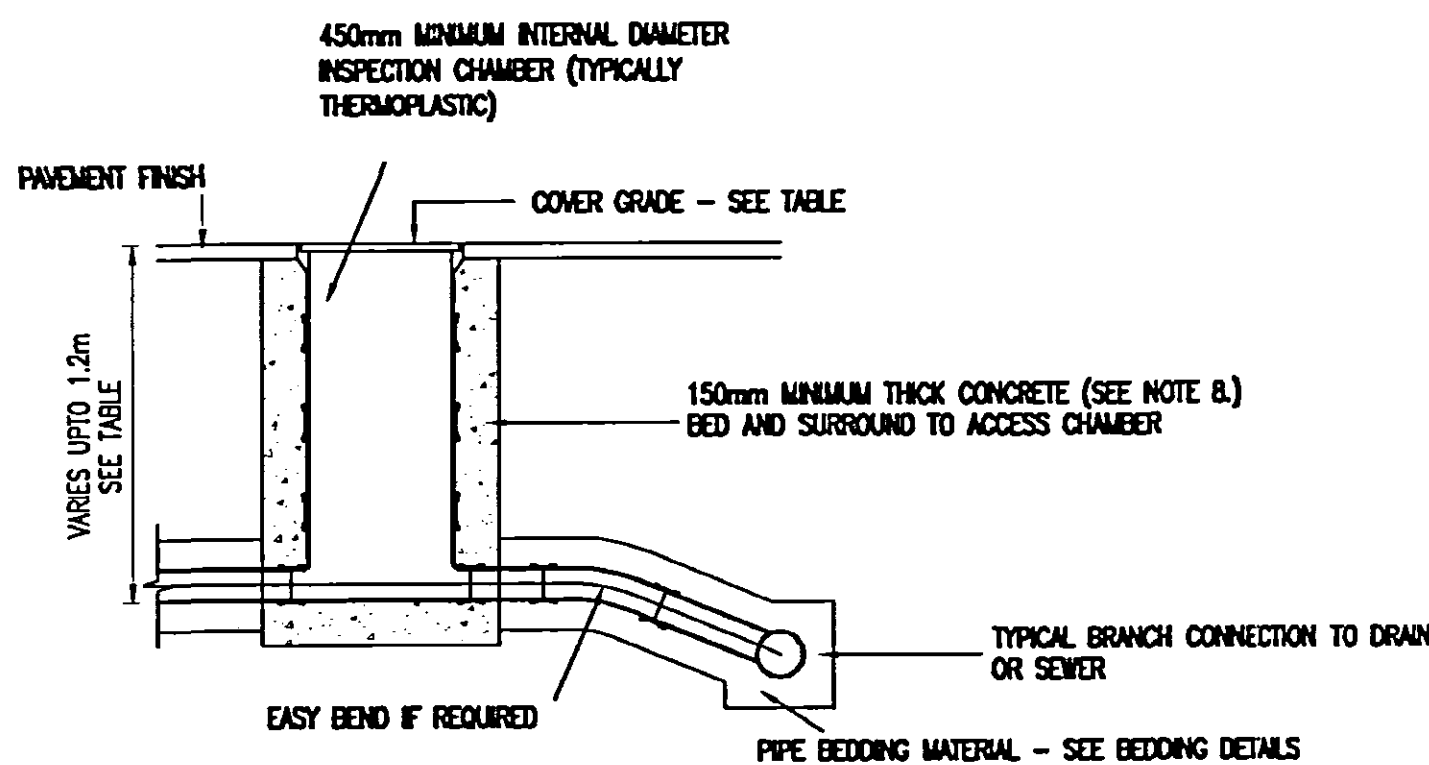
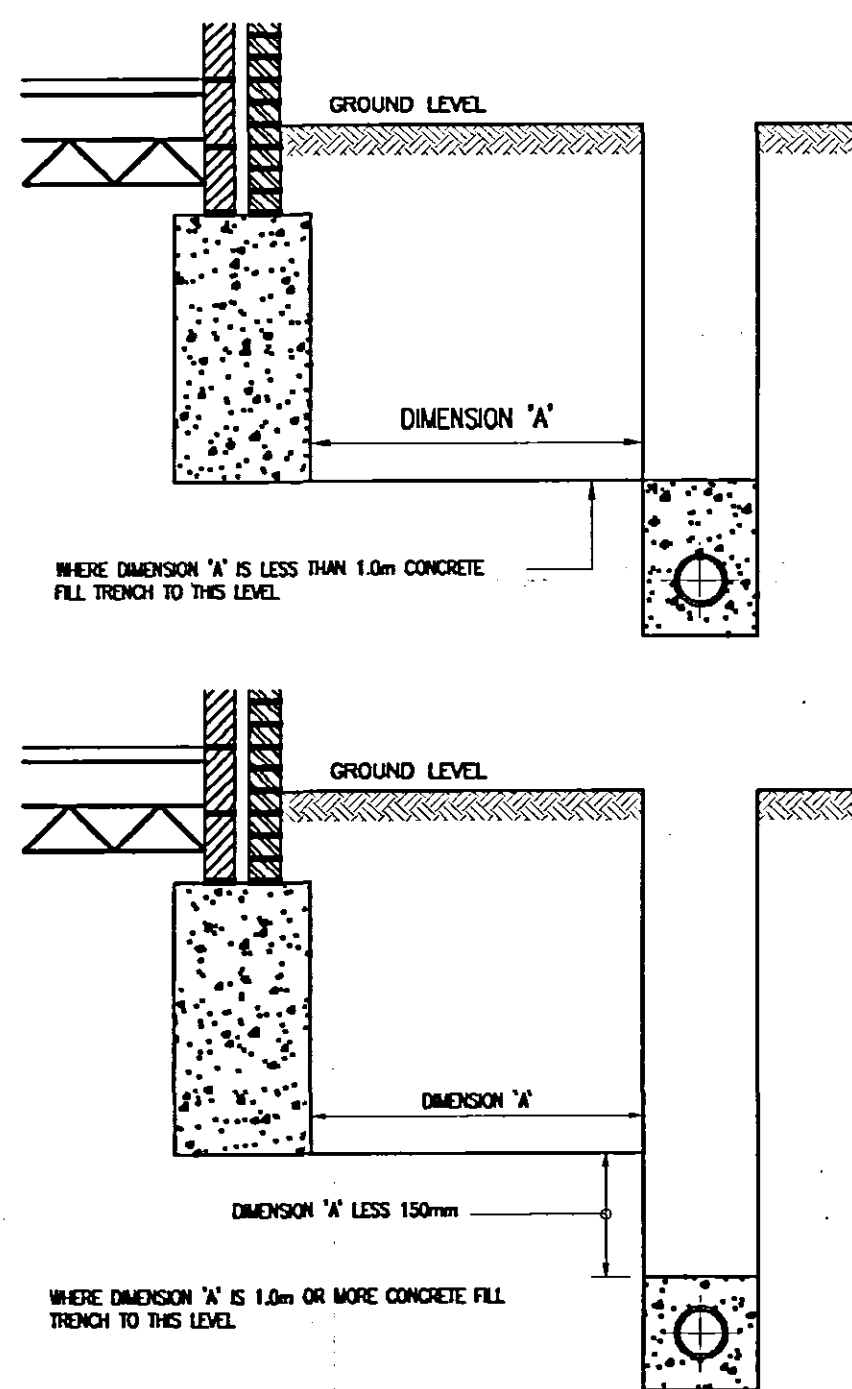
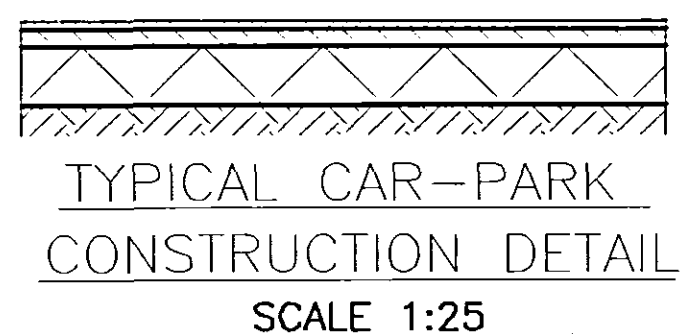




