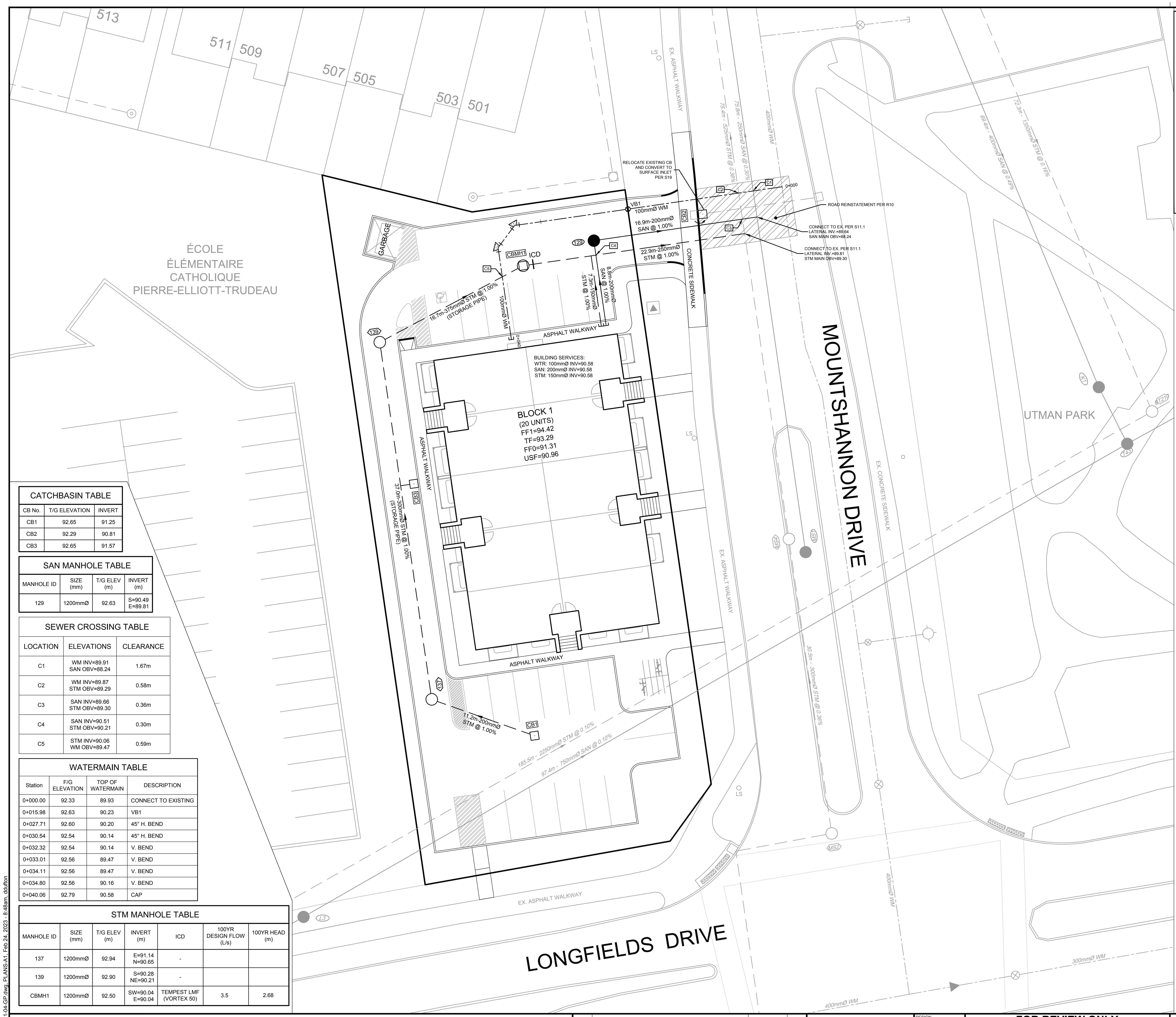
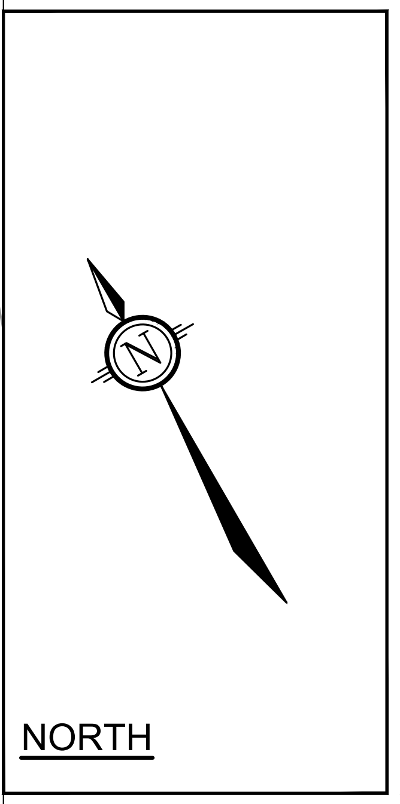
