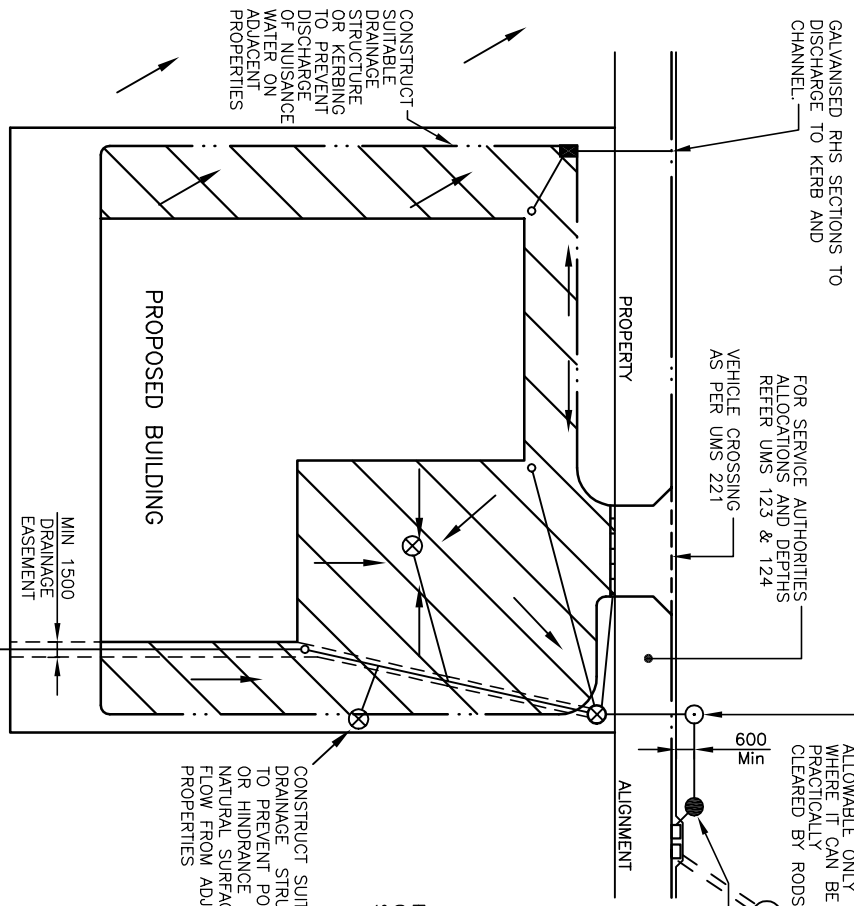


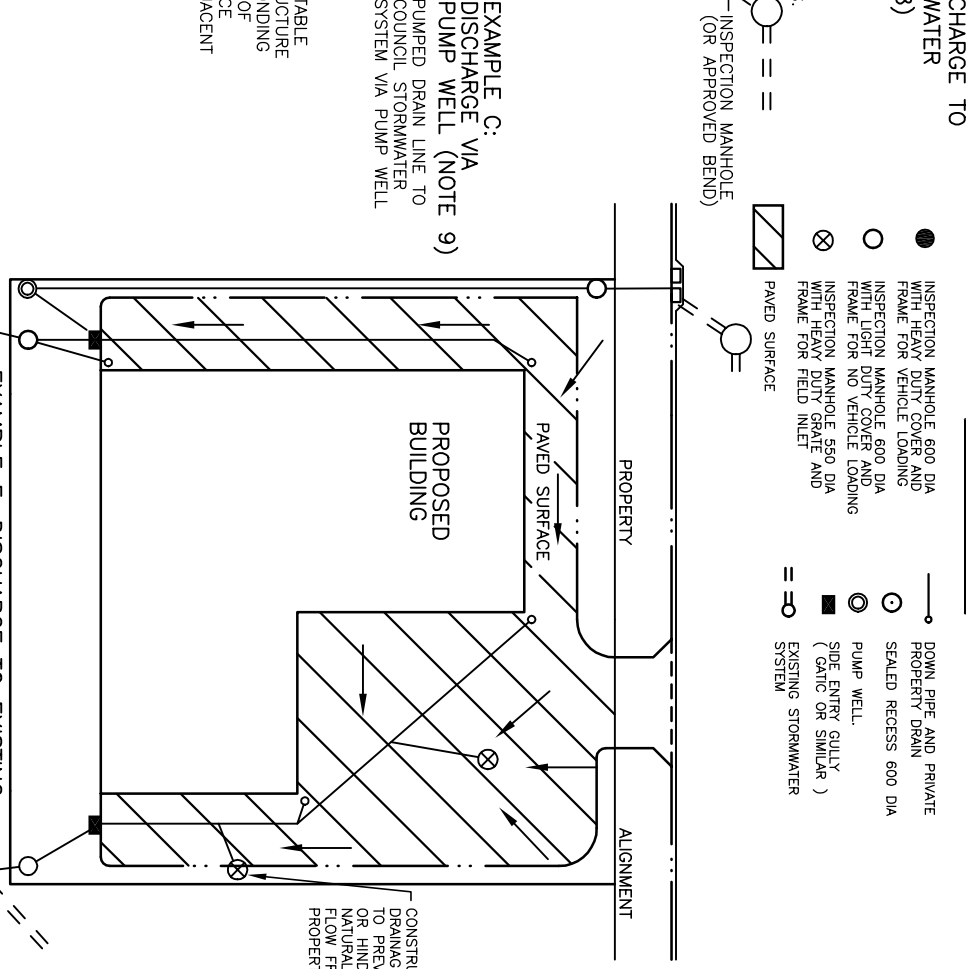
LEGEND

- INSPECTION MANHOLE 600 DIA WITH HEAVY DUTY COVER AND FRAME FOR VEHICLE LANDING
- INSPECTION MANHOLE 600 DIA WITH LIGHT DUTY COVER AND FRAME FOR NO VEHICLE LANDING
- ⊗ INSPECTION MANHOLE 550 DIA WITH HEAVY DUTY GATE AND FRAME FOR FIELD TILE
- ▨ PAVED SURFACE
- DOWN PIPE AND PRIVATE PROPERTY DRAIN
- SEALED RECESS 600 DIA
