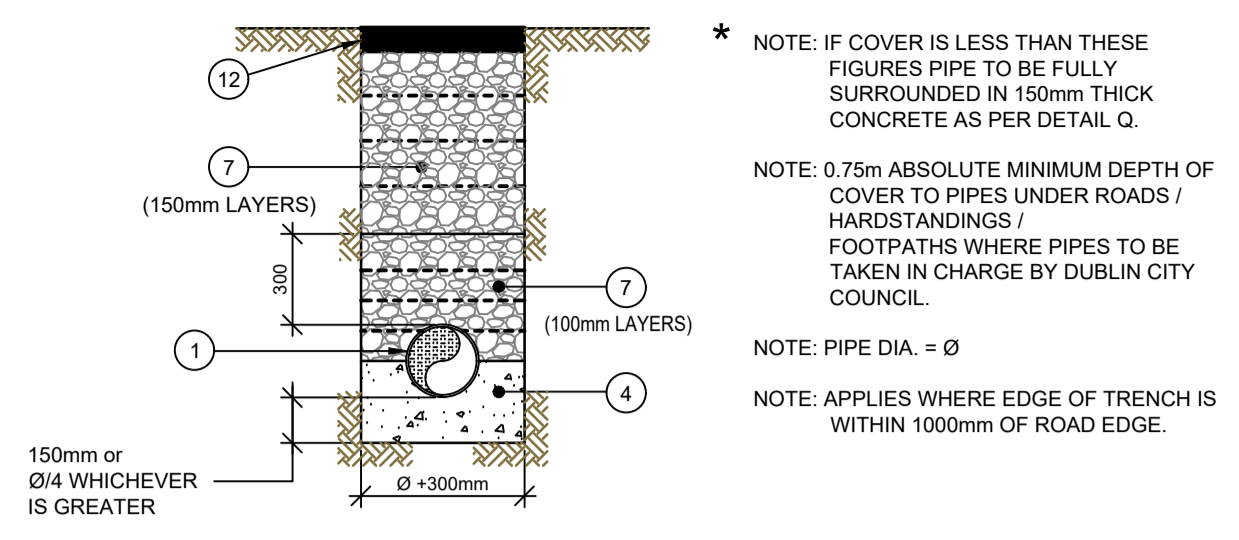


NOTES

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS.
- FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING. ALL DIMENSIONS TO BE CHECKED ON SITE. ENGINEER TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE ANY WORK PROCEEDS.

