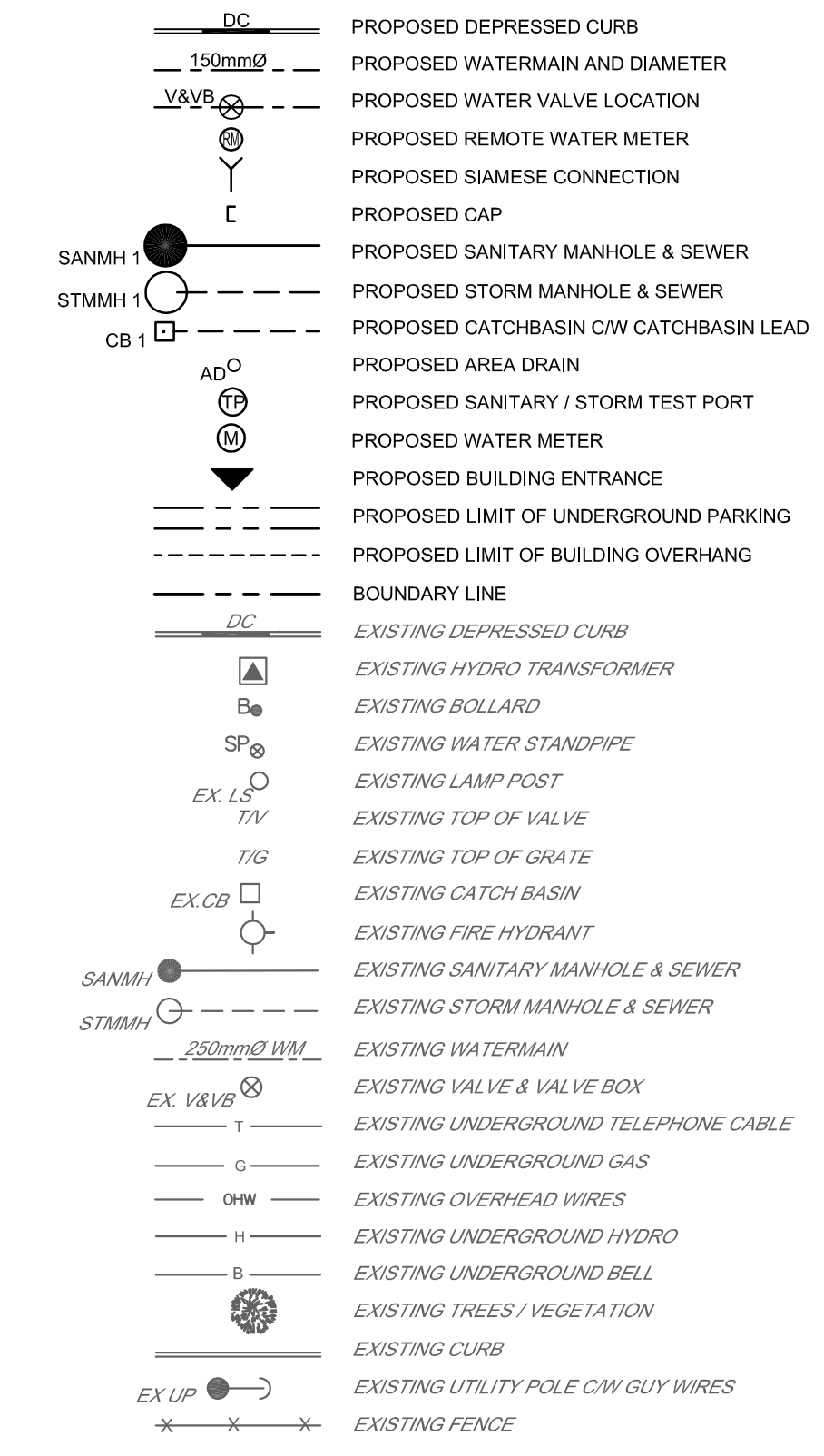


GENERAL NOTES:

- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- 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 THIS DRAWING.
- OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
- BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$5,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
- RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
- REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
- ALL ELEVATIONS ARE GEODETIC.
- REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
- REFER TO STORMWATER MANAGEMENT REPORT (R-2013-003, DATED JAN. 31, 2013) AND SERVICES DESIGN BRIEF (R-2013-003, DATED JAN. 31, 2013) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
- SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
- PROVIDE LINE/PARKING PAINTING.
- CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVICES AS-BUILT INFORMATION SHOWN ON THIS PLAN, AS-BUILT INFORMATION MUST INCLUDE PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND TIG ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, TWM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.
- REFER TO GEOTECHNICAL REPORT (NO. PG 267-41, DATED MAY 21, 2012) PREPARED BY PATTERSON GROUP FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
- ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS AND ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS. ONTARIO PROVINCIAL STANDARDS WILL APPLY WHERE NO CITY STANDARDS ARE AVAILABLE.
- ALL PRIVATE APPROACHES MUST BE CONSTRUCTED AS PER CITY SPECIFICATION SC13

LEGEND



SEWER NOTES:

- SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
SEWER SERVICE CONNECTION - RIGID PIPE	S 11	CITY OF OTTAWA
SEWER SERVICE ABANDONMENT	S 11.4	CITY OF OTTAWA
CATCH-BASIN (600x600mm)	705.010	OPSD
STORM / SANITARY MANHOLE (12000)	701.010	OPSD
CB, FRAME & COVER	400.020	OPSD
STORM / SANITARY MH FRAME & COVER	401.010	OPSD
SEWER TRENCH - BEDDING (GRANULAR A)	401.010	OPSD
COVER (GRANULAR A OR GRANULAR B TYPE I, WITH MAXIMUM PARTICLE SIZE=25mm)	401.010	OPSD
STORM SEWER	PVC DR 35	
SANITARY SEWER	PVC DR 35	
CATCH-BASIN LEAD	PVC DR 35	
- INSULATE ALL PIPES (SANITARY) THAT HAVE LESS THAN 1.5m COVER WITH 50mmx1200mm HI-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
- SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1:100.
- 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.
- FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-SEAL, PSX, POSITIVE SEAL AND DURASEAL). THE CONCRETE CRACKLE FOR THE PIPE CAN BE ELIMINATED.
- THE OWNER SHALL REQUIRE THAT THE SITE SERVING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSD 410.07.16.04 AND 607.07.24. 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 A CERTIFIED PROFESSIONAL ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST REPORTS.
- FULL PORT BACKWATER VALVES ARE REQUIRED ON THE SANITARY SERVICES. INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND A BACKWATER VALVE IS REQUIRED ON THE STORM SERVICES / FOUNDATION DRAINS FOR EACH BUILDING. INSTALLED AS PER STD. DWG 514.
- STORM MANHOLES AND CBMS ARE TO HAVE 300mm SLUMPS UNLESS OTHERWISE INDICATED.
- CONTRACTOR TO TELETYPE (CCTV) ALL PROPOSED SEWERS.
- REINSTATE ALL EXISTING PAVEMENT, CURB AND BOULEVARDS AS PER CITY OF OTTAWA R10.
- ALL EXISTING SANITARY AND STORM SERVICES ARE TO BE CAPED AT THE PROPERTY LINE TO THE SATISFACTION OF THE CITY OF OTTAWA'S SEWER OPERATIONS.

STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	DESCRIPTION
0+00.0	62.80	60.40	CONNECT TO EXISTING 150mm WATERMAIN
0+05.0	62.94	60.54	N&VB
0+10.0	63.02	60.62	
0+14.4	63.20	60.80	STAND POST AT PROPERTY LINE
0+14.8	63.21	60.81	WATERMAIN CAP

EXACT DEPTH OF EXISTING WATERMAIN TO BE DETERMINED AT TIME OF EXCAVATION. CONTRACTOR TO CONFIRM TOP OF WATERMAIN. PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAIL W23 WHERE COVER IS LESS THAN 2.4m

ITEM	CLEARANCE
150mm WM TWM = 59.44	0.50m
150mm WM TWM = 59.49	0.50m
150mm WM TWM = 59.54	0.50m
150mm WM TWM = 59.59	0.96m
150mm WM TWM = 59.64	0.50m
150mm WM TWM = 59.69	0.50m
150mm WM TWM = 59.74	0.50m
150mm WM TWM = 59.79	0.50m
150mm WM TWM = 59.84	1.54m
150mm WM TWM = 59.89	1.50m

PROVIDE THERMAL INSULATION FOR WATERMAIN AS PER CITY OF OTTAWA DETAIL W23 WHERE COVER IS LESS THAN 2.4m. VERTICAL BENDS TO BE PROVIDED WHERE REQUIRED AS PER W23

