PROPOSED GRANITE SHOWROOM & WAREHOUSE DEVELOPMENT
561 SOMME ST., OTTAWA, ON

REVISION 04



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PROPOSED GRANITE SHOWROOM & WAREHOUSE DEVELOPMENT
521 SOMME ST., OTTAWA, ON
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PROVINCE OF ONTARIO
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 CONTRACTORS SHALL CONFIRM THE LOCATION OF ALL EXISTING UTILITIES WITHIN THE SITE AND ADJACENT WORK AREAS. THE CONTRACTORS 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 CONTRACTOR'S 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 SERVICING 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 IN 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 OPSS 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 MOMENT'S 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 DETAILED DRAWINGS INDICATING THE ON-SITE ACTIVITIES AND MEASURES TO BE USED TO CONTROL EROSION AND SEDIMENT MOVEMENT FOR EACH STEP OF THE WORK.

CONTRACTOR'S 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, 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 CONTRACTOR'S EXPENSE AND MANAGED IN COMPLIANCE WITH REQUIREMENTS FOR 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 CONTRACTOR'S 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 AT 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 OF 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. SC1.1 OR OPSD 600.110. PROVISION SHALL BE MADE FOR CURB DEPRESSIONS AS INDICATED ON ARCHITECTURAL SITE PLAN. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD SC1.4. ALL CURBS, CONCRETE ISLANDS, AND SIDEWALKS SHOWN ON THIS DRAWING ARE TO BE 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 300MM AROUND ALL STRUCTURES WITHIN THE PAVEMENT AREA.
7. SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'B' COMPACTED IN MAXIMUM 300MM LIFTS.
8. ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR TO 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 6MM 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 & 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 STOCKPILED 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 A MINIMUM OF 100% STANDARD PROCTOR 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 S8. 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 FROST 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 225MM 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 SEWERS 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 OPSS 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

10. 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 SPECIFIED OTHERWISE.
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. BEDDING 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 200MM 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 FOR 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.

STORM SUB-DRAIN

30. SUBDRAIN PIPE SHALL BE PERFORATED PLASTIC PIPE (100 MM TO 300 MM NOMINAL SIZE) IN ACCORDANCE WITH CAN/CSA-B182.8 OR B182.6, OPSS 1840, AND CITY OF OTTAWA MS-22.15.
31. SUBDRAIN PIPE TO BE FACTORY-WRAPPED WITH KNITTED SOCK GEOTEXTILE; GEOTEXTILE FILTER SHALL BE APPROVED NON-WOVEN CLASS 1 AS PER CITY OF OTTAWA MS-22.15.
32. BEDDING AND BACKFILL SHALL BE GRANULAR MATERIAL IN ACCORDANCE WITH OPSS 1010; CLEAR STONE SHALL BE 19 MM TYPE I OR TYPE II PER OPSS 1004.
33. TRENCHES SHALL BE EXCAVATED AT LEAST 50 MM BELOW PIPE INVERT AND FILLED WITH BEDDING; BACKFILL SHALL BE SAME AS BEDDING MATERIAL.
34. SUBDRAINS SHALL BE CONNECTED TO MAINTENANCE HOLES, CATCH BASINS, AND DITCH INLETS BY A MINIMUM 1 M SECTION OF NON-PERFORATED PIPE.
35. PIPE CONNECTIONS TO MUNICIPAL FACILITIES SHALL CONFORM TO OPSS 410 AND CITY OF OTTAWA SPECIAL PROVISION F-4100.
36. COMPACTION OF BACKFILL MATERIAL SHALL CONFORM TO OPSS 501.
37. CONTRACTOR SHALL REPLACE ANY CRACKED, CRUSHED, OR UV-DAMAGED PIPE AND ENSURE NO DAMAGE/DISLODGEMENT OF OUTLET PIPES DURING BACKFILL.
38. ALL INSTALLATIONS SHALL FOLLOW OPSS 405 FOR SUBDRAIN PIPING AND SECTION 31 23 33.01 FOR TRENCHING.

WATERMAIN

39. ALL WATERMAIN INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
40. ALL PVC WATERMAINS SHALL BE AWWA C-900 CLASS 150, SDR 18 OR APPROVED EQUIVALENT.
41. ALL WATER SERVICES LESS THAN OR EQUAL TO 50MM IN DIAMETER TO BE TYPE 'K' COPPER.
42. 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.
43. ALL PVC WATERMAINS, SHALL BE INSTALLED WITH A 10 GAUGE STRANDED COPPER TWU OR RWU TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STD. W.36.
44. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS PER CITY OF OTTAWA STD.25.5 AND W25.6.
45. VALVE BOXES SHALL BE INSTALLED PER CITY OF OTTAWA STD W24.
46. WATERMAIN IN FILL AREAS TO BE INSTALLED WITH RESTRAINED JOINTS PER CITY OF OTTAWA STD.25.5 AND W25.6.
47. THRUST BLOCKING OF WATERMAINS TO BE INSTALLED PER CITY OF OTTAWA STD. W25.3 AND W25.4.
48. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS, BLOW-OFFS, AND NOZZLES REQUIRED FOR TESTING AND DISINFECTION OF THE WATERMAIN.
49. WATERMAIN CROSSING OVER AND BELOW SEWERS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. W25.2 AND W25, RESPECTIVELY.
50. WATER SERVICES ARE TO BE INSULATED PER CITY STD. W23 WHERE SEPARATION BETWEEN SERVICES AND MAINTENANCE HOLES ARE LESS THAN 2.4M.
51. THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SEWER/UTILITY IS 0.5M PER MOE 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.
52. ALL WATERMAINS SHALL HAVE A MINIMUM COVER OF 2.4M, OTHERWISE THERMAL INSULATION IS REQUIRED AS PER STD DWG W22.
53. GENERAL WATER PLANT TO UTILITY CLEARANCE AS PER STD DWG R20.
54. 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.
55. 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.
56. ALL WATERMAINS 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.
57. ALL WATERMAINS 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 THE ENVIRONMENT. IT IS RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MUNICIPAL AND/OR PROVINCIAL REQUIREMENTS ARE FOLLOWED.
58. ALL WATERMAIN STUBS SHALL BE TERMINATED WITH A PLUG AND 50MM BLOW OFF UNLESS OTHERWISE NOTED.

- GEOTECHNICAL INFORMATION AS PER GEOTECHNICAL INVESTIBATION REPORT PG7250-1 BY PATERSON GROUP DATED OCTOBER 01,2024.
- HYDROGEOLOGICAL INFORMATION AS PER HYDROGEOLOGICAL REPORT PREAPRED BY LRL ASSOCIATES DATES FEBRUARY 07,2025.
- STORMWATER MANAGEMENT DETAILS AS PER STORMWATER MANAGEMENT REPORT PREPARED BY LRL ASSOCIATES.

USE AND INTERPRETATION OF DRAWINGS

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LICENSED PROFESSIONAL ENGINEER
M. BASNET
100501996
2026-11-09
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

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

CLIENT
BLACKSTONE GRANITE

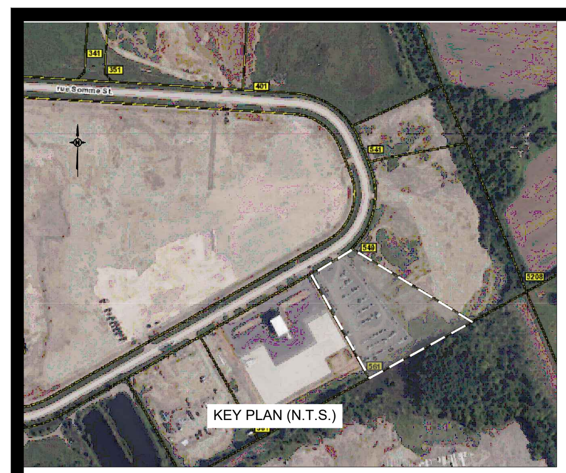
DESIGNED BY:	DRAWN BY:	APPROVED BY:
S.V.	S.V.	M.B.

