

- DRAINAGE NOTES:
- Do not scale.
 - Refer to all other Project Drawings and supporting notes.
 - All adoptable drainage works to be constructed as detailed in Design and Construction Guidance or as stipulated in the Water Authorities Addendum.
 - All public sewers are to be the subject of a Section 104 agreement of the Water Industry Act 1991.
 - Invert levels of existing manholes and sewers are to be checked on site before construction commences and results reported to engineers.
 - The Contractor is responsible for maintaining continuity of flow for all existing sewers within the site boundary and limit of works for the duration of the project.
 - All drainage ironworks to comply with BS EN124, and be stamped with BSI Kitemark. Covers to suit loading as below;
 - Carriageways and Roads - D400
 - Driveways and Verges - C250
 - Footways and Pedestrian Areas - B125
 - Gardens/Landscaping - A15
 - All sewer pipes up to and including 600mm diameter to be PVC-U to BS EN1401. All sewer pipes greater than 600mm diameter to be concrete pipes to BS EN1916.
 - All drainage shall be installed and tested strictly in accordance with the Manufacturers' printed instructions, BS EN 752, BS EN 1601, Local Water Authority requirements and the Building Regulations.
 - All bedding shall be Class S unless noted otherwise.
 - All trenches under existing and proposed public highways are to be backfilled with thoroughly compacted Type 1 granular sub-base material.
 - Drainage laid beneath roads and areas of vehicular access (car parking etc) with less than 1200mm of cover shall be encased in concrete bed and surround with associated movement joints. Drainage laid beneath paths, footways and pedestrian areas with less than 900mm of cover shall be similarly treated.
 - The use of precast concrete products made with sulphate resisting cement is mandatory, unless a laboratory report proves such precautions are not necessary.
 - All gully connections to use a minimum diameter pipe of 150mm and to be surrounded by a minimum of 150mm of grade C8/C10 concrete over its full length (which should not exceed 15m) and its connection to the carrier system.
 - All sewers to be abandoned must be surveyed to identify any lateral connections that are still live with any found to be reported to the Engineer.
 - All laterals to be 150mm laid at 1:100 (surface) or 1:80 (foul) unless otherwise stated.
 - All private drains to be 100mm diameter unless otherwise stated.
 - All foul and storm water drains which are not to be adopted as public sewers shall be in accordance with Document H of the Building regulations, together with NHBC Standards Chapter 5.3 and BS8301.
 - Where pipes pass through footings, retaining or screen walls, lintels to be provided over drains.
 - Where inverts are less than 0.6m deep inspection chambers (min dia. 190mm) or access fittings (225 x 100mm) to be used, elsewhere proprietary plastic, brick or pcc is to be used and sized in accordance with Table 11 of Document H of the Building Regulations (<0.6m to invert min DN300, >0.6m to invert min DN475).
 - All gullies connected direct to drains to be roddable.
 - Adequate precautions in accordance with Approved Document H and manufacturers' recommendations to be taken to protect drains (particularly plastic) at shallow depths.
 - Trees and shrubs of a large size or heavy canopy with a moderate or high water demand must not be planted within any sewer easement.
 - Where required 1m deep root barrier of an approved type to be installed vertically along the back edging kerb of all areas of footway/demarcation to protect from both proposed and future plantation.
 - First foul water ICs to be 750mm below FFL, unless noted otherwise.
 - Surface water ICs to be laid 600mm below external level, unless noted otherwise.
 - Rodding eyes to be laid 450mm below external level, unless noted otherwise.

