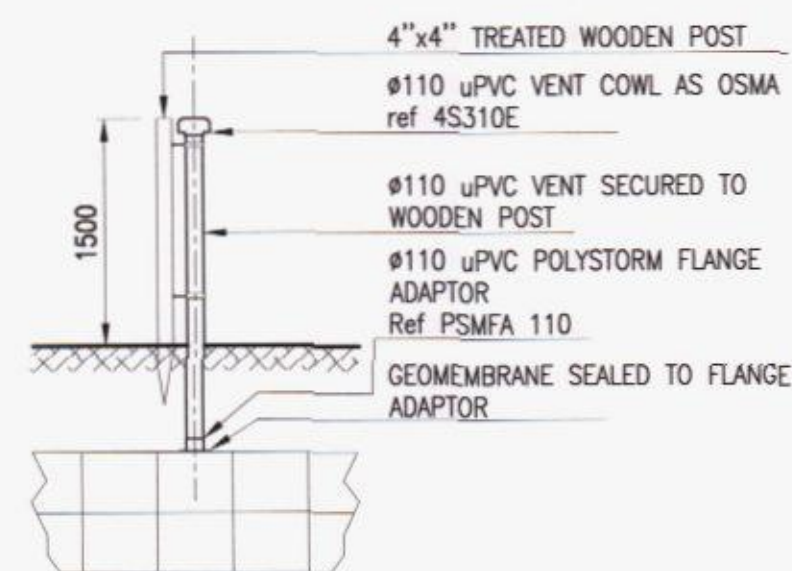
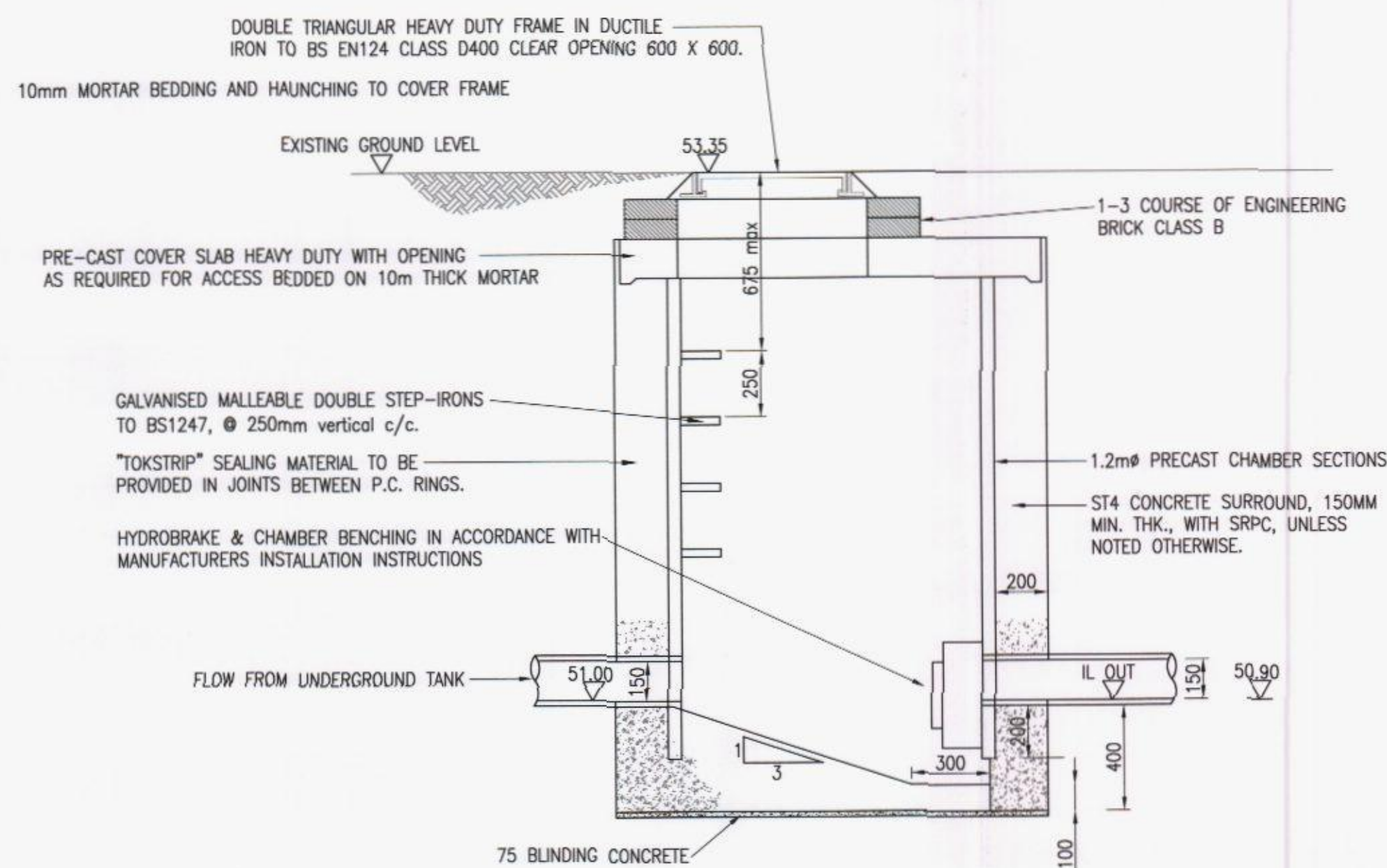
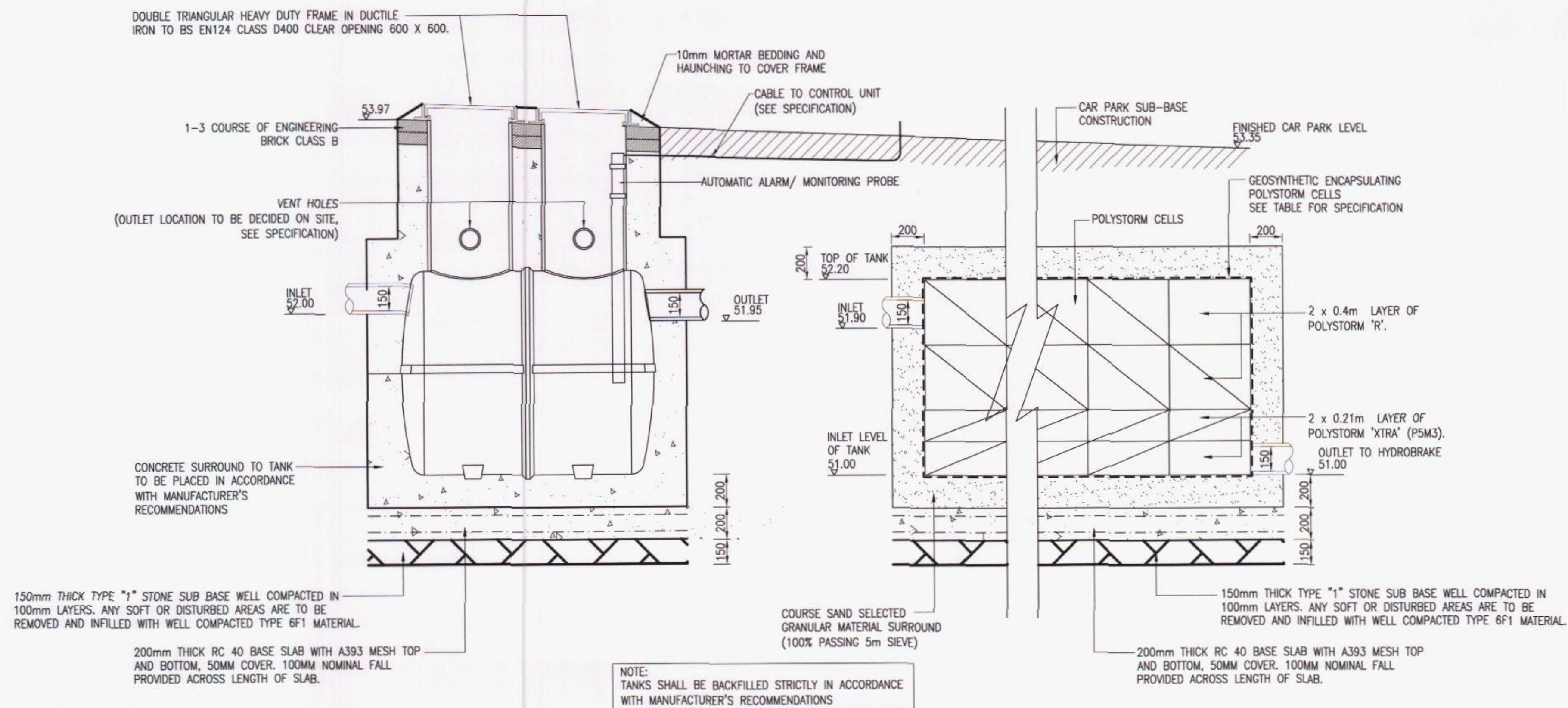




