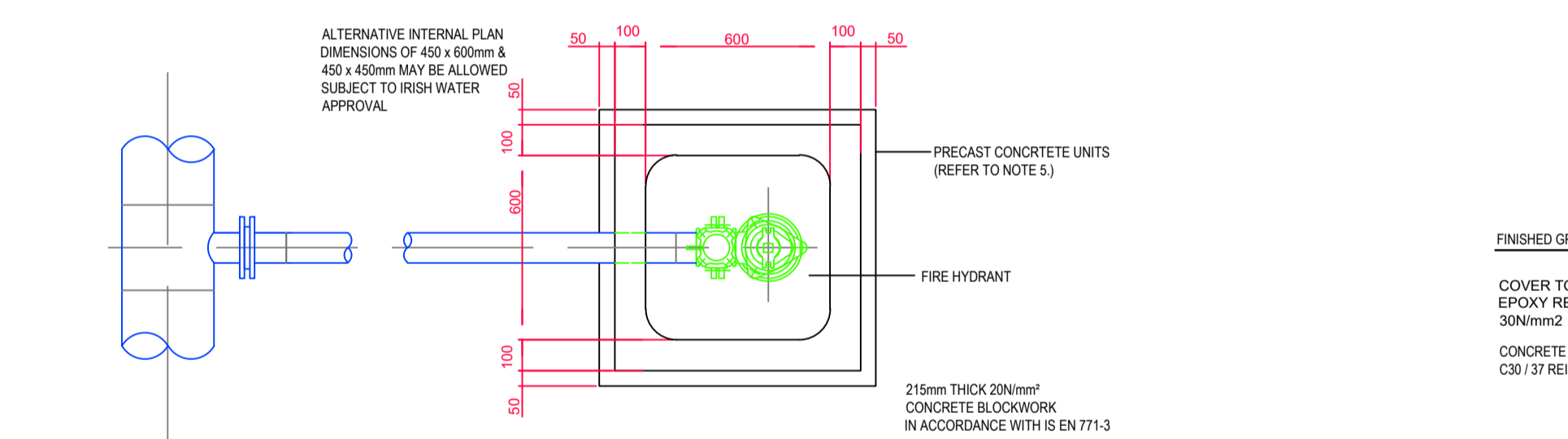
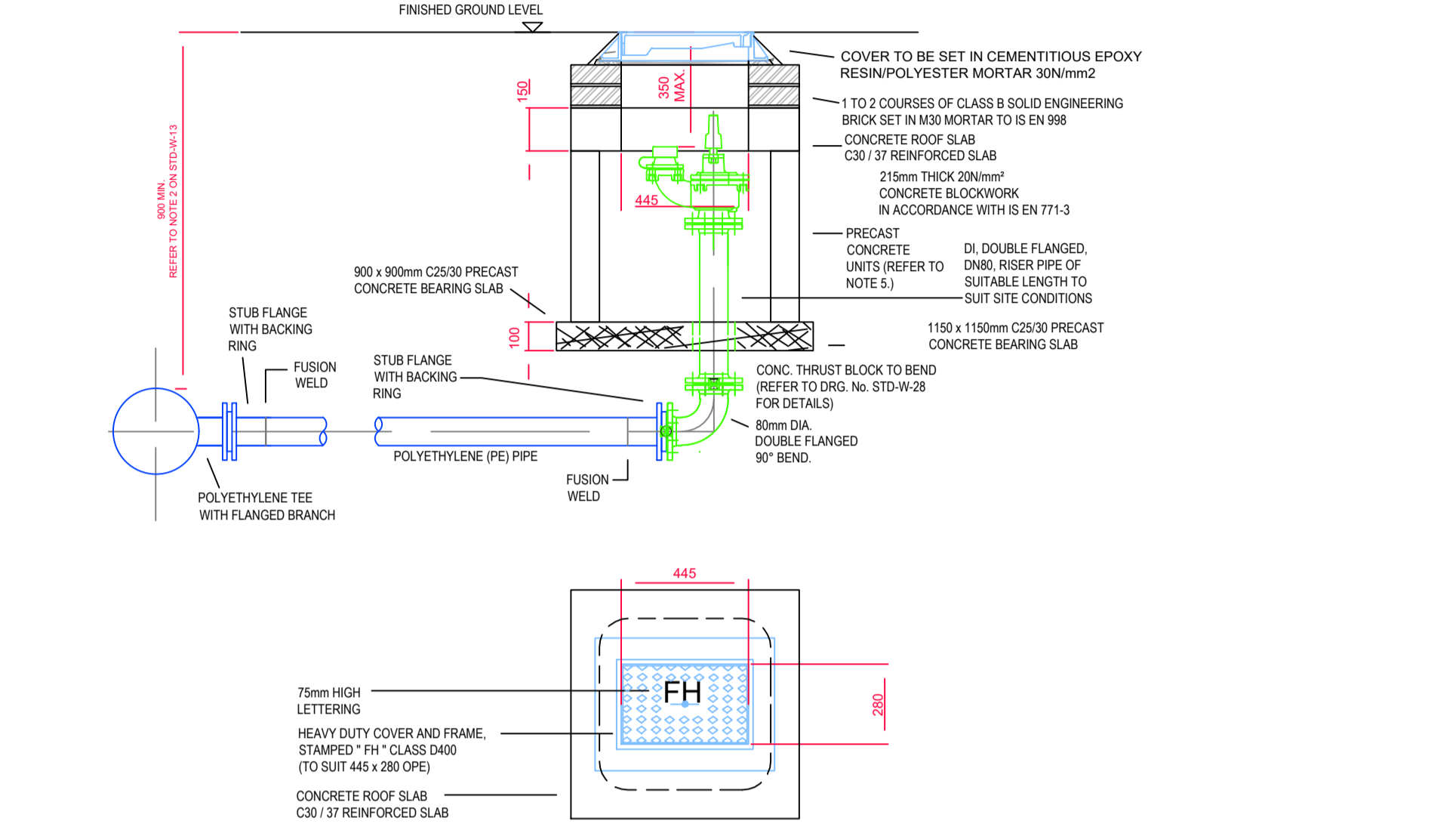
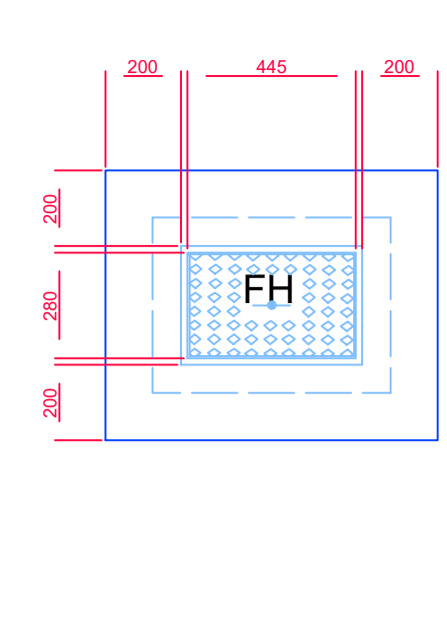


