PATERSON GROUP

memorandum

re: **Grading & Site Servicing Plan Review**
Proposed Multi-Storey Building
1815 Montreal Road – Ottawa, Ontario

to: Creative Development Ventures – **Catherine Humphrey** – catherine@creativedevventures.com

cc: CSV Architects – **Lee-Christine Bushey** – bushey@csv.ca

date: October 20, 2023

file: PG6594-MEMO.02

Further to your request and authorization, Paterson Group (Paterson) prepared the following memorandum to document our review of the grading and servicing plans for the proposed development to be located at 1815 Montreal Road in the City of Ottawa. This memorandum should be read in conjunction with the Geotechnical Investigation Report (Paterson Group Report PG6594-1 dated May 16, 2023).

Grading Plan Review

Paterson reviewed the following drawing prepared by McIntosh Perry for the aforementioned development:

- ❑ Lot Grading, Drainage, Erosion & Sediment Control Plan – 9-Storey Apartment Building, 1815 Montreal Road – Project No. CCO-23-3469 – Drawing No. C101 – Revision 2 dated October 5, 2023.

Due to the presence of the silty clay deposit at the site, a permissible grade raise restriction of 2 m was recommended for grading at the subject site. Based on our review of the grading plan, significant grade raise exceedances of approximately 2 to 2.5 m above the permissible grade raise restriction are proposed. As such, lightweight fill, such as expanded polystyrene (EPS) geofoam blocks, are recommended adjacent to the proposed building, retaining wall and other settlement structures, where grade raise exceedances are proposed, for the portion of the grade raise exceeding 2 m. Please refer to Figure 1 – Grading Plan Review, attached to the current memorandum, for the approximate limits of where lightweight fill (LWF) is required.

Landscaping Considerations

Based on our review of the available drawings, it is anticipated that the footings at the rear of the property will consist of shallow spread footings, founded over a hard to very stiff brown silty clay. As such, the following tree planting restrictions will apply:

Tree planting setback limits are 7.5 m for small (mature height up to 7.5 m) and medium size trees (mature tree height 7.5 to 14 m), provided that the following conditions are met:

- The underside of footing (USF) is 2.1 m or greater below the lowest finished grade for footings within 10 m from the tree, as measured from the centre of the tree trunk and verified by means of the Grading Plan.

- A small tree must be provided with a minimum of 25 m^3 of available soils volume while a medium tree must be provided with a minimum of 30 m^3 of available soil volume, as determined by the Landscape Architect. The developer is to ensure that the soil is generally un-compacted when backfilling in street tree planting locations.

- The tree species must be small (mature tree height up to 7.5 m) to medium size (mature tree height 7.5 m to 14 m) as confirmed by the Landscape Architect.

- The foundation walls are to be reinforced at least nominally (minimum of two upper and two lower 15M bars in the foundation wall).

- Grading surrounding the tree must promote drainage to the tree root zone (in such a manner as not to be detrimental to the tree), as noted on the subdivision Grading Plan.

It is well documented in the literature, and is our experience, that fast-growing trees located near buildings founded on cohesive soils that shrink on drying can result in long-term differential settlements of the structures. Tree varieties that have the most pronounced effect on foundations are seen to consist of poplars, willows and some maples (i.e. Manitoba Maples) and, as such, they should not be considered in the landscaping design.

It should be noted that plants such as shrubs and bushes in which root growth is typically limited to the upper 1 m of overburden soils, may be planted within the 7.5 m setback limit.

Site Servicing Plan Review

Paterson reviewed the following drawing prepared by McIntosh Perry for the aforementioned development:

- Site Servicing Plan – 9-Storey Apartment Building, 1815 Montreal Road – Project No. CCO-23-3469 – Drawing No. C102 - Revision 2 dated October 5, 2023.

Based on our review of the site servicing plan, sufficient soil cover has been provided to the proposed watermain and sanitary services. However, insufficient soil cover was noted along segments of the proposed stormwater service. Where insufficient soil cover (i.e. less than 2.1 m of soil cover is present above the obvert of the pipe) is available, the following frost protection criteria outlined in Table 1 should be followed. Please refer to Figure 2 – Site Servicing Plan Review attached which indicates the frost protection provided to each service.

Table 1 - Rigid Insulation Recommendations for Storm Sewer and Water Pipes with Reduced Soil Cover

Thermal Condition	Soil Cover Provided (mm)	Insulation Dimensions	
		Thickness (mm)	Extension (mm)
Unheated	600 to 900	125	Extend 1200 mm horizontally beyond edge face of the pipe
	900 to 1200	100	Extend 1200 mm horizontally beyond edge face of the pipe
	1200 to 1500	75	Extend 900 mm horizontally beyond edge face of the pipe
	1500 to 1800	50	Extend 600 mm horizontally beyond edge face of the pipe
	1800 to <2100	25	Extend 300 mm horizontally beyond edge face of the pipe
Notes: All designs are based on a freezing index of 1000°C-days			

All rigid insulation should consist of either Dow Chemical High-Load 40 (HI-40), Styro Rail SR.P400, or equivalent approved by Paterson. The placement of all insulation within the service trenches must be reviewed and approved by Paterson personnel at the time of construction.

We trust that this information satisfies your immediate requirements.

Best Regards,

Paterson Group Inc.

