

DAMAGE TO THEM.





## **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 PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES 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 OF THE CITY OF OTTAWA AND 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 STORMWATER MANAGEMENT REPORT(R-2013-004, DATED JAN. 31, 2013) AND SERVICING DESIGN BRIEF (R-2013-003, DATED JAN. 31, 2013) 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) REFER TO GEOTECHNICAL REPORT (NO. PG 2674-2R, DATED JUNE 3, 2015) 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.
- 14) 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.

15) ALL PRIVATE APPROACHES MUST BE CONSTRUCTED AS PER CITY SPECIFICATION SC13

## SEWER NOTES:

STORM SEWER

- 1) SPECIFICATIONS: SPEC No. <u>ITEM</u> SEWER SERVICE CONNECTION - RIGID PIPE S 11 SEWER SERVICE ABANDONMENT 05.010 CATCHBASIN (600x600mm) STORM / SANITARY MANHOLE (1200Ø) CB. FRAME & COVER STORM / SANITARY MH FRAME & COVER SEWER TRENCH - BEDDING (GRANULAR A)
  - OPSD 701.010 400.020 OPSD OPSD OPSD 401.010 OPSD COVER (GRANULAR A OR GRANULAR B TYPE I, OPSD WITH MAXIMUM PARTICLE SIZE=25mm) PVC DR 35

<u>REFERENCE</u>

CITY OF OTTAWA CITY OF OTTAWA

- 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) FULL PORT BACKWATER VALVES ARE REQUIRED ON THE SANITARY SERVICES. INSTALLED AS PER THE MANUFACTURES RECOMMENDATIONS AND A BACKWATER VALVE IS REQUIRED ON THE STORM SERVICES / FOUNDATION DRAINS FOR EACH BUILDING; INSTALLED AS PER STD. DWG S14.
- 8) STORM MANHOLES AND CBMHS ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
- 9) CONTRACTOR TO TELEVISE (CCTV) ALL PROPOSED SEWERS.
- 10)REINSTATE ALL EXISTING PAVEMENT, CURB AND BOULEVARDS AS PER CITY OF OTTAWA R10.
- 11) ALL EXISTING SANITARY AND STORM SERVICES ARE TO BE CAPPED AT THE PROPERTY LINE TO THE SATISFACTION OF THE CITY OF OTTAWA'S SEWER OPERATIONS.

## **PROPOSED BUILDING - ROOF DRAIN TABLE**

			P	OST DEVELOP	MENT ZURN R	OOFDRAIN CO		/ETERS
AREA ID	ZURN SPECIFICATION	NOTCHES	1:5 - YEAR EVENT			1:100 - YEAR EVENT		
			HEAD(m)	Q(l/s)	VOL(m <sup>3</sup> )	HEAD(m)	Q(l/s)	VOL(m <sup>3</sup> )
R-01	ZCF121-1W-X4-Z-105-10-77	1	0.11	0.40	1.91	0.14	0.52	4.20
R-02	ZCF121-1W-X4-Z-105-10-77	1	0.11	0.42	1.87	0.15	0.55	4.13
R-03	ZCF121-1W-X4-Z-105-10-77	1	0.12	0.43	2.60	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	2.23	0.14	0.52	4.86
R-14	ZCF121-1W-X4-Z-105-10-77	1	0.10	0.37	0.96	0.13	0.49	2.16
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	3.92
R-17	ZCF121-1W-X4-Z-105-10-77	1	0.11	0.40	1.77	0.14	0.52	3.89
R-18	ZCF121-1W-X4-Z-105-10-77	1	0.07	0.27	0.05	0.10	0.38	0.15
R-19	ZCF121-1W-X4-Z-105-10-77	1	0.10	0.36	0.35	0.13	0.48	0.86
R-20	ZCF121-1W-X4-Z-105-10-77	1	0.07	0.27	0.05	0.10	0.38	0.15
TOTAL				9.24	17.16		14.45	37.95
ROOF AREAS	S R-01 TO R-20 WILL HAVE CON	NTROLLED RO	OF DRAINS V		IRECT RUNO	FF TO		

THE OUTLET VIA THE BUILDINGS INTERNAL PIPES. REFER TO DRAWING 112191-STM FOR STORM DRAINAGE AREAS.