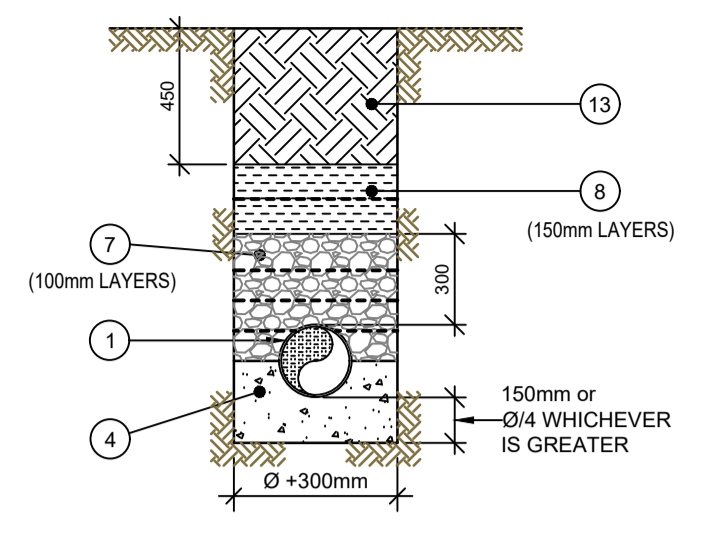
NOTES

- CONCRETE SEWER PIPES WITH SPIGOT & SOCKET JOINTS & RUBBER RING FITTINGS TO COMPLY WITH ISEN 1916 & IS 6 2004 OR EQUIVALENT STANDARD CLASS M OR CLASS H.
 - THERMOPLASTIC STRUCTURED WALL PIPES AND FITTINGS IN ACCORDANCE WITH THE REQUIREMENTS OF ISEN 13476 (2007/2009). PIPES TO BE SERVICE CLASS 8 MIN.
 - UNPLASTICIZED POLYVINYLCHLORIDE (UPVC) PIPES & FITTINGS IN ACCORDANCE WITH THE REQUIREMENTS OF ISEN 1401 (2009/2012).
 - CONCRETE BED & SURROUND TO BE A MINIMUM 150mm THICK IN-SITU CONCRETE CLASS C16/20 & HAUNCHED HALF WAY UP THE BARREL OF THE PIPE.
 - GRANULAR BED & SURROUND FOR RIGID PIPES TO BE EITHER:
A. 14mm TO 5mm GRADED AGGREGATE OR
B. 10mm SINGLE SIZED AGGREGATE.
- ALL COMPLYING WITH THE REQUIREMENTS OF ISEN 13242 & SHOULD HAVE A COMPACTION FACTOR VALUE NOT GREATER THAN 0.2 WHEN MEASURED IN ACCORDANCE WITH ISEN 752.
- GRANULAR BED & SURROUND & COVER FOR FLEXIBLE PIPES TO BE:
(A) 14mm TO 5mm GRADED AGGREGATE (PIPE DIAMETER < 315mm)
(B) 10mm SINGLE SIZED AGGREGATE (PIPE DIAMETER < 315mm)
- ALL COMPLYING WITH THE REQUIREMENTS OF ISEN 13242 & SHOULD HAVE A COMPACTION FACTOR VALUE NOT GREATER THAN 0.2 WHEN MEASURED IN ACCORDANCE WITH ISEN 752. GRANULAR BED FILL & COVER TO BE PLACED UNIFORMLY ON EITHER SIDE OF THE PIPE IN LAYERS NOT EXCEEDING 100mm, EACH LAYER BEING COMPACTED BY H&S TAMPING UNTIL THE PIPE HAS A MINIMUM 150mm COMPACTED COVER.
- GRANULAR BACKFILL MATERIAL SHALL BE IN COMPLIANCE WITH CLAUSE 804 (GRANULAR MATERIAL TYPE B) OF THE NRA SPECIFICATION FOR ROAD WORKS. GRANULAR BACKFILL SHOULD BE PLACED UNIFORMLY ON EITHER SIDE OF THE PIPE IN LAYERS NOT EXCEEDING 100mm, EACH LAYER BEING COMPACTED BY HAND & TAMPING UNTIL THE PIPE HAS MINIMUM OF 300mm COMPACTED COVER. CARE SHOULD BE TAKEN THAT THE PROCESS OF COMPACTION DOES NOT DISPLACE THE PIPE FROM ITS CORRECT LINE & LEVEL. SUBSEQUENT LAYERS OF GRANULAR FILL TO BE WELL COMPACTED IN 150mm THICK LAYERS TO THE LOCAL AUTHORITY ROAD DIVISION SPECIFICATION. MECHANICAL COMPACTION EQUIPMENT SHOULD NOT BE USED UNTIL THERE IS A MINIMUM OF 60mm COMPACTED COVER OVER THE CROWN OF THE PIPE.
 - SELECTED FILL SHOULD BE FREE FROM STONES LARGER THAN 37mm. LUMPS OF CLAY OVER 75mm, TIMBER, FROZEN MATERIAL & VEGETABLE OR FOREIGN MATTER. SELECTED FILL SHOULD BE PLACED UNIFORMLY ON EITHER SIDE OF THE PIPE IN LAYERS NOT EXCEEDING 100mm, EACH LAYER BEING COMPACTED BY H&S TAMPING UNTIL THE PIPE HAS A MINIMUM OF 150mm COMPACTED COVER. CARE SHOULD BE TAKEN THAT THE PROCESS OF COMPACTION DOES NOT DISPLACE THE PIPE FROM ITS CORRECT LINE & LEVEL. SUBSEQUENT SELECTED FILL CAN BE PLACED & COMPACTED IN 150mm THICK LAYERS.
