

Notes

- DO NOT SCALE FROM THIS DRAWING.
- ALL DIMENSIONS ARE MILLIMETRES U.N.O.
- ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM U.N.O.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
- THIS DRAWING IS TO BE READ IN RELATION TO THE SUBJECT OF THE TITLE. OTHER INFORMATION IS CONSIDERED INDICATIVE ONLY.

P04	TENDER ISSUE	29.01 2024	PC	DS
P03	STAGE 3	27.10 2023	RR	DS
P02	ISSUED FOR PLANNING	13.10 2023	RR	DS
P01	STAGE 3 - FOR REVIEW AND COMMENT	28.09 2023	AL	DS
Rev	Description	Date	By	App
			CHK	

STATUS - S3			
NHM_UNLOCKED			
RAMBOLL tel 020 7631 5291 london@ramboll.co.uk www.ramboll.co.uk			
TYPICAL DRAINAGE DETAILS - SHEET 5			
Project No:	Scale (@A1):	Drawn:	Date:
1620012379	1:20	AAL	JAN 24
Drawing No:	Suitability:	Rev:	
RD001-RAM-XX-00-DR-C-0405	S3	P04	

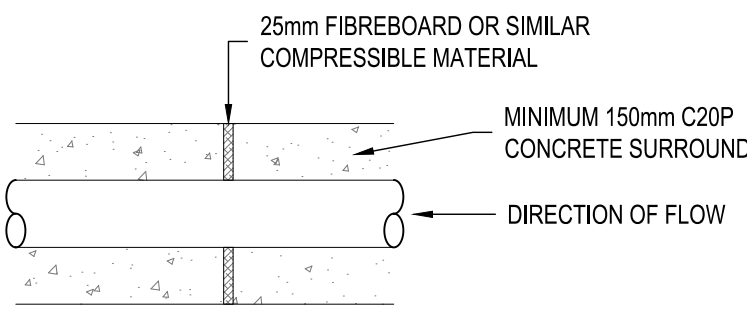
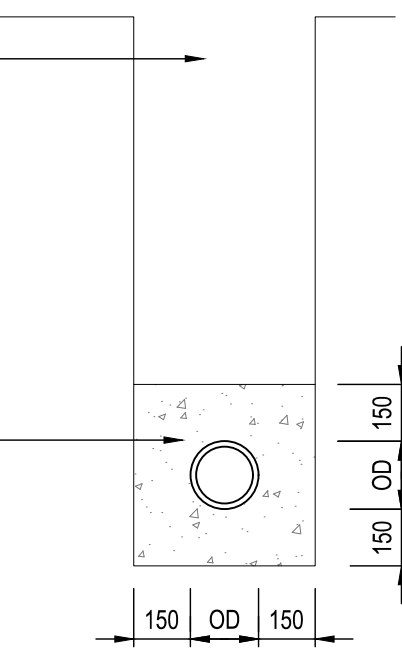
CLASS Z CONCRETE BED AND SURROUND

TRENCH BACKFILL:

- UNDER ROADS AND FOOTPATHS USE TYPE 1 GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO THE UNDERSIDE OF SURFACING CONSTRUCTION.
- ELSEWHERE USE SELECTED EXCAVATED MATERIALS COMPACTED IN 150mm LAYERS

CONCRETE BED AND SURROUND SHALL BE INTERRUPTED AT EACH PIPE JOINT USING 25mm THICK FIBRE BOARD TO THE FULL AREA OF THE CONCRETE - SEE DETAIL BELOW

USE CLASS Z CONCRETE BED AND SURROUND UNDER ALL FOUNDATIONS AND FLOOR SLABS, WHERE COVER TO CROWN OF PIPE IS LESS THAN 0.75m IN VEHICULAR ACCESS AREAS, AND WHERE PIPES ARE LAID WITHIN 1.0m OF FOUNDATIONS



CLASS S GRANULAR BED AND SURROUND

TRENCH BACKFILL:

- UNDER ROADS AND FOOTPATHS USE TYPE 1 GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO THE UNDERSIDE OF SURFACING CONSTRUCTION.
- ELSEWHERE USE SELECTED EXCAVATED MATERIALS COMPACTED IN 150mm LAYERS

