

3	APR 9-26	RE-ISSUED FOR APPROVAL
2	DEC 17-25	ISSUED FOR APPROVAL
1	DEC 15-25	ISSUED FOR COORDINATION
No.	DATE	REVISION

D. B. GRAY ENGINEERING INC.
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Project
PROPOSED TIM HORTONS
2300 BANK STREET
 OTTAWA, ONTARIO

Engineer's Seal

 NOT VALID UNLESS SIGNED & DATED

Drawing Title
NOTES & DETAILS

Drawing No.
C-5
 of **6**

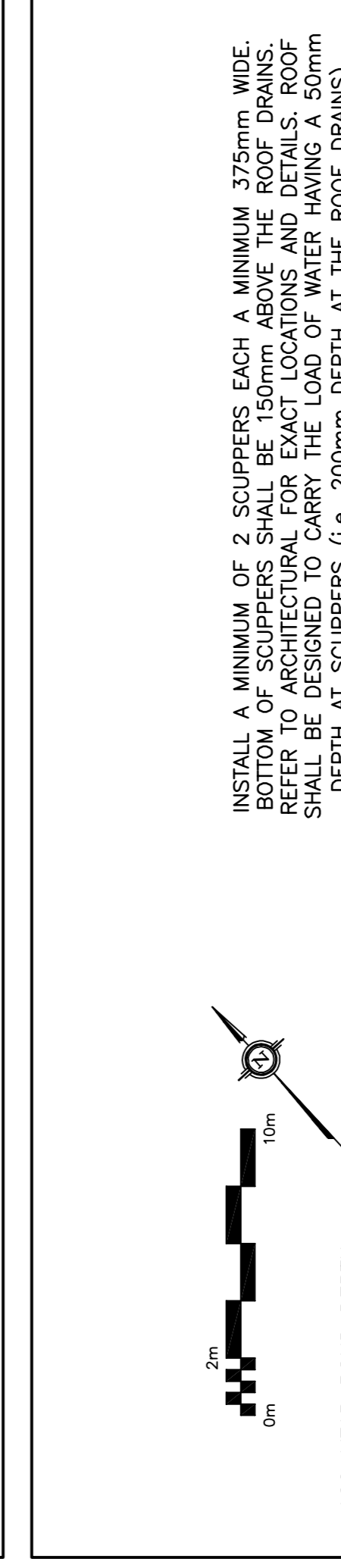
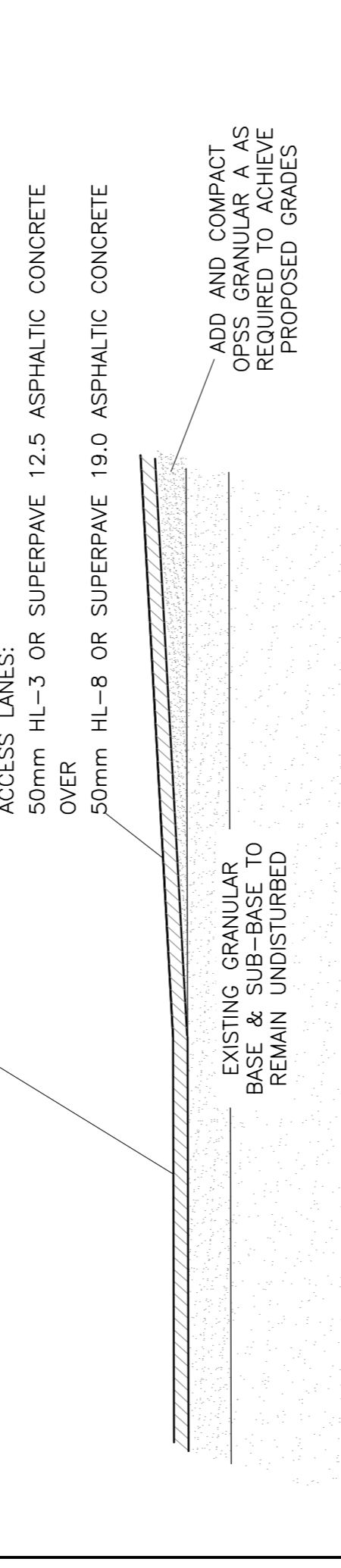
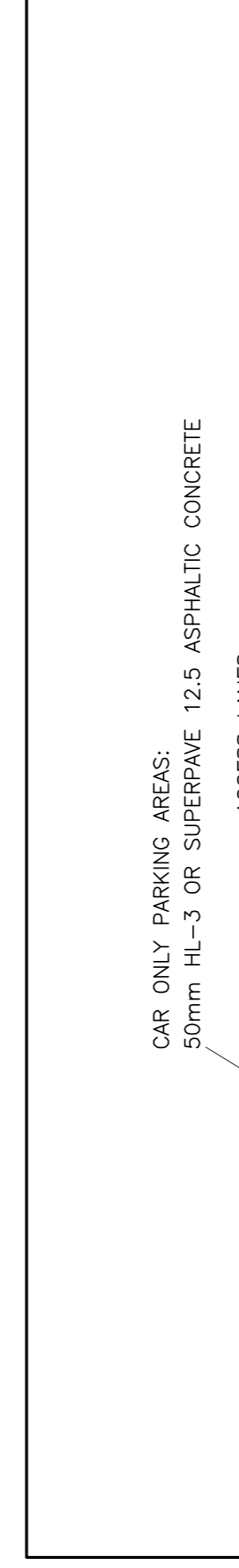
WATER SERVICE PROFILE TABLE

