

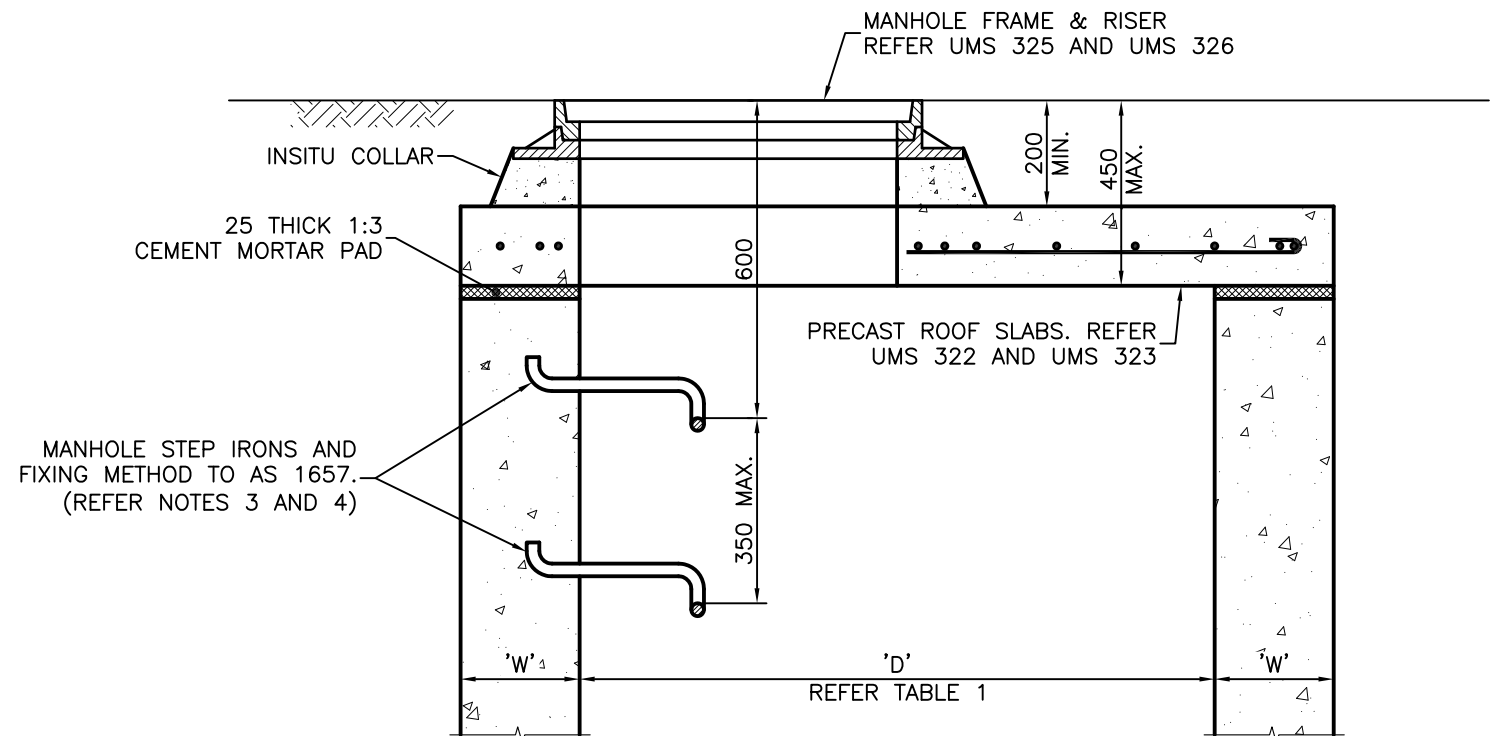
TOP SLAB ANCHOR BRACKET DETAILS FOR SURCHARGE SYSTEM OR WHERE DIRECTED

TABLE 1 – MH WALL THICKNESS

MANHOLE DIAMETER 'D'	ROOF SLAB DIAMETER	WALL THICKNESS 'W'	DIMENSION 'T' FOR MH INVERT GRADE	
			INLET/S	OUTLET
1050	1350	150	175	150
1200	1650	225	250	225
1350	1800			
1500	1950			

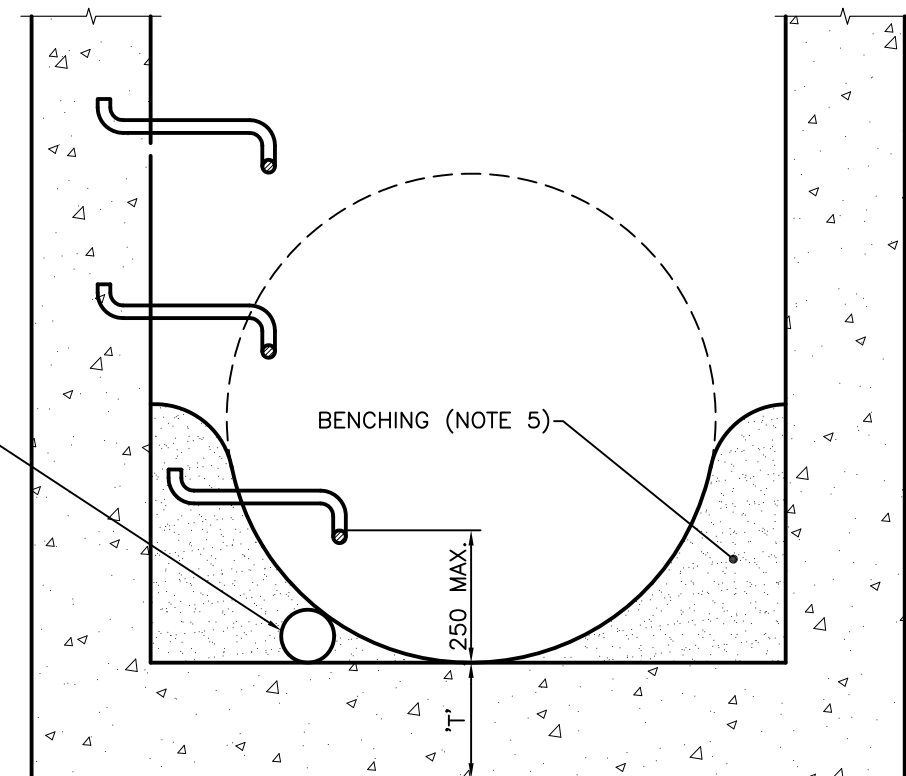
NOTES:

1. CONCRETE TO WALLS AND FLOOR TO BE GRADE N25.
2. MANHOLE DESIRABLE MINIMUM AND MAXIMUM DEPTHS TO 1200 AND 3000 RESPECTIVELY.
3. INSTALL STEP IRONS TO MANHOLES 850–3000 DEEP IN ACCORDANCE WITH AS1657.
4. INSTALL FIXED ACCESS LADDER TO MANHOLES DEEPER THAN 3000 DEEP IN ACCORDANCE WITH AS1657. ALSO REFER QUEENSLAND URBAN UTILITIES STANDARD DRAWINGS 486/5/25–SF009 (M.S. LADDERS) AND 486/5/25–SF011 (S.S. LADDERS). STAINLESS STEEL LADDERS TO BE USED IN AGGRESSIVE OR MARINE ENVIRONMENTS OR AS DIRECTED.
5. PROVIDE 150 MINIMUM CLEAR DISTANCE BETWEEN INLET PIPES. PROVIDE BENCHING AS REQUIRED BY DESIGN ON THE FLOOR OF MANHOLE (TO HALF THE DIAMETER OF THE OUTLET PIPE) FOR COMPLEX MANHOLES WITH MORE THAN 2 INLET PIPES.
6. FRAME MAY BE BOLTED TO TOP SLAB WITH M20 BOLTS AND NUTS WITH FLAT AND SPRING WASHERS. BOLTS TO BE EITHER CAST IN-SITU AS PART OF TOP SLAB OR CHEMICALLY FASTENED TO TOP SLAB POST CONSTRUCTION. REFER UMS 325 FOR FRAME DETAILS.
7. PRINCIPLES TO MINIMISE HYDRAULIC HEAD LOSS AT MANHOLE:
 - REDUCE CHANGES IN DIRECTION TO A MINIMUM.
 - AVOID "OPPOSED LATERAL" SITUATIONS BY LOCATING ALL INCOMING PIPES WITHIN A 90° ARC.
 - AVOID VERTICAL MISALIGNMENT (DROP MANHOLES) IF POSSIBLE, UNLESS THERE IS A DELIBERATE ATTEMPT TO REDUCE VELOCITY.
 - WHERE POSSIBLE DIRECT INLET PIPES WHOLLY INTO THE BARREL OF OUTLET PIPE.
 - PROVIDE GEOMETRY SUCH THAT THE CHANGE OF DIRECTION OCCURS AT OR NEAR THE DOWNSTREAM FACE OF THE MANHOLE.
8. APPLY HEAVY GREASE TO FRAME SEAT PRIOR TO INSTALLING COVER.
9. RISER TO BE OMITTED FOR NON-ROADWAY MANHOLES.
10. DIMENSIONS IN MILLIMETRES (U.N.O.).



UNLESS DIRECTED OTHERWISE, PROVIDE 1000 LONG x Ø100. STUB TO DEWATER PIPE TRENCH.

STUB TO BE CORRUGATED PERFORATED POLYETHYLENE PIPE CLASS 400 TO AS2439. (WITH END CAP) INSTALLED ON THE UPSTREAM FACE OF MANHOLES.



TYPICAL SECTION

ISSUE	AMENDMENT	DRAWN DATE	CHK'D DATE	APPR'D DATE
C	Notes Reviewed, Step Iron Spacing Amend..	DL 04/12	IC 29/4/12	GB 31/5/12
B	Note 6 Added.	DL 12/09	GM 03/10	GB 04/10
A	ORIGINAL ISSUE	April '01	May '01	June '01

DESIGN AUTHORIZED FOR ISSUE B. BALL SIGNATURE ON ORIGINAL DATED 29/6/01	DESIGN	STD DWG GROUP	DATE	April '01
MANAGER ASSET SUPPORT - R.P.E.O. 3, 8, 5, 2	DRAWN	CITY DESIGN	DATE	April '01
DESIGN APPROVED B. HANSEN SIGNATURE ON ORIGINAL DATED 27/6/01	CHECKED	M. STEER	DATE	May '01
PRINCIPAL ASSET OFFICER ROADS & DRAINAGE	DRAWING FILENAME	UMS 321		
	ASSOCIATED PLANS	SUPERSEDES WS 51-1 & DRAFT UMS 51-1		



BRISBANE CITY COUNCIL STANDARD DRAWING

STORMWATER MANHOLE DETAILS
1050 TO 1500 DIAMETER

SCALE: NOT TO SCALE
DWG No. UMS 321
ORIGINAL SIZE: A3
REVISION: C