

BUILDING A1 AND A3 4055 RUSSELL ROAD, OTTAWA

REVISION 02



KEY PLAN (N.T.S.)

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BUILDING A1 AND A3
4055 RUSSELL ROAD, OTTAWA
REV.02 - RE-ISSUED FOR APPROVAL - APRIL 2026
LRL PROJECT no: 230778



NOT AUTHENTIC UNLESS SIGNED AND DATED

GENERAL NOTES

1. ALL WORKS MATERIALS SHALL CONFIRM TO THE LAST REVISION OF THE STANDARDS AND SPECIFICATIONS FOR THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS), WHERE APPLICABLE. LOCAL UTILITY STANDARDS AND MINISTRY OF TRANSPORTATION STANDARDS WILL APPLY WHERE REQUIRED.
2. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EXISTING UTILITIES WITHIN THE SITE AND ADJACENT WORK AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANY SERVICES OR UTILITIES DISTURBED DURING CONSTRUCTION, TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.
3. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION, ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER. LOST TIME DUE TO FAILURE OF THE CONTRACTORS TO CONFIRM UTILITY LOCATIONS AND NOTIFY ENGINEER OF POSSIBLE CONFLICTS PRIOR TO CONSTRUCTION WILL BE AT CONTRACTORS EXPENSE.
4. ANY AREA BEYOND THE LIMIT OF THE SITE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AT THE CONTRACTORS EXPENSE. RELOCATING OF EXISTING SERVICES AND/OR UTILITIES SHALL BE AS SHOWN ON THE DRAWINGS OR DETECTED BY THE ENGINEER AT THE EXPENSE OF DEVELOPERS.
5. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS. THE GENERAL CONTRACTORS SHALL BE DEEMED TO BE THE 'CONTRACTOR' AS DEFINED IN THE ACT.
6. ALL THE CONSTRUCTION SIGNAGE MUST CONFIRM TO THE MINISTRY OF TRANSPORTATION OF ONTARIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PER LATEST AMENDMENT.
7. THE CONTRACTOR IS ADVISED THAT WORKS BY OTHERS MAY BE ONGOING DURING THE PERIOD OF THE CONTRACT. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES TO PREVENT CONFLICTS.
8. ALL DIMENSIONS ARE IN METRES UNLESS SPECIFIED OTHERWISE.
9. THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS PRIOR WRITTEN APPROVAL IS RECEIVED FROM THE ENGINEER.
10. ALL CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT.
11. FOR DETAILS RELATING TO STORMWATER MANAGEMENT AND ROOF DRAINAGE REFER TO THE SITE SERVICES AND STORMWATER MANAGEMENT REPORT.
12. ALL SEWERS CONSTRUCTED WITH GRADES LESS THAN 1.0% SHALL BE INSTALLED USING LASER ALIGNMENT AND CHECKED WITH LEVEL INSTRUMENT PRIOR TO BACKFILLING.
13. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND TO BEAR THE COST OF THE SAME.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL BEDDING, OR ADDITIONAL STRENGTH PIPE IF THE MAXIMUM TRENCH WIDTH AS SPECIFIED BY OPSD IS EXCEEDED.
15. ALL PIPE/CULVERT SECTION SIZES REFER TO INSIDE DIMENSIONS.
16. SHOULD DEEPLY BURIED ARCHAEOLOGICAL REMAINS BE FOUND ON THE PROPERTY DURING CONSTRUCTION ACTIVITIES, THE HERITAGE OPERATIONS UNIT OF THE ONTARIO MINISTRY OF CULTURE MUST BE NOTIFIED IMMEDIATELY.
17. ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED BY THE CONTRACTOR. REVIEW WITH CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO ANY TREE CUTTING/REMOVAL.
18. DRAWINGS SHALL BE READ ON CONJUNCTION WITH ARCHITECTURAL SITE PLAN.
19. THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER ONE SET OF AS CONSTRUCTED SITE SERVICING AND GRADING DRAWINGS.
20. BENCHMARKS: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SITE BENCHMARK(S) HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION DEPICTED ON THIS PLAN.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL

THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

THE CONTRACTOR ACKNOWLEDGES THAT SURFACE EROSION AND SEDIMENT RUNOFF RESULTING FROM THEIR CONSTRUCTION OPERATIONS HAS POTENTIAL TO CAUSE A DETRIMENTAL IMPACT TO ANY DOWNSTREAM WATERCOURSE OR SEWER, AND THAT ALL CONSTRUCTION OPERATIONS THAT MAY IMPACT UPON WATER QUALITY SHALL BE CARRIED OUT IN MANNER THAT STRICTLY MEETS THE REQUIREMENT OF ALL APPLICABLE LEGISLATION AND REGULATIONS.

AS SUCH, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT THEIR OPERATIONS, AND SUPPLYING AND INSTALLING ANY APPROPRIATE CONTROL MEASURES, SO AS TO PREVENT SEDIMENT LADEN RUNOFF ENTERING ANY SEWER OR WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA.

THE CONTRACTOR ACKNOWLEDGES THAT NO ONE MEASURE IS LIKELY TO BE 100% EFFECTIVELY FOR EROSION PROTECTION AND CONTROLLING SEDIMENT RUNOFF AND DISCHARGES FROM THE SITE. THEREFORE, WHERE NECESSARY THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES ARRANGED IN SUCH MANNER AS TO MITIGATE SEDIMENT RELEASE FROM THE CONSTRUCTION OPERATIONS AND ACHIEVE SPECIFIC MAXIMUM PERMITTED CRITERIA WHERE APPLICABLE. SUGGESTED ON-SITE MEASURES MAY INCLUDE, BUT SHALL NOT BE LIMITED TO, THE FOLLOWING METHODS: SEDIMENT PONDS, FILTER BAGS, PUMP FILTERS, SETTLING TANKS, SILT FENCE, STRAW BALES, FILTER CLOTHS, CATCH BASIN FILTERS, CHECK DAMS AND/OR OTHER RECOGNIZED TECHNOLOGIES AND METHOD AVAILABLE AT THE TIME OF CONSTRUCTION. SPECIFIC MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS OF OPSD 577 WHERE APPROPRIATE, OR IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

WHERE, IN THE OPINION OF THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY, THE INSTALLED CONTROL MEASURES FAIL TO PERFORM ADEQUATELY, THE CONTRACTOR SHALL SUPPLY AND INSTALL ADDITIONAL OR ALTERNATIVE MEASURES AS DIRECTED BY THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY, AS SUCH, THE CONTRACTOR SHALL HAVE ADDITIONAL CONTROL MATERIALS ON SITE AT ALL TIME WHICH ARE EASILY ACCESSIBLE AND MAY BE IMPLEMENTED BY HIM AT THE MOMENTS NOTICE.

PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL SUBMIT TO THE CONTRACT ADMINISTRATOR SIX COPIES OF A DETAILED EROSION AND SEDIMENT CONTROL PLAN (ESCP). THE ESCP WILL CONSIST OF WRITTEN DESCRIPTION AND DETAIL DRAWINGS INDICATING THE ON-SITE ACTIVITIES AND MEASURES TO BE USED TO CONTROL EROSION AND SEDIMENT MOVEMENT FOR EACH STEP OF THE WORK.

CONTRACTORS RESPONSIBILITIES

THE CONTRACTOR SHALL ENSURE THAT ALL WORKERS, INCLUDING SUB-CONTRACTOR, IN THE WORKING AREA ARE AWARE OF THE IMPORTANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES AND INFORMED OF THE CONSEQUENCES OF THE FAILURE TO COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AGENCIES.

THE CONTRACTOR SHALL PERIODICALLY (WEEKLY), AND WHEN REQUESTED BY THE CONTRACT ADMINISTRATOR, CLEAN OUT ACCUMULATED SEDIMENT DEPOSITS AS REQUIRED AT THE SEDIMENT CONTROL DEVICES, INCLUDING THOSE DEPOSITS THAT MAY ORIGINATE FROM OUTSIDE THE CONSTRUCTION AREA. ACCUMULATED SEDIMENT SHALL BE REMOVED IN SUCH A MANNER THAT PREVENTS THE DEPOSITION OF THIS MATERIAL INTO THE WATERCOURSE AND AVOIDS DAMAGE TO EXISTING SITE FEATURES. THE SEDIMENT SHALL BE REMOVED FROM THE SITE AT THE CONTRACTORS EXPENSE AND MANAGED IN COMPLIANCE WITH REQUIREMENTS FRO EXCESS EARTH MATERIAL, AS SPECIFIED ELSEWHERE IN THE CONTRACT.

THE CONTRACTOR IS REQUIRED TO IMPLEMENT SEDIMENT AND EROSION CONTROL MEASURES AT LEAST ONE WEEK BEFORE THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. THESE MEASURES SHOULD BE THOROUGHLY INSTALLED TO EFFECTIVELY MAINTAIN SOIL EROSION AND SEDIMENT RUNOFF. FOLLOWING INSTALLATION, THE CONTRACTOR MUST CONDUCT INSPECTIONS OF THESE CONTROL MEASURES ON A WEEKLY BASIS TO ENSURE THEIR ONGOING EFFECTIVENESS AND FUNCTIONALITY.

IN ADDITION TO THE REGULAR WEEKLY INSPECTIONS, THE CONTRACTOR MUST ALSO CARRY OUT ADDITIONAL INSPECTIONS IN THE AFTERMATH OF ANY MAJOR RAINFALL EVENTS. THIS WILL HELP ASSESS THE PERFORMANCE OF THE EROSION CONTROL MEASURES UNDER INCREASED WATER FLOW CONDITIONS. ANY DEFICIENCIES OR DAMAGES IDENTIFIED DURING THESE INSPECTIONS MUST BE PROMPTLY REPAIRED TO MAINTAIN COMPLIANCE AND ENSURE THE INTEGRITY OF THE CONSTRUCTION SITE.

THE CONTRACTOR SHALL PERIODICALLY, AND WHEN REQUESTED BY THE CONTRACT ADMINISTRATOR, CLEAN OUT ACCUMULATED SEDIMENT DEPOSITS AS REQUIRED AT THE SEDIMENT CONTROL DEVICES, INCLUDING THOSE DEPOSITS THAT MAY ORIGINATE FROM OUTSIDE THE CONSTRUCTION AREA. ACCUMULATED SEDIMENT SHALL BE REMOVED IN SUCH A MANNER THAT PREVENTS THE DEPOSITION OF THIS MATERIAL INTO THE SEWER WATERCOURSE AND AVOIDS DAMAGE TO CONTROL MEASURES. THE SEDIMENT SHALL BE REMOVED FROM THE SITE AT THE CONTRACTORS EXPENSE AND MANAGED IN COMPLIANCE WITH REQUIREMENTS FRO EXCESS EARTH MATERIAL, AS SPECIFIED ELSEWHERE IN THE CONTRACT.

THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE CONTRACT ADMINISTRATOR ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO EITHER THE WATERCOURSE OR THE STORM SEWER SYSTEM. FAILURE TO REPORT WILL BE CONSTITUTE A BRACH OF THIS SPECIFICATION AND THE CONTRACTOR MAY ALSO BE SUBJECT TO THE PENALTIES IMPOSED BY THE APPLICABLE REGULATORY AGENCY. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.

THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE CONTRACT ADMINISTRATOR, THE MEASURE OR MEASURES, IS NO LONGER REQUIRED. NO CONTROL MEASURE MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE CONTRACT ADMINISTRATOR. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS THE ENTRY OF ANY EQUIPMENT, OTHER THAN HAND-HELD EQUIPMENT, INTO ANY WATERCOURSE, AND PREVENTS THE RELEASE OF ANY SEDIMENT OR DEBRIS INTO ANY SEWER OR WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA. ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE WORKING AREA AT THE CONTRACTORS EXPENSE AND MANAGED IN COMPLIANCE WITH THE REQUIREMENTS FOR EXCESS EARTH MATERIAL.

WHERE, IN THE OPINION OF EITHER THE CONTRACT ADMINISTRATOR OR A REGULATORY AGENCY, ANY OF THE TERMS SPECIFIED HEREIN HAVE NOT BEEN COMPLIED WITH OR PERFORMED IN A SUITABLE MANNER, OR THAT ALL THE CONTRACTOR ADMINISTRATOR OR A REGULATORY AGENCY HAS THE RIGHT TO IMMEDIATELY WITHDRAW ITS PERMISSION TO CONTINUE THE WORK BUT MAY RENEW ITS PERMISSION UPON BEING SATISFIED THAT THE DEFAULTS OR DEFICIENCIES IN THE PERFORMANCE OF THIS SPECIFICATION BY THE CONTRACTOR HAVE BEEN REMEDIED.

SPILL CONTROL NOTES

1. ALL CONSTRUCTION EQUIPMENT SHALL BE RE-FUELED, MAINTAINED, AND STORED NO LESS THAN 30 METRES FROM WATERCOURSE, STREAMS, CREEKS, WOODLOTS, AND ANY ENVIRONMENTALLY SENSITIVE AREAS, OR AS OTHERWISE SPECIFIED.
2. THE CONTRACTOR MUST IMPLEMENT ALL NECESSARY MEASURES IN ORDER TO PREVENT LEAKS, DISCHARGES OR SPILLS OF POLLUTANTS, DELETERIOUS MATERIALS, OR OTHER SUCH MATERIALS OR SUBSTANCES WHICH WOULD OR COULD CAUSE AN ADVERSE IMPACT TO THE NATURAL ENVIRONMENT.
3. IN THE EVENT OF A LEAK, DISCHARGE OR SPILL OF POLLUTANT, DELETERIOUS MATERIAL OR OTHER SUCH MATERIAL OR SUBSTANCE WHICH WOULD OR COULD CAUSE AN ADVERSE IMPACT TO THE NATURAL ENVIRONMENT, THE CONTRACTOR SHALL:
 - 3.1. IMMEDIATELY NOTIFY APPROPRIATE FEDERAL, PROVINCIAL, AND LOCAL GOVERNMENT MINISTRIES, DEPARTMENTS, AGENCIES, AND AUTHORITIES OF THE INCIDENT IN ACCORDANCE WITH ALL CURRENT LAWS, LEGISLATION, ACTS, BY-LAWS, PERMITS, APPROVALS, ETC.
 - 3.2. TAKE IMMEDIATE MEASURES TO CONTAIN THE MATERIAL OR SUBSTANCE, AND TO TAKE SUCH MEASURES TO MITIGATE AGAINST ADVERSE IMPACTS TO THE NATURAL ENVIRONMENT.
 - 3.3. RESTORE THE AFFECTED AREA TO THE ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION.

MUD MAT NOTES

1. THE GRANULAR MATERIAL WILL REQUIRE PERIODIC REPLACEMENT AS IT BECOMES CONTAMINATED BY VEHICLE TRAFFIC.
2. SEDIMENT SHALL BE CLEANED FROM PUBLIC ROADS AT THE END OF EACH DAY.
3. SEDIMENT SHALL BE REMOVED FROM PUBLIC ROADS BY SHOVELING OR SWEEPING AND DISPOSED OR PROPERLY IN A CONTROLLED SEDIMENT DISPOSAL AREA.

SITE GRADING NOTES

1. PRIOR TO THE COMMENCEMENT OF THE SITE GRADING WORKS, ALL SILTATION CONTROL DEVICES SHALL BE INSTALLED AND OPERATIONAL PER EROSION CONTROL PLAN.
2. ALL GRANULAR AND PAVEMENT FOR ROADS/PARKING AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
3. ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROAD AND PARKING AREAS ALLOWANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
4. CONCRETE CURB SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. SCI.1 PROVISION SHALL BE MADE OR CURB DEPRESSIONS AS INDICATED ON ARCHITECTURAL SITE PLAN. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD SCI.4. ALL CURBS, CONCRETE ISLANDS, AND SIDEWALKS SHOWN ON THIS DRAWING ARE TO BR PRICED IN SITE WORKS PORTION OF THE CONTRACT.
5. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. R10 AND OPSD 509.010 AND OPSS 310.
6. GRANULAR 'A' SHALL BE PLACED TO A MINIMUM THICKNESS OF 30MM AROUND ALL STRUCTURES WITHIN THE PAVEMENT AREA.
7. SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'B' COMPACTED IN MAXIMUM 30MM LIFTS.
8. ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR BACKFILLING.
9. CONTRACTOR TO OBTAIN A ROAD OCCUPANCY PERMIT 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL ROAD ALLOWANCE, IF REQUIRED BY THE MUNICIPALITY.
10. ALL PAVEMENT MARKING FEATURES AND SITE SIGNAGE SHALL BE PLACED PER ARCHITECTURAL SITE PLAN. LINE PAINTING AND DIRECTIONAL SYMBOLS SHALL BE APPLIED WITH A MINIMUM OF TWO COATS OF ORGANIC SOLVENT PAINT.
11. REFER TO ARCHITECTURAL SITE PLAN FOR DIMENSIONS AND SITE DETAILS.
12. STEP JOINTS ARE TO BE USED WHERE PROPOSED ASPHALT MEETS EXISTING ASPHALT. ALL JOINTS MUST BE SEALED.
13. SIDEWALKS TO BE 13MM & BEVELED AT 2:1 OR 8MM WITH NO BEVEL REQUIRED BELOW THE FINISHED FLOOR SLAB ELEVATION AT ENTRANCES REQUIRED TO BE BARRIER-FREE, UNLESS OTHERWISE NOTED. ALL IN ACCORDANCE WITH OBC 3.8.1.3.8 OTTAWA ACCESSIBILITY DESIGN STANDARDS.
14. WHERE APPLICABLE THE CONTRACTOR IS TO SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. SHOP DRAWINGS MUST BE SITE SPECIFIC, SIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER. THE CONTRACTOR WILL ALSO BE REQUIRED TO SUPPLY AND GEOTECHNICAL CERTIFICATION OF THE AS-CONSTRUCTED RETAINING WALL TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.

ROADWORK SPECIFICATIONS

15. ROADWORK TO BE COMPLETED IN ACCORDANCE WITH GEOTECHNICAL REPORT.
16. ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROAD ALLOWANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND STOCK PILED ON SITE AS DIRECTED BY NATIONAL MUNICIPALITY.
17. THE SUBGRADE SHALL BE CROWNED AND SLOPED AT LEAST 2% AND PROOF ROLLED WITH HEAVY ROLLERS.
18. SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'A', TYPE II COMPACTED IN MAXIMUM 300MM LIFTS.
19. ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO MINIMUM OF 100% STANDARD PROCTOR DENSITY MAXIMUM DRY DENSITY (SPMDD).
20. CONCRETE RAMP C/W TACTILE WALKING SURFACE INDICATORS COMPONENT AS PER OPSD 310.039. TACTILE WALKING SURFACE INDICATORS TO BE INSTALLED AT ALL RAMPS. MATERIAL TO BE POLYMER COMPOSITE, COLOR GREY.

