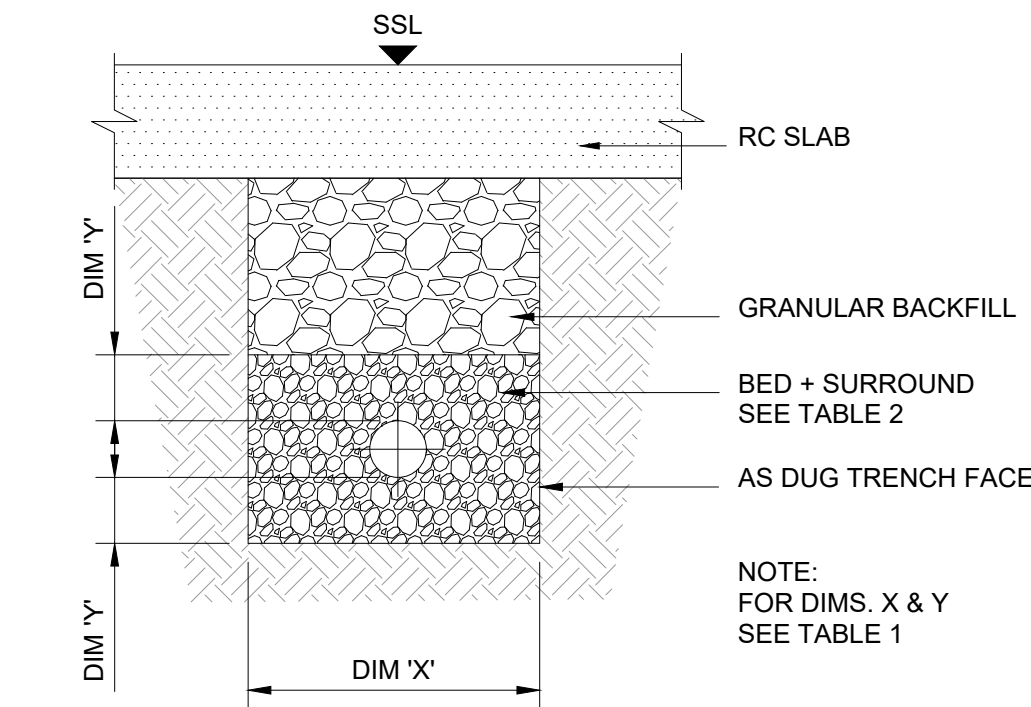
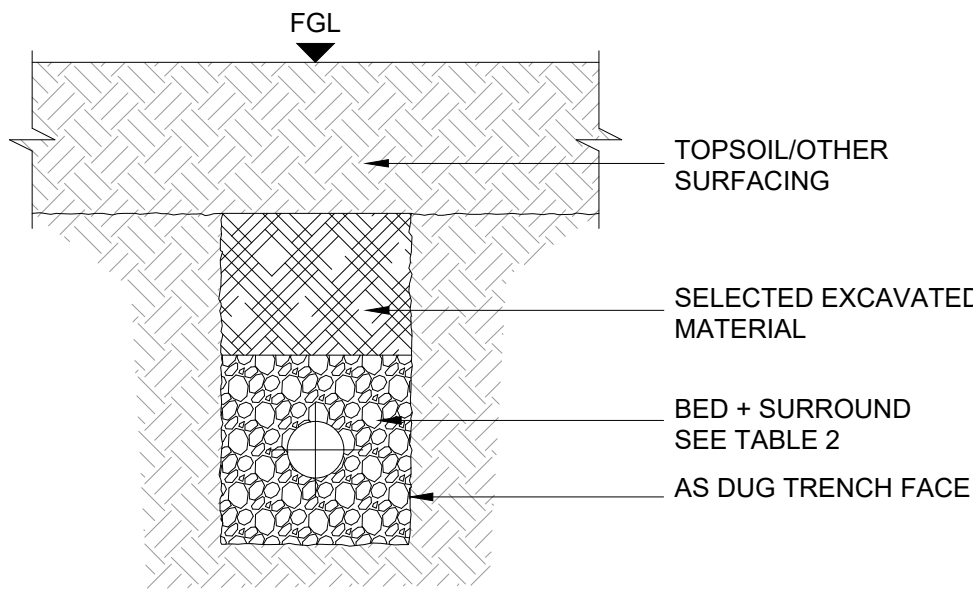
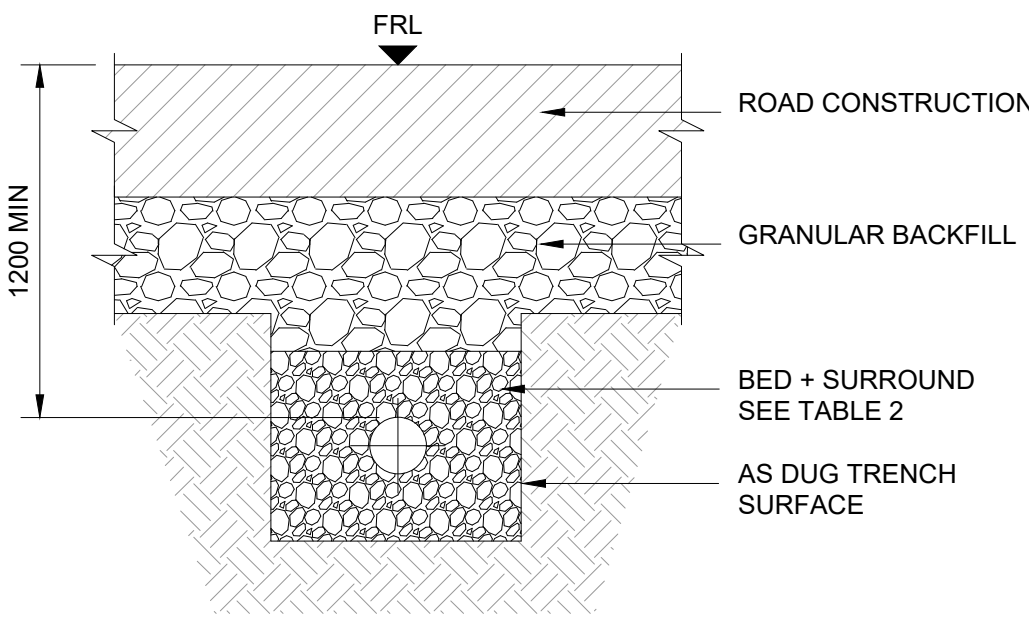




