

1. GENERAL

- 1.1 USE BAR SCALE TO CONFIRM ACTUAL PLOT SCALE. EXISTING AND NEW ELEVATIONS AND INVERTS SHOWN ARE GEODETIC AND ARE IN METERS. ALL PIPE DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- 1.2 EXISTING UTILITIES ARE SHOWN AS DOTTED LINES. THE DEPTHS AND LOCATIONS OF EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON PLAN AND THOSE SHOWN ARE DERIVED FROM AVAILABLE INFORMATION AND MUST BE CONFIRMED ON SITE BEFORE COMMENCING CONSTRUCTION. REPORT ANY DIFFERENCES TO ENGINEER. UNDERGROUND UTILITIES (INCLUDING ONTARIO ONE CALL: 1-800-400-2255) SHALL BE CONDUCTED PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION.
- 1.3 COORDINATES AND EXISTING GRADES AND OTHER FEATURES DERIVED FROM TOPOGRAPHIC SURVEY PREPARED BY ANNIS O'SULLIVAN, VOLLEBEKK LTD JOB No. 19519-17. IT IS THE RESPONSIBILITY OF THE USER OF THE SURVEY PLAN AND THESE DRAWINGS TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREE WITH THE INFORMATION SHOWN ON THESE DRAWINGS.
- 1.4 REFER TO ARCHITECTURAL AND LANDSCAPE SITE PLANS FOR EXACT LOCATIONS OF BUILDINGS, PAVED AREAS, DRIVEWAYS, DRIVEWAYS AND EXISTING GRADES AND OTHER FEATURES DERIVED FROM TOPOGRAPHIC SURVEY PREPARED BY ANNIS O'SULLIVAN, VOLLEBEKK LTD JOB No. 19519-17. IT IS THE RESPONSIBILITY OF THE USER OF THE SURVEY PLAN AND THESE DRAWINGS TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREE WITH THE INFORMATION SHOWN ON THESE DRAWINGS.
- 1.5 REFER TO ARCHITECTURAL AND LANDSCAPE SITE PLANS FOR EXACT LOCATIONS OF BUILDINGS, PAVED AREAS, DRIVEWAYS, DRIVEWAYS AND EXISTING GRADES AND OTHER FEATURES DERIVED FROM TOPOGRAPHIC SURVEY PREPARED BY ANNIS O'SULLIVAN, VOLLEBEKK LTD JOB No. 19519-17. IT IS THE RESPONSIBILITY OF THE USER OF THE SURVEY PLAN AND THESE DRAWINGS TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREE WITH THE INFORMATION SHOWN ON THESE DRAWINGS.
- 1.6 REFERENCE THE LATEST REVISION AND ALL ADDENDUMS OF THE GEOTECHNICAL INVESTIGATION BY PATERSON GROUP INC. FILE: PG2655-LEY01. SITE PREPARATION INCLUDING BUILDING SUB-GRADE PREPARATION AND PAVEMENT SUB-GRADE PREPARATION AND CONSTRUCTION OF THE PAVEMENT STRUCTURE AND EXCAVATION AND BACKFILLING, INCLUDING COMPACTION OF MATERIALS, SHALL CONFORM TO THE GEOTECHNICAL INVESTIGATION TO THE SATISFACTION OF THE ENGINEER.
- 1.7 DRAWINGS ARE TO BE READ IN CONJUNCTION WITH SERVICING BRIEF & STORM WATER MANAGEMENT REPORT No. 20037 PREPARED BY D. B. GRAY ENGINEERING INC.
- 1.8 REINSTATE ADJACENT PROPERTIES TO PRE-CONSTRUCTION CONDITIONS.
- 1.9 REINSTATE CITY PROPERTIES TO CITY STANDARDS AND TO CITY OF OTTAWA'S SATISFACTION.
- 1.10 ALL PROPOSED EXCAVATIONS SHALL BE MADE TO THE CITY OF OTTAWA'S CITY STANDARDS AND TO CITY OF OTTAWA'S SATISFACTION.
- 1.11 ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS WILL APPLY WHERE NO CITY STANDARDS ARE AVAILABLE.
- 1.12 ALL PROPOSED RETAINING WALLS SHALL BE SETBACK A MINIMUM 0.15m FROM PROPERTY LINE. ALL PROPOSED RETAINING WALLS GREATER THAN 1.0m IN HEIGHT SHALL BE DESIGN BY A PROFESSIONAL ENGINEER REGISTERED IN ONTARIO.

