CORPORATION OF THE
TOWNSHIP OF EDWARDSBURGH CARDINAL

BY-LAW NO. 2021-17

"BEING A BY-LAW TO AUTHORIZE THE EXECUTION OF A SITE PLAN CONTROL AGREEMENT WITH RUSS HOLMES TRANSPORT INC."

WHEREAS the Council of the Corporation of the Township of Edwardsburgh Cardinal deems it advisable to enter into a Site Plan Control Agreement with Russ Holmes Transport Inc. respecting development of a property described as:

Concession 1, Pt Lot 10, Pt Lot 11
RP 15R127, Part 6
RP 15R584, Part 1
Geographic Township of Edwardsburgh
County of Grenville
1026 County Road 2
Property Roll #0701 701 010 12900 0000
Township of Edwardsburgh Cardinal

WHEREAS Authority is granted under Section 41 of the Planning Act, RSO 1990, c.P. 13, as amended to the Council of the Corporation of the Township of Edwardsburgh/Cardinal to enter into and amend such agreements; and

NOW THEREFORE BE IT RESOLVED THAT the Council of the Corporation of the Township of Edwardsburgh Cardinal enacts as follows:

1. That the Mayor and Clerk are hereby authorized to execute an agreement with Russ Holmes Transport Inc. and that a signed copy of said agreement is attached hereto as Schedule "A".

2. That the following bylaw to authorize execution of a site plan control previously passed is hereby repealed: By-law 2001-74, passed on December 3, 2001.

3. That this by-law shall come into force and effect upon passing.

Read a first and second time in open Council this 22 day of March, 2021.

Read a third and final time, passed, signed and sealed in open Council this 22 day of March, 2021.

Mayor **Clerk**

CORPORATION OF THE TOWNSHIP OF EDWARDSBURGH/CARDINAL
SITE PLAN CONTROL AGREEMENT
AS AUTHORIZED BY BYLAW 2021-17

THIS AGREEMENT, made in triplicate this 6 day of April, 2021

BETWEEN:

RUSS HOLMES TRANSPORT INC.
(the "Owner")

AND:

THE CORPORATION OF THE TOWNSHIP OF EDWARDSBURGH/CARDINAL
(the "Township")

WHEREAS: Bylaw 2002-31, as amended, of the Corporation of the Township of Edwardsburgh designated all of the lands in the Township of Edwardsburgh to be subject to site plan control;

AND WHEREAS: The owner is the registered owner of the lands described in Schedule "A" to this agreement and which are situate within the Township of Edwardsburgh/Cardinal;

AND WHEREAS: The described land is zoned as a Rural Industrial, Exception 4 (MR-4) under the Township of Edwardsburgh Cardinal Zoning Bylaw 2012-35, as amended;

AND WHEREAS: The owner wishes to develop the owner's lands according to the requirements of Bylaw 2012-35, as amended;

NOW THEREFORE THIS AGREEMENT WITNESSETH THAT, in consideration of other valuable considerations and the sum of one dollar ($1.00) of lawful money of Canada now paid by the Owner to the Township (the receipt whereof is hereby acknowledged) and in consideration of the mutual covenants hereinafter expressed, the parties hereto covenant and agree one with the other as follows:

1. This is an agreement made pursuant to the provisions of Section 41 of the Planning Act, RSO 1990, as amended, and applies to the lands described in Schedule "A" to this agreement which lands are hereinafter referred to as the owner's lands.

2. That the location of the buildings and structures to be erected on the owner's lands, location of other facilities and the external appearance and design of the buildings shall conform to the plans attached hereto as Schedule "B" to this agreement; provided that minor changes to such plans may be made by the

owner with the prior consent in writing of the Chief Building Official for the Corporation of the Township of Edwardsburgh/Cardinal.

3. That the owner shall satisfy the conditions, facilities and matters on the owner's lands as specified in Schedule "C" to this agreement to the satisfaction of the Chief Building Official for the Corporation of the Township of Edwardsburgh/Cardinal.

4. That the conditions, facilities and matters as shown and described in the attached schedules shall be provided and maintained by the owner at his sole risk and expense and to the satisfaction of the Chief Building Official of the Township, and that in default thereof, may enter upon the lands and do all such matters and things as may be required to comply with any Order of the Chief Building Official. Such actual costs incurred by the Township plus an overhead charge of 15%, shall be deemed to be recoverable from the Owner by invoice and may be recovered in like manner as municipal taxes pursuant to the Municipal Act.

5. That the covenants, agreements and conditions herein contained on the part of the owner shall run with the land and shall be binding upon the parties hereto, and their successors, assigns, respective heirs, executors and administrators.

6. That it is understood and agreed that examination and acceptance of plans, drawings and contract document by any employee of the Corporation of the Township of Edwardsburgh/Cardinal or the satisfying of any requirements of this agreement by the owner does not constitute acceptance of this agreement by the Corporation of the Township of Edwardsburgh/Cardinal, until a Bylaw to authorize this agreement has been passed by the Council of the Corporation of the Township of Edwardsburgh/Cardinal and this agreement is signed by the persons authorized to do so by such Bylaw.

7. That the owner hereby agrees to pay all costs involved in the registration of this agreement and all other costs incurred by the Corporation of the Township of Edwardsburgh/Cardinal with respect to this agreement.

8. Any notice to be given hereunto shall be in writing to all other parties and either delivered personally or sent by prepaid registered mail, and in the latter case shall be deemed to have been given three (3) business days following the date upon which it was mailed. The address of the parties for the purpose hereof shall be:

to the Owner at:

Russ Holmes Transport Inc.
c/o Edward Holmes
1026 County Road 2
Edwardsburgh Cardinal ON KOE 1EO

to the Township at:

Township of Edwardsburgh Cardinal
PO Box 129
Spencerville ON KOE 1XO

IN WITNESS WHEREOF the parties hereto have executed this agreement.

THE CORPORATION OF THE TOWNSHIP OF EDWARDSBURGH/CARDINAL

Mayor

Clerk

We have authority to bind the Corporation.

OWNER, RUSS HOLMES TRANSPORT INC.

Owner

I have the authority to bind the Corporation.

DATED AT Spencerville, ON this 16 day of April, 2021

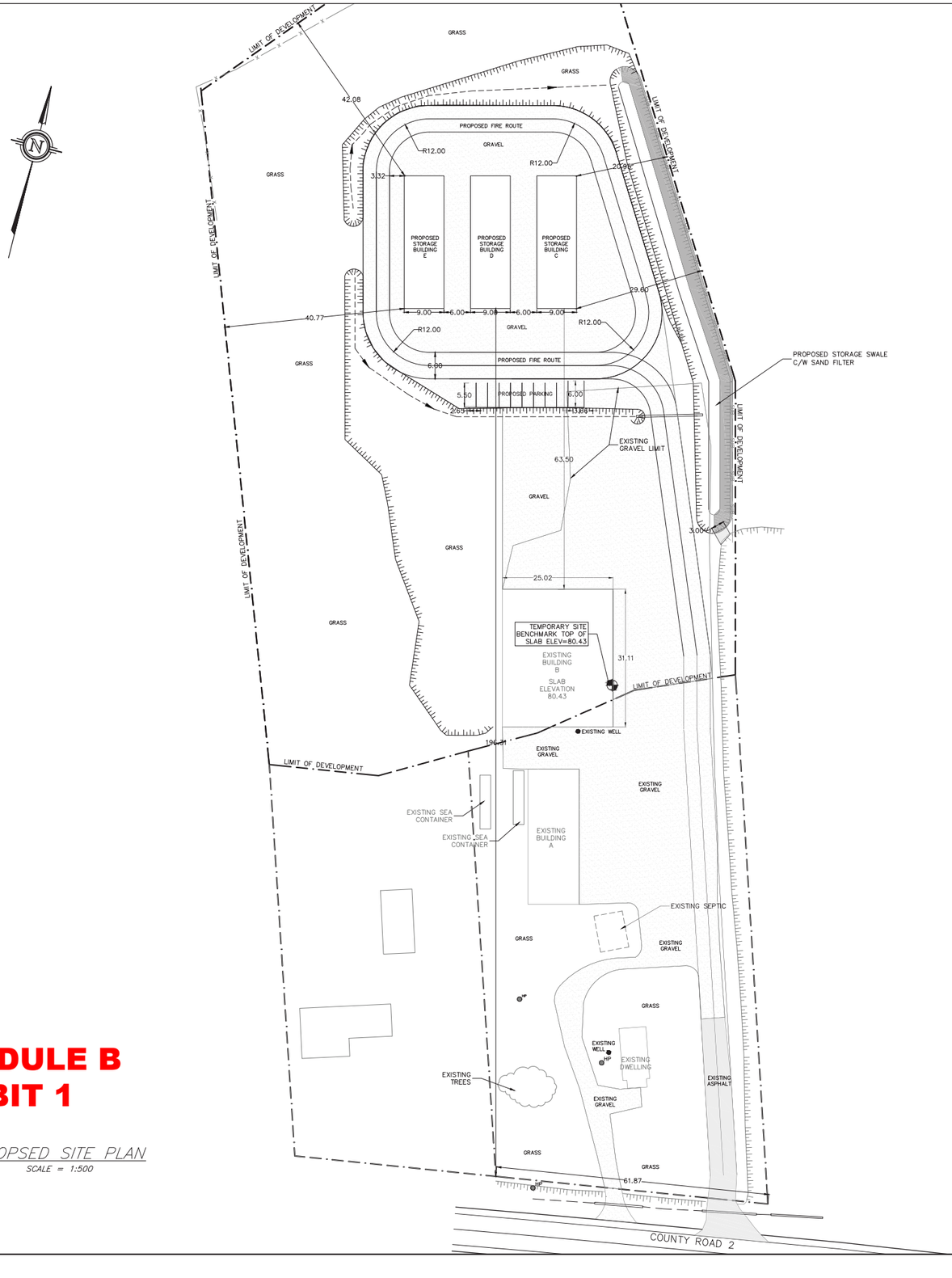
SCHEDULE "A"
DESCRIPTION OF THE PROPERTY

Concession 1, Pt Lot 10, Pt Lot 11
RP 15R127, Part 6
RP 15R584, Part 1
Township of Edwardsburgh
County of Grenville
1026 County Road 2
Property Roll #07 01 701 010 12900 0000

SCHEDULE "B"
SITE PLAN

The following Exhibits attached hereto shall form part of this Schedule:

Exhibit 1 - Site Plan
Exhibit 2 - Grading Plan
Exhibit 3 - Storm Pond Detail
Exhibit 4 - Sediment and Erosion Control Plan
Exhibit 5 - Stormwater Management Report



SCHEDULE B
EXHIBIT 1

PROPOSED SITE PLAN
SCALE = 1:500

LEGEND

- EXISTING ELEVATION
- PROPOSED/EXISTING ELEVATIONS
- PROPOSED ELEVATIONS
- DRAINAGE SLOPE
- CENTRELINE OF ROAD
- EDGE OF ROAD
- 3H:1V TERRACE
- PROPERTY LINE
- SILT FENCE
- OVERLAND FLOW ROUTE
- TEMPORARY BENCHMARK
- EXISTING HYDRO POLE
- EXISTING HYDRO GUY WIRE ANCHOR
- PROPOSED SWALE
- PROPOSED SUBDRAIN

SITE STATISTICS:		
TOTAL LOT AREA	2513	m^2
EXISTING BUILDINGS (TO REMAIN)	1212	m^2
PROPOSED BUILDING FOOTPRINT	$270m^2 \times 3$ buildings $= 810$	m^2
TOTAL GROSS FLOOR AREA	2022	m^2

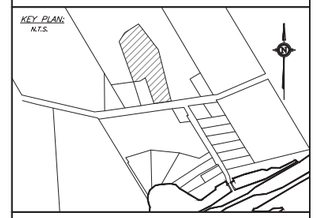
MR (RURAL INSUSTRIAL) PROVISIONS:			
ZONING MECHANISMS		REQUIRED	PROVIDED
(a) Minimum lot area (ha)		1	2.5
(b) Minimum lot frontage (m)		45	61.9
(c) Minimum front yard setback (m)		15	196.3
(d) Minimum rear yard setback (m)		15	42.1
(e) Minimum side yard setback (m)	side I	15	21.0
	side II	15	40.8
(f) Maximum principal building height (m)		15	2.7
(g) Maximum lot coverage (%)		35	8

PARKING REQUIREMENTS:	
VEHICULAR PARKING REQUIRED	PROVIDED
WAREHOUSE = 1/100m^2 GFA = 9 SPACES	9
ACCESSIBLE SPACES = 1 /(1–20 REQUIRED)	1
TOTAL =	10 SPACES

DRAWING No: 200633–SP

DRAWING NAME: PROPOSED SITE PLAN

KEY PLAN: N.T.S.



