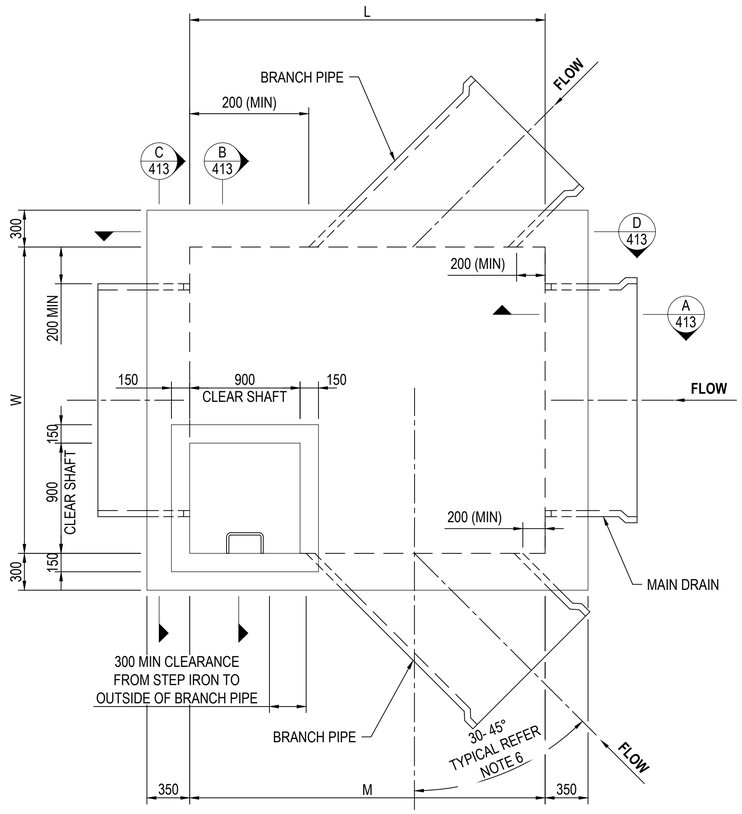
REV	MWC DRAWING NUMBER	CODE
B	7251/08/412	

NOTES:

1. THIS DRAWING DETAILS JUNCTION PITS FOR MAIN PIPE DIAMETERS 675mm TO 1800mm DIAMETER.
2. THE WIDTH AND HEIGHT OF THE PIT SHALL BE DETERMINED FROM THE MAIN DRAIN DIAMETER AS SHOWN IN TABLE.
3. THE LENGTH OF THE PIT SHALL BE THE GREATER OF "M" OR "L" AND IS DETERMINED BY THE BRANCH PIPE DIAMETER AND WHETHER THE BRANCH PIPE IS ADJACENT TO THE LADDER OR NOT.
4. THE ACCESS SHAFT SHALL BE LOCATED ON THE SIDE WITH THE SMALLER BRANCH PIPE.
5. ASSETS TO BE VESTED IN THE COUNCIL SHALL BE CONSTRUCTED IN ACCORDANCE WITH RELEVANT COUNCIL STANDARDS.
6. PREFERENCE SHALL BE GIVEN TO ANGLING BRANCH DRAINS DOWNSTREAM AT 45 DEGREES FROM THE PERPENDICULAR.
7. BRANCH PIPE SHALL NOT BE LOCATED IN THE ACCESS SHAFT AND SHALL BE 300mm CLEAR OF STEP IRONS.
8. BRANCH PIPES SHALL NOT BE CONNECTED TO ANY PIT CORNERS. 200mm CLEARANCE IS REQUIRED BETWEEN THE OUTSIDE FACE OF THE PIPE AND THE INTERNAL CORNER OF THE PIT. PIPE OBVERTS ARE TO MATCH WHERE POSSIBLE.
9. USE HEAVY DUTY CLASS D CAST IRON, CONCRETE INFILL VENTED COVERS IN ACCORDANCE WITH AS 3996. VENTS IN COVERS TO BE FORMED IN THE MANUFACTURING PROCESS, NOT ON SITE.
10. COVERS SHALL FINISH FLUSH WITH THE SURROUNDING SURFACE.
11. WHERE THE PIT IS REQUIRED FOR SURFACE DRAINAGE:
    - A PIPE GRILL COVER SHALL BE PROVIDED AS PER DRAWING 7251/08/423 WHERE DEBRIS BUILD UP IS LIKELY.
    - THE SURROUNDING SURFACE SHALL BE SHAPED TO DIVERT RUNOFF TO THE PIT.
12. JUNCTION PITS SHOWN ON THIS DRAWING HAVE BEEN DESIGNED FOR A LATERAL AT REST EARTH PRESSURE OF 0.50 AND A WHEEL LOAD OF 80 kN. THE REQUIREMENTS OF WALL THICKNESS AND REINFORCEMENT SHALL BE DETERMINED BY THE DESIGNER HAVING REGARD TO SITE CONDITIONS.
13. IT IS DESIGNER'S THE RESPONSIBILITY TO ENSURE THAT THE NOMINATED MELBOURNE WATER STANDARD DRAWINGS ARE SUITABLE FOR PROJECT USE.
14. DESIGN ENGINEER TO CARRY OUT SAFETY IN DESIGN RISK ASSESSMENT FOR ANY DESIGN INCORPORATING MELBOURNE WATER STANDARD DRAWINGS.
15. THE DESIGNER IS TO CONSIDER JUNCTION PIT BACKFILLING METHODOLOGY DURING THE DESIGN PROCESS. PIPE BACKFILLING TO COMPLY WITH DRAWING 7251/08/419.
16. JUNCTION PITS ARE TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS 3600 AND AS 3735.
17. ALL CONCRETE SHALL BE S40 WITH MAXIMUM WATER CEMENT RATIO OF 0.50.
18. MINIMUM CONCRETE COVER TO REINFORCEMENT TO BE 50mm.
19. THE CONTRACTOR TO OBTAIN NECESSARY PERMITS AND APPROVALS FROM MELBOURNE WATER PRIOR TO COMMENCING WORKS ON MELBOURNE WATER ASSETS.
20. THE DESIGN DOES NOT COVER JUNCTION PIT OVER EXISTING ASBESTOS PIPE LINES. FURTHER DESIGN ADVICE IS REQUIRED FROM MELBOURNE WATER IN THIS SITUATION.
21. ALL CONCRETE TO BE CAST IN SITU.
22. FOR MANHOLES LOCATED IN NON-PAVED AREAS, CAST IN 600mm CONCRETE APRON SURROUND ALL AROUND THE MANHOLE AS SHOWN ON THE CONCRETE APRON ARRANGEMENT DETAIL ON DRAWING 7251/08/417.
23. NO VEGETATION OBSTRUCTION TO BE LOCATED WITHIN 2m ZONE OF MANHOLES.
24. REFER TO DRAWING 7251/08/416 FOR STEP IRON AND LADDER DETAILS.



