5m

0m 1:150 25m

1066 SILVER ST
PROPOSED 4 STOREY
APARTMENT BUILDING
(46 UNITS)

PROPOSED
1066 SILVER ST
FFL = 84.77
TOF = 84.32
BFL = 81.77
USF = 80.32

No. 1290
2 STOREY
BRICK DWELLING
(FOUNDATION NOTED)

1295 SUMMERVILLE AVE
EXISTING 3 STOREY
APARTMENT BUILDING
(18 UNITS)

1291 SUMMERVILLE AVE
(UNDER CONSTRUCTION) 4
STOREY
APARTMENT BUILDING
(16 UNITS)

DECOMMISSION EXISTING SEWER SERVICES IN ACCORDANCE WITH CITY OF OTTAWA DRAWING No. S11.4 (APPROXIMATE LOCATIONS)

DECOMMISSION EXISTING WATER SERVICE (APPROXIMATE LOCATION)

RAINWATER LEADERS INSIDE BUILDING SHALL BE CONSTRUCTED TO WITHSTAND THE PRESSURE FROM A WATER COLUMN THE HEIGHT OF THE RAINWATER LEADER. PERFORM PRESSURE TESTS ON THE SYSTEMS IN ACCORDANCE WITH THE MECHANICAL ENGINEER'S INSTRUCTIONS.

FOUNDATION DRAIN SUMP & PUMP DISCHARGE TO STORM DRAIN AT HIGH LEVEL IN BASEMENT (REFER TO MECHANICAL)

REMOVE EXISTING CURB STOP (APPROXIMATE LOCATION)

APPROXIMATE EXTENT OF ROAD CUT REINSTATEMENT IN ACCORDANCE WITH CITY OF OTTAWA DRAWING No. R10

BLANK WATER SERVICE AT CITY WATERMAIN BY CITY FORCES

CB-1
TOP 84.30
INV 82.48

CB/MH-2
TOP 84.62
INV 82.43(NW)
INV 82.43(S)

CB/MH-3
TOP 84.66
INV 82.35(N)
INV 82.35(S)
ICD IN OUTLET PIPE
HYDROVEX 50VHV-1
2.42L/s @ 2.12m

MH-4
TOP ±84.31
INV 82.29(N)
INV ±82.25(W)
INV ±82.21(E)

EXISTING MH
TOP 81.02
INV ±79.67(S)
INV ±78.71(N)

EXISTING CB
TOP 81.28

EXISTING CB
TOP 81.30

EXISTING CB
TOP 83.51

EXISTING MH
TOP 82.85
INV ±80.16

EXISTING MH
TOP 83.23
INV ±81.05(W)
INV ±81.02(S)
INV ±80.94(N)

EXISTING MH
TOP 83.11
INV ±79.67(W)
INV ±79.67(SW)
INV ±79.67(E)

EXISTING MH
TOP 85.70
INV ±82.59(W)
INV ±82.59(E)

EXIST. ST MH
TOP 85.54
INV ±83.45(W)
INV ±83.45(E)

SITE BENCHMARK #1:
MAG NAIL IN HP
ELEV=82.54

SITE BENCHMARK #2:
MAG NAIL IN HP
ELEV=83.87

±48.8m EXISTING 375
CONC ST @ ±2.44%

±75.9m EXISTING 225
CONC SAN @ ±4.74%

±45.8m EXISTING 300
CONC ST @ ±2.67%

±44m EXISTING 300
CONC ST @ ±2.67%

±100.5m EXISTING 225
CONC SAN @ ±2.91%

EXISTING 375 CONC ST @ ±2.44%

EXISTING 150 UCI WM

11.9m – 250 PVC ST @ 0.43%

18m – 250 PVC ST @ 0.43%

15m–250 PVC ST @ 0.43%

250 ST INV 82.47
250 ST SPL ±82.47

ST INV 82.53
3m – 250 PVC ST @ 2%

0+16.1
100 PVC WS

0+11.4
VB

13.8m – 150
PVC SAN @ 2%

0+05.4

300 ST INV ±81.78
150 SAN TOP 80.94

150 SAN INV 80.73
225 SAN SPL ±80.73

0+02.3

0+00.0

SAN INV 81.01

SILVER STREET
(FORMERLY SIMCOE STREET AS PER REGISTERED PLAN 294)

SUMMERVILLE AVENUE
(FORMERLY SIMCOE STREET AS PER REGISTERED PLAN 294)

ALL EXISTING TREES SHALL BE PROTECTED DURING AND AFTER CONSTRUCTION IN ACCORDANCE WITH THE TREE PROTECTION BY-LAW

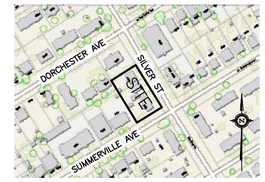
APPROXIMATE EXTENT OF ROAD CUT REINSTATEMENT IN ACCORDANCE WITH CITY OF OTTAWA DRAWING No. R10

REFER TO NOTES & DETAILS ON DRAWINGS C-5 & C-6

LEGEND

FFL	FIRST FLOOR ELEVATION
TOF	TOP OF FOUNDATION
BFL	BASEMENT FLOOR ELEVATION
USF	UNDERSIDE OF FOOTING
	PROPERTY LINE
CB	CATCH BASIN
MH	STORM MANHOLE
CB/MH	CATCH BASIN/MANHOLE
MH	SANITARY MANHOLE
FH	FIRE HYDRANT
CS	CURB STOP & STANDPOST
VB	VALVE & VALVE BOX
SAN	SANITARY SEWER
ST	STORM SEWER
WS/WM	WATER SERVICE/WATERMAIN
SPL	SPRINGLINE OF PIPE
INV	INVERT OF PIPE
	150mm BARRIER CURB
	ROAD CUT REINSTATEMENT

KEY PLAN



No.	DATE	REVISION
1	FEB 27-24	ISSUED FOR APPROVAL

D. B. GRAY ENGINEERING INC.
Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermains
700 Long Point Circle 613-425-8044
Ottawa, Ontario d.gray@dbgrayengineering.com