2. EROSION AND SEDIMENT CONTROL PLAN

- 2.1 THE EROSION AND SEDIMENT CONTROL PLAN IS A "LIVING DOCUMENT" AND SHALL BE REVISED IN THE EVENT MODIFIED CONDITIONS ARE IDENTIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL DEVELOP EROSION AND SEDIMENT CONTROL PRACTICES PRIOR TO THE START OF CONSTRUCTION. THESE PRACTICES SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL USING SEDIMENT CAPTURE FILTER SOCKS, INSERTS IN CATCH BASINS AND MANHOLES AND INSTALLING SILT FENCES AND OTHER EFFECTIVE SEDIMENT TRAPS. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSIDERED AS A BREACH OF THE CONTRACT AND SUBJECT TO PENALTIES.
- 2.2 PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL CATCH BASINS AT THE SITE AND AT ANY MANHOLES OR CATCH BASINS THAT WILL RECEIVE DISCHARGE FROM DE-WATERING OPERATIONS AND ALL NEW CATCH BASINS AS THEY ARE INSTALLED. INSTALL SEDIMENT CAPTURE FILTER SOCKS, INSERTS (TERRAFIX GEOSYNTHETICS INC SILTSACK OR APPROVED EQUAL). INSPECT AT THE END OF EACH DAY AND AFTER EACH RAINFALL. REMOVE SEDIMENT AS RECOMMENDED BY THE MANUFACTURER. IMMEDIATELY REPAIR OR REPLACE ANY DAMAGED FILTER SOCKS. FILTER SOCKS SHALL BE MAINTAINED AND REPLACED AS NECESSARY.
- 2.3 ANY MATERIAL DEPOSITED ON PUBLIC ROAD SHALL BE REMOVED BY SWEEPING AND SHOWELING OR VACUUMING AND DISPOSING SEDIMENT IN A CONTROLLED AREA. DO NOT SWEEP OR HOSE MATERIAL INTO ANY STORMWATER CONVEYANCE SYSTEM.
- 2.4 CONSTRUCTION IS CONSIDERED COMPLETE WHEN THE FOLLOWING CONDITIONS HAVE BEEN MET:
 - a. ALL EXPOSED SURFACES HAVE BEEN FULLY REGRADED.
 - b. ALL HARD SURFACES HAVE BEEN FULLY CONSTRUCTED.
 - c. ALL PROPOSED GRASSED AREAS ARE EITHER SODDED OR HAVE A FULL COVER OF WELL ESTABLISHED TURF AND HAVE HAD A MINIMUM OF ONE FULL GROWING SEASON (MAY 15TH TO SEPTEMBER 15TH).
 - d. THERE ARE NO AREAS OF EXPOSED EARTH.
 - e. ALL STOCKPILED MATERIALS HAVE BEEN REMOVED.
- 2.5 REMOVE EROSION AND SEDIMENT CONTROL MEASURES WHEN CONSTRUCTION IS COMPLETE.

3. GRADING & DRAINAGE

- 3.1 NEW GRADES TO MATCH EXISTING AT PROPERTY LINE. NO EXCESS DRAINAGE WILL BE DIRECTED TOWARDS THE ADJACENT PROPERTIES DURING AND AFTER CONSTRUCTION. THERE WILL BE NO ALTERATION TO EXISTING GRADE AND DRAINAGE PATTERNS ON PROPERTY LINE.
- 3.2 ALL AREAS SHALL BE GRADED TO ENSURE ADEQUATE DRAINAGE AWAY FROM BUILDINGS TO CATCH BASINS, SWALES, DITCHES AND OTHER APPROVED DISPOSAL AREAS. GRADING SHALL BE GRADUAL BETWEEN FINISHED SPOT HEIGHTS SHOWN ON DRAWINGS TO PREVENT PONDING (OTHER THAN PONDING REQUIRED FOR STORMWATER MANAGEMENT).
- 3.3 WHETHER RESULT OF POOR WORKMANSHIP OR DAMAGE DEFECTIVE GRADING SHALL BE CORRECTED. PROMPTLY MAKE GOOD OTHER CONTRACTOR'S WORK DAMAGED BY SUCH CORRECTIONS.

