70 Hughes LanePO Box 416Marmora, OntarioK0K 2M0(613) 472-3137crowevalley.com



REPORT FOR: CROWE VALLEY CONSERVATION AUTHORITY WATERSHED ADVISORY BOARD

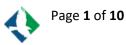
REGARDING: ONTARIO REGULATION 041/24, PERMIT APPLICATION NO. 011/25 BEING: AN ADDITION TO AN ACCESSORY BUILDING OR STRUCTURE AND ADDITION / MODIFICATIONS TO A SINGLE RESIDENTIAL DWELLING

DATE: **FEBRUARY 12[™], 2025**

HEARING DATE	February 20 th , 2025			
DATE APPLICATION RECEIVED	January 7 th , 2025			
DATE HEARING REQUESTED	January 27 th , 2025			
APPLICANT	Grant Gilmour			
LOCATION	200 Trotter Oitment Road			
	Part of Lot 9, Concession 10			
	Township of North Kawartha			
	ARN: 1536 010 100 06800			
PROPOSAL	Construct addition onto detached garage; construct addition and			
	modifications to dwelling.			
OVERVIEW	The proposed development does not conform to the CVCA's			
	Watershed Planning and Regulations policies because:			
	The addition onto the detached garage would result in an			
	accessory structure in the flood plain that is greater than			
	46.5 m ² / 500 ft ² .			
	The proposed garage would be 82.5 m ² / 888 ft ² .			
	The proposed addition / modifications to the dwelling are minor			
	and are recommended for approval, but are nonetheless part of			
	an application that is before the CVCA Watershed Advisory Board.			

Executive Summary

An application for development has been submitted by Mr. Grant Gilmour with regard to Ontario Regulation 41/24: Prohibited Activities Exemptions and Permits (see Appendix A). The application is requesting permission for development within the floodplain that does not conform to the CVCA's Policies. The proposal is for the addition of a detached garage and the addition / modification of the dwelling. The proposed garage addition would result in an accessory building or structure that is 82.5 m² / 888 ft² within the flood hazard. CVCA policies permit the construction of accessory structures within the flood hazard provided that there is no alternative feasible option outside of the flood hazard and the building or structure does not exceed 46.5 m² / 500 ft². **The building exceeds the allowable size by 36 m² / 388 ft². Therefore, staff recommend the application be denied.**



The proposed development does not conform to the following Policies of the CVCA (CVCA's Watershed Planning and Regulations Policies):

Policy 5.3.1.14

Additions to existing accessory buildings or structures located within a flooding hazard will be permitted provided it can be demonstrated that:

• the total size of the building or structure that would result from the addition does not exceed the maximum size identified in Policy 5.3.1.12 (46.5 m² / 500 ft²).

Conformity: No - The proposed development does not conform as it would result in an accessory structure or building of 82.5 m^2 / 888 ft², exceeding the maximum allowable size of 46.5 m^2 / 500 ft².

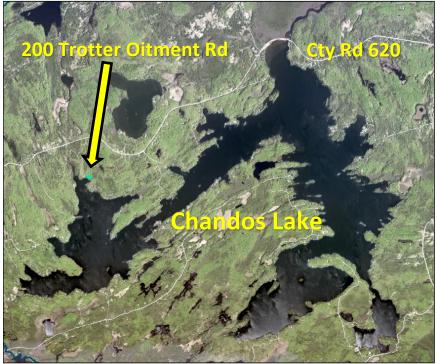
Policy 5.3.1.15

Requests to increase the size of the original accessory building or structure which result in a cumulative exceedance of a maximum of 46.5 m² / 500 ft² in the flood hazard will not be permitted.

Conformity: No - The proposed development represents a request to increase an existing accessory building or structure within a flood hazard that exceeds the allowable size threshold.

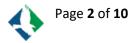
Background and Subject Lands

The subject property is located on Trotter Oitment Road in the Township of North Kawartha and is located on the north west side of Chandos Lake (known as West Bay).



The property is approximately 4,150 m², just over 1 acre, and has approximately 50m of shoreline along Chandos Lake. Nearly all of the property is mapped as floodplain, with the entire property being regulated by the CVCA (floodplain plus 15m allowance). There are other regulated features on and near the property, but the current proposed development is not expected to impact these features. The main consideration for the proposed development are impacts of increased development within the floodplain and the control of flooding.

