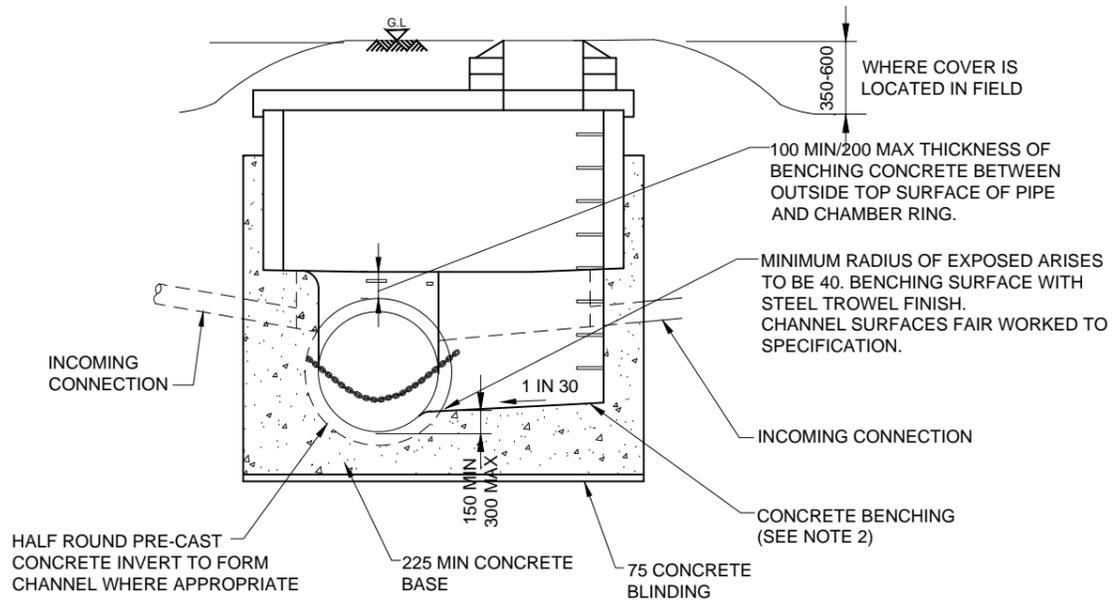
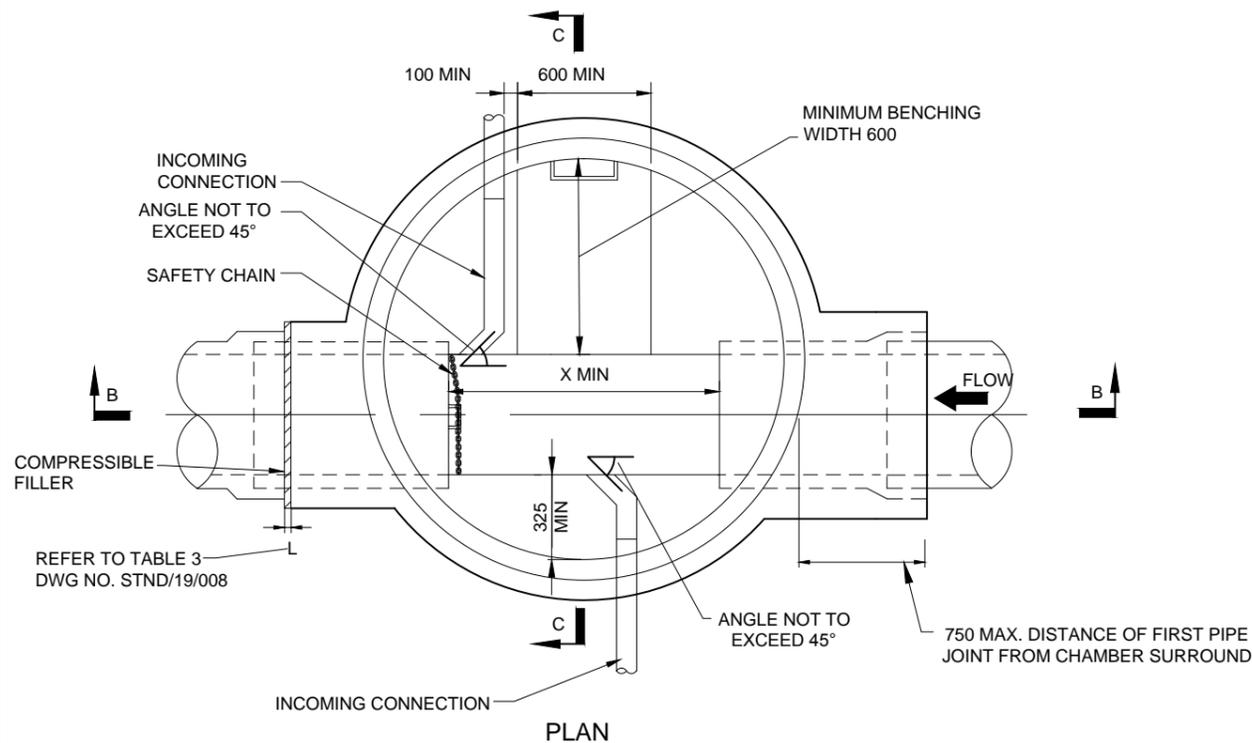