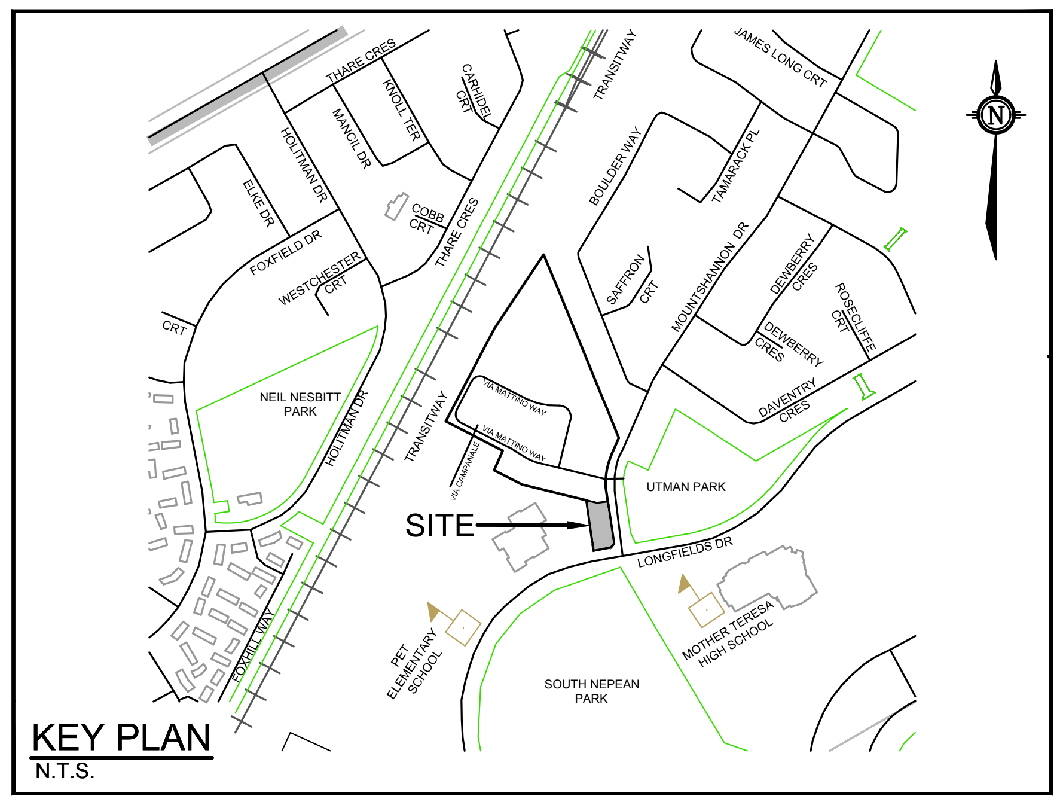




