

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.
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.
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.
7. ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION.
8. ALL ELEVATIONS ARE GEODETIC. THE SITE BENCHMARK IS CURRENTLY SET ON TOP OF THE FIRE HYDRANT SPINDLE (ELEV. = 82.40).
9. REFER TO GEOTECHNICAL REPORT (No. PG6527-1, DATED MARCH 22, 2023), PREPARED BY PATERSON GROUP FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS.
10. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
11. REFER TO SERVICING AND STORMWATER MANAGEMENT REPORT PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
12. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
13. PROVIDE LINE/PARKING PAINTING.
14. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN.
15. CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT FOR CONSTRUCTION PURPOSES.

SEWER NOTES:

Table with 3 columns: ITEM, SPEC. No., REFERENCE. Lists specifications for catchbasins, manholes, frames, covers, trenching, gas pipe crossing, storm sewer, and sanitary sewer.

INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 2.0m COVER WITH 50mmx1200mm HI-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION (REFER TO DETAIL).

- 2. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0% (2.0% IS PREFERRED).
3. SEWER SERVICE CONNECTIONS PER CITY OF OTTAWA DETAILS S11 AND S11.1.
4. PIPE BEDDING FOR SEWER AND WATER PIPES SHOULD CONSIST OF AT LEAST 150mm OF OPSS GRANULAR A.
5. THE SEWER AND WATER PIPE COVER MATERIAL SHOULD CONSIST OF OPSS GRANULAR A.
6. WHERE HARD SURFACE AREAS ARE CONSIDERED ABOVE TRENCH BACKFILL, THE TRENCH BACKFILL MATERIAL WITHIN THE FROST ZONE.
7. FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES.
8. THE OWNER SHALL REQUIRE THAT THE SITE SERVICING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS.
9. STORM MANHOLES AND CBMHs ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
10. CONTRACTOR TO TELEVIEW (CCTV) ALL PROPOSED SEWERS, 200mm OR GREATER PRIOR TO BASE COURSE ASPHALT.
11. ALL CATCHBASINS AND CATCHBASIN MANHOLES TO BE PROVIDED WITH MINIMUM 3 METER LONG PERFORATED SUBDRAINS.

WATERMAIN NOTES:

- 1. SPECIFICATIONS: ITEM, WATERMAIN TRENCHING, THERMAL INSULATION IN SHALLOW TRENCHES, WATERMAIN CROSSING BELOW SEWER/ABOVE SEWER, WATERMAIN, HYDRANT, VALVE AND VALVE BOX.
2. SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
3. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
4. PROVIDE MINIMUM 0.25m ABOVE, 0.5m IF BELOW, CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS PER CITY OF OTTAWA STANDARDS W25/W25.2.
5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.
6. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS CITY OF OTTAWA STANDARD DETAILS W-39, 40, 41, 42, 43 AND 44.
7. PROVIDE THERMAL INSULATION FOR WATERMAIN AT OPEN STRUCTURES PER CITY OF OTTAWA STANDARD DETAIL W-23.
8. IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.

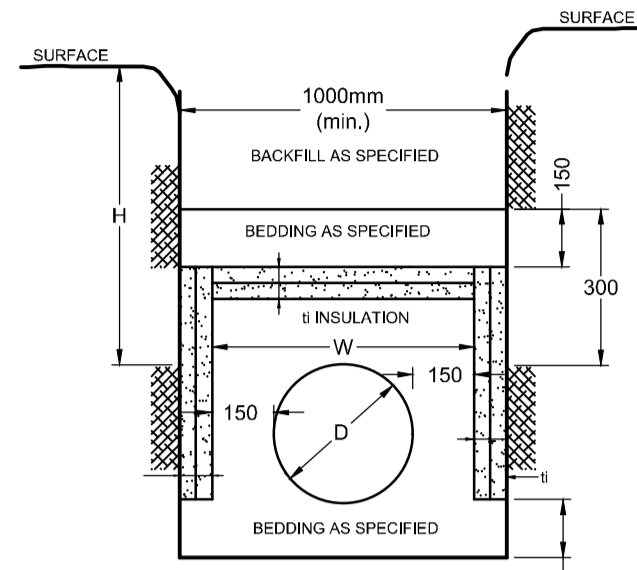
GRADING NOTES:

- 1. ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS AS DIRECTED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER.
2. NON-SPECIFIED EXISTING FILL ALONG WITH SITE EXCAVATED SOIL COULD BE PLACED AS GENERAL LANDSCAPING FILL AND BENEATH EXTERIOR PARKING AREAS WHERE SETTLEMENT OF THE GROUND IS OF MINOR CONCERN.
3. EXPOSED SUB-GRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF GRANULARS.
4. ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUB-EXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
5. FILL USED FOR GRADING BENEATH THE BASE AND SUB-BASE LAYERS OF PAVED AREAS SHOULD CONSIST, UNLESS OTHERWISE SPECIFIED, OF CLEAN IMPORTED GRANULAR FILL.
6. THE TRANSITION BETWEEN THE PAVEMENT STRUCTURE OVER THE PODIUM DECK SUB-GRADE AND SOIL SUB-GRADE BEYOND THE FOOTPRINT OF THE PODIUM DECK IS RECOMMENDED TO BE TRANSITIONED TO MATCH THE PAVEMENT STRUCTURES PROVIDED FOR THE AREAS NOT ABOVE THE PODIUM DECK.
7. MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
8. MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTED.
9. ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS OTHERWISE INDICATED.
10. ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE NOTED.
11. BACKFILL MATERIAL BELOW SIDEWALK AND WALKWAY SUB-GRADE OR OTHER SETTLEMENT SENSITIVE STRUCTURES WHICH ARE NOT ADJACENT TO THE BUILDINGS SHOULD CONSIST OF FREE DRAINING, NON-FROST SUSCEPTIBLE MATERIAL.
12. REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS.
13. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING AS-BUILT ELEVATIONS OF ALL DESIGN GRADES SHOWN ON THIS PLAN.
14. THE PROPOSED SITE IS SUBJECT TO GRADE RAISE RESTRICTIONS. REFER TO PATERSON MEMORANDUM TITLED: GRADING PLAN REVIEW, PROPOSED APARTMENT BUILDING, 3080 NAVAN ROAD - OTTAWA ONTARIO, DATED APRIL 18, 2023, PG65274-MEMO.01 FOR THE SITE LIGHTWEIGHT FILL REQUIREMENTS.

SEWER & WATERMAIN INSULATION NOTES:

- 1. INSULATE ALL SEWER PIPES THAT HAVE LESS THAN 2.0m COVER AND ALL WATERMAIN WITH LESS THAN 2.4m OF COVER WITH EXPANDED POLYSTYRENE INSULATION AS PER OPSD 1109.030.
2. THE THICKNESS OF INSULATION SHALL BE THE EQUIVALENT OF 25mm FOR EVERY 300mm REDUCTION IN THE REQUIRED DEPTH OF COVER WITH 50mm MINIMUM (SEE TABLE).
T = THICKNESS OF INSULATION (mm)
W = WIDTH OF INSULATION (mm)
W = D + 300 (1000 mm.)
D = O.D. OF PIPE (mm)

Table with 2 columns: COVER SEWER / WATER (mm), INSULATION THICKNESS (mm). Shows values for 2000-1700, 1700-1400, and 1400-1100 cover depths.



INSULATION DETAIL FOR SHALLOW SEWERS & WATERMAIN N.T.S.

