

LEGEND

PROPERTY LINE	PROPOSED WATER METER AND REMOTE METER
SANMH 101	PROPOSED FINISHED FLOOR ELEVATION
CBMH 102	PROPOSED UNDERSIDE OF FOOTING ELEVATION
STMM 108	PROPOSED BASEMENT FLOOR ELEVATION
CB 01	PROPOSED TOP OF FOUNDATION ELEVATION
HYD	EXISTING CONCRETE CURB
DC	EXISTING SANITARY MH & SEWER
200mm	EXISTING STORM MH & SEWER
150mm	EXISTING HYDRANT
100mm	EXISTING HYDRANT
75mm	EXISTING HYDRANT
50mm	EXISTING HYDRANT
30mm	EXISTING HYDRANT
15mm	EXISTING HYDRANT
10mm	EXISTING HYDRANT
5mm	EXISTING HYDRANT
2.5mm	EXISTING HYDRANT
1.5mm	EXISTING HYDRANT
1.0mm	EXISTING HYDRANT
0.5mm	EXISTING HYDRANT
0.25mm	EXISTING HYDRANT
0.15mm	EXISTING HYDRANT
0.10mm	EXISTING HYDRANT
0.075mm	EXISTING HYDRANT
0.05mm	EXISTING HYDRANT
0.0375mm	EXISTING HYDRANT
0.025mm	EXISTING HYDRANT
0.01875mm	EXISTING HYDRANT
0.0125mm	EXISTING HYDRANT
0.009375mm	EXISTING HYDRANT
0.00625mm	EXISTING HYDRANT
0.0046875mm	EXISTING HYDRANT
0.003125mm	EXISTING HYDRANT
0.00234375mm	EXISTING HYDRANT
0.0017265625mm	EXISTING HYDRANT
0.001294921875mm	EXISTING HYDRANT
0.00097119140625mm	EXISTING HYDRANT
0.0007283937500000mm	EXISTING HYDRANT
0.000546295312500000mm	EXISTING HYDRANT
0.00041272148437500000mm	EXISTING HYDRANT
0.0003095406132812500000mm	EXISTING HYDRANT
0.0002321552093750000000mm	EXISTING HYDRANT
0.000174116407031250000000mm	EXISTING HYDRANT
0.000130587305312500000000mm	EXISTING HYDRANT
0.000097940478125000000000mm	EXISTING HYDRANT
0.000073455359375000000000mm	EXISTING HYDRANT
0.00005509152343750000000000mm	EXISTING HYDRANT
0.00004131864250000000000000mm	EXISTING HYDRANT
0.0000309879812500000000000000mm	EXISTING HYDRANT
0.0000232410375000000000000000mm	EXISTING HYDRANT
0.000017430781250000000000000000mm	EXISTING HYDRANT
0.000013073084375000000000000000mm	EXISTING HYDRANT
0.00000980481406250000000000000000mm	EXISTING HYDRANT
0.0000073536109375000000000000000000mm	EXISTING HYDRANT
0.0000055152078125000000000000000000mm	EXISTING HYDRANT
0.000004136405937500000000000000000000mm	EXISTING HYDRANT
0.00000309750442187500000000000000000000mm	EXISTING HYDRANT
0.0000023235783125000000000000000000000000mm	EXISTING HYDRANT
0.00000174268187500000000000000000000000000mm	EXISTING HYDRANT
0.000001306811406250000000000000000000000000mm	EXISTING HYDRANT
0.00000098016718750000000000000000000000000000mm	EXISTING HYDRANT
0.0000007351253125000000000000000000000000000000mm	EXISTING HYDRANT
0.00000055107812500000000000000000000000000000000mm	EXISTING HYDRANT
0.0000004130312500000000000000000000000000000000000mm	EXISTING HYDRANT
0.000000309984375000000000000000000000000000000000000mm	EXISTING HYDRANT
0.000000232937500mm	EXISTING HYDRANT
0.00000017489062500000000000000000000000000000000000000mm	EXISTING HYDRANT
0.00000013084375000mm	EXISTING HYDRANT
0.000000098796875000mm	EXISTING HYDRANT
0.00000007375000mm	EXISTING HYDRANT
0.000000055703125000mm	EXISTING HYDRANT
0.0000000416562500mm	EXISTING HYDRANT
0.000000030609375000mm	EXISTING HYDRANT
0.0000000235625000mm	EXISTING HYDRANT
0.000000017515625000mm	EXISTING HYDRANT
0.0000000134687500mm	EXISTING HYDRANT
0.000000009421875000mm	EXISTING HYDRANT
0.00000000737500mm	EXISTING HYDRANT
0.000000005528125000mm	EXISTING HYDRANT
0.000000004177187500mm	EXISTING HYDRANT
0.0000000030263125000mm	EXISTING HYDRANT
0.00000000237537500mm	EXISTING HYDRANT
0.0000000017244062500mm	EXISTING HYDRANT
0.0000000013734375000mm	EXISTING HYDRANT
0.0000000009224687500mm	EXISTING HYDRANT
0.000000000771500mm	EXISTING HYDRANT
0.0000000005205312500mm	EXISTING HYDRANT
0.0000000004695625000mm	EXISTING HYDRANT
0.0000000003185937500mm	EXISTING HYDRANT
0.00000000026762500mm	EXISTING HYDRANT
0.00000000021665625000mm	EXISTING HYDRANT
0.0000000001656875000mm	EXISTING HYDRANT
0.0000000001147187500mm	EXISTING HYDRANT
0.00000000006375000mm	EXISTING HYDRANT
0.0000000000127812500mm	EXISTING HYDRANT
0.00000000000727187500mm	EXISTING HYDRANT
0.00000000000276312500mm	EXISTING HYDRANT
0.00000000000025375000mm	EXISTING HYDRANT
0.00000000000000375000mm	EXISTING HYDRANT
0.0000000000000000375000mm	EXISTING HYDRANT

