

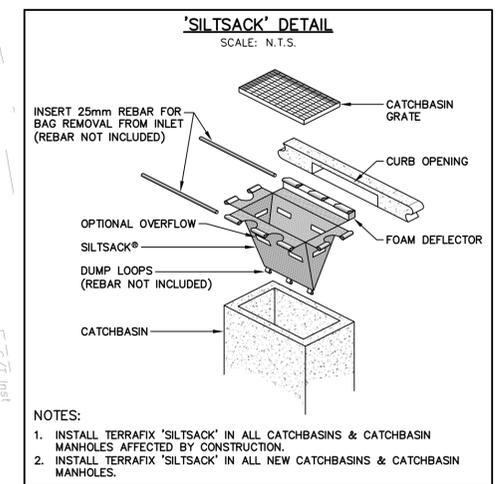
LEGEND	
	PROPERTY LINE
	EXISTING DITCH
	EXISTING FENCE
	EXISTING GRADE
	EXISTING OVERLAND FLOW DIRECTION
	MUD-MAT; SEE DETAIL
	TEMPORARY SILT FENCE; (OPSD 219.110)
	PROPOSED CONSTRUCTION LIMITS
	PROPOSED LIMIT OF ASPHALT REMOVAL

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

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2015 Rev 2

LIGHT-DUTY SILT FENCE BARRIER

OPSD 219.110



No.	ISSUE / REVISION	DATE
1	RE-ISSUED FOR SPA PER CITY COMMENTS	2022/OCT/17
0	ISSUED FOR SITE PLAN APPLICATION	2022/MAY/17

ELEVATION NOTE:
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LOCAL BENCHMARK:
TOP SPINDLE OF FIRE HYDRANT LOCATED ON SOUTH SIDE OF COLONNADE ROAD, APPROXIMATELY 95.0m WEST OF PRINCE OF WHALES DRIVE.
ELEVATION = 85.19m

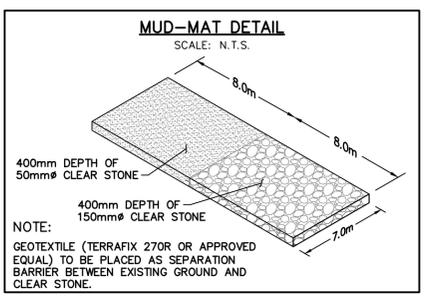
SURVEY NOTES:
SURVEY COMPLETED BY FARLEY, SMITH, & DENIS SURVEYING LTD. (2022/MAR/09)
FILE No.: 101-21
BEARINGS ARE GRID AND ARE REFERRED TO THE WESTERLY LIMIT OF PRINCE OF WHALES DRIVE HAVING A BEARING OF N 24° 04' 30" W, AS SHOWN ON PLAN 4R-18363.

SITE PLAN NOTES:
DESIGN ELEMENTS ARE BASED ON SITE PLAN BY ARCHITECTURE 49.
DRAWING No.: A0.2 WITH REVISION DATED (2022/SEP/23)
PROJECT No.: 219-00058-00

DRAWING NOTES:
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Project
125 COLONNADE ROAD SOUTH
CITY OF OTTAWA

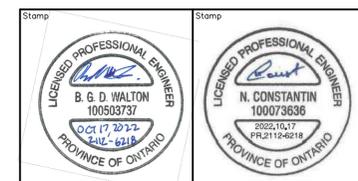
Drawing
EROSION, REMOVALS AND SEDIMENT CONTROL PLAN



NOTE:
CONTRACTOR TO OBTAIN ALL NECESSARY ROAD OCCUPANCY PERMITS FOR PROPOSED WORKS IN MUNICIPAL ROAD ALLOWANCE

- EROSION & SEDIMENT CONTROL NOTES:**
1. EROSION & SEDIMENT CONTROL MEASURES MUST BE INSTALLED PRIOR TO THE COMMENCEMENT OF SITE WORKS.
 2. EROSION & SEDIMENT CONTROLS MUST BE INSPECTED ON A REGULAR BASIS AND AFTER EVERY RAIN FALL EVENT, AND MUST BE MAINTAINED AND REPAIRED IN A TIMELY MANNER TO PREVENT SEDIMENT FROM LEAVING THE SITE.
 3. IT IS REQUIRED TO STABILIZE ALL AREAS THAT WILL REMAIN DISTURBED FOR MORE THAN 30 DAYS.
 4. MUD MAT AND SILT FENCE, AND ARE NOT TO BE REMOVED UNTIL COMPLETION OF CONSTRUCTION.

NOT FOR CONSTRUCTION

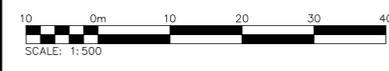


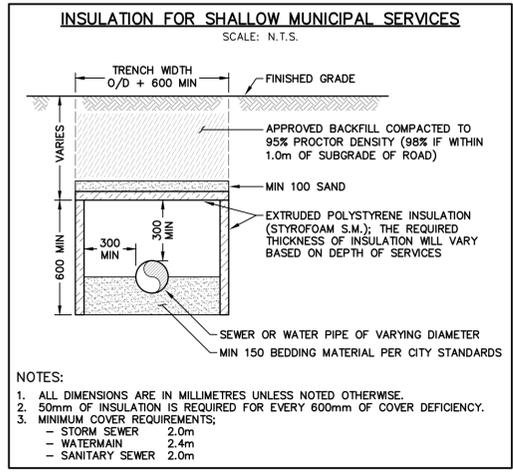
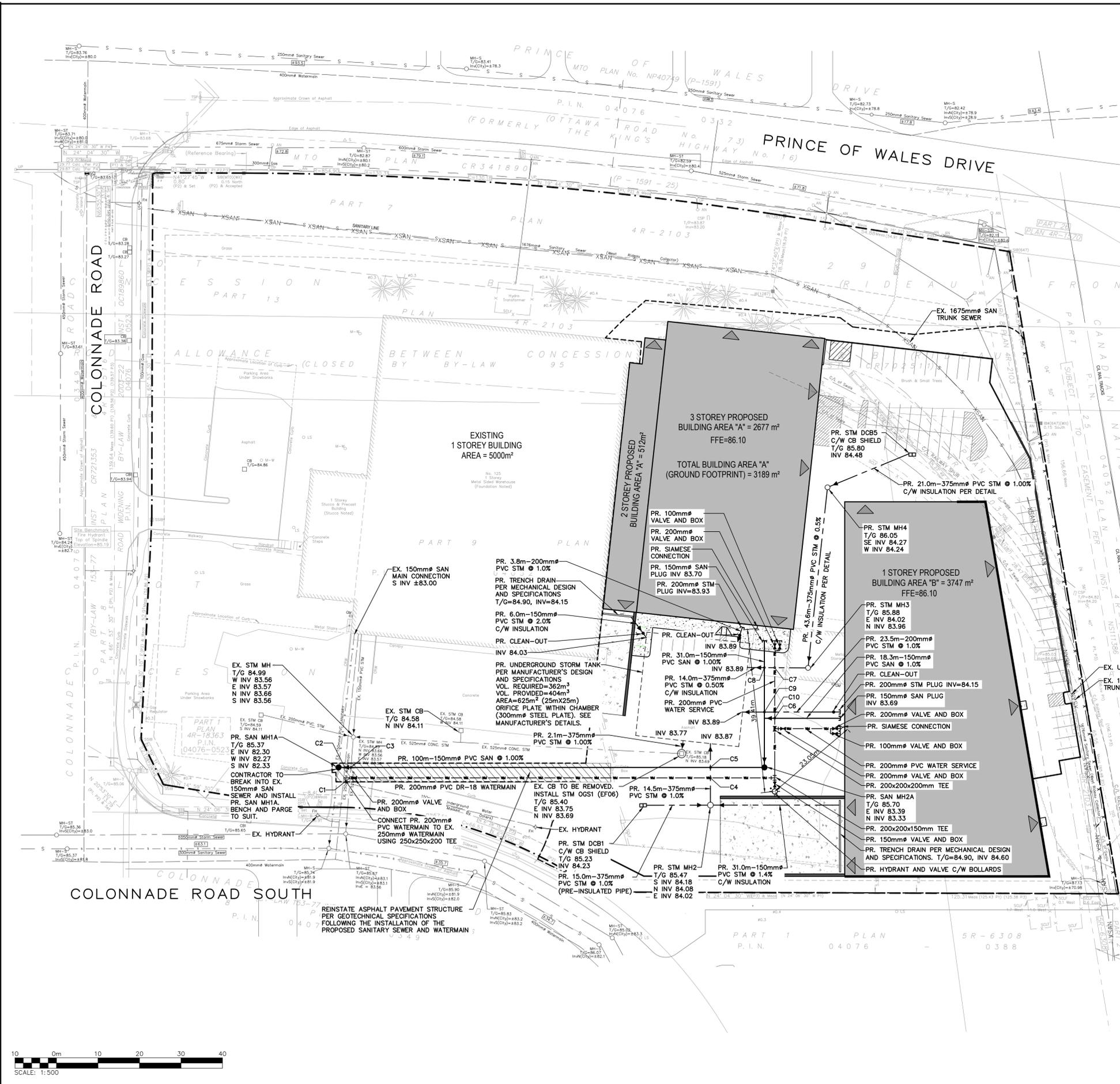
CROZIER CONSULTING ENGINEERS