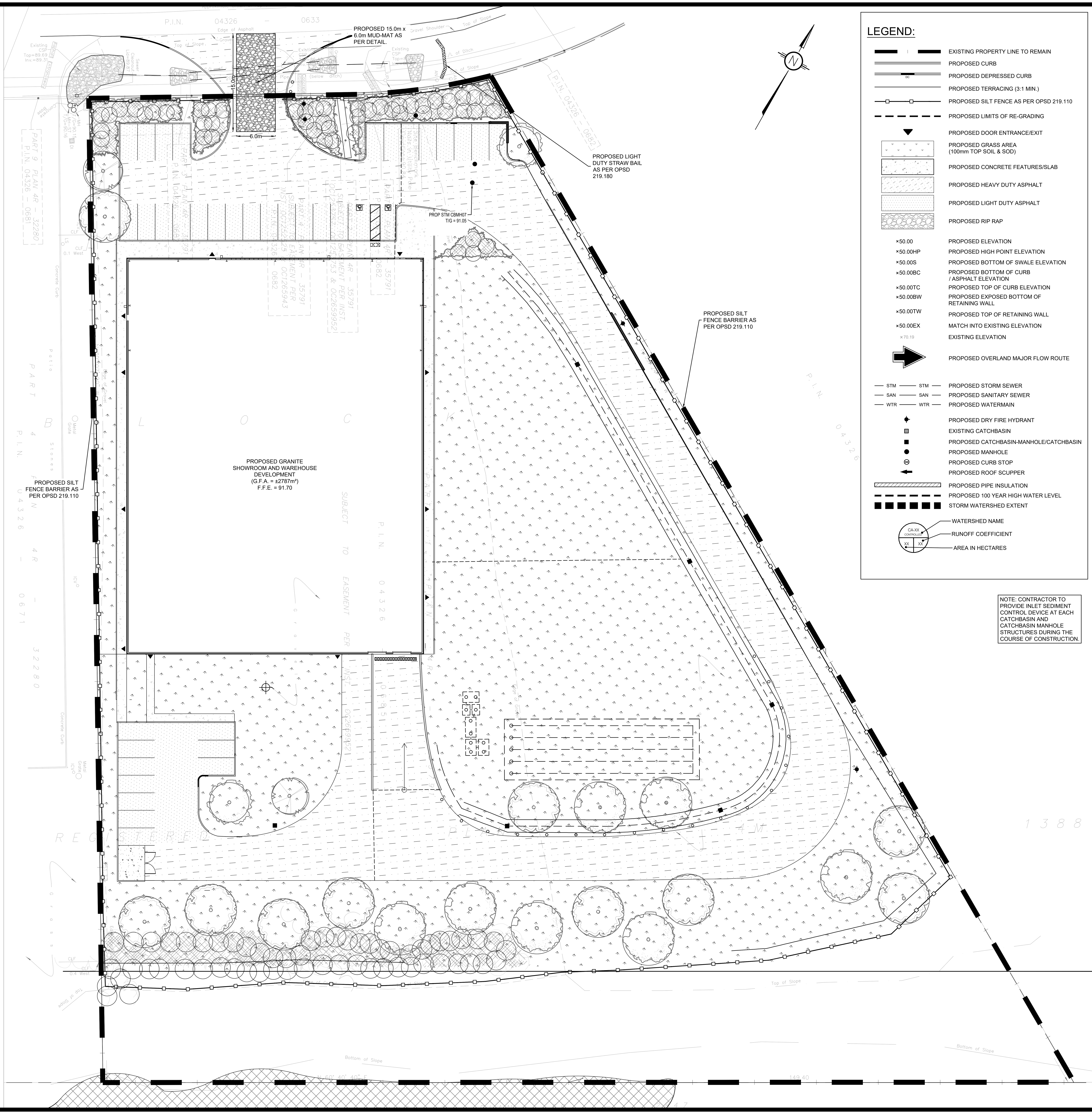
PROJECT
PROPOSED GRANITE SHOWROOM & WAREHOUSE DEVELOPMENT
561 SOMME STREET
OTTAWA, ON K0A 1V0

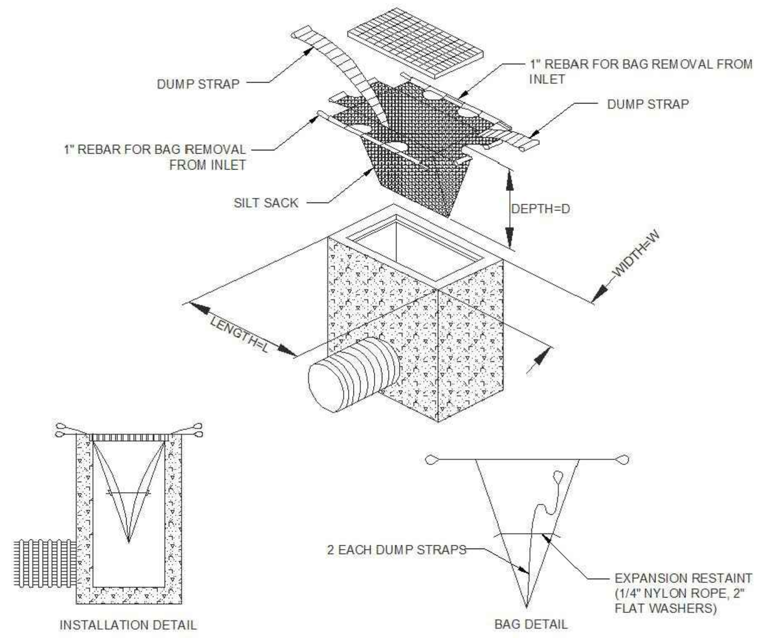
DRAWING TITLE
GENERAL NOTES

PROJECT NO.
240374

C001

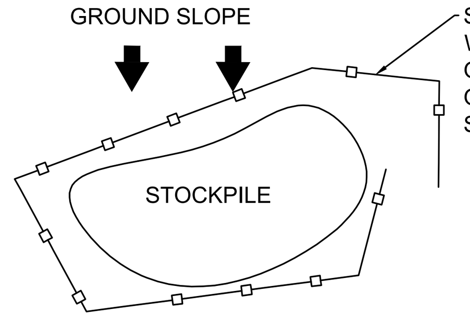




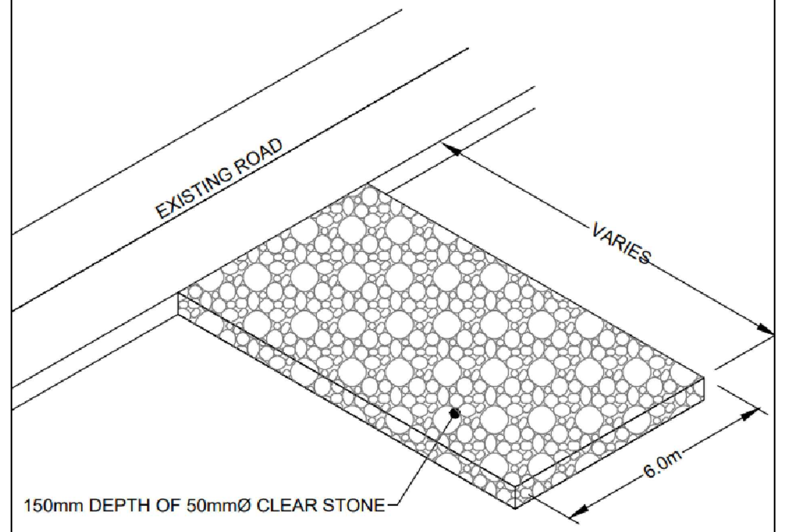


INLET SEDIMENT CONTROL DEVICE
N.T.S.

FLOW DIRECTION/ GROUND SLOPE



STOCKPILE EROSION PROTECTION
N.T.S.



