

FIGURE B.12
TYPICAL MANHOLE DETAIL – TYPE 2
Maximum depth from cover level to soffit of pipe 3.0 m

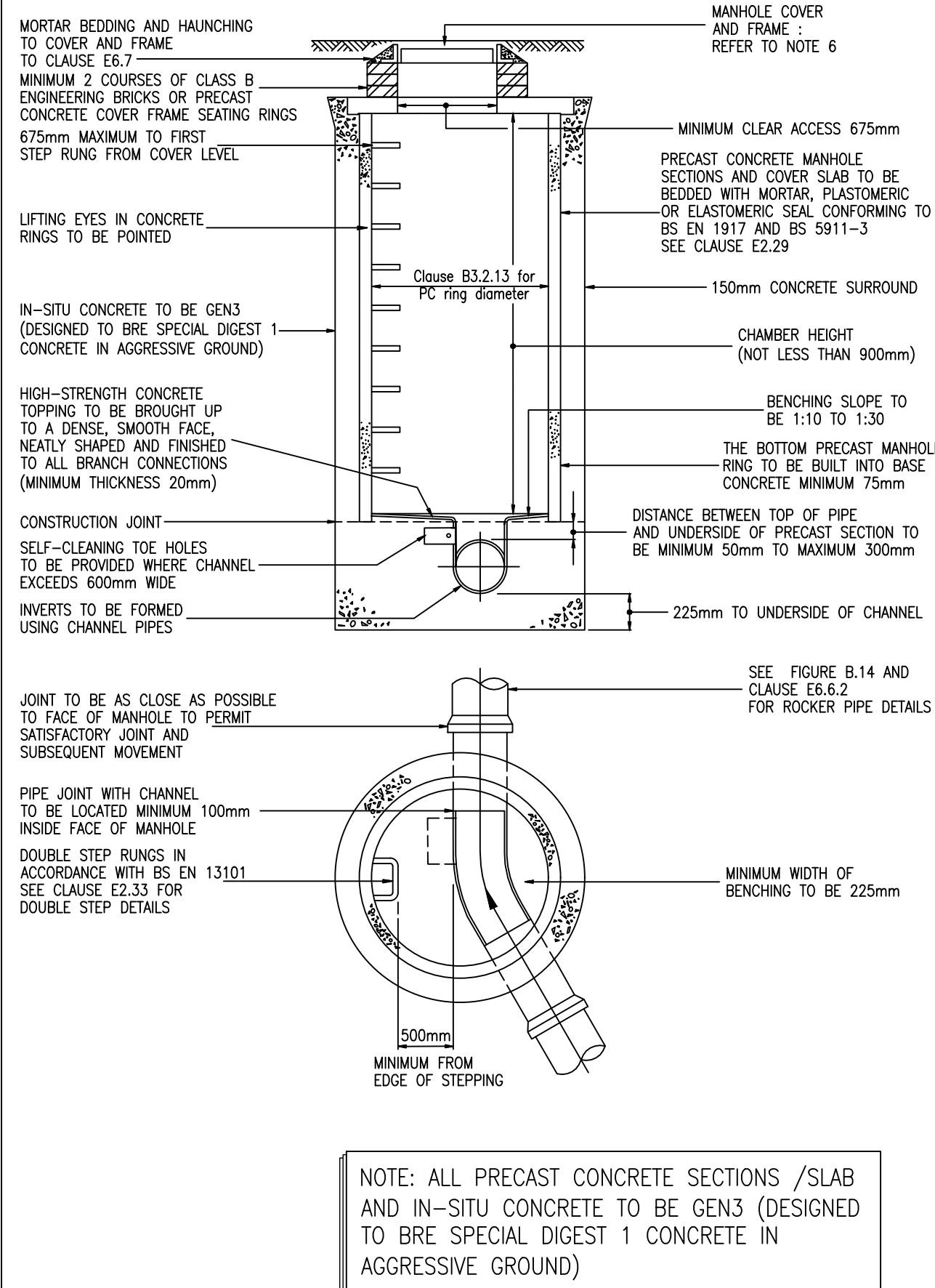
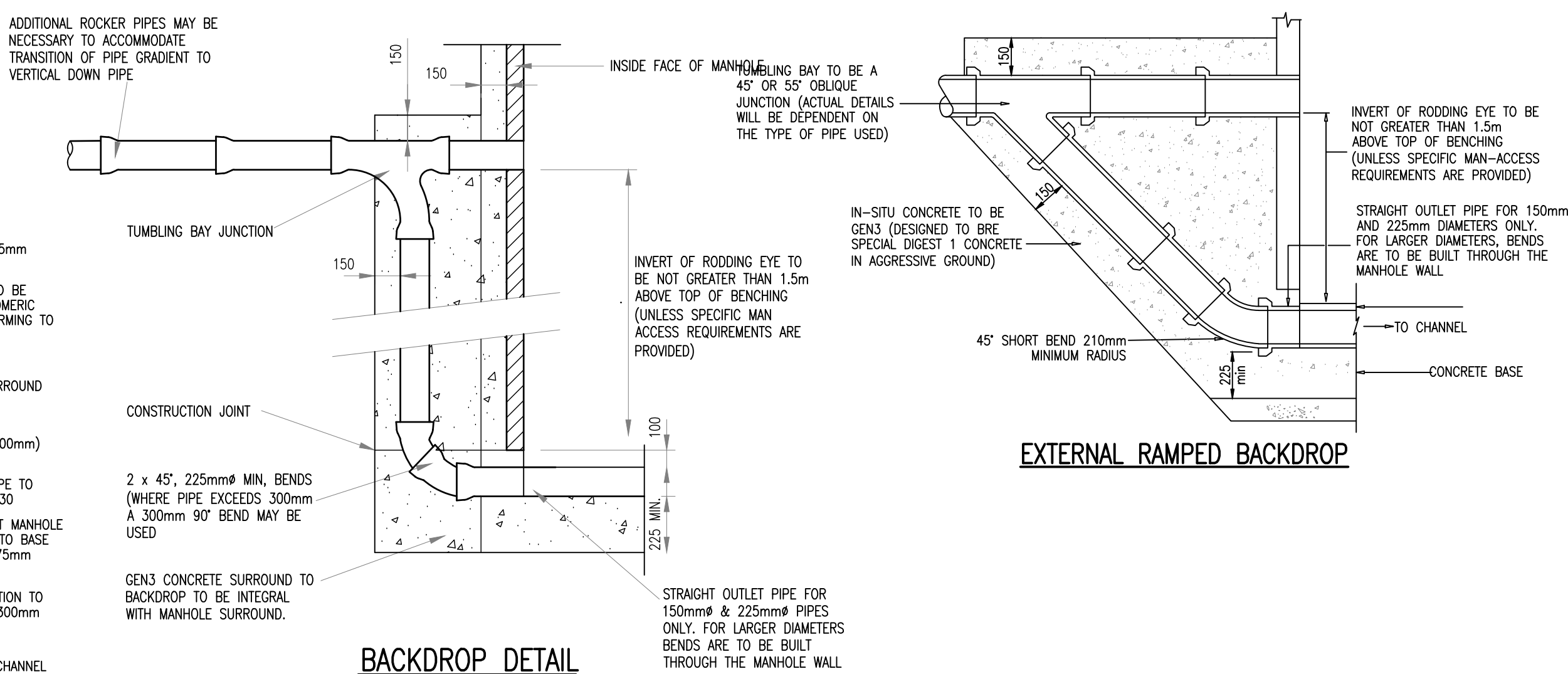
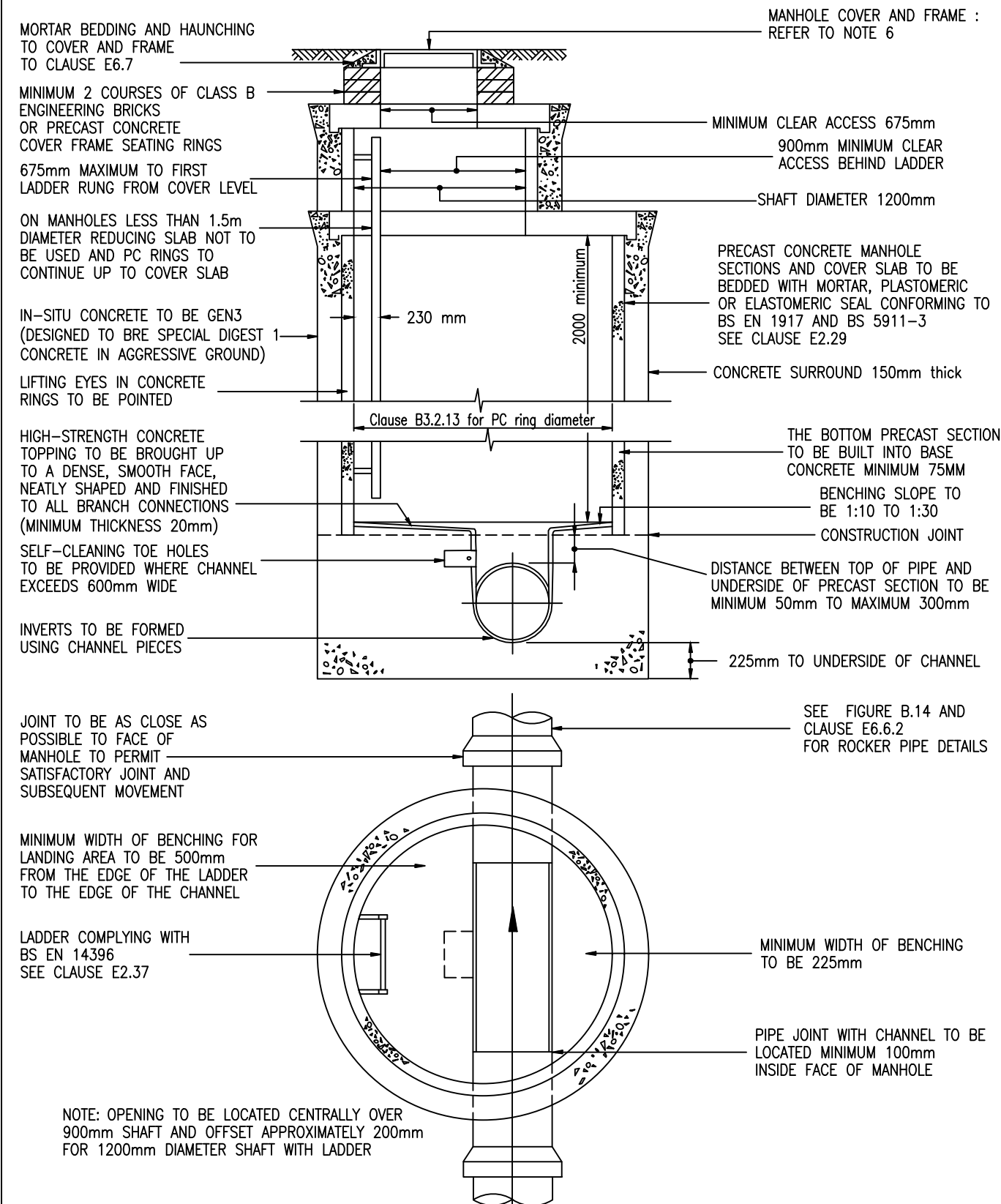