2800 HIGH POINT DRIVE
SUITE 100
MILTON, ON L9T 6P4
905-875-0026 T
905-875-4915 F
WWW.CFCROZIER.CA

Stamp
Stamp

Drawn: M.I.M. Design: B.P. Project No.: **2112-6218**
Check: B.W. Check: B.W. Scale: 1:500 Dwg.: **C101**





CROSSING TABLE		
CROSSING I.D.	UPPER	LOWER
C1	EX STM INV 83.56±	W/M OBV 83.26
C2	EX W/M INV 83.09±	SAN OBV 82.50
C3	EX STM INV 83.57±	SAN OBV 82.52
C4	STM INV 83.97	W/M OBV 83.47
C5	STM INV 83.96	SAN OBV 83.35
C6	SAN INV 83.54	W/M OBV 83.04
C7	STM INV 84.16	SAN OBV 83.66
C8	STM INV 84.13	SAN OBV 83.73
C9	STM INV 83.97	SAN OBV 83.67
C10	STM INV 83.98	W/M OBV 83.04

NOTE:

- CONTRACTOR TO ENSURE A MINIMUM 0.50m VERTICAL SEPARATION BETWEEN THE WATERMAIN AND ALL SEWER CROSSINGS DURING CONSTRUCTION. IN CASE OF CONFLICT BETWEEN SEWERS AND WATERMAIN, CONTRACTOR TO LOWER THE WATERMAIN CROSSING THE SEWER, ENSURING THE MINIMUM 0.50m VERTICAL CLEARANCE.
- TRENCH DRAIN INVERTS AND ROOF DRAINS/DOWNSPOUTS PER MECHANICAL DESIGN AND SPECIFICATIONS.
- CONTRACTOR TO VERIFY EXISTING WATERMAIN, SANITARY AND STORM SEWER LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION. DAYLIGHT THESE SERVICES TO VERIFY CROSSINGS.

NOTE:

BUILDING "A"
THIRTEEN (13) ROOF DRAINS REQUIRED. ALL DRAINS TO BE ZURN MODEL ZCF121-1W-X1-Z-105-10-77 OR CERTIFIED EQUIVALENT. THE DRAINS ARE TO BE INSTALLED WITH TWO NOTCHES OPEN AND AN OVERALL RELEASE RATE OF 29.8 L/s/m OF HEAD.

BUILDING "B"
TWELVE (12) ROOF DRAINS REQUIRED. ALL DRAINS TO BE ZURN MODEL ZCF121-1W-X1-Z-105-10-77 OR CERTIFIED EQUIVALENT. THE DRAINS ARE TO BE INSTALLED WITH TWO NOTCHES OPEN AND AN OVERALL RELEASE RATE OF 29.8 L/s/m OF HEAD.

* FOR ROOFTOP PONDING VOLUME CALCULATIONS AND CONTROLLED ROOFTOP RELEASE RATE CALCULATIONS SEE DWG. C104.



LEGEND

SCALE: N.T.S.

- PROPERTY LINE
- EXISTING WATERMAIN & GATE VALVE
- EXISTING STORM SEWER & MANHOLE
- EXISTING SINGLE / DOUBLE CATCHBASIN
- EXISTING SANITARY SEWER & MANHOLE
- PROPOSED WATERMAIN & GATE VALVE
- PROPOSED FIRE HYDRANT & GATE VALVE
- PROPOSED SIAMESE CONNECTION
- PROPOSED WATER METER
- PROPOSED BACKFLOW PREVENTOR
- PROPOSED STORM SEWER & MANHOLE
- PROPOSED SINGLE / DOUBLE CATCHBASIN
- PROPOSED SANITARY SEWER & MANHOLE
- PROPOSED CONSTRUCTION LIMITS

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TOP SPRING OF FIRE HYDRANT LOCATED ON SOUTH SIDE OF COLONNADE ROAD, APPROXIMATELY 95.0m WEST OF PRINCE OF WALES DRIVE.
ELEVATION = 85.19m

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SITE PLAN NOTES:
DESIGN ELEMENTS ARE BASED ON SITE PLAN BY ARCHITECTURE 49.
DRAWING NO.: A02 WITH REVISION DATED (2022/SEP/23)
PROJECT NO.: 219-00058-00

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Project
125 COLONNADE ROAD SOUTH
CITY OF OTTAWA

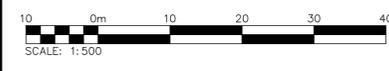
Drawing
SITE SERVICING PLAN

NOT FOR CONSTRUCTION

Stamp

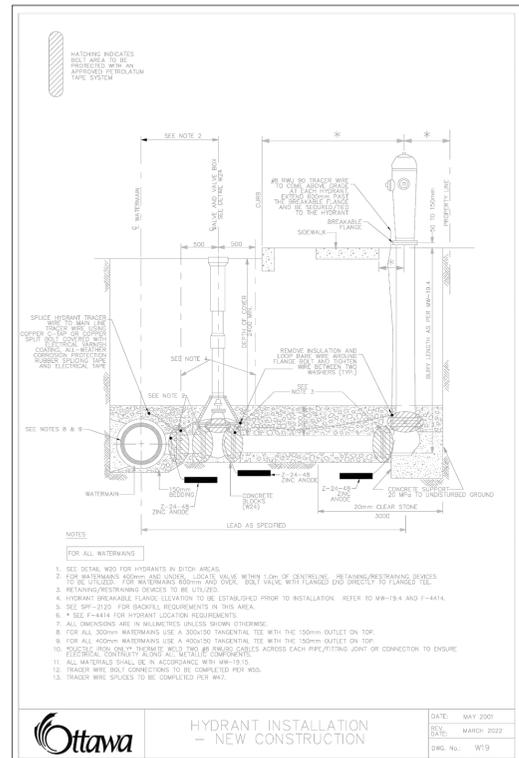
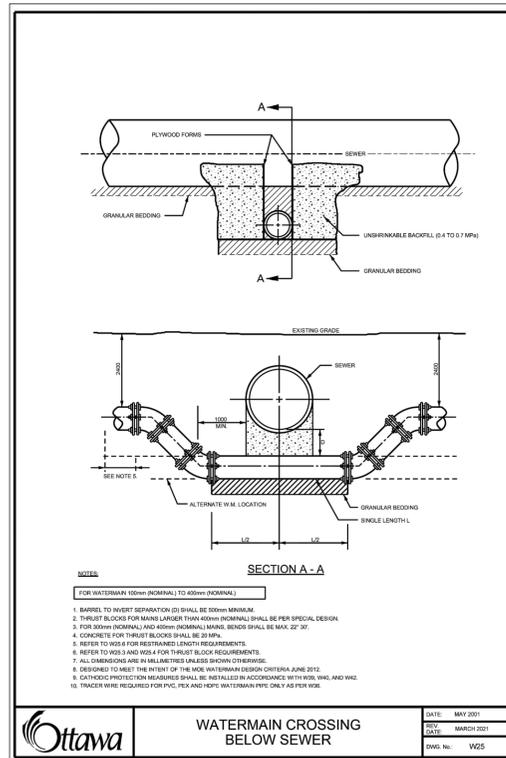
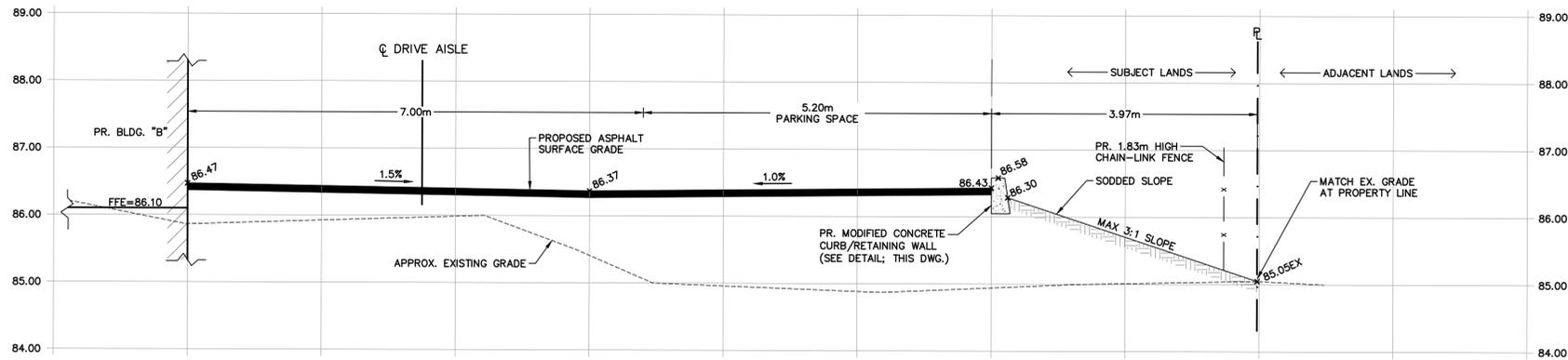
CROZIER CONSULTING ENGINEERS
2800 HIGH POINT DRIVE
SUITE 100
MILTON, ON L9T 6P4
905-875-0026 T
905-875-4915 F
WWW.CFCROZIER.CA

Drawn: M.I.M. Design: B.P. Project No: **2112-6218**
Check: B.W. Check: B.W. Scale: 1:500 Dwg: **C103**



