



Executive Committee Hearing
S. 28 (12) of the CA Act

Application # : RV5-44/19

Date rec'd.: July 30, 2019

**Owner: Barrhaven Conservancy
Development Corporation**

EXHIBIT #1 Application

Received July 30, 2019

- JFSA Response to RVCA review rcvd Sept 17, 2019
- WND Response to RVCA review rcvd Sept 17, 2019
- GHD technical Review of the JFSA Hydrodynamic Impact Assessment
- Revised report and Grading plans rcvd October 23, 2019



Box 599, 3889 Rideau Valley Drive
Manotick, Ontario K4M 1A5
613-692-3571
www.rvca.ca

Application/File #:

Prior to application submission, please contact the RVCA for pre-consultation or visit www.rvca.ca

Official Use Only Date Received Stamp	Related Files <input type="text"/> <input type="text"/>	Fee <input type="text"/>
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Application for "Development, Interference with Wetlands and Alterations to Shorelines and Watercourses" Ont. Reg. 174/06

Pursuant to Section 28 of the *Conservation Authorities Act* and Ontario Regulation 97/04

The Rideau Valley Conservation Authority will consider your application based on the information you provide below. Any false or misleading statement made on this application will render null and void any permission granted. Complete all relevant sections, date, sign and return the application along with applicable scale drawings and other documents necessary (refer to minimum guideline requirements) as well as application fee "Schedule B."

Contact Information (please print clearly)			
Property Owner's Name(s): Barrhaven Conservancy Development Corporation (BCDC)			
Mailing Address (Street, P.O. Box)	City	Postal Code	
2934 Baseline Road - #302	Ottawa	K2H 1B2	
Telephone: Home	Work	Mobile	
E-mail: frank.cairo@caivan.com			
Agent's Name: Stephen Pichette			
<i>* Property owner's letter of authorization required</i>			
Mailing address (Street, P.O. Box)	City	Postal Code	
120 Iber Road, Suite 103	Stittsville	K2S 1E9	
Telephone: Home	Work	Mobile	
E-mail: spichette@dse.ca			

Location of Proposed Works			
Property Assessment Roll Number (From Property Tax Notice, required): PIN 04595(2405)(0059)(0023)(0021)(1742)(0021)			
Municipal Street Address: 3285/3305/3288/ Borrisokane Road; 4305/4345/4375/ McKenna Casey Dr			
Municipality	Former Municipality	Watercourse/Drain	
City of Ottawa	Nepean	Jock River	
Lot	Concession	Registered Plan Number	Sub-lot
13/14	3	See attached plans.	
Culvert Identification Number			

EXHIBIT #1 Application Form

Correspondence from all parties.

Response to RVCA Technical Items received November 5, 2019

Description of Works (please check each that apply)

<input checked="" type="checkbox"/> Placement of fill, site alteration, changes in land elevation	<input type="checkbox"/> Construction of a structure (building, septic system, pools)
<input type="checkbox"/> Pond construction, cleanout and/or repair	<input type="checkbox"/> Watercourse crossing (culvert or bridge)
<input type="checkbox"/> Dam re-construction/repair	<input type="checkbox"/> Bank protection
<input type="checkbox"/> Dredging	<input type="checkbox"/> Alteration to a watercourse or shoreline
<input type="checkbox"/> Drainage works and ditching	<input type="checkbox"/> Other
<input type="checkbox"/> Interference with a wetland	

What is the purpose of the work? _____

Proposed fill placement within the floodplain area depicted in the attached figure relevant to the municipal addresses summarized in this application. _____

Proposed Starting Date: August 2019 Completion Date: August 2020

Existing use of land: Agricultural Proposed use of land: Future Subdivision development
(i.e., residential, commercial, vacant) Details (e.g. Permit Number, Application Number)

Previous RVCA application on this property? yes no RV5-17/18

Planning approval required? (e.g. site plan approval or re-zoning, minor variance) yes no _____

Applications made to other agencies? (e.g., MNRF, MOECC, Parks Canada, DFO) yes no _____

Municipal Building Permit required? yes no _____

Septic application/permits required? yes no _____

Is fill remaining on site? (if the answer is "no" you must specify an address where the fill is to be removed to:) yes no address _____

Submission Requirements and Terms

Digital transmission of PDFs are: USB/flash drive, CD or email (development@rvca.ca)

- Applications must be submitted digitally with one hard copy to scale.
- Permits or Approvals granted by the Rideau Valley Conservation Authority are non-transferable.
- Permits, approvals, etc. may be required from other agencies prior to undertaking the proposed work. Rideau Valley Conservation Authority permission, if granted for the proposed work, does not exempt the owner/agent from complying with any or all other laws, statutes ordinances, directives, regulations, approvals, etc. that may affect the property or the use of same.
- Fees paid are for application processing only; the RVCA reserves the right to refuse permission based on policy provisions and the applicant's right to a hearing under Section 28(12) of the Act.
- Section 28 (20) Conservation Authorities Act— An officer appointed by the RVCA may enter on private property, other than a dwelling or building, if the entry is for the purpose of considering a request related to the property for permission that is required by a regulation. By signing this form consent is being granted.
- Cancellation fee may apply to applications that have been accepted.

*** I/we the undersigned hereby certify to the best of my/our knowledge and belief that all of the above-noted, attached and/or supporting documentation information is correct and true. I/we further solemnly declare that I/we have read and fully understand the contents of this application and specifically the terms and conditions, and the declaration which is written below.**

By signing this application, consent is given to the Rideau Valley Conservation Authority, its employees and authorized representatives to access the property for the purposes of obtaining information and monitoring any approved works pursuant to Section 28(20) of the Act.

Owner's name: Frank Cairo(BCDC) Date: 2019 / 07 / 24
please print clearly signature year month day

Authorized Agent: Stephen Pichette (DSEL)
please print clearly signature

Letter of Authorization from owner must be attached if agent is signing off on all works

Notice of Collection

Pursuant to the municipal Freedom of Information and Protection of Privacy Act, the personal information contained on this form is collected under the Authority of the Conservation Authorities Act, R.S.O. 1990, Chapter C. 27, and O Regulation 174/06 RVCA Regulation of Development, Interference with Wetlands and Alteration to Shorelines and Watercourses. This information is used to access applications and where approved issue permits. Information on this form will be disclosed to government and municipal agencies for review and comments and may be disclosed to members of the public through the Freedom of Information process.

EXHIBIT #1 Application Form

- The application submission includes the:
 - “Barrhaven Conservancy Cut/Fill Hydraulic Impact Assessment” prepared by JFSA, July 2019, revised October 2019
 - Grading plans prepared by DSEL – Numbered 1-5, dated October 23, 2019
 - Natural Heritage Impacts and Opportunities Associates with a Proposed Cut and Fill at Barrhaven Conservancy, by Kilgour * Associates, July 23, 2019,
 - “Fluvial Geomorphological Memo” July 24, 2019



EXHIBIT #1 Application Summary

- Placement of 407,000 cubic metres of fill in the flood plain to bring the majority of the property above the corresponding 1:100 year flood plain.
- Cut or Removal of 116,000 cubic metres of fill in the floodplain to alleviate any hydraulic issues.