FIGURE B.8
TYPICAL MANHOLE DETAIL – TYPE 1A
Depth from cover level to soffit of pipe 3 m to 6 m

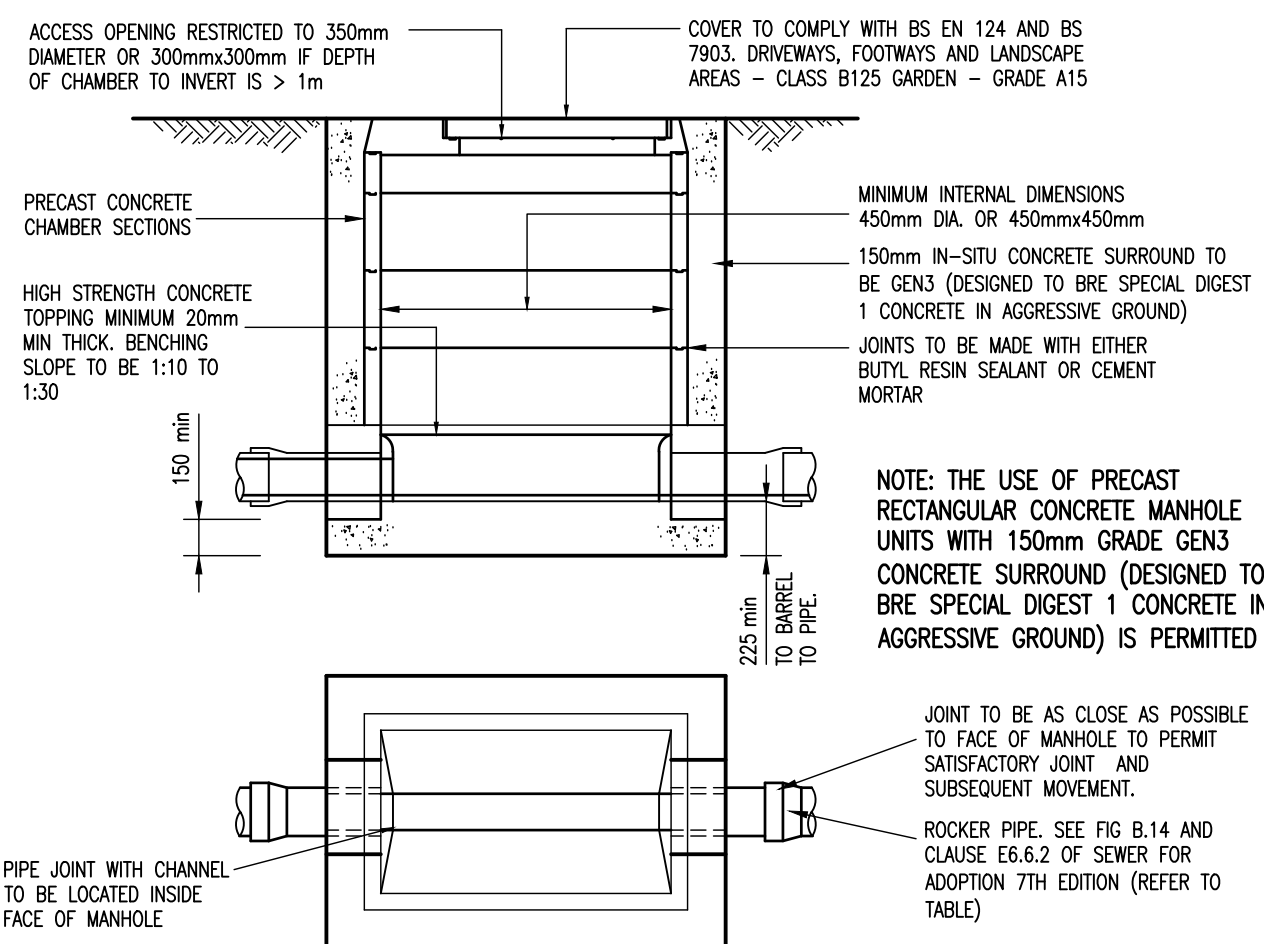


BACKDROP DETAIL

DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)
LESS THAN 375	1200
375 - 450	1350
500-700	1500
750-900	1800
GREATER THAN 900	DIAMETER + 900