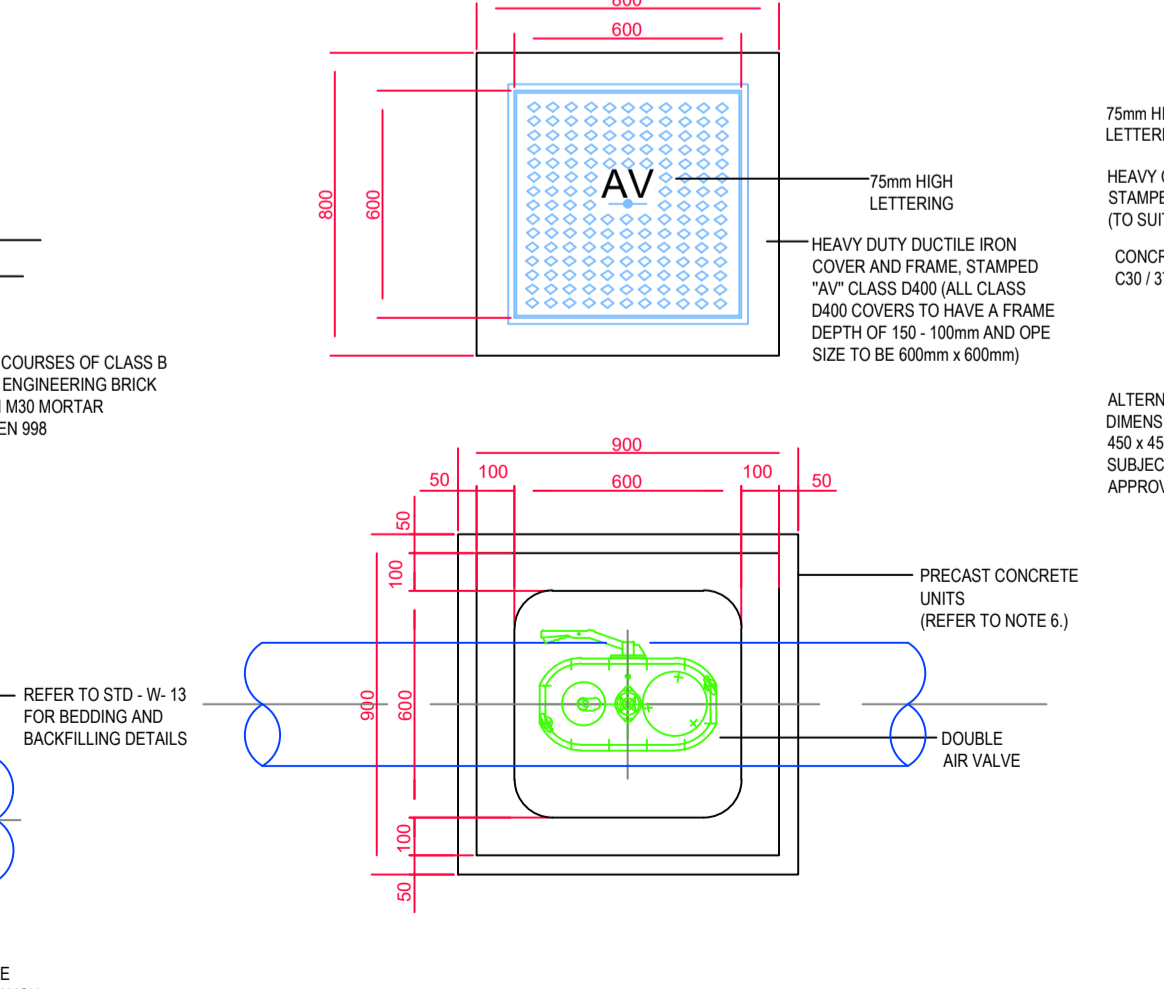
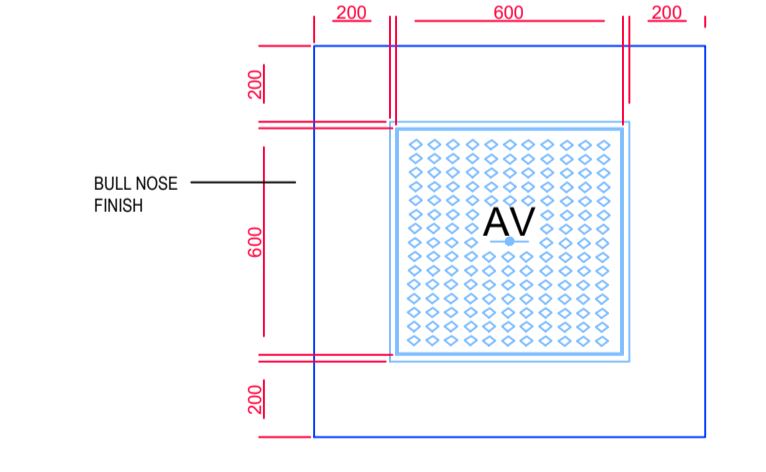
- ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- HYDRANT CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 OR BS 5834 COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
- ALL HYDRANTS, SURFACE BOX FRAMES & COVERS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF IS EN 14339, IS EN 1074-6 & BS 750. FIRE HYDRANTS SHALL BE TYPE 2.
- THE HYDRANT INLET SHALL BE 100mm DIAMETER WITH IRISH WATER APPROVAL.
- ALL HYDRANTS SHALL BE CLOCKWISE CLOSING.
- HYDRANT CHAMBER TO BE CONSTRUCTED OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK, ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER. ROOF SLABS SHALL BE DESIGNED TO CARRY ALL LIVE LOADS & DEAD LOADS, A 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 IS EN 1937 & IS 420. PCC CHAMBER RISER UNITS SHOULD BE INTERLOCKING WHEN STACKED TO PREVENT LATERAL MOVEMENT OF INDIVIDUAL UNITS.
- CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER STD-W-13.
- DUCTILE IRON PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 545, PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201-2011, & 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN 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 CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
- ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S 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 RELAND REQUIREMENTS.
- THE FIRE HYDRANT OUTLET TYPE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRE OFFICER FOR THE AREA AND SHALL BE AGREED PRIOR TO THE COMMENCEMENT OF WORKS.
- THE HYDRANT SHALL BE DOUBLE FLANGED DRILLED TO PN 16. THEY SHALL COMPLY WITH IS EN 14339, IS EN 1074 PART 6 AND BS 750: 2012. THE HYDRANT SHALL INCORPORATE A SCREW DOWN GATE VALVE, UNDERGROUND 'GUIDE TO HEAD' TYPE WITH A FALSE SPINDLE CAP. THE OUTLET SHALL BE IN ACCORDANCE WITH ITEM 15 ABOVE.
- 450 x 600mm INTERNAL DIMENSION CHAMBERS MAY BE PROVIDED SUBJECT TO REVIEW BY IW. SUCH CHAMBERS SHALL BE PROVIDED WITH GRADE 'A' HEAVY DUTY COVER & FRAME & STAMPED 'SV'.