IMPERMEABLE MEMBRANE SPECIFICATION		
PHYSICAL PROPERTIES		
THICKNESS	MIN. 0.75 to 1.0mm	ASTM D5199
DENSITY	900kg/m³	ASTM D1505
MECHANICAL PROPERTIES		
TENSILE STRENGTH AT YIELD	Min. 1600N/m²	ASTM D4885
ELONGATION AT BREAK	>500%	ASTM D4885
PUNCTURE RESISTANCE	Min. 170N	ASTM D4833
TEAR RESISTANCE	Min. 67N	ASTM D1004 DieC
IMPACT RESISTANCE	Min. 15 JOULES	ASTM D3998 mod
STRESS CRACK RESISTANCE	Min. 200 hrs	ASTM D5391(SP=NCTL)
PERMEABILITY COEFFICIENT	Max 2.0x10 ⁻¹²	ASTM D
pH	RESISTANT TO ALL NATURALLY OCCURRING SOIL ACIDS AND ALKALIS	
CHEMICAL/BIOLOGICAL RESISTANCE	RESISTANCE TO ALL SUBSTANCES FOUND TO NATURALLY OCCUR IN SOILS AND RAINWATER. DETAILED INFORMATION WOULD NEED TO BE PROVIDED TO THE GEOMEMBRANE MANUFACTURER IN INSTANCES OF CONTAMINATED LAND.	

WORK IN PROGRESS (TENDER)

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IN RESPECT OF SUB-CONTRACTOR DESIGNED ELEMENTS, THE CLADDING/CURTAIN WALLING DESIGN, ROOFING DESIGN, M&E SERVICES DESIGN INCLUDING B.W.I.C., THE DESIGN OF PRECAST CONCRETE ELEMENTS AND OTHER PROPRIETARY FRAME COMPONENTS ALL HAVE AN INTERFACE WITH THE PRIMARY FRAME STRUCTURE. IF THIS DRAWING IS USED FOR CONSTRUCTION PURPOSES IN ADVANCE OF FINAL SUB-CONTRACTOR DETAILS FOR THESE ELEMENTS THEN THE MAIN CONTRACTOR ACKNOWLEDGES THE RISK OF VARIATIONS TO THE FRAME DETAILS IN RESPONSE TO SUCH DESIGN INFORMATION AND ACCEPTS THE RESPONSIBILITY FOR THE CONSEQUENCES THEREOF.

