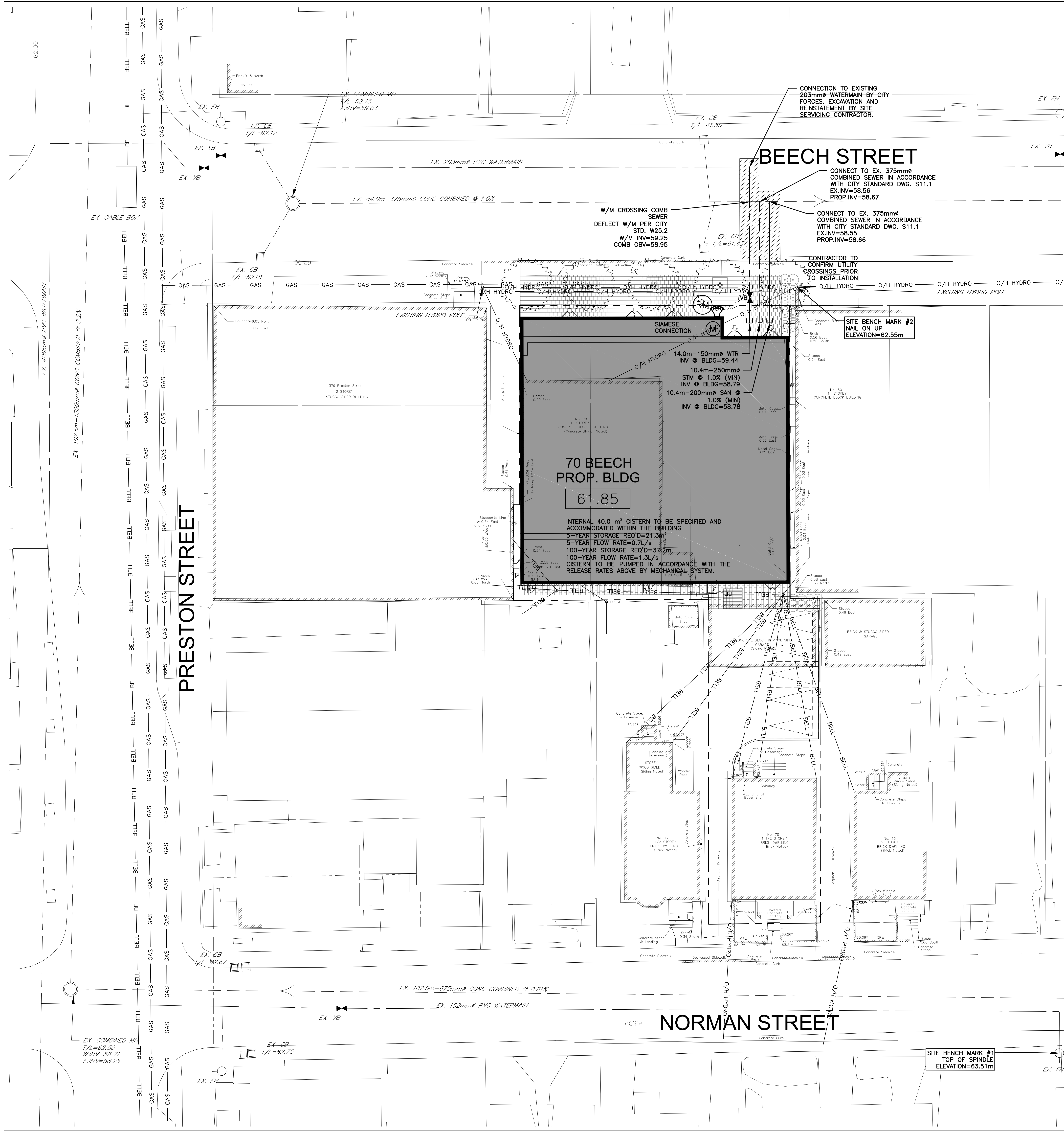
