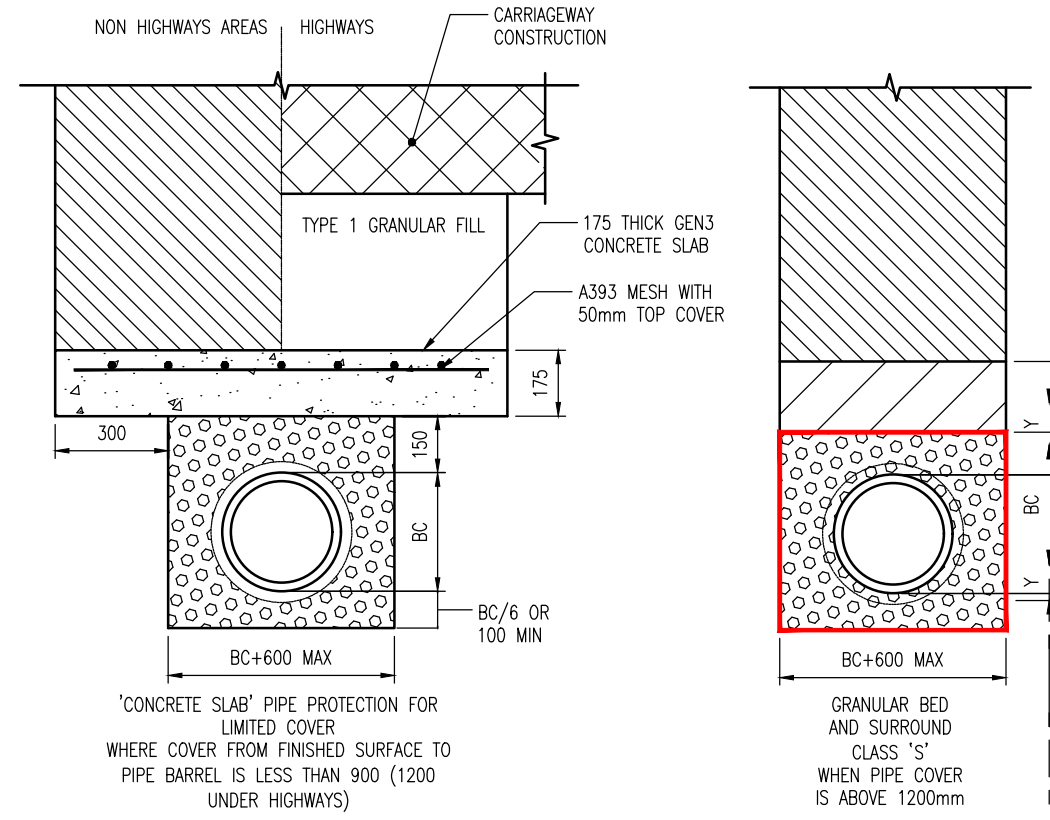


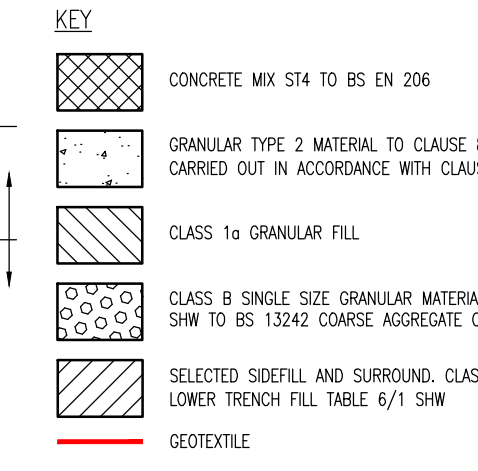
DO NOT SCALE

NOTES:

