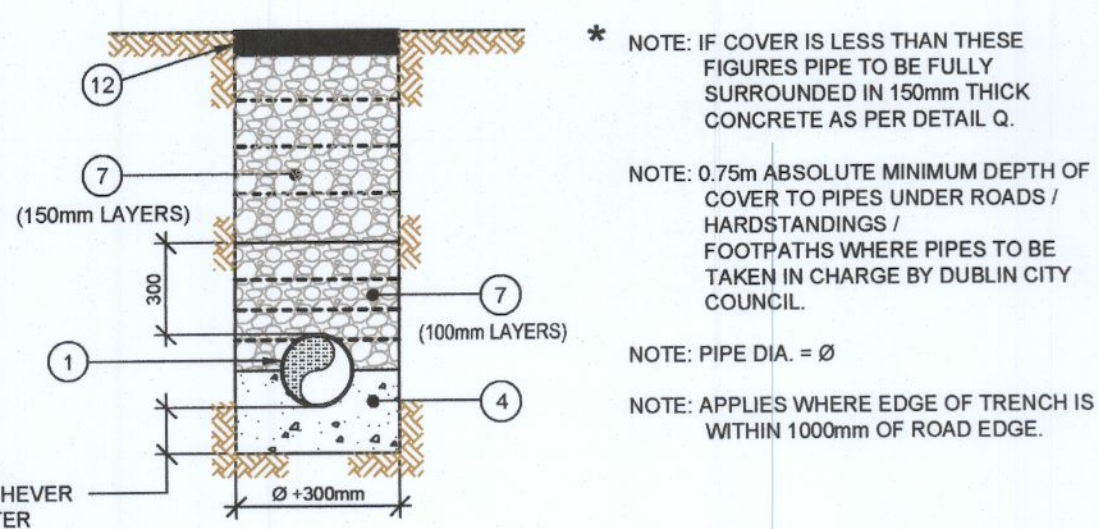


NOTES

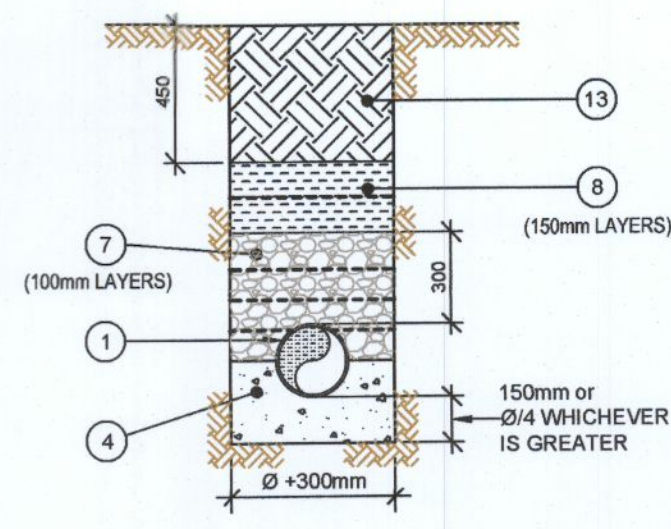
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS.
- FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING. ALL DIMENSIONS TO BE CHECKED ON SITE. ENGINEER TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE ANY WORK PROCEEDS.
- REFER TO DRAWING 20047-DOW-0000 FOR PROJECT SPECIFICATION.