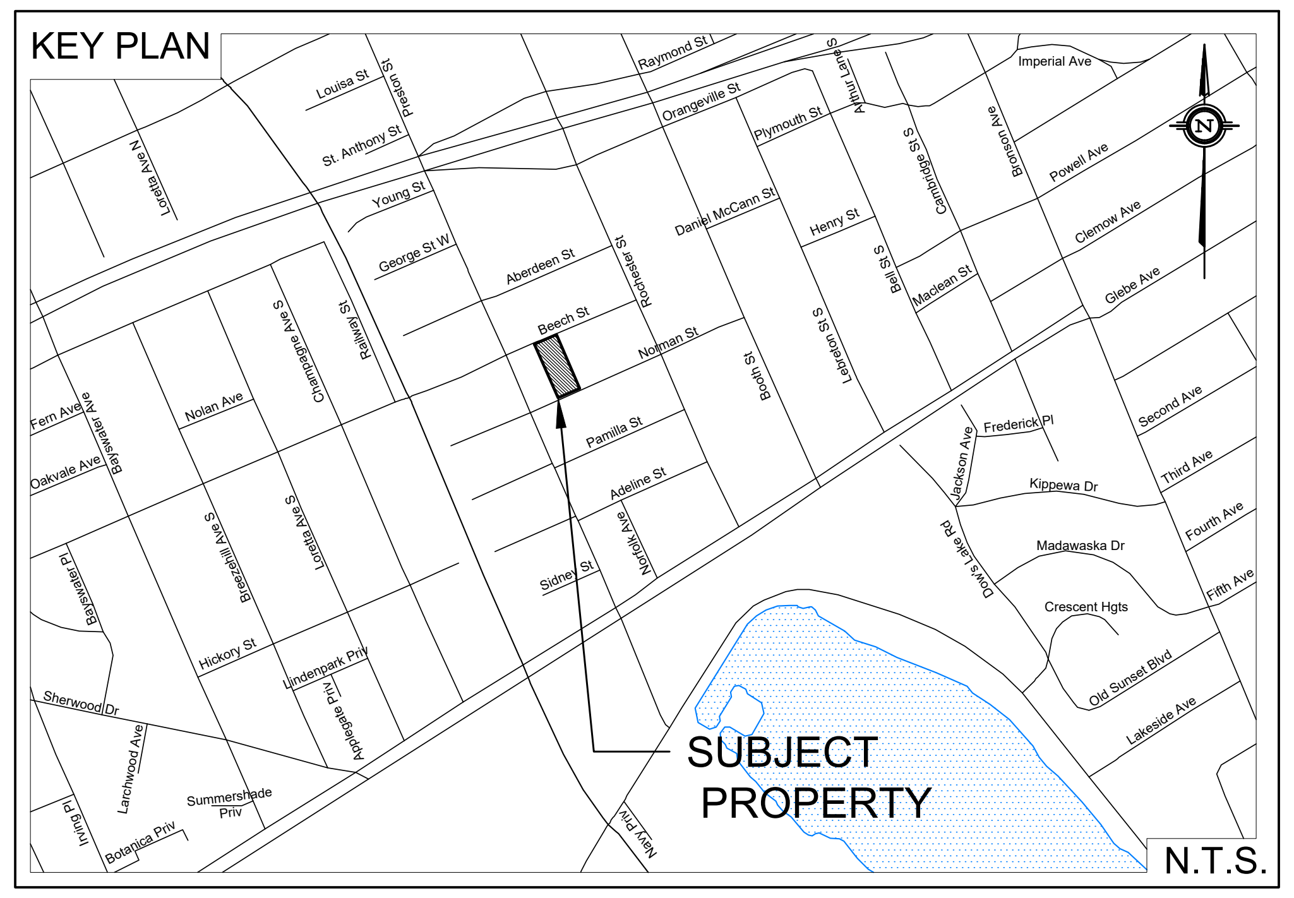