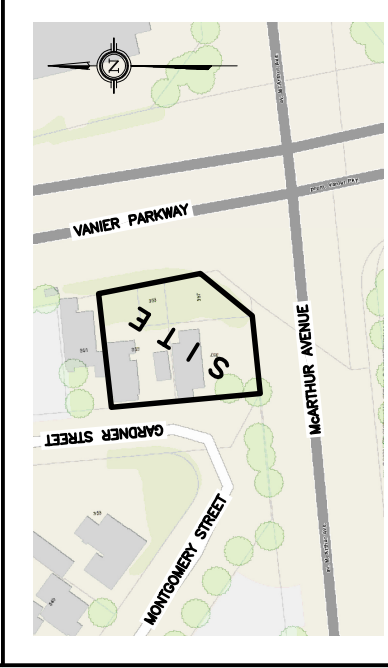
4. SITE SERVICES

- 4.1 EXISTING WATER SERVICE CONNECTIONS TO BE DECOMMISSIONED SHALL BE BLANKED AT CITY WATERMAIN BY CITY FORCES. CONTRACTOR SHALL PROVIDED EXCAVATION, BEDDING AND REINSTATEMENT. EXISTING SEWER SERVICE CONNECTIONS SHALL BE DECOMMISSIONED AS PER CITY OF OTTAWA STANDARDS S11.4. CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING AND REINSTATEMENT. WATERMAIN BY CITY OF OTTAWA FORCES. CONTRACTOR SHALL PROVIDE EXCAVATION, BACKFILL AND REINSTATEMENT.
- 4.2 THE WATER PRESSURE IS EXPECTED TO ABOVE 80 PSI. INSTALL A PRESSURE REDUCING VALVE (PRV) IMMEDIATELY AFTER THE WATER METER.
- 4.4 WATER METER SHALL BE INSTALLED AS PER CITY OF OTTAWA DWG. No. W31.
- 4.5 ALL WATER MAINS SHALL BE INSTALLED IN UNIFORM TRENCHES WITH A MINIMUM 7.5m BARREL TO BARREL HORIZONTAL SEPARATION FROM SEWERS AND SEWER MANHOLES.
- 4.6 PROVIDE A MINIMUM 2.4 m COVER OVER WATER SERVICE CONNECTION. WHERE THE MINIMUM COVER IS NOT POSSIBLE INSULATE AS PER CITY OF OTTAWA DWG. No. W22.
- 4.7 WHERE LESS THAN 2.4 m CLEARANCE FROM AN OPEN STRUCTURE (EG. MANHOLES & CATCH BASINS) PLACE INSULATION AROUND AND WATER SERVICE CONNECTIONS AS PER CITY OF OTTAWA DWG. No. W23.
- 4.8 ALL WATER MAINS SHALL BE INSTALLED IN UNIFORM TRENCHES WITH A MINIMUM 7.5m BARREL TO BARREL HORIZONTAL SEPARATION FROM SEWERS AND SEWER MANHOLES.
- 4.9 THE SANITARY BUILDING DRAIN SHALL BE INSTALLED WITH A FULL-PORT BACKWATER VALVE TO CITY OF OTTAWA STANDARDS AND TO CITY OF OTTAWA DWG. No. S14.1 OR S14.2. THE BACKWATER VALVE SHALL BE INSTALLED SO THAT ALL PLUMBING FIXTURES ABOVE THE LEVEL OF THE BACKWATER VALVE SHALL BE ABOVE THE VALVE.
- 4.10 SEWER SERVICE LATERAL SHALL HAVE A MINIMUM 2.0m OF COVER OR SHALL BE INSULATED.
- 4.11 INSTALL CLEANOUTS ON THE STORM BUILDING DRAIN AND SANITARY BUILDING DRAIN AS CLOSE AS PRACTICAL TO THE WHERE THE SANITARY AND STORM DRAINS LEAVE THE BUILDING.
- 4.12 CONNECT PROPOSED STORM SEWER SERVICE CONNECTION TO EXISTING MUNICIPAL STORM SEWER AS PER CITY OF OTTAWA STANDARDS AND TO CITY OF OTTAWA DWG. No. S14.3.
- 4.13 ALL SEWER MATERIALS AND CONSTRUCTION METHODS TO CITY OF OTTAWA STANDARDS AND ONTARIO PROVINCIAL STANDARDS SPECIFICATIONS (OPSS & OPSD). SEWER MATERIAL SHALL BE PVC OR REINFORCED CONCRETE. PVC SEWERS SHALL BE SDR-35 (SDR-28 FOR DIAMETERS 150mm OR LESS) AND SHALL CONFORM TO CSA B182.2 AND SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS.