TYPICAL MEDIUM DEPTH INSPECTION CHAMBER
DETAIL FOR USE IN DRIVEWAYS/CAR PARKING AREAS
(NOT SUBJECT TO HEAVY VEHICLE LOADING)
SCALE 1:25
(POLYPRPYLENE INSPECTION CHAMBER – PPIC)



TYPICAL DETAIL OF PIPE RUNS
ADJACENT TO BUILDINGS
SCALE 1:25



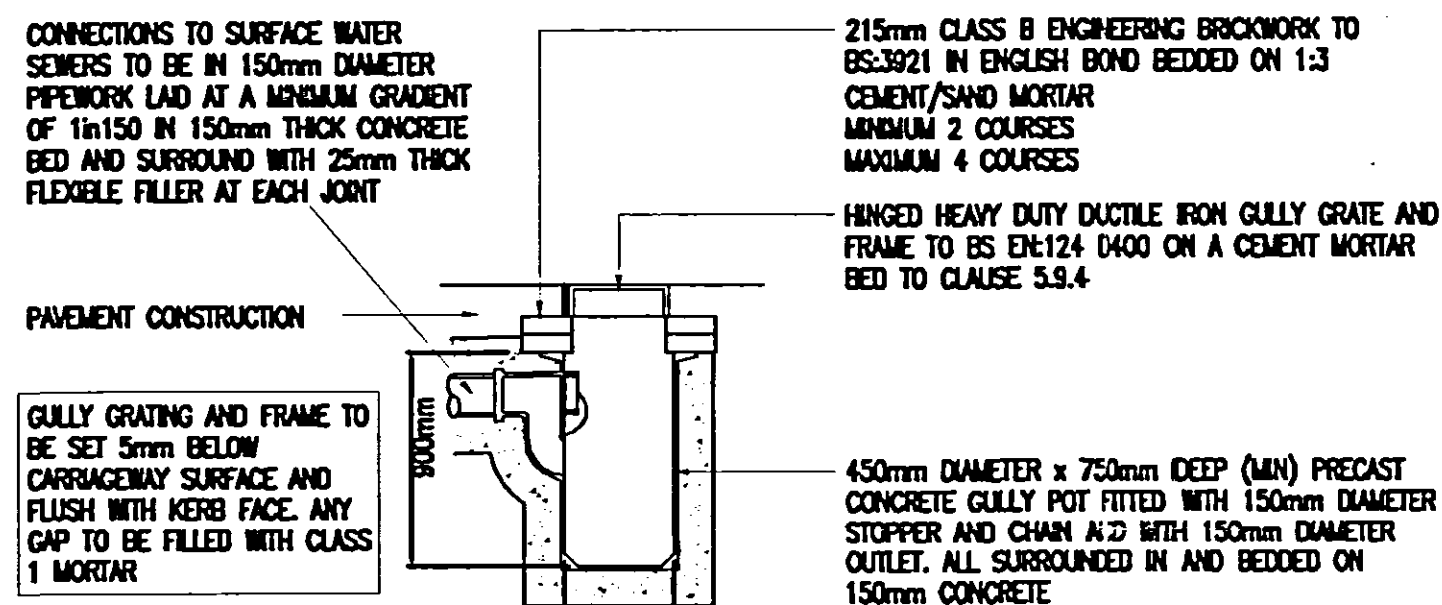
TYPICAL CAR-PARK
CONSTRUCTION DETAIL
SCALE 1:25