DRAINAGE UNDER BUILDINGS



DRAINAGE UNDER NON-TRAFFICKED AREAS



UNDER TRAFFICKED AREAS

NOTE:
WHERE DEPTH TO SOFFIT IS LESS THAN
1200mm 150 THICK GRADE C20 CONCRETE
PROTECTION IS REQUIRED

LEGEND

RWO RAINWATER OUTLET
RWP RAINWATER PIPE
SVP SOIL VENT PIPE
WVP WASTE VENT PIPE
WP WASTE PIPE
VP VENT PIPE
ASP ANTI SIPHON PIPE
AAV AUTOMATIC AIR ADMITTANCE VALVE

A/C ACCESS CAP OR DOOR
R/E RODDING EYE

FA FROM ABOVE
TB TO BELOW
DTB DROP TO BELOW
DTD DROP TO DRAIN
LL LOW LEVEL
HL HIGH LEVEL

CS CLEANERS SINK
DW DISH WASHER
KS KITCHEN SINK
SH SHOWER
UR URINAL
WC WATER CLOSET
WHB WASH HAND BASIN
WM WASHING MACHINE
BIG BACK INLET GULLY
G GULLY
FMH FOUL MANHOLE
SWMH SURFACE WATER MANHOLE

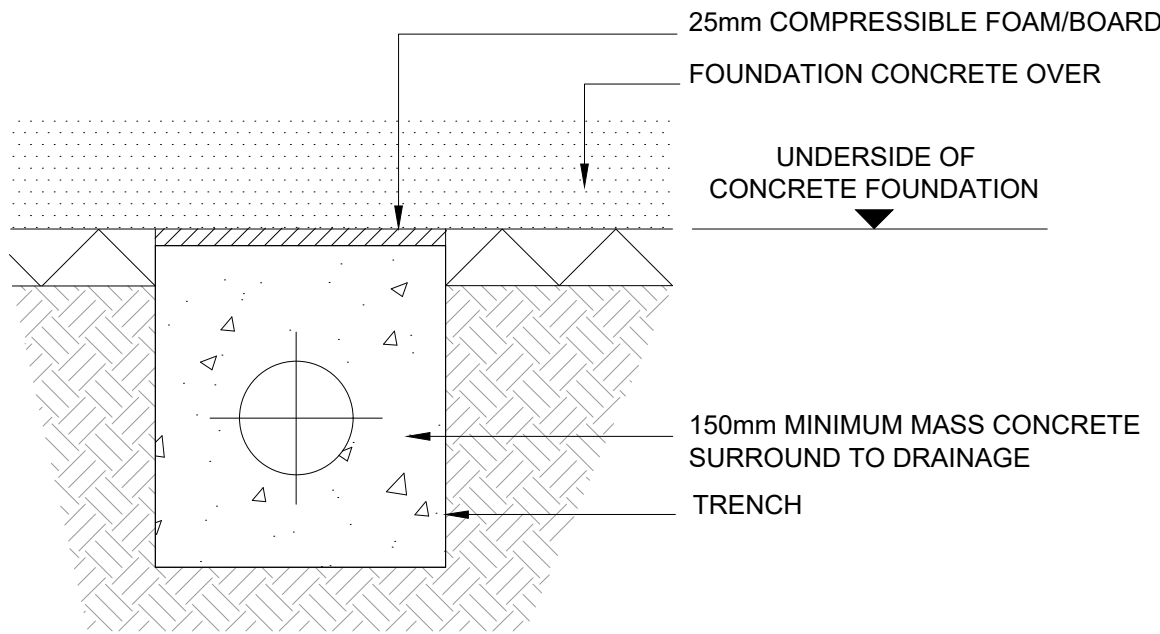
FFL FINISHED FLOOR LEVEL
FGL FINISHED GROUND LEVEL
FRL FINISHED ROAD LEVEL
SSL STRUCTURAL SLAB LEVEL
CL COVER LEVEL
IL INVERT LEVEL

DI DUCTILE IRON
VC VITRIFIED CLAYWARE

FOUL DRAIN
SURFACE WATER DRAIN
WATERPROOFING DRAINAGE
PIPEWORK AT HIGH LEVEL

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DRAINAGE UNDER CONCRETE
FOUNDATIONS AND ALONG BOATHOUSE

TABLE 1

PIPE DIA.	DIM 'X'		DIM 'Y'
	MAX	MIN	
100	525	450	200
150	600	490	200
225	700	580	200
300	750	680	200
375	1050	950	200
450	1150	1030	200