MUD MAT - CONSTRUCTION ACCESS
NTS

LEGEND:

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PROPOSED HEAVY DUTY ASPHALT
PROPOSED LIGHT DUTY ASPHALT
PROPOSED RIP RAP

×50.00	PROPOSED ELEVATION
×50.00HP	PROPOSED HIGH POINT ELEVATION
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×50.00TW	PROPOSED TOP OF RETAINING WALL
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×70.19	EXISTING ELEVATION

PROPOSED OVERLAND MAJOR FLOW ROUTE

STM — STM	PROPOSED STORM SEWER
SAN — SAN	PROPOSED SANITARY SEWER
WTR — WTR	PROPOSED WATERMAIN

PROPOSED DRY FIRE HYDRANT
EXISTING CATCHBASIN
PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
PROPOSED MANHOLE
PROPOSED CURB STOP
PROPOSED ROOF SCUPPER
PROPOSED PIPE INSULATION
PROPOSED 100 YEAR HIGH WATER LEVEL
STORM WATERSHED EXTENT

CA-XX CONTROLLED — WATERSHED NAME
XX — RUNOFF COEFFICIENT
XX — AREA IN HECTARES

NOTE: CONTRACTOR TO PROVIDE INLET SEDIMENT CONTROL DEVICE AT EACH CATCHBASIN AND CATCHBASIN MANHOLE STRUCTURES DURING THE COURSE OF CONSTRUCTION.

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5m 2 0 5 10m
SCALE: 1:300

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LICENSED PROFESSIONAL ENGINEER
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100501996
2026-11-09
PROVINCE OF ONTARIO

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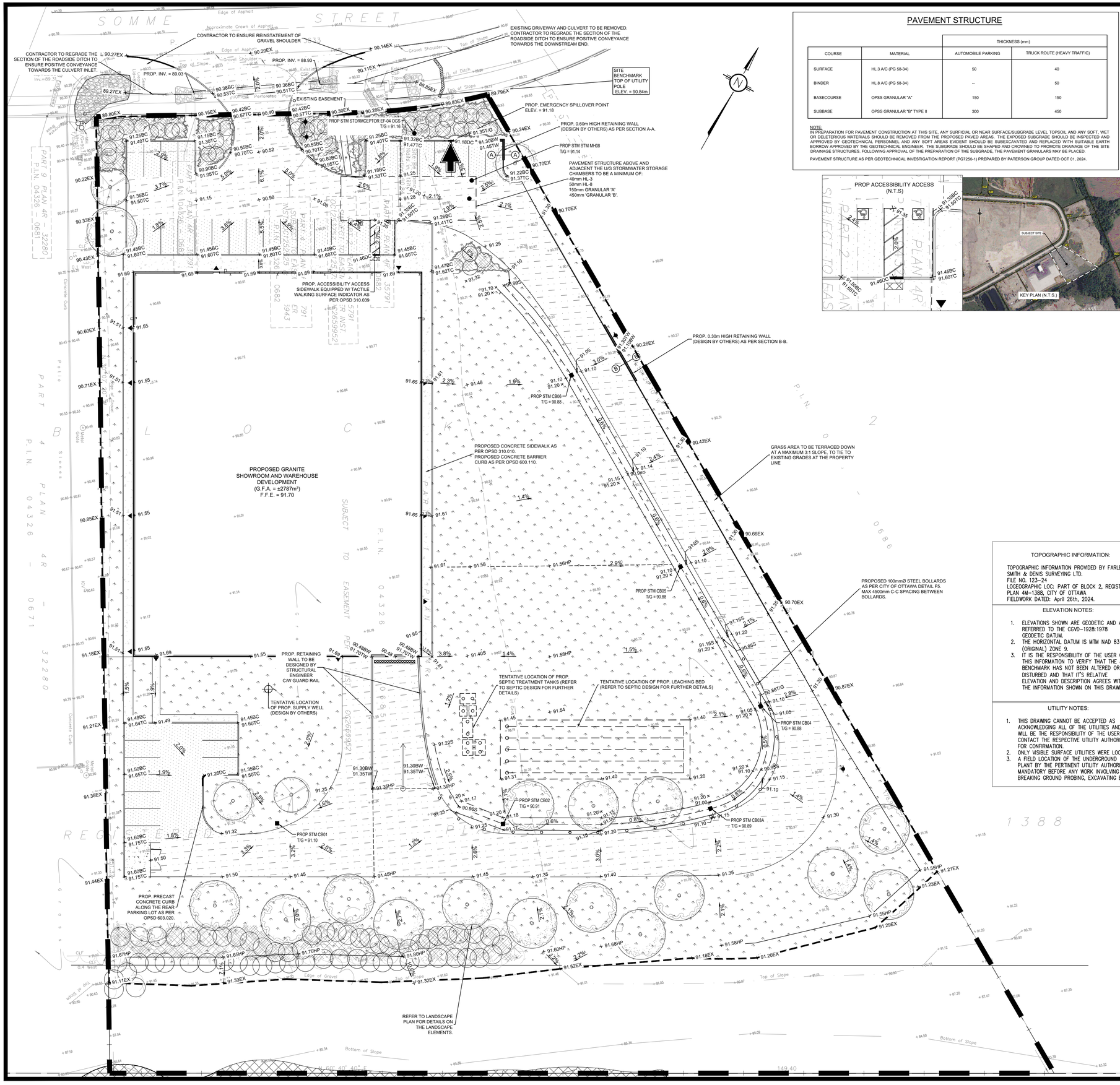
CLIENT
BLACKSTONE GRANITE

DESIGNED BY:	DRAWN BY:	APPROVED BY:
S.V.	S.V.	M.B.

PROJECT
PROPOSED GRANITE SHOWROOM & WAREHOUSE DEVELOPMENT
561 SOMME STREET
OTTAWA, ON K0A 1V0

DRAWING TITLE
EROSION AND SEDIMENT CONTROL PLAN

PROJECT NO.
240374
C101



PAVEMENT STRUCTURE

COURSE	MATERIAL	THICKNESS (mm) AUTOMOBILE PARKING	THICKNESS (mm) TRUCK ROUTE (HEAVY TRAFFIC)
SURFACE	HL 3 A/C (PG 58-34)	50	40
BINDER	HL 8 A/C (PG 58-34)	--	50
BASECOURSE	OPSS GRANULAR "A"	150	150
SUBBASE	OPSS GRANULAR "B" TYPE II	300	450

NOTE:
IN PREPARATION FOR PAVEMENT CONSTRUCTION AT THIS SITE, ANY SURFICIAL OR NEAR SURFACE/SUBGRADE LEVEL TOPSOIL AND ANY SOFT, WET OR DELETERIOUS 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 SUBEXCAVATED AND REPLACED WITH SUITABLE EARTH BORROW APPROVED BY THE GEOTECHNICAL ENGINEER. THE SUBGRADE SHOULD BE SHAPED AND CROWNED 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 (PG7250-1) PREPARED BY PATERSON GROUP DATED OCT 01, 2024.

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 LIMITS OF RE-GRADING
- PROPOSED DOOR ENTRANCE/EXIT
- PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
- PROPOSED CONCRETE FEATURES/SLAB
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- PROPOSED ROOF SCUPPER
- PROPOSED PIPE INSULATION
- PROPOSED 100 YEAR HIGH WATER LEVEL
- STORM WATERSHED EXTENT
- CA-XY / CONROCK / XC / X.XX — WATERSHED NAME, RUNOFF COEFFICIENT, AREA IN HECTARES

TOPOGRAPHIC INFORMATION:

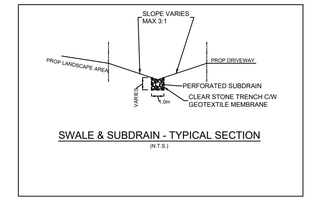
TOPOGRAPHIC INFORMATION PROVIDED BY FARLEY, SMITH & DENIS SURVEYING LTD.
FILE NO. 123-24
LOGEOGRAPHIC LOC: PART OF BLOCK 2, REGISTERES PLAN 4M-1388, CITY OF OTTAWA
FIELDWORK DATED: April 26th, 2024.

ELEVATION NOTES:

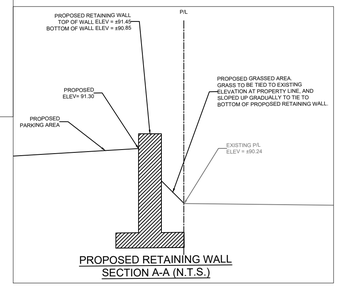
1. ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD-1928:1978 GEODETIC DATUM.
2. THE HORIZONTAL DATUM IS MTM NAD 83 (ORIGINAL) ZONE 9.
3. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT IT'S RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.