The existing dwelling, septic system, boathouse, shed, and recently built detached garage (subject of this hearing) are all located within the 100-year floodplain associated with Chandos Lake (see maps included as Appendix D).



File History and Hearing Context

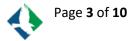
Mr. Gilmour received permission from the CVCA to build the detached garage on March 8, 2024 (CVCA permit #241/23). When Mr. Gilmour originally submitted his permit application, it was for an attached, 67 m² (720 ft²) garage and modifications to the dwelling that would result in additional habitable area within the floodplain. The increase to the dwelling was in exceedance of maximum allowable increase stipulated by CVCA's Policy. Staff permitted this in an effort to be flexible, and on account that the addition would be wet floodproofed and designed by an engineer. Wet floodproofing intentionally floods that portion of the structure (compared to dry floodproofing that requires additional fill in the floodplain to raise the structure) and is less likely to affect flood flows, flood storage capacity, and ultimately have a greater risk of affecting upstream or downstream areas. Wet floodproofing is typically not recommended for habitable buildings, however in this case the ground floor level acts as a basement and the addition was for an entry / mudroom area for which wet floodproofing methods were deemed appropriate. As for the attached garage, CVCA policies would not have permitted this, as an attached garage is considered potential habitable space and, with the addition described above, would have drastically exceeded the allowable increase in habitable space within the floodplain. In working with CVCA staff, the proposal was altered to a detached 46.45 m² (496 ft²) garage that satisfied CVCA policy requirements, plus the addition to the dwelling. Both employed wet floodproofing methods designed by an engineer. This would allow Mr. Gilmour to ensure that some form of a garage could be permitted by the CVCA's normal permit approval process, and if Mr. Gilmour still desired a larger garage that would no longer conform to CVCA policy, he could apply for the extension and request a Hearing with the CVCA Watershed Advisory Board.

The detached garage that was approved with Permit #241/23 is structurally completed (slab, framing, roofing) though not finished (doors, siding, windows). CVCA staff learned that the garage was built in a location that differed from what was stipulated in the approval letter: the garage was constructed approximately 2m closer to Chandos Lake, and further into the floodplain. Deviation from approval conditions can be considered a violation of the Regulation and offence under the Conservation Authorities Act. Investigating the matter, CVCA staff determined that there was officially induced error, as the altered building location was discussed and approved through the municipal building process. Based on the topography of the subject lands, CVCA staff have determined that the garage in the as-built location is not expected to create any increased risks related to flooding, or have any adverse impacts on the floodplain and the control of flooding. The matter will be resolved via an amendment to Permit #241/23 which recognizes the new location as well as existing and proposed floor areas of various structures on the property that were revised during the municipal building approval process.

Therefore, in summary, Mr. Gilmour has constructed a detached garage in the floodplain which has reached the CVCA's maximum allowable size for an accessory structure in the floodplain and is requesting an extension to that structure which would result in 82.5m² (888 ft²), 36 m² (388 ft²) more than what CVCA policy allows. The application includes modifications to the dwelling that would result in a small increase. And although the maximum allowable increase to habitable area in the floodplain was reached (and surpassed) with the approval of Permit #241/23, the increase is very minor (less than 4 m²) and is not expected to have any negative impact on the floodplain or the control of flooding. Therefore, staff recommend this component of the application for approval.

<u>Timeline</u>

November 2023	Gilmour submits application (#241/23) to CVCA to build attached garage and construct additions onto existing dwelling.
March 2024	CVCA issues permit for revision of application #241/23 to construct detached garage and dwelling additions. Garage built to maximum area allowed by CVCA policy for an accessory structure entirely within the floodplain. Garage and dwelling wet-floodproofed, designed by engineer. Dwelling additions exceed



	maximum allowable increase permitted by CVCA policy (max increase of 46.5 m ²). CVCA staff afforded flexibility to the applicant in this regard.
	Gilmour submits application (#011/25) to CVCA to build extension onto
January 2025	attached garage permitted by approval #241/23. Application also includes
	minor dwelling modifications. The resulting garage would exceed the maximum
	allowable area for an accessory structure within the floodplain, and was
	therefore recommended for refusal by CVCA staff.
January 30, 2025	Gilmour requests hearing with CVCA Watershed Advisory Board on February
	20, 2025.
January 30, 2025	CVCA issues Notice of Hearing to Gilmour. Notice includes reasons for
	recommendation of refusal.

