

LEGEND

- PROPERTY LINE
PROPOSED SANITARY MH & SEWER
PROPOSED CATCHBASIN MH & SEWER
PROPOSED STORM MH & SEWER
UNDERGROUND MECHANICAL DECK DRAIN
BI-LEVEL DRAIN AT PODIUM AND UG DECKING
PROPOSED HYDRANT CW VALVE & VALVE BOX
PROPOSED INLET CONTROL DEVICE
CONTROLLED FLOW ROOF DRAIN
PROPOSED WATER METER AND REMOTE METER
DC PROPOSED BARRIER CURB
150mm Ø PROPOSED DEPRESSED CURB
150mm Ø PROPOSED WATER SERVICE AND DIAMETER
VB BEND
C PROPOSED VALVE & VALVE BOX
11.25°, 22.5°, 45° or TEE PROPOSED BEND AND THRUSTBLOCK
PROPOSED CAP
PROPOSED BUILDING ENTRANCE
THERMAL INSULATION FOR SHALLOW SEWERS
PROPOSED HYDRO TRANSFORMER
FFE FINISHED FLOOR ELEVATION
T/FND TOP OF FOUNDATION WALL ELEVATION
USF UNDERSIDE OF FOOTING ELEVATION
EXISTING CONCRETE CURB
EXISTING SANITARY MANHOLE & SEWER
EXISTING CATCHBASIN MANHOLE
EXISTING STORM MANHOLE & SEWER
EXISTING CATCHBASIN CW
CATCHBASIN LEAD

BENCHMARK NOTES:

- ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE 2011 GEODETIC DATUM. ELEVATIONS ARE RELATED TO VERTICAL CONTROL MONUMENT 011948US53G HAVING AN ELEVATION OF 96.03m.
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 TOPOGRAPHICAL PLAN OF SURVEY, PART OF BLOCK C, REGISTERED PLAN 771, CITY OF OTTAWA, PREPARED BY ANNIS, OSULLIVAN, VOLLEBEKK LTD.
TEMPORARY JOB BENCHMARK DESCRIPTION IS LOCATED ON WALL IN EAST FACE OF UTILITY POLE LOCATED APPROXIMATELY 24.7m WEST OF THE SOUTHWEST PROPERTY BOUNDARY ALONG BEAVERWOOD ROAD. SEE TOPOGRAPHICAL PLAN OF SURVEY MENTIONED ABOVE FOR DETAILS.