SECTION B-B



SECTION C-C



SHALLOW SURFACE WATER MANHOLES ARE TO BE USED WHERE THE MINIMUM 2.0m HEADROOM CANNOT BE ACHIEVED BETWEEN TOP OF BENCHING AND UNDERSIDE OF COVER SLAB

NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES
- CONCRETE BENCHING AND PIPE SURROUND**
SHALL BE PLACED IN SINGLE CONTINUOUS OPERATION FROM TOP OF BASE SLAB TO TOP OF BENCHING AND PIPE SURROUND
- CONNECTION INTO MANHOLES**
SHALL BE CONSTRUCTED WITH THE SOFFITS AT THE LEVEL UNLESS DETAILED DIFFERENTLY ON CONTRACT DRAWINGS
- METALWORK**
LADDERS, HANDRAILING AND SAFETY CHAIN SHALL BE AS SHOWN ON DEVELOPER SERVICES DETAIL 9 (STND/19/009)
- CONCRETE SURROUND TO MANHOLES**
A CONCRETE SURROUND IS NOT NORMALLY REQUIRED TO MANHOLES UNLESS INSTALLED IN AREAS OF UNSTABLE GROUND, UNDER CONDITIONS OF FLOTATION OR WHERE SUBJECTED TO EXCEPTIONAL OR ECCENTRIC LOADS. IN WHICH CASES A 150 SURROUND OF AT LEAST 20 N/mm CONCRETE SHALL BE PROVIDED. ANY JOINTS SHOULD BE STAGGERED WITH PRECAST CONCRETE JOINTS
- MINIMUM LENGTH OF CHANNEL (X MIN)**

CHAMBER DIA	"X" MIN
1050	800
1200	950
1350	1000
1500	1050
1800	1150
2100	1300
2400	1450
2700	1550
3000	1700

- CUT ENDS OF REINFORCED CONCRETE PIPES**
SHALL BE TREATED WITH EPOXY RESIN PAINT/MORTAR
- MANHOLE ACCESSES AND VARIABLE FEATURES (v.f.)**
REFER TO DEVELOPER SERVICES DETAIL 10 (STND/19/010). DOUBLE STEPS SHALL BE PLASTIC ENCAPSULATED CARBON STEEL TO BS EN 1247-2
- COVER AND FRAME**
150mm DEEP COVERS ARE TO BE USED IN CATEGORY 1, 2, 3 ROADS. 100mm DEEP COVERS ARE TO BE USED IN CATEGORY 4 ROADS. DOUBLE TRIANGULAR COVERS ARE TO BE USED IN CARRIAGEWAY. ROAD CATEGORY TO BE DESIGNATED BY THE HIGHWAY AUTHORITY. FRAME TO BE SET AS PER SPECIFICATION
- CONCRETE**
ALL IN-SITU CONCRETE TO BE DC - 3 OR FND3

CURRENT ISSUE INFORMATION

A	SC	DH	SD	FOR INFORMATION	15.04.16
VERSION	DRWN	CHKD	REVD	DATE	



UNITED UTILITIES LTD	
DEVELOPER SERVICES	
DETAIL 4 - SHALLOW SW MANHOLE DETAIL	
RESTRICTED HEADROOM (LESS THAN 2.0m)	
FOR PIPE SIZES 450DIA AND ABOVE	
SCALE	SHEET SIZE
NTS	A3
DRAWING NUMBER	REVISION
STND/19/004	A