

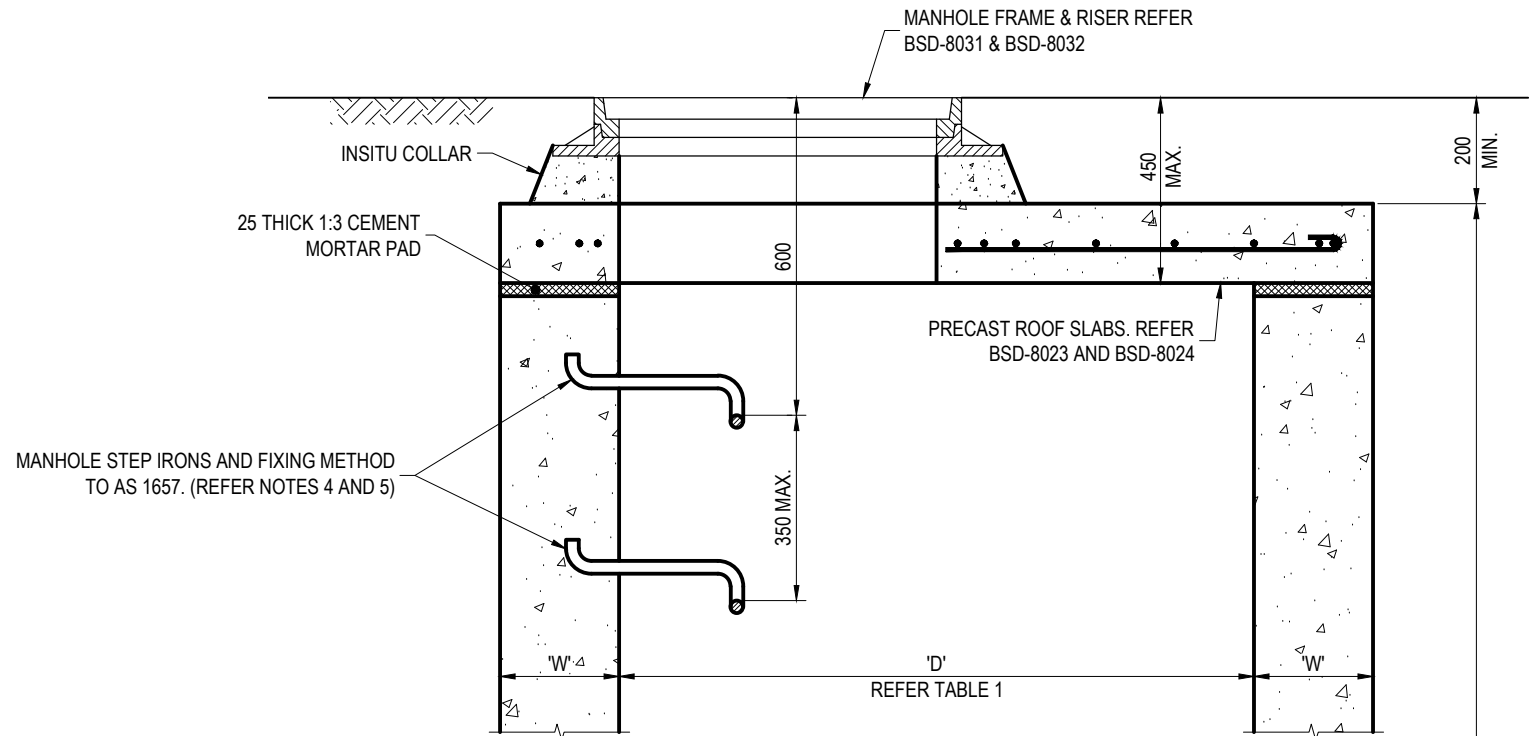
TOP SLAB ANCHOR BRACKET DETAILS FOR SURCHARGE SYSTEM OR WHERE DIRECTED

TABLE 1 - MH WALL THICKNESS

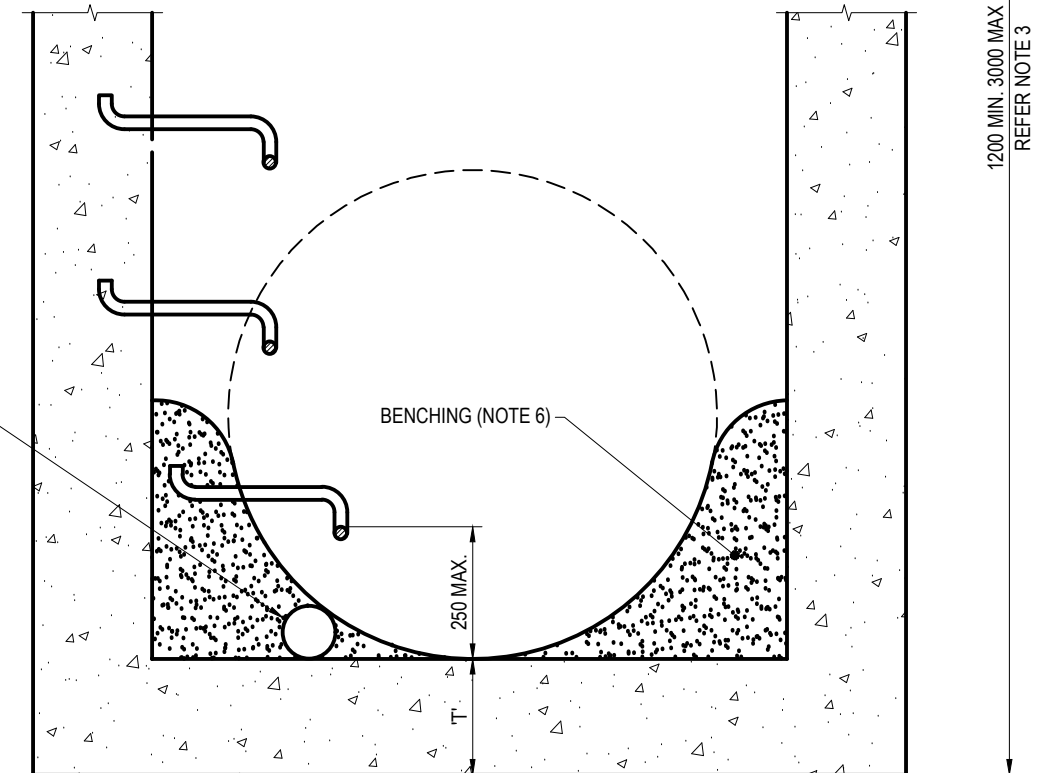
| MANHOLE DIAMETER 'D' | ROOF SLAB DIAMETER | WALL THICKNESS 'W' | DIMENSION 'T' FOR MH INVERT GRADE | |
|----------------------|--------------------|--------------------|-----------------------------------|--------|
| | | | INLET/S | OUTLET |
| 1050 | 1350 | 150 | 175 | 150 |
| 1200 | 1650 | 225 | 250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

NOTES:

- CONCRETE TO WALLS AND FLOOR TO BE GRADE N25.
- MANHOLE DESIRABLE MINIMUM AND MAXIMUM DEPTHS TO 1200 AND 3000 RESPECTIVELY.
- MANHOLES DEEPER THAN 3000 TO BE INDIVIDUALLY DESIGNED AND CERTIFIED BY AN RPEQ.
- INSTALL STEP IRONS TO MANHOLES 1200-3000 DEEP IN ACCORDANCE WITH AS1657.
- INSTALL FIXED ACCESS LADDER TO MANHOLES DEEPER THAN 3000 DEEP IN ACCORDANCE WITH AS1657. ALSO REFER SEQ WATER SERVICE PROVIDERS STANDARD DRAWINGS SEQ-SEW-1301-12 FOR MILD STEEL AND STAINLESS STEEL LADDERS. STAINLESS STEEL LADDERS TO BE USED IN AGGRESSIVE OR MARINE ENVIRONMENTS OR AS DIRECTED.
- 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.
- FRAME AND RISER MAY BE BOLTED TO TOP SLAB WITH 4xM20 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 BSD-8031 FOR FRAME DETAILS AND BSD-8032 FOR RISER DETAILS.