UTILITY NOTES:

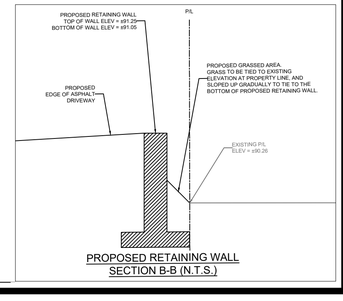
1. THIS DRAWING CANNOT BE ACCEPTED AS ACKNOWLEDGING ALL OF THE UTILITIES AND IT WILL BE THE RESPONSIBILITY OF THE USER TO CONTACT THE RESPECTIVE UTILITY AUTHORITIES FOR CONFIRMATION.
2. ONLY VISIBLE SURFACE UTILITIES WERE LOCATED.
3. A FIELD LOCATION OF THE UNDERGROUND PLANT BY THE PERTINENT UTILITY AUTHORITY IS MANDATORY BEFORE ANY WORK INVOLVING BREAKING GROUND PROBING, EXCAVATING ETC.



SWALE & SUBDRAIN - TYPICAL SECTION
(N.T.S.)



PROPOSED RETAINING WALL SECTION A-A (N.T.S.)



PROPOSED RETAINING WALL SECTION B-B (N.T.S.)

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SCALE: 1:300

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LICENSED PROFESSIONAL ENGINEER
M. BASNET
100501996
2026-11-09
PROVINCE OF ONTARIO
NOT AUTHENTIC UNLESS SIGNED AND DATED

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

CLIENT
BLACKSTONE GRANITE

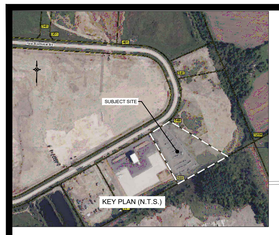
DESIGNED BY:	DRAWN BY:	APPROVED BY:
S.V.	S.V.	M.B.

PROJECT
PROPOSED GRANITE SHOWROOM & WAREHOUSE DEVELOPMENT
561 SOMME STREET
OTTAWA, ON K0A 1V0

DRAWING TITLE
GRADING AND DRAINAGE PLAN

PROJECT NO.
240374

C301



NOTE: CONTRACTOR TO CONFIRM EXISTING BOTTOM OF DITCH ELEVATIONS PRIOR TO CULVERT INSTALLATION AND REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.

PROP. 20.0m - 1030mm x 740mmØ, 2.8mm THICK, AL2 CSPA @ 0.51% SLOPE, FROST TREATED AS PER OPSD 803.030.
RIP-RAP TO BE PLACED AT CULVERT INLET/OUTLET AS PER OPSD 801.101.

PROP. INV. = 89.03

PROP. INV. = 88.93

PROP. 150mmØ ROOF-DRAIN STM OUTLET PIPE INV. =89.20
BOTTOM OF DITCH =88.90
C/W RODENT GRATE AND BACKFLOW PREVENTOR.

PROP. 300mmØ STM OUTLET PIPE INV. =89.20
BOTTOM OF DITCH =88.85
C/W RODENT GRATE AND BACKFLOW PREVENTOR
RIP-RAP TO BE PLACED AT STM-SEWER INLET/OUTLET AS PER OPSD 801.010.
CONTRACTOR TO CONFIRM POSITIVE DRAINAGE TOWARDS THE DITCH DOWNSTREAM.

PROP STM 8.1m - 300mmØ PVC @ 0.49% W/ INSULATION

PROP STM 11.7m - 300mmØ PVC DR-35 @ 0.51%

PROP STM MH08
T/G = 91.14
W INV = 89.33
EQUIPPED W/ HYDROVEX 200VHV-2 ICD
(OR APPROVED EQUIVALENT)
MAX FLOW= 44.36L/s
DESIGN HEAD = 1.85m

PROP NYLOPLAST INLET 01 (OR APPROVED EQUIVALENT)
T/G = 91.05
SW INV = 89.39
SE INV = 89.45

PIPE CROSSING CR- 01
WTR OBV=88.75
STM INV=89.47
MIN CLEARANCE =0.72m

PROP. 20cm-150mmØ PVC DR-18 WTR SERVICE PIPE TO SERVICE DRY HYDRANT ON-SITE. PIPE TO BE BURIED 2.4m BELOW GRADE.

FIRE PROTECTION WATER SUPPLY VOLUME REQ'D = 180,000L AS PER NFPA CALCULATIONS PROVIDED BY JAIN SUSTAINABILITY CONSULTANTS DATED AUG 12, 2025.
TENT. PROP. REINFORCED CONCRETE TANKS @ 60,000L CAPACITY EACH.
C/W ANCHORING TO COUNTER BUOYANCY FORCES.
LEAD TANK TO BE FITTED WITH CHUTE AND DRAW PIPE AS PER CITY OF OTTAWA DETAILS W51 AND W52.

PROP STM 27.4m - 250mmØ PVC @ 4.93%

PROPOSED REINFORCED CONCRETE UNDERGROUND FIRE PROTECTION TANKS (DESIGN BY OTHERS)
ALL STORAGE TANKS TO BE DESIGNED WITH ADDITIONAL REINFORCING TO SUPPORT CHBDC VEHICULAR LOADING.

PROP STM CBMH07
T/G = 91.05

PROP STM 32.3m - 375mmØ PVC DR-35 @ 0.28%

PIPE CROSSING CR-02
WTR OBV=88.80
STM INV=90.24
VERTICAL SEPARATION=±1.44m

PIPE CROSSING CR-03
WTR OBV=89.00
STM INV=90.42
VERTICAL SEPARATION=±1.42m

PROP ROOF DRAIN OUTLET.
PROP INV. AT STUB= ±90.55.

PROP. ±64.7m - 150mmØ PVC DR18 WTR SERVICE PIPE (UNLESS OTHERWISE SPECIFIED) TO BE BURIED 2.4m BELOW GRADE. WTR CONNECTION TO THE BUILDING AS PER MECHANICAL DESIGN.

PROP STM CB06
T/G = 90.85
SE INV = 89.54
NW INV = 89.54

PROP. ±156m-150mmØ PVC DR-18 WTR SERVICE PIPE TO SERVICE DRY HYDRANT ON-SITE. PIPE TO BE BURIED 2.4m BELOW GRADE.

PROPOSED GRANITE SHOWROOM AND WAREHOUSE DEVELOPMENT
(G.F.A. = ±2787m²)
F.F.E. = 91.70

PROP STM 34.9m - 375mmØ PERFORATED SUBDRAIN @ 0.34%

PROP STM CB05
T/G = 90.88
SE INV = 89.66
NW INV = 89.66

PROP STM 25.4m - 375mmØ PERFORATED SUBDRAIN @ 0.35%

PROP STM CB04 (CB-T)
T/G = 90.88
SE INV = 89.75
NW INV = 89.75

SEPTIC SANITARY SERVICE OUTLET LOCATION AND INVERT TO BE COORDINATED BETWEEN MECHANICAL ENGINEER AND SEPTIC DESIGNER

PROP. ±14.5m - 150mm PVC SDR-28 SANITARY SERVICE @ MIN. 1.0% SLOPE.
SANITARY SERVICE DIAMETER & PLACEMENT TO BE CONFIRMED BY THE SEPTIC DESIGNER.

PROP. 6.1m- 50mmØ PEX WTR SERVICE PIPE TO BE BURIED 2.4m BELOW GRADE. WTR CONNECTION TO THE BUILDING AS PER MECHANICAL DESIGN.

TOP OF TRENCH DRAIN = 90.45
PROP. TRENCH DRAIN TO OUTLET ON THE GRASS-SURFACE V/A INTERNAL PUMP. REFER TO MECH DRAWINGS FOR INTERNAL PUMP AND PLUMBING DETAILS.