SECTION A-A

SCALE: HOR: 1:50
VER: 1:50



ROOFTOP PONDING CALCULATIONS

ROOFTOP PONDING VOLUME CALCULATIONS

Roof Name	Roof Area (ha)	Roof Area Per Drain (ha)	Drain Ponding Area (ha)	Max. Allowable Rooftop Ponding Depth (m)	Max. Rooftop Ponding Volume per Drain (m³)	Max. Rooftop Ponding Volume Available (m³)
BLDG A (3 storey)	0.27	0.03	0.02	0.15	10.7	85.5
BLDG A (2 storey)	0.05	0.02	0.01	0.15	0.8	20.6
BLDG A (total)	0.32	-	-	0.15	-	106.2
BLDG B	0.37	0.03	0.02	0.15	2.6	124.9

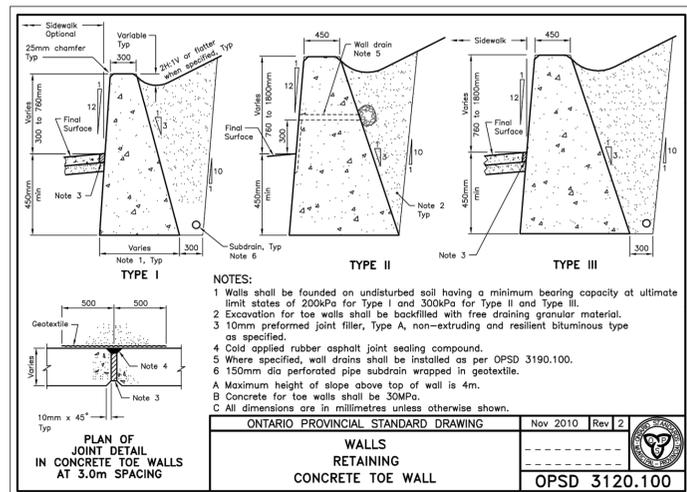
ZURN ROOF DRAIN FLOW RATING

Opening	G.P.M. Per Inch of Head	L.P.M. Per Inch of Head	L/s Per Meter of Head	L/s Per 0.05 m of Head	L/s Per 0.10 m of Head	L/s Per 0.15 m of Head
X ₁	5.00	22.73	14.91	1.14	2.27	3.41
X ₂	3.75	17.05	11.19	0.85	1.70	2.56
X ₃	2.50	11.37	7.46	0.57	1.14	1.70
X ₄	1.25	5.68	3.73	0.28	0.57	0.85

Note: Zurn control flow rates obtained from Drawing No. P-13521 - Adjustable Weir for Sloped-Roof "Control-Flo" Roof Drain

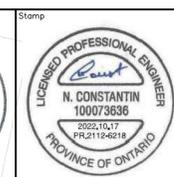
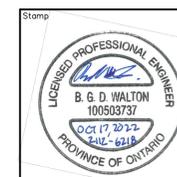
CONTROLLED ROOFTOP RELEASE RATE CALCULATIONS

Roof Name	Control System	Zurn Model Number	Release Rate per Drain (L/s per meter of head)	Proposed # of Zurn Drains	# of Notches per Zurn Drain	Total Release Rate from Roof (L/s)
BLDG A (3 storey)	Zurn Roof Drain	ZCF121-1W-X1-Z-105-10-77	14.92	10	2	44.7
BLDG A (2 storey)	Zurn Roof Drain	ZCF121-1W-X1-Z-105-10-77	14.92	3	2	13.4
BLDG A (total)	Zurn Roof Drain	ZCF121-1W-X1-Z-105-10-77	14.92	13	2	58.2
BLDG B	Zurn Roof Drain	ZCF121-1W-X1-Z-105-10-77	14.92	12	2	53.7



NOT FOR CONSTRUCTION

CONSTRUCTION DETAILS



2800 HIGH POINT DRIVE
SUITE 100
MILTON, ON L9T 6P4
905-875-0026 T
905-875-4915 F
WWW.CFCROZIER.CA

Drawn	M.I.M.	Design	B.P.	Project No.	2112-6218	
Check	B.W.	Check	B.W.	Scale	1:500	
					Dwg.	C104

1	RE-ISSUED FOR SPA PER CITY COMMENTS	2022/OCT/17
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Project
125 COLONNADE ROAD SOUTH
CITY OF OTTAWA

Drawing
CONSTRUCTION DETAILS

CONSTRUCTION NOTES:

1.0 EROSION & SEDIMENT CONTROL INSTALLATION

- 1.1 NO MAINTENANCE OR REPAIR WORK ON CONSTRUCTION EQUIPMENT IS ALLOWED WITHIN 30m OF AN EXISTING WATER COURSE OR DITCH.
1.2 ALL EROSION AND SEDIMENT CONTROL FACILITIES AND WORKS ARE TO BE CONSTRUCTED AND IN PLACE TO THE APPROVAL OF THE SITE ENGINEER PRIOR TO ANY GRADING OPERATIONS COMMENCING. TYPICAL WORKS INCLUDE SILT FENCES AND SILT SACKS ON CATCHBASIN GRATES.
1.3 ALL TEMPORARY SOIL OR DIRT STOCKPILES ARE TO BE PROVIDED WITH THE NECESSARY SEDIMENT AND EROSION CONTROL FEATURES. IF STOCKPILES ARE TO REMAIN FOR A PERIOD LONGER THAN 180 DAYS, STOCKPILES SHALL BE HYDROSEEDED AND SURROUNDED WITH SILT FENCE.
1.4 ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES (I.E. SILT FENCE, STRAW BALES, CLEARSTONE ETC.) ARE TO BE KEPT ON SITE FOR EMERGENCIES AND REPAIRS.
1.5 EROSION AND SEDIMENT CONTROL METHODS ARE TO BE CONTINUOUSLY EVALUATED AND, WHERE NECESSARY, UPGRADES ARE TO BE IMPLEMENTED.
1.6 ANY AFTER HOURS CONTACT NUMBER IS TO BE VISIBLY POSTED ON-SITE FOR EMERGENCIES.
1.7 ALL CATCHBASINS WITHIN LANDSCAPED AREAS TO HAVE SILT SACK ERECTED IMMEDIATELY AFTER CATCHBASIN INSTALLATION. SILT SACK TO BE MAINTAINED ON A REGULAR BASIS OR TO THE SATISFACTION OF THE CITY OF OTTAWA.
1.8 ALL ROADSIDE CATCHBASINS TO HAVE SILT SACK INSTALLED IMMEDIATELY AFTER CATCHBASIN INSTALLATION. SILT SACK TO BE MAINTAINED ON A REGULAR BASIS OR TO THE SATISFACTION OF THE CITY OF OTTAWA.
1.9 CONSTRUCTION SEQUENCE:
- INITIAL SEDIMENT CONTROL INSTALLATION
- SITE GRADING OPERATIONS
- UNDERGROUND SERVICING OPERATIONS
- BUILDING CONSTRUCTION
- FINAL GRADING OPERATIONS
1.10 IF SITE CONSTRUCTION ACTIVITIES ARE INTERRUPTED AND/OR INACTIVITY EXCEEDS 30 DAYS, ALL STRIPPED AND/OR BARE SOIL AREAS ARE TO BE STABILIZED BY SODDING/SEEDING/MULCHING OR OTHER APPROVED METHOD, TO THE SATISFACTION OF THE CITY OF OTTAWA.
1.11 ALL EROSION AND SEDIMENT CONTROL MEASURE ARE TO BE REGULARLY INSPECTED AND MAINTAINED, AS REQUIRED, TO THE SATISFACTION OF THE CITY OF OTTAWA.
1.12 DURING ALL CONSTRUCTION PHASES, MUD TRACKING CONTROL, CONSISTING OF FLUSHING AND SWEEPING ROADS, IS TO BE PROVIDED FOR ALL ROADS.

A) PRE CONSTRUCTION

- 1.13 CONTRACTOR TO ADVISE CITY WHAT STAFF IS RESPONSIBLE FOR SITE SEDIMENT CONTROL SUPERVISION, INSPECTION AND MAINTENANCE, INCLUDING AFTER HOUR CONTACTS.
1.14 CONTRACTOR TO PROVIDE WRITTEN INSPECTION AND MAINTENANCE SCHEDULE OF SEDIMENT CONTROL DEVICES.
1.15 CONTRACTOR TO INSTALL ALL SEDIMENT CONTROL DEVICES AS IDENTIFIED ON THE APPROVED EROSION CONTROL PLAN PRIOR TO IMPLEMENTATION OF TOPSOIL STRIPPING OR EARTHWORKS OPERATIONS.

B) DURING CONSTRUCTION (SITE & BUILDING WORKS)

- 1.16 CONTRACTOR TO ENSURE TOPSOIL, STRIPPING, GRADING AND UNDERGROUND WORKS CONFORM TO APPROVED GRADING, SERVICING AND EROSION CONTROL PLANS.
1.17 SITE ENGINEER TO CONDUCT REQUIRED WEEKLY INSPECTION, MAINTENANCE AND REPORTING OF SEDIMENT CONTROLS TO THE CITY STAFF.
1.18 CONTRACTOR TO STABILIZE SITE AS REQUIRED THROUGHOUT SITE CONSTRUCTION SCHEDULE.

