

**TRENCH BACKFILL AND BEDDING**  
STD-W-13

PIPE DIAMETER 'A' (mm)	TRENCH WIDTH 'B' (mm)
< 80	SEE NOTE 10
100	500
150	600
200	600
250	750
300	750
350	750
400	900
450	900

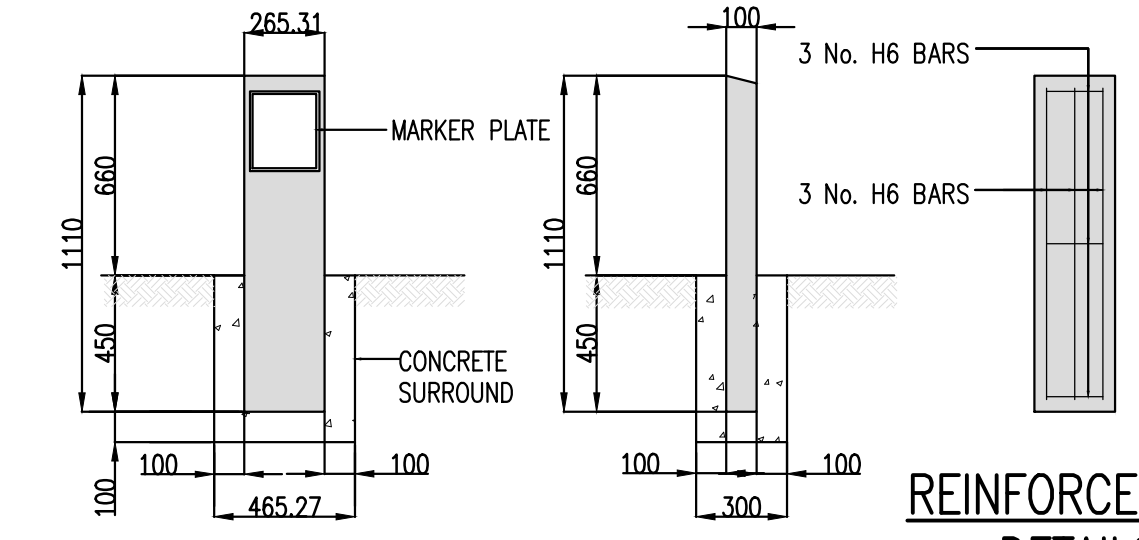
PIPE DIAMETER 'A' (mm)	DEPTH OF BEDDING 'C' (mm)
< 200	150
> 250	200

