







MMH 16

CONC

EX. 610mmø WATERMAIN

X, the X

头 2.4m CONC: S/W SC4

1		51014		DLE SCHE		
	INVERT ELEVATIONS (m)				TOP COVER	MANHOLE
	NORTH	SOUTH	EAST	WEST	(m)	TYPE
EX.	EX.97.453	97.410 E X.97.483				1800ø
MH 1	97.520 97.556		97.580 97.616	98.304	101.530	1520X1830
MH 2			98.631	98.716	101.640	1500ø
MH 3			98.850	99.400	102.200	1200ø
MH 4		97.630 97.704	98.790 98.855	97.620 97.644	101.550	1520X1830
MH 5		99.710		99.480 99.465	101.790	1200ø
MH 6		98.603	98.250 98.168	98.260 98.178	101.910	1520X1830
MH 8		98.360 98.334	98.350 98.274	98.580 98.584	101.920	1520X1830
СВМН 9		100.070 100.069	98.640 98.637	98.860 98.850	101.700	1500ø
CBMH 10		99.030 99.040	98.910 98.905		101.700	1500ø
CBMH 11	99.130 99.117	100.080 100.060		100.080 100.058	101.700	1200ø
MH 14	98.600 98.439		98.590 98.589	98.900 98.874	102.330	1520X1830
MH 15		99.170 99.137	98.960 98.927	99.190 99.162	102.140	1200ø
MH 15		55.1 51	99.480 99.441		103.140	1200¢
MH 17		99.020 99.076	99.750 98.750 98.801	98.610 98.641	102.010	1220X1220
	99.070 99.128	100.200 100.247	100.050	90.041	101.750	1200/1220
CBMH 18	9 9.128 _	99.160 99.174	99.020 99.049	98.860 98.889		
MH 19	99.320 99.321	99.174_	99.049	98.889	102.400	1200ø
MH 20	- <u>99.321</u> _			99.230 99.237	102.415	1200ø
MH 21	98,000	98.250			102.060	1200ø
MH 22	98.000 97.945 98.260	98.250 98.190 98.390	98 460	98.140 98.080	101.750	1520X1830
MH 23	98.260 98.202	98.390 98.370 98.850	98.460 98.400_	98.670	101.705	1220X1220
CBMH 24	08.02	98.850 98.850	100.016	98.670 98.671 100.000	101.750	1500ø
CBMH 25	98.92 98.923		99.99 100.016	100.000 100.016	101.600	1200ø
MH 26	98.500 98.442	100.070	98.750 98.727	98.810 98.802	101.930	1500ø
MH 27		100.070 1 00.027	100.060 100.011	98.89 98.853	101.950	1200ø
MH 28		100.190 100.182	99.000 98.993		102.080	1200ø
CBMH 29	98.617	98.817	100.035 1 00.053	100.040 1 00.053	101.650	1200ø
СВМН 30	98.877		100.050 1 00.050	100.010 100.034	101.650	1200ø
CBMH 31	99.210 99.184	100.310 1 00.278		99.610 99.575	101.900	1200ø
CBMH 32			98.600 98.612	98.470 98.412	101.650	1200ø
MH 33	EX.99.342	EX.99.342		99.492	±103.070	1520X1830
MH 34	100.360	100.282	99.607	99.678	102.98	1800ø
CBMH35	100.354	100.510			102.650	1200ø
CBMH36	100.850	100.466			102.650	1200ø
BOX MH37	100.475		99.811	99.840	102.890	1520X1830
MH 39	99.96		99.90		101.90	1200ø
MH 40	100.22	100.19	100.22	100.22	102.23	1200ø
MH 41	100.03		100.06		102.00	1200ø
MH 42	99.30	99.90		99.36	102.10	1200ø
MH 63		99.46	99.40	100.13	101.70	1200¢
		55.70	100.17	100.06	101.60	1200¢

		SANITA	RY MAN	HOLE SC	HEDULE	
LOCATION	INVERT ELEVATIONS (m)				TOP COVER	MANHOLE
	NORTH	SOUTH	EAST	WEST	(m)	TYPE
MH1A	EX.98.30	EX.98.30	98.92 98.90		±102.750	1500ø
MH2A			99.050 99.060	99.040 99.049	103.030	1200ø
мнза			99.260 99.270	99.250 99.260	101.630	1200ø
MH4A		99.550 99.535	99.550 99.535	99.500 99.475	101.500	1200ø*
MH5A				99.670 99.648	101.750	1200ø*
MH6A	99.715 99.706	99.715 99.716			101.790	1200ø*
MH7A	99.750 99.752	99.750 99.762			101.760	1200ø*
MH8A	99.940 99.949	100.050 100.059	100.010 100.009	100.010 100.009	102.420	1200ø
MH9A				100.300 100.250	102.090	1200ø
MH10A	100.320 100.290				102.430	1200ø
MH11A			100.220 100.219	100.280 100.279	102.360	1200ø
MH12A			100.510 100.517		102.980	1200ø
MH13A			99.216	99.226	102.950	1200ø
MH14A		99.468	99.356	99.366	102.900	1200ø
MH15A	99.884				102.920	1200ø
MH16A			99.477	99.487	102.950	1200ø
MH17A	EX.98.466	EX.98.466		99.066	±103.060	1500ø
MH18A	100.01	100.04			102.06	1200ø