C) POST CONSTRUCTION (INCLUDING BUILDING CONSTRUCTION)

- 1.19 CONTRACTOR TO COMPLETE FINAL SITE STABILIZATION AND REVEGETATION WORKS.
1.20 CONTRACTOR TO REMOVE ALL SEDIMENT CONTROL DEVICES AFTER THE SITE IS STABILIZED TO A CONDITION EQUAL TO, OR BETTER THAN, PRE-CONSTRUCTION.
1.21 FOLLOWING COMPLETION OF CONSTRUCTION AND AS DIRECTED BY SITE ENGINEER, ALL EROSION AND SEDIMENT CONTROL WORKS ARE TO BE REMOVED INCLUDING ANY ACCUMULATED SEDIMENT.
1.22 ALL WORKS LOCATED ON LANDS OUTSIDE THE PROPOSED DEVELOPMENT AREA ARE TO BE GRADED TO MATCH EXISTING SURROUNDING GROUND AND HYDROSEEDED.

2.0 EROSION & SEDIMENT CONTROL MAINTENANCE

- 2.1 SILT FENCE TO BE PER OPSD 219.110.
2.2 SILT FENCE MUST BE INSPECTED WEEKLY FOR RIPS OR TEARS, BROKEN STAKES, BLOW-OUTS/AND ACCUMULATION OF SEDIMENT.
2.3 SILT FENCE MUST BE INSPECTED IMMEDIATELY AFTER EVERY RAIN STORM EVENT OR AS DIRECTED BY SITE ENGINEER.
2.4 SEDIMENT MUST BE REMOVED FROM SILT FENCE WHEN ACCUMULATION REACHES 50% OF THE HEIGHT OF THE FENCE.
2.5 ALL SILT FENCES MUST BE REMOVED ONLY WHEN THE ENTIRE SITE IS STABILIZED AND AS DIRECTED BY THE SITE ENGINEER.
2.6 ALL SILT FENCES INSTALLED AT THE LIMIT OF THE DEVELOPMENT ARE TO BE PLACED DIRECTLY ON THE PROPERTY LINE OR AS DIRECTED BY SITE ENGINEER.

3.0 GENERAL

- 3.1 ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS, OPSD & OPSS. WHERE CONFLICT OCCURS, CITY OF OTTAWA STANDARDS TO GOVERN.
3.2 ALL TOPSOIL & EARTH EXCAVATION TO BE REMOVED TO AN APPROVED SITE.
3.3 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED LAYOUT OF THE WORK. THE ENGINEER WILL CONFIRM ALL BENCH MARK ELEVATIONS AND HORIZONTAL ALIGNMENT.
3.4 ALL PROPERTY BARS TO BE PRESERVED AND REPLACED BY O.L.S. AT CONTRACTOR'S EXPENSE IF REMOVED DURING CONSTRUCTION.
3.5 THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR THE SUPPLY OF TEMPORARY WATER & POWER.
3.6 IF REQUIRED, DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS-517 & 518 TO MAINTAIN ALL TRENCHES IN A DRY CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING M.O.E.C.C. PERMIT IF REQUIRED.
3.7 THE UTILITIES SHOWN ON PLANS ARE APPROXIMATE ONLY & CONTRACTOR TO CONFIRM LOCATIONS IN ADVANCE OF CONSTRUCTION.
3.8 THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK & CO-ORDINATE CONSTRUCTION ACCORDINGLY.
3.9 THE LOCATION AND ELEVATION OF ALL EXISTING SERVICES AND UTILITIES ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION AND/OR REPAIR OF EXISTING UTILITIES DISTURBED DURING CONSTRUCTION.
3.10 ALL AREAS BEYOND THE SITE PLAN WHICH ARE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AT THE EXPENSE OF THE CONTRACTOR.
3.11 ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE "OCCUPATIONAL HEALTH AND SAFETY ACT". THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEFINED IN THE ACT.
3.12 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.
3.13 ALL DISTURBED AREAS WITHIN MUNICIPAL RIGHT-OF-WAY TO BE RESTORED TO EXISTING CONDITIONS OR BETTER.
3.14 THE GEOTECHNICAL SUITABILITY OF ALL THE FILL MATERIAL WILL BE ASSESSED BY THE GEOTECHNICAL ENGINEER.
3.15 GEOTECHNICAL ENGINEER TO CONFIRM SUITABILITY OF ROAD MATERIAL DEPTHS BASED ON SUB-BASE MATERIAL.
3.16 MONITORING WELLS TO BE DECOMMISSIONED PER GEOTECHNICAL ENGINEER.
3.17 ALL EXISTING UNDERGROUND UTILITIES AND SERVICES TO BE LOCATED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. CONTRACTOR IS TO CONTACT ENGINEER WITH ANY DISCREPANCIES PRIOR TO REMOVAL.

4.0 OPEN CUT & RESTORATION

- 4.1 BACKFILL MATERIALS SHALL BE OPSS GRANULAR 'A', GRANULAR 'B' & UNSHRINKABLE FILL PLACED AT THE SPECIFIED DEPTHS. ALL GRANULAR MATERIAL SHALL CONFORM WITH OPSS 1010 & THE UNSHRINKABLE FILL SHALL CONFORM TO CURRENT CITY OF OTTAWA STANDARDS. ALL GRANULAR MATERIAL SHALL BE PLACED IN 150mm LIFTS AND COMPACTED TO 100% STANDARD PROCTOR DENSITY.
4.2 AFTER BACKFILLING THE UTILITY TRENCH, A MIN. 300mm TOTAL ASPHALT REMOVAL SHALL BE CUT ON ALL SIDES OF THE TRENCH INTO THE EXISTING PAVEMENT STRUCTURE. THE PAVEMENT STRUCTURE MATERIALS SHALL MATCH THE EXISTING PAVEMENT MATERIAL.
4.3 ASPHALT RESTORATION SHALL BE A MINIMUM OF 40mm HL-3 & 50mm HL-8 & SHALL MATCH THE EXISTING PAVEMENT STRUCTURE. ALL ASPHALT RESTORATION SHALL BE IN COMPLIANCE WITH OPSS 310. ALL HOT-MIX MATERIAL SHALL CONFORM TO OPSS 1149, 1150 AND/OR 1154. EXPOSED ASPHALT AND CONCRETE FACES SHALL BE CLEANED AND COATED WITH AN RS-1 (OR EQUIVALENT) ASPHALT EMULSION & ALLOW TO "BREAK" PRIOR TO COMMENCING ASPHALT PLACEMENT.
4.4 WHEN THE REMAINING ASPHALT, FROM THE EDGE OF PAVEMENT TO THE SAWCUT IS 1.3m OR LESS, THE EXISTING ASPHALT WILL BE REMOVED FULL DEPTH & REPAVED AS PER NOTE 3. WHEN TWO OR MORE ROAD CUTS ARE REQUIRED AT A GIVEN SITE AND THE CUTS ARE LESS THAN 2.5m APART THE ENTIRE AREA MUST HAVE FULL DEPTH ASPHALT RESTORATION FROM THE OUTER LIMITS OF ALL REPAIRS.
4.5 SIDEWALK RESTORATION SHALL BE A MINIMUM OF 1 FULL BAY INCLUDING EXPANSION JOINT MATERIAL. ALL CONCRETE SHALL BE AS PER OPSS 351. ALL SIDEWALKS SHALL BE 130mm THICK.
4.6 SUB-DRAINS UNDER THE CURB SHALL BE RESTORED TO ENSURE THEIR OPERATION AND SHALL BE PLACED AS PER CITY OF OTTAWA STANDARDS.
4.7 WHERE THE CURB HAS BEEN UNDERMINED TO FACILITATE WATERMAIN INSTALLATION THE CURB SHALL BE REMOVED AND REPLACED. CURB RESTORATION SHALL BE MINIMUM OF 2.0m OR SHALL EXTEND 0.5m BEYOND THE OUTER TRENCH EDGES WHICH EVER IS GREATER, ALL CONCRETE SHALL BE AS PER OPSD 600.11
4.8 ALL GRASSED BOULEVARDS SHALL BE RE-INSTATED WITH NUMBER 1 NURSERY SOD PLACED ON TOP OF 100mm OF TOPSOIL. ALL SOD SHALL BE PLACED WITH STAGGERED JOINTS, BE ROLLED, AND WHERE APPLICABLE, STAKED INTO THE GROUND.

5.0 DRIVEWAY & PARKING LOT

- 5.1 GRANULAR 'A' & 'B' BASE TO BE COMPACTED TO 98% OF THE MATERIAL'S RESPECTIVE SPMD OR AS APPROVED BY GEOTECHNICAL ENGINEER.
5.2 THE TOP 1.0m OF THE SUB-BASE SHALL BE COMPACTED TO 98% OF STANDARD PROCTOR DENSITY WITHIN 2% OF OPTIMUM MOISTURE CONTENT.
5.3 SUBGRADE TO BE PROOF ROLLED & APPROVED BY GEOTECHNICAL ENGINEER PRIOR TO PLACING GRANULAR MATERIAL.
5.4 DRIVEWAYS & PARKING LOT TO BE CONSTRUCTED AS PER RECOMMENDATIONS OF GEOTECHNICAL ENGINEER.
5.5 ALL GRANULAR AND ASPHALT MATERIAL PLACEMENT TO BE IN ACCORDANCE WITH OPSS 314 & OPSS 310.
5.6 ALL CONCRETE SIDEWALKS TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
5.7 ALL PEDESTRIAN SIDEWALK ENTRANCES AT INTERSECTIONS TO BE CONSTRUCTED IN ACCORDANCE WITH OPSD 350.010.