ALL PIPE BEDDING TO BE CLASS 'S' GRANULAR SURROUND UNLESS NOTED OTHERWISE ON THE DRAWING

Rev	Date	First Issue	Description	LC	DS
A	04/25				



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Client

BLOOR HOMES

Project
HYDE END ROAD,
SHINFIELD

Title
FULL APPLICATION
DRAINAGE CONSTRUCTION
DETAILS SHEET 1

Status

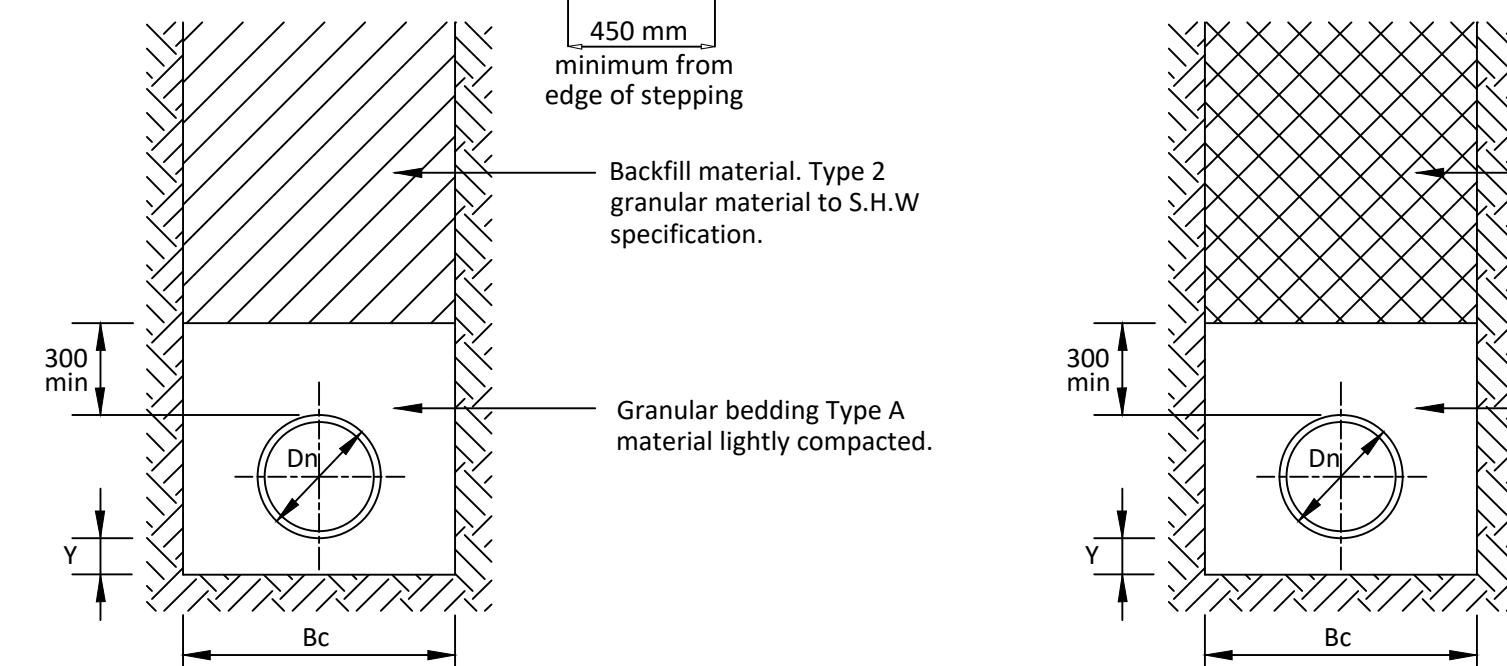
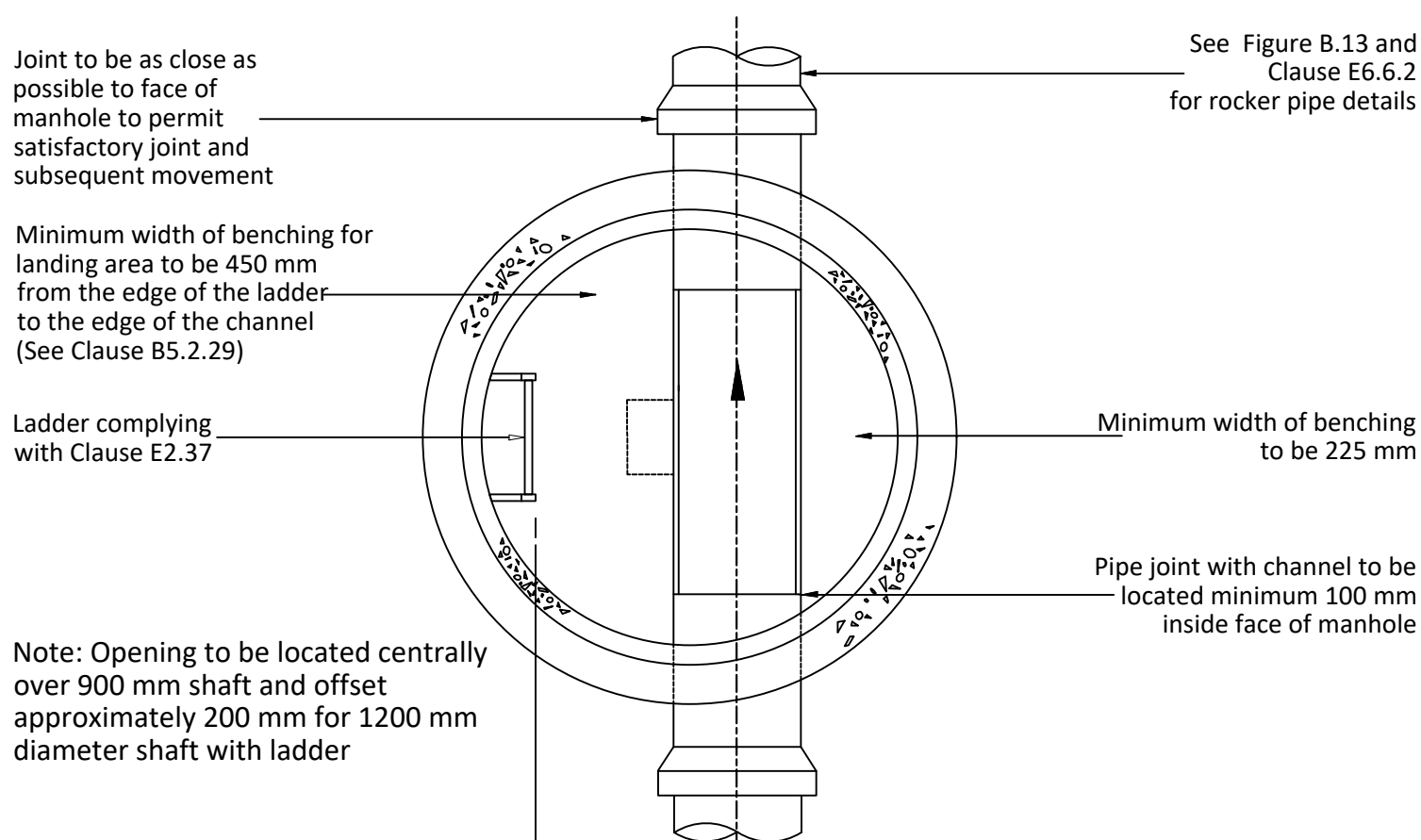
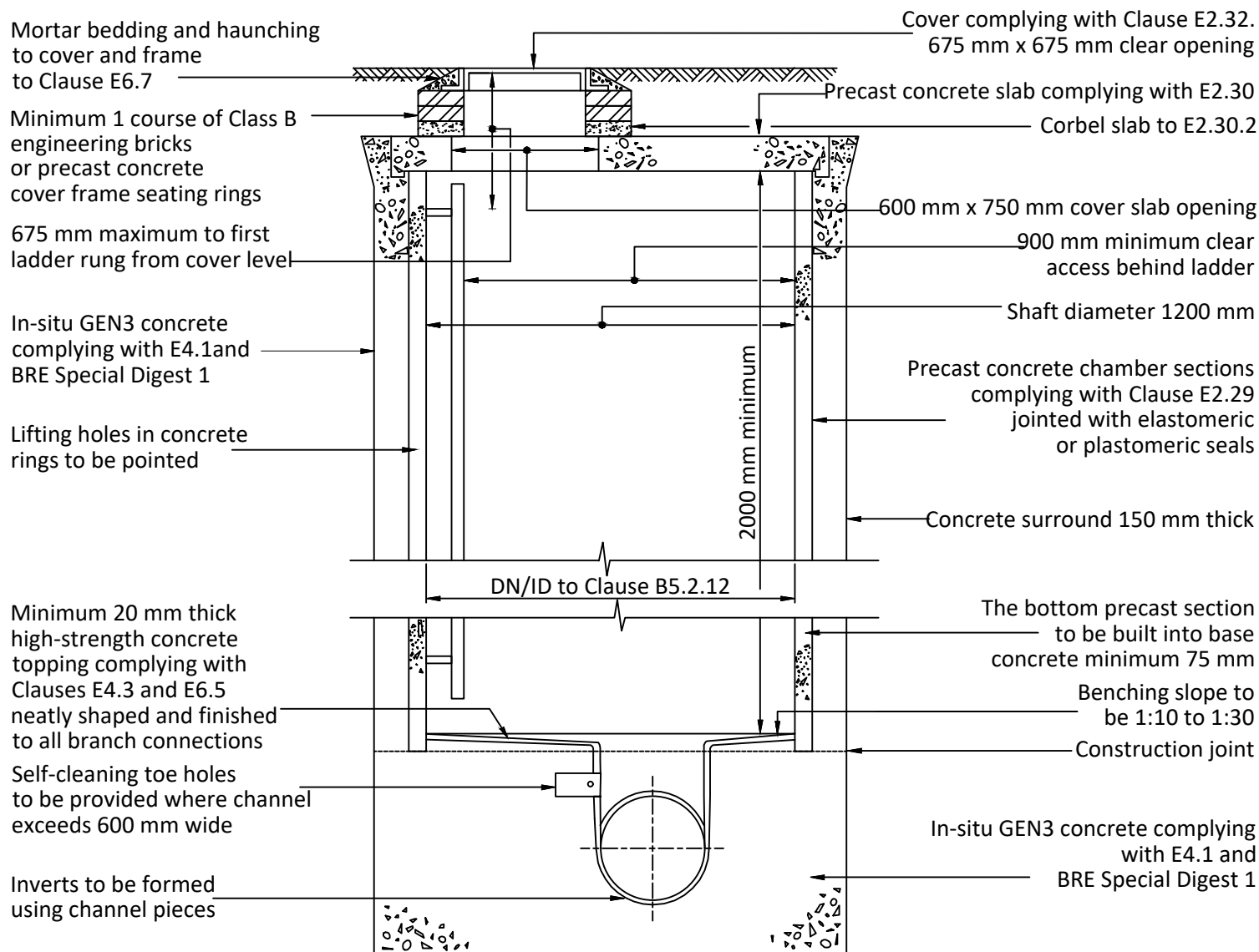
Scale	Date	Drawn	Checked
AS SHN @ A1	APR 2025	LC	DS

