

- SANITARY MANHOLE, SEWER & DIRECTION OF FLOW
- SANITARY MANHOLE WITH COMPRESSION ASSEMBLY TOP
- STORM MANHOLE, SEWER & DIRECTION OF FLOW
- WATERMAIN AND DIAMETER
- VALVE & VALVE BOX
- BEND & THRUST CHAMBER
- VALVE AND VALVE BLOCK
- HYDRANT CW VALVE & LEAD
- CAP
- REDUCER
- CATCH BASIN
- LANDSCAPE CATCH BASIN
- REAR YARD CATCH BASIN
- CATCH BASIN MANHOLE

- GENERAL NOTES:**
- DIMENSIONS AND LAYOUT INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - THE ORIGINAL TOPOGRAPHY AND GROUND ELEVATIONS, SERVICES AND SURVEY INFORMATION SHOWN ON THIS PLAN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF ALL INFORMATION OBTAINED FROM THIS PLAN.
 - CO-ORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
 - BEFORE COMMENCING CONSTRUCTION, PROVIDE PROOF OF COMPREHENSIVE ALL RISK AND OPERATIONAL LIABILITY INSURANCE INCLUDING BLASTING, INSURANCE POLICY TO NAME THE OWNER, ENGINEER AND THE CITY AS CO-INSURED.
 - CONNECT TO EXISTING SYSTEMS AS DETAILED, INCLUDING ALL RESTORATION WORK NECESSARY TO REINSTATE SURFACES TO EXISTING CONDITIONS OR BETTER.
 - DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS.
 - OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS BEFORE COMMENCING CONSTRUCTION.
 - RESTORE ALL TRENCHES AND SURFACE FEATURES TO EXISTING CONDITIONS OR BETTER AND TO THE SATISFACTION OF MUNICIPAL AUTHORITIES.
 - REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER.
 - ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
 - REFER TO GEOTECHNICAL INVESTIGATION PROJECT: XXX (DATED XXX), PREPARED BY XXX FOR SUBSURFACE CONDITIONS AND CONSTRUCTION RECOMMENDATIONS.
 - PERFORATED PIPE SUB-DRAINS TO BE PROVIDED AT SUBGRADE LEVEL EXTENDING FROM THE ROADSIDE CATCH BASIN FOR A DISTANCE OF 3.0m, PARALLEL TO THE CURB IN TWO DIRECTIONS.

- SEWER NOTES:**
- SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
CATCH-BASIN (600x600mm)	705.010	OPSD
STORM / SANITARY MANHOLE (1200)	701.010	OPSD
STORM MANHOLE (1500)	701.011	OPSD
ROADSIDE CB, FRAME & COVER	S2 & S19	CITY OF OTTAWA
CURB INLET CB, FRAME & COVER	S3, S22 & S23	CITY OF OTTAWA
CBM FRAME & COVER	S25 & S24.1	CITY OF OTTAWA
DIGB STRUCTURE & GRATE	705.030, 403.010	OPSD
STORM / SANITARY M/F FRAME & COVER	S24.1, S24 & S25	CITY OF OTTAWA
STORAGE PIPE	PVC DR 35 OR CONC.	(CLASS SPECIFIED ON PROFILE DRAWINGS)
SANITARY SEWER	PVC DR 35	(CLASS SPECIFIED ON PROFILE DRAWINGS)
CATCH-BASIN LEAD	PVC DR 35	
 - INSULATE ALL PIPES (SANSTM) THAT HAVE LESS THAN 1.5m COVER WITH 50mmx1200mm HI-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
 - PIPES ARE TO BE CONSTRUCTED 2.0m BEYOND THE PROPERTY LINE AT MINIMUM SLOPE OF 1.0% (2.0% IS PREFERRED). DYE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.
 - SEWER SERVICE CONNECTIONS PER CITY OF OTTAWA DETAILS S11 AND S11.1.
 - THE SITE SERVICING CONTRACTOR SHALL PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410.07.16 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER.
 - STORM MANHOLES AND CBMS SHALL HAVE 300mm SUMP'S UNLESS OTHERWISE INDICATED.
 - CONTRACTOR TO CONTACT (CCTV) ALL PROPOSED SEWERS, 200mm Ø OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF TRENCH, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
 - SAFETY LANDING PER OPSD 404.020 REQUIRED IF MANHOLE DEPTH IS GREATER THAN 5.0m.

- WATERMAIN NOTES:**
- GENERAL:

ITEM	DETAIL No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER / OVER SEWER	W25 / W25.2	CITY OF OTTAWA
 - THE WATERMAIN SHALL BE PVC DR 18 IN ACCORDANCE WITH MATERIAL SPECIFICATION MW-18.1 UNLESS OTHERWISE INDICATED.
 - SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMANS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.
 - WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
 - PROVIDE MINIMUM 0.50m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
 - WATER SERVICE IS TO BE CONSTRUCTED TO PROPERTY LINE USING 19mmØ PE-XL COX LEFT FOR FUTURE EXTENSION BY BUILDER.
 - HYDRANT INSTALLATION PER CITY DETAIL W19.
 - MINIMUM 2.5m HORIZONTAL SEPARATION BETWEEN SEWER AND WATERMAIN (BARREL TO BARREL).