* COMPLETE WITH WATER TIGHT FRAME & COVER

			<u>CROSSING SCHEDULE</u>	
	300mmø SAN. 0.730m	CLEARANCE UNDER EX.400mmø W/M	M 🕣 450mmø STM. 0.940m CLEARANCE UNDER 200mmø STM. 🗿 600mmø STM 0.350m CLEARANCE UNDER 200mmø W/M 250mmø SAN. 0.150m CLEARANCE UNDER 200mmø STM.	
2	200mmø W/M 0.500m	CLEARANCE OVER 300mmø STM	200mmø W/M 1.100m CLEARANCE UNDER 200mmø STM. 🕢 200mmø STM. 0.520m CLEARANCE OVER 200mmø W/M 200mmø STM. 0.850m CLEARANCE OVER 900mmø STM.	
3	300mmø W/M 1.000m 300mmø SAN. 0.400m	CLEARANCE UNDER 200mmø STM CLEARANCE UNDER 200mmø STM	375mmø STM. 0.484m CLEARANCE UNDER 250mmø SAN. 300mmø W/M 0.500m CLEARANCE UNDER 200mmø SAN. 50mmø W/M.0.500m CLEARANCE OVER 300mmø STM.	
5	200mmø W/M 0.500m 200mmø W/M 1.300m 200mmø SAN. 0.150m	CLEARANCE UNDER 600mmø STM CLEARANCE UNDER 300mmø SAN. CLEARANCE OVER 600mmø STM.	50mmø W/M.0.500m CLEARANCE UNDER 250mmø SAN. 450mmø STM. 0.300m CLEARANCE UNDER 250mmø SAN. 450mmø STM. 0.300m CLEARANCE UNDER 50mmø W/M (42) 150mmø SAN. 0.650m CLEARANCE OVER 200mmø W/M	
6	300mmø W/M 1.000m 200mmø STM. 0.250m	CLEARANCE UNDER 200mmø STM. CLEARANCE OVER 300mmø SAN.	450mmø STM. 0.840m CLEARANCE UNDER 150mmø SAN. 200mmø SAN. 0.430m CLEARANCE UNDER 200mmø STM. 375mmø STM. 1.160m CLEARANCE UNDER 200mmø STM.	
	975mmø STM. 0.500m 975mmø STM. 0.850m	CLEARANCE UNDER 300mmø W/M CLEARANCE UNDER 300mmø W/M	50mmø W/M 0.780m CLEARANCE UNDER 200mmø STM.	
8	300mmø W/M 0.500m 300mmø W/M 0.300m 300mmø SAN. 0.800m	CLEARANCE UNDER 300mmø SAN. CLEARANCE OVER 975mmø STM. CLEARANCE OVER 975mmø STM.	25/ 375mmø STM. 0.505m CLEARANCE UNDER 50mmø W/M 375mmø STM. 0.820m CLEARANCE UNDER 150mmø SAN.	
9	200mmø W/M 0.970m 200mmø W/M 0.500m 200mmø SAN. 0.200m	CLEARANCE UNDER 250mmø SAN. CLEARANCE UNDER 450mmø STM. CLEARANCE OVER 450mmø STM.	26) 200mmø STM. 0.550m CLEARANCE UNDER 200mmø SAN. 50mmø W/M 0.500m CLEARANCE UNDER 300mmø SAN. 50mmø W/M 0.500m CLEARANCE OVER 525mmø STM.	
10	150mmø W/M 0.800m 450mmø STM. 0.500m	CLEARANCE UNDER 250mmø SAN. CLEARANCE OVER 150mmø W/M	525mmø STM. 0.900m CLEARANCE UNDER 150mmø SAN. 28 375mmø STM. 0.660m CLEARANCE UNDER 300mmø SAN. 300mmø W/M 0.500m CLEARANCE UNDER 375mmø STM.	
11	200mmø SAN. 0.200m 200mmø SAN. 0.200m 150mmø W/M 0.500m	CLEARANCE OVER 450mmø STM. CLEARANCE OVER 525mmø STM. CLEARANCE UNDER 525mmø STM	300mmø W/M 0.500m CLEARANCE UNDER 375mmø STM. 300mmø W/M 1.000m CLEARANCE UNDER 200mmø STM. 300mmø SAN. 0.224m CLEARANCE UNDER 200mmø STM.	
12	300mmø W/M 1.000m 900mmø STM. 0.825m	CLEARANCE UNDER 300mmø SAN CLEARANCE UNDER 250mmø SAN	750mmø STM. 1.200m CLEARANCE UNDER 200mmø STM. 300mmø W/M 0.750m CLEARANCE UNDER 150mmø SAN. 300 Z00mmø W/M 0.750m CLEARANCE UNDER 200mmø SAN.	
13	900mmø STM. 0.200m	CLEARANCE UNDER 300mmø SAN.	300mmø W/M 0.750m CLEARANCE UNDER 200mmø STM. 200mmø STM. 0.300m CLEARANCE UNDER 300mmø SAN.	
14	300mmø SAN 0.650m	CLEARANCE OVER 900mmø STM. CLEARANCE OVER 900mmø STM.	 250mmø STM. 0.890m CLEARANCE UNDER 300mmø SAN. 300mmø W/M 0.500m CLEARANCE OVER 250mmø STM. 	
15	150mmø W/M 0.500m	CLEARANCE OVER 150mmø W/M. CLEARANCE OVER 750mmø STM.	525mmø STM. 0.300m CLEARANCE UNDER 200mmø W/M 200mmø W/M 0.300m CLEARANCE UNDER 250mmø SAN.	
16	300mmø SAN. 0.200m 300mmø W/M 1.200m 600mmø STM 1.210m	CLEARANCE UNDER 200mmø STM. CLEARANCE UNDER 200mmø STM. CLEARANCE UNDER 200mmø STM.	33 300mmø W/M 1.130m CLEARANCE UNDER 200mmø STM. 525mmø STM. 1.270m CLEARANCE UNDER 200mmø STM.	
	300mmø STM. 0.710m 300mmø STM. 0.500m	CLEARANCE UNDER 300mmø SAN. CLEARANCE UNDER 300mmø W/M	375mmø STM. 0.843m CLEARANCE UNDER 250mmø SAN. 300mmø W/M 0.500m CLEARANCE OVER 375mmø STM.	
18	300mmø W/M 1.740m 300mmø W/M 0.700m 375mmø STM. 0.480m	CLEARANCE UNDER 200mmø SAN. CLEARANCE UNDER 375mmø SAN. CLEARANCE UNDER 750mmø SAN.	250mmø SAN. 0.150m CLEARANCE UNDER 200mmø STM. 300mmø W/M 1.150m CLEARANCE UNDER 200mmø STM. 300mmø STM. 1.140m CLEARANCE UNDER 200mmø STM.	
(19)	525mmø STM. 0.403m 300mmø W/M 1.690m 300mmø W/M 0.500m	CLEARANCE UNDER 300mmø SAN. CLEARANCE UNDER 300mmø STM. CLEARANCE UNDER 525mmø SAN.	200mmø STM. 0.151m CLEARANCE OVER 250mmø SAN. 300mmø W/M 0.500m CLEARANCE UNDER 200mmø STM 300mmø W/M 0.500m CLEARANCE UNDER 150mmø SAN.	
20	50mmø W/M 0.500m 50mmø W/M 0.500m 450mmø STM. 0.790m	CLEARANCE UNDER 250mmø SAN. CLEARANCE OVER 450mmø STM. CLEARANCE UNDER 150mmø SAN.	 900mmø STM. 0.960m CLEARANCE UNDER 200mmø STM. 200mmø W/M 1.000m CLEARANCE UNDER 200mmø STM 900mmø STM. 0.990m CLEARANCE UNDER 200mmø STM. 	
			38 200mmø W/M 0.700m CLEARANCE UNDER 200mmø STM	