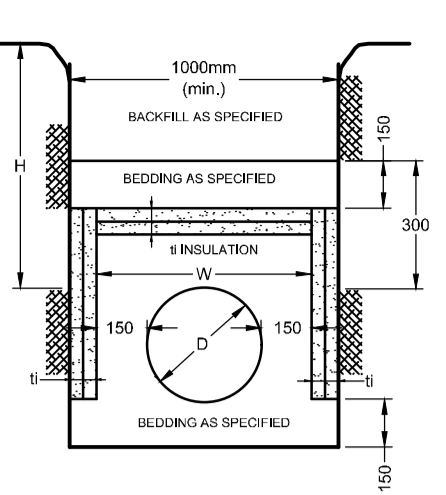
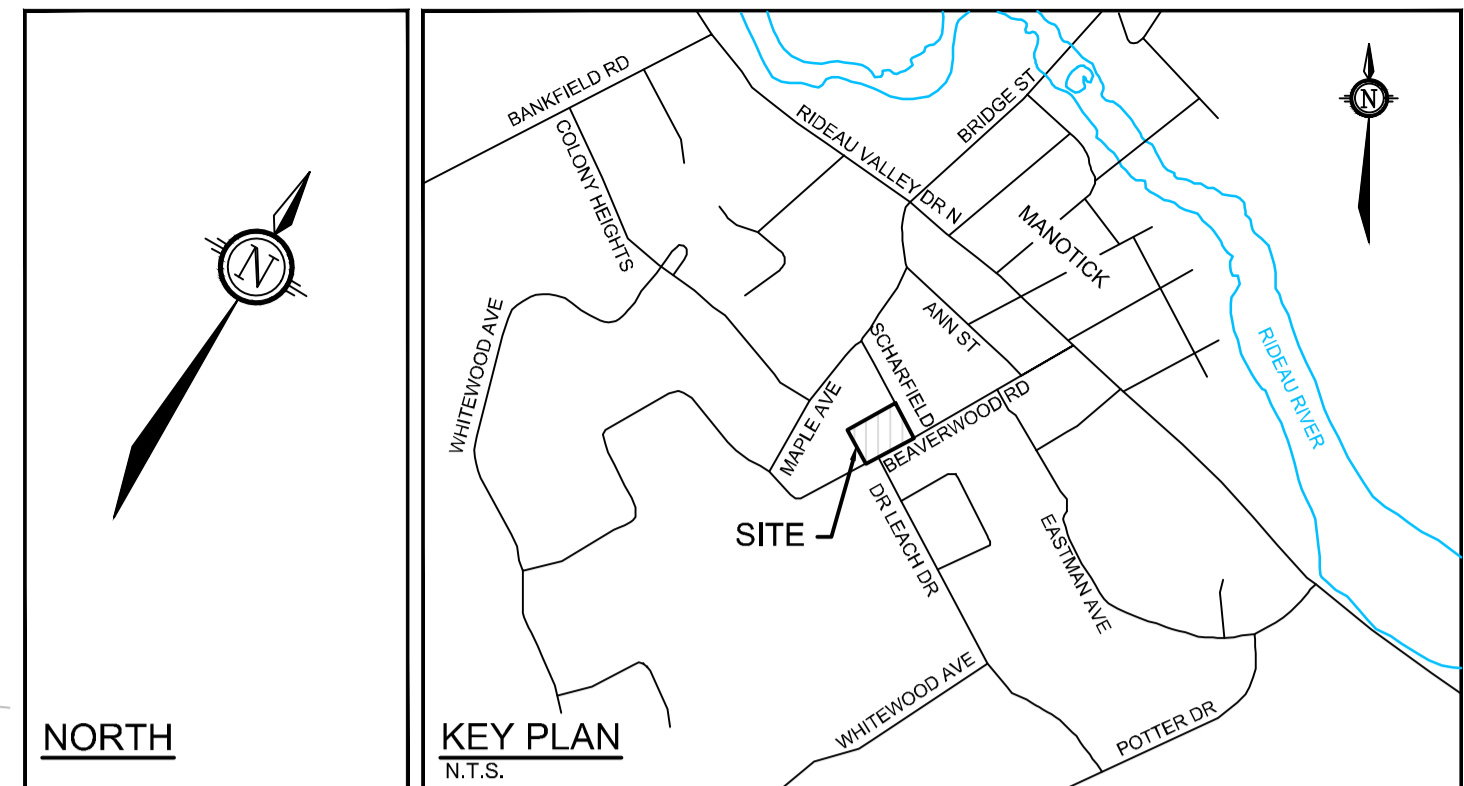


Table with 2 columns: COVER (mm) and THICKNESS (mm). Includes notes on insulation requirements for different cover depths.



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.
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.
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, INSPECTION AND ALL RELEVANT REFERENCES TO OPSIS, OPSIS & 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 MUNICIPAL AUTHORITIES.
REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER.
ALL ELEVATIONS ARE GEODETIC.
REFER TO GEOTECHNICAL INVESTIGATION REPORT (PG6160-1, REVISION 3, DATED MARCH 21, 2023), FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS AND GEOTECHNICAL INSPECTION REQUIREMENTS.
REFER TO ARCHITECTS AND LANDSCAPE ARCHITECTS DRAWINGS FOR BUILDING AND HARD SURFACED AREAS AND DIMENSIONS.
REFER TO THE 'DEVELOPMENT' SERVICING STUDY AND STORMWATER MANAGEMENT REPORT (R-2022-013) PREPARED BY NOVATECH.
SAW CUT AND GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE-IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).