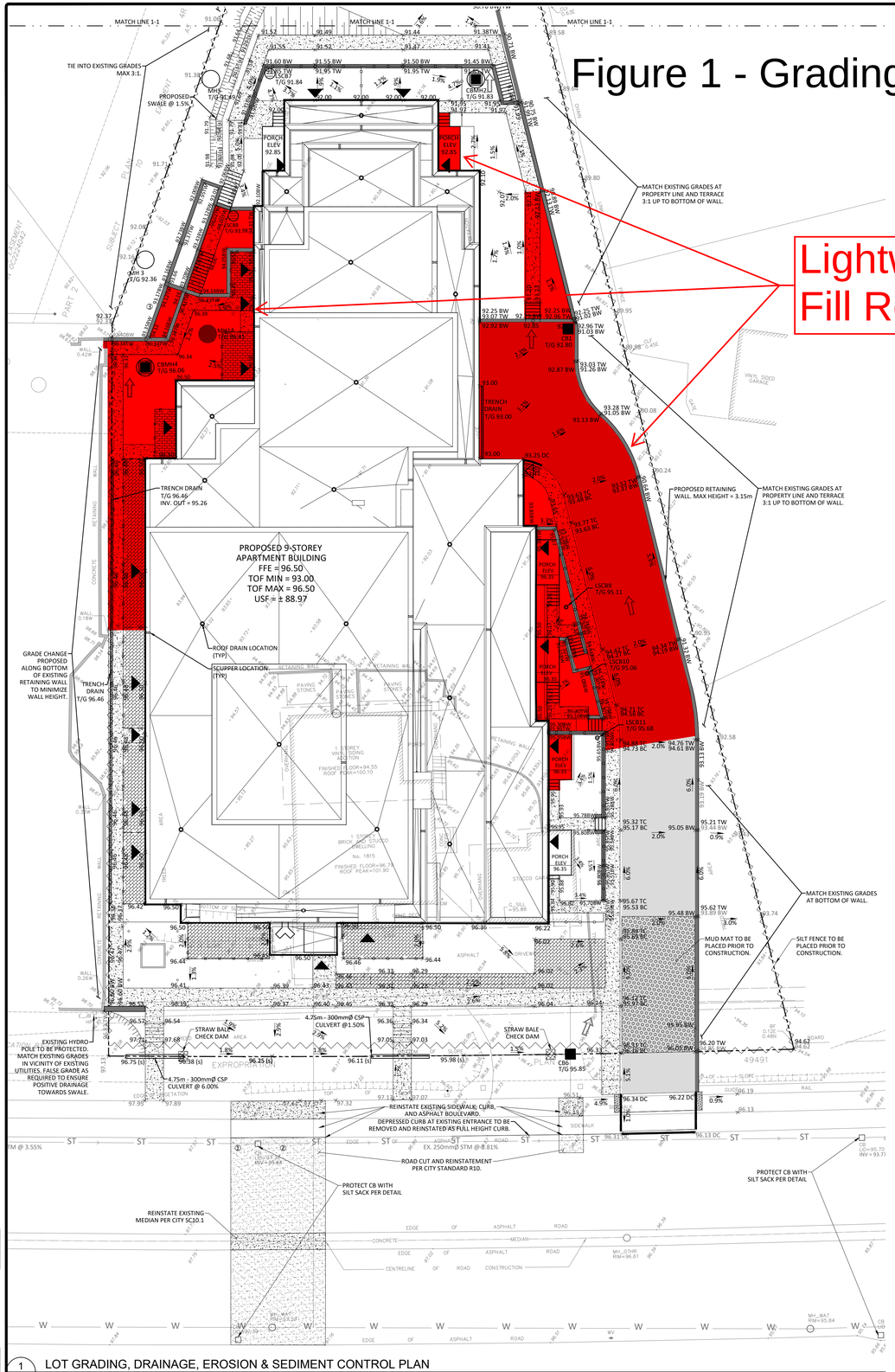
Kevin A. Pickard, P.Eng.

LICENSED PROFESSIONAL ENGINEER
Oct. 20, 2023
S. S. DENNIS
100519516
PROVINCE OF ONTARIO

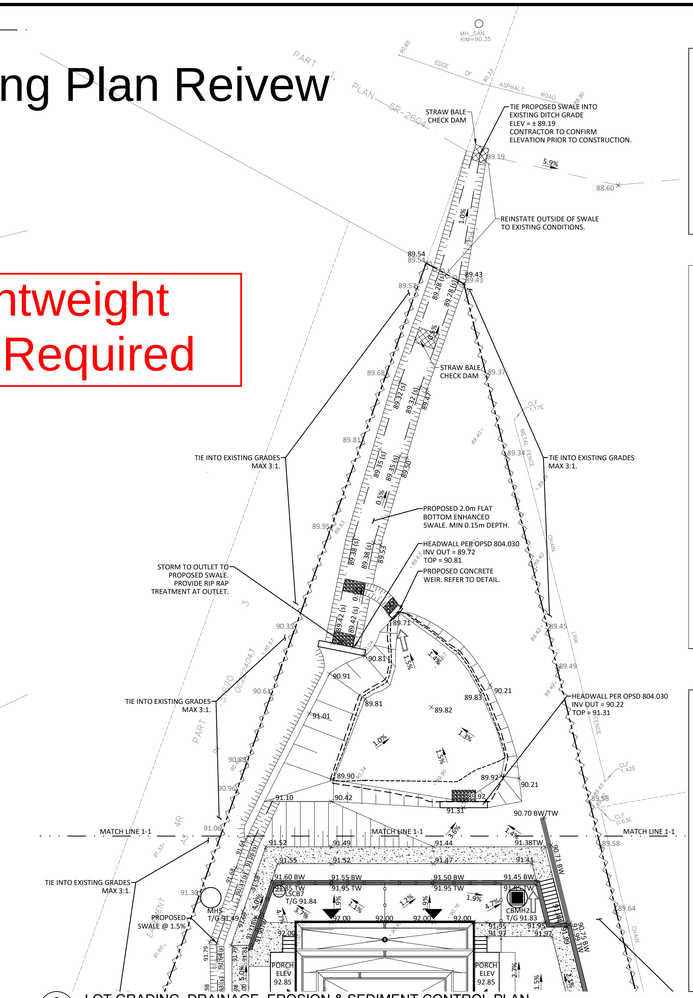
Scott S. Dennis, P.Eng.

