University of Ottawa

Technical Memorandum No. 1 –

Environmental Impact Statement Addendum

Proposed Site Redevelopment 200 Lees Avenue Ottawa, Ontario

A001049A

SUBMITTED BY CIMA CANADA INC.
(CIMA+)
110-240 Catherine Street
Ottawa, Ontario K2P 2G8
cima.ca

CIMA+ file number: A001049A
7 October 2021 – Review 00

University of Ottawa

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Environmental Impact Statement - Addendum

Proposed Site Redevelopment 200 Lees Avenue Ottawa, Ontario

Prepared by:

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Environmental Specialist - Environment **CIMA+**

Verified by:

Karen Greer, M.Sc., P.Geo., QP_{ESA}
Project Manager - **CIMA+**

240 Catherine Street, Suite 110, Ottawa, Ontario
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CIMA+ file number: A001049A
7 October 2021 – Review 00

Confidentiality and Ownership

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List of Appendices

1. Introduction

CIMA+, in collaboration with Geosyntec Consultants International, Inc (Geosyntec), was retained by the *University of Ottawa* (uOttawa) to complete an Environmental Impact Statement (EIS) with Tree Conservation Report (TCR) report.

The purpose of the EIS was to support a Site Plan Application to the City of Ottawa for the proposed redevelopment of the property located at 200 Lees Avenue, Ottawa Ontario. The EIS report was completed on September 17, 2020 (**CIMA+**, 2020) in accordance with the Environmental Impact Statement Guidelines (City of Ottawa, 2015).

The scope of the EIS included:

+ Background documentation review including regulatory information requests to the Ministry of Natural Resources and Forestry (MNRF) Kemptville District, the Ontario Ministry of Environment, Conservation and Parks (MECP), the City of Ottawa, and the Rideau Valley Conservation Authority (RVCA);
+ Desktop Species at Risk (SAR) screening;
+ Confirmatory investigations for vegetation & wildlife and SAR carried out on July 9, 2020; and
+ Assessment of project conceptual design, as available at the time of assessment, and the recommendation of avoidance and mitigation measures to address potential impacts to the natural environment.

The EIS also included a tree inventory which was completed on July 23, 2020.

The purpose of this technical memorandum is to provide specific responses to selected City of Ottawa Review comments on the EIS report provided to uOttawa on October 1, 2021.

2. Description of the Project

The property located at 200 Lees Avenue, Ottawa Ontario and is owned and operated by the uOttawa. The property currently facilitates both administrative and academic services and current occupants include the Faculty of Health Sciences (FHS), library, Faculty of Engineering, Faculty of Arts, and Sports Services. A portion of the property (approximate area of 22,000 m^2), herein referred to as the "Site" is being proposed for redevelopment by uOttawa. The scope of the redevelopment is the construction of a new multi-storey "C" shaped building with no basement following the demolition of Buildings B, C, and D. This new building will be located within the approximate footprint of existing Buildings C and D. It is understood that the use of the Site is to remain unchanged and will continue to operate as a university pursuant to section 3 of the *Post-secondary Education Choice and Excellence Act, 2000*. A layout of the Site and nearby features is shown in **Figure 1** provided in **Appendix A** and includes the property from the top of slope along the Rideau River northwards.

3. Response to Comments

Selected City of Ottawa comments, as they relate to the EIS report, are provide below alongside specific responses.

15. It is the staff's opinion that the EIS supports the proposal. Please revise the document to offer a clearer list of recommendations to ease implementation through the Site Plan Approval conditions.

Response:

Given project construction timelines, rather than revising the EIS report, it is the intent of this technical memo to act as an addendum to the report providing responses to City comments.

16. General comments on the EIS:

c. Wildlife exclusion fencing should be provided along the boundaries of the site, at least along the watercourse side of the site. The fencing is best paired with the construction access fencing /erosion control fencing. We appreciate the approach of fencing/covering any stockpiles, however the entire side is a hazard for wildlife, particularly turtles, and access should be controlled, and this can be completed along with other fencing.

Response

Design and implementation of the proposed development were conceptual at the time of the completion of the EIS. Since the finalization of the report, further details have been confirmed. The Site is isolated by a 6' or 8' high fence around the perimeter of the construction site which is fitted with full height scaffold netting. Details are provided in the product information sheet in **Appendix B**. In addition to the perimeter fence the ESC plan (**Appendix C**) also entails a standalone silt fence, installed per OPSD 219.110 surrounding the site. The perimeter fence and silt fence together should be sufficient to prevent turtles and other wildlife from accessing the site.

d. Please provide a reference for the Ottawa Species at Risk Handbook (OSC, 2014) in the reference section.

Response:

The EIS references the Ottawa Species at Risk Handbook however a proper reference was omitted from the Reference section. Therefore, the EIS should be considered to include the following:

Ottawa Stewardship Council, 2014. The Species at Risk Handbook for Ottawa.

http://www.ottawastewardship.org/wp-content/uploads/2015/06/The-SAR-Handbook-for-Ottawa-July-28-2014.pdf

e. As per the Bird-Safe Design Guidelines, the EIS needs to address bird-safe design. Please see the bird safe-safe design guidelines for more information

https://documents.ottawa.ca/sites/documents/files/birdsafedesign_guidelines_en.pdf

Response:

As mentioned above, detailed design of structures and buildings was not available for review at the time of preparation of the EIS and have yet to be finalized. However, design specifications for construction do require windows and window treatments (glazing, etc.) be designed in accordance with the Bird-Safe Design Guidelines. The specification also calls for the installation of bird warning glass.

Similarly landscaping and lighting design and overall site design take into consideration potential impacts to wildlife, birds and turtles.

f. The EIS section 6 (Summary and Recommendations/Conclusions) needs to be revised to provide a clearer summary of recommendations and not a list of recommendations as it currently does (for example the impact of migratory bird's nests – please note, the harming of migratory bird nests is prohibited under Federal statute). Further the EIS summary should note the "ecological value" is in the fact that the Rideau River and its associated riparian lands that this EIS development protects and enhances.

Response:

To provide increase clarity for the reader the conclusion section should be revised as follows:

This EIS with TCR provides an analysis of the potential impacts to the valued ecosystem components that may result from the proposed development of the Site located within 200 Lees Ave. The majority of the Site consists of previously developed and landscaped lands with limited ecological value. However, the Rideau River is located immediately adjacent to the site to the south. The re-development of the site has been planned to avoid impacts to the Rideau River or associated riparian lands.