- 4.14 MANHOLES & CATCH BASINS:
 - A. MANHOLES SHALL BE CONSTRUCTED WITH PVC PIPE WITH WELDED JOINTS AND THE CLEANOUTS SHALL BE CONSTRUCTED WITH PVC PIPE WITH WELDED JOINTS AND SHALL CONFORM TO CITY OF OTTAWA STANDARDS AND TO CITY OF OTTAWA DWG. No. S14.4.
 - B. MANHOLE STEPS: TO OPSD 1351 AND OPSD 701.010 WITH BASE SLAB OR MONOLITHIC BASE. TOP SECTION'S ECCENTRIC CONE OR FLAT LAB TOP TYPE WITH OPENING OFFSET FOR VERTICAL LADDER INSTALLATION.
 - C. ADJUSTING RINGS: TO OPSD 405.01
 - D. PRECAST CATCH BASIN SECTIONS: TO OPSD 1351.
 - E. JOINTS: SHALL BE MADE WATERTIGHT USING BUTYL BASED, FLEXIBLE WATERSTOP/JOINT SEALANT MATERIAL.
 - F. SANITARY SEWERS: BENCH TO PROVIDE A SMOOTH U-SHAPED CHANNEL PER OPSD 701.021. SLOPE INVERT TO ESTABLISH SEWER GRADE.
 - G. 600mm SUMP SEWERS: MANHOLES SHALL HAVE A 300mm SUMP AND CATCH BASINS AND DITCH INLETS SHALL HAVE A 600mm SUMP.
 - H. FRAMES, GRATINGS AND COVERS TO CITY OF OTTAWA DRAWINGS OR OPSD 401.010
- 4.15 ROOF DRAINS SHALL BE FLOW CONTROL TYPE EACH INSTALLED WITH A WEIR WITH A PARABOLIC SLOT, EACH SLOT SHALL RELEASE 5 USgpm/inch. OPENING AT TOP OF FLOW CONTROL WEIR SHALL BE A MINIMUM 50mm IN DIAMETER. MATTS ROOF DRAIN WITH MATTS ACTUATOR WEIR RD-100-A1 OR EQUAL. PRIOR TO INSTALLATION SUBMIT SHOP DRAWING TO ENGINEER FOR APPROVAL. SCUPPERS SHALL BE INSTALLED WITH DETAIL FROM EACH JOBBER AND SHALL BE INSTALLED WITH A MINIMUM 100mm ABOVE ROOF DRAINAGE DEPTH. REFER TO ARCHITECT FOR EXACT LOCATION AND DETAILS OF SCUPPERS. THE MINIMUM WIDTH OF SCUPPERS, REFER TO ARCHITECT FOR EXACT LOCATION AND DETAILS OF SCUPPERS. THE ROOF STRUCTURE SHALL BE DESIGNED TO CARRY THE LOAD OF WATER HAVING A 50mm DEPTH OF WATER AT THE SCUPPER AND 200mm DEPTH OF WATER AT THE ROOF DRAIN (REFER TO STRUCTURAL ENGINEER). RAINWATER LEADERS INSIDE BUILDING SHALL BE CONSTRUCTED WITH PVC PIPE WITH WELDED JOINTS AND THE CLEANOUTS SHALL BE CONSTRUCTED WITH PVC PIPE WITH WELDED JOINTS AND SHALL CONFORM TO CITY OF OTTAWA STANDARDS AND TO CITY OF OTTAWA DWG. No. S14.5. CONDUCT A PRESSURE TEST ON THE SYSTEM AS PER THE MECHANICAL ENGINEER'S INSTRUCTIONS (SEE MECHANICAL). DISCHARGE FROM ALL ROOF DRAINS SHALL BE PIPED TO CISTERN. 4.16 THE INLET CONTROL DEVICE (LOCATED IN THE OUTLET PIPE OF THE CISTERN) SHALL BE A HYDROVEX SWV-1 VERTICAL VORTEX FLOW REGULATOR AND AND SIZED BY THE MANUFACTURER FOR A DISCHARGE RATE AS INDICATED ON PLAN. PRIOR TO INSTALLATION SUBMIT SHOP DRAWING TO ENGINEER FOR APPROVAL.