Figure 1 - Grading Plan Reivew

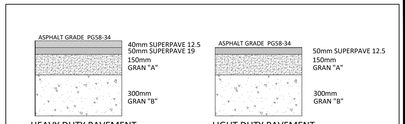
Lightweight
Fill Required



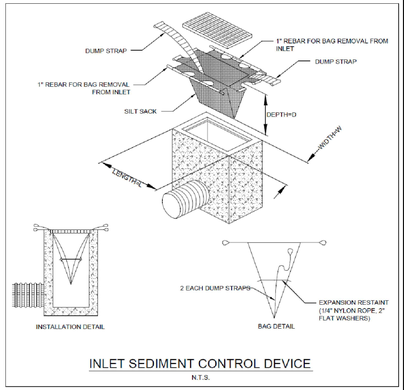
1 C101 LOT GRADING, DRAINAGE, EROSION & SEDIMENT CONTROL PLAN
1 : 200



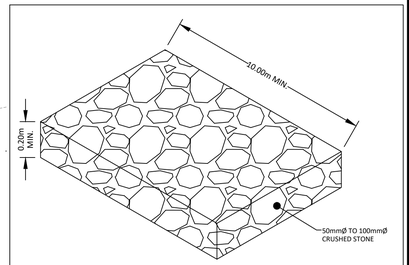
2 C101 LOT GRADING, DRAINAGE, EROSION & SEDIMENT CONTROL PLAN
1 : 200



ASPHALT CROSS-SECTIONS TO CONFORM TO GEOTECHNICAL REPORT COMPLETED BY PATERSON GROUP, DATED MAY 16, 2023



INLET SEDIMENT CONTROL DEVICE
N.T.S.

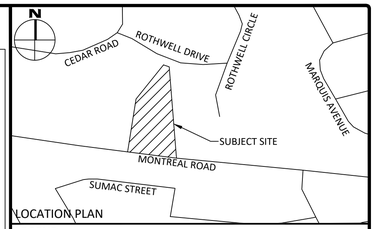


EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, TEMPORARY SEDIMENT CONTROL (GEOSOCK INSERTS WITH AN OVERFLOW UNDER GRATE OR COVER) TO BE IMPLEMENTED DURING CONSTRUCTION ON ALL PROPOSED ROAD CATCHBASINS, REARYARD CATCHBASINS AND CATCHBASIN MANHOLES AND OTHER SEDIMENT TRAPS. NO RECYCLED GEOSOCK MATERIAL SHALL BE PERMITTED FOR USE ON SITE. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
2. AT THE DISCRETION OF THE PROJECT MANAGER OR MUNICIPAL STAFF, ADDITIONAL SILT CONTROL DEVICES SHALL BE INSTALLED AT DESIGNATED LOCATIONS.
3. FOR SILT FENCE BARRIER, USE OPSD 219.110. GEOTEXTILE FOR SILT FENCE AS PER OPSS 1860, TABLE 3.
4. EXCEPT AS PROVIDED IN PARAGRAPHS 4.1., and 4.2. BELOW, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED.
   - 4.1. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASE IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE.
   - 4.2. WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASED, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 21 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED.
5. SEDIMENT THAT IS ACCUMULATED BY THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS ESCAPE OF THE SEDIMENT TO THE DOWNSTREAM SIDE OF THE CONTROL MEASURE AND AVOIDS DAMAGE TO THE CONTROL MEASURE. SEDIMENT SHALL BE REMOVED TO THE LEVEL OF THE GRADE EXISTING AT THE TIME THE CONTROL MEASURE WAS CONSTRUCTED AND BE ACCORDING TO THE FOLLOWING:
   - 5.1. FOR LIGHT-DUTY SEDIMENT BARRIERS, ACCUMULATED SEDIMENT SHALL BE REMOVED ONCE IT REACHES THE LESSER OF THE FOLLOWING:
     - 5.1.1. A DEPTH OF ONE-HALF THE EFFECTIVE HEIGHT OF THE CONTROL MEASURE.
     - 5.1.2. A DEPTH OF 300 MM IMMEDIATELY UPSTREAM OF THE CONTROL MEASURE.
   - 5.2. FOR ALL CONTROL MEASURES, ACCUMULATED SEDIMENT SHALL BE REMOVED AS NECESSARY TO PERFORM MAINTENANCE REPAIRS.
   - 5.3. ACCUMULATED SEDIMENT SHALL BE REMOVED PRIOR TO THE REMOVAL OF THE CONTROL MEASURE.
   - 5.4. ACCUMULATED SEDIMENT IS TO BE REMOVED AND DISPOSED OF AS PER OPSS 180.
6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MONITORED TO ENSURE THEY ARE IN EFFECTIVE WORKING ORDER. THE CONDITION OF THE CONTROL MEASURES SHALL BE MONITORED PRIOR TO ANY FORECAST STORM EVENT AND FOLLOWING A STORM EVENT.
7. DUST CONTROL MEASURES SHOULD BE CONSIDERED PRIOR TO CLEARING AND GRADING. THE USE OF WATER, CALCIUM CHLORIDE FLAKES/SOLUTION OR MAGNESIUM CHLORIDE FLAKES/SOLUTION SHALL BE USED AS DUST SUPPRESSANTS AS PER OPSS 506. THIS IS TO LIMIT WIND EROSION OF SOILS WHICH MAY TRANSPORT SEDIMENTS OFFSITE, WHERE THEY MAY BE WASHED INTO THE RECEIVING WATER BY THE NEXT RAINSTORM.
8. ALL 'GREEN AREAS' TO BE TREATED WITH 150mm TOPSOIL AND SOD AS SOON AS FEASIBLE, AS PER OPSS 570.
9. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
10. STOCKPILED MATERIAL IS TO BE STORED AWAY FROM POTENTIAL RECEIVERS (E.G. STORM CATCHBASINS, MANHOLES), AND BE SURROUNDED BY EROSION CONTROL MEASURES WHERE MATERIAL IS LEFT IN PLACE IN EXCESS OF 14 DAYS.
11. IF REQUIRED, DEWATERING/SETTLING BASINS SHALL BE CONSTRUCTED AS PER OPSD 219.240 AND LOCATED ON FLAT GRADE UPSTREAM OF OTHER EXISTING MITIGATION MEASURES. WATERCOURSES SHALL NOT BE DIVERTED, OR BLOCKED, AND TEMPORARY WATERCOURSES CROSSINGS SHALL NOT BE CONSTRUCTED OR UTILIZED, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. IF CLOSURE OF ANY PERMANENT WATER PASSAGE IS NECESSARY, THE CONTRACTOR SHALL RELEASE ANY STRANDED FISH TO THE OPEN PORTION OF THE WATERCOURSE WITHOUT HARM.
12. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO OPSS 577
13. WHERE DEWATERING IS REQUIRED, THE DISCHARGED WATER SHALL BE CONTROLLED IN ACCORDANCE WITH OPSS 518.
14. ALL SETTLING/FILTRATION BASINS SHALL BE EQUIPPED WITH TERRAFIX 270R GEOTEXTILE (OR APPROVED EQUIVALENT) AND SHALL BE CLEANED AND REPLACED AS REQUIRED.