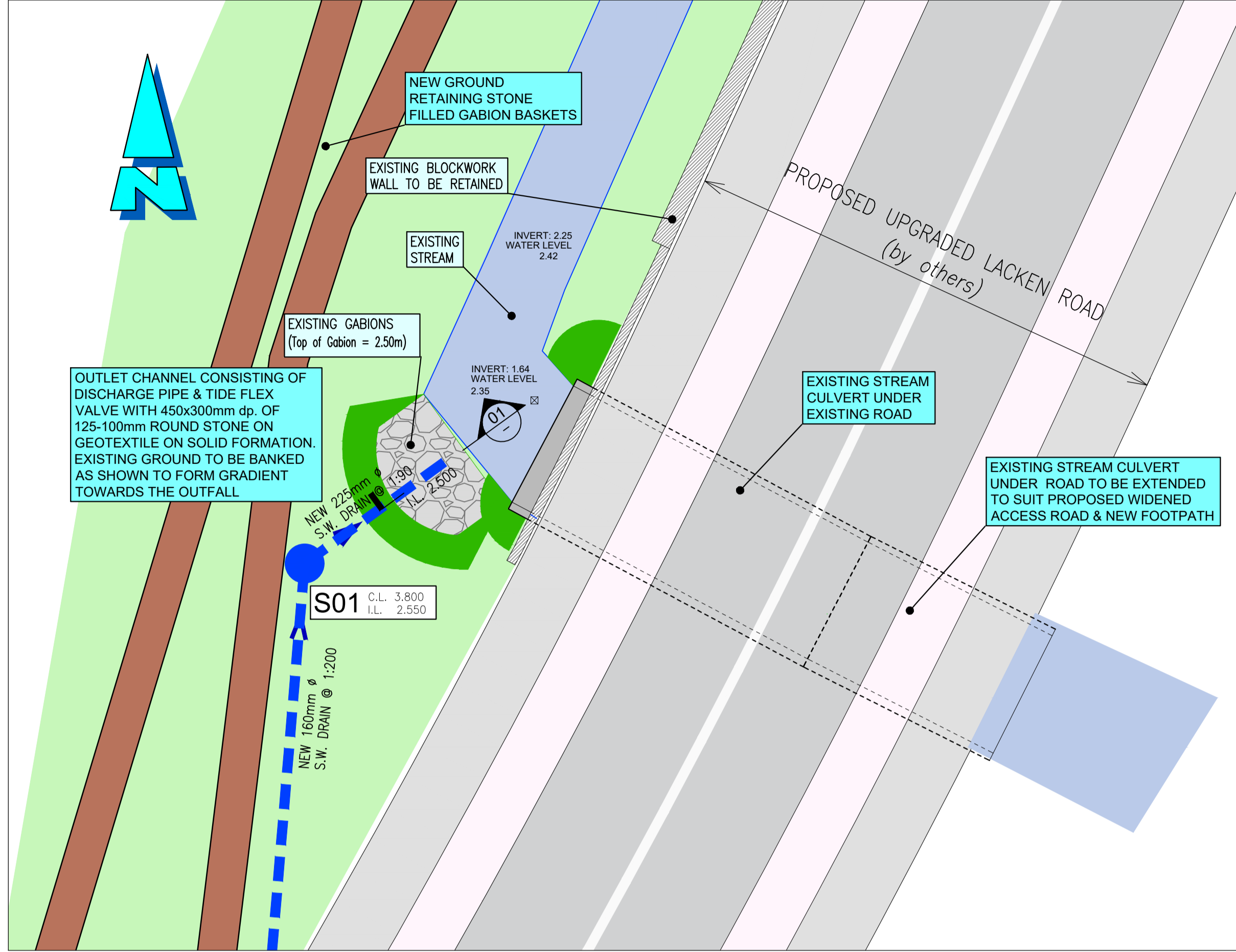
OFF - LINE HYDRANT FOR POLYETHYLENE (P.E.) PIPE

