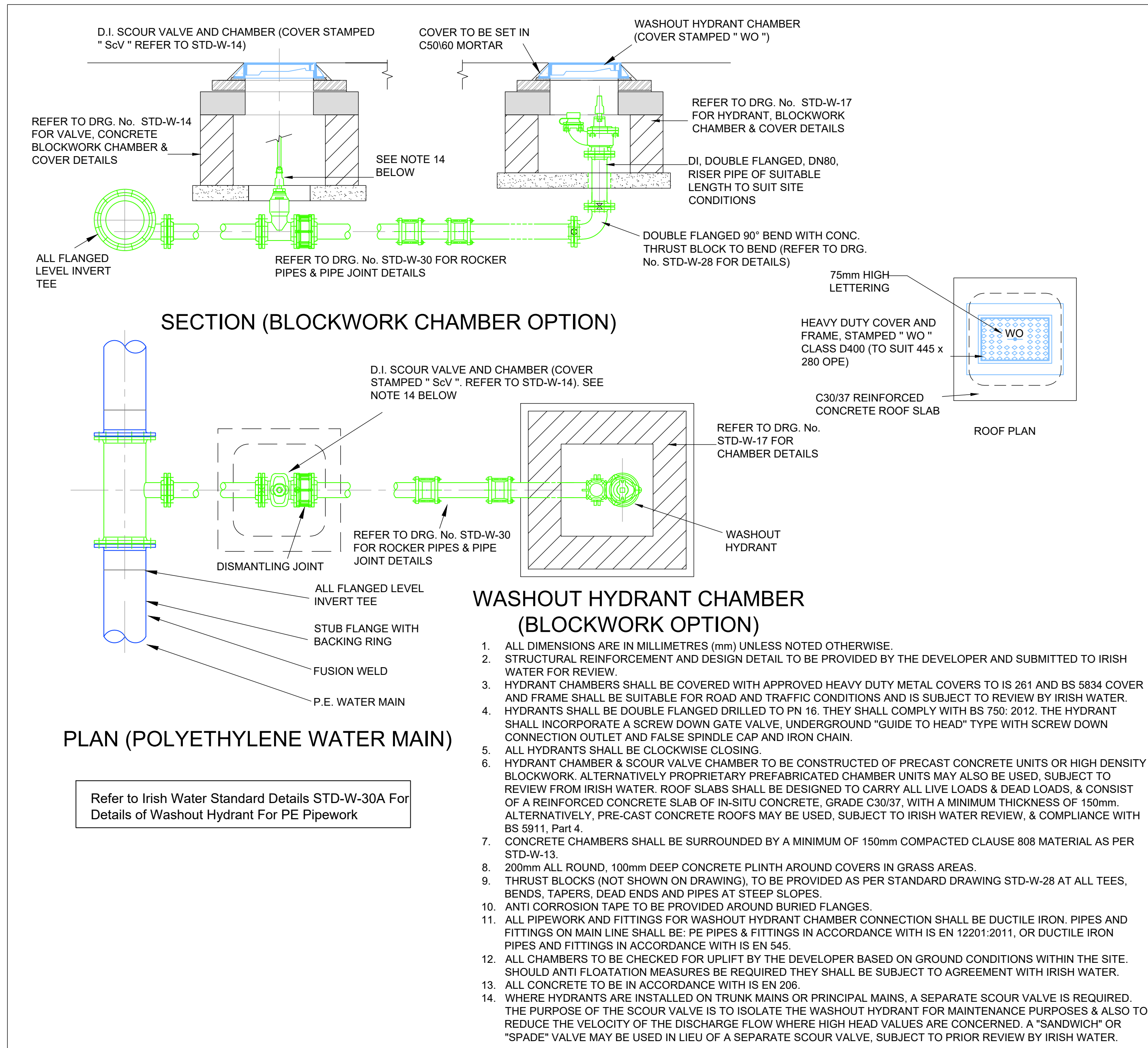
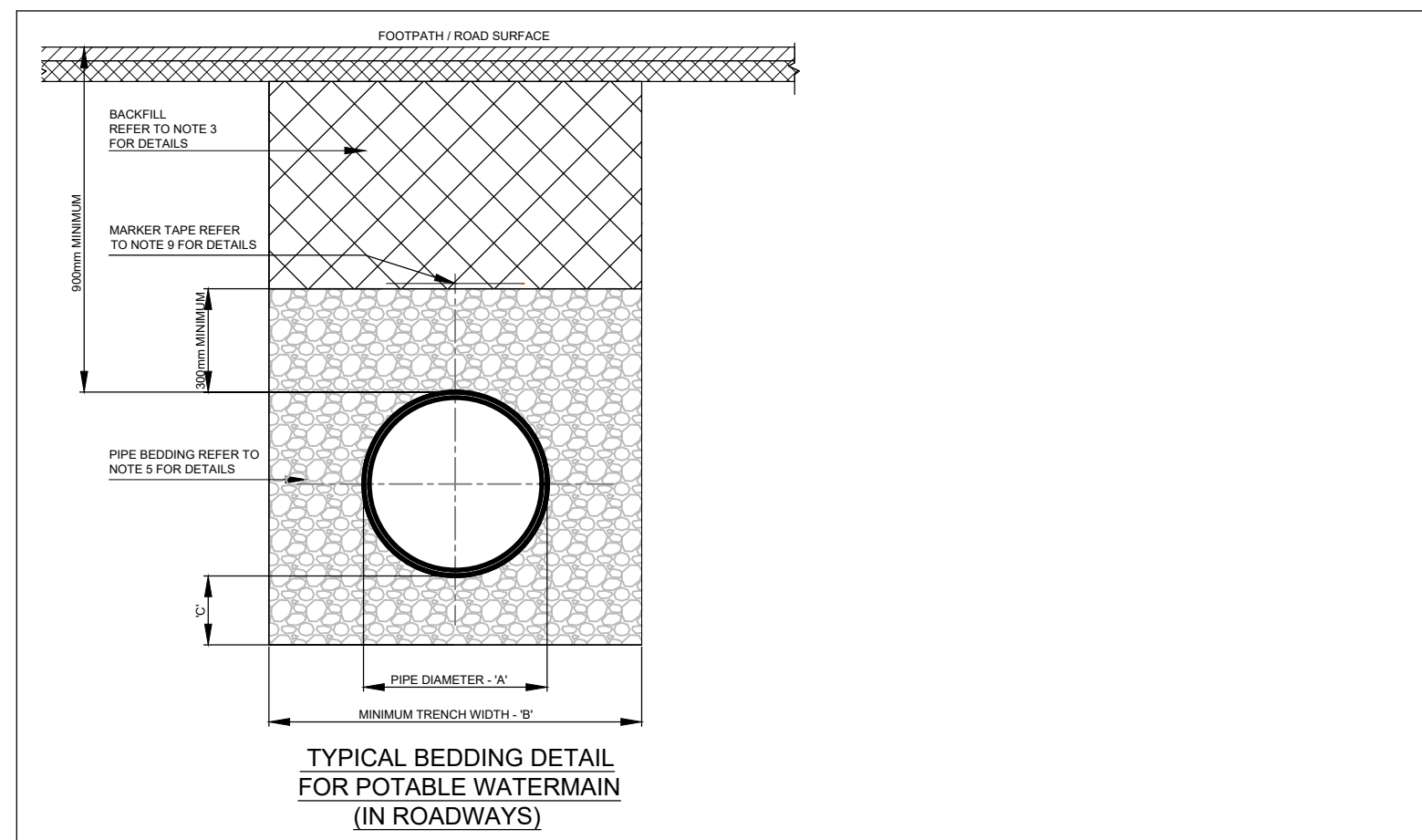