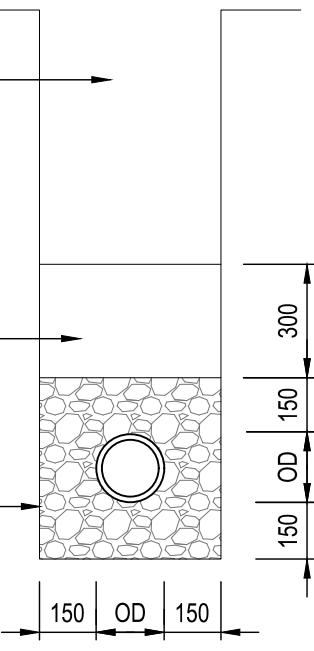
FIRST 300mm OF BACKFILL ABOVE CROWN OF PIPE TO BE FREE FROM STONES EXCEEDING 40mm

MINIMUM 150mm BED AND SURROUND AS DETAILED IN TABLE BELOW

USE CLASS S BED AND SURROUND WHERE COVER TO PIPE IS BETWEEN 0.75m AND 1.2m IN VEHICULAR ACCESS AREAS AND LESS THAN 0.45m UNDER FOOTPATHS/PAVED AREAS

PIPE DIAMETER:	BEDDING MATERIAL:
1000	10mm SINGLE SIZE AGGREGATE
1010 - 1500	10mm OR 14mm SINGLE SIZE AGGREGATE
1510 - 5000	10mm, 14mm OR 20mm SINGLE SIZE AGGREGATE

NOTE: THE ABOVE MATERIALS ARE FOR GUIDANCE OTHER BEDDING MATERIALS CAN BE USED IN ACCORDANCE WITH THE PIPE MANUFACTURES RECOMMENDATIONS I.E. SINTERED PULVERISED FUEL ASH AND AIR COOLED BLAST FURNACE SLAGS



CLASS B GRANULAR BED AND SURROUND

TRENCH BACKFILL:

- UNDER ROADS AND FOOTPATHS USE TYPE 1 GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO THE UNDERSIDE OF SURFACING CONSTRUCTION.
- ELSEWHERE USE SELECTED EXCAVATED MATERIALS COMPACTED IN 150mm LAYERS

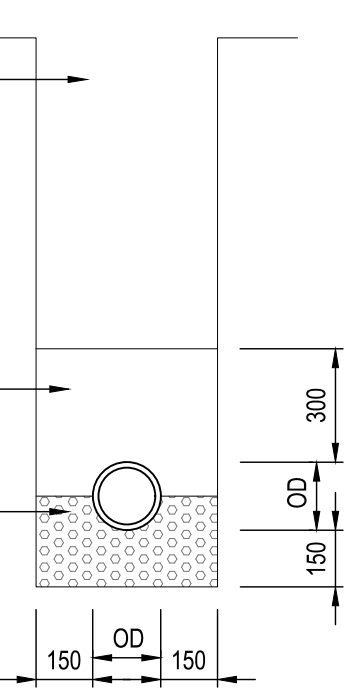
FIRST 300mm OF BACKFILL ABOVE CROWN OF PIPE TO BE FREE FROM STONES EXCEEDING 40mm