6.0 SANITARY SERVICE

- 6.1 BEDDING & EMBEDMENT TO OPSD - 802.010, GRANULAR 'A' BEDDING.
6.2 TRENCH BACKFILL TO SELECT NATIVE MATERIAL AS APPROVED BY ENGINEER OR IMPORTED GRANULAR MATERIAL.
6.3 BEDDING & EMBEDMENT MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
6.4 CLEAR STONE WRAPPED WITH FILTER FABRIC CAN BE SUBSTITUTED FOR EMBEDMENT MATERIAL IF APPROVED BY THE GEOTECHNICAL ENGINEER.
6.5 SANITARY SEWER; SDR 35 PVC WITH MINIMUM PIPE STIFFNESS OF 320kPa - MANUFACTURED TO C.S.A. STANDARD B182.2 (A.S.T.M. SPECIFICATION D 3034) WITH RUBBER GASKETTED BELL AND SPIGOT JOINTS.
6.6 ALL SEWERS CONSTRUCTED WITH GRADES 0.5% OR LESS, SHALL BE INSTALLED USING A LASER AND CHECKED PRIOR TO BACKFILL AT THE CONTRACTORS EXPENSE.
6.7 ALL INTERNAL DROP STRUCTURES FOR MANHOLES SHALL CONFORM TO LATEST VERSION OF CITY OF OTTAWA STANDARDS.

7.0 WATER SERVICE

- 7.1 BEDDING & EMBEDMENT TO CITY OF OTTAWA STANDARDS.
7.2 BEDDING & EMBEDMENT MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMD.
7.3 TRENCH BACKFILL TO BE SELECT NATIVE MATERIAL AS APPROVED BY ENGINEER OR IMPORTED GRANULAR MATERIAL.
7.4 SERVICE CONNECTIONS TO CITY OF OTTAWA STANDARDS.
7.5 MINIMUM COVER ON WATERMAIN AND SERVICES TO BE 1.7m BELOW FINISHED GRADE.
7.6 CLEARANCE BETWEEN WATERMAIN AND SEWERS TO BE A MINIMUM OF 0.5m VERTICAL WHERE WATER MAIN IS ABOVE SEWER OR 2.5m MINIMUM HORIZONTAL SEPARATION. FOLLOWING TESTING, CONTRACTOR SHALL OPERATE EACH WATER SERVICE TO VERIFY FULL FLOW AND PRESSURE AT THE CURB STOP TO THE SATISFACTION OF THE ENGINEER.
7.7 VALVE IN BOXES TO BE INSTALLED PER CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
7.8 MECHANICAL JOINT FITTINGS - ANSI A21.53 (A.W.W.A C153) SPECIFICATIONS; HYPROTEC FITTING SHALL BE USED WITH HYPROTEC PIPE INSTALLATION.
7.9 ALL PVC WATERMAIN SHALL BE EQUAL TO AWWA C-900 CLASS 150, DR 18.
7.10 ALL TRACER WIRE IS TO BE INSTALLED ON ALL NEW INSTALLATIONS OF PVC WATERMAIN PIPE FOR LOCATING PURPOSES. A SOLID 10 GAUGE TWU COPPER WIRE IS TO BE INSTALLED ALONG THE PIPE STRAPPED TO THE PIPE AT 6M INTERVALS. JOINTS IN THE WIRE BETWEEN VALES ARE NOT PERMITTED.
7.11 THE INSPECTOR MAY TEST THE TRACING WIRE FOR CONDUCTIVITY. IF THE TRACING WIRE IS NOT CONTINUOUS FROM VALVE TO VALVE, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, REPLACE OR REPAIR THE WIRE.
7.12 CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS AS PER CITY OF OTTAWA STANDARDS.
7.13 THE OPERATION OF EXISTING WATERMAIN VALVES SHALL BE CONDUCTED AS REQUIRED BY THE CITY OF OTTAWA.
7.14 WATERMAIN AND/OR WATER SERVICE MATERIALS 100mm OR LARGER MUST BE PVC CLASS 150 / AWWA C900. SIZE 50mm AND SMALLER TO BE TYPE K SOFT COPPER ASTM B88-49.
7.15 WATERMANS AND/OR WATER SERVICE TO HAVE MINIMUM COVER OF 1.7m WITH MINIMUM HORIZONTAL SPACING OF 1.2m FROM THEMSELVES AND ALL OTHER UTILITIES. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC. MUST BE PROVIDED WITH AT LEAST A 50mm OUTLET ON 100mm AND LARGER LINES. COPPER LINES ARE TO HAVE FLUSHING POINTS AT END, THE SAME SIZE AS THE LINE. THEY MUST ALSO BE HOSED OR PIPED TO ALLOW THE WATER TO DRAIN ONTO A PARKING LOT OR DOWN A DRAIN. ON FIRE LINES, FLUSHING OUTLET TO BE 100mm DIAMETER MINIMUM ON A HYDRANT.
7.16 ALL CURB STOPS TO BE 3.0m OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED.
7.17 WATERMANS TO BE INSTALLED TO GRADES AS SHOWN ON APPROVED SITE PLAN. COPY OF GRADE SHEET MUST BE SUPPLIED TO INSPECTOR PRIOR TO COMMENCEMENT OF WORK, WHERE REQUESTED BY INSPECTOR.
7.18 WATERMANS MUST HAVE MINIMUM VERTICAL CLEARANCE OF 0.3m OVER / 0.5m UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING.
7.19 ALL PROPOSED WATER PIPING MUST BE ISOLATED FROM EXISTING LINES IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CHLORINATING FROM EXISTING SYSTEM.

8.0 STORM SERVICE

- 8.1 BEDDING & EMBEDMENT MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMD.
8.2 BEDDING & EMBEDMENT TO OPSD 802.010 (FLEXIBLE PIPE) GRANULAR 'A' EMBEDMENT.
8.3 STORM SEWERS; PVC PIPE (OPSS 410), MIN. PIPE STIFFNESS SHALL BE 320kPa. ALL PIPE TO BE JOINED WITH A GASKETTED BELL AND SPIGOT SYSTEM.
8.4 WHERE COVER OVER THE SPRING LINE OF THE SEWER IS LESS THAN 1.50m, INSTALL 50mm THICKNESS OF STYROFOAM SM INSULATION MATERIAL, FOR EACH 300mm COVER DEFICIT.
8.5 ALL INTERNAL DROP STRUCTURES FOR MANHOLES SHALL CONFORM TO LATEST VERSION OF CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

GENERAL

- 1. ALL EXISTING UNDERGROUND UTILITIES AND SERVICES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. ANY SITE ILLUMINATION TO BE DIRECTED DOWNWARD AND INTERNAL TO SITE ONLY.
3. DETAILS ON PROPOSED PLANTING, LANDSCAPE FEATURES, RETAINING WALLS & SITE TREATMENTS ARE PREPARED BY LANDSCAPE ARCHITECT.
4. NATIVE SITE SOILS ARE CONSIDERED TYPE 3 SOILS AS PER OCCUPATIONAL HEALTH & SAFETY ACT; HOWEVER, WHERE SEEPAGE OCCURS AND/OR IF THE SOILS ARE BELOW THE WATER TABLE, THEN TYPE 4 SOIL CONDITIONS APPLY.
5. ROAD OCCUPANCY PERMIT IS REQUIRED FROM THE TOWN PRIOR TO ANY WORKS COMPLETED WITHIN THE MUNICIPAL RIGHT OF WAY (ROW). CONTRACTOR IS RESPONSIBLE TO RETAIN PERMIT.
6. ALL BOULEVARDS & DISTURBED AREAS ARE TO BE RESTORED TO EXISTING CONDITIONS OR BETTER, 75mm TOPSOIL & SEED UNLESS OTHERWISE NOTED.
7. CLEAR STONE WRAPPED IN FILTER CLOTH CAN BE SUBSTITUTED FOR BEDDING MATERIAL IF APPROVED BY THE GEOTECHNICAL ENGINEER.
8. ALL PROPERTY BARS TO BE PROTECTED DURING CONSTRUCTION. BARS ARE TO BE PLACED BY O.L.S. AT CONTRACTOR'S EXPENSE IF DAMAGED OR REMOVED.
9. DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS-517 & 518 TO MAINTAIN ALL TRENCHES IN A DRY CONDITION. CONTRACTOR IS RESPONSIBLE FOR OBTAINING M.O.E. PERMIT IF REQUIRED.