KEY PLAN



LEGEND

— - - — - - —	PROPERTY LINE
——— - ———	PROPOSED WATERMAIN
————————	PROPOSED SANITARY SEWER
— — — — —	PROPOSED STORM SEWER
VB	PROPOSED VALVE BOX
	PROPOSED SIAMESE CONNECTION
RM	PROPOSED REMOTE WATER METER
M	PROPOSED WATER METER
▨	ROAD CUT REINSTATEMENT PER CITY STD. R10

SANITARY AND STORM SEWER NOTES

GENERAL

1. LASER ALIGNMENT CONTROL TO BE UTILIZED ON ALL SEWER INSTALLATIONS.
2. CLAY SEALS TO BE INSTALLED AS PER CITY STANDARD DRAWING S8. THE SEALS SHOULD BE AT LEAST 1.5m LONG (IN THE TRENCH DIRECTION) AND SHOULD EXTEND FROM TRENCH WALL TO TRENCH WALL. THE SEALS SHOULD EXTEND FROM THE FROST LINE AND FULLY PENETRATE THE BEDDING, SUB–BEDDING, AND COVER MATERIAL. THE BARRIERS SHOULD CONSIST OF RELATIVELY DRY AND COMPACTIBLE BROWN SILTY CLAY PLACED IN MAXIMUM 225mm LIFTS AND COMPACTED TO A MINIMUM OF 95% SPMDD. THE CLAY SEALS SHOULD BE PLACED AT THE SITE BOUNDARIES AND AT 60m INTERVALS IN THE SERVICE TRENCHES.
3. SERVICES TO BUILDINGS TO BE TERMINATED 1.0m FROM THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
4. ALL MAINTENANCE STRUCTURE AND CATCH BASIN EXCAVATIONS TO BE BACKFILLED WITH GRANULAR MATERIAL COMPACTED TO 98% STANDARD PROCTOR DENSITY, A MINIMUM OF 300mm AROUND STRUCTURES.
5. "MODULOC" OR APPROVED PRE–CAST MAINTENANCE STRUCTURE AND CATCH BASIN ADJUSTERS TO BE USED IN LIEU OF BRICKING. PARGE ADJUSTING UNITS ON THE OUTSIDE ONLY.
6. SAFETY PLATFORMS SHALL BE PER OPSD 404.02.
7. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH OPSD 1003.01 AND 1003.02, IF APPLICABLE.
8. THE CONTRACTOR IS TO PROVIDE CCTV CAMERA INSPECTIONS OF ALL SEWERS, INCLUDING PICTORIAL REPORT, ONE (1) CD COPY AND TWO (2) VIDEO RECORDINGS IN A FORMAT ACCEPTABLE TO THE ENGINEER. ALL SEWERS ARE TO BE FLUSHED PRIOR TO CAMERA INSPECTION. ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEWERS AND NECESSARY REPAIRS HAVE BEEN COMPLETED TO THE SATISFACTION OF THE ENGINEER.
9. CONTRACTOR SHALL PERFORM LEAKAGE TESTING, IN THE PRESENCE OF THE CONSULTANT, FOR SANITARY SEWERS IN ACCORDANCE WITH OPSS 410 AND OPSS 407. CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF ALL SEWERS. A COPY OF THE VIDEO AND INSPECTION REPORT SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF WEAR COURSE ASPHALT.
10. FROST PROTECTION RECOMMENDATIONS FOR STORM SEWERS WITH LESS THAN 1.5m AND SANITARY SEWERS WITH LESS THAN 1.8m FROM GROUND SURFACE TO PIPE OBVERT TO BE PROVIDED BY GEOTECHNICAL ENGINEER.

SANITARY

11. ALL SANITARY SEWER INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
12. ALL SANITARY GRAVITY SEWER SHALL BE PVC SDR 35, IPEX 'RING–TITE' (OR APPROVED EQUIVALENT) PER CSA STANDARD B182.2 OR LATEST AMENDMENT, UNLESS SPECIFIED OTHERWISE.
13. EXISTING MAINTENANCE STRUCTURES TO BE RE–BENCHED WHERE A NEW CONNECTION IS MADE.
14. SANITARY GRAVITY SEWER TRENCH AND BEDDING SHALL BE PER CITY OF OTTAWA STD. S6 AND S7, CLASS 'B' BEDDING, UNLESS SPECIFIED OTHERWISE.
15. SANITARY MAINTENANCE STRUCTURE FRAME AND COVERS SHALL BE PER CITY OF OTTAWA STD. S24 AND S25.
16. SANITARY MAINTENANCE STRUCTURES SHALL BE BENCHED PER OPSD 701.021.