GENERAL NOTES

1. THE ORIGINAL TOPOGRAPHY, GROUND ELEVATION AND SURVEY DATA SHOWN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY, AND IMPLY NO GUARANTEE OF ACCURACY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL INFORMATION SHOWN.
2. THIS PLAN IS NOT A CADASTRAL SURVEY SHOWING LEGAL PROPERTY BOUNDARIES AND EASEMENTS. THE PROPERTY BOUNDARIES SHOWN HEREON HAVE BEEN DERIVED INFORMATION SUPPLIED BY (OR SHOWN ON) J.D. BARNES DRAWING 22-10-111-00 AND CANNOT BE RELIED UPON TO BE ACCURATE OR COMPLETE. THE PRECISE LOCATION OF THE CURRENT PROPERTY BOUNDARIES AND EASEMENTS CAN ONLY BE DETERMINED BY AN UP-TO-DATE LAND TITLES SEARCH AND A SUBSEQUENT CADASTRAL SURVEY PERFORMED AND CERTIFIED BY AN ONTARIO LAND SURVEYOR.
3. THE CONTRACTOR IS TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY BEFORE COMMENCING CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT.
5. THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME ALL RESPONSIBILITY FOR EXISTING UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
6. RESTORE ALL TRENCHES AND SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY AUTHORITIES.
7. EXCAVATE AND DISPOSE OF ALL EXCESS EXCAVATED MATERIAL, SUCH AS ASPHALT, CURBING AND DEBRIS, OFF SITE AS DIRECTED BY THE ENGINEER AND THE CITY.
8. TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN FILL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
9. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION, AND REMOVAL OF ALL NECESSARY SIGNAGE, DELINEATORS, MARKERS AND BARRIERS.
11. DO NOT ALTER GRADING OF THE SITE WITHOUT PRIOR APPROVAL OF THE ENGINEER/CITY.
12. ALL ROADWAY, PARKING LOT, AND GRADING WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS. THE CONTRACTOR IS TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING.
13. CONTACT THE CITY FOR INSPECTION OF ROUGH GRADING OF PARKING LOTS, ROADWAYS AND LANDSCAPED AREAS PRIOR TO PLACEMENT OF ASPHALT AND TOPSOIL. ALL DEFICIENCIES NOTED SHALL BE RECTIFIED TO THE CITY'S SATISFACTION PRIOR TO PLACEMENT OF ANY ASPHALT, TOPSOIL, SEED & MULCH AND/OR SOD.
14. ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION, IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
15. ELECTRICAL, GAS, TELEPHONE AND TELEVISION SERVICE LOCATIONS ARE SUBJECT TO THE INDIVIDUAL AGENCY:
    - ELECTRICAL SERVICE - HYDRO ONE,
    - GAS SERVICE - ENBRIDGE,
    - TELEPHONE SERVICE - BELL CANADA,
    - TELEVISION SERVICE - ROGERS.
16. INSTALLATION TO BE IN ACCORDANCE WITH CURRENT CODES AND STANDARDS OF APPROVAL AGENCIES HYDRO ONE, BELL AND THE CITY.
17. CONTRACTOR TO ENSURE ALL APPLICABLE OPS SPECIFICATIONS ARE FOLLOWED DURING CONSTRUCTION
18. ALL PROPOSED CURB TO BE CONCRETE BARRIER CURB UNLESS OTHERWISE SPECIFIED.
19. THIS PLAN MUST BE READ IN CONJUNCTION WITH THE GEOTECHNICAL INVESTIGATION COMPLETED BY PATERSON GROUP, DATED MAY 16, 2023.



LOCATION PLAN

LEGEND

- CONCRETE BARRIER CURB
- CONCRETE WALKWAY
- PAVER WALKWAY
- PROPOSED ASPHALT
- LSC# — LANDSCAPING CATCHBASIN
- CBMH# T/G — CATCHBASIN MANHOLE
- CB# T/G — CATCHBASIN
- MH#A T/G — SANITARY SEWER MANHOLE
- HYD B/F — FIRE HYDRANT
- WATER VALVE
- WATER METER
- REMOTE WATER METER
- RETAINING WALL
- LIMIT OF CONSTRUCTION
- DRAINAGE SWALE
- DRAINAGE DITCH
- SLOPING AT 3:1 UNLESS SPECIFIED
- 95.50 — SURFACE ELEVATION
- 95.50 (S) — SWALE ELEVATION
- T/W 95.50 B/W 94.25 — TOP OF WALL ELEVATION BOTTOM OF WALL ELEVATION
- OVERLAND FLOW ROUTE
- SILT FENCE BARRIER
- STRAW BALE CHECK DAM
- MUD MAT

FOR REVIEW ONLY
NOT FOR CONSTRUCTION

No.	Revisions	Date
1	ISSUED FOR SITE PLAN CONTROL	MAY 30, 2023

Check and verify all dimensions before proceeding with the work — Do not scale drawings

SCALE 1 : 200
0 10 20 Metres

McINTOSH PERRY
115 Walgreen Road, RR3, Carp, ON K0A 1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.mcintosherry.com

Stamp:

Client:
CSV ARCHITECTS
190 O'CONNOR STREET, SUITE 100
OTTAWA, ON K2P 2R3

Project:
9-STOREY APARTMENT BUILDING
1815 MONTREAL ROAD

Drawing Title:
LOT GRADING, DRAINAGE, EROSION & SEDIMENT CONTROL PLAN

Scale: 1:200	Project Number: CCO-23-3469
Drawn By: FV	
Checked By: BC	Drawing Number: C101
Designed By: FV	

