

**LEGEND**

- COMH EXISTING COMBINED MANHOLE
- MH-5 EXISTING SANITARY MANHOLE
- MH-ST EXISTING STORM MANHOLE
- CB EXISTING CATCH BASIN
- FH EXISTING FIRE HYDRANT
- VC EXISTING VALVE CHAMBER
- EXH EXISTING HYDRO TRANSFORMER
- EXHM EXISTING HYDRO MANHOLE
- EXSM EXISTING STORM MANHOLE
- EXUM EXISTING UTILITY POLE
- EXGM EXISTING GAS METRE
- EXFL EXISTING FIBER OPTIC LINE
- EXST EXISTING STORM SEWER
- EXSA EXISTING SANITARY SEWER
- EXBL EXISTING BELL LINE
- EXHL EXISTING HYDRO LINE
- MH IOI PROPOSED SANITARY MANHOLE
- MH IOO PROPOSED STORM MANHOLE
- CB PROPOSED CATCHBASIN
- VBVB PROPOSED VALVE & VALVE BOX
- PROPOSED BELL PEDESTAL
- PROPOSED CABLE PEDESTAL
- CB/MH PROPOSED CATCHBASIN/MANHOLE
- WV D.C. PROPOSED VALVE LOCATION
- PROPOSED DEPRESSED CURB
- PROPOSED BARRIER CURB
- IRON BAR & PROPERTY LINE
- LEGAL ADJACENT
- PROPOSED CABLE SEWER
- PROPOSED SANITARY SEWER
- ABANDONED
- REMOVAL
- ADJUSTED
- PROPOSED SOFT LANDSCAPING
- PROPOSED GAS METER
- PROPOSED PODIUM DRAIN
- PROPOSED SIAMESE CONNECTION
- PROPOSED REMOTE WATER METER
- PROPOSED WATER METER
- INTERNAL MONITORING TEST PORTS

**WATERMAIN TABLE**

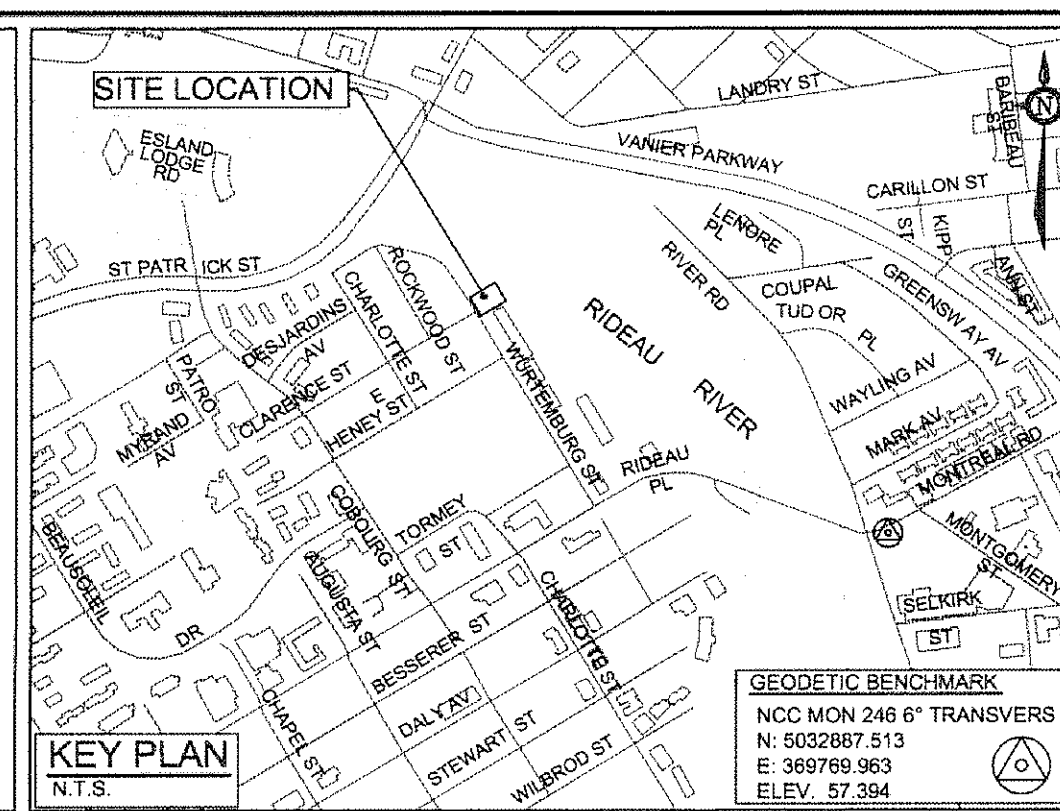
STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	DESCRIPTION
0+00.0	67.90	65.50	CONNECT TO EXISTING
0+01.5	67.86	65.46	CURB FACE
0+02.4	68.01	65.61	HYDRO DUCT
0+03.9	68.06	65.66	WM BEND 45°
0+05.6	68.06	65.66	WM BEND 45°
0+07.0	68.08	65.68	STANPOST R
0+07.0	68.08	65.68	RIDGE FACE
TOTAL			

\* 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 2.0m.