SCALE 1:500 — 0 5 10 20 40 METRES

GENERAL NOTES:

1. All dimensions are metric and are in metres unless noted otherwise.
2. Do not scale drawings.
3. All elevations are in metres and geodetic. Temporary site benchmark (TBM)= Top of slab on 25 x 31 building. Elevation= 80.43.
4. Geodetic information for the site was obtained using GPS survey equipment connected to the CAN-Net Virtual Reference Station Network which provides real time GNSS -(Global Navigation Satellite System) calibration data to precisely obtain the horizontal and vertical coordinates of a point within the NAD83 coordinate reference frame.
5. This drawing does not represent a legal survey or utility plan. Boundary information was derived from plan for part 1 and part 6 of lot 10, concession 1 by William J. Salter.
6. All legal boundaries to be verified by a licensed Ontario Land Surveyor prior to construction.
7. Finished grade elevations are as indicated.
8. All dimensions to be verified on site by contractor prior to construction.
9. All materials and construction methods to be in accordance with Municipality Standards and Ontario Provincial Standards and Specifications.
10. The owner (and/or Contractor) agrees to prepare and implement an erosion and sediment control plan at least equal to the stated minimum requirements and to the satisfaction of the Municipality of North Grenville, appropriate to the site conditions, prior to undertaking any site alterations (filling, grading, removal of vegetation, etc.) and during all phases of site preparation and construction in accordance with the current Best Management Practices for Erosion and Sediment Control such as but not limited to Installing a light duty silt fence barrier as shown on Kollaard Associates Inc. Drawing # 200633–ER.
11. This drawing cannot be accepted as acknowledging all of the utilities, and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
12. Contractor is responsible for the location and protection of utilities.
13. Hydro service to be installed according to the specifications of Ontario Hydro and the mechanical engineer.
14. Obtain all necessary permits and approvals from the municipality before commencing construction.
15. Restore all disturbed areas on–site and off–site, including trenches and surfaces on public road allowances to existing conditions or better to the satisfaction of the Municipality of Edwardsburgh Cardinal and engineer.
16. Remove from site all excess excavated material, organic matter and debris unless otherwise instructed by engineer. Excavate and remove from site any contaminated material. All contaminated material shall be disposed of at a licensed landfil facility.
17. Any changes made to this plan must be verified and approved by Kollaard Associates Inc.
18. This drawing is part of Kollaard Associates design report #200633.

No.	REVISION	DATE	BY
0	ISSUED FOR SITE PLAN CONTROL	18/12/2020	AVB
#	REVISION ITEM / DESCRIPTION	REV. DATE	INT.

CLIENT: EDDIE HOLMES

PROJECT: PROPOSED MINI–STORAGE

LOCATION: 1026 COUNTY ROAD 2
CARDINAL ONTARIO

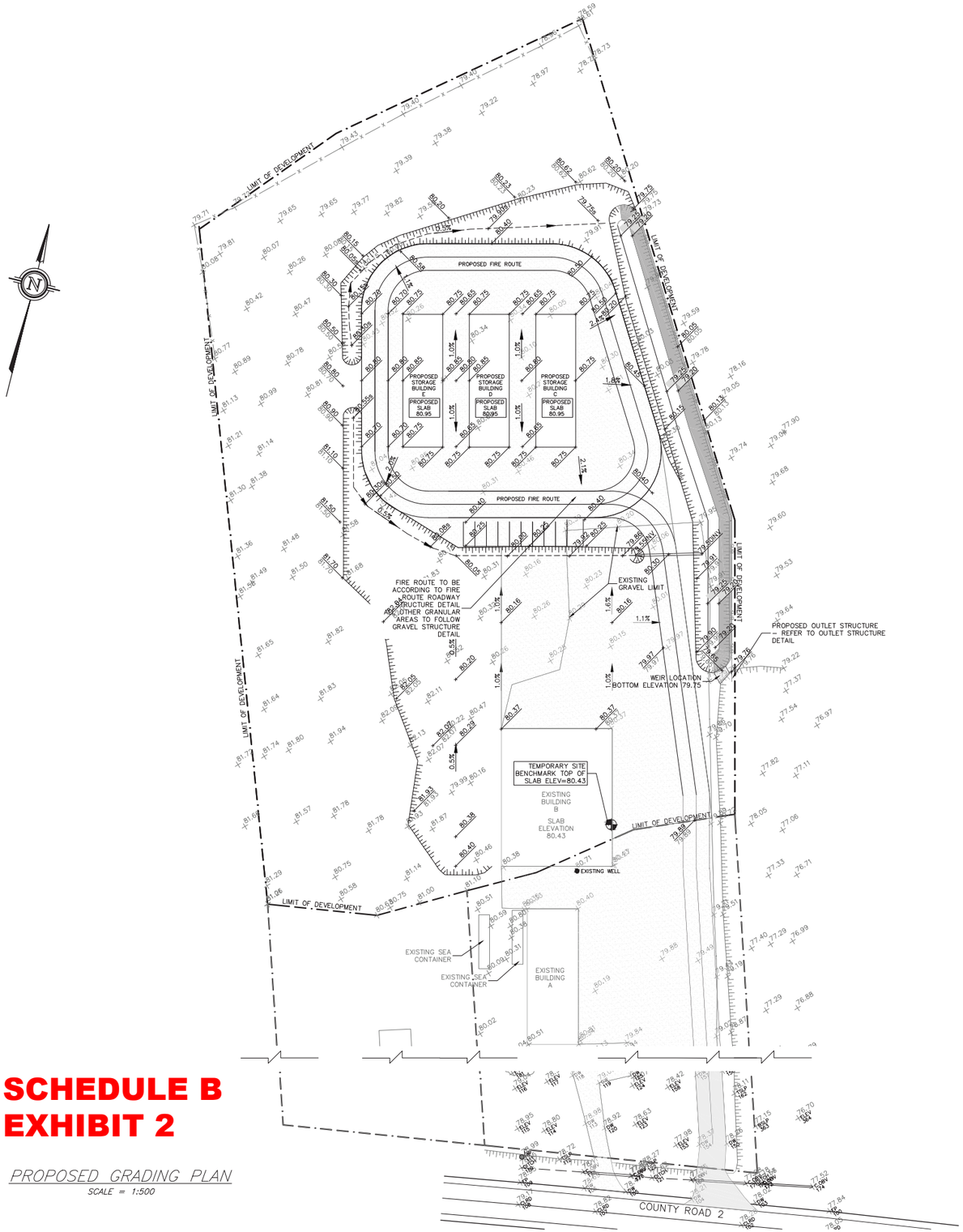
Kollaard Associates Engineers
P.O. BOX 189, 210 PRESCOTT ST. (613) 860–0923
KEMPTVILLE, ONTARIO info@kollaard.ca
K0G 1J0 FAX (613) 258–0475
http://www.kollaard.ca

LICENSED PROFESSIONAL ENGINEER — DEC. 18, 2020 — S.E. deWit 100079612 — PROVINCE OF ONTARIO

DESIGNED BY:	CHECKED BY:
AVB	SD
DRAWN BY:	APPROVED BY:
AVB	SD

DATE: DEC 14, 2020
SCALE: 1:500
PROJECT NUMBER: 200633

ARCH D



SCHEDULE B
EXHIBIT 2

PROPOSED GRADING PLAN

SCALE = 1:500

LEGEND

- EXISTING ELEVATION
- PROPOSED/EXISTING ELEVATIONS
- PROPOSED ELEVATIONS
- DRAINAGE SLOPE
- CENTRELINE OF ROAD
- EDGE OF ROAD
- 3H:1V TERRACE
- PROPERTY LINE
- SILT FENCE
- OVERLAND FLOW ROUTE
- TEMPORARY BENCHMARK
- EXISTING HYDRO POLE
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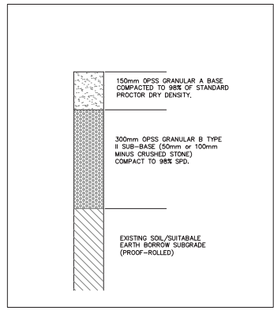
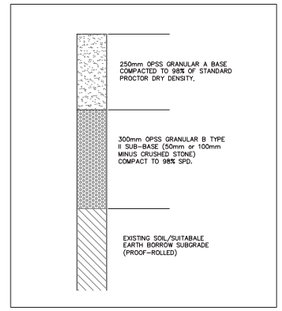


GRAVEL STRUCTURE DETAIL



FIRE ROUTE ROADWAY STRUCTURE DETAIL

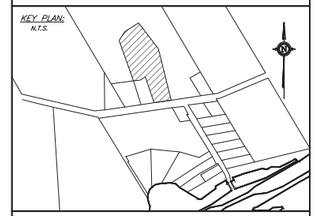
GRADING NOTES:

1. NO EXCESS DRAINAGE WILL BE DIRECTED TOWARDS THE NEIGHBOURING PROPERTIES DURING AND AFTER CONSTRUCTION.
2. ALL EAVESTROUGHES FOR STORAGE UNITS BE DIRECTED AS INDICATED ON THE GRADING PLAN
3. THERE IS TO BE NO ALTERATION TO THE EXISTING GRADE AND DRAINAGE PATTERNS ON THE PROPERTY LINES.

DRAWING No: 200633

DRAWING NAME: PROPOSED GRADING PLAN

KEY PLAN: N.T.S.



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No.	REVISION	DATE	BY
0	ISSUED FOR SITE PLAN CONTROL	18/12/2020	AVB
#	REVISION ITEM / DESCRIPTION	REV. DATE	INT.

CLIENT: EDDIE HOLMES

PROJECT: PROPOSED MINI-STORAGE

LOCATION: 1026 COUNTY ROAD 2 CARDINAL ONTARIO

Kollaard Associates Engineers
P.O. BOX 189, 210 PRESCOTT ST. (613) 860-0923
KEMPTVILLE, ONTARIO info@kollaard.ca
K0G 1J0 FAX (613) 258-0475
http://www.kollaard.ca

LICENSED PROFESSIONAL ENGINEER — PROVINCE OF ONTARIO — DEC. 18, 2020 — S.E. deWit 100079612

DESIGNED BY:	CHECKED BY:
AVB	SD
DRAWN BY:	APPROVED BY:
AVB	SD
DATE: DEC 14, 2020	
SCALE: 1:500	
PROJECT NUMBER: 200633	

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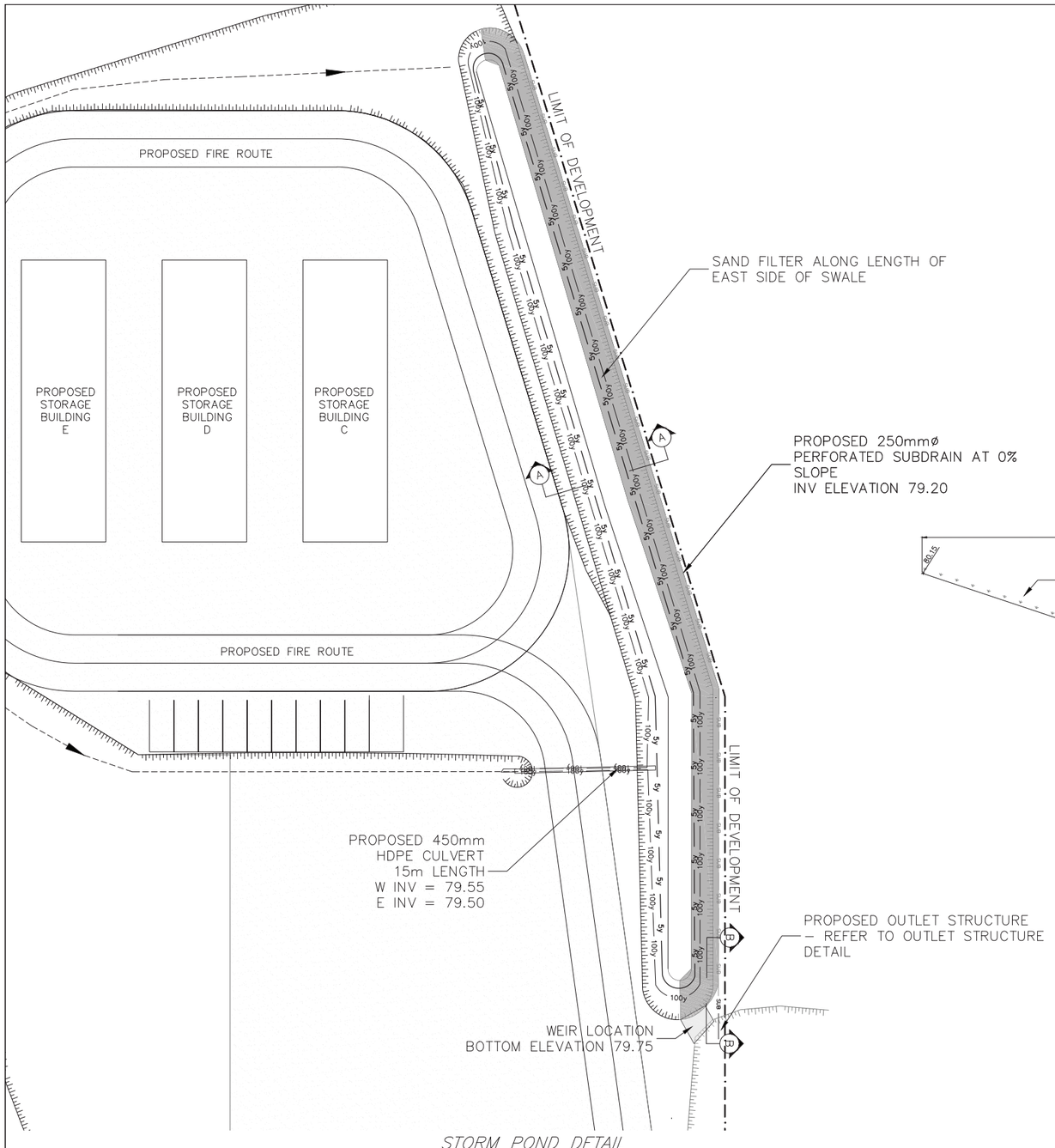
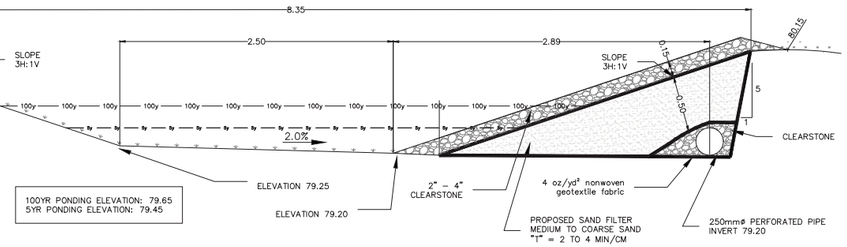


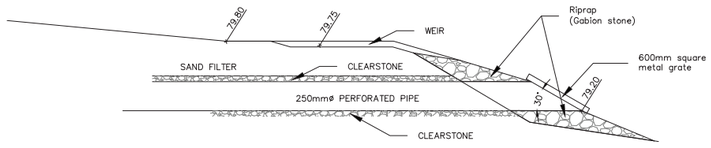
STORM POND DETAIL
SCALE = 1:250

CONSTRUCTION NOTES:

1. PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY.
2. BUILDING CONTRACTOR TO PROVIDE TEMPORARY ADDITIONAL GRANULAR BACKFILL ABOVE SHALLOW CULVERTS AND STORM SEWERS TO SUPPORT HEAVY CONSTRUCTION EQUIPMENT.