NOTES

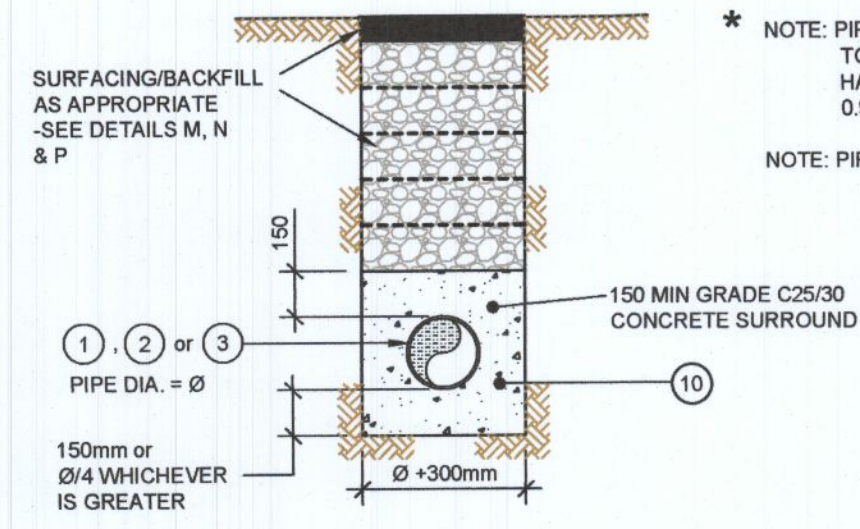
- CONCRETE SEWER PIPES WITH SPOUT & SOCKET JOINTS & RUBBER RING FITTINGS TO COMPLY WITH ISEN 1518 & IS 2024 OR EQUIVALENT STANDARD CLASS OR CLASS H.
 - THERMOPLASTIC STRUCTURED WALL PIPES AND FITTINGS IN ACCORDANCE WITH THE REQUIREMENTS OF ISEN 15476 (2007/2009). PIPES TO BE SERVICE CLASS 8.
 - UNPLASTICIZED 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 GRADE C25/30 & HAUNCHED HALF WAY UP THE BARREL OF THE PIPE.
 - GRANULAR BED & SURROUND FOR RIGID PIPES TO BE EITHER:
A. 14mm TO 9mm GRADED AGGREGATE OR
B. 10mm SINGLE SIZED AGGREGATE
 - ALL COMPLYING WITH THE REQUIREMENTS OF ISEN 15242 & 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) 4mm TO 5mm GRADED AGGREGATE (PIPE DIAMETER < 315mm)
(B) 10mm SINGLE SIZED AGGREGATE (PIPE DIAMETER < 315mm)
 - ALL COMPLYING WITH THE REQUIREMENTS OF ISEN 15242 & SHOULD HAVE A COMPACTION FACTOR VALUE NOT GREATER THAN 0.2 WHEN MEASURED IN ACCORDANCE WITH ISEN 752. GRANULAR SIDE FILL & COVER TO BE PLACED UNIFORMLY ON EITHER SIDE OF THE PIPE IN LAYERS NOT EXCEEDING 100mm, EACH LAYER BEING COMPACTED BY HIS TAMING 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 IWA 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 & TAMING 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 450mm COMPACTED COVER OVER THE CROWN OF THE PIPE.
 - SELECTED FILL SHOULD BE FREE FROM STONES LARGER THAN 50mm, LUMPS OF CLAY OVER 75mm, TIMBER, FROZEN MATERIAL 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 HIS TAMING 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 LAYERS OF FILL CAN BE PLACED & COMPACTED IN 150mm THICK LAYERS.
 - GENERAL BACKFILL MATERIAL SUITABLE FOR BACKFILL ABOVE SELECTED FILL MATERIAL SHOULD BE FREE FROM Boulders, 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 C25/30 CONCRETE.
 - LEANMIX BACKFILL TO TRENCHES IN EXISTING ROAD, WHERE REQUIRED BY THE LOCAL AUTHORITY TO BE GRADE C20/25 CONCRETE OF 20mm AGGREGATE.
 - 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/A₂ (ARMSTRONG JUNCTIONS)
a. TO BE USED FOR PIPE DEPTHS UP TO 600mm
b. INTERNAL A₁/A₂ IF REQUIRED TO HAVE DOUBLE SEALED COVERS
c. EXTERNAL A₁/A₂ TYPICALLY TO BE PROPRIETARY UPVC WITH 35mm COVER
d. EXTERNAL A₁/A₂ IN AREAS SUBJECT TO TRAFFIC TO BE SURROUNDED 150 WITH C20/25 CONCRETE & TO HAVE A CLASS D COVER & FRAME SUPPORTED OFF THE CONCRETE SURROUND
- GENERAL NOTES**
- IN SOFT GROUND CONDITIONS (CGR = 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 REFILL 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 TAPS SHOULD BE INSTALLED AT TOP OF PIPE BEDDING LAYER. IN THE CASE OF NON METAL PIPE MATERIAL, THE MARKER TAP 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 SHOULD BE IN ACCORDANCE WITH B.S. EN 822-1 AND B.S. EN 822-4 AND TO BE 18mm THICK.
 - POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH B.S. 6078 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.