50mm COPPER ASTM B88 TYPE "K" SOFT

STATION	DESCRIPTION	GRADE ELEVATION	TOP OF PIPE	DEPTH OF COVER	NOTES
0+00.0	CONNECTION TO EXISTING 50mm COPPER	±85.94	±83.39	±2.55	-
0+02.8	50mm CURB STOP & SERVICE POST TO CITY OF OTTAWA STANDARDS	±86.08	±83.62	±2.46	ON PROPERTY LINE

MATERIAL:
50mm PEX TUBING TO AWWA C-904 SDR 9 (CTS)

0+02.8	50mm CURB STOP & SERVICE POST TO CITY OF OTTAWA STANDARDS	±86.08	±83.62	±2.46	ON PROPERTY LINE
0+07.1	-	±86.38	±83.98	2.40	-
0+14.6	-	86.68	84.28	2.40	BOTTOM OF CURB
0+16.2	-	86.83	84.35	2.48	ENTRY INTO BUILDING



INSTALL A MINIMUM OF 2 SCUPPERS EACH A MINIMUM 375mm WIDE. BOTTOM OF SCUPPER SHALL BE 150mm ABOVE FINISH GRADE. REFER TO ARCHITECTURE FOR EXACT LOCATIONS AND DETAIL OF ROOF. SCUPPERS SHALL BE DESIGNED TO CARRY THE LOAD OF WATER HAVING A 50mm DEPTH AT SCUPPERS (i.e. 200mm DEPTH AT THE ROOF DRAINS). REFER TO STRUCTURAL.

5.9 CUT AND FILL AS NECESSARY TO ACHIEVE THE PROPOSED GRADE ELEVATIONS. DISPOSE OF SURPLUS AND UNSUITABLE EXCAVATED MATERIAL TO AN APPROVED DISPOSAL AREA. FILL SHALL BE COMPACTED TO NOT LESS THAN 95% OF CORRECTED MAXIMUM DRY DENSITY. FILL MATERIAL AND THE PLACEMENT AND COMPACTION OF THE FILL MATERIALS AS PER THE GEOTECHNICAL REPORT AND TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT. FACE MATERIAL IN TRENCH LAYERS NOT EXCEEDING 300mm CORRECTED THICKNESS. EXCAVATIONS SHALL BE PROTECTED AGAINST FLOODING AND DAMAGE DUE TO WATER. DISCHARGE FROM DRAINING OPERATIONS SHALL BE DIRECTED TO A SEDIMENT CONTROL MEASURE AND/OR A VEGETATED DISCHARGE AREA. ENSURE THAT THE DISCHARGED WATER DOES NOT CAUSE EROSION OR OTHER DAMAGE TO ADJACENT LANDS.