**PIPE BEDDING NOTES:**

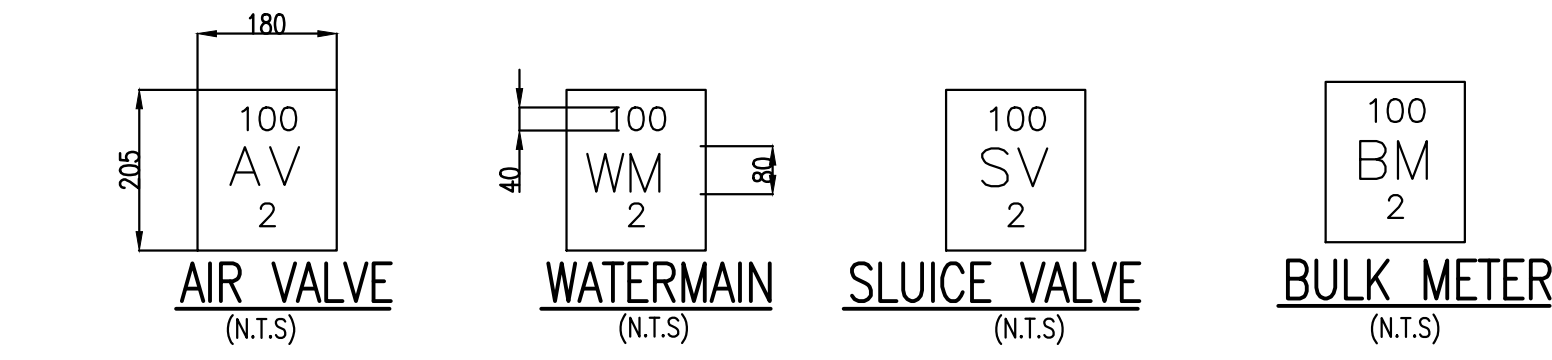
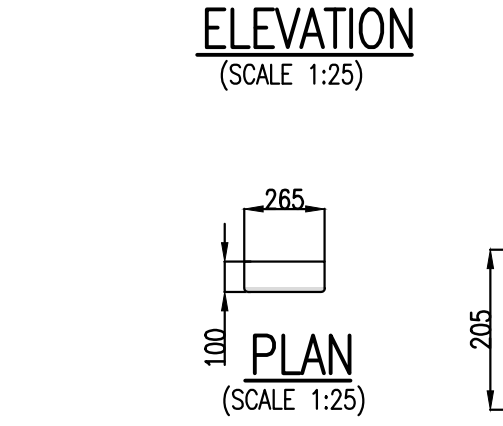
- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- THE MINIMUM DEPTH OF COVER FROM THE FINISHED GROUND LEVEL TO THE EXTERNAL CROWN OF THE PIPE SHALL BE 750mm FOR SERVICE CONNECTIONS, 900mm FOR WATER MAINS, GREATER DEPTHS OF COVER AND/OR PIPE STRENGTH AND/OR A HIGHER CLASS OF BEDDING MATERIAL MAY BE REQUIRED WHERE HIGH TRAFFIC LOADING IS ANTICIPATED. THE MAXIMUM COVER SHOULD NOT EXCEED 1,200mm WHERE PRACTICABLE.
- CLAUSE 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE THE WATER 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 4-08-02 AND IGN 4-08-01 GRANULAR MATERIAL SHALL BE 14mm TO 5mm GRADED AGGREGATE OR 10mm SINGLE SIZED AGGREGATE TO IS EN 12620.
- IN SOFT GROUND CONDITIONS (CBR < 5) THE MATERIAL SHOULD BE EXCAVATED OUT 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 OR ROCKS, OR ANY HARD OBJECT 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.
- SHOULD MINIMUM COVER NOT BE ACHIEVABLE, CONCRETE GRADE C8/10 SHALL BE USED AS BACKFILL MATERIAL.
- MARKER TAPE TO BE 400mm WIDE BLUE POLYETHYLENE MATERIAL IN ACCORDANCE WITH EN 12163. PLASTIC PIPES SHALL HAVE WARNING TAPE INCORPORATED A REINFORCED BAND BRACING WIRE. SERVICE PIPES SHALL HAVE 200mm WIDE MESH TAPE. MARKER TAPE TO BE LAID AT A DISTANCE OF 350mm FROM SURFACE OF THE ROAD.
- TRENCH WIDTHS FOR PIPE SIZES = < 80mm MY BE < 500mm, SUBJECT TO CONSIDERATION BEING GIVEN TO THE TRENCH DEPTH, HEALTH & SAFETY & CONSTRUCTION ACCESS REQUIREMENTS.
- NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
- EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF "GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS" BY THE DEPT. OF TRANSPORT, TOURISM & SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.