PROPOSED SEPTIC TREATMENT SYSTEM (DESIGN BY OTHERS)

PROPOSED LEACHING BED (DESIGN BY OTHERS)

TENTATIVE LOCATION OF PROP. SUPPLY WELL (DESIGN BY OTHERS)

PROP. GRASS SWALE @2.7%

PROP STM 10.0m -375mmØ SUBDRAIN @ 0.44%

PROP STM 10.3m - 300mmØ SUBDRAIN @ 0.34%

PROP STM CB03A (CB-T)
T/G = 90.89
SW INV = 89.82
NE INV = 89.82

PROP STM CB01 (CB-L)
T/G = 91.10
NE INV = 90.13

PROP STM 35.7m - 250mmØ PVC DR-35 @ 0.45%

PROP STM CB02 (CB-T)
T/G = 90.91
SW INV = 89.97
NE INV = 89.97

PROP STM 33.1m - 300mmØ PERFORATED SUBDRAIN @ 0.45%

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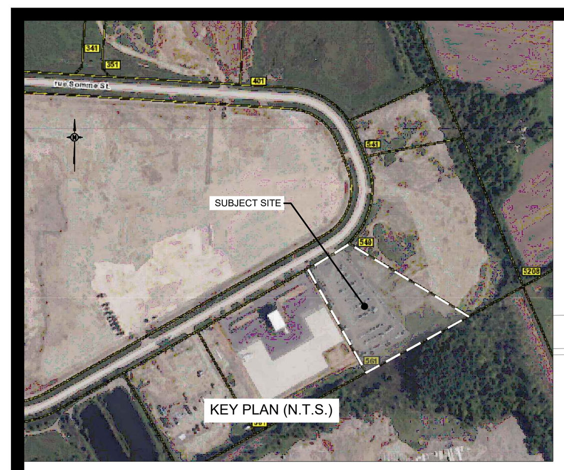
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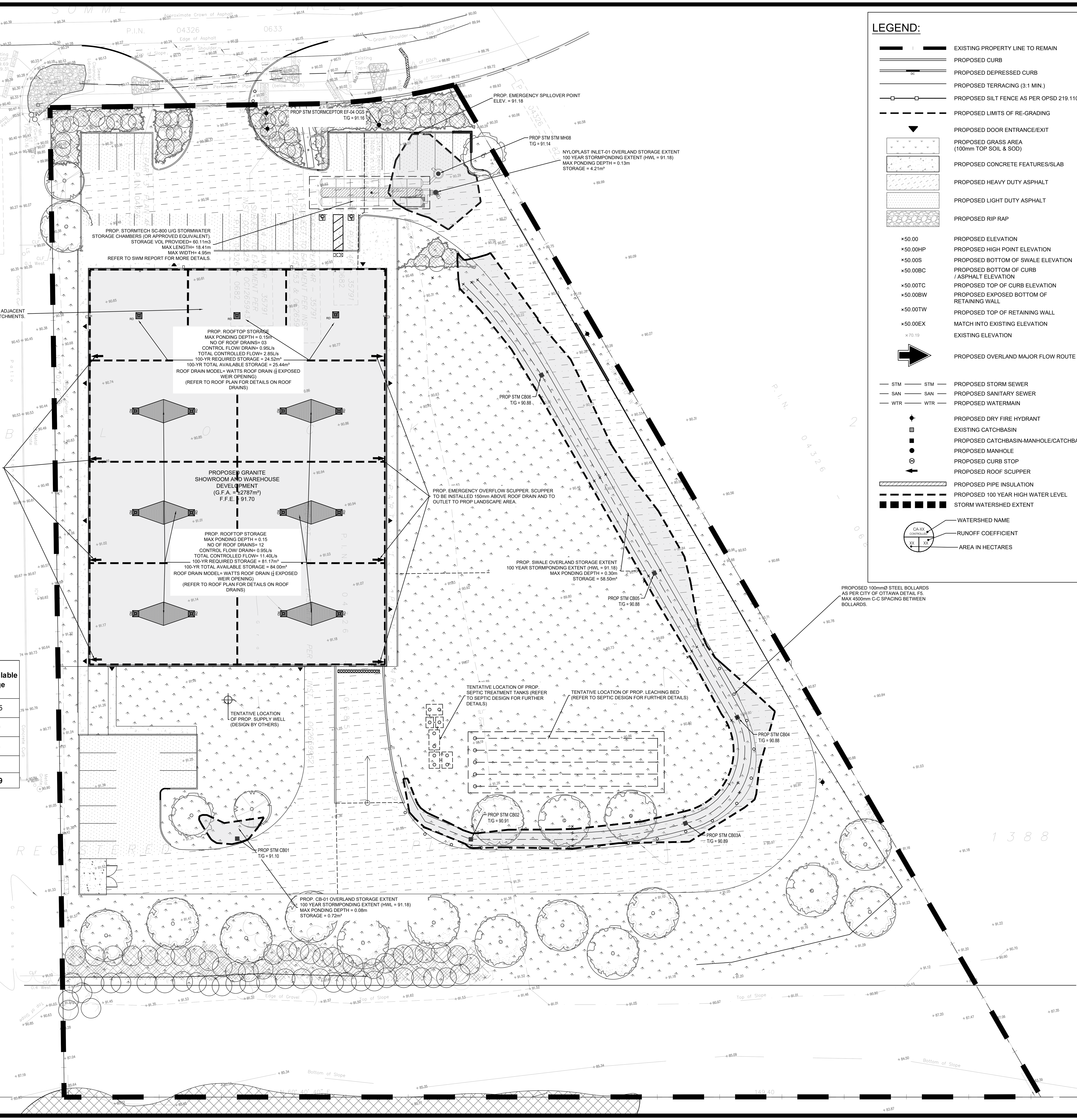
PROJECT
PROPOSED GRANITE SHOWROOM & WAREHOUSE DEVELOPMENT
561 SOMME STREET
OTTAWA, ON K0A 1V0

DRAWING TITLE
SERVICING PLAN

PROJECT NO.
240374

C401





Summary of Release Rates and Storage Volumes

Catchment	Drainage Area (ha)	100-year Release Rate (L/s)	100-Year Required Storage (m3)	Total Available Storage (m3)
CA-03 to CA-09 (ICD Controlled)	0.848	44.36	173.01	177.55
CA-02A (Roof Controlled)	0.216	11.40	81.17	84.00
CA-02B (Roof Controlled)	0.062	2.85	24.52	25.44
Uncontrolled	0.237	65.03	N/A	N/A
Total	**1.363**	**123.64**	**278.70**	**286.99**

Pipe Storage

Pipe	Length (m)	dia. (m)	Storage (m^3)
CB01-CB02	35.7	0.250	1.75
CB02-CB03A	33.10	0.300	2.34
CB03A-CB03B	10.30	0.300	0.73
CB03B-CB04	10.00	0.375	1.10
CB04-CB05	25.40	0.375	2.81
CB05-CB06	34.90	0.375	3.86
CB06-Inlet 01	32.30	0.375	3.57
		Total	**16.16**

MH/CBMH Storage

CB/CBMH	Depth (m)	dia. (m)	Storage (m^3)
CB01	0.97	0.30	0.07
CB02	0.93	0.30	0.07
CB03	1.07	0.30	0.08
CB04	1.13	0.30	0.08
CB05	1.22	0.30	0.09
CB06	1.31	0.30	0.09
Inlet 01	1.66	1.20	1.88
		Total	**2.35**