OCATION	INVE	RT ELEV	ATIONS (m)	TOP COVER
	NORTH	SOUTH	EAST	WEST	(m)
TRENCH DRAIN CB	99.65	99.95			101.05
CICB 2		99.95 99.90 100.18 100.00			101.30
CICB 3					101.40
CICB 4		99.87 100.02 99.95			101.40
CB 6	100.20 100.20	33.54		100.30 100.3 0	101.80
CB 7			100.40 100.40		101.80
CB 8	100.20 109.20				101.70
CB 9			100.25 100.25		101.85
CB 10	100.20 100.20		100.40	100.30 100.30	101.80
CB 11	100.15		100.40 100.40		101.80
CICB 12	100.15 100.88				101.80
CB 14	100.88	100.78	100.43		102.08
CB 15 CB 16	100.90 1 00.88	100.78	100.43		102.08
CB 17	100.55	100.80 109.78	100.43 1 00.4 1		102.08
CB 18			99.85 9 9.8 0		101.45
CB 19	100.45 100.40				101.90
CB 20	100.75 1 00.72			100.85 1 00.8 2	102.32
CB 21		100 59	100.95 100.92	100.70	102.32
CB 22	100.68	100.58 1 00.5 8		100.38 1 00.38	101.98
CB 23	100.68				101.98
CB 24	100.35 100.35 100.84 100.84			100.94 1 00.94	101.85
CB 25 CB 26	10 0.84		101.08 101.04	100.94	102.44
CB 20 CB 27		100.28 100.53	101.04	100.18	102.44
CB 28	100.65 1 00.63				101.83
CB 29	99.95 99.975			101.10_ 101.13	101.55
CB 30				100.20	101.65
CB 31			400.40	100.27 1 00.20	101.65
CB 32	100.02		100.18 100.20	100.11	101.65
CB 33	100.02 10 0.00		100 19	100.11 100.10	101.60
CB 34	100.06 100.00		100.19 1 00.2 0	100.38 1 00.30	101.60
CB 35	100.00		100.39 1 00.4 0	100.30	101.60
CB 36 CB 39	100.11 1 00.08		100.40		101.60
CB 40				100.22 1 00.2 0	101.65
CB 41	100.25 1 00.25				101.75
CB 42				100.20 1 00.20	101.65
CB 43			100.18 1 00.20	100.27	101.65
CB 44			100.19	100.27 1 00.2 0	101.65
CB 45	400.00		100.19 100.15		101.65
CB 46 CB 47	100.60		101.15		102.65
CB 48		100.945	101.10		102.52
CB 49	101.15		101.05		102.65
CB 50		101.25			102.65
RYCB 51		100.50			102.00
CB 52				100.25 100.22	101.80
CB 53	99.69 1 00.0 5			100.22	101.75
CB 54	99.66 100.03				101.47
CB 55 CB 56	<u>100.03</u> 99.80 9 9.8 1				101.45
TRENCH	99.81 99.81 99.83				101.05
CB 57 CB 58	100.62 100.66			100.73 100.76	102.26
CB 59			100.90 1 00.86		102.26
CB 60	100.35 R	REUSE OTATE EX. C		100.01	101.75
CB 61		99.90		100.00	101.35
CB 62		99.90		100.00	101.35
CB 61A	100.00				101.88
CB 62A	100.00				101.88
CB63			100.20		101.95
CB64			100.15	99.77	101.55
CB65			100.30		101.75
					1