MINIMUM DIMENSIONS FOR ACCESS FITTINGS AND INSPECTION CHAMBERS					
TYPE OF ACCESS	DEPTH TO INVEST FROM COVER LEVEL (m)	MINIMUM INTERNAL DIMENSIONS (m)		MINIMUM CLEAR OPENING SIZE (m)	
		LENGTH x WIDTH (mm x mm)	CIRCULAR (mm)	LENGTH x WIDTH (mm x mm)	CIRCULAR (mm)
RODDING EYE	–	AS DRAW BUT MINIMUM 100mm	–	–	SAME SIZE AS PIPEWORK
ACCESS FITTING	0.6m OR LESS EXCEPT WHERE SITUATED IN A CHAMBER	150 x 100 225 x 100	150 225	150 x 100 (1) 225 x 100 (1)	SAME SIZE AS ACCESS FITTING
INSPECTION CHAMBER					
SHALLOW	0.6m OR LESS	225 x 100	180 (2)		180 (1)
MEDIUM	1.2m OR LESS	450 x 450	450	MIN 430 x 430	430
DEEP	GREATER THAN 1.2m	450 x 450	450	MAX 300 x 300 (3)	ACCESS RESTRICTED TO MAX 300 (3)

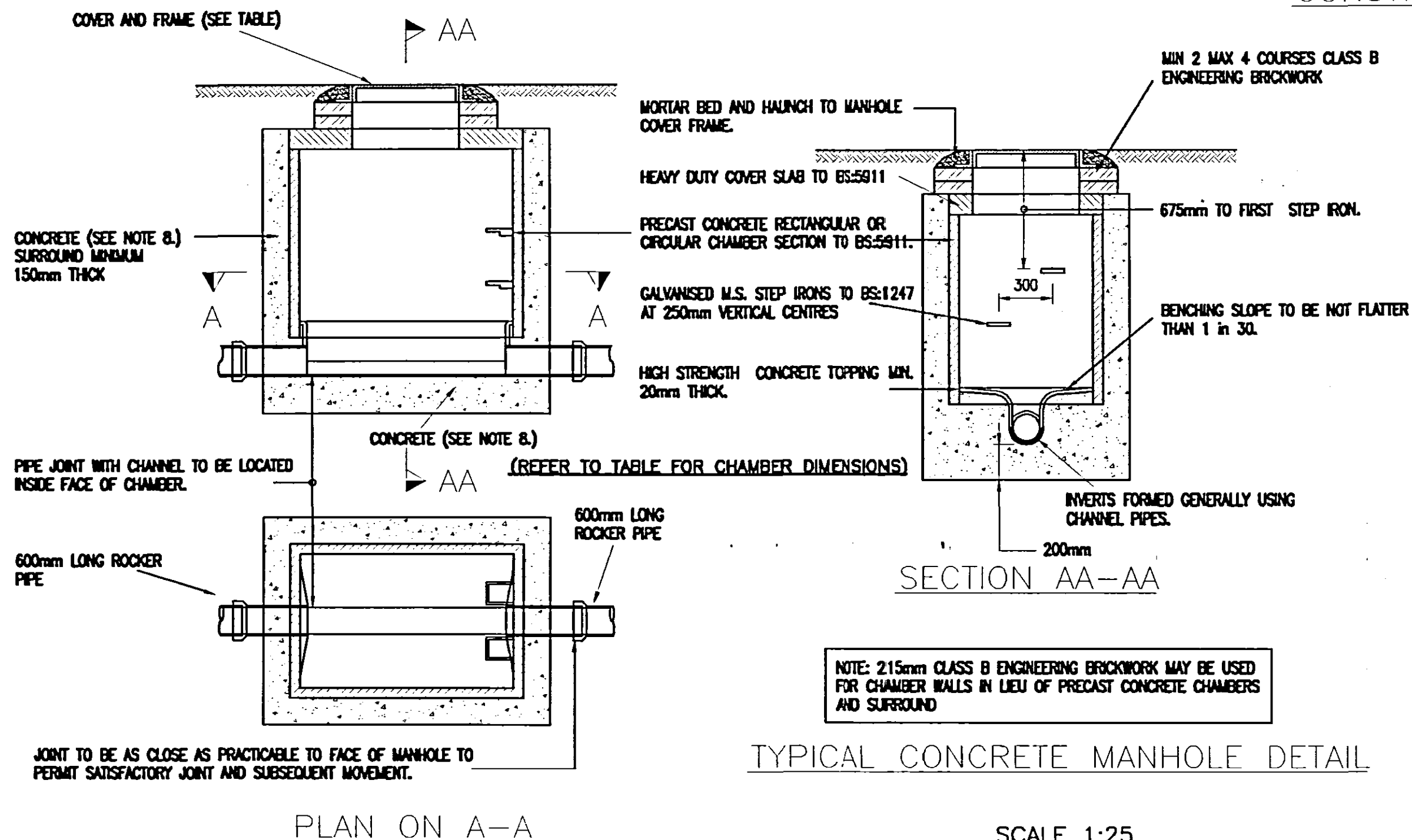
NOTES:
(1) THE CLEAR OPENING MAY BE REDUCED BY 20mm IN ORDER TO PROVIDE PROPER SUPPORT FOR THE COVER AND FRAME.
(2) DRIVES UP TO 150mm DIAMETER.
(3) A LARGER CLEAR OPENING COVER MAY BE USED IN CONJUNCTION WITH A RESTRICTED ACCESS. THE SIZE IS RESTRICTED FOR HEALTH AND SAFETY REASONS TO ODER ENTRY.