A1  
1  
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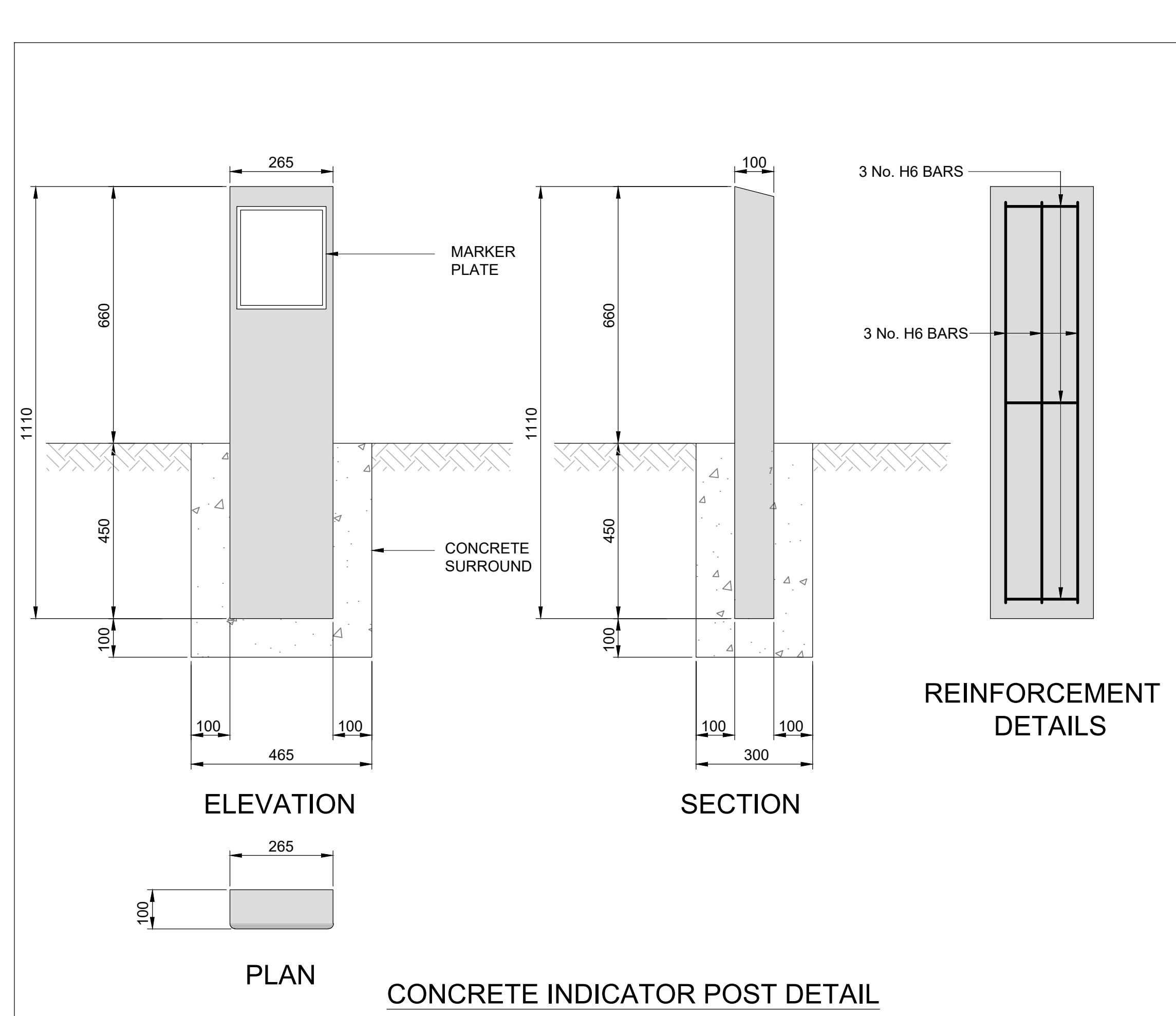