Drawing No.	Revision
HD068-FA-055	A

Figure B 7

Typical manhole cover - Type A2

Depth from cover level to soffit of pipe 3 m to 6 m with ladder
Alternative rigid material construction with concrete surround



CLASS S BEDDING

(On trafficked areas)

GRANULAR BEDDING

Nominal bore of pipe (mm)	Alternative Aggregate sizes (mm)	
	Single sized	Graded
100	10	-
150	10 or 14	14-5
225-300	14 or 20	14-5 or 20-5
375-525	14 or 20	14-5 or 20-5
>525	14, 20 or 40	14-5, 20-5 or 40-5

Granular bedding for pipes and backfilling material for temporary drains (trench sub-drains) shall consist of aggregates from natural sources to BS EN 12324 and BS EN 1744-1 or sintered pulverised fuel ash complying with the relevant provisions of BS 3892; sized in accordance with the above table

Selected fill material, whether selected from locally excavated material or imported, shall consist of uniform, readily compactable material, free from vegetable matter, building rubbish and frozen material, or materials susceptible to spontaneous combustion, and excluding clay of liquid limit greater than 80 and/or plastic limit greater than 55 and materials of excessively high moisture content. Clay lumps and stones shall be retained on 100mm and 40mm sieves respectively.

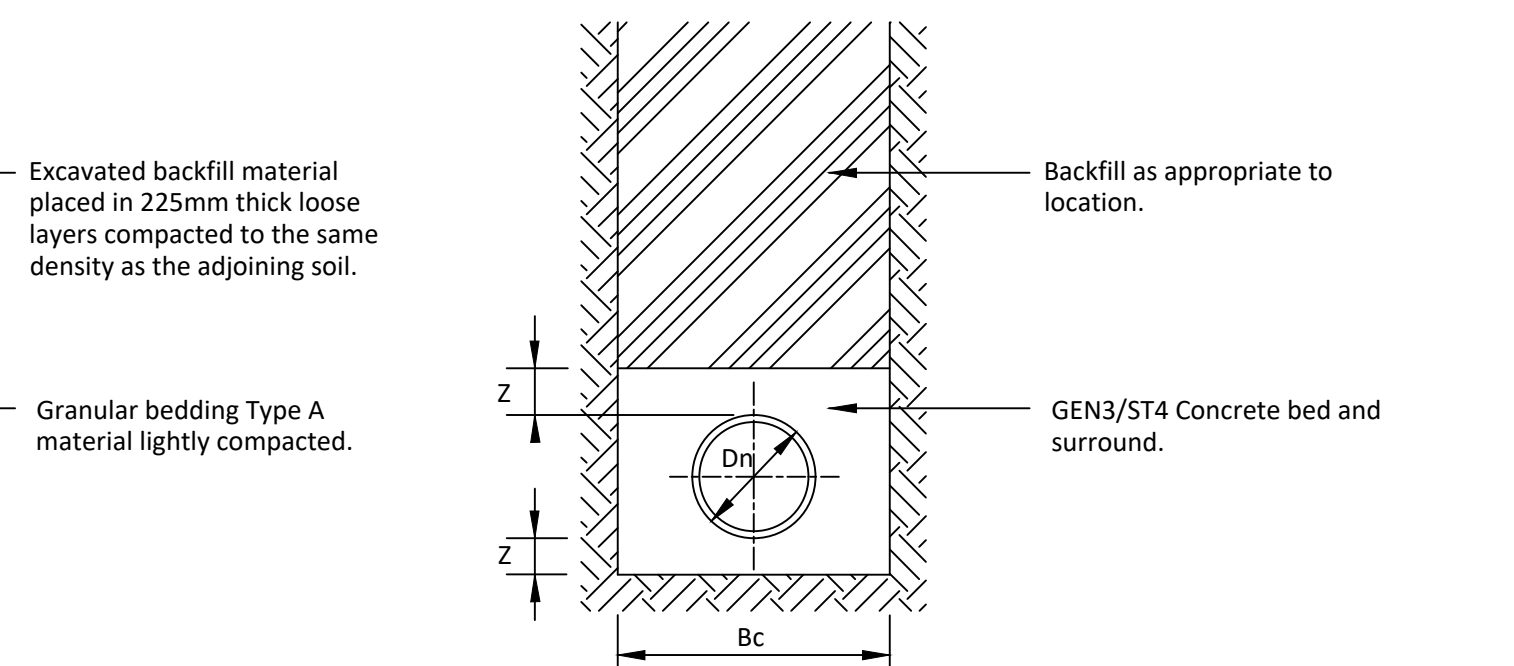
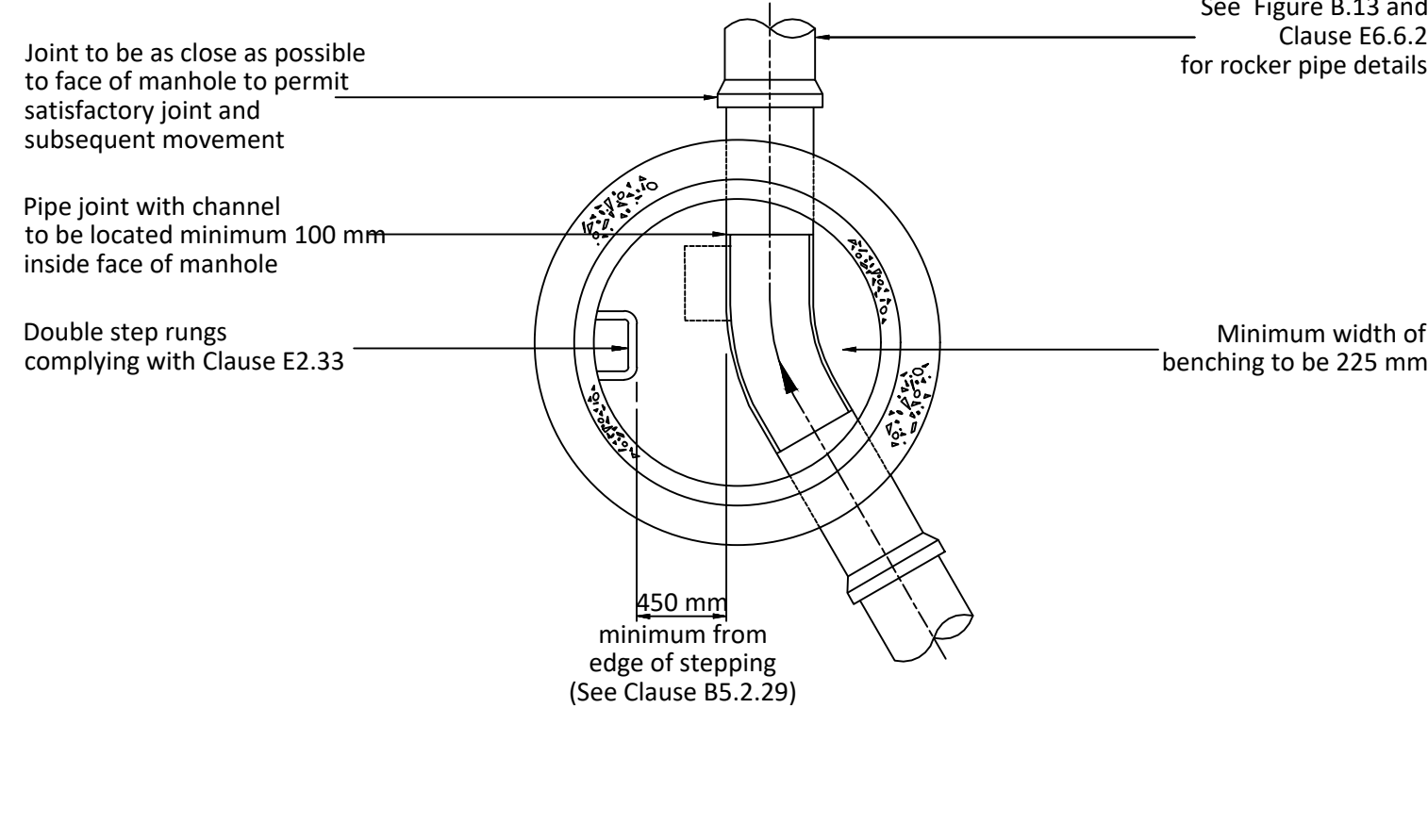
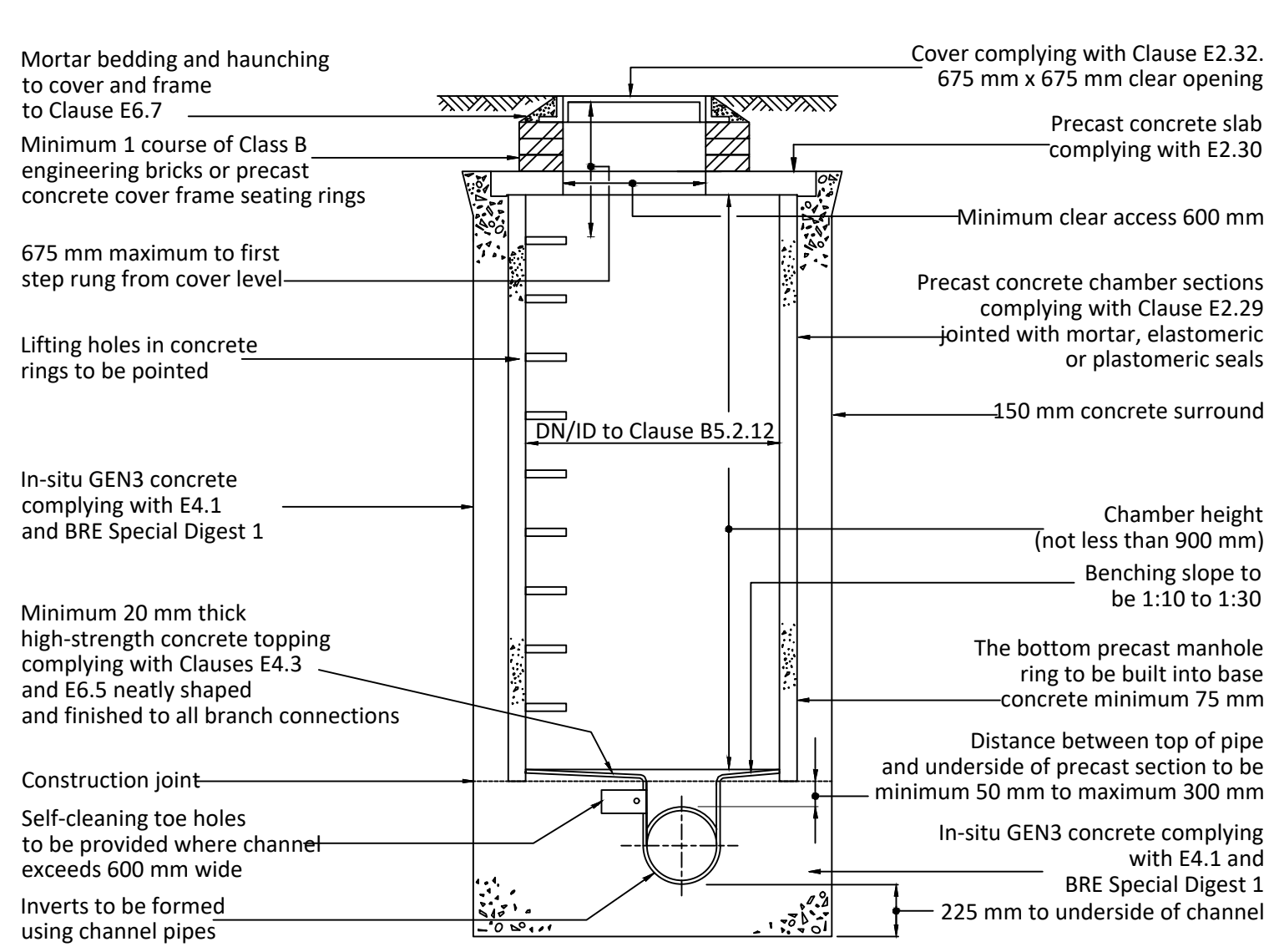
TRENCH WIDTHS & KEY DIMENSIONS