MINIMUM 150mm BED AND SURROUND AS DETAILED IN TABLE BELOW

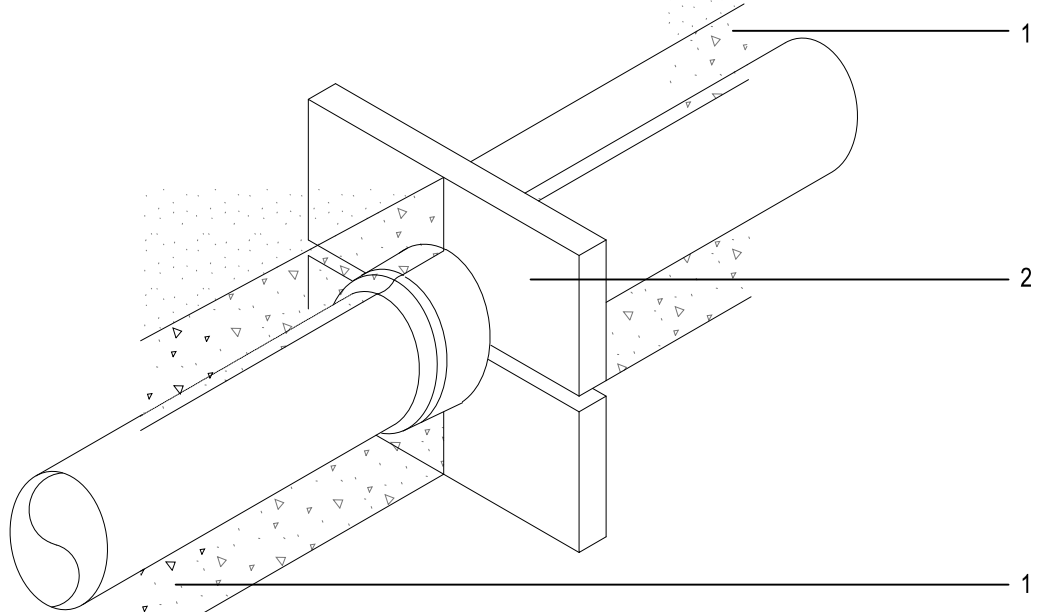
CLASS B BED TO BE USED WHERE COVER TO CROWN OF PIPE IS GREATER THAN 1.2m IN VEHICULAR ACCESS AREAS AND 0.45m IN FOOTPATHS/PAVED AREAS

PIPE DIAMETER:	BEDDING MATERIAL:
1000	10mm SINGLE SIZE AGGREGATE
1010 - 1500	10mm OR 14mm SINGLE SIZE AGGREGATE
1510 - 5000	10mm, 14mm OR 20mm SINGLE SIZE AGGREGATE
5010 AND ABOVE	10mm, 14mm, 20mm OR 40mm SINGLE SIZE CRUSHED ROCK

NOTE: THE ABOVE MATERIALS ARE FOR GUIDANCE OTHER BEDDING MATERIALS CAN BE USED IN ACCORDANCE WITH THE PIPE MANUFACTURES RECOMMENDATIONS I.E. SINTERED PULVERISED FUEL ASH AND AIR COOLED BLAST FURNACE SLAGS



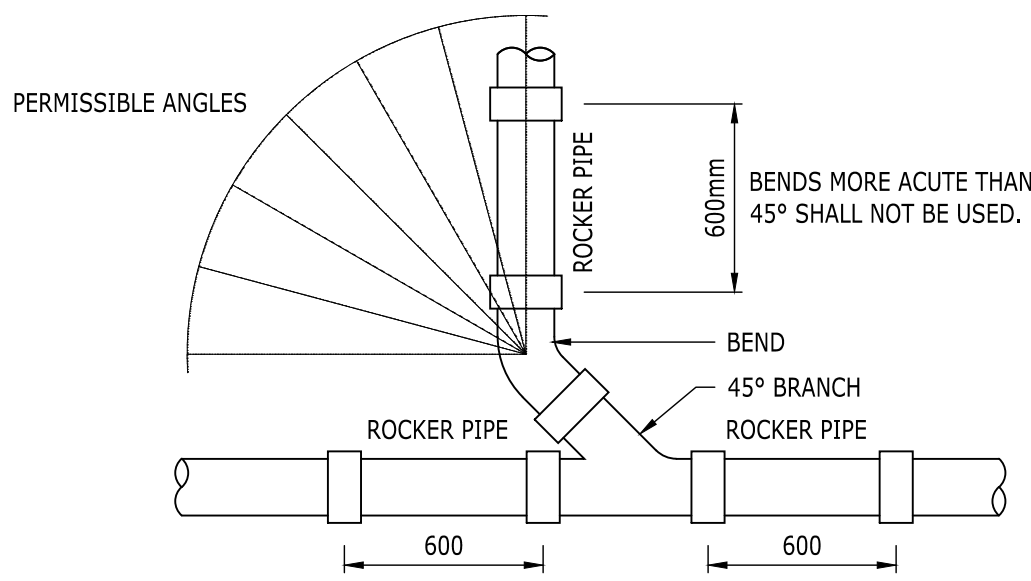
DRAIN WITH CONCRETE SURROUND



DESCRIPTION:

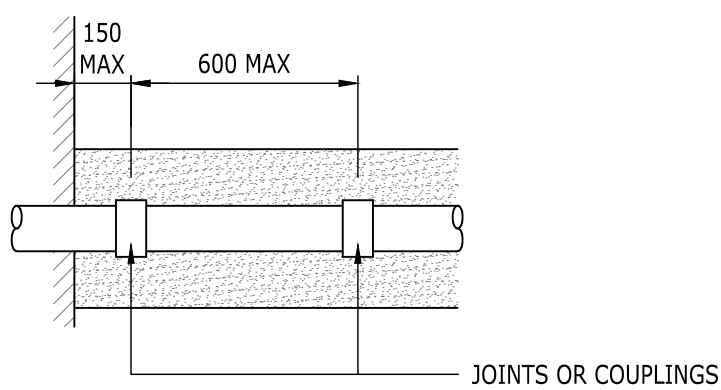
- 150mm MINIMUM THICK CONCRETE SURROUND.
- COMPRESSIBLE MATERIAL EITHER FIBRE BOARD OR POLYSTYRENE 18mm MINIMUM THICKNESS

OBLIQUE JUNCTION ARRANGEMENT

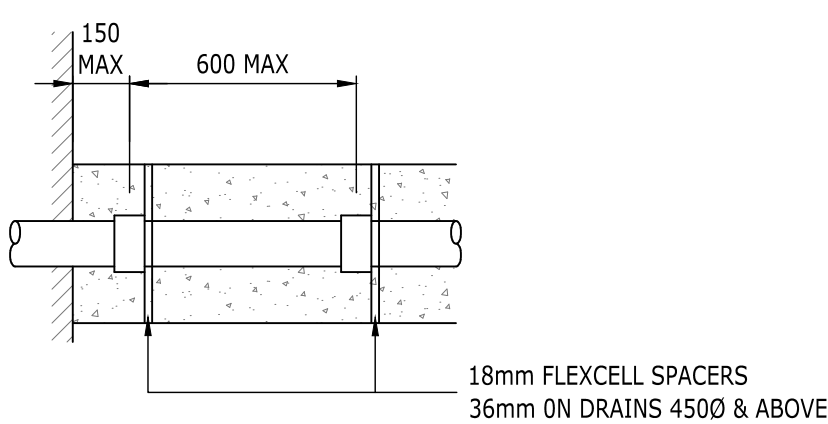


ROCKER PIPE ASSEMBLY

THESE DETAILS APPLY TO ALL DRAINS AT FIXED POINTS I.E. AT FACE OF STRUCTURE, CHAMBERS ETC.