Proposal Description

As per the application information provided (received 7 January 2025):

Existing / Proposed Development:

		Original	Original Existing (as of Permit #241/23)		Proposed (this application)		Policy increase used	Policy increase remaining
Building / Structure	Details	Area (m ²)	Area (m²)	Change (m ²)	Result (m²)	(m²) – of original	(m²) – of original	(m²)
Garage	Detached	none	46.45	36.05	82.50	46.50	46.45	0.05
Dwelling	Basement (ground floor)	132.49	173.99	3.14	177.13			
	First floor	152.59	178.98	0.23	179.21			
	Loft	18.71	18.71	0	18.71			
	All floors	303.79	371.68	3.37	375.05	46.50 (350.29 total)	67.89 (371.68 total)	-21.39 (beyond policy)

Proposed Development:

Garage, detached:

- Existing garage is 46.45 m² / 499.98 ft².
- Located entirely within floodplain of Chandos Lake.
- Proposed extension resulting in 82.50 m² / 888.02 ft² (increase of 36.05 m² / 388.04 ft²).
- CVCA policy permits 46.50 m² / 500 ft².
- Proposed increase represents an exceedance of 78% of what CVCA policy allows.
- Flood depths and forces have been assessed by an engineer, and the structure has been designed to be wetfloodproofed (i.e. intentionally taking on water during the regulatory flood event). Engineer report is included as Appendix B, with additional information in Appendix C.
- There are no other feasible options on the property that would result in decreased risks related to flooding the proposed location is satisfactory in that regard, and represents an area of least risk.

Dwelling:

- Existing dwelling
- Multiple storey: walkout basement, main floor and loft levels.



- Existing total habitable floor area of the dwelling is 371.68 m² / 4000.73 ft²
- The proposed modifications to the dwelling would result in a net increase of 3.37 m² / 36.27 ft², with 3.14 m² being on the basement level which interacts with the floodplain.
- The resulting dwelling would be 375.05 m^2 / 4037.01 $ft^2.$

Flood depths and forces have been assessed by an engineer, and the structure has been designed to be wet-floodproofed (i.e. intentionally taking on water during the regulatory flood event). Engineer report is included as Appendix B, with additional information in Appendix C.

CVCA Regulated Features:

- 100-year floodplain, Chandos Lake → 314.17 m (CGVD2013)

Maps of existing and proposed development are included in Appendix D.

<u>Applicability of the Conservation Authorities Act, Ontario Regulation 41/24 and the Crowe</u> Valley Conservation Authority's Watershed Planning and Regulations Policy Manual

Ontario Regulation 41/24 (see Appendix E), was made pursuant to section 28 of the Conservation Authorities Act, R.S.O. 1990.

The subject property is within an area regulated by the CVCA due to the 100-year flood hazard associated with Chandos Lake. The extent of the floodplain nearly covers the whole property, with the entire property being regulated when applying the Regulation Limit of 15m from the 100-year floodplain. (See maps included in Appendix D).

The Conservation Authorities Act and Ontario Regulation 41/24 contain various provisions related to floodplains.

The Conservation Authorities Act states:

Prohibited activities re watercourses, wetlands, etc.

28 (1) No person shall carry on the following activities, or permit another person to carry on the following activities, in the area of jurisdiction of an authority:

1. Activities to straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or to change or interfere in any way with a wetland.

2. Development activities in areas that are within the authority's area of jurisdiction and are,

i. hazardous lands

ii. wetlands

iii. river or stream valleys the limits of which shall be determined in accordance with the regulations,

iv. areas that are adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to an inland lake and that may be affected by flooding, erosion or dynamic beach hazards, such areas to be further determined or specified in accordance with the regulations, or

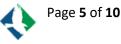
v. other areas in which development should be prohibited or regulated, as may be determined by the regulations.

Ontario Regulation 41/24 defines hazardous land as:

"Land that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock.