5. CONSTRUCTION:

- 5.1 PRIOR TO COMMENCING WORK:
 - A. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE AUTHORITIES.
 - B. SIZE, DEPTH AND LOCATION OF EXISTING SERVICES, UTILITIES AND STRUCTURES AS INDICATED ON THE DRAWINGS ARE FOR GUIDANCE ONLY. ALL EXISTING SERVICES, UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE DRAWINGS. COMPLETENESS AND ACCURACY ARE NOT GUARANTEED. NOTIFY ALL APPLICABLE OWNERS, UTILITY COMPANIES AND AUTHORITIES HAVING JURISDICTION OF PROPOSED WORK AND LOCATE AND CLEARLY MARK ALL EXISTING UTILITIES AND STRUCTURES TO BE AVOIDED. CONTACT ALL UTILITY COMPANIES AT LOCATES (INCLUDING ONTARIO ONE CALL: 1-800-400-2255) SHALL BE CONDUCTED PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION. CONFIRM LOCATIONS OF BURIED SERVICES AND UTILITIES BY CAREFUL TEST EXCAVATIONS AND REPORT ANY DIFFERENCES TO THE ENGINEER.
 - C. EXISTING GRADE ELEVATIONS INDICATED ON THE DRAWINGS ARE FOR GUIDANCE ONLY. COMPLETENESS AND ACCURACY ARE NOT GUARANTEED. CONFIRM EXISTING GRADE ELEVATIONS AND REPORT ANY DIFFERENCES TO THE ENGINEER.
 - D. COORDINATE AND SCHEDULE WORK WITH THE AUTHORITIES AND OTHER TRADES.
 - E. SCHEDULE WORK TO PROVIDE THE MINIMUM DISRUPTION TO SERVICES, UTILITIES AND STRUCTURES ENCOUNTERED.
 - F. MAINTAIN AND PROTECT FROM DAMAGE, SERVICES, UTILITIES AND STRUCTURES ENCOUNTERED.
 - G. SURVEY BENCH MARKS AND MONUMENTS AND OTHER SURFACE FEATURES FROM DAMAGE WHILE WORK IS IN PROGRESS. DO NOT DISTURB SOIL WITHIN BRANCH SPRINGS OF TREES OR SHRUBS THAT ARE TO REMAIN.
 - H. PROVIDE TRAFFIC CONTROL AND SAFETY MEASURES INCLUDING ANY NECESSARY PERSONNEL AND THE SUPPLY, INSTALLATION, REMOVAL AND REPLACEMENT OF ALL NECESSARY SIGNAGE AND BARRIERS, AS REQUIRED BY THE CITY OF OTTAWA STANDARDS AND TO CITY OF OTTAWA DWG. No. S14.6.
 - I. REMOVE OBSTRUCTIONS, ICE AND SNOW FROM SURFACES TO BE EXCAVATED TO OTTAWA REQUIREMENTS.
 - J. BREAK UP PAVEMENT AND / OR SIDEWALK NEATLY ALONG LIMITS OF PROPOSED EXCAVATION IN ORDER THAT SURFACE MAY BREAK EVENLY AND CLEANLY.
 - K. COORDINATE AND PAY FOR GEOTECHNICAL INSPECTIONS AND COMPACTION TESTS OF SUB-GRADE, PIPE BEDDING AND SURROUND MATERIAL FOR WATER MAINS, BACKFILL, SUB-BASE, BASE AND ASPHALT TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT AND ENGINEER. SUBMIT GEOTECHNICAL INSPECTIONS AND COMPACTION REPORTS TO THE ENGINEER.