The assessment of ecological features and functions identified within and adjacent to the Site and an evaluation of the conceptual design for the Site resulted in the identification of potential impacts and associated mitigation measures as documented in Section 5.0. A summary of potential impacts and associated mitigative strategies is provided below:

+ Temporary construction activities have an increased potential sediment and erosion into the Rideau River because of construction activities. These potential impacts can be mitigated through the preparation and implementation of a comprehensive erosion and sediment control plan.
+ Construction activities will result in damage or loss of trees on the Site. Direct impacts to vegetation not intended for clearing can be mitigated through the implementation of standard best management practices and long-term impacts can be compensated for through appropriate landscaping and re-planting. Invasive plant species were noted adjacent to the site along the Rideau River. At this time, all work is planned to avoid these areas and the existing vegetated bank will not be disturbed so it is anticipated that the potential for construction activities to spread invasive species is negligible.
+ Impacts to migratory bird nest, eggs and nestling due to tree cutting, vegetation clearing or building demolition activities. Impacts to migratory birds and bird nesting activities can be avoided through the application of appropriate clearing timing windows and best practices for vegetation clearing and building demolition.

- While no SAR were confirmed as occurring on-Site, SAR do have the potential to utilize adjacent lands and in particular the Rideau River. Additionally, construction activities may result in temporary disruption to wildlife within and adjacent to Site. Potential impacts to SAR and wildlife can be avoided through the implementation of appropriate Site exclusion, worker education, and standard construction best management practices.
- Changes in air quality may result from construction activities including of noise, fugitive dust or vehicle/equipment exhaust can be mitigated through the application of standard construction best management practices and phasing.

4. Limitations and Constraints

CIMA+ completed diligent and reasonable research in the conduct of this evaluation, with respect to the recognized laws and standards of practice.

The facts presented in this report are strictly limited to the period of investigation. The conclusions presented in this report are based on the available information and documents, the observations made during the Site visit and the information obtained from communications with various contacts. The interpretation presented in this report is limited to this data.

CIMA+ is not responsible for erroneous conclusions due to voluntary abstention or the non-availability of pertinent information. Any opinion expressed in relation to legal or regulatory conformity is technical and should not be, in any case, considered as legal advice.

5. References

CIMA Canada Inc., 2020. University of Ottawa Environmental Impact Statement with Tree Conservation Report - Proposed Site Redevelopment – 200 Lees Avenue, Ottawa, Ontario

PCL Constructors Canada Inc. 2021. Erosion and Sedimentation Control Plan For University of Ottawa Faculty of Health Sciences (FHS) Project #100265

Ottawa Stewardship Council, 2014. The Species at Risk Handbook for Ottawa.

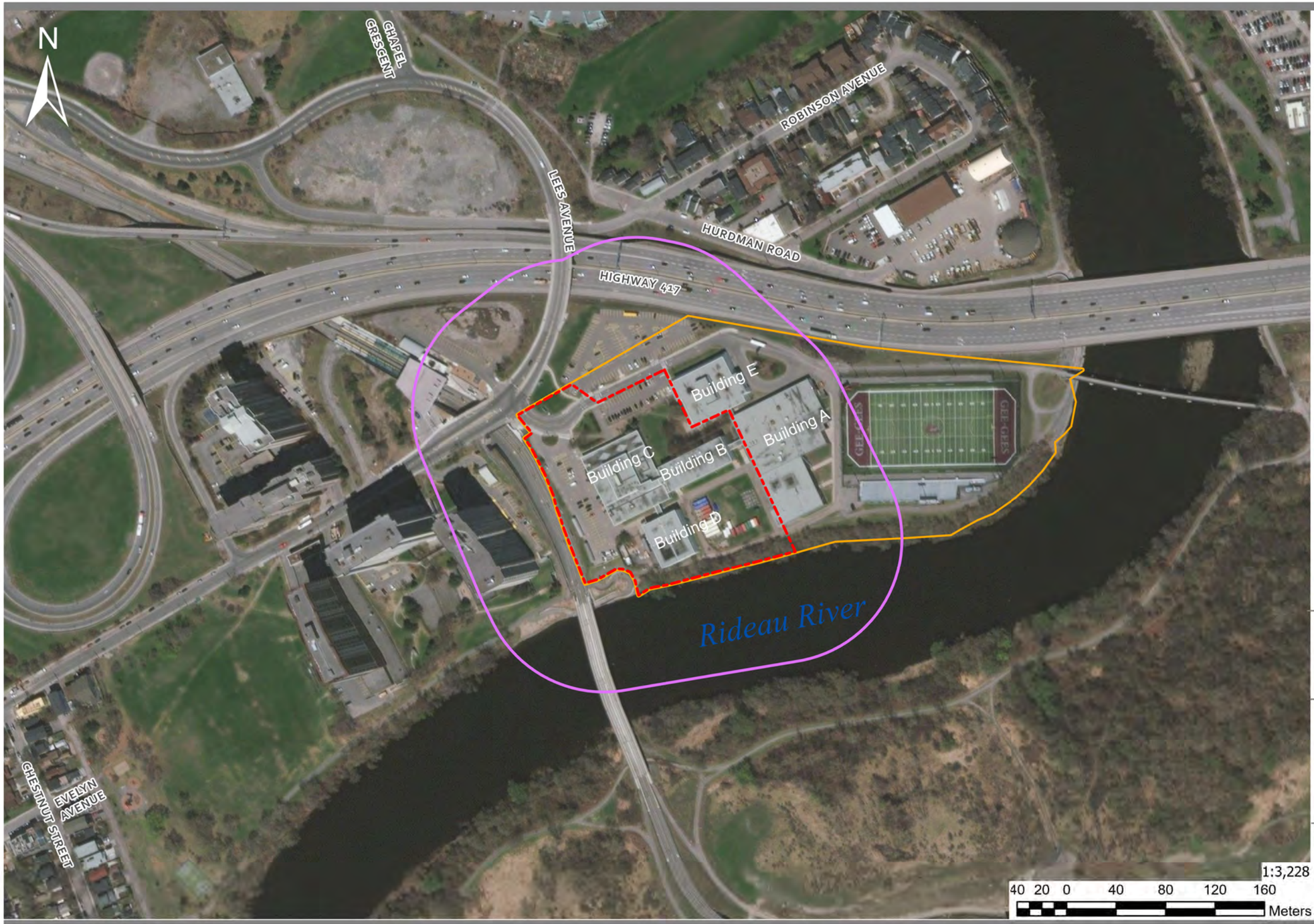
http://www.ottawastewardship.org/wp-content/uploads/2015/06/The-SAR-Handbook-for-Ottawa-July-28-2014.pdf

City of Ottawa, 2020. Bird-Safe Design Guidelines.

https://documents.ottawa.ca/sites/documents/files/birdsafedesign_guidelines_en.pdf

A

Appendix A
Figure



Site boundary
120 m - Study Area
Property parcel

Spatial Reference
Name: WGS 1984 UTM Zone 18N
PCS: WGS 1984 UTM Zone 18N
GCS: GCS WGS 1984
Datum: WGS 1984

Sources:
- Topo. Plan, Annis, O'Sullivan, Vollebekk Ltd., 2020
- Basemap : Esri, HERE, Garmin, NGA, USGS, NPS, NRCan, GeoEye, Maxar

1:3,228
40 20 0 40 80 120 160
Meters

General Notes:
Dimensions on the plan should be read and not measured.
Any errors or omissions should be reported to CIMA +. The boundaries, areas and title deeds must be verified by a surveyor.

