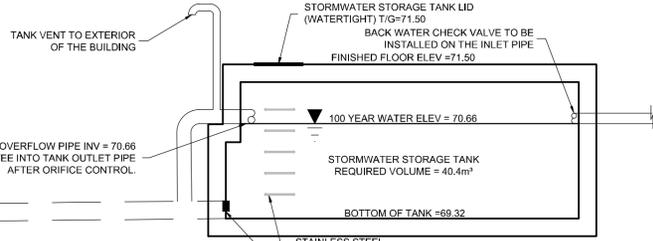


SWM TANK NOTES:

1. THE MINIMUM INTERNAL SIZE OF THE STORMWATER MANAGEMENT TANK IS TO BE 40m³. REFER TO THE CROSS SECTION DETAIL AND THE ARCHITECT'S DRAWINGS FOR TANK DIMENSIONS, CONFIGURATION, MATERIALS AND WATERPROOFING DETAILS.
2. PROVIDE CIRCULAR HOLLOW ALUMINUM MAINTENANCE HOLE STEPS ALONG TANK WALLS AT THE ACCESS HATCHES PER OPSD 405.010.



CONNECT PROPOSED STORM SERVICE TO THE PROPOSED STORM MANHOLE. INVERT ELEVATION OF EXISTING SEWER = 69.00, INVERT OF PROPOSED SERVICE = 69.20



STORMWATER MANAGEMENT TANK CROSS-SECTION DETAIL

SCALE = N.T.S.

LEGEND

- PROPERTY LINE
- SP PROPOSED STANDPOST
- V&VB PROPOSED VALVE AND VALVE BOX
- C PROPOSED CAP
- W PROPOSED WATER METER
- RM PROPOSED REMOTE METER
- IP PROPOSED INTERNAL TEST PORT
- SAN MH PROPOSED SANITARY SERVICE & MANHOLE
- STM MH PROPOSED STORM SEWER & MANHOLE
- PROPOSED INTERLOCK
- FDSC PROPOSED SIAMSE LOCATION
- EXISTING UTILITY POLE CIV GUY WIRES
- EXISTING VALVE & VALVE CHAMBER
- EXISTING VALVE & VALVE BOX
- EXISTING HYDRANT
- EXISTING SANITARY SEWER & MANHOLE
- EXISTING STORM SEWER & MANHOLE
- EXISTING CATCHBASIN
- EXISTING LIGHT STANDARD
- EXISTING FENCE
- EXISTING UNDERGROUND BELL
- EXISTING OVERHEAD WIRES
- EXISTING UNDERGROUND CONDUIT
- EXISTING UNDERGROUND GAS
- EXISTING UNDERGROUND POWER

NORTH

KEY PLAN

N.T.S.

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 \$2,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED AND THE CITY OF OTTAWA AS THIRD PARTY.
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.
6. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ALL ORGANIC MATERIAL AND DEBRIS. ALL CONTAMINATED MATERIAL (IF ANY) SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
7. ALL ELEVATIONS ARE GEODETIC. SITE BENCHMARK IS A HYDRANT LOCATED AT THE CORNER OF NEPEAN ST. AND METCALFE ST. (TOP OF SPINDLE ELEV. = 72.04). REFER TO ANNIS, OSULLIVAN, VOLLEBECK LTD. TOPOGRAPHIC PAN OF LOTS 47, 48 AND 49 (SOUTH NEPEAN ST.) REGISTERED PLAN 2996 CITY OF OTTAWA.
8. REFER TO GEOTECHNICAL REPORT No. PG4911-1 PREPARED BY PATERSON GROUP INC. DATED JULY 18, 2018, 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.
9. REFER TO THE DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT No. R-2018-109, DATED AUGUST 3, 2018 PREPARED BY NOVATECH.
10. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.
11. SAW CUT AND KEYRING ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10). ALL ROAD CUTS TO BE REINSTATED WITH FULL MILL OVERLAY AS PER CITY OF OTTAWA STANDARDS (R10).
12. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES AND GRADING PLAN 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/WV ELEVATIONS, ANY ALIGNMENT CHANGES, AND ALL SURFACE ELEVATION AS BUILT GRADES.