 - L. CUT AND FILL AS NECESSARY TO ACHIEVE THE REQUIRED SUB-GRADE ELEVATION. DISPOSE OF SURPLUS AND UNSUITABLE EXCAVATED MATERIAL OFF SITE. FILL MATERIAL AND THE PLACEMENT AND COMPACTION OF THE FILL SHALL BE TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT AND ENGINEER. SUBMIT GEOTECHNICAL INSPECTIONS AND COMPACTION REPORTS TO THE ENGINEER.
 - M. EXCAVATION, TRENCHING & BACKFILL: IN MANNER TO PREVENT SEGREGATION AND PROTECT FROM CONTAMINATION WITH ONTARIO REGULATION 377 UNDER THE ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT AND OTHER AUTHORITIES HAVING JURISDICTION. EXCAVATIONS FREE OF WATER WHILE WORK IS IN PROGRESS. PROTECT OPEN EXCAVATIONS AGAINST FLOODING AND DAMAGE DUE TO SURFACE RUN-OFF.
 - N. EXCAVATION MUST NOT INTERFERE WITH BEARING CAPACITY OF ADJACENT FOUNDATIONS.
 - O. DO NOT OBSTRUCT FLOW OF SURFACE DRAINAGE OR NATURAL WATERCOURSES.
 - P. EXCAVATE TO LINES OF EXCAVATIONS, ELEVATIONS AND DIMENSIONS AS INDICATED.
 - Q. EARTH BOTTOMS OF EXCAVATIONS TO BE UNDISTURBED SOIL, LEVEL, FREE FROM LOOSE, SOFT OR ORGANIC MATTER.
 - R. ALL STRUCTURES WITHIN PAVED AREAS SHALL HAVE 4:1 FROST TAPERS FROM FROST LINE TO SUB-GRADE. MAXIMUM DRY DENSITY.
 - S. CORRECT OVER-EXCAVATION WITH GRANULAR A COMPACTED TO NOT LESS THAN 95% OF CORRECTED GROUND. SUB-GRADE AND AREAS TO BE BACKFILLED TO BE FREE FROM DEBRIS, SNOW, ICE, WATER AND FROZEN GROUND.
 - T. DO NOT USE BACKFILL MATERIAL WHICH IS FROZEN OR CONTAINS ICE, SNOW OR DEBRIS.
 - U. BEDDING AND SURROUND MATERIAL FOR SEWERS SHALL BE OPS GRANULAR A. BEDDING AND SURROUND MATERIAL FOR WATERMAIN AND WATER SERVICE CONNECTIONS SHALL BE OPS GRANULAR A OR OPS GRANULAR M. RE-CLAY SHALL NOT BE USED FOR BEDDING OR SURROUND.
 - V. DO NOT USE BEDDING, SURROUND OR BACKFILL MATERIAL WHICH IS FROZEN OR CONTAINS ICE, SNOW OR DEBRIS.
 - W. PIPE BEDDING SHALL BE 150mm THICK. SHAPE BED TRUE TO GRADE AND TO PROVIDE CONTINUOUS, UNIFORM BEARING SURFACE FOR PIPE.
 - X. ROUND PIPES TO FULL WIDTH OF TRENCH AND TO 300mm ABOVE PIPES. THICKNESS. PLACE FILL AND BACKFILL MATERIAL IN UNIFORM LAYERS NOT EXCEEDING 300mm COMPACTED TO REQUIRED DRY DENSITY.
 - Y. COMPACT EACH LAYER TO 95% OF CORRECTED, DRY DENSITY BEFORE PLACING SUCCEEDING LAYER.
 - Z. DO NOT BACKFILL AROUND OR OVER CAST-IN-PLACE CONCRETE WITHIN 24 HOURS AFTER PLACING OF CONCRETE.