STORM

17. ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.2, OR LATEST AMENDMENT. ALL NON–REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.1, OR LATEST AMENDMENT. PIPE SHALL BE JOINED WITH STD. RUBBER GASKETS AS PER CSA A257.3, OR LATEST AMENDMENT.
18. ALL STORM SEWER TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. S6 AND S7 CLASS 'B' UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY PROJECT GEOTECHNICAL ENGINEER.
19. ALL PVC STORM SEWERS ARE TO BE SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE SPECIFIED.
20. CATCH BASINS SHALL BE IN ACCORDANCE WITH OPSD 705.010.
21. CATCH BASIN LEADS SHALL BE 200MM DIA. AT 1% SLOPE (MIN) UNLESS SPECIFIED OTHERWISE.
22. ALL CATCH BASINS SHALL HAVE 600MM SUMPS, UNLESS SPECIFIED OTHERWISE.
23. ALL CATCH BASIN LEAD INVERTS TO BE 1.5m BELOW FINISHED GRADE UNLESS SPECIFIED OTHERWISE.
24. THE STORM SEWER CLASSES HAVE BEEN DESIGNED BASED ON BEDDING CONDITIONS SPECIFIED ABOVE. WHERE THE SPECIFIED TRENCH WIDTH IS EXCEEDED, THE CONTRACTOR IS REQUIRED TO PROVIDE AND SHALL BE RESPONSIBLE FOR EXTRA TEMPORARY AND/OR PERMANENT REPAIRS MADE NECESSARY BY THE WIDENED TRENCH.
25. PERFORATED SUBDRAIN FOR ROAD AND PARKING LOT CATCH BASIN SHALL BE INSTALLED PER CITY STD R1 AND GEOTECHNICAL RECOMMENDATIONS UNLESS OTHERWISE NOTED.
26. PERFORATED SUBDRAIN FOR REAR YARD AND LANDSCAPING APPLICATIONS SHALL BE INSTALLED PER CITY STD S29, S30, AND S31, WHERE APPLICABLE.
27. RIP–RAP TREATMENT FOR SEWER AND CULVERT OUTLETS PER OPSD 810.010.
28. ALL STORM SEWERS / CULVERTS TO BE INSTALLED WITH FROST TREATMENT PER OPSD 803.031 WHERE APPLICABLE.
29. STORM MAINTENANCE STRUCTURE FRAME AND COVERS SHALL BE PER CITY OF OTTAWA STD S25 AND S24.1, UNLESS OTHERWISE NOTED.
30. CATCH BASIN FRAME AND COVER SHALL BE PER OPSD 400.02 AND CITY STD S19.1, UNLESS OTHERWISE NOTED.

WATERMAIN NOTES

1. ALL WATERMAIN INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
2. ALL PVC WATERMAINS SHALL BE AWWA C–900 CLASS 150, DR 18 OR APPROVED EQUIVALENT.
3. WATERMAIN TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W17. UNLESS SPECIFIED OTHERWISE. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY THE PROJECT GEOTECHNICAL ENGINEER.
4. ALL PVC WATERMAINS SHALL BE INSTALLED WITH A 10 GAUGE STRANDED COPPER TWU OR RWU TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STD. W.36.
5. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS PER CITY OF OTTAWA STD. W40 AND W42.
6. VALVE BOXES SHALL BE INSTALLED PER CITY OF OTTAWA STD W24.
7. WATERMAIN IN FILL AREAS TO BE INSTALLED WITH RESTRAINED JOINTS PER CITY OF OTTAWA STD.25.5 AND W25.6.
8. THRUST BLOCKING OF WATERMAINS TO BE INSTALLED PER CITY OF OTTAWA STD. W25,3 AND W25.4.
9. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS, BLOW–OFFS, AND NOZZLES REQUIRED FOR TESTING AND DISINFECTION OF THE WATERMAIN.
10. WATERMAIN CROSSING OVER AND BELOW SEWERS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. W25.2 AND W25, RESPECTIVELY.
11. WATER SERVICES ARE TO BE INSULATED PER CITY STD. W23 WHERE SEPARATION BETWEEN SERVICES AND MAINTENANCE HOLES ARE LESS THAN 2.4m.
12. THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SEWER / UTILITY IS 0.50m PER MOE GUIDELINES. FOR CROSSING UNDER SEWERS, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWERS IS REQUIRED TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING. THE LENGTH OF WATER PIPE SHALL BE CENTERED AT THE POINT OF CROSSING TO ENSURE THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.
13. ALL WATERMAINS SHALL HAVE A MINIMUM COVER OR 2.4m, OTHERWISE THERMAL INSULATION IS REQUIRED AS PER STD DWG W22.
14. GENERAL WATER PLANT TO UTILITY CLEARANCE AS PER STD DWG R20
15. FIRE HYDRANT INSTALLATION AS PER STD DWG W19, ALL BOTTOM OF HYDRANT FLANGE ELEVATIONS TO BE INSTALLED 0.10m ABOVE PROPOSED FINISHED GRADE AT HYDRANT; FIRE HYDRANT LOCATION AS PER STD DWG W18 UNLESS OTHERWISE NOTED.
16. BUILDING SERVICE TO BE CAPPED 1.0m OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED AND MUST BE RESTRAINED A MINIMUM OF 12m BACK FROM STUB.
17. ALL WATERMAINS SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES UNLESS OTHERWISE DIRECTED. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC. MUST BE PROVIDED.
18. ALL WATERMAINS SHALL BE BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES. ALL CHLORINATED WATER TO BE DISCHARGED AND PRETREATED TO ACCEPTABLE LEVELS PRIOR TO DISCHARGE. ALL DISCHARGED WATER MUST BE CONTROLLED AND TREATED SO AS NOT TO ADVERSELY EFFECT THE ENVIRONMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MUNICIPAL AND/OR PROVINCIAL REQUIREMENTS ARE FOLLOWED.
19. ALL WATERMAIN STUBS SHALL BE TERMINATED WITH A PLUG AND 50mm BLOW OFF UNLESS OTHERWISE NOTED.