 - GENERAL BACKFILL MATERIAL SUITABLE FOR BACKFILL ABOVE SELECTED FILL MATERIAL SHOULD BE FREE FROM BOULERS. LUMPS OF CONCRETE, TIMBER & VEGETABLE OR FOREIGN / CONTAMINATED MATTER. GENERAL BACKFILL SHOULD BE PLACED IN LAYERS NOT EXCEEDING 300mm, EACH LAYER BEING WELL COMPACTED. MECHANICAL COMPACTION EQUIPMENT SHOULD NOT BE USED UNTIL THERE IS A MINIMUM OF 450mm COMPACTED COVER OVER THE CROWN OF THE PIPE.
 - PIPES WITH INADEQUATE COVER TO BE FULLY SURROUNDED IN 150mm THICK GRADE C16/20 CONCRETE.
 - LEAN-MIX BACKFILL TO TRENCHES IN EXISTING ROAD, WHERE REQUIRED BY THE LOCAL AUTHORITY TO BE GRADE 20N / 20mm CONCRETE.
 - SURFACING TO BE IN ACCORDANCE WITH THE ROAD SPECIFICATION & IF APPROPRIATE, LOCAL AUTHORITY REQUIREMENTS.
 - GOOD QUALITY TOPSOIL, 450mm MINIMUM THICK, TO BE PLACED OVER BACKFILL IN ACCORDANCE WITH PARKS DEPARTMENT / LANDSCAPE ARCHITECTS REQUIREMENTS.
 - A₁ (ARMSTRONG JOINTS)
a. TO BE USED FOR PIPE DEPTHS UP TO 600mm
b. INTERNAL A₁'s IF REQUIRED TO HAVE DOUBLE SEALED COVERS
c. EXTERNAL A₁'s TYPICALLY TO BE PROPRIETARY gPVC WITH 35kN COVER
d. EXTERNAL A₁'s IN AREAS SUBJECT TO TRAFFIC TO BE SURROUNDED 150 WITH C20 CONCRETE & TO HAVE A CLASS 0 COVER & FRAME SUPPORTED OFF THE CONCRETE SURROUND
- GENERAL NOTES**
- IN SOFT GROUND CONDITIONS (CBR < 5) THE MATERIAL SHOULD BE EXCAVATED AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 804 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.
 - 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 804 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 MARKER TAPE SHOULD INCORPORATE A TRACE WIRE WHICH IS LINKED TO FITTINGS AND TERMINATED AT THE WASTE WATER PLUMBING STATION AND THE DISCHARGE MANHOLE.
 - TRENCH WIDTHS FOR PIPE SIZES ≤ 80mm MAY BE ≤ 500mm, SUBJECT TO CONSIDERATION BEING GIVEN TO THE TRENCH DEPTH, HEALTH & SAFETY & CONSTRUCTION ACCESS REQUIREMENTS.
 - 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 B.S. EN 622-1 AND B.S. EN 622-4 AND TO BE 18mm THICK.
 - POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH B.S. 6076 BEFORE BEING CAST INTO CONCRETE.
 - BITUMINOUS MATERIAL SHALL NOT BE PUT IN CONTACT WITH PE OR PVC PIPES.
 - FOR FOUL DRAINS TO BE TAKEN IN CHARGE BY IRISH WATER, PIPE BEDDING SHALL BE STRICTLY IN ACCORDANCE WITH THE REQUIREMENTS OF IRISH WATER WHICH MAY DIFFER FROM THE DETAILS SHOWN. REFER TO IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE AND ASSOCIATED IRISH WATER STANDARD DETAILS, ALONG WITH ANY PARTICULAR REQUIREMENTS.



