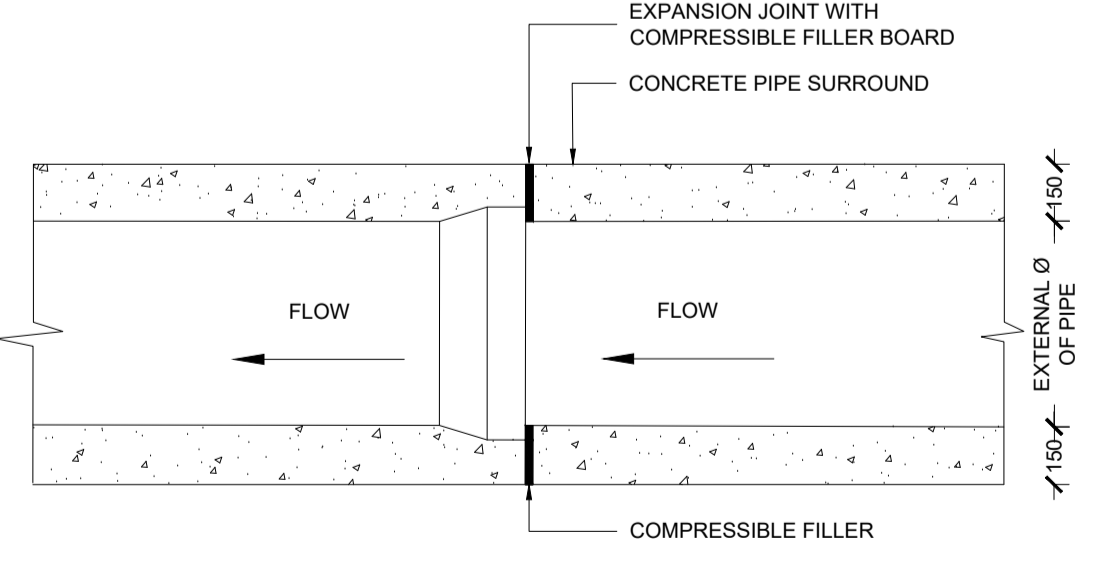
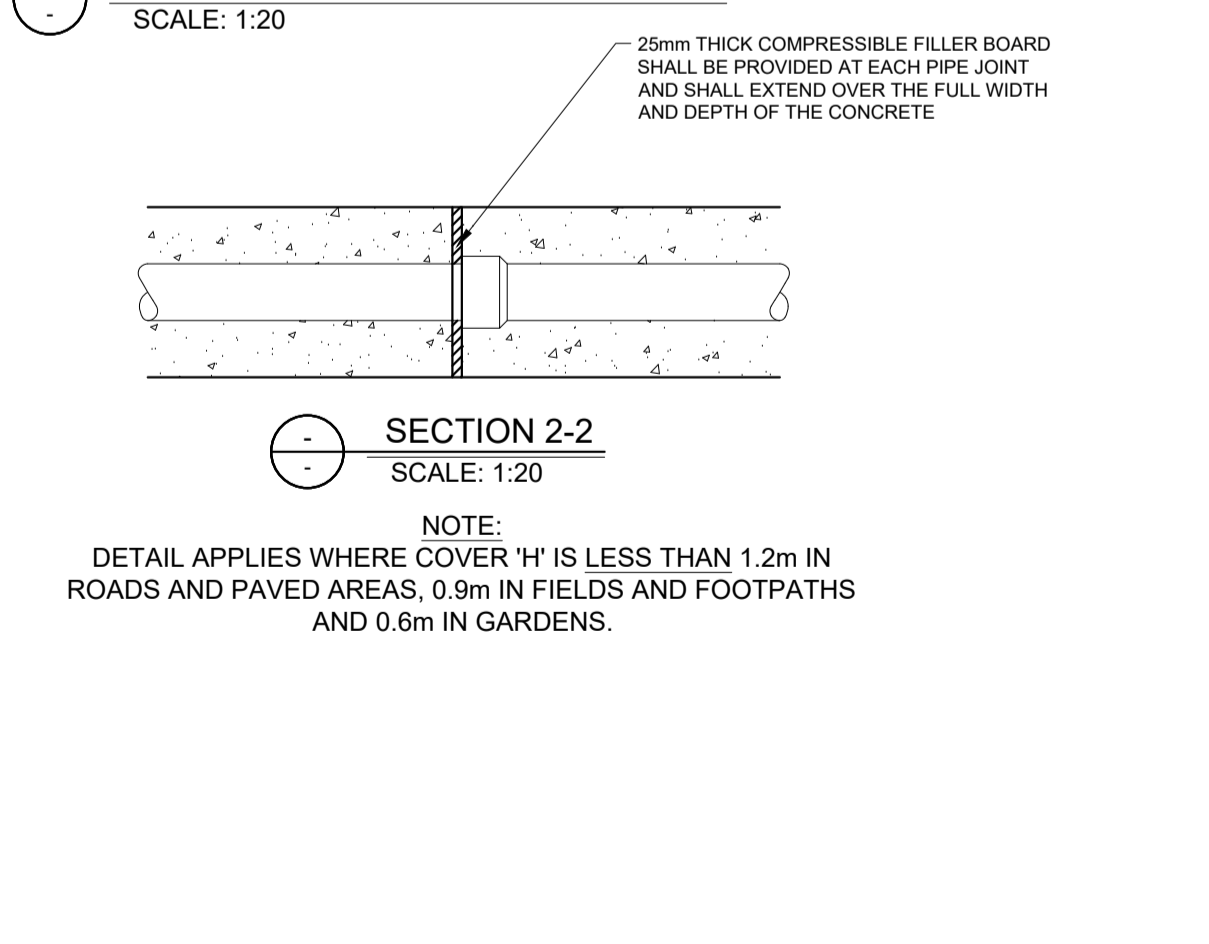
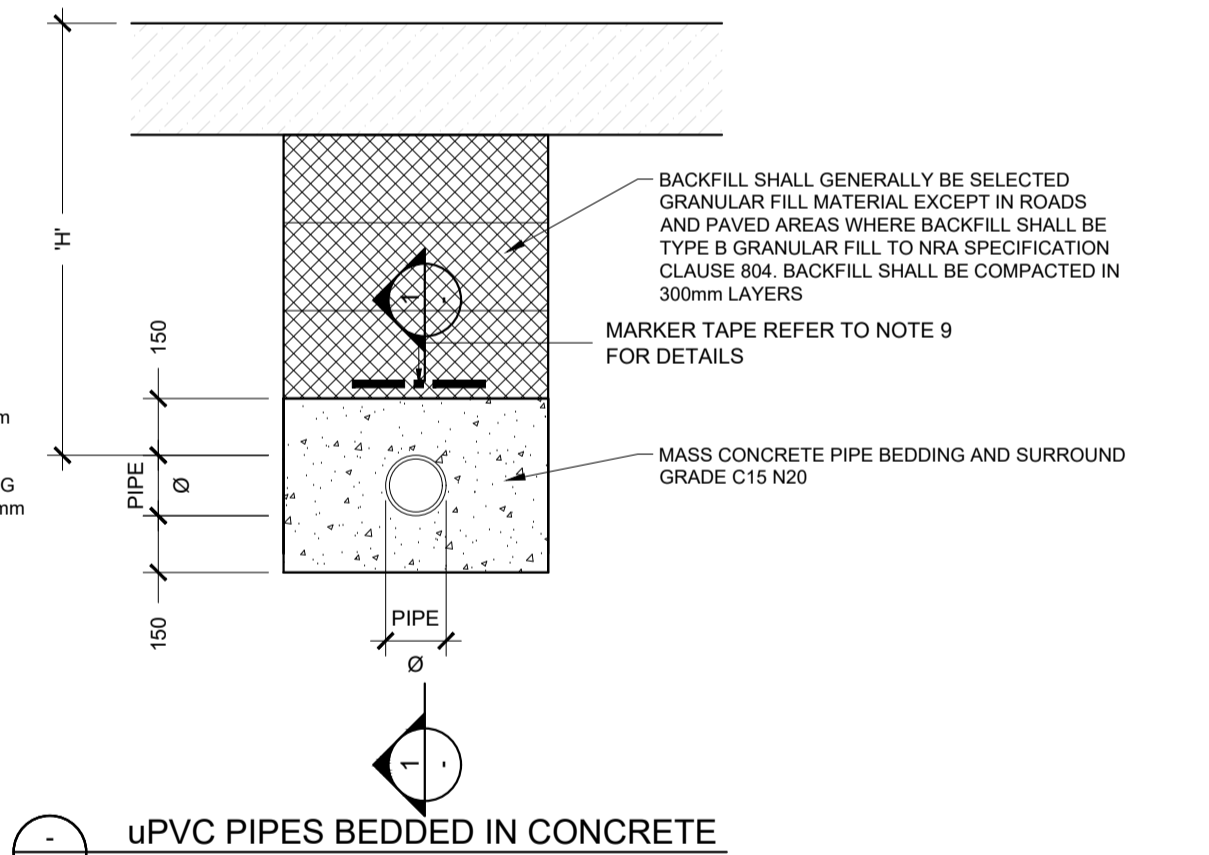
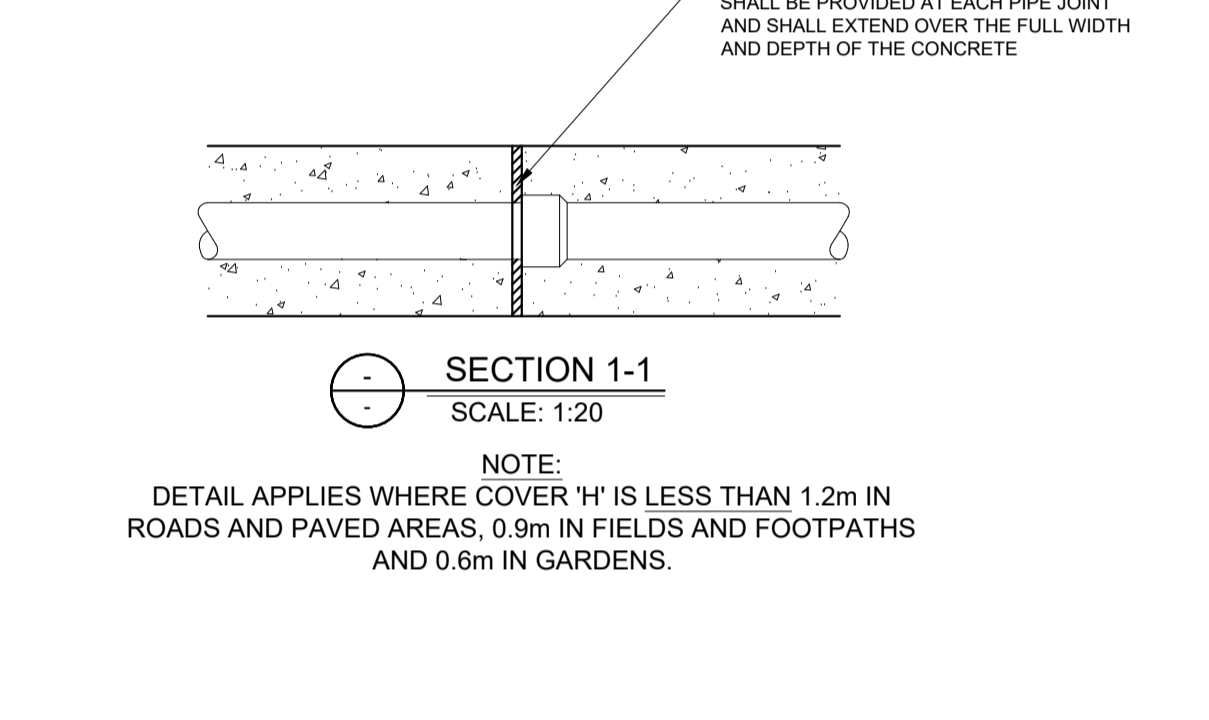
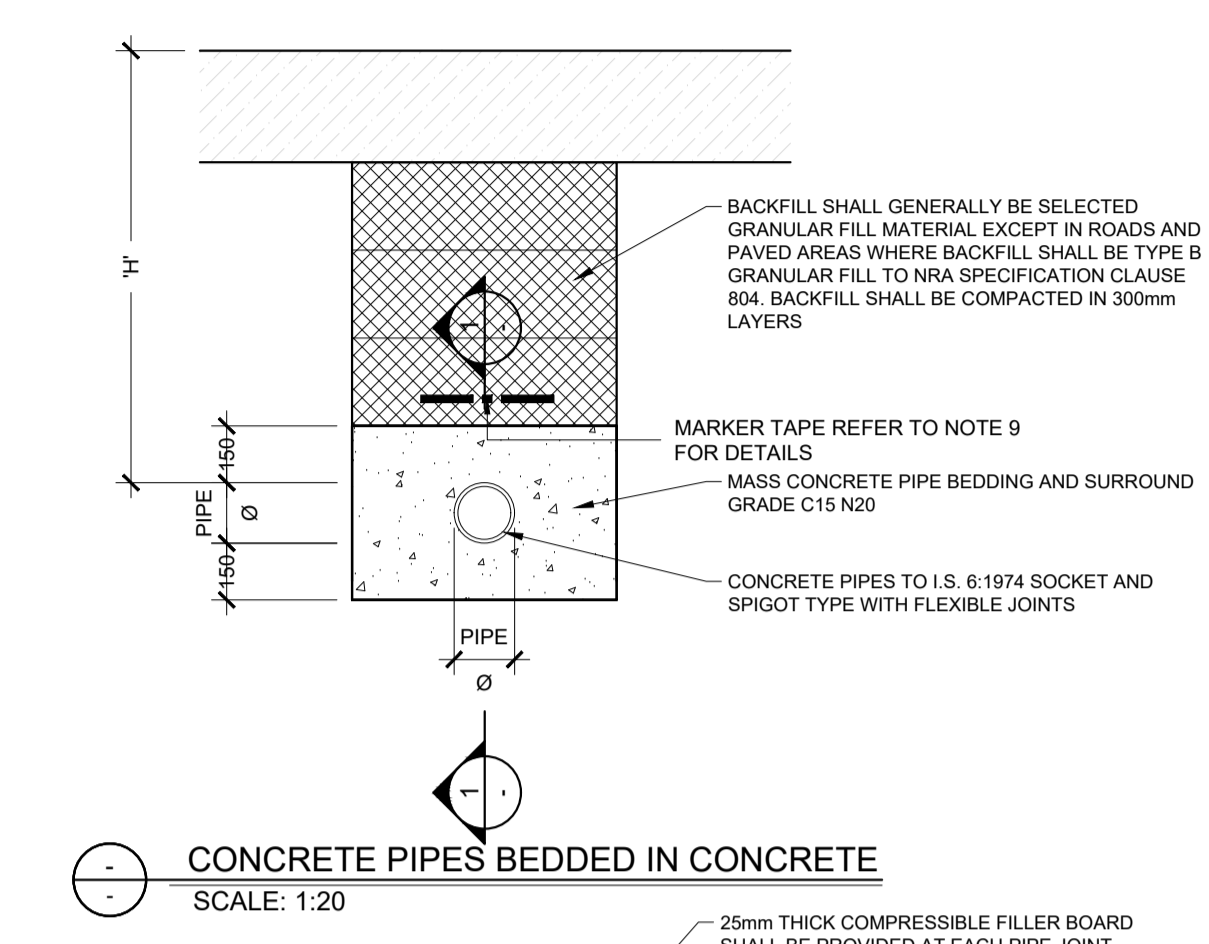
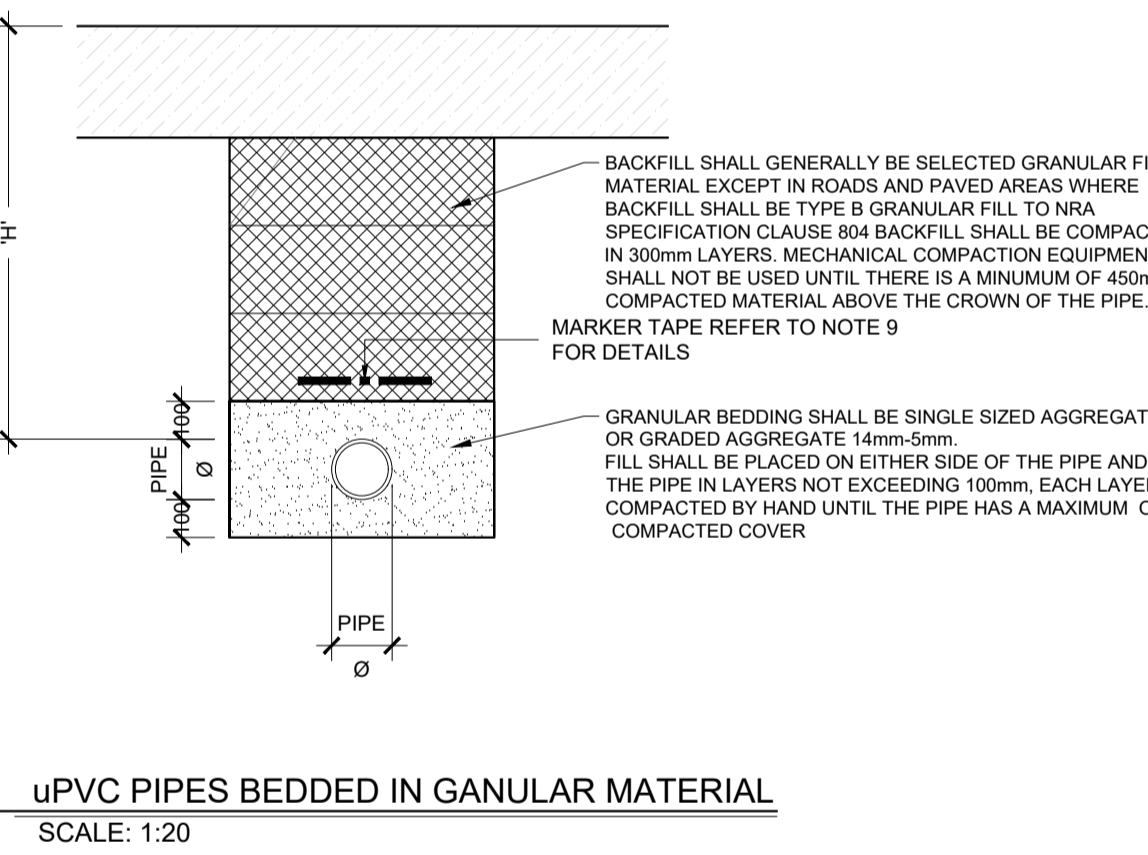
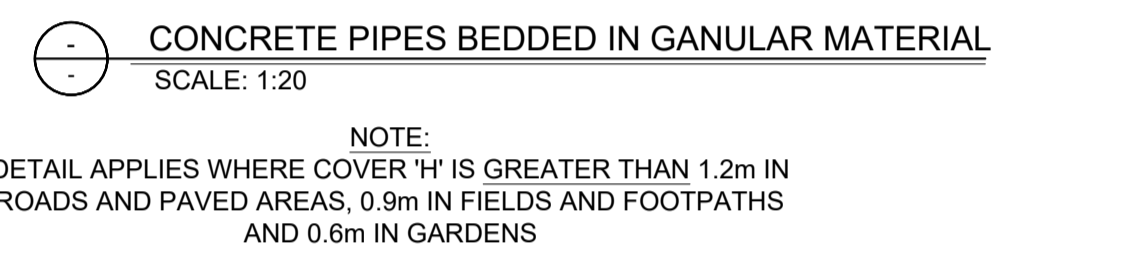
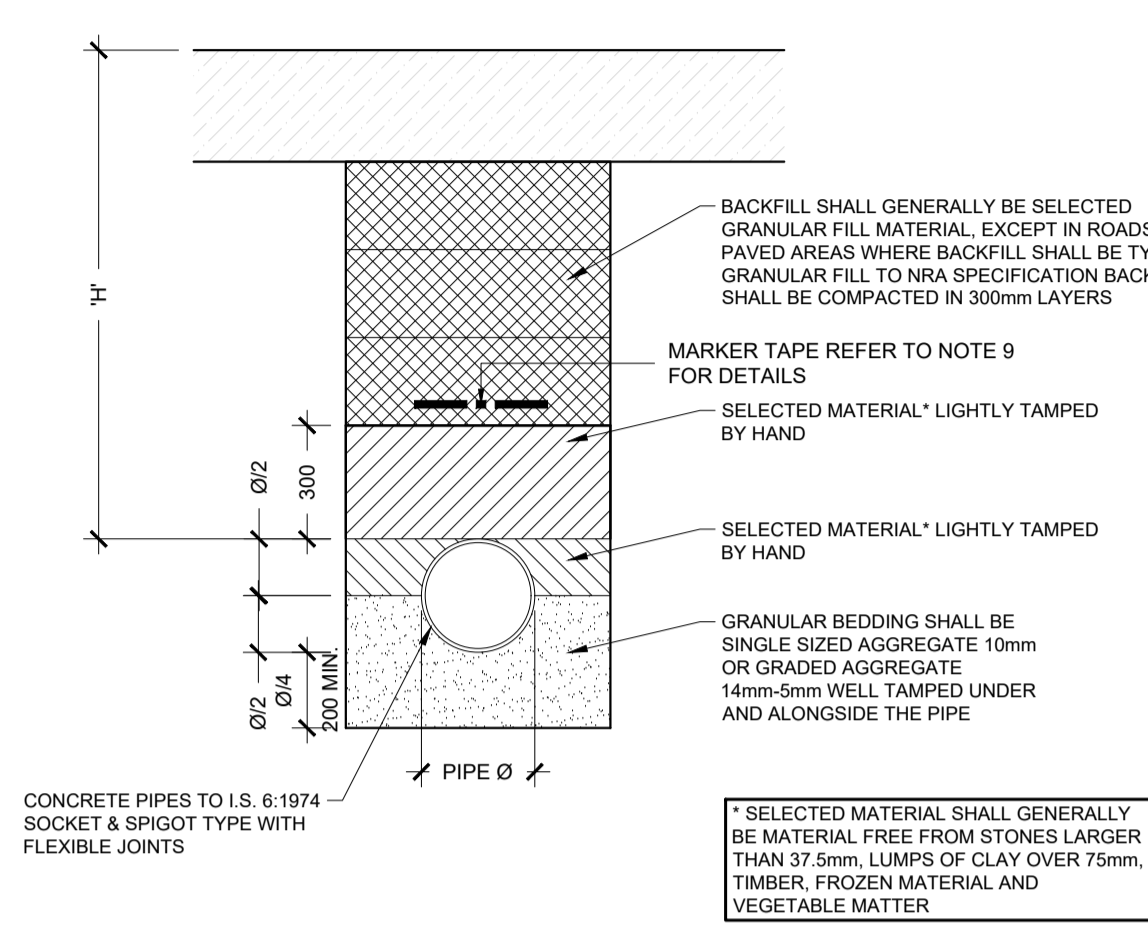