SECTION A–A
SCALE = 1:50



OUTLET STRUCTURE DETAIL
SECTION B–B
N.T.S

LEGEND

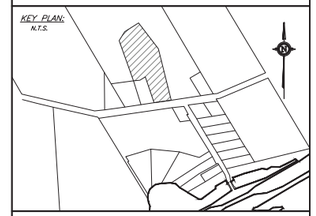
- EXISTING ELEVATION
- PROPOSED/EXISTING ELEVATIONS
- PROPOSED ELEVATIONS
- DRAINAGE SLOPE
- CENTRELINE OF ROAD
- EDGE OF ROAD
- 3H:1V TERRACE
- PROPERTY LINE
- SILT FENCE
- OVERLAND FLOW ROUTE
- TEMPORARY BENCHMARK
- EXISTING HYDRO POLE
- EXISTING HYDRO GUY WIRE ANCHOR
- PROPOSED SWALE
- PROPOSED SUBDRAIN

SCHEDULE B
EXHIBIT 3

DRAWING No: 200633– POND

DRAWING NAME: STORM POND DETAIL

KEY PLAN: N.T.S.



0 5 10 20 40
SCALE 1:500 METRES

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18. This drawing is part of Kollaard Associates design report #200633.

No.	REVISION	DATE	BY
0	ISSUED FOR SITE PLAN CONTROL	18/12/2020	AVB
#	REVISION ITEM / DESCRIPTION	REV. DATE	INT.

CLIENT: EDDIE HOLMES

PROJECT: PROPOSED MINI–STORAGE

LOCATION: 1026 COUNTY ROAD 2
CARDINAL ONTARIO

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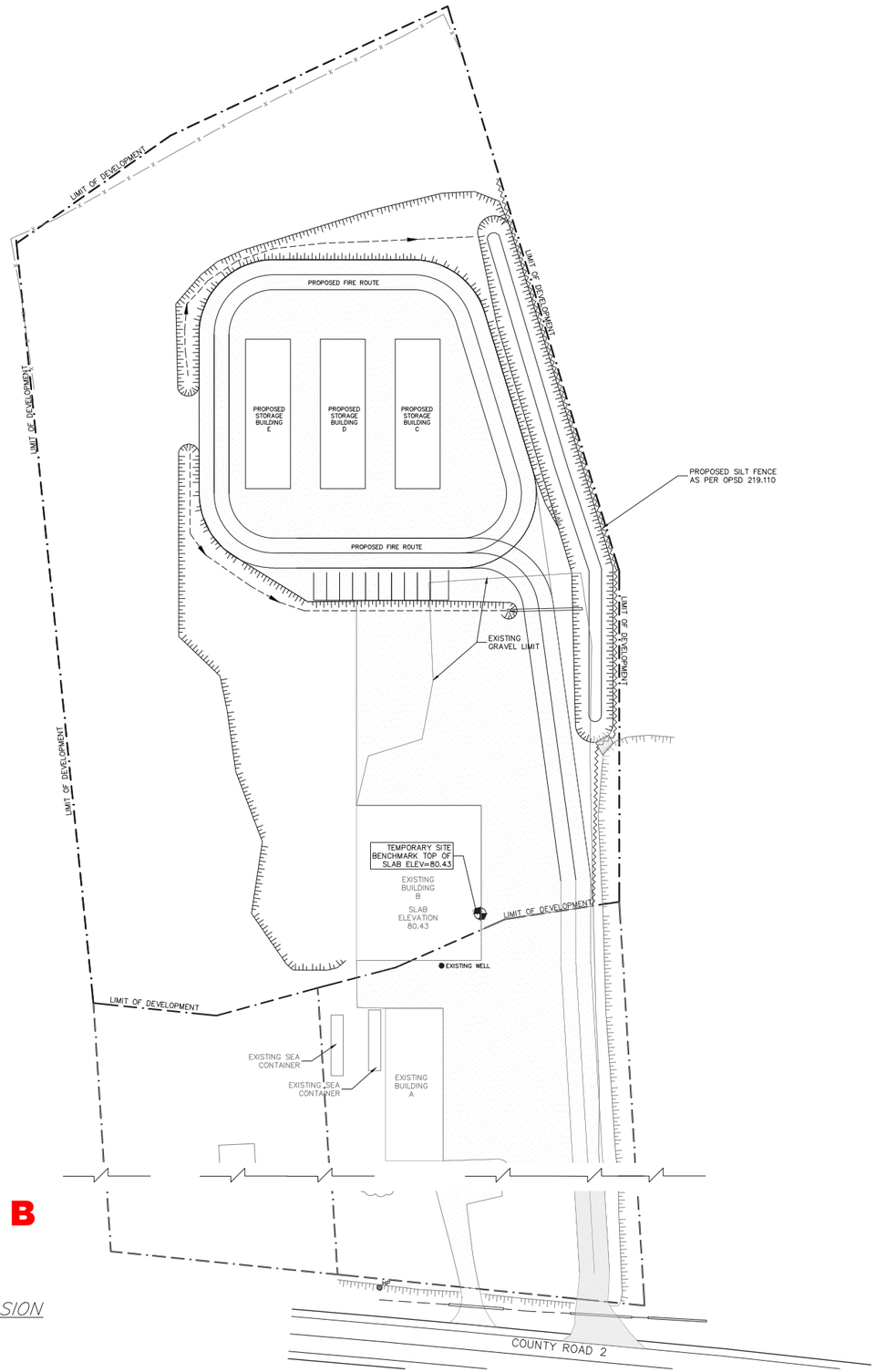
LICENSED PROFESSIONAL ENGINEER
DEC. 18, 2020
S.E. deWit
100079612
PROVINCE OF ONTARIO

DESIGNED BY: AVB	CHECKED BY: SD
DRAWN BY: AVB	APPROVED BY: SD
DATE: DEC 14, 2020	
SCALE: AS INDICATED	
PROJECT NUMBER: 200633	

ARCH D

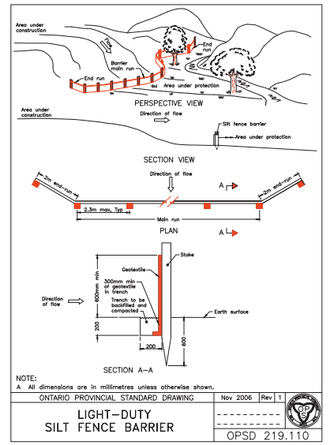


SCHEDULE B
EXHIBIT 4

SEDIMENT AND EROSION CONTROL PLAN
SCALE = 1:500

LEGEND

- EXISTING ELEVATION
- PROPOSED/EXISTING ELEVATIONS
- PROPOSED ELEVATIONS
- 0.0% DRAINAGE SLOPE
- CENTRELINE OF ROAD
- EDGE OF ROAD
- 3H:1V TERRACE
- PROPERTY LINE
- SILT FENCE
- OVERLAND FLOW ROUTE
- TEMPORARY BENCHMARK
- HP EXISTING HYDRO POLE
- EXISTING HYDRO GUY WIRE ANCHOR
- PROPOSED SWALE
- SUB PROPOSED SUBDRAIN



ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2006	Rev 1
LIGHT–DUTY SILT FENCE BARRIER	----------	
	OPSD 219.110	

EROSION AND SEDIMENT CONTROL NOTES:

1. 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.
2. THE OWNER (AND/OR CONTRACTOR) AGREES TO PREPARE AND IMPLEMENT AN EROSION AND SEDIMENT CONTROL PLAN AT LEAST EQUAL TO THE STATED MINIMUM REQUIREMENTS AND TO THE SATISFACTION OF THE TOWNSHIP OF EDWARDSBURGH CARDINAL, APPROPRIATE TO THE SITE CONDITIONS, PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING, REMOVAL OF VEGETATION, ETC.) AND DURING ALL PHASES OF SITE PREPARATION AND CONSTRUCTION IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL.
3. THE CONTRACTOR IS TO ENSURE THAT THE SITE ACCESS POINTS AND ADJACENT STREETS TO THE ACCESS POINTS ARE MAINTAINED AND KEPT CLEAN OF CONSTRUCTION MATERIALS SUCH AS, BUT NOT LIMITED TO MUD, DIRT, CLAY AND GRANULARS ON A DAILY BASIS OR AS NECESSARY, TO THE SATISFACTION OF THE TOWNSHIP OF EDWARDSBURGH CARDINAL.
4. EVERY EFFORT WILL BE MADE TO ENSURE THAT ALL DISTURBED AREAS ARE TOPSOILED AND SEEDED AS SOON AS REASONABLY POSSIBLE.
5. THE SEDIMENT AND EROSION CONTROL PLAN IS A LIVING DOCUMENT WHICH MAY BE AMENDED BY ONSITE REQUIREMENTS AT THE APPROVAL OF THE MUNICIPALITY AND THE CONSERVATION AUTHORITY.

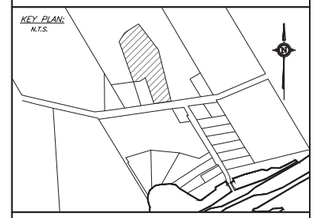
MINIMUM EROSION AND SEDIMENT CONTROL PLAN REQUIREMENTS:

- TIME THE DEMOLITION AND EXCAVATION ACTIVITIES SO THAT THEY OCCUR NO SOONER THAN IS NECESSARY FOR SUBSEQUENT CONSTRUCTION ACTIVITIES.
- LANDSCAPE THE SITE AS SOON AS PRACTICALLY POSSIBLE.
- USE SILT FENCES AROUND ANY STOCKPILES OF SOIL.
- INSTALL A SILT FENCE AS INDICATED ON THE DRAWING.
- THE SILT FENCE MAY BE POLYPROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN.
- IF A STANDARD FILTER FABRIC IS USED, IT MUST BE BACKED BY A WIRE FENCE SUPPORTED ON POSTS NOT OVER 2.0 METRES APART. EXTRA STRENGTH FABRIC MAY BE USED WITHOUT A WIRE FENCE BACKING IS POSTS ARE NOT OVER 1.0 METRES APART. FABRIC JOINTS SHOULD BE LAPPED AT LEAST 150mm (6") AND STAPLED.
- THE BOTTOM EDGE OF THE SILT FENCE SHOULD BE ANCHORED IN A 300mm (1 ft) DEEP TRENCH, TO PREVENT FLOW UNDER THE FENCE. SECTIONS OF FENCE SHOULD BE CLEARED IF BLOCKED WITH SEDIMENT OR REPLACED IF TORN.
- THE SILT FENCE SHOULD BE REMOVED ONLY WHEN THE SITE IS STABILIZED.
- ALL CHANGES TO THIS DESIGN MUST BE VERIFIED AND APPROVED BY KOLLAARD ASSOCIATES INCORPORATED.

DRAWING No: 200633

DRAWING NAME: EROSION AND SEDIMENT CONTROL PLAN

KEY PLAN: N.T.S.



SCALE 1:500 — 0 5 10 20 40 METRES

GENERAL NOTES:

1. All dimensions are metric and are in metres unless noted otherwise.
2. Do not scale drawings.
3. All elevations are in metres and geodetic. Temporary site benchmark (TBM)= Top of slab on 25 x 31 building. Elevation= 80.43.
4. Geodetic information for the site was obtained using GPS survey equipment connected to the CAN-Net Virtual Reference Station Network which provides real time GNSS -(Global Navigation Satellite System) calibration data to precisely obtain the horizontal and vertical coordinates of a point within the NAD83 coordinate reference frame.
5. This drawing does not represent a legal survey or utility plan. Boundary information was derived from plan for part 1 and part 6 of lot 10, concession 1 by William J. Salter.
6. All legal boundaries to be verified by a licensed Ontario Land Surveyor prior to construction.
7. Finished grade elevations are as indicated.
8. All dimensions to be verified on site by contractor prior to construction.
9. All materials and construction methods to be in accordance with Municipality Standards and Ontario Provincial Standards and Specifications.
10. The owner (and/or Contractor) agrees to prepare and implement an erosion and sediment control plan at least equal to the stated minimum requirements and to the satisfaction of the Municipality of North Grenville, appropriate to the site conditions, prior to undertaking any site alterations (filling, grading, removal of vegetation, etc.) and during all phases of site preparation and construction in accordance with the current Best Management Practices for Erosion and Sediment Control such as but not limited to installing a light duty silt fence barrier as shown on Kollaard Associates Inc. Drawing # 200633-ER.
11. This drawing cannot be accepted as acknowledging all of the utilities, and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
12. Contractor is resoponsible for the location and protection of utilities.
13. Hydro service to be installed according to the specifications of Ontario Hydro and the mechanical engineer.
14. Obtain all necessary permits and approvals from the municipality before commencing construction.
15. Restore all disturbed areas on-site and off-site, including trenches and surfaces on public road allowances to existing conditions or better to the satisfaction of the Municipality of Edwardsburgh Cardinal and engineer.
16. Remove from site all excess excavated material, organic matter and debris unless otherwise instructed by engineer. Excavate and remove from site any contaminated material. All contaminated material shall be disposed of at a licensed landfill facility.
17. Any changes made to this plan must be verified and approved by Kollaard Associates Inc.
18. This drawing is part of Kollaard Associates design report #200633.