ROADS

- 1. ALL EXCAVATION SHALL CONFORM TO THE CURRENT ONTARIO PROVINCIAL SPECIFICATION FOR GRADING OPSS 206.
2. THE DEVELOPER SHALL RETAIN A QUALIFIED SOILS CONSULTANT TO CARRY OUT COMPACTION TESTS ON THE COMPLETED SUBGRADE AND SUBSEQUENT LIFTS OF GRANULAR BASE MATERIAL BEFORE PLACEMENT OF GRANULAR LIFT.
3. ALL VEGETATION, BOULDERS OVER 150mm#, TOPSOIL AND ORGANIC OR FROST-SUSCEPTIBLE MATERIALS, SHALL BE REMOVED FROM THE ROAD BASE TO A DEPTH OF AT LEAST 1.20m BELOW FINISHED GRADE AND REPLACED WITH SUITABLE MATERIAL.
4. ALL UNSUITABLE EXCAVATED MATERIAL SHALL BE REMOVED FROM THE ENTIRE "ROAD CORRIDOR" AND DEPOSITED OFF THE SITE TO A DISPOSAL AREA APPROVED BY THE SITE ENGINEER.
5. THE SUB-GRADE SHALL BE SHAPED TO CONFORM TO THE REQUIRED LONGITUDINAL GRADE AND CROSS-SECTION AND SHALL HAVE A CROSSFALL OF 3% FROM THE CENTRELINE OF THE ROADWAY TO EACH SIDE. IF CONSIDERED NECESSARY BY THE TOWN ENGINEER AND QUALIFIED SOILS CONSULTANT, THE SUB-GRADE SHALL BE COMPACTED WITH SUITABLE MECHANICAL COMPACTION EQUIPMENT AS REQUIRED TO PRODUCE A SOLID BASE FOR THE ROAD GRAVEL. ALL IDENTIFIED SOFT AND WEAK SPOTS SHALL BE EXCAVATED AND BACKFILLED WITH A GRANULAR BASE MATERIAL.
6. NATIVE SUB-GRADE TO BE GRADED, COMPACTED AND PROOF-ROLLED PRIOR TO PLACEMENT OF GRANULARS. COMPACTION TO BE MINIMUM 98% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
7. THE GRANULAR BASE SHALL BE LAID ON DRY, SMOOTH, PROPERLY GRADED SUB-GRADE, AND SHALL BE SPREAD FOR THE REQUIRED WIDTH TO MEET THE EDGE OF SUB-GRADE. THE GRANULAR ROAD BASE SHALL CONSIST OF A BOTTOM COURSE OF 300mm MIN. CONSOLIDATED GRANULAR 'B' MATERIAL FULL WIDTH ACROSS THE ROADWAY AND A TOP COURSE OF 150mm GRANULAR 'A' MATERIAL FULL WIDTH ALONG THE ROADWAY AND CONFORMING IN ALL RESPECTS TO THE MINISTRY OF TRANSPORTATION ONTARIO PROVINCIAL STANDARD SPECIFICATIONS OPSS 1010.
8. THE GRANULAR MATERIAL SHALL BE SPREAD IN LAYERS OF 150mm MAXIMUM COMPACTED DEPTHS, AND EACH LAYER SHALL BE THOROUGHLY COMPACTED TO 100% SPMD.
9. NO GRANULAR BASE SHALL BE PLACED UNTIL THE GRADE ON WHICH IT IS TO BE LAID HAS BEEN INSPECTED AND APPROVED BY THE SOILS CONSULTANT.
10. ALL GRANULAR CONSTRUCTION SHALL CONFORM IN ALL RESPECTS TO ONTARIO PROVINCIAL STANDARD SPECIFICATION OPSS 314.
11. AS SOON AS THE DIRT SHALL BE THOROUGHLY COMPACTED AND SHARED AND THE BASE COURSE ASPHALT PLACED, THE BASE COURSE SHALL CONSIST OF 40mm MIN. THICKNESS OF HL4 BASE COURSE ASPHALT. THE SURFACE COURSE SHALL CONSIST OF 40mm MIN. THICKNESS OF HL3 SURFACE COURSE ASPHALT. ASPHALT WORK SHALL CONFORM IN ALL RESPECTS TO ONTARIO PROVINCIAL STANDARD SPECIFICATIONS OPSS 310.
12. THE ASPHALT COMPONENTS SHOULD BE COMPACTED TO 92% TO 96.5% OF MAXIMUM RELATIVE DENSITY IN ACCORDANCE WITH OPSS 310.
13. DURING AND BETWEEN CONSTRUCTION SEASONS, THE GRANULAR BASE SHALL BE MAINTAINED SUITABLE FOR VEHICLE AND PEDESTRIAN TRAFFIC INCLUDING DUST CONTROL BY CALCIUM CHLORIDE AND RENEWED IF REQUIRED TO THE SATISFACTION OF THE SITE ENGINEER.
14. PERFORATED SUBDRAIN (100mm#) TO BE PLACED ALONG BOTH SIDES OF ROADWAY BELOW LEVEL OF GRANULAR 'B' AND TERMINATED IN STORM SEWER SYSTEM WHERE APPROPRIATE.
15. CONCRETE CURB AND GUTTER SHALL CONFORM TO OPSD 600.100 AND SHALL BE INSTALLED IN CONFORMANCE WITH OPSS 353.
16. ALL SERVICES, MANHOLES, VALVES, ETC. ARE TO BE INSTALLED TO MATCH GRADE OF BASE COURSE OF ASPHALT AND/OR LANDSCAPING. UPON PLACEMENT OF SURFACE COURSE OF ASPHALT ALL APPURTENANCES LOCATED IN ROADWAY SHALL BE RAISED TO MATCH FINISHED GRADE.

SIDEWALKS

- 1. ALL SIDEWALKS ARE TO BE CONSTRUCTED AS PER OPSD 310.010. ALL INTERSECTIONS OF ROAD AND SIDEWALK SHALL BE AS PER OPSD 310.030.

STORM SEWER

- 1. MAIN SEWERS SHALL BE PVC PIPE (OPSS 410), MIN. PIPE STIFFNESS SHALL BE 320kPa. ALL PIPE TO BE JOINED WITH A GASKETTED BELL & SPIGOT SYSTEM.
2. APPROX PIPE SIZE INCLUDING CATCHBASIN LEADS, SHALL BE 300mm#.
3. STORM SEWER EMBEDMENT SHALL CONFORM WITH OPSD 802.010 USING GRANULAR 'A'.
4. PRECAST STORM MANHOLES SHALL BE PER OPSD 701.010 (1200mm#), 701.011 (1500mm#) OR 700.012 (1800mm#) WITH FRAME AND GRATE PER OPSD 401.010 TYPE 'A' AND HOLLOW RECTANGULAR LADDER RUNGS OPSD 405.010. CATCHBASIN MANHOLE FRAME AND GRATE PER OPSD 400.020. BENCHING SHALL BE PROVIDED IN ALL MANHOLES.
5. PRECAST CATCHBASINS ARE TO BE OPSD 705.010 (SINGLE) OR 705.020 (DOUBLE) WITH FRAME AND GRATE OPSD 400.020. ALL CATCHBASIN AND CATCHBASIN MANHOLES SHALL HAVE SLUMPS.
6. FROST STRAPS REQUIRED ON ALL MANHOLES AS PER OPSD 701.100.

WATERMAIN

A) PIPING

- 1. ALL CONSTRUCTION TO CONFORM TO AWWA C605-94 AND AWWA C600-99 STANDARDS.
2. WATERMAIN PIPE SHALL BE PVC DR18 (SIZES UP TO 300mm#), CONFORMING TO AWWA C900. A DIFFERENT PIPE STRENGTH OR TYPE MAY BE REQUIRED BY THE MUNICIPALITY FOR SPECIAL CONDITIONS.
3. WATERMAIN SHALL BE BEDDED IN ACCORDANCE WITH OPSD 802.010 WITH UNIFORM FINE SAND.
4. WATERMAIN TO BE TESTED AND APPROVED PER THE TOWN OF THE BLUE MOUNTAINS - WATERMAIN COMMISSIONING PROTOCOL STANDARD (MAY 2007).
5. ALL TESTING REQUIRED NOTIFICATION IN WRITING, 48 HOURS PRIOR TO ALL TESTING.
6. ALL CONNECTIONS TO EXISTING MUNICIPAL SUPPLY MAINS MUST BE INSPECTED BY THE MUNICIPALITY OR REPRESENTATIVE AND GIVING 48 HOURS NOTICE PRIOR TO BACKFILLING OPERATIONS.
7. THE PVC PIPE INSTALLATION SHALL INCLUDE A 12 AWG TWU SOLID PLASTIC COVERED TRACER WIRE, TW4 75AC 600V OR APPROVED EQUAL. MUNICIPALITY MUST BE ON SITE DURING ANY TRACER WIRE CONTINUITY TESTING.
8. THE MINIMUM COVER ON WATERMANS SHALL BE 1.7m. WHEN COVER IS LESS THAN 1.70m, CONTRACTOR TO PROVIDE INSULATION PER DETAIL ON DWG XXX.

B) SERVICES

- 1. EACH HOUSING UNIT SHALL HAVE A SEPARATE 19mm# MIN. TYPE 'K' COPPER OR SERIES 160 POLYETHYLENE WATER SERVICE, A CURB STOP AND EXTENSION SERVICE BOX AND MAIN STOP MUST BE INSTALLED ON EACH SERVICE USING COMPRESSION JOINT FITTINGS. TRACER WIRE SHALL BE PLACED ALONG THE ENTIRE LENGTH OF EACH SERVICE LINE.
2. WATER SERVICE FITTINGS SHALL BE AS FOLLOWS:
- MAIN STOPS ARE TO BE MUELLER H1509.
- CURB STOPS ARE TO BE SELF DRAINING, MUELLER H15209.
- SERVICE BOXES ARE TO BE OF ALL IRON/STEEL CONSTRUCTION, MUELLER A-726 OR EQUIVALENT.
3. CURB STOPS SHALL BE LOCATED 300mm FROM STREET LINE.
4. SERVICE CONNECTIONS TO WATERMANS SHALL BE MADE BY DIRECT TAPPING OR WITH BROAD BAND STAINLESS STEEL SADDLES.