**MARKER PLATES NOTES**

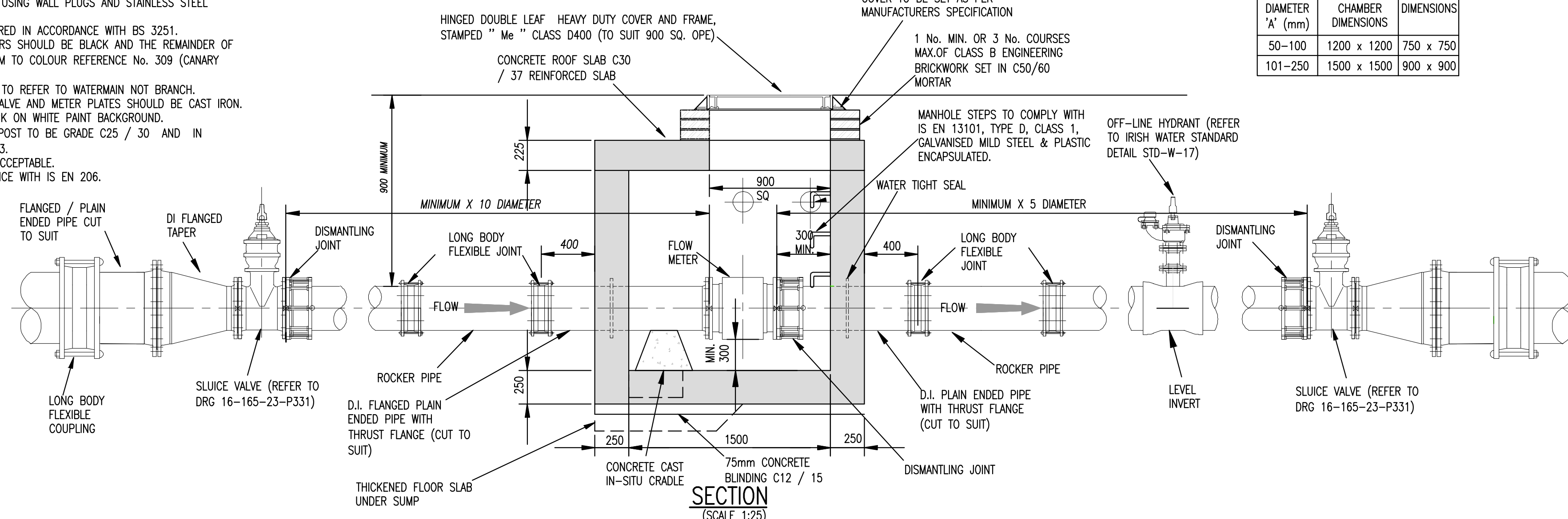
- WHERE PRACTICAL MARKER PLATES SHALL BE FIXED TO ADJACENT WALLS OR ALTERNATIVELY ATTACHED TO MARKER POSTS.
- PLATES TO BE FIXED IN POSITION USING WALL PLUGS AND STAINLESS STEEL SCREWS.
- MARKER PLATES TO BE MANUFACTURED IN ACCORDANCE WITH BS 3251.
- FOR HYDRANT PLATE ALL CHARACTERS SHOULD BE BLACK AND THE REMAINDER OF THE FRONT FACE SHOULD CONFORM TO COLOUR REFERENCE No. 309 (CANARY YELLOW) OF BS 381C.
- PIPE DIAMETER ON HYDRANT PLATE TO REFER TO WATERMAIN NOT BRANCH.
- SLUICE VALVE, AIR VALVE, SCOUR VALVE AND METER PLATES SHOULD BE CAST IRON. ALL CHARACTERS SHOULD BE BLACK ON WHITE PAINT BACKGROUND.
- CONCRETE SURROUND TO MARKER POST TO BE GRADE C25 / 30 AND IN ACCORDANCE WITH IS EN 206/2013.
- PLASTIC MARKER POSTS ARE NOT ACCEPTABLE.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.