STATION	DESCRIPTION	FINISHED GRADE(m)	TOP OF WATERMAIN(m)	AS BUILT WATERMAIN(m
A) 1+100.0 1+111.5	400x300 TEE 300ø V&VB	<i>EX.102.60</i> 103.02	<i>EX.100.40</i> 100.620	<i>EX.100.40</i> 100.60
1+138.68	SERVICE CONNECTION	102.32	99.920	99.920
1+178.49 1+187.68	SERVICE CONNECTION	101.44	99.040	99.03 98.99
1+229.57	SERVICE CONNECTION	101.47	99.070	99.02
1+282.18 1+305.82	HYDRANT&TEE 300¢ V&VB	101.58	99.18 99.080	99.00 99.04
B)1+312.85 1+316.27	300ø TEE 300x200 REDUCER	101.44	99.150 99.020	99.08 99.11
1+351.92	HYDRANT&TEE	101.67	99.270	99.21
1+353.96 1+359.52	45° BEND 45° BEND	101.65 101.66	99.000 98.650	99.20 98.94
C)1+374.38 B)2+100.00	200 V&VB 300ø TEE	101.90	99.270 99.150	99.270 99.16
2+103.00		101.50	98.950	98.96
2+103.50 2+103.85	VERTICAL BEND	101.51 101.54	98.950	98.96 99.26
2+110.00 2+125.00	300ø V&VB	101.60	99.200	99.21 99.28
2+175.00 F)2+186.56		102.22	99.820	99.78
F)2+186.56 F)3+100.00	300X200Ø TEE 300X200Ø TEE	101.84	99.440	99.440 99.440
3+104.69 3+152.61	200ø V&VB HYDRANT & TEE	101.90	99.500	99.48 99.76
G 3+201.33	200ø TEE	101.92	99.520	99.58
H)3+240.69 F)4+100.00	HYDRANT 300ø TEE	102.10 101.84	99.700 99.440	99.72 99.440
4+101.60	300ø V&VB	101.82 101.76	99.460	99.50 99.42
4+112.13	300X150Ø TEE & HYD	101.85	99.600	99.39
4+114.64 4+123.75	22° BEND 22° BEND	101.87 101.73	99.600 99.330	99.42 99.35
4+167.00	300¢ V&VB	101.87	99.900 99.850	99.83 99.36
4+207.97 4+209.30	VERTICAL BEND	102.25	98.300	98.28
4+209.80	VERTICAL BEND 300ø TEE	102.27 102.38	98.300 98.300	98.300 98.300
1 4+400.00	300ø TEE	102.38	98.300	98.300
4+403.51 4+411.41	300×200 REDUCER SERVICE CONNECTION	102.38	98.300 98.300	98.300 98.36
4+416.08 4+416.58	VERTICAL BEND	102.23	98.300 99.830	98.38 99.830
4+437.57	HYDRANT&TEE	102.06	99.660	99.65
4+466.57 4+493.33	SERVICE CONNECTION	101.83 102.09	99.350 99.690	99.350 99.68
4+498.37 4+499.78	45° BEND	102.10	99.700	99.69 99.70
J4+503.78	HYDRANT	102.20	99.800	99.800
K)5+100.00 5+105.00	300ø C/W 50ø SADDLE 45° BEND	102.38 102.27	98.300 98.300	98.28 98.300
5+107.00 5+137.00	45° BEND	102.30	99.900	99.86 100.14
5+154.50	SERVICE CONNECTION	102.48	100.080	100.07
K)6+100.00 6+100.50	300ø C/W 50ø SADDLE VERTICAL BEND	102.38	98.300	98.300 98.300
6+102.00	VERTICAL BEND	102.26	99.860 99.850	99.860 99.86
6+106.75	SERVICE CONNECTION	102.26	99.860	99.90
6+130.50	HYDRANT&TEE VERTICAL BEND	102.12	99.720 99.670	99.71 99.71
6+145.5 6+151.5	VERTICAL BEND	102.07	98.500 98.500	98.55 98.55
6+152.8	VERTICAL BEND	102.00	99.600	99.600
6+187.50	SERVICE CONNECTION	102.20	98.000 98.000	98.000 98.000
6+201.00 M6+202.00	50mmø SADDLE 300X200 TEE	102.35 102.34	99.940 99.940	99.93 99.93
∭10+100.00	50mmø SADDLE	102.35	99.940	99.93
10+110.00 10+133.00		102.42 102.53	100.02	100.02
G 7+100.00 7+106.00	200ø TEE	101.92 101.94	99.520 99.732	99.59 99.73
7+127.63		102.01	99.610	99.60
7+177.63 7+206.00	HYDRANT&TEE 200ø V&VB	102.10	99.700	99.700 99.89
∭7+216.63	300X200 TEE	102.34	99.940	99.95
7+222.13 7+243.63	300¢ V&VB VERTICAL BEND	102.22	99.820 99.750	99.80 99.750
7+243.89 7+249.37	VERTICAL BEND	102.15 102.17	100.024	100.02
7+249.63	VERTICAL BEND	102.17	99.750	99.750
7+285.88 7+308.13	HYDRANT&TEE SERVICE CONNECTION	102.46 102.87	100.060	100.10
7+314.63 N7+328.63	300ø V&VB 400x300 TEE	103.05 <i>EX. 103.10</i>	100.650 EX. 100.750	100.650 EX. 100.750
0 8+100.0	400x300 TEE	EX.102.97	EX.100.71	
8+121.7 8+122.7	3000 V&VB	102.95 102.97	100.550 100.570	
8+124.7 8+127.6	VERTICAL BEND	103.00 103.00	98.500 98.500	
8+130.6	SERVICE CONNECTION	103.07	98.500	
8+133.6 8+135.6	VERTICAL BEND	103.19 103.07	98.500 100.670	
8+146.5	VERTICAL BEND	103.00	100.600	
8+153.0	VERTICAL BEND	103.00	99.786	
8+154.0 P 8+162.9	VERTICAL BEND 300x200 CROSS	103.00 102.87	98.500 98.500	
8+165.9	VERTICAL BEND	102.85	98.500	
8+167.9 8+185.8	VERTICAL BEND SERVICE CONNECTION	102.79 102.68	100.390	
8+191.9 8+202.5	SERVICE CONNECTION 3000 V&VB	102.74 102.85	100.340	
Q 8+204.1	300ø CAP	102.85	100.450	
R) 9+100.0 9+104.7	HYDRANT&TEE 200x150 REDUCER	103.05 102.85	100.650 100.450	
9+141.3 P) 9+144.3	VERTICAL BEND	102.90	98.500 98.500	
9+155.0	VERTICAL BEND	102.90	99.500	
9+157.0 9+191.0	VERTICAL BEND	102.90 102.90	100.500 100.500	

