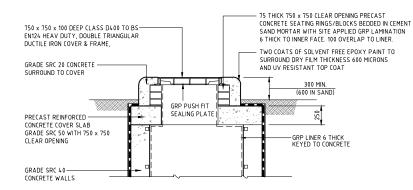
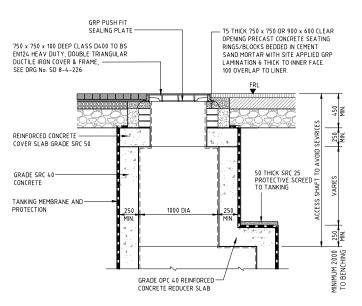


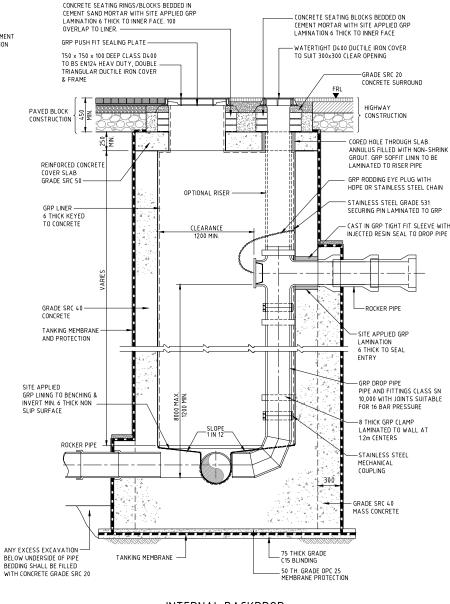
SECTION A-A WITH COVER DETAIL FOR PAVED/ROAD SURFACE



COVER DETAIL FOR UNPAVED AREAS

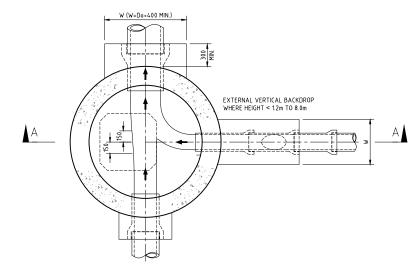


OPTIONAL ACCESS SHAFT TO AVOID SERVICES



75 THICK 750 x 750 CLEAR OPENING PRECAST

INTERNAL BACKDROP



SECTION B-B VERTICAL BACKDROP

DIMENSIONS OF MANHOLE FOR OPEN TRENCH EXCAVATION WORKS									
NOMINAL PIPE DIAMETER (mm)	DEPTH TO INVERT (mm)	DIAMETER OF MANHOLE (mm)	MIN. WALL THICKNESS (mm)	MIN. BASE THICKNESS (mm)	MAXIMUM MH SPACING (m)	IN-SITU	PRECAST	MINIMUM ACCESS COVER SIZE	
200 - 600	- UP TO 6000	1500	250	- 500	110	✓	✓	750 x 750mm D400 DOUBLE TRIANGULAR DUCTILE IRON	
800 - 1000		1800	300		150	✓	✓		

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT Q.C.S. UNLESS OTHERWISE AGREED WITH THE ENGINEER.
- WHERE THERE IS A DISCREPANCY BETWEEN THE REQUIREMENTS IN THE SPECIFICATION AND THOSE SHOWN ON THIS DRAWING THE SPECIFICATION SHALL TAKE PRECEDENCE.
- VARIATION TO STANDARD DETAILS ARE PERMISSIBLE TO MEET SITE SPECIFIC REQUIREMENTS SUBJECT TO ENGINEERS
- SEE DRAWING No. SD 8-4-106 FOR STANDARD NOTES AND DETAILS.
- ALL JOINTS BETWEEN SECTIONS OF GRP LINERS SHALL BE LAMINATED OVER WITH 200mm WIDE RESIN RICH GLASS.
- ALL JOINTS BETWEEN PIPES, FIXTURES AND GRP LINERS ARE SEALED.
- ALL JOINTS BETWEEN PIPES AND CONCRETE SECTIONS ARE WATERTIGHT
- ALL INCOMING PIPES ARE LAID SOFFIT TO SOFFIT WITH THE OUTGOING PIPE UNLESS A RAMP/BACKDROP IS CONSTRUCTED O AS SHOWN ON THE PLAN.
- . ROCKER PIPE IS 600mm IN LENGTH OR 1.5xD WHICHEVER IS GREATER. MAXIMUM LENGTH OF ROCKER TO BE 1/2 OF MANUFACTURER'S NOMINAL PIPE LENGTH OR AS AGREED ON SITE
- GRP PIPES AND FABRICATIONS CAST INTO CONCRETE SHALL BE GRIT COATED.
- SEE DRAWING No. SD 8-4-103 FOR TANKING DETAILS
- . DI MANHOLE COVERS SHALL BE BADGED 'FOUL WATER' IN ENGLISH AND ARABIC.
- ENGLISH AND ARABIL.