- PUMP WELL
- SILE ENTRY GULLY (GATE OR SIMILAR) EXISTING STORMWATER SYSTEM

EXAMPLE A: DISCHARGE TO KERB AND CHANNEL
(NOTE 6)



EXAMPLE B: DISCHARGE TO EXISTING STORMWATER SYSTEM (NOTE 8)



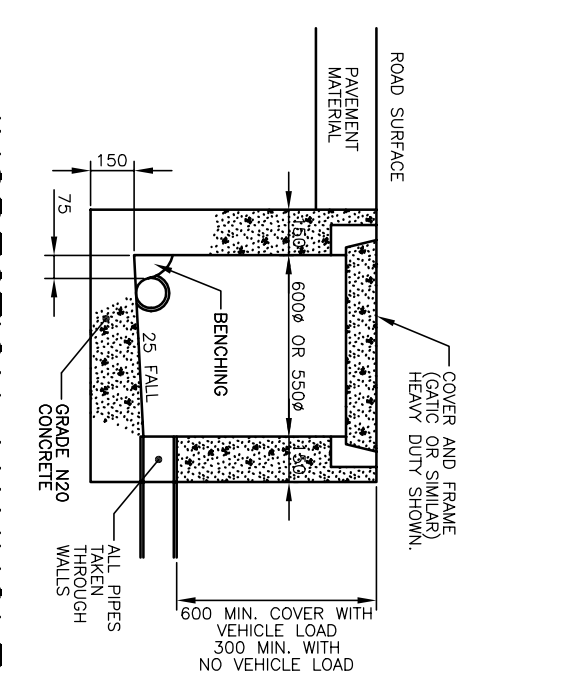
EXAMPLE C: DISCHARGE VIA PUMP WELL (NOTE 9)

EXAMPLE D: DRAIN TO LAWFUL POINT OF DISCHARGE
WHERE NO UNDERGROUND STORMWATER DRAIN EXISTS, DRAIN TO THE NEAREST POINT OF LAWFUL DISCHARGE