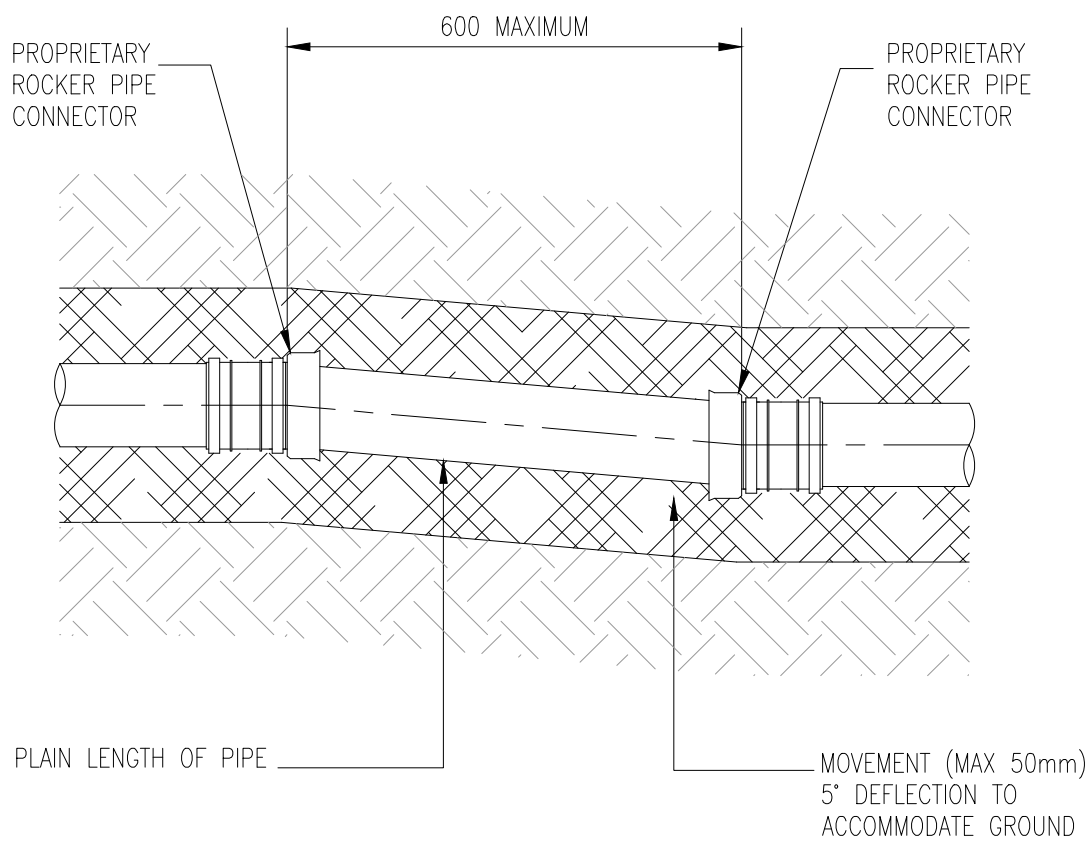
TABLE 2

PIPE DIA.	AGGREGATE	
	GRADED	SINGLE SIZE
100	-	10
150	14-5	10 OR 14
225 & 300	14-5 OR 20-5	10,14 OR 20
375 - 525	14-5 OR 20-5	14 OR 20

NOTE!
MASS CONCRETE IS TO BE USED IN LIEU OF GRANULAR MATERIAL WHERE
COVER TO PIPES IS BELOW 600mm (1200mm UNDER TRAFFICKED AREAS)
OR CLEARANCE BETWEEN PIPES IS LESS THAN 300mm AND MAY BE USED
ELSEWHERE IF REQUIRED.

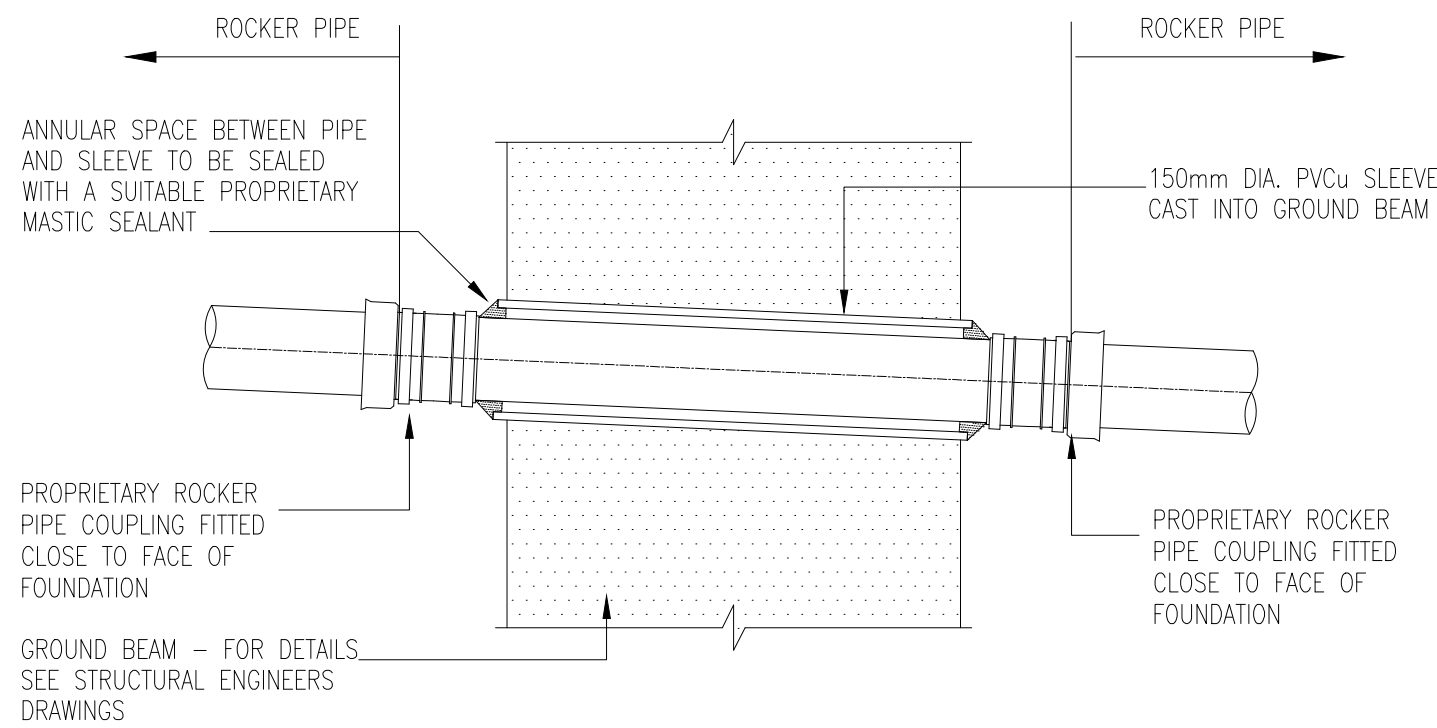
PIPE BEDDING DETAILS FOR GRAVITY AND RISING MAIN DRAINS