NOMINAL DIAMETER (mm)	ROCKER PIPE EFFECTIVE LENGTH (m)
150 – 600	0.60
601 – 750	1.00
OVER 750	1.25

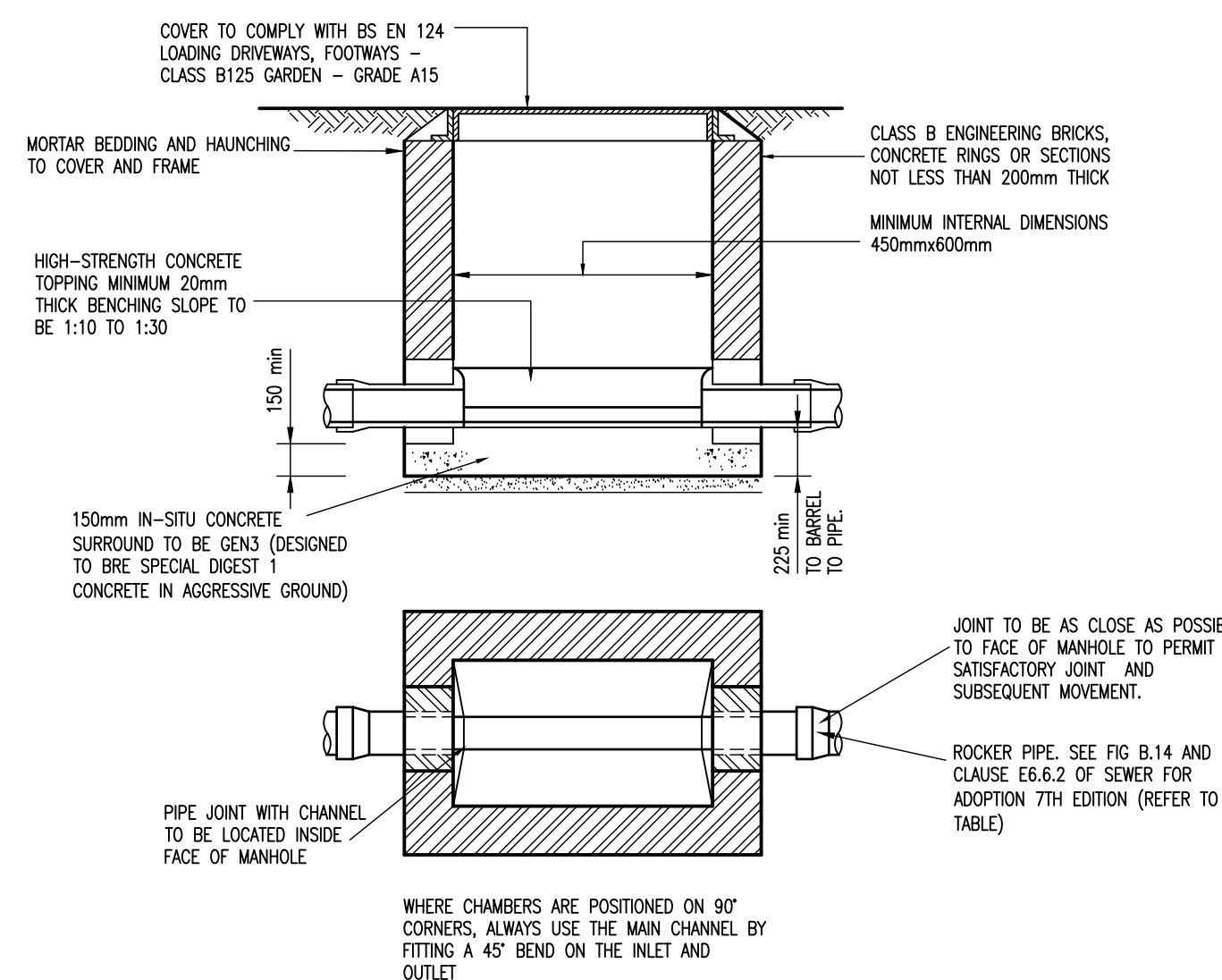
NOTE: DIAMETER TO BE INCREASED BY ONE SIZE FOR MANHOLES WITH LARGE NUMBERS OF CONNECTIONS



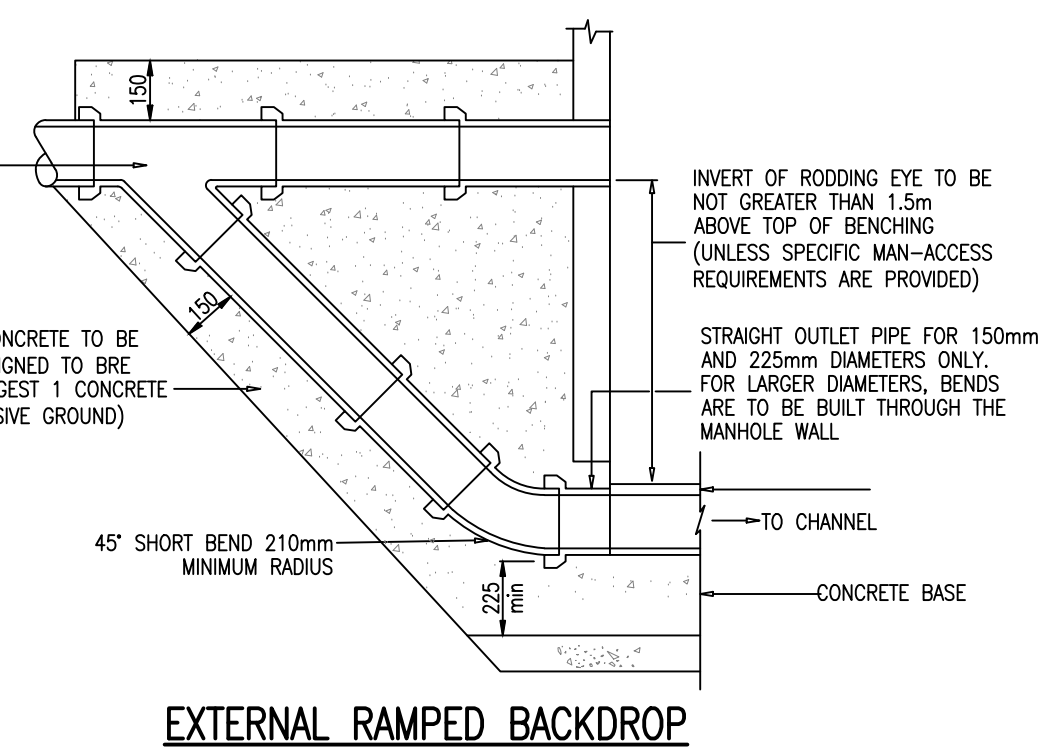
TYPICAL INSPECTION CHAMBER DETAIL – TYPE 3 (RIGID MATERIAL DETAIL)