- ALL LEVELS ARE IN METRES AT 34.0m ABOVE ORDNANCE DATUM.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE DRAINAGE STRATEGY DRAWING 3775-WSP-00-ZZ-DR-CE-1002.
- ALL WORKS TO BE IN ACCORDANCE WITH THE RELEVANT PROVISIONS OF THE SPECIFICATION DOCUMENT SEENERS FOR ADOPTION 6TH EDITION. THE CLAUSE NUMBERS REFERRED BELOW RELATE TO THE SPECIFICATION ABOVE UNLESS STATED OTHERWISE.
- MANHOLE COVERS AND FRAMES SHALL COMPLY WITH BS EN 124, BS7903 AND CLAUSE E2.32
- MANHOLE FRAMES SHALL BE SET LEVEL, BEDDED AND HAUNCHED TO CL E6.7
- MANHOLE FRAME SHALL BE SEATED ON AT LEAST TWO COURSES OF CLASS B ENGINEERING BRICKS TO CL E6.7
- FOR ROCKER PIPE DETAILS REFER TO CLAUSE E6.6.2
- STEP IRONS COMPLYING WITH BS EN 14396 AND CLAUSE E2.37
- OPENING TO BE LOCATED CENTRALLY OVER 900 mm SHAFT
- D400 HEAVY DUTY MANHOLE COVER TO CL E2.32, MIN 600 x 600 mm CLEAR OPENING, 150mm DEEP FRAME. SEE MANHOLE SCHEDULE FOR VENTING/SEALING DETAILS.
- PIPE BEDDING CLASSIFICATIONS ARE DERIVED FROM I.R.R.L. DOCUMENT 'SIMPLIFIED TABLED OF EXTERNAL LOADS ON BURIED PIPELINES'.
- ENSURE ALL MANHOLE JOINTS AND EYELET RINGS ARE COMPLETELY SEALED TO PREVENT GROUNDWATER INGRESS.
- HEADWALL MORTAR TO CLAUSE 2404.
- BACKFILL AROUND HEADWALL SHALL BE CLASS GN WITH MIN  $\phi=35^\circ$  BACKFILLING NOT TO COMMENCE UNTIL WALL HAS ACHIEVED 28 DAY STRENGTH.
- MILD STEEL FABRICATION FOR THE SAFETY GRILLE TO BE HOT DIP GALVANISED TO BS EN 1461.
- THE DEPTH OF FOUNDATIONS FOR ALL STRUCTURES SHALL BE IN ACCORDANCE WITH NHBC STANDARDS, CHAPTER 4.2 (2011) BUILDING NEAR TREES.
- SEE DRAINAGE LAYOUT DRAWINGS FOR LOCATIONS OF BACKFLOWS, FLOW CONTROL CHAMBERS, AND INVERT AND INVERT LEVELS.
- IF FIRST PIPE BEYOND JUNCTION IS ENCASED IN CONCRETE A FLEXIBLE BOARD SHALL BE INSERTED AND THE CONCRETE PIPE SURROUND CONTINUED UP TO THE JOINT WITH ROCKER PIPE.
- PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598-1 AND BS EN 13598-2 OR HAVING EQUIVALENT INDEPENDENT APPROVAL.
- WHERE THE ACCESS CHAMBER IS IN THE HIGHWAY THE HIGHWAY AUTHORITY CAN HAVE SPECIFIC REQUIREMENTS.
- BOND BREAK TO BE PROVIDED BETWEEN CONCRETE COLLAR AND SHAFT TO PREVENT FRAME AND COLLAR BEARING ONTO SHAFT.
- JOINTS BETWEEN BASE AND SHAFT AND SHAFT COMPONENTS TO BE FITTED WITH WATER TIGHT SEALS.
- BASE UNIT TO HAVE ALL CONNECTIONS OF PIPES OF 150mm dia OR LARGER SOFFIT TO SOFFIT AND SMALLER BRANCH CONNECTIONS TO HAVE INVERT 50mm ABOVE THE MAIN RUN.
- ENKAMAT BANK PROTECTION TO BE INSTALLED WITH DITCH HEADWALL TO MANUFACTURERS RECOMMENDATIONS. ENKAMAT IS MANUFACTURED BY MGC.
- A FLEXIBLE JOINT SHALL BE PROVIDED AS CLOSE AS POSSIBLE TO THE HEADWALL IN THE FORM OF A ROCKER PIPE. FOR OUTFALL PIPE DIAMETERS UP TO 600 AND 750, THE EFFECTIVE LENGTH OF ROCKER PIPES ARE TO BE 600 AND 1000 RESPECTIVELY.
- ROCKER PIPE SHALL BE FLEMISH BOND IN CLASS B ENGINEERING BRICKS TO BS 3921 LAD ON DESIGNATION (I) MORTAR TO CLAUSE 2404.
- SCHEDULED DIMENSIONS TO BE ADJUSTED AS DIRECTED BY THE ENGINEER ON SITE.
- MILD STEEL HANDRAIL 1100 HIGH FIXED TO BRICKWORK AS RECOMMENDED BY MANUFACTURER. HANDRAIL TO BE COATED WITH AN ALL WEATHER COATING (COATING TO MANUFACTURERS RECOMMENDATIONS).