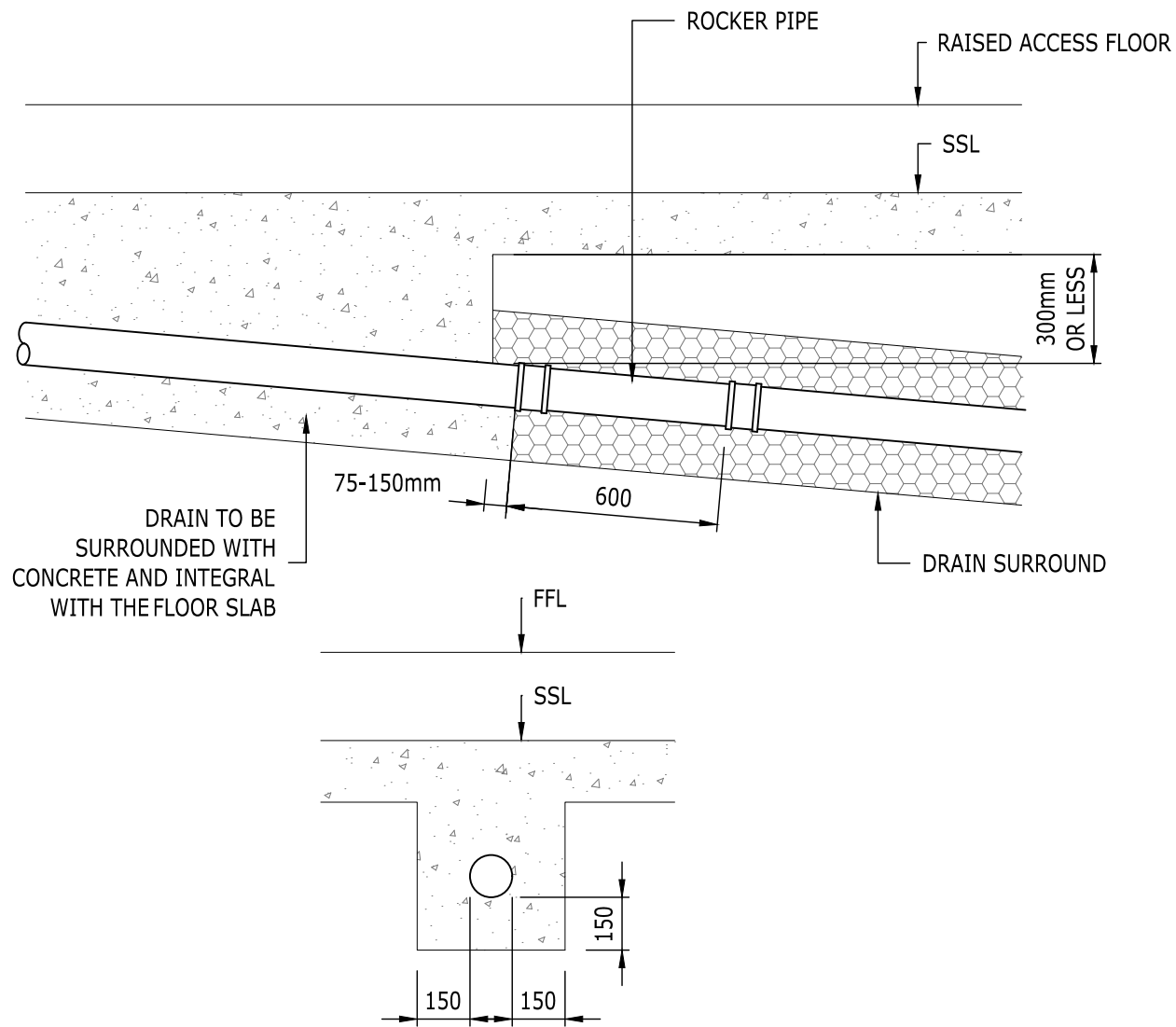


DETAIL 1
DRAIN WITH GRANULAR SURROUND

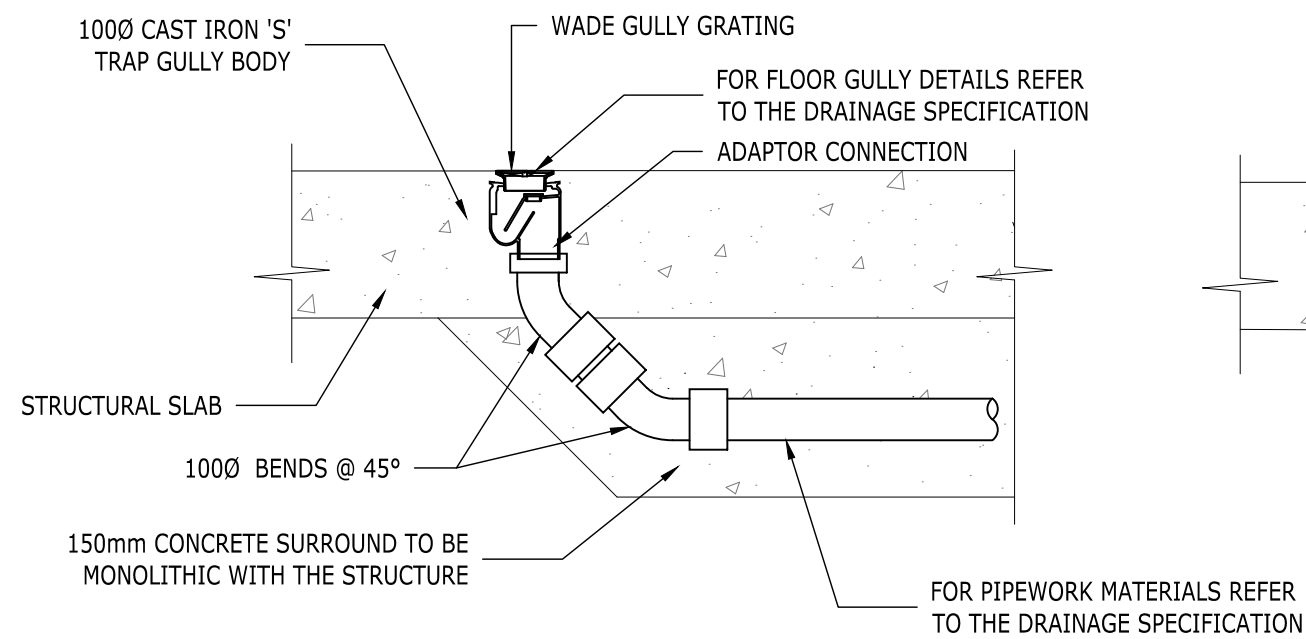


DETAIL 2