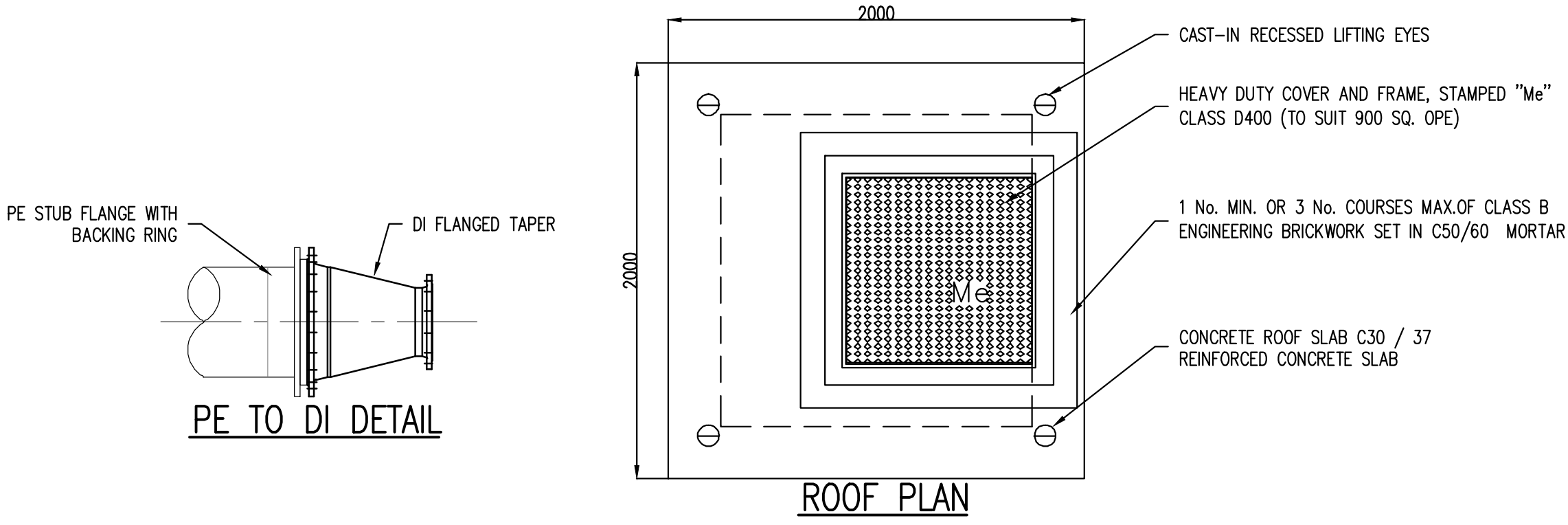
**REINFORCEMENT DETAILS**  
SCALE 1:25



**MARKER POST/PLATE DETAILS**  
STD-W-27



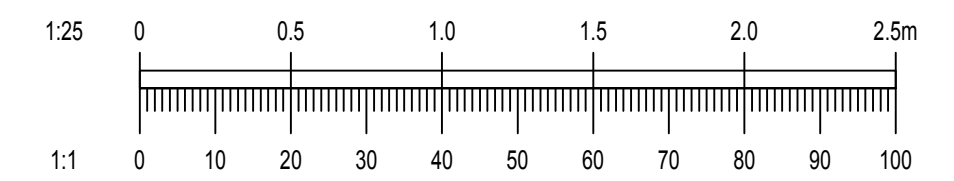
**PROPOSED BULK WATER METER**  
PLAN VIEW  
STD-W-26  
SCALE 1:25



**ROOF PLAN**

METER DIAMETER 'A' (mm)	INTERNAL CHAMBER DIMENSIONS	COVER DIMENSIONS
50-100	1200 x 1200	750 x 750
101-250	1500 x 1500	900 x 900