DRAWING NOTES 1.0 GENERAL

ROAD. TREES, PARKING METERS, SIDEWALKS, CURBS, ASPHALT, AND STREET SIGNS FROM

DAMAGE DURING CONSTRUCTION. CONTRACTOR TO PAY THE COST TO REINSTATE OR REPLACE ANY DAMAGED INFRASTRUCTURE OR PROPERTY TO THE SATISFACTION OF THE CITY. 1.13 THE POSITION OF POLE LINES, CONDUITS, WATERMAIN, SEWERS, AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, SHALL PROTECT ALL UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

2.0 SANITARY TYPE. ONLY FACTORY FITTINGS TO BE USED. SEWER TO BE INSTALLED AS PER OSPD

2.2 ALL SANITARY MAINTENANCE HOLES TO BE 1.2m DIAMETER AS PER CITY OF OTTAWA STANDARDS COMPLETE WITH BENCHING, STEPS IF REQUIRED, AND FRAME AND COVER. STANDARD S24.

1005.01

ENGINEER. TO CITY STANDARDS. 3.0 STORM

COMPLETE. BE FLAT TOP TYPE.

STANDARDS.

CITY OF OTTAWA STANDARDS COMPLETE WITH BENCHING FOR SEWERS 900mm OR GREATER, STEPS IF REQUIRED, AND FRAME AND COVER. 3.3 STORM MH FRAME AND COVERS TO BE OPEN TYPE, AS PER CITY STANDARD S24. CONTRACTOR TO INSTALL FILTER FABRIC UNDER STORM MH COVER UNTIL SODDING IS 3.4 STORM MAINTENANCE HOLES TO BE AS PER OPSD 701.010, TAPER TOP TYPE COMPLETE WITH 300mm SUMP FOR SEWER LESS THAN 900mmØ. ALL STORM CBMH'S TO 3.5 ALL CATCH BASINS TO BE AS PER OPSD 705.010, FRAME & GRATE AS PER 400.02, LEAD TO BE AS PER ITEM 3.1. 3.6 ALL DITCH INLET CB'S TO BE AS PER OPSD 705.030 WITH 3:1 SLOPE. ALL DITCH INLET MANHOLES TO BE TYPE A AS PER OPSD 702.040. ALL DITCH INLET GRADE AS PER OPSD 403.010, LEAD AS PER ITEM 3.1. 3.7 150mm DIAMETER SOCK-WRAPPED PERFORATED PVC SUBDRAINS TO BE INSTALLED

AT ALL CBMH'S AND CB'S. SUBDRAINS TO BE 3m LONG (EACH SIDE – CURB INLETS, AND FOUR ORTHOGONALLY OUT – SUMP INLETS) AND DISCHARGE INTO CBMH OR CB. 3.8 STORMWATER ICD'S TO BE INSTALLED IN CB'S PRIOR TO BASE ASPHALT.

