Recycled Content Paper

GENERAL NOTES

- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS
- 2. THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT RAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.
- ALL WORKS SHALL BE COMPLETED IN ACCORDANCE WITH THE CURRENT OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS. THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEFINED IN THE ACT.
- 4. THE CONTRACTOR AND SUB CONTRACTORS ARE RESPONSIBLE TO ENSURE THAT THEIR CONSTRUCTION MATERIALS AND PRACTICES CONFORM TO THE LATEST CITY/ REGION STANDARDS, SPECIFICATIONS AND DESIGN CRITERIA. IN THE ABSENCE OF CITY/REGIONAL SPECIFICATIONS, THE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS) SHALL APPLY.
- OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING AND IMPLEMENTING TEMPORARY TRAFFIC MANAGEMENT PLANS FOR CONSTRUCTION WITHIN THE CITY RIGHT OF WAY, ALL PLANS ARE TO FOLLOW THE REQUIREMENTS OF THE CITY AND PROVINCIAL STANDARDS (OTM BOOK 7).
- 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
- THE CONTRACTOR, AT THEIR EXPENSE AND TO THE SATISFACTION OF THE CITY OF OTTAWA AND THE ENGINEER, SHALL BE RESPONSIBLE FOR THE RESTORATION AND THE REPAIR OF ALL AREAS DISTURBED DURING CONSTRUCTION ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND EXISTING UTILITIES TO EXISTING CONDITIONS OR BETTER.
- 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.
- 10. THE SUPPORT OF ALL UTILITIES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- 11. ALL BACKFILL FOR SEWERS, WATERMAINS AND UTILITIES ON THE ROAD ALLOWANCE MUST BE MECHANICALLY
- 12. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AND CITY SERVICES (WATER, SANITARY & STORM) PRIOR TO CONSTRUCTION. ANY DISCREPANCIES MUST BE REPORTED TO AECOM LTD.
- 13. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
- 14. ALL ELEVATIONS ARE GEODETIC.
- 15. REFER TO GEOTECHNICAL REPORT (PROJECT: 63993.58 DATED JUNE 12, 2018), PREPARED BY GEMTEC 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.
- 16. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.
- 17. REFER TO STORMWATER MANAGEMENT REPORT PREPARED BY AECOM, DATED JANUARY __ 2019
- 18. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES 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/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.
- 19. A UTILITY CLEARANCE RADIUS OF 1.2M BETWEEN THE PROPOSED DRIVEWAY ENTRANCE CURB RETURN AND ALL ABOVE GROUND UTILITIES MUST BE MAINTAINED.
- 20. THE OWNER SHALL INDICATE IN THE AGREEMENT, IN WORDS SATISFACTORY TO BELL CANADA, THAT IT WILL GRANT TO BELL CANADA ANY EASEMENTS THAT MAY BE REQUIRED, WHICH MAY INCLUDE A BLANKET EASEMENT, FOR COMMUNICATION/TELECOMMUNICATION INFRASTRUCTURE. IN THE EVENT OF ANY CONFLICT WITH EXISTING BELL CANADA FACILITIES OR EASEMENTS, THE OWNER SHALL BE RESPONSIBLE FOR THE RELOCATION OF SUCH FACILITIES OR EASEMENTS.

GRADING NOTES

- 1. ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL COMPLY WITH THE STANDARD DRAWINGS AND SPECIFICATIONS OF THE CITY OF OTTAWA, THE ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS (O.P.S.S.) AND THE ONTARIO BUILDING CODE (O.B.C.)
- 2. ALL SURFACE DRAINAGE SHALL BE CONTAINED AT SITE, COLLECTED AND DISCHARGED AT A LOCATION TO BE APPROVED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. DRAINAGE OF ABUTTING PROPERTIES SHALL NOT BE ADVERSELY AFFECTED. UNLESS NOTED OTHERWISE.
- 3. 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.
- 4. THE SUBGRADE SHALL BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY
- 5. EXPOSED SUBGRADES 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.
- 6. ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUB-EXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST RESISTANT AND COMPATIBLE WITH THE EXISTING SOILS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- 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. REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS.
- 11. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING AS-BUILT ELEVATIONS OF ALL DESIGN GRADES SHOWN ON THIS PLAN.