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
STORM / SANITARY MANHOLE (1000) 701 010 OPSIS
SANITARY MANHOLE FRAME AND COVER 401 010 - TYPE 'A' OPSIS
STORMWATER FRAME AND COVER 401 010 - TYPE 'B' OPSIS
WATERTIGHT MANHOLE FRAME AND COVER 401 033 OPSIS
CATCHBASIN (600x600) 705 010 OPSIS
CATCHBASIN FRAME & COVER 519 CITY OF OTTAWA
SEWER TRENCH 58 CITY OF OTTAWA
STORM SEWER PVC DR 35 (450mm PIPE AND SMALLER) PVC DR 35 (450mm PIPE AND SMALLER)
STORM SEWER PVC DR 35 (600mm PIPE AND LARGER) PVC DR 35
SANITARY SEWER PVC DR 35
REFER TO MECHANICAL PLANS FOR DETAILS.
THE SANITARY SERVICE LATERAL SHALL BE EQUIPPED WITH BACKFLOW PREVENTERS WITHIN THE BUILDING FOOTPRINT AS PER CITY OF OTTAWA STANDARD DETAILS S14.1.
REFER TO MECHANICAL PLANS FOR DETAILS.
THE STORM SERVICE LATERAL SHALL BE EQUIPPED WITH A BACKFLOW PREVENTER WITHIN THE BUILDING FOOTPRINT AS PER CITY OF OTTAWA STANDARD DETAILS S14.1. REFER TO MECHANICAL PLANS FOR DETAILS.
SERVICES ARE TO BE CONSTRUCTED TO 1.5m 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.
INSULATE ALL PIPES (SAN / STM) THAT HAVE LESS THAN 1.5m COVER WITH HD-40 INSULATION PER INSULATION DETAIL FOR SHALLOW SEWERS. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
CONCRETE MANHOLES ARE TO BE 1200mm Ø STRUCTURES UNLESS OTHERWISE NOTED ON THE DRAWING. FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-SEAL, PSX, POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
TYPICAL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
THE CONTRACTOR IS TO TELETEST (CCTV) ALL PROPOSED SEWERS, 200mm Ø OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES. PROVIDE A COPY OF ALL CCTV INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.
CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL APPLICABLE SERVICES AS-BUILT INFORMATION SHOWN ON THIS PLAN AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND TIG ELEVATIONS, STRUCTURE LOCATIONS AND ANY ALIGNMENT CHANGES, ETC.
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 OPSIS 410.07.16, 410.07.16.04 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SEWERS 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.

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.
SPECIFICATIONS: ITEM, SPEC. No., REFERENCE
WATERMAIN TRENCHING W17 CITY OF OTTAWA
HYDRANT INSTALLATION W19 CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES W22 CITY OF OTTAWA
THERMAL INSULATION BY OPEN STRUCTURES W23 CITY OF OTTAWA
VALVE BOX ASSEMBLY W24 CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWERS W25 CITY OF OTTAWA
CATHODIC PROTECTION FOR PVC WATERMANS W40 CITY OF OTTAWA
WATERMAIN MATERIAL PVC DR 18 (100mm AND LARGER)
EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMANS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAN AND CROCKING IN OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.
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 WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

INLET CONTROL DEVICE DATA TABLE: AREA A-2. Table with columns: DESIGN EVENT, ICD TYPE (PLUG TYPE), OUTLET STRUCTURE, DIAMETER OF OUTLET PIPE (mm), PEAK FLOW (L/s), DESIGN HEAD (m), WATER ELEVATION (m), VOLUME (m³), AVAILABLE STORAGE.

PROPOSED ROOF DRAIN TABLE: AREA R-1 (RD 1 TO RD 5). Table with columns: AREA ID, ROOF DRAIN NO. (WATTS MODEL), ROOF DRAIN OPENING SETTING, 1.5 YEAR RELEASE RATE, APPROX. 5-YR PONDING DEPTH, 1:100 YEAR RELEASE RATE, APPROX. 100-YR PONDING DEPTH.

PROPOSED 100mm Ø WATER SERVICE TABLE. Table with columns: STATION, SURFACE ELEVATION, T&M ELEVATION, COMMENTS.

ALL REAR PATIO DECK / BI-LEVEL PODIUM DRAINS ARE TO BE CONNECTED TO THE INTERNAL PLUMBING SYSTEM AND OUTLET TO THE BUILDING STORM SERVICE UPSTREAM OF STM MH 102. REFER TO MECHANICAL PLANS FOR DETAILS.

PROPOSED STORM SERVICE TO BE SLEEVED THROUGH FOUNDATION WALL. REFER TO MECHANICAL PLANS FOR DETAILS.

INSULATE SHALLOW STORM SERVICE WHERE COVER IS LESS THAN 2.0m (TYPICAL).

THE INTERNAL PLUMBING SYSTEM FOR THE REAR PATIO DECKS AND PODIUM DRAINS IS TO BE CONSTRUCTED WITH PRESSURE PIPE AND FITTINGS. REFER TO MECHANICAL PLANS FOR DETAILS.