EXHIBIT #2 Location Plan

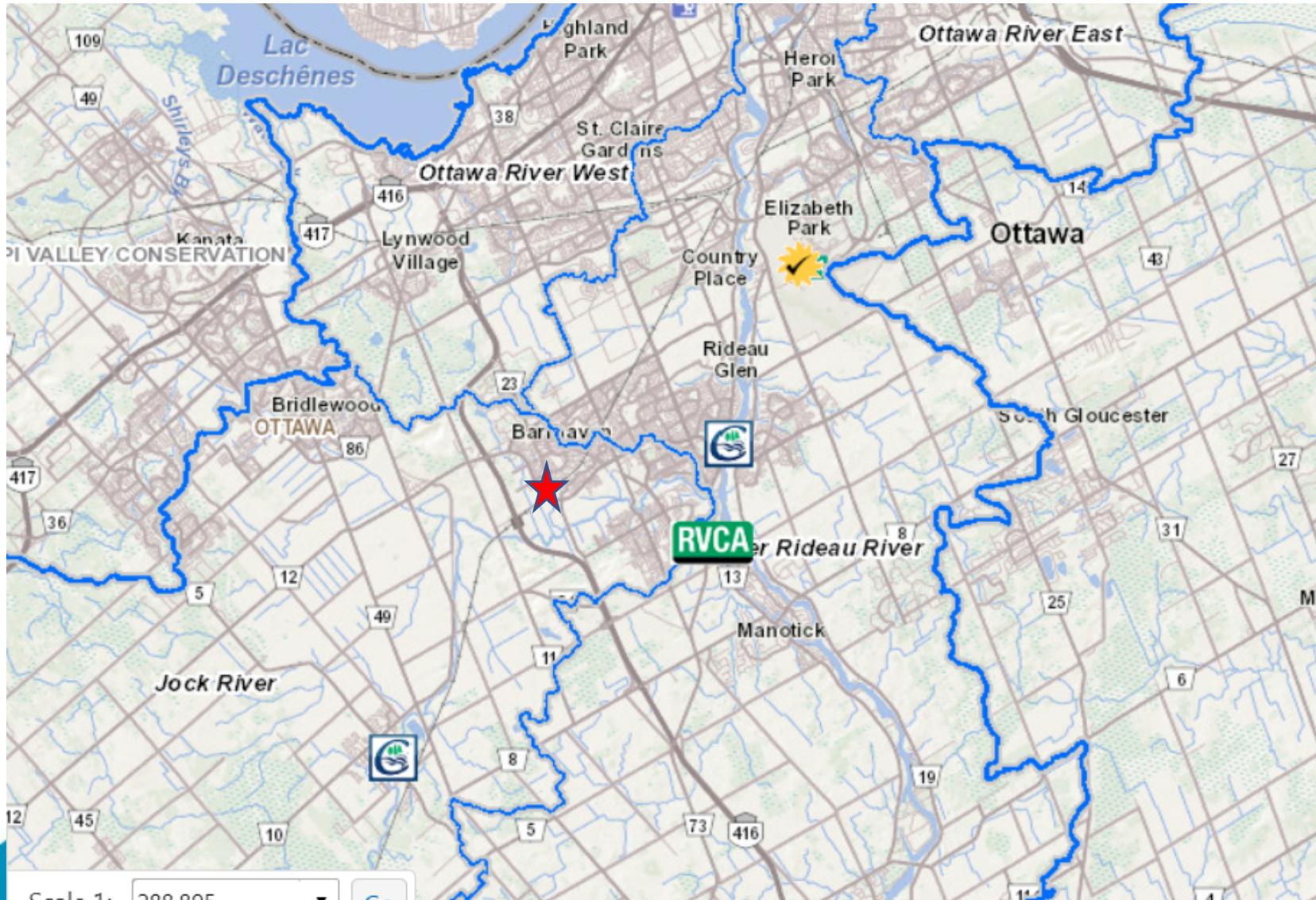


Exhibit #3 Location Plan

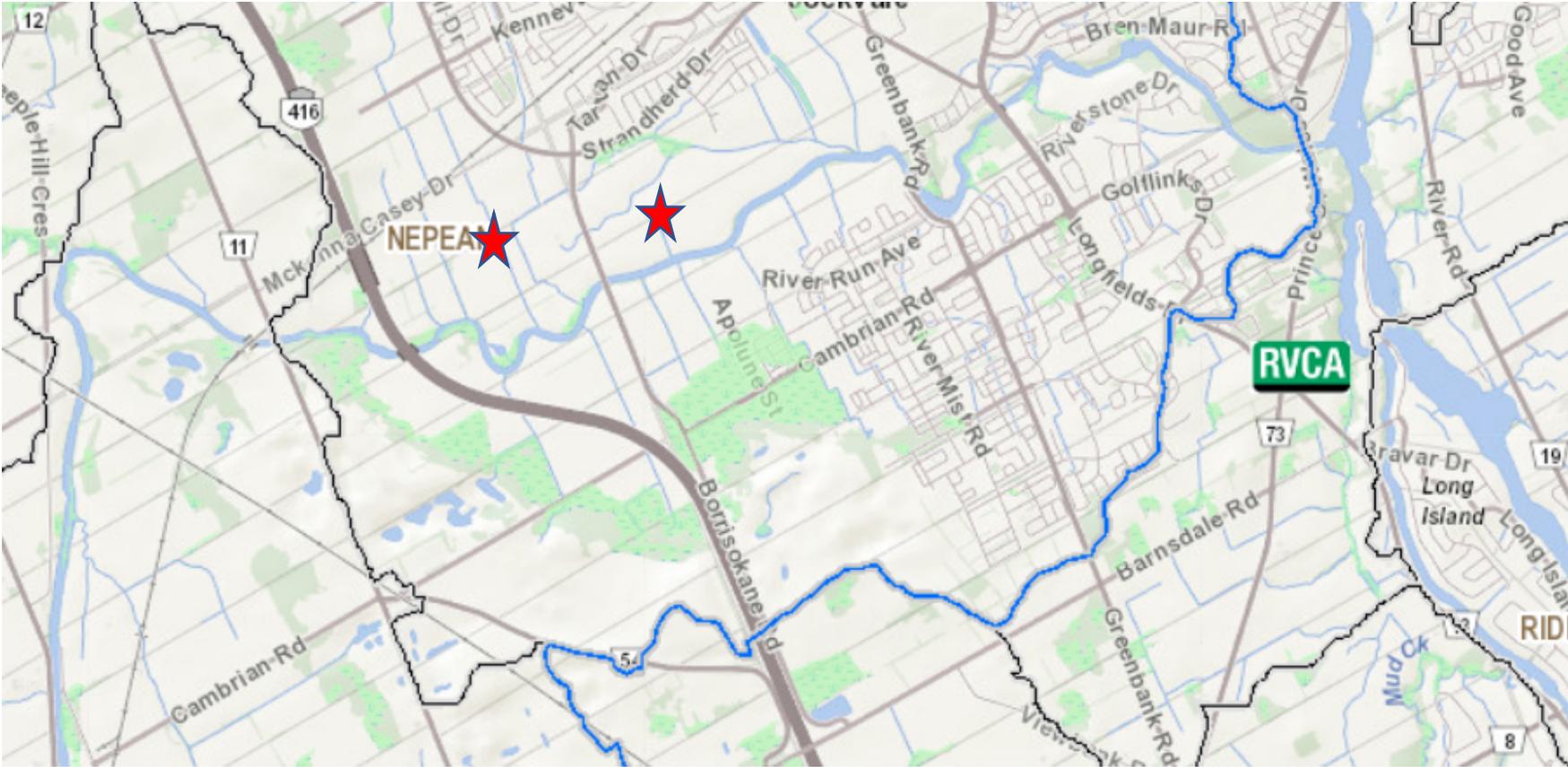


EXHIBIT #4

Site Plan



EXHIBIT #5 Regulation Limit & Subject Property

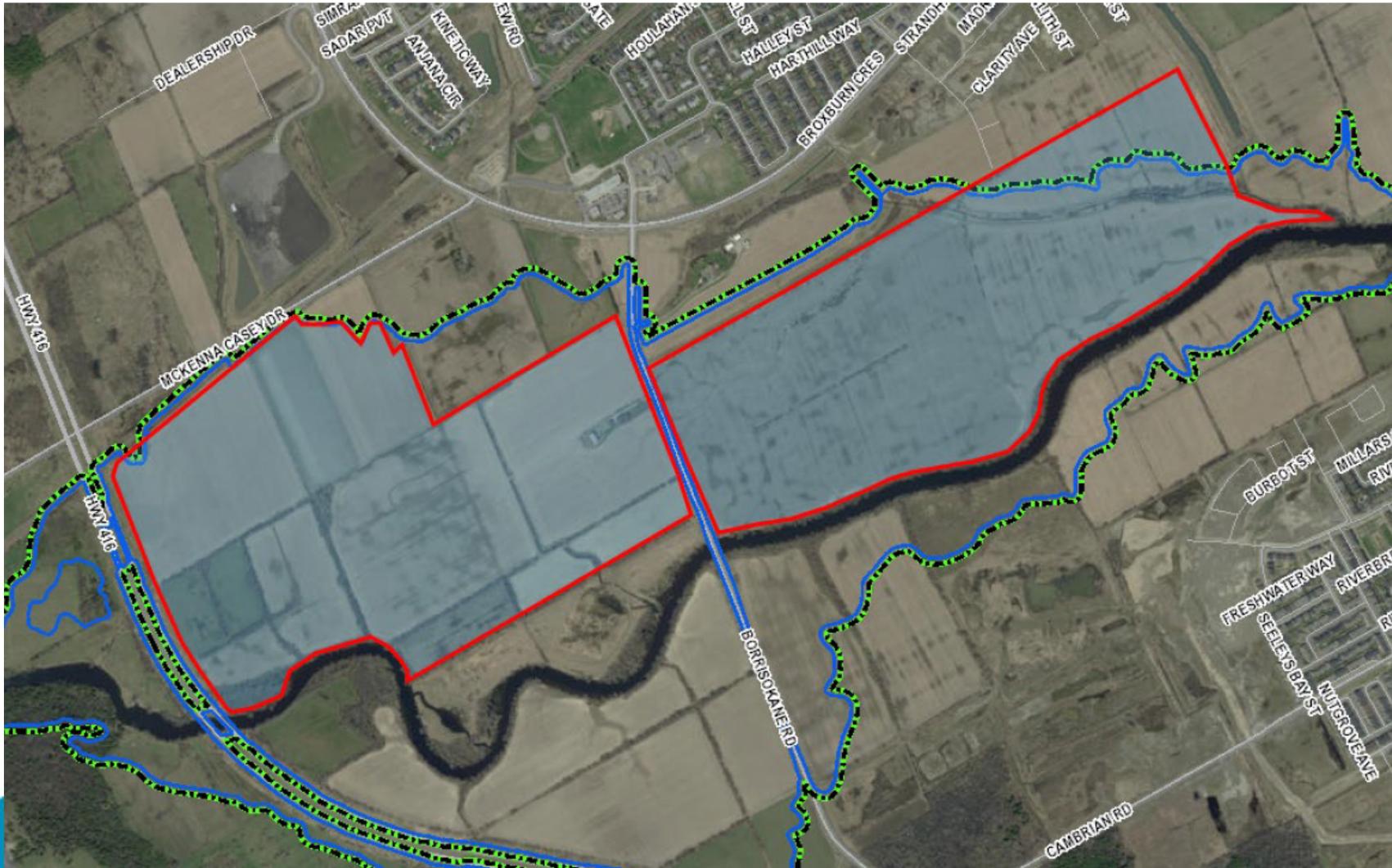


EXHIBIT #7 Proposed Cut/Fill Offsets

Table 2: Changes in Floodplain Storage Volume

Action	Location	Area (ha)	Change in Volume* (1000 m ³)
Fill	BCDC East	14.23	-133
	BCDC West-East	14.17	-90
	BCDC West-Middle	19.73	-105
	BCDC West-West	42.07	-79
Cut	West	7.81	+17
	East	18.96	+99
Total		116.98	-291

*Positive values indicate an increase in floodplain storage volume and negative values indicate a reduction in floodplain storage volume

