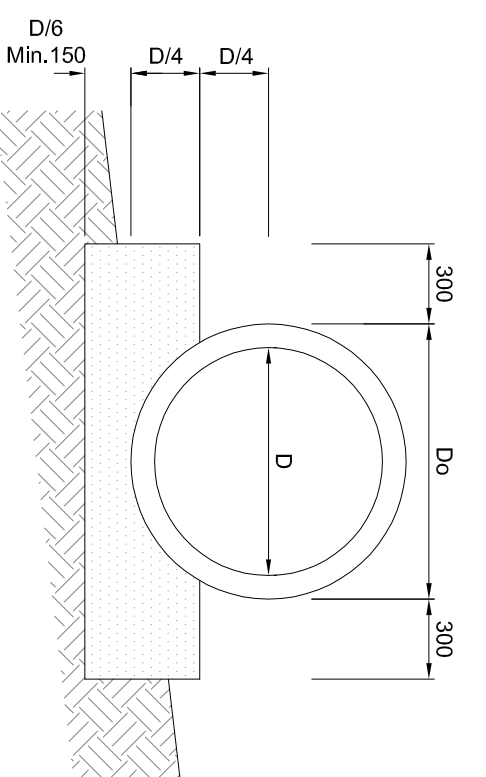


CLASS "B" BEDDING FOR HARD
EXCAVATIONS (SINGLE PIPE)

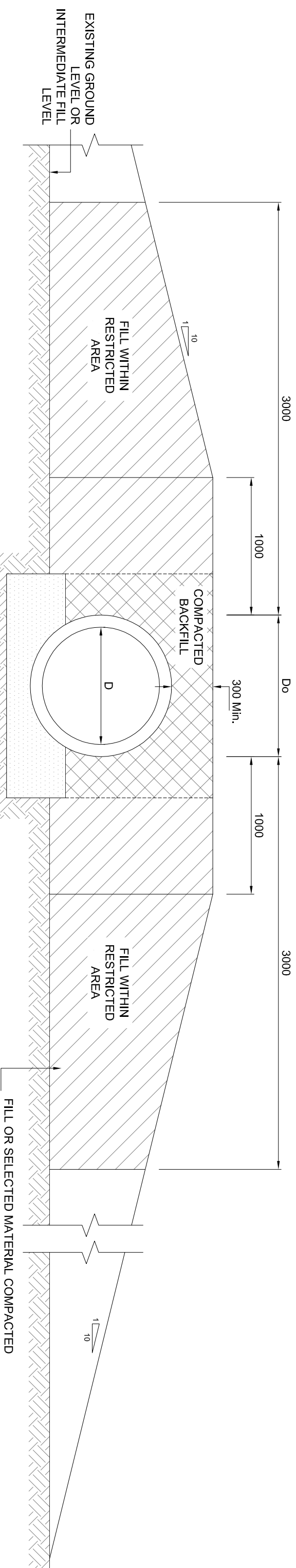
CLASS "B" BEDDING FOR HARD
EXCAVATIONS (DOUBLE PIPE)
N.T.S.