SANITARY, FOUNDATION DRAIN, STORM SEWER AND WATERMAIN NOTES

GENERAL

1. LASER ALIGNMENT CONTROL TO BE UTILIZED ON ALL SEWER INSTALLATIONS.
2. CLAY SEALS TO BE INSTALLED AS PER CITY STANDARD DRAWING 58. THE SEALS SHOULD BE AT LEAST 1.5M LONG (IN THE TRENCH DIRECTION) AND SHOULD EXTEND FROM TRENCH WALL TO TRENCH WALL. THE SEALS SHOULD EXTEND FROM THE FRONT LINE AND FULLY PENETRATE THE BEDDING, SUB-BEDDING, AND COVER MATERIAL. THE BARRIERS SHOULD CONSIST OF RELATIVELY DRY AND COMPATIBLE BROWN SILTY CLAY PLACED IN MAXIMUM 25MM LIFTS AND COMPACTED TO A MINIMUM OF 95% SPMDD. THE CLAY SEALS SHOULD BE PLACED AT THE SITE BOUNDARIES AND AT 60M INTERVALS IN THE SERVICE TRENCHES.
3. SERVICES TO BUILDING TO BE TERMINATED 1.0M FROM THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
4. ALL MAINTENANCE STRUCTURE AND CATCH BASIN EXCAVATIONS TO BE BACKFILLED WITH GRANULAR MATERIAL COMPACTED TO 98% STANDARD PROCTOR DENSITY. A MINIMUM OF 300MM AROUND STRUCTURES.
5. "MODULOC" OR APPROVED PRE-CAST MAINTENANCE STRUCTURE AND CATCH BASIN ADJUSTERS TO BE USED IN LIEU OF BRICKING. PARGE ADJUSTING UNITS ON THE OUTSIDE ONLY.
6. SAFETY PLATFORMS SHALL BE PER OPSD 404.02.
7. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH OPSD 1003.01, IF APPLICABLE.
8. THE CONTRACTOR IS TO PROVIDE CCTV CAMERA INSPECTIONS OF ALL SEWERS, INCLUDING PICTORIAL REPORT, ONE (1) CD COPY AND TWO (2) VIDEO RECORDING IN A FORMAT ACCEPTABLE TO ENGINEER. ALL SEWER ARE TO BE FLUSHED PRIOR TO CAMERA INSPECTION. ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEWERS AND NECESSARY REPAIRS HAVE BEEN COMPLETED TO THE SATISFACTION OF THE ENGINEER.
9. CONTRACTOR SHALL PERFORM LEAKAGE TESTING, IN THE PRESENCE OF THE CONSULTANT, FOR SANITARY SEWERS IN ACCORDANCE WITH OPSD 407. CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF ALL SEWERS. A COPY OF THE VIDEO AND INSPECTION REPORT SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF WEAR COURSE ASPHALT.

SANITARY

11. ALL SANITARY SEWER INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
11. ALL SANITARY GRAVITY SEWER SHALL BE PVC SDR 35, IPEX 'RING-TITE' (OR APPROVED EQUIVALENT) PER CSA STANDARD B182.2 OR LATEST AMENDMENT, UNLESS SPECIFIED OTHERWISE.
12. EXISTING MAINTENANCE STRUCTURES TO BE RE-BENCHED WHERE A NEW CONNECTION IS MADE.
13. SANITARY GRAVITY SEWER TRENCH AND BEDDING SHALL BE PER CITY OF OTTAWA STD. S6 AND S7 CLASS 'B' BEDDING, UNLESS OTHERWISE SPECIFIED.
14. SANITARY MAINTENANCE STRUCTURE FRAME AND COVERS SHALL BE PER CITY OF OTTAWA STD. S24 AND S25.
15. SANITARY MAINTENANCE STRUCTURES SHALL BE BENCHED PER OPSD 701.021.
16. 100MM THICK HIGH-DENSITY GRADE 'A' POLYSTYRENE INSULATION TO BE INSTALLED IN ACCORDANCE WITH CITY STD W22 WHERE INDICATED ON DRAWING SSP-1.

STORM

17. ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.2, OR LATEST AMENDMENT. ALL NON-REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.1, OR LATEST AMENDMENT. PIPE SHALL BE JOINED WITH STD. RUBBER GASKETS AS PER CSA A257.3, OR LATEST AMENDMENT.
18. ALL STORM SEWER TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. S6 AND S7 CLASS 'B' UNLESS OTHERWISE SPECIFIED. BEDDINGS AND COVER MATERIAL SHALL BE SPECIFIED BY PROJECT GEOTECHNICAL ENGINEER.
19. ALL PVC STORM SEWERS ARE TO BE SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE SPECIFIED.
20. CATCH BASIN SHALL BE IN ACCORDANCE WITH OPSD 705.010.
21. CATCH BASIN LEADS SHALL BE IN 300MM DIA. AT 1% SLOPE (MIN) UNLESS SPECIFIED OTHERWISE.
22. ALL CATCH BASINS SHALL HAVE 600MM SUMPS, UNLESS SPECIFIED OTHERWISE.
23. ALL CATCH BASIN LEAD INVERTS TO BE 1.5M BELOW FINISHED GRADE UNLESS SPECIFIED OTHERWISE.
24. THE STORM SEWER CLASSES HAVE BEEN DESIGNED BASED ON BEDDING CONDITIONS SPECIFIED ABOVE. WHERE THE SPECIFIED TRENCH WIDTH IS EXCEEDED, THE CONTRACTOR IS REQUIRED TO PROVIDE AND SHALL BE RESPONSIBLE FOR EXTRA TEMPORARY AND/OR PERMANENT REPAIRS MADE NECESSARY BY THE WIDENED TRENCH.
25. ALL ROAD AND PARKING LOT CATCH BASINS TO BE INSTALLED WITH ORTHOGONALLY PLACED SUBDRAINS IN ACCORDANCE WITH DETAIL. PERFORATED SUBDRAIN FOR ROAD AND PARKING LOT CATCH BASIN SHALL BE INSTALLED PER CITY STD R1 UNLESS OTHERWISE NOTED.
26. PERFORATED SUBDRAIN FOR REAR YARD AND LANDSCAPING APPLICATIONS SHALL BE INSTALLED PER CITY STD S29, S30 AND S31, WHERE APPLICABLE.
27. RIP-RAP TREATMENT SEWER AND CULVERT OUTLETS PER OPSD 810.010.
28. ALL STORM SEWER CULVERTS TO BE INSTALLED WITH FROST TREATMENT PER OPSD 803.031 WHERE APPLICABLE.
29. ALL STORM MANHOLES WITH PIPE LESS THAN 900MM IN DIAMETER SHALL BE CONSTRUCTED WITH A 300MM SUMP AS PER SDG, CLAUSE 6.2.6.

WATERMAIN

30. ALL WATERMAIN INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
31. ALL PVC WATERMANS SHALL BE AWWA C-900 CLASS 150, SDR 18 OR APPROVED EQUIVALENT.
32. ALL WATER SERVICES LESS THAN OR EQUAL TO 50MM IN DIAMETER TO BE TYPE 'K' COPPER.
33. WATERMAIN TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W17, UNLESS SPECIFIED OTHERWISE. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY THE PROJECT GEOTECHNICAL ENGINEER.
34. ALL PVC WATERMANS, SHALL BE INSTALLED WITH A 10 GAUGE STRANDED COPPER TWU OR RWU TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STD. W.36.
35. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS PER CITY OF OTTAWA STD. W25.5 AND W25.6.
36. VALVE BOXES SHALL BE INSTALLED PER CITY OF OTTAWA STD W26.
37. WATERMAIN IN FILL AREAS TO BE INSTALLED WITH RESTRAINED JOINTS PER CITY OF OTTAWA STD. W25.5 AND W25.6.
38. THRUST BLOCKING OF WATERMANS TO BE INSTALLED PER CITY OF OTTAWA STD. W25.3 AND W25.4.
39. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS, BLOW-OFFS, AND NOZZLES REQUIRED FOR TESTING AND DISINFECTION OF THE WATERMAIN.
40. WATERMAIN CROSSING OVER AND BELOW SEWERS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. W25.2 AND W25, RESPECTIVELY.
41. WATER SERVICES ARE TO BE INSTALLED PER CITY OF OTTAWA STD. W26 WHERE SEPARATION BETWEEN SERVICES AND MAINTENANCE HOLES ARE LESS THAN 2.4M.
42. THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SEWER/UTILITY IS 0.5M PER MCE GUIDELINES. FOR CROSSING UNDER SEWERS, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER IS REQUIRED TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING. THE LENGTH OF WATER PIPE SHALL BE CENTERED AT THE POINT OF CROSSING TO ENSURE THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.
43. ALL BURIED WATER INFRASTRUCTURE, INCLUDING WATERMANS, PRIVATE FIRE PROTECTION LINES, AND SERVICE CONNECTIONS, SHALL HAVE A MINIMUM COVER OF 2.4 M. WHERE MINIMUM COVER CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED IN ACCORDANCE WITH STD DWG W22.
44. GENERAL WATER PLANT TO UTILITY CLEARANCE AS PER STD DWG R20.
45. FIRE HYDRANT INSTALLATION AS PER STD DWG W19. ALL BOTTOM OF HYDRANT FLANGE ELEVATIONS TO BE INSTALLED 0.10M ABOVE PROPOSED FINISHED GRADE AT HYDRANT. FIRE HYDRANT LOCATION AS PER STD DWG W18.
46. BUILDING SERVICE TO BE CAPPED 1.0M OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED AND MUST BE RESTRAINED A MINIMUM OF 12M BACK FROM STUB.
47. ALL WATERMANS SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES UNLESS OTHERWISE DIRECTED. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC. MUST BE PROVIDED.
48. ALL WATERMANS SHALL BE BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES. ALL CHLORINATED WATER TO BE DISCHARGED AND PRETREATED TO ACCEPTABLE LEVELS PRIOR TO DISCHARGE. ALL DISCHARGED WATER MUST BE CONTROLLED AND TREATED SO AS NOT TO ADVERSELY EFFECT ENVIRONMENT. IT IS RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MUNICIPAL AND/OR PROVINCIAL REQUIREMENTS ARE FOLLOWED.
49. ALL WATERMAIN STUBS SHALL BE TERMINATED WITH A PLUG AND 50MM BLOW OFF UNLESS OTHERWISE NOTED.

DEWATERING NOTES

1. PROVIDE ALL 'EASR' DOCUMENT TO LRL ENV. STAFF FOR REVIEW BEFORE REGISTERING ONLINE WITH THE MECFP.
2. RECORD MECP AND LRL STAFF BEFORE EXCAVATION STARTS.
3. RECORD DAILY WATER PUMPING RATES AND DATA AND PROVIDE TO LRL.
4. RECORD DAILY WEATHER CONDITIONS DURING PUMPING AND PROVIDE TO LRL.
5. SAMPLE 2-3 TIMES A WEEK WATER BEING PUMPED TO ENSURE THEY FULFILL QUALITY RELEASE RATES AS PER LOCAL MUNICIPAL GUIDELINES. SEND WATER RESULTS TO LRL FOR REVIEW.
6. CLOSE/TERMINATE 'EASR' ON THE MECP WEBSITE 30 DAYS OR LESS FROM THE END OF PUMPING. ADVISE LRL WHEN THIS HAS BEEN DONE.

CLOSE-OUT REQUIREMENTS

1. WRITTEN CERTIFICATION AND AS-BUILT DRAWINGS CONFIRMING THAT THE STORM WATER MANAGEMENT MEASURES HAVE BEEN IMPLEMENTED AS PER APPROVED DESIGN.
2. STREET CLEANING - MAINTAIN ALL STREETS WITHIN THE AREA IN ORDER TO ENSURE THEY ARE CLEAR OF MUD, DUST & OTHER MATERIAL RESULTING FROM VEHICLES INVOLVED IN DEVELOPMENTS.
3. WRITTEN CERTIFICATION THAT THE PLUMBING AND LATERAL SERVICES HAVE RECEIVED AND PASSED A DYE TEST INSPECTION.
4. SUBMIT WRITTEN CERTIFICATION THAT ALL SANITARY SEWERS, MANHOLES, EXCEPT PRIVATE BUILDING SANITARY SEWER CONNECTIONS, HAVE PASSED LEAKAGE TESTING. THE VERIFICATION WILL INCLUDED CERTIFIED TEST RESULTS FOR ALL SECTIONS OF SANITARY SEWERS CONSTRUCTED.
5. VIDEO EXAMINATION OF STORM AND SANITARY SEWERS 200MM OR LARGER IN DIAMETER SHALL BE REQUIRED.
6. MAINTAIN AND POST SIGNS DESIGNATING FIRE LANES AND PARKING FOR PHYSICALLY DISABLED IN CONFORMITY WITH CITY BY-LAWS AND KEPT FREE AND CLEAR OF VEHICLES AND THAT PARKING SPACES FOR THE DISABLED ARE NOT ILLEGALLY OCCUPIED.
7. LANDSCAPING - MAINTENANCE OF PLANT MATERIAL SHALL BEGIN IMMEDIATELY AFTER INSTALLATION - WATERING, WEEDING & RODENT PEST AND DISEASE CONTROL IN ACCORDANCE WITH GENERALLY ACCEPTED HORTICULTURAL PRACTICES.
8. SNOW STORAGE SHALL BE SHOWN ON THE APPROVED SITE PLAN OR APPROVED BY THE GM. PLANNING, REAL ESTATE & ECONOMIC DEVELOPMENT.
9. EXTERIOR LIGHTING BE INSTALLED ONLY IN THE LOCATIONS AND IN ACCORDANCE WITH SPECIFICATIONS SHOWN ON THE APPROVED PLANS.
10. REPLACE ANY DAMAGED OR DESTROYED TREES DURING THE DEVELOPMENT.
11. SUBMIT A CERTIFIED SURVEYOR'S REAL PROPERTY REPORT, INCLUDING FOUNDATION ELEVATIONS, UPON COMPLETION OF THE FOUNDATION
12. SUPPLY ONE SET OF MYLAR OR PLASTIC FILM AS-CONSTRUCTED ROAD, GRADING AND SERVICE DRAWINGS INCLUDING THE LOCATION OF ALL WORKS. PROVIDE THE AS-BUILT DRAWINGS AND THE ATTRIBUTE DATA FOR THE WORKS.
13. BARRIER CURBS - PARKING AREAS AND ENTRANCES HAVE BARRIER CURBS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE DRAWING.
14. REINSTATEMENT OF CITY PROPERTY INCLUDING BUT NOT LIMITED TO SIDEWALKS, CURBS AND BOULEVARDS, WHICH MIGHT HAVE BEEN DAMAGED DURING THE DEVELOPMENT.
15. EXTEND INTERNAL WALKWAYS BEYOND THE LIMITS OF THE SUBJECT LANDS TO CONNECT TO EXISTING PUBLIC SIDEWALKS.
16. CERTIFICATION LETTER THAT CERTIFIES ACUSTICAL COMPLIANCE WITH ALL REQUIREMENTS OF THE APPLICABLE CONDITIONS IN THE AGREEMENT.
17. PROVIDE CONFIRMATION BY THE GEOTECHNICAL ENGINEER THAT THE OWNER COMPLIED WITH ALL RECOMMENDATIONS AND PROVISIONS OF THE REPORT, PRIOR TO CONSTRUCTION OF THE FOUNDATION AND AT THE COMPLETION OF THE WORKS.
18. OBTAIN A VIDEO INSPECTION OF THE CITY SEWER SYSTEM TO DETERMINE IF THE CITY SEWER SYSTEM SUSTAINED ANY DAMAGES AS A RESULT OF CONSTRUCTION.
19. INSTALL AND MAINTAIN IN GOOD WORKING ORDER THE REQUIRED IN-GROUND STORMWATER INLET CONTROL DEVICES AS RECOMMENDED IN THE APPROVED STORMWATER MANAGEMENT REPORT.
20. STORMWATER WORKS CERTIFICATION - PROVIDE CERTIFICATES OF COMPLIANCE CONFIRMING THAT ALL RECOMMENDATIONS AND PROVISIONS HAVE BEEN IMPLEMENTED IN ACCORDANCE WITH THE APPROVED PLANS.
21. CERTIFICATE OF CONFORMANCE AND AS-BUILT DRAWINGS CERTIFYING THAT ALL REQUIRED INLET CONTROL DEVICES HAVE BEEN PROPERLY INSTALLED AND THAT THE STORM SEWER SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED DRAWINGS.
22. PROVIDE CERTIFICATION THAT THE SITE LIGHTING HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED DESIGN PLAN.

USE AND INTERPRETATION OF DRAWINGS

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UNAUTHORIZED CHANGES

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO THESE PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY RL ASSOCIATES LTD. (RL) WITHOUT OBTAINING RL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRL'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES

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SCALE: #####

NOT FOR CONSTRUCTION TENDER

02 RE-ISSUED FOR APPROVAL S.V. 29 APR 2026

01 ISSUED FOR APPROVAL S.V. 19 DEC 2025

No. REVISIONS BY DATE



NOT AUTHENTIC UNLESS SIGNED AND DATED



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www.lrl.ca | (613) 842-3434

CLIENT

AVENUE 31

DESIGNED BY: S.V. DRAWN BY: S.V. APPROVED BY: K.P.