SCALE 1:10



TYPICAL DETAIL OF PVCu ROCKER PIPE

SCALE 1:10



TYPICAL DETAIL OF PVCu PIPES SLEEVED THROUGH UNDERGROUND
BEAMS, WALLS AND FOUNDATIONS

SCALE 1:10

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PROJECT	Custom House, The Terrace, Gravesend
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SCALE	PROJ REF	ORIGINATOR	CHECKED BY
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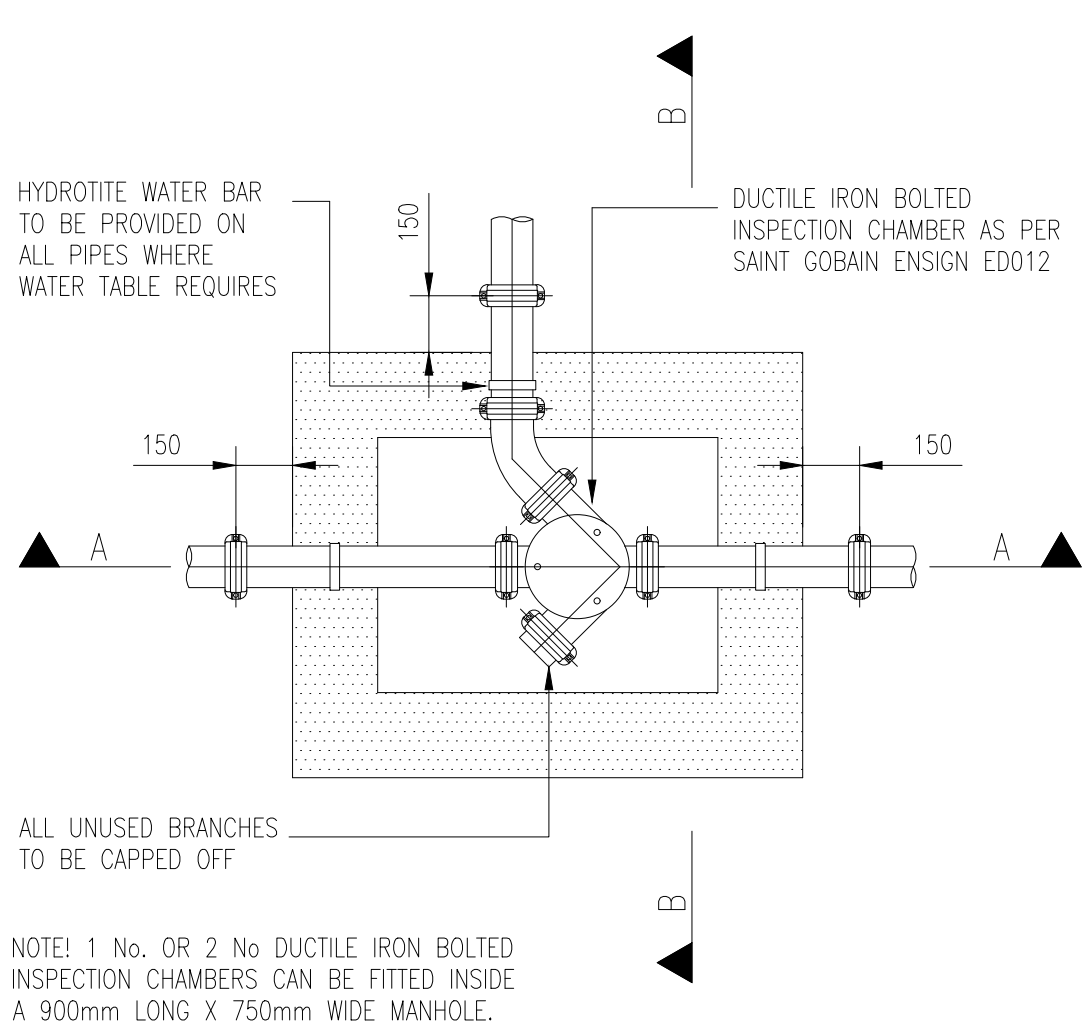
DWG TITLE	DWG No.
STANDARD DETAILS SHEET 1 OF 5	HC-2813-602-SH1

GENERAL NOTES

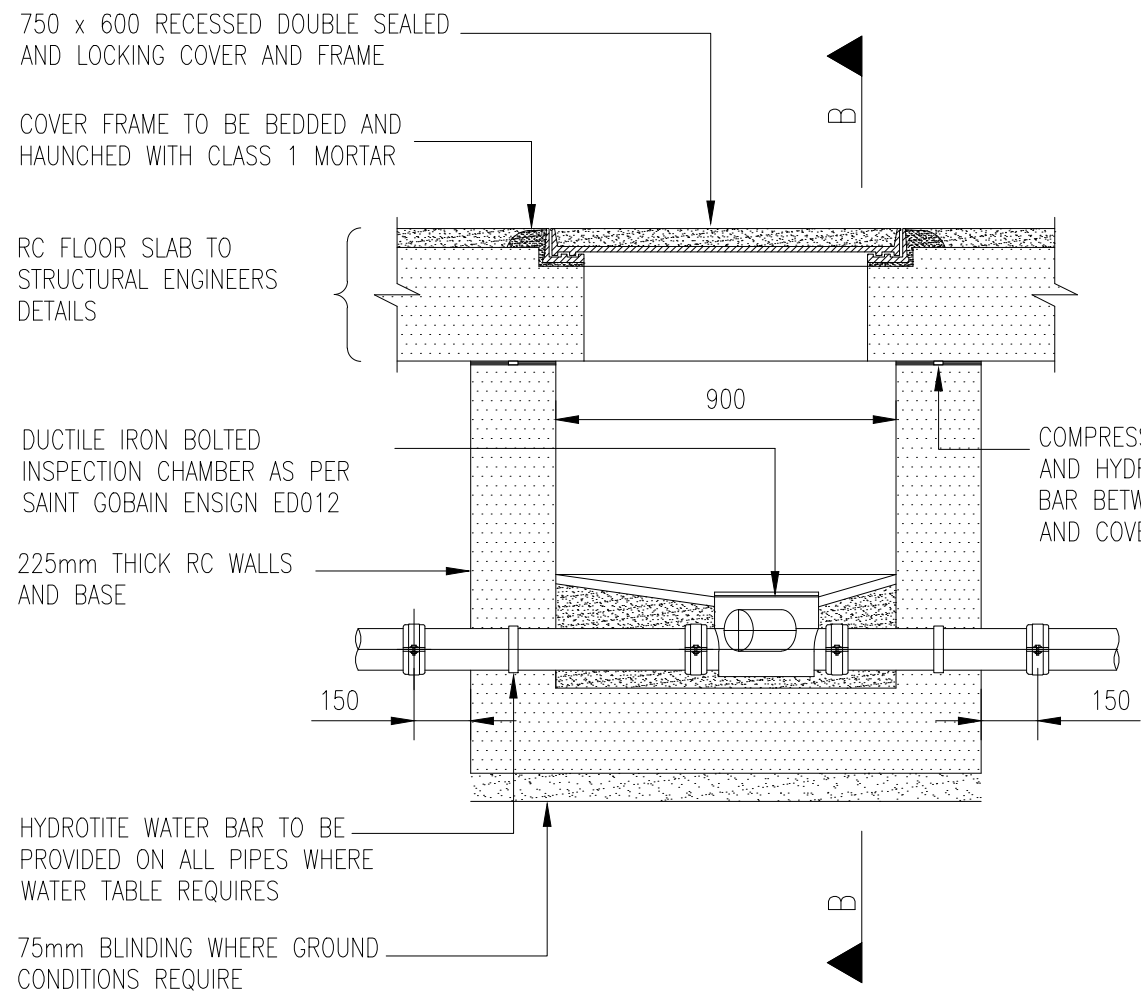
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LEGEND