**ROOF DRAIN TABLE**

AREA ID	ZURN SPECIFICATION	NOTCHES	ZURN ROOF DRAIN CONTROL PARAMETERS	
			5-YEAR EVENT	100-YEAR EVENT
			HEADWIND Q(%)	HEADWIND Q(%)
R-01	ZCF121-WX3-2-105-10-77	1	0.112	0.143
R-02	ZCF121-WX2-2-105-10-77	1	0.115	0.148
R-03	ZCF121-WX4-2-105-10-77	1	0.055	0.079
R-04	ZCF121-WX4-2-105-10-77	1	0.039	0.081
TOTAL			2.47	3.25

ROOF AREAS R-01 TO R-04 WILL HAVE CONTROLLED ROOF DRAINS WHICH WILL DIRECT RUNOFF TO THE OUTLET VIA THE BUILDINGS INTERNAL PIPES.



NORTH

**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 ARCHITECTS AND LANDSCAPE ARCHITECTS DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
- REFER TO STORMWATER MANAGEMENT REPORT (R-2011-034) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
- SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT IN THE 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 AS BUILT ON THIS PLAN. AS BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZE, LENGTHS, SLOPES, INVERT AND TIC ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, TWM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.
- REFER TO GEOTECHNICAL REPORT (No. P03003), DATED Dec. xx, 2011, PREPARED BY PATERSON 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.

**SEWER NOTES:**

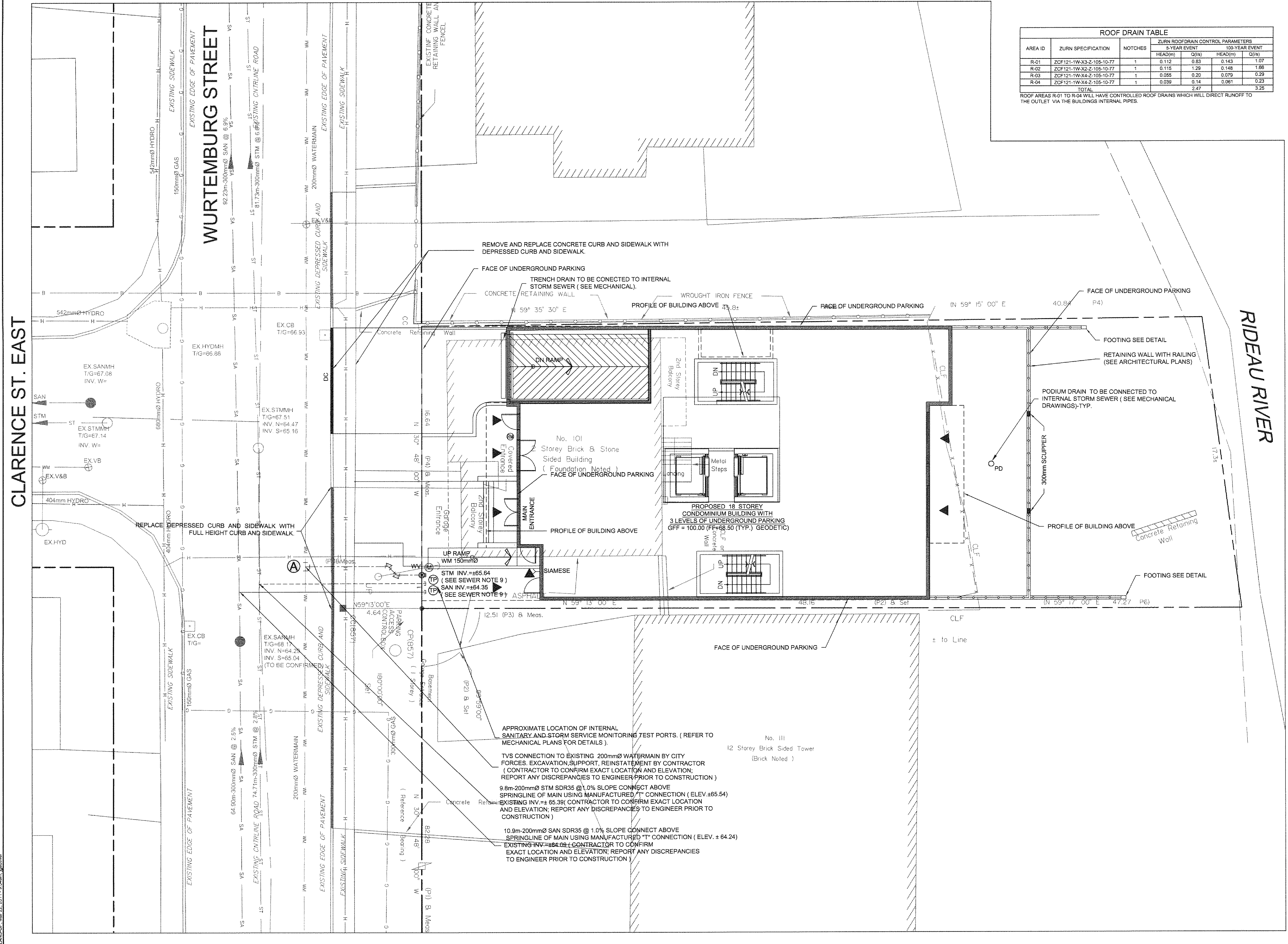
- SPECIFICATIONS:
 