C) HYDRANT INSTALLATION

- 1. HYDRANTS SHALL BE LOCATED 300mm FROM STREET LINE AND INSTALLED AS SPECIFIED IN TOWN OF THE BLUE MOUNTAINS STANDARDS. CENTER OF PUMPER NOZZLE SHALL BE LOCATED A MINIMUM OF 632mm ABOVE FINISHED GRADE.
2. PRECAST SANITARY MANHOLES SHALL CONFORM WITH OPSD 701.010 (1200mm#) WITH HOLLOW RECTANGULAR LADDER RUNGS OPSD 405.010. BENCHING SHALL BE PROVIDED IN ALL MANHOLES.
3. MANHOLE COVERS SHALL BE CAMRON DS579 (OR APPROVED EQUAL) AND INSTALLED AS PER MUNICIPAL STANDARD.
4. HOUSE SERVICE CONNECTIONS SHALL BE PVC SDR 28 WITH RUBBER GASKET CONNECTIONS AND SHALL BE 125mm# DIOD.
5. SHOP MANUFACTURED "TEE" CONNECTIONS SHALL BE USED FOR HOUSE SERVICE CONNECTIONS ON 200mm AND 250mm SEWERS.
6. 125mm# SERVICE CONNECTIONS SHALL BE TERMINATED AT THE PROPERTY LINE WITH A 125mmx125mmx100mm TEE, AND A 100mm INSPECTION PIPE TO THE SURFACE, CAPPED.
7. CONNECTION TO MANHOLES SHALL ENTER THE MANHOLE NO HIGHER THAN 600mm ABOVE THE LOWEST INVERT EXCEPT AS OTHERWISE APPROVED BY THE MUNICIPALITY.
8. FROST STRAPS REQUIRED ON ALL MANHOLES AS PER OPSD 701.100.

SANITARY SEWERS

- 1. MAIN SEWERS SHALL BE PVC SDR 35 WITH RUBBER GASKET CONNECTIONS WITH A MIN. SIZE OF 200mm#.
2. SANITARY SEWER EMBEDMENT SHALL CONFORM WITH OPSD 802.010 USING GRANULAR 'A'.
3. PRECAST SANITARY MANHOLES SHALL CONFORM WITH OPSD 701.010 (1200mm#) WITH HOLLOW RECTANGULAR LADDER RUNGS OPSD 405.010. BENCHING SHALL BE PROVIDED IN ALL MANHOLES.
4. MANHOLE COVERS SHALL BE CAMRON DS579 (OR APPROVED EQUAL) AND INSTALLED AS PER MUNICIPAL STANDARD.
5. HOUSE SERVICE CONNECTIONS SHALL BE PVC SDR 28 WITH RUBBER GASKET CONNECTIONS AND SHALL BE 125mm# MIN.
6. SHOP MANUFACTURED "TEE" CONNECTIONS SHALL BE USED FOR HOUSE SERVICE CONNECTIONS ON 200mm AND 250mm SEWERS.
7. 125mm# SERVICE CONNECTIONS SHALL BE TERMINATED AT THE PROPERTY LINE WITH A 125mmx125mmx100mm TEE, AND A 100mm INSPECTION PIPE TO THE SURFACE, CAPPED.
8. CONNECTION TO MANHOLES SHALL ENTER THE MANHOLE NO HIGHER THAN 600mm ABOVE THE LOWEST INVERT EXCEPT AS OTHERWISE APPROVED BY THE MUNICIPALITY.
9. FROST STRAPS REQUIRED ON ALL MANHOLES AS PER OPSD 701.100.



AS-BUILT SURVEY

- 1. THE CONTRACTOR IS TO SUPPLY ALL AS-BUILT INFORMATION TO THE ENGINEER UPON COMPLETION OF WORKS. AS-BUILT INFORMATION TO INCLUDE A FULL TOPOGRAPHIC SURVEY OF THE SITE. THE AS-BUILT TO ALSO INCLUDE BUT NOT LIMITED TO: LAYOUT OF ALL SEWERS AND WATERMAIN, INVERTS AND TOP OF COVER/GRADE AT STRUCTURES, HEADWALLS AND ANY STORMWATER MANAGEMENT FEATURES.
2. THE AS-BUILT SURVEY TO ALSO INCLUDE BUT NOT LIMITED TO CURBS, SIDEWALKS LONGITUDINAL AND CROSS-FALL SLOPES, CENTERLINE OF ROADS AND EDGE OF PAVEMENT TO CHECK CROSS-FALLS AND ROAD/PARKING LOT GRADES, BARRIER FREE RAMPS ETC. ANY DEVIATIONS FROM THE ORIGINAL DESIGN ARE TO BE INCLUDED IN THE AS-BUILT DRAWINGS. INFORMATION IS TO BE SUPPLIED TO THE CONTRACT ADMINISTRATOR IN BOTH PDF AND CAD FORMATS.
3. THE AS-BUILT INFORMATION WILL BE REQUIRED ONCE AT BASE ASPHALT PLACEMENT COMPLETION AND AGAIN AFTER THE COMPLETION OF TOP ASPHALT AND LANDSCAPING.
4. THE CONTRACTOR TO INCLUDE IN THEIR SCOPE TO CONFIRM CONDITIONS OF ANY WATERMAIN ELEMENTS (HYDRANTS, VALVE BOXES, WATER CHAMBERS ETC.) A MINIMUM THREE TIES INTO EXISTING ABOVE GROUND VISIBLE PERMANENT REPEERS. (IE. EXISTING POLES, CATCHBASINS ETC.)

PERMITS

- 1. THE CONTRACTOR IS RESPONSIBLE FOR APPLYING, RECEIVING AND PAYING FOR ALL PERMITS REQUIRED TO CONSTRUCT THE WORKS INCLUDED IN THE CONTRACT. THE CONTRACTOR SHALL ALSO COMPLY WITH ALL CONDITIONS DICTATED BY SUCH PERMITS AT NO EXTRA COST TO THE OWNER.
2. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION. ALL PERMITS AND ASSOCIATED DRAWINGS AND CONDITIONS MUST BE ON-SITE AND AVAILABLE UPON REQUEST.

THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED TESTING BY THE MUNICIPALITY AND/OR ENGINEER AS APPLICABLE WHICH INCLUDES BUT NOT LIMITED TO:

STORM AND SANITARY SEWERS

- 1. PRECONSTRUCTION FLUSH AND VIDEO OF EXISTING PRIVATE OR MUNICIPAL SEWERS TO CONFIRM CONDITIONS OF ANY SEWER TIE-INS, TO THE SATISFACTION OF THE ENGINEER/MUNICIPALITY AS APPLICABLE.
2. FLUSH AND VIDEO ALL STORM AND SANITARY SEWERS AND PROVIDE THREE PHYSICAL COPIES OF REPORTS AND VIDEOS. THIS INCLUDES MAINLINE SEWERS, LATERALS, LEADS AND SERVICES UP TO THE STUB. THE CCTV INSPECTION, INCLUDING FLUSHING AND CLEANING, IS TO BE CARRIED OUT AS DETAILED IN OPSS 409. ONE FLUSH AND CCTV VIDEO ROUND IS TO BE COMPLETED AFTER THE PLACEMENT OF BASE ASPHALT. SECOND ROUND OF FLUSH AND CCTV TO BE COMPLETED AFTER THE PLACEMENT OF TOP ASPHALT AND COMPLETION OF ALL LANDSCAPING. THIS ITEM TO ALSO INCLUDE THE CLEANING OF ALL STRUCTURES.
3. MANDREL TESTING PER THE OPSS FOR ALL FLEXIBLE SANITARY AND STORM PIPES AFTER INSTALLATION, PRIOR TO BASE ASPHALT PLACEMENT.
4. AIR TESTING FOR SANITARY SEWERS AND STRUCTURES PRIOR TO BASE ASPHALT PLACEMENT, IF REQUESTED BY THE MUNICIPALITY.

WATERMAIN

- 1. THE CONTRACTOR TO INCLUDE IN THEIR SCOPE, THIRD PARTY TESTING, INCLUDING REPORTS, FOR ALL APPLICABLE WATERMAIN TESTING INCLUDING BUT NOT LIMITED TO FLUSHING, SWABBING, PRESSURE TESTING, CHLORINATION, BACKFLOW PREVENTOR TESTING, CONTINUITY TESTING AND HYDRANT FLOW TESTING.

Table with 3 columns: Issue/Revision, Description, Date. Row 1: 1 RE-ISSUED FOR SPA PER CITY COMMENTS 2022/OCT/17. Row 2: 0 ISSUED FOR SITE PLAN APPLICATION 2022/MAY/17.

ELEVATION NOTE:

ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO GEODETIC DATUM CGVD-1928:1978. (SEE FSD FILE No. 531-20)

IT IS THE RESPONSIBILITY OF THE SER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.

LOCAL BENCHMARK:

TOP SPRING OF FIRE HYDRANT LOCATED ON SOUTH SIDE OF COLONNADE ROAD, APPROXIMATELY 95.0m WEST OF PRINCE OF WHALES DRIVE. ELEVATION = 85.19m

SURVEY NOTES:

SURVEY COMPLETED BY FARLEY, SMITH, & DENIS SURVEYING LTD. (2022/MAR/09) FILE No.: 101-21 BEARINGS ARE GRID AND ARE REFERRED TO THE WESTERLY LIMIT OF PRINCE OF WHALES DRIVE HAVING A BEARING OF N 24° 04' 30" W, AS SHOWN ON PLAN 4R-18363.