Project

PROPOSED 4-STOREY APARTMENT BUILDING
1066 SILVER STREET
OTTAWA, ONTARIO

Drawing Title

SITE SERVICING PLAN

Engineer's Seal

LICENSED PROFESSIONAL ENGINEER
D.B. GRAY
17016502
FEB 27-24
PROVINCE OF ONTARIO

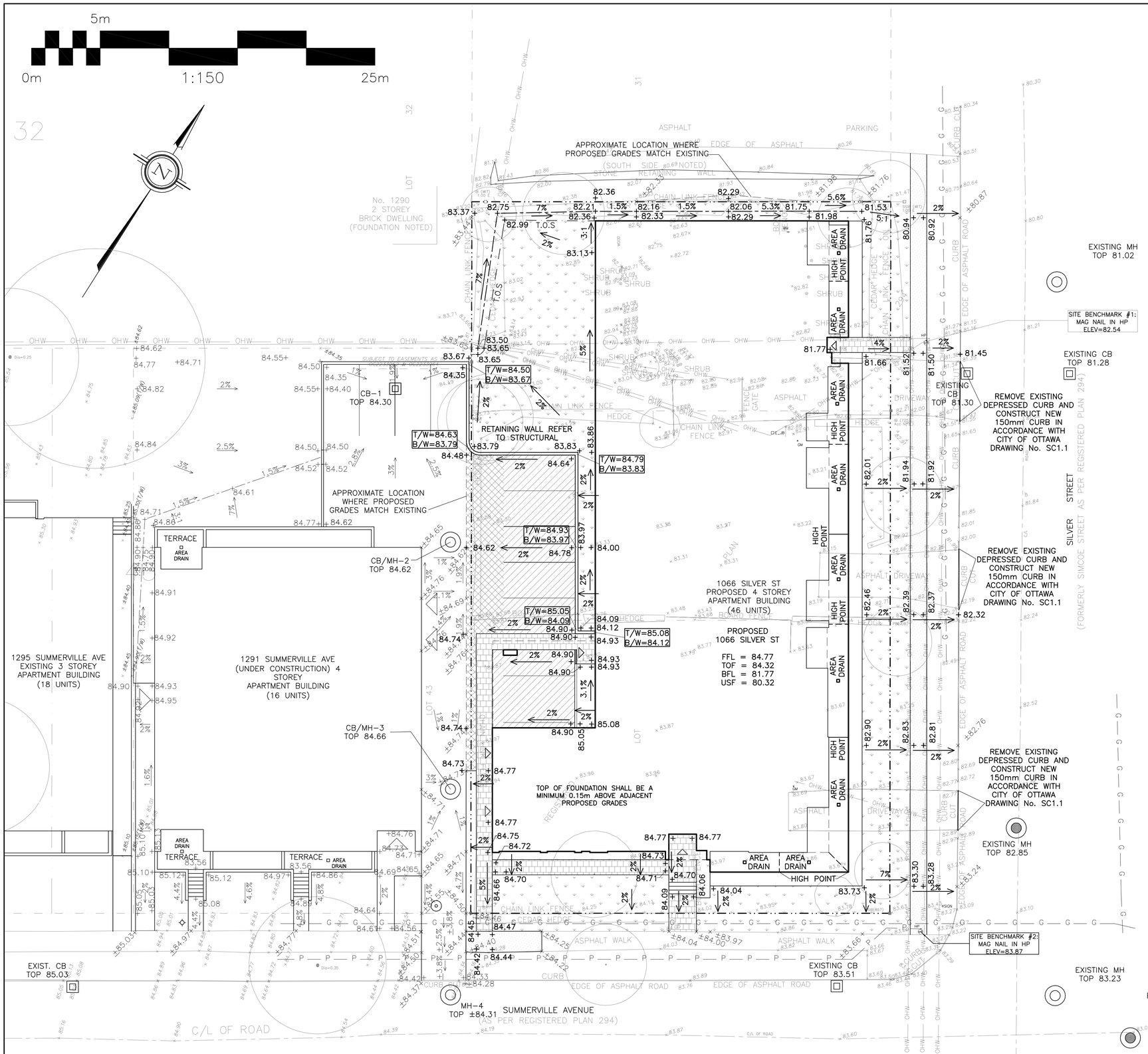
NOT VALID UNLESS SIGNED & DATED

Drawn	D.B.G
H. Scale	1:150
V. Scale	
Date	JAN 23-24
Job No.	23056

Drawing No.
C-1
of 7

5m

0m 1:150 25m



TOP OF FOUNDATION SHALL BE A MINIMUM 0.15m ABOVE ADJACENT PROPOSED GRADES

USF SHALL BE A MINIMUM 1.5m BELOW ADJACENT PROPOSED GRADES OR PROVIDE ADEQUATE INSULATION

GRADING SHALL BE BETWEEN 2% & 7%. GRADING OVER 7% SHALL BE TERRACED AT MAXIMUM 3H:1V.

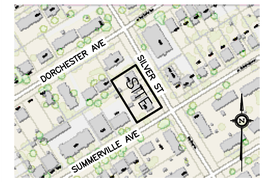
ALL EXISTING TREES SHALL BE PROTECTED DURING AND AFTER CONSTRUCTION IN ACCORDANCE WITH THE TREE PROTECTION BY-LAW

REFER TO NOTES & DETAILS ON DRAWINGS C-5 & C-6

LEGEND

FFL	FIRST FLOOR ELEVATION
TOF	TOP OF FOUNDATION
BFL	BASEMENT FLOOR ELEVATION
USF	UNDERSIDE OF FOOTING
	PROPERTY LINE
CB	CATCH BASIN
MH	STORM MANHOLE
CB/MH	CATCH BASIN/MANHOLE
MH	SANITARY MANHOLE
FH	FIRE HYDRANT
x99.99	EXISTING GRADE ELEVATION
+99.99	PROPOSED GRADE ELEVATION
2%	EXISTING SLOPE OF GRADE
2%	PROPOSED SLOPE OF GRADE
	CENTERLINE OF SWALE
	150mm BARRIER CURB
D.C	DEPRESSED CURB
	LIGHT-DUTY PAVEMENT
	HEAVY-DUTY PAVEMENT
	ASPHALT SIDEWALK
	INTERLOCK
	LANDSCAPE

