

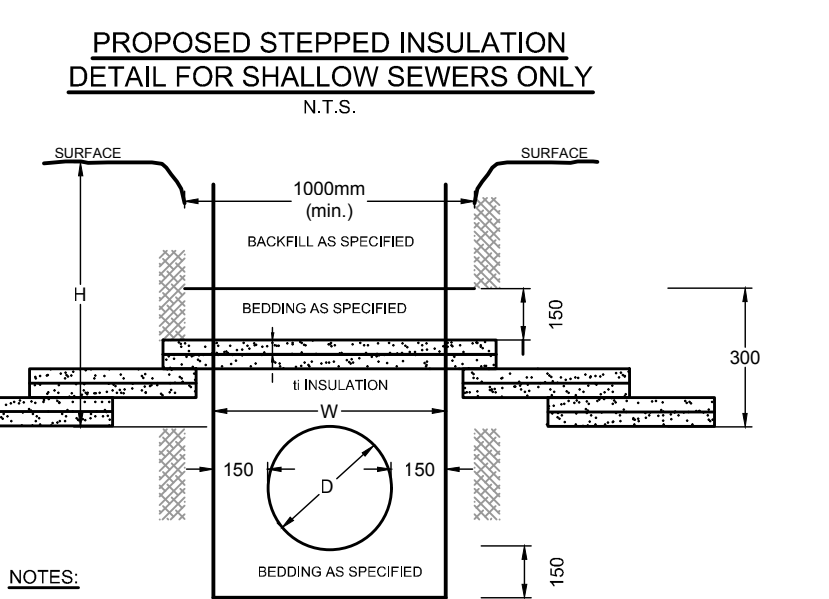
LEGEND

| | |
|--|------------------------------------------------------------|
| | PROPERTY LINE |
| | PROPOSED SANITARY MH & SEWER |
| | PROPOSED CATCHBASIN MH & SEWER |
| | PROPOSED STORM MH & SEWER |
| | MECHANICAL DECK DRAIN |
| | PROPOSED HYDRANT CW VALVE & VALVE BOX |
| | PROPOSED WATER METER AND REMOTE METER |
| | PROPOSED BARRIER CURB |
| | PROPOSED DEPRESSED CURB |
| | PROPOSED WATER SERVICE AND DIAMETER |
| | PROPOSED VALVE & VALVE BOX |
| | PROPOSED BEND AND THRUSTBLOCK 11.25', 22.5', 45' or TEE |
| | PROPOSED CAP |
| | PROPOSED SLIAMSE CONNECTION |
| | PROPOSED BUILDING ENTRANCE |
| | THERMAL INSULATION FOR SHALLOW SEWERS |
| | PROPOSED LANDSCAPE AREA |
| | REMOVALS |
| | FINISHED FLOOR ELEVATION |
| | TOP OF FOUNDATION ELEVATION |
| | UNDERSIDE OF FOOTING |
| | EXISTING CONCRETE CURB |
| | EXISTING SANITARY MANHOLE & SEWER |
| | EXISTING CATCHBASIN MANHOLE |
| | EXISTING STORM MANHOLE & SEWER |
| | EXISTING CATCHBASIN CW CATCHBASIN LEAD |
| | EXISTING WATERMAIN |
| | EXISTING HYDRANT CW VALVE & LEAD |
| | EXISTING TREES/VEGETATION |
| | EXISTING UTILITY POLE |
| | EXISTING OVERHEAD UTILITY WIRES |

- ### 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.
 - COMPLETE ALL WORKS IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS USING THE CURRENT GUIDELINES, BYLAWS AND STANDARDS INCLUDING MATERIALS OF CONSTRUCTION, DISINFECTION AND ALL RELEVANT REFERENCES TO OPSS, OPSD & AWWA GUIDELINES - ALL CURRENT VERSIONS AND 'AS AMENDED'.
 - 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 GEOTECHNICAL REPORT (PG4394-1, DATED MARCH 29, 2018) AND RELIANCE LETTER (DATED JULY 23, 2024), PREPARED BY PATERSON GROUP INC. 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.
 - REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.
 - REFER TO THE DEVELOPMENT SERVING STUDY & STORMWATER MANAGEMENT REPORT (R-2024-087) PREPARED BY NOVATECH.
 - 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 AS REQUIRED PER THE ARCHITECTURAL SITE PLAN.