3.9 ANY STORM SEWER WITH LESS THAN 1.8m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE ENGINEER. 3.10 CONNECTION TO THE EXISTING STORM SEWER TO BE INCLUDED IN THE COST FOR STORM SEWER INSTALLATION. THIS INCLUDES REINSTATEMENT OF ROAD CUT TO CITY

3.1 ALL STORM SEWER TO BE CSA CERTIFIED PVC SDR 35 OR CONCRETEE CLASS 100-D, BELL AND SPIGGOT TYPE. ALL STORM SEWERS TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. ONLY FACTORY FITTINGS TO BE USED. 3.2 ALL STORM MAINTENANCE HOLES TO BE SIZED IN WITH THE PLANS AND AS PER

2.6 CONNECTION TO THE EXISTING SANITARY SEWER TO BE INCLUDED IN THE COST FOR SANITARY SEWER INSTALLATION. THIS INCLUDES REINSTATEMENT OF ROAD CUTS

2.3 SANITARY MH FRAME AND COVER TO BE CLOSED COVER TYPE, AS PER CITY 2.4 SANITARY SEWER LEAKAGE TEST AND CCTV INSPECTION SHALL BE COMPLETED AS PER CITY SPECIFICATIONS PRIOR TO INSTALLATION OF BASE COURSE ASPHALT. 2.5 ANY SANITARY SEWER WITH LESS THAN 1.8m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE

1.16 ALL DISTURBED BOULEVARDS TO BE REINSTATED WITH SOD ON 100mm TOPSOIL. 1.17 UTILITY DUCTS TO BE INSTALLED PRIOR TO ROAD BASE CONSTRUCTION. 2.1 ALL SANITARY SEWERMAINS TO BE CSA CERTIFIED PVC SDR 35, BELL AND SPIGGOT

1.15 CONTRACTOR TO HAUL EXCESS MATERIAL OFFSITE AS NECESSARY TO GRADE SITE TO MEET THE PROPOSED GRADES. ALL EXCESS MATERIAL TO BE HAULED OFFSITE AND DISPOSED OF AT AN APPROVED DUMP SITE. SHOULD THE CONTRACTOR DISCOVER ANY HAZARDOUS MATERIAL, CONTRACTOR IS TO NOTIFY ENGINEER. ENGINEER TO DETERMINE APPROPRIATE DISPOSAL METHOD/LOCATION.

1.14 CONTRACTOR TO SUPPLY SUITABLE FILL MATERIAL WHERE REQUIRED TO ROUGH GRADE THE SITE.

1.10 ALL CONCRETEE SHALL BE "NORMAL PORTLAND CEMENT" IN ACCORDANCE WITH O.P.S.S. 1350 AND SHALL ACHIEVE A MINIMUM STRENGTH OF 30MPa AT 28 DAYS. 1.11 ALL CONSTRUCTION TRAFFIC TO ACCESS SITE OFF HUNTMAR OR HAZELDEAN 1.12 CONTRACTOR TO PROTECT EXISTING INFRASTRUCTURE AND PROPERTY SUCH AS

1.8 ALL IRON WORK ELEVATIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MINOR ADJUSTMENTS AS DETERMINED BY THE ENGINEER. 1.9 ALL CONCRETEE CURBS AND SIDEWALKS TO CONFORM TO O.P.S. AND CONSTRUCTED TO CITY STANDARDS. ALL ONSITE CURBS TO BE BARRIER TYPE.

1.7 FOR LEGAL SURVEY INFORMATION REFER TO REGISTERED PLAN.

AND SPECIFICATIONS.

AND SPECIFICATIONS. 1.6 THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS

1.4 USE ONLY THE LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION". 1.5 ALL CONSTRUCTION SHALL COMPLY WITH CURRENT CITY OF OTTAWA STANDARDS

1.1 CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. 1.2 DO NOT SCALE DRAWINGS. 1.3 CONTRACTOR TO REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE ARCHITECT OR DESIGN ENGINEER AS APPLICABLE.

5.0 ROAD AND WORK IN THE RIGHT OF WAY 5.1 CONTRACTOR TO REINSTATE ROAD CUTS PER CITY OF OTTAWA STANDARD R-10. 5.2 THE CONTRACTOR SHALL PREPARE A TRAFFIC MANAGEMENT PLAN FOR REVIEW AND APPROVAL BY THE CITY OF OTTAWA. CONTRACTOR TO MAINTAIN TRAFFIC FLOW DURING THE ENTIRE CONSTRUCTION PERIOD. MAINTENANCE OF ROAD CUTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. PROVISION OF FLAGMEN, DETOURS AS NECESSARY, BARRICADES AND SIGNS TO THE FULL SATISFACTION OF THE ENGINEER AND ROAD AUTHORITY SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

GEOTECHNICAL ENGINEER OF GRANULAR B PLACEMENT.

PLACEMENT OF GRANULAR B MATERIAL.

ENGINEER OF GRANULAR A PLACEMENT.

VERIFICATION PRIOR TO PLACEMENT.

CITY OF OTTAWA STANDARDS.

MATCH ORIGINAL CONDITION.

SHOWN ON THE PLANS.

APPROPRIATE DISPOSAL METHOD/LOCATION.

6.0 SEDIMENT AND EROSION CONTROL

ANY APPLICABLE REGULATORY AGENCY.

REQUIREMENTS.

REPORT.

REPORT.