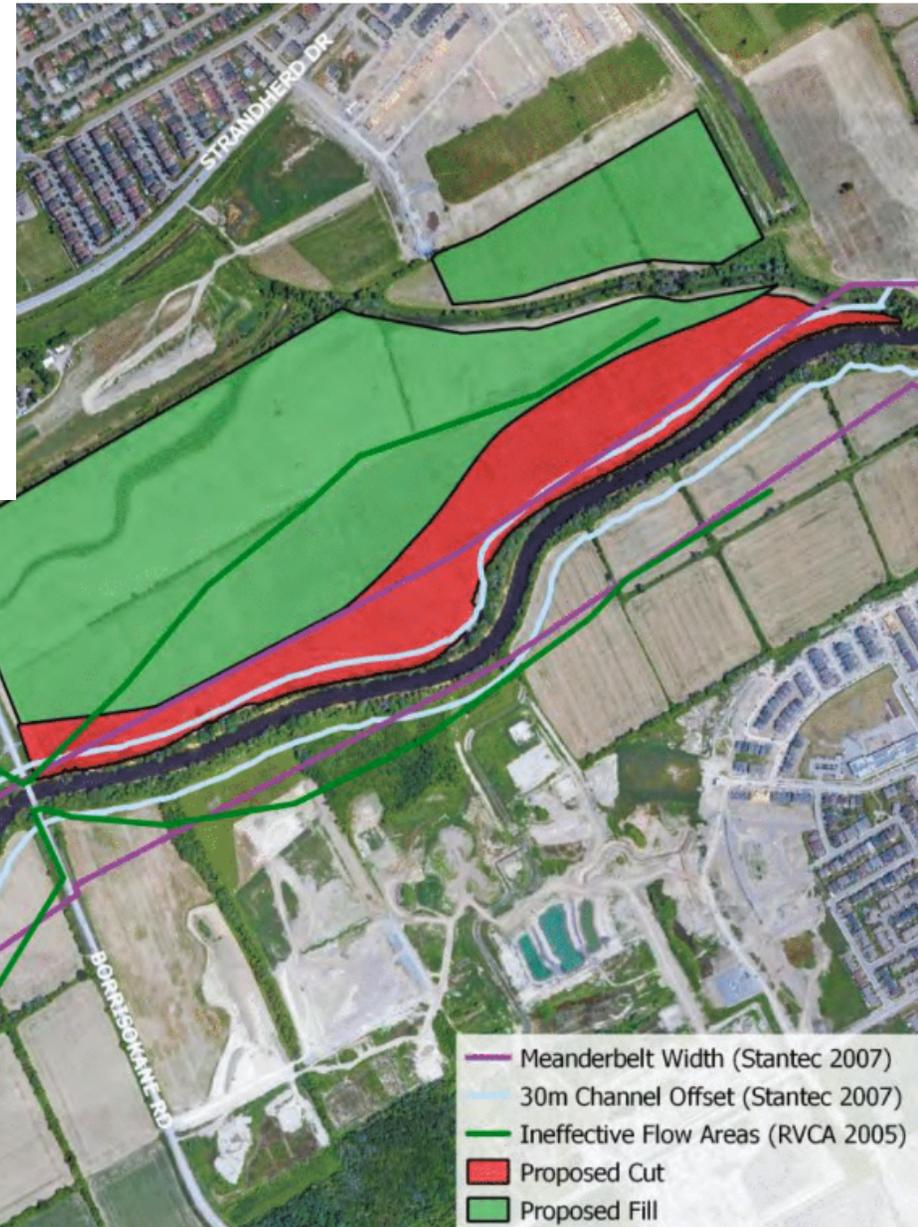


EXHIBIT #8

Definition

Balanced Cut and Fill:

All fill placed at or below the flood elevation balanced with an equal amount of soil material removal within a defined reach of a watercourse



EXHIBIT #9 Hydraulic Impact Assessment

Received October 2019



Ottawa, ON
Paris, ON
Gatineau, QC
Montréal, QC
Québec, QC

BARRHAVEN CONSERVANCY CUT / FILL HYDRAULIC IMPACT ASSESSMENT

October 2019



Prepared For:

Barrhaven Conservancy Development Corporation
2934 Baseline Rd suite 302,
Nepean, ON
K2H 1B2
T 613-518-1864

Prepared By:

J.F. Sabourin and Associates Inc.
52 Springbrook Drive,
Ottawa, ON
K2S 1B9
T 613-836-3884 F 613-836-0332

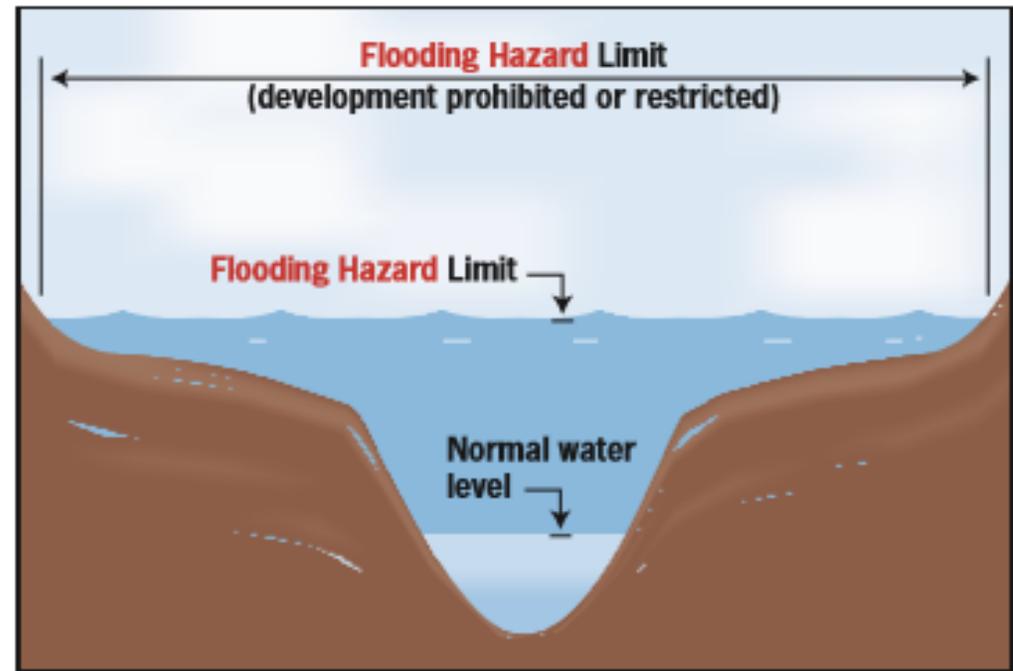
EXHIBIT #10 Floodway Delineation

3.6 Floodway Delineation

For this analysis, the floodway has been assumed to be where the flood depth is greater than 1.0 m and/or the flood velocity is greater than 1.0 m/s. These areas have been calculated by merging the depth and velocity maps provided above. The full flood extent has been indicated through transparent black hatching. Figures D.5 and D.6 provides an overview of the floodway around the subject area under both existing 2D and proposed 2D conditions. A comparison between existing and proposed conditions show that the proposed fill does not touch the existing floodway.

EXHIBIT #11 One Zone Administration

- The Jock River is an area of one zone administration. The entire 1:100 year floodplain is considered the flood way. Local Policy indicates New Development including site alteration is not permitted.