5.10 EXCAVATION, TRENCHING, & BACKFILL:
 A. PROTECT EXISTING UTILITIES AND SERVICES AND PRESERVE ALL WORK IN ADJACENT AREAS WITH OVERBIRD REGULATION TO SURFACE RUN-OFF.
 B. KEEP EXCAVATIONS FREE OF WATER WHILE WORK IS IN PROGRESS. PROTECT OPEN EXCAVATIONS AGAINST FLOODING AND DAMAGE DUE TO SURFACE RUN-OFF.
 C. EXCAVATION SHALL NOT INTERFERE WITH BEARING CAPACITY OF ADJACENT FOUNDATIONS.
 D. DO NOT OBSTRUCT FLOW OF SURFACE DRAINAGE OR NATURAL INTERCREEKS.
 E. EXCAVATIONS SHALL BE PROTECTED AGAINST FLOODING AND DAMAGE DUE TO SURFACE RUN-OFF.
 F. EARTH BOTTOMS OF EXCAVATIONS SHALL BE UNDISTURBED SOIL LEVEL FREE FROM LOOSE, SOFT OR ORGANIC MATERIAL.
 G. ALL STRUCTURES WITHIN PAVED AREAS SHALL HAVE 4:1 FRENCH TAPERS FROM FROST LINE TO SUB-GRADE.
 H. CORRECT OVER-EXCAVATION WITH GRANULAR A COMPACTED TO NOT LESS THAN 95% OF CORRECTED MAXIMUM DRY DENSITY.
 I. SUB-GRADE AND AREAS TO BE BACKFILLED TO BE FREE FROM DEBRIS, SNOW, ICE, WATER AND FROZEN GROUND.
 J. DO NOT USE BACKFILL MATERIAL WHICH IS FROZEN OR CONTAINS ICE, SNOW OR DEBRIS.
 K. PIPE BEDDING AND SURROUND MATERIAL SHALL BE COMPACTED TO NOT LESS THAN 95% OF CORRECTED MAXIMUM DRY DENSITY.
 L. PIPE BEDDING SHALL BE 150mm THICK. SHAPE BED TRUE TO GRADE AND TO PROVIDE CONTINUOUS, UNIFORM BEARING SURFACE FOR PIPE.
 M. PLACE SURROUND MATERIAL IN UNIFORM LAYERS NOT EXCEEDING 150mm COMPACTED THICKNESS. PLACE FILL AND PLACE BACKFILL MATERIAL TO FULL WIDTH OF TRENCH AND TO 300mm ABOVE PIPES.
 N. COMPACT EACH LAYER TO 95% OF CORRECTED DRY DENSITY BEFORE PLACING SUCCEEDING LAYER.
 O. DO NOT BACKFILL AROUND OR OVER CAST-IN-PLACE CONCRETE WITHIN 24 HOURS AFTER PLACING OF CONCRETE.
 P. 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, ROCK, OR IMPORTED GRANULAR MATERIAL. PREVENT INGRESS OF FINE MATERIAL INTO Voids IN THE ROCK FILL. THE UPPER SURFACE OF THE ROCK FILL SHALL BE COVERED WITH A MINIMUM LAYER OF COMPACTED, WELL GRADED CRUSHED STONE PLACED ON GEOTEXTILE FABRIC.

5.12 PIPES:
 A. HANDLE PIPE USING METHODS APPROVED BY MANUFACTURER.
 B. LAY, JOINT AND JOIN PIPES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 C. USE ONLY FITTINGS AS RECOMMENDED BY PIPE MANUFACTURER.
 D. LAY PIPES ON PREPARED BED, TRUE TO LINE AND GRADE AND ENSURE BARREL OF EACH PIPE IS IN CONTACT WITH SHARP BED.
 E. DO NOT EXCEED MAXIMUM JOINT DEFLECTION RECOMMENDED BY PIPE MANUFACTURER.
 F. WHENEVER WORK IS SUSPENDED, INSTALL REMOVABLE WATER-TIGHT BULKHEAD AT OPEN END OF LAST PIPE Laid TO PREVENT ENTRY OF FOREIGN MATERIALS.
 G. WHEN STOPPAGE OF WORK OCCURS, BLOCK PIPES TO PREVENT CREEP DURING DOWN TIME. MAKE WATER-TIGHT CONNECTIONS TO JOINTS SHALL BE STRUCTURALLY SOUND AND WATER-TIGHT.
 H. REPAIR OR REPLACE PIPE, PIPE JOINT OR BEDDING FOUND DEFECTIVE.
 I. SEWERS AND SEWER SERVICE CONNECTIONS.
 J. CONSTRUCT TRENCHES AS PER CITY DWG 56 & 57.
 K. MAINTAIN EXISTING SEWAGE FLOWS DURING CONSTRUCTION.
 L. MAKE EACH JOINT WATER-TIGHT WITH RUBBER RING GASKETS.
 M. PLACE GRANULAR BACKFILL MATERIALS IN A UNIFORM LAYERS TO COMPACTED THICKNESS OF 150mm, COMPACT TO 95% CORRECTED MAXIMUM DRY DENSITY.
 N. PLACE FRAME AND COVER ON TOP SECTION TO ELEVATION AS INDICATED. IF ADJUSTMENT REQUIRED USE CONCRETE RINGS TO A CLEAN UNITS OF DEBRIS, FOREIGN AND SURPLUS MATERIALS. REMOVE FINS AND SHARP PROJECTIONS. PREVENT DEBRIS FROM ENTERING SYSTEM.
 O. MAINTAIN RECORD DRAWINGS AND ACCURATELY RECORD DEVIATIONS FROM THE ORIGINAL CONTRACT DOCUMENTS CAUSED BY SITE CONDITIONS AND DETAIL CHANGES TO GRADE ELEVATIONS, AND HORIZONTAL AND VERTICAL CURVES. RECORD DRAWINGS SHALL INCLUDE TO CHANGES OF DIMENSION AND TRENCH DEPTH. SUBMIT A RECORD DRAWING OF "AS-BUILT" GRADE ELEVATIONS, PREPARED BY AN OLS SURVEYOR, TO THE ENGINEER AT THE END OF CONSTRUCTION.
 P. RENSTATE ALL AREAS DISTURBED BY CONSTRUCTION. RENSTATE LAWN AND TURF TO ORIGINAL CONDITION AND ELEVATION WHICH EXISTED BEFORE CONSTRUCTION.
 Q. CLEAN AND RENSTATE AREAS AFFECTED BY THE WORK.