SANITARY AND STORM SEWER NOTES

- 1. SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT STANDARDS AND SPECIFICATIONS OF CITY OF OTTAWA AND ONTARIO PROVINCIAL STANDARDS.
- 2. MAIN LINE PVC PIPE SHALL BE DR 35 AND SERVICE CONNECTION PVC PIPE SHALL BE DR 28.
- 3. SERVICES ARE TO BE CONSTRUCTED TO 1.0M FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
- 4. BEDDING FOR FLEXIBLE PIPE SHALL BE AS PER OPSD 802.010, 802.013 OR 802.014.
- 5. PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO MINIMUM 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE
- MAINTENANCE HOLES AS PER OPSD 701.010 (1200MM), 701.011 (1500MM) AND 701.012 (1800MM).
- 7. FRAME AND COVER AS PER OPSD 401.010 TYPE A CLOSED (SANITARY) AND 400.070 (STORM)
- 8. SANITARY MAINTENANCE HOLE SHALL HAVE WATERTIGHT FRAME AND COVER IN PONDING AREAS AS PER OPSD 401.030.
- 9. BENCHING SHALL BE AS PER OPSD 701.021.
- 10. TRENCH WIDTH (SEPARATE TRENCH) AT TOP OF THE PIPE SHALL BE TO CITY OF OTTAWA STANDARD S6. CONTRACTOR IS RESPONSIBLE FOR SUPPLYING ADDITIONAL BEDDING AND/OR STRONGER PIPE IF ACTUAL TRENCH WIDTHS EXCEED DESIGN WIDTHS.
- 11. ALL SEWERS CONSTRUCTED WITH GRADES 0.50% OR LESS, SHALL BE INSTALLED WITH LASER LEVEL AND CHECKED PRIOR TO BACKFILL AT THE CONTRACTOR'S EXPENSE.
- 12. ALL STORM AND SANITARY SERVICE LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS \$14 AND \$14.1 OR \$14.2.
- 13. INSULATE ALL PIPES THAT HAVE LESS THAN 1.5M COVER WITH HI-40 INSULATION PER INSULATION DETAIL FOR SHALLOW SEWERS. PROVIDE 150MM CLEARANCE BETWEEN PIPE AND INSULATION.
- 14. SERVICE CONNECTIONS AND UTILITY CUTS TO BE BACKFILLED WITH UNSHRINKABLE FILL
- 15. STORM PIPE LENGTHS ARE TO BARREL OF MANHOLE AND DO NOT INCLUDE BENCHING.
- 16. 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.
- 17. ALL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300MM SUMPS UNLESS OTHERWISE INDICATED. ALL CATCHBASINS ARE TO HAVE 600MM SUMPS UNLESS OTHERWISE INDICATED.
- 18. ALL CATCHBASINS, MANHOLES AND/OR CATCHBASIN MANHOLES THAT ARE TO HAVE ICD'S INSTALLED WITHIN THEM ARE TO HAVE 600MM SUMPS.
- 19. 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 OPSS 410.07.16, 410.07.16.04 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.
- 20. CONTRACTOR TO TELEVISE (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

WATERMAIN NOTES

- 1. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- 2. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE CITY OF OTTAWA REPRESENTATIVES.
- 3. PVC WATERMAINS SHALL BE MINIMUM DR 18 CLASS 235 (AWWA) C900-07
- 4. WATER SERVICE CONNECTIONS TO C-STORE SHALL BE 50MM Ø TYPE "K" SOFT COPPER AS PER OPSD 1104.01.AND CONFORM TO ASTM B88-03 (ASTM B88M-05 FOR METRIC SIZES)
- 5. BEDDING SHALL BE AS PER CITY OF ATTAWA STANDARD DRAWING W17.
- 6. THERMAL INSULATION IN SHALLOW TRENCHES AND ADJACENT TO OPEN STRUCTURES SHALL BE AS PER CITY OF OTTAWA STANDARD DRAWING W22 AND W23.
- MINIMUM COVER ON WATERMAINS SHALLBE 2.4 METRES.
- 8. PROVISIONS FOR FLUSHING THE WATER LINE PRIOR TO TESTING AND SO FORTH MUST BE PROVIDED WITH AT LEAST A 50 MM OUTLET ON 100 MM AND LARGER LINES AS PER OPSD1104.03-1. COPPER LINES ARE TO HAVE FLUSHING POINTS AT THE END, THE SAME SIZE AS THE LINE. ON FIRE LINES, FLUSHING OUTLET TO BE 100 MM DIAMETER MINIMUM OR A HYDRANT.
- 9. ALL TEES, PLUGS, HORIZONTAL, VERTICAL BENDS, REDUCERS AND HYDRANTS TO HAVE CONCRETE THRUST BLOCKS AS PER OPSD 1103.01 AND 1103.021.
- 10. PROPOSED WATER SERVICES ARE TO BE CONSTRUCTED TO WITHIN 1.0M OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.
- 11. WATERMAINS MUST FOLLOW THE MINISTRY OF THE ENVIRONMENT PROCEDURES THAT GOVERN THE SEPARATION OF SEWERS AND WATERMAINS F-6-1. A MINIMUM VERTICAL CLEARANCE OF 0.30 METER OVER, 0.5 METER UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING. MUST ALSO MAINTAIN 2.5 METRES HORIZONTAL SEPARATION WITH SEWERS.
- 12. ALL PROPOSED WATER PIPING MUST BE ISOLATED FROM EXISTING LINES IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CHLORINATING FROM THE EXISTING SYSTEM. FLUSHING, SWABBING AND TESTING OF WATERMAIN AS PER ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS (OPSS), AS WELL AS CITY OF OTTAWA SPECIFICATION.
- 13. AFTER PASSING THE HYDROSTATIC PRESSURE TEST AND LEAKAGE TEST, CHLORINATION CAN PROCEED. SAMPLING OF THE NEW MAINS IS TO BE DONE AT THE REQUIRED LOCATIONS PRIOR TO CONNECTING TO THE CITY WATERMAIN SYSTEM. THE TEE FITTING IS TO BE CUT INTO THE EXISTING WATERMAIN TO MAKE THE CONNECTION. TO MAINTAIN THE PRESSURE IN THE NEW MAIN DURING INSTALLATION OF SERVICE, A 50MM BY-PASS WITH AN APPROVED PRESSURE DIFFERENTIAL BACKFLOW PREVENTER, MOUNTED ABOVE GROUND LEVEL IS TO BE INSTALLED AROUND THE CLOSED ISOLATING VALVE.
- 14. CITY IN-SERVICE WATER VALVES CAN ONLY BE OPERATED BY CITY OF OTTAWA WATER STAFF.
- 15. WATERMAINS TO BE INSTALLED TO GRADE AS SHOWN ON APPROVED PLANS, COPY OF GRADE SHEET MUST BE SUPPLIED TO INSPECTOR PRIOR TO COMMENCEMENT OF WORK, WHEN REQUESTED BY INSPECTOR.
- 16. VALVE IN BOXES SHALL BE INSTALLED AS PER CITY OF OTTAWA STD. MAINLINE VALVES TO BE RESTRAINED AS PER CITY OF OTTAWA STD.
- 17. THE CONTRACTOR SHALL COMPLETE THE NECESSARY WATER TESTING (I.E. PRESSURE TEST, FLUSHING, CHLORINATE, SAMPLING, ETC.)