PROJECT

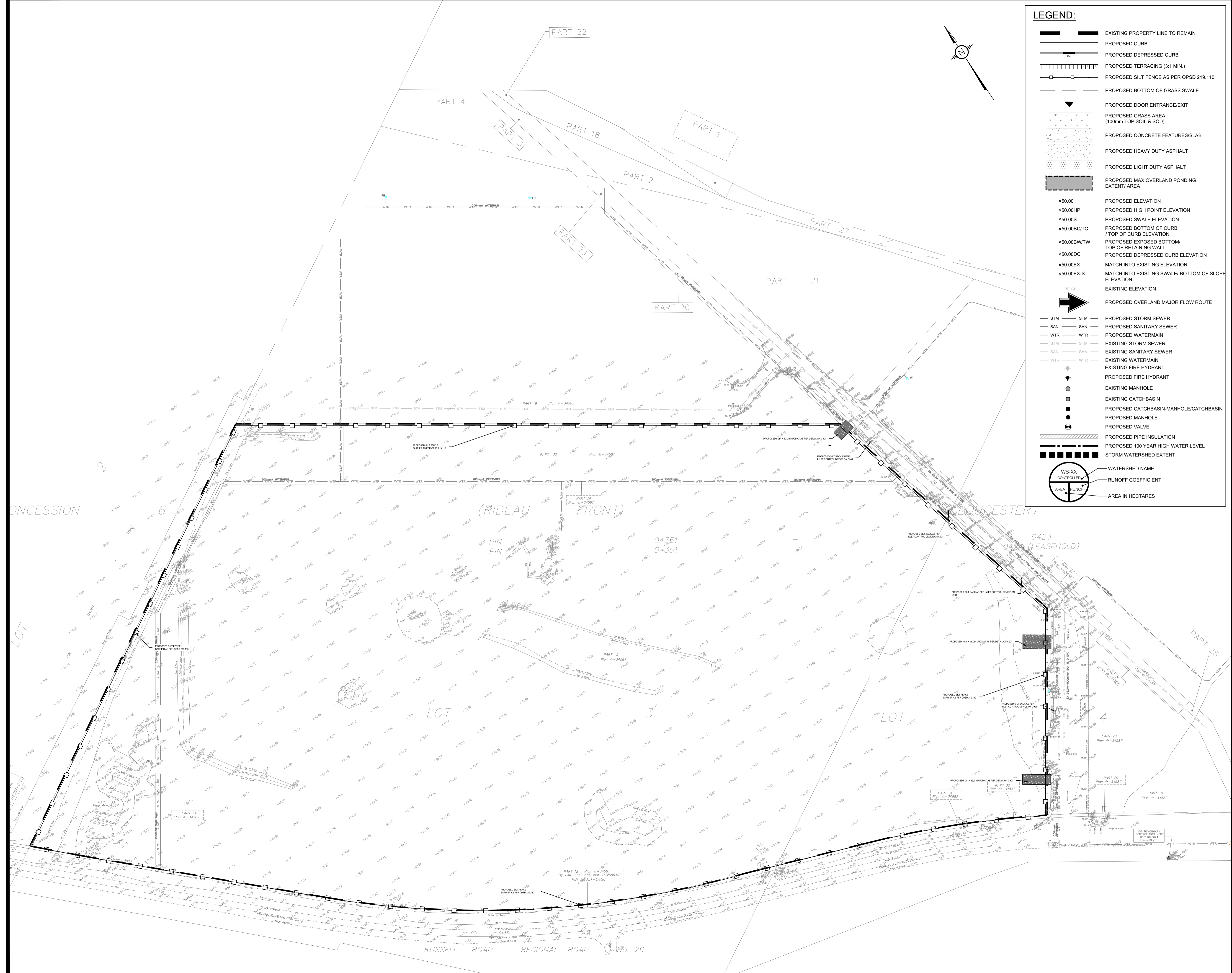
BUILDING A1 AND A3
4055 RUSSELL ROAD
OTTAWA, ON

DRAWING TITLE

GENERAL NOTES

PROJECT NO.

230778 C001



LEGEND:

- EXISTING PROPERTY LINE TO REMAIN
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- PROPOSED TERRACING (3:1 MIN.)
- PROPOSED SILT FENCE AS PER OPSD 219.110
- PROPOSED BOTTOM OF GRASS SWALE
- PROPOSED DOOR ENTRANCE/EXIT
- PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
- PROPOSED CONCRETE FEATURES/SLAB
- PROPOSED HEAVY DUTY ASPHALT
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- PROPOSED MAX OVERLAND PONDING EXTENT/AREA
- PROPOSED ELEVATION
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- MATCH INTO EXISTING ELEVATION
- MATCH INTO EXISTING SWALE / BOTTOM OF SLOPE ELEVATION
- EXISTING ELEVATION
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- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN
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- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING MANHOLE
- EXISTING CATCHBASIN
- PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
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- PROPOSED VALVE
- PROPOSED PIPE INSULATION
- PROPOSED 100 YEAR HIGH WATER LEVEL
- STORM WATERSHED EXTENT
- WATERSHED NAME
- RUNOFF COEFFICIENT
- AREA IN HECTARES

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20m 10 0 20 40m

SCALE: 1:1000

NOT FOR CONSTRUCTION TENDER

02	RE-ISSUED FOR APPROVAL	S.V.	29 APR 2026
01	ISSUED FOR APPROVAL	S.V.	19 DEC 2025
No.	REVISIONS	BY	DATE

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www.lrl.ca | (613) 842-3434

CLIENT

AVENUE 31

DESIGNED BY: S.V. DRAWN BY: S.V. APPROVED BY: K.P.

PROJECT

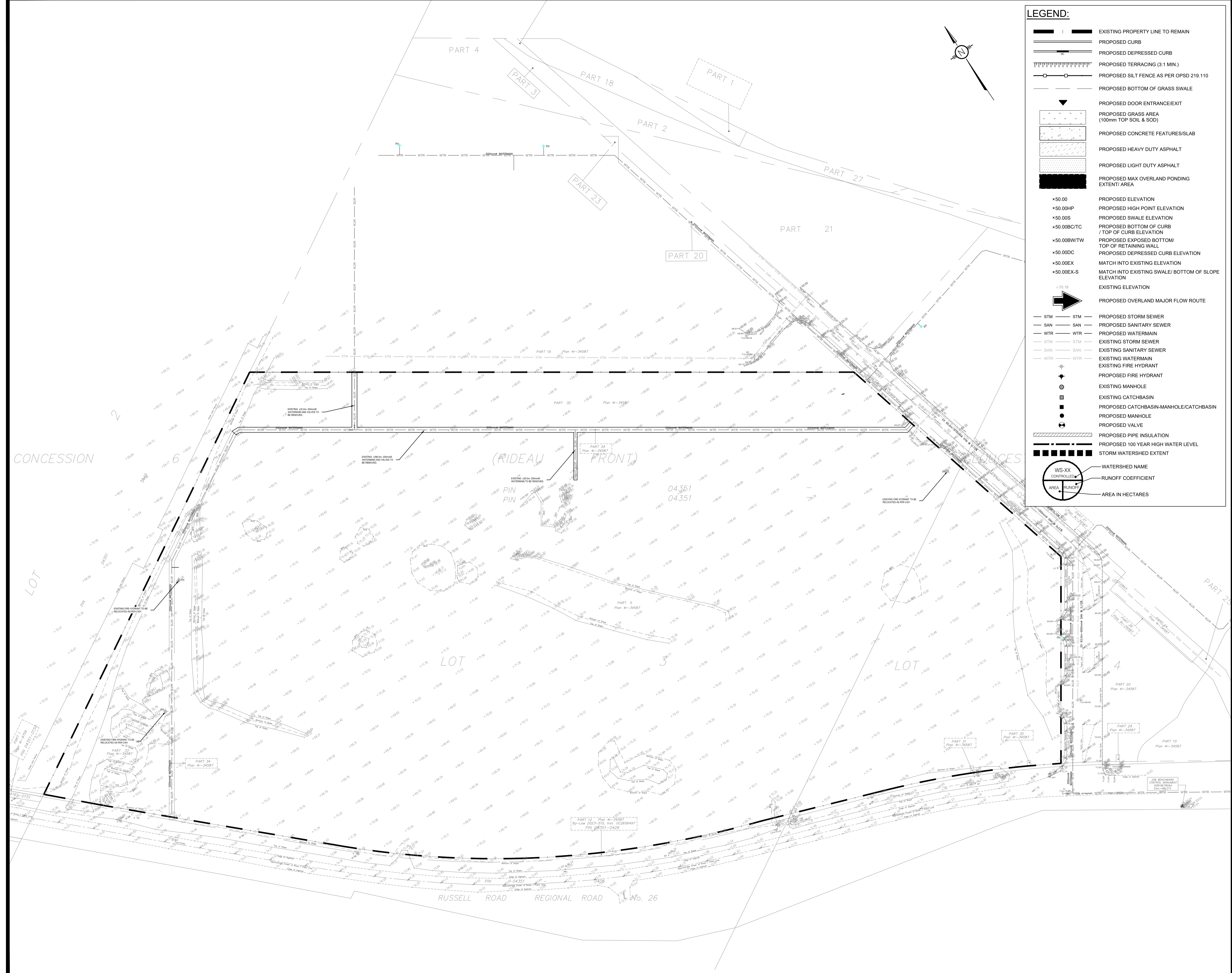
BUILDING A1 AND A3
4055 RUSSELL ROAD
OTTAWA, ON

DRAWING TITLE

EROSION AND SEDIMENT CONTROL PLAN

PROJECT NO.

230778 C101



LEGEND:

- 1 — EXISTING PROPERTY LINE TO REMAIN
- 2 — PROPOSED CURB
- 3 — PROPOSED DEPRESSED CURB
- 4 — PROPOSED TERRACING (3:1 MIN.)
- 5 — PROPOSED SILT FENCE AS PER OPD 219-110
- 6 — PROPOSED BOTTOM OF GRASS SWALE
- 7 — PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
- 8 — PROPOSED CONCRETE FEATURES/SLAB
- 9 — PROPOSED HEAVY DUTY ASPHALT
- 10 — PROPOSED LIGHT DUTY ASPHALT
- 11 — PROPOSED MAX OVERLAND PONDING EXTENT/ AREA
- 12 — PROPOSED ELEVATION
- 13 — PROPOSED HIGH POINT ELEVATION
- 14 — PROPOSED SWALE ELEVATION
- 15 — PROPOSED BOTTOM OF CURB / TOP OF CURB ELEVATION
- 16 — PROPOSED EXPOSED BOTTOM/ TOP OF RETAINING WALL
- 17 — PROPOSED DEPRESSED CURB ELEVATION
- 18 — MATCH INTO EXISTING ELEVATION
- 19 — MATCH INTO EXISTING SWALE/ BOTTOM OF SLOPE ELEVATION
- 20 — EXISTING ELEVATION
- 21 — PROPOSED OVERLAND MAJOR FLOW ROUTE
- 22 — STM — STM — PROPOSED STORM SEWER
- 23 — SAN — SAN — PROPOSED SANITARY SEWER
- 24 — WTR — WTR — PROPOSED WATERMAIN
- 25 — STM — STM — EXISTING STORM SEWER
- 26 — SAN — SAN — EXISTING SANITARY SEWER
- 27 — WTR — WTR — EXISTING WATERMAIN
- 28 — EXISTING FIRE HYDRANT
- 29 — PROPOSED FIRE HYDRANT
- 30 — EXISTING MANHOLE
- 31 — EXISTING CATCHBASIN
- 32 — PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
- 33 — PROPOSED MANHOLE
- 34 — PROPOSED VALVE
- 35 — PROPOSED PIPE INSULATION
- 36 — PROPOSED 100 YEAR HIGH WATER LEVEL
- 37 — STORM WATERSHED EXTENT
- 38 — WS-XX — WATERSHED NAME
- 39 — CONTROLLED — RUNOFF COEFFICIENT
- 40 — AREA — AREA IN HECTARES

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20m 10 0 20 40m

SCALE: 1:1000

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www.lrl.ca | (613) 842-3434

CLIENT: AVENUE 31

DESIGNED BY: S.V. DRAWN BY: S.V. APPROVED BY: K.P.

PROJECT: BUILDING A1 AND A3
4055 RUSSELL ROAD
OTTAWA, ON

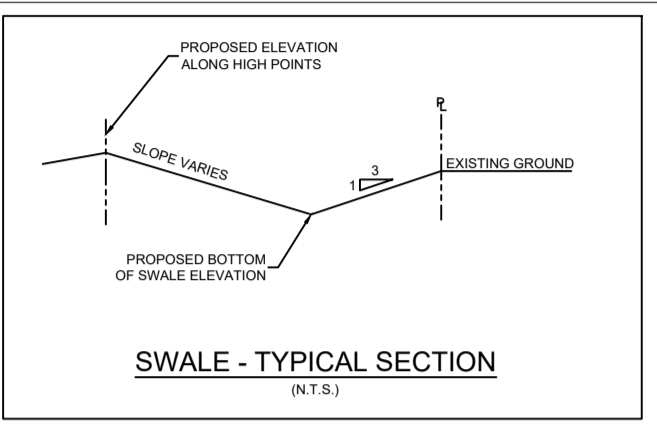
DRAWING TITLE: DEMOLITION PLAN

PROJECT NO. 230778 **C102**

TOPOGRAPHIC SURVEY PREPARED BY ANNIS, O'SULLIVAN, VOLLEBECK LTD. JOB NO. 24257-23 4055 RUSSELL RD T D1, DATED JANUARY 08, 2024

ELEVATION NOTES
 1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum and are related to Control Monument 09119020359 having an elevation of 73.746 metres and Control Monument 0911907004 having an elevation of 69.216 metres.
 2. It is the responsibility of the user of this information to verify that the point benchmark has not been altered or disturbed and that its related elevation and description agrees with the information shown on this drawing.
 - COORDINATE SYSTEM IS MTM ZONE 9 NAD83 (ORIGINAL)

UTILITY NOTES
 1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
 2. Only visible surface utilities were located.
 3. A field location of underground plant by the pertinent utility authority is mandatory before any work involving trenching, ground, probing, measuring etc.



PAVEMENT STRUCTURE

COURSE	MATERIAL	THICKNESS (mm)	
		AUTOMOBILE PARKING	TRUCK ROUTE (HEAVY TRAFFIC)
SURFACE	HL-3 A/C (PG 58-34)	50	40
BINDER	HL-3 A/C (PG 58-34)	-	50
BASECOURSE	OPSS GRANULAR "A"	150	150
SUBGRADE	OPSS GRANULAR "B" TYPE II	300	300

NOTE:
 IN PREPARATION FOR PAVEMENT CONSTRUCTION AT THIS SITE, ANY BURIED OR NEAR SURFACE/SUBGRADE LEVEL TOPSOIL AND ANY SOFT, WET OR DELICIOUS MATERIALS SHOULD BE REMOVED FROM THE PROPOSED PAVED AREAS. THE EXPOSED SUBGRADE SHOULD BE INSPECTED AND APPROVED BY GEOTECHNICAL PERSONNEL AND ANY SOFT AREAS EVIDENT SHOULD BE SUBGRAVATED AND REPLACED WITH SUITABLE EARTH MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER. THE SUBGRADE SHOULD BE SHAPED AND DRAINAGE TO PROMOTE DRAINAGE OF THE SITE. DRAINAGE STRUCTURES, FOLLOWING APPROVAL OF THE PREPARATION OF THE SUBGRADE, THE PAVEMENT GRANULARS MAY BE PLACED.
 PAVEMENT STRUCTURE AS PER GEOTECHNICAL INVESTIGATION REPORT PG4843 PREPARED BY PATTERSON GROUP DATED NOVEMBER 26, 2021.

LEGEND:

- EXISTING PROPERTY LINE TO REMAIN
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- PROPOSED TERRACING (3:1 MIN.)
- PROPOSED SILT FENCE AS PER OPSD 219.110
- PROPOSED BOTTOM OF GRASS SWALE
- PROPOSED DOOR ENTRANCE/EXIT
- PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
- PROPOSED CONCRETE FEATURES/SLAB
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED LIGHT DUTY ASPHALT
- PROPOSED MAX OVERLAND PONDING EXTENT/ AREA
- PROPOSED ELEVATION
- PROPOSED HIGH POINT ELEVATION
- PROPOSED SWALE ELEVATION
- PROPOSED BOTTOM OF CURB / TOP OF CURB ELEVATION
- PROPOSED EXPOSED BOTTOM/ TOP OF RETAINING WALL
- PROPOSED DEPRESSED CURB ELEVATION
- MATCH INTO EXISTING ELEVATION
- MATCH INTO EXISTING SWALE/ BOTTOM OF SLOPE ELEVATION
- EXISTING ELEVATION
- PROPOSED OVERLAND MAJOR FLOW ROUTE
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING MANHOLE
- EXISTING CATCHBASIN
- PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
- PROPOSED MANHOLE
- PROPOSED VALVE
- PROPOSED PIPE INSULATION
- PROPOSED 100 YEAR HIGH WATER LEVEL
- STORM WATERSHED EXTENT
- WATERSHED NAME
- RUNOFF COEFFICIENT
- AREA IN HECTARES

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SCALE: 1:1000

NOT FOR CONSTRUCTION TENDER

02	RE-ISSUED FOR APPROVAL	S.V.	29 APR 2026
01	ISSUED FOR APPROVAL	S.V.	19 DEC 2025
No.	REVISIONS	BY	DATE



NOT AUTHENTIC UNLESS SIGNED AND DATED



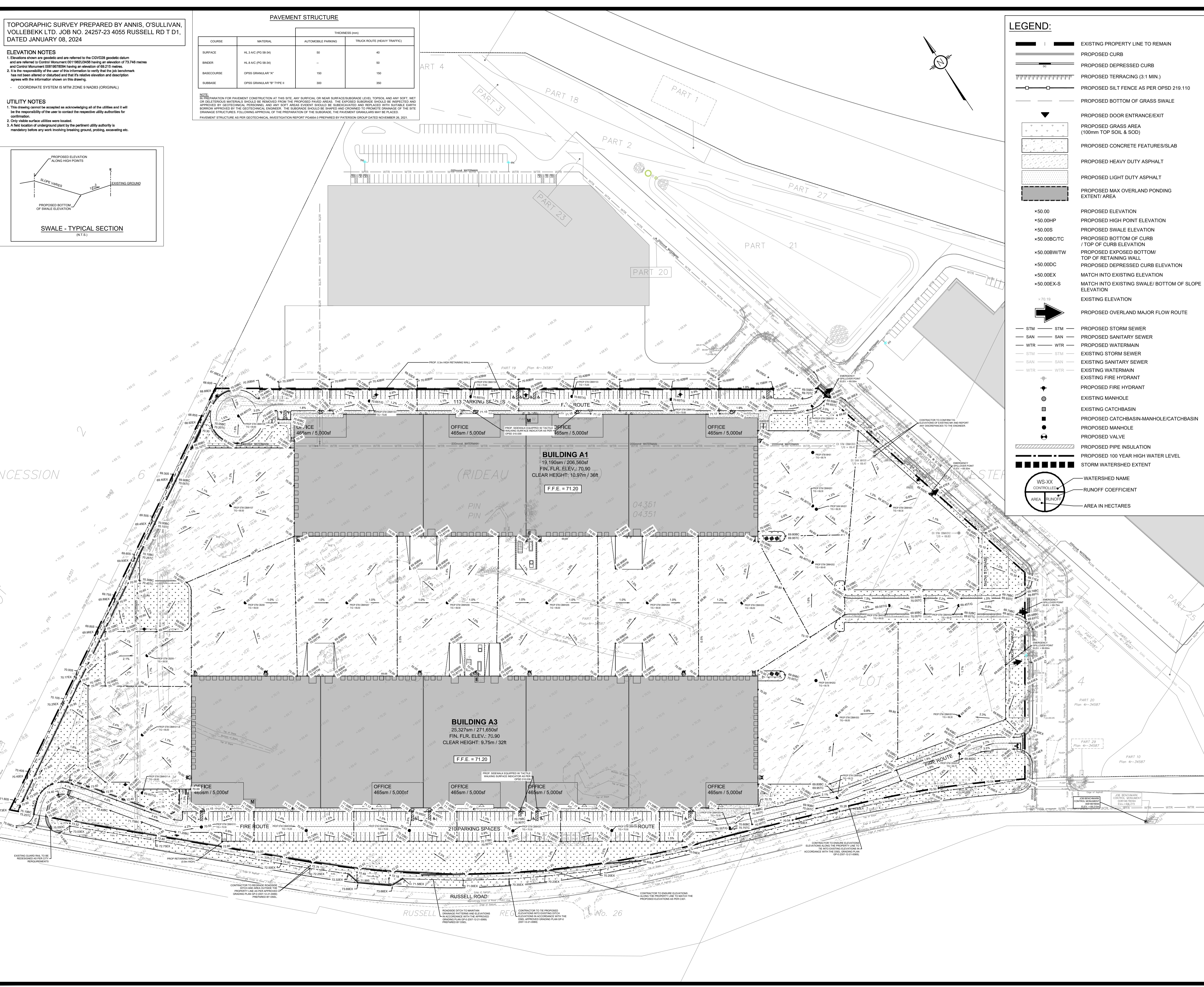
CLIENT: AVENUE 31

DESIGNED BY: S.V. DRAWN BY: S.V. APPROVED BY: K.P.