No.	REVISION	DATE	BY
0	ISSUED FOR SITE PLAN CONTROL	18/12/2020	AVB
#	REVISION ITEM / DESCRIPTION	REV. DATE	INT.

CLIENT: EDDIE HOLMES

PROJECT: PROPOSED MINI–STORAGE

LOCATION: 1026 COUNTY ROAD 2 CARDINAL ONTARIO

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LICENSED PROFESSIONAL ENGINEER — DEC. 18, 2020 — S.E. deWit 100079612 — PROVINCE OF ONTARIO

DESIGNED BY:	CHECKED BY:
AVB	SD
DRAWN BY:	APPROVED BY:
AVB	SD
DATE: DEC 14, 2020	
SCALE: 1:500	
PROJECT NUMBER: 200633	

ARCH D

SCHEDULE B
EXHIBIT 5

STORMWATER MANAGEMENT REPORT

PROPOSED SELF-SERVICE
STORAGE BUILDINGS
1026 COUNTY ROAD 2
CARDINAL, ONTARIO

Prepared For:
Mr. Edward Holmes
1026 County Road 2
Cardinal, Ontario
K0E 1E0

PROJECT #: 200633

DISTRIBUTION
1 copies – The Township of Edwardsburgh Cardinal
1 copy – Mr. Edward Holmes
1 copy – Kollaard Associates Inc.

Rev 0 – Issued for Site Plan Control

December 18, 2020

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1 INTRODUCTION

Kollaard Associates was retained by Mr. Edward Holmes to complete a Stormwater Management Report for the proposed development of three self-service (mini) storage buildings in the Township of Edwardsburgh Cardinal.

The report shall summarize the stormwater management (SWM) design requirements and proposed works that will address stormwater flows arising from the site under post-development conditions for both a quality and quantity perspective.

The proposed development is located at 1026 County Road 2 in Cardinal Ontario, approximately 56m west of Galop Canal Road. (See location of property on the key plan included in the grading plan 200633-GR).

The site has a total area of 2.51 hectares. The current use of the property is for motorcycle and truck repair business. The site is occupied by a repair garage with a footprint of about 778m^2 and a separate office building with showroom of 354m^2. The site is also occupied by a dwelling with a footprint of 80m^2.

The project consists of the construction of three self-service storage buildings of 270m^2 each. The storage buildings are to be constructed at the rear of the lot. Lot access is from the asphalt driveway on County Road 2. The site surfaces consist primarily of grass and gravel.

2 STORMWATER DESIGN

2.1 Introduction

Design of the storm system was completed in conformance with the Ministry of Environment (MOE) Stormwater Management Planning and Design Manual (March 2003).

Referring to the site plan (200633-SP), the existing building A (office building) and the existing dwelling are in the southern portion of the lot. Building B (repair garage) and the proposed development of the storage buildings C, D, and E are within the northern portion of the lot. The buildings and grading in the southern portion of the lot will remain unchanged and are beyond the limit of development. The existing drainage patterns outside of the limit of development will remain unchanged. For stormwater calculations, a limit of development is shown on the site plan. This delineates the area studied in the stormwater design within the northern portion of the lot. The limit of development area is 1.84 hectares.

2.2 Stormwater Management Design Criteria

Quantity and quality control criteria were provided by South Nation Conservation Authority (SNCA). The flow rate criteria consist of the following:

- The post-development flow rates from the site must not exceed pre-development runoff rates for storm events up to and including 100 year events.
- An enhanced level of treatment must be provided for runoff from the site, corresponding to 80% total suspended solids removal.

2.3 Stormwater Quantity Control

2.3.1 Methodology

Peak Flow for runoff quantities for the Pre-Development and Post-Development stages of the project were calculated using the rational method. The rational method is a common and straightforward calculation, which assumes that the entire drainage area is subject to uniformly distributed rainfall. The formula is:

$$Q = \frac{CiA}{360}$$

Where
Q is the Peak runoff measured in m^3/s

C is the Runoff Coefficient, **Dimensionless**
A is the runoff area in ***hectares***
i is the storm intensity measure in ***mm/hr***

All values for intensity, i, for this project were derived from IDF curves provided by the OntarioMinistry of Transportation (MTO) IDF Curve Lookup web-based application. An IDF curve was obtained from the website for the coordinates 44° 46' 45" N, 75° 24' 15" W (44.779167,-75.404167). For this project two return periods were considered, 5 and 100-year events. The formulas for each are:

5-Year Event

$$i = 26.9 \times (t_{ca})^{-0.699}$$

100-Year Event

$$i = 44.8 \times (t_{ca})^{-0.699}$$

Where
$t_c$is time of concentration in***hrs***
i is the storm intensity measure in ***mm/hr***

2.3.2 Runoff Coefficients

Runoff coefficients for impervious surfaces (roofs and asphalt) were taken as 0.90, whereas pervious surfaces (grass) were taken as 0.20. Gravel areas have a runoff coefficient of 0.6.

A 25% increase for the post development 100-year runoff coefficients was used. Refer to Appendix A for pre-development and post-development runoff coefficients.

2.3.3 Time of Concentration (Pre-development)

The time of concentration within the limit of development was determined using the velocity method (United States Department of Agriculture - Part 630 Hydrology National Engineering Handbook Chapter 15 Time of Concentration [USDA Handbook]). The velocity method assumes that the time of concentration is the sum of travel times for segments along the hydraulically most distant flow path. The segments used in the velocity method for this site are: sheet flow T_s and shallow concentrated flow T_{sc}.

2.3.3.1 Sheet Flow

The maximum length of sheet flow as defined by the USDA Handbook is 100 ft or 30 metres. The sheet flow area was from the westerly side of building B, extending north.

Based on a review of the ground cover and topographic information, this areaconsists mainly of short, dense grasses. Under interpretation of table 15-1 of the USDA handbook, the Manning's Roughness coefficient was assigned to be 0.2. The average slope across the sheet flow area is 5.0%.
Travel time for sheet flow under pre-development conditions:

$$T_s = \frac{0.091(nl)^{0.8}}{(P_2)^{0.5} S^{0.4}}$$

Where T_s = travel time, h
n = Manning's roughness coefficient = 0.2
l = sheet flow length, 30 m
P_2 = 2-year 24-hour rainfall, cm = 52.6 cm
S = Slope of land surface m/m = 0.05

T_s = 0.18 hours

Therefore, the travel time for sheet flow was calculated as 0.18hrs.

2.3.3.2 Shallow Concentrated Flow

From the USDA Handbook Shallow concentrated flow is assumed to occur after sheet flow ends. The estimated shallow concentrated flow time was calculated using the velocities developed from Figure 15-4 USDA handbook in which the velocity is a function of the surface slope and ground cover type. Slope of the ground surface running north easterly toward the property line is 2%. Length of this flow path is 328ft. (100m). The ground cover was considered equal to that of short grass pasture

From Table 15-4 of the USDA Handbook using a slope of 2.0% and short-grass pasture, the velocity is estimated at 0.26 m/s (0.85ft/s) for the pre-development area.

$$T_{sc} = \frac{l}{3600\,V}$$

Where T_{sc} = travel time, h
l = distance of shallow concentrated flow = 100 m
V = average velocity = 0.26 m/s
T_{sc} = 0.11 hrs

The travel time for shallow concentrated flow was calculated as 0.11hrs.

The total time of concentration for pre-development area is

T_t = 0.18 + 0.11 = 0.29 hrs or 17minutes.

As such, a time of concentration of 17 minutes was used to model the pre- development conditions as well as the uncontrolled grass surfaced areas during post-development conditions.

2.3.4 Pre-development Site Conditions

As previously indicated the limit of development outlined is 1.84 hectares. The rain water from the area drains via overland flows to the north, west and east property lines. Referring tothe Ministry of Natural Resources and Forestry, Ontario Flow Assessment Tool (OFAT) mapping, runoff from the north and east property lines flows to wetland areas. These wetland areas lead to McLaughlins Creek, and ultimately to the St. Laurence River.

Drawing 200633-PRE shows the pre-development conditions and pre-development areas.

2.3.5 Pre-development Runoff Coefficient

Pre-development site conditions are summarised for the site in the following Table 2-1.

Table 2-1 – Summary of Pre-Development Site Conditions

PRE-DEVELOPMENT

Description	Runoff Coefficient		Area (ha)
	5-year	100-year	
			1.84
Roof	0.90	1.00	0.07
Gravel	0.60	0.75	0.21
Grass/ Trees	0.20	0.25	1.56
Controlled Area Weighted Average C	*0.27*	*0.34*	

Based on the existing ground cover the 5 year pre-development runoff coefficient was calculated to be 0.27 and the 100 year pre-development runoff coefficient was calculated to be 0.34.

2.3.6 Pre-development Flow Rate

Using the Rational Method with a time of concentration of 17 minutes, the storm intensities calculated under the IDF curve equations yielded 64.95mm/hr for a 5 year storm and 108.66mm/hr for a 100 year storm. Using the previously calculated runoff coefficients and the storm intensities, the pre-development runoff rate for the 5-year storm and 100- year stormsare as follows:

$5\ year^{pre\text{-}development} = 2.78 \times 0.27 \times 64.95 \times 1.84 = 91.16\ L/s$
$100\ year^{pre\text{-}development} = 2.78 \times 0.34 \times 108.66 \times 1.84 = 187.85\ L/s$

2.3.7 Post-Development Site Conditions

It is understood that three new self-serve storage units (each with a $270m^2$ footprint) will be constructed on the site north of the repair garage (building B).

Runoff generated from the site up to and including the 100 year event will flow overland toward the east side yard in the same manner as the pre-development. A swale is proposed in the east side yard. The swale will contain the runoff and discharge it to the east in a controlled manner.

The proposed site drainage patterns have been outlined on drawing 200633-POST. For the purposes of determining the post-development runoff coefficient, the site was divided into controlled and uncontrolled areas.

Uncontrolled areas consist of areas from which runoff free flows directly off the site without restriction. Controlled areas consist of the areas from which runoff is directed by means of sheet flow and swales to a storm water storage area from which discharge is restricted and released at a controlled rate. The proposed site drainage pattern showing the controlled and uncontrolled areas has been outlined on drawing 200633-POST. Post-development site conditions are summarised for the site in the following Table 2-2.

Table 2-2 – Summary of Post-Development Site Conditions

POST-DEVELOPMENT

Description	Runoff Coefficient		Area (ha)
	5-year	100-year	
Controlled			1.12
Roof	0.90	1.00	0.15
Gravel	0.60	0.75	0.55
Grass	0.20	0.25	0.41
Controlled Area Weighted Average C	*0.49*	*0.60*	
Controlled area Impervious (percentage)		*13%*	
Uncontrolled			
Grass	0.20	0.25	0.73
5year Uncontrolled Area Weighted Average C	*0.20*	*0.25*	

2.3.8 Post-Development Uncontrolled Area Runoff Rate

The runoff rate from a site includes the uncontrolled flow that is directed off site from the uncontrolled areas. As previously indicated, the time of concentration for the uncontrolled grass surfaced areas was calculated to be 17 minutes.

A post-development time of concentration of 17 minutes for the uncontrolled portion of the site corresponds to a storm intensity of 64.95 mm/hr and 108.66 mm/hr on the 5-year and 100-year storm IDF equations respectively.

Q_{5uncon} = 2.78 x 0.20x 64.95x 0.73 = 26.30L/sec.
$Q_{100uncon}$ = 2.78 x 0.25x 108.66x 0.73 = 48.80 L/sec.

The runoff rate from the uncontrolled areas was therefore calculated to be 26.30 L/s and 48.80 L/sfor the 5 year and 100 year storm events, respectively.

2.3.9 Allowable Post-Development Discharge Rate from the Controlled Area.

In keeping with the stormwater management criteria, the total post-development runoff rate is to be less than or equal to the pre-development runoff rate. The maximum allowable release rate from the controlled areas of the site is therefore equal to the total allowable runoff rate minus the runoff rate from the uncontrolled area of the site for each design storm event. The total allowable post-development runoff rate for the site is equal to the pre-development runoff rate.

The allowable post development runoff rates for the site are as follows:
$Q_{controlled} = Q_{total\ allowable} - Q_{uncontrolled}$

For the 5-year Storm event
$Q_{controlled}$= 91.2 – 26.3/s = 64.9 L/s

For the 100-year Storm event
$Q_{controlled}$= 187.8 – 48.8/s = 139.0 L/s

The allowable controlled area release rate for the site is summarized in Appendix A.

2.3.10 Post-Development Restricted Flow and Storage

Stormwater storage for the purposes of restricting the post-development runoff rate to the pre-development runoff rate for each storm event will be provided within the stormwater storage swale located along the east side of the site. The proposed storage swale along the east side of the site has been designed in conjunction with the quality control criteria to ensure that both the quantity and quality control criteria will be met.