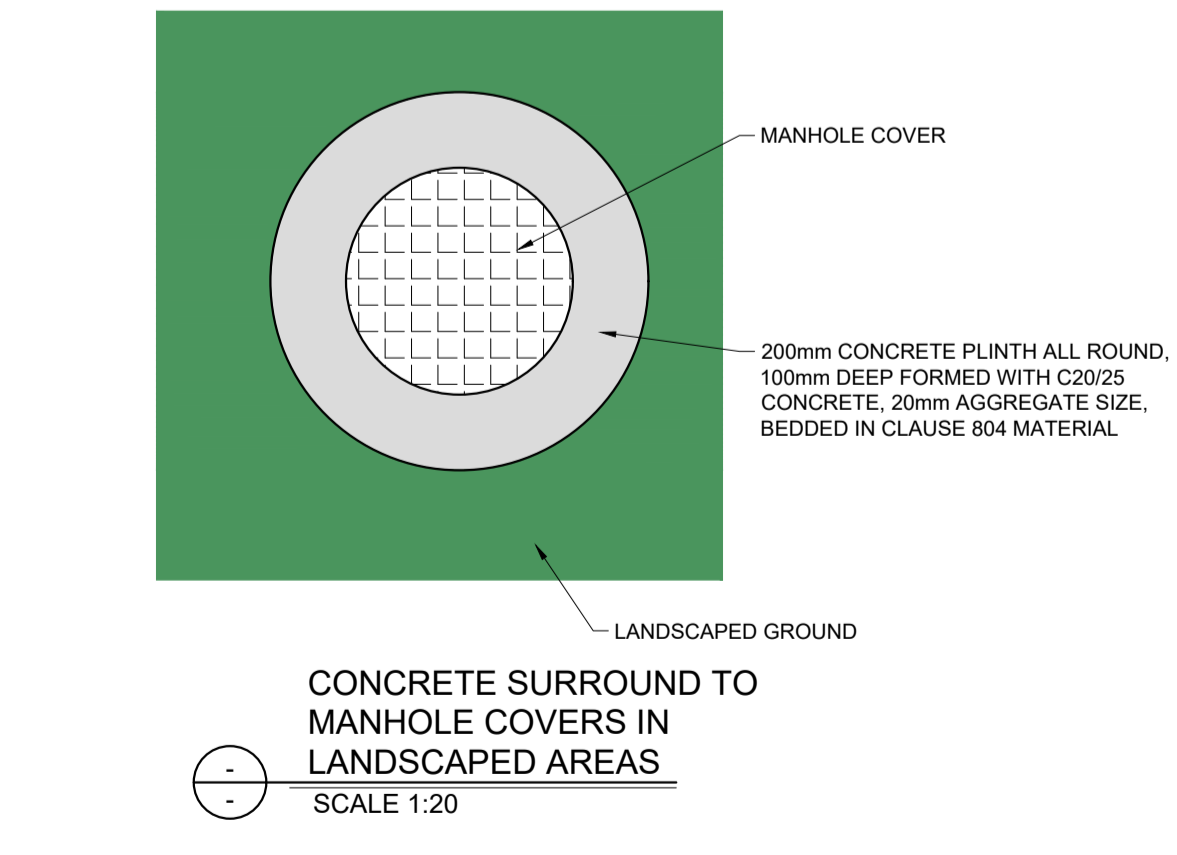
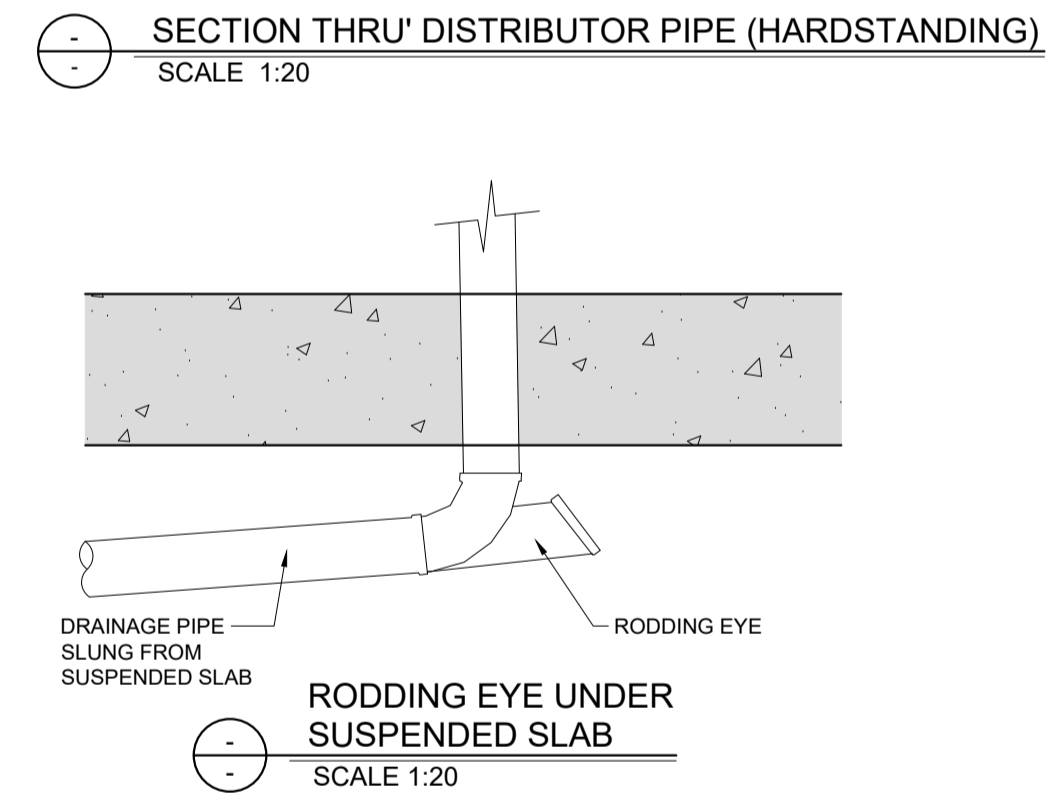
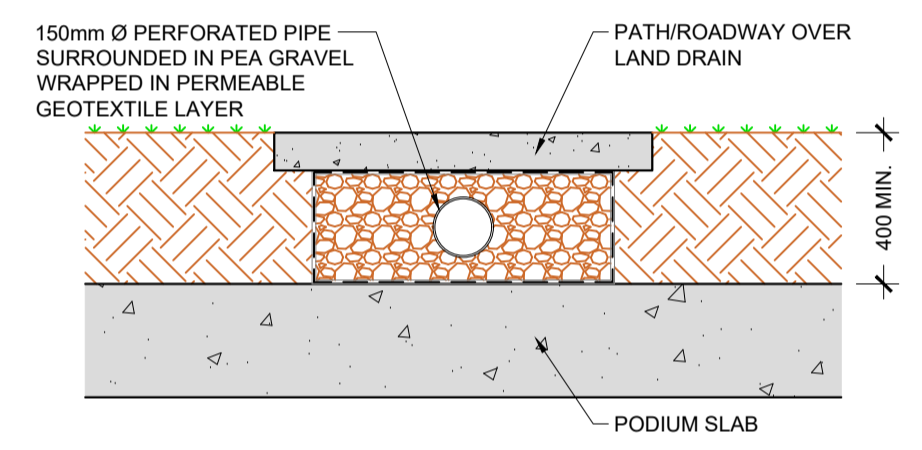
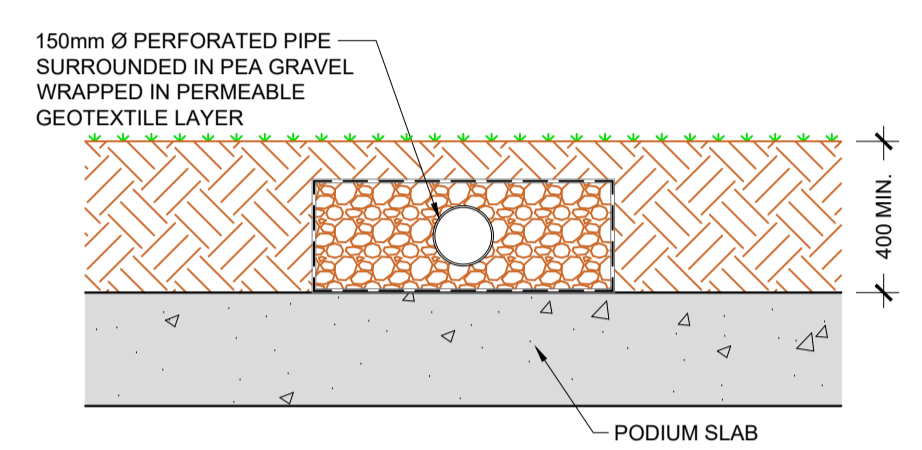
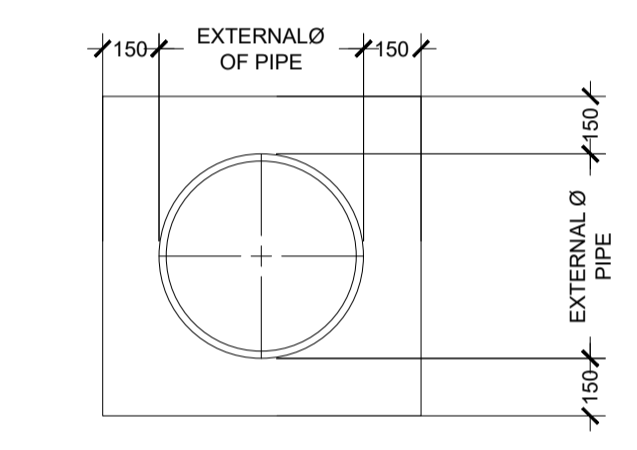
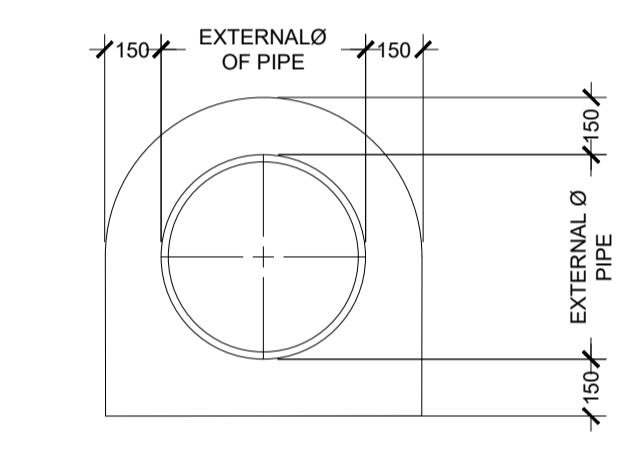
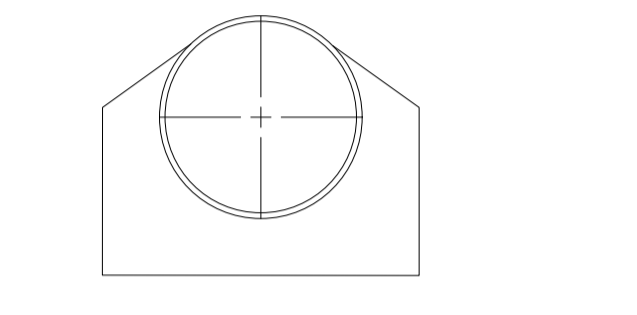
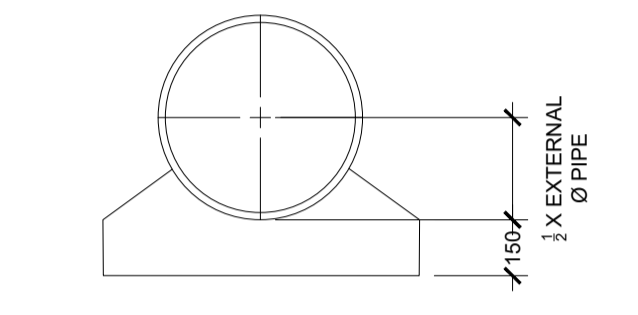