PROJECT: BUILDING A1 AND A3, 4055 RUSSELL ROAD, OTTAWA, ON

DRAWING TITLE: GRADING AND DRAINAGE PLAN

PROJECT NO.: 230778 C301



Crossing #	WM	inv./obv.	STM	inv./obv.	SAN	inv./obv.	Depth Separation (m)
CR-01	N/A	67.23	inv.	65.99	obv.	N/A	1.24
CR-02	68.65	inv.	68.12	obv.	N/A		0.53
CR-03	68.65	inv.	68.12	obv.	N/A		0.53
CR-04	69.25	inv.	68.71	obv.	N/A		0.54
CR-05	69.25	inv.	68.70	obv.	N/A		0.55

Watermain Table				
Description	Chainage	Finish Grade	Obvert of Watermain	Cover (m)
200mm Water Service	0+000	70.90	68.50	2.40
200mm Water Service	0+025	70.79	68.39	2.40
200mm Water Service	0+050	70.85	68.45	2.40
200mm Water Service	0+075	70.80	68.40	2.40
200mm Water Service	0+100	70.80	68.40	2.40
Tee	0+122	70.88	68.48	2.40
Tee	0+123	70.86	68.46	2.40
200mm Water Service	0+125	70.84	68.44	2.40
200mm Water Service	0+150	70.72	68.32	2.40
200mm Water Service	0+175	70.90	68.50	2.40
200mm Water Service	0+200	70.82	68.42	2.40
200mm Water Service	0+225	70.87	68.47	2.40
200mm Water Service	0+250	70.60	68.20	2.40
200mm Water Service	0+275	69.40	67.00	2.40
45° Bend	0+284	69.56	67.16	2.40
Tee	0+291	69.58	67.18	2.40
200mm Water Service	1+000	70.90	68.50	2.40
200mm Water Service	1+025	70.48	68.08	2.40
200mm Water Service	1+050	70.32	67.92	2.40
45° Bend	1+053	70.31	67.91	2.40
22.5° Bend	1+057	70.30	67.90	2.40
200mm Water Service	1+075	70.30	67.90	2.40
Tee	1+091	69.95	67.55	2.40

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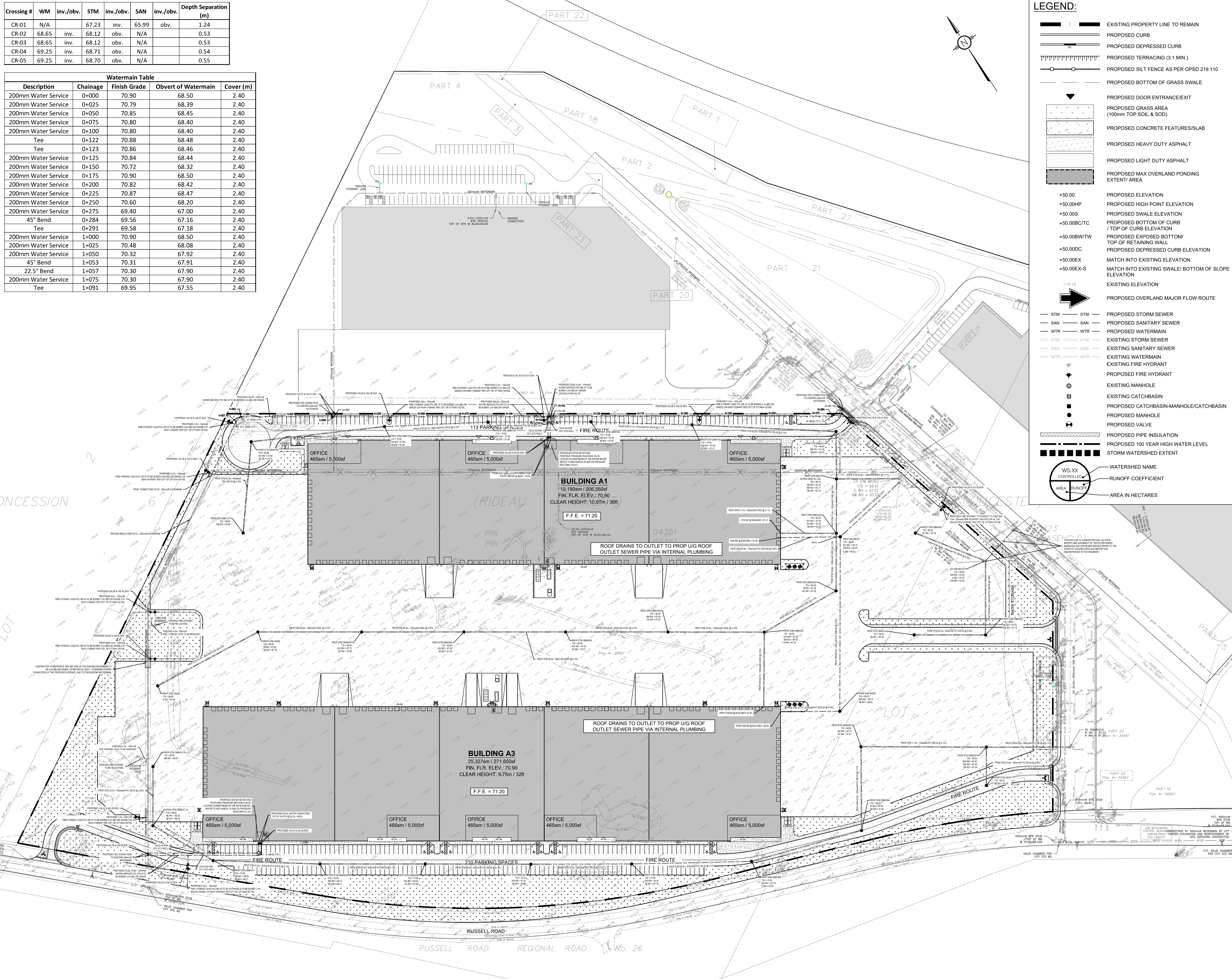
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NOT FOR CONSTRUCTION TENDER

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01	ISSUED FOR APPROVAL	S.V.	19 DEC 2025

No.	REVISIONS	BY	DATE
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NOT AUTHENTIC UNLESS SIGNED AND DATED

LRL
ENGINEERING | INGENIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

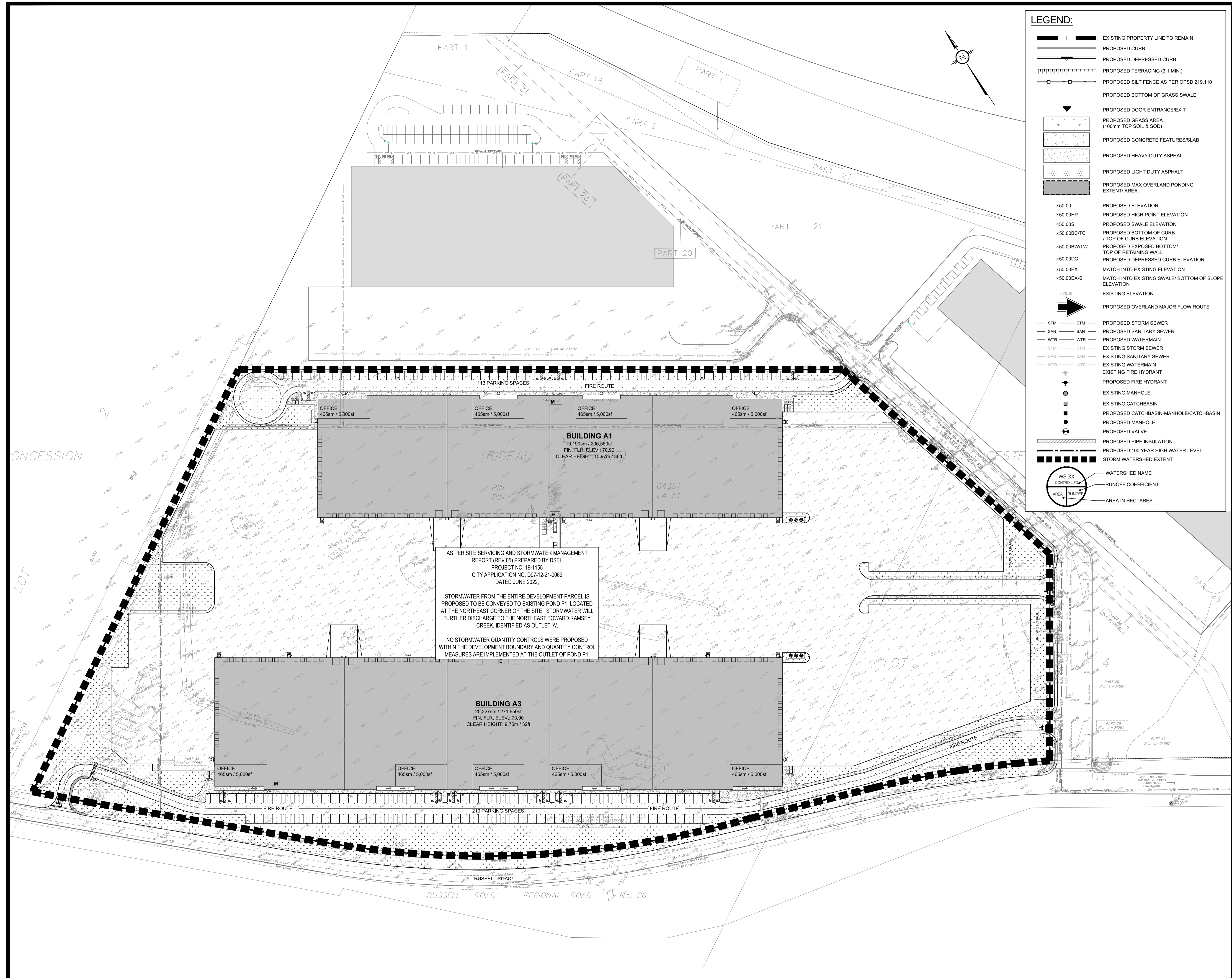
CLIENT: AVENUE 31

DESIGNED BY: S.V. DRAWN BY: S.V. APPROVED BY: K.P.

PROJECT: BUILDING A1 AND A3
4055 RUSSELL ROAD
OTTAWA, ON

DRAWING TITLE: SERVICING PLAN

PROJECT NO.: 230778 C401



LEGEND:

	EXISTING PROPERTY LINE TO REMAIN
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	PROPOSED DEPRESSED CURB
	PROPOSED TERRACING (3:1 MIN.)
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	SAN — PROPOSED SANITARY SEWER
	WTR — PROPOSED WATERMAIN
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20m 10 0 20 40m
SCALE: 1:1000

NOT FOR CONSTRUCTION TENDER

AS PER SITE SERVICING AND STORMWATER MANAGEMENT REPORT (REV 05) PREPARED BY DSEL PROJECT NO. 19-1155 CITY APPLICATION NO. D07-12-21-0069 DATED JUNE 2022.

STORMWATER FROM THE ENTIRE DEVELOPMENT PARCEL IS PROPOSED TO BE CONVEYED TO EXISTING POND P1, LOCATED AT THE NORTHEAST CORNER OF THE SITE. STORMWATER WILL FURTHER DISCHARGE TO THE NORTHEAST TOWARD RAMSEY CREEK, IDENTIFIED AS OUTLET 'A'.

NO STORMWATER QUANTITY CONTROLS WERE PROPOSED WITHIN THE DEVELOPMENT BOUNDARY AND QUANTITY CONTROL MEASURES ARE IMPLEMENTED AT THE OUTLET OF POND P1.

02	RE-ISSUED FOR APPROVAL	S.V.	29 APR 2026
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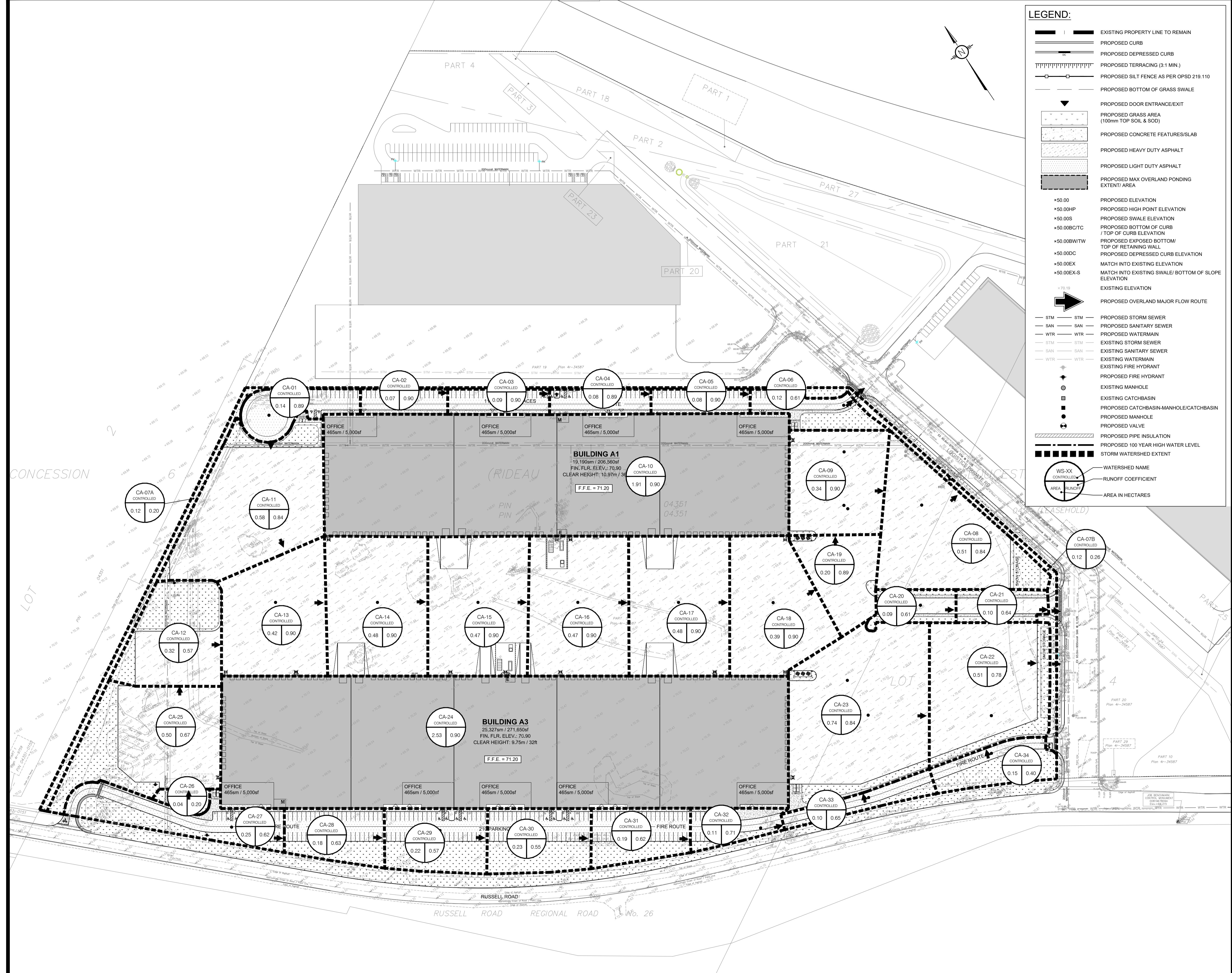
CLIENT: AVENUE 31

DESIGNED BY: S.V. DRAWN BY: S.V. APPROVED BY: K.P.