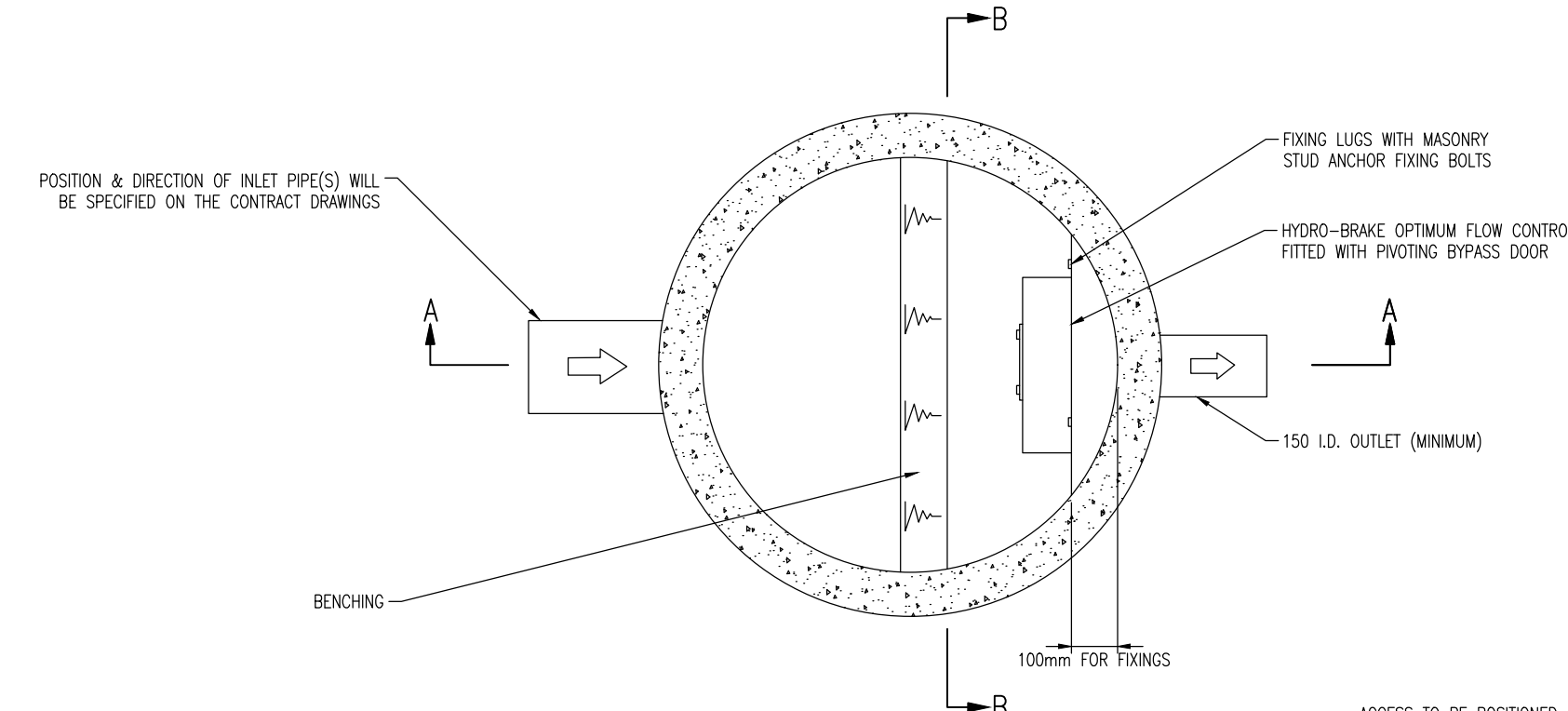
DETAIL 06  
PIPE BEDDING DETAILS



DIMENSION Y

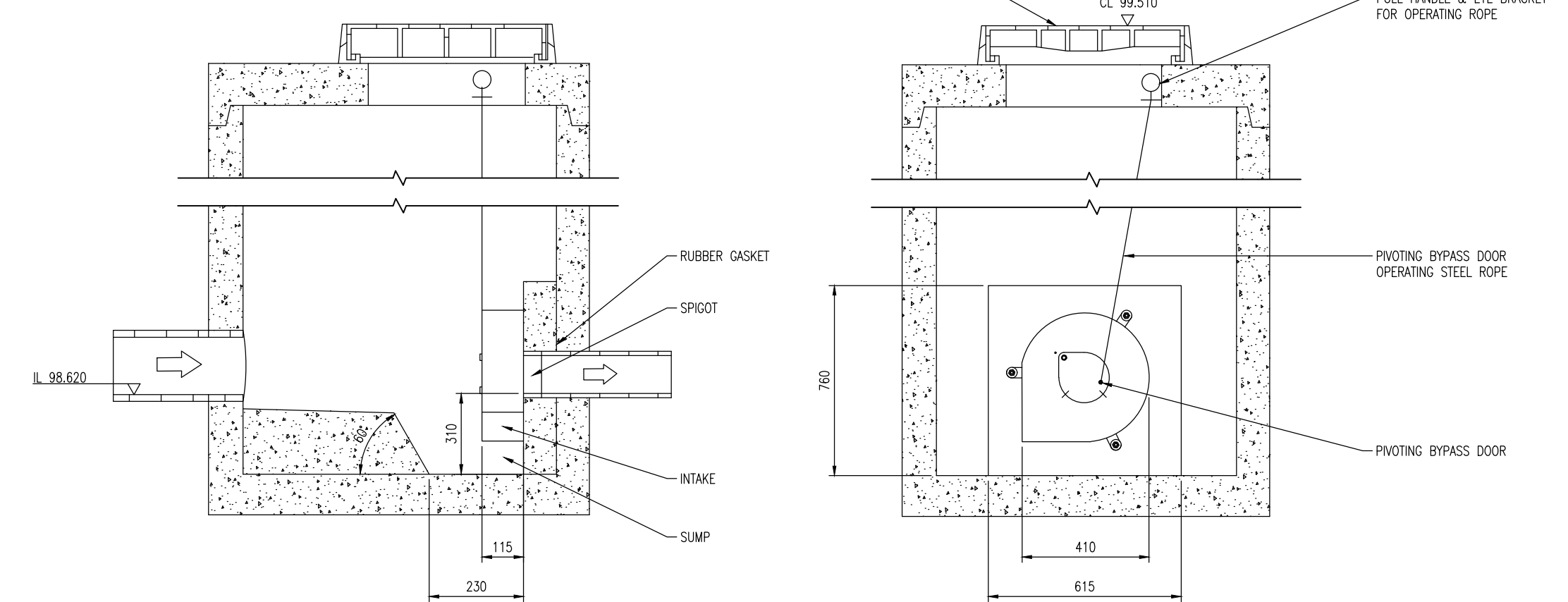
CLASS	MACHINE DUG UNIFORM SOIL	ROCK OR MIXED SOILS
N, F, B & S	NOTE (i)	NOTE (i)
A & Z	NOTE (ii)	NOTE (ii)

(i) Y=BC/6, WITH MIN 100 UNDER BARRELS (50 FOR SLEEVE JOINTS) AND MIN 50 UNDER SOCKETS, WHICHEVER IS THE GREATER, WITH MAX OF 400.  
(ii) Y=BC/4, WITH MIN 200 UNDER BARRELS (150 FOR SLEEVE JOINTS) AND MIN 150 UNDER SOCKETS, WHICHEVER IS THE GREATER, WITH A MAX OF 400.  
NOTE: SHW MEANS REFER TO THE SPECIFICATION FOR HIGHWAY WORKS VOL. 1 SERIES 600  
DN = NOMINAL INTERNAL DIAMETER OF PIPE.  
DC = OUTSIDE DIAMETER OF PIPE.

