

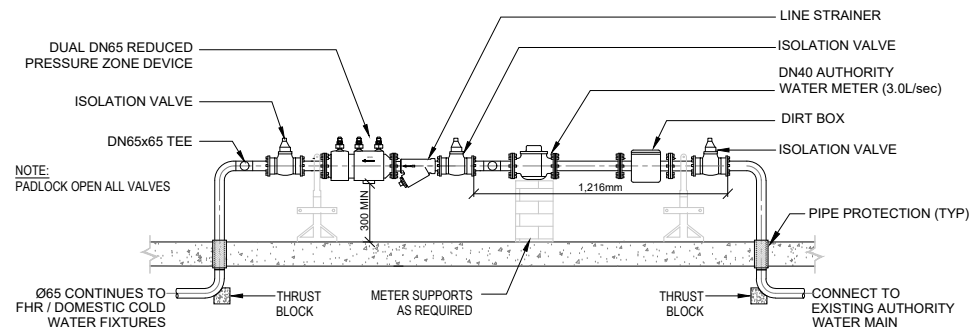
DN150 FIRE HYDRANT BOOSTER ASSEMBLY DETAIL

WATER METER ASSEMBLY UNDER NOT SHOWN FOR CLARITY (GUIDE ONLY)

N.T.S.

NOTE:

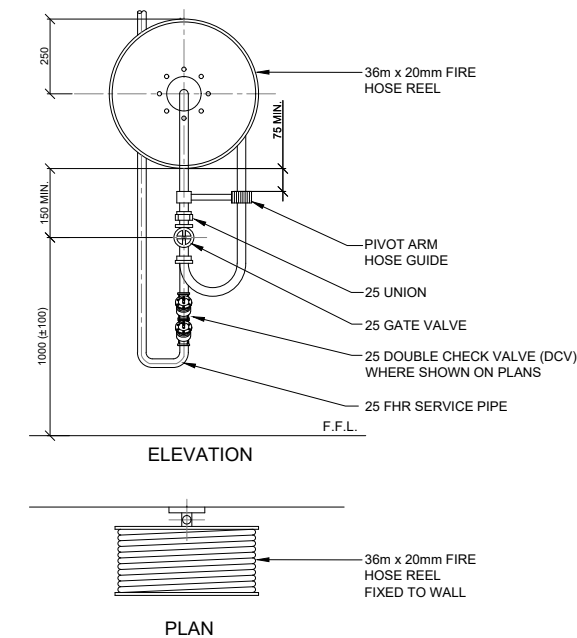
- PROVIDE THRUST BLOCKS AS NECESSARY
- PROVIDE ADEQUATE COVER TO PIPEWORK BELOW GROUND
- PAINT ALL PIPEWORK & FITTINGS RED TO AS1345
- ALL ISOLATION VALVES TO BE LOCKED IN THE OPEN POSITION.
- ALL PIPEWORK FLANGES, NUTS, BOLTS ETC. TO BE HOT DIPPED GALVANISED.



TYPICAL WATER METER ASSEMBLY DETAIL (GUIDE ONLY)

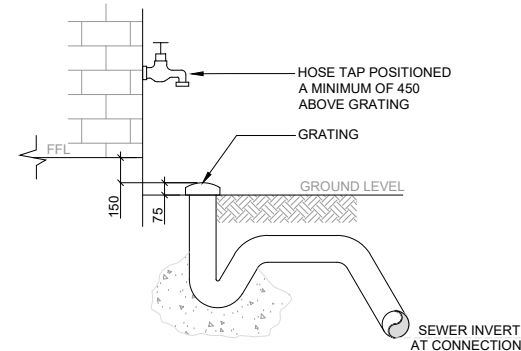
N.T.S.

