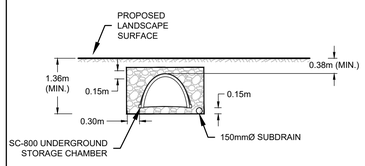
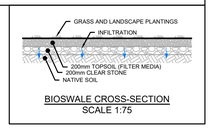


TYPICAL UDERGROUND STORAGE CHAMBERS
SCALE 1:175



TYPICAL CHAMBER CROSS-SECTION
SCALE 1:75



BIOSWALE CROSS-SECTION
SCALE 1:75

ICD TABLE

STRUCTURE ID	ICD TYPE	INVERT (m)	100-YR HEAD (m)	100-YR PEAK FLOW (L/s)
6	TEMPEST LMF	NW=82.70 SE=82.70	1.12	8.0
CB1	106mm	NW=82.32	1.13	21.2
CBMH2	TEMPEST LMF	SE=82.88 NW=83.48	2.96	7.4
RY1	TEMPEST LMF	E=81.23 N=81.06	1.63	12.2

WATERMAIN TABLE

Station	F/G ELEVATION	TOP OF WATERMAIN	DESCRIPTION
1+000.00	83.34	80.94	200x300 TEE
1+008.86	83.46	81.07	VB1
1+022.15	83.71	81.31	45° H.BEND
1+023.89	83.79	81.39	45° H.BEND
1+029.31	83.89	81.49	CAP

CATCHBASIN TABLE

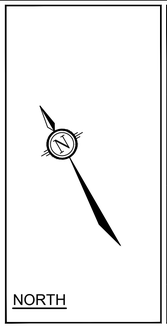
CB No.	T/G ELEVATION	INVERT	ICD DIA.
CB1	83.32	82.02	106mm
RY1	82.78	81.06	TEMPEST LMF
RY2	83.07	81.50	-
RY3	82.90	81.69	-
RY4	83.16	81.73	-
RY5	83.80	82.80	-
RY6	83.80	82.87	-

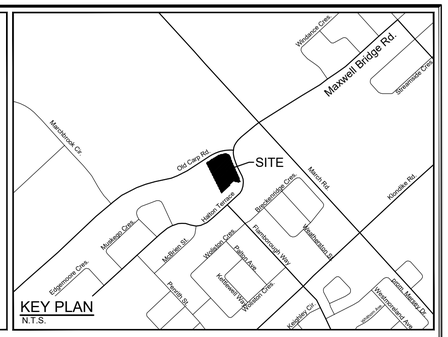
STM MANHOLE TABLE

MANHOLE ID	SIZE (mm)	T/G ELEV	INVERT	PIPE DIA. (mm)
2	1200Ø	83.79	NE=81.35 SW=81.78	NE=450 SW=450
4	1200Ø	85.74	NE=82.17 NW=82.77	NE=450 NW=300
6	1200Ø	85.82	NW=82.70 SE=82.70	SE=200 NW=600
8	1200Ø	85.88	SE=82.77 NE=82.77	SE=600 NE=250
103	1200Ø	84.06	NW=80.23 S=80.52	NW=1500 S=1500
104	1200Ø	82.73	NW=79.99 NE=79.39 SE=80.00	NE=1500 NW=375 SE=1500
CBMH1	1200Ø	85.55	SE=83.69	SE=600
CBMH2	1200Ø	85.55	SE=82.88 NW=83.48	SE=300 NW=600
CBMH3	1200Ø	81.66	SW=80.75 NE=80.70 S=80.98	NE=500 SW=500 S=250

SAN MANHOLE TABLE

MANHOLE ID	SIZE (mm)	T/G ELEV	INVERT	PIPE DIA. (mm)
X1	1200Ø	84.21	S=81.78 NW=82.31	S=250 NW=200
1	1200Ø	84.15	W=82.37 SE=82.36	SE=200 W=200
3	1200Ø	84.02	E=82.45 NW=82.47	E=200 NW=200





LEGEND

- SANITARY MANHOLE, SEWER & DIRECTION OF FLOW
- STORM MANHOLE, SEWER & DIRECTION OF FLOW
- WATERMAIN AND DIAMETER
- VALVE & VALVE BOX
- BEND AND THRUST BLOCK
- HYDRANT C/W VALVE & LEAD
- CAP
- FEATURE WALL
- CATCHBASIN MANHOLE
- ROAD CATCHBASIN WITH ICD
- REAR YARD CATCH BASIN
- UNDERGROUND STORAGE CHAMBERS WITH SUBDRAIN
- ROOFTOP DOWNSPOUT LOCATION
- PUMP OUTLET LOCATION
- FIRE DEPARTMENT CONNECTION
- WATER METER
- REMOTE METER