5.3 CONTRACTOR TO PREPARE SUBGRADE, INCLUDING PROOFROLLING, TO THE

5.4 FILL TO BE PLACED AND COMPACTED PER THE GEOTECHNICAL REPORT

5.5 CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR B MATERIAL IN

TESTING AND CERTIFICATION FROM THE GEOTECHNICAL ENGINEER THAT THE

5.6 GRANULAR A MATERIAL ONLY TO BE PLACED ONLY UPON APPROVAL BY THE

5.7 CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR A MATERIAL IN

ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOETCHNICAL ENGINEER. CONTRACTOR TO PROVIDE ENGINEER WITH SAMPLES OF GRANULAR A MATERIAL FOR

TESTING AND CERTIFICATION FROM THE GEOTECHNICAL ENGINEER THAT THE

5.9 CONTRACTOR TO SUPPLY, PLACE AND COMPACT ASPHALT MATERIAL IN

ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. CONTRACTOR TO PROVIDE ENGINEER WITH SAMPLES OF ASPHALT MATERIAL FOR

MATERIAL MEETS THE REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.

5.11 DITCHES DISTURBED DURING CULVERT INSTALLATION AND GRADING OPERATIONS

5.12 CULVERTS TO CONSIST OF 2.8MM THICKNESS MATERIAL AND BE INSTALLED PER

5.13 CONTRACTOR TO REINSTATE ANY DISTURBED AREA WITHIN EXISTING ROW OR

ADJACENT LANDS TO THE BETTER OF IMPORTED SOD ON 100MM TOPSOIL, OR TO

5.14 ALL EXCESS MATERIAL TO BE HAULED OFFSITE AND DISPOSED OF AT AN

MATERIAL, CONTRACTOR IS TO NOTIFY ENGINEER. ENGINEER TO DETERMINE

APPROVED DUMP SITE. SHOULD THE CONTRACTOR DISCOVER ANY HAZARDOUS

5.15 PAVEMENT STRUCTURE (MATERIAL TYPES AND THICKNESSES) FOR HEAVY DUTY

AND LIGHT DUTY AREAS TO BE AS SPECIFIED IN THE GEOTECHNICAL REPORT AND

6.1 CONTRACTOR TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES AS

PREPARATION AND CONSTRUCTION THE MEASURES ARE TO BE MAINTAINED TO THE

SATISFACTION OF THE ENGINEER AND CITY OF OTTAWA IN ACCORDANCE WITH THE

BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL. SHOULD ANY

ADDITIONAL MEASURES BE REQUIRED TO ADDRESS FIELD CONDITIONS THEY SHALL BE

CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY

6.2 ANY GROUND WATER PUMPING IS LIMITED TO 10 0001/d, AND SHALL BE DISCHARGED

6.3 SEEPAGE BARRIERS WILL BE CONSTRUCTED IN ANY TEMPORARY DRAINAGE DITCH.

6.4 FILLER CLOTHS WILL BE PLACED ON OPEN INFRASTRUCTURES SUCH AS MANHOLE

IN TO AN APPROVED FILTER MECHANISM PRIOR TO RELEASE TO THE ENVIRONMENT.

THE CITY OF OTTAWA, PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING,

GRADING, REMOVAL OF VEGETATION, ETC.). DURING ALL PHASES OF THE SITE

INSTALLED AS DIRECTED BY THE ENGINEER OR THE CITY OF OTTAWA. THE

IDENTIFIED IN THE EROSION AND SEDIMENT CONTROL PLAN TO THE SATISFACTION OF

ARE TO BE REINSTATED TO THEIR ORIGINAL CONDITION AND FLOWLINE GRADES.

TESTING AND CERTIFICATION FROM THE GEOTECHNICAL ENGINEER THAT THE

5.10 CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING LINE AND GRADE IN

ACCORDANCE WITH THE PLANS, AND FOR PROVIDING THE ENGINEER WITH

MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL

5.8 ASPHALT MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL

MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL

ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOETCHNICAL ENGINEER. CONTRACTOR TO PROVIDE ENGINEER WITH SAMPLES OF GRANULAR B MATERIAL FOR

SATISFACTION OF THE GEOTECHNICAL ENGINEER PRIOR TO THE COMMENCEMENT OF

ACTUAL COST OF ACQUIRING THE WATER PERMIT. 4.9 CONNECTION TO EXISTING WATERMAIN TO BE CITY FORCES, EXCAVATION AND BACKFILLING AND REINSTATEMENT BY CONTRACTOR, COST TO BE INCLUDING THE COST FOR THE WATERMAIN INSTALLATION. THIS COST INCLUDES REINSTATEMENT OF ROAD CUTS TO CITY STANDARDS.

PERMIT. OWNER IS RESPONSIBLE FOR REIMBURSING THE CONTRACTOR FOR THE

4.7 ANY WATERMAIN WITH LESS THAN 2.4m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE ENGINEER. 4.8 CONTRACTOR IS RESPONSIBLE FOR ACQUIRING THE WATER PERMIT FROM THE CITY OF OTTAWA AND PAYMENT OF ANY FEES ASSOCIATED WITH SECURING THE WATER

4.5 ALL COMPONENTS OF THE WATER DISTRIBUTION SYSTEM SHALL BE CATHODICALLY PROTECTED AS PER MUNICIPAL STANDARDS. 4.6 ALL VALVES & VALVE BOXES, HYDRANTS, AND HYDRANT VALVES AND ASSEMBLIES SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS.

WATERMAINS AND DISINFECT AND CHLORINATE ALL WATERMAINS TO THE SATISFACTION OF M.O.E.E. AND THE CITY OF OTTAWA. 4.4 TRACER WIRE TO BE INSTALLED ALONG THE FULL LENGTH OF WATERMAIN AND ATTACHED TO EACH MAIN STOP AS PER MUNICIPAL STANDARDS.