PAVEMENT STRUCTURE:

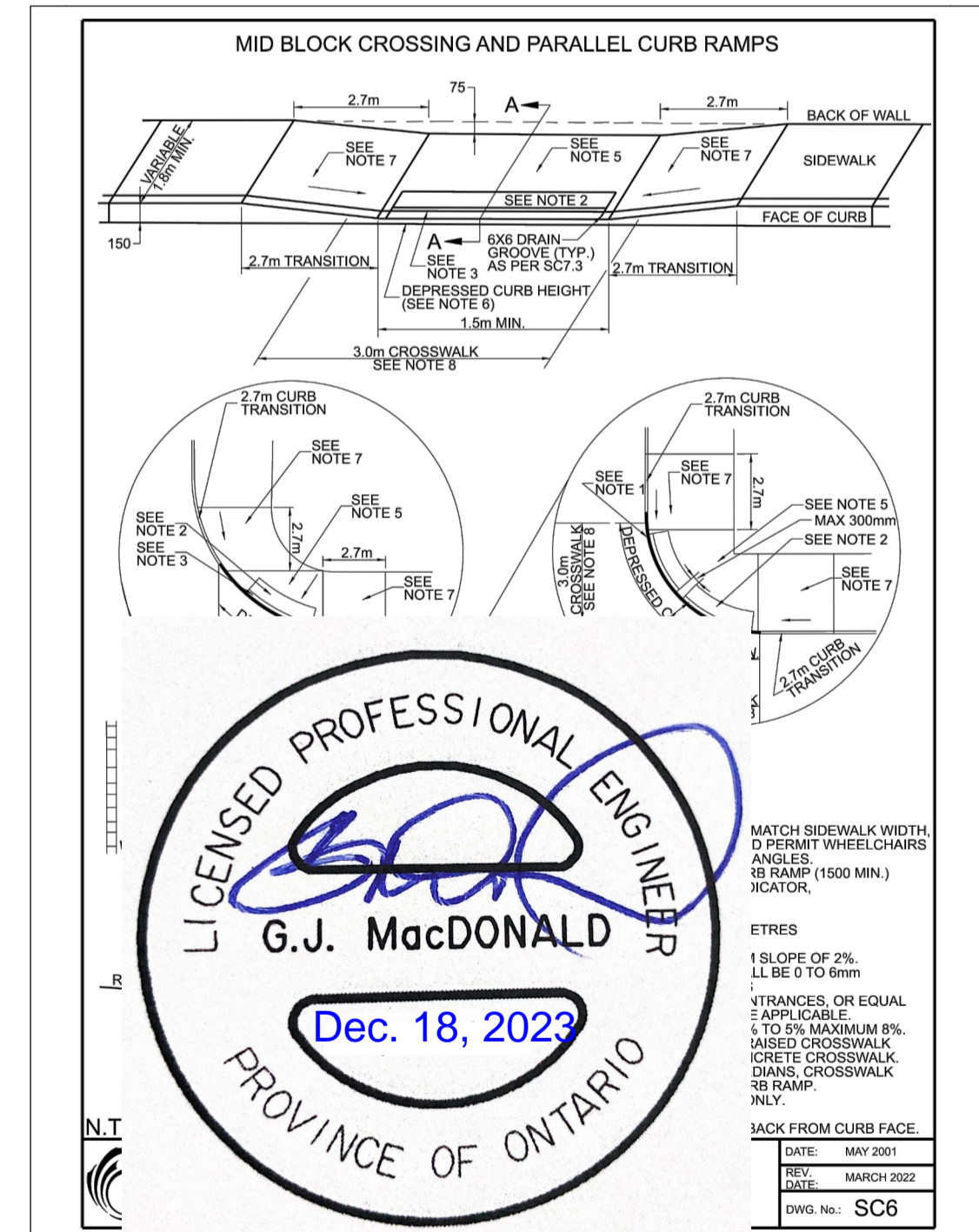
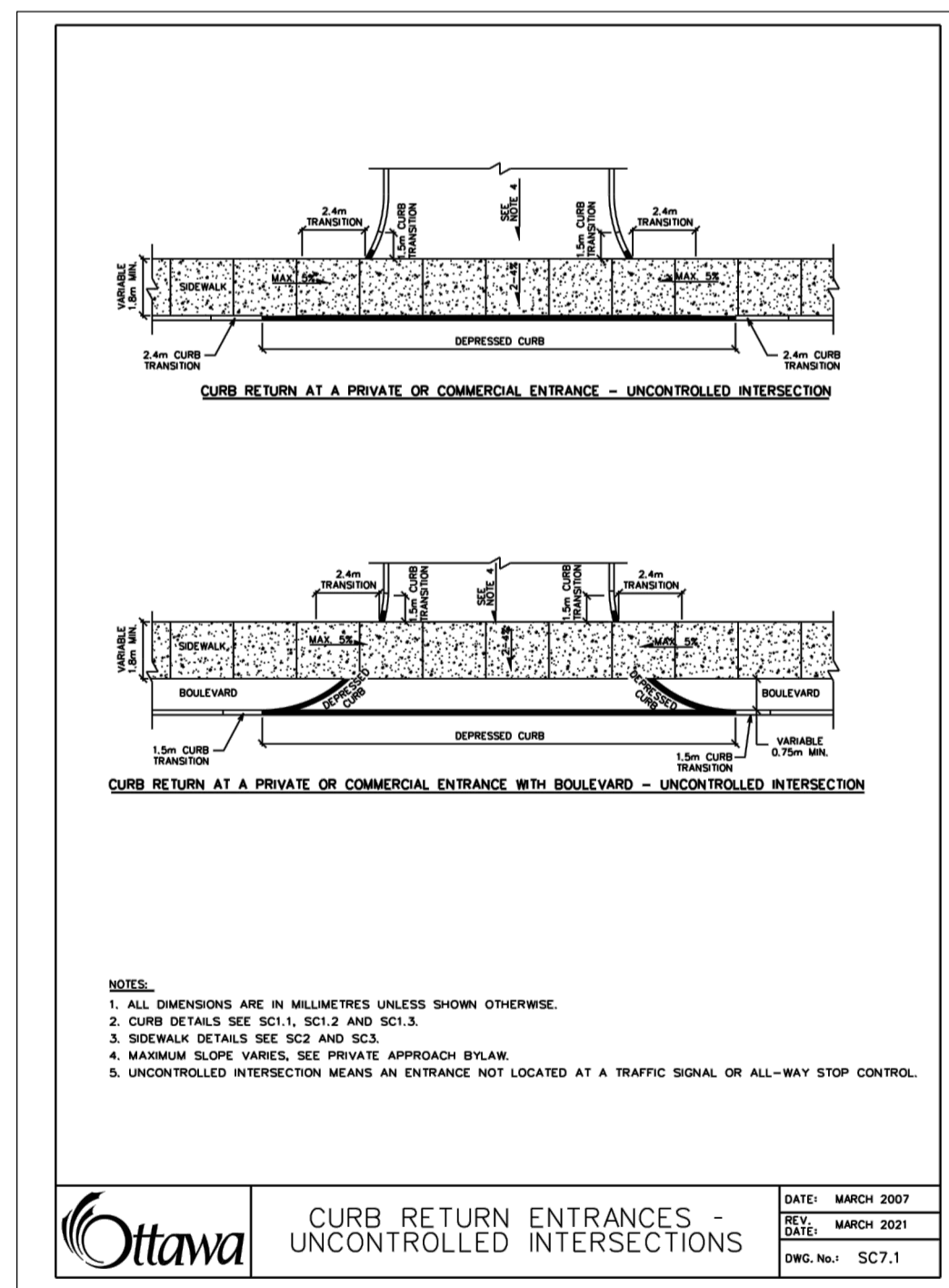
- ACCESS LANE, FIRE TRUCK LANE, RAMP AND HEAVY TRUCK PARKING AREAS (PODIUM DECK)
40mm HL3 OR SUPERPAVE 12.5
50mm HL3 OR SUPERPAVE 19.0
300mm** OPSS GRAN "A" CRUSHED STONE
101.6mm RIGID INSULATION
31.8mm WATERPROOFING MEMBRANE AND PROTECTION BOARD (SUBGRADE - REINFORCED CONCRETE PODIUM DECK)
- HEAVY TRUCK TRAFFIC AND LOADING AREAS
45mm HL3 OR SUPERPAVE 12.5
50mm HL8 OR SUPERPAVE 19.0
150mm OPSS GRAN "A" CRUSHED STONE
450mm OPSS GRAN "B" TYPE II (SUBGRADE - EITHER IN SITU SOIL, FILL OR OPSS GRANULAR TYPE I OR II MATERIAL PLACED OVER IN SITU SOIL.)
- CAR ONLY PARKING AREAS (PODIUM DECK)
50mm HL3 OR SUPERPAVE 12.5
200mm** OPSS GRAN "A" CRUSHED STONE
101.6mm RIGID INSULATION
31.8mm WATERPROOFING MEMBRANE AND PROTECTION BOARD (SUBGRADE - REINFORCED CONCRETE PODIUM DECK)
- CAR ONLY PARKING AREAS
50mm HL3 OR SUPERPAVE 12.5
150mm OPSS GRAN "A" CRUSHED STONE
300mm OPSS GRAN "B" TYPE II (SUBGRADE - EITHER IN SITU SOIL, FILL OR OPSS GRANULAR TYPE I OR II MATERIAL PLACED OVER IN SITU SOIL.)