KEY PLAN



No.	DATE	REVISION
2	FEB 27-24	ISSUED FOR APPROVAL
1	FEB 22-24	ISSUED FOR COORDINATION

D. B. GRAY ENGINEERING INC.

Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermains

700 Long Point Circle 613-425-8044

Ottawa, Ontario d.gray@dbgrayengineering.com

Project

PROPOSED 4-STOREY APARTMENT BUILDING 1066 SILVER STREET

OTTAWA, ONTARIO

Drawing Title

GRADING PLAN

Engineer's Seal

LICENSED PROFESSIONAL ENGINEER
D.B. GRAY
17016502
FEB 27-24
PROVINCE OF ONTARIO

NOT VALID UNLESS SIGNED & DATED

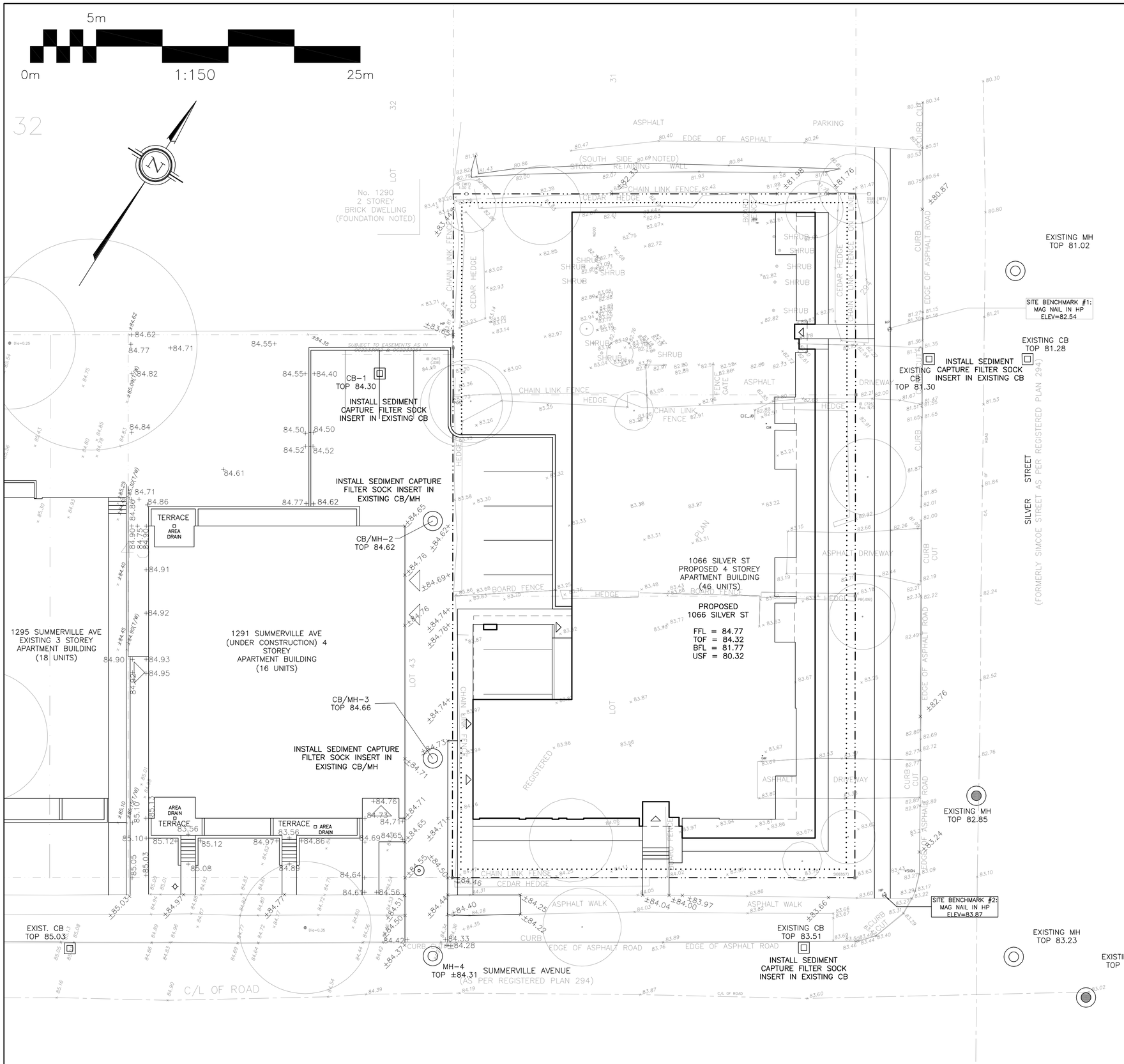
Drawn	D.B.G
H. Scale	1:150
V. Scale	
Date	JAN 23-24
Job No.	23056

Drawing No.

C-2
of 7

5m

0m 1:150 25m

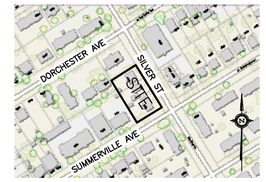


REFER TO NOTES & DETAILS
ON DRAWINGS C-5 & C-6

LEGEND

FFL	FIRST FLOOR ELEVATION
TOF	TOP OF FOUNDATION
BFL	BASEMENT FLOOR ELEVATION
USF	UNDERSIDE OF FOOTING
	PROPERTY LINE
CB	CATCH BASIN
MH	STORM MANHOLE
CB/MH	CATCH BASIN/MANHOLE
MH	SANITARY MANHOLE
FH	FIRE HYDRANT
×99.99	EXISTING GRADE ELEVATION
	150mm BARRIER CURB
	SILT FENCE BARRIER

KEY PLAN



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D. B. GRAY ENGINEERING INC.

Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermains

700 Long Point Circle 613-425-8044

Ottawa, Ontario d.gray@dbgrayengineering.com

Project

PROPOSED 4-STOREY
APARTMENT BUILDING
1066 SILVER STREET

OTTAWA, ONTARIO

Drawing Title

EROSION & SEDIMENT CONTROL PLAN

Engineer's Seal

LICENSED PROFESSIONAL ENGINEER
D.B. GRAY
17016502
FEB 27-24
PROVINCE OF ONTARIO

NOT VALID UNLESS
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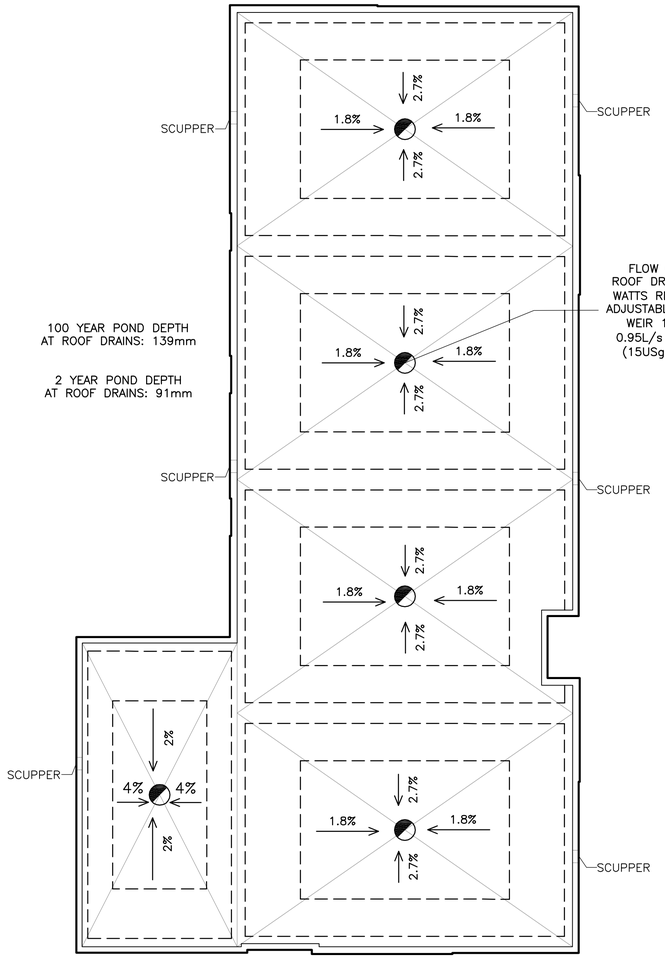
Drawn	D.B.G
H. Scale	1:150
V. Scale	
Date	JAN 23-24
Job No.	23056

Drawing No.

C-3
of 7

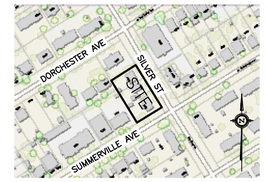


INSTALL A MINIMUM OF 6 SCUPPERS EACH A MINIMUM 430mm WIDE. BOTTOM OF SCUPPERS SHALL BE 150mm ABOVE THE ROOF DRAINS. REFER TO ARCHITECTURAL FOR EXACT LOCATIONS AND DETAILS. ROOF SHALL BE DESIGNED TO CARRY THE LOAD OF WATER HAVING A 50mm DEPTH AT SCUPPERS (i.e. 200mm DEPTH AT THE ROOF DRAINS). REFER TO STRUCTURAL.