SITE PLAN NOTES:

DESIGN ELEMENTS ARE BASED ON SITE PLAN BY ARCHITECTURE 49. DRAWING No.: A02 WITH REVISION DATED (2022/SEP/23) PROJECT No.: 219-00058-00

DRAWING NOTES:

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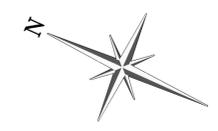
Project: 125 COLONNADE ROAD SOUTH CITY OF OTTAWA

CONSTRUCTION NOTES

NOT FOR CONSTRUCTION

Professional Engineer stamps for B.G.D. WALTON and N. CONSTANTIN, and Crozier Consulting Engineers logo and contact information (2800 High Point Drive, Suite 100, Milton, ON L9T 6P4).

Table with 4 columns: Drawn, Design, B.P., Project No. 2112-6218. Check, B.W., Check, B.W., Scale, N.T.S., Dwg. C105.



LEGEND

- PROPERTY LINE
- EXISTING DITCH
- EXISTING GRADE
- EXISTING OVERLAND FLOW DIRECTION
- STORM DRAINAGE CATCHMENT
- CATCHMENT I.D.
- AREA (ha) | PERCENT IMPERVIOUS (%)

1	RE-ISSUED FOR SPA PER CITY COMMENTS	2022/OCT/17
0	ISSUED FOR SITE PLAN APPLICATION	2022/MAY/17
No.	ISSUE / REVISION	YYYY/MM/DD

ELEVATION NOTE:
ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO GEODETIC DATUM CGVD-1928:1978. (SEE FSD FILE No. 531-20)

IT IS THE RESPONSIBILITY OF THE SER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.

LOCAL BENCHMARK:
TOP SPINDLE OF FIRE HYDRANT LOCATED ON SOUTH SIDE OF COLONNADE ROAD, APPROXIMATELY 95.0m WEST OF PRINCE OF WALES DRIVE.
ELEVATION = 85.19m

SURVEY NOTES:
SURVEY COMPLETED BY FARLEY, SMITH, & DENIS SURVEYING LTD. (2022/MAR/09)
FILE No.: 101-21
BEARINGS ARE GRID AND ARE REFERRED TO THE WESTERLY LIMIT OF PRINCE OF WALES DRIVE HAVING A BEARING OF N 24° 04' 30" W, AS SHOWN ON PLAN 4R-18363.

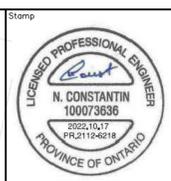
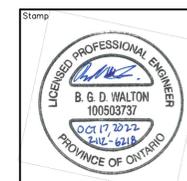
SITE PLAN NOTES:
DESIGN ELEMENTS ARE BASED ON SITE PLAN BY ARCHITECTURE 49.
DRAWING No.: A0.2 WITH REVISION DATED (2022/SEP/23)
PROJECT No.: 219-00058-00

DRAWING NOTES:
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THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT. DO NOT SCALE THIS DRAWING.
ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

Project
125 COLONNADE ROAD SOUTH
CITY OF OTTAWA

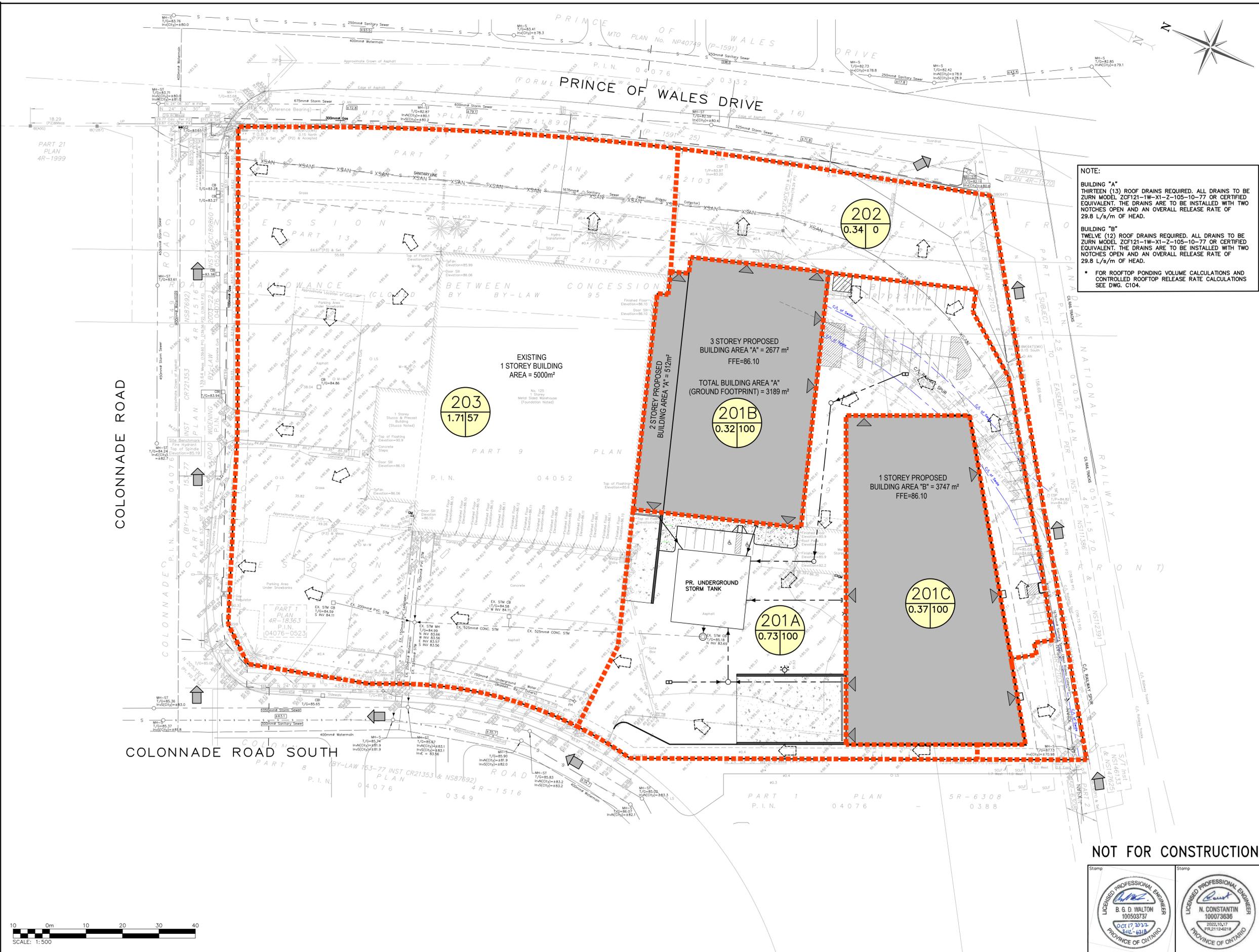
Drawing
PRE-DEVELOPMENT DRAINAGE PLAN

NOT FOR CONSTRUCTION



Drawn	M.I.M.	Design	B.P.	Project No.	2112-6218
Check	B.W.	Check	B.W.	Scale	1:500
				Dwg.	FIG 1





NOTE:

BUILDING "A"
THIRTEEN (13) ROOF DRAINS REQUIRED. ALL DRAINS TO BE ZURN MODEL ZCF121-1W-X1-Z-105-10-77 OR CERTIFIED EQUIVALENT. THE DRAINS ARE TO BE INSTALLED WITH TWO NOTCHES OPEN AND AN OVERALL RELEASE RATE OF 29.8 L/s/m OF HEAD.

BUILDING "B"
TWELVE (12) ROOF DRAINS REQUIRED. ALL DRAINS TO BE ZURN MODEL ZCF121-1W-X1-Z-105-10-77 OR CERTIFIED EQUIVALENT. THE DRAINS ARE TO BE INSTALLED WITH TWO NOTCHES OPEN AND AN OVERALL RELEASE RATE OF 29.8 L/s/m OF HEAD.

* FOR ROOFTOP PONDING VOLUME CALCULATIONS AND CONTROLLED ROOFTOP RELEASE RATE CALCULATIONS SEE DWG. C104.

LEGEND

- PROPERTY LINE
- EXISTING DITCH
- EXISTING GRADE
- EXISTING MAJOR OVERLAND FLOW DIRECTION
- PROPOSED MAJOR OVERLAND FLOW DIRECTION
- STORM DRAINAGE CATCHMENT
- CATCHMENT I.D.
- AREA (ha) | PERCENT IMPERVIOUS (%)

1	RE-ISSUED FOR SPA PER CITY COMMENTS	2022/OCT/17
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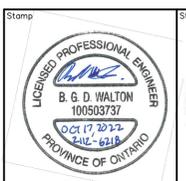
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Project
**125 COLONNADE ROAD SOUTH
CITY OF OTTAWA**

Drawing
POST-DEVELOPMENT DRAINAGE PLAN

NOT FOR CONSTRUCTION



Drawn	M.I.M.	Design	B.P.	Project No.	2112-6218
Check	B.W.	Check	B.W.	Scale	1:500
				Dwg.	FIG 2