MINIMUM DIMENSIONS FOR MANHOLES					
TYPE OF ACCESS	SIZE OF LARGEST PIPE (DN)	MINIMUM INTERNAL DIMENSIONS (m)		MINIMUM CLEAR OPENING SIZE (m)	
		RECTANGULAR LENGTH x WIDTH (mm x mm)	CIRCULAR DIAMETER (mm)	RECTANGULAR LENGTH x WIDTH (mm x mm)	CIRCULAR DIAMETER (mm)
MANHOLE LESS THAN 1.5m DEEP TO SOFT	LESS THAN OR EQUAL TO 150	750 x 675 (7)	1000 (7)	750 x 675 (7)	N/A (7)
	225	1200 x 675	1200	1200 x 675 (7)	
	300	1200 x 750	1200		
	GREATER THAN 300	1800 x (DN+450)	THE LARGER OF 1800 or (DN+450)		
MANHOLE GREATER THAN 1.5m DEEP TO SOFT	LESS THAN OR EQUAL TO 225	1200 x 1000	1200	800 x 600	600
	300	1200 x 1075	1200		
	375-450	1300 x 1225	1200		
	GREATER THAN 450	1800 x (DN+775)	THE LARGER OF 1800 or (DN+775)		
MANHOLE SHIRT (1) GREATER THAN 3.0m DEEP TO SOFT OF PIPE	STEPS (2)	1050 x 800	1050	600 x 600	600
	LADDERS (2)	1200 x 800	1200		
	WINCH (2)	900 x 800	900		