Figure 1 - Site Location Map

Environmental Impact Statement with Tree Conservation Report
200 Lees Avenue, Ottawa, Ontario
University of Ottawa

Ref # : C10-A001049-080-110

Survey by : J. Scott
Figure by : J. Scott
Concept by : J. Scott
Verified by : K. Greer
Revision 00 - - Issued for report - 31 July 2020

B

Appendix B
Eagle Enclosures Product Sheet Debris Netting and Scaffold Netting

EAGLE ENCLOSURES

Debris Netting

- Paint Overspray
- Fence Lines
- Temporary Walls
- Wind Protection
- Privacy Screen
- Construction Debris



Scaffold Netting

- Jobsite Protection
- Worker Safety
- Debris Protection
- Demolition Control
- Falling Debris
- Scaffold Enclosures

888.692.2490

www.eagleencl.com

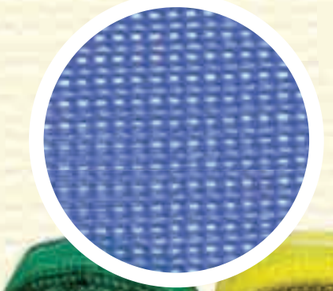


- Easy to handle, High Strength Polyethylene
- Protects public safety
- Flame and Non-Flame Retardant
- Limits unauthorized access
- Can be hung vertically or horizontally
- Open weave allows for good air movement
- Reinforced edges with buttonholes for easy attachment
- Attaches using tie wraps

Roll Sizes
4' 0" x 150'
5' 6" x 150'
8' 0" x 150'
8' 6" x 150'
10' 0" x 150'
12' 0" x 150'
Colors
Black, White, Yellow, Blue & Green

Total Site Protection

50% 70%
Available

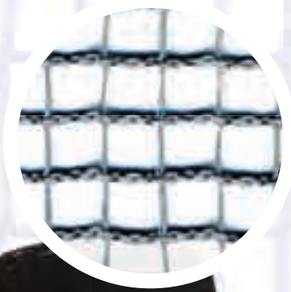


Debris Netting



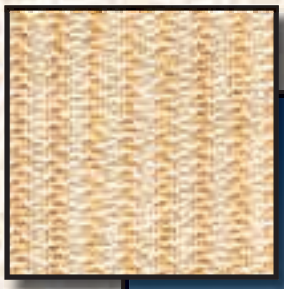
- Lightweight P.E. Netting
- Hole openings approx. 1/4" x 3/8"
- Larger holes allows for Maximum air movement
- Reinforced Borders
- Flame and Non-Flame Retardant
- Protects public safety
- Meets OSHA specifications

Roll Sizes
4' 0" x 150'
5' 6" x 150'
8' 6" x 150'
10' 0" x 150'
Colors
Black, Orange, Blue, Silver & Yellow



Scaffold Netting

Privacy Fence Netting



- Provides jobsite protection
- Protects public Safety
- Gives 90% Privacy Blockage but still allows for good air passage and ventilation
- Roll goods or custom fabrication available
- Ideal for any construction site, commercial property, special event or even a private residence.

Roll Sizes
5' 8" x 150'
7' 8" x 150'
10' x 150'
Colors
Black, Green, Desert Tan & Blue

EAGLE ENCLOSURES

P.O. Box 10652 • New Orleans, LA 70181
Phone: 504.733.3525 • Fax: 504.818.0178
Toll Free: 888.692.2490 • ***www.eagleencl.com***

From Resin to Rolls

Eagle Netting
can be used for
Various Applications

C

Appendix C
PCL - Erosion and Sedimentation Control Plan for University of Ottawa Faculty of Health Sciences

Erosion and Sedimentation Control Plan

For

University of Ottawa

Faculty of Health Sciences (FHS)

PROJECT # 1000265

Version	Date	Description	By
R0	July 14, 2021	Initial Draft	DGW
R1			

Table of Contents

1. Introduction

The University of Ottawa – Faculty of Health Sciences (FHS) involves the integration of five Health departments into a new facility of approximately 230,000 sf including teaching rooms, wet labs, offices, workspaces, and testing laboratories at the new River campus at 200 Lees Avenue. The Faculty of Health Sciences will be a LEED Platinum project.

2. Erosion and Sedimentation Control Measures

Erosion and sedimentation control measures for this project have been considered and designed to meet or exceed the requirements of the 2017 U.S. EPA Construction General Permit. The measures will:

- Prevent soil loss during construction by storm water runoff and/or wind erosion
- Prevent sedimentation of storm sewer or receiving streams
- Prevent polluting the air with dust and particulate matter
- Minimize the amount of disturbed soil
- Dewatering the excavation as required

The following measures will be implemented prior to commencement of construction and maintained in good order until vegetation has been established.

2.1 Clearing Limits

Purpose: The purpose of setting clearing limits is to delineate the areas that are not to be disturbed during construction, reducing the potential for erosion. It will also serve to limit construction traffic to designated construction entrances.

Method: Clearing Limits will be delineated by a silt fencing barrier in accordance with OPSD 219.110, installed prior to exaction activity on site. The extent of clearing is shown on the drawing C003 (Appendix B).

2.2 Catch Basin and Inlet Protections

Purpose: The purpose of catch basin and inlet protection is to prevent coarse sediment from entering the storm drainage system. Each Catch basin and inlet will be covered with filter fabric and inspected on a regular basis.

Method: Geotextile cloth will be installed between all catch basin covers and frames, in order to catch sediments prior to entering the City's infrastructure. The filter fabric will be stretched tight across the underside of the catch basin cover and secured at the sides to obtain this protection. Upon inspection, if any sediment buildup, filter cloth to be removed and disposed of accordingly and replaced immediately with new geotextile fabric.

3. Inspection and Maintenance Program

The goal of the inspection and maintenance program is to ensure that all erosion and sediment measures are functioning. PCL's field staff will be responsible for ensuring the above erosion and sedimentation control measures are maintained and that all repairs and documentation required are completed in accordance with the inspection checklists.

The erosion and sedimentation control plan consists of a visual inspection daily, reports performed monthly and after heavy rainstorms or snow melts. Written logs of all inspection and maintenance activities will be maintained throughout the duration of the project and logged on the PM4 documentation website. All of these documents will be distributed to the LEED® consultant, PCL's Site Superintendants and PCL's Project Managers.

Table 1: Inspection Requirements

Control Measure	Maintenance Required
Site Cleaning	• Visual inspection of perimeter silt fencing • Take photos as required
Catch Basin	• Visual inspection of straw bales around catch basin • If needed determine maintenance, repair or replacement requirements • Check for sediment build up • Take photos as required

Upon inspection of any of the above listed control measures, if any deficiencies are noted, the Field Coordinator and/or LEED Coordinator will take steps to have them corrected. This will include, taking before and after photographs of the deficient area and recording the work in the maintenance log.