D02-02-23-0043 & D07-12-23-0071

18999

FILENAME: I:\Ottawa\01 Project - Proposals\2023 Jobs\CCO\CCO-23-3469 CSV_Apartment_1815 Montreal Road\12 - Drawings\CCO-23-3469_Presentation.dwg
LAST SAVED: Wednesday, September 27, 2023 LAST SAVED BY: F.Valenti
LAST PLOTTED: Friday, September 29, 2023 7:39 PLE TABLE USED: MP-C4-STANDARD.ctb

Figure 2 - Site Servicing Plan Review

Proposed Storm Sewer

Prop. Grade=91.49 m
Prop. Invert=89.92 m
Soil Cover Provided=1.3 m
Frost Protection Required

Proposed Storm Sewer

Prop. Grade=91.84 m
Prop. Invert=90.15 m
Soil Cover Provided=1.5 m
Frost Protection Required

Proposed Storm Sewer

Prop. Grade=92.47 m
Prop. Invert=90.52 m
Soil Cover Provided=1.7 m
Frost Protection Required

Proposed Storm Sewer

Prop. Grade=93.98 m
Prop. Invert=90.24 m
Avail. Soil Cover=3.5 m

Proposed Storm Sewer

Prop. Grade=91.83 m
Prop. Invert=90.33 m
Soil Cover Provided=1.3 m
Frost Protection Required

Proposed Storm Sewer

Prop. Grade=93.73 m
Prop. Invert=90.56 m
Avail. Soil Cover=3.0 m

Proposed Sanitary Sewer

Prop. Grade=92.62 m (+/-)
Prop. Invert = 90.05 m
Soil Cover Provided=2.3 m

Proposed Storm Sewer

Prop. Grade=92.80 m
Prop. Invert=90.58 m
Soil Cover Provided=2.0 m
Frost Protection Required

Proposed Sanitary Sewer

Prop. Grade=96.41 m
Prop. Invert=90.32 m
Soil Cover Provided=5.9 m

Proposed Storm Sewer

Prop. Grade=96.29 m
Prop. Invert=94.09 m
Soil Cover Provided=2.0 m
Frost Protection Required

Proposed Storm Sewer

Ex. Grade=90.81 m
Prop. Invert=89.72 m
Soil Cover Provided=0.8 m
Frost Protection Required

Proposed Storm Sewer

Ex. Grade=91.31 m
Prop. Invert=90.22 m
Soil Cover Provided=0.9 m
Frost Protection Required

Proposed Waterline

Prop. Grade=96.50 m (+/-)
Prop. Top of WM=91.00 m
Soil Cover Provided=5.3 m

Proposed Storm Sewer

Prop. Grade=95.88 m
Prop. Invert=94.86 m
Soil Cover Provided=0.7 m
Frost Protection Required

Proposed Waterline

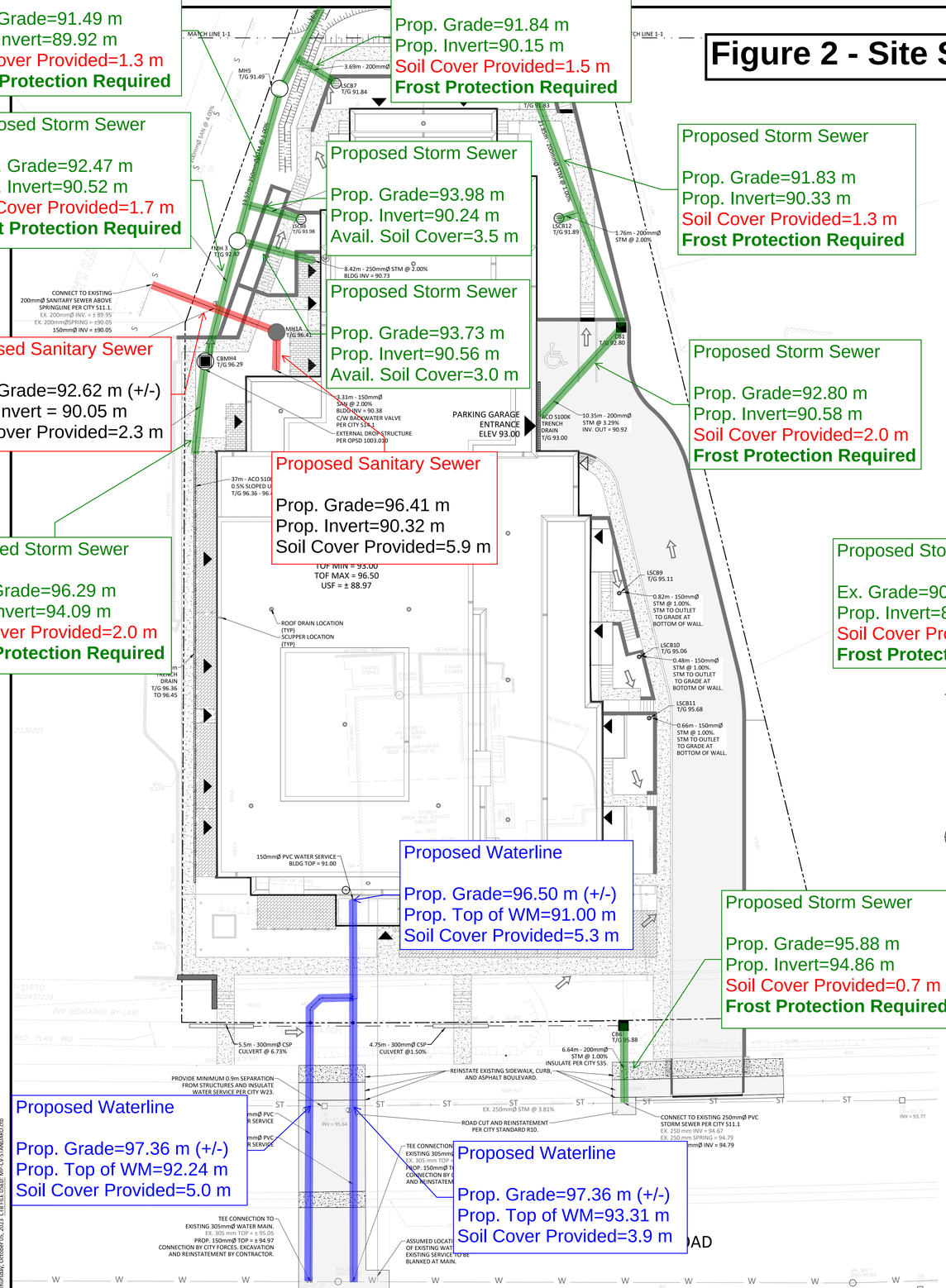
Prop. Grade=97.36 m (+/-)
Prop. Top of WM=92.24 m
Soil Cover Provided=5.0 m