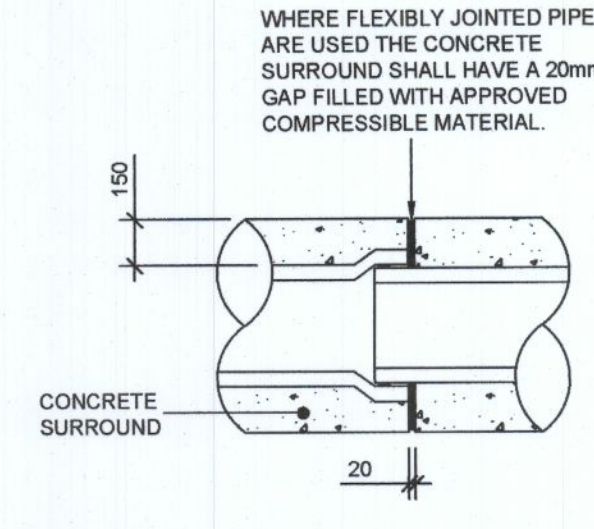
UNDER ROADS/HARDSTANDINGS/FOOTPATHS
COVER ≥ 1.2m *



UNDER LANDSCAPED AREAS
COVER ≥ 0.9m *



CONCRETE PIPE ENCASEMENT DETAIL



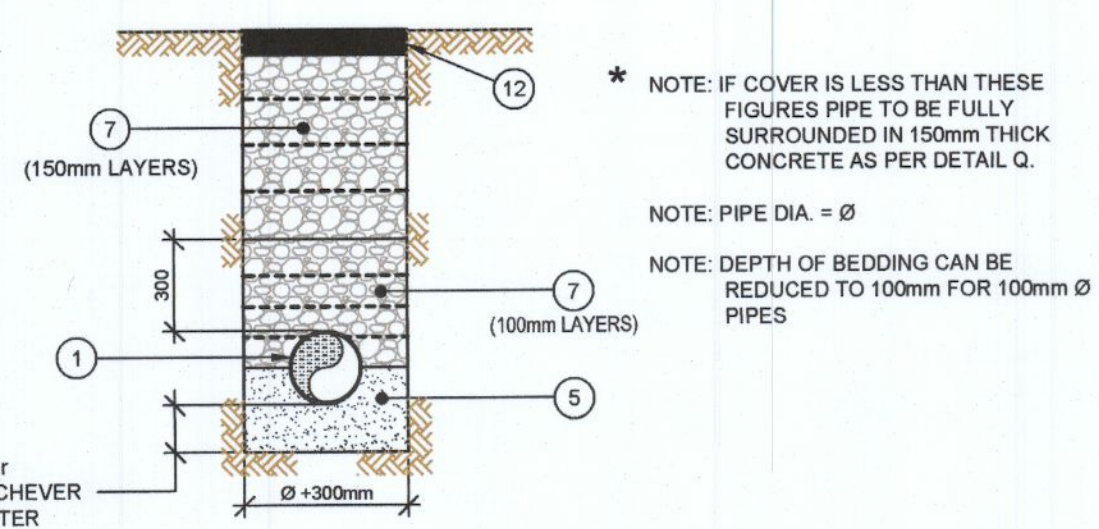
JOINT IN CONCRETE SURROUND

RIGID PIPES WITH CONCRETE BED & SURROUND

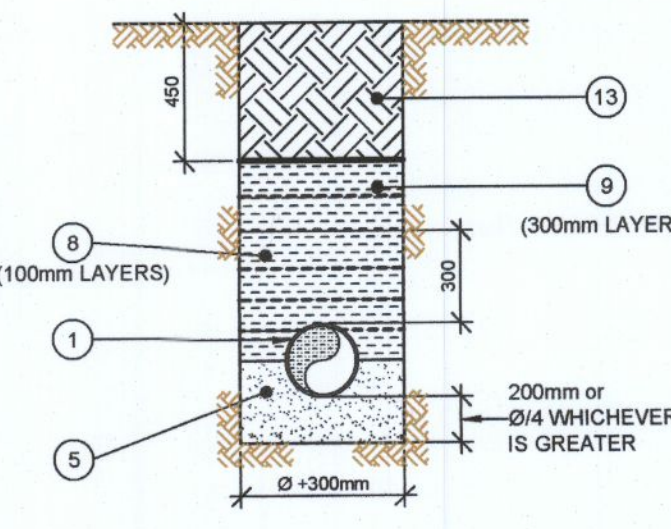
M DETAIL