GENERAL DRAINAGE NOTES CONTINUED

- HEAVY DUTY COVER SLABS ARE TO BE USED WITHIN VEHICULAR TRAFFICKED AREAS.
- GULLY GRATES AND STEEL CHANNEL COVERS ARE TO BE IN ACCORDANCE WITH BSEN124 AS FOLLOWS:
 - AREAS SUBJECT TO VEHICLE OVERRUN CLASS D400 MINIMUM.
 - AREAS NOT SUBJECT TO REGULAR VEHICLE OVERRUN CLASS C250
 - GULLY GRATES ADJACENT TO KERBS SHALL BE HINGED ON THE SIDE OF THE TRAFFIC DIRECTION (LEFT HAND SIDE)
 - PETER SAVAGE KDS00 KITEMARKED, DUCTILE IRON, D400 420 X 420, 100mm DEEP HINGED, ANTI-THIEF GRATE AND FRAME OR SIMILAR APPROVED.
- DRAINAGE CHANNELS TO BE ACO MULTIDRAIN MD100 M1000.030 WITH 'ULTRASEAL' EDGE RAILS C/W WITH 125mm DEEP (105mm DEEP IN PAVED AREAS) 10mm SLOT GALVANISED STEEL ACO BRICKSLOT GRATING.
 - TYPE 1 DRAINAGE CHANNEL - LOAD CLASS C250
 - TYPE 2 DRAINAGE CHANNEL - LOAD CLASS D400
 - ACCESS UNITS (AU) 125mm DEEP (105mm DEEP IN PAVED AREAS) GALVANISED STEEL TO SUIT LOAD CLASS
 - CHANNEL OUTLETS (CO) SUMP UNIT WITH 'ULTRASEAL' EDGE RAILS C/W ACCESS UNIT 125mm DEEP (105mm DEEP IN PAVED AREAS) GALVANISED STEEL UNIT TO SUIT LOAD CLASS. ALL WITH 110/160 HIGH LEVEL RODDABLE END/ SIDE OUTLETS.
- 50 UNIVERSAL END CAPS TO BE PROVIDED AT THE END OF EACH CHANNEL RUN.

- TESTING OF THE DRAINAGE SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE BRITISH STANDARDS AND CURRENT BUILDING REGULATIONS. A SIGNED RECORD BY AN AUTHORISED PERSON OF THE TESTING SHALL BE KEPT AND MADE AVAILABLE TO THE ENGINEER IF REQUESTED.
- UPON COMPLETION OF THE WORKS, ALL THE DRAINS SHALL BE CLEANED BY JETTING, REMOVING ALL DEBRIS FROM THE SITE. NO DEBRIS SHALL BE PERMITTED TO ENTER THE OFF SITE PIPEWORK.
- THE CONTRACTOR SHALL ALLOW FOR A COLOUR CCTV SURVEY OF ALL THE DRAINAGE SYSTEM AND PROVIDE THE ENGINEER WITH TWO COPIES OF THE CCTV ON DVD IN WINDOWS MEDIA FORMAT (MPEG) AND REPORTS.
- THE CONTRACTOR SHALL ALLOW FOR DEALING WITH GROUNDWATER IN ALL EXCAVATIONS AND OBTAIN ALL RELEVANT PERMITS FOR TEMPORARY DISPOSAL.
- THE CONTRACTOR SHALL ALLOW FOR OBTAINING CONSENT FROM THE SEWERAGE AUTHORITY FOR CONNECTING TO THE PUBLIC SEWER IN ACCORDANCE WITH SECTION 106 OF THE WATER INDUSTRY ACT 1991 (AMENDED BY THE WATER ACT 2003)

NOTES

- DO NOT SCALE FROM THIS DRAWING, WORK FROM FIGURED DIMENSIONS ONLY. ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS IN METRES ABOVE ORDNANCE DATUM.
- NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING WILL BE ALLOWED WITHOUT THE PRIOR PERMISSION IN WRITING.
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GENERAL DRAINAGE NOTES