Dia Dn (mm)	Width Bc (mm)		Y(mm)		L(mm)	Z MIN (mm)
	Max	Min	Y1 (Uniform Soil)	Y2 (Rock)		
100	550	450	100	200	18	150
150	600	490	150	200		150
225	700	580	150	200		150
300	750	680	150	200	36	150
375	1050	950	150	200		150
450	1150	1030	150	200		150
525	1200	1120	150	200	54	150
600	1350	1240	150	200		150
675	1450	1330	150	200		225
750	1500	1400	150	200	72	225
825	1600	1490	150	225		225
900	2100	1900	150	225		225
975	2150	1950	175	250	90	300
1050	2250	2050	175	275		300
1200	2500	2250	200	300		300
OVER 1200	O.D.+1000	O.D.+800	I.D./6	I.D./4	54	400

Figure B 10

Typical manhole detail - Type B

Depth from cover level to soffit of pipe 1.5 m to 3.0 m
Alternative Rigid material construction with concrete surround



CLASS Z BEDDING

(Cover to pipe <1.2m or as specified)

GRANULAR BEDDING

Nominal bore of pipe (mm)	Alternative Aggregate sizes (mm)	
	Single sized	Graded
100	10	-
150	10 or 14	14-5
225-300	14 or 20	14-5 or 20-5
375-525	14 or 20	14-5 or 20-5
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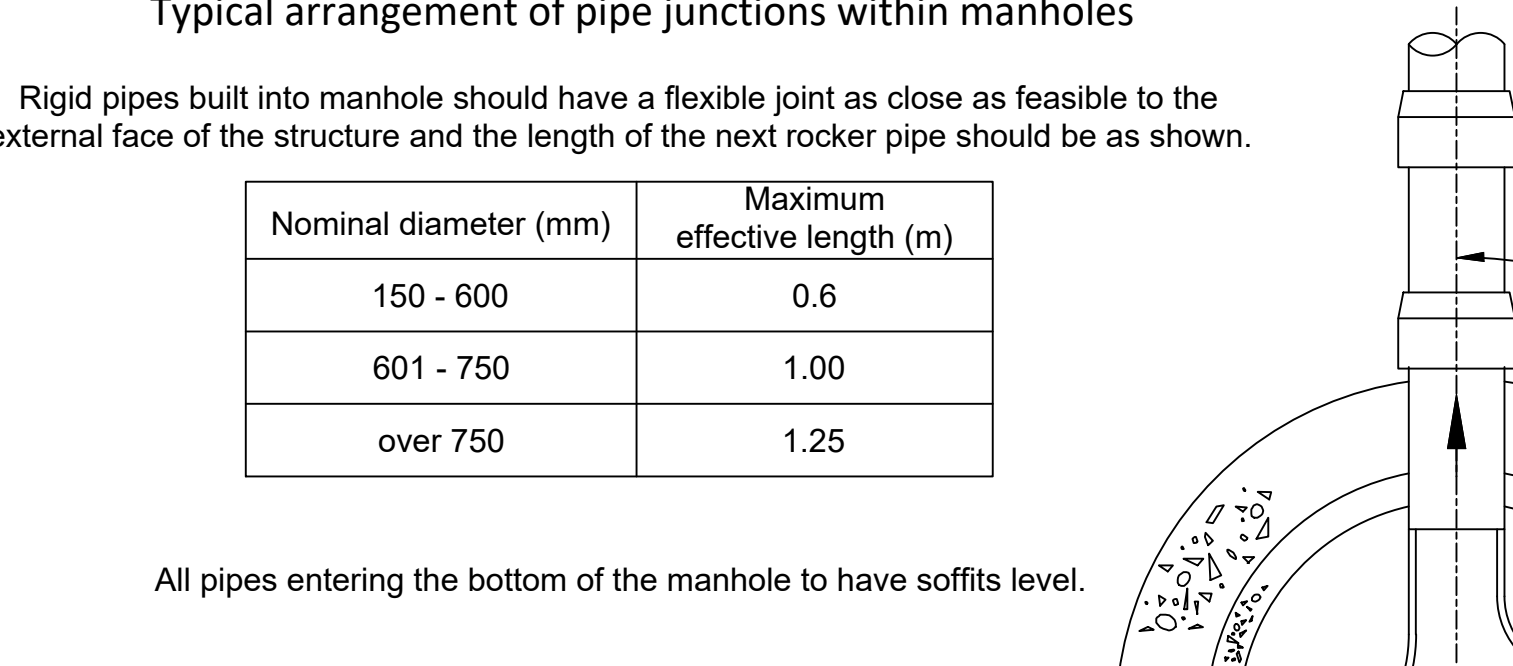
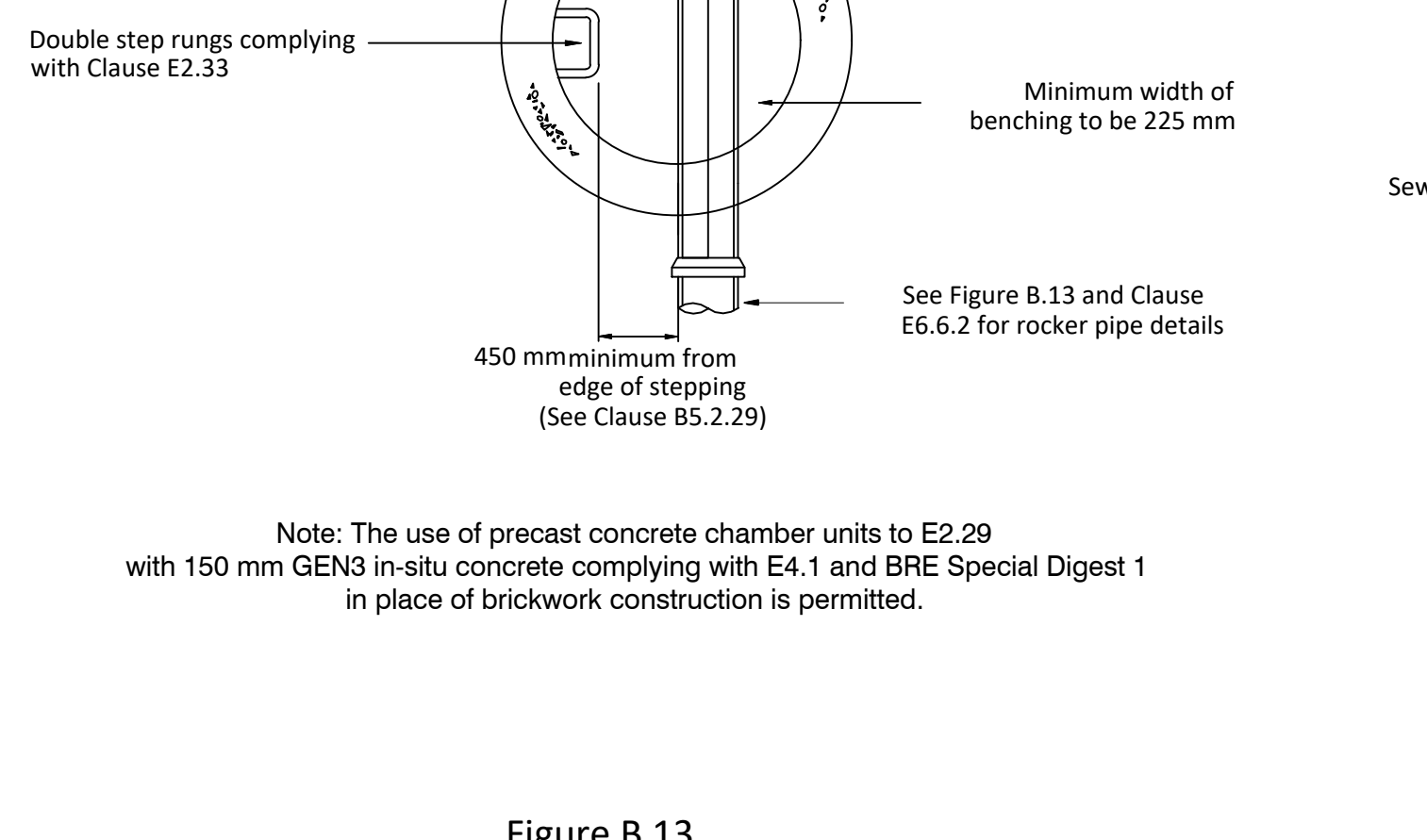
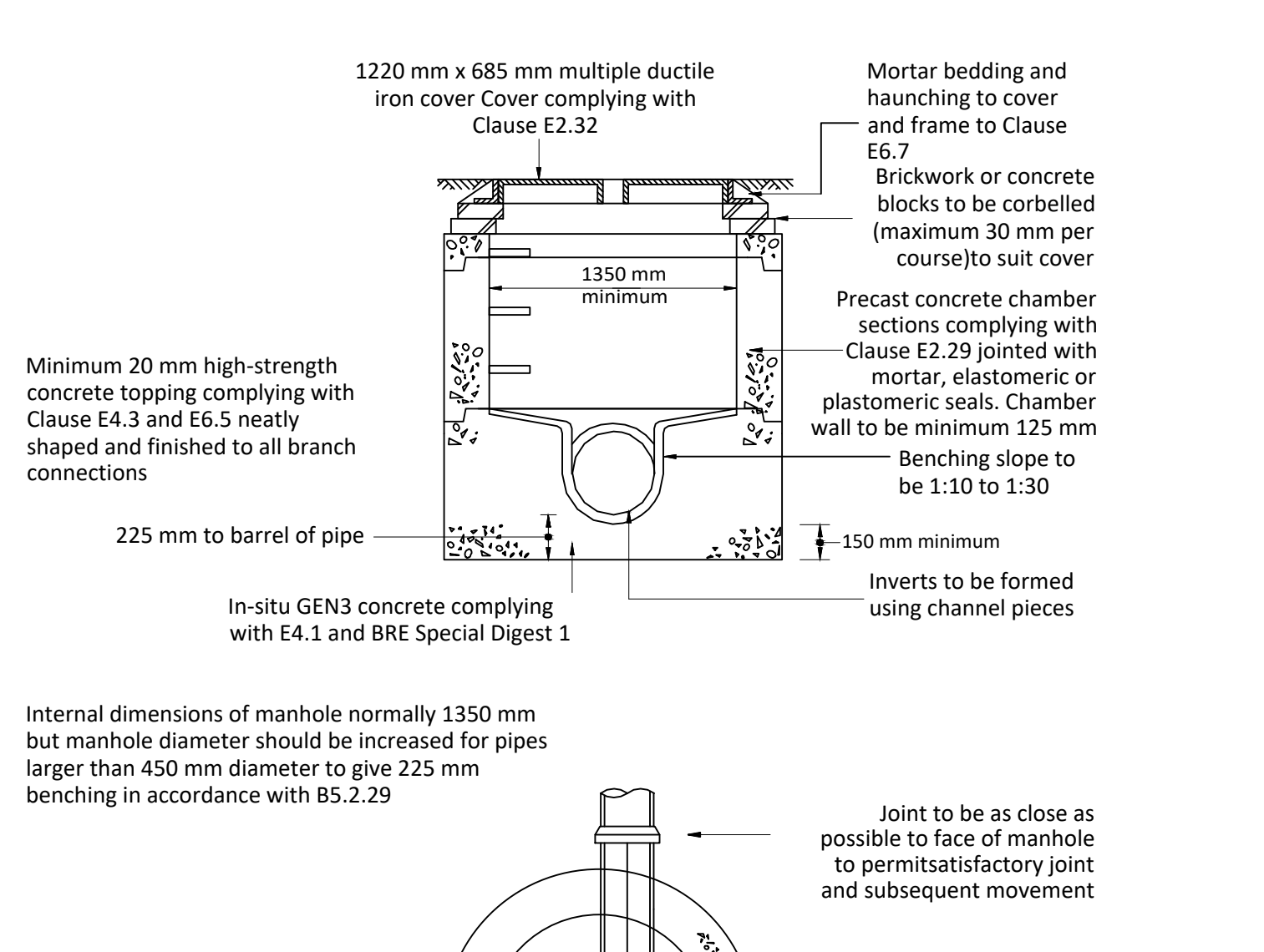
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Selected fill material, whether selected from locally excavated material or imported, shall consist of uniform, readily compactable material, free from vegetable matter, building rubbish and frozen material, or materials susceptible to spontaneous combustion, and excluding clay of liquid limit greater than 80 and/or plastic limit greater than 55 and materials of excessively high moisture content. Clay lumps and stones shall be retained on 100mm and 40mm sieves respectively.