RAINWATER LEADERS INSIDE BUILDING SHALL BE CONSTRUCTED TO WITHSTAND THE PRESSURE FROM A WATER COLUMN THE HEIGHT OF THE RAINWATER LEADER. PERFORM PRESSURE TESTS ON THE SYSTEMS IN ACCORDANCE WITH THE MECHANICAL ENGINEER'S INSTRUCTIONS.

REFER TO NOTES & DETAILS
ON DRAWINGS C-5 & C-6

KEY PLAN



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700 Long Point Circle 613-425-8044
Ottawa, Ontario d.gray@dbgrayengineering.com

Project

PROPOSED 4-STOREY
APARTMENT BUILDING
1066 SILVER STREET

OTTAWA, ONTARIO

Drawing Title

ROOF DRAINAGE PLAN

Engineer's Seal

LICENSED PROFESSIONAL ENGINEER
D.B. GRAY
17016502
FEB 27-24
PROVINCE OF ONTARIO

NOT VALID UNLESS
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Drawn	D.B.G
H. Scale	1:150
V. Scale	
Date	JAN 23-24
Job No.	23056

Drawing No.

C-4
of 7

1. GENERAL

1.1 USE BAR SCALE TO CONFIRM ACTUAL PLOT SCALE. EXISTING AND NEW ELEVATIONS AND INVERTS SHOWN ARE GEODETIC AND ARE IN METERS. ALL PIPE DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
1.2 UNLESS OTHERWISE STATED "ENGINEER" REFERS TO D. B. GRAY ENGINEERING INC.
1.4 SITE BOUNDARIES AND EXISTING GRADES AND OTHER FEATURES DERIVED FROM TOPOGRAPHIC SURVEY PREPARED BY S THE RESPONSIBILITY OF THE USER OF THE SURVEY PLAN AND THESE DRAWINGS TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREE WITH THE INFORMATION SHOWN ON SURVEY PLAN AND THESE DRAWINGS.
1.5 REFER TO ARCHITECTURAL AND LANDSCAPE SITE PLANS FOR EXACT LOCATIONS OF BUILDINGS, PAVED AREAS, SIDEWALKS, PLANTERS ETC. LAYOUT SHALL BE COMPLETED BY THE CONTRACTOR AND SHALL BE REVIEWED BY THE OWNER'S REPRESENTATIVE / ENGINEER PRIOR TO CONSTRUCTION. AT ALL TIMES THE CONTRACTOR IS RESPONSIBLE FOR THE ACCURACY OF THE LAYOUT INCLUDING LINES AND GRADES.
1.6 REFERENCE THE LATEST REVISION AND ALL ADDENDUMS OF THE GEOTECHNICAL INVESTIGATION BY PATERSON GROUP INC. FILE: PG5573–LET.03, DATED JANUARY 17, 2024. SITE PREPARATION SHALL CONFORM TO THE GEOTECHNICAL INVESTIGATION TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER INCLUDING: BUILDING SUB–GRADE PREPARATION; PAVEMENT SUB–GRADE PREPARATION AND CONSTRUCTION OF THE PAVEMENT STRUCTURE; EXCAVATION AND BACKFILLING; SERVICE TRENCH EXCAVATION AND PIPE BEDDING AND BACKFILL; AND THE COMPACTION OF MATERIALS. DRAWINGS ARE TO BE READ IN CONJUNCTION WITH SPECIFICATIONS.
1.7 DRAWINGS ARE TO BE READ IN CONJUNCTION WITH SITE SERVICING & STORM WATER MANAGEMENT REPORT No. 23104 PREPARED BY D. B. GRAY ENGINEERING INC.
1.8 REINSTATE ADJACENT PROPERTIES TO PRE–CONSTRUCTION CONDITIONS.
1.9 REINSTATE CITY PROPERTIES TO CITY STANDARDS AND TO CITY OF OTTAWA'S SATISFACTION.
1.10 ALL RELEVANT WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT CITY STANDARDS AND SPECIFICATIONS.
1.11 ONTARIO PROVINCIAL STANDARDS & SPECIFICATIONS WILL APPLY WHERE NO CITY STANDARDS ARE AVAILABLE.

2. EROSION AND SEDIMENT CONTROL PLAN

2.1 THE EROSION AND SEDIMENT CONTROL PLAN IS A "LIVING DOCUMENT" AND SHALL BE REVISED IN THE EVENT THE SPECIFIED CONTROL MEASURES ARE NOT SUFFICIENT. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATER COURSE DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, USING SEDIMENT CAPTURE FILTER SOCK INSERTS IN CATCH BASINS AND MANHOLES AND INSTALLING SILT FENCES AND OTHER EFFECTIVE SEDIMENT TRAPS. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY. SPECIFICALLY THE CONTRACTOR SHALL INSTALL THE FOLLOWING CONTROL MEASURES AND INSPECT (AFTER EACH RAINFALL), MAINTAIN AND REMOVE THE CONTROL MEASURES.
2.2 PRIOR TO COMMENCEMENT OF CONSTRUCTION AT ALL MUNICIPAL CATCH BASINS ADJACENT TO THE SITE AND AT ANY MANHOLES OR CATCH BASINS THAT WILL RECEIVE DISCHARGE FROM DE–WATERING OPERATIONS AND ALL NEW CATCH BASINS AS THEY ARE INSTALLED: INSTALL SEDIMENT CAPTURE FILTER SOCK INSERTS (TERRAFIX GEOSYNTHETICS INC SILTSACK OR APPROVED EQUAL). INSPECT AT THE END OF EACH DAY AND AFTER EACH RAINFALL. REMOVE SEDIMENT AS RECOMMENDED BY THE MANUFACTURER. IMMEDIATELY REPAIR OR REPLACE ANY DAMAGED FILTER SOCK INSERTS. DO NOT REMOVE UNTIL CONSTRUCTION IS COMPLETE.
2.3 ANY MATERIAL DEPOSITED ON A PUBLIC ROAD SHALL BE REMOVED BY SWEEPING AND SHOVELING OR VACUUMING AND DISPOSING SEDIMENT IN A CONTROLLED AREA. DO NOT SWEEP OR HOSE MATERIAL INTO ANY STORMWATER CONVEYANCE SYSTEM.
2.4 CONSTRUCTION IS CONSIDERED COMPLETE WHEN THE FOLLOWING CONDITIONS HAVE BEEN MET:
a. ALL STRUCTURES HAVE BEEN BUILT.
b. ALL HARD SURFACES HAVE BEEN CONSTRUCTED.
c. ALL PROPOSED GRASSED AREAS ARE EITHER SODDED OR HAVE A FULL COVERAGE OF WELL ESTABLISHED TURF AND HAVE HAD A MINIMUM OF ONE FULL GROWING SEASON (MAY 15TH TO SEPTEMBER 15TH).
d. THERE ARE NO AREAS OF EXPOSED EARTH.
e. ALL STOCKPILED MATERIALS HAVE BEEN REMOVED.
2.5 REMOVE EROSION AND SEDIMENT CONTROL MEASURES WHEN CONSTRUCTION IS COMPLETE.