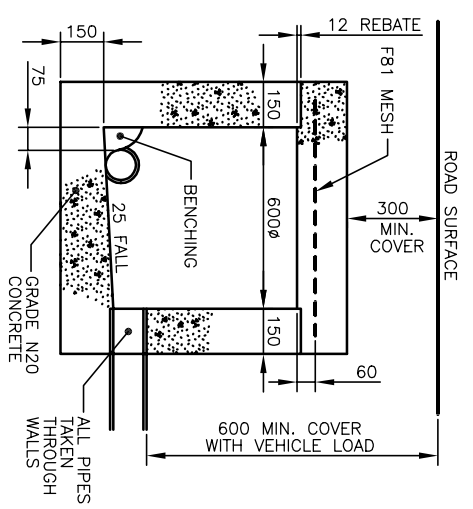
EXAMPLE E: DISCHARGE TO EXISTING STORMWATER SYSTEM (NOTE 10)

CONNECTION PIPE <200φ: BREAKING INTO EXISTING STORMWATER PIPE IS PERMITTED, PROVIDED THAT A SADDLE JUNCTION IS INSTALLED.
CONNECTION PIPE 200-675φ: CONNECT TO EXISTING MANHOLE IF AVAILABLE. OTHERWISE CONSTRUCT NEW MANHOLE.
CONNECTION PIPE >675φ: CONSTRUCT NEW MANHOLE.

SITE SLOPING TOWARD ROAD



SITE SLOPING AWAY FROM ROAD



INSPECTION MANHOLE 6000 OR 5500

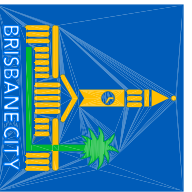
SEALED RECESS 6000

NOTES:

1. THIS STANDARD DRAWING DEPICTS FIVE TYPICAL EXAMPLES OF HOW ROOF AND SURFACE WATER CAN BE DISCHARGED FROM A DEVELOPMENT (OTHER THAN SINGLE DWELLING). Whilst the focus is on the piped options, the applicant must nevertheless consider alternative ecologically sustainable solutions. All roof and surface water must be collected internally and drained to a lawful point of discharge.
2. THE OWNER IS WHOLLY RESPONSIBLE FOR THE ADEQUACY OF THE INTERNAL DRAINAGE SYSTEM AND THE MAINTENANCE OF ALL PRIVATE STORMWATER DRAINS, INCLUDING CONNECTIONS THAT ARE EXTERNAL TO THE SITE.
3. THE MINIMUM PIPE SIZE FOR INTERNAL UNDERGROUND SITE DRAINAGE IS 150 NOMINAL DIAMETER. WHERE THE PIPE ALSO CONVEYS STORMWATER FROM AN ADJOINING UPSTREAM PROPERTY (NOW OR IN FUTURE), THE MINIMUM PIPE SIZE IS 225 DIAMETER. SIZE PIPE TO TAKE INTO ACCOUNT OF ULTIMATE DEVELOPMENT FLOWS FOR INTERNAL AND EXTERNAL CATCHMENTS.
4. PIPE TYPES AND CLASSES TO COMPLY WITH THE FOLLOWING REQUIREMENTS:
 - UPVC STORMWATER PIPE MANUFACTURED IN ACCORDANCE WITH AS 1254 - APPLICATIONS: LIMIT USE OF THIS PIPE TO DOMESTIC (LOW DENSITY RESIDENTIAL) APPLICATIONS.
 - UPVC SEWER PIPE (MINIMUM CLASS SN6) MANUFACTURED IN ACCORDANCE WITH AS 1260 - PVC PIPES AND FITTINGS FOR DRAIN, WASTE AND VENT APPLICATIONS. THE "ULTRA-RIB" PIPE AND FITTING SYSTEMS MANUFACTURED BY VINDEX IS ACCEPTABLE.
 - STEEL REINFORCED CONCRETE PIPE (MINIMUM CLASS 2) MANUFACTURED TO AS 4058.
 - FIBRE REINFORCED CONCRETE PIPE (MINIMUM CLASS 1) MANUFACTURED TO AS 4139.
5. 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.
6. THE PERMITTED TOTAL DISCHARGE FROM THE DEVELOPMENT TO KERB AND CHANNEL, INCLUDING CONTRIBUTION FROM ANY EXTERNAL CATCHMENT, MUST NOT EXCEED 30 L/s.
7. SINGLE OR MULTIPLE HOT DIP GALVANISED RECTANGULAR HOLLOW SECTION (RHS) TO BE 100 MAXIMUM HEIGHT AND 75 MINIMUM WIDTH. GENERALLY THE 125/150/200 WIDE/75 HIGH RHS ARE SUITABLE FOR USE IN FOOTPATH CROSSINGS. ALL OUTLETS TO BE 300mm CLEAR OF DRIVEWAY TAPER.
8. STORMWATER DISCHARGE EXCEEDING 30 L/s MUST BE CONNECTED TO AN EXISTING GULLY PIT OR MANHOLE SITUATED WITHIN 50m OFF THE SITE BOUNDARY. WHERE THE CAPACITY OF THE EXISTING STORMWATER DRAINAGE SYSTEM IS DEFICIENT, THE DEVELOPER IS GENERALLY RESPONSIBLE FOR UPGRADING THE PIPE DRAINAGE TO THE APPROPRIATE DESIGN STANDARD IN THE ABSENCE OF AN INFRASTRUCTURE CHARGES PLAN THAT SPECIFIES THE DEVELOPMENT CONTRIBUTION FOR STORMWATER FACILITIES.
9. THE PROPERTY OWNER IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH INSTALLATION, OPERATION AND MAINTENANCE. A SUITABLY QUALIFIED REGISTERED PROFESSIONAL ENGINEER IN QUEENSLAND (RPEQ) MUST BE ENGAGED TO PREPARE AND CERTIFY THE DESIGN AND CONSTRUCTION WORK. THE PUMP WELL AND PUMP CAPACITIES MUST BE DESIGNED FOR THE MINIMUM 10 YEAR ARI CRITICAL STORM BURST. THE CRITICAL STORM BURST IS THE STORM DURATION THAT DICTATES THE MAXIMUM ACTIVE STORAGE SIZE, AND THIS STORM DURATION IS USUALLY INDEPENDENT OF THE SUB-CATCHMENT TIME OF CONCENTRATION. COUNCIL WILL ONLY CONSIDER A PUMPED STORMWATER DRAINAGE SYSTEM IF:
 - COUNCIL IS SATISFIED ALL OTHER AVENUES HAVE BEEN EXHAUSTED.
 - LETTERS OF REFUSAL FROM DOWNSTREAM PROPERTY OWNERS.
 - IT IS PART OF A COMPREHENSIVE STORMWATER RECYCLING SYSTEM.
10. WHERE THE CAPACITY OF THE EXISTING STORMWATER DRAINAGE SYSTEM IS DEFICIENT, THE DEVELOPER IS GENERALLY RESPONSIBLE FOR UPGRADING THE PIPE DRAINAGE TO THE APPROPRIATE DESIGN STANDARD IN THE ABSENCE OF AN INFRASTRUCTURE CHARGES PLAN THAT SPECIFIES THE DEVELOPMENT CONTRIBUTION FOR STORMWATER FACILITIES. DISCHARGE TO THE EXISTING STORMWATER SYSTEM MUST BE LIMITED TO ONE CONNECTION FROM EACH DEVELOPMENT.
11. DIMENSIONS IN MILLIMETRES U.N.O.

ISSUE	AMENDMENT	DRAWN DATE	CHK'D DATE	APPR'D DATE
A	ORIGINAL ISSUE	April '01	May '01	June '01

DESIGN AUTHORISED FOR ISSUE B. BALL SIGNATURE ON ORIGINAL DATED 29/6/01		DESIGN	STD DWG GROUP	DATE	April '01
MANAGER ASSET SUPPORT - R.P.E.G. 3, 8, 5, 2		DRAWN	CITY DESIGN	DATE	April '01
DESIGN APPROVED B. HANSEN SIGNATURE ON ORIGINAL DATED 27/6/01		CHECKED	M. STER	DATE	May '01
PRINCIPAL ASSET OFFICER ROADS & DRAINAGE		DRAWING FILENAME	UMS 353	ASSOCIATED PLANS	SUPERSIDES WS 54-3



BRISBANE CITY COUNCIL - URBAN MANAGEMENT DIVISION

ROOF AND SURFACE WATER DRAINAGE FOR SITE DEVELOPMENTS

SCALE: NOT TO SCALE
DWG NO: UMS 353
ORIGINAL SIZE: A3
REVISION: A