- THE POSITION AND LEVELS OF ALL DRAINS ARE TO BE CONFIRMED ON SITE PRIOR TO THE COMMENCEMENT OF THE WORKS AND ANY DISCREPANCIES REPORTED IMMEDIATELY TO THE ENGINEER.
- ALL PRIVATE DRAINAGE WITHIN THE SITE IS TO COMPLY WITH THE REQUIREMENTS OF SEWERS FOR ADOPTION - 7TH EDITION, BSEN752:2008 AND BUILDING REGULATIONS PART H
- CONCRETE PROTECTION PIPEWORK IS TO BE PROVIDED AS FOLLOWS:
 - ALL PIPEWORK WITHIN PEDESTRIAN/ SOFT AREAS WITH LESS THAN 600mm COVER
 - ALL PIPEWORK SUBJECT TO VEHICULAR OVERRUN WITH LESS THAN 1.2m COVER. REINFORCED PROTECTIVE SLAB WHERE COVER IS LESS THAN 0.8m.
- ALL PIPEWORK WITHIN MANHOLES ARE TO BE LAID SOFFIT TO SOFFIT (U.N.O.). ALL CHAMBER INVERT LEVELS ARE FOR THE OUTGOING PIPE LEVELS. BACKDROP PIPEWORK SHALL BE CONNECTED AT SOFFIT TO SOFFIT WITH THE RODDING ACCESS LEVEL SPECIFIED.
- ANY GRADIENTS OF DRAINS ARE INDICATED ONLY AND THE CONTRACTOR SHALL INSTALL THE DRAINS TO THE SPECIFIED LEVELS SHOWN FOR EACH MANHOLE (U.N.O.).
- ALL PIPES ARE TO BE RIGID CONSTRUCTION AND SIZED AS FOLLOWS (UNLESS NOTED OTHERWISE):
 - FROM FOUL STACKS - 100ø
 - ROAD GULLIES OR DRAINAGE CHANNELS - 150ø
 - FROM RWPs - 100ø
- CO-ORDINATE SETTING INFORMATION FOR MANHOLES IS TO THE INTERSECTION OF THE DRAINS AND NOT THE CENTRE OF THE MANHOLE.
- COVER LEVELS OF THE MANHOLES ARE PROVISIONAL AND SUBJECT TO ADJUSTMENT ON SITE TO SUIT THE FINISHED GROUND LEVELS.
- MANHOLE COVERS AND FRAMES ARE TO BE IN ACCORDANCE WITH BSEN124 AND THE FOLLOWING:
 - VEHICULAR AREAS: CLASS D400 (600 IN VULNERABLE SERVICE YARD LOCATIONS), DOUBLE TRIANGULAR, 150mm DEEP DUCTILE IRON COVER AND FRAME WITH THREE POINT COVER SEATING, BADGED FW OR SW FOR FOUL OR SURFACE WATER DRAINAGE.
 - PEDESTRIAN AREAS: CLASS B125, 100mm DEEP BADGED FW OR SW FOR FOUL OR SURFACE WATER DRAINAGE.
 - INTERNAL ACCESS SHALL BE BY HOWE



T1	ISSUED FOR TENDER	EW	FAZ	PJS	24.10.14
REV	MODIFICATIONS	BY	CH	AP	DATE



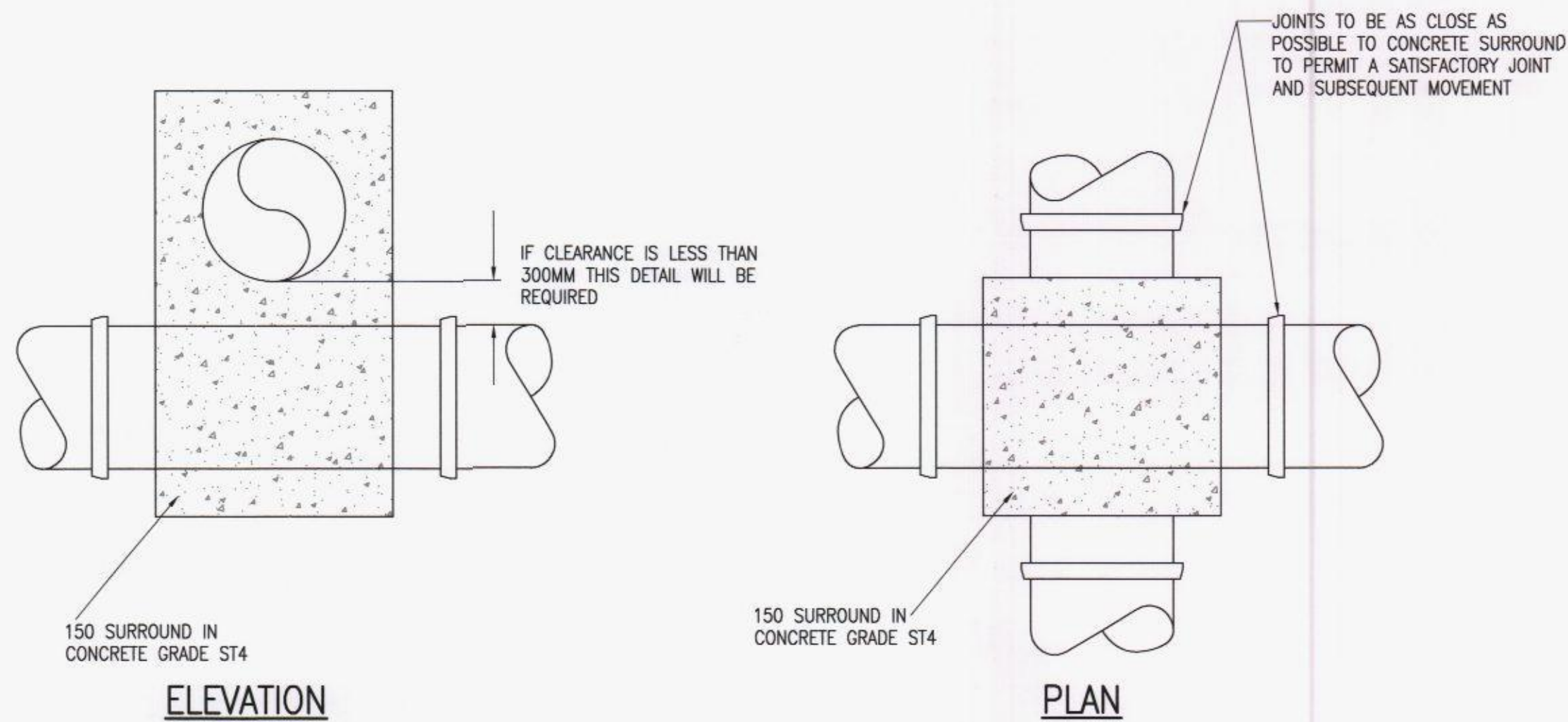
PURBROOK PARK SCHOOL REDEVELOPMENT

DRAINAGE DETAILS (SHEET 1 OF 3)