4. Erosion and Sedimentation Control Personnel

PCL's LEED Coordinator is the contact person between the trades, PCL staff, consultants and the LEED® professional for the project.

The LEED coordinator is responsible for:

- Ensuring all measures outlined above are part of the construction program.
- Supervising on-site Erosion and Sedimentation Control (ESC) activities on a daily basis
- Conducting ESC inspections monthly, correcting deficiencies and taking photographs before and after
- Coordinating ESC tasks with subcontractors to ensure timely and orderly progress of the work
- Directing the maintenance, modifications and removal of all erosion and sedimentation control measures
- Preparing ESC documentation and submittals for circulation to consultants

The PCL Field Coordination are responsible for:

- Ensuring all measures outlined above are part of the construction program.
- Supervising on-site Erosion and Sedimentation Control (ESC) activities on a daily basis in each of the project specified areas
- Conducting visual inspections on a daily basis in each of their specified areas
- Coordinating ESC tasks with subcontractors to ensure timely and orderly progress of the work
- Directing the maintenance, modifications and removal of all erosion and sedimentation control measures in each of their project specific areas
- Assisting with ESC documentation and submittals per their project specific areas
- Photographs to be taken weekly uploaded to PDC for distributed to the LEED Consultant

In addition to the Field Coordinator, PCL's Site Superintendents and the sub trades will be responsible for monitoring the control measures as implemented on site. If a deficiency or potential problem is observed, the area Field Coordinator will be advised and take the appropriate steps to rectify the situation with the sub trades.

All subcontractors working on site will be informed of the Erosion and Sedimentation Control Plan and be expected to comply with the measures that apply to their work.

Appendix A

Erosion and Sedimentation Control Inspection Checklist

		PROJECT NAME:	University of Ottawa	COMPANY:	PCL Constructors	DATE:	
		PROJECT LOCATION:	200 Lees Ave., Ottawa ON	COMPLETED BY:			

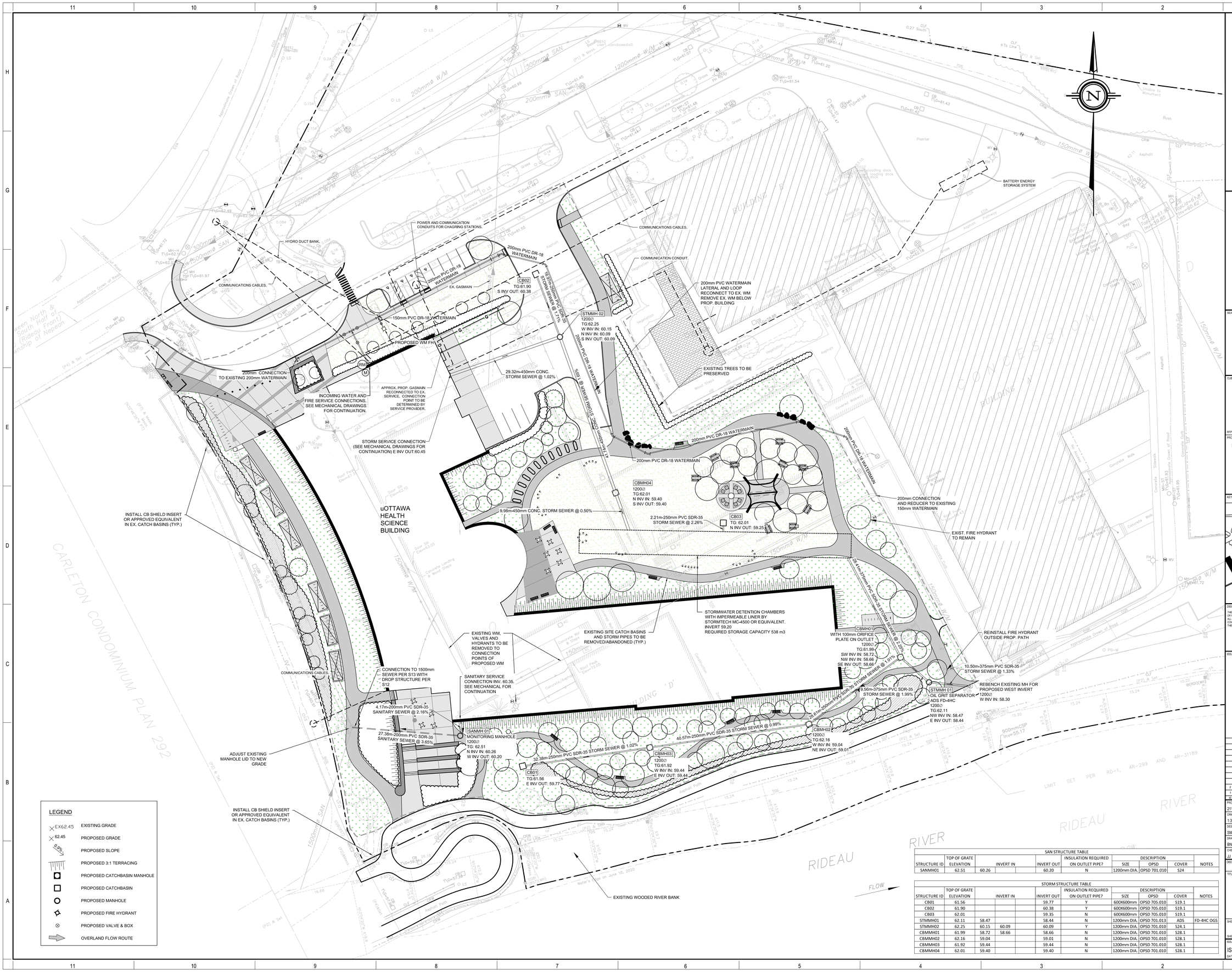
Observed and Noted	Picture taken	ESC Management Item	DEFICIENCIES/CORECTIVE ACTION	INITIAL
Clearing Limits				
☐	☐	Silt fence installed around the perimeter of the work zone prevent erosion		
☐	☐	Monitor washout		
Traffic Area Stabilization				
☐	☐	Mud mat in place		
☐	☐	Public roadways clear of dirt and debris		
Catch Basin and Inlet Protections				
☐	☐	Filter fabric in place and not damaged		
☐	☐	Catch basin area is free from coarse sediment		
☐	☐	Straw bales installed around catchbasin		
Stockpile Covers				
☐	☐	Check for tears and lifting		
☐	☐	Adequate weight to hold down tarpaulin		

*I hereby certify that the information provided is complete, correct and complies with the requirements of EPA Best Management Practices.