5.13 SEWERS AND SEWER SERVICE CONNECTIONS:
 A. CONSTRUCT TRENCHES AS PER CITY DWG 56 & 57.
 B. JOINTS SHALL BE MADE WATER-TIGHT.
 C. MAINTAIN EXISTING SEWAGE FLOWS DURING CONSTRUCTION.
 D. MAKE EACH JOINT WATER-TIGHT WITH RUBBER RING GASKETS.
 E. PLACE GRANULAR BACKFILL MATERIALS IN A UNIFORM LAYERS TO COMPACTED THICKNESS OF 150mm, COMPACT TO 95% CORRECTED MAXIMUM DRY DENSITY.
 F. CLEAN UNITS OF DEBRIS, FOREIGN AND SURPLUS MATERIALS. REMOVE FINS AND SHARP PROJECTIONS. PREVENT DEBRIS FROM ENTERING SYSTEM.
 G. MAINTAIN RECORD DRAWINGS AND ACCURATELY RECORD DEVIATIONS FROM THE ORIGINAL CONTRACT DOCUMENTS CAUSED BY SITE CONDITIONS AND DETAIL CHANGES TO GRADE ELEVATIONS, AND HORIZONTAL AND VERTICAL CURVES. RECORD DRAWINGS SHALL INCLUDE TO CHANGES OF DIMENSION AND TRENCH DEPTH. SUBMIT A RECORD DRAWING OF "AS-BUILT" GRADE ELEVATIONS, PREPARED BY AN OLS SURVEYOR, TO THE ENGINEER AT THE END OF CONSTRUCTION.
 H. RENSTATE ALL AREAS DISTURBED BY CONSTRUCTION. RENSTATE LAWN AND TURF TO ORIGINAL CONDITION AND ELEVATION WHICH EXISTED BEFORE CONSTRUCTION.
 I. CLEAN AND RENSTATE AREAS AFFECTED BY THE WORK.

5.14 WATER SERVICE CONNECTIONS:
 A. CONSTRUCT TRENCHES AS PER CITY DWG 57.
 B. JOINTS SHALL BE MADE WATER-TIGHT.
 C. MAINTAIN EXISTING SEWAGE FLOWS DURING CONSTRUCTION.
 D. MAKE EACH JOINT WATER-TIGHT WITH RUBBER RING GASKETS.
 E. PLACE GRANULAR BACKFILL MATERIALS IN A UNIFORM LAYERS TO COMPACTED THICKNESS OF 150mm, COMPACT TO 95% CORRECTED MAXIMUM DRY DENSITY.
 F. CLEAN UNITS OF DEBRIS, FOREIGN AND SURPLUS MATERIALS. REMOVE FINS AND SHARP PROJECTIONS. PREVENT DEBRIS FROM ENTERING SYSTEM.
 G. MAINTAIN RECORD DRAWINGS AND ACCURATELY RECORD DEVIATIONS FROM THE ORIGINAL CONTRACT DOCUMENTS CAUSED BY SITE CONDITIONS AND DETAIL CHANGES TO GRADE ELEVATIONS, AND HORIZONTAL AND VERTICAL CURVES. RECORD DRAWINGS SHALL INCLUDE TO CHANGES OF DIMENSION AND TRENCH DEPTH. SUBMIT A RECORD DRAWING OF "AS-BUILT" GRADE ELEVATIONS, PREPARED BY AN OLS SURVEYOR, TO THE ENGINEER AT THE END OF CONSTRUCTION.
 H. RENSTATE ALL AREAS DISTURBED BY CONSTRUCTION. RENSTATE LAWN AND TURF TO ORIGINAL CONDITION AND ELEVATION WHICH EXISTED BEFORE CONSTRUCTION.
 I. CLEAN AND RENSTATE AREAS AFFECTED BY THE WORK.