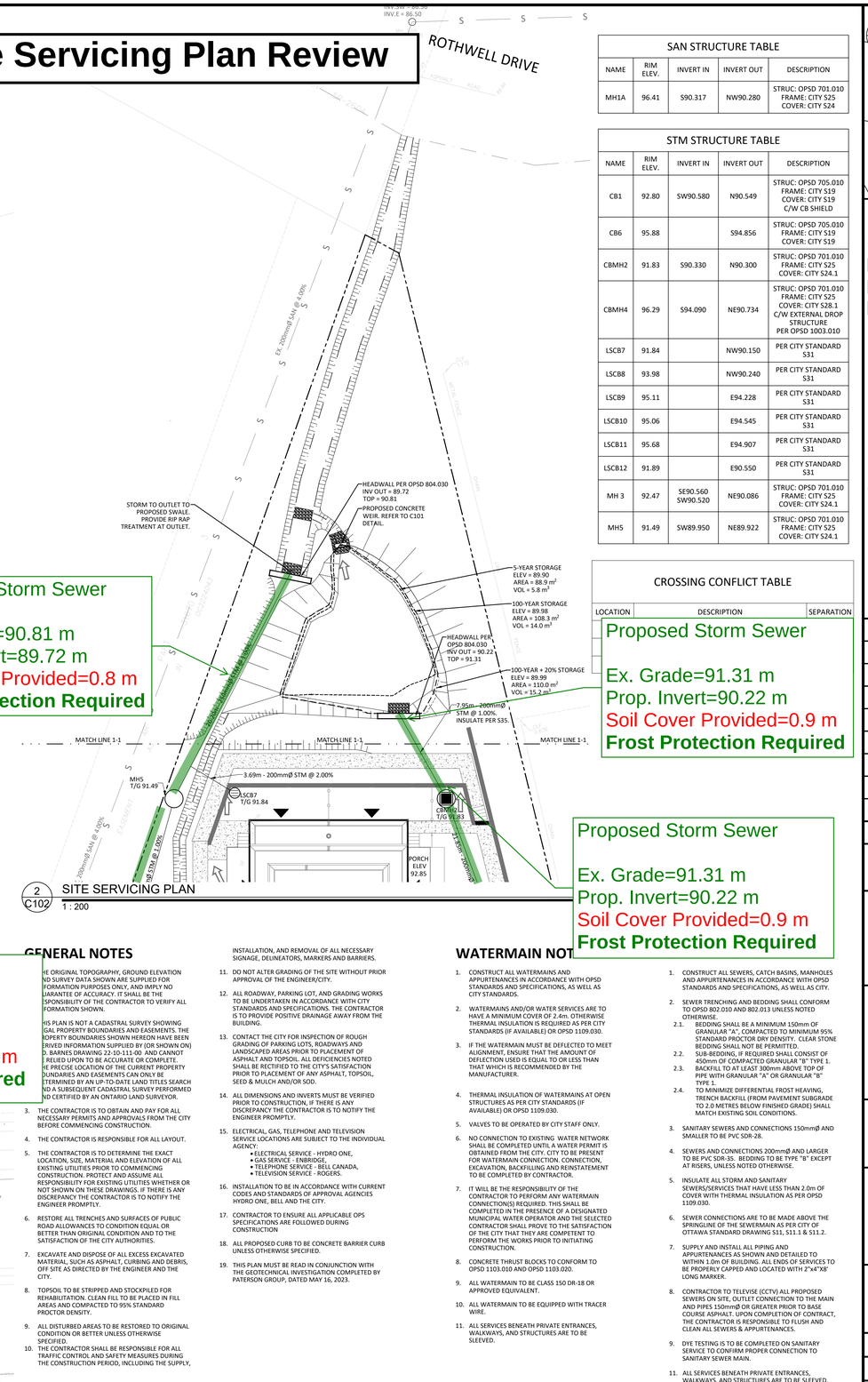
Proposed Waterline

Prop. Grade=97.36 m (+/-)
Prop. Top of WM=93.31 m
Soil Cover Provided=3.9 m

Proposed Storm Sewer

Ex. Grade=91.31 m
Prop. Invert=90.22 m
Soil Cover Provided=0.9 m
Frost Protection Required





SAN STRUCTURE TABLE

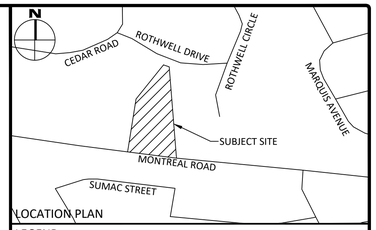
NAME	RIM ELEV.	INVERT IN	INVERT OUT	DESCRIPTION
MH1A	96.41	S90.317	NW90.280	STRUC: OPSD 701.010 FRAME: CITY S25 COVER: CITY S24