Figure B 15

Typical manhole detail - Type C

Depth from cover level to soffit of pipe less than 1.5 m
Rigid material construction



CLASS S BEDDING

(On trafficked areas)

GRANULAR BEDDING

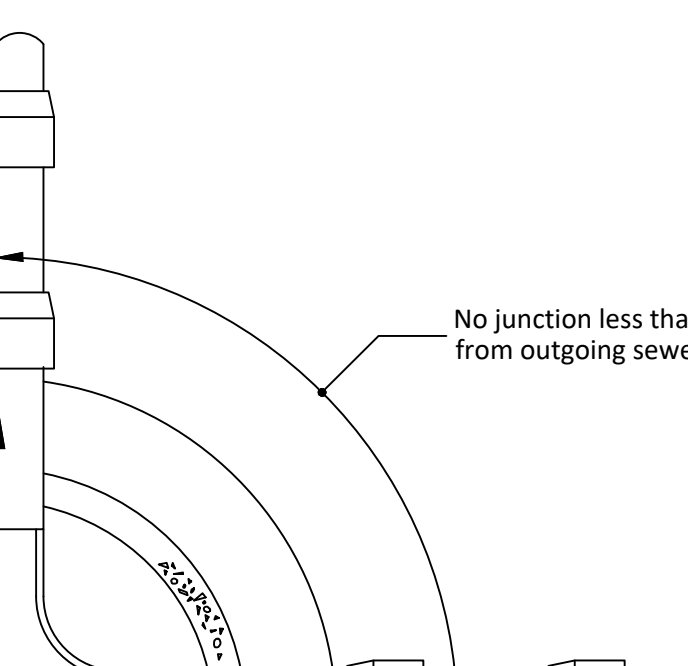
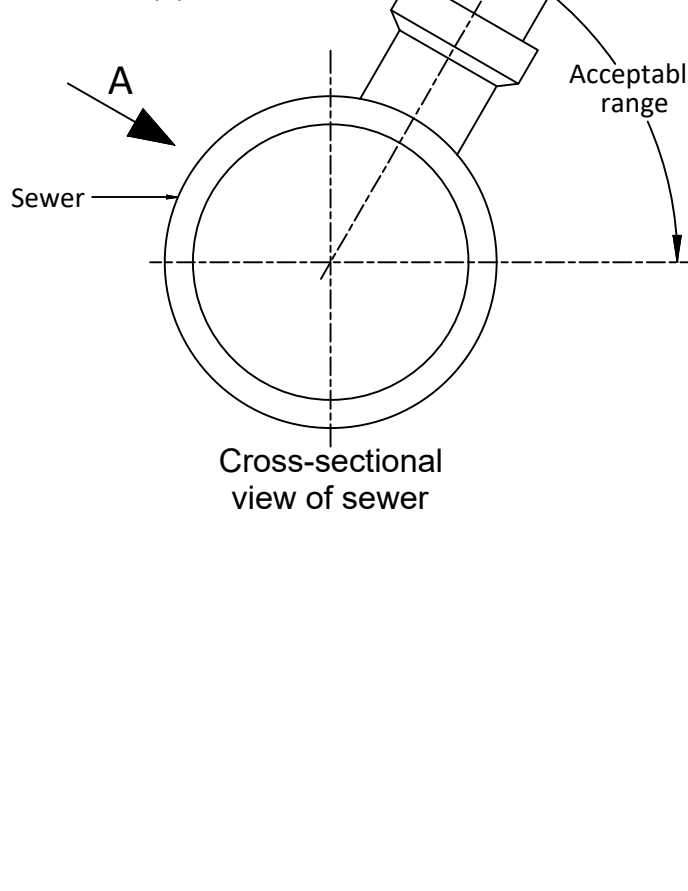
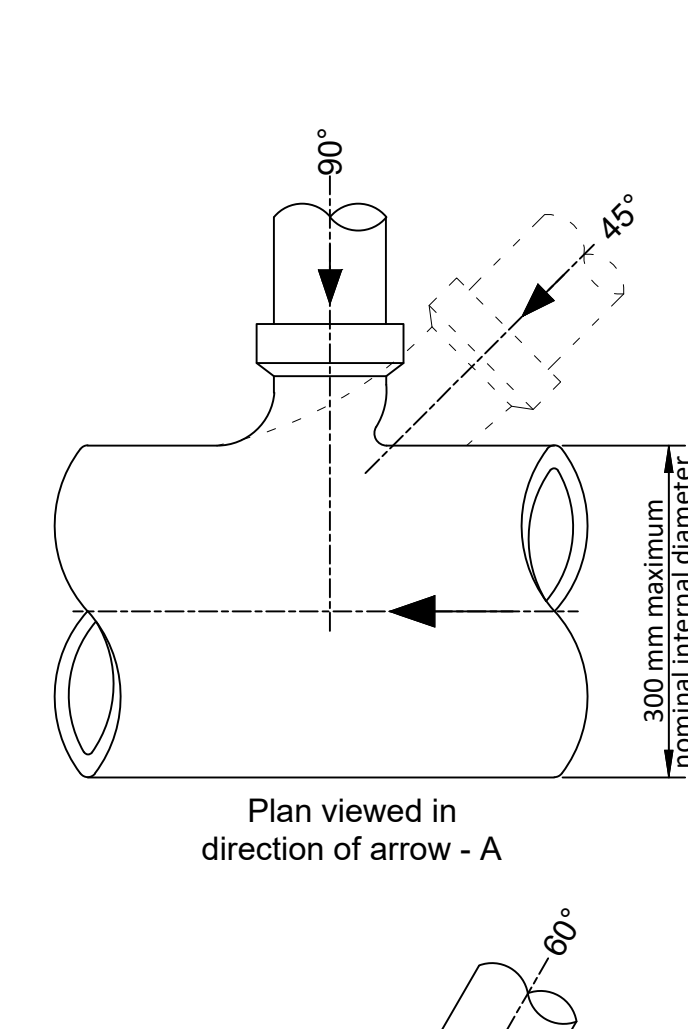
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Figure B 26

Connections to sewer



CLASS S BEDDING

(On trafficked areas)

GRANULAR BEDDING

The diagram shows a vertical pipe with a valve handle at the top. To the right of the pipe is a circular scale with markings. The markings include '0.01', '0.02', and '0.03'. There is also a small '1' and a '2' near the top of the scale. The pipe has a dashed line running through its center, and a solid line at the bottom. The valve handle is a rectangular block with a circular top.

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