5.15 MANHOLES & CATCH BASINS:
 A. JOINTS SHALL BE MADE WATER-TIGHT.
 B. MAINTAIN EXISTING SEWAGE FLOWS DURING CONSTRUCTION.
 C. MAKE EACH JOINT WATER-TIGHT WITH RUBBER RING GASKETS.
 D. PLACE GRANULAR BACKFILL MATERIALS IN A UNIFORM LAYERS TO COMPACTED THICKNESS OF 150mm, COMPACT TO 95% CORRECTED MAXIMUM DRY DENSITY.
 E. CLEAN UNITS OF DEBRIS, FOREIGN AND SURPLUS MATERIALS. REMOVE FINS AND SHARP PROJECTIONS. PREVENT DEBRIS FROM ENTERING SYSTEM.
 F. MAINTAIN RECORD DRAWINGS AND ACCURATELY RECORD DEVIATIONS FROM THE ORIGINAL CONTRACT DOCUMENTS CAUSED BY SITE CONDITIONS AND DETAIL CHANGES TO GRADE ELEVATIONS, AND HORIZONTAL AND VERTICAL CURVES. RECORD DRAWINGS SHALL INCLUDE TO CHANGES OF DIMENSION AND TRENCH DEPTH. SUBMIT A RECORD DRAWING OF "AS-BUILT" GRADE ELEVATIONS, PREPARED BY AN OLS SURVEYOR, TO THE ENGINEER AT THE END OF CONSTRUCTION.
 G. RENSTATE ALL AREAS DISTURBED BY CONSTRUCTION. RENSTATE LAWN AND TURF TO ORIGINAL CONDITION AND ELEVATION WHICH EXISTED BEFORE CONSTRUCTION.
 H. CLEAN AND RENSTATE AREAS AFFECTED BY THE WORK.

5.16 REHABILITATED ASPHALT PAVEMENT:
 A. PRECAST MANHOLE UNITS, TO OPS 1351 AND OPS 701.010 WITH BASE SLAB OR MONOLITHIC BASE. TOP SECTIONS ECCENTRIC CONE OR FLAT TOP TYPE WITH OPENING OFFSET FOR VERTICAL LADDER INSTALLATION.
 B. MANHOLE STEPS: TO OPS 405/01
 C. ALUMINUM SURFACES IN CONTACT WITH OR CAST INTO CONCRETE SHALL HAVE POLYETHYLENE ANCHOR INSULATING SLEEVES.
 D. PRECAST CATCH BASIN SECTIONS: TO OPS 1351.
 E. JOINTS: SHALL BE MADE WATER-TIGHT USING BUTYL BASED, FLEXIBLE WATERSTOP/Joint SEALANT MATERIAL.
 F. STORM SEWERS: MANHOLES SHALL HAVE A 300mm SUMP AND CATCH BASIN SHALL HAVE A 600mm SUMP.
 G. FRAMES, GRATES AND COVERS TO CITY OF OTTAWA DRAWINGS OR OPSD (AS PER CATCH BASIN & MANHOLE SCHEDULE). GRATES AND COVERS TO BEAR EVENLY ON FRAMES.
 H. ROOF DRAINS SHALL BE ADJUSTABLE FLOW CONTROL TYPE EACH INSTALLED WITH A FIXED WEIR ONE AND AN ADJUSTABLE UPPER WEIR ACCUTROL WEIR RD-100-41 OR APPROVED EQUAL SHALL BE A MINIMUM 50mm IN DIAMETER. WATTS RD-100-41 SHALL BE USED FOR REVIEW. VORTEX FLOW REGULATOR (OR APPROVED EQUAL) AND SIZED BY THE MANUFACTURER FOR A DISCHARGE RATE AS INDICATED ON THE PLAN. PRIOR TO INSTALLATION SUBMIT SHOP DRAWING TO ENGINEER FOR REVIEW.
 I. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING CONDITIONS:
 1. ALL STRUCTURES SHALL BE BUILT TO CITY OF OTTAWA STANDARDS.
 2. ALL PROPOSED GRASSED AREAS ARE EITHER SODDED OR HAVE A FULL COVERAGE OF WELL ESTABLISHED TURF AND HAVE HAD A MINIMUM OF ONE FULL GROWING SEASON (MAY 15th TO SEPTEMBER 15th).
 3. ALL STOCKPILED MATERIALS HAVE BEEN COVERED.
 4. REMOVE EROSION AND SEDIMENT CONTROL MEASURES WHEN CONSTRUCTION IS COMPLETE.