Signature Title Date

Appendix B

Erosion and Sedimentation Control Plan – C003



LEGEND

- EX62.45 — EXISTING GRADE
- 62.45 — PROPOSED GRADE
- 0.5% — PROPOSED SLOPE
- PROPOSED 3:1 TERRACING
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED CATCHBASIN
- PROPOSED MANHOLE
- PROPOSED FIRE HYDRANT
- PROPOSED VALVE & BOX
- OVERLAND FLOW ROUTE

SAN STRUCTURE TABLE

STRUCTURE ID	TOP OF GRATE ELEVATION	INVERT IN			INVERT OUT	INSULATION REQUIRED ON OUTLET PIPE?	DESCRIPTION SIZE	OPSD	COVER	NOTES
SANMH01	62.51	60.26			60.20	N	1200mm DIA.	OPSD 701.010	524	

STORM STRUCTURE TABLE

STRUCTURE ID	TOP OF GRATE ELEVATION	INVERT IN			INVERT OUT	INSULATION REQUIRED ON OUTLET PIPE?	DESCRIPTION SIZE	OPSD	COVER	NOTES
CB01	61.56				59.77	Y	600X600mm	OPSD 705.010	S19.1	
CB02	61.90				60.38	Y	600X600mm	OPSD 705.010	S19.1	
CB03	62.01				59.35	N	600X600mm	OPSD 705.010	S19.1	
STMMH01	62.11	58.47			58.44	N	1200mm DIA.	OPSD 701.013	ADS	FD-4HC OGS
STMMH02	62.25	60.15	60.09		60.09	Y	1200mm DIA.	OPSD 701.010	S24.1	
CBMMH01	61.99	58.72	58.66		58.66	N	1200mm DIA.	OPSD 701.010	S28.1	
CBMMH02	62.16	59.04			59.01	N	1200mm DIA.	OPSD 701.010	S28.1	
CBMMH03	61.92	59.44			59.44	N	1200mm DIA.	OPSD 701.010	S28.1	
CBMMH04	62.01	59.40			59.40	N	1200mm DIA.	OPSD 701.010	S28.1	

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1000-150 ISABELLA STREET
OTTAWA (ONTARIO) CANADA K1S 1V7
Phone: 613-238-0440 | Fax: 613-238-6597 | WWW.ARCHITECTURE49.COM

wsp
2611 Queensview Dr, Suite 300
Ottawa, Ontario, K2B 8K2 Canada
T 613-829-2800 | F 613-829-8299 | www.wsp.com

PCL CONSTRUCTION
49 Auriga Drive
Ottawa, Ontario, K2E 8A1 Canada
T 613-978-5398 | www.pcl.com

SEAL:

CLIENT: uOttawa

WP #: 2020-40369 CLIENT REF. #: BT20-18477

PROJECT:
University of Ottawa - Faculty of Health Sciences Building

200 LEES AVENUE
OTTAWA, ON

KEY PLAN:

ISSUED FOR - REVISION:

NO.	DATE	DESCRIPTION
2	2021-06-28	ISSUED FOR SPCA
1	2021-04-15	ISSUED FOR TECHNICAL SUBMISSION

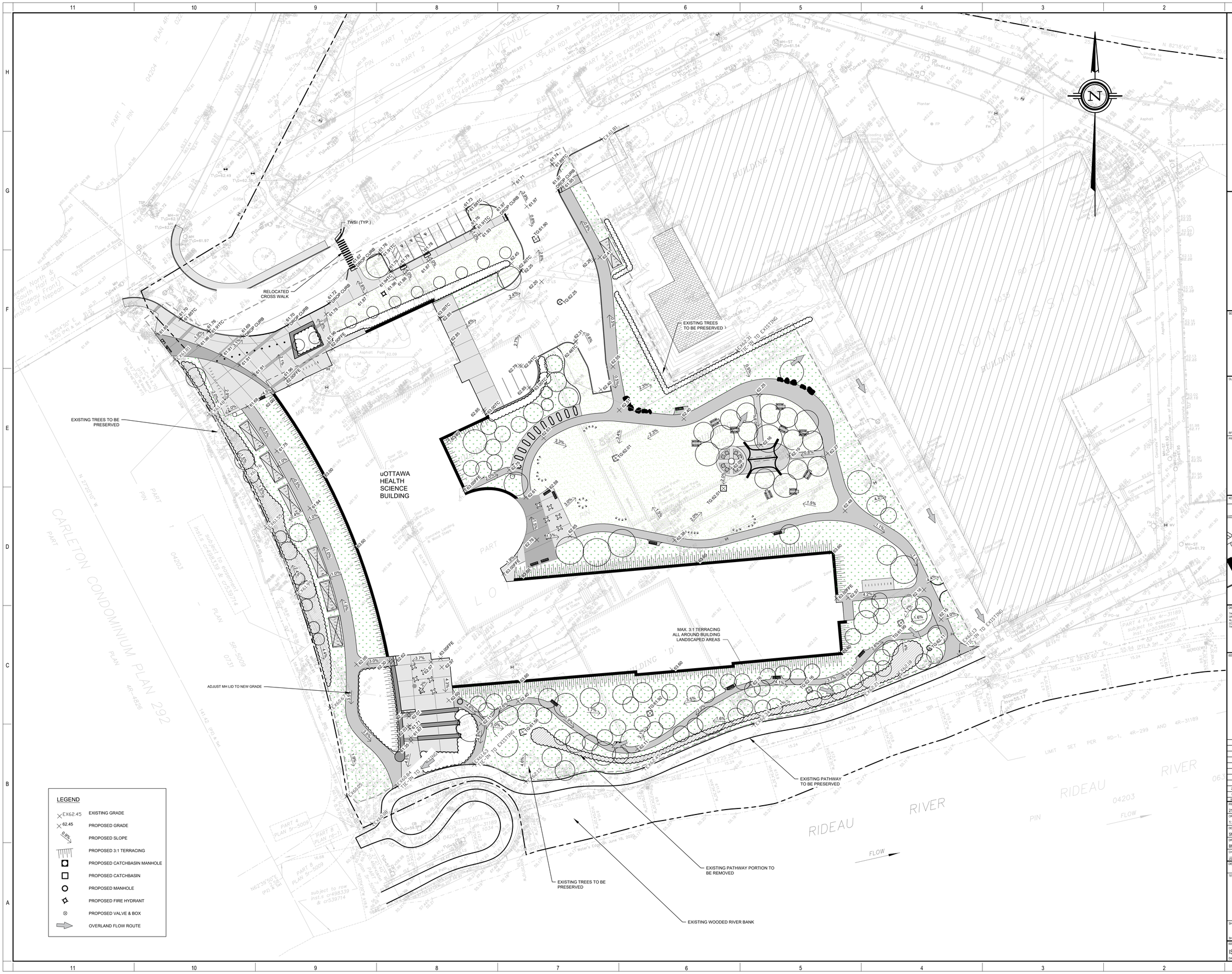
PROJECT NO: 211-01094-01
DATE: 2021-06-28
ORIGINAL SCALE: 1:300
DESIGNED BY: SM
DRAWN BY: BN
CHECKED BY: JJ
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE. 25mm