PROPOSED 150mmØ BLDG A WATER SERVICE TABLE

STATION	SURFACE ELEVATION	TWM ELEVATION	COMMENTS
1+000.0	86.62	84.22	250mmØ CROSS
1+001.3	86.65	84.25	250mmx150mm REDUCER(S)
1+003.8	86.65	84.25	150mmØ VALVE AND VALVE BOX
1+006.6	87.00	84.30	CAP 1.0m FROM BUILDING

PROPOSED 250mmØ WATERMAIN TABLE

STATION	SURFACE ELEVATION	TWM ELEVATION	COMMENTS
0+000.0	86.50±	83.84±	CONNECTION TO EX. 300mmØ WM STUB IN ESSELMONT ST
0+001.8	86.50±	83.85	300mmx250mm REDUCER
0+001.3	86.58±	83.90	45° HORIZONTAL BEND
0+007.1	86.57	83.92	VALVE AND VALVE BOX AT PROPERTY LINE
0+010.6	86.53	83.95	22.5° HORIZONTAL BEND
0+031.7	86.62	84.22	HYDRANT TEE
0+036.2	86.62	84.22	250mmØ CROSS
0+050.4	86.60	84.20	CROSS BELOW 375mmØ STM (±0.6m CLEARANCE)
0+091.2	86.72	84.20	45° HORIZONTAL BEND
0+110.0	86.69	84.20	45° HORIZONTAL BEND
0+107.0	86.60	84.10	CROSS BELOW 375mmØ STM (±0.54m CLEARANCE)
0+137.6	86.85	83.90	CROSS BELOW 375mmØ STM (±0.53m CLEARANCE)
0+141.5	86.69	83.99	VALVE AND VALVE BOX AT PROPERTY LINE
0+154.6	86.88±	84.35±	CONNECTION TO EX. 300mmØ WM IN NAVAN RD

PROPOSED 200mmØ-150mmØ BLDG C WATER SERVICE TABLE

STATION	SURFACE ELEVATION	TWM ELEVATION	COMMENTS
3+000.0	86.62	84.22	250mmØ CROSS
3+007.1	86.73	84.22	TEE (BUILDING B SERVICE)
3+008.1	86.72	84.25	250mmx200mm REDUCER
3+012.8	86.67	84.27	CROSS BELOW 375mmØ STM (±0.67m CLEARANCE)
3+014.3	86.65	84.25	45° HORIZONTAL BEND
3+020.5	86.85	84.45	HYDRANT TEE
3+022.1	87.03	84.45	200mmx150mm REDUCER
3+026.3	87.05	84.50	150mmØ VALVE AND VALVE BOX
3+031.6	87.19	84.50	CAP 1.0m FROM BUILDING

PROPOSED 200mmØ-150mmØ BLDG B WATER SERVICE TABLE

STATION	SURFACE ELEVATION	TWM ELEVATION	COMMENTS
2+000.0	86.73	84.22	TEE
2+005.3	86.95	84.30	45° HORIZONTAL BEND
2+014.6	86.70	84.30	45° HORIZONTAL BEND
2+014.6	86.67	84.27	CROSS BELOW 375mmØ STM (±0.70m CLEARANCE)
2+022.6	86.80	84.40	HYDRANT TEE
2+023.9	86.82	84.40	200mmx150mm REDUCER
2+032.8	87.10	84.60	150mmØ VALVE AND VALVE BOX
2+035.2	87.19	84.60	CAP 1.0m FROM BUILDING

AREA A-2: ICD TABLE - CBMH 104

DESIGN EVENT	TYPE OF ICD	DIAMETER OF OUTLET PIPE (mm)	DESIGN FLOW (L/S)	DESIGN HEAD (m)	WATER DEPTH (m)	VOLUME (m³)
1.2 YR	118mm DIA. ORIFICE	375	13.5	0.20	84.82	64.8
1.5 YR	PLUG TYPE ICD		16.8	0.31	84.93	116.4
1.100 YR			24.3	0.65	85.27	242.9