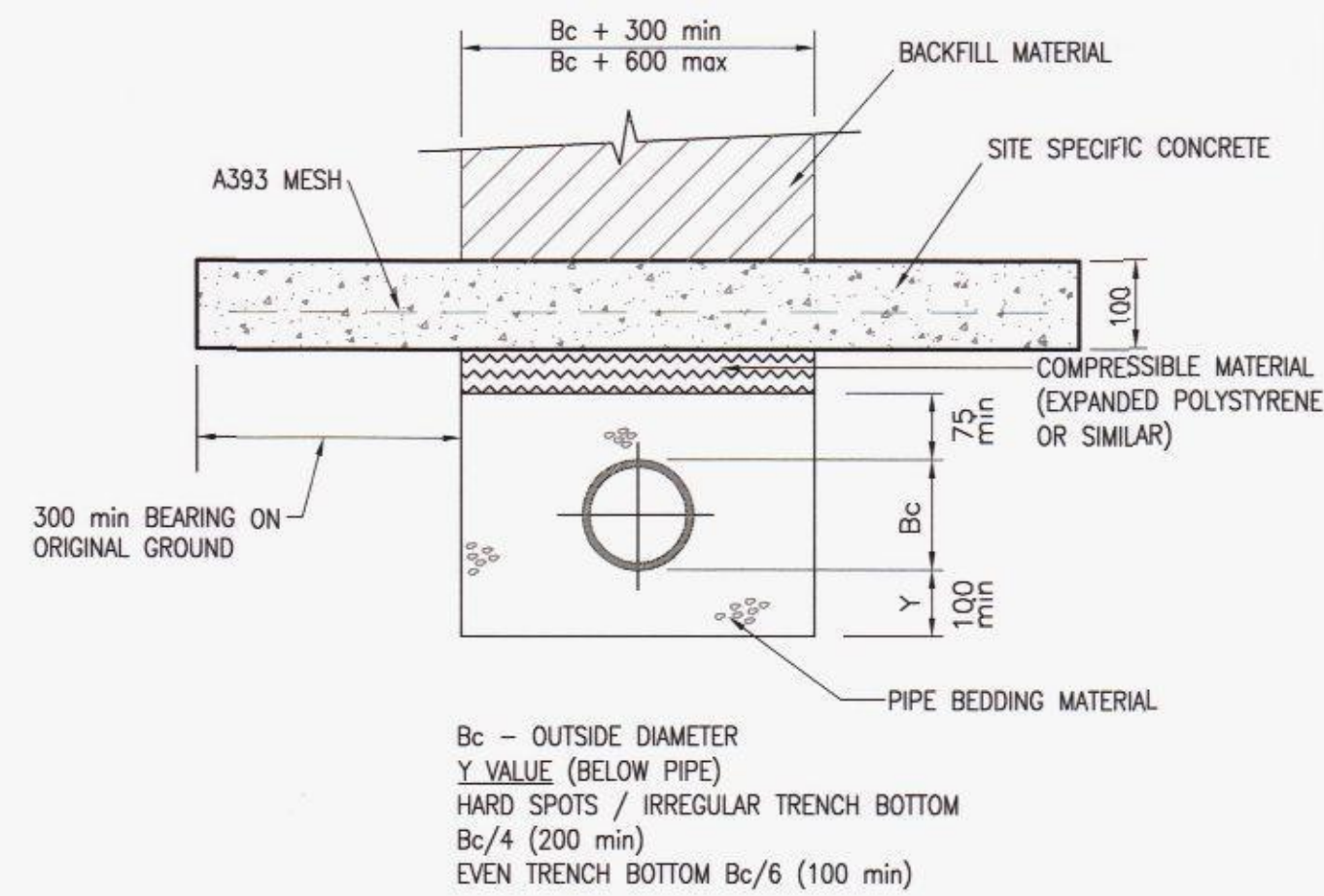
DRAWN BY	EW	DATE	08.09.2014
REVIEWED BY	FAZ	SCALE	AS SHOWN
AUTHORISED BY	PJS	ISSUE	Tn
		REVISION	T1