NORTH



KEY PLAN

N.T.S.

LEGEND

④ ●	SANITARY MANHOLE, SEWER & DIRECTION OF FLOW
③ ○	STORM MANHOLE, SEWER & DIRECTION OF FLOW
300mmØ	WATERMAIN AND DIAMETER
⊗	VALVE & VALVE BOX
━	SITE LEGAL BOUNDARY
─	EXISTING PROPERTY & ROW LINES
○─⊗	EXISTING HYDRANT C/W VALVE & LEAD
	THRUST BLOCK AND BEND
L1 ◎	LANDSCAPE TYPE CATCHBASIN
CBMH1	CATCH BASIN MANHOLE
CB1 □	ROAD CATCHBASIN

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 EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. EXCAVATE AND REMOVE FROM SITE ALL ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER.
10. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
11. REFER TO GEOTECHNICAL INVESTIGATION PROJECT: PG2306-1 (JANUARY 31, 2013), PREPARED BY PATERSON GROUP 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 / CONC	
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 1.0m FROM BUILDING FACE 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. BACKWATER VALVES ARE TO BE INSTALLED ON SERVICES AS PER CITY STANDARDS (S14, S14.1, S14.2).
7. 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.
8. STORM MANHOLES AND CBMHS SHALL HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
9. CONTRACTOR TO TELEVISE (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO CONNECTING THE PROPOSED SEWERS. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
10. ALL CATCH BASIN LEADS SHALL BE 200mmØ @ 1.0% (MIN.) UNLESS SHOWN OTHERWISE.
11. ALL CATCH BASINS SHALL HAVE 600mm SUMPS UNLESS INDICATED OTHERWISE.

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
THRUST BLOCK	W25.3	CITY OF OTTAWA

2. THE WATERMAIN SHALL BE PVC DR 18 IN ACCORDANCE WITH MATERIAL SPECIFICATION MW-18.1, UNLESS OTHERWISE INDICATED, COMPLETE WITH TRACING WIRE AND CATHODIC PROTECTION.
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 0.30m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
6. HORIZONTAL CLEARANCE BETWEEN WATERMAIN AND SEWERS IS 2.5m (MIN.).
7. CONNECTION TO EXISTING WATERMAIN BY CITY FORCES. CIVIL CONTRACTOR TO EXCAVATE TRENCH, PLACE BEDDING, BACKFILL AND REINSTATE SURFACE TO EXISTING CONDITIONS OR BETTER.

CATCHBASIN TABLE

CB No.	T/G ELEVATION	INVERT
CB1	92.65	91.25
CB2	92.29	90.81
CB3	92.65	91.57

SAN MANHOLE TABLE

MANHOLE ID	SIZE (mm)	T/G ELEV (m)	INVERT (m)
129	1200mmØ	92.63	S=90.49 E=89.81

SEWER CROSSING TABLE

LOCATION	ELEVATIONS	CLEARANCE
C1	WM INV=89.91 SAN OBV=88.24	1.67m
C2	WM INV=89.87 STM OBV=89.29	0.58m
C3	SAN INV=89.66 STM OBV=89.30	0.36m
C4	SAN INV=90.51 STM OBV=90.21	0.30m
C5	STM INV=90.06 WM OBV=89.47	0.59m

WATERMAIN TABLE

Station	F/G ELEVATION	TOP OF WATERMAIN	DESCRIPTION
0+000.00	92.33	89.93	CONNECT TO EXISTING
0+015.98	92.63	90.23	VB1
0+027.71	92.60	90.20	45° H. BEND
0+030.54	92.54	90.14	45° H. BEND
0+032.32	92.54	90.14	V. BEND
0+033.01	92.56	89.47	V. BEND
0+034.11	92.56	89.47	V. BEND
0+034.80	92.56	90.16	V. BEND
0+040.06	92.79	90.58	CAP

STM MANHOLE TABLE

MANHOLE ID	SIZE (mm)	T/G ELEV (m)	INVERT (m)	ICD	100YR DESIGN FLOW (L/s)	100YR HEAD (m)
137	1200mmØ	92.94	E=91.14 N=90.65	-		
139	1200mmØ	92.90	S=90.28 NE=90.21	-		
CBMH1	1200mmØ	92.50	SW=90.04 E=90.04	TEMPEST LMF (VORTEX 50)	3.5	2.68

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.

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No.	REVISION	DATE	BY
1.	CITY SUBMISSION	FEB 24/23	MAB

SCALE
1:200

1:200
0 2 4 6 8

DESIGN	LRW
CHECKED	MAB
DRAWN	DTD
CHECKED	LRW
APPROVED	MAB

FOR REVIEW ONLY

L. R. WILSON
100160065

M.A. BISSETT
2023.02.24

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CITY OF OTTAWA
285 MOUNTSHANNON DRIVE - BLOCK 1

SERVICING PLAN

PROJECT No.
112021-04

REV
REV # 1

DRAWING No.
112021-04-GP

PLANA1.DWG - 841mmx594mm