1. INSTALLATION TO COMPLY TO C.C.C. CONNECTION OFFER FORMAL REQUIREMENTS.
2. WATER METER ASSEMBLY TO BE INSTALLED BEHIND/UNDER THE LINE OF THE BOOSTER ASSEMBLY TO NOT IMPEDE ACCESS BY FIRE AND RESCUE NSW TO BOOSTER ASSEMBLY



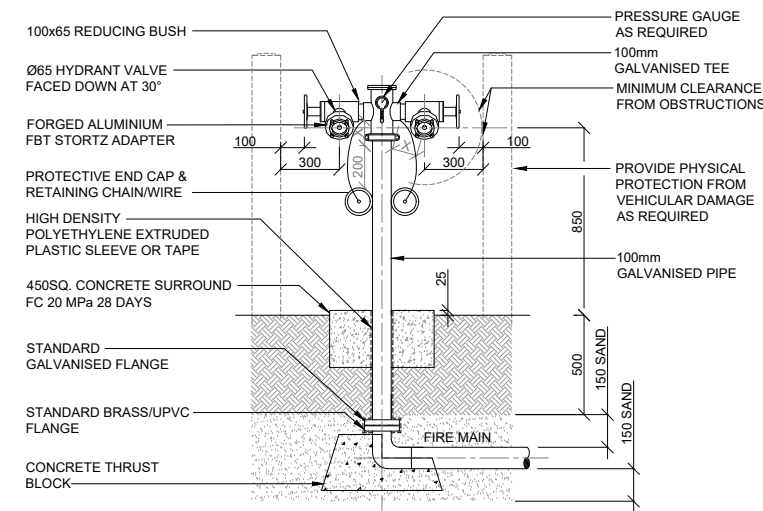
TYPICAL FIRE HOSE REEL DETAIL

N.T.S.



TYPICAL POSITIONING OF UNIT OVERFLOW RELIEF GULLY

N.T.S.



TYPICAL DOUBLE PILLAR HYDRANT DETAIL

N.T.S.

DOMESTIC WATER/FHR SERVICE DESIGN CALCULATIONS

PRESSURE REQUIRED	250 kPa	
WATER REQUIRED	3.0L/s	
PRESSURE IN MAIN	501kPa	
LENGTH OF RUN	470m	
PIPING PRESSURE LOSS	195kPa	
LOSS OF FITTINGS (20%)	165kPa	INCLUDING METER & RPZD
VERTICAL RISE LOSS	+30kPa	
TOTAL PRESSURE LOSS	330kPa	
PRESSURE AT END FIXTURE	171kPa	
A PUMP IS NOT REQUIRED		

COLD WATER CALCULATIONS

FIXTURE	No.	L.U.	TOTAL
BASIN	4	1	4
CLOTHES WASHING MACHINE	1	3	3
LAUNDRY TUB	1	3	3
MAIN PRESSURE HEATER	1	8	8
SHOWER	2	2	4
SINK/WASHING MACHINE	3	3	9
WATER CLOSET PAN (CISTERN)	4	2	8
WASH DOWN REELS	8	5	40
MISTING OUTLETS	5	2	10
WASH BAY	1	40	40
STAGE 2 (FUTURE ALLOWANCE)	1	200	200
FIRE HOSE REELS (2 MAX.)	10	18	65
TOTALS	41	394	3.0L/s Ø65

PRESSURE AND FLOW STATEMENT - 30.01.2019

Physical Data		80mm Hydrant Flow Test Results	
Main and Hydrant Flow Test Location indicated on attached map	Y	Pressure at Main (Ground Level) with:	Pressure (kPa)
Main Diameter (mm)	150mm	• No Flow	505
Ground Level (AHD) at Test Location (m)	206.0m	• 0.66L/s Flow	505
		• 5.0 L/s Flow	501
		• 10.0 L/s Flow	494
		• 15.0 L/s Flow	482
		• 20.0 L/s Flow	467
		• 25.0 L/s Flow	447
		• 30.0 L/s Flow	424
		• 35.0 L/s Flow	398
		• 40.0 L/s Flow	367
		• 45.0 L/s Flow	332
		• Max. Flow (48.0 L/s)	284