DISCIPLINE: CIVIL

TITLE: SERVICING PLAN

SHEET NUMBER: C-001
SHEET # 1 OF 4

ISSUE: ISSUED FOR SITE APPLICATION
REV # 2
DATE OF: 2021-06-28



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PCL CONSTRUCTION
49 Auriga Drive
Ottawa, Ontario, K2E 8A1 Canada
T 613-978-5388 | www.pcl.com

SEAL:

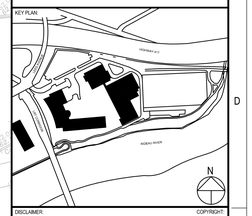
CLIENT:
uOttawa

WP #: 2020-40369 CLIENT REF. #: BT20-18477

PROJECT:
University of Ottawa - Faculty of Health Sciences Building

200 LEES AVENUE
OTTAWA, ON

KEY PLAN:



ISSUED FOR - REVISION:

NO.	DATE	DESCRIPTION
2	2021-06-28	ISSUED FOR SPCA
1	2021-04-15	ISSUED FOR TECHNICAL SUBMMISSION

PROJECT NO.: 211-01094-01
DATE: 2021-06-28
ORIGINAL SCALE: 1:300
DESIGNED BY: SM
DRAWN BY: BN
CHECKED BY: JJ
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

DISCIPLINE: CIVIL

TITLE: GRADING PLAN

SHEET NUMBER: C-002
SHEET # 2 OF 4

ISSUE: ISSUED FOR SITE APPLICATION
REV.# 2
DATE OF: 2021-06-28

NOTES: EROSION AND SEDIMENT CONTROL

** CONTRACTOR IS RESPONSIBLE FOR ALL INSTALLATION, MONITORING, REPAIR AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROL FEATURES TO MEET LEED SUSTAINABLE SITE REQUIREMENTS, INCLUDING:. **

1. PRIOR TO START OF CONSTRUCTION:

1.1. INSTALL SILT FENCE IN LOCATION SHOWN.
1.2. INSTALL MUD MAT AT CONSTRUCTION ENTRANCES.
1.3. INSTALL FILTER FABRIC OR SILT SACK FILTERS IN ALL THE CATCHBASINS AND MANHOLES TO REMAIN DURING CONSTRUCTION WITHIN THE SITE (SEE TYPICAL DETAIL). INSTALL CHECK DAM.
1.4. INSPECT MEASURES IMMEDIATELY AFTER INSTALLATION.

2. DURING CONSTRUCTION:

2.1. MINIMIZE THE EXTENT OF DISTURBED AREAS AND THE DURATION OF EXPOSURE AND IMPACTS TO EXISTING GRADING.
2.2. PERIMETER VEGETATION TO REMAIN IN PLACE UNTIL PERMANENT STORM WATER MANAGEMENT IS IN PLACE. OTHERWISE, IMMEDIATELY INSTALL SILT FENCE WHEN THE EXISTING SITE IS DISTURBED AT THE PERIMETER.
2.3. PROTECT DISTURBED AREAS FROM OVERLAND FLOW BY PROVIDING TEMPORARY SWALES TO THE SATISFACTION OF THE FIELD ENGINEER. TIE-IN TEMPORARY SWALE TO EXISTING CB'S AS REQUIRED.
2.4. PROVIDE TEMPORARY COVER SUCH AS SEEDING OR MULCHING IF DISTURBED AREA WILL NOT BE REHABILITATED WITHIN 30 DAYS.
2.5. INSPECT SILT FENCES, FILTER FABRIC FILTERS AND CATCH BASIN SUMPS WEEKLY AND WITHIN 24 HOURS AFTER A STORM EVENT. CLEAN AND REPAIR WHEN NECESSARY.
2.6. DOWNSTREAM STORM INFRASTRUCTURE SHALL BE PROTECTED FROM UNFILTERED RUNOFF DURING DEMOLITION OF STORM INFRASTRUCTURE ON SITE.
2.7. DRAWING TO BE REVIEWED AND REVISED AS REQUIRED DURING CONSTRUCTION..
2.8. EROSION CONTROL FENCING TO BE ALSO INSTALLED AROUND THE BASE OF ALL STOCKPILES.
2.9. DO NOT LOCATE TOPSOIL PILES AND EXCAVATION MATERIAL CLOSER THAN 2.5m FROM ANY PAVED SURFACE, OR ONE WHICH IS TO BE PAVED BEFORE THE PILE IS REMOVED. ALL TOPSOIL PILES ARE TO BE SEEDED IF THEY ARE TO REMAIN ON SITE LONG ENOUGH FOR SEEDS TO GROW (LONGER THAN 30 DAYS).
2.10. CONTROL WIND-BLOWN DUST OFF SITE BY SEEDING TOPSOIL PILES AND OTHER AREAS TEMPORARILY (PROVIDE WATERING AS REQUIRED AND TO THE SATISFACTION OF THE ENGINEER).
2.11. NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE FIELD ENGINEER.
2.12. CITY ROADWAY AND SIDEWALK TO BE CLEANED OF ALL SEDIMENT FROM VEHICULAR TRACKING AS REQUIRED.
2.13. DURING WET CONDITIONS, TIRES OF ALL VEHICLES/EQUIPMENT LEAVING THE SITE ARE TO BE SCRAPED.
2.14. ANY MUD/MATERIAL TRACKED ONTO THE ROAD SHALL BE REMOVED IMMEDIATELY BY HAND OR RUBBER TIRE LOADER.
2.15. TAKE ALL NECESSARY STEPS TO PREVENT BUILDING MATERIAL, CONSTRUCTION DEBRIS OR WASTE BEING SPILLED OR TRACKED ONTO ABUTTING PROPERTIES OR PUBLIC STREETS DURING CONSTRUCTION AND PROCEED IMMEDIATELY TO CLEAN UP ANY AREAS SO AFFECTED.
2.16. ALL EROSION CONTROL STRUCTURE TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN STABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE GROUND COVER.
2.17. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

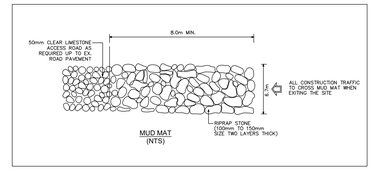
TWSI (TYP.)

uOTTAWA
HEALTH
SCIENCE
BUILDING

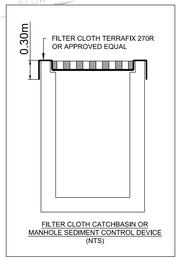
MIN. 15m BUFFER
BETWEEN SILT FENCE
AND EDGE OF RIVER