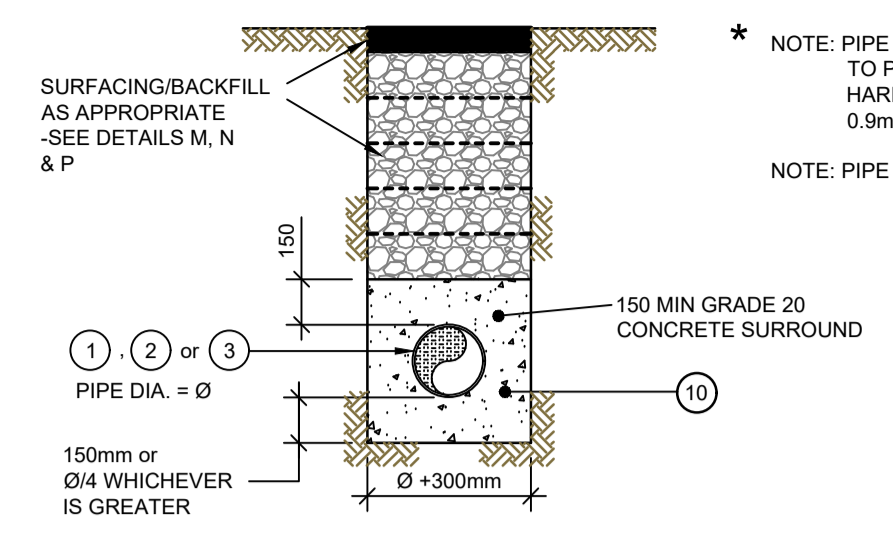
UNDER ROADS/HARDSTANDINGS/FOOTPATHS
COVER ≥ 1.2m *