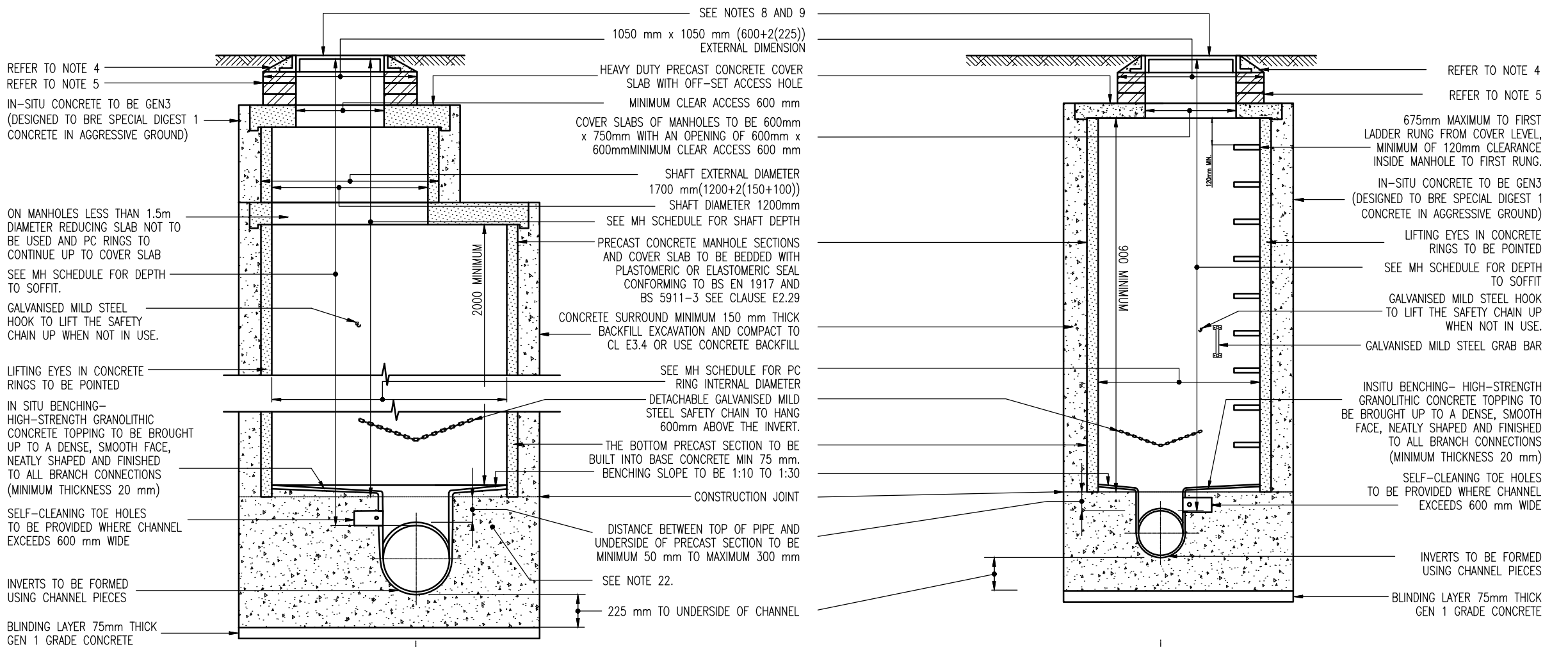


TECHNICAL SPECIFICATION

CONTROL POINT	HEAD (m)	FLOW (l/s)
PRIMARY DESIGN	0.650	4.600
FLUSH-FLO	0.202	4.581
KICK-FLO	0.452	3.892
MEAN FLOW		3.906

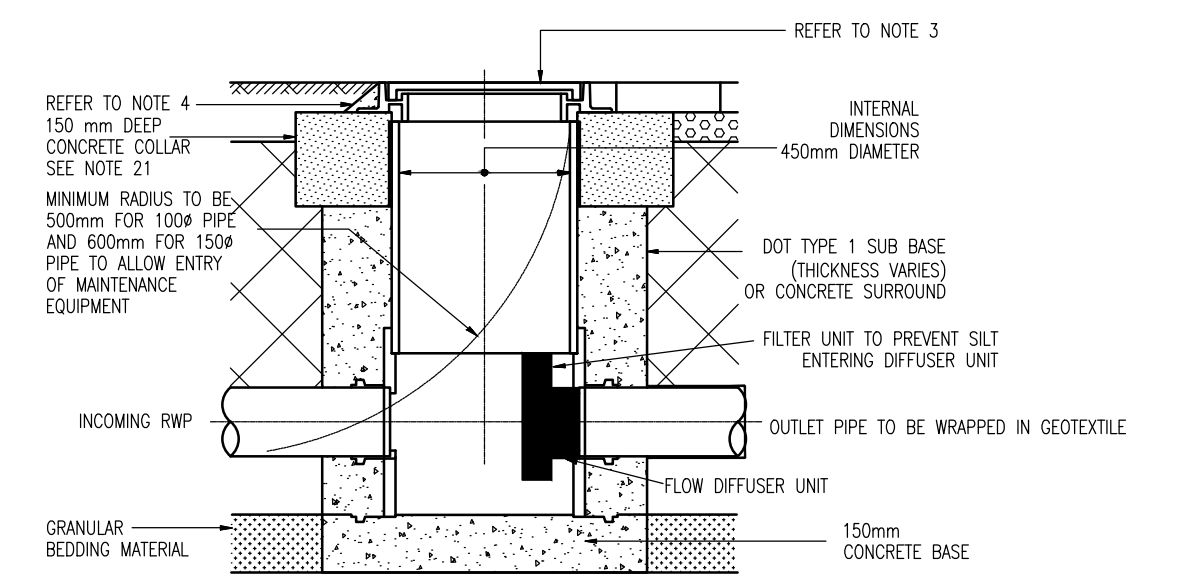


SECTION A-A  
DETAIL 05  
HYDRO-BRAKE MANHOLE DETAIL  
SECTION B-B

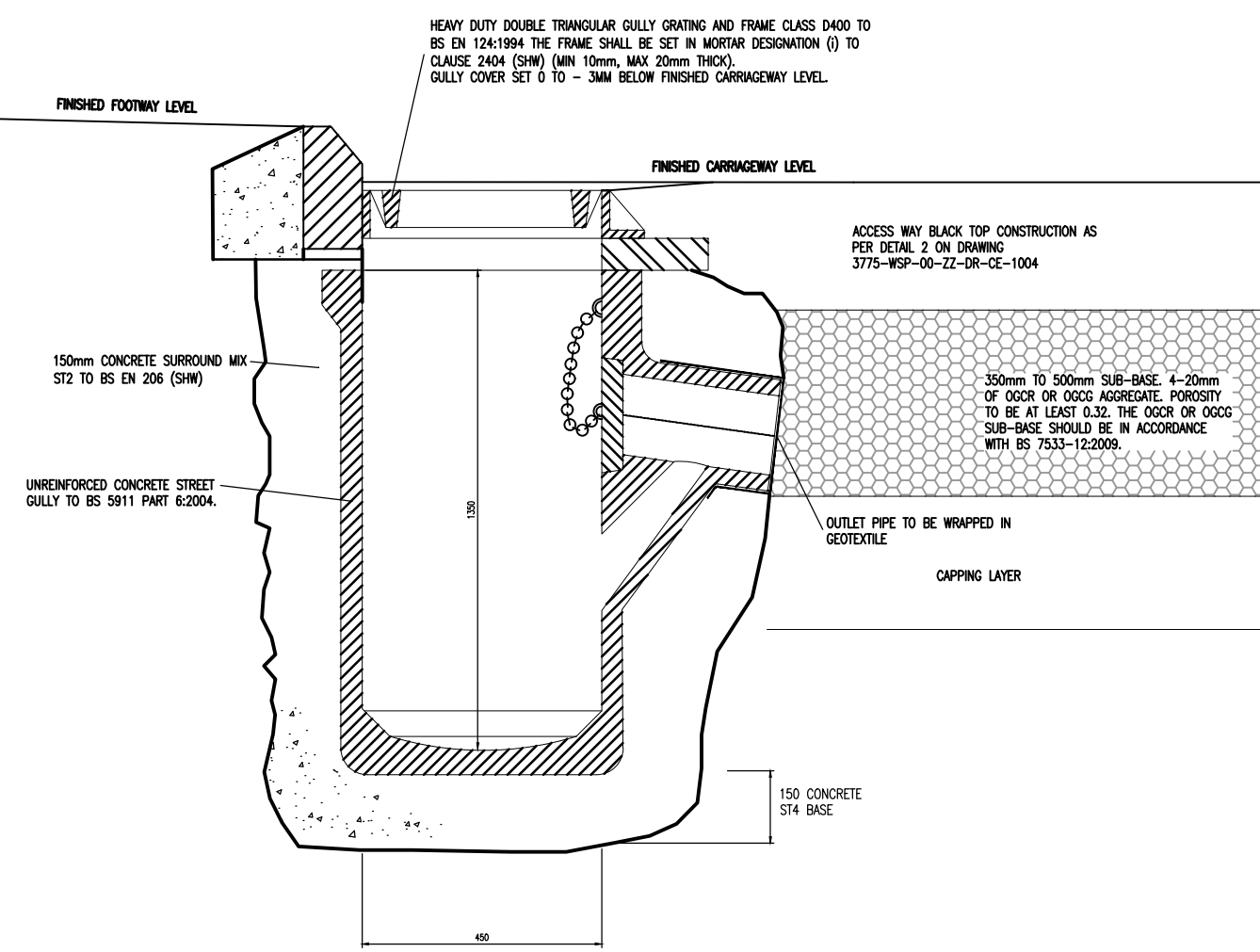


DETAIL 08  
TYPICAL MANHOLE DETAIL - TYPE A  
DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3m to 6m

DETAIL 09  