The stormwater storage has been designed as follows:

- The storage swale has a bottom elevation of 79.20 metres, a bottom width of 2.5 metres and a bottom length of about 100 metres.
- The storage swale has been constructed with depth ranging from 0.55 metres to 1.0 metres and side slopes of 3 horizontal to 1 vertical.
- The east side of the swale will be constructed using a sand filter sub-drained by a 250 mm perforated pipe surrounded by clear stone. The sand filter will be covered with a 150 mm thick layer of 50 to 100 mm clearstone riprap and geotextile to provide protection of the filter.
- The bottom and west side of the storage swale will be grass surfaced.
- Discharge from the storage swale below an elevation of 79.75 will be controlled by exfiltration through the sand filter only to ensure sufficient volume in the storage swale for quality control purposes.
- Should the ponding in the storage swale exceed 0.55m, water will overtop the sand filter and riprap through a depressed section at the end of the swale. The depressed section at the end of the swale was designed as a broad crested weir and will have a bottom elevation of 79.75. The weir will have a width of 3 m and a depth of 0.05 m.

The physical characteristics of the stormwater storage swale and outlet control will result in the stage - storage - discharge relationship as indicated in the following Table 2-3

Table 2-3 – Elevation, Storage and Discharge Relations

Stage (Elevation) m	Storage Volume m^3	Infiltration L/sec	Weir Flow L/sec	Total Discharge L/sec
79.80	258.00	36.00	99.0	135.0
79.75	228.20	30.25	0.0	30.2
79.65	173.20	20.25	0.0	20.2
79.55	124.20	12.25	0.0	12.2
79.45	81.20	6.25	0.0	6.2
79.35	44.20	2.25	0.0	2.2
79.25	13.20	0.25	0.0	0.2
79.20	0.00	0.00	0.0	0.0

The modified rational method was utilized to determine the maximum storage requirement within the storage swale based on the above storage discharge relationship. The calculation tables are included in Appendix A.

From the calculation tables provided in Appendix A, the maximum discharge rates and storage requirements and ponding depths for the design storm are as summarized in the following Table 2-4

Table 2-4 – Summary of Maximum Discharge Rate, Storage Requirement and Ponding Depth

Design Storm Event	Allowable Release Rate L/sec	Actual Discharge Rate L/sec	Storage Requirement m^3	Ponding Depth m	Available Storage* m^3
5 year	64.9	10	110	0.25	228
100 year	139.0	26	210	0.45	228

* Before overflow by means of the weir.

From the Calculations in Appendix A as summarized in the above table, the actual release rate from the storage swale will be much less than the allowable release rate for each design storm event.

It is noted that the storage volume required to ensure the quality control criteria is met in conjunction with the flow restriction provided by the filter will result in over control of the flow rate from the storm pond based on the allowable release rates previously calculated.

2.4 Stormwater Quality Control

SNCA requires an enhanced level of treatment for the site. An enhanced level of treatment corresponds to 80 percent total suspended solids removal.

Stormwater treatment of 80% TSS removal will be provided by a treatment train approach. The treatment train consists of sedimentation within the grass surfaced storage area followed by filtration through a sand filter. Pre-treatment will be provided by best management practices. Quality Control will be provided by temporary detention of the entire quality control volume generated in the catchment CA1. A sand filter will be constructed along the side of the swale adjacent to the east property line.

Water from CA1 will travel by sheet flow and grass lined swales to the storage swale along the east side of the development area. The quality storage swale has been designed to outlet the quality storage volume horizontally through a sand filter. In the storage swale water goes from the sand filter into a subdrain. The perforated subdrain outlets into the wetland east of the property.

The Ministry of Environment Stormwater Management Planning and Design Manual (March 2003)(MOE Manual) provides guidance on design for stormwater quality control. Quality control design is completed with the fundamental understanding that the majority of sediment and particulate pollutants are washed from the site surfaces during minor (frequent) storm events. Section 3.3.1 of the MOE Manual indicates that in most cases, quality control design storms range from 12.5 mm to 25 mm. The MOE Manual also indicates that an alternate approach to the volumetric sizing of stormwater facilities for quality control has been applied in Ontario. The alternate approach is summarized in Table 3.2 *Water Quality Storage Requirements Based on Receiving Waters.* Table 3.2 of the MOE manual specifies the storage volume required to achieve an enhanced minimum required quality control level of treatment using filtration.

In Part 4, the MOE Manual details the design requirements of several types of end of pipe stormwater management facilities. The proposed stormwater management design for quality control will consist of filtration. Design guidance for filtration is provided in Part 4 Section 4.6.7 Filters of the MOE Manual

Section 4.6.7 provides the design guidance with respect to the use of a filter as summarized in the table below. A column has been added to indicate how the proposed design conforms to the Criteria.

Design Element	Design Objective	Minimum Criteria	Design Conformance
Drainage Area		< 5 hectares	~ 1.12 hectares
Pre-treatment	Longevity	Pre-treatment by means of sedimentation chamber, or forebay, vegetated filter strip, swale or oil/grit separator	Pre-treatment by vegetated quality storage swale. Side adjacent filter. Water going through sand filter goes to sub-drained swale. Storage swale adjacent to granular surfaces. Vegetative filtration in grassed swales on grass covered side slope and bottom of quality storage swale.
Storage Depth	Avoid Filter Compaction	Subsurface sand and organic filters: 0.5 m Maximum 1.0 m	Maximum storage depth of storage swale of 0.55m
Filter Media Depth	Filtering	Sand: 0.5 m	sand: 0.5m
Under-drain	Discharge	Minimum 100 mm perforated pipes bedded in 150 – 300 mm of 50 mm gravel	Horizontal discharge to 150mm diameter perforated pipe surrounded in 50mm thickness of 50 mm clear stone.
Land use		any land use, often employed for commercial and industrial	Rural industrial
Volumetric Sizing		provided in Table 3.2 under infiltration. By-pass flows should not occur below a 4 hr 15 mm design event	Quality storage volume sufficient to contain entire volume of a 15 mm storm event before by-pass
Filter Size		Determined using the Darcy Equation	Determined using the Darcy Equation
Filter Lining	prevent clogging	liner to prevent native material from entering filter	Non-woven geotextile filter cloth used between native material and filter and between filter and clearstone
Overflow / by-pass		required	overflow is provided above the quality storage requirement
Drawdown time	prevent standing water	from 24 to 48 hours 24 hours preferred	storage swale: 30 hrs

2.4.1 Volumetric Sizing and Filter Size.

The water quality storage volume requirement to achieve anenhanced level of treatment using the sand filter was determined from the MOE Manual Table 3.2 under infiltration. As previously calculated, the impervious ratio for the controlled area of the site is 13%.From Table 3.2, for a 13% impervious ratio at an enhanced level of treatment the storage requirement was extrapolated to be 9 m^3/ha.

Catchment area CA1 has an area of 1.12 ha. 1.12 x 9 m^3/ha gives a quality storage requirement of 10.08 m^3.

The MOE Manual in section 4.6.7 under the heading Volumetric Sizing provides the following additional design guidance when using filtration for quality control:

"Water quality volumes to be used in the design are provided in Table 3.2 under the "infiltration" heading. Erosion and quantity control volumes are not applicable to this type of SWMP. The design should be such that at a minimum, the by-pass of flows should not occur below or at the peak runoff from a 4 hour 15 mm design event."

In order to ensure that by-pass would not occur below a 4 hr 15 mm design event, the quality swales are designed to accommodate the entire volume of a 15 mm rainfallassuming all of the rainfall runs off into the quality storage pond. It is noted that a runoff coefficient OF 0.49 indicates that only 49% of the rainfall will result in runoff.

The MOE Manual indicates that the size of the filter be designed to ensure a specified volume is discharged within a specified time period using the Darcy Equation. The size of the filter and storage volume must be sufficient to ensure that no overflow or by-pass occurs below the 4 hr 15 mm design storm.

Catchment area CA1 has an area of 1.12ha. A 15mm storm event will result in a runoff volume of (1.12ha x15mm) 168m^3 for CA1. This results in a maximum quality storage requirement of 168m^3 assuming no infiltration or discharge. There is a total storage volume for quality control purposes of 228m^3 in the easterly swale to the side of the sand filter.

The proposed filter has been sized based on the space available for the filter. The flow rate through the filter was calculated and the drawdown time was determined based on the volume of the quality storage in the catchment.

In CA1 the proposed filter will be constructed with a width of 0.5m and length of 100m. The 100m length is the complete length of the storage swale on the easterly side of the lot.

The sand used to construct the filter will consist of a filter media sand having a percolation rate "T" time of 2 min/cm and a maximum of 3 percent passing the 0.08 millimetre sieve size. This corresponds to a coefficient of permeability of k = 3600 millimetres per hour. The sand will be placed as shown in the details on Kollaard Associates Inc. drawing #200633 – SER–Servicing will have a depth of 0.5 metres. The filter will be protected on the surface by a 150 mm thick layer of riprap. A non-woven geotextile filter fabric (such as Terrafix 270R or an approved alternative) will be placed between the sand and the layer of riprap. The filter fabric will also be extended beneath and beside the filter to avoid contamination of the filter sand from the underlying native material. This fabric offers medium tensile strength at high elongation and good filtration, coupled with high permeability to allow for proper filtration, while holding the filter sand in place as designed. The Terrafix Geosynthetics Inc. specification sheet can be found in Appendix.

The height of the sand filters was determined based on the quality storage requirement and the capacity of the storage area with respect to depthin the catchment. The filter height was set to ensure that the minimum volume equal to the quality requirement would discharge through the sand filter.

As such the entire quality control volume required by the MOE Manual will be stored below the top of the sand filters and no by-pass or overtopping of the filter will occur below the 15mm storm event.

2.4.2 Discharge Through Filters

The average flow rate through the sand filters was calculated using Darcy's Equation to be:
Q= A K i
A = the cross sectional area of the filter
K= coefficient of permeability
i= hydraulic gradient = average head across the filter/ flow path across the filter

A= 0.55m (height) x 100m (storage swale length)
K= $1x10^{-3}$m/s
i = (0.5/2)/0.5
Q_{CA1}= 30.2L/s

Based on the discharge rates through the filter, it is expected that the draw down time in the swale is 30hrs.

2.4.3 Best Management Practices

Section 4.5.9 of the MOE Stormwater Management Planning and Design Manual (dated March 2003), discusses the use of grassed swales as a form of lot level and conveyance controls for stormwater management. Swales are also more effective for water quality purposes if the slope is less than 1% and the velocity less than 0.5m/s. These design aspects should be incorporated into the detailed design of the development.

Best Management Practices shall be implemented as follows to reduce transport of sediments.

- Discharge roof leaders to yards for natural infiltration / evaporation. Roof leaders will discharge onto the ground.
- Construction works are to be timed in order to reduce the length of time between the beginning of construction and the establishment of vegetative cover.

The runoff from the uncontrolled areas consists of runoff from predominately grassed surfaced areas and will not be subject to any significant sediment or pollutant loading.

2.5 Stormwater System Operation and Maintenance

The swales should be inspected on a weekly basis and after any rain fall event after construction until vegetation is well established. Any areas of erosion or distress should be repaired immediately.

Once the vegetation is well established, the swales should be visually inspected on a bi-monthly basis and following significant storm events. Any debris should be removed from the storage areas if present.

The grassed bottom of the swales should be subjected to the same maintenance schedule as the remainder of the grass covered landscaped "lawn" surfaces. That is, the grass should be mowed and cared for as required to maintain a normal healthy appearance. Minimum recommended grass height in the swales is 50 mm.

Removal of accumulated sediment from the grassed swales should be conducted when the accumulation of the sediment begins to significantly affect the quality of the grass growth and/or the drainage patterns along the grassed surfaces.

If long term ponding occurs within the storage, the engineer should be notified. At this point the engineer could make an assessment of the material in the upper portion of the filter. If the assessment indicates that the filter has become compromised with sediment, the filter will require maintenance.

The outer layer of the filter material (e.g., 0.1 to 0.15 m) should be removed and replaced with clear material when accumulated sediment is removed from the filter. The protective riprap may be reused if free of silt/sediment.

3 EROSION AND SEDIMENT CONTROL

The owner (and/or contractor) agrees to prepare and implement an erosion and sediment control plan at least equal to the stated minimum requirements and to the satisfaction of theTownship of Edwardsburgh Cardinal, appropriate to the site conditions, prior to undertaking any site alterations (filling, grading, removal of vegetation, etc.) and during all phases of site preparation and construction in accordance with the current best management practices for erosion and sediment control. It is considered to be the owners and/or contractors responsibility to ensure that the erosion control measures are implemented and maintained.

In order to limit the amount of sediment carried in stormwater runoff from the site during construction, it is recommended to install a silt fence along the property line, as shown in Kollaard Associates Inc. Drawing #200633-SEC. The silt fence may be polypropylene, nylon, and polyester or ethylene yarn.

If a standard filter fabric is used, it must be backed by a wire fence supported on posts not over 2.0 m apart. Extra strength filter fabric may be used without a wire fence backing if posts are not over 1.0 m apart. Fabric joints should be lapped at least 150 mm (6") and stapled. The bottom edge of the filter fabric should be anchored in a 300 mm (1 ft) deep trench, to prevent flow under the fence. Sections of fence should be cleaned, if blocked with sediment and replaced if torn.

The proposed landscaping works should be completed as soon as possible. The proposed granular and asphaltic concrete surfaced areas should be surfaced as soon as possible.

The silt fences should only be removed once the site is stabilized and landscaping is completed.

These measures will reduce the amount of sediment carried from the site during storm events that may occur during construction.