PROJECT: BUILDING A1 AND A3
4055 RUSSELL ROAD
OTTAWA, ON

DRAWING TITLE: PRE-DEVELOPMENT WATERSHED PLAN

PROJECT NO. 230778 **C701**



LEGEND:

- | — EXISTING PROPERTY LINE TO REMAIN
- — — PROPOSED CURB
- — — PROPOSED DEPRESSED CURB
- ||||| PROPOSED TERRACING (3:1 MIN.)
- — — PROPOSED SILT FENCE AS PER OPSD 219.110
- — — PROPOSED BOTTOM OF GRASS SWALE
- ▼ PROPOSED DOOR ENTRANCE/EXIT
- PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
- PROPOSED CONCRETE FEATURES/SLAB
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED LIGHT DUTY ASPHALT
- PROPOSED MAX OVERLAND PONDING EXTENT/ AREA
- *50.00 PROPOSED ELEVATION
- *50.00HP PROPOSED HIGH POINT ELEVATION
- *50.00S PROPOSED SWALE ELEVATION
- *50.00BC/TC PROPOSED BOTTOM OF CURB / TOP OF CURB ELEVATION
- *50.00BW/TW PROPOSED EXPOSED BOTTOM/ TOP OF RETAINING WALL
- *50.00DC PROPOSED DEPRESSED CURB ELEVATION
- *50.00EX MATCH INTO EXISTING ELEVATION
- *50.00E-S MATCH INTO EXISTING SWALE/ BOTTOM OF SLOPE ELEVATION
- > 70.19 EXISTING ELEVATION
- ➔ PROPOSED OVERLAND MAJOR FLOW ROUTE
- STM — PROPOSED STORM SEWER
- SAN — PROPOSED SANITARY SEWER
- WTR — PROPOSED WATERMAIN
- STM — EXISTING STORM SEWER
- SAN — EXISTING SANITARY SEWER
- WTR — EXISTING WATERMAIN
- — — EXISTING FIRE HYDRANT
- ◆ PROPOSED FIRE HYDRANT
- EXISTING MANHOLE
- EXISTING CATCHBASIN
- PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
- PROPOSED MANHOLE
- PROPOSED VALVE
- — — PROPOSED PIPE INSULATION
- — — PROPOSED 100 YEAR HIGH WATER LEVEL
- — — STORM WATERSHED EXTENT
- WS-XX CONTROLLED WATERSHED NAME
- RUNOFF COEFFICIENT
- AREA RUNOFF AREA IN HECTARES

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20m 10 0 20 40m
SCALE: 1:1000

NOT FOR CONSTRUCTION TENDER

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01	ISSUED FOR APPROVAL	S.V.	19 DEC 2025
No.	REVISIONS	BY	DATE

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRL
ENGINEERING | INGENIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