(NOT TO SCALE)

Figure B-2 - One Zone Floodplain Concept

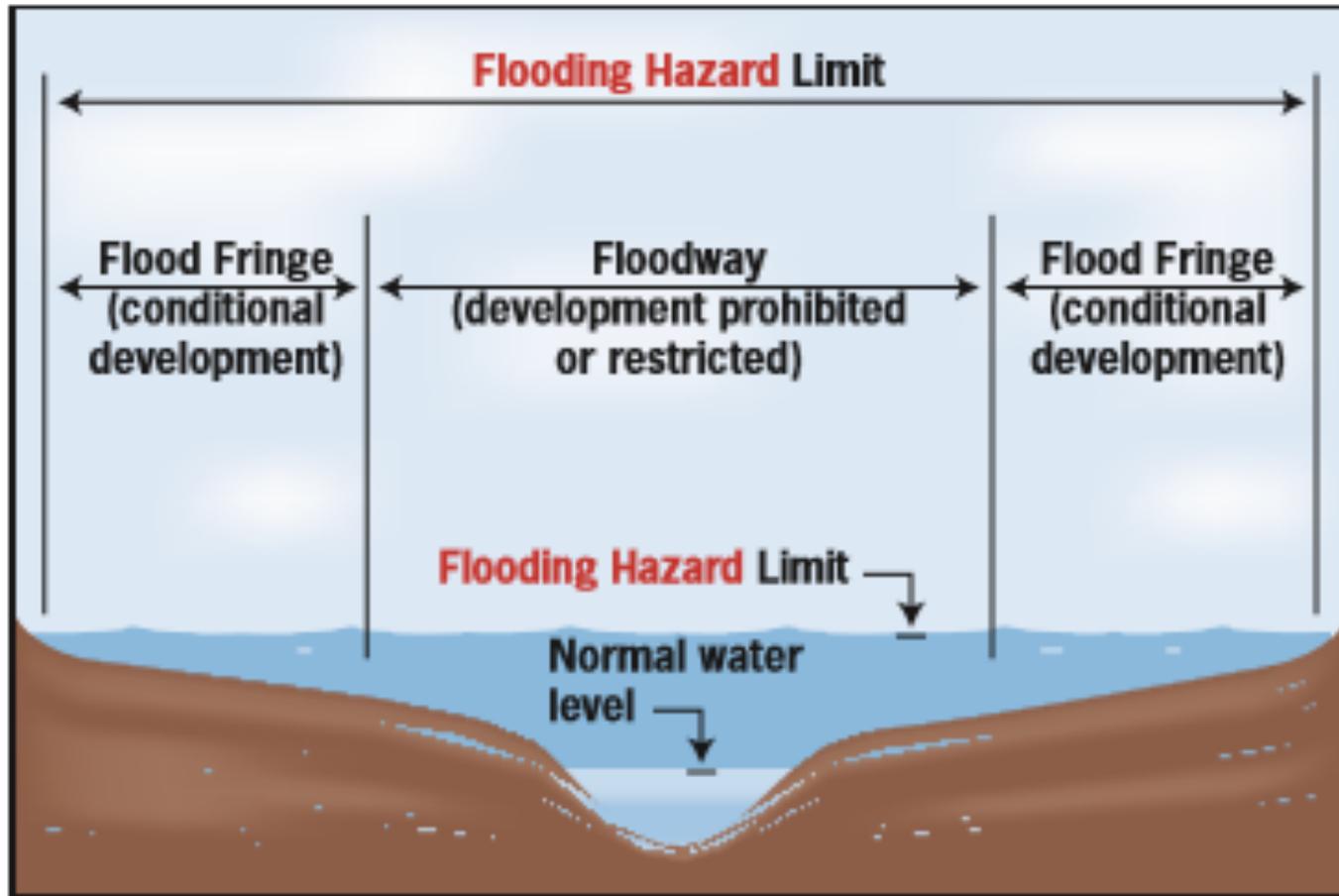
EXHIBIT #12

Proposed Cut/Fill Volume

3.10 Proposed Cut/Fill Volume

Table 2 provides a summary of the floodplain storage gained and lost through the respective proposed cut/fill. Note as this analysis relies on the two-zone concept (floodway/flood fringe), a balanced cut/fill has not been proposed nor required for this analysis. As indicated by the 2D hydraulic modelling, a 100 m³ of fill in the flood fringe does not have the same effect on the hydrodynamic of the watercourse as a 100 m³ of cut in the floodway. Accordingly, the analysis was completed using the 2D model, as this modelling approach can account for the impacts of the proposed adjustments based on their location relative to the floodway. This analysis showed that the proposed cut/fill has no impacts upstream and downstream of the subject location, with only minor localized differences near the locations of the proposed adjustments. Irrespective of this, the proposed cut/fill volumes have been provided below as requested by RVCA.

EXHIBIT #13 Two Zone Administration



(NOT TO SCALE)

Figure B-3 - Two Zone Floodway - Floodfringe concept

EXHIBIT #14

Peak Water Levels Table

Table 1: 2D Peak Water Levels at Key Locations along the Jock River
(100 Year Flood – 196m³/s at Moodie Drive)

Location*	XS ID	100 yr. Flow (m ³ /s)	Peak 100 Year Water Levels* (m)		
			(1) Existing Condi tions	(2) Proposed Conditions	Difference (2)-(1)
Confluence with Monahan Drain	10144	196	92.949	92.950	0.001
Railway Crossing	8835	196	92.724	92.725	0.001
Moodie Drive	8660	196	92.534	92.534	0.001
HWY 416	7806	196	92.064	92.066	0.002
Midway HWY 416 & Borrisokane Road	6550	201	91.932	91.908	-0.024
Borrisokane Road	5962	201	91.841	91.814	-0.026
Midway Borrisokane & Greenbank Road	4803	201	91.729	91.714	-0.015
Greenbank Road	3681	205	90.991	90.992	0.001
Jockvale Road	2601	205	88.751	88.748	-0.004
Price of Wales Drive	189	205	81.076	81.075	-0.001
Rideau River	0	205	80.289	80.289	0.000

*Water levels extracted at the center of channel at the intersection of the RVCA 1D model cross-sections and the river centerline.

EXHIBIT #15

Rideau Valley Conservation Authority

Jock River: Barrhaven RVCA Floodplain: >30cm below flood level

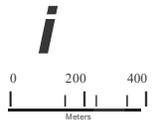
LEGEND

c:::J cuT

DFILL

- Assessment Parcels  <30cm below flood
- level  >30cm below flood level

1:15,000



11/07/2019

UTM Zone 18 NAO 83 Datum

Base-mapping and GIS services provided courtesy of the Rideau Valley Conservation Authority, under License with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2019.