DRAWING NUMBER **1910.PPS.207**

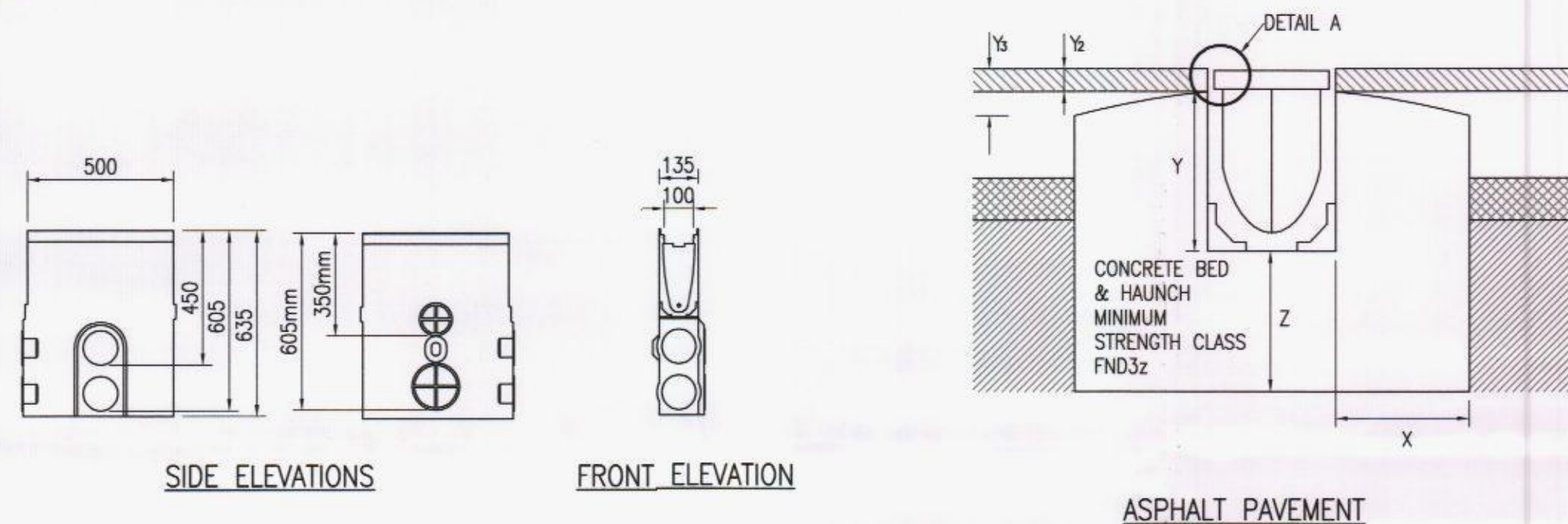




PIPE CROSSING DETAILS



SHALLOW PIPELINE PROTECTION SLAB



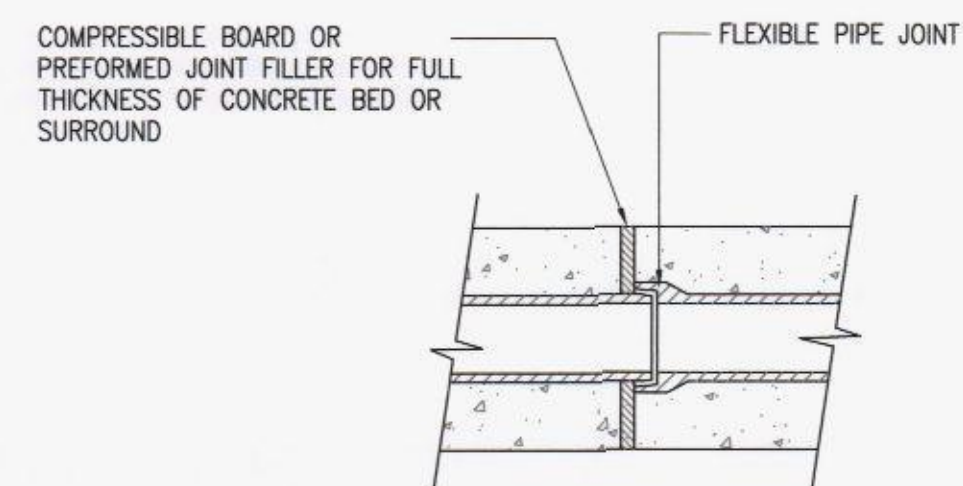
ACO M100D SUMP

INSTALLATION DETAILS FOR ACO MULTIDRAIN M100D DRAINAGE CHANNEL WITH ULTRA-STEEL GALVANISED EDGE RAIL

SURFACE PROTECTION: IN ASPHALT PAVEMENTS AVOID CONTACT BETWEEN COMPACTION EQUIPMENT AND CHANNEL/ GRATING. THIS MAY BE ACHIEVED BY ENSURING THAT THE FINISHED SURFACE LEVEL LIES ABOVE THE GRATING LEVEL (BY AT LEAST 3mm). STONES SHOULD BE REMOVED FROM GRATING PRIOR TO LAYING/ROLLING WEARING COURSE.

MINIMUM DIMENSIONS OF CONCRETE SURROUND				
LOAD CLASS	A15	B125	C250	D400*
MINIMUM DIMENSIONS (mm)	X 100	150	150	200
	Y FULL CHANNEL HEIGHT (LESS Y2 WHERE NECESSARY)			
	Z 100	150	150	200
MAXIMUM DIMENSIONS (mm)	Y1 35	35	35	35
	Y2 100	60	60	60