CALE	DESIGN	FOR RE
	JAG	
	CHECKED	
:200	GJM/JGR	
	DRAWN	
	MTM/BET	
1:200	CHECKED	
	JAG	
	APPROVED	
	GJM/JGR	

REVISION

DATE





**LEGEND** 



X X EXISTING FENCE WATERMAIN TABLE (x3 SERVIC SURFACE TOP OF WM ELEVATION ELEVATION DESCRIPTION STATION 62.80 ±60.40\* CONNECT TO EXISTING 0+00.0 62.80 ±60.40 V&VB 62.94 60.54 STATION 
 0+10.0
 63.02
 60.62
 STATION

 0+14.4
 63.20
 60.80
 STAND POST AT PROPE

 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

I	CRITICAL PIPE CRO	SSING TABLE
1	150mmØ WM T/WM = 59.48 <b>*</b> 150mmØ WM T/WM = 59.49 <b>*</b> 250mmØ STM OBV= 59.09	300mmØ SAN OBV= 59.9 300mmØ SAN OBV= 59.9 300mmØ SAN INV= 60.0
0	250mmØ STM OBV = 59.08 150mmØ WM T/WM = 59.54 150mmØ WM T/WM = 59.54	1350mmØ WM T/WM= ±6 1350mmØ WM T/WM= ±6 1350mmØ WM T/WM= ±6
3	150mmØ WM T/WM = 60.78 <b>*</b> 150mmØ WM T/WM = 60.79 <b>*</b> 250mmØ STM OBV = 59.02 250mmØ STM INV = 58.77	300mmØ STM OBV= 60. 300mmØ STM OBV= 60. 300mmØ STM INV= 59.8 1050mmØ SAN OBV= 58
4	150mmØ WM T/WM. = 60.43 150mmØ WM T/WM. = 60.42	1350mmØ STM OBV= 58. 1350mmØ STM OBV= 58.

\*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 W25

## WATERMAIN NOTES: 1) SPECIFICATIONS:

- SPEC. No WATERMAIN TRENCHING THERMAL INSULATION IN SHALLOW TRENCHES W22 W24 VALVE BOX ASSEMBLY WATERMAIN CROSSING BELOW SEWER W25 CONNECTION DETAIL FROM EXISTING TO NEW WM W25.1 W25. WATERMAIN CROSSING OVER SEWER PVC DI WATERMAIN (150mm) WATERMAIN (50mm) THERMAL INSULATED AT OPEN STRUCTURE W23 W26
- 19mm WATER SERVICE CONNECTIONS 50mm WATER SERVICE CONNECTIONS WATER SERVICE INSTALATION AT SEWER CROSSING. 2) SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTEN
- WITH THE CITY OF OTTAWA STANDARD AND SPECIFICATIONS INSTALLATION, BACKFILL AND RESTORATION OF ALL WATER CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIA 3) WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE

- INDICATED. OTHERWISE THERMAL INSULATION IS REQUIRED 4) PROVIDE MINIMUM 0.50m CLEARANCE BETWEEN OUTSIDE OF
- CROSSINGS. 5) WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1m OF F
- CAPPED, UNLESS OTHERWISE INDICATED.
- 6) WATER DEMAND = TBD
- 7) ALL EXISTING WATER SERVICES TO BE BLANKED AT MAIN. EX REINSTATEMENT BY CONTRACTOR.