- ### WASHOUT HYDRANT CHAMBER (BLOCKWORK OPTION)
- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
  - STRUCTURAL REINFORCEMENT AND DESIGN DETAIL TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.
  - HYDRANT CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 AND BS 5834 COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
  - HYDRANTS SHALL BE DOUBLE FLANGED DRILLED TO PN 16. THEY SHALL COMPLY WITH BS 750: 2012. THE HYDRANT SHALL INCORPORATE A SCREW DOWN GATE VALVE, UNDERGROUND "GUIDE TO HEAD" TYPE WITH SCREW DOWN CONNECTION OUTLET AND FALSE SPINDLE CAP AND IRON CHAIN.
  - ALL HYDRANTS SHALL BE CLOCKWISE CLOSING.
  - HYDRANT CHAMBER & SCOUR VALVE CHAMBER TO BE CONSTRUCTED OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW FROM IRISH WATER. ROOF SLABS SHALL BE DESIGNED TO CARRY ALL LIVE LOADS & DEAD LOADS, & CONSIST OF A REINFORCED CONCRETE SLAB OF IN-SITU CONCRETE, GRADE C30/37, WITH A MINIMUM THICKNESS OF 150mm. ALTERNATIVELY, PRE-CAST CONCRETE ROOFS MAY BE USED, SUBJECT TO IRISH WATER REVIEW, & COMPLIANCE WITH BS 5911, Part 4.
  - CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER STD-W-13.
  - 200mm ALL ROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GRASS AREAS.
  - THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD DRAWING STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
  - ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
  - ALL PIPEWORK AND FITTINGS FOR WASHOUT HYDRANT CHAMBER CONNECTION SHALL BE DUCTILE IRON. PIPES AND FITTINGS ON MAIN LINE SHALL BE: PE PIPES & FITTINGS IN ACCORDANCE WITH IS EN 12201:2011, OR DUCTILE IRON PIPES AND FITTINGS IN ACCORDANCE WITH IS EN 545.
  - ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO AGREEMENT WITH IRISH WATER.
  - ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
  - WHERE HYDRANTS ARE INSTALLED ON TRUNK MAINS OR PRINCIPAL MAINS, A SEPARATE SCOUR VALVE IS REQUIRED. THE PURPOSE OF THE SCOUR VALVE IS TO ISOLATE THE WASHOUT HYDRANT FOR MAINTENANCE PURPOSES & ALSO TO REDUCE THE VELOCITY OF THE DISCHARGE FLOW WHERE HIGH HEAD VALUES ARE CONCERNED. A "SANDWICH" OR "SPADE" VALVE MAY BE USED IN LIEU OF A SEPARATE SCOUR VALVE, SUBJECT TO PRIOR REVIEW BY IRISH WATER.