Depth from ground level to soffit of pipe Max. 3.0m for areas not subject to vehicle loading or areas subject to light vehicle loading, non-entry

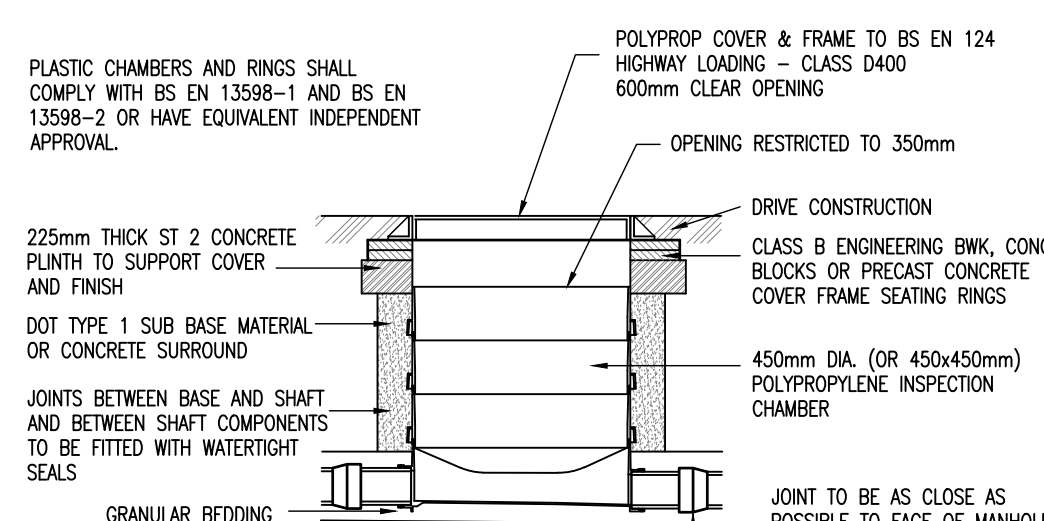
TYPICAL MANHOLE DETAILS WITHIN THIRD PARTY AREAS IN
ACCORDANCE TO SEWERS FOR ADOPTION 7th EDITION



TYPICAL INSPECTION CHAMBER DETAIL – TYPE 4 (RIGID MATERIAL)
MAX. DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 1.0m,
NON-ENTRY

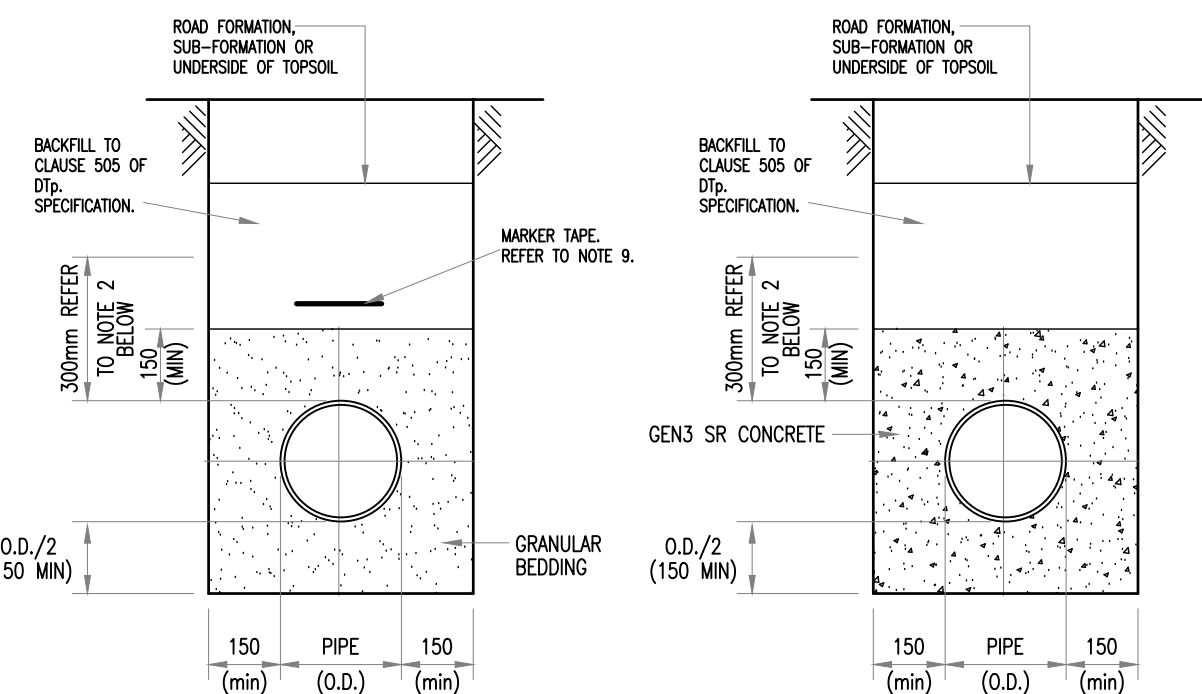


EXTERNAL RAMPED BACKDROP



TYPICAL INSPECTION CHAMBER DETAIL - TYPE 3
(FLEXIBLE MATERIAL DETAIL)

Depth from ground level to soffit of pipe Max. 3.0m
for areas subject to vehicle loading, Non-entry