DETAIL M
SCALE 1:25

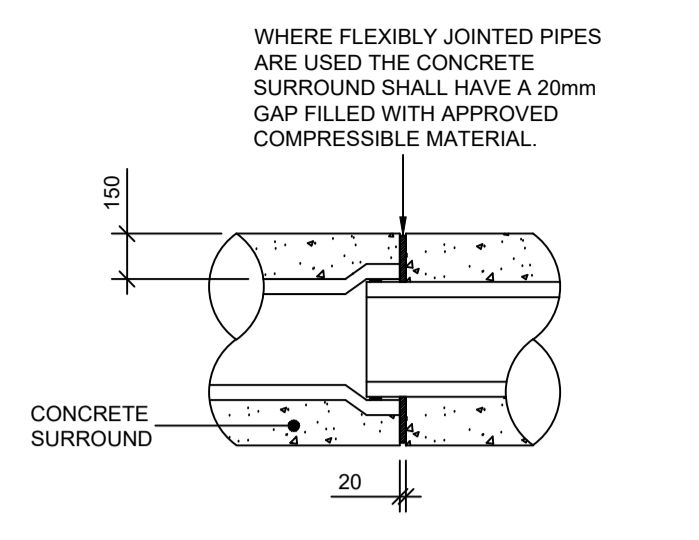


UNDER LANDSCAPED AREAS
COVER ≥ 0.9m *

DETAIL Q
SCALE 1:25



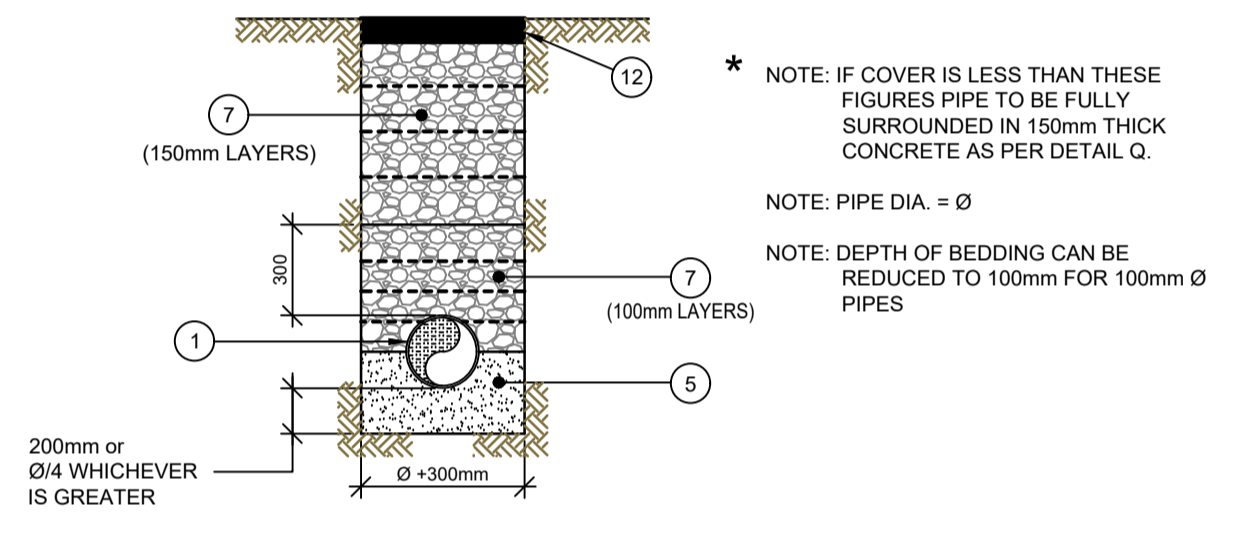
CONCRETE PIPE ENCASEMENT DETAIL



JOINT IN CONCRETE SURROUND

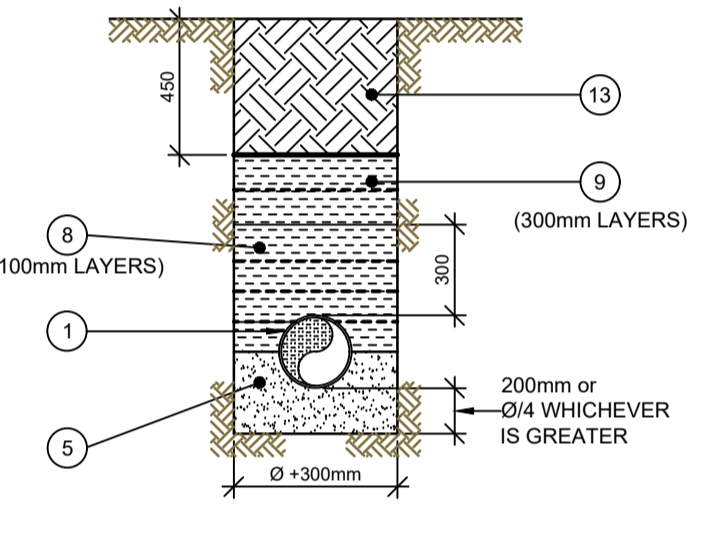
RIGID PIPES WITH CONCRETE BED & SURROUND

CONCRETE ENCASEMENT



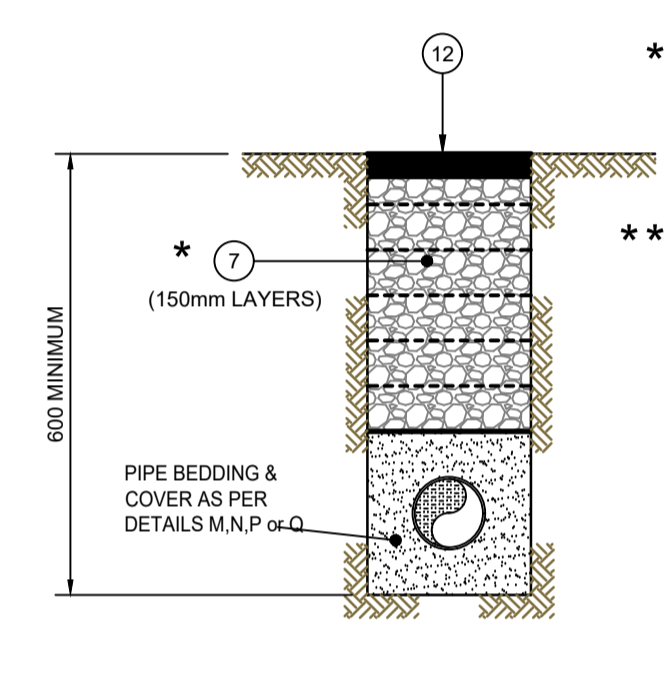
UNDER ROADS/HARDSTANDINGS/FOOTPATHS
COVER ≥ 1.2m *