Overland Storage Summary

Structure	Storage (m3)
CB01	0.72
Inlet 01	4.21
Swale	58.50
Total	**63.43**

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5m 2 0 5 10m

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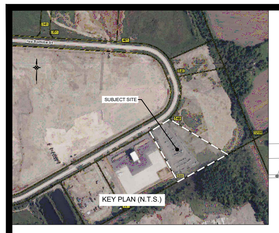
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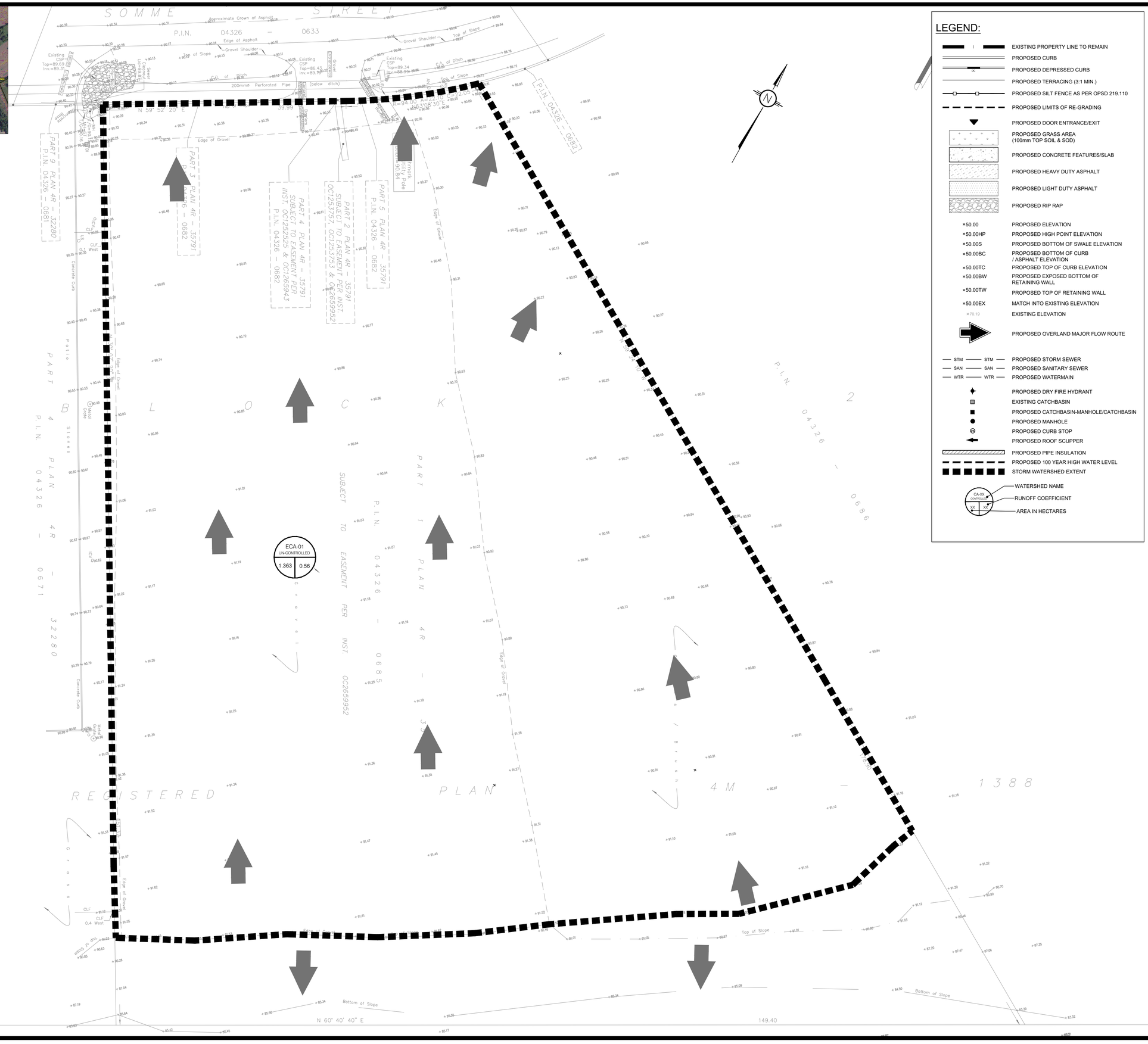
PROJECT
PROPOSED GRANITE SHOWROOM & WAREHOUSE DEVELOPMENT
561 SOMME STREET
OTTAWA, ON K0A 1V0

DRAWING TITLE
STORMWATER MANAGEMENT PLAN

PROJECT NO.
240374

C601





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- PROPOSED DOOR ENTRANCE/EXIT
- PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
- PROPOSED CONCRETE FEATURES/SLAB
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED LIGHT DUTY ASPHALT
- PROPOSED RIP RAP
- ×50.00 PROPOSED ELEVATION
- ×50.00HP PROPOSED HIGH POINT ELEVATION
- ×50.00S PROPOSED BOTTOM OF SWALE ELEVATION
- ×50.00BC PROPOSED BOTTOM OF CURB / ASPHALT ELEVATION
- ×50.00TC PROPOSED TOP OF CURB ELEVATION
- ×50.00BW PROPOSED EXPOSED BOTTOM OF RETAINING WALL
- ×50.00TW PROPOSED TOP OF RETAINING WALL
- ×50.00EX MATCH INTO EXISTING ELEVATION
- ×70.19 EXISTING ELEVATION
- PROPOSED OVERLAND MAJOR FLOW ROUTE
- STM STM PROPOSED STORM SEWER
- SAN SAN PROPOSED SANITARY SEWER
- WTR WTR PROPOSED WATERMAIN
- PROPOSED DRY FIRE HYDRANT
- EXISTING CATCHBASIN
- PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
- PROPOSED MANHOLE
- PROPOSED CURB STOP
- PROPOSED ROOF SCUPPER
- PROPOSED PIPE INSULATION
- PROPOSED 100 YEAR HIGH WATER LEVEL
- STORM WATERSHED EXTENT

CA-XX CONTROLLED — WATERSHED NAME
XX — RUNOFF COEFFICIENT
XX — AREA IN HECTARES

USE AND INTERPRETATION OF DRAWINGS

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CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

5m 2 0 5 10m
SCALE: 1:300

NOT FOR CONSTRUCTION TENDER OR PERMIT

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LICENSED PROFESSIONAL ENGINEER
M. BASNET
100501996
2026-11-09
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

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

CLIENT
BLACKSTONE GRANITE

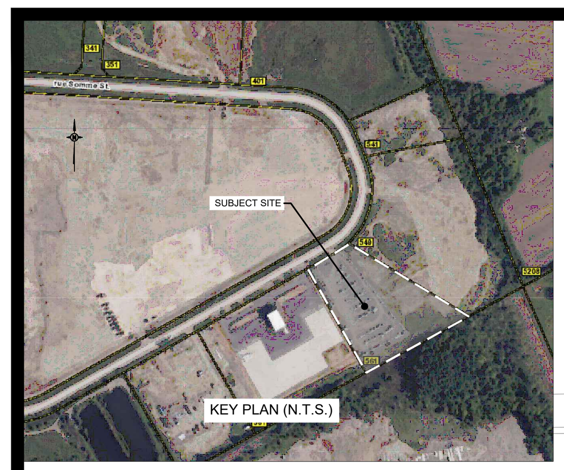
DESIGNED BY:	DRAWN BY:	APPROVED BY:
S.V.	S.V.	M.B.