THE PROPOSED WEEPING TILE SYSTEM AND UNDERSLAB DRAINAGE SYSTEMS ARE TO BE CONNECTED TO THE INTERNAL MECHANICAL PLUMBING AND OUTLET TO THE BUILDING STORM SERVICE UPSTREAM OF STM MH 103 (BYPASSING THE CONTROLLED SWM SYSTEM). REFER TO MECHANICAL PLANS FOR DETAILS.

ALL UPPER ROOF DRAINS (RD 1 - 5) ARE TO BE CONTROLLED FLOW DRAINS CONNECTED TO THE INTERNAL PLUMBING SYSTEM AND OUTLET TO THE BUILDING STORM SERVICE UPSTREAM OF STM MH 103 (BYPASSING THE CONTROLLED SWM SYSTEM). REFER TO MECHANICAL PLANS FOR DETAILS.

PROPOSED STORM SERVICE TO BE SLEEVED THROUGH FOUNDATION WALL. REFER TO MECHANICAL PLANS FOR DETAILS.

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.

PIPE CROSSING TABLE. Table with columns: CROSSING, LOWER PIPE, HIGHER PIPE, CLEARANCE.

CONNECT TO EXISTING 300mm Ø PVC WATERMAIN TO BE COMPLETED BY CITY FORCES. CONTRACTOR TO DETERMINE EXACT LOCATION AND ELEVATION OF WATERMAIN IN FIELD. EXCAVATION, BACKFILL AND REINSTATEMENT BY CONTRACTOR.

CONNECT TO EXISTING 200mm Ø PVC SANITARY SEWER FROM ABOVE WITH ROLLED TEE AND 22.5° VERTICAL BEND. MAINTAIN AND PROTECT EXISTING FLOWS FROM THE WEST. EXCAVATION, BACKFILL AND REINSTATEMENT BY CONTRACTOR. EXISTING 200mm Ø INVERT=87.52m. PROPOSED 200mm Ø INVERT=87.63m.

CONNECT TO EXISTING 250mm Ø PVC STORM SEWER FROM ABOVE PER CITY DETAIL S11.1 WITH ROLLED TEE AND TWO (2) 22.5° RADIUS BENDS. MAINTAIN AND PROTECT EXISTING FLOWS FROM THE WEST. EXCAVATION, BACKFILL AND REINSTATEMENT BY CONTRACTOR. EXISTING 250mm Ø INVERT=87.50m. PROPOSED 200mm Ø INVERT (AT CONNECTION)=87.61m. PROPOSED 200mm Ø INVERT (AT VERTICAL BEND)=89.79m.

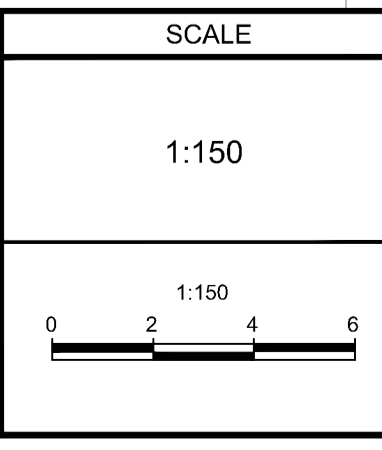
APPROXIMATE LIMITS OF ROADWAY REINSTATEMENT (PER CITY STANDARD R10).

PROPOSED STORM SEWER SERVICE TO CROSS ABOVE EXISTING 300mm Ø WATERMAIN. EXISTING 300mm Ø WATERMAIN. PROPOSED 200mm Ø INVERT=88.33m. EXISTING T/W=88.33m. CLEARANCE=0.50m.

STORM TO CROSS BELOW EX.GAS. CLEARANCE=1.3m.

OWNER INFORMATION: NIVO DEVELOPMENTS INC. 255 MICHAEL COWPLAND DRIVE, OTTAWA, ONTARIO, K2M 0M5. CONTACT: ANTHONY NICOLINI. PHONE: (613) 880-2274. EMAIL: anthony@arkconstruction.ca

Revision table with columns: No., REVISION, DATE, BY.



FOR REVIEW ONLY. Table with columns: DESIGN, CHECKED, DRAWN, APPROVED. Includes professional engineer seal for F.S. THAUVETTE, dated MAR 16, 2023.

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

LOCATION: CITY OF OTTAWA, 1185 BEAVERWOOD ROAD. DRAWING NAME: GENERAL PLAN OF SERVICES. PROJECT No.: 121184. REV # 3. DRAWING No.: 121184-GP.