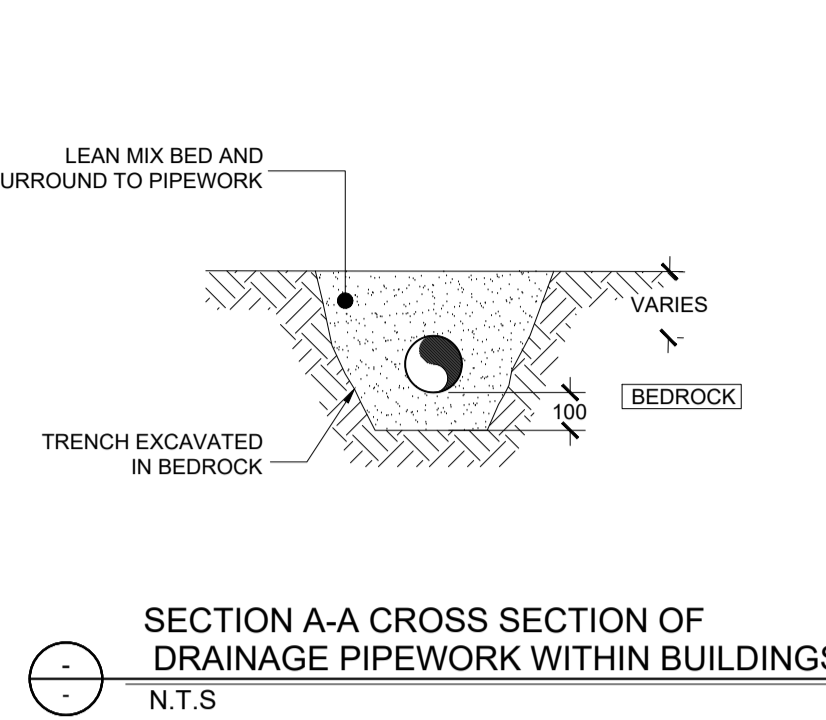
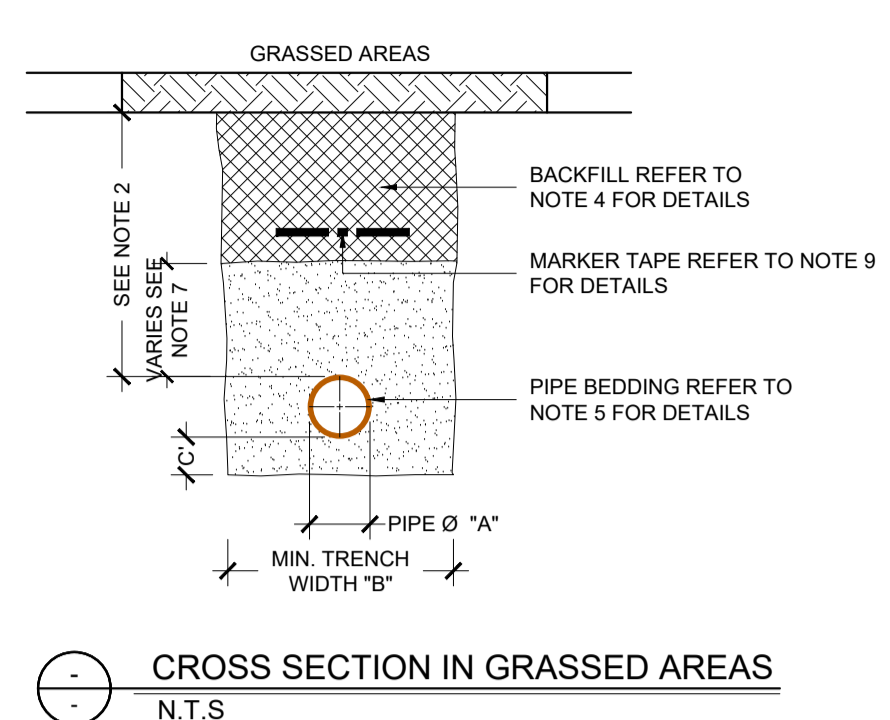
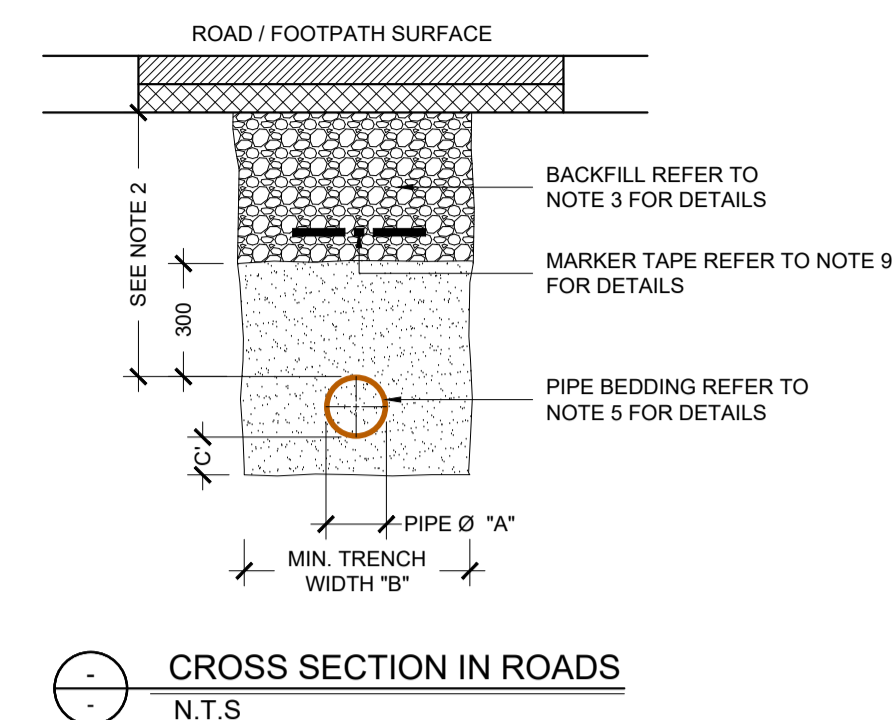


REVISION SCHEDULE				
REV. NO.	REV. DESCRIPTION	REV. DATE	DRAWN	CHECKED
PL1	ISSUED FOR PLANNING	04/11/2019	JPC	JFC
PL2	IRISH WATER COMMENTS INCORPORATED	17/12/2019	JPC	JFC
PL3	ISSUED FOR PLANNING	17/02/2020	JPC	JFC