SECTIONAL PLAN

MAIN DRAIN Ø	MINIMUM PIT		MAX. BRANCH DRAIN Ø	VARIATIONS TO PIT LENGTH "L" / "M"	
	HEIGHT "H"	WIDTH "W"		PIPE OPPOSITE LADDER "L"	PIPE ADJACENT LADDER "M"
				30° - 45°	30° - 45°
1950	2800	2600	900	1900	2600
2100	3000	2800	1050	2150	2850
2250	3150	3000	1050	2150	2850
2400	3350	3200	1200	2350	3050

* ALL DIMENSIONS ARE IN mm.

REINFORCEMENT IN MANHOLE CHAMBER WITH DEPTH TO OBVERT LESS THAN 3.5m

ITEM	THICKNESS	REINFORCEMENT		
		TOP	BOTTOM	STARTER BARS FOR WALLS AND SLABS
BASE SLAB	300	N20 180 EW	N20 180 EW	N16 200 EF
ROOF	350	N24 180 EW	N24 180 EW	
WALLS		VERTICAL	HORIZONTAL	STARTER BARS FOR ROOF
WALLS WITH MAIN DRAIN PIPE	350	N20 180 EF N16 LIGATURES ABOVE PIPE	N20 200 EF	N20 AT 180 OUTSIDE FACE INTO TOP OF ROOF SLAB. N16 200 INSIDE FACE INTO SHAFT WALLS
OTHER WALLS	300	N20 180 EF N16 LIGATURES ABOVE PIPE	N20 200 EF	AS FOR WALLS WITH PIPE
SHAFT WALLS	150	N12 200 CENTRALLY PLACED	N12 200 CENTRALLY PLACED	-

*** REFER DRAWING 7251/08/413 FOR REINFORCEMENT DETAILS**

REV	DESCRIPTION	COMPANY	PROJECT OR WO NUMBER	DRAWN	ENG. CHECK	PR. MAN. APP'D	DATE
B	SECOND REVISION: CORRECT TABLE HEADING			-	MK	-	05.07.18
A	FIRST REVISION			RD	VY	RM	25.11.15

Melbourne Water
DRAINAGE STANDARD DRAWINGS

DRAFTER	DESIGNER	DESIGN MANAGER APPROVAL	PROJECT MANAGER APPROVAL
RD	GT	RM	VY
DRAFTING CHECK	ENGINEERING REVIEW		
BS	VY		

TITLE **JUNCTION PITS (≤3.5m DEEP) - SHEET 1 OF 2**
FOR PIPELINES 1950mm TO 2400mm DIAMETER

PROJECT DATUM	Original Size	MELBOURNE WATER CORPORATION	
SCALE NTS	A1	7251/08/412	B
		CODE	MWC DRAWING NUMBER / REV