



**APPROVED**  
By Lily Xu at 4:19 pm, Dec 10, 2019

	SITE BOUNDARY
	LEGAL ADJACENT
	PROPOSED DEPRESSED CURB
	PROPOSED BARRIER CURB
	EXISTING BARRIER CURB
	EXISTING DEPRESSED CURB
	PROPOSED CONCRETE SIDEWALK
	PROPOSED ROADWAY REINSTATEMENT
	PROPOSED VALVE LOCATION
	PROPOSED SIAMESE CONNECTION
	PROPOSED WATER METRE
	PROPOSED REMOTE METRE
	PROPOSED SANITARY / STORM TEST PORT
	PROPOSED TRENCH DRAIN
	PROPOSED SERVICE LOCATION
	DIRECTION OF FLOW
	PROPOSED GAS METER
	PROPOSED AREA DRAIN
	PROPOSED ROOF DRAIN
	PROPOSED STORM SEWER
	PROPOSED SANITARY SEWER
	PROPOSED WATERMAIN
	PROPOSED RETAINING WALL
	PROPOSED UNDERGROUND PARKING LIMIT
	PROPOSED WOOD SCREEN FENCE
	EXISTING COMBINED MANHOLE
	EXISTING SANITARY MANHOLE
	EXISTING STORM MANHOLE
	EXISTING CATCHBASIN
	EXISTING BOLLARD TO BE REMOVED
	EXISTING GAS METRE TO BE REMOVED
	EXISTING WATERMAIN
	EXISTING COMBINED SEWER
	EXISTING STORM SEWER
	EXISTING SANITARY SEWER
	EXISTING HYDRO GUY WIRE
	EXISTING HYDRO UTILITY POLE
	EXISTING BELL LINE
	EXISTING UNDERGROUND HYDRO CONDUIT
	EXISTING OVERHEAD HYDRO LINE
	EXISTING GAS LINE

ITEMS:		SPEC. No.	REFERENCE
1	WATER MAIN TRENCHING	W17	CITY OF OTTAWA
	VALVE BOX ASSEMBLY	W24	CITY OF OTTAWA
	REINFORCEMENT ALL FROM NEW TO EXISTING WM	W25	CITY OF OTTAWA
	WATER MAIN CROSSING OVER SEWER	W25.2	CITY OF OTTAWA
	THERMAL INSULATION IN SHALLOW TRENCHES	W29	CITY OF OTTAWA
	PIPE INSULATED AT JOINT STRUCTURE	W23	CITY OF OTTAWA
	SUPPORT DETAIL FOR CROSSING BELOW AN EX. WM	W29	CITY OF OTTAWA
	WATER METER INSTALLATION 75mm & LARGER	W32	CITY OF OTTAWA
	TYPICAL PRIVATE SESSION - 100mm CONNECTION	W60	CITY OF OTTAWA
	WATERMAIN (150mm)	PVC DR 18	
2)	SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARD AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL, TESTING AND PROTECTION 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 24in DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED. OTHERWISE THERMAL INSULATION IS REQUIRED AS PER STD. DWG W22		
4)	PROVIDE MINIMUM 0.50m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS		
5)	WATER SERVICES TO BE CONSTRUCTED TO WITHIN 1m OF FOUNDATION WALL AND CAPPED. UNLESS OTHERWISE INDICATED.		
6)	WATER DEMAND = 11.79 L/s		
7)	ALL EXISTING WATER SERVICES TO BE BLANKED AT MAIN BY CITY FORCES. EXCAVATION AND REINSTATEMENT BY CONTRACTOR.		

SPECIFICATIONS:	SPEC. NO.	REFERENCE
SEWER SERVICE CONNECTION - RIGID PIPE	<b>\$ 11</b>	<b>CITY OF OTTAWA</b>
SEWER SERVICE CONNECTION - RIGID PIPE	<b>\$ 11.4</b>	<b>CITY OF OTTAWA</b>
SEWER SERVICE CONNECTION - RIGID PIPE		<b>OPSS</b>
SEWER TRENCH - ABOVE GROUND (GRANULAR A)		<b>OPSS</b>
SEWER TRENCH - ABOVE GROUND (GRANULAR B TYPE I, WITH A MINIMUM FILL SIZE=25mm)		<b>OPSS</b>
STORM SEWER	<b>PVC DR 36</b>	
SANITARY SEWER	<b>PVC DR 36</b>	
2) INSULATE ALL PIPES (SANITARY) THAT HAVE LESS THAN 1.5m cover WITH 50mm/100mm Hi-Lod INSULATION. PROVIDE 155mm 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 AT A BEDDING LAYER IS MANDATORY.		
5) FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KORN-SEAL, PSK, POSITIVE SEAL AND DURASEAL). THE CONCRETE CROWN FOR THE PIPE CAN BE ELIMINATED.		
6) THE OWNER SHALL REQUIRE THAT THE SITE SERVISING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING IS TO BE COMPLETED IN ACCORDANCE WITH OPSS 410.07.16, 410.07.16.04 AND 410.24.24. TESTING SHALL BE COMPLETED BY THE SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TEST SHALL BE PERFORMED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL ENGINEER. THE CLIENT SHALL SIGN A CERTIFIED COPY OF THE RESULTS.		
7) 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/ FOUNDATIONS DRAINS FOR EACH BUILDING. INSTALLED AS PER STD. DVGW B14.		
8) RENSTATE ALL EXISTING PAVEMENT, CURB AND BOULEVARDS AS PER CITY OF OTTAWA R10		
9) ALL EXISTING SANITARY AND STORM SERVICES TO BE CAPPED AT THE PROPERTY LINE TO THE SATISFACTION OF THE CITY OF OTTAWA'S SEWER OPERATIONS.		

CRITICAL PIPE CROSSING TABLE			CLEARANCE
①	150mmØ WM OBV=84.40	525mmØ STM INV=84.90	0.50m
②	150mmØ SAN OBV=84.72	525mmØ STM INV=84.90	0.18m
③	225mmØ SAN INV=84.48	150mmØ OBV=83.98	0.50m

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

LOCATION City of Ottawa 1545 Bank Street		PROJECT No.  118019-0
DRAWING NAME  GENERAL PLAN OF SERVICES		REV  REV # 1
		DRAWING No.  118019-GF