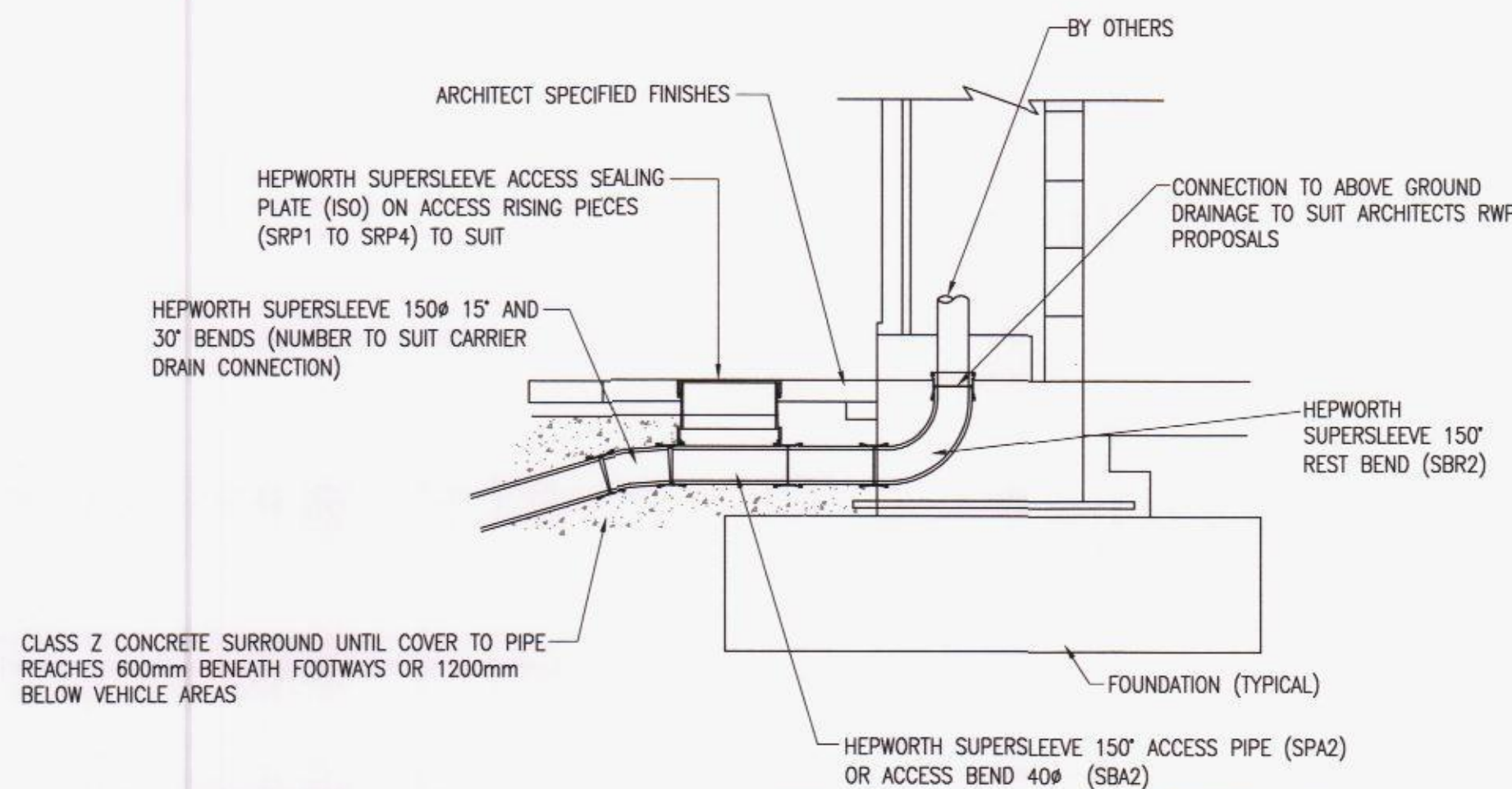
* e.g. PARKING AREAS FOR ALL TYPES OF ROAD VEHICLE
NOT SUITABLE FOR CARRIAGEWAY OF ROADS OR INDUSTRIAL AREAS
** NOTE DASHED LINE PRINTED ON EDGE RAILS 35mm BELOW TOP



JOINTS FOR CONCRETE SURROUND TO PIPES (CLASS A & Z)
(TO OCCUR AT EACH PIPE JOINT)

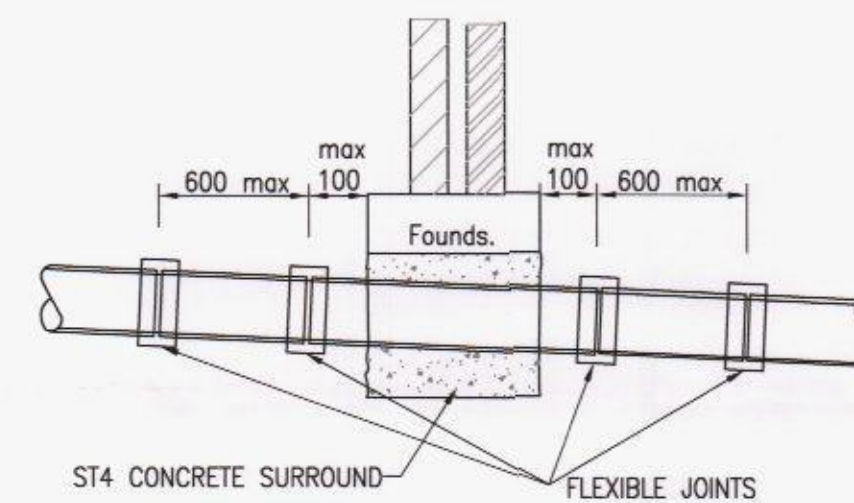
Pipe Ø	Joint thickness
< 450	18mm
450-1200	36mm
1200 <	54mm

COMPRESSIBLE FILLER TABLE
(BITUMEN IMPREGNATED INSULATING BOARD TO BS 1142: PART 3)