SCALE 1:25

Q DETAIL
SCALE 1:25

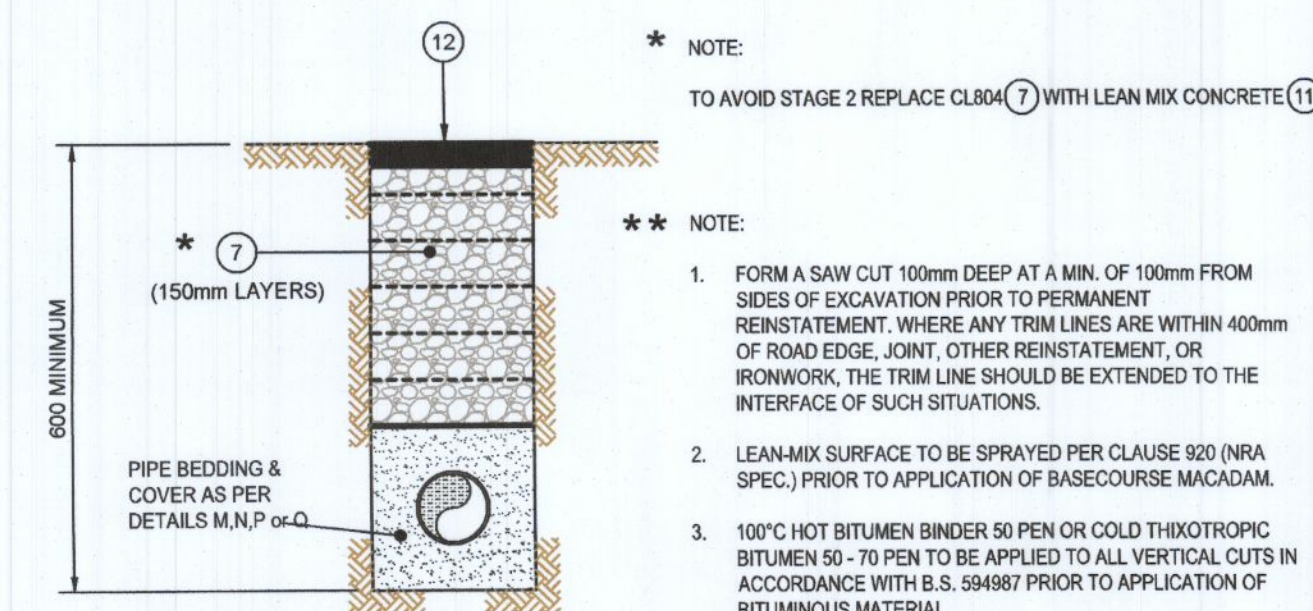
CONCRETE ENCASEMENT



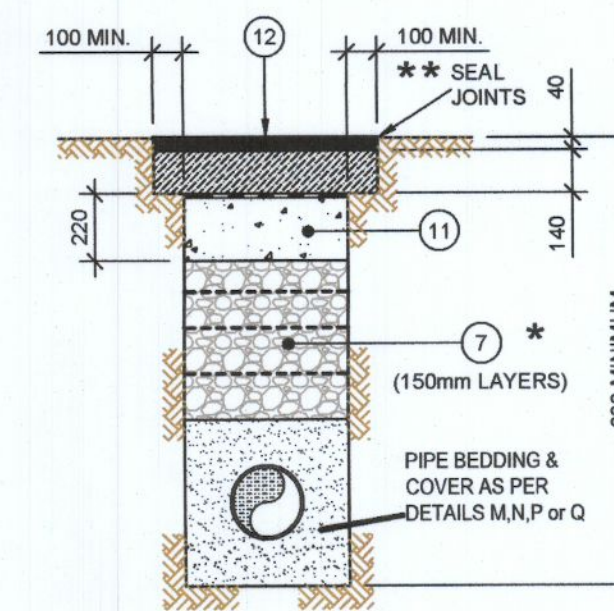
UNDER ROADS/HARDSTANDINGS/FOOTPATHS
COVER ≥ 1.2m *



UNDER LANDSCAPED AREAS
COVER ≥ 0.9m *



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 220mm LAYER OF LEAN-MIX CONCRETE (11)