TYPICAL MANHOLE DETAIL - TYPE B  
DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE NOT EXCEEDING 3m



DETAIL 07  
TYPICAL INSPECTION CHAMBER DETAIL - TYPE 4  
DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE  $\leq$  2m, NON-ENTRY



DETAIL 10  
GULLY WITH OUTLET INTO CGA

POZ	DATE	BY	DESCRIPTION	CHK	APP
PO2	01/02/2018	MM	DETAIL 05 CL & I, ADDED, DETAIL 10 EXTENT OF CONCRETE SURROUND AMENDED.	AJG	MB
PO1	15/12/2017	MM	FIRST ISSUE	AJG	MB

DRAWING STATUS: S2 - FOR INFORMATION

**wsp**

Unit 9 The Chase, John Tate Road, Foxhous Business Park, Hertford, SG13 7NN, UK  
T+44 (0) 1992 526 000, F+44 (0) 1992 526 001  
wsp.com

CLIENT: ATLAS HOTELS GROUP

ARCHITECT: NORR

SITE/PROJECT: HOLIDAY INN EXPRESS BICESTER GATEWAY

TITLE: DRAINAGE CONSTRUCTION DETAILS SHEET 1 OF 2

SCALE @ A1:	CHECKED:	APPROVED:
as shown	AJG	MB

PROJECT NO:	DESIGNED:	DRAWN:	DATE:
70033775	MM	MM	January 18

DRAWING NO:	REV:
3775-WSP-00-ZZ-DR-CE-1005	P02

© WSP UK Ltd