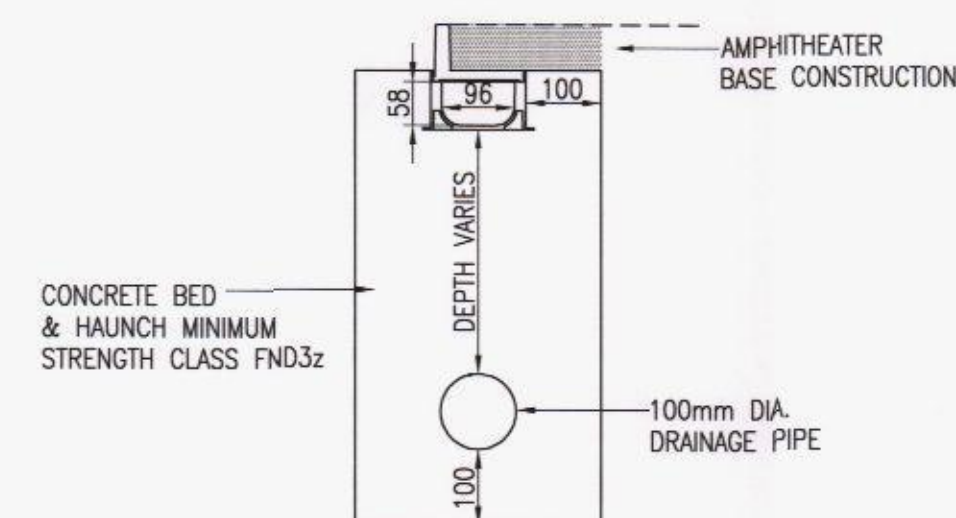


CLASS Z CONCRETE SURROUND UNTIL COVER TO PIPE REACHES 600mm BENEATH FOOTWAYS OR 1200mm BELOW VEHICLE AREAS

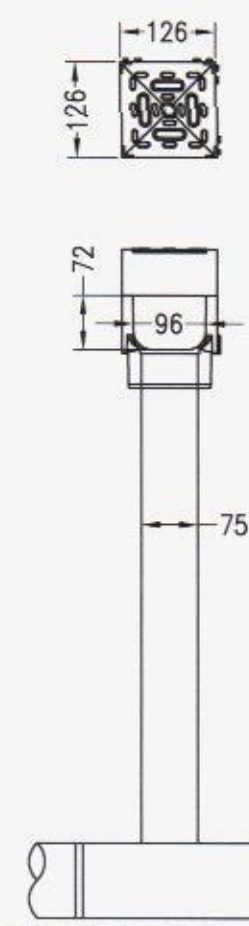
TYPICAL ACCESS PIPE DETAILS



PIPES UNDER FOUNDATIONS



HEXDRAIN BRICKSLOT



HEXDRAIN CORNER UNIT DRAINAGE ARRANGEMENT

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NOTES

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 - INTERNAL ACCESS SHALL BE BY HOWE

RECEIVED
TENDER ISSUE

T1	ISSUED FOR TENDER	EW	FAZ	PJS	24.10.14
REV	MODIFICATIONS	BY	RE	AP	DATE



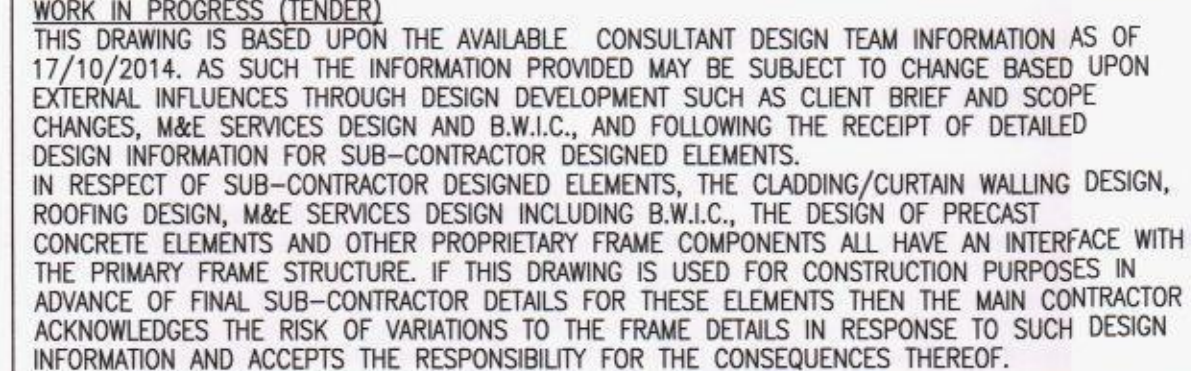
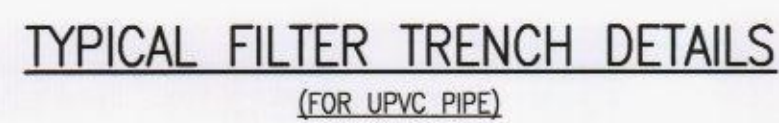
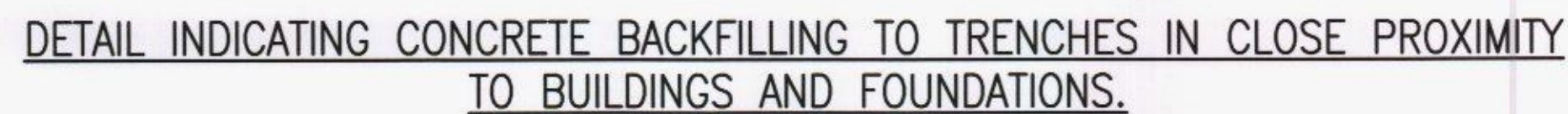
PURBROOK PARK SCHOOL
REDEVELOPMENT

DRAINAGE DETAILS
(SHEET 2 OF 3)

DRAWN BY	EW	DATE	01.10.2014
REVIEWED BY	FAZ	SCALE	1:1 N.T.S.
AUTHORISED BY	PJS	ISSUE	Tn
		REVISION	T1

DRAWING NUMBER
1910.PPS.208

Caulmert
engineering environmental planning



- Caulmert**
engineering environmental planning