CURB, SIDEWALK, AND PAVEMENT NOTES

- 1. ALL CURBS SHALL BE BARRIER CURB (150MM) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER CITY OF OTTAWA STANDARDS (SC1.1). MOUNTABLE CURBS ARE TO BE PER CITY OF OTTAWA STANDARD (SC1.3).
- 2. THE GRANULAR SUB-BASE AND BASE SHALL BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE PROPOSED PAVEMENT SHOULD BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
- 3. AT ALL ENTRANCES TO THE SITE THE ROAD CURB AND SIDEWALK WILL BE CONTINUOUS THROUGH THE DRIVEWAY, THE DRIVEWAY GRADE WILL BE COMPATIBLE WITH THE EXISTING SIDEWALK AND CURB DEPRESSION WILL BE PROVIDED FOR EACH ENTRANCE. ACCESS CONSTRUCTION AS PER O.P.S.D. 350.010.
- 4. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10). WHERE THE NEW PAVEMENT WILL ABUT EXISTING PAVEMENT, THE DEPTHS OF THE GRANULAR MATERIALS SHOULD TAPER UP OR DOWN AT 5 HORIZONTAL TO 1 VERTICAL, OR FLATTER TO MATCH THE DEPTHS OF THE GRANULAR MATERIAL(S) EXPOSED IN THE EXISTING PAVEMENT.
- 5. THE PORTION OF THE DRIVEWAY WITHIN THE CITY BOULEVARD MUST BE PAVED TO THE LATEST CITY OF OTTAWA STANDARDS.
- 6. PROVIDE LINE/PARKING PAINTING.
- 7. PAVEMENT STRUCTURE FOR PARKING LOT AND ACCESS ROADWAYS;

100 MILLIMETRES ASPHALTIC CONCRETE, OVER 150 MILLIMETRES OF OPSS GRANULAR A BASE, OVER 450 MILLIMETRES OF OPSS GRANULAR B TYPE II SUBBASE

THE 100 MILLIMETRES ASPHALTIC CONCRETE SURFACE SHOULD CONSIST OF 40 MILLIMETRES OF **SUPERPAVE 12.5**

(TRAFFIC LEVEL B) OVER 60 MILLIMETRES OF SUPERPAVE 19.0 (TRAFFIC LEVEL B).

DERRICK MOODIE MANAGER PLANNING, INFRASTRUCTURE & ECONOMIC **DEVELOPMENT DEPARTMENT, CITY OF OTTAWA**

APPROVED

By Laurel McCreight at 9:45 am, Dec 12, 2019

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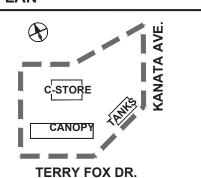
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OM and its client, as required by law		G	2019.09.12	RE-ISSUED FOR SPA
		F	2019.09.05	ISSUED FOR BP
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		D	2019.06.13	ISSUED FOR BP
		C	2019.06.03	ISSUED FOR TENDER
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KEY PLAN



PROJECT NUMBER

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GENERAL NOTES

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