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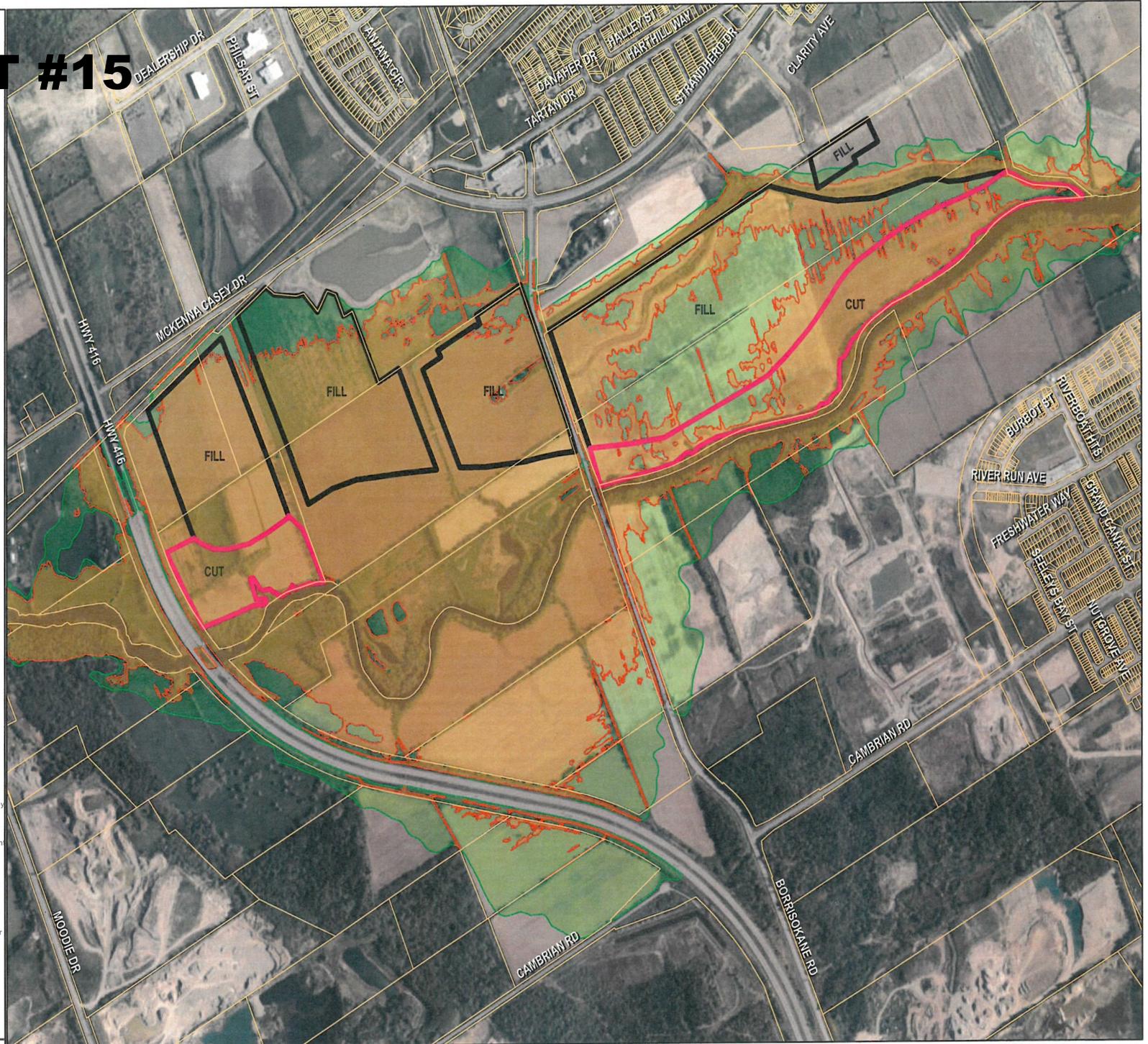