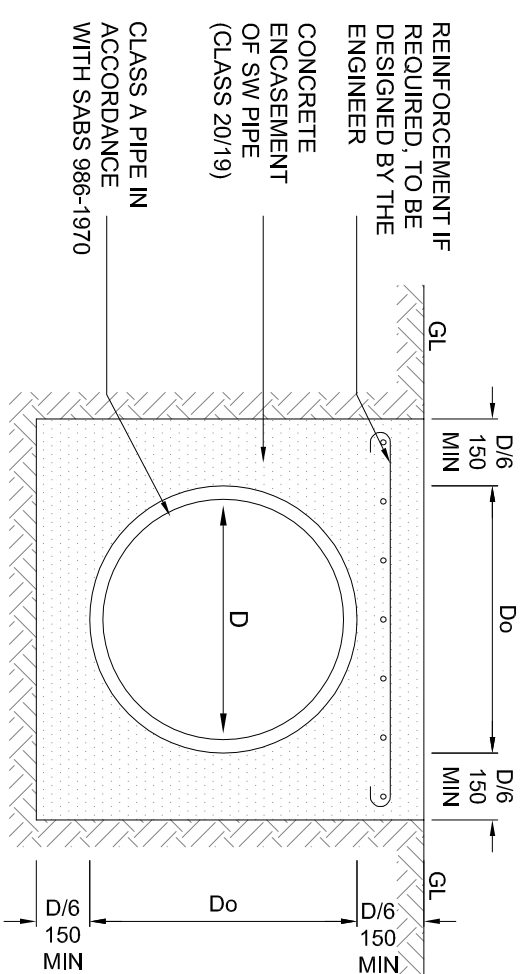
TYPICAL CROSS SECTION
CONCRETE ENCASEMENT OF PIPE
EXTENSIONS LESS THAN 1.5m IN LENGTH
N/S



CLASS "A" BEDDING FOR
EMBANKMENT CONDITIONS
N.T.S.



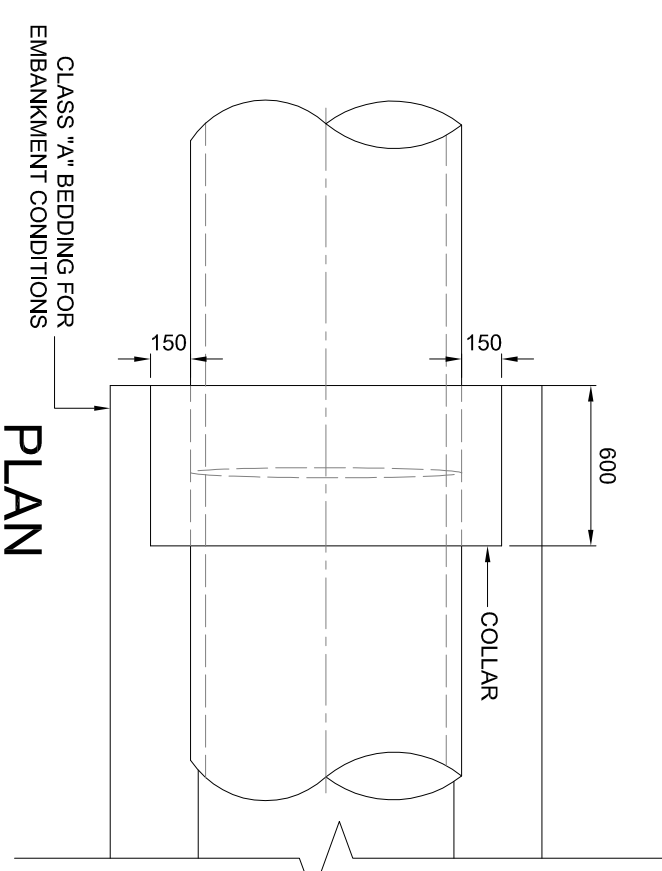
EMBANKMENT INSTALLATION
(CLASS "A" BEDDING)
N.T.S.



