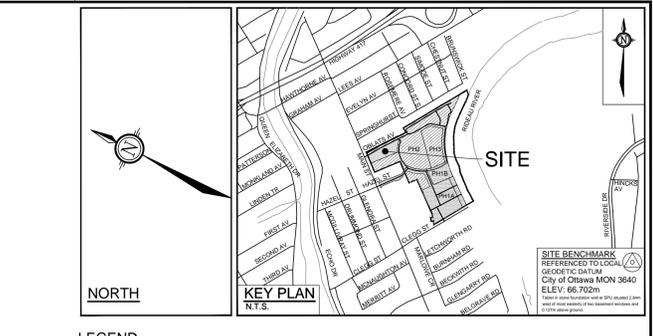


AREA ID	ZURN SPECIFICATION	NOTCHES	POST DEVELOPMENT ZURN ROOF DRAIN CONTROL PARAMETERS		
			1.5-YEAR EVENT	1.100-YEAR EVENT	
TOP ROOF	AS REQUIRED		HEAD(m)	Q(l/s)	VOL(m³)
REMAINDER OF ROOF	N/A		-	-	-
TOTAL			-	-	-

AREA ID	ZURN SPECIFICATION	NOTCHES	POST DEVELOPMENT ZURN ROOF DRAIN CONTROL PARAMETERS		
			1.5-YEAR EVENT	1.100-YEAR EVENT	
TOP ROOF	AS REQUIRED		HEAD(m)	Q(l/s)	VOL(m³)
REMAINDER OF ROOF	N/A		-	-	-
TOTAL			-	-	-

STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	DESCRIPTION
0+000	64.99	62.58*	CONNECT TO EXISTING 250mmØ WATERMAIN
0+06.2	65.14	62.74*	WATER VALVE AT PROPERTY LINE
0+06.2	65.16	62.76*	CAP

STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	DESCRIPTION
0+000	64.56	62.16*	CONNECT TO EXISTING 400mmØ WATERMAIN
0+05.0	64.62	62.22*	WATER VALVE AT PROPERTY LINE
0+11.7	64.55	62.45*	WATER VALVE AT PROPERTY LINE
0+12.7	64.57	62.47*	CAP



- LEGEND**
- SITE BOUNDARY
  - PROPOSED STORM SEWER AND DIRECTION OF FLOW
  - PROPOSED SANITARY SEWER AND DIRECTION OF FLOW
  - PROPOSED WATERMAIN
  - PROPOSED VALVE AND VALVE BOX
  - PROPOSED HYDRO METER LOCATION
  - PROPOSED REMOTE METER LOCATION
  - PROPOSED WATER METER LOCATION
  - PROPOSED REMOTE METER LOCATION
  - PROPOSED SANITARY / STORM MONITORING TEST PORT
  - PROPOSED RETAINING WALL
  - PROPOSED BUILDING ENTRANCE
  - PROPOSED CATCHBASIN
  - PROPOSED AREA DRAIN
  - PROPOSED STREETLIGHT
  - PROPOSED TREES / SHRUBS
  - EXISTING TREES
  - EXISTING STORM MANHOLE AND SEWER
  - EXISTING SANITARY MANHOLE AND SEWER
  - EXISTING WATERMAIN
  - EXISTING UNDERGROUND BELL
  - EXISTING UNDERGROUND ROCCERS CABLE
  - EXISTING UNDERGROUND HYDRO
  - EXISTING UNDERGROUND GAS
  - EXISTING ABANDONED UNDERGROUND GAS
  - EXISTING VALVE AND VALVE BOX
  - EXISTING TOP OF GRADE
  - EXISTING FIRE HYDRANT
  - EXISTING CATCHBASIN
  - EXISTING UTILITY POLE C/W GUY WIRES
  - EXISTING STREETLIGHT
  - PROPOSED CONCRETE LIMITS

- 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 SERVICING DESIGN BRIEF 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 GRADING PLAN INDICATING THE AS-BUILT ELEVATION OF EVERY DESIGN GRADE SHOWN ON THIS PLAN.
  - REFER TO GEOTECHNICAL REPORT NO. 1688819, DATED JUNE 2017, PREPARED BY GOLDER ASSOCIATES 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 AND SPECIFICATIONS 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
SEWER SERVICE CONNECTION - RIGID PIPE	S11	CITY OF OTTAWA
SEWER SERVICE ABANDONMENT	S11.4	CITY OF OTTAWA
SEWER TRENCH - BEDDING (GRANULAR A)	S6, S7, W17	CITY OF OTTAWA / OPSD
COVER (GRANULAR A OR GRANULAR B TYPE I WITH MAXIMUM PARTICLE SIZE=25mm)	S6, S7, W17	CITY OF OTTAWA / OPSD
STORM SEWER	PVC DR 36	
SANITARY SEWER	PVC DR 36	
  - INSULATE ALL PIPES (SAN/STM) 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 1.0%.
  - 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 OPS 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.
  - 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 S14.
  - CONTRACTOR TO TELEPHONE (CCTV) ALL PROPOSED SEWERS/LATERALS.
  - REINSTATE ALL EXISTING PAVEMENT, CURBS AND BOULEVARDS AS PER CITY OF OTTAWA R10.
  - ALL EXISTING SANITARY AND STORM SERVICES ARE TO BE CAPPED AT THE PROPERTY LINE TO THE SATISFACTION OF THE CITY OF OTTAWA'S SEWER OPERATION.
  - MONITORING TEST PORTS FOR BUILDING SERVICES TO BE INSTALLED IN PARKING GARAGE.

- 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
CONNECTION DETAIL FROM EXISTING TO NEW WM	W25.1	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAWA
WATERMAIN CROSSING OVER SEWER	W25.2	CITY OF OTTAWA
WATERMAIN (150mmØ)	PVC DR 18	
WATERMAIN (300mmØ)	TYPE K COPPER	
THERMAL INSULATED AT OPEN STRUCTURE	W28	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 WHEN WATERMAIN IS BELOW AND MINIMUM 0.25m CLEARANCE WHEN WATERMAIN IS ABOVE.
  - WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.
  - WATER DEMAND = A.D.D + T.B.D. L196c, M.D.D + T.B.D. L196c, M.H.D + T.B.D. L196c
  - ALL EXISTING WATER SERVICES TO BE BLANKED AT MAIN BY CITY FORCES. EXCAVATION AND REINSTATEMENT BY CONTRACTOR.
  - WATERMANS TO BE INTERCONNECTED FOR REDUNDANCY.

**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.

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

No.	REVISION	DATE	BY
4.	REVISED PER CITY COMMENTS	DEC 7/18	JAG
3.	ISSUED FOR COORDINATION	NOV 30/18	JAG
2.	REVISED PER CITY COMMENTS	OCT 9/18	JAG
1.	ISSUED WITH SITE PLAN APPLICATION	MARCH 9/18	JAG

SCALE: 1:300

FOR REVIEW ONLY

JAG  
MSP  
MTM  
JAG  
JGR

PROFESSIONAL ENGINEER  
D.D. BLAIR  
100122737

PROFESSIONAL ENGINEER  
J.G. RIDDELL  
7172

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Website: www.novatech-eng.com

LOCATION  
CITY OF OTTAWA  
Greystone Village Condo 2A-2B

DRAWING NAME

GENERAL PLAN OF SERVICES

PROJECT No. 114025-00  
REV # 4  
114025-GP(2A)2B