SEWER NOTES:

1. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
STORM / SANITARY MANHOLE (1200Ø)	701.070	OPSD
STORM / SANITARY MH FRAME	S25	CITY OF OTTAWA
SANITARY COVER	S24	CITY OF OTTAWA
STORM COVER (CLOSED)	S24.1	CITY OF OTTAWA
SEWER TRENCH	S6 & S7	CITY OF OTTAWA
STORM SEWER	PVC SDR 35,	CITY OF OTTAWA
SANITARY SEWER	PVC DR 35	CITY OF OTTAWA
2. 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.
3. FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-NSL-PSX; POSITIVE SEAL AND DURASEAL), THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
4. DYE TESTING IS TO BE COMPLETED ON SANITARY SERVICE TO CONFIRM PROPER CONNECTION TO THE SANITARY SERVICE MAIN.
5. STORM MANHOLES AND CBMHs ARE TO HAVE 300mm SUMP UNLESS OTHERWISE INDICATED.
6. CONTRACTOR TO TELEVIEW (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
7. ALL DRAINAGE FOR THE UNDERGROUND PARKING LEVELS IS REQUIRED TO BE DIRECTED TO THE SANITARY SEWER.
8. A BACKWATER CHECK VALVE ON THE INLET PIPE TO BE INSTALLED INTO THE UNDERGROUND STORAGE TANK.

WATERMAIN NOTES:

1. 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	PVC DR 18	CITY OF OTTAWA
2. 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.
3. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
4. PROVIDE MINIMUM 0.25m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

WATERMAIN TABLE - 180 METCALFE STREET (A)

STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	DESCRIPTION
0+00.0	71.35	68.80	BLDG FACE (UNDERGROUND PARKING)
0+001.5	71.25	68.85	VALVE AND VALVE BOX @ R
0+005.3	71.20	68.80	CURB FACE
0+006.9	71.23	68.83	CROSSING BELL
0+008.6	71.25	68.85	CONNECT TO EXISTING

WATERMAIN TABLE - 180 METCALFE STREET (B)

STATION	SURFACE ELEVATION	TOP OF WM ELEVATION	DESCRIPTION
0+000.0	71.35	68.80	BLDG FACE (UNDERGROUND PARKING)
0+000.9	71.30	68.90	VALVE AND VALVE BOX @ R
0+005.3	71.25	68.85	CROSSING GAS
0+006.9	71.15	68.75	CURB FACE
0+008.6	71.05	68.65	CONNECT TO EXISTING

* 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: 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.

No.	REVISION	DATE	BY
6.	ISSUED FOR BUILDING PERMIT APPLICATION	JUNE 19/19	CJR
5.	ISSUED FOR FINAL APPROVAL	APR 30/19	CJR
4.	REVISED PER CITY COMMENTS	MAR 25/19	CJR
3.	REVISED PER CITY COMMENTS	DEC 14/18	CJR
2.	ISSUED FOR SITE PLAN APPLICATION	AUG 17/18	CJR
1.	ISSUED FOR COORDINATION	AUG 14/18	CJR

SCALE
1:150

FOR REVIEW ONLY

DESIGN: MJH
CHECKED: CJR
DRAWN: MJH
CHECKED: CJR
APPROVED: CJR

LICENSED PROFESSIONAL ENGINEER
M. PPRKHORAK
10021256
PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER
C.J. RUDDLE
11111111
PROVINCE OF ONTARIO

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone: (613) 254-9643
Facsimile: (613) 254-5867
Website: www.novatech-eng.com

LOCATION
CITY OF OTTAWA
180 METCALFE STREET

DRAWING NAME
GENERAL PLAN OF SERVICES

PROJECT No.: 118103
REV # 6
DRAWING No.: 118103-GP
#17827