ITEM	SPEC. No.	REFERENCE
CATCHBASIN (600x600mm)	705.010	OPSD
STORM/SANITARY MANHOLE (1200B)	701.010	OPSD
CB FRAME & COVER	400.020	OPSD
STORM/SANITARY MH FRAME & COVER	401.010	OPSD
SEWER TRENCH - BEDDING (GRANULAR A)		OPSD
COVER (GRANULAR A OR GRANULAR B TYPE I, WITH MAXIMUM PARTICLE SIZE=25mm)		OPSD
STORM SEWER	PVC DR 35	
SANITARY SEWER	PVC DR 35	
CATCHBASIN LEAD	PVC DR 35	
- INSULATE ALL PIPES (SANITARY) THAT HAVE LESS THAN 1.5m COVER WITH 50mmX1200mm H-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 1.0%.
- 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-N-SEAL, PSX POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
- 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 OPSB 410.07.16, 410.07.18.04 AND 407.24. 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.
- STORM MANHOLES AND CATCHBASINS ARE TO HAVE 300mm SLUMPS UNLESS OTHERWISE INDICATED.
- CONTRACTOR TO TELETEST (CCTV) ALL PROPOSED SEWERS.
- FULL PORT BACKWATER VALVES ARE REQUIRED ON THE SANITARY SERVICES. INSTALLED AS PER THE MANUFACTURERS RECOMMENDATIONS AND A BACKWATER VALVE IS REQUIRED ON THE STORM SERVICES FOUNDATION DRAINS FOR EACH BUILDING. INSTALLED AS PER STD. DWG 514.
- REINSTATE ALL EXISTING PAVEMENT CURB AND BOULEVARDS.
- ALL EXISTING SANITARY AND STORM SERVICES TO BE CAPPED AT THE PROPERTY LINE TO THE SATISFACTION OF THE CITY OF OTTAWA.

**WATERMAIN NOTES:**

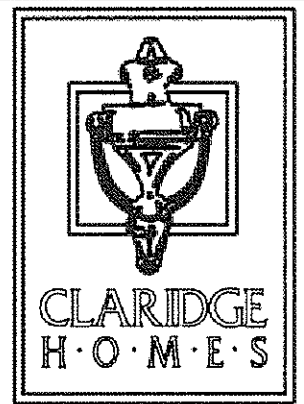
- SPECIFICATIONS:
 

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 (150mm)		
WATERMAIN (50mm)		
THERMAL INSULATED AT OPEN STRUCTURE	W23	CITY OF OTTAWA
150mm WATER SERVICE CONNECTIONS	W28	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 STANDARD AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMANS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND COLORATION 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 0.25m 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 BLANKED AT MAIN.



**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.

SCALE		DESIGN	
1:100		JAG	
1:100		CHECKED GJM	
0 1 2 3 4		DRAWN MAY	
		CHECKED JAG	
		APPROVED GJM	
01	ISSUED WITH SITE PLAN APPLICATION	02/18/11	GJM
No.	REVISION	mm/dd/yyyy	BY

**FOR REVIEW ONLY**

PROFESSIONAL ENGINEER  
G.J. MacDONALD  
PROVINCE OF ONTARIO

**NOVATECH**  
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LOCATION  
CITY OF OTTAWA  
101 WURTEMBERG STREET

DRAWING NAME  
GENERAL PLAN AND SERVICES

PROJECT No.  
111013-00

REV  
REV #01

DRAWING No.  
111013-GP