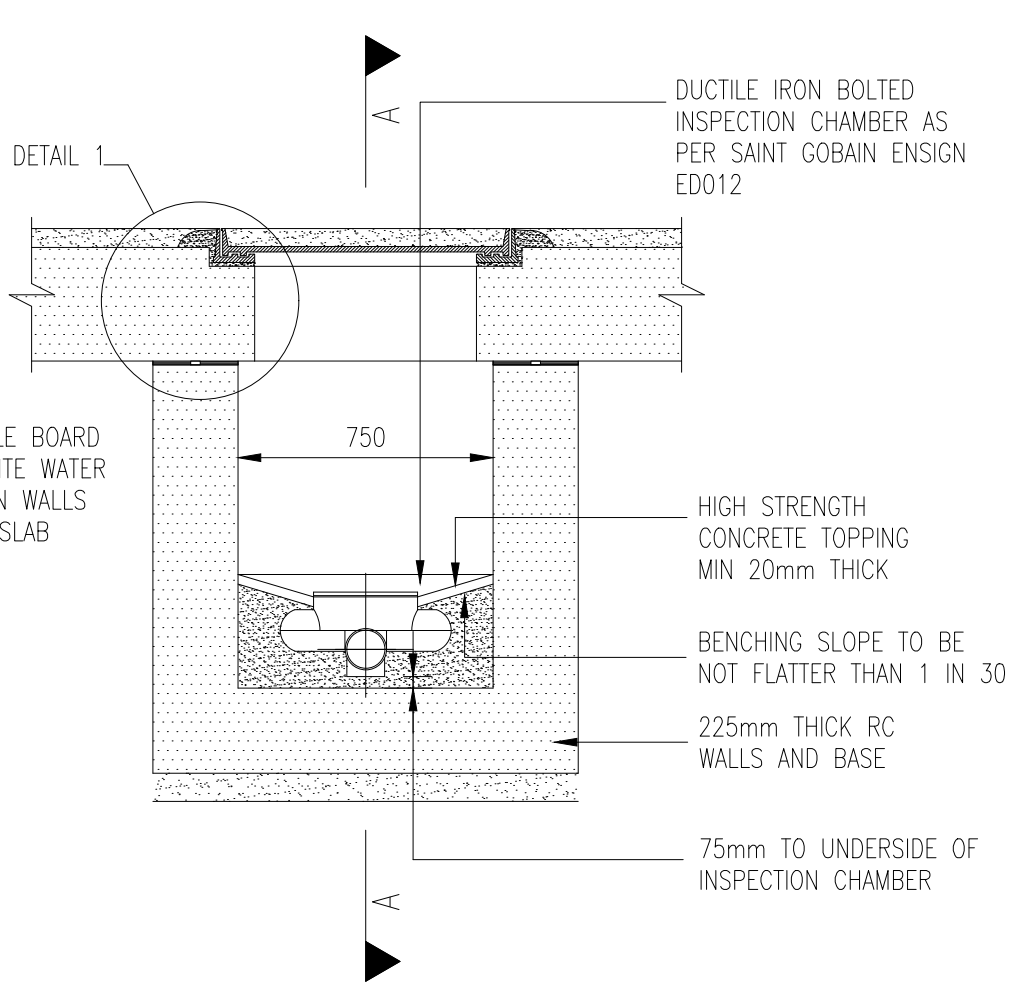
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SVP	SOIL VENT PIPE
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A/C	ACCESS CAP OR DOOR
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TB	TO BELOW
DTB	DROP TO BELOW
DTD	DROP TO DRAIN
LL	LOW LEVEL
HL	HIGH LEVEL
CS	CLEANERS SINK
DW	DISH WASHER
KS	KITCHEN SINK
SH	SHOWER
UR	URINAL
WC	WATER CLOSET
WHB	WASH HAND BASIN
WM	WASHING MACHINE
BIG	BACK INLET GULLY
G	GULLY
FMH	FOUL MANHOLE
SWMH	SURFACE WATER MANHOLE
FFL	FINISHED FLOOR LEVEL
FGL	FINISHED GROUND LEVEL
FRL	FINISHED ROAD LEVEL
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IL	INVERT LEVEL
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---	FOUL DRAIN
- - -	SURFACE WATER DRAIN
- . - .	WATERPROOFING DRAINAGE
- - - -	PIPEWORK AT HIGH LEVEL