4 CONCLUSIONS

This report addresses stormwater management (SWM) design requirements and proposed works that will address stormwater flows arising from the site under post-development conditionsfor the proposed self-serve storage buildings. Based on the analysis provided in this report, the conclusions are as follows:

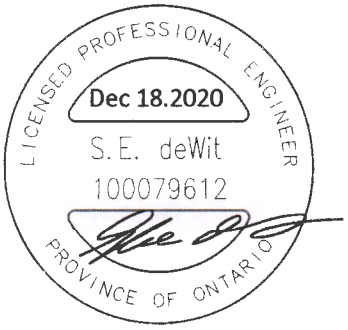
SWM for the proposed development will be achieved by maintaining that the post-development runoff does not exceed the pre-development runoff for all storm events up to and including the 100 year event.

Stormwater from the site drains via overland flows to the proposed side yard swale on the east.

During all construction activities, erosion and sedimentation shall be controlled.

We trust that this report provides sufficient information for your present purposes. If you have any questions concerning this report or if we can be of any further assistance to you on this project, please do not hesitate to contact our office.

Sincerely,
Kollaard Associates, Inc.



Steven deWit, P.Eng.

Appendix A:Storm Design Information

- IDF Data
- Runoff Coefficients
- Pre-Development Flows
- Uncontrolled Flow
- Catchment 1 Post-Development Required Storage and Release

Coefficient summary

IDF Curve: 44° 46' 45" N, 75° 24' 15" W (44.779167,-75.404167)

Retrieved: Thu, 10 Dec 2020 13:50:23 GMT

Data year: 2010
IDF curve year: 2010

Return period	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
A	20.2	26.9	31.3	36.9	41.0	45.0
B	-0.699	-0.699	-0.699	-0.699	-0.699	-0.699

Statistics

Rainfall intensity (mm hr^{-1})

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	114.7	70.7	53.2	32.8	20.2	12.4	5.8	3.6	2.2
5-yr	152.8	94.1	70.9	43.7	26.9	16.6	7.7	4.7	2.9
10-yr	177.8	109.5	82.5	50.8	31.3	19.3	8.9	5.5	3.4
25-yr	209.6	129.1	97.2	59.9	36.9	22.7	10.5	6.5	4.0
50-yr	232.9	143.5	108.0	66.6	41.0	25.3	11.7	7.2	4.4
100-yr	255.6	157.4	118.6	73.1	45.0	27.7	12.9	7.9	4.9

Rainfall depth (mm)

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	9.6	11.8	13.3	16.4	20.2	24.9	34.6	42.7	52.6
5-yr	12.7	15.7	17.7	21.8	26.9	33.1	46.1	56.8	70.0
10-yr	14.8	18.3	20.6	25.4	31.3	38.6	53.7	66.1	81.5
25-yr	17.5	21.5	24.3	30.0	36.9	45.5	63.3	78.0	96.0
50-yr	19.4	23.9	27.0	33.3	41.0	50.5	70.3	86.6	106.7
100-yr	21.3	26.2	29.6	36.5	45.0	55.4	77.2	95.1	117.1

Terms of Use

You agree to the Terms of Use of this site by reviewing, using, or interpreting these data.

Design Chart 1.07: Runoff Coefficients

- Urban for 5 to 10-Year Storms

Land Use		Runoff Coefficient	
		Min.	Max.
Pavement	- asphalt or concrete	0.80	0.95
- brick		0.70	0.85
Gravel roads and shoulders		0.40	0.60
Roofs		0.70	0.95
Business	- downtown	0.70	0.95
- neighbourhood		0.50	0.70
- light		0.50	0.80
- heavy		0.60	0.90
Residential	- single family urban	0.30	0.50
- multiple, detached		0.40	0.60
- multiple, attached		0.60	0.75
- suburban		0.25	0.40
Industrial	- light	0.50	0.80
- heavy		0.60	0.90
Apartments		0.50	0.70
Parks, cemeteries		0.10	0.25
Playgrounds (unpaved)		0.20	0.35
Railroad yards		0.20	0.35
Unimproved areas		0.10	0.30
Lawns	- Sandy soil		
- flat, to 2%		0.05	0.10
- average, 2 to 7%		0.10	0.15
- steep, over 7%		0.15	0.20
- Clayey soil			
- flat, to 2%		0.13	0.17
- average, 2 to 7%		0.18	0.22
- steep, over 7%		0.25	0.35

For flat or permeable surfaces, use the lower values. For steeper or more impervious surfaces, use the higher values. For return period of more than 10 years, increase above values as 25-year - add 10%, 50-year - add 20%, 100-year - add 25%.

The coefficients listed above are for unfrozen ground.

Design Chart 1.07: Runoff Coefficients (Continued)

- Rural

Land Use & Topography[3]	Soil Texture		
	Open Sand Loam	Loam or Silt Loam	Clay Loam or Clay
CULTIVATED			
Flat 0 - 5% Slopes	0.22	0.35	0.55
Rolling 5 - 10% Slopes	0.30	0.45	0.60
Hilly 10- 30% Slopes	0.40	0.65	0.70
PASTURE			
Flat 0 - 5% Slopes	0.10	0.28	0.40
Rolling 5 - 10% Slopes	0.15	0.35	0.45
Hilly 10- 30% Slopes	0.22	0.40	0.55
WOODLAND OR CUTOVER			
Flat 0 - 5% Slopes	0.08	0.25	0.35
Rolling 5 - 10% Slopes	0.12	0.30	0.42
Hilly 10- 30% Slopes	0.18	0.35	0.52
BARE ROCK	COVERAGE[3]		
	30%	50%	70%
Flat 0 - 5% Slopes	0.40	0.55	0.75
Rolling 5 - 10% Slopes	0.50	0.65	0.80
Hilly 10- 30% Slopes	0.55	0.70	0.85
LAKES AND WETLANDS	0.05		

[2] Terrain Slopes

[3] Interpolate for other values of % imperviousness

Sources: American Society of Civil Engineers - ASCE (1960)
U.S. Department of Agriculture (1972)

APPENDIX A: STORMWATER MANAGEMENT MODEL
PRE-DEVELOPMENT FLOW AND SWM SUMMARY

Client: Edward Holmes
Job No.: 200633
Location: 1026 County Road 2, Cardinal
Date: December 10, 2020

PRE-DEVELOPEMNT AREA

Runoff Coefficient Equation

$C = (A_{hard} \times 0.9 + A_{soft} \times 0.2)/A_{tot}$

Pre- Dev run-off Coefficient "C"

Area	Surface	Ha	"C"	5 yr C_{ave}
Total	Roof	0.07	0.90	0.27
1.84	Gravel	0.21	0.60	
	Grass	1.56	0.20	
		0.00	0.10	

Area	Surface	Ha	"C"	100 yr C_{ave}
Total	Roof	0.07	1.00	0.34
1.84	Gravel	0.21	0.75	
	Grass	1.56	0.25	
		0.00	0.13	

5 Year Event

Pre Dev.	C	Intensity	Area
5 Year	0.27	64.95	1.845

2.78CIA= 91.16

**Use a 17 minute time of concentration for 5 year

Total Runoff Rate: 91.16 L/s

100 Year Event

Pre Dev.	C	Intensity	Area
100 Year	0.34	108.66	1.845

2.78CIA= 187.85

**Use a 17 minute time of concentration for 100 year

Total Runoff Rate: 187.85 L/s

APPENDIX A: STORMWATER MANAGEMENT MODEL
STORAGE VOLUME REQUIRED

Client: Edward Holmes
Job No.: 200633
Location: 1026 County Road 2, Cardinal
Date: December 10, 2020

UA1 - UNCONTROLLED AREA

Post Dev run-off Coefficient "C"

			5 Year Event		100 Year Event	
Area	**Surface**	**Ha**	**"C"**	**C_{avg}**	**"C"**	**C_{avg}**
Total	Asphalt	0.00	0.90	**0.20**	1.00	**0.25**
0.73	Roof	0.00	0.90		1.00	
	grass	0.73	0.20		0.25	

Runoff Coefficient Equation
$C = (A_{hard} \times 0.9 + A_{soft} \times 0.2)/A_{tot}$

Post Dev Free Flow

5 Year Event

Pre Dev.	C	Intensity	Area
5 Year	0.20	64.95	0.728
2.78CIA= 26.28			
26.30 L/S			

**Use a 17 minute time of concentration for 5 year

100 Year Event

Pre Dev.	C*	Intensity	Area
100 Year	0.22	108.66	0.728
2.78CIA= 48.80			
48.80 L/S			

**Use a 17 minute time of concentration for 100 year
*C value multiplied by 1.25 for 100 year event

Equations:

Flow Equation
$Q = 2.78 \times C \times I \times A$
Where:
C is the runoff coefficient
I is the intensity of rainfall, City of Ottawa IDF
A is the total drainage area

APPENDIX A: STORMWATER MANAGEMENT MODEL

REQUIRED STORAGE VS. RELEASE RATE

Client: Edward Holmes
Job No.: 200633
Location: 1026 County Road 2, Cardinal
Date: December 10, 2020

Post Dev run-off Coefficient "C" - CA1

			5 Year Event		100 Year Event	
Area (ha)	Surface	Area (ha)	"C"	C_{avg}	"C" x 1.25	$C_{100\ avg}$
Total	Roof/Asphalt	0.155	0.90	0.49	1.00	0.60
	Gravel	0.552	0.60		0.75	
1.117	Grass	0.411	0.20		0.25	

TABLE 3 - REQUIRED STORAGE VERSUS RELEASE RATE FOR 5 YEAR STORM

Runoff Coeffcient, C = 0.49
Drainage Area (ha) = 1.117
Return Period (yrs) = 5
Duration Interval (min) = 5
Release Rate Start (L/s) = 0
Release Rate Interval (L/s) = 5

			Release Rate -->	0	5	10	15	20	25	30	35	40	45
Duration (min)	Rainfall Intensity (mm/hr)	Peak Flow (L/sec)		Storage Required (m^3)									
0.01	11767.4	17907.1		10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
5	152.8	232.5		69.8	68.3	66.8	65.3	63.8	62.3	60.8	59.3	57.8	56.3
10	94.1	143.2		85.9	82.9	79.9	76.9	73.9	70.9	67.9	64.9	61.9	58.9
15	70.9	107.9		97.1	92.6	88.1	83.6	79.1	74.6	70.1	65.6	61.1	56.6
20	58.0	88.2		105.9	99.9	93.9	87.9	81.9	75.9	69.9	63.9	57.9	51.9
25	49.6	75.5		113.2	105.7	98.2	90.7	83.2	75.7	68.2	60.7	53.2	45.7
30	43.7	66.5		119.6	110.6	101.6	92.6	83.6	74.6	65.6	56.6	47.6	38.6
35	39.2	59.7		125.3	114.8	104.3	93.8	83.3	72.8	62.3	51.8	41.3	30.8
40	35.7	54.3		130.4	118.4	106.4	94.4	82.4	70.4	58.4	46.4	34.4	22.4
45	32.9	50.1		135.1	121.6	108.1	94.6	81.1	67.6	54.1	40.6	27.1	13.6
50	30.6	46.5		139.5	124.5	109.5	94.5	79.5	64.5	49.5	34.5	19.5	4.5
55	28.6	43.5		143.6	127.1	110.6	94.1	77.6	61.1	44.6	28.1	11.6	-4.9
60	26.9	40.9		147.4	129.4	111.4	93.4	75.4	57.4	39.4	21.4	3.4	-14.6
65	25.4	38.7		151.0	131.5	112.0	92.5	73.0	53.5	34.0	14.5	-5.0	-24.5
70	24.2	36.8		154.4	133.4	112.4	91.4	70.4	49.4	28.4	7.4	-13.6	-34.6
75	23.0	35.0		157.6	135.1	112.6	90.1	67.6	45.1	22.6	0.1	-22.4	-44.9
80	22.0	33.5		160.7	136.7	112.7	88.7	64.7	40.7	16.7	-7.3	-31.3	-55.3
85	21.1	32.1		163.7	138.2	112.7	87.2	61.7	36.2	10.7	-14.8	-40.3	-65.8
90	20.3	30.8		166.5	139.5	112.5	85.5	58.5	31.5	4.5	-22.5	-49.5	-76.5
95	19.5	29.7		169.2	140.7	112.2	83.7	55.2	26.7	-1.8	-30.3	-58.8	-87.3
Maximum Storage Rate =				169.2	140.7	112.7	94.6	83.6	75.9	70.1	65.6	61.9	58.9

TABLE 4 - REQUIRED STORAGE VERSUS RELEASE RATE FOR 100 YEAR STORM

Runoff Coeffcient, C = 0.60
Drainage Area (ha) = 1.117
Return Period (yrs) = 100
Duration Interval (min) = 5
Release Rate Start (L/s) = 0
Release Rate Interval (L/s) = 5