5.17 MAINTAIN RECORD DRAWINGS AND ACCURATELY RECORD DEVIATIONS FROM THE ORIGINAL CONTRACT DOCUMENTS CAUSED BY SITE CONDITIONS AND DETAIL CHANGES TO GRADE ELEVATIONS, AND HORIZONTAL AND VERTICAL CURVES. RECORD DRAWINGS SHALL INCLUDE TO CHANGES OF DIMENSION AND TRENCH DEPTH. SUBMIT A RECORD DRAWING OF "AS-BUILT" GRADE ELEVATIONS, PREPARED BY AN OLS SURVEYOR, TO THE ENGINEER AT THE END OF CONSTRUCTION.
 5.18 RENSTATE ALL AREAS DISTURBED BY CONSTRUCTION. RENSTATE LAWN AND TURF TO ORIGINAL CONDITION AND ELEVATION WHICH EXISTED BEFORE CONSTRUCTION.
 5.19 CLEAN AND RENSTATE AREAS AFFECTED BY THE WORK.

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1. GENERAL:
 1.1 USE BAR SCALE TO CONFIRM ACTUAL PLOT SCALE. EXISTING AND NEW ELEVATIONS AND INVERTS SHOWN ARE GEODETIC AND ARE IN UNITS OF METERS AS SHOWN ON THE DRAWINGS.
 1.2 UNLESS OTHERWISE STATED ENGINEER REFERS TO D. B. GRAY ENGINEERING INC.
 1.3 SITE BOUNDARIES AND EXISTING GRADES AND OTHER FEATURES FROM TOPOGRAPHIC SURVEY PREPARED BY ANNE O'SULLIVAN, CONSULTANT TO D. B. GRAY ENGINEERING INC. SHALL BE USED UNLESS OTHERWISE INDICATED.
 1.4 THE BEHAVIOUR HAS NOT BEEN ALTERED OR DISTURBED, AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREE WITH THE INFORMATION SHOWN ON SURVEY PLANS AND THESE DRAWINGS.
 1.5 REPLY SHALL BE COMPLETED AND LAYED OUT WITHIN THE LOCATIONS OF BUILDINGS, ADDRESS, SIDEWALKS, PATIERS, ETC.
 1.6 REFER TO THE CONSERVATION REPORT FOR TREE PROTECTION REQUIREMENTS.
 1.7 REVISION 1, DATED JULY 11, 2022, INVESTIGATION BY PATERSON GROUP INC. FILE: 050707-1
 1.8 GEOTECHNICAL ENGINEER INCLUDING, SUB-GRADE PREPARATION AND CONSTRUCTION OF THE PAVEMENT STRUCTURE. EXCAVATION AND DRAWINGS ARE TO BE READ IN CONJUNCTION WITH SITE SERVING STUDY & STORMWATER MANAGEMENT REPORT No. 25051 PREPARED BY D. B. GRAY ENGINEERING INC.
 1.9 STANDARD SPECIFICATIONS AND DRAWINGS.
 1.10 ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AND DRAWINGS SHALL APPLY WHERE NO CITY OF OTTAWA STANDARD SPECIFICATIONS OR STANDARD SPECIFICATIONS AND DRAWINGS.
 1.11 RENSTATE AREAS DISTURBED BY CONSTRUCTION TO PRE-CONSTRUCTION CONDITIONS.
 1.12 RENSTATE CITY PROPERTIES TO CITY STANDARDS AND TO CITY OF OTTAWA'S SATISFACTION.