DRAIN WITH CONCRETE SURROUND

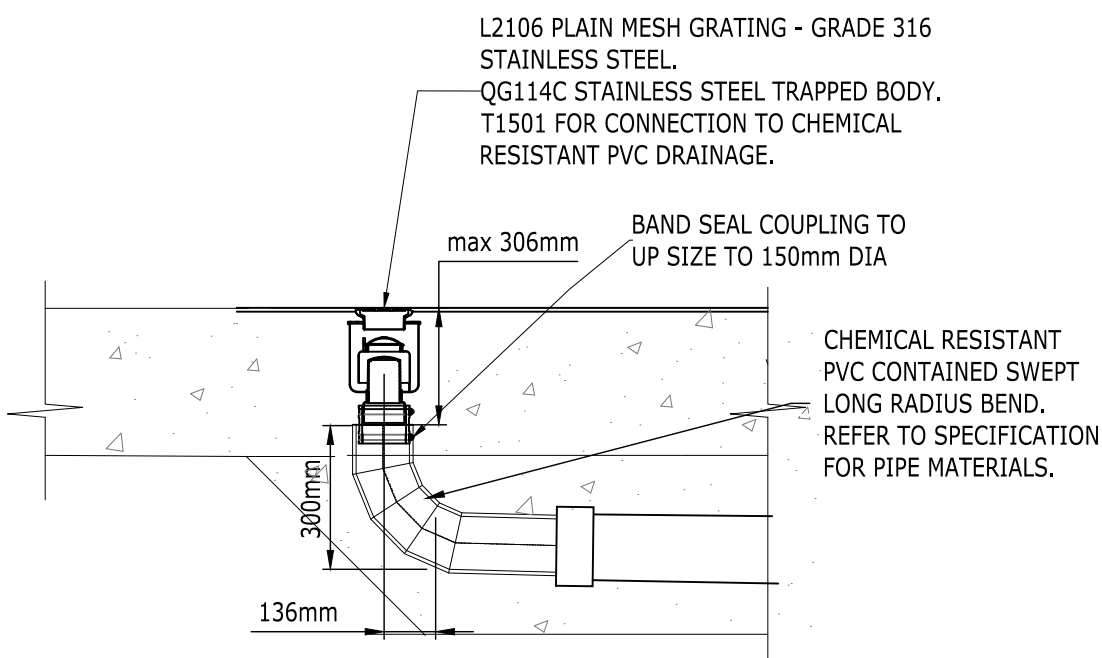
CLASS Y CONCRETE SURROUND
WITHIN 300mm OF FLOOR SLAB