PLAN



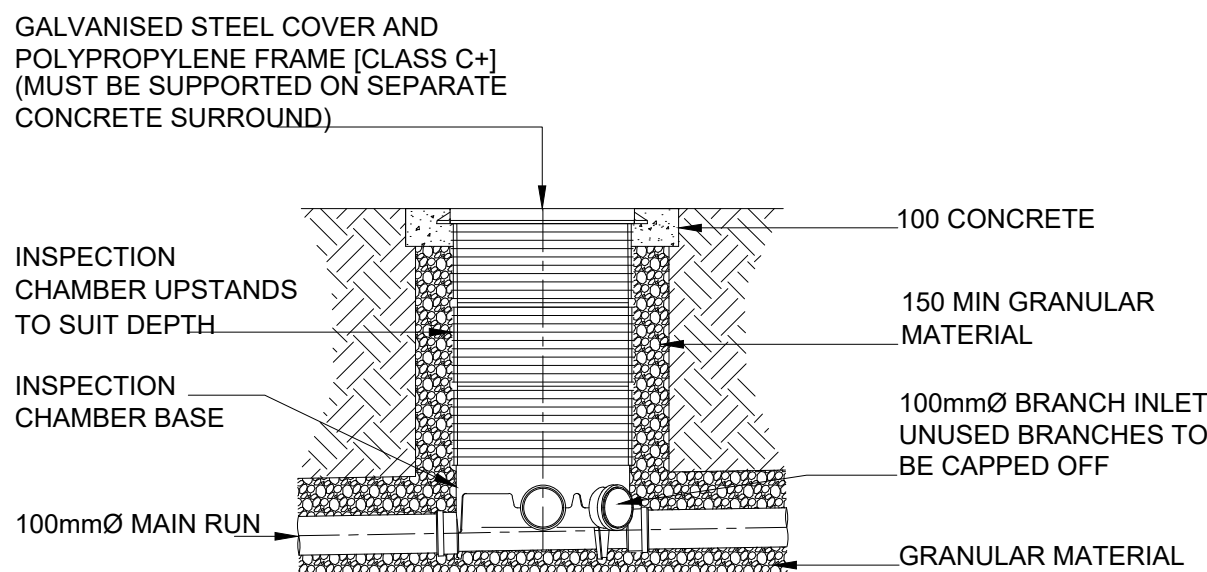
SECTION A-A



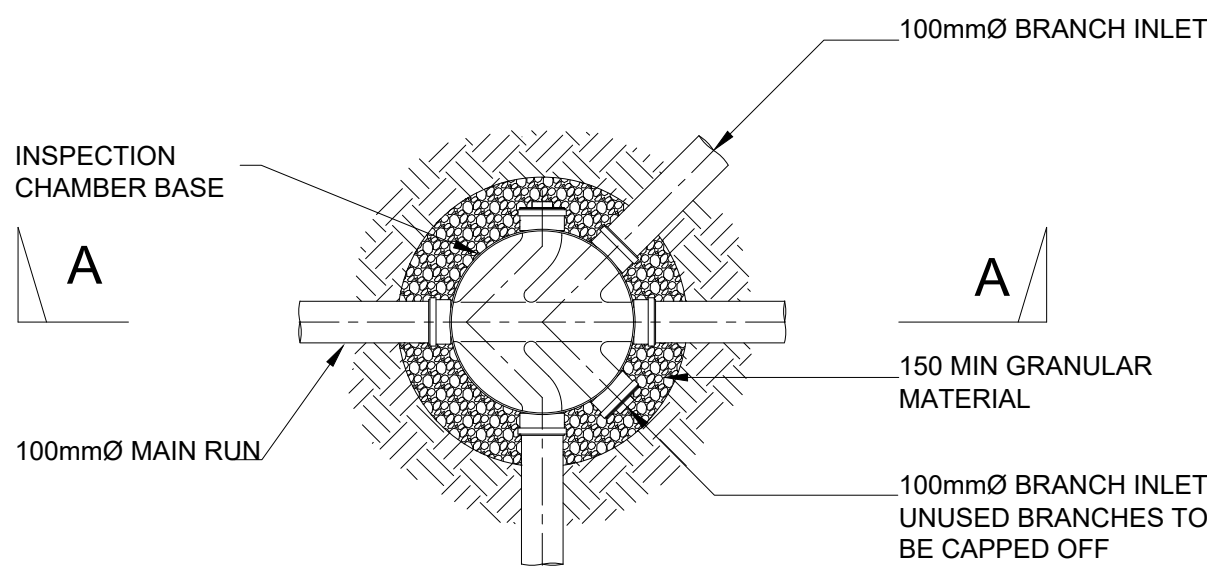
SECTION B-B

DETAIL OF INTERNAL INSITU RC MANHOLES WITH BOLTED INSPECTION CHAMBERS FOR USE IN GROUND BEARING RC FLOOR SLABS

SCALE 1:20



SECTION A-A

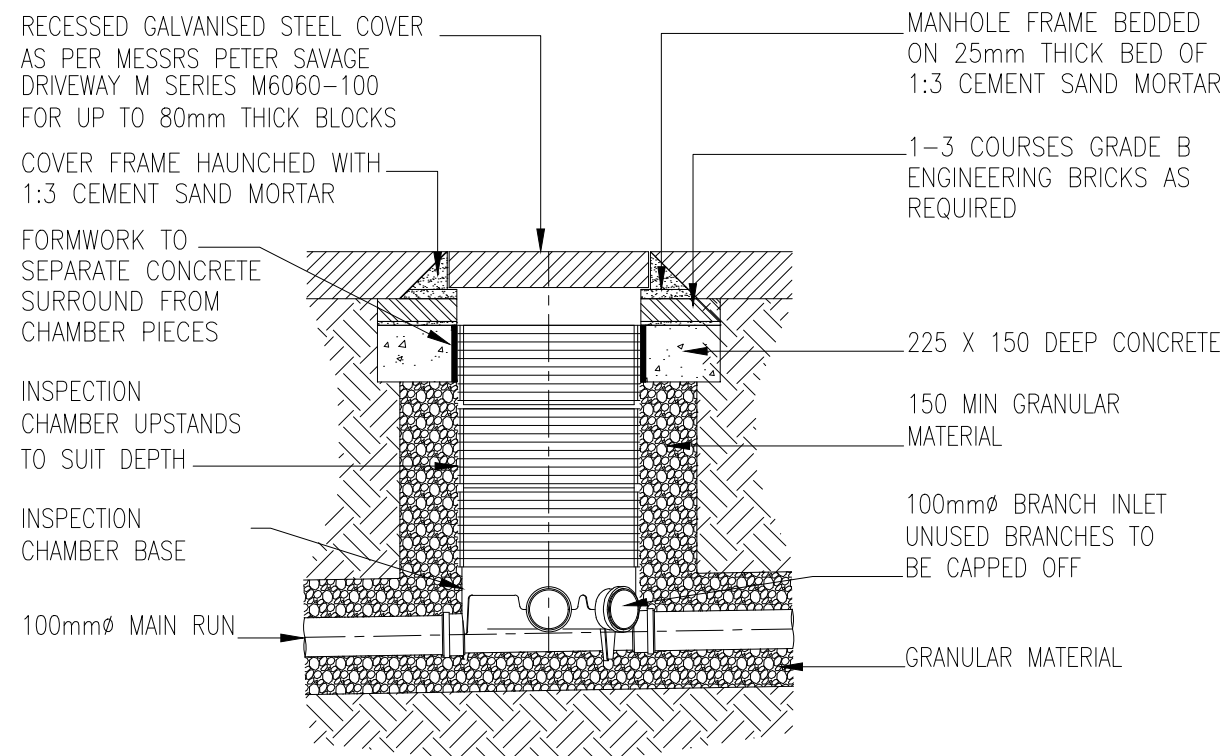


PLAN

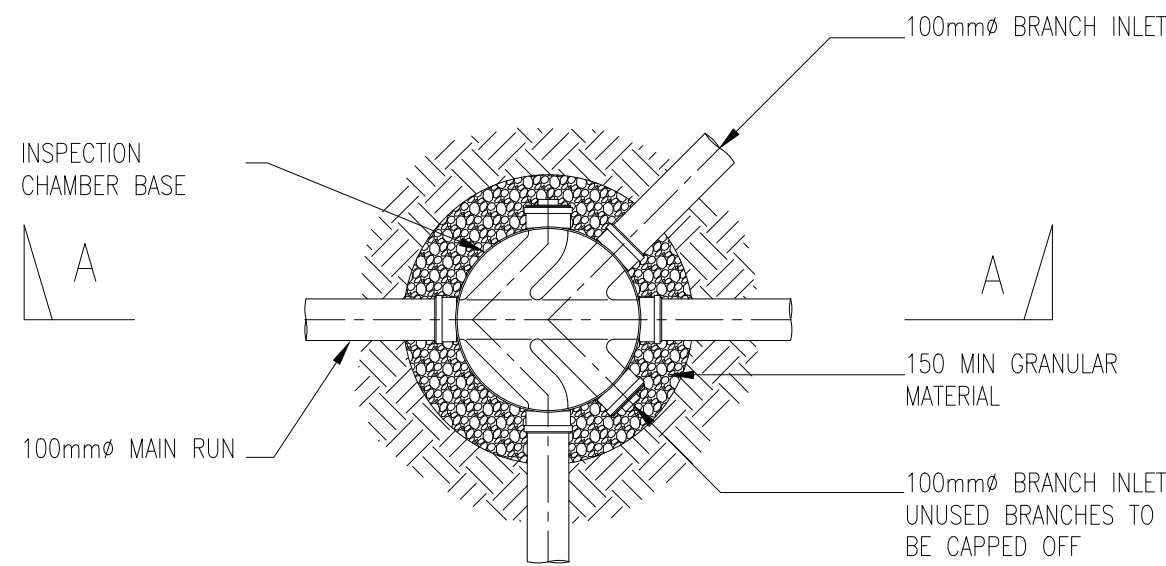
TYPICAL DETAIL OF POLYPROPYLENE INSPECTION CHAMBER (PPIC) 470mmØ. WITH 100mmØ MAIN RUN AND BRANCHES

NOTE. MAXIMUM DEPTH TO INVERT 2000mm SEE SEWERS FOR ADOPTION
