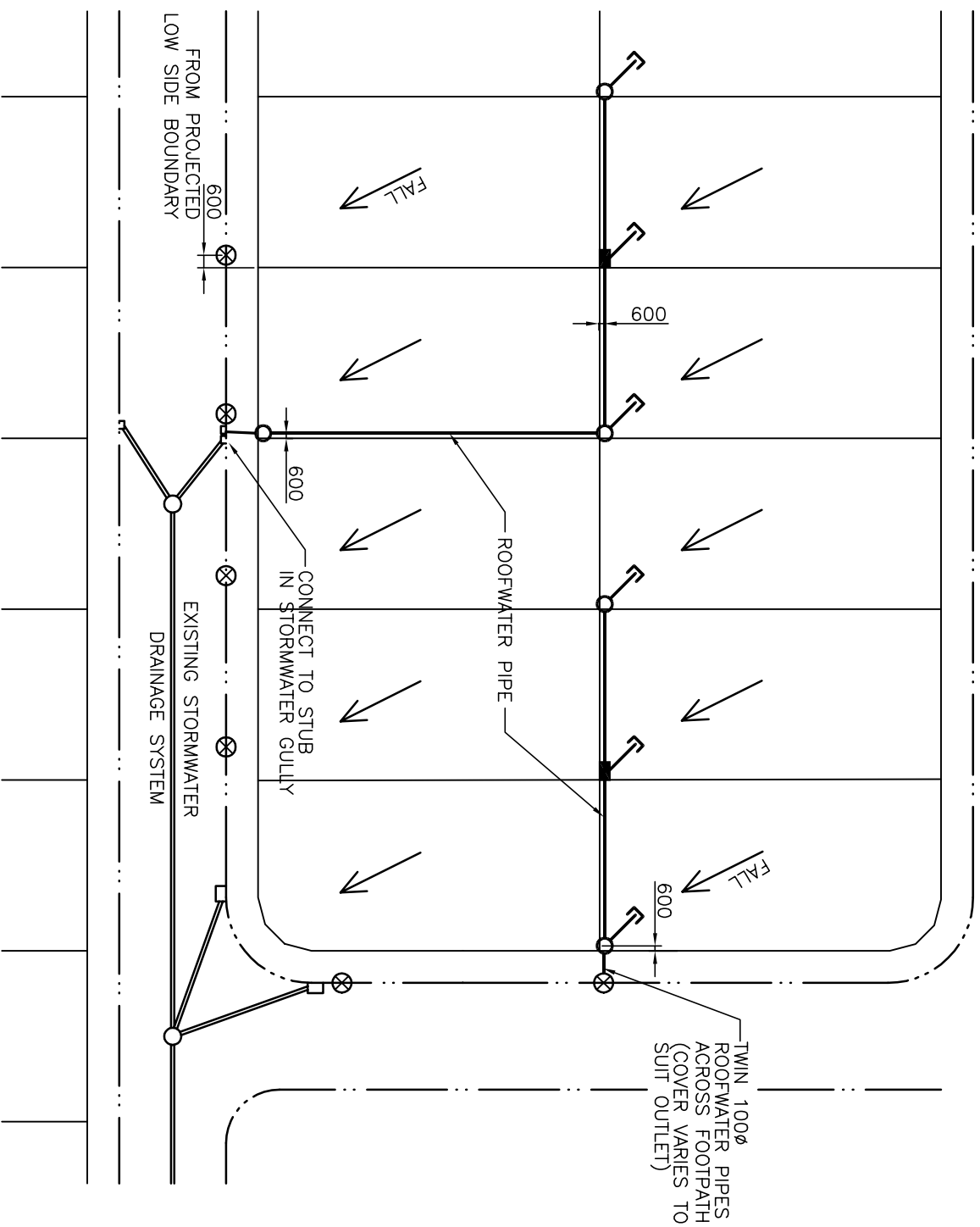


LEGEND

- ROOFWATER INSPECTION MANHOLE AS PER UMS 352
- ROOFWATER INSPECTION OPENING WITH 100mm DIA STUB AND END CAP
- U.P.V.C. Y JUNCTION WITH 100mm DIA STUB AND END CAP
- ⊗ KERB ADAPTOR TO UMS 354



TYPICAL PLAN ROOFWATER DRAINAGE SYSTEM

DESIGN CRITERIA FOR LEVEL II REAR OF ALLOTMENT DRAINAGE SYSTEM

EASEMENT WIDTH (m)	NOMINAL PIPE DIAMETER (mm)	MINIMUM PIPE SLOPE (%)	FLOW (L/s) – NOTE 5							
			PIPE GRADIENT % – NOTE 6							
NOT REQUIRED – NOTE 3	150	1.0	0.5	1.0	1.5	2.0	2.5	3.0	4.0	5.0
			18	23	26	30	33	38	42	
1.5	225	0.5	38	56	67	78	87	96	110	125
1.5	300	0.5	84	120	146	170	190	210	N/A	N/A