STM STRUCTURE TABLE

NAME	RIM ELEV.	INVERT IN	INVERT OUT	DESCRIPTION
CB1	92.80	SW90.580	N90.549	STRUC: OPSD 705.010 FRAME: CITY S19 COVER: CITY S19 C/W CB SHIELD
CB6	95.88		S94.856	STRUC: OPSD 705.010 FRAME: CITY S19 COVER: CITY S19
CBMH2	91.83	S90.330	N90.300	STRUC: OPSD 701.010 FRAME: CITY S25 COVER: CITY S24.1
CBMH4	96.29	S94.090	NE90.734	STRUC: OPSD 701.010 FRAME: CITY S25 COVER: CITY S28.1 C/W EXTERNAL DROP STRUCTURE PER OPSD 1003.010
LSCB7	91.84		NW90.150	PER CITY STANDARD S31
LSCB8	93.98		NW90.240	PER CITY STANDARD S31
LSCB9	95.11		E94.228	PER CITY STANDARD S31
LSCB10	95.06		E94.545	PER CITY STANDARD S31
LSCB11	95.68		E94.907	PER CITY STANDARD S31
LSCB12	91.89		E90.550	PER CITY STANDARD S31
MH 3	92.47	SE90.560 SW90.520	NE90.086	STRUC: OPSD 701.010 FRAME: CITY S25 COVER: CITY S24.1
MH5	91.49	SW89.950	NE89.922	STRUC: OPSD 701.010 FRAME: CITY S25 COVER: CITY S24.1

CROSSING CONFLICT TABLE

LOCATION	DESCRIPTION	SEPARATION



LOCATION PLAN

LEGEND

- CONCRETE BARRIER CURB
- CONCRETE WALKWAY
- PAVER WALKWAY
- PROPOSED ASPHALT
- LSCB# LANDSCAPING CATCHBASIN
- CBMH# T/G CATCHBASIN MANHOLE
- CB# T/G CATCHBASIN
- MH#A T/G SANITARY SEWER MANHOLE
- HYD B/F FIRE HYDRANT
- WATER VALVE
- WATER METER
- REMOTE WATER METER
- RETAINING WALL
- LIMIT OF CONSTRUCTION
- DRAINAGE SWALE
- DRAINAGE DITCH
- SLOPING AT 3:1 UNLESS SPECIFIED
- 95.50 SURFACE ELEVATION
- 95.50 (S) SWALE ELEVATION
- T/W95.50 B/W 94.25 TOP OF WALL ELEVATION BOTTOM OF WALL ELEVATION
- OVERLAND FLOW ROUTE
- SILT FENCE BARRIER
- STRAW BALE CHECK DAM
- MUD MAT

No.	Revisions	Date
2	ISSUED FOR SITE PLAN CONTROL	OCT. 05, 2023
1	ISSUED FOR SITE PLAN CONTROL	MAY 30, 2023

Check and verify all dimensions before proceeding with the work

Do not scale drawings

SCALE 1 : 200

0 10 20 Metres

GENERAL NOTES

1. HE ORIGINAL TOPOGRAPHY, GROUND ELEVATION ND SURVEY DATA SHOWN ARE SUPPLIED FOR FORMATION PURPOSES ONLY, AND IMPLY NO UARANTEE OF ACCURACY. IT SHALL BE THE SPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL FORMATION SHOWN.
2. HIS PLAN IS NOT A CADASTRAL SURVEY SHOWING GAL PROPERTY BOUNDARIES AND EASEMENTS. THE OPERTY BOUNDARIES SHOWN HEREON HAVE BEEN RIVED INFORMATION SUPPLIED BY (OR SHOWN ON) D. BARNES DRAWING 22-10-111-00 AND CANNOT RELIED UPON TO BE ACCURATE OR COMPLETE. HE PRECISE LOCATION OF THE CURRENT PROPERTY UNDARIES AND EASEMENTS CAN ONLY BE TERMINED BY AN UP-TO-DATE LAND TITLES SEARCH ND A SUBSEQUENT CADASTRAL SURVEY PERFORMED ND CERTIFIED BY AN ONTARIO LAND SURVEYOR.
3. THE CONTRACTOR IS TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY BEFORE COMMENCING CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT.
5. THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION, PROTECT AND ASSUME ALL RESPONSIBILITY FOR EXISTING UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
6. RESTORE ALL TRENCHES AND SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY AUTHORITIES.
7. EXCAVATE AND DISPOSE OF ALL EXCESS EXCAVATED MATERIAL, SUCH AS ASPHALT, CURBING AND DEBRIS, OFF SITE AS DIRECTED BY THE ENGINEER AND THE CITY.
8. TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN FILL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
9. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION, AND REMOVAL OF ALL NECESSARY SIGNAGE, DELINEATORS, MARKERS AND BARRIERS.
11. DO NOT ALTER GRADING OF THE SITE WITHOUT PRIOR APPROVAL OF THE ENGINEER/CITY.
12. ALL ROADWAY, PARKING LOT, AND GRADING WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS. THE CONTRACTOR IS TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING.
13. CONTACT THE CITY FOR INSPECTION OF ROUGH GRADING OF PARKING LOTS, ROADWAYS AND LANDSCAPED AREAS PRIOR TO PLACEMENT OF ASPHALT AND TOPSOIL. ALL DEFICIENCIES NOTED SHALL BE RECTIFIED TO THE CITY'S SATISFACTION PRIOR TO PLACEMENT OF ANY ASPHALT, TOPSOIL, SEED & MULCH AND/OR SOD.
14. ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION, IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
15. ELECTRICAL, GAS, TELEPHONE AND TELEVISION SERVICE LOCATIONS ARE SUBJECT TO THE INDIVIDUAL AGENCY:
    - ELECTRICAL SERVICE - HYDRO ONE,
    - GAS SERVICE - ENBRIDGE,
    - TELEPHONE SERVICE - BELL CANADA,
    - TELEVISION SERVICE - ROGERS.
16. INSTALLATION TO BE IN ACCORDANCE WITH CURRENT CODES AND STANDARDS OF APPROVAL AGENCIES HYDRO ONE, BELL AND THE CITY.
17. CONTRACTOR TO ENSURE ALL APPLICABLE OPS SPECIFICATIONS ARE FOLLOWED DURING CONSTRUCTION
18. ALL PROPOSED CURB TO BE CONCRETE BARRIER CURB UNLESS OTHERWISE SPECIFIED.
19. THIS PLAN MUST BE READ IN CONJUNCTION WITH THE GEOTECHNICAL INVESTIGATION COMPLETED BY PATERSON GROUP, DATED MAY 16, 2023.