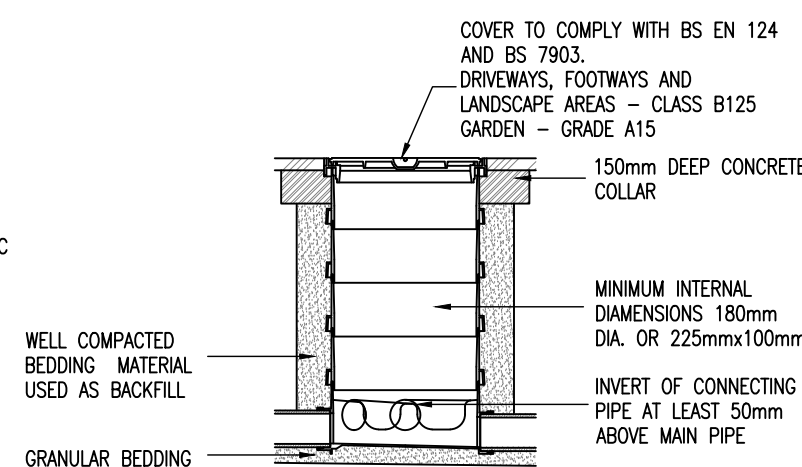


CLASS S GRANULAR

NOTES:

1. BEDDING BENEATH AND AT THE SIDES OF THE PIPE TO BE WELL COMPACTED
2. THE FIRST 300mm OF FILL ABOVE THE CROWN OF THE PIPE IS TO BE LIGHTLY TAMPED BY HAND. MECHANICAL COMPACTION MAY BE USED ONLY ABOVE THIS LEVEL
3. GEOTEXTILES MAY BE USED WHERE DIRECTED OR APPROVED BY THE ENGINEER TO CONTAIN BEDDING MATERIAL IN CERTAIN SOILS e.g. RUNNING SAND
4. IN VERY WET CONDITIONS, WHERE DIRECTED OR APPROVED BY THE ENGINEER A TEMPORARY LAND DRAIN MAY BE LAID WITHIN THE GRANULAR BED.

BEDDING DETAILS



**TYPICAL INSPECTION CHAMBER DETAIL -
TYPE 4 (FLEXIBLE MATERIAL)
MAX. DEPTH FROM COVER LEVEL TO
SOFFIT OF PIPE 2.0m, NON-ENTRY
(Sited in driveway/paved areas)**

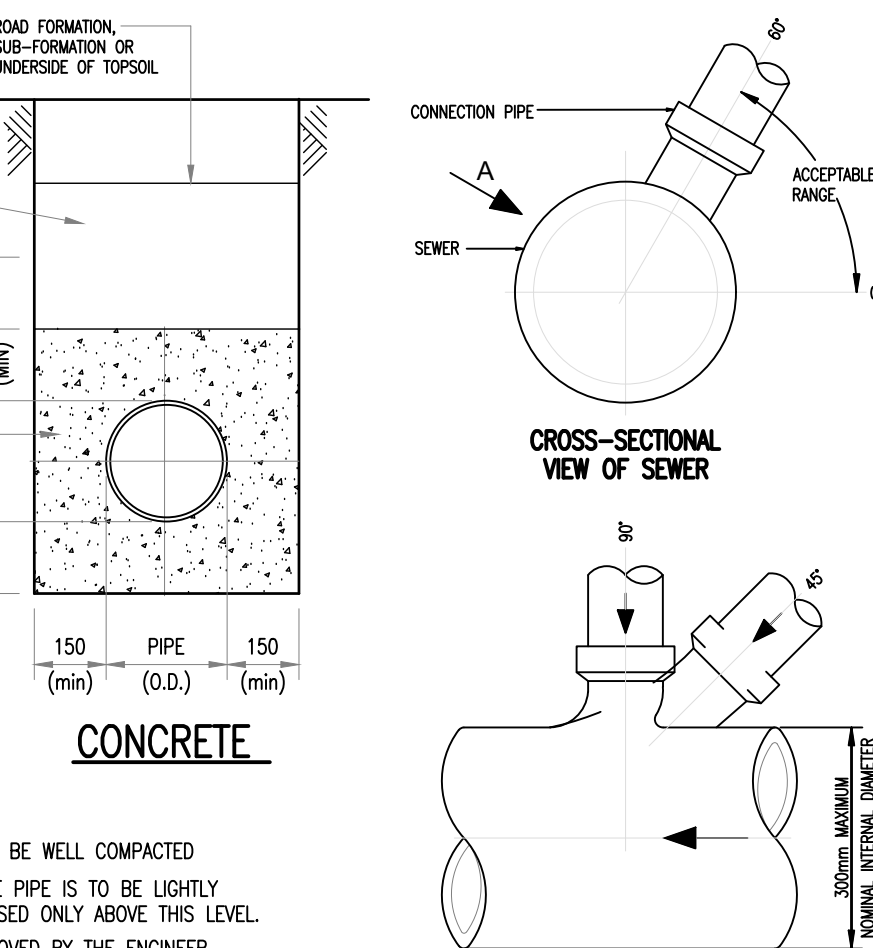
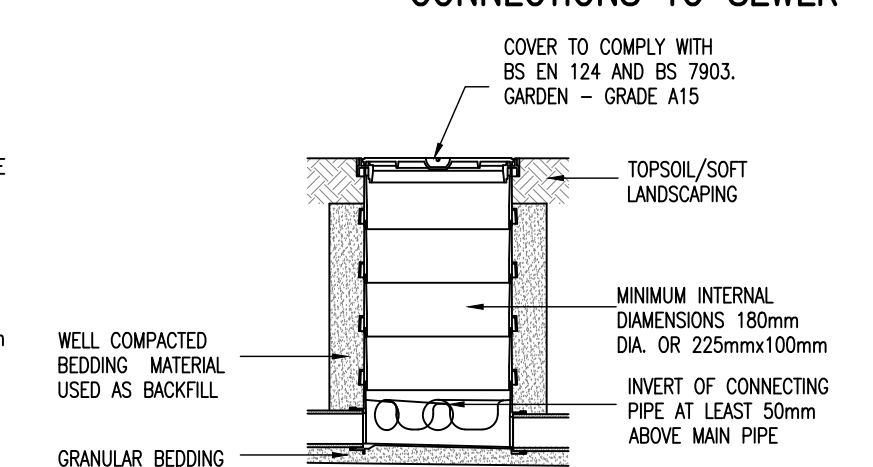