- NOTE:
- MINIMUM PERFORMANCE GRADED (PG) 58-34 ASPHALT CEMENT.
- IF SOFT SPOTS DEVELOP IN THE SUBGRADE DURING COMPACTION OR DUE TO CONSTRUCTION TRAFFIC, THE AFFECTED AREAS SHOULD BE EXCAVATED AND REPLACED WITH OPSS GRANULAR B TYPE II MATERIAL.
- THE PAVEMENT GRANULAR BASE AND SUB-BASE SHOULD BE PLACED IN MAXIMUM 300mm THICK LIFTS AND COMPACTED TO A MINIMUM OF 100% OF THE MATERIALS SPMDD USING SUITABLE COMPACTION EQUIPMENT.

PIPE CROSSING TABLE with columns: CROSSING, LOWER PIPE, HIGHER PIPE, CLEARANCE. Lists crossing details for 200mm and 250mm pipes.

PROPOSED WATER SERVICE (1+000.0) and (2+000.0) tables with columns: STATION, SURFACE ELEVATION, TWM ELEVATION, COMMENTS. Lists stationing and elevations for water service connections.

ICD SIZING AND FLOWS table with columns: STRUCTURE, TEMPEST LMF/ORIFICE ICD SIZE, ICD INVERT (m), T/G (m), 100-yr HGL (m), 100-yr HEAD (m), 100-yr RELEASE RATE (L/s). Lists data for CBMH02 and CISTERN.



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.

NOT FOR CONSTRUCTION

Revision table with columns: No., REVISION, DATE, BY. Lists revisions for updated comments and issued for SPA.

Approval table with columns: DESIGN, CHECKED, DRAWN, APPROVED. Lists roles and names of project team members.

FOR REVIEW ONLY section containing professional engineer seals for A.R. Mestwarp and G.J. MacDonald, dated Dec 18, 2023.

NOVATECH logo and contact information: Engineers, Planners & Landscape Architects, Suite 200, 240 Michael Cowpland Drive, Ottawa, Ontario, Canada K2M 1P6.

Project information table with columns: LOCATION, DRAWING NAME, NOTES AND DETAILS, PROJECT No., REV, DRAWING No. Lists project details for Rhythm Apartments.

M:\2023\122180\CAD\CAD\122180.dwg, ND, Dec 18, 2023, 1:32pm, amestwarp

D07-12-23-0047

18995