Ontario Regulation 41/24 contains the following sections dealing with river or stream valleys:

2. (1) For the purposes of subparagraph 2 iii of subsection 28 (1) of the Act, river or stream valleys include river or stream valleys that have depressional features associated with a river or stream, whether or not they contain a watercourse, the limits of which are determined as follows:



3. Where the river or stream valley is not apparent, the valley extends,

(i) to the furthest of the following distances:

A. the distance from a point outside the edge of the maximum extent of the flood plain under the applicable flood event standard [100-year flood] to a similar point on the opposite side, and

(ii) an additional 15-metre allowance on each side.

The Conservation Authorities Act states:

28.1 (1) An authority may issue a permit to a person to engage in an activity specified in the permit that would otherwise be prohibited by section 28, if, in the opinion of the authority, with any conditions specified in the regulations.

(a) the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock;

(b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and (c) any other requirements that may be prescribed by the regulations are met.

Hearing Process and Role of the CVCA's Watershed Advisory Board

When an application for development does not conform to the CVCA policies, CVCA staff must recommend the application for denial. The applicant then has the ability to request a Hearing with the CVCA's Watershed Advisory Board. The Watershed Advisory Board is tasked with reviewing the application for development, considering the applicable CVCA policies that have not been satisfied, and ultimately making a decision as to whether the application is consistent with the tests of the Conservation Authorities Act.

Tests of the Conservation Authorities Act

Permits

28.1(1)

An authority may issue permission to a person to engage in an activity specified in the permit that would otherwise be prohibited by section 28, if, in the opinion of the authority,

- (a) the activity is not likely to affect the control of <u>flooding</u>, erosion, dynamic beaches or unstable soil or bedrock;
- (b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and
- (c) any other requirements that may be prescribed by the regulations area met.

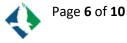
The CVCA Watershed Advisory Board may grant or refuse permission. Permission may be granted with or without conditions. The applicant will receive written notice of the decision. <u>The notice of decision must state the reasons for</u> <u>which the application was either approved or refused.</u> If the authority, after holding a hearing, refuses a permit or issues the permit subject to conditions, within 90 days after receiving the reasons for the authority's decision, the applicant may appeal this decision to the Ontario Land Tribunal.

CVCA Staff Recommendation

Based on the information submitted, CVCA staff recommend that the application be **<u>denied</u>** for the following reasons:

• The proposed garage extension would result in a structure that exceeds the maximum size allowed for an accessory structure within the floodplain.

The applicable policies from the CVCA Watershed Planning and Regulations Policy Manual are listed and detailed in the following section of this report. Policies sections that are not relevant to this application have been omitted. The CVCA's Planning and Regulations Policy Manual provides a framework for the CVCA and its staff to consistently administer its



powers under the Conservation Authorities Act and Ontario Regulation 41/24. When reviewing development applications, the Authority must have regard for its objectives of preventing loss of life and minimizing property damage as a result of natural hazards.

Administrative Policies

The following sections speak to over-arching policies that every application must be tested against. Areas subject to the regulation include the flood hazard and the prescribed allowance (15 metres).

3.8 General Regulation Policies

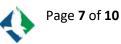
3.8.1 That development, interference or alteration will not be permitted within a regulated area, except in accordance with the policies contained within this document. In the event of a conflict between the policies applicable to the development, interference or alteration, the most restrictive policy shall apply

3.8.2 That notwithstanding Policy 3.8.1, the CVCA's Board of Directors may grant permission for development, interference and/or alteration where the application provided evidence acceptable to the Board of Directors that documents the development and/or activity will have no adverse effect on the control of flooding, erosion, and unstable soil or bedrock with respect to river or stream valleys, hazardous land, wetland and areas of interference, or result in unacceptable interference with a watercourse or wetland.

3.8.3 That development, interference or alteration within a regulated area may be permitted where it can be demonstrated to the satisfaction of CVCA, through appropriate technical reports, assessments, site plans and/ or other documents as required by CVCA, that:

- there is no feasible alternative location for development outside the hazard;
- the development does not encroach further into the hazard than existing conditions;
- the risk to public safety is not increased;
- susceptibility to natural hazards is not increased and no new hazards are created (e.g. there will be no impacts on adjacent properties with respect to natural hazards);
- there are no adverse hydraulic or fluvial impacts on rivers, creeks, streams, or watercourses;
- negative or adverse hydrological impacts on natural features and functions, including wetlands, are avoided and mitigated as demonstrated by a qualified professional;
- intrusions on natural features, areas and