2. EROSION AND SEDIMENT CONTROL PLAN:
 2.1 THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATER COURSE DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, USING SEDIMENT TRAPS, LOG DAILY EROSION AND SEDIMENT CONTROL MEASURES, DO NOT REMOVE UNTIL CONSTRUCTION IS COMPLETE.
 2.2 PRIOR TO COMMENCEMENT OF CONSTRUCTION AT ALL MUNICIPAL CATCH BASINS ADJACENT TO THE SITE AND AT ANY MANHOLES OR CATCH BASINS, THE CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES TO PREVENT EROSION AND SEDIMENT CAPTURE AFTER EACH RAINFALL REMOVE SEDIMENT AS RECOMMENDED BY THE MANUFACTURER, IMMEDIATELY INSPECT AT THE END OF EACH DAY AND AFTER EACH RAINFALL. REMOVE SEDIMENT DEPOSITS WHEN THE LEVEL OF DEPOSITS REACHES ONE THIRD THE HEIGHT OF EACH DAY AND AFTER EACH RAINFALL. REMOVE SEDIMENT DEPOSITS WHEN THE LEVEL OF DEPOSITS REACHES ONE THIRD THE HEIGHT OF EACH DAY AND AFTER EACH RAINFALL. REMOVE SEDIMENT DEPOSITS WHEN THE LEVEL OF DEPOSITS REACHES ONE THIRD THE HEIGHT OF EACH DAY AND AFTER EACH RAINFALL. REMOVE SEDIMENT DEPOSITS WHEN THE LEVEL OF DEPOSITS REACHES ONE THIRD THE HEIGHT OF EACH DAY AND AFTER EACH RAINFALL.
 2.3 IMMEDIATELY AFTER REMOVAL OF EXISTING ASPHALT INSTALL A 200 mm DIAMETER FILER SOCK MEDIA ACROSS THE FULL WIDTH OF THE EXISTING ASPHALT. THE SOCK SHALL NOT BE PULLED TIGHT TO ENSURE THE SOCK HAS 100% SOIL CONTACT. WHEN THE SOCK BEHIND TO 150 mm TO 450 mm. THE SOCK SHALL NOT BE PULLED TIGHT TO ENSURE THE SOCK HAS 100% SOIL CONTACT. WHEN THE SOCK BEHIND TO 150 mm TO 450 mm. THE SOCK SHALL NOT BE PULLED TIGHT TO ENSURE THE SOCK HAS 100% SOIL CONTACT. WHEN THE SOCK BEHIND TO 150 mm TO 450 mm. THE SOCK SHALL NOT BE PULLED TIGHT TO ENSURE THE SOCK HAS 100% SOIL CONTACT.
 2.4 PLACE, INSPECT THE SOCK AFTER EVERY RAIN EVENT. IF SEDIMENT REACHES 1/2 THE HEIGHT OF THE SOCK, THE SEDIMENT SHALL BE REMOVED IMMEDIATELY AND DEPOSIT IN A CONTAINER. THE SOCK SHALL BE REPLACED. DAMAGED SILT SOCKS SHALL BE REPLACED. THE SOCK SHALL BE REPLACED IMMEDIATELY AND DEPOSIT IN A CONTAINER. THE SOCK SHALL BE REPLACED. DAMAGED SILT SOCKS SHALL BE REPLACED. THE SOCK SHALL BE REPLACED IMMEDIATELY AND DEPOSIT IN A CONTAINER. THE SOCK SHALL BE REPLACED. DAMAGED SILT SOCKS SHALL BE REPLACED.
 2.5 ANY MATERIAL DEPOSITED ON A PAVED ROAD SHALL BE REMOVED BY SWEEPING AND SHOVELING OR VACUUMING AND DISPOSING SEDIMENT TO AN APPROVED DISPOSAL AREA.
 2.6 CONSTRUCTION IS CONSIDERED COMPLETE WHEN THE FOLLOWING CONDITIONS HAVE BEEN MET:
 A. ALL STRUCTURES HAVE BEEN BUILT.
 B. ALL PROPOSED GRASSED AREAS ARE EITHER SODDED OR HAVE A FULL COVERAGE OF WELL ESTABLISHED TURF AND HAVE HAD A MINIMUM OF ONE FULL GROWING SEASON (MAY 15th TO SEPTEMBER 15th).
 C. ALL STOCKPILED MATERIALS HAVE BEEN COVERED.
 D. 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 OR AFTER CONSTRUCTION. THERE WILL BE NO ALTERATION TO EXISTING GRADE AND DRAINAGE PATTERNS ON PROPERTY LINE UNLESS OTHERWISE STATED BY THE ENGINEER.
 3.2 APPROVED DISPOSAL AREAS.
 3.3 PONDING (OTHER THAN PONDING REQUIRED FOR STORMWATER MANAGEMENT).
 3.4 WHETHER RESULT OF POOR WORKMANSHIP OR DAMAGE, DEFECTIVE GRADING SHALL BE CORRECTED.
 3.5 ALL STRUCTURES SHALL BE BUILT TO CITY OF OTTAWA STANDARDS.
 3.6 ALL PROPOSED GRASSED AREAS ARE EITHER SODDED OR HAVE A FULL COVERAGE OF WELL ESTABLISHED TURF AND HAVE HAD A MINIMUM OF ONE FULL GROWING SEASON (MAY 15th TO SEPTEMBER 15th).
 3.7 REMOVE EROSION AND SEDIMENT CONTROL MEASURES WHEN CONSTRUCTION IS COMPLETE.