DETAIL N
SCALE 1:25

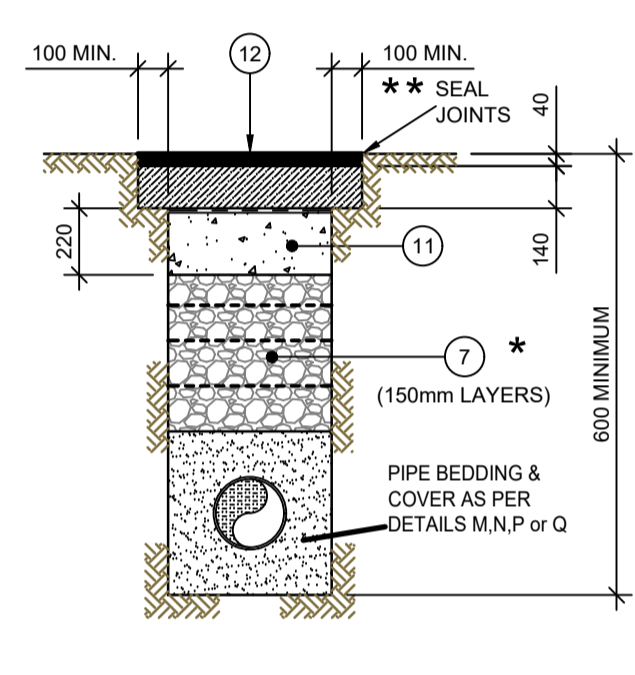


UNDER LANDSCAPED AREAS
COVER ≥ 0.9m *

DETAIL O
SCALE 1:25



STAGE 1
LEAVE FOR 6 MONTHS TO CONSOLIDATE

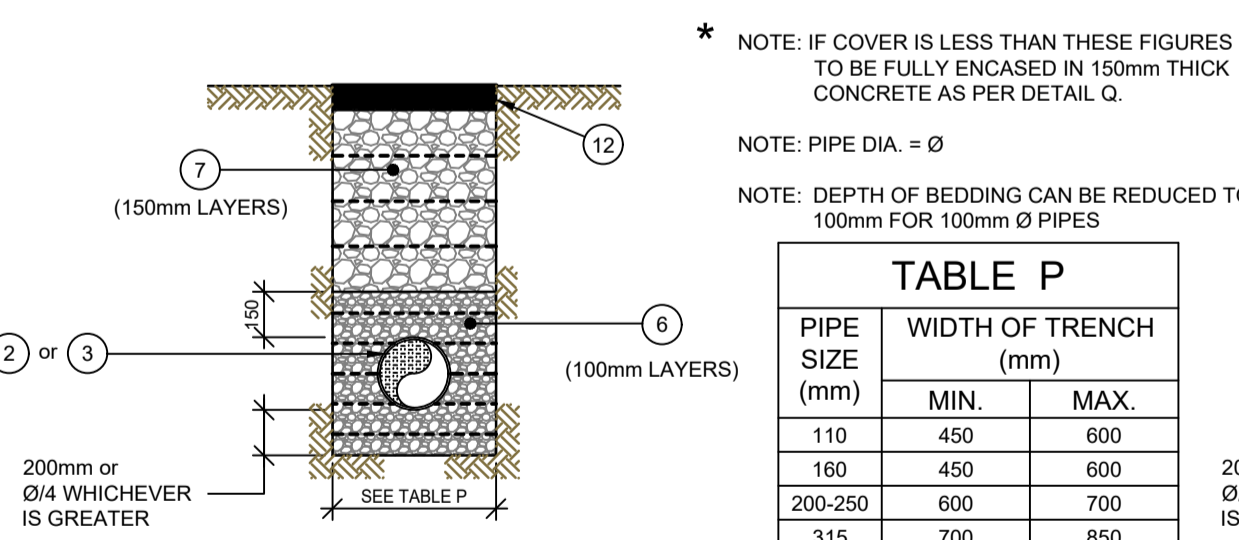


STAGE 2
DIG OUT SURFACING & TOP 220mm OF CL804 MATERIAL (7) & REPLACE WITH NEW WIDER SURFACING ON 220 LAYER OF LEAN-MIX CONCRETE (11)

REINSTATEMENT OF PIPE TRENCH IN EXISTING ROAD

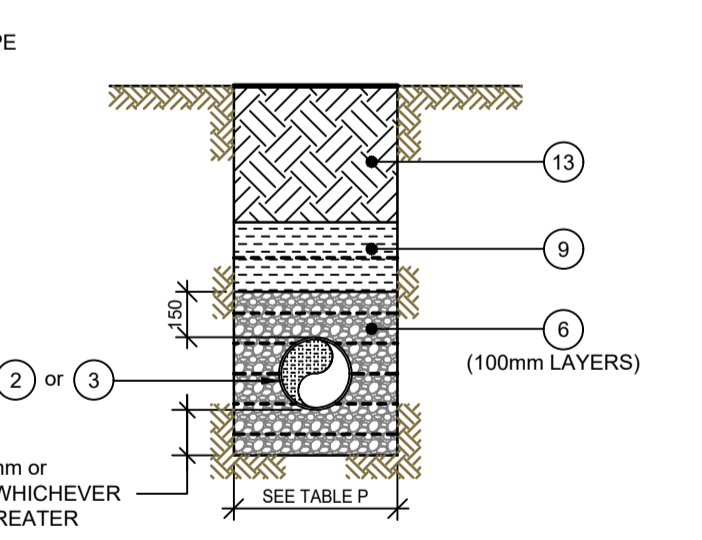
(SUBJECT TO APPROVAL OF LOCAL AUTHORITY)

RIGID PIPES WITH GRANULAR BED & SURROUND



UNDER ROADS/HARDSTANDINGS/FOOTPATHS
COVER ≥ 1.2m *

DETAIL P
SCALE 1:25



UNDER LANDSCAPED AREAS
COVER ≥ 0.9m *

PIPE SIZE (mm)	WIDTH OF TRENCH (mm)	
	MIN.	MAX.
110	450	600
160	450	600
200-250	600	700
315	700	850
355	750	900
400	800	950
450	850	1000

FLEXIBLE PIPES WITH GRANULAR BED & SURROUND

P01	14.07.20	ISSUED FOR PLANNING	AG	AD
Rev	Date	Amendments	by	chkd

PROJECT
FCC HAYESTOWN HOUSING, RUSH, Co. DUBLIN

CLIENT
FINGAL COUNTY COUNCIL

DRAWING TITLE
PIPE BEDDING DETAILS

drawn by: AG date: 14.07.20 scale: N.T.S. @ A1 chk: AD

20067 - DOW - 00 - XX - DR - CE
Project Originator Volume Level Type Role

20067 4002 P01
DOW Project No. drg. no. rev.

S4 - SUITABLE FOR STAGE APPROVAL
Suitability Status: Code - Description

Cashel Business Centre,
Cashel Road, Kimmage, Dublin 12
T 01 4901611
E admin@downesassociates.ie
www.downesassociates.ie