NOTES:

- DESIGN FLOWS CALCULATED BASED ON MANNING'S 'n' OF 0.011. PIPE SIZED IN ACCORDANCE WITH QUEENSLAND URBAN DRAINAGE MANUAL ASSUMING A DISCHARGE OF 10 L/s FROM EACH ALLOTMENT BASED ON ROOF AREAS OF 180m² AND ARI OF 20 YEARS FOR S.E. QUEENSLAND. ALL PIPES SHALL HAVE A MINIMUM DIAMETER OF 150mm, EXCEPT ACROSS FOOTPATH.
- WHERE THE PIPE GRADIENT EXCEEDS 5%, UNDERTAKE A MORE DETAILED HYDRAULIC ANALYSIS INCLUDING THE ASSESSMENT OF STRUCTURE LOSSES, WHERE APPROPRIATE.
- AN EASEMENT IN FAVOUR OF COUNCIL IS REQUIRED WHEN THE ROOFWATER LINE IS DESIGNED TO SERVICE MORE THAN 3 ALLOTMENTS, IRRESPECTIVE OF PIPE SIZE.
- DISCHARGE TO KERB AND CHANNEL MUST BE LIMITED TO 30L/s (ie. MAXIMUM 3 SINGLE HOUSE LOTS).
- PROVIDE MINIMUM 450 COVER TO PIPES EXCEPT WHERE REDUCED COVER IS NECESSARY TO EFFECT DISCHARGE TO KERB AND CHANNEL. PIPE TYPES AND CLASSES TO COMPLY WITH THE FOLLOWING REQUIREMENTS:
 - UPVC PIPE (MINIMUM SEWER CLASS S6) MANUFACTURED IN ACCORDANCE WITH AS1260 – PVC PIPES AND FITTINGS FOR DRAIN, WASTE AND VENT APPLICATIONS. JOINT TYPE, SOLVENT WELDED. THE "ULTRA-RIB" PIPE AND FITTING SYSTEMS MANUFACTURED BY VINDEX IS ACCEPTABLE.
 - STEEL REINFORCED CONCRETE PIPE MINIMUM CLASS 2, MANUFACTURED TO AS 4058. JOINT TYPE, RUBBER RING.
 - FIBRE REINFORCED CONCRETE PIPE MINIMUM CLASS 1, MANUFACTURED TO AS 4139. JOINT TYPE, RUBBER RING (SUPERITTE).
- MINIMUM PIPE GRADES TO COMPLY GENERALLY WITH AS 3500 NATIONAL PLUMBING AND DRAINAGE CODE PART 3 STORMWATER DRAINAGE:
 - 1.0% GRADE FOR PIPES ≤ 150 DIAMETER
 - 0.5% GRADE FOR PIPES > 150 BUT < 375 DIAMETER
 - 0.3% GRADE FOR PIPES ≥ 375 DIAMETER
- PROVIDE ROOFWATER INSPECTION MANHOLES:
 - AT MAXIMUM 100m SPACING.
 - AT ALL CHANGES IN PIPE SIZES.
 - AT ALL DIRECTION CHANGES EXCEEDING 15°
 - AT LINE TERMINATION.
- PROVIDE "AS CONSTRUCTED" INFORMATION FOR:
 - OFFSETS OF THE MAIN LINE TO THE PROPERTY BOUNDARY.
 - THE LOCATIONS OF INSPECTION MANHOLES AND Y JUNCTIONS MEASURED FROM THE PROPERTY BOUNDARY.
- DIMENSIONS IN MILLIMETRES (U.N.O.)

ISSUE	AMENDMENT	DRAWN DATE	CHKD DATE	APPRD DATE
A	ORIGINAL ISSUE	April '01	May '01	June '01

DESIGN AUTHORISED FOR ISSUE B. BALL SIGNATURE ON ORIGINAL DATED 29/6/01	DESIGN DRAWN	STD DWG GROUP CITY DESIGN	DATE April '01
MANAGER ASSET SUPPORT - R.P.E.G. 3, 8, 5, 2 DESIGN APPROVED B. HANSEN SIGNATURE ON ORIGINAL DATED 27/6/01	CHECKED DRAWING FILENAME	M. STER UMS 351	DATE May '01
PRINCIPAL ASSET OFFICER ROADS & DRAINAGE	ASSOCIATED PLANS	SUPersedes WS 54-1	



BRISBANE CITY COUNCIL - URBAN MANAGEMENT DIVISION

ROOFWATER DRAINAGE FOR LOW DENSITY RESIDENTIAL SUBDIVISIONS

SCALE	NOT TO SCALE
DWG No.	UMS 351
ORIGINAL SIZE	A3
REVISION	A