WATERMAIN NOT

1. CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH OPSD STANDARDS AND SPECIFICATIONS, AS WELL AS CITY STANDARDS.
2. WATERMAINS AND/OR WATER SERVICES ARE TO HAVE A MINIMUM COVER OF 2.4m. OTHERWISE THERMAL INSULATION IS REQUIRED AS PER CITY STANDARDS (IF AVAILABLE) OR OPSD 1109.030.
3. IF THE WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS EQUAL TO OR LESS THAN THAT WHICH IS RECOMMENDED BY THE MANUFACTURER.
4. THERMAL INSULATION OF WATERMAINS AT OPEN STRUCTURES AS PER CITY STANDARDS (IF AVAILABLE) OR OPSD 1109.030.
5. VALVES TO BE OPERATED BY CITY STAFF ONLY.
6. NO CONNECTION TO EXISTING WATER NETWORK SHALL BE COMPLETED UNTIL A WATER PERMIT IS OBTAINED FROM THE CITY. CITY TO BE PRESENT FOR WATERMAIN CONNECTION. CONNECTION, EXCAVATION, BACKFILLING AND REINSTATEMENT TO BE COMPLETED BY CONTRACTOR.
7. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ANY WATERMAIN CONNECTION(S) REQUIRED. THIS SHALL BE COMPLETED IN THE PRESENCE OF A DESIGNATED MUNICIPAL WATER OPERATOR AND THE SELECTED CONTRACTOR SHALL PROVE TO THE SATISFACTION OF THE CITY THAT THEY ARE COMPETENT TO PERFORM THE WORKS PRIOR TO INITIATING CONSTRUCTION.
8. CONCRETE THRUST BLOCKS TO CONFORM TO OPSD 1103.010 AND OPSD 1103.020.
9. ALL WATERMAIN TO BE CLASS 150 DR-18 OR APPROVED EQUIVALENT.
10. ALL WATERMAIN TO BE EQUIPPED WITH TRACER WIRE.
11. ALL SERVICES BENEATH PRIVATE ENTRANCES, WALKWAYS, AND STRUCTURES ARE TO BE SLEEVED.
1. CONSTRUCT ALL SEWERS, CATCH BASINS, MANHOLES AND APPURTENANCES IN ACCORDANCE WITH OPSD STANDARDS AND SPECIFICATIONS, AS WELL AS CITY.
2. SEWER TRENCHING AND BEDDING SHALL CONFORM TO OPSD 802.010 AND 802.013 UNLESS NOTED OTHERWISE.
   - 2.1. BEDDING SHALL BE A MINIMUM 150mm OF GRANULAR "A", COMPACTED TO MINIMUM 95% STANDARD PROCTOR DRY DENSITY. CLEAR STONE BEDDING SHALL NOT BE PERMITTED.
   - 2.2. SUB-BEDDING, IF REQUIRED SHALL CONSIST OF 450mm OF COMPACTED GRANULAR "B" TYPE 1.
   - 2.3. BACKFILL TO AT LEAST 300mm ABOVE TOP OF PIPE WITH GRANULAR "A" OR GRANULAR "B" TYPE 1.
   - 2.4. TO MINIMIZE DIFFERENTIAL FROST HEAVING, TRENCH BACKFILL (FROM PAVEMENT SUBGRADE TO 2.0 METRES BELOW FINISHED GRADE) SHALL MATCH EXISTING SOIL CONDITIONS.
3. SANITARY SEWERS AND CONNECTIONS 150mmØ AND SMALLER TO BE PVC SDR-28.
4. SEWERS AND CONNECTIONS 200mmØ AND LARGER TO BE PVC SDR-35. BEDDING TO BE TYPE "B" EXCEPT AT RISERS, UNLESS NOTED OTHERWISE.
5. INSULATE ALL STORM AND SANITARY SEWERS/SERVICES THAT HAVE LESS THAN 2.0m OF COVER WITH THERMAL INSULATION AS PER OPSD 1109.030.
6. SEWER CONNECTIONS ARE TO BE MADE ABOVE THE SPRINGLINE OF THE SEWERMAIN AS PER CITY OF OTTAWA STANDARD DRAWING S11, S11.1 & S11.2.
7. SUPPLY AND INSTALL ALL PIPING AND APPURTENANCES AS SHOWN AND DETAILED TO WITHIN 1.0m OF BUILDING. ALL ENDS OF SERVICES TO BE PROPERLY CAPPED AND LOCATED WITH 2"x4"X8' LONG MARKER.
8. CONTRACTOR TO TELEVISE (CCTV) ALL PROPOSED SEWERS ON SITE, OUTLET CONNECTION TO THE MAIN AND PIPES 150mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
9. DYE TESTING IS TO BE COMPLETED ON SANITARY SERVICE TO CONFIRM PROPER CONNECTION TO SANITARY SEWER MAIN.
11. ALL SERVICES BENEATH PRIVATE ENTRANCES, WALKWAYS, AND STRUCTURES ARE TO BE SLEEVED.

McINTOSH PERRY
115 Walgreen Road, RR3, Carp, ON K0A 1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.mcintoshperry.com

Stamp: LICENSED PROFESSIONAL ENGINEER J. D. J. HEWSON 100506243 10/05/2023 PROVINCE OF ONTARIO

Client:
CSV ARCHITECTS
190 O'CONNOR STREET, SUITE 100
OTTAWA, ON K2P 2R3

Project:
9-STOREY APARTMENT BUILDING
1815 MONTREAL ROAD

Drawing Title:
SITE SERVICING PLAN

Scale:	1:200
Drawn By:	FV
Checked By:	JH
Designed By:	FV
Project Number:	CCO-23-3469
Drawing Number:	C102

D02-02-23-0043 & D07-12-23-0071

18999

FILENAME: U:\Ottawa\01 Project - Proposals\2023 Jobs\CCO\CCO-23-3469 CSV_Apartment_1815 Montreal Road\12 - Drawings\CCO-23-3469_Presentation.dwg
LAST SAVED: Thursday, October 05, 2023 LAST SAVED BY: F. Valenti
LAST PLOTTED: Thursday, October 05, 2023 7:39 PM PLOTTED BY: M-P CIVIL STANDARD.ctb