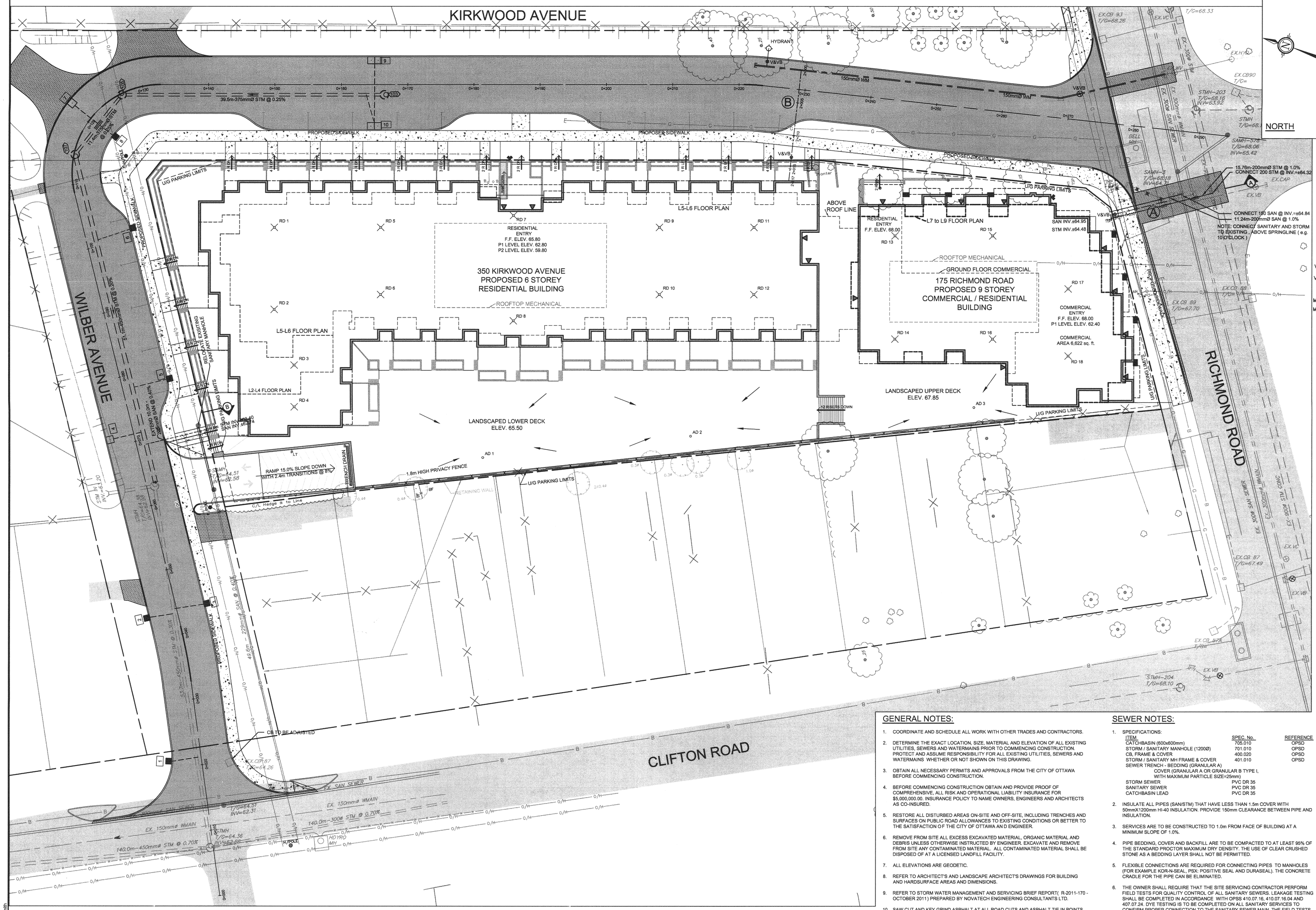

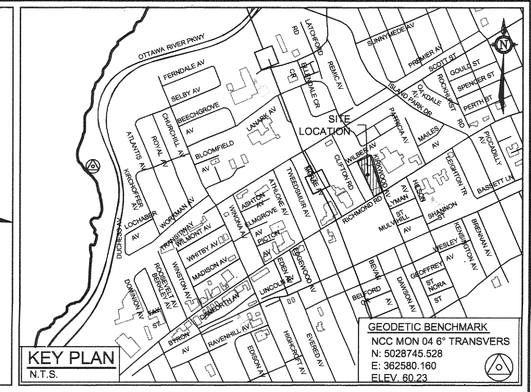

LEGEND

- IRON BAR & PROPERTY LINE
- LEGAL ADJACENT
- PROPOSED BELL PEDESTAL
- PROPOSED CABLE PEDESTAL
- PROPOSED DEPRESSED CURB
- PROPOSED BARRIER CURB
- PROPOSED ASPHALT
- PROPOSED CATCHBASIN/MANHOLE
- PROPOSED VALVE LOCATION
- PROPOSED VALVE & VALVE BOX
- PROPOSED FIRE HYDRANT
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED CATCHBASIN
- ABANDONED
- REMOVAL
- ADJUSTED
- PODIUM DRAIN
- AREA DRAIN
- REMOTE METRE
- MONITERING TEST PORT
- WATER METRE
- DIRECTION OF FLOW
- PROPOSED GAS METER
- PROPOSED REARYARD CATCHBASIN
- PROPOSED STORM SEWER
- PROPOSED SANITAY SEWER
- PROPOSED WATERMAIN
- PROPOSED GAS
- PROPOSED HYDRO
- PROPOSED RETAINING WALL
- UNDERGROUND PARKING LIMIT