3. GRADING & DRAINAGE

3.1 NEW GRADES TO MATCH EXISTING AT PROPERTY LINE. NO EXCESS DRAINAGE WILL BE DIRECTED TOWARDS THE ADJACENT PROPERTIES DURING AND AFTER CONSTRUCTION. THERE WILL BE NO ALTERATION TO EXISTING GRADE AND DRAINAGE PATTERNS ON PROPERTY LINE.
3.2 ALL AREAS SHALL BE GRADED TO ENSURE ADEQUATE DRAINAGE AWAY FROM BUILDINGS TO CATCH BASINS, SWALES, DITCHES AND OTHER APPROVED DISPOSAL AREAS. GRADING SHALL BE GRADUAL BETWEEN FINISHED SPOT ELEVATIONS SHOWN ON DRAWINGS TO PREVENT PONDING (OTHER THAN PONDING REQUIRED FOR STORMWATER MANAGEMENT).
3.3 WHETHER RESULT OF POOR WORKMANSHIP OR DAMAGE: DEFECTIVE GRADING SHALL BE CORRECTED. PROMPTLY MAKE GOOD OTHER CONTRACTOR'S WORK DAMAGED BY SUCH CORRECTIONS.
3.4 CONCRETE CURBS SHALL BE CONSTRUCTED TO CITY OF OTTAWA DRAWING NO. SC1.1. CONCRETE SIDEWALK SHALL BE CONSTRUCTED TO CITY OF OTTAWA DRAWING NO. SC4. CONCRETE CURBS WITH CONCRETE SIDEWALK SHALL BE CONSTRUCTED TO CITY OF OTTAWA DRAWING NO. SC1.4.

4. SITE SERVICES

4.1 CONNECTION TO WATERMAIN BY CITY OF OTTAWA FORCES, CONTRACTOR SHALL PROVIDE EXCAVATION, BACKFILL AND REINSTATEMENT.
4.2 WATER METER SHALL BE INSTALLED AS PER CITY OF OTTAWA DWG. No. W32.
4.3 ALL WATER SERVICE MATERIALS AND CONSTRUCTION METHODS TO CITY OF OTTAWA STANDARDS AND ONTARIO PROVINCIAL STANDARDS SPECIFICATIONS (OPSS & OPSD). WATER SERVICE MATERIALS SHALL BE PVC PRESSURE CLASS 150 DR18. METALLIC WARNING TAPE SHALL BE INSTALLED OVER ALL WATERMAINS. PROVIDE THRUST BLOCKS AS PER CITY OF OTTAWA DWG. No. W25.3 & W25.4 AT ALL VALVES, TEES, CAPS, BENDS, REDUCERS AND HYDRANTS OR OTHER FITTINGS WHERE CHANGES OCCUR IN PIPE DIAMETER OR DIRECTION. RESTRAINING AS PER AS PER CITY OF OTTAWA DWG. No W25.5 & W25.6.ALL CONNECTIONS, RESTRAINT RODS AND VALVE BOLTS TO BE STAINLESS STEEL. CATHODIC PROTECTION & ANODE INSTALLATION AS PER CITY OF OTTAWA DWG. No W40, W42, W44 & W47.
4.4 PROVIDE A MINIMUM 2.4 m COVER OVER WATER SERVICE CONNECTION. WHERE THE MINIMUM COVER IS NOT POSSIBLE INSULATE AS PER CITY OF OTTAWA DWG. No. W22.
4.5 WATER SERVICE CONNECTION INSTALLED PARALLEL TO A SEWER CONNECTION WITHIN 2.5 m HORIZONTAL DISTANCE OF A SEWER SHALL BE CONSTRUCTED OF A SINGLE RUN OF PIPE WITH NO JOINTS OR FITTINGS BETWEEN THE WATERMAIN AND VALVE AND BETWEEN THE VALVE AND THE INSIDE FACE OF THE BUILDING.
4.6 SEWER SERVICE LATERAL SHALL HAVE A MINIMUM 2.0m OF COVER OR SHALL BE INSULATED AS PER DETAIL.
4.7 CONNECT PROPOSED SANITARY SEWER SERVICE CONNECTION TO EXISTING MUNICIPAL SANITARY SEWER AS PER CITY OF OTTAWA DWG No. S11 (RIGID MAIN SEWER).
4.8 CONNECT PROPOSED STORM SEWER SERVICE CONNECTION TO EXISTING MUNICIPAL STORM SEWER AS PER CITY OF OTTAWA DWG No. S11 (RIGID MAIN SEWER).
4.9 ALL SEWER MATERIALS AND CONSTRUCTION METHODS TO CITY OF OTTAWA STANDARDS AND ONTARIO PROVINCIAL STANDARDS SPECIFICATIONS (OPSS & OPSD). SEWER MATERIAL SHALL BE PVC SDR–35 (SDR–28 FOR DIAMETERS 150mm OR LESS) AND SHALL CONFORM TO CSA B182.2 AND SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS.

5. CONSTRUCTION:

5.1 PRIOR TO COMMENCING WORK:
A. OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE AUTHORITIES.
B. SIZE, DEPTH AND LOCATION OF EXISTING INFRASTRUCTURE (SERVICES, UTILITIES, AND STRUCTURES) AND ARE NOT NECESSARILY SHOWN ON DRAWINGS AND THOSE INDICATED ON THE DRAWINGS ARE DERIVED FROM AVAILABLE INFORMATION AND ARE FOR GUIDANCE ONLY AND MUST BE CONFIRMED ON SITE BEFORE COMMENCING ANY WORK. COMPLETENESS AND ACCURACY ARE NOT GUARANTEED. NOTIFY ALL APPLICABLE OWNERS, UTILITY COMPANIES AND AUTHORITIES HAVING JURISDICTION OF PROPOSED WORK AND LOCATE AND CLEARLY IDENTIFY ALL EXISTING INFRASTRUCTURE ON THE SITE AND ADJACENT TO THE SITE. UNDERGROUND LOCATES (INCLUDING BUT NOT LIMITED TO ONTARIO ONE CALL: 1–800–400–2255) SHALL BE CONDUCTED PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION. CONFIRM LOCATIONS OF BURIED INFRASTRUCTURE BY CAREFUL TEST EXCAVATIONS AND REPORT ANY DIFFERENCES TO THE ENGINEER. ANY ISSUES ARISING FROM FAILURE OF CONTRACTOR TO DETERMINE THE SIZE, DEPTH AND LOCATION ALL EXISTING INFRASTRUCTURE WILL BE AT THE CONTRACTOR'S EXPENSE.
C. EXISTING ELEVATIONS SHOWN ON DRAWINGS ARE DERIVED FROM AVAILABLE INFORMATION AND ARE FOR GUIDANCE ONLY AND MUST BE CONFIRMED ON SITE BEFORE COMMENCING CONSTRUCTION. COMPLETENESS AND ACCURACY ARE NOT GUARANTEED. REPORT ANY DIFFERENCES TO ENGINEER.
D. COORDINATE AND SCHEDULE WORK WITH THE OWNER, AUTHORITIES AND OTHER TRADES.
E. SCHEDULE WORK TO PROVIDE THE MINIMUM DISRUPTION TO SERVICES.
F. INSTALL CONSTRUCTION FENCING AROUND THE AREA OF WORK. DO NOT REMOVE FENCING UNTIL WORK IS COMPLETE.