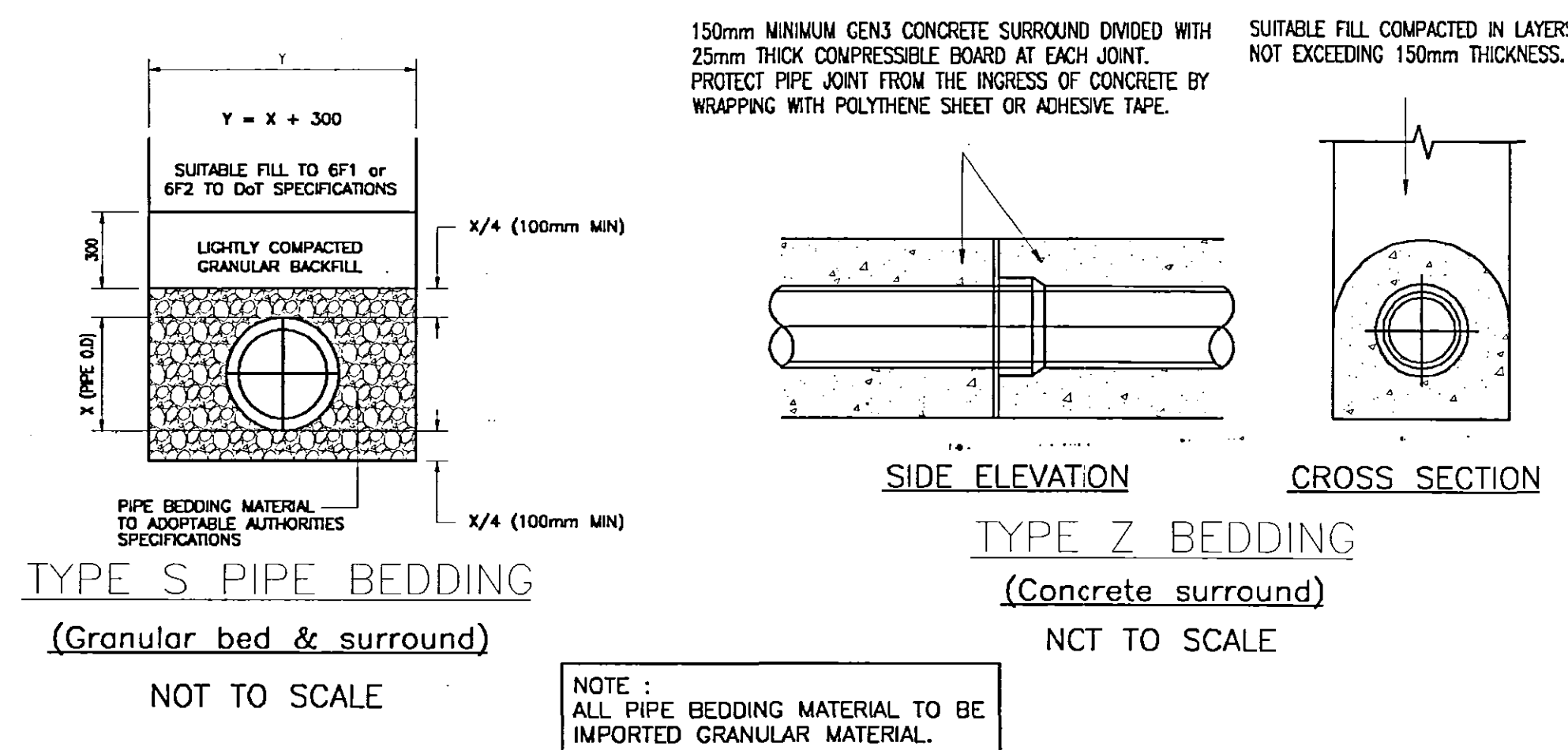
NOTES:
(1) LARGER SIZES MAY BE REQUIRED FOR MANHOLES ON BONDS OR WHERE THERE ARE JUNCTIONS.
(2) MAY BE REDUCED TO 800mm WHERE REQUIRED BY HIGHWAY LOADING CONSIDERATIONS, SUBJECT TO A SAFE SYSTEM OF WORK BEING SPECIFIED.
(3) NOT APPLICABLE DUE TO WORKING SPACE NEEDED.
(4) MINIMUM HEIGHT OF CHAMBER IN SHIRTED MANHOLE 2m FROM BENCHING TO UNDERSIDE OF REDUCING SLAB.
(5) MINIMUM CLEAR SPACE BETWEEN LADDERS OR STEPS AND THE OPPOSITE FACE OF THE SHIRT SHOULD BE APPROXIMATELY 800mm.
(6) WINCH ONLY – NO STEPS OR LADDERS, PERMANENT OR REMOVABLE.
(7) THE MINIMUM SIZE OF ANY MANHOLE SERVING A SEWER (i.e. ANY DRAIN SERVING MORE THAN ONE PROPERTY) SHOULD BE 1200x750mm RECTANGULAR OR 1200mm DIAMETER.