SEWER CALCULATIONS

FIXTURE	No.	F.U.	TOTAL
BASIN	4	1	4
CLOTHES WASHING MACHINE	1	5	5
LAUNDRY TUB	1	5	5
SHOWER	2	2	4
SINK/WASHING MACHINE	3	3	9
TUNDISH	10	1	10
WATER CLOSET PAN (CISTERN)	4	4	16
WASH BAY	30	1	30
STAGE 2 (FUTURE ALLOWANCE)	100	1	100
STAGE 3 (KANGOO ROAD)	250	1	250
TOTALS	405	433	Ø150

FIRE SERVICE REQUIREMENTS

FLOOR AREA OF BUILDING	2,206m ²
CLASS OF BUILDING	8 & 5
FHR REQUIRED	YES
FH COVERAGE REQUIRED	YES (EXTERNAL)
BUILDING SPRINKLERED	NO
FLOW REQUIRED	20L/s
FLOW REQUIRED AT BOOSTER	20L/s
PRESSURE REQUIRED	250 kPa

FIRE HYDRANT SERVICE DESIGN CALCULATIONS

PRESSURE REQUIRED	250 kPa	
FLOW REQUIRED	20L/s	
AVAILABLE PRESSURE	467 kPa	
INDEX LENGTH	400m	
HEADLOSS PIPES	80 kPa	
HEADLOSS FITTINGS	105 kPa	INCLUDING BOOSTER & DCDV
STATIC HEAD	-30 kPa	
TOTAL HEAD LOSS	155 kPa	
PRESSURE AT MOST DISADVANTAGED HYDRANT	312 kPa	
A PUMP IS NOT REQUIRED		

NOTE: THESE TABLES AND CALCULATIONS DESIGN RESULTS ARE FOR CALCULATION PURPOSES ONLY AND ARE NOT FOR BILL OF QUANTITIES PURPOSES.

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE.

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<p>REVISION</p> <table border="1"> <tr> <th>REVISION</th> <th>DESCRIPTION</th> <th>DATE</th> <th>VERSION</th> </tr> <tr> <td>A</td> <td>PRELIMINARY ISSUE</td> <td>16.01.20</td> <td></td> </tr> <tr> <td>B</td> <td>TENDER ISSUE</td> <td>03.02.20</td> <td></td> </tr> </table> <p>SCALE</p>	REVISION	DESCRIPTION	DATE	VERSION	A	PRELIMINARY ISSUE	16.01.20		B	TENDER ISSUE	03.02.20		<p>FOR TENDER</p> <p>RGH CONSULTING GROUP Multi-discipline Engineering</p> <p>Postal Address: PO Box 3197, Tuggerah NSW 2259 Central Coast Office: Unit 1, 3 Teamster Close, Tuggerah NSW 2259 Ph: 02 4353 9032 Newcastle Office: Unit 5, 166 Hannell Street, Maryville NSW 2293 Ph: 02 4058 2137 Sydney Office: Ph: 02 8524 0583 www.rghconsulting.com.au</p>	<p>PROJECT MANAGER</p> <p>RAYBAL CONSTRUCTIONS</p>	<p>CLIENT</p> <p>KARIONG SAND & SOIL SUPPLIES</p> <p>ADDRESS</p> <p>90 GINDURRA ROAD, SOMERSBY - LOT 4, DP227279</p> <p>PROJECT</p> <p>PROPOSED KARIONG SAND & SOIL SUPPLIES FACILITY - SSD8660</p>	<p>DRAWING TITLE</p> <p>HYDRAULIC SERVICES CALCULATION & DETAIL SHEET</p>	<p>SCALE</p> <p>N.T.S.</p> <p>INT.</p> <p>SHEET</p> <p>H200</p> <p>REV</p> <p>B</p> <p>DATE</p> <p>DECEMBER 2019</p> <p>JOB NUMBER</p> <p>20180015A</p>
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