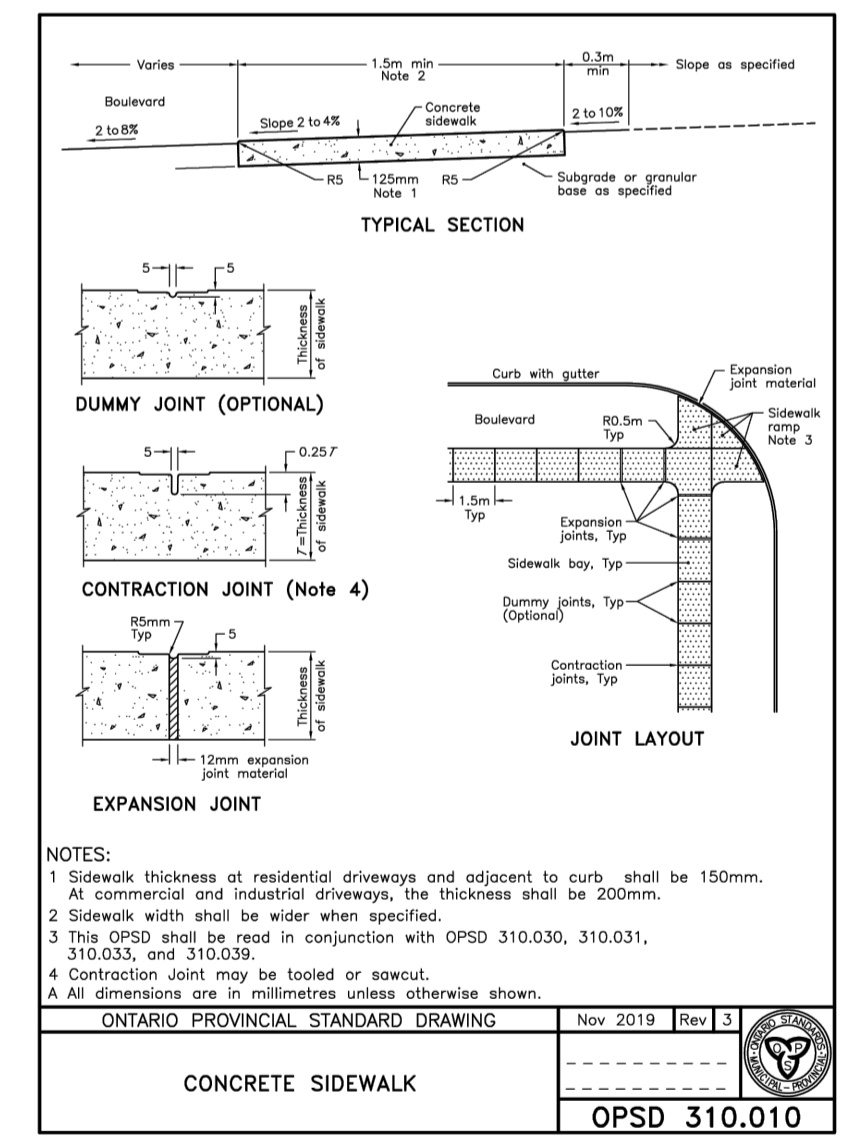
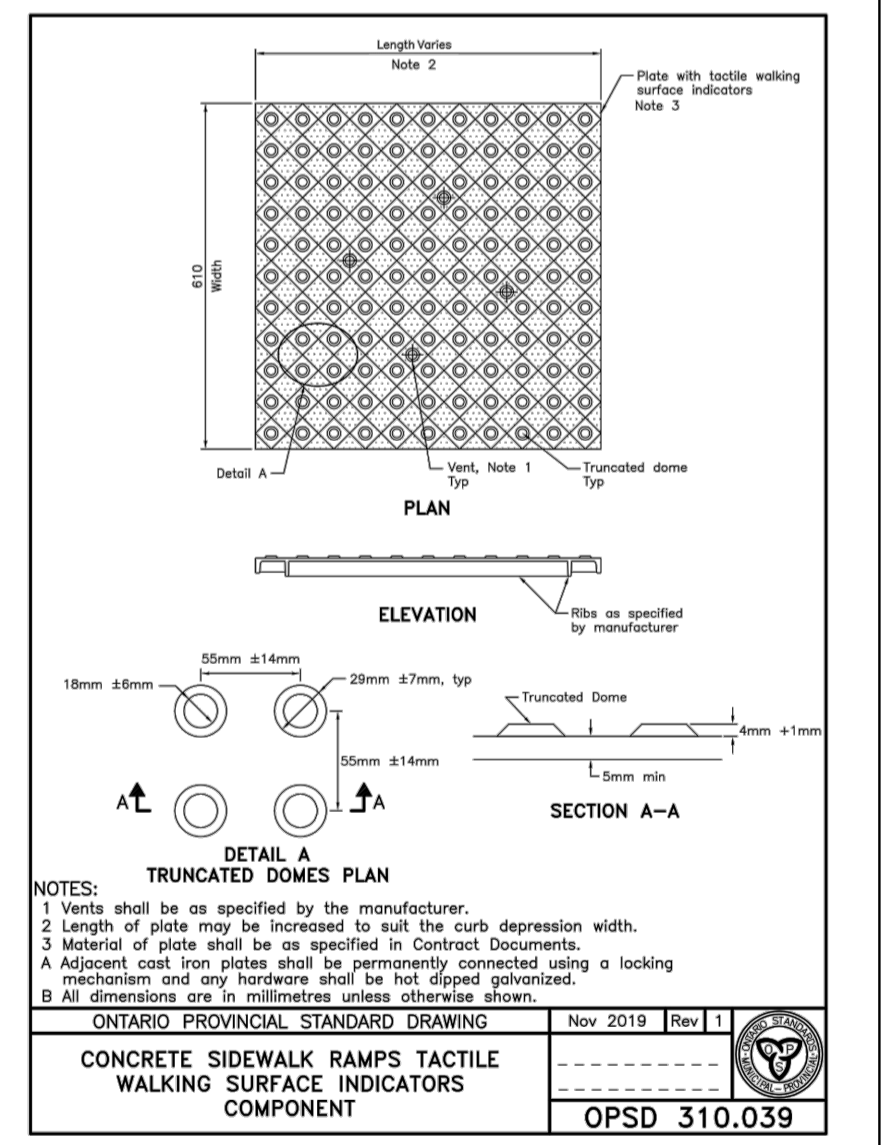
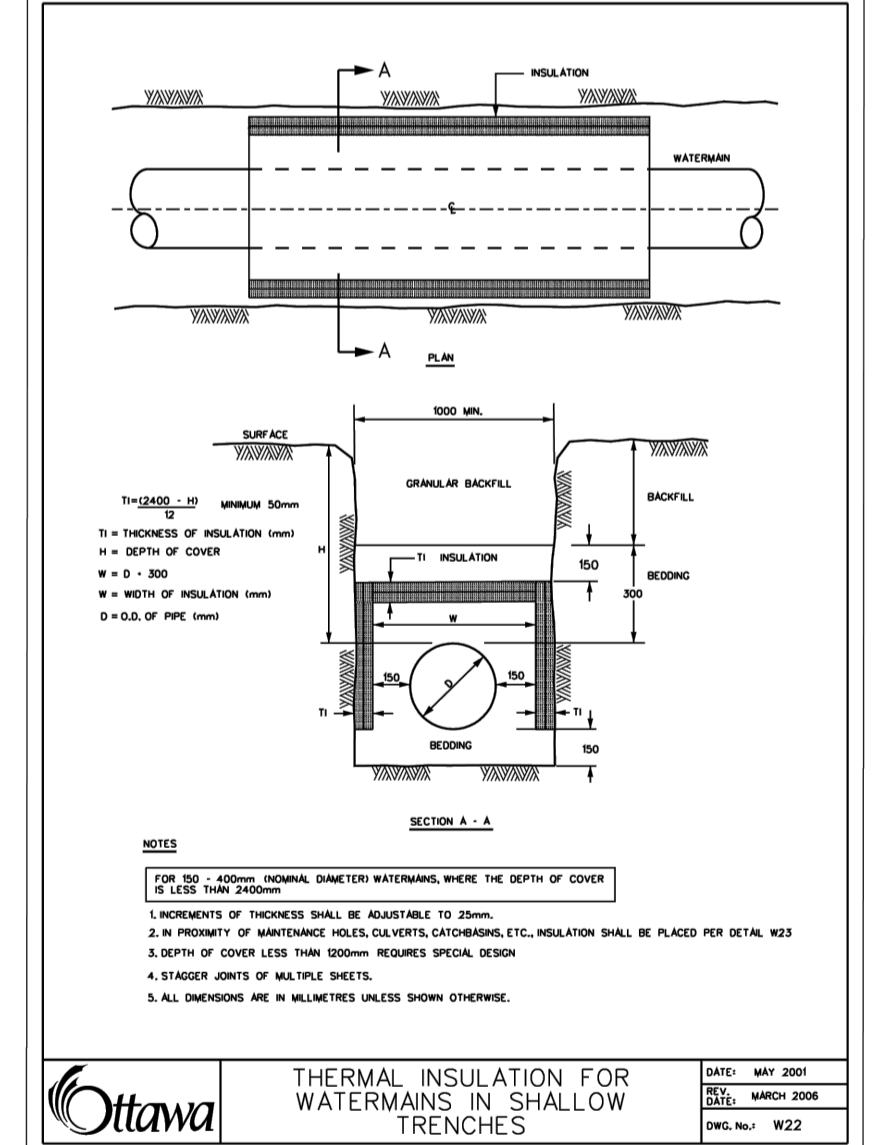
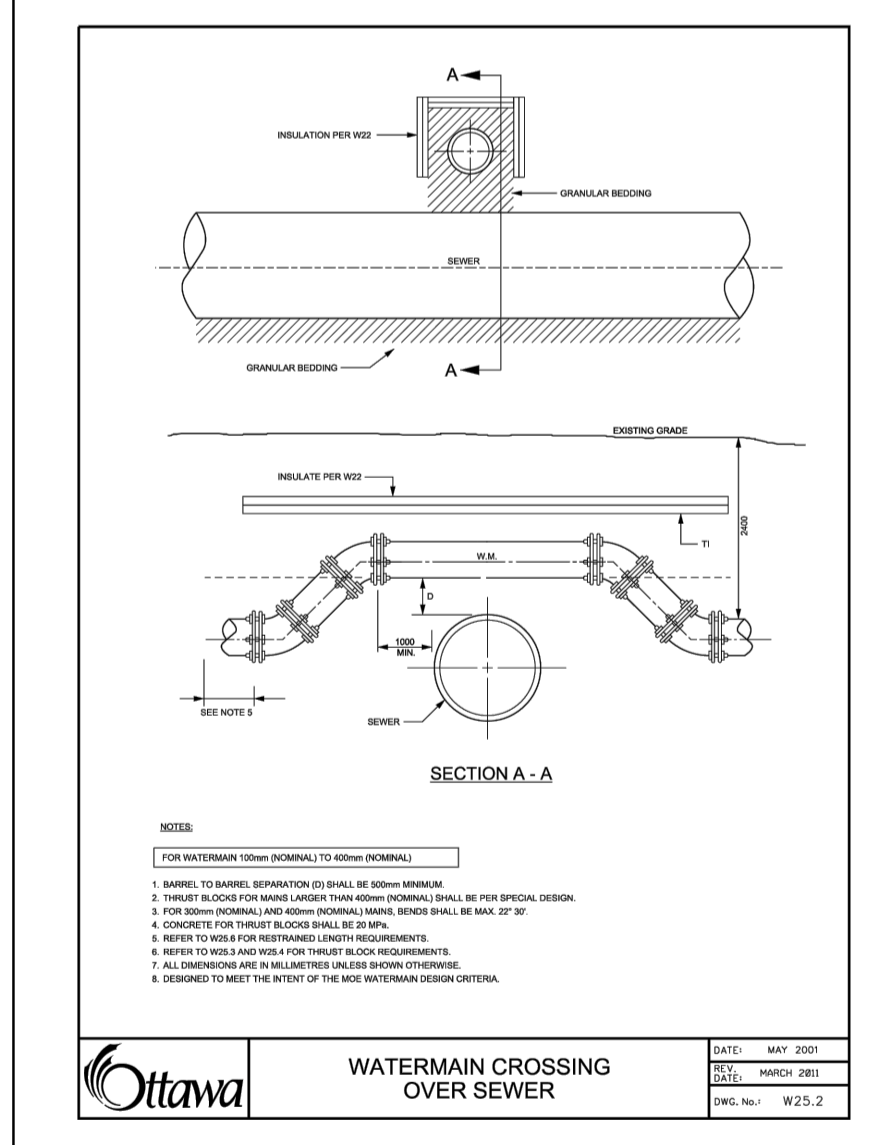
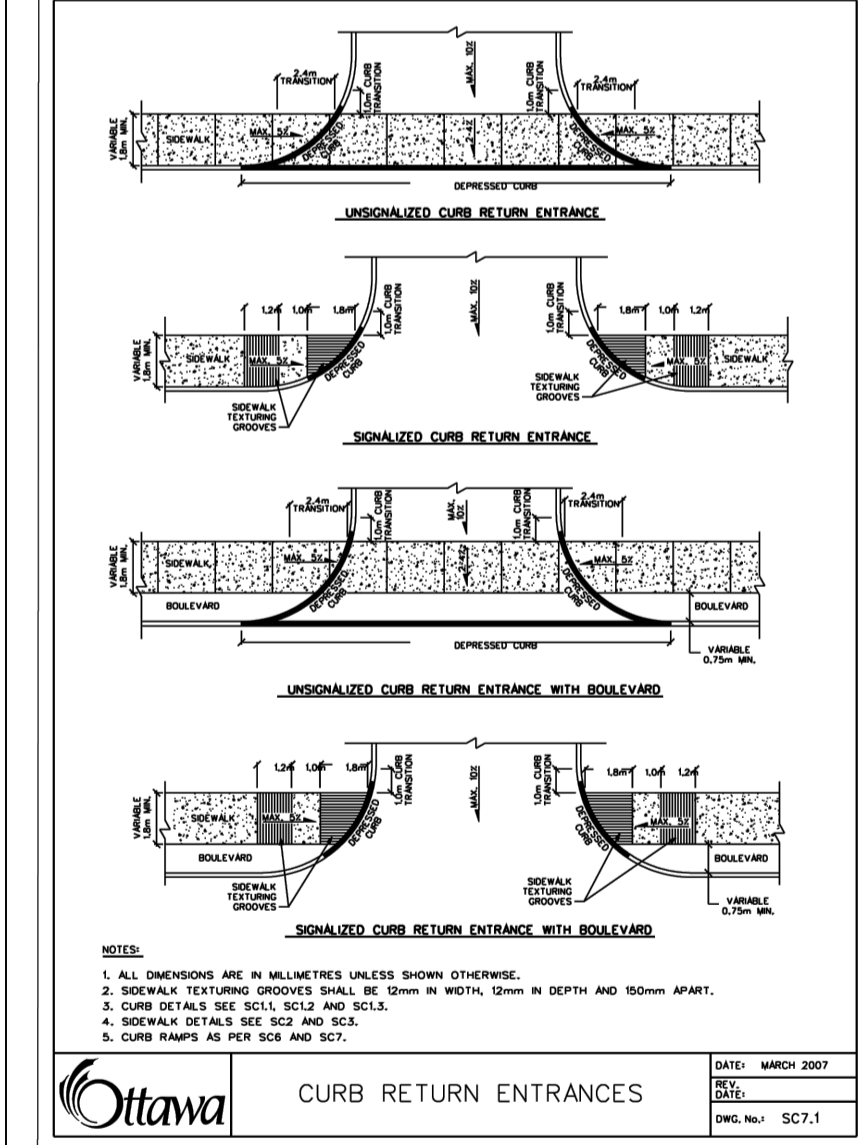
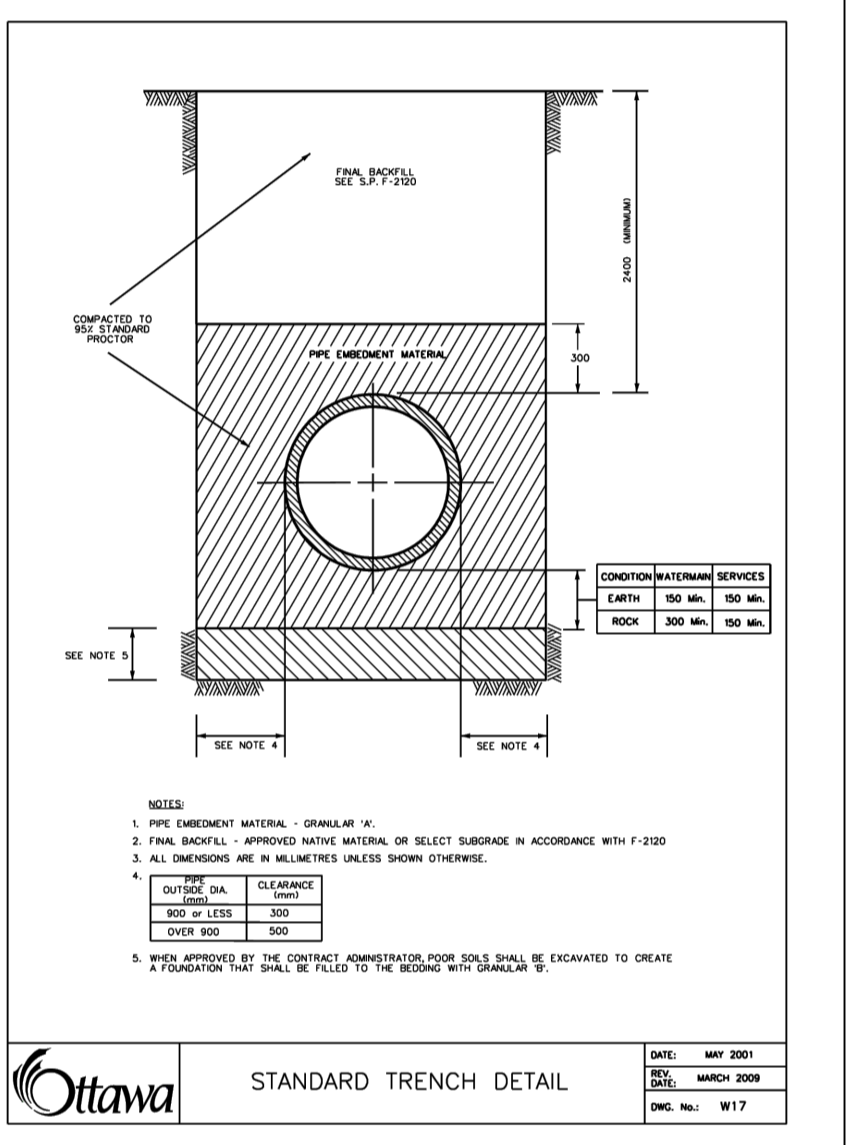
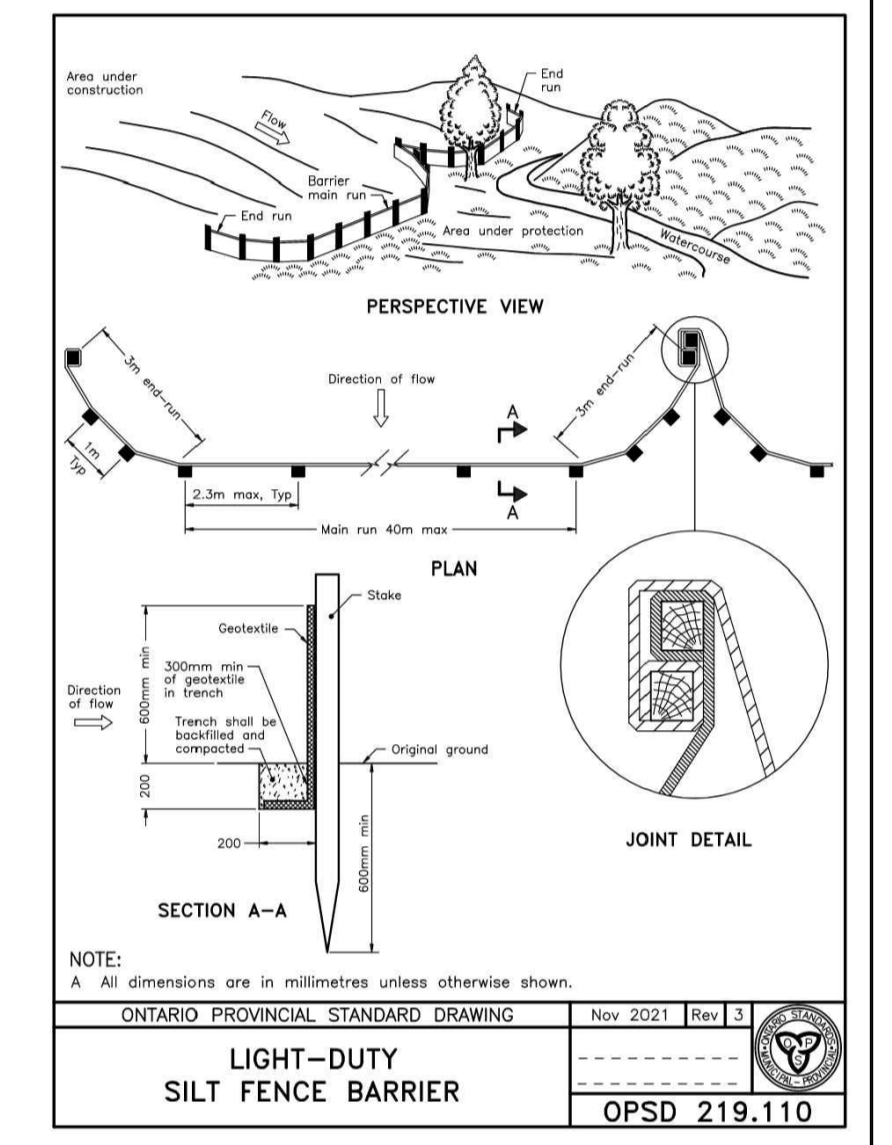
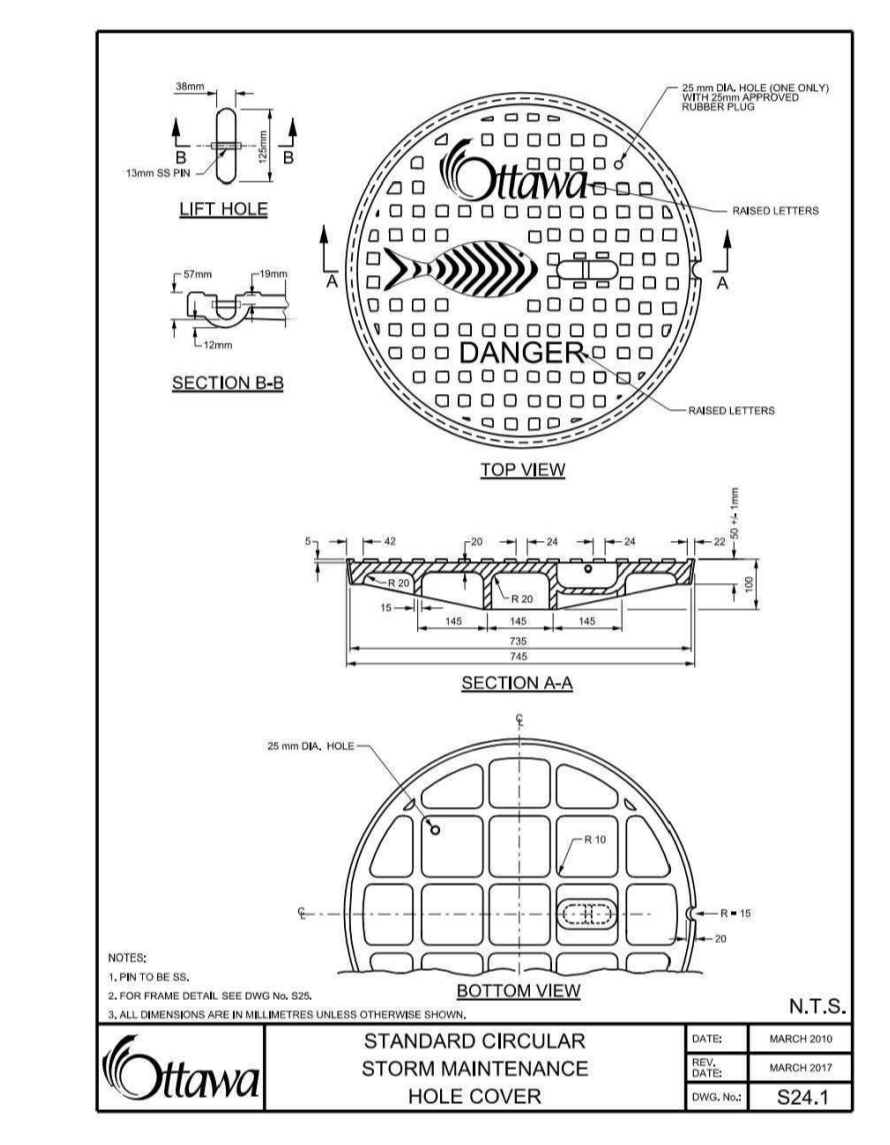
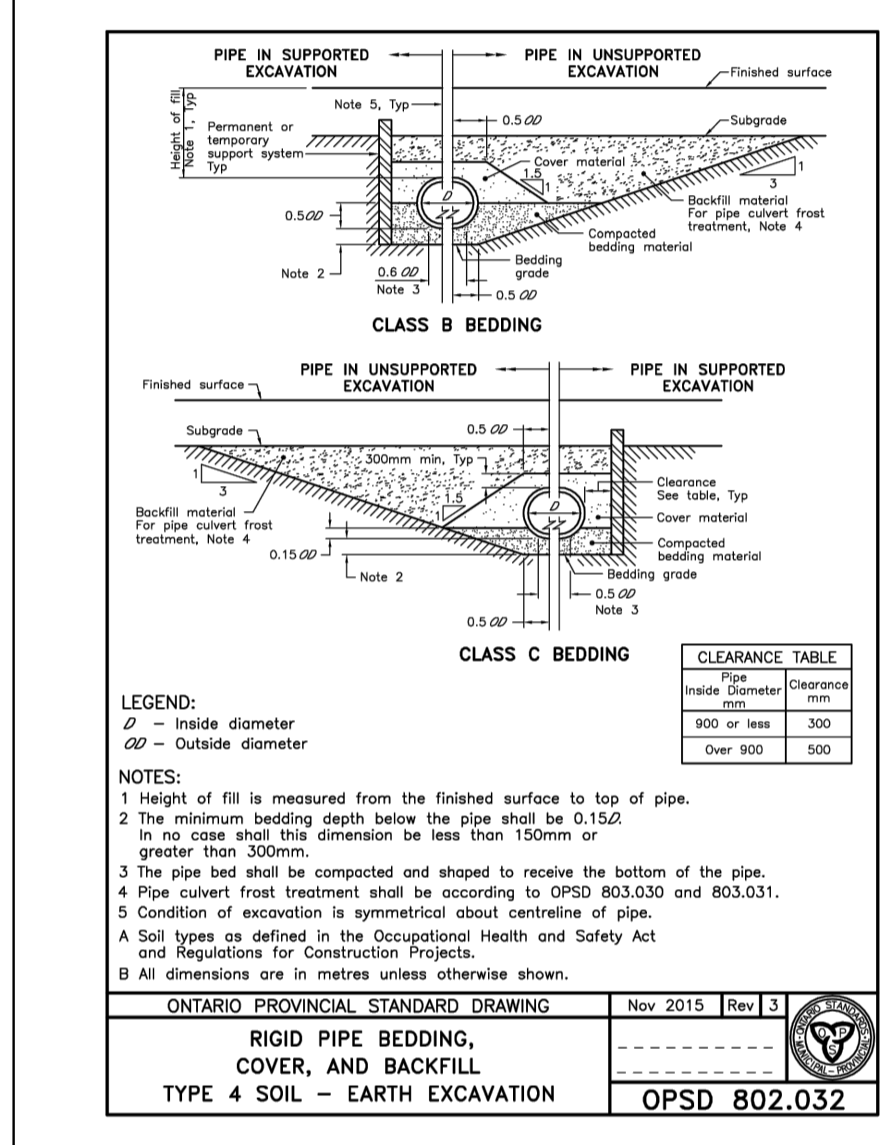
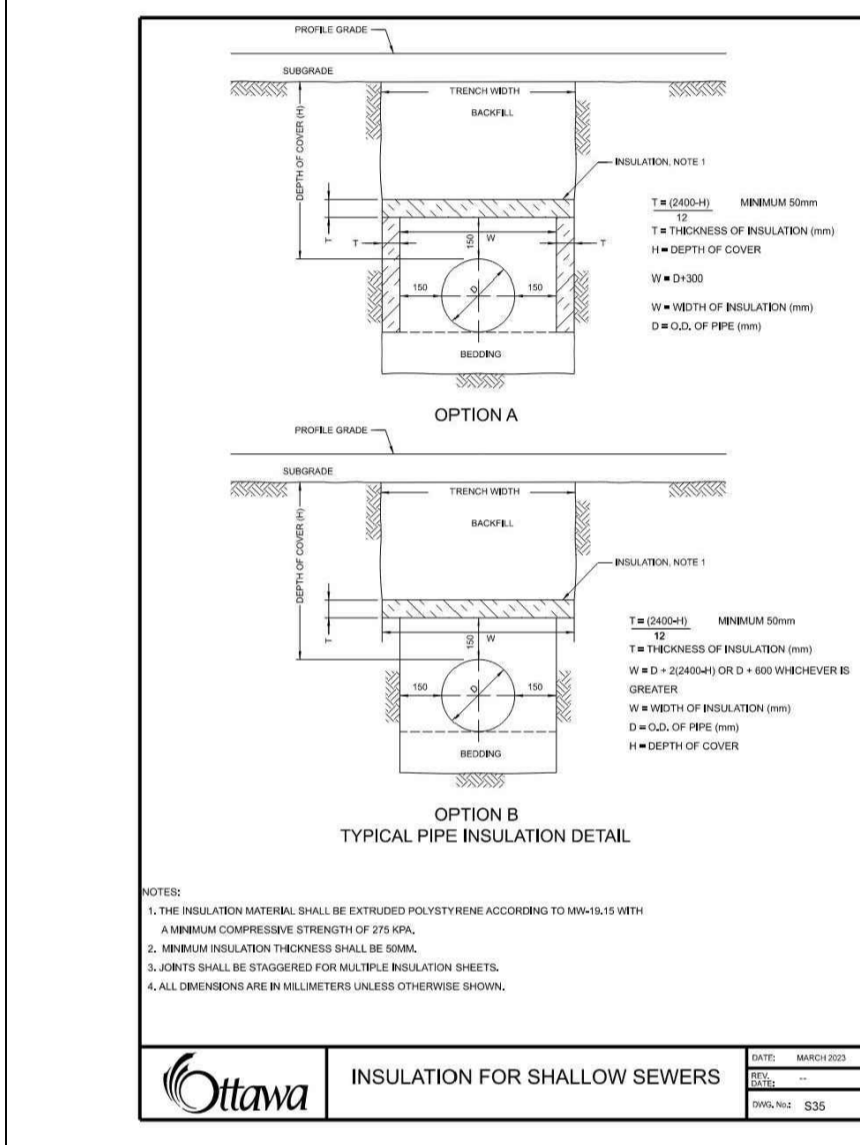
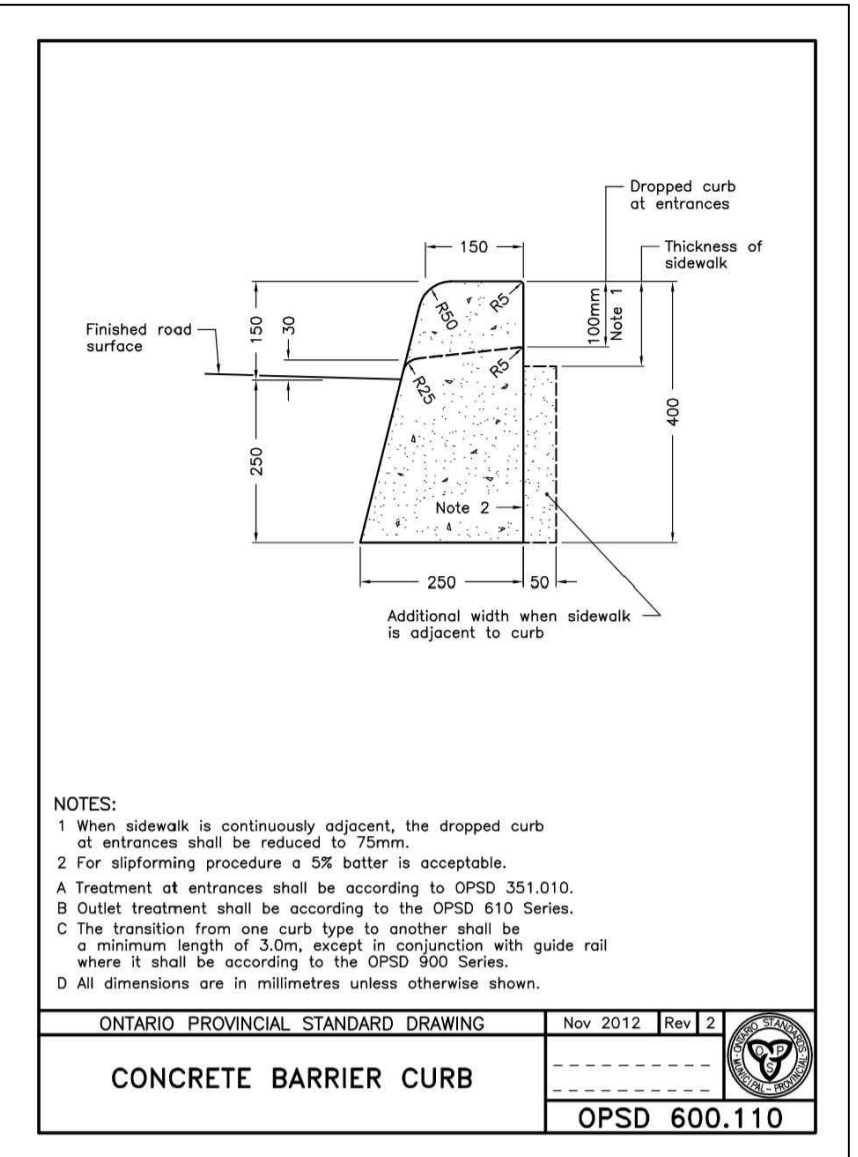
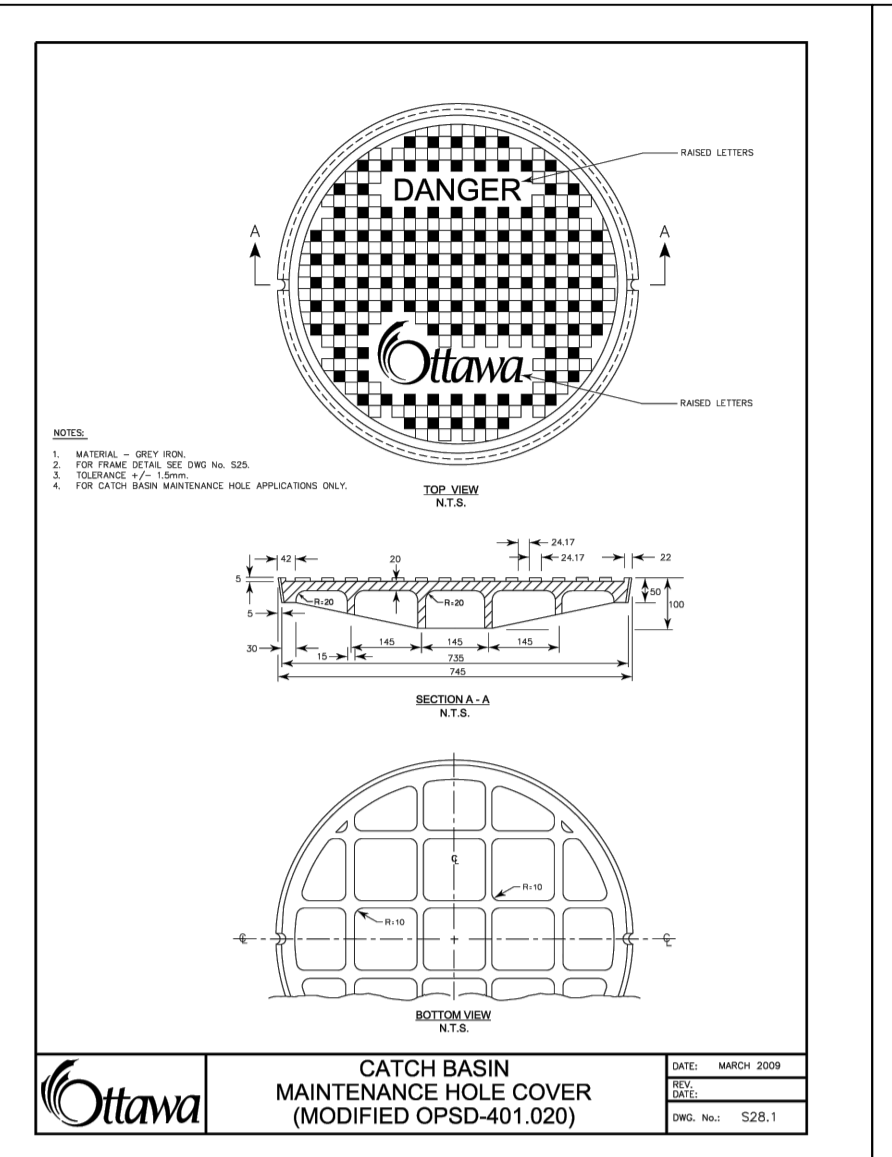
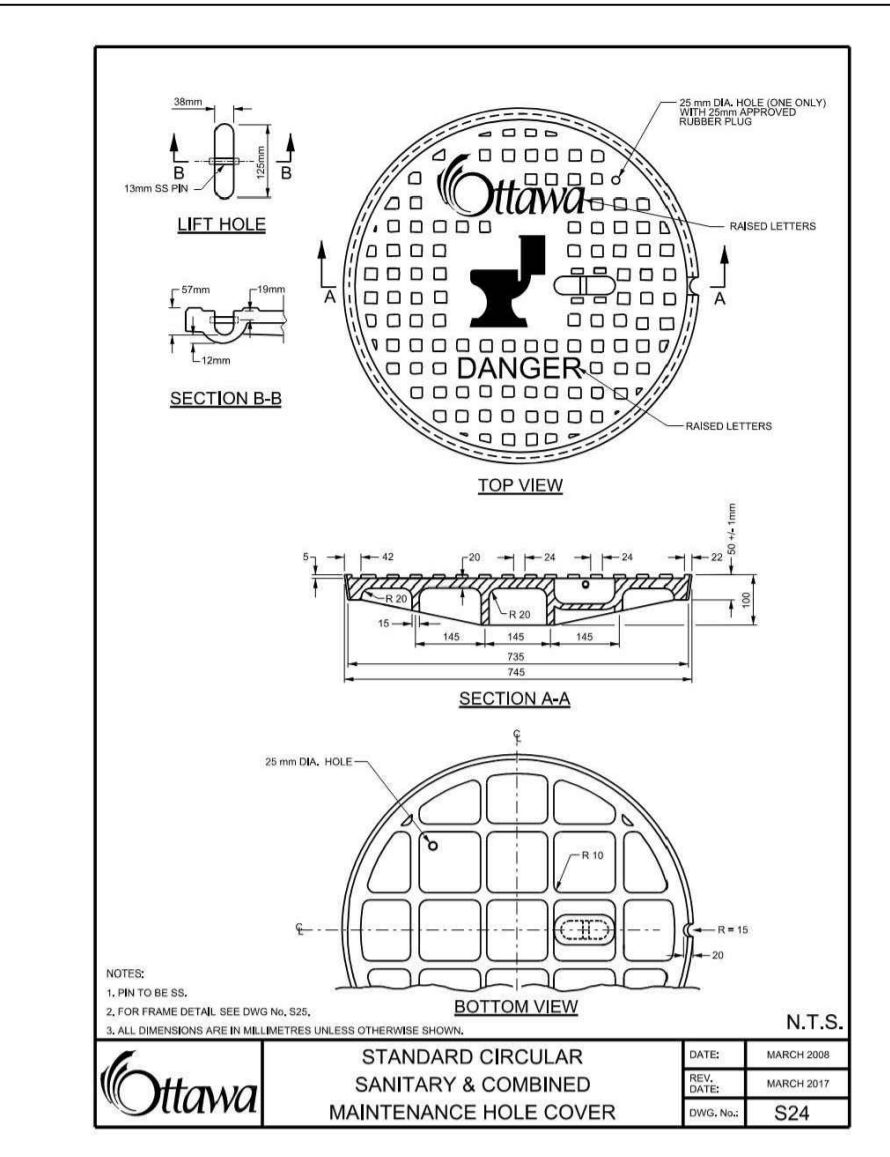
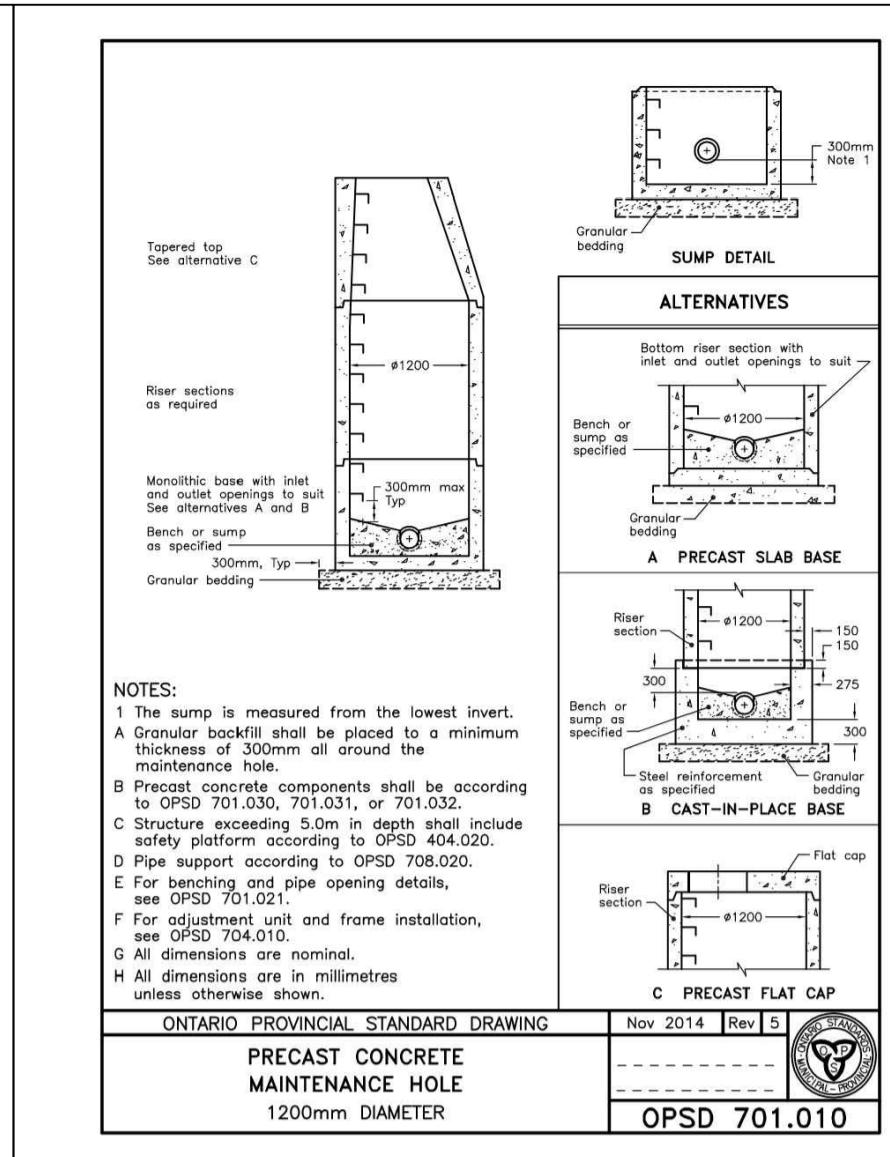
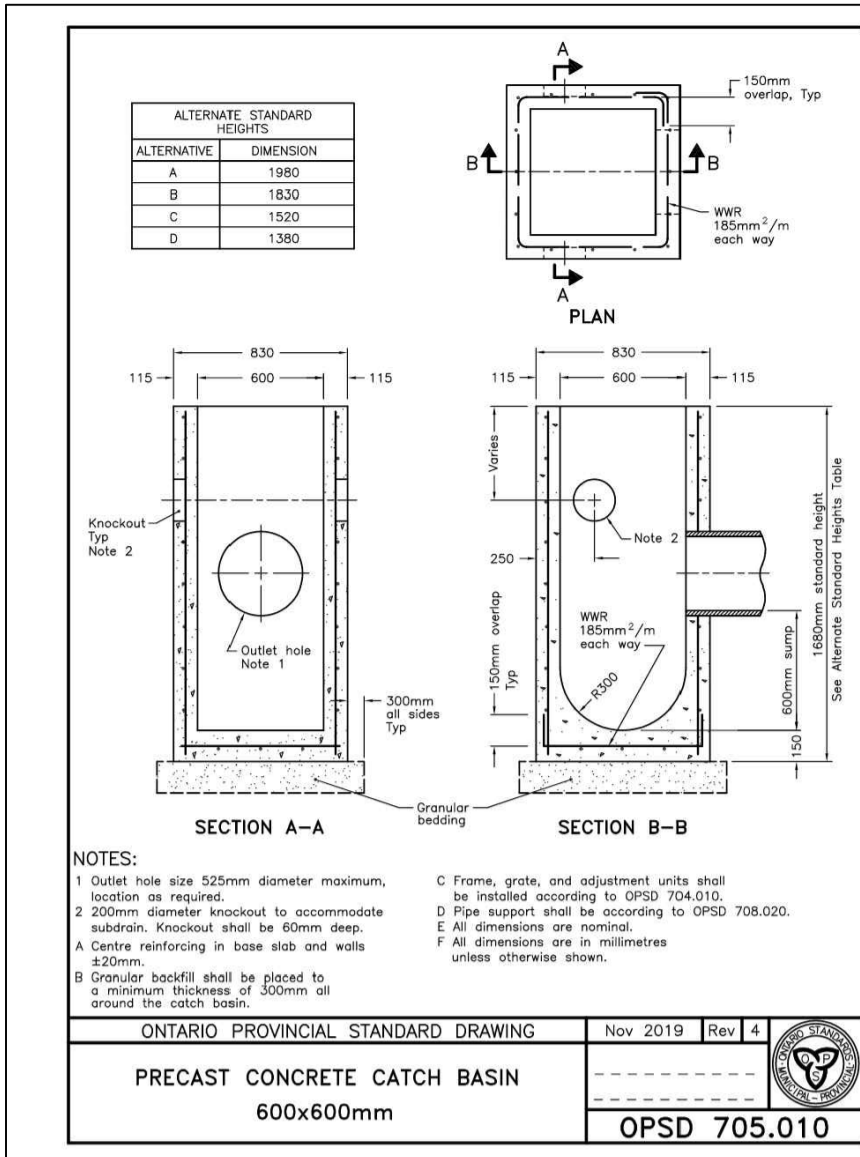
CLIENT: AVENUE 31