PROJECT
PROPOSED GRANITE SHOWROOM & WAREHOUSE DEVELOPMENT
561 SOMME STREET
OTTAWA, ON K0A 1V0

DRAWING TITLE
PRE-DEVELOPMENT WATERSHED PLAN

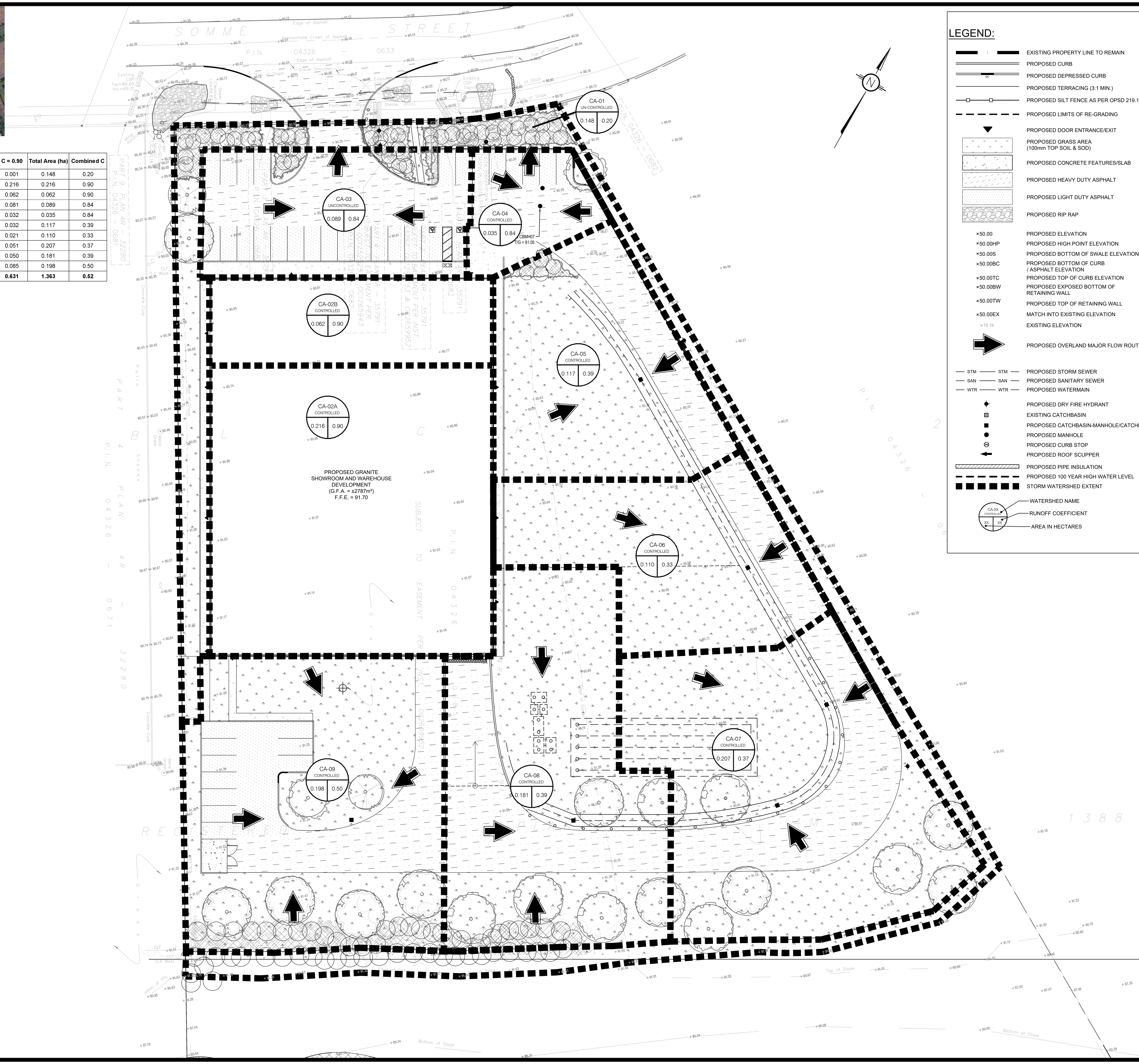
PROJECT NO.
240374

C701



Post-Development Catchments

Catchment	C = 0.20	C = 0.8	C = 0.90	Total Area (ha)	Combined C
CA-01 (uncontrolled)	0.147	0.000	0.001	0.148	0.20
CA-02A (roof-controlled)	0.000	0.000	0.216	0.216	0.90
CA-02B (roof-controlled)	0.000	0.000	0.062	0.062	0.90
CA-03 (uncontrolled)	0.008	0.000	0.081	0.089	0.84
CA-04 (controlled)	0.003	0.000	0.032	0.035	0.84
CA-05 (controlled)	0.085	0.000	0.032	0.117	0.39
CA-06 (controlled)	0.089	0.000	0.021	0.110	0.33
CA-07 (controlled)	0.156	0.000	0.051	0.207	0.37
CA-08 (controlled)	0.131	0.000	0.050	0.181	0.39
CA-09 (controlled)	0.113	0.000	0.085	0.198	0.50
Total	**0.732**	**0.000**	**0.631**	**1.363**	**0.52**



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 LIMITS OF RE-GRADING
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5m 2 0 5 10m

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LICENSED PROFESSIONAL ENGINEER
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100501996
2026-11-09
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

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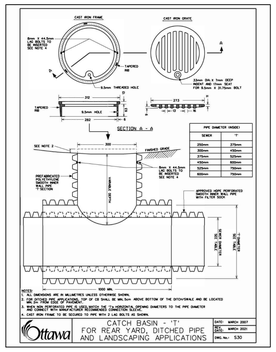
CLIENT
BLACKSTONE GRANITE

DESIGNED BY:	DRAWN BY:	APPROVED BY:
S.V.	S.V.	M.B.

PROJECT
PROPOSED GRANITE SHOWROOM & WAREHOUSE DEVELOPMENT
561 SOMME STREET
OTTAWA, ON K0A 1V0

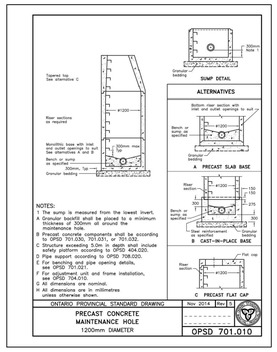
DRAWING TITLE
POST-DEVELOPMENT WATERSHED PLAN

PROJECT NO.
240374
C702



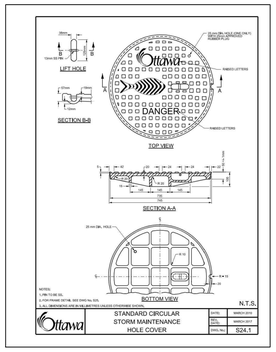
CATCH BASIN – "1"
FOR REAR YARD, DITCHED PIPE AND LANDSCAPING APPLICATIONS

DATE:	MARCH 2007
DWG. No.	SC1
SPEC. No.	OPSD 701.010



PRECAST CONCRETE MAINTENANCE HOLE 1200mm DIAMETER

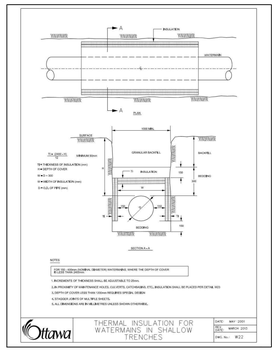
ONTARIO PROVINCIAL STANDARD DRAWING	
Nov 2014	Rev 1
OPSD 701.010	



STORM MAINTENANCE HOLE COVER

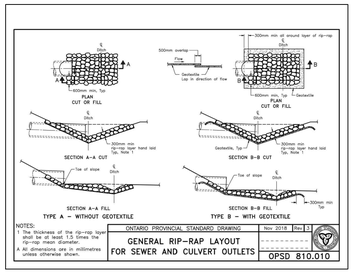
DATE:	MARCH 2007
DWG. No.	SC2
SPEC. No.	OPSD 401.010
DWG No.	S24.1

N.T.S.



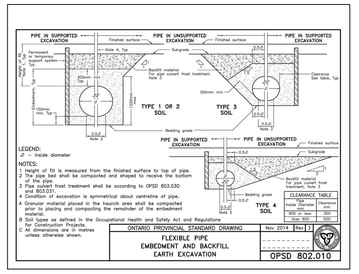
THERMAL INSULATION FOR WATERMAINS IN SHALLOW TRENCHES

DATE:	MAY 2001
DWG. No.	W22



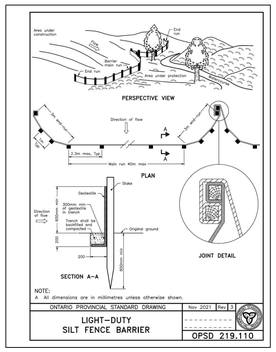
GENERAL RIP-RAP LAYOUT FOR SEWER AND CULVERT OUTLETS

ONTARIO PROVINCIAL STANDARD DRAWING	
Nov 2018	Rev 1
OPSD 810.010	



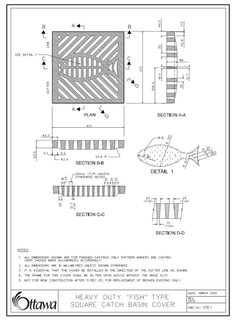
FLEXIBLE PIPE EMBEDMENT AND BACKFILL EARTH EXCAVATION