5.2 MAINTAIN AND PROTECT FROM DAMAGE, SERVICES, UTILITIES AND STRUCTURES ENCOUNTERED.
5.3 PROTECT EXISTING BUILDINGS, TREES AND OTHER PLANTS, LAWNS, FENCING, SERVICE POLES, WIRES, PAVEMENT, SURVEY BENCH MARKS AND MONUMENTS AND OTHER SURFACE FEATURES FROM DAMAGE WHILE WORK IS IN PROGRESS. DO NOT DISTURB SOIL WITHIN BRANCH SPREAD OF TREES OR SHRUBS THAT ARE TO REMAIN.
5.4 PROVIDE TRAFFIC CONTROL AND SAFETY MEASURES AS REQUIRED BY THE AUTHORITIES, INCLUDING ANY NECESSARY PERSONNEL AND THE SUPPLY, INSTALLATION, REMOVAL AND REPLACEMENT OF ALL NECESSARY SIGNAGE AND BARRIERS. IF APPLICABLE, PROVIDE TRAFFIC MANAGEMENT PLAN AS PER CITY OF OTTAWA REQUIREMENTS.
5.5 FENCE OFF ALL OPEN EXCAVATIONS AT THE END OF EACH WORK DAY. FENCES SHALL BE INSTALLED AND MAINTAINED IN A GOOD AND WORKMAN LIKE MANNER.
5.6 REMOVE OBSTRUCTIONS, ICE AND SNOW, FROM SURFACES TO BE EXCAVATED.
5.7 CUT PAVEMENT AND / OR SIDEWALK NEATLY ALONG LIMITS OF PROPOSED EXCAVATION IN ORDER THAT SURFACE MAY BREAK EVENLY AND CLEANLY.
5.8 COORDINATE AND PAY FOR GEOTECHNICAL INSPECTIONS AND COMPACTION TESTS OF SUB–GRADE, PIPE BEDDING AND EACH LAYER OF SURROUND MATERIAL, BACKFILL, SUB–BASE, BASE AND ASPHALT TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT AND ENGINEER. SUBMIT GEOTECHNICAL INSPECTIONS AND COMPACTION REPORTS TO ENGINEER.
5.9 CUT AND FILL AS NECESSARY TO ACHIEVE THE PROPOSED GRADE ELEVATIONS. DISPOSE OF SURPLUS AND UNSUITABLE EXCAVATED MATERIAL OFF SITE. FILL MATERIAL AND THE PLACEMENT AND COMPACTION OF THE FILL MATERIAL AS PER THE GEOTECHNICAL REPORT AND TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT. STOCKPILE GRANULAR AND FILL MATERIALS IN MANNER TO PREVENT SEGREGATION AND PROTECT FROM CONTAMINATION. PLACE MATERIAL IN UNIFORM LAYERS NOT EXCEEDING 300mm COMPACTED THICKNESS. PROTECT WORK AREA AGAINST FLOODING AND DAMAGE DUE TO SURFACE RUN–OFF. DEWATER AS REQUIRED TO KEEP WORK AREA FREE OF WATER. DISCHARGE FROM DEWATERING OPERATIONS SHALL BE DIRECTED TO A SEDIMENT CONTROL MEASURE AND/OR A VEGETATED DISCHARGE AREA. ENSURE THAT THE DISCHARGED WATER DOES NOT CAUSE EROSION OR OTHER DAMAGE TO ADJACENT LANDS.
5.10 EXCAVATION, TRENCHING, ENGINEERED FILL, COMPACTION & BACKFILL SHALL BE AS PER THE GEOTECHNICAL INVESTIGATION:
A. SHORE AND BRACE EXCAVATIONS, PROTECT SLOPES AND BANKS AND PERFORM ALL WORK IN ACCORDANCE WITH ONTARIO REGULATION 213/91 UNDER THE ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT AND OTHER AUTHORITIES HAVING JURISDICTION.
B. KEEP EXCAVATIONS FREE OF WATER WHILE WORK IS IN PROGRESS. PROTECT OPEN EXCAVATIONS AGAINST FLOODING AND DAMAGE DUE TO SURFACE RUN–OFF.
C. EXCAVATION MUST NOT INTERFERE WITH BEARING CAPACITY OF ADJACENT FOUNDATIONS.
D. DO NOT OBSTRUCT FLOW OF SURFACE DRAINAGE OR NATURAL WATERCOURSES.
E. EXCAVATE TO LINES, GRADES, ELEVATIONS AND DIMENSIONS AS INDICATED.
F. EARTH BOTTOMS OF EXCAVATIONS TO BE UNDISTURBED SOIL, LEVEL, FREE FROM LOOSE, SOFT OR ORGANIC MATTER.
G. ALL STRUCTURES WITHIN PAVED AREAS SHALL HAVE 4:1 FROST TAPERS FROM FROST LINE TO SUB–GRADE.
H. CORRECT OVER–EXCAVATION WITH GRANULAR A COMPACTED TO NOT LESS THAN 95% OF CORRECTED MAXIMUM DRY DENSITY.
I. SUB–GRADE AND AREAS TO BE BACKFILLED TO BE FREE FROM DEBRIS, SNOW, ICE, WATER AND FROZEN GROUND.
J. DO NOT USE BACKFILL MATERIAL WHICH IS FROZEN OR CONTAINS ICE, SNOW OR DEBRIS.
K. PIPE BEDDING AND SURROUND MATERIAL SHALL BE OPSS GRANULAR A. RE–CYLCLED GRANULAR MATERIALS ARE NOT PERMITTED.
L. DO NOT USE BEDDING, SURROUND OR BACKFILL MATERIAL WHICH IS FROZEN OR CONTAINS ICE, SNOW OR DEBRIS.
M. PIPE BEDDING SHALL BE 150mm THICK. SHAPE BED TRUE TO GRADE AND TO PROVIDE CONTINUOUS, UNIFORM BEARING SURFACE FOR PIPE.
N. PLACE SURROUND MATERIAL AROUND PIPES TO FULL WIDTH OF TRENCH AND TO 300mm ABOVE PIPES.
O. PLACE BEDDING AND SURROUND MATERIAL IN UNIFORM LAYERS NOT EXCEEDING 150mm COMPACTED THICKNESS. PLACE FILL AND BACKFILL MATERIAL IN UNIFORM LAYERS NOT EXCEEDING 300mm COMPACTED THICKNESS.
P. COMPACT EACH LAYER TO 95% OF CORRECTED DRY DENSITY BEFORE PLACING SUCCEEDING LAYER.
Q. DO NOT BACKFILL AROUND OR OVER CAST–IN–PLACE CONCRETE WITHIN 24 HOURS AFTER PLACING OF CONCRETE.
R. BACKFILL MATERIALS WITHIN 1.8m OF PROPOSED GRADE SHALL MATCH THE MATERIALS EXPOSED ON THE TRENCH WALLS. BACKFILL BELOW 1.8m OF THE PROPOSED CAN CONSIST OF EITHER ACCEPTABLE NATIVE MATERIAL; ROCK; OR IMPORTED GRANULAR MATERIAL CONFORMING TO OPSS GRANULAR B TYPE I OR II. ANY ORGANIC SOILS OR TOPSOIL, IF ENCOUNTERED, SHALL BE REMOVED FROM THE EXCAVATION. IF ROCK IS USED AS BACKFILL IT SHALL BE WELL SHATTERED AND GRADED AND 200mm OR SMALLER IN DIAMETER. TO PREVENT INGRESS OF FINE MATERIAL INTO VOIDS IN THE ROCK FILL, THE UPPER SURFACE OF THE ROCK FILL SHALL BE COVERED WITH 150mm LAYER OF COMPACTED, WELL GRADED CRUSHED STONE PLACED ON GEOTEXTILE FABRIC.