DESIGNED BY: S.V. DRAWN BY: S.V. APPROVED BY: K.P.

PROJECT: BUILDING A1 AND A3
4055 RUSSELL ROAD
OTTAWA, ON

DRAWING TITLE: POST-DEVELOPMENT WATERSHED PLAN

PROJECT NO.: 230778 C702



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NOT FOR CONSTRUCTION TENDER

02	RE-ISSUED FOR APPROVAL	S.V.	29 APR 2026
01	ISSUED FOR APPROVAL	S.V.	19 DEC 2025
No.	REVISIONS	BY	DATE

LICENCED PROFESSIONAL ENGINEER
K. L. PARONIS
100045152
2026-04-29
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRL
ENGINEERING | INGENIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

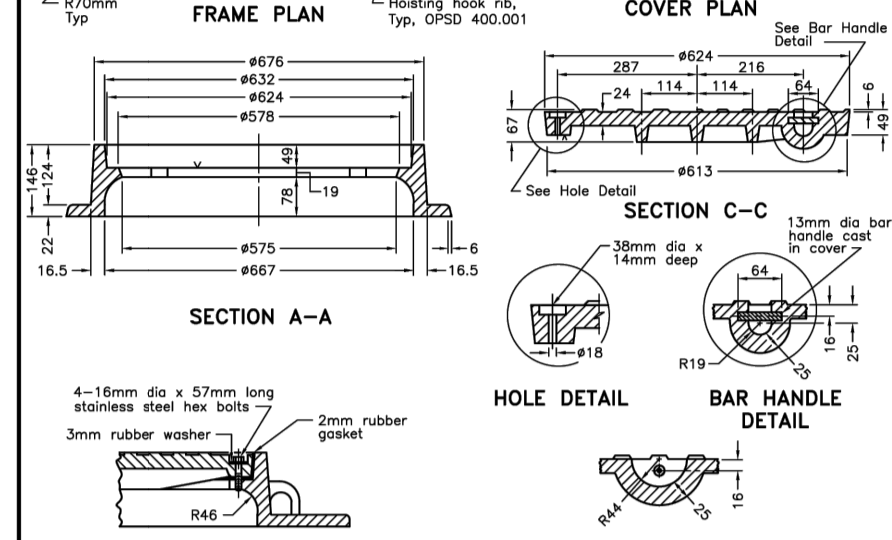
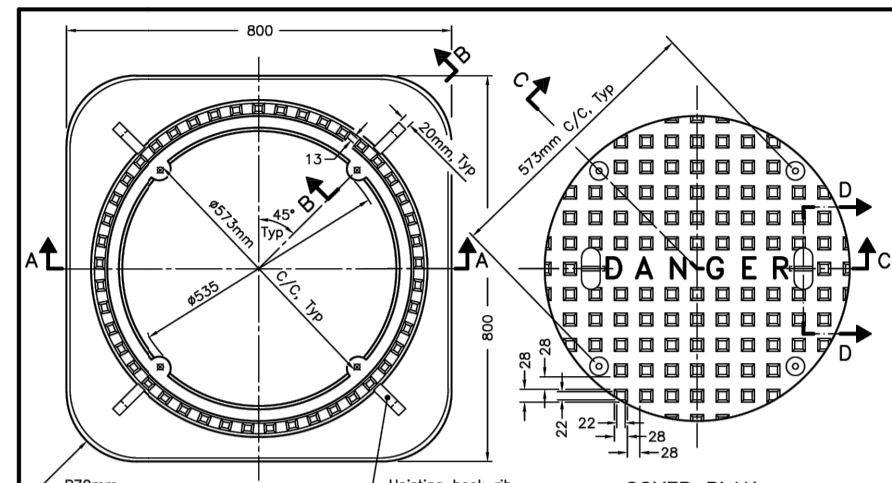
CLIENT: AVENUE 31

DESIGNED BY: S.V. DRAWN BY: S.V. APPROVED BY: K.P.

PROJECT: BUILDING A1 AND A3
4055 RUSSELL ROAD
OTTAWA, ON

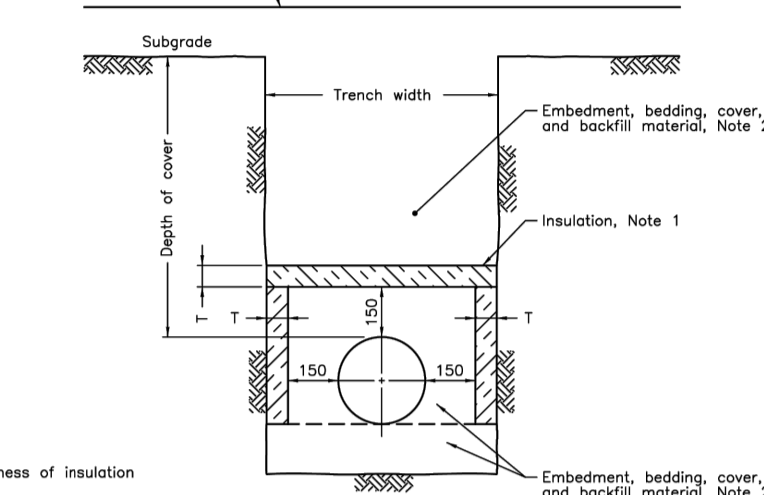
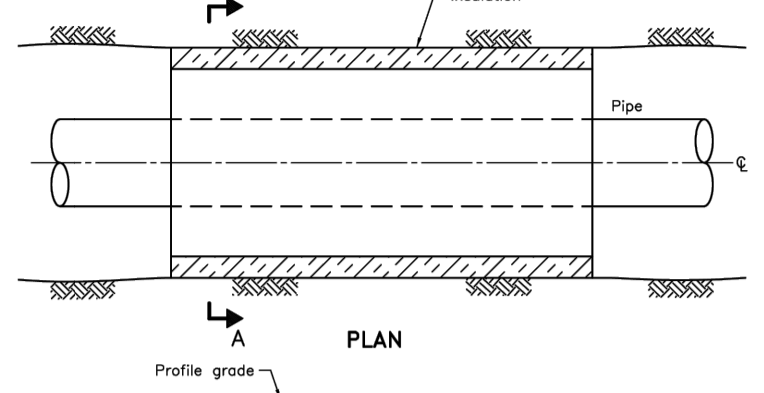
DRAWING TITLE: CONSTRUCTION DETAIL PLAN

PROJECT NO.: 230778 **C901**



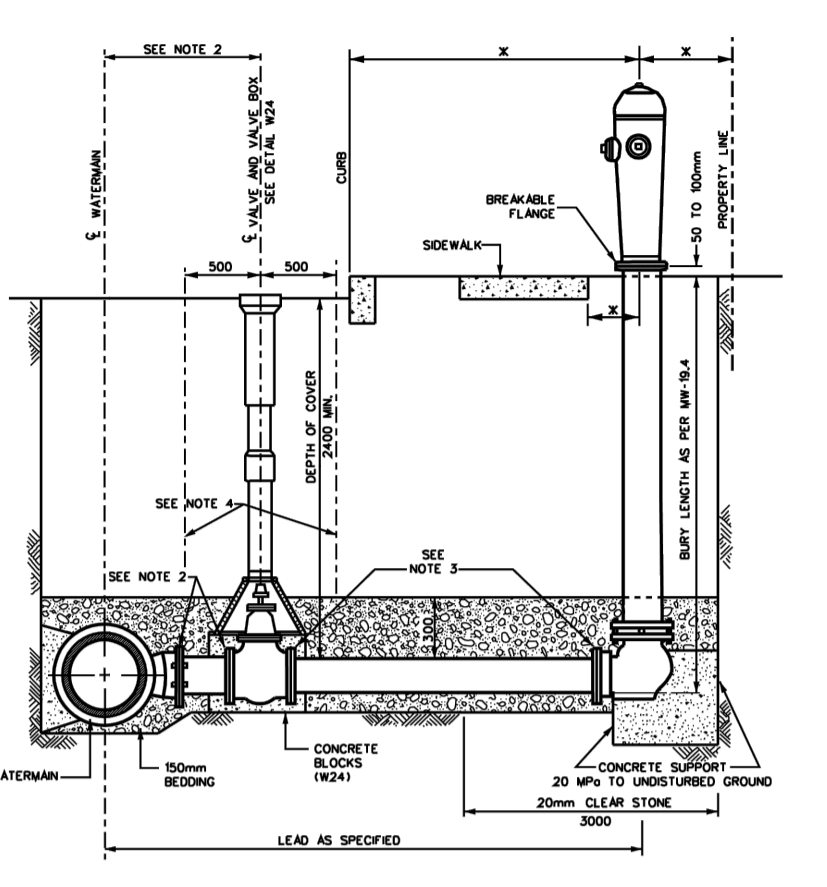
NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING
CAST IRON, SQUARE FRAME WITH CIRCULAR WATERTIGHT COVER FOR MAINTENANCE HOLES
Nov 2018 Rev 4
OPSD 401.030



NOTES:
1 The insulation material shall be extruded polystyrene according to OPSD 1805 with a minimum compressive strength of 275 kPa.
2 Pipe embedment or bedding, cover, and backfill shall be according to:
a) Flexible OPSD 802.010, 802.013, 802.020, and 802.023.
b) Rigid - OPSD 802.030, 802.031, 802.032, 802.033, 802.050, 802.051, 802.052, and 802.053.
A Minimum insulation thickness shall be 50mm.
B Joints shall be staggered for multiple insulation sheets.
C This OPSD is to be read in conjunction with OPSD 3090.100 and 3090.101.
D All dimensions are in millimetres unless otherwise shown.