FIGURE B.24
CONNECTIONS TO SEWER

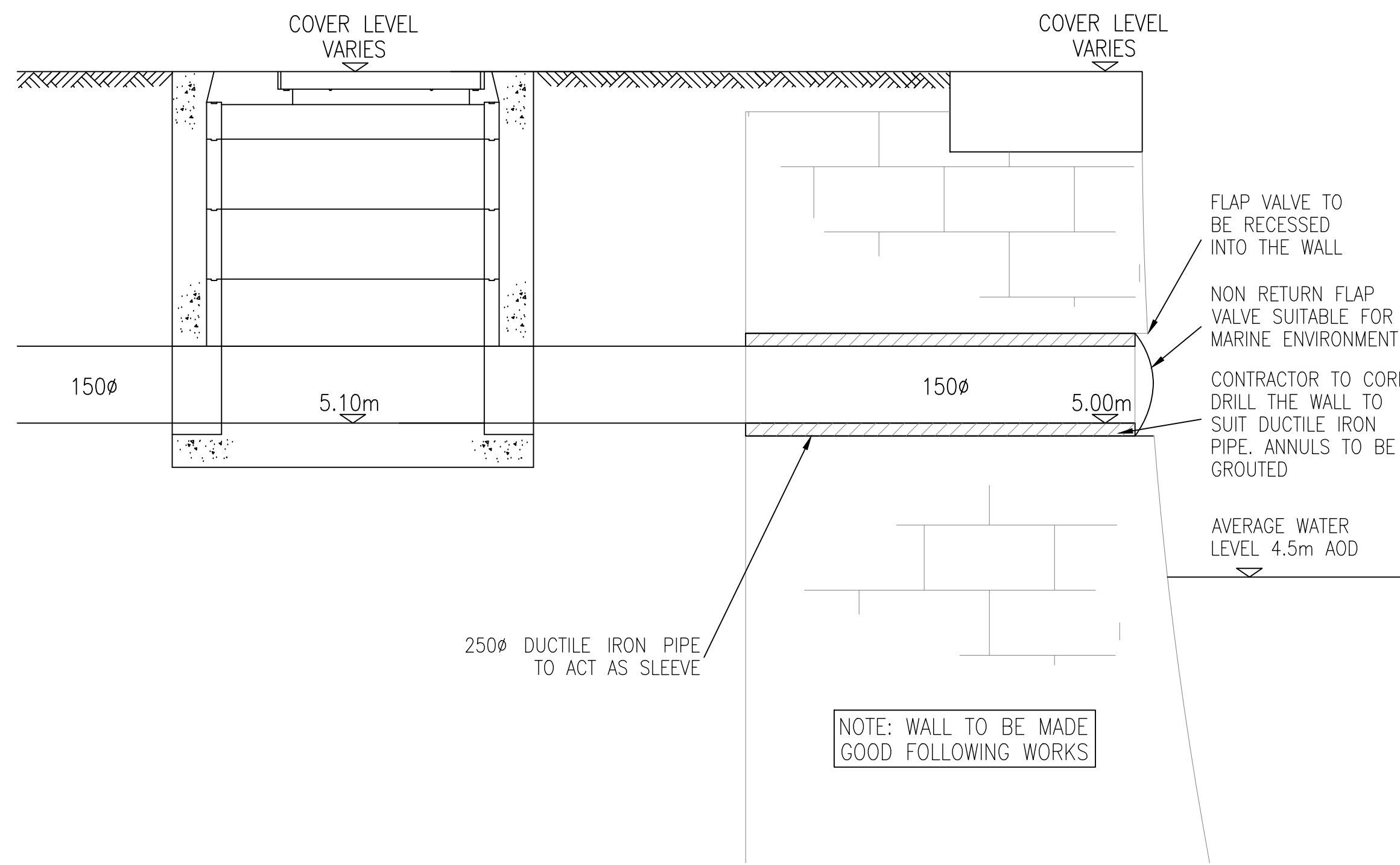


TYPICAL INSPECTION CHAMBER DETAIL –
TYPE 4 (FLEXIBLE MATERIAL)
MAX. DEPTH FROM COVER LEVEL TO SOFFIT
OF PIPE 2.0m, NON-ENTRY
(Sited in gardens areas)

- GENERAL NOTES:

1. THE PLANNING, DESIGN AND CONSTRUCTION OF SEWERS SHALL BE IN ACCORDANCE WITH SEWERS FOR ADOPTION 7TH EDITION.
2. THE MINIMUM SIZE OF SEWER WHERE GUIDE BARS, SAFETY CHAINS, OR OTHER SAFETY DEVICES ARE REQUIRED IN MANHOLES SHALL BE 375mm DIAMETER.
3. ALL TYPE 1 AND 2 MANHOLES SHOULD HAVE A CONCRETE SURROUND. CONCRETE RINGS SHALL BE SEALED USING "TOKSTIP" AND LIFTING EYES POINTED WITH RESIN MODIFIED MORTAR.
4. COMPLIANCE WITH HEALTH AND SAFETY MATTERS ON ANY TRENCH/MANHOLE IS OBLIGATORY AND A PERMIT TO ENTER A CONFINED SPACE IS REQUIRED WHEN CONNECTING SITE DRAINAGE TO THE EXISTING PUBLIC SEWERAGE SYSTEM, A PERMIT TO ENTER A CONFINED SPACE WILL BE OBTAINED FROM DOW PRIOR TO WORKS COMMENCING ON ANY PUBLIC SEWERAGE SYSTEM.
5. WHERE THE PROPOSED SITE DRAINAGE CONNECTS TO THE PUBLIC SEWERAGE SYSTEM EITHER AT A NEW JUNCTION, NEW MANHOLE OR AT AN EXISTING MANHOLE OR AT AN EXISTING MANHOLE, IT WILL REQUIRE THE SUBMISSION OF AN APPLICATION FOR SEWER CONNECTIONS FORM DCWW PRIOR TO WORKS COMMENCING.
6. MH COVERS AND FRAMES SHALL BE DUCTILE IRON WITH A MINIMUM SQUARE OPENING OF 675x675mm. COVERS SHALL BE DOUBLE TRIANGLE FOR 675mm square openings and SHALL COMPLY WITH LOOSE BOLTED CONNECTIONS. TYPICALLY FRAMES ARE 150mm DEEP BUT IN ALL CASES THE FRAMES SHALL COMPLY WITH SFA7.
7. PROPOSED ADULTLY SIZES ARE ONLY PERMITTED TO HAVE OTHER SEWER/GULLY CONNECTIONS AND OTHER SERVICES LAID AT AN ANGLE OF BETWEEN 45° AND 90° ACROSS THE LINE WITH A VERTICAL CLEARANCE IN EXCESS OF 300mm.
8. ALL IRONWORK TO BE KITE MARKED BY BSI OR CERTIFIED BY EQUIVALENT INSPECTION AUTHORITY.
9. RED COLOURED PLASTIC MARKER TAPE AT LEAST 150mm WIDE SHALL BE LAID AT A MINIMUM OF 200mm ABOVE THE SOFFIT OF THE PIPE. THE TAPE SHALL BE PRINTED WITH THE WORDS "GRAVITY SEWER" IN BOLD CAPITAL LETTERS THROUGHOUT ITS LENGTH AND AT INTERVALS NOT EXCEEDING 700mm AND SHALL INCORPORATE A CORROSION RESISTANT TRACING SYSTEM FOR NON-METALLIC PIPES.
10. ALL WORKS TO BE ADOPTED UNDER THE SECTION 104 AGREEMENT SHALL BE INSPECTED BY DOW IN ACCORDANCE WITH THEIR REQUIREMENTS (FOUL AND SURFACE WATER SEWERS)
11. ALL WORKS TO BE ADOPTED UNDER THE SECTION 38 AGREEMENT SHALL BE INSPECTED BY YOGCC IN ACCORDANCE WITH THEIR REQUIREMENTS.
12. REFER TO LONGITUDINAL SECTIONS FOR DETAILS OF PIPE SIZES, INVERT LEVELS, BEDDING, ETC.
13. SUBJECT TO DRAINAGE AUTHORITY APPROVAL PLASTIC PIPES FOR GRAVITY SEWER, 150mm - 300mm are to BE EITHER:-
 - HAPLEY TWINWALL SYSTEM
 - UPONOR ULTRABEST SYSTEM
 - OLSA ULTRABEST SYSTEM
 - POLYSUR TWINWALL SYSTEM
14. PLASTIC PIPES APPROVAL BY DCWW FOR LARGER DIAMETER GRAVITY SEWERS ARE:
 - POLYPIPE - RIGISEWER (400mm-600mm)
 - POLYPIPE - RIGIDSTORM XL (750mm-900mm)
15. ANY PROPOSED CHANGES TO THE MATERIAL MUST BE AUTHORISED BY DOW.
16. SULPHATE RESISTING PORTLAND CEMENT SHALL BE USED FOR ALL CONCRETE AND MORTARS HAVING EQUIVALENT COMPRESSIVE STRENGTH OF 20N/mm² OR GREATER (INCLUDING PRECAST CONCRETE PRODUCTS), UNLESS TESTS INDICATE OTHERWISE.
17. Foul water manholes to be badged "FW". Surface water

DRAINAGE DESIGN AND CONSTRUCTION
TO BE IN ACCORDANCE WITH SEWERS
FOR ADOPTION 7TH EDITION AND THE
REQUIREMENTS OF THE STATUTORY
SEWERAGE UNDERTAKER



TYPICAL SURFACE WATER OUTFALL DETAIL

A 27/08/20 TYPICAL SURFACE WATER OUTFALL DETAIL ADDED.

Project: Barry Waterfront, East Quay Housing Development

Client

Taylor Wimpey

Drawing: Sewer Construction Details

Scale: N.T.S. @ A1 Date: FEB 2020 Drawn by: J

Drawing No: 10225-S104-05-01


PHOENIX DESIGN
Partnership Ltd.

Unit 9, Westway Garage,
Marksbury, Bath, BA2 9HN
tel. 01761 479950

☐ Suite 7, Unit Three, Melin Corwyd
Business Park, Upper Boat, Pontypool
CF37 5BE. tel. 029 2049 0771

email.enquiries@phoenixdp.co.uk www.phoenixdp.co.uk

This drawing is the copyright of Phoenix Design Partnership Ltd. No liability will be accepted for amendments by others to either the printed or digital format.

Drg.Status: **FOR APPROVAL**