- ### SEWER NOTES:
- SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS - ALL CURRENT VERSIONS AND 'AS AMENDED'.
 - SPECIFICATIONS:

| ITEM | SPEC. No. | REFERENCE |
|---------------------------------------|--------------------|----------------|
| CATCHBASIN (600x600mm) | 705.010 | OPSD |
| STORM / SANITARY MANHOLE (1200mm) | 701.010 | OPSD |
| CB, FRAME & COVER | 400.020 | OPSD |
| SANITARY MH FRAME & COVER | 401.010 - TYPE "A" | OPSD |
| STORM / CBMH MANHOLE FRAME AND COVER | 401.010 - TYPE "B" | OPSD |
| WATERTIGHT MH FRAME AND COVER | 401.030 | OPSD |
| LANDSCAPE DRAIN (ELBOW, COVER & PIPE) | S29 / S31 | CITY OF OTTAWA |
| SEWER TRENCH | S6 | CITY OF OTTAWA |
| STORM SEWER | PVC DR 35 | |
| SANITARY SEWER | PVC DR 35 | |
| CATCHBASIN LEAD | PVC DR 35 | |
 - ALL STORM AND SANITARY SERVICE LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14.1 OR S14.2.
 - INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 1.8m COVER WITH HI-40 INSULATION PER INSULATION DETAIL FOR SHALLOW SEWERS. 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 SERVING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410.07.16, 410.07.18.04 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.
 - ALL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED. ALL CATCHBASINS ARE TO HAVE 600mm SUMPS.
 - ALL CATCHBASINS, MANHOLES AND/OR CATCHBASIN MANHOLES THAT ARE TO HAVE ICD'S INSTALLED WITHIN THEM ARE TO HAVE 600mm SUMPS.
 - ALL WEeping TILE SYSTEMS ARE TO BE PUMPED TO THE SURFACE AS INDICATED ON THE GENERAL PLAN OF SERVICES DRAWING. REFER TO MECHANICAL PLANS FOR DETAILS.
 - CONTRACTOR TO TELEVIEW (CCTV) ALL PROPOSED SEWERS, 200mm OR GREATER PRIOR TO BASE COURSE ASPHALT, UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
 - CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND TIG ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, TWM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.



NOTES:

- INSULATE ALL SEWER PIPES THAT HAVE LESS THAN 1.8m COVER WITH EXPANDED POLYSTYRENE INSULATION AS SHOWN.
- THE THICKNESS OF INSULATION SHALL BE THE EQUIVALENT OF 25mm FOR EVERY 300mm REDUCTION IN THE REQUIRED DEPTH OF COVER (SEE TABLE).

| COVER (mm) | INSULATION THICKNESS (mm) |
|------------|---------------------------|
| 1800-1900 | 50 |
| 1500-1800 | 75 |
| 1200-1500 | 100 |
| 900-1200 | 125 |

n = THICKNESS OF INSULATION (mm)
t = DEPTH OF COVER (W = 300 (1000 mm))
W = WIDTH OF INSULATION (mm)
D = O.D. OF PIPE (mm)

150mmØ WATER SERVICE TABLE (WEST)

| STATION | SURFACE ELEVATION | T/W M ELEVATION | COMMENTS |
|---------|-------------------|-----------------|--------------------------------------------------------|
| 0+0.0 | 64.41s | 61.87s | 150mmØ TEE CONNECTION TO EX. 203mmØ PVC WM |
| 0+2.0 | 64.42 | 62.69 | 22.5" VERTICAL BEND |
| 0+3.8 | 64.50 | 62.69 | CROSS ABOVE EX. 600mm STORM SEWER (CLEARANCE = ±0.25m) |
| 0+8.8 | 64.53 | 62.69 | 150mmØ V&VB |
| 0+9.5 | 64.51 | 62.69 | CAP AT FOUNDATION WALL |

150mmØ WATER SERVICE TABLE (EAST)

| STATION | SURFACE ELEVATION | T/W M ELEVATION | COMMENTS |
|---------|-------------------|-----------------|--------------------------------------------------------|
| 1+0.0 | 64.35s | 61.87s | 150mmØ TEE CONNECTION TO EX. 203mmØ PVC WM |
| 0+2.0 | 64.40 | 62.69 | 22.5" VERTICAL BEND |
| 1+3.8 | 64.50 | 62.69 | CROSS ABOVE EX. 600mm STORM SEWER (CLEARANCE = ±0.25m) |
| 0+8.8 | 64.57 | 62.69 | 150mmØ V&VB |
| 0+9.5 | 64.57 | 62.69 | CAP AT FOUNDATION WALL |

* CONNECTIONS TO EXISTING 200mmØ WATERMAIN. EXACT ELEVATIONS TO BE FIELD DETERMINED.
 ** PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAIL W22 IN SHALLOW TRENCHES AND/OR CITY OF OTTAWA DETAIL W23 ADJACENT TO OPEN STRUCTURES.