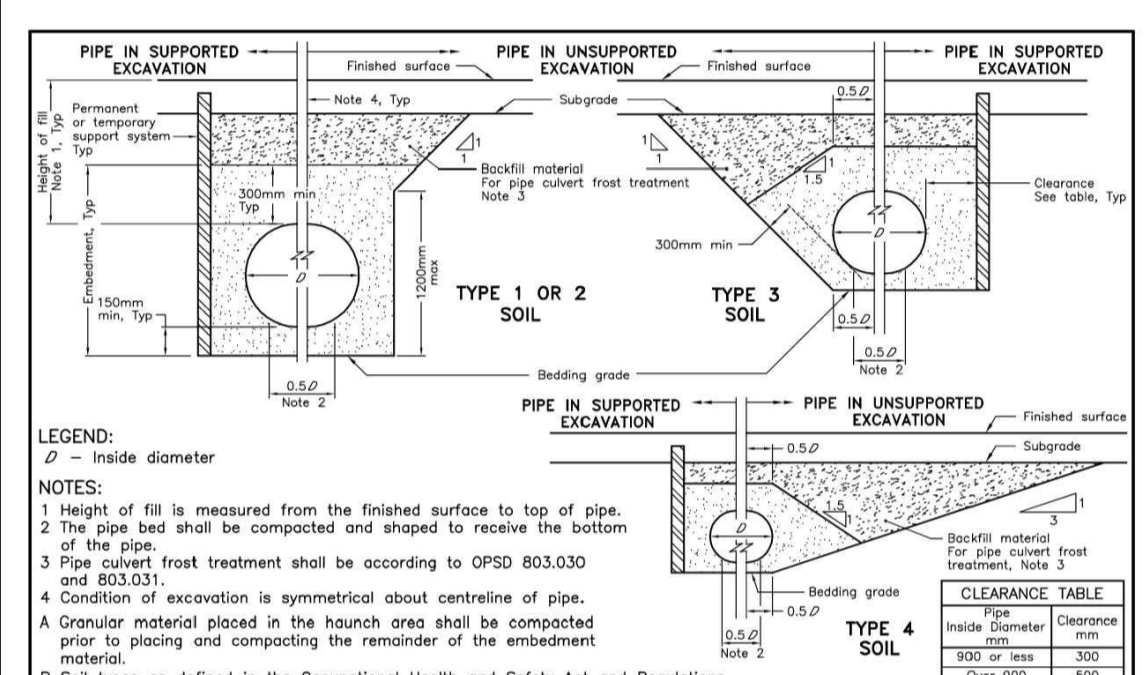
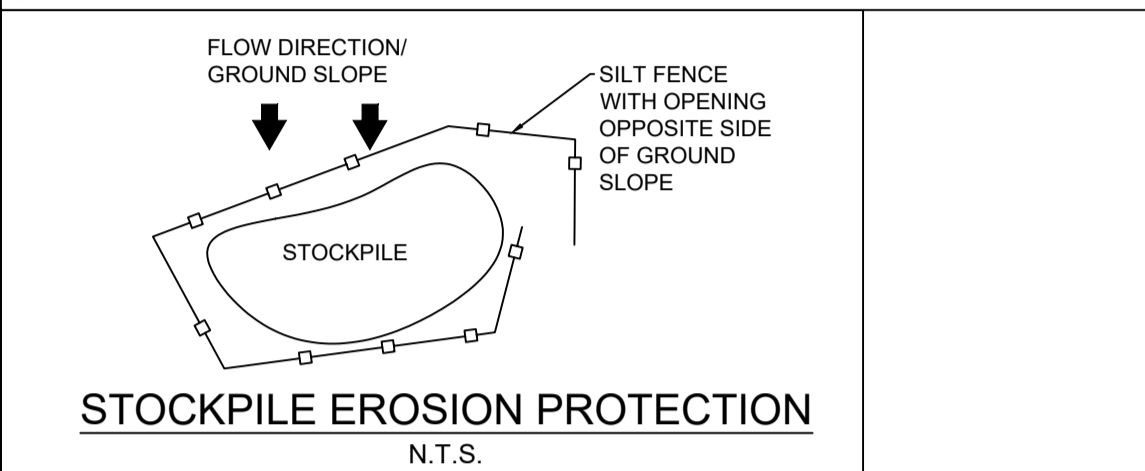
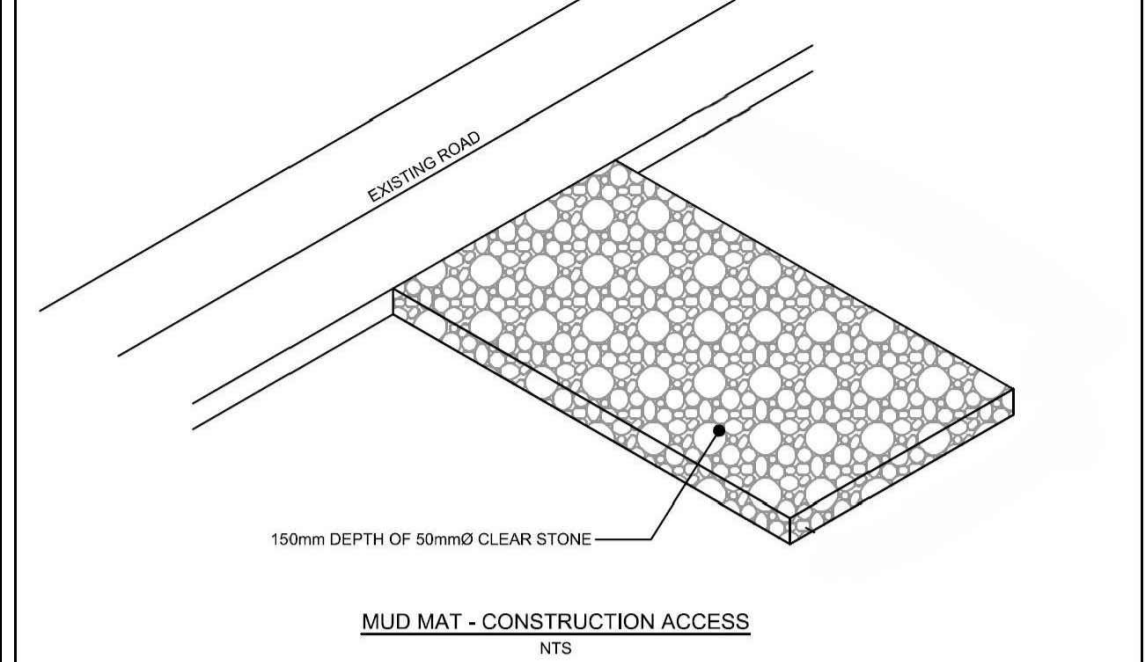
ONTARIO PROVINCIAL STANDARD DRAWING
INSULATION FOR SEWERS AND WATERMANS IN SHALLOW TRENCHES
Nov 2020 Rev 1
OPSD 1109.030



NOTES:
FOR ALL WATERMANS
1. SEE DETAIL W01 FOR HYDRANTS IN DITCH AREAS.
2. FOR WATERMANS ABOVE AND UNDER, LOCATE VALVE WITHIN 1.0M OF CENTRELINE. RETAINING/RESTRAINING DEVICES TO BE UTILIZED FOR WATERMANS ABOVE AND OVER SOFT VALVE WITH FLANGED END DIRECTLY TO FLANGED TEE.
3. RETAINING/RESTRAINING DEVICES TO BE UTILIZED.
4. HYDRANT BREAKABLE FLANGE ELEVATION TO BE ESTABLISHED PRIOR TO INSTALLATION. REFER TO W-19-A AND F-705.
5. SEE W-19 FOR BACKFILL REQUIREMENTS IN THIS AREA.
6. - SEE W-19 FOR HYDRANT LOCATION REQUIREMENTS.
7. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

DATE: MAY 2001
REVISED: MARCH 2008
DWG. NO.: W19

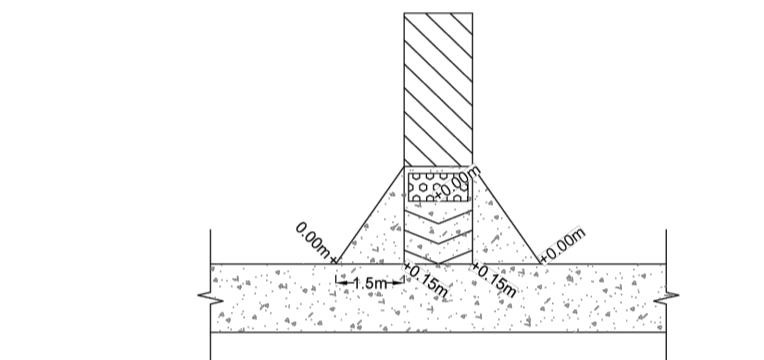
Ottawa
HYDRANT INSTALLATION



LEGEND:
Ø - Inside diameter

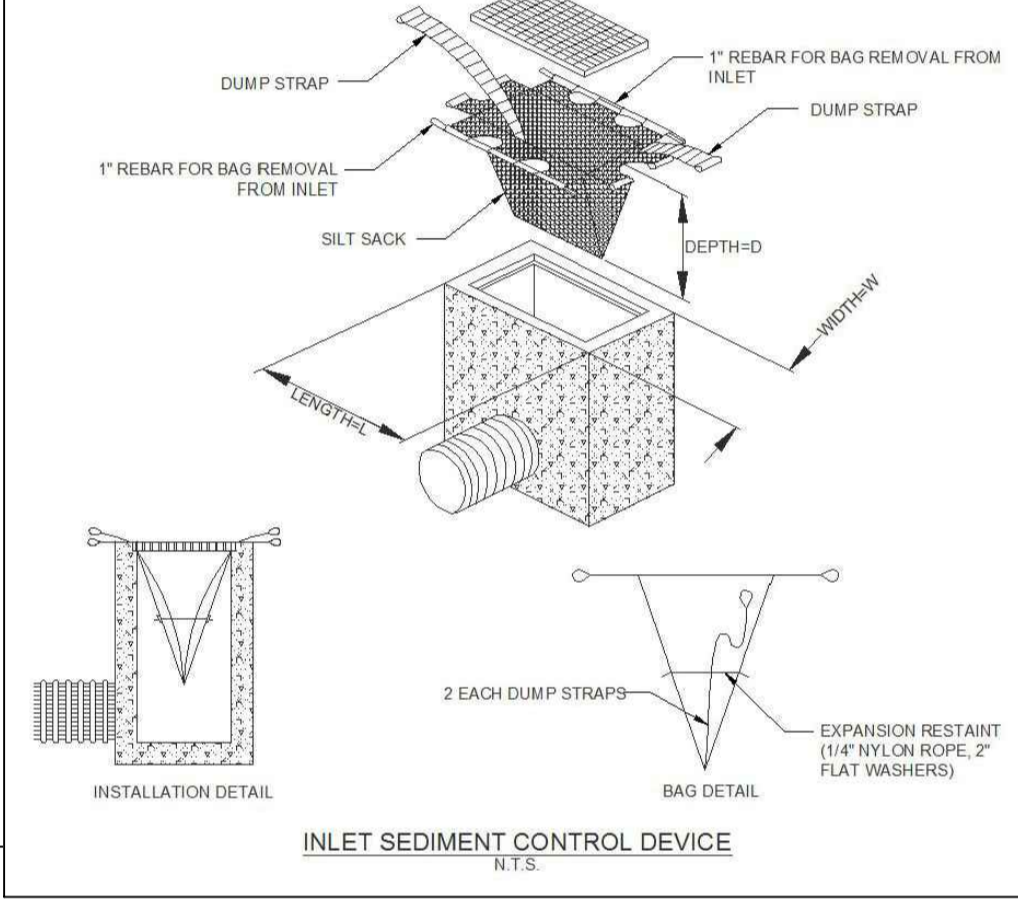
NOTES:
1 Height of fill is measured from the finished surface to top of pipe.
2 The pipe bed shall be compacted and shaped to receive the bottom of the pipe.
3 Pipe cover frost treatment shall be according to OPSD 803.030 and 803.031.
4 Condition of excavation is symmetrical about centreline of pipe.
A Granular material placed in the haunch area shall be compacted prior to placing and compacting the remainder of the embedment material.
B Soil types as defined in the Occupational Health and Safety Act and Regulations for Construction Projects.
C All dimensions are in metres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING
FLEXIBLE PIPE EMBEDMENT AND BACKFILL EARTH EXCAVATION
Nov 2014 Rev 1
OPSD 802.010

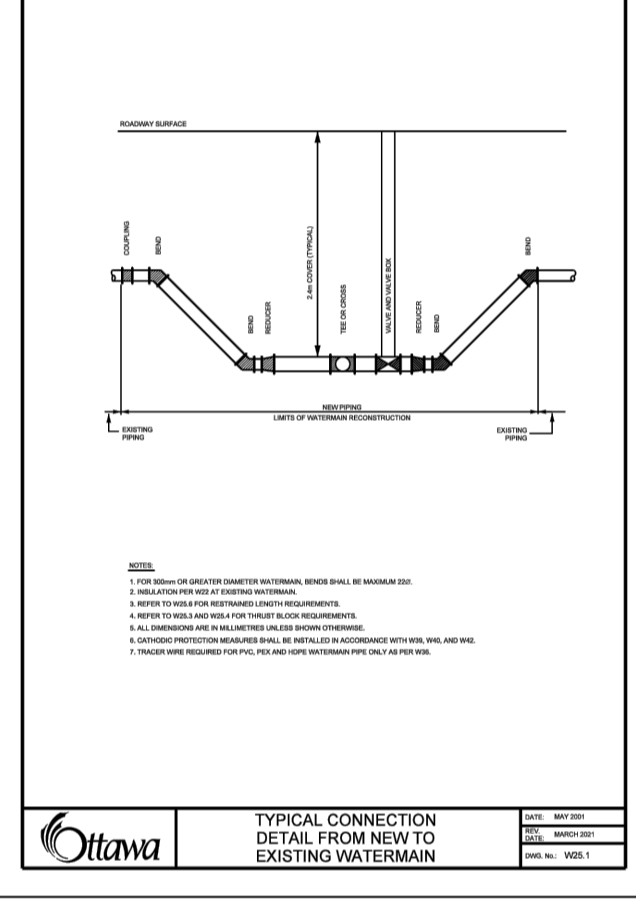


THE CURB RAMP SHALL:
1. HAVE A RUNNING SLOPE OF 1:10
2. HAVE A WIDTH OF NOT LESS THAN 1.5m EXCLUSIVE OF FLARED SIDES
3. HAVE A SURFACE INCLUDING FLARED SIDES THAT SHALL:
A. BE SLIP-RESISTANT;
B. HAVE A DETECTABLE WARNING SURFACE THAT IS COLOUR- AND TEXTURE-CONTRASTED WITH THE ADJACENT SURFACES, AND
C. HAVE A SMOOTH TRANSITION FROM THE RAMP AND ADJACENT SURFACES, AND
4. HAVE FLARED SIDES WITH A SLOPE OF NOT MORE THAN 1:10 WHERE PEDESTRIANS ARE LIKELY TO WALK ACROSS THEM

ONTARIO PROVINCIAL STANDARD DRAWING
CURB RAMP DETAIL
N.T.S.



ONTARIO PROVINCIAL STANDARD DRAWING
INLET SEDIMENT CONTROL DEVICE
N.T.S.



ONTARIO PROVINCIAL STANDARD DRAWING
TYPICAL CONNECTION DETAIL FROM NEW TO EXISTING WATERMAIN
N.T.S.

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01	ISSUED FOR APPROVAL	S.V.	19 DEC 2025
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NOT AUTHENTIC UNLESS SIGNED AND DATED



CLIENT
AVENUE 31

DESIGNED BY: S.V. DRAWN BY: S.V. APPROVED BY: K.P.

PROJECT
BUILDING A1 AND A3
4055 RUSSELL ROAD
OTTAWA, ON

DRAWING TITLE
CONSTRUCTION DETAIL PLAN

PROJECT NO.
230778 C902