 MANHOLES IN CARRIAGEWAY TO BE BACKFILLED TO THE UNDERSIDE OF THE SUB BASE, FROM THE EXCAVATED SURPACE WITH SMPA FLOWABLE FILL. AT TRENCH OPENINGS, ROUGH SHUTTERING SHALL BE PROVIDED TO GIVE A MINIMUM THICKNESS OF 300 AROUND THE MANHOLE. WHERE FLOWABLE FILLS USED FOR BACKFILL, TANKING MEMBRANE TO WALLS IS REQUIRED ONL TO 300 ABOVE THE HIGHEST PIPE (ROWN LEVEL. DAY JONES SHALL BE USED TO PREVENT THE FLOWABLE FILL ENTERING THE GRANUL AR BED AND SURROUND. TANKING MEMBRANE IS NOT REGUIRED FOR PRC MANHOLES.
- MEMBERANE IS NOT REQUIRED FOR PIX MARMOLES.

 INTERNAL BACKORDO SHALL BE MAXIMM 300 DIAMETER AND SHALL BE PROVIDED WHERE EXTERNAL BACKOROP IS NOT POSSIBLE AND SUBJECT TO APPROVAL OF THE ENGINEER. INTERNAL BACKOROP MAY BE FORMED IN GRP OR DUCTILE IRON DUCTILE IRON PIPES AND FITTINGS SHALL BE SUITABLE FOR 16 BAR IPFAT WITH EXTERNAL COATING. THE CONTRACTOR SHALL SUBMIT DETAILS OF ALTERNATIVE PROPOSAL FOR THE APPROVAL OF THE ENGINEER.
- . DRG No. SD 6-1-201 TO SD 6-1-205 FOR CONSTRUCTION IN EXISTING PAVEMENT.
- THERE SHALL BE A MINIMUM OF 1 AND MAXIMUM OF 4 PRECAST CONCRETE SEATING RINGS INSTALLED SUBJECT TO THE APPROVAL OF THE ENGINEER.
- FOR RAMP AND VERTICAL BACKDROP CONNECTION DETAILS, REFER TO DRG No. SD 8-4-227

NOTES APPLICABLE TO BACKDROP MANHOLES:

- WHERE THERE IS A DIFFERENCE IN LEVEL BETWEEN THE INVER LEVEL OF INCOMING AND OUTGOING SEWERS THE FOLLOWING RULES APPLY:
- a. WHERE THE DIFFERENCE IN LEVEL IS LESS THAN 600 THE PIP CONNECTION MAY BE DIRECT THROUGH THE MANHOLE OR GRADIENT ADJUSTED TO SUIT.
- b. WHERE THE DIFFERENCE IN LEVEL IS GREATER THAN 600 AND LESS THAN 1200 A RAMP BACKDROP SHALL BE CONSTRUCTED.
- . WHERE THE DIFFERENCE IN LEVEL IS 1200 AND LESS THAN 8000 A VERTICAL BACKDROP SHALL BE CONSTRUCTED.
- e. EXTERNAL BACKDROPS ARE PREFFERED. INTERNAL BACKDROP MAY BE USED SUBJECT TO APPROVAL BY THE ENGINEER.
- f. FOR INTERNAL BACKDROPS WHERE DIFFERENCE IN LEVEL IS 4000 OR GREATER, A VERTICAL RISER SHALL BE CONSTRUCTED.
- THE MINIMUM DIAMETER FOR A BACKDROP IS 200. WHERE INCOMING PIPE CONCETTING TO BACKDROP IS LESS THAN THE SPECIFIED MINIMUM DIA. OF THE BACKDROP, A LEVEL INVERT TAPER SHALL BE PROVIDED IN THE GRP FABRICATION. IF INCOMING PIPE IS OREATER THAN OR FOLDAL, TO MIN. DIA. THE BACKDROP SHALL BE OF THE SAME DIAMETER AS THE INCOMING
- VORTEX DROP TO BE USED WHEN DIFFERENCE IN PIPE INVERT LEVELS IS GREATER THAN 8.0m AND FLOW IS GREATER THAN 30 I/SEC OR VELOCITY IS GREATER THAN 1.2 m/SEC. TYPE OF VORTEX DROP AND DESIGN TO BE APPROVED BY THE ENGINEER.

Rev.	Date	Revision Details	Appd.			
0	15SEP13	ISSUED FOR USE				
1	23NOV15	ISSUED FOR USE				
2	21JAN16	ISSUED FOR USE				
3	01 MAR 19	UPDATED ISSUE				
4	APR 19	ISSUED FOR USE				

ميئــة الأشغــال العامـــة

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PA

PROJECTS AFFAIRS

Section 8 - Drainage Works Part 4 - Pipeline Installation

FOUL SEWER

MANHOLE DETAILS

Approved:	Sheet No: 1 OF 1
Date: APRIL 2019	Scale: 1:25 ON A1
Drawing Number:	Revision:

SD 8-4-204