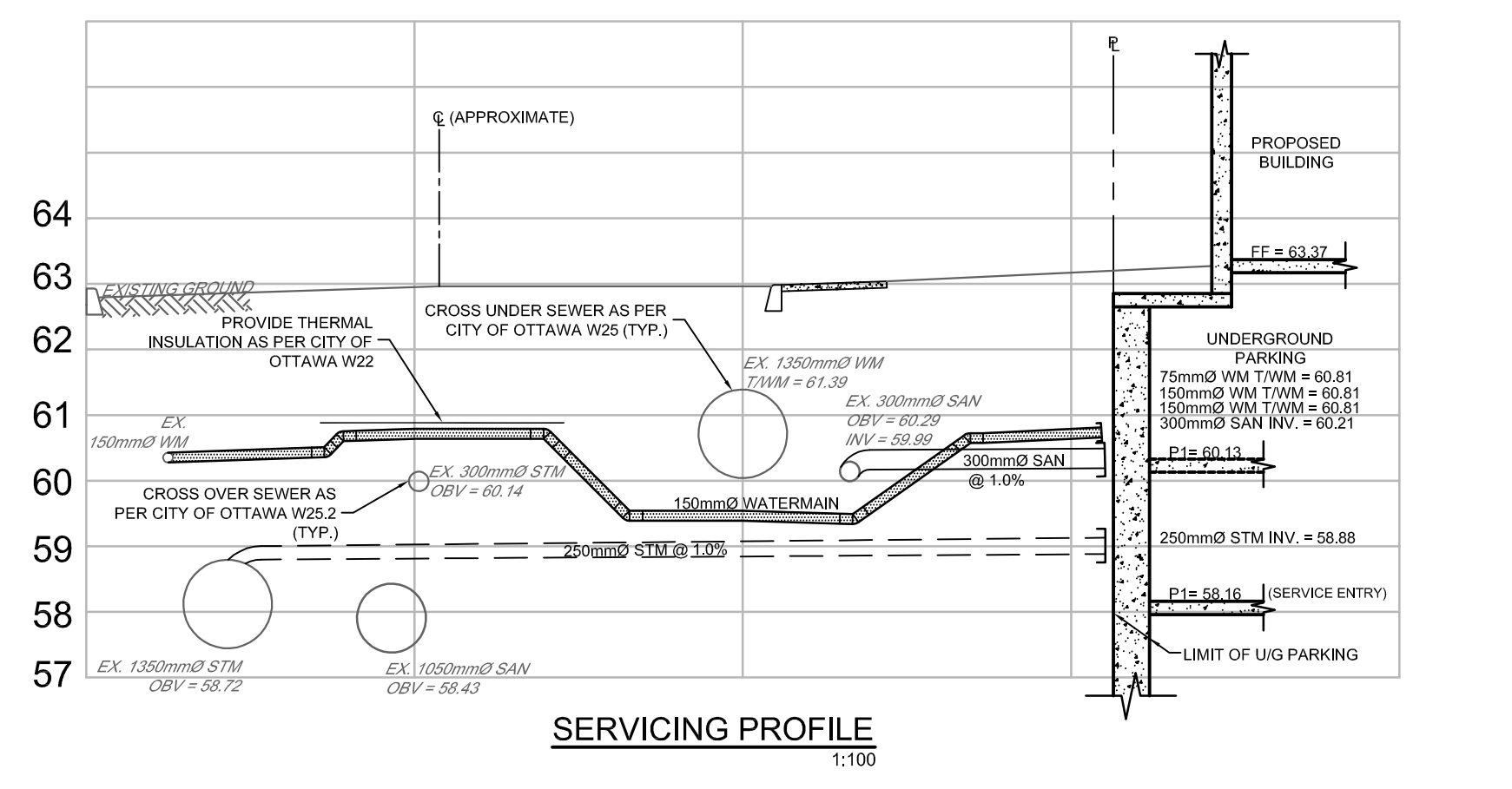
WATERMAIN NOTES:

- SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
VALVE BOX ASSEMBLY	W24	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER	W25.1	CITY OF OTTAWA
WATERMAIN CROSSING OVER SEWER	W25.2	CITY OF OTTAWA
WATERMAIN (150mm)	PVC DR 18	
TYPE K COPPER	W23	CITY OF OTTAWA
19mm WATER SERVICE CONNECTIONS	W26	CITY OF OTTAWA
50mm WATER SERVICE CONNECTIONS	W33	CITY OF OTTAWA
WATER SERVICE INSTALLATION AT SEWER CROSSING	W38	CITY OF OTTAWA
- 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. OTHERWISE THERMAL INSULATION IS REQUIRED AS PER STD. DWG W22.
- PROVIDE MINIMUM 0.50m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
- WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.
- WATER DEMAND = TBD
- ALL EXISTING WATER SERVICES TO BE BLANK AT MAIN EXCAVATION AND REINSTATEMENT BY CONTRACTOR.