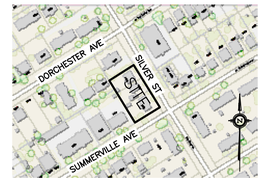
5.11 PIPES:
A. HANDLE PIPE USING METHODS APPROVED BY MANUFACTURER.
B. LAY, CUT AND JOIN PIPES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
C. USE ONLY FITTINGS AS RECOMMENDED BY PIPE MANUFACTURER.
D. LAY PIPES ON PREPARED BED, TRUE TO LINE AND GRADE AND ENSURE BARREL OF EACH PIPE IS IN CONTACT WITH SHAPED BED THROUGHOUT ITS FULL LENGTH, FREE OF SAGS OR HIGH POINTS.
E. DO NOT EXCEED MAXIMUM JOINT DEFLECTION RECOMMENDED BY PIPE MANUFACTURER.
F. WHENEVER WORK IS SUSPENDED, INSTALL REMOVABLE WATERTIGHT BULKHEAD AT OPEN END OF LAST PIPE LAID TO PREVENT ENTRY OF FOREIGN MATERIALS.
G. WHEN STOPPAGE OF WORK OCCURS, BLOCK PIPES TO PREVENT CREEP DURING DOWN TIME. MAKE WATERTIGHT CONNECTIONS TO MANHOLES.
H. JOINTS SHALL BE STRUCTURALLY SOUND AND WATERTIGHT.
I. REPAIR OR REPLACE PIPE, PIPE JOINT OR BEDDING FOUND DEFECTIVE.

5.12 SEWERS AND SEWER SERVICES:
A. CONSTRUCT SEWER TRENCHES AS PER CITY DWG S6 & S7.
B. RIGID STRUCTURES, INSTALL PIPE JOINTS NOT MORE THAN 1.2M FROM SIDE OF STRUCTURE.
C. MAINTAIN EXISTING SEWAGE FLOWS DURING CONSTRUCTION.
D. PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. SPECIFICALLY, THE LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410. REPAIR AND RETEST SEWER LINE AS REQUIRED. REPAIR VISIBLE LEAKS REGARDLESS OF TEST RESULTS.
E. CONDUCT TWO CCTV INSPECTIONS OF SEWERS. FIRST INSPECTION AFTER COMPLETION OF CONSTRUCTION. SECOND INSPECTION IMMEDIATELY PRIOR TO END OF WARRANTY PERIOD. A PAN AND TILT CAMERA SHALL BE USED. REPAIR SEWER LINE AS REQUIRED. SUBMIT REPORTS AND VIDEOS TO ENGINEER.

5.13 WATER SERVICE:
A. INSTALL AND TEST TRACER WIRE ON THE WATER SERVICE CONNECTION AS PER 4.3.12 OF THE CITY OF OTTAWA WATER DISTRIBUTION DESIGN GUIDELINES AND DRAWING W36.
B. PRESSURE TESTING AS PER AWWA C–605–5 AND CITY OF OTTAWA DESIGN GUIDELINES – WATER DISTRIBUTION SECTION 4.6.13.
C. CHLORINATION AS PER AWWA C–651–05 AND CITY OF OTTAWA DESIGN GUIDELINES – WATER DISTRIBUTION SECTION 4.6.13 & CITY DWG. W46.

5.14 MAINTAIN RECORD DRAWINGS AND ACCURATELY RECORD DEVIATIONS FROM THE ORIGINAL CONTRACT DOCUMENTS CAUSED BY SITE CONDITIONS AND CHANGES MADE BY CHANGE ORDER OR ADDITIONAL INSTRUCTIONS. UPDATE DAILY AND MAKE AVAILABLE ON–SITE FOR REVIEW THROUGHOUT THE CONSTRUCTION PERIOD. RECORD DRAWINGS SHALL INCLUDE BUT NOT NECESSARILY LIMITED TO CHANGES OF DIMENSION AND DETAIL; CHANGES TO GRADE ELEVATIONS; AND HORIZONTAL AND VERTICAL LOCATIONS OF UNDERGROUND SERVICES, UTILITIES AND APPURTENANCES REFERENCED TO A PERMANENT SURFACE STRUCTURE. SUBMIT DRAWINGS TO ENGINEER AT THE END OF CONSTRUCTION. SUBMIT A RECORD DRAWING OF "AS–BUILT" GRADE ELEVATIONS, PREPARED BY A SURVEYOR, TO THE ENGINEER AT THE END OF CONSTRUCTION.
5.15 WHETHER RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE PRODUCTS OR DAMAGE: DEFECTIVE PORTIONS OF CURBS, SIDEWALK AND ASPHALT SHALL BE CORRECTED OR REMOVED AND REPLACED. PROMPTLY MAKE GOOD OTHER CONTRACTOR'S WORK DAMAGED BY SUCH REMOVALS OR REPLACEMENTS.
5.16 REINSTATE ALL AREAS DISTURBED BY CONSTRUCTION. REINSTATE PAVEMENTS, CURBS AND SIDEWALKS, TO THICKNESS, STRUCTURE AND ELEVATION WHICH EXISTED BEFORE CONSTRUCTION. REINSTATE LANDSCAPED AREAS TO THE CONDITION AND ELEVATION WHICH EXISTED BEFORE CONSTRUCTION.
5.17 CLEAN AND REINSTATE AREAS AFFECTED BY THE WORK.