ROOF DRAIN TABLE

AREA ID	ROOF DRAIN NO. (WATTS MODEL)	ROOF DRAIN OPENING SETTING	2 YEAR RELEASE RATE	APPROX. 5-YR PONDING DEPTH	5-YEAR RELEASE RATE	100-YEAR PONDING DEPTH	100-YEAR RELEASE RATE	APPROX. 100-YR PONDING DEPTH
R-1	RD 1A (RD-100-A-ADJ)	1/4 EXPOSED	0.72 L/s	10 cm	0.82 L/s	11 cm	0.91 L/s	14 cm
	RD 2A (RD-100-A-ADJ)	1/4 EXPOSED	0.72 L/s	10 cm	0.82 L/s	11 cm	0.91 L/s	14 cm
	RD 3A (RD-100-A-ADJ)	1/4 EXPOSED	0.72 L/s	10 cm	0.82 L/s	11 cm	0.91 L/s	14 cm
	RD 4A (RD-100-A-ADJ)	1/4 EXPOSED	0.72 L/s	10 cm	0.82 L/s	11 cm	0.91 L/s	14 cm
R-2	RD 1B (RD-100-A-ADJ)	1/4 EXPOSED	0.72 L/s	10 cm	0.82 L/s	11 cm	0.91 L/s	14 cm
	RD 2B (RD-100-A-ADJ)	1/4 EXPOSED	0.72 L/s	10 cm	0.82 L/s	11 cm	0.91 L/s	14 cm
	RD 3B (RD-100-A-ADJ)	1/4 EXPOSED	0.72 L/s	10 cm	0.82 L/s	11 cm	0.91 L/s	14 cm
	RD 4B (RD-100-A-ADJ)	1/4 EXPOSED	0.72 L/s	10 cm	0.82 L/s	11 cm	0.91 L/s	14 cm
R-3	RD 1C (RD-100-A-ADJ)	1/4 EXPOSED	0.72 L/s	10 cm	0.82 L/s	11 cm	0.91 L/s	14 cm
	RD 2C (RD-100-A-ADJ)	1/4 EXPOSED	0.72 L/s	10 cm	0.82 L/s	11 cm	0.91 L/s	14 cm
	RD 3C (RD-100-A-ADJ)	1/4 EXPOSED	0.72 L/s	10 cm	0.82 L/s	11 cm	0.91 L/s	14 cm
	RD 4C (RD-100-A-ADJ)	1/4 EXPOSED	0.72 L/s	10 cm	0.82 L/s	11 cm	0.91 L/s	14 cm

CRITICAL SEWER PIPE CROSSING TABLE

CROSSING	LOWER PIPE	HIGHER PIPE	CLEARANCE	SURFACE ELEVATION
1	250mmØ TWM-83.95	300mmØ STM INV-84.81 ± 1.01m	86.55m	86.55m
2	250mmØ TWM-84.20	375mmØ STM INV-84.81 ± 0.61m	86.60m	86.60m
3	250mmØ TWM-84.10	375mmØ STM INV-84.64 ± 0.54m	86.60m	86.60m
4	250mmØ TWM-83.90	375mmØ STM INV-84.43 ± 0.53m	86.85m	86.85m
5	200mmØ TWM-84.27	375mmØ STM INV-84.97 ± 0.70m	86.67m	86.67m
6	200mmØ TWM-84.27	375mmØ STM INV-84.94 ± 0.67m	86.67m	86.67m
7	200mmØ SAN 08V-82.42	375mmØ STM INV-85.03 ± 2.61m	86.77m	86.77m

SITE FLOWS & STORMWATER MANAGEMENT TABLE

DESIGN EVENT	PRE-DEVELOPMENT CONDITIONS		POST-DEVELOPMENT CONDITIONS						REDUCTION IN FLOW (L/s) %	
	UNCONTROLLED FLOW (L/s)	ALLOWABLE RELEASE RATE (L/s)*	A-1 DIRECT RUNOFF (L/s)	A-2 FLOW (L/s)	A-3 FLOW (L/s)	R-1 FLOW (L/s)	R-2 FLOW (L/s)	R-3 FLOW (L/s)		TOTAL FLOW (L/s)
1.2 YR	63.3	63.3	26.5	13.5	3.7	2.9	2.9	3.5	52.9	10.4 or 16%
1.5 YR	85.9	85.9	35.9	16.8	5.0	3.3	3.3	4.0	68.2	17.7 or 12%
1.100 YR	154.0	154.0	71.9	24.3	9.4	3.6	3.6	4.5	117.3	66.7 or 36%

* REDUCED FLOW COMPARED TO PRE-DEVELOPMENT UNCONTROLLED CONDITIONS
** LESSER OF UNCONTROLLED