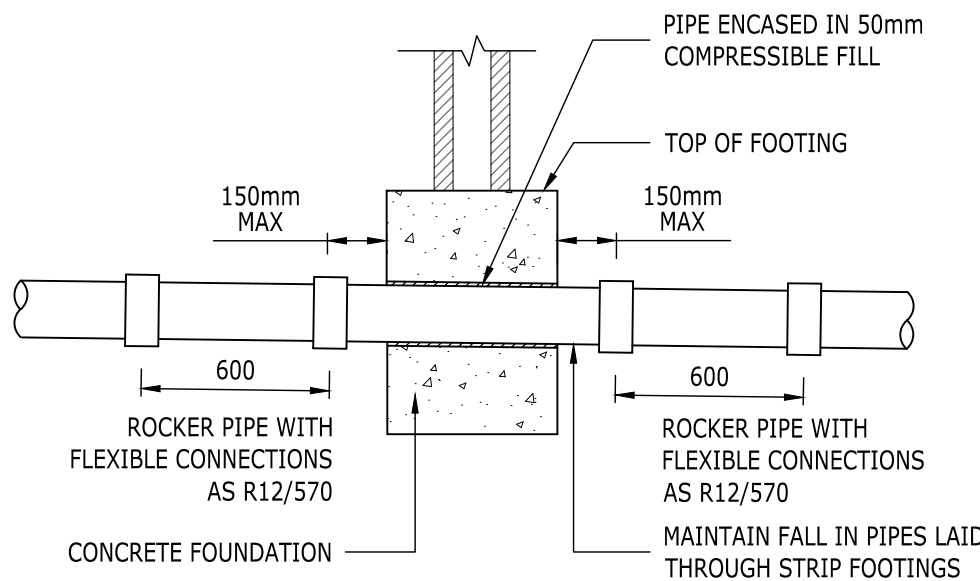
PLANT/SERVICE AREA TRAPPED FLOOR
GULLY - UNDER SLAB



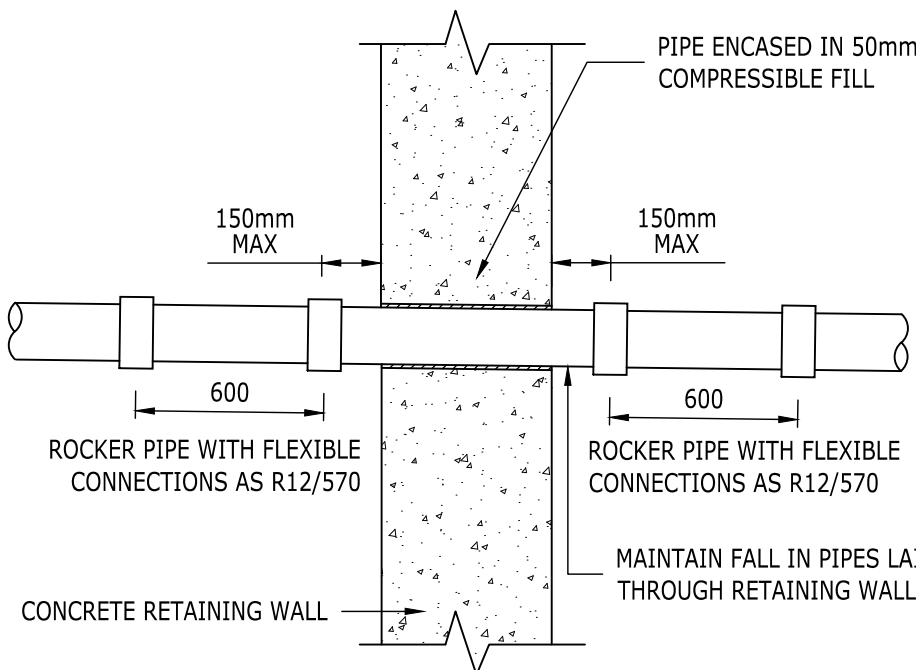
LAB PLANT ROOM GULLY - UNDER SLAB



TYPICAL DRAIN/STRIP FOOTING PENETRATION



PIPE PENETRATION THROUGH A CONCRETE
RETAINING WALL



TYPICAL BACKDROP DETAIL
EXTERNAL VERTICAL BACKDROP