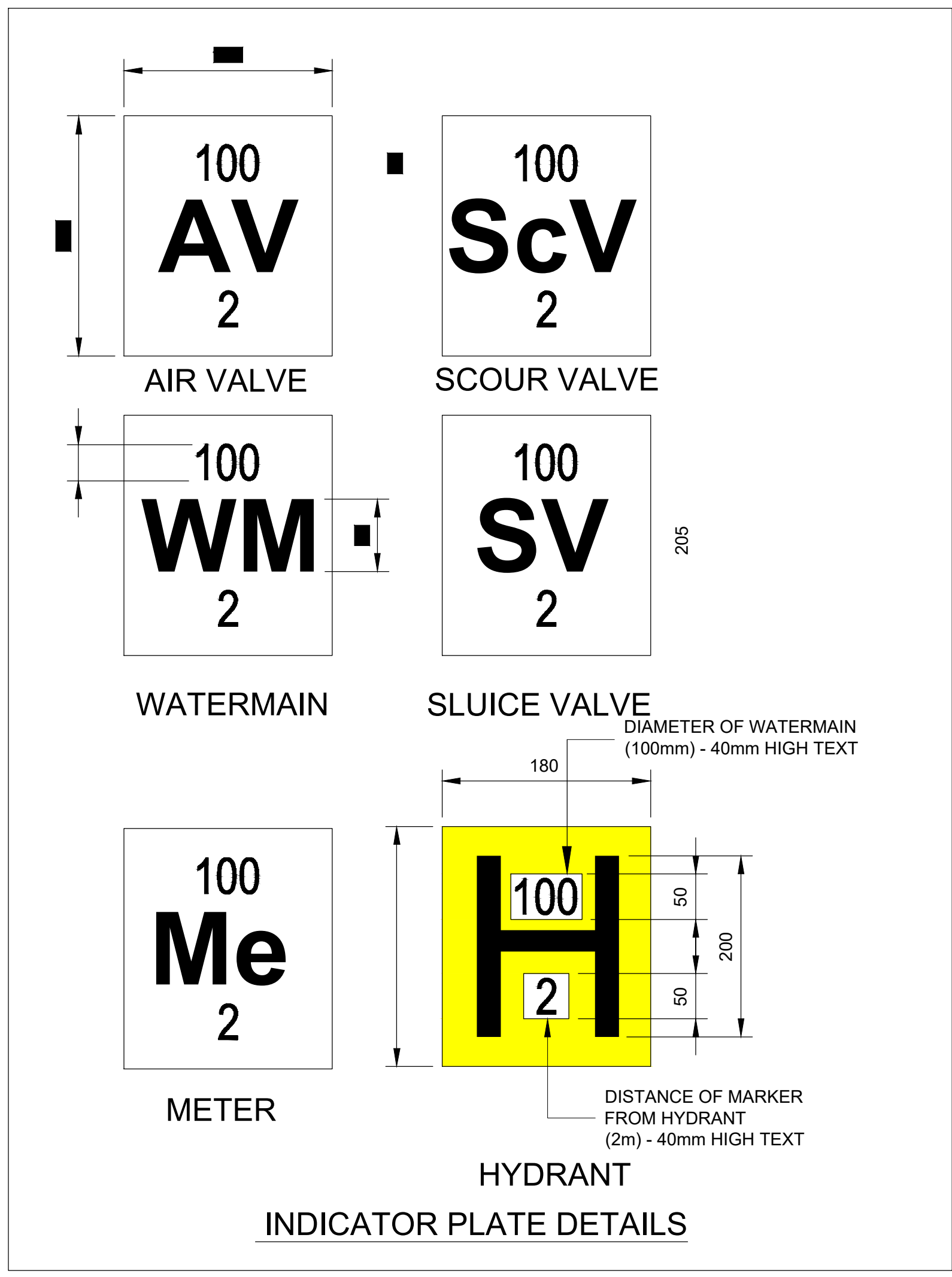
- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE
- THE MINIMUM DEPTH OF COVER FROM THE FINISHED GROUND LEVEL TO THE EXTERNAL CROWN OF THE PIPE SHALL BE 750mm FOR SERVICE CONNECTIONS, 900mm FOR WATER MAINS. GREATER DEPTHS OF COVER AND/OR PIPE STRENGTH AND/OR A HIGHER CLASS OF BEDDING MATERIAL MAY BE REQUIRED WHERE HIGH TRAFFIC LOADING IS ANTICIPATED. THE MAXIMUM COVER SHOULD NOT EXCEED 1,200mm WHERE PRACTICABLE.
- CLAUSE 804 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 804 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 TOP OF PIPE BEDDING LAYER.
- TRENCH WIDTHS FOR PIPE SIZES TO CONSIDERATION BEING GIVEN TO THE TRENCH DEPTH, HEALTH & SAFETY & CONSTRUCTION ACCESS REQUIREMENTS.