LOCATION CITY OF OTTAWA 1040 SOMERSET STREET WEST DRAWING NAME

GENERAL PLAN OF SERVICES

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LAUREL	í ľ	THE CHART			
	ADSTONEA	GEODETIC	BENCHMARK		
FL	<u>,                                    </u>	FIRE HYDR/ SPINDLE OI AVE, ELEV.	ANT TOP OF N BREEZEHILL O		
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	с г		2		
<u>150mm</u>	<u> </u>	PROPOSED DEPRESSED CUR	⊐ DIAMETER		
<u>_v∝v</u> B⊗	F	PROPOSED WATER VALVE LO	CATION //ETER		
Ύ	F	PROPOSED SIAMESE CONNEC PROPOSED CAP	TION		
• GM	F	PROPOSED BOLLARD			
Ē	F	PROPOSED SANITARY / STORI	M TEST PORT		
	F F	PROPOSED WATER METER PROPOSED BUILDING ENTRAM	ICE		
	F F	PROPOSED LIMIT OF UNDERG	ROUND PARKING G OVERHANG		
DC	E	BOUNDARY LINE			
		EXISTING HYDRO TRANSFORI	MER		
SP		EXISTING WATER STANDPIPE			
EX. LS Ti	7V 1	EXISTING LAMP POST EXISTING TOP OF VALVE			
т. <u>ех.св</u> [	7G 1	EXISTING TOP OF GRATE EXISTING CATCH BASIN			
( MH	<u> </u>	EXISTING FIRE HYDRANT EXISTING SANITARY MANHOLI	E & SEWER		
MH	1	EXISTING STORM MANHOLE &	SEWER		
230mm		EXISTING VALVE & VALVE BO	X		
——— Т ——— G		EXISTING UNDERGROUND TEL EXISTING UNDERGROUND GA	<i>LEPHONE CABLE</i> S		
———— ОНУ ———— Н	N 2	EXISTING OVERHEAD WIRES EXISTING UNDERGROUND HY	DRO		
—— В		EXISTING UNDERGROUND BE EXISTING TREES / VEGETATIC	2.L DN		
	/	EXISTING CURB	SUV WIRES		
	, /		or mileo		
EX UP •	X	EXISTING FENCE			
EX UP • X X	X	EXISTING FENCE			
		EXISTING FENCE	S)		
EX UP • X X WATE SURFACE ELEVATION 62.80	ERMAIN TOP OF WM ELEVATION ±60.40*	TABLE (x3 SERVICE) DESCRIPTION CONNECT TO EXISTING 150	S) mmØ WATERMAIN		
EX UP • X X WATE SURFACE ELEVATION 62.80 62.94 63.02	<b>ERMAIN</b> TOP OF WM ELEVATION ±60.40 ±60.40 60.54 60.62	EXISTING FENCE         TABLE (x3 SERVICE:         DESCRIPTION         CONNECT TO EXISTING 1500         V&VB         STATION         STATION	S) mmØ WATERMAIN		
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KATE     K       K       K    K    K	Image: Second state           TOP OF WW           ELEVATION           ±60.40*           ±60.40           60.54           60.62           60.80           60.81           ING WATER           N, CONTRAC           HERE COVE           IPE CRO           VM = 59.48*           VM = 59.49*           BV = 59.09           BV = 59.08           VM = 60.79*           BV = 59.09           BV = 59.08           VM = 60.43           VM = 50.54           VM = 60.43           VM = 50.54           VM = 50.77           VM = 50.78 <th>EXISTING FENCE</th> <th>S) mmØ WATERMAIN mmØ WATERMAIN CIUNE CLEARENCE CLEARENCE 0.50m 0.</th>	EXISTING FENCE	S) mmØ WATERMAIN mmØ WATERMAIN CIUNE CLEARENCE CLEARENCE 0.50m 0.		
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KATE     K        K   K   K    K   K   K   K   K   K	ERVICES TO CONNECTIC	EXISTING FENCE	S) mmØ WATERMAIN CLEARENCE CLEARENCE 0.50m 0.5		
KAUP      K	ERVICES TO CONNECTION SOVER SEM CONNECTION CONNECT	EXISTING FENCE	S) mmØ WATERMAIN CLEARENCE CLEARENCE 0.50m 0.5		
EXUP         XXX         SURFACE         ELEVATION         62.80         62.94         63.02         63.20         63.21         PTH OF EXIST         FXCAVATION         N. PROVIDE T         ETAIL W23 WH         ITICAL PI         OmmØ WM TA	ERVICES TO CONSECTION CONSEC	EXISTING FENCE	S) mmØ WATERMAIN CUEARENCE CLEARENCE CLEARENCE 0.50m 0.50m 0.91m 0.96m 0.90m 0.50m		
KAUP      K	ERVICES TO CONNECTION SOVER SEM CONNECTION CONNECT	EXISTING FENCE	S) mmØ WATERMAIN mmØ WATERMAIN CUEARENCE 0.50m		
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