LEGEND

- SF — LIGHT DUTY SILT FENCE AS PER OPSD 219.110
- FILTER CLOTH PLACED UNDER CB AND CBMH COVER
- STRAW BALE CHECK DAM PER OPSD 219.180
- MUD MAT



MUD MAT
(NTS)



FILTER CLOTH CATCHBASIN OR MANHOLE SEDIMENT CONTROL DEVICE
(NTS)

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SEAL:

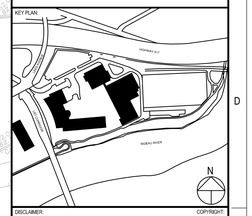
CLIENT: uOttawa

WP #: 2020-40369 CLIENT REF. #: BT20-18477

PROJECT:
University of Ottawa - Faculty of Health Sciences Building

200 LEES AVENUE
OTTAWA, ON

KEY PLAN:



ISSUED FOR - REVISION:

NO.	DATE	DESCRIPTION
1	2021-06-28	ISSUED FOR SPCA

PROJECT NO: 211-01094-01
DATE: 2021-06-28
ORIGINAL SCALE: 1:300
DESIGNED BY: SM
DRAWN BY: BN
CHECKED BY: JJ
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE. 25mm

DISCIPLINE: CIVIL

TITLE:
EROSION AND SEDIMENT CONTROL PLAN

SHEET NUMBER: C-003
SHEET # 3 OF 4

ISSUE: ISSUED FOR SITE APPLICATION
DATE OF: 2021-06-28
REV.# 1

NOTES: GENERAL

1. DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND LANDSCAPE DRAWINGS FOR LAYOUT AND SURFACE MATERIALS. ARCHITECTURAL PLAN SHALL TAKE PRECEDENCE FOR SITE LAYOUT. LANDSCAPE PLAN SHALL TAKE PRECEDENCE FOR SITE MATERIALS.
2. ALL SERVICES, MATERIALS, CONSTRUCTION METHODS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND REGULATIONS OF THE: CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS, ONTARIO PROVINCIAL SPECIFICATION STANDARD SPECIFICATION (OPSS) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD), UNLESS OTHERWISE SPECIFIED, TO THE SATISFACTION OF THE CITY AND THE CONSULTANT
3. THE POSITION OF EXISTING POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES, STRUCTURES AND APPURTENANCES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SATISFY HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM DURING THE COURSE OF CONSTRUCTION. ANY RELOCATION OF EXISTING UTILITIES REQUIRED BY THE DEVELOPMENT OF SUBJECT LANDS IS TO BE UNDERTAKEN AT CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR MUST NOTIFY ALL EXISTING UTILITY COMPANY OFFICIALS FIVE (5) BUSINESS DAYS PRIOR TO START OF CONSTRUCTION AND HAVE ALL EXISTING UTILITIES AND SERVICES LOCATED IN THE FIELD OR EXPOSED PRIOR TO THE START OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO POWER, COMMUNICATION AND GAS LINES.
5. ALL TRENCHING AND EXCAVATIONS TO BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS AND AS PER THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL REPORT.
6. REFER TO ARCHITECTS PLANS FOR BUILDING DIMENSIONS, LAYOUT AND REMOVALS. REFER TO LANDSCAPE PLAN FOR LANDSCAPED DETAILS AND OTHER RELEVANT INFORMATION. ALL INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
7. TOPOGRAPHIC SURVEY COMPLETED AND PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. DATED JULY 21, 2020. CONTRACTOR TO VERIFY IN THE FIELD PRIOR TO CONSTRUCTION OF ANY WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
8. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS. VERIFY THAT JOB BENCHMARKS HAVE NOT BEEN ALTERED OR DISTURBED.
9. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCH BASIN OUTLETS ARE PROVIDED.
10. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT. PAVEMENT REINSTATEMENT SHALL BE WITH STEP JOINTS OF 500mm WIDTH MINIMUM.
11. ALL DISTURBED AREAS OUTSIDE PROPOSED GRADING LIMITS TO BE RESTORED TO ORIGINAL ELEVATIONS AND CONDITIONS UNLESS OTHERWISE SPECIFIED. ALL RESTORATION SHALL BE COMPLETED WITH THE GEOTECHNICAL REQUIREMENTS FOR BACKFILL AND COMPACTION.
12. ABUTTING PROPERTY GRADES TO BE MATCHED UNLESS OTHERWISE SHOWN.
13. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE MUNICIPAL AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION, INCLUDING WATER PERMIT AND ROAD CUT PERMIT.
14. MINIMIZE DISTURBANCE TO EXISTING VEGETATION DURING THE EXECUTION OF ALL WORKS.
15. REMOVE/ABANDON EXISTING WATERMAIN AND APPURTENANCES; STORM SEWERS, STRUCTURES , AND APPURTENANCES; SANITARY SEWERS FROM PROJECT SITE AND BLANK WHERE CONNECTS TO EXISTING. MONITORING WELLS TO BE DECOMMISSIONED IN ACCORDANCE TO O.REG. 903.
16. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED FROM THE ENGINEER. EXCAVATE AND REMOVE ALL ORGANIC MATERIAL AND DEBRIS LOCATED WITHIN THE PROPOSED BUILDING, PARKING AND ROADWAY LOCATIONS.
17. AT PROPOSED UTILITY CONNECTION POINTS AND CROSSINGS (I.E. STORM SEWER, SANITARY SEWER, WATER, ETC.) THE CONTRACTOR SHALL DETERMINE THE PRECISE LOCATION AND DEPTH OF EXISTING UTILITIES AND REPORT ANY DISCREPANCIES OR CONFLICTS TO THE ENGINEER BEFORE COMMENCING WORK.
18. CONTRACTOR TO OBTAIN POST-CONSTRUCTION TOPOGRAPHIC SURVEY, COMPLETED BY OLS OR P.ENG CONFIRMING COMPLIANCE WITH DESIGN GRADING AND SERVICING. SURVEY IS TO INCLUDE LOCATION AND INVERTS FOR BURIED UTILITIES.
19. ABIDE BY RECOMMENDATIONS OF GEOTECHNICAL REPORT. REPORT ANY VARIATIONS IN OBSERVED CONATIONS FROM THOSE INCLUDED IN REPORT.
20. PROVIDE CCTV INSPECTION REPORT FOR ALL SEWERS AND CATCHBASIN LEADS 200mm DIAMETER AND LARGER. REPEAT CCTV INSPECTION FOLLOWING RECTIFICATION OF ANY DEFICIENCIES.