PIPE DIAMETER 'A' (mm)	TRENCH WIDTH 'B' (mm)	PIPE DIAMETER 'A' (mm)	DEPTH OF BEDDING 'C' (mm)
≤80	SEE NOTE 10	< 200	150
100	500	> 250	200
150	600		
200	600		
250	750		



- Notes:
- This Drawing shall be Read in Conjunction with all Other Relevant Specifications & Drawings including Civil Site Drawings.
  - Note that the construction and installation of all watermain, valves, hydrants, meters, chambers, marker posts etc. are to be carried out in accordance with the Water Infrastructure Standard Details by Irish Water. If any discrepancies are found between the Irish Water Standard Details and the information on this drawing then the Irish Water Standard Details shall govern.

- Marker posts / plates
- 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.
  - Plastic marker posts are not acceptable.
  - All concrete to be in accordance with IS EN 206.



C01	12/04/19	D.F.	F.O.S.	J.D.
Issued for Construction (Status A4)				
P03	05/10/18	JTC	F.O.S.	J.D.
Issued for Construction Approval				
P02	23/07/18	B.M.	F.O.S.	J.D.
Issued for Tender				
P01	28/06/18	B.M.	F.O.S.	J.D.
Issued for Review & Comment				
Rev	Date	By	Chkd	Appd

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www.arup.com

Client  
**HQ** **bam**  
CLARENDON

Project Title  
HQ  
Horgan's Quay

Drawing Title  
Proposed Typical  
Watermain Details  
Sheet 2

Scale at A1 As Shown  
Role Civil  
Suitability A4 - Approved as Stage Complete  
Arup Job No 252901-00 Rev C01  
Name HQDPR-ARP-ZZ-XX-DR-C-3502