TYPICAL ROAD GULLY DETAIL
SCALE 1:25



TYPICAL CONCRETE MANHOLE DETAIL
SCALE 1:25



TYPE S PIPE BEDDING
(Granular bed & surround)
NOT TO SCALE

TYPE Z BEDDING
(Concrete surround)
NCT TO SCALE

PERMITTED PIPE/BEDDING TYPES		
PIPE BEDDING	DEPTH OF COVER BELOW ROADS	
	1.2m-3.5m	1.2m-3.5m
PIPE TYPE	TYPE S	TYPE S
	CONCRETE CLASS M TO BS:5911	VITRIFIED CLAY TO BS:65, WITH FLEXIBLE JOINTS SUPER STRENGTH CLASS FOR 225 AND 300mm, EXTRA STRENGTH CLASS FOR ALL OTHER SIZES.
0.9m-1.2m	TYPE S + 150 JONC. SLAB	TYPE Z
	CONCRETE CLASS M TO BS:5911 AND VITRIFIED CLAY TO BS:65	CONCRETE CLASS M TO BS:5911 AND VITRIFIED CLAY TO BS:65

REMOVABLE STOPPER OR CAP FOR RODDING ACCESS

SEE PRIVATE MANHOLE DETAIL FOR CONSTRUCTION DETAILS
TYPICAL DETAIL OF EXTERNAL
BACKDROP MANHOLE
NOT TO SCALE

NOTES

- 1) ALL BUILDING DRAINAGE TO BE INSTALLED AND TESTED IN COMPLIANCE WITH THE BUILDING REGULATIONS 2000 DRAINAGE AND WASTE DISPOSAL APPROVED DOCUMENT H 2002 EDITION.
- 2) ALL COMPONENTS AND MATERIALS ARE TO BE MANUFACTURED AND SUPPLIED IN ACCORDANCE WITH THE RELEVANT BRITISH STANDARDS, AND LAD AND BACKFILLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND THE RELEVANT BRITISH STANDARDS.
- 3) THE CONTRACTOR SHALL, BEFORE COMMENCING THE WORKS, VERIFY ALL SITE AND SETTING OUT DIMENSIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TRUE AND PROPER SETTING OUT OF THE WORKS AND FOR THE CORRECTNESS OF THE POSITION, LEVELS, DIMENSIONS AND ALIGNMENT OF ALL PARTS OF THE WORKS.
- 4) SMALL LIGHTWEIGHT ACCESS COVERS SHOULD BE SECURED (FOR EXAMPLE WITH SCREWS) TO DETER UNAUTHORISED ACCESS.
- 5) INSPECTION CHAMBERS AND MANHOLES IN BUILDINGS TO HAVE MECHANICALLY FIXED AIRTIGHT COVERS UNLESS THE DRAIN ITSELF HAS WATERTIGHT ACCESS COVERS.
- 6) MANHOLES DEEPER THAN 1m TO HAVE GALVANISED STEEL STEP IRONS OR FIXED LADDERS.
- 7) ALL ABOVE GROUND DRAINAGE TO INCORPORATE RODDING ACCESS FACILITIES.
- 8) IN SITU CONCRETE FOR USE IN GENERAL DRAINAGE WORKS, GRADE TO BS: 5328, USE AS FOLLOWS:

CLASS 1 SULFATE CONDITIONS	
ADAPTABLE STANDARD WORKS AND AREAS SUBJECT TO HEAVY LOADING	GEN 3 or ST4
AREAS SUBJECT TO LIGHT LOADING eg: HOUSING AND PRIVATE DRIVES, SMALL CAR PARKS.	GEN1 or ST2
FOR BURIED CONCRETE EXPOSED TO OTHER SULFATE CONDITIONS:	
CLASS 2	FND 2
CLASS 3	FND 3
CLASS 4A	FND 4A
CLASS 4B	FND 4B

SHDC
PLANNING & DEVELOPMENT
22 NOV 2006
Ref. 161106

B 18.09.06 Car-park and gully detail added.
A 17.09.06 Backdrop and Manhole Type G detail added.

REV DATE REMARKS
STATUS PRELIMINARY

SRC SIDEBOTTOM RICHARDSON CHENG LTD
CONSULTING STRUCTURAL AND CIVIL ENGINEERS
PROJECT Residential Development
Double Street
Spalding

TITLE Drainage Details
Sheet 1 of 2

DATE July 2005 SCALE 1:25
DRAWN SRC CHECKED
DESIGN FILENAME 22-04-002

DRG No. 22306/002 REV B