- EXISTING COMBINED MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING GAS METRE
- EXISTING TRAFFIC LIGHT
- EXISTING LAMP STANDARD
- EXISTING CATCH BASIN
- EXISTING SIDEWALK
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING BELL LINE
- EXISTING HYDRO LINE
- EXISTING GAS LINE
- EXISTING TRAFFIC SIGNALE
- EXISTING FIBER OPTIC LINE
- EXISTING WATER MAIN
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING VALVE CHAMBER
- EXISTING BELL PEDESTAL
- EXISTING HYDRO TRANSFORMER
- EXISTING HYDRO MANHOLE
- EXISTING TRAFFIC MANHOLE
- EXISTING UTILITY POLE

PROPOSED BUILDINGS - ROOF & AREA DRAIN TABLE

ROOF DRAIN ID	ZURN SPECIFICATION	NOTCHES	POST-DEVELOPMENT CONDITIONS			
			1:5 YEAR EVENT		1:100 YEAR EVENT	
			FLOW (L/S)	DEPTH (m)	FLOW (L/S)	DEPTH (m)
RD 1 - 18	ZCF121-1W-X3-Z-105-10-77	1	0.42	0.113	0.54	0.145
AD 1 - 2	ZN-221-2NH-G-P-X-VP-Y		2.97	0.105	3.15	0.141
AD 3			2.90	0.092	3.08	0.122
TOTAL			16.40		19.10	

GENERAL NOTES:

1. COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
2. DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES, SEWERS AND WATERMAINS PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES, SEWERS AND WATERMAINS WHETHER OR NOT SHOWN ON THIS DRAWING.
3. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
4. 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.
5. 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 O F THE CITY OF OTTAWA AN D ENGINEER.
6. 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.
7. ALL ELEVATIONS ARE GEODETIC.
8. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
9. REFER TO STORM WATER MANAGEMENT AND SERVICING BRIEF REPORT(R-2011-170 - OCTOBER 2011) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
10. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
11. PROVIDE LINE/PARKING PAINTING.
12. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.
13. DESIGN AS PER BY-LAW REGULATIONS, CITY STANDARDS AND GOOD ENGINEERING PRACTICE.

SEWER NOTES:

1. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
CATCHBASIN (600x600mm)	705.010	OPSD
STORM / SANITARY MANHOLE (1200Ø)	701.010	OPSD
CB, FRAME & COVER	400.020	OPSD
STORM / SANITARY MH FRAME & COVER	401.010	OPSD
SEWER TRENCH - BEDDING (GRANULAR A) COVER (GRANULAR A OR GRANULAR B TYPE I, WITH MAXIMUM PARTICLE SIZE=25mm)		
STORM SEWER	PVC DR 35	
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 FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
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. FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SEAL, PSX: POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
6. THE OWNER SHALL REQUIRE THAT THE SITE SERVICING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410.07.16, 410.07.16.04 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 A CERTIFIED PROFESSIONAL ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.
7. STORM MANHOLES AND CBMHS ARE TO 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.

GEOTECHNICAL REPORT:

1. REFER TO GEOTECHNICAL INVESTIGATION (PGxxxx-LET.xx, xxx. 2011) PREPARED BY PATERSON GROUP CONSULTING ENGINEERS.

WATERMAIN NOTES:

1. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAWA
WATERMAIN	PVC DR 18	

2. 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.
3. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
4. PROVIDE MINIMUM 0.50m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

WATERMAIN TABLE: RICHMOND ROAD CONNECTION (MIN COVER = 2.4m)

	STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	DESCRIPTION
A	1+000.0	68.15	65.75✱	CONNECT TO EXISTING
	1+001.6	68.07	65.67	CROSS SAN SEWER (INV. ±64.69)
	1+005.7	67.93	65.53	CURB FACE
	1+012.2	68.02	65.62	V&VB
	1+012.8	68.05	65.65	BLDG FACE

WATERMAIN TABLE: KIRKWOOD AVENUE CONNECTION (MIN COVER = 2.4m)

	STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	DESCRIPTION
B	2+000.0	66.41	64.01✱	CONNECT TO EXISTING
	2+012.2	66.56	64.16	V&VB
	2+012.8	66.60	64.20	BLDG FACE

✱ 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

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.

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

CLARIDGE H·O·M·E·S

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
1.	ISSUED FOR CITY SITE PLAN APPLICATION	OCT. 06/11	GJM

SCALE 1:250 (1:250 0 2 4 6 8 10)

DESIGN BHB/DS
CHECKED GJM
DRAWN BHB/DS
CHECKED GJM
APPROVED GJM

FOR REVIEW ONLY

LICENSED PROFESSIONAL ENGINEER G.J. McDONALD 100113 PROVINCE OF ONTARIO

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LOCATION
CITY OF OTTAWA
RICHMOND ROAD RESIDENTIAL DEVELOPMENT
175 RICHMOND ROAD

DRAWING NAME
GENERAL PLAN OF SERVICES

PROJECT No. 111130-00
REV REV # 01
DRAWING No. 111130-GP

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DVIEW 72.10*

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