RIGID PIPES WITH GRANULAR BED & SURROUND

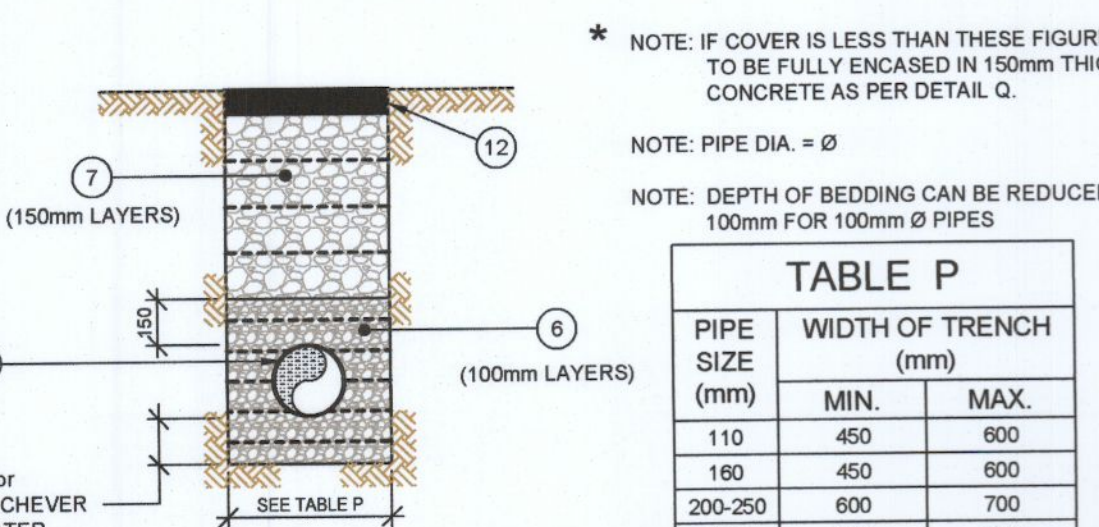
NOTE: GRANULAR BED NOT ALLOWED IN DUBLIN CITY COUNCIL AREAS

N DETAIL
SCALE 1:25

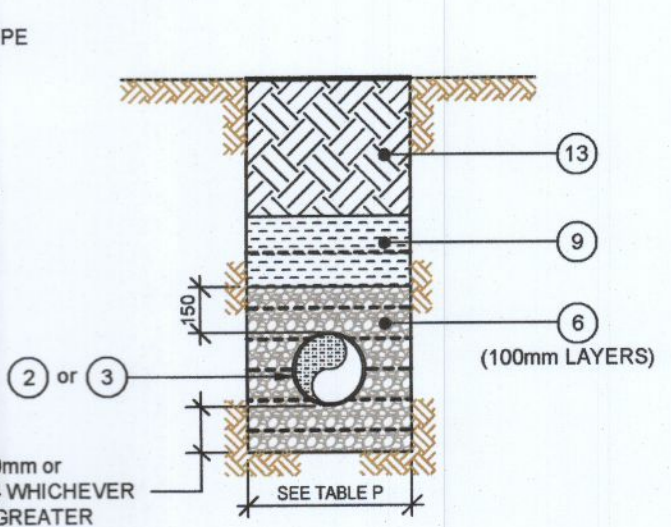
R DETAIL
SCALE 1:25

REINSTATEMENT OF PIPE TRENCH IN EXISTING ROAD

(SUBJECT TO APPROVAL OF LOCAL AUTHORITY)



UNDER ROADS/HARDSTANDINGS/FOOTPATHS
COVER ≥ 1.2m *



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

P DETAIL
SCALE 1:25

FLEXIBLE PIPES WITH GRANULAR BED & SURROUND

NOTE: UPVC PIPES NOT ALLOWED IN DUBLIN CITY COUNCIL AREAS

Rev	Date	Amendments	AG	IC
P03	30.09.22	GENERAL REVISIONS	AG	IC
P02	20.01.21	TITLE BLOCK REVISED	AG	IC
P01	07.12.20	ISSUED FOR PLANNING	AG	IC

PROJECT
PROPOSED HOUSING DEVELOPMENT
AT CLONBRONE, LUCAN, DUBLIN 20.

CLIENT
NACUL DEVELOPMENTS Ltd.

DRAWING TITLE
PIPE BEDDING DETAILS

drawn by: AG date: 30.11.20 scale: N/A @ A1 chk: IC

20047 - DOW - 00 - XX - DR - CE

Project	Originator	Volume	Level	Type	Role
20047	4003				P03

DOW Project No. drg. no. rev.

S0 - SUITABLE FOR PLANNING
Suitability Status: Code - Description

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