MANHOLE ID	SIZE (mm)	TIG ELEV (m)	INVERT (m)
201	1200mmØ	135.14	NE=133.29 NW=133.35
203	1200mmØ	136.74	SE=133.80 W=133.83
205	1200mmØ	137.46	SW=134.48 NW=134.05 E=134.02
207	1200mmØ	137.56	SE=134.23 W=134.22 NW=134.23 NE=134.28 N=134.29
209	1200mmØ	135.24	SE=133.62 W=134.22 NW=133.62
211	1200mmØ	137.58	SE=134.38 SW=134.65
213	1200mmØ	137.47	S=134.94 NE=134.84 SW=134.84
215	1200mmØ	139.00	NW=135.20 NE=135.14

MANHOLE ID	SIZE (mm)	INVERT (m)
161	1200mmØ	SW=134.08 SE=133.69 NW=133.76 NE=134.05
163	1200mmØ	NW=133.09 SE=133.02
165	1200mmØ	NW=132.71 SE=132.70 NE=134.05
167	1200mmØ	NW=132.46 SE=132.46 SW=132.62
175	1200mmØ	NE=136.43
199	1200mmØ	NE=134.25 SW=135.83
201	1200mmØ	NE=133.29 NW=133.35

MANHOLE ID	SIZE (mm)	TIG ELEV (m)	INVERT (m)
100	1500mmØ	134.45	S=133.07 E=132.78 NW=132.84
102	1200mmØ	135.22	SW=133.10 E=132.87
104	1200mmØ	135.36	NW=133.24 NE=133.23
108	1200mmØ	136.70	W=133.57 SE=133.56
110	1200mmØ	136.96	NW=133.76 E=133.68
114	1200mmØ	137.46	NW=133.93 SE=133.86 SW=134.00
120	1200mmØ	137.63	NW=135.74 SE=134.10
126	1200mmØ	137.70	SW=135.98 SE=135.57 NE=134.15

MANHOLE ID	SIZE (mm)	INVERT (m)
100	1500mmØ	S=133.07 E=132.78 NW=132.84
102	1200mmØ	SW=133.24 SE=133.24 NE=134.59
104	1200mmØ	SW=135.82 SE=135.64 NE=135.65 NW=135.81
108	1200mmØ	NW=134.72 SE=134.72 SW=136.58 N=136.58
171	1200mmØ	NW=132.71 E=132.71

Station	FIG ELEVATION	TOP OF WATERMAIN	DESCRIPTION
+1000.00	137.65	135.25	CONNECT TO EXISTING
+1025.00	137.69	135.29	-
+1050.00	137.56	135.16	-
+1075.00	137.55	135.15	-
+1100.00	137.55	135.15	-
+1104.56	137.59	135.19	HYD-T1
+1112.79	137.58	135.18	TEE-200x150
+1125.00	137.46	135.06	-
+1150.00	137.44	135.04	-
+1162.93	137.49	135.09	HYD-T2
+1167.97	137.42	135.02	H.BEND-45
+1175.00	137.48	135.08	-
+1200.00	136.77	134.37	-
+1221.89	136.81	134.41	H.BEND-45
+1225.00	136.78	134.38	-
+1250.00	136.20	133.80	-
+1275.00	135.30	132.90	-
+1300.00	135.06	132.66	-
+1325.00	135.08	132.68	-
+1330.30	135.08	132.68	H.BEND-45
+1340.48	135.02	132.62	H.BEND-45
+1348.27	135.20	132.80	VB1
+1350.37	135.29	132.89	CONNECT TO EXISTING

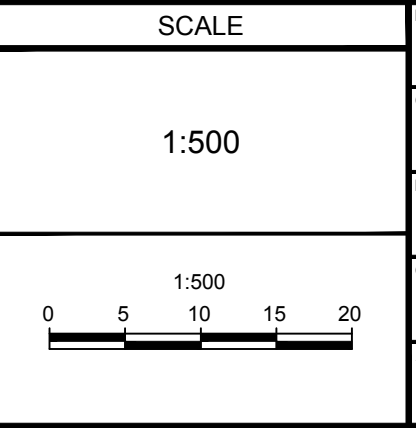
CB No.	TIG ELEVATION	INVERT
CB1	137.45	136.05
CB2	137.40	135.41
CB3	137.35	135.70
CB4	137.30	135.25
CB5	137.20	135.55
CB6	137.70	136.12
CB7	137.50	135.85
CB8	134.97	133.57
CBMH1	136.55	134.18
CBMH2	136.55	134.52
CBMH3	137.50	135.25
CBMH4	137.50	135.47
RY1	137.20	135.55
RY2	137.35	136.01
RY3	137.80	136.39
RY4	135.50	134.01
RY6	133.60	133.60

STRUCTURE ID	ICD TYPE	INVERT (m)	100-YR HEAD (m)	100-YR PEAK FLOW (L/s)
126	TEMPEST MHF	SW=135.06 SE=135.57 NE=134.15	3.60	14.2
CB1	TEMPEST MHF	SW=136.05 SE=135.41 NE=135.41	1.48	12.5
CB2	TEMPEST MHF	SW=135.25 SE=135.25 NE=135.25	2.19	25.2
CB4	TEMPEST MHF	SW=134.18 SE=134.18 NE=134.18	2.71	22.2
CBMH1	TEMPEST MHF	SW=135.25 SE=135.25 NE=135.25	2.46	10.8
RY1	TEMPEST MHF	SW=135.55 SE=135.55 NE=135.55	1.83	15.6
RY6	TEMPEST LMF	NE=133.60 W=133.60	1.50	9.2

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS 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, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.



No.	REVISION	DATE	BY
1.	ISSUED FOR APPROVAL	JUN 6/23	MAB



FOR REVIEW ONLY

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TOWN OF PERTH HARRIS STREET DEVELOPMENT

MAPLE LEAF HOMES

SERVICING PLAN

PROJECT No. 121225
REV # 1
DRAWING No. 121225