EXISTING UNDERGROUND SERVICES AND UTILITY LOCATIONS DERIVED FROM THE BEST AVAILABLE DATA, AS-CONSTRUCTED DRAWINGS, UTILITY DRAWINGS AND INFRASTRUCTURE MAPPING PROVIDED BY THE CITY OF OTTAWA.

CONTRACTOR TO CONFIRM ELEVATIONS AND LOCATIONS OF EXISTING UNDERGROUND SERVICES AND UTILITIES WITHIN THE RIGHT OF WAY PRIOR TO INSTALLATION OF SITE SERVICING INFRASTRUCTURE.

THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT THE FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

NOT FOR CONSTRUCTION

TOPOGRAPHIC INFORMATION

TOPOGRAPHIC INFORMATION PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD
PROJ. NO.194250
DATED MARCH 5, 2018

SITE PLAN INFORMATION

SITE PLAN PROVIDED BY RODERICK LAHEY ARCHITECTS
PROJ. NO.1724
DATED NOVEMBER 30, 2017

GEOTECHNICAL STUDY

GEOTECHNICAL RECOMMENDATIONS PROVIDED BY PATERSON GROUP
PROJ. NO. PG4430–1
DATED FEBRUARY 8, 2019

SITE SERVICING AND STORMWATER MANAGEMENT STUDY

SERVICING AND STORMWATER MANAGEMENT RECOMMENDATIONS PROVIDED BY DSEL
PROJ. NO. 18–1015
DATED MARCH 2019

BENCH MARK

BENCHMARK #1: TOP OF FIRE HYDRANT SPINDLE LOCATED SOUTH EAST OF SUBJECT SITE
ELEV=63.51
BENCHMARK #2: NAIL ON UTILITY POLE LOCATED NORTH EAST OF SUBJECT SITE
ELEV=62.55

No.	BY	YY.MM.DD	DESCRIPTION
2	C.M.K.	19.03.05	ISSUED FOR MUNICIPAL REVIEW
1	C.M.K.	19.03.01	ISSUED FOR COORDINATION

PROJECT No.18-1015

R. D. FREEL
100163197
2019-03-05
18-1015

SITE SERVICING PLAN

70 BEECH STREET & 75 NORMAN STREET

© DSEL

THE PROPERTIES GROUP

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DRAWN BY:	C.M.K.	CHECKED BY:	R.J.F.	DRAWING NO.	SHEET NO.
DESIGNED BY:	C.M.K.	CHECKED BY:	A.J.G.	SSP-1	3 of 4
SCALE:	1:200	DATE:	MARCH 2019		

CITY FILE No.: D07-12-XX-XXXX CITY PLAN No.: XXXXX

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