- NOTES:
- DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS.
  - WATERMANS SHALL BE LAID IN ACCORDANCE WITH THE LOCAL AUTHORITY SPECIFICATION FOR THE LAYING OF NEW WATERMANS AND BYLAWS WHICH OVER-RIDE THESE NOTES. THE CONSTRUCTION OF THE WATERMAIN SHALL BE IN ACCORDANCE WITH THE BEST CURRENT PRACTICE AND THE LATEST EDITIONS OF THE RELEVANT STANDARDS AND CODES OF PRACTICE.
  - WATERMANS SHALL NOT BE LAID UNDER WALLS OR AREAS DESIGNATED FOR TREES/SHRUBS/FLOWERS.
  - PIPES SHALL BE HDPE (BLUE PIPE) UNLESS NOTED OTHERWISE BY AGREEMENT WITH THE LOCAL AUTHORITY. DUCTILE IRON PIPES SHALL BE USED UNDER ROADS OF CLASSIFICATION "DISTRICT DISTRIBUTOR" UPWARDS UNLESS NOTED OTHERWISE.
  - PIPES SHALL CONFORM TO THE UK WATER INDUSTRY SPECIFICATION OR EQUIVALENT E.U. SPECIFICATION.
  - DUCTILE IRON PIPES SHALL CONFORM TO CLASS K9 OF EN 545. DUCTILE IRON FITTINGS SHALL BE EITHER K9 OR K12. DUCTILE IRON PIPEWORK SHALL BE COATED INTERNALLY WITH A CENTRIFUGAL APPLIED CEMENT MORTAR LINING CONTAINING A SULPHATE RESISTANT CEMENT AND SHALL BE SEALED WITH AN APPROVED BITUMEN OR EPOXY RESIN SEAL COAT IN ACCORDANCE WITH BS 4722:1988. EXTERNAL PROTECTION SHALL INCLUDE A ZINC COATING TO EN 545 UNDER BITUMEN BASED COATING TO BS 3416:1991.
  - ALL PIPEWORK SHALL HAVE A 400mm WIDE WATER WARNING MESH, (PLYAGE HR 40D BLUE POLYETHYLENE WARNING MESH OR SIMILAR) LAID DIRECTLY OVER THE CENTRELINE OF THE PIPELINE AND TIED TO VALVES AT A DEPTH OF 350mm BELOW THE FINISHED GROUND SURFACE. SUPPLY PIPES SHALL HAVE A 200mm WIDE MESH LAID AT THE SAME DEPTH.
  - WATERMANS SHALL BE LAID UNDER FOOTPATHS PREFERABLY OR GRASS MARGINS WHERE APPROVED. NO PIPE, CONDUIT, CABLE OR OTHER SERVICE SHALL BE LAID LONGITUUDINALLY OVER THE LINE OF A WATERMAIN. NO CABINET POLES, JUNCTION BOXES OR CHAMBERS SHALL BE CONSTRUCTED OVER A WATERMAIN.
  - THE MINIMUM COVER TO A WATERMAIN SHALL BE 750mm, THE MAXIMUM COVER SHALL BE 900mm UNLESS NOTED OTHERWISE.
  - CONNECTIONS TO THE MAINS WHICH ARE THE PROPERTY OF THE LOCAL AUTHORITY CAN BE MADE BY THE LOCAL AUTHORITY ONLY. NO OTHER PERSON MAY INTERFERE IN ANY WAY WITH THESE MAINS. SUCH CONNECTIONS WILL BE MADE BY THE COUNTY COUNCIL AT THE EXPENSE OF THE PERSONS REQUIRING THEM. THE ESTIMATED COST OF SUCH CONNECTIONS MUST BE LODGED WITH THE LOCAL AUTHORITY BEFORE THE WORK IS UNDERTAKEN.
  - WHERE VALVES ARE USED, THEY SHALL BE BOLTED TO FITTINGS (E.G. TEE-PIECES) DIRECTLY, WITHOUT THE INSERTION OF ANY INTERMEDIATE PIPE LENGTHS.
  - SLUICE VALVES SHALL COMPLY WITH THE LOCAL AUTHORITY SPECIFICATION FOR SLUICE VALVES. THEY SHALL BE DOUBLE FLANGED, DUCTILE IRON RESILIENT SEAL GATE VALVES FOR WATER DIVISION PURPOSES AND SHALL COMPLY WITH THE RELEVANT REQUIREMENTS OF BS 5163: 1986 TYPE B AND HAVE THE BS KITEMARK. ALL SLUICE VALVES SHALL BE OF THE METAL TONGUED VARIETY AND CONSTRUCTED WITH A RECESSED CHANNEL FOR RECEIVING THE METAL TONGUE ON CLOSING.
  - HYDRANTS, SLUICE VALVES, AIR VALVES CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY SURFACE COVERS TO IS 261: 1994. THESE APPROVED METAL COVERS SHALL CONFORM TO THE LOCAL AUTHORITY SPECIFICATION FOR VALVE AND HYDRANT COVERS.
  - HYDRANT/SLUICE VALVE/FLOW METER INDICATOR PLATES AND BASEBOARDS SHALL COMPLY WITH THE RELEVANT LOCAL AUTHORITY SPECIFICATION. THEY SHALL BE MOUNTED AT THE BOUNDARY OF THE PUBLIC THOROUGHFARE NEAREST TO THE HYDRANT.



REV. DATE	AMENDMENT	DRN	APPD
A	07/11/19		
		PW	AK

STATUS **FOR PLANNING NOT FOR CONSTRUCTION**

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CLIENT	BALLYMORE PROPERTY DEVELOPMENTS LTD
ARCHITECT	REDDY ARCHITECTURE
PROJECT	RESIDENTIAL DEVELOPMENT, SEAMOUNT, MALAHIDE, CO DUBLIN
TITLE	TYPICAL WATERMAIN CONSTRUCTION DETAILS SHEET 1 OF 2

DRAWN	DESIGNED	APPROVED	DATE
PW	BC	IW	JUNE '19
SCALE	JOB NO.	DRG. NO.	REVISION
1:25 @ A1	18-001	P332	A