GENERAL NOTES:

1. DIMENSIONS AND LAYOUT INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. THE ORIGINAL TOPOGRAPHY AND GROUND ELEVATIONS, SERVICING 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.
3. CO-ORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
4. 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.
5. CONNECT TO EXISTING SYSTEMS AS DETAILED, INCLUDING ALL RESTORATION WORK NECESSARY TO REINSTATE SURFACES TO EXISTING CONDITIONS OR BETTER.
6. 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.
7. OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS BEFORE COMMENCING CONSTRUCTION.
8. RESTORE ALL TRENCHES AND SURFACE FEATURES TO EXISTING CONDITIONS OR BETTER AND TO THE SATISFACTION OF MUNICIPAL AUTHORITIES.
9. REMOVE FROM SITE ALL DEBRIS AND EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER.
10. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
11. REFER TO GEOTECHNICAL INVESTIGATION PG4872-1 (DATED MAY 3, 2019), PREPARED BY PATERSON GROUP INC. FOR SUBSURFACE CONDITIONS AND CONSTRUCTION RECOMMENDATIONS.
12. PERFORATED PIPE SUB-DRAINS TO BE PROVIDED AT SUBGRADE LEVEL EXTENDING FROM THE ROADSIDE CATCHBASIN FOR A DISTANCE OF 3.0m, PARALLEL TO THE CURB IN TWO DIRECTIONS.

SEWER NOTES:

1. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
CATCHBASIN (600x600mm)	705.010	OPSD
STORM / SANITARY MANHOLE (1200Ø)	701.010	OPSD
ROADSIDE CB, FRAME & COVER	S2 & S19	CITY of OTTAWA
STORM / SANITARY MH FRAME & COVER	S24.1 / S24 & S25	CITY of OTTAWA
STORM SEWER	PVC DR 35 OR CONC.	(CLASS SPECIFIED ON PROFILE DRAWINGS)
SANITARY SEWER	PVC DR 35	
CATCHBASIN LEAD	PVC DR 35	

2. INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 1.5m COVER WITH 50mmX1200mm HI-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
3. SERVICES ARE TO BE CONSTRUCTED TO PROPERTY LINE AT MINIMUM SLOPE OF 1.0% (2.0% IS PREFERRED).
4. PIPE 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.
5. SEWER SERVICE CONNECTIONS PER CITY OF OTTAWA DETAILS S11 AND S11.1.
6. 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.
7. STORM MANHOLES AND CBMHS SHALL HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
8. CONTRACTOR TO TELEVISE (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.

WATERMAIN NOTES:

1. 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
HYDRANT LOCATION	W18	CITY OF OTTAWA

2. THE WATERMAIN SHALL BE PVC DR 18 IN ACCORDANCE WITH MATERIAL SPECIFICATION MW-18.1, UNLESS OTHERWISE INDICATED.
3. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.
4. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
5. PROVIDE MINIMUM 0.50m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.

SEWER CROSSING TABLE

LOCATION	ELEVATIONS	CLEARANCE
C1	STM INV=82.27 WM OBV=81.14	1.13m
C2	STM INV=81.35 WM OBV=80.85	0.50m
C3	SAN INV=82.49 STM OBV=82.19	0.30m
C4	SAN INV=82.32 WM OBV=81.82	0.50m
C5	STM INV=81.24 WM OBV=80.74	0.50m

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, 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
6.	CITY SUBMISSION	JUL 11/25	MAB
5.	CITY SUBMISSION	APR 25/25	MAB
4.	SIDEWALK UPDATE - OLD CARP	FEB 27/25	MAB
3.	CITY SUBMISSION	SEP 18/24	MAB
2.	CITY SUBMISSION	NOV 3/23	MAB
1.	CITY SUBMISSION	OCT 19/21	MAB

SCALE
1:300
1:300
0 3 6 9 12

DESIGN DTD
CHECKED LWR
DRAWN DTD
CHECKED MAB
APPROVED JGR

FOR REVIEW ONLY

LICENSED PROFESSIONAL ENGINEER L. R. WILSON 100160065 PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER M.A. BISSETT 2025.07.11 PROVINCE OF ONTARIO

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CITY OF OTTAWA
1104 HALTON TERRACE

GENERAL PLAN OF SERVICES

PROJECT No. 119024
REV REV # 6
DRAWING No. 119024-GP

PLAN #18654 D07-12-21-0186

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