FIGURE B18 TYPICAL INSPECTION CHAMBER DETAIL - TYPE D

SCALE 1:20



SECTION A-A



PLAN

TYPICAL DETAIL OF POLYPROPYLENE INSPECTION CHAMBER (PPIC) 470mmØ. WITH 100mmØ MAIN RUN AND BRANCHES FOR USE IN LIGHTLY TRAFFICKED AREAS

NOTE. MAXIMUM DEPTH TO INVERT 2000mm SEE SEWERS FOR ADOPTION
FIGURE B18 TYPICAL INSPECTION CHAMBER DETAIL - TYPE D

SCALE 1:20

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STANDARD DETAILS SHEET 2 OF 5

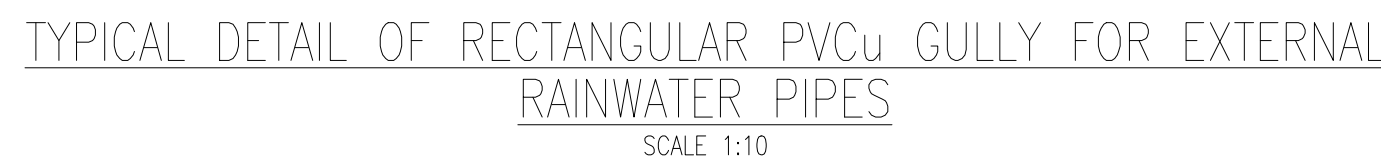
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HC-2813-602-SH2