DIAMETER OF MAIN	UP TO 250 (mm)	250 TO 350 (mm)
DIAMETER OF BRANCH	80mm	100mm
BORE OF VALVE INLET	80mm	100mm

- ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- AIR VALVE CHAMBERS SHALL BE COVERED WITH APPROVED VENTILATED HEAVY DUTY DUCTILE IRON COVERS TO IS EN 124 RATING.
- COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
- AIR VALVES SHALL COMPLY WITH THE REQUIREMENTS OF IS EN 1074-4. AIR VALVES SHALL BE DOUBLE GRIFCE TYPE AND SHALL INCLUDE AN ISOLATING VALVE. THE ISOLATING VALVE SHALL BE EITHER A GATE VALVE CONFORMING TO IS EN 1074-2 & SHALL BE OF A BOLTED BONNET DESIGN, OR A BUTTERFLY VALVE TO IS EN 1074-2.
- SERVICE CONNECTIONS SHALL NOT BE PROVIDED WITHIN 2m OF THE AIR VALVE LOCATION.
- AIR VALVE CHAMBERS TO BE OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK, ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER.
- PRECAST CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER STD-W-13.
- DUCTILE IRON PIPES (FITTINGS AND PE PIPES) / FITTINGS TO BE IN ACCORDANCE WITH IS EN 545 AND IS EN 12201-2011, & 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN 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.
- THE LOCATION OF THE AIR VALVE SHALL BE THE SUBJECT OF PARTICULAR AGREEMENT WITH IRISH WATER TO ENSURE THAT THE RISK OF CONTAMINATION THROUGH THE VALVE IS ELIMINATED.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
- ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.