 - AA. BACKFILL MATERIALS WITHIN 1.8m OF PROPOSED GRADE SHALL MATCH THE MATERIALS EXPOSED ON THE TRENCH WALLS. BACKFILL BELOW 1.8m OF THE PROPOSED GRADE CAN CONSIST OF EITHER ACCEPTABLE NATIVE MATERIAL, ROCKS, OR FORTIFIED MATERIALS CONFORMING TO OPS GRANULAR B TYPE (OR II). ANY ORGANIC SOILS OR MATERIALS WELL SHATTERED AND GRADED AND 200mm OR SMALLER IN DIAMETER, TO PREVENT INGRESS OF FINE MATERIAL INTO VOIDS IN THE ROCK FILL, THE UPPER SURFACE OF THE ROCK FILL SHALL BE COVERED WITH 150mm LAYER OF COMPACTED, WELL GRADED CRUSHED STONE PLACED ON GEOTEXTILE FABRIC.
 - AB. HANDLE PIPE USING METHODS APPROVED BY MANUFACTURER.
 - AC. LAY, CUT AND JOIN PIPES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - AD. USE ONLY FITTINGS AS RECOMMENDED BY PIPE MANUFACTURER.
 - AE. LAY PIPES ON PREPARED BED, TRUE TO LINE AND GRADE AND ENSURE BARREL OF EACH PIPE IS IN CONTACT WITH SHAPED BED THROUGHOUT ITS FULL LENGTH, FREE OF SAGS OR HIGH POINTS.
 - AF. WHENEVER WORK IS SUSPENDED, INSTALL REMOVABLE WATERTIGHT BULKHEAD AT OPEN END OF LAST PIPE LAD TO PREVENT ENTRY OF FOREIGN MATERIALS.
 - AG. WHEN STOPPAGE OF WORK OCCURS, BLOCK PIPES TO PREVENT CREEP DURING DOWN TIME. MAKE WATERTIGHT CONNECTIONS TO MANHOLES, SUMP, SOUND AND WATERTIGHT.
 - AH. REPAIR OR REPLACE PIPE, PIPE JOINT OR BEDDING FOUND DEFECTIVE.
 - AI. SEWERS AND SEWER SERVICES:
 - AJ. CONSTRUCT SEWER TRENCHES AS PER CITY DWG S6 & S7.
 - AK. RIGID STRUCTURES INSTALL PIPE JOINTS NOT MORE THAN 1.2M FROM SIDE OF STRUCTURE.
 - AL. PROVIDE PROTECTIVE COVERING OVER ALL EXPOSED SEWER SERVICES. PROVIDE PROTECTIVE COVERING OVER ALL EXPOSED SEWER SERVICES.
 - AM. PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. SPECIFICALLY, THE LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPS 410. REPAIR AND RETEST SEWER LINE AS REQUIRED. REPAIR VISIBLE LEAKS REGARDLESS OF TEST RESULTS.
 - AN. SECOND CONTRACT TWO CIVIL INSPECTIONS OF SEWERS. FIRST INSPECTION AFTER COMPLETION OF CONSTRUCTION. SECOND INSPECTION AFTER COMPLETION OF FINISHES. SUBMIT REPORTS AND DVDS TO ENGINEER.
 - AO. REPAIR SEWER LINE AS REQUIRED. SUBMIT REPORTS AND DVDS TO ENGINEER.
 - AP. CONDUCT DYE TEST OF SANITARY SEWERS AND COORDINATE WITH ENGINEER. DYE TEST SHALL BE WITNESSED BY ENGINEER.
 - AQ. WATER SERVICE:
 - A. TEST TRACER WIRE ON THE WATER SERVICE CONNECTION AS PER 4.3.12 OF THE CITY OF OTTAWA WATER DISTRIBUTION DESIGN GUIDELINES AND DRAWING W36.
 - B. PRESSURE TESTING AS PER AMWA C-605-5 AND CITY OF OTTAWA DESIGN GUIDELINES - WATER DISTRIBUTION SECTION 4.6.13.
 - C. WATER SERVICE SHALL BE INSTALLED IN UNIFORM TRENCHES WITH A FULL-PORT BACKWATER VALVE TO CITY OF OTTAWA STANDARDS AND TO CITY OF OTTAWA DWG. No. S14.3.