KEY PLAN



No.	DATE	REVISION
1	FEB 27–24	ISSUED FOR APPROVAL

D. B. GRAY ENGINEERING INC.
Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermains
700 Long Point Circle 613-425-8044
Ottawa, Ontario d.gray@dbgrayengineering.com

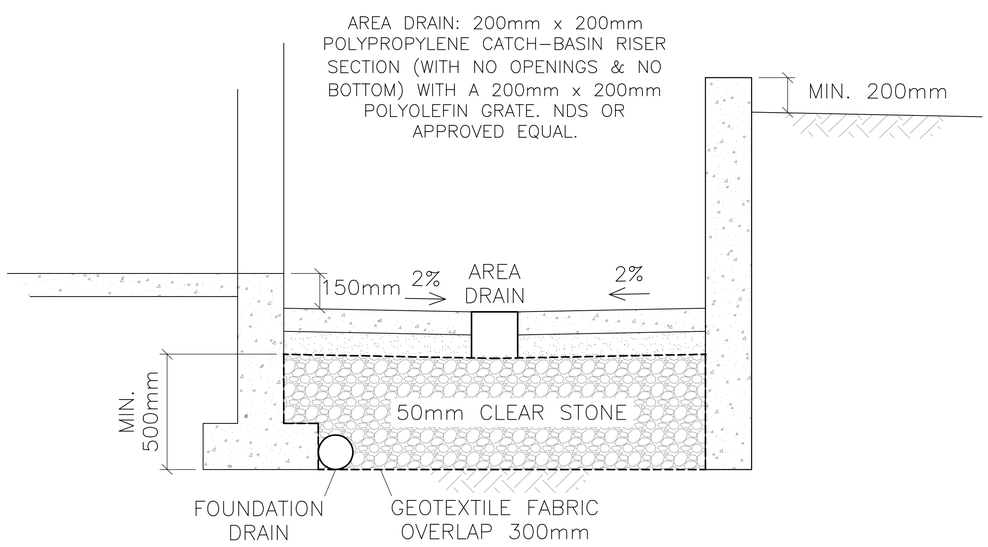
Project
PROPOSED 4–STOREY APARTMENT BUILDING
1066 SILVER STREET
OTTAWA, ONTARIO

Drawing Title
NOTES

Engineer's Seal
LICENSED PROFESSIONAL ENGINEER
D.B. GRAY
17016502
FEB 27–24
PROVINCE OF ONTARIO
NOT VALID UNLESS SIGNED & DATED

Drawn	D.B.G
H. Scale	
V. Scale	
Date	JAN 23–24
Job No.	23056

Drawing No.
C–5
of 7

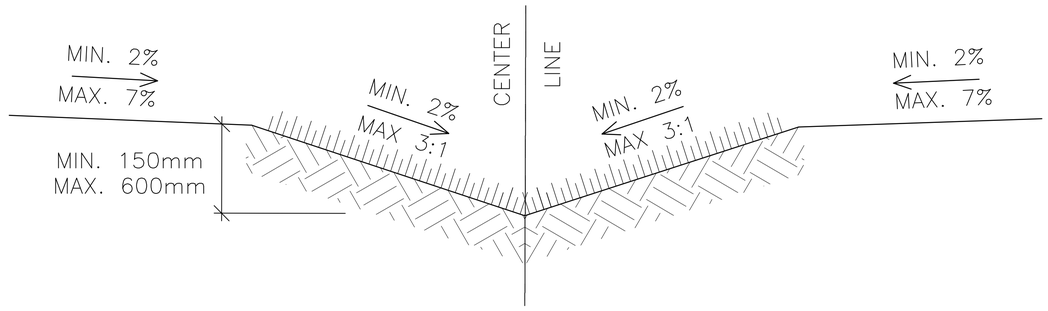


TERRACE DRAINAGE
SECTION A-A
(N.T.S)

WATER SERVICE PROFILE TABLE

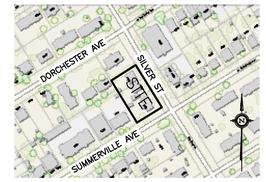
MATERIAL:
100mm PVC PRESSURE CLASS 150 DR18

STATION	DESCRIPTION	GRADE ELEVATION	TOP OF PIPE	DEPTH OF COVER	NOTES
0+00.0	150mm x 100mm TEE CONNECTION IN 150mm MUNICIPAL WATERMAIN TO CITY OF OTTAWA STANDARDS	±83.85	±81.75	±2.10	START OF 50mm THICK INSULATION AS PER CITY OF OTTAWA DRAWING No. W22
0+01.0	11.25° VERTICAL BEND DOWN TO CITY OF OTTAWA STANDARDS	±83.87	81.75	±2.12	–
0+02.3	–	±83.90	81.49	±2.41	END OF 50mm THICK INSULATION AS PER CITY OF OTTAWA DRAWING No. W22 CROSSING 225 SAN TOP 80.92 WS U/S 81.39 – 470mm CLEARANCE (MIN. 250mm REQ'D)
0+03.1	11.25° VERTICAL BEND UP TO CITY OF OTTAWA STANDARDS	±83.88	81.34	±2.54	–
0+05.4	–	±83.84	81.34	±2.50	CROSSING 300 ST INV 81.84 WS TOP 81.34 – 500mm CLEARANCE (MIN. 500mm REQ'D)
0+06.5	–	±83.82	81.34	±2.48	BOTTOM OF CURB
0+11.4	100mm VALVE & VALVE BOX TO CITY OF OTTAWA STANDARDS	84.10	81.34	2.76	ON PROPERTY LINE
0+16.1	–	84.21	81.34	2.87	ENTRY INTO BUILDING



SECTION SWALE
AS PER CITY OF
OTTAWA DRAWING S29
N.T.S.

KEY PLAN



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Ottawa, Ontario d.gray@dbgrayengineering.com

Project
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OTTAWA, ONTARIO

Drawing Title
DETAILS

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H. Scale	
V. Scale	
Date	JAN 23-24
Job No.	23056

Drawing No.
C-6
of 7

5m

0m 1:150 25m

I 698 0.43

II 882 0.90

1066 SILVER ST
PROPOSED 4 STOREY
APARTMENT BUILDING
(46 UNITS)

1295 SUMMERVILLE AVE
EXISTING 3 STOREY
APARTMENT BUILDING
(18 UNITS)

1291 SUMMERVILLE AVE
(UNDER CONSTRUCTION) 4
STOREY
APARTMENT BUILDING
(16 UNITS)

CB-1
TOP 84.30

CB/MH-2
TOP 84.62

CB/MH-3
TOP 84.66

MH-4
TOP ±84.31

EXISTING MH
TOP 81.02

SITE BENCHMARK #1:
MAG NAIL IN HP
ELEV=82.54

EXISTING CB
TOP 81.28

EXISTING
CB
TOP 81.30

EXISTING MH
TOP 82.85

SITE BENCHMARK #2:
MAG NAIL IN HP
ELEV=83.87

EXISTING CB
TOP 83.51

EXISTING MH
TOP 83.23

EXISTING MH
TOP 83.11

EXIST. CB
TOP 85.03

SILVER STREET
(FORMERLY SIMCOE STREET AS PER REGISTERED PLAN 294)

SUMMERVILLE AVENUE
(AS PER REGISTERED PLAN 294)

EDGE OF ASPHALT ROAD

CURB CUT

ASPHALT DRIVEWAY

ASPHALT WALK

PARKING

CHAIN LINK FENCE

CEDAR HEDGE

BOARD FENCE

STONE RETAINING WALL

C/L OF ROAD

LEGEND

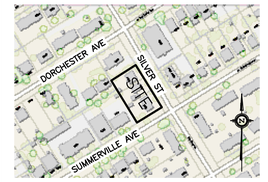
DRAINAGE AREA — AREA (sq.m)

X — XXX

0.XX

5 YEAR RUNOFF COEFFICIENT

KEY PLAN



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DRAINAGE PLAN

Engineer's Seal

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C-7
of 7