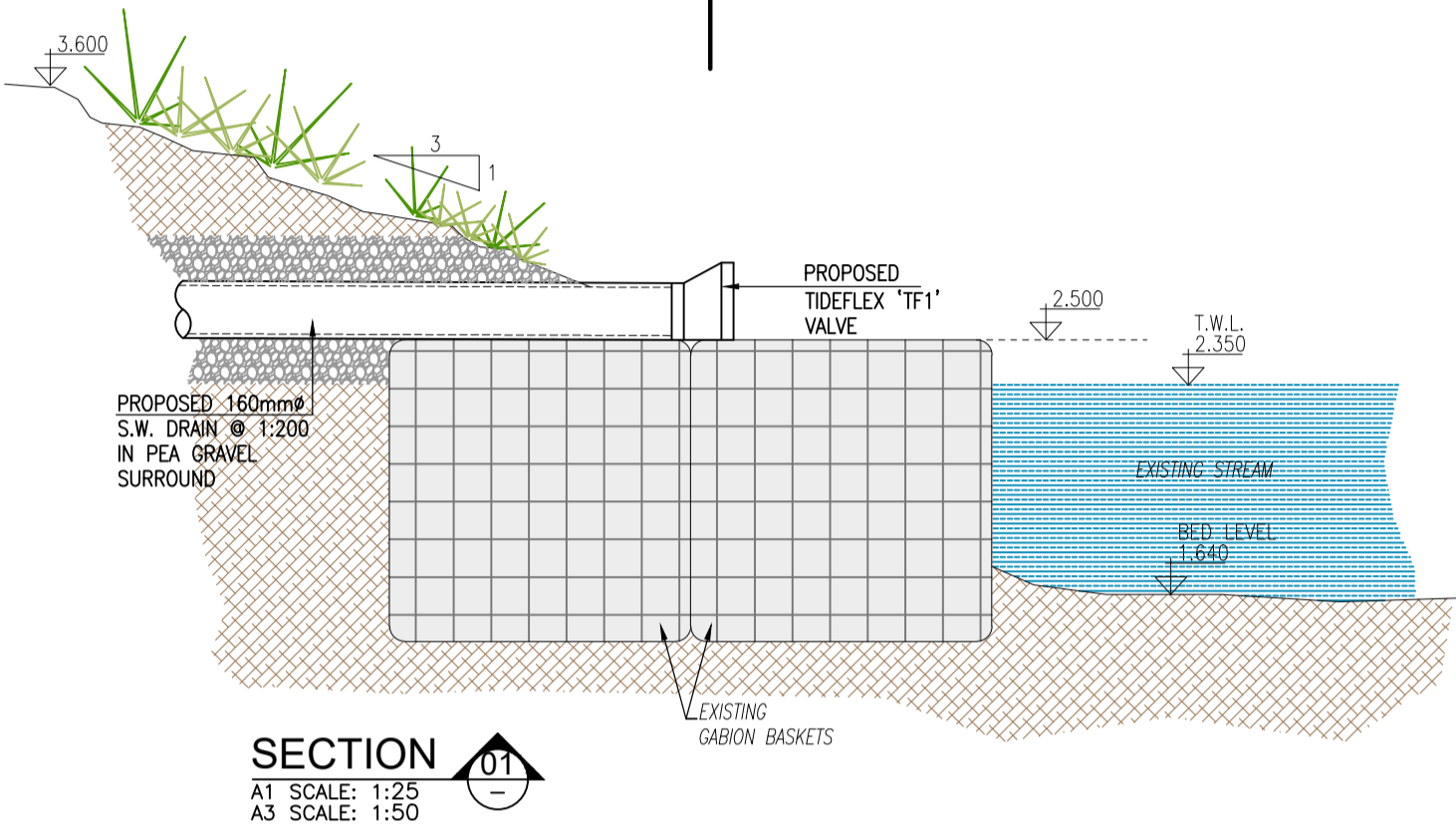


ON - LINE AIR VALVE FOR POLYETHYLENE (P.E.) PIPE



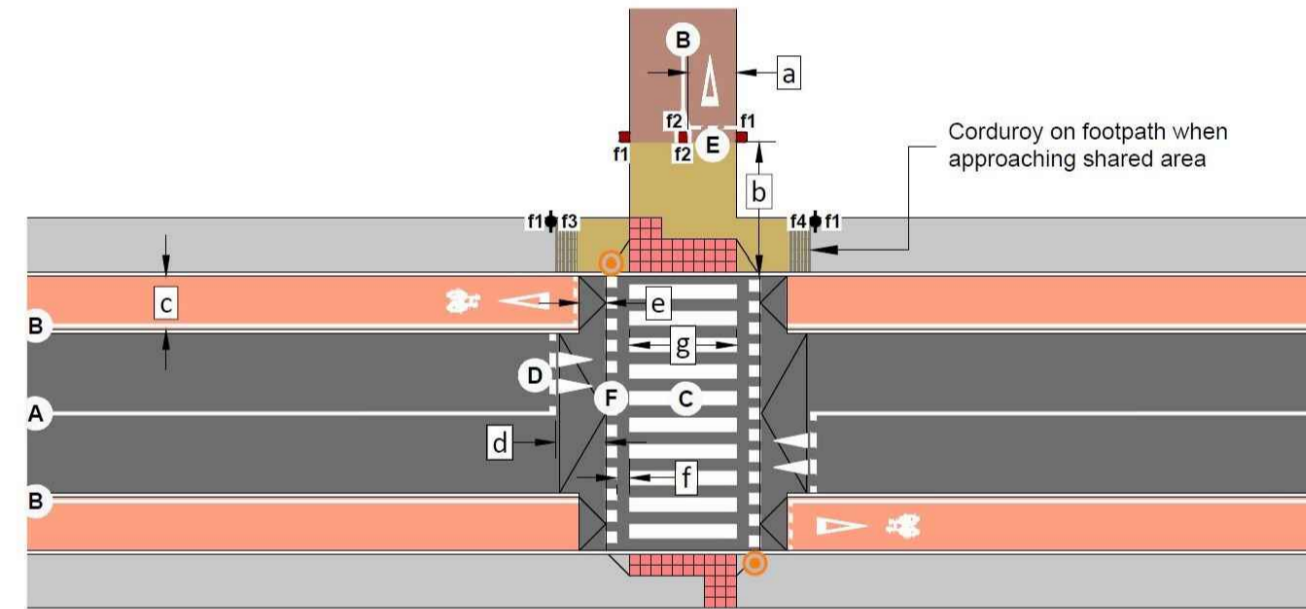
PLAN ON SURFACE WATER DRAINAGE OUTFALL TO EXISTING STREAM

SCALE A1: 1:100
SCALE A3: 1:200



SECTION 01
A1 SCALE: 1:25
A3 SCALE: 1:50

TL605 Combined Zebra Crossing



KEY DIMENSIONS

- a) Minimum 1.5m spacing between bollards. Preferably, edge bollards are just off paved area
- b) 5m minimum level approach to road (maximum longitudinal gradient of 2.5%)
- c) 2m typically (refer to width calculator)
- d) 1m - 2m
- e) Distance determined by 5% max. gradient of ramp
- f) 0.5m
- g) 4m minimum

KEY FEATURES

- f1 Optional bollard with sign RUS 058 on side f1
- f2 Optional bollard with sign RUS 001 on side f2
- f3 Sign Pole with sign RUS 058 on side f1
- f4 Sign Pole with sign RUS 058CR on side f4
- Shared area
- Belisha beacon
- Red blister tactile
- f1 (RUS 058)
- f2 (RUS 001)
- f3 (RUS 058CL)
- f4 (RUS 058CR)