 - D. MANHOLES & CATCH BASINS:
 - E. JOINTS: SHALL BE MADE WATERTIGHT.
 - F. SET PRECAST CONCRETE BASE ON 150mm MINIMUM OF GRANULAR BEDDING COMPACTED TO 100% CORRECTED DRY DENSITY.
 - G. PLACE GRANULAR BACKFILL MATERIALS IN A UNIFORM LAYERS TO COMPACTED THICKNESS OF 150mm, COMPACT TO 95% CORRECTED MAXIMUM DRY DENSITY.
 - H. PLACE FRAME AND COVER ON TOP SECTION TO ELEVATION AS INDICATED. IF ADJUSTMENT REQUIRED USE CONCRETE UNDERMINES TO PROVIDE CORRECT ELEVATION.
 - I. CLEAN OUTS OF DRAINING SYSTEM.
 - J. REMOVE DEBRIS FROM ENTERING SYSTEM.
 - K. PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. SPECIFICALLY, THE LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPS 407.
 - L. PROVIDE PROTECTIVE COVERING OVER ALL EXPOSED SEWER SERVICES. PROVIDE PROTECTIVE COVERING OVER ALL EXPOSED SEWER SERVICES. SPECIFICALLY, THE LEAKAGE TESTING CAUSED BY SITE CONDITIONS AND CHANGES MADE BY CHANGE ORDER OR ADDITIONAL INSTRUCTIONS. UPDATE DAILY AND MAKE AVAILABLE ON-SITE FOR REVIEW THROUGHOUT THE CONSTRUCTION PERIOD. MARK CHANGES IN RED INK. RECORD DRAWINGS SHALL INCLUDE BUT NOT NECESSARILY LIMITED TO CHANGES OF DIMENSION AND DETAIL; CHANGES TO GRADE ELEVATIONS; AND HORIZONTAL AND VERTICAL LOCATIONS OF UNDERGROUND SERVICES, UTILITIES AND OF CONSTRUCTION.
 - M. REFERENCED TO A PERMANENT SURFACE STRUCTURE. SUBMIT DRAWINGS TO ENGINEER AT THE END OF CONSTRUCTION.
 - N. 5.15 WHETHER RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE PRODUCTS OR DAMAGE; DEFECTIVE PORTIONS OF CURBS, SIDEWALK AND ASPHALT SHALL BE CORRECTED OR REMOVED AND REPLACED. PROMPTLY MAKE GOOD OTHER CONTRACTOR'S WORK DAMAGED BY SUCH REMOVALS OR REPLACEMENTS.
 - O. REINSTATE ALL AREAS DISTURBED BY CONSTRUCTION. REINSTATE PAVEMENTS, CURBS AND SIDEWALKS TO ORIGINAL CONDITION AND ELEVATION WHICH EXISTED BEFORE CONSTRUCTION.
 - P. REINSTATE LANDSCAPED AREAS TO THE CONDITION AND ELEVATION WHICH EXISTED BEFORE CONSTRUCTION.
 - Q. 5.13 CLEAN AND REINSTATE AREAS AFFECTED BY THE WORK.

KEY PLAN



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**PROPOSED 9-STORY
61-UNIT APARTMENT
BUILDING
353-357 GARDNER STREET
OTTAWA, ONTARIO**

NOTES
Drawing Title

Engineer's Seal
L. CHEN
Professional Engineer
U.B. Gray
1701650
1998-2025
Ontario
NOT VALID UNLESS
SIGNED & DATED

Drawn: D.B.G.
Hchr. Scale:
Vert. Scale:
Date: MAY 29-20
Job No.: 20037

Drawing No. **C-4**
of **6**