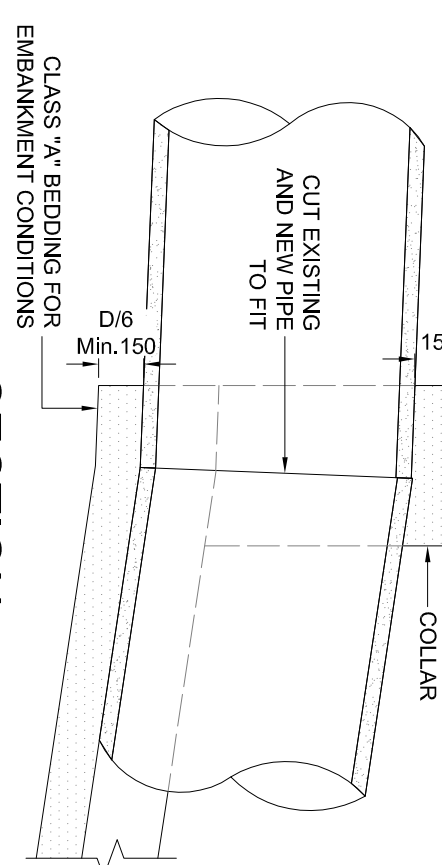
CONCRETE ENCASEMENT OF PIPES

LEGEND:			
H	=	TOTAL COVER OVER THE PIPE BELOW THE FINAL ROAD LEVEL	
D	=	INTERNAL BARREL DIMENSION	
D _o	=	OUTSIDE BARREL DIMENSION	
G _L	=	GROUND LEVEL MEANING EITHER OF THE FOLLOWING AN INTERMEDIATE RILL LEVEL IN ORDER TO PROVIDE THE UNDERSIDE OF THE SELECTED SUBGRADE OR SUBBASE	
NOMINAL PIPE DIA (D)	DIA OUTSIDE (D _o) (approx)	SIDE ALLOWANCE PER SIDE	
		ENCASE 150mm	BEDDING
		CLASS A D _o /6 150 MIN	CLASS B D _o /2.5 150 MAX
600	700	150	150
750	870	150	350
900	1 030	175	400
1 050	1 195	200	500
1 200	1 360	225	500
1 350	1 525	250	500
1 500	1 690	300	500

1. ALL CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF SANS 667 : 1988, STANDARD SPECIFICATIONS FOR NONPRESSURE PIPES.
2. THE BEDDING TYPE SHALL BE DESIGNED IN ACCORDANCE WITH SANS 6012 PART 1 - 1987 IN CONJUNCTION WITH THE CONCRETE PIPE AND MANUFACTURERS.
3. THE PIPE CLASS MUST BE DETERMINED FROM THE WEIGHT OF THE PRISM OF LIFT ABOVE THE CULVERT PLUS THE SABC LOADINGS IN ACCORDANCE WITH T.M.H. (PARTS 1 & 2) CODE OF PRACTICE FOR THE DESIGN OF HIGHWAY BRIDGES AND CULVERTS IN SOUTH AFRICA.
4. THE MINIMUM LIFT OF 300MM FOR THE CONCRETE PIPE IS 50 KN WITH A MINIMUM LIFT OF 300MM ON TOP OF THE PIPE.
5. CONCRETE IN CLASS A BEDDING AND IN CONCRETE ENCASEMENT SHALL BE CLASS 20/18.
6. CONCRETE IN CLASS A BEDDING CAN EITHER BE REINFORCED OR UNREINFORCED DEPENDING ON THE PREVALUING CONDITIONS.
7. PIPE ENDS 300MM SELECTED RACHTILL ON SLOTTABLE MATERIAL OVER PIPES.
8. IN CASES WHERE H < 600MM THE PIPE SHALL BE ENCASED IN CLASS 20/18 CONCRETE AS SHOWN.
9. ALL EXISTING PIPE CULVERTS ON THE 9 & 10 TO BE EXTENDED SHALL BE CONSTRUCTED UNDER EMBANKMENT CONDITIONS TO ENSURE STABILITY OF EXISTING CULVERTS AND TO PROVIDE ADEQUATE COVER AT CULVERT EXTENSIONS WHERE THE EXISTING GROUND LEVEL IS BELOW THE DESIGNED INVERT LEVEL. THE SPACE SHALL BE BACK FILLED WITH FOUNDATION FILL MATERIAL TO A LEVEL WHERE THE CLASS A BEDDING CAN BE SUITABLY PLACED.
- 10.



PLAN



SECTION

TYPICAL DETAIL OF CONCRETE
COLLAR AT PIPE EXTENSIONS
WITH SLOPE CHANGES