NOTES: PARKING LOT, ROADWAY, AND WORK IN PUBLIC RIGHTS OF WAY

1. CONTRACTOR TO REINSTATE ROAD CUTS AS PER CITY OF OTTAWA DETAIL R10.
2. REFER TO GEOTECHNICAL INVESTIGATION REPORT PREPARED BY GOLDER ASSOCIATES DATED APRIL 2020 FOR GEOTECHNICAL RECOMMENDATIONS.
3. CONTRACTOR TO PREPARE SUBGRADE, INCLUDING PROOFROLLING, TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT PRIOR TO THE COMMENCEMENT OF PLACEMENT OF GRANULAR B MATERIAL.
4. FILL TO BE PLACED AND COMPACTED PER THE GEOTECHNICAL REPORT REQUIREMENTS.
5. CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR B MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF GRANULAR B MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
6. GRANULAR A MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL CONSULTANT OF GRANULAR B PLACEMENT.
7. CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR A MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF GRANULAR A MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
8. ASPHALT MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL CONSULTANT OF GRANULAR A PLACEMENT.
9. CONTRACTOR TO SUPPLY, PLACE AND COMPACT ASPHALT MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF ASPHALT MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
10. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING LINE AND GRADE IN ACCORDANCE WITH THE PLANS, AND FOR PROVIDING THE CONSULTANT WITH VERIFICATION PRIOR TO PLACEMENT.
11. ALL EXCESS MATERIAL TO BE HAULED OFFSITE AND DISPOSED OF AT AN APPROVED DUMP SITE. SHOULD THE CONTRACTOR DISCOVER ANY HAZARDOUS MATERIAL, CONTRACTOR IS TO NOTIFY CONSULTANT. CONSULTANT TO DETERMINE APPROPRIATE DISPOSAL METHOD/LOCATION.
12. PAVEMENT STRUCTURE (MATERIAL TYPES AND THICKNESS) TO BE AS SPECIFIED BY THE GEOTECHNICAL CONSULTANT.

NOTES: STORM SEWERS AND STRUCTURES

1. ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. PROVIDE CCTV INSPECTION REPORTS FOR ALL NEW STORM SEWERS, SERVICES AND CB LEADS.
2. STORM SEWERS 450mm DIAMETER AND SMALLER SHALL BE PVC SDR-35, WITH RUBBER GASKET PER CSA A-257.3.
3. STORM SEWER LARGER THAN 450mm SHALL BE REINFORCED CONCRETE CLASS 100.
4. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
5. ALL STORM MANHOLES TO BE AS PER STORM STRUCTURE TABLE ON C-001.
6. ANY NEW OR EXISTING STORM SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR APPROVED BY THE ENGINEER.
7. ALL CATCHBASIN LEADS TO BE MINIMUM 200mm DIAMETER AT MINIMUM 1.0% SLOPE UNLESS OTHERWISE SPECIFIED.
8. STORM CATCHBASINS AS PER OPSD 705.010 AND FRAME/COVER AS PER CITY STANDARD DRAWINGS S19. STORM CBMH'S AS INDICATED IN TABLE WITH SUMP, ADJUSTMENT SECTIONS SHALL BE AS PER OPSD 704.010.
9. INSTALLATION OF FLOW CONTROL ICD'S TO BE VERIFIED BY QUALITY VERIFICATION ENGINEER RETAINED BY CONTRACTOR.

NOTES: SANITARY SEWER AND MANHOLES

1. ALL SANITARY SEWER, SANITARY SEWER APPURTENANCES AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. PROVIDE CCTV INSPECTION REPORTS FOR ALL NEW SANITARY PIPING. PROVIDE DYE TESTING FOR NEW SERVICES.
2. SANITARY SEWER PIPE SIZE 150mm DIAMETER AND GREATER TO BE PVC SDR-35 (UNLESS SPECIFIED OTHERWISE) WITH RUBBER GASKET TYPE JOINTS IN CONFORMANCE WITH CSA B-182.2,3,4.
3. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
4. ALL SANITARY MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSD 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24.
5. MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES AS PER THE OPSD 701.021
6. ANY SANITARY SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR APPROVED BY THE ENGINEER.

NOTES: WATERMAIN

1. ALL WATERMAIN AND WATERMAIN APPURTANANCES, MATERIALS, CONSTRUCTION AND TESTING METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA AND MINISTRY OF ENVIRONMENT STANDARDS AND SPECIFICATIONS.
2. ALL WATERMAIN 300mm DIAMETER AND SMALLER TO BE POLY VINYL CHLORIDE (PVC) CLASS 150 DR 18 MEETING AWWA SPECIFICATION C900.
3. ALL WATERMAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE. WHERE WATERMAINS CROSS OVER OTHER UTILITIES, A MINIMUM 0.30m CLEARANCE SHALL BE MAINTAINED; WHERE WATERMAINS CROSS UNDER OTHER UTILITIES, A MINIMUM 0.50m CLEARANCE SHALL BE MAINTAINED. WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED, THE WATERMAIN SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2. WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W22. WHERE A WATERMAIN IS IN CLOSE PROXIMITY TO AN OPEN STRUCTURE, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W23.
4. CONCRETE THRUST BLOCKS AND MECHANICAL RESTRAINTS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, REDUCERS, ENDS OF MAINS AND CONNECTIONS 100mm AND LARGER, IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W25.3 & W25.4.
5. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS AS PER CITY OF OTTAWA STANDARD W40 & W42.
6. ALL VALVES AND VALVE BOXES AND CHAMBERS, HYDRANTS, AND HYDRANT VALVES AND ASSEMBLES SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARD
7. FIRE HYDRANT LOCATION AND INSTALLATION AS PER CITY OF OTTAWA STANDARD W18 & W19. CONTRACTOR TO PROVIDE FLOW TEST AND PAINTING OF NEW HYDRANT IN ACCORDANCE WITH CITY STANDARDS.
8. IF WATER MAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.

PAVEMENT COMPONENT- HEAVY DUTY TRAFFIC	
SUPERPAVE 12.5 SURFACE COURSE	40mm
SUPERPAVE 19.mm BASE COURSE	50mm
OPPS GRANULAR A BASE	150mm
OPPS GRANULAR B TYPE II SUBBASE	450mm

NOTE: PAVEMENT STRUCTURE FOR LOADING DOCK AND ACCESS ROAD RE-ESTABLISHMENT

ARCHITECTURE 49

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SEAL:

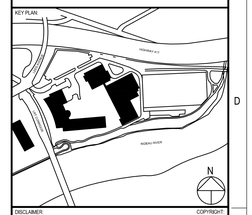
CLIENT:
uOttawa

WP #: 2020-40369 CLIENT REF. #: BT20-18477

PROJECT:
University of Ottawa - Faculty of Health Sciences Building

200 LEES AVENUE
OTTAWA, ON

KEY PLAN:



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ID	DATE	DESCRIPTION
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PROJECT NO: 211-01094-01
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DESIGNED BY: SM
DRAWN BY: BN
CHECKED BY: JJ
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

DISCIPLINE: CIVIL

TITLE: GENERAL NOTES & DETAILS

SHEET NUMBER: C-004
SHEET # 1 OF 4

ISSUE: ISSUED FOR SITE PLAN APPLICATION
REV #: 1
DATE OF: 2021-06-28