			Release Rate -->	0	5	10	15	20	25	30	35	40	45
Duration (min)	Rainfall Intensity (mm/hr)	Peak Flow (L/sec)		Storage Required (m^3)									
0.01	19685.2	36681.0		22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
5	255.6	476.3		142.9	141.4	139.9	138.4	136.9	135.4	133.9	132.4	130.9	129.4
10	157.4	293.4		176.0	173.0	170.0	167.0	164.0	161.0	158.0	155.0	152.0	149.0
15	118.6	221.0		198.9	194.4	189.9	185.4	180.9	176.4	171.9	167.4	162.9	158.4
20	97.0	180.7		216.9	210.9	204.9	198.9	192.9	186.9	180.9	174.9	168.9	162.9
25	83.0	154.6		231.9	224.4	216.9	209.4	201.9	194.4	186.9	179.4	171.9	164.4
30	73.1	136.1		245.0	236.0	227.0	218.0	209.0	200.0	191.0	182.0	173.0	164.0
35	65.6	122.2		256.7	246.2	235.7	225.2	214.7	204.2	193.7	183.2	172.7	162.2
40	59.7	111.3		267.2	255.2	243.2	231.2	219.2	207.2	195.2	183.2	171.2	159.2
45	55.0	102.5		276.8	263.3	249.8	236.3	222.8	209.3	195.8	182.3	168.8	155.3
50	51.1	95.2		285.7	270.7	255.7	240.7	225.7	210.7	195.7	180.7	165.7	150.7
55	47.8	89.1		294.1	277.6	261.1	244.6	228.1	211.6	195.1	178.6	162.1	145.6
60	45.0	83.9		301.9	283.9	265.9	247.9	229.9	211.9	193.9	175.9	157.9	139.9
65	42.6	79.3		309.2	289.7	270.2	250.7	231.2	211.7	192.2	172.7	153.2	133.7
70	40.4	75.3		316.2	295.2	274.2	253.2	232.2	211.2	190.2	169.2	148.2	127.2
75	38.5	71.7		322.8	300.3	277.8	255.3	232.8	210.3	187.8	165.3	142.8	120.3
80	36.8	68.6		329.2	305.2	281.2	257.2	233.2	209.2	185.2	161.2	137.2	113.2
85	35.3	65.7		335.2	309.7	284.2	258.7	233.2	207.7	182.2	156.7	131.2	105.7
90	33.9	63.2		341.1	314.1	287.1	260.1	233.1	206.1	179.1	152.1	125.1	98.1
95	32.6	60.8		346.6	318.1	289.6	261.1	232.6	204.1	175.6	147.1	118.6	90.1
100	31.5	58.7		352.0	322.0	292.0	262.0	232.0	202.0	172.0	142.0	112.0	82.0
Maximum Storage Rate =				352.0	322.0	292.0	262.0	233.2	211.9	195.8	183.2	173.0	164.4

APPENDIX A: STORMWATER MANAGEMENT MODEL

OUTLET CONTROL STRUCTURE DESIGN SHEET - CA1

Client: Edward Holmes
Job No.: 200633
Location: 1026 County Road 2, Cardinal
Date: December 10, 2020

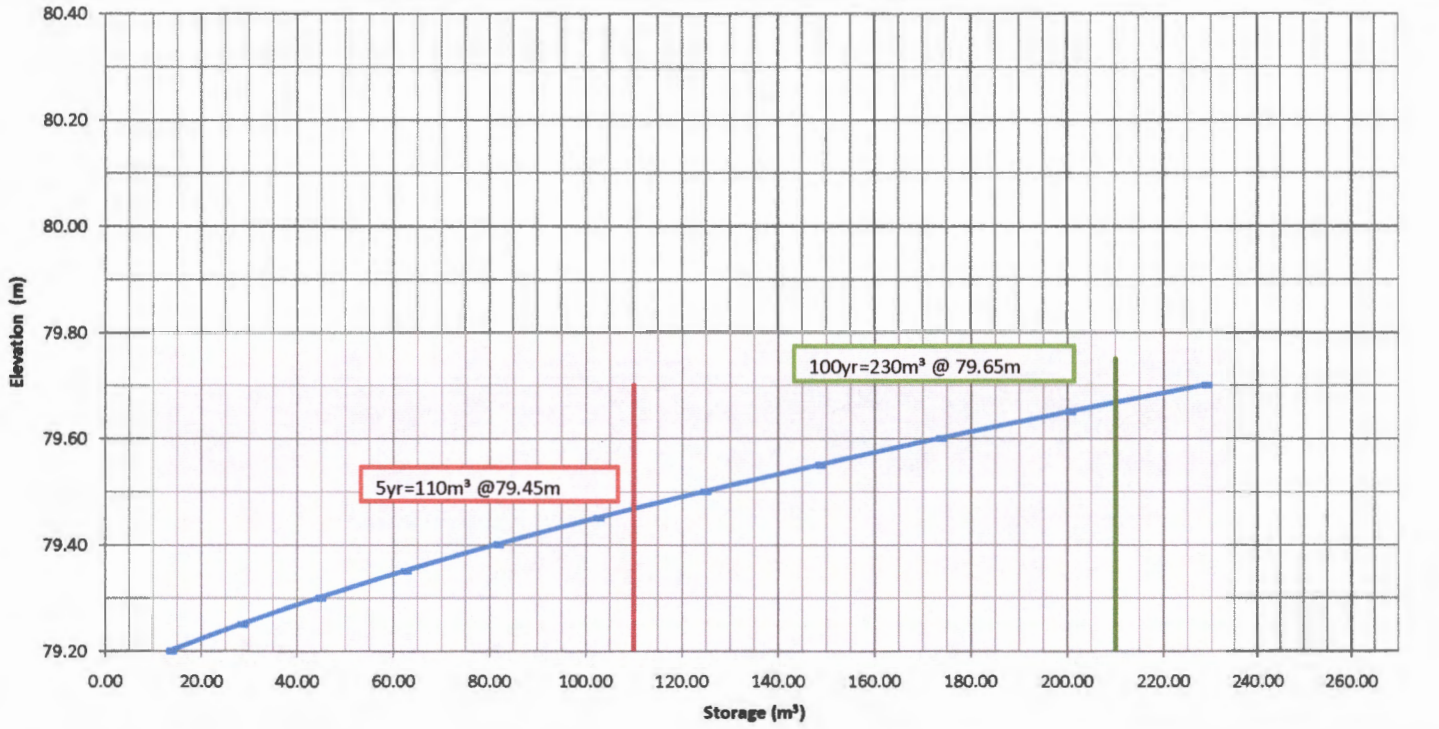
Stage, WSE Elev (m)	Comments	Layer Thickness (m)	Cumulative depth	Top Layer Area (m^2)	Bottom Layer Area (m^2)	Layer Volume (m^3)	Cummulative Storage Volume (m^3)	Outflow Weir(L/sec)	Outflow filtration (L/sec)	Total Outflow (L/sec)	Draw Down Incremental (hrs)	Draw Down Cummulative (hrs)
79.90												
79.80								99.0				
79.75	Top of Quality Storage	0.050	0.55			28.2	228.20	0.0	30.250	30.2	0.26	30.25
79.70		0.050	0.50			26.8	200.00	0.0	25.000	25.0	0.30	25.07
79.65		0.050	0.45			25.2	173.20	0.0	20.250	20.2	0.35	24.77
79.60		0.050	0.40			23.8	148.00	0.0	16.000	16.0	0.41	24.43
79.55		0.050	0.35			22.2	124.20	0.0	12.250	12.2	0.50	24.01
79.50		0.050	0.30			20.8	102.00	0.0	9.000	9.0	0.64	23.51
79.45		0.050	0.25			19.2	81.20	0.0	6.250	6.2	0.85	22.87
79.40		0.050	0.20			17.8	62.00	0.0	4.000	4.0	1.24	22.01
79.35		0.050	0.15			16.2	44.20	0.0	2.250	2.2	2.00	20.78
79.30		0.050	0.10			14.8	28.00	0.0	1.000	1.0	4.11	18.78
79.25		0.050	0.05			13.2	13.20	0.0	0.250	0.2	14.67	14.67
79.20	Bottom of Storage	0.000	0.0			0.0	0.00	0.0	0.000	0.0	0.00	0.00

Client: Edward Holmes
Job No.: 200633
Location: 1026 County Road 2, Cardinal
Date: December 10, 2020

APPENDIX A: STORMWATER MANAGEMENT MODEL

Stage-Storage Curve

CA1

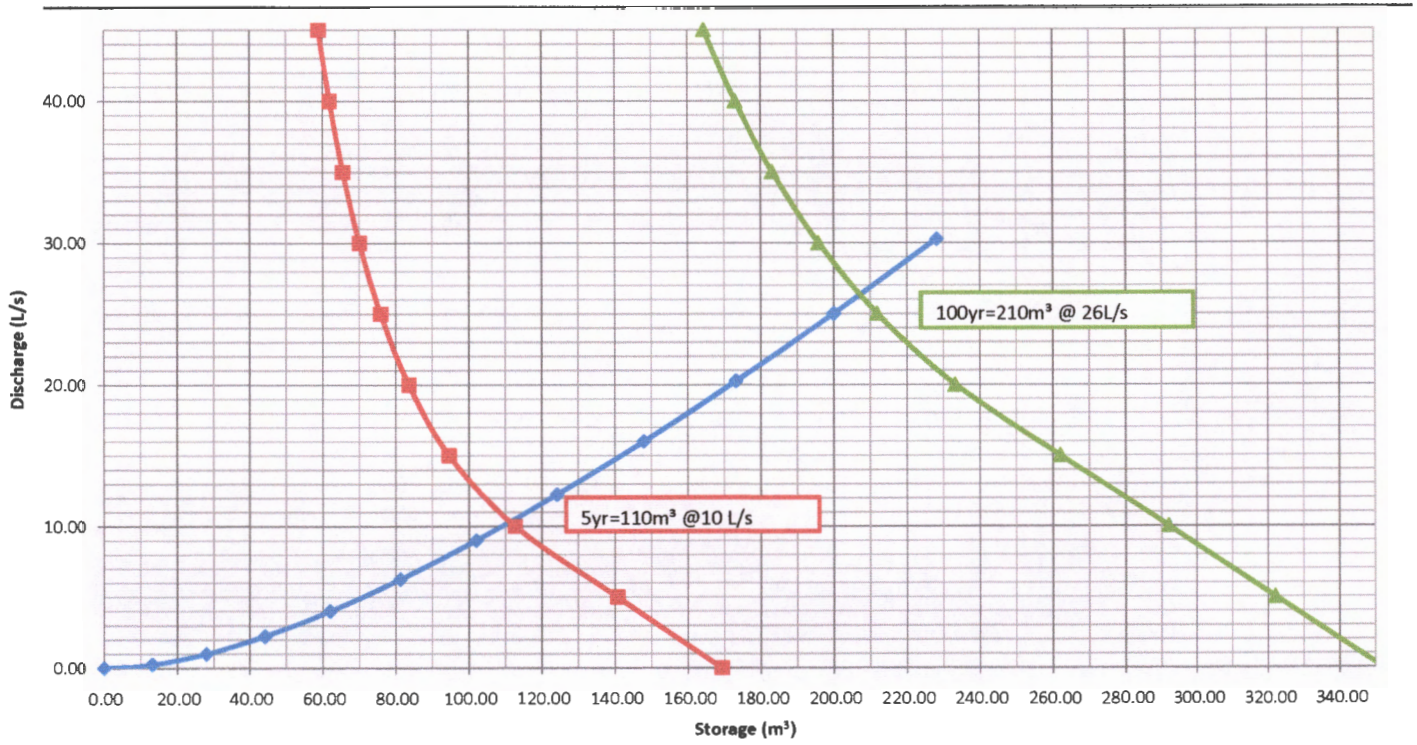


Client: Edward Holmes
Job No.: 200633
Location: 1026 County Road 2, Cardinal
Date: December 10, 2020

APPENDIX A: STORMWATER MANAGEMENT MODEL

Storage-Discharge Curve

CA1



Appendix B: Product Information

- Geotextile

Terrafix 270R - Geotextile

Function: Filtration & Drainage.

Terrafix 270R is a needle-punched nonwoven geotextile made of 100% virgin polypropylene staple fibers, which are formed into a random network for dimensional stability. Terrafix 270R resists ultraviolet deterioration, rotting, biological degradation, naturally encountered alkalis and acids. Polypropylene is stable within the pH range of 2-13.