- 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.
- APPLY HEAVY GREASE TO FRAME SEAT PRIOR TO INSTALLING COVER.
- RISER TO BE OMITTED FOR NON-ROADWAY MANHOLES.
- DIMENSIONS IN MILLIMETRES (U.N.O.).



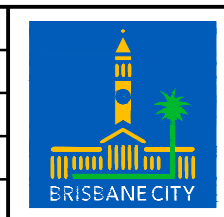
UNLESS DIRECTED OTHERWISE, PROVIDE 1000 LONG x Ø100. STUB TO DEWATER PIPE TRENCH. STUB TO BE CORRUGATED PERFORATED POLYETHYLENE PIPE CLASS 400 TO AS2439. (WITH END CAP) INSTALLED ON THE UPSTREAM FACE OF MANHOLES.



TYPICAL SECTION

| ISSUE | AMENDMENT | DRAWN DATE | CHK'D DATE | APPR'D DATE |
|-------|--|------------|------------|-------------|
| C | Note 4 Mod. - Min. Depth for Steps Irons Changed | MAY '18 | JUL '18 | NOV '18 |
| B | Drawing Title Amended | FEB '16 | JUL '16 | JUL '16 |
| A | Drawing Converted from UMS Series April 2014 | APR '14 | APR '14 | APR '14 |

| DRAWING AUTHORISED FOR PUBLICATION | | | |
|------------------------------------|---|------|---------|
| DESIGN | STD DWG GROUP | DATE | APR '01 |
| DRAWN | CITY DESIGN | DATE | APR '01 |
| CHECKED | M.STEER | DATE | MAY '01 |
| DRAWING FILENAME | BSD-8021 (C) Stormwater maintenance hole details 1050 to 1500 diameter - to 3.0m deep.dwg | | |
| ASSOCIATED PLANS | SUPERSEDES UMS-321 | | |



| BRISBANE CITY COUNCIL STANDARD DRAWING | |
|--|--------------|
| SCALE | NOT TO SCALE |
| DWG No. | BSD-8021 |
| ORIGINAL SIZE | A3 |
| REVISION | C |