4.1 ALL WATERMAINS TO BE PVC DR 18, WITH MINIMUM COVER OF 2.4m AND INSTALLED PER CITY OF OTTAWA STANDARDS. ALL WATER SERVICES TO BE COPPER OR APPROVED EQUAL WITH MINIMUM COVER OF 2.4 m AND INSTALLED AS PER CITY OF OTTAWA STANDARDS. 4.2 THRUST BLOCKS TO BE INSTALLED AT ALL BENDS, TEES, AND CAPS ALL AS PER OPSD 1103.01 AND 1103.02.

4.0 WATER

AND CATCH BASIN UNTIL STRUCTURES ARE COMMISSIONED AND PUT IN USE.	⊐D. €. Yanno
7.0 GEOTECHNICAL.	PROLINCE OF
7.1 FOR DETAILS OF TEST PITS AND VARIOUS CONSTRUCTION REQUIREMENTS SEE GEOTECHNICAL REPORT, GEOTECHNICAL INVESTIGATION PROPOSAL COMMERCIAL DEVELOPMENT HAZELDEAN ROAD AT HUNTMAR DRIVE, OTTAWA ONTARIO, BY PATERSON GROUP DATED FEBRUARY 24, 2012.	Drawing Title
7.2 FILL MATERIAL WITHIN THE PARKING LOT AND BUILDING PAD AREAS, AND SUPPORTING BUILDING FOUNDATIONS SHALL BE COMPACTED TO 98% STANDARD MODIFIED PROCTOR DENSITY AND TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.	SCHEE
7.3 ALL FILL MATERIAL TO BE CERTIFIED AS ACCEPTABLE BY THE GEOTECHNICAL ENGINEER.	Scale
7.4 ALL COMPACTION METHODS TO BE PERFORMED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER TO INCLUDE BUT NOT BE LIMITED TO THE THICKNESS OF LIFTS, AND COMPACTION EQUIPMENT USED.	
7.5 CLAY SEALS TO BE INSTALLED WHERE INDICATED ON THE DRAWINGS OR AS APPROVED AND DIRECTED BY THE GEOTECHNICAL ENGINEER ALL IN ACCORDANCE	Design D
WITH CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. 7.6 PIPE BEDDING AND BACKFILL SHALL BE COMPLETED IN ACCORDANCE WITH LATEST	Drawn
CITY OF OTTAWA STANDARD. AT A MINIMUM BEDDING FOR SEWER AND WATERMAIN SHALL BE 150mm OPSS GRANULAR A, COMPACTED TO 95% SPMDD AND EXTEND TO	Project No.
SPRINGLINE OF PIPE. COVER MATERIAL SHALL CONSIST OF OPSS GRANULAR A AND SHALL EXTEND FROM SPRINGLINE TO MINIMUM 300mm ABOVE OBVERT OF PIPE, AND COMPACTED TO 95% SPMDD. SEE GEOTECHNICAL REPORT FOR ADDITIONAL DETAILS.	101

SCHEDULES AND NOTES PHASE 1 & 2 D.G.Y. OCTOBER 2011 Checked E.H. D.G.Y. roject No. Drawing No. C-105 10113

333 Preston Street IBI Tower 1, Suite 400 Ottawa, Ontario Canada K1S 5N4 GROUP Tel (613)225-1311 FAX (613)225–9868 Project Title 5705 HAZELDEAN ROAD OTTAWA, ONT.). 🐔 Yannoulopou

2020/03/2

NORTH AMERICAN DEVELOPMENT GROUP

25	REVISED AS PER CITY COMMENTS	DGY	20: 03: 27
24	REVISED AS PER CITY COMMENTS	DGY	19:12:20
23	REVISED SPA CRU B-3, PAD B, BOX D	DGY	19:08:29
22	ISSUED FOR CONSTRUCTION BLDG 2	DGY	18:04:06
21	ISSUED FOR TENDER	DGY	18:01:15
20	REVISED AS PER CITY COMMENTS	DGY	17:11:23
19	ISSUED FOR SPA	DGY	17:11:02
18	REVISED AS PER SITE PLAN	DGY	17:07:07
17	REVISED AS PER CITY COMMENTS	DGY	17:06:23
16	REVISED BLD 2 & PAD E	DGY	17:02:14
15	REVISED AS PER CITY COMMENTS	DGY	16:08:02
14	SPA BLDG 1 & 2	DGY	16:03:07
13	ASBUILT		15:01:19
12	REVISED AS PER SITE PLAN	DGY	14:11:03
11	SPA	DGY	14:09:09
10	REVISED AS PER SITE PLAN	DGY	14:08:08
9	REVISED AS PER CITY COMMENTS	DGY	14:07:31
8	REVISED DOLLAR & CRUB	DGY	14:06:03
7	ISSUED FOR PAD F TENDER	DGY	13:02:14
6	REVISED FOR PAD F	DGY	12:11:16
5	REVISED SPRINKLER ROOM BOX E	DGY	12:03:09
4	REVISED PER CITY COMMENTS AND PAD E	DGY	12:02:22
3	REVISED FOR BOX E	DGY	12:01:26
2	REVISED SITE PLAN PH1 & PH2	DGY	11:11:24
1	ISSUED FOR APPROVAL	DGY	11:10:27
No.	REVISIONS	Ву	Date

4.3 CONTRACTOR TO CONDUCT PRESSURE AND LEAKAGE TESTING OF ALL

#16044