ONTARIO PROVINCIAL STANDARD DRAWING	
Nov 2014	Rev 1
OPSD 802.010	



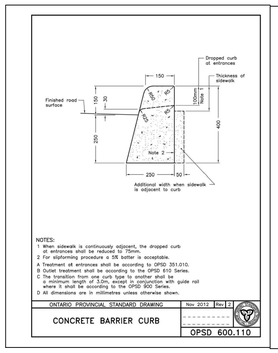
LIGHT–DUTY SILT FENCE BARRIER

ONTARIO PROVINCIAL STANDARD DRAWING	
Nov 2021	Rev 2
OPSD 219.110	



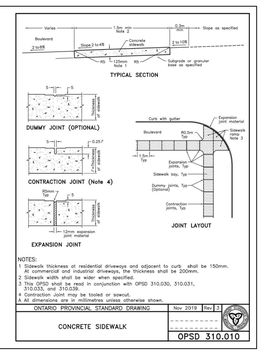
HEAVY DUTY "FISH" TYPE SQUARE CATCH BASIN COVER

DATE:	MARCH 2005
DWG. No.	S18.1



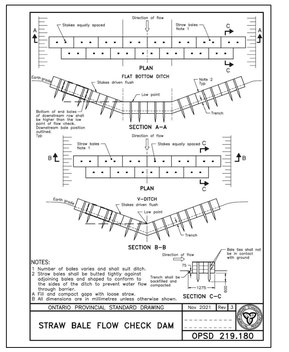
CONCRETE BARRIER CURB

ONTARIO PROVINCIAL STANDARD DRAWING	
Nov 2012	Rev 2
OPSD 600.110	



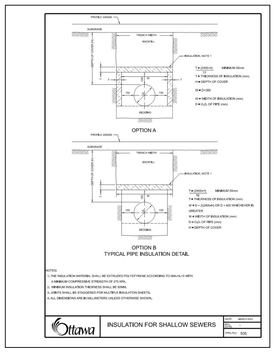
CONCRETE SIDEWALK

ONTARIO PROVINCIAL STANDARD DRAWING	
Nov 2019	Rev 1
OPSD 310.010	



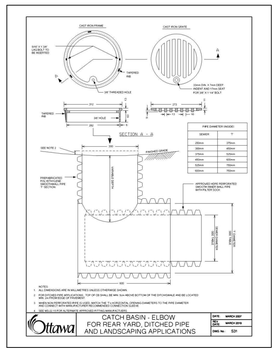
STRAW BALE FLOW CHECK DAM

ONTARIO PROVINCIAL STANDARD DRAWING	
Nov 2021	Rev 2
OPSD 219.180	



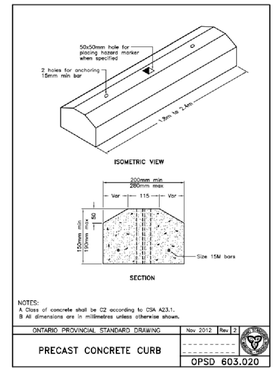
INSULATION FOR SHALLOW SEWERS

DATE:	MARCH 2007
DWG. No.	S26



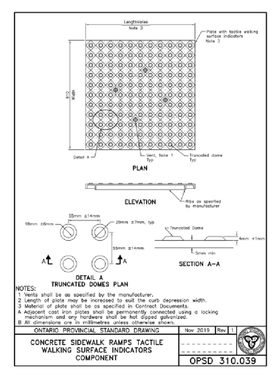
CATCH BASIN – ELBOW FOR REAR YARD, DITCHED PIPE AND LANDSCAPING APPLICATIONS

DATE:	MARCH 2007
DWG. No.	S29



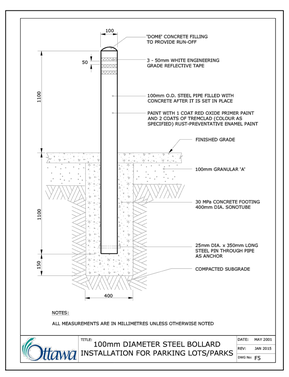
PRECAST CONCRETE CURB

ONTARIO PROVINCIAL STANDARD DRAWING	
Nov 2012	Rev 2
OPSD 603.020	



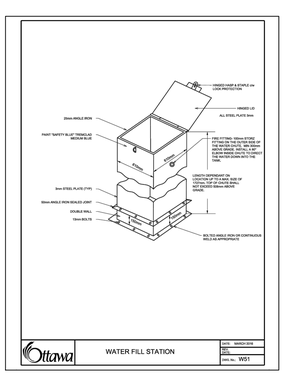
CONCRETE SIDEWALK RAMPS TACTILE WALKING SURFACE INDICATORS COMPONENT

ONTARIO PROVINCIAL STANDARD DRAWING	
Nov 2019	Rev 1
OPSD 310.039	



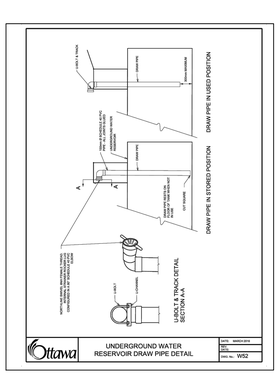
100mm DIAMETER STEEL BOLLARD INSTALLATION FOR PARKING LOTS/PARKS

DATE:	MAY 2001
REV:	JAN 2015
DWG No.	F5



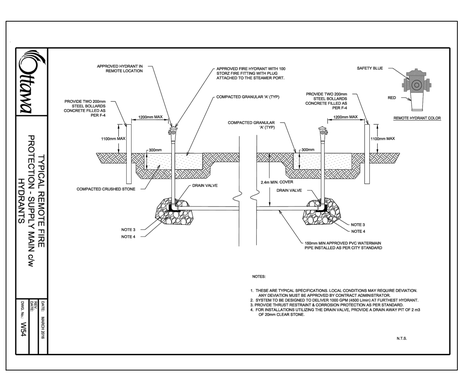
WATER FILL STATION

DATE:	MARCH 2018
DWG. No.	W51

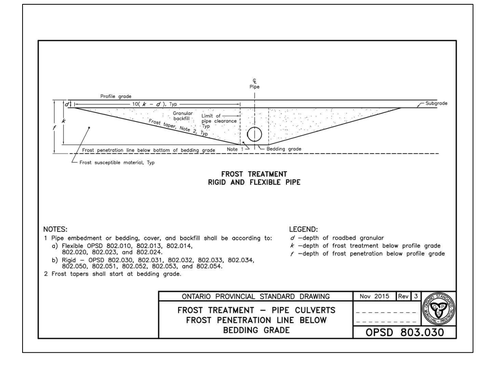


UNDERGROUND WATER RESERVOIR DRAW PIPE DETAIL

DATE:	MARCH 2014
DWG. No.	W52



DRAWN:	KH
DES'D:	SV
DATE:	MARCH 2025
DWG. No.	W54



FROST TREATMENT – PIPE CULVERTS FROST PENETRATION LINE BELOW BEDDING GRADE

ONTARIO PROVINCIAL STANDARD DRAWING	
Nov 2015	Rev 3
OPSD 803.030	

USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWINGS. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OR OTHER ELECTRONIC MEDIA AND COPIED THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK AND BID PRICE. NO CLAIMS FOR EXTRA CHANGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

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 ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'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:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABLE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

NOT FOR CONSTRUCTION TENDER OR PERMIT

No.	REVISIONS	BY	DATE
04	RE- ISSUED FOR APPROVAL	K.H.	09 NOV 2026
03	RE- ISSUED FOR APPROVAL	K.H.	12 JUNE 2026
02	RE- ISSUED FOR APPROVAL	S.V.	10 OCT 2025
01	ISSUED FOR APPROVAL	S.V.	17 APRIL 2025

LICENSED PROFESSIONAL ENGINEER
M. BASNET
100501996
2026-11-09
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road I Ottawa, ON, K1J 9G2
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CLIENT
BLACKSTONE GRANITE

DESIGNED BY:	DRAWN BY:	APPROVED BY:
S.V.	S.V.	M.B.

PROJECT
PROPOSED GRANITE SHOWROOM & WAREHOUSE DEVELOPMENT
561 SOMME STREET
OTTAWA, ON K0A 1V0

DRAWING TITLE
CONSTRUCTION DETAIL PLAN

PROJECT NO.
240374 C901