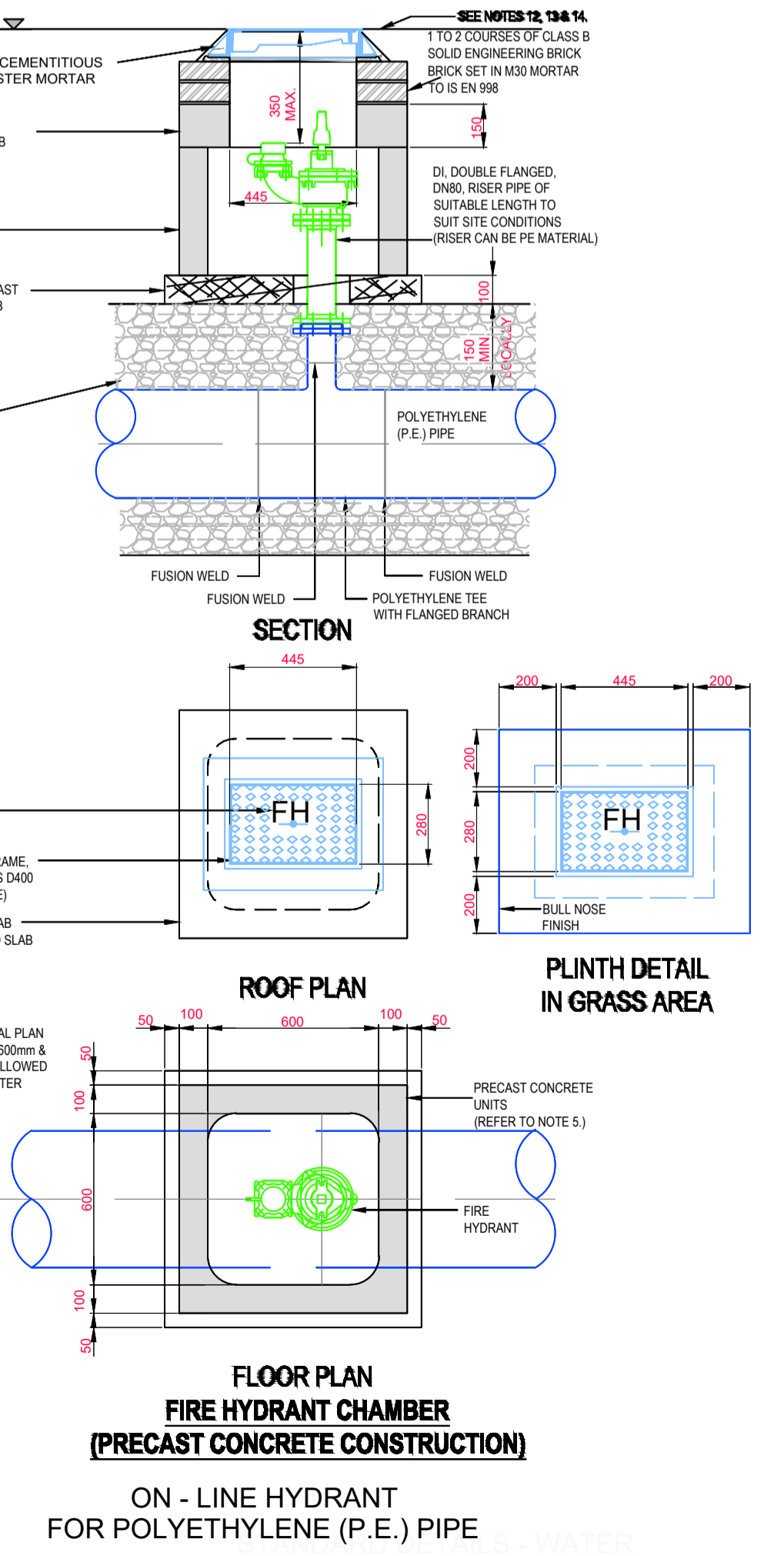
- NOTES:**
- Suitable in speed limits up to 50 km/h, depending on traffic volumes (see Table 4.24)
 - Provides shared controlled crossing of carriageway.
 - Similar features to standard zebra crossing however elephant's footprints are marked outside the zebra stripes.
 - Minimum recommended width of crossing is 4m (similar to toucan crossing).
 - Belisha beacons placed as per standard zebra crossing layout (RPC 001). Alternatively zebra crossing signs may be used.
 - Recommend that crossing is placed on a raised table.
 - Where an adjoining cycle facility is present (as shown) and area of shared space will be required adjacent to the crossing.
 - Corduroy tactile paving should be provided on footpaths approaching shared space.
 - Bollards may be considered where access control is required.

ROAD MARKINGS (Refer to TSM Chapter 7)

- A RRM 001
- B RRM 022
- C RPC 001 with Elephant Feet Marking (F)
- D RRM 018
- E RRM 018C
- F Elephant Feet Markings (400mm wide, 400mm gap, 400mm mark)
- M 112
- M 115C
- M 116

COMBINED ZEBRA CROSSING ARRANGEMENT

(Extract from *Cycle Design Manual*, September 2023)



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THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, THE SPECIFICATION AND THE SAFETY AND HEALTH PLAN.
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Rev.	Description	Date	Drawn	Chkd	Appr
P1	PLANNING APPLICATION	19.01.'24	GL	CC	COB
P1	PLANNING APPLICATION	20.09.'23	GL	JK	COB

THIS DRAWING TO BE USED FOR PLANNING PURPOSES ONLY

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Client: **NOEL FRISBY CONSTRUCTION LTD.**

Job: **STUDENT ACCOMODATION AT CORK ROAD, WATERFORD.**

Drawing: **SITE DEVELOPMENT DETAILS SHEET 2**

Job No	Drg No	Stage	Revision	Scale
W22076	P861	PL	P1	A1 1:25 A3 1:50