AREA ID	ZURN SPECIFICATION	NOTCHES	1.5 - YEAR EVENT			1:100 - YEAR EVENT		
			HEAD(m)	Q(l/s)	VOL(m³)	HEAD(m)	Q(l/s)	VOL(m³)
			TOTAL					
R-01	ZCF121-1W-X4-Z-105-10-77	1	0.11	0.40	1.91	0.15	0.52	4.20
R-02	ZCF121-1W-X4-Z-105-10-77	1	0.11	0.42	1.97	0.15	0.55	4.13
R-03	ZCF121-1W-X4-Z-105-10-77	1	0.12	0.43	2.00	0.15	0.56	5.61
R-04	---	---	0.00	0.67	0.00	0.00	1.27	0.00
R-05	---	---	0.00	0.67	0.00	0.00	1.27	0.00
R-06	---	---	0.00	0.67	0.00	0.00	1.27	0.00
R-07	ZCF121-1W-X1-Z-105-10-77	1	0.03	0.51	0.10	0.05	0.72	0.28
R-08	ZCF121-1W-X1-Z-105-10-77	1	0.04	0.51	0.11	0.05	0.73	0.30
R-09	---	---	0.00	0.53	0.00	0.00	1.01	0.00
R-10	---	---	0.00	0.57	0.00	0.00	1.08	0.00
R-11	---	---	0.00	0.61	0.00	0.00	1.16	0.00
R-12	ZCF121-1W-X4-Z-105-10-77	1	0.11	0.39	1.57	0.14	0.51	3.48
R-13	ZCF121-1W-X4-Z-105-10-77	1	0.11	0.40	1.57	0.14	0.52	3.48
R-14	ZCF121-1W-X4-Z-105-10-77	1	0.10	0.37	1.98	0.13	0.49	2.18
R-15	ZCF121-1W-X4-Z-105-10-77	1	0.11	0.40	1.80	0.14	0.52	3.97
R-16	ZCF121-1W-X4-Z-105-10-77	1	0.11	0.40	1.78	0.14	0.52	3.97
R-17	ZCF121-1W-X4-Z-105-10-77	1	0.10	0.37	1.77	0.14	0.52	3.99
R-18	ZCF121-1W-X4-Z-105-10-77	1	0.07	0.27	0.65	0.10	0.38	1.15
R-19	ZCF121-1W-X4-Z-105-10-77	1	0.10	0.36	0.35	0.13	0.48	0.66
R-20	ZCF121-1W-X4-Z-105-10-77	1	0.07	0.27	0.65	0.10	0.38	1.15
TOTAL			2.24	17.16	144.45	2.44	37.95	

ROOF AREAS R-01 TO R-20 WILL HAVE CONTROLLED ROOF DRAINS WHICH WILL DIRECT RUNOFF TO THE OUTLET VIA THE BUILDING'S INTERNAL PIPES. REFER TO DRAWING 112191-STM FOR STORM DRAINAGE DETAILS.



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.

CLARIDGE HOMES
 CLARIDGE HOMES SUITE 2001,
 210 GLADSTONE AVENUE,
 OTTAWA, ONTARIO K2P 0Y6.

NOTE: CONTRACTOR TO CONFIRM ELEVATIONS OF INFRASTRUCTURE IN THE STREET PRIOR TO EXTENDING SERVICES INTO THE SITE AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.

No.	REVISION	DATE	BY
01.	ISSUED WITH SITE PLAN APPLICATION	JAN 31/13	GJM

SCALE: 1:200

FOR REVIEW ONLY

JAG
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MTM
JAG
GJM

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 Telephone: (613) 254-9643
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 Email: novat@novatech-eng.com

LOCATION: CITY OF OTTAWA 1040 SOMERSET STREET WEST

DRAWING NAME: GENERAL PLAN OF SERVICES

PROJECT NO.: 112191-01
 REV: # 01
 DRAWING NO.: 112191-GP