EXHIBIT #16 March 29, 1976



EXHIBIT #17 1999 Air Photography



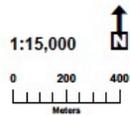
EXHIBIT #18



Jock River: Barrhaven RVCA 1999 Historic Flood

LEGEND

- CUT
- FILL



11/07/2019
UTM Zone 18 NAD 83 Datum

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EXHIBIT #19

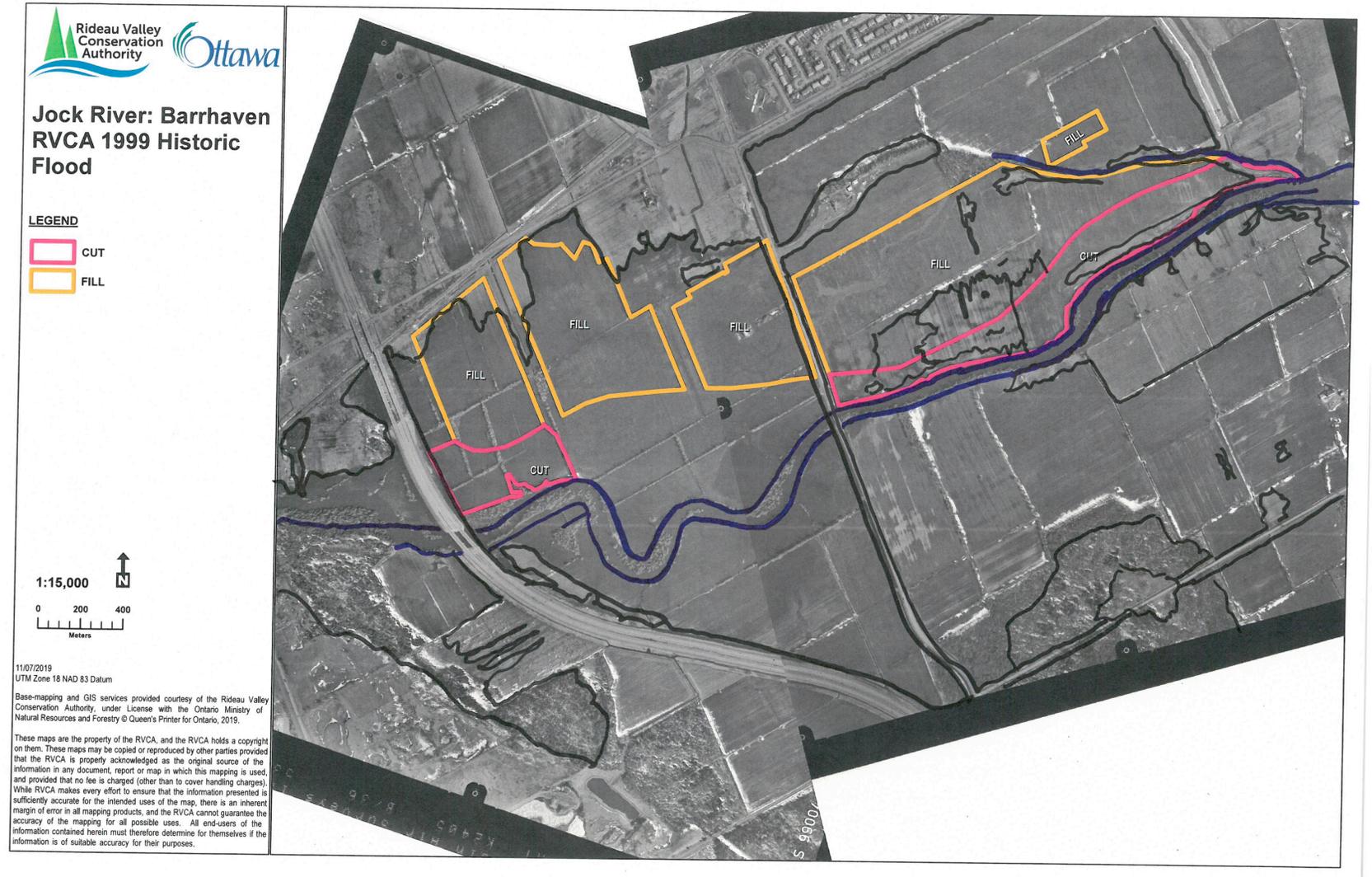


EXHIBIT #20 – March 29, 1976



EXHIBIT #21 April 11, 1999

West side of Cedarview



EXHIBIT #22 April 11, 1999

West side of Cedarview



EXHIBIT #23 April 11, 1999

West side of Cedarview



EXHIBIT #24

Municipal Zoning Map

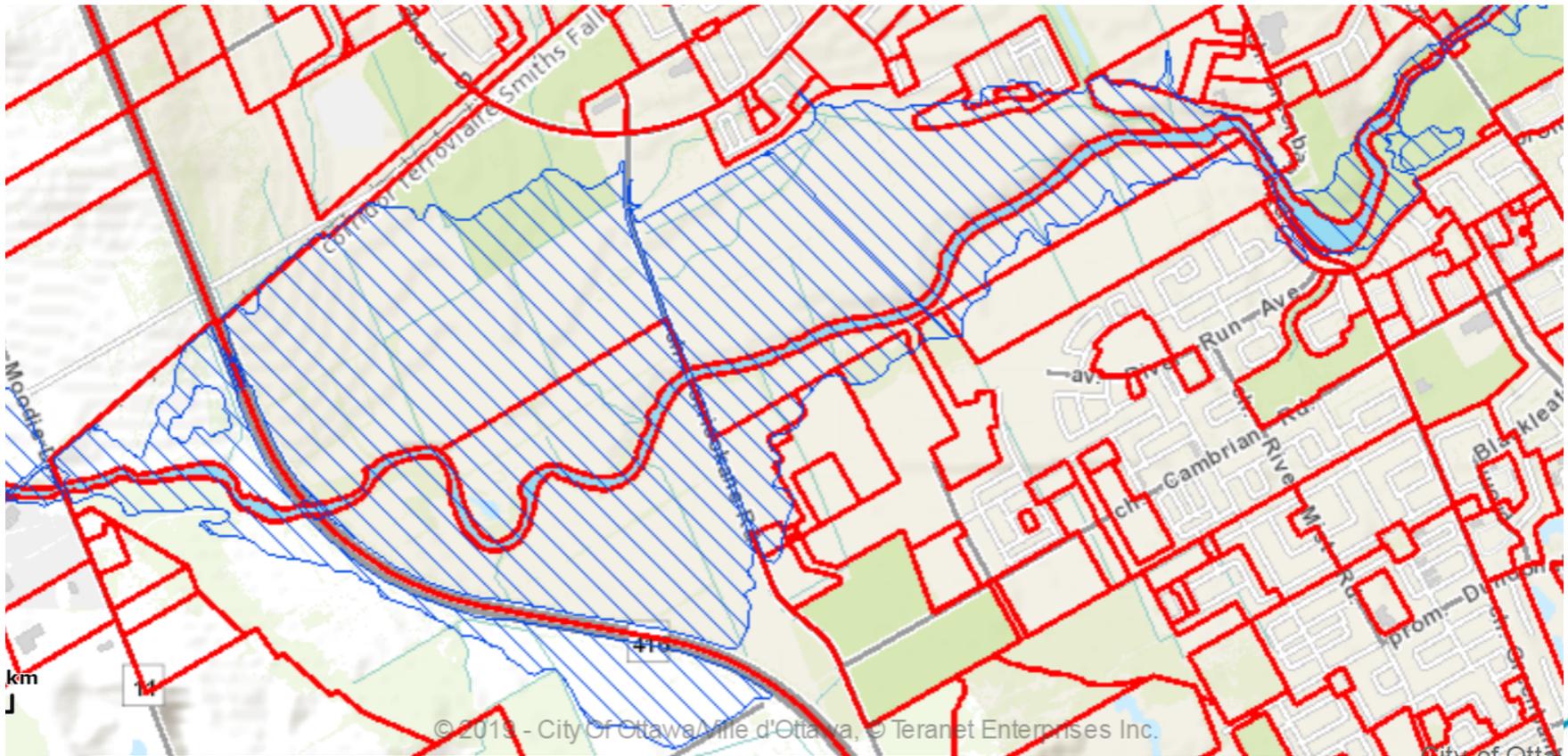




Exhibit #25

Letter from City of Ottawa

Lee-Ann Snedden

Director of Planning Services

Indicating support for
development.

November 7, 2019

BY EMAIL (sommer.casgrain-robertson@rvca.ca)

Members of the RVCA Executive Committee

Rideau Valley Conservation Authority
3889 Rideau Valley Drive
Ottawa, ON K4M 1A5

**Re: November 7, 2019 Hearing – Application Under Ontario Regulation 174/06
Concerning Placement of Fill in Sections of the Jock River Floodplain**

Please accept this letter as confirmation of the City of Ottawa's support for the approval of the above noted application. In accordance with Council direction provided by Official Plan Amendment 212, we wanted to write to reemphasize the importance of completing the Barrhaven community and the facilitation of development north of the Jock River, west of Greenbank and South of Strandherd Drive.

Development in this area constitutes smart planning, supporting City of Ottawa objectives associated with:

1. Efficient use of existing infrastructure;
2. The establishment of an enhanced Jock River corridor;
3. Focusing growth within the existing Urban area;
4. Facilitating the provision of additional housing options and affordability.

We want to reinforce the support Council has expressed for this file, founded on the comprehensive work completed by the applicant and its consulting team, validated by third party peer review. Further, we can confirm that the proposal is consistent with City of Ottawa Official Plan and applicable Provincial Policy and we encourage the RVCA to expeditiously complete the necessary permitting in order for modifications to the Jock River floodplain be completed accordingly.

.../2

EXHIBIT #26

Conservation Authorities Act

- **Right to hearing**
 - (12) Permission required under a regulation made under clause (1) (b) or (c) shall not be refused or granted subject to conditions unless the person requesting the permission has been given the opportunity to require a hearing before the authority or, if the authority so directs, before the authority's executive committee. 1998, c. 18, Sched. I, s. 12.
- 

EXHIBIT #27 O. Reg 174/06

3. (1) The Authority may grant permission for development in or on the areas described in subsection 2 (1) if, in its opinion, **the control of flooding, erosion, dynamic beaches, pollution or the conservation of land** will not be affected by the development. O. Reg. 174/06, s. 3 (1).