4. SITE SERVICES:
 4.1 WATER METERS SHALL BE INSTALLED AS PER CITY OF OTTAWA DWG. No. W31 (40 & 50mm). WATER SERVICE LINE SHALL BE INSTALLED AS PER CITY OF OTTAWA DWG. No. W32 (40 & 50mm).
 4.2 ALL WATER MAINS AND WATER SERVICE MATERIALS AND CONSTRUCTION METHODS TO CITY OF OTTAWA STANDARDS AND ONTARIO PROVINCIAL STANDARDS SPECIFICATIONS (OPSS & OPSD). WATER SERVICE MATERIALS SHALL BE COPPER ASTM B88 TYPE "K" SOFT OR PEX TUBING SDR 9 CTS TO AWWA C-904 & CITY OF OTTAWA STANDARDS.
 4.3 OTTAWA DWG. No. W22. 4 m COVER OVER WATER SERVICES. WHERE THE MINIMUM COVER IS NOT POSSIBLE INSULATE AS PER CITY OF OTTAWA DWG. No. W22.
 4.4 ALL SEWER MATERIALS AND CONSTRUCTION METHODS TO CITY OF OTTAWA STANDARDS AND ONTARIO PROVINCIAL STANDARDS SPECIFICATIONS (OPSS & OPSD). ALL SEWER MATERIAL SHALL BE PVC SDR-35 (SDR-28 FOR DIAMETERS 150mm OR LESS) AND SHALL CONFORM TO CSA S136.1.
 4.5 SEWERS SHALL HAVE A MINIMUM 2.0m OF COVER OR SHALL BE INSULATED AS PER CITY OF OTTAWA STANDARD DRAWING S35.
 4.6 MANHOLES:
 A. PRECAST MANHOLE UNITS, TO OPS 1351 AND OPS 701.010 WITH BASE SLAB OR MONOLITHIC BASE. TOP SECTIONS ECCENTRIC CONE OR FLAT TOP TYPE WITH OPENING OFFSET FOR VERTICAL LADDER INSTALLATION.
 B. MANHOLE STEPS: TO OPS 405/01
 C. ALUMINUM SURFACES IN CONTACT WITH OR CAST INTO CONCRETE SHALL HAVE POLYETHYLENE ANCHOR INSULATING SLEEVES.
 D. PRECAST CATCH BASIN SECTIONS: TO OPS 1351.
 E. JOINTS: SHALL BE MADE WATER-TIGHT USING BUTYL BASED, FLEXIBLE WATERSTOP/Joint SEALANT MATERIAL.
 F. STORM SEWERS: MANHOLES SHALL HAVE A 300mm SUMP AND CATCH BASIN SHALL HAVE A 600mm SUMP.
 G. FRAMES, GRATES AND COVERS TO CITY OF OTTAWA DRAWINGS OR OPSD (AS PER CATCH BASIN & MANHOLE SCHEDULE). GRATES AND COVERS TO BEAR EVENLY ON FRAMES.
 H. ROOF DRAINS SHALL BE ADJUSTABLE FLOW CONTROL TYPE EACH INSTALLED WITH A FIXED WEIR ONE AND AN ADJUSTABLE UPPER WEIR ACCUTROL WEIR RD-100-41 OR APPROVED EQUAL SHALL BE A MINIMUM 50mm IN DIAMETER. WATTS RD-100-41 SHALL BE USED FOR REVIEW. VORTEX FLOW REGULATOR (OR APPROVED EQUAL) AND SIZED BY THE MANUFACTURER FOR A DISCHARGE RATE AS INDICATED ON THE PLAN. PRIOR TO INSTALLATION SUBMIT SHOP DRAWING TO ENGINEER FOR REVIEW.
 I. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING CONDITIONS:
 1. ALL STRUCTURES SHALL BE BUILT TO CITY OF OTTAWA STANDARDS.
 2. ALL PROPOSED GRASSED AREAS ARE EITHER SODDED OR HAVE A FULL COVERAGE OF WELL ESTABLISHED TURF AND HAVE HAD A MINIMUM OF ONE FULL GROWING SEASON (MAY 15th TO SEPTEMBER 15th).
 3. ALL STOCKPILED MATERIALS HAVE BEEN COVERED.
 4. REMOVE EROSION AND SEDIMENT CONTROL MEASURES WHEN CONSTRUCTION IS COMPLETE.

5. CONSTRUCTION:
 5.1 PRIOR TO COMMENCING WORK:
 A. OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE AUTHORITIES.
 B. SIZE