**NOTES**

- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- THE MINIMUM DEPTH OF COVER FROM THE FINISHED SURFACE TO THE CROWN OF GRAVITY PIPES WITHOUT PROTECTION SHOULD BE AS FOLLOWS:
  - GARDENS AND PATHWAYS WITHOUT ANY POSSIBILITY OF VEHICULAR ACCESS - DEPTH NOT LESS THAN 0.9m (THIS WOULD NORMALLY RELATE TO DRAINS IN PRIVATE PROPERTY, SHALLOW PIPES OF THIS NATURE ARE UNDESIRABLE AND SHOULD BE INSTALLED IN ACCORDANCE WITH THE CURRENT BUILDING REGULATIONS)
  - DRIVEWAYS, PARKING AREAS AND YARDS WITH HEIGHT RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.75m.
  - DRIVEWAYS, PARKING AREAS AND NARROW STREETS WITHOUT FOOTWAYS (E.G. MEWS DEVELOPMENTS) WITH LIMITED ACCESS FOR VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.9m
  - DEPTHS OF SEWERS IN GATED ESTATES SHALL BE SIMILAR TO THAT OUTLINED ABOVE.
  - AGRICULTURAL LAND AND PUBLIC OPEN SPACE - DEPTH NOT LESS THAN 0.9m
  - OTHER HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS TO VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 1.2m
- CLAUSE 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE THE SEWER MAIN IS LOCATED IN ROADS, FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 1m OF THE PAVED EDGE OF THE ROADWAY. CLAUSE 808 IS TO BE COMPACTED AS PER CLAUSE 802 OF THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS.