- ### WATERMAIN NOTES:
- SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS - ALL CURRENT VERSIONS AND 'AS AMENDED'. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMANS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF THE CITY OF OTTAWA FORCES.
 - 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 |
| WATERMAIN CROSSING OVER SEWER | W25.2 | CITY OF OTTAWA |
| WATERMAIN | PVC DR 18 | |
 - WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE, UNLESS OTHERWISE INDICATED.
 - PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS, UNLESS OTHERWISE INDICATED.
 - WATER SERVICE IS TO BE CONSTRUCTED TO FOUNDATION WALL AND CAPPED.

- ### BENCHMARK NOTES:
- ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM, AND ARE DERIVED FROM THE CAN-NET VRS NETWORK MONUMENT, OTTAWA WITH AN ELEVATION OF 96.230.
 - IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.
 - BENCHMARK WAS PROVIDED ON PLAN OF SURVEY OF ALL OF LOTS 24 AND 25, AND PART OF LOTS 45, 46, 47, AND 48, REGISTERED PLAN 369, SURVEYED BY STANTEC GEOMATICS LTD (PROJECT NO 161613828-110).

INTERNAL SWM STORAGE SYSTEM

| DESIGN EVENT | STORAGE SYSTEM CONTROLLED FLOW | STORAGE VOLUMES REQUIRED | PROVIDED |
|--------------|--------------------------------|--------------------------|----------|
| 1.2 YR | PUMPED FLOW RATE = 5.5 L/S | 18.7 m³ | >71 m³ |
| 1.5 YR | | 29.4 m³ | |
| 1-100 YR | | 70.5 m³ | |

NOTES:

- ALL DRAINS FROM AREA A.2 (PROPOSED AMENITY AREA DECK DRAINAGE AND ALL ROOF DRAINS) TO BE DIRECTED TO THE INTERNAL STORMWATER STORAGE SYSTEM. REFER TO ARCHITECTURAL AND MECHANICAL PLANS FOR DETAILS.
- REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR EXACT SIZE AND DETAILS OF INTERNAL STORMWATER STORAGE SYSTEM.
- REFER TO ARCHITECTURAL AND MECHANICAL PLANS FOR LOCATION AND CONNECTIONS AND DETAILS OF THE INTERNAL STORMWATER STORAGE SYSTEM AND EMERGENCY OVERFLOW PIPING.

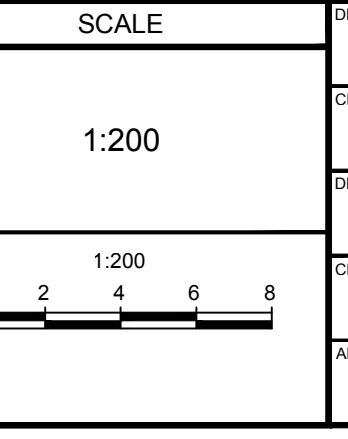
CRITICAL SEWER PIPE CROSSING TABLE

| CROSSING | LOWER PIPE | HIGHER PIPE | CLEARANCE | SURFACE ELEVATION |
|----------|----------------------|----------------------|-----------|-------------------|
| ① | 200mmØ WM T/P=61.78 | 200mmØ SAN INV=62.52 | ±0.74m | 64.15 m |
| ② | 600mmØ STM T/P=62.31 | 200mmØ SAN INV=62.56 | ±0.25m | 64.36 m |

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.

OWNER INFORMATION
 GRANITE PRIVATE EQUITY LIMITED PARTNERSHIP
 16 CONCOURSE GATE, SUITE 200
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| No. | REVISION | DATE | BY |
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| 1. | ISSUED FOR SPC | JUL 31/24 | FST |



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| 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 1950 SCOTT STREET AND 312 & 314 CLIFTON ROAD | PROJECT No. 121301 |
| | | DRAWING NAME GENERAL PLAN OF SERVICES | REV #1 121301-GP |

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