EXHIBIT #28 RVCA Policy Considerations

Section 1.1 General Principles

(a) New development must result in no significant impact on expected flood levels or velocities, taking into consideration the direct and cumulative effects of the development on floodplain conveyance capacity and storage capacity.

(b) New development involving capital investment in flood susceptible areas by the public and private sectors must be designed so that structures and their contents are protected against flood damage.

(c) New development must not increase the risks to public safety which are expected to be present during the regulatory flood (...) [The] availability of access to and egress from the structure [must also be taken into consideration].



Section 1.1 General Principles continued...

(d) New development must not, in the opinion of the Authority, have the result of polluting or contributing to the pollution of the abutting watercourse nor will new development be permitted which will adversely affect the Authority's interest in terms of the conservation of land.

(e) Development is to be setback a minimum of 30 metres from the normal high-water mark of a watercourse.

(f) Policies shall be in conformity with and complement the Ontario government's "Provincial Policy Statement" made under the authority of Section 3 of the *Planning Act*.



Section 1.2 Development within a One-Zone Regulatory Floodplain of a River or Stream Valley

1. Development within the 1:100 year floodplain shall not be permitted except as allowed by specific policies elsewhere in this document. This includes:
 - iii) Site grading and filling



Section 2.1 Policies Regarding the Placing of Fill

Exceptions may be considered for the minor removal or placement of fill in the floodway where flood depths in the floodway are shallow, flow velocities are minimal and the proposed development or site alteration is conserved to be minor in nature with no impact in terms of its effect on the control of flooding, pollution, erosion and the conservation of land such that:



I) The site alteration (cut and fill operation) is confined to lands toward the edge of the floodplain with ground elevations are at present no more than 0.3 metres lower than the estimated 1:100 year water surface elevation...

ii) The loss of floodplain storage volume within the 1:100 year floodplain which will result from the placement of fill shall be fully compensated for by a balanced cut to be carried out in close proximity to and concurrent with the placement of fill in accordance with the following tolerances:

- The volume of available floodplain storage capacity within the affected river or stream reach shall not be reduced; and
 - The minimum proposed ground elevation in the cut shall not be lower than the minimum existing ground elevation in the proposed fill area...
 - The proposed site grading must result in no increase in flow velocities in the affected river cross sections under full range of potential flood discharge conditions (1:2 year to 1:100 year return periods)...
- 

Section 2.7 General Provisions

(a) Associated with pollution concerns only clean fill may be utilized

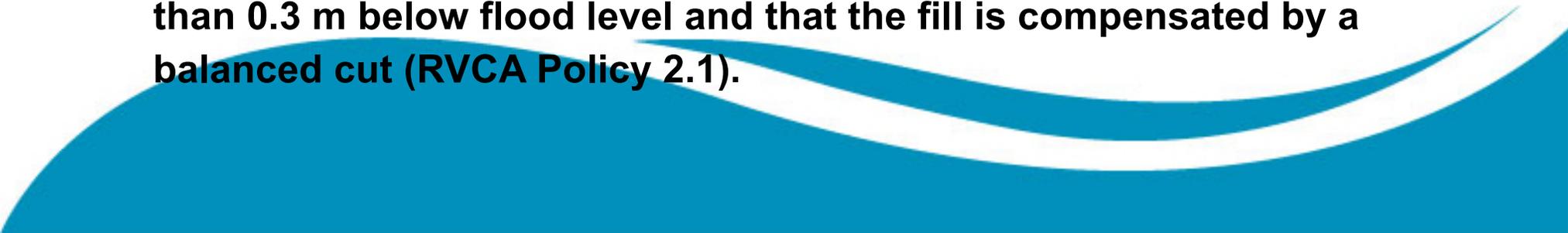
(b) Consistent with established standards and procedures relating to erosion and sediment control

(c) Matters related to conservation of land shall be addressed such that a net environmental gain shall be achieved associated with on-site natural heritage features (wooded areas, riparian zones, wildlife habitat, etc.)



Summary

In summary, the application for the placement of 407,000 cubic metres of fill in the floodplain cannot be approved at a staff level for the following reasons:

- 1. The Jock River floodplain is administered as a one zone floodplain, wherein the floodway is the entire floodplain (RVCA Policy 1.2).**
 - 2. Development involving site grading or fill placement or removal within the floodway is generally not permitted; exceptions may be considered, however, subject to the provisions of Section 2.1 (Minor removal or placement of fill / minor site grading in the floodplain) (RVCA Policy 2.0).**
 - 3. The proposal is for a major cut and fill, whereas the policy allows for consideration of minor removal or placement of fill at the edge of the floodplain where the ground surface elevation is no more than 0.3 m below flood level and that the fill is compensated by a balanced cut (RVCA Policy 2.1).**
- 

Summary-continued

4. The property has been flooded in the past (aerial photography 1999 and 1976).
5. The granting of permission will set a precedent.
6. The granting of permission may have cumulative impacts.



Summary-continued

- Application does not satisfy RVCA's local policies
 - RVCA acknowledges that Section 3.1.6 of the Provincial Policy Statement (PPS) allows for consideration of the two zone concept whereby the floodplain is divided into the floodway (higher depth and velocity) and flood fringe (lower depth and velocity) and that development may be permitted in the flood fringe, subject to floodproofing.
 - RVCA policy (Section 2) states that *“in areas of reduced flood risk described in Section 1.5 and in the flood fringe (determined in accordance with the PPS provisions and MNR guidelines with respect to the two zone concept), development involving site grading or fill placement or removal may be permitted provided it will not have an adverse effect on the control of flooding, erosion, pollution or conservation of land.”*
- 

Next Steps

- Approve the application
- Approve the application with conditions
- Deny the application

Having reviewed the application in detail with the applicant, Staff are comfortable with approval of the application subject to the following conditions:



Conditions:

Submission for review and acceptance by RVCA staff of:

- Monitoring Plan that demonstrates water levels and velocities are verified and within acceptable range . Must include provisions for the cost of the equipment by the proponent for 2-4 monitoring stations and a 3rd party consultant to devise and implement the monitoring plan. Provide an annual “Review of the Findings Report” for a term acceptable for evaluating impact from filling. A Memorandum of Agreement with the proponent to fully fund the Monitoring Plan.
- In the event of adverse affects from the filling of the flood fringe are identified by the Monitoring Program the proponent agrees to undertake addition earth works to mitigate the adverse affects to the satisfaction of RVCA.
- Both areas to be cut must be completed prior to any filling to the satisfaction of RVCA .