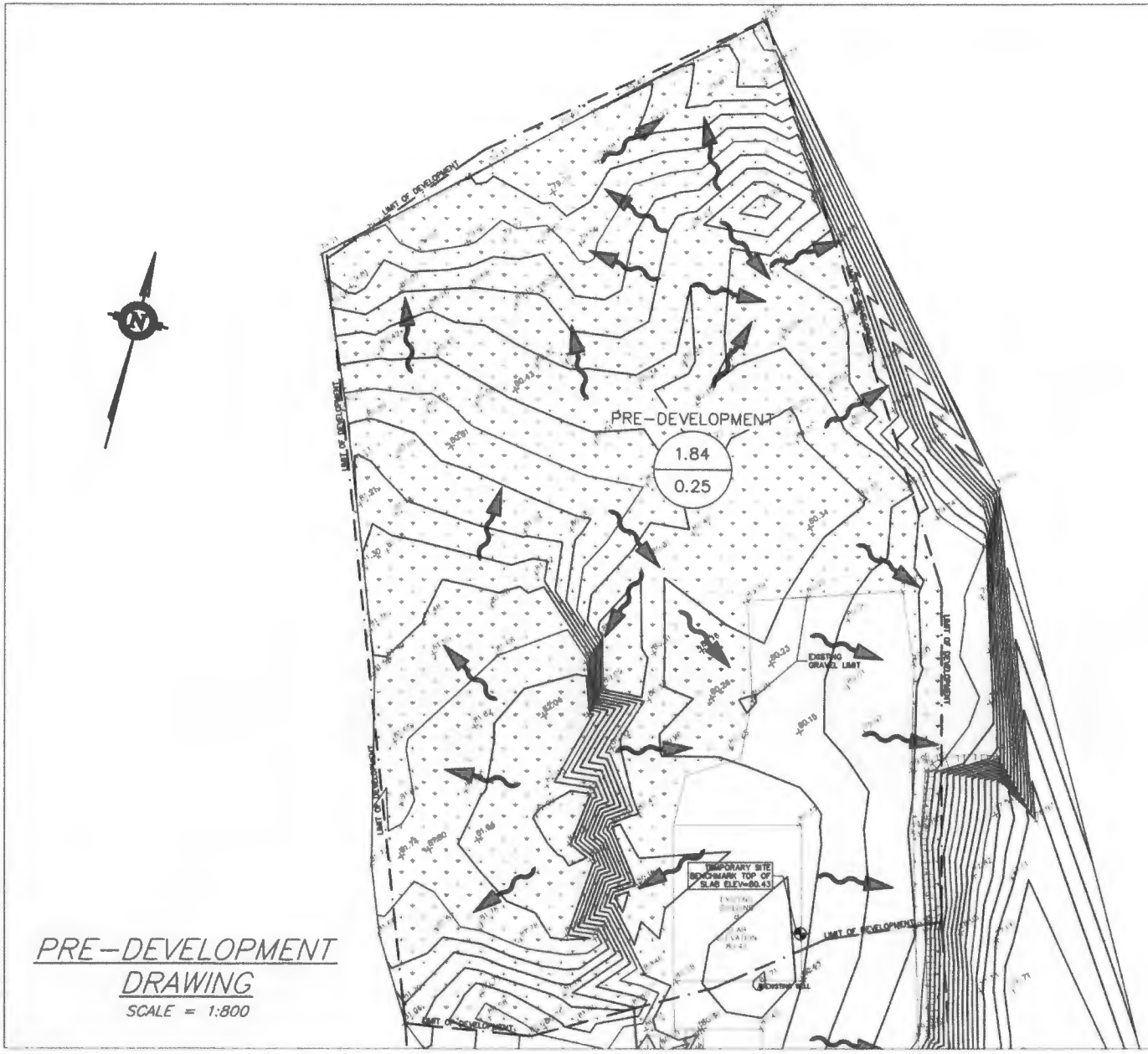
Types of applications for 270R are: Subdrains, French Drains, Foundation Drains, Trench Drains, Blanket Drains.

270R provides good lateral drainage and is suitable for a wide spectrum of soil permeabilities.

Property	ASTM Test Method	Value Metric Units
Typical Geotextile Properties		
• Weight (Typical)	D 5261	140 g / m^2 (4.0 oz/sqyd)
• Grab Tensile Strength	D 4632	445 N
• Grab Elongation	D 4632	50%
• Tear Resistance	D 4533	200 N
• Puncture CBR	D 6241	1320 N
• Permittivity	D 4491	2.00 sec^{-1}
• Water Flow	D 4491	6095 l/min/m^2
• Apparent Opening Size	D 4751	0.300 mm
• U.V. Stability	D 4355	70% @ 500hrs

Appendix C: Drawings

- 200633– PRE – Pre-Development Water Flows
- 200633 – POST – Post-Development Water Flows
- 200633 – SP – Site Plan
- 200633 – GR – Grading and Landscaping Plan
- 200633 – POND– Stormwater Pond Details
- 200633 – SEC – Erosion and Sediment Control Plan

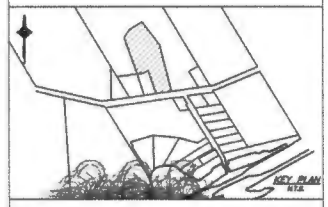


PRE-DEVELOPMENT DRAWING

SCALE = 1:800

DRAWING NUMBER: 200633-PRE

PRE-DEVELOPMENT DRAWING



LEGEND (STORM WATER MANAGEMENT)

- CONTROLLED — CATCHMENT LABEL
- 0.39 — CATCHMENT AREA (HECTARES)
- 0.34 — RUNOFF COEFFICIENT (5 YEAR)
- CATCHMENT AREA BOUNDARY
- PROPERTY LINE
- TOP OF SLOPE
- CONTROLLED AREA
- UNCONTROLLED AREA
- PRE-DEVELOPMENT DRAINAGE PATTERN

REV	BY	DATE	DESCRIPTION
0	AVB	2020/12/18	ISSUED FOR SPC

Kollaard Associates Engineers
P.O. BOX 189, 210 PRESCOTT ST
KEMPTVILLE, ONTARIO
K0G 1J0 FAX (613) 258-0475
http://www.kollaard.ca
(613) 860-0923
info@kollaard.ca

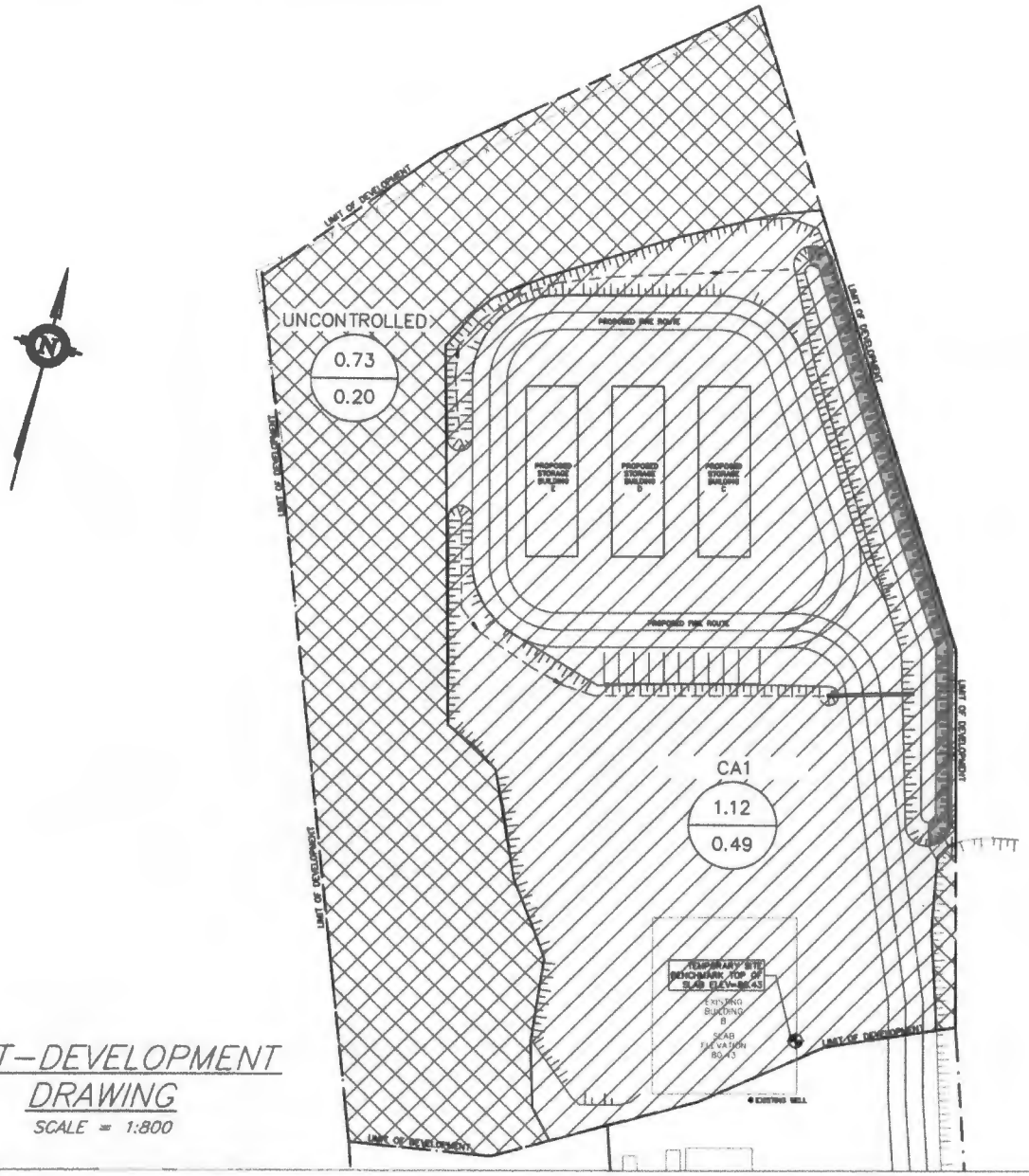
CLIENT: EDDIE HOLMES

PROJECT: PROPOSED MINI-STORAGE

LOCATION: 1026 COUNTY ROAD 2 CARDINAL ONTARIO

DESIGNED BY:	DATE:
AVB	DEC 14, 2020
DRAWN BY: AVB	SCALE: 1:800

KOLLAARD FILE NUMBER: 200633

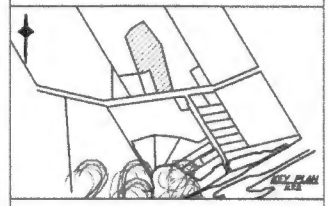


POST-DEVELOPMENT DRAWING

SCALE = 1:800

DRAWING NUMBER:
200633-POST

POST-DEVELOPMENT DRAWING



LEGEND (STORM WATER MANAGEMENT)

CONTROLLED	CATCHMENT LABEL
0.39 / 0.34	CATCHMENT AREA (HECTARES) / RUNOFF COEFFICIENT (5 YEAR)
	CATCHMENT AREA BOUNDARY
	PROPERTY LINE
	TOP OF SLOPE
	CONTROLLED AREA
	UNCONTROLLED AREA
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CLIENT:
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200633

SCHEDULE "C"
ADDITIONAL REQUIREMENTS

1. Access Facilities and Roads

The site shall be accessed as per the site plan forming Exhibit 1 of Schedule "B". No additional entranceways shall be established without the consent of the Roads Superintendent of the United Counties of Leeds and Grenville.

The road allowance from the centre of County Road 2 shall be 15.25m. Confirmation that this allowance exists by letter from a registered surveyor to the United Counties of Leeds and Grenville shall be provided prior to the issuance of a building permit. Should the allowance not meet the desired right-of-way, an appropriate dedication shall be provided to the United Counties of Leeds and Grenville prior to the issuance of a building permit.

Parking and loading on site shall be in accordance with the site plan forming Exhibit 1 of Schedule "B".

2. Snow Removal

Snow removal is the responsibility of the owner.

3. Stormwater, Sediment & Erosion Control

Drainage, stormwater, sediment and erosion control shall be managed as per Schedule "B" to this agreement.

4. Lighting

Parking lots and access driveways on the owner's land are to be illuminated to the requirements of the Chief Building Official.

5. Refuse Storage and Disposal

A refuse storage shall be provided by the owner. The owner shall be responsible for the disposal of refuse from his property.

6. Location of Building Structures and Facilities

Building structures and facilities shall be located as per Site Plan forming Exhibit 1 of Schedule "B" to this Agreement.

If open storage is present on the site, appropriate screening shall be in place.

ACKNOWLEDGEMENT AND DIRECTION

TO: Samantha Berry
(Insert lawyer's name)

AND TO: AULT & AULT
(Insert firm name)

RE: SITE PLAN CONTROL AGREEMENT - PIN 68153-0072 ("the transaction")
(Insert brief description of transaction)

This will confirm that:

- I/We have reviewed the information set out in this Acknowledgement and Direction and in the documents described below (the "Documents"), and that this information is accurate;
- You, your agent or employee are authorized and directed to sign, deliver, and/or register electronically, on my/our behalf the Documents in the form attached.
- You are hereby authorized and directed to enter into an escrow closing arrangement substantially in the form attached hereto being a copy of the version of the Document Registration Agreement, which appears on the website of the Law Society of Ontario as the date of the Agreement of Purchase and sale herein. I/We hereby acknowledge the said Agreement has been reviewed by me/us and that I/We shall be bound by its terms;
- The effect of the Documents has been fully explained to me/us, and I/we understand that I/we are parties to and bound by the terms and provisions of the Documents to the same extent as if I/we had signed them; and
- I/we are in fact the parties named in the Documents and I/we have not misrepresented our identities to you.
- I,_____, am the spouse of_____, the (Transferor/Chargor) , and hereby consent to the transaction described in the Acknowledgment and Direction. I authorize you to indicate my consent on all the Documents for which it is required.

DESCRIPTION OF ELECTRONIC DOCUMENTS

The Document(s) described in the Acknowledgement and Direction are the document(s) selected below which are attached hereto as "Document in Preparation" and are:

☐ A Transfer of the land described above.

☐ A Charge of the land described above.

☐ Other documents set out in Schedule "B" attached hereto.

Dated at _____ **, this** _____ **day of** _____ **, 20___ .**

WITNESS

(As to all signatures, if required)

_____

THE CORPORATION OF THE TOWNSHIP OF EDWARDSBURGH/CARDINAL

PATRICK SAYEAU - MAYOR

DAVID GRANT - CAO

WE HAVE AUTHORIZATION TO BIND THE CORPORATION

Properties

PIN	68153 - 0072 LT
Description	PT LT 10-11 CON 1 EDWARDSBURGH PT 1, 15R5684, PT 6, 15R127; EDWARDSBURGH/CARDINAL
Address	1026 COUNTY RD 2 CARDINAL

Consideration

Consideration $0.00

Applicant(s)

The notice is based on or affects a valid and existing estate, right, interest or equity in land

Name THE CORPORATION OF THE TOWNSHIP OF EDWARDSBURGH/CARDINAL

Acting as a company

Address for Service

This document is not authorized under Power of Attorney by this party.

This document is being authorized by a municipal corporation Patrick Sayeau, Mayor and David Grant, CAO.

Statements

This notice is pursuant to Section 71 of the Land Titles Act.

This notice is for an indeterminate period

Schedule: See Schedules

File Number

Applicant Client File Number : 1369-372