DWG TITLE STANDARD DETAILS SHEET 3 OF 5	DWG No. HC-2813-602-SH3
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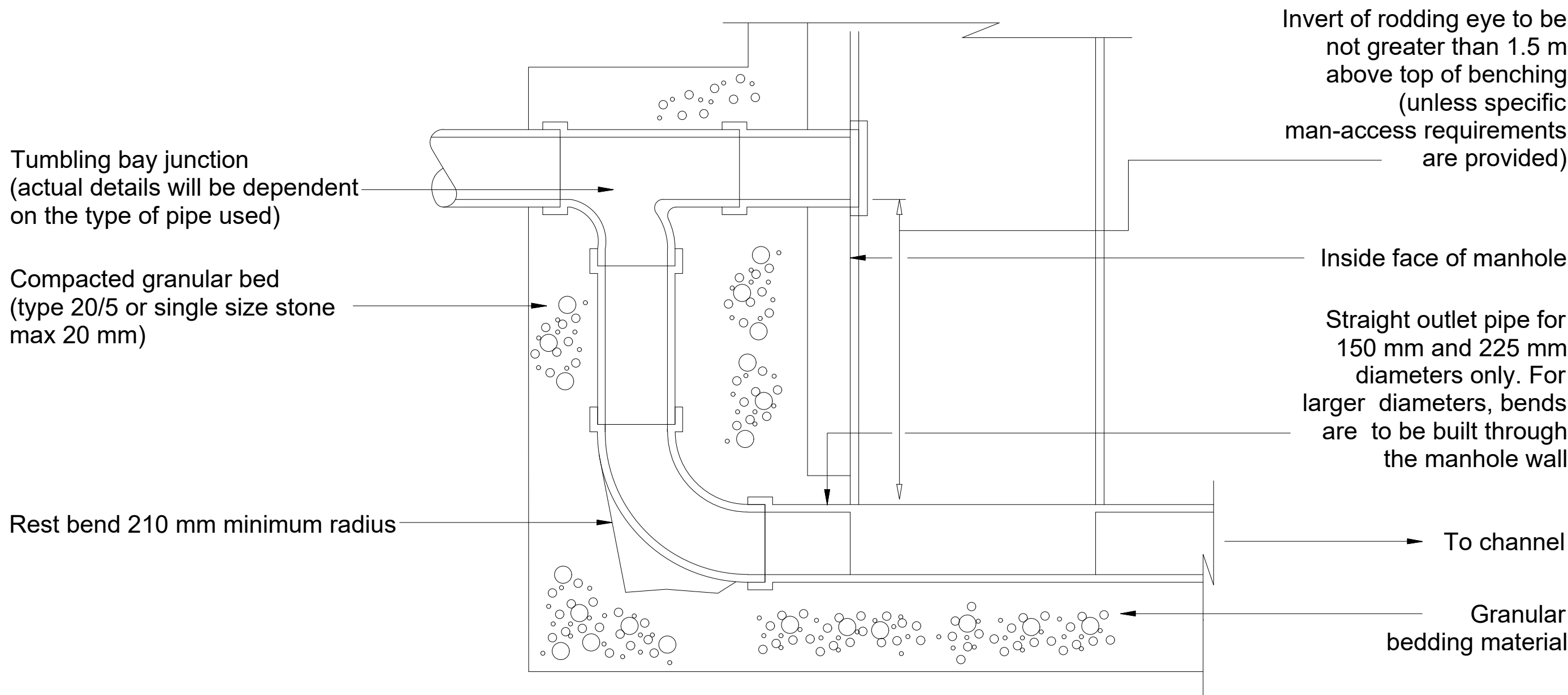
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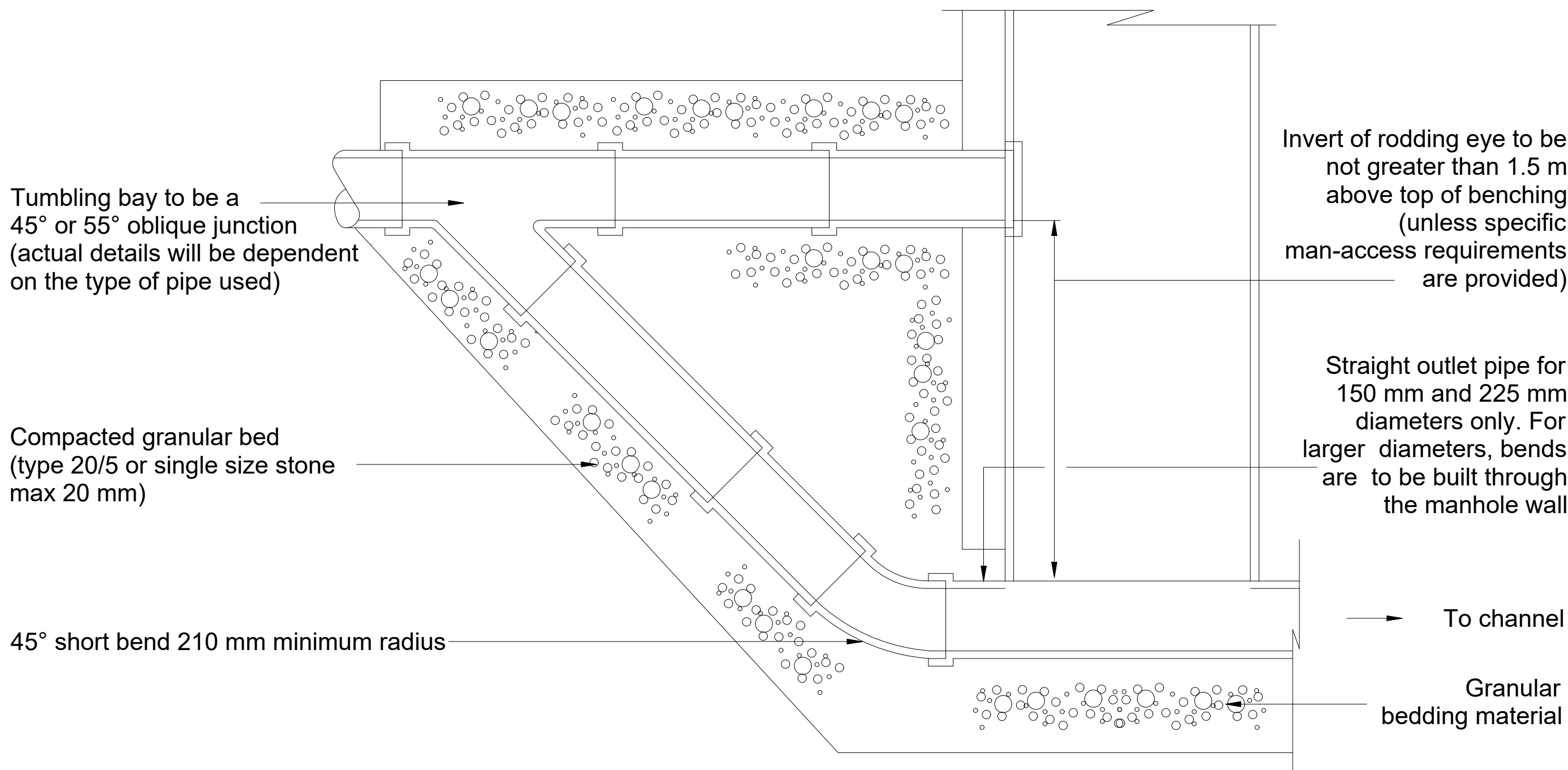
DIMENSION X (mm)		
MANHOLE TYPE	TRANSVERSE	LONGITUDINAL
900 x 750	75	75
1200 x 750	75	150

Figure B 17
Typical vertical and ramped backdrop detail
For use inmanhole types A to D or PPIC

Note: Steeper gradients are preferred to the use of backdrops.
Type of backdrop to be used to be agreed with Undertaker.



External Vertical Backdrop



External Ramped Backdrop

Not to scale

Detail from Design and Construction Guidance for foul and surface water sewers offered for adoption under the Code for adoption agreements for water and sewerage companies operating wholly or mainly in England ("the Code")

LEGEND

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