- SELECTED EXCAVATED MATERIAL MAY BE USED IN GREEN-FIELD AREAS ABOVE GRANULAR PIPE SURROUND MATERIAL SUBJECT TO THE APPROVAL OF IRISH WATER.
- PIPE BEDDING SHALL COMPLY WITH WIS-08-02 AND IGH 4-08-01 GRANULAR MATERIAL SHALL BE 14mm TO 5mm GRADED AGGREGATE OR 10mm SINGLE SIZED AGGREGATE IS EN 13242. CONCRETE BED, HAUNCH & SURROUND, WHERE REQUIRED SHALL BE TO IRISH WATER STANDARDS.
- IN SOFT GROUND CONDITIONS (CBR <5) THE MATERIAL SHOULD BE EXCAVATED AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS SHALL REPLACE THE EXCAVATED MATERIAL, WRAPPED IN GEO-TEXTILE WRAPPING, ALTERNATIVELY, SPECIAL PIPE SUPPORT ARRANGEMENTS, INCLUDING PILING ETC. MAY BE REQUIRED WHERE THE DEPTH OF SOFT MATERIAL IS EXCESSIVE. SUCH ARRANGEMENTS SHALL BE SUBJECT TO ASSESSMENT BY IRISH WATER BEFORE ADVANCING WITH THE WORK.
- IN GREEN FIELD AREAS, TYPE B BACKFILL (SELECTED EXCAVATED MATERIAL) WILL BE ALLOWED ABOVE THE SIDE HAUNCH GRANULAR MATERIAL IN THE CASE OF RIGID PIPES. A GRANULAR SURROUND OF A MINIMUM DEPTH OF 150mm ABOVE THE CROWN OF THE PIPE IS REQUIRED FOR FLEXIBLE PIPES, AND TYPE B MATERIAL MAY BE USED AS BACKFILL ABOVE THIS. ALL RISING MAINS IN GREENFIELD AREAS SHALL HAVE A MINIMUM COVER OF 300mm OF GRANULAR MATERIAL ABOVE THE EXTERNAL CROWN OF THE PIPE.
- PIPES SHALL NOT BE SUPPORTED ON STONES, ROCKS OR ANY HARD OBJECTS AT ANY POINT ALONG THE TRENCH, ROCK SHALL BE EXCAVATED TO A DEPTH OF 150mm BELOW THE ACTUAL DEPTH OF THE TRENCH WITH THE VOID FILLED WITH CLAUSE 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. THE GRANULAR MATERIAL SHALL BE LAID ABOVE THIS VOID BACKFILL MATERIAL.
- NON DEGRADABLE MARKER TAPE SHOULD BE INSTALLED AT TOP OF PIPE BEDDING LAYER, IN THE CASE OF NON METAL PIPE MATERIAL, THE TAPE SHOULD INCORPORATE A TRACE WIRE WHICH IS LINKED TO FITTINGS AND TERMINATED AT THE WASTE WATER PUMPING STATION AND DISCHARGE MANHOLE.
- TRENCH WIDTHS FOR PIPE SIZES <math>\leq 80\text{mm}</math> MAY BE <math>\leq 500\text{mm}</math>, SUBJECT TO CONSIDERATION BEING GIVEN TO THE TRENCH DEPTH, HEALTH & SAFETY & CONSTRUCTION ACCESS TO REQUIREMENTS.



- NOTES:**
- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
  - CONCRETE PIPE BEDS AND HAUNCHES MAY BE REQUIRED TO ADDRESS MINIMUM COVER SITUATIONS, AND SHALL BE SUBJECT TO SUBMISSION AND ASSESSMENT BY IRISH WATER BEFORE ADVANCING WITH THE WORKS.
  - CONCRETE PIPE BEDS AND HAUNCHES SHALL HAVE A MINIMUM THICKNESS OF 150mm WITH AN ABSOLUTE MINIMUM DEPTH OF COVER ABOVE THE EXTERNAL CROWN OF THE PIPE OF 750mm.
  - CONCRETE TO BE IN ACCORDANCE WITH IS EN 206 AND TO BE CLASS C16/20.
  - THE HAUNCHES AND SURROUNDS TO BE FORMED USING FORM WORK TO PROVIDE A ROUGH CAST FINISH.
  - EXPANSION JOINTS IN THE CONCRETE SHALL BE PROVIDED AT ALL PIPE JOINTS TO ALLOW FOR PIPE FLEXIBILITY, COMPRESSIBLE FILLER BOARD TO BE IN ACCORDANCE WITH BS EN 622-1 AND BS EN 622-4, AN TO BE 18mm THICK.
  - POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE. BITUMINOUS MATERIAL SHALL NOT BE PUT IN CONTACT WITH PE OR PVC PIPES.

Drawing Stage: <b>PLANNING</b>	Project Details: Site Address: DUBLIN ROAD, SWORDS, Co. DUBLIN Client: JACKO INVESTMENTS Architect: AUGHEY O'FLAHERTY ARCHITECTS M&E Designer: Contractor:	Notes: 1. ALL ENGINEERS DRAWINGS TO BE READ IN CONJUNCTION WITH RELEVANT DRAWINGS AND SPECIFICATIONS. 2. ALL SETTING OUT TO ARCHITECTS DRAWINGS. 3. DO NOT SCALE FROM ENGINEERS DRAWINGS. 4. ANY DISCREPANCIES BETWEEN DRAWINGS, SKETCHES, VERBAL INSTRUCTIONS AND SITE CONDITIONS TO BE REFERRED TO THE DESIGN TEAM BEFORE WORK COMMENCES. 5. ALL LEVELS ARE STRUCTURAL UNLESS NOTED OTHERWISE. 6. ALL LEVELS ARE STRUCTURAL UNLESS NOTED OTHERWISE.	Drawn by: JPC Checked by: KO'M Approved by: JFC Date: 01/10/2019	Project Name: THE LORD MAYOR REDEVELOPMENT Scale: A.S. @ A1 Project Originator: SA Project Originator: CORA Zone: 00	Date: 01/10/2019 Project Number: 1867 Originator: CORA Zone: 00	Level: ZZ Type: DR Discipline: C Drawing No: 0013 Stage: 04 Revision: PL3	Behan House, 10 Lower Mount St., Dublin 2. D02 H771 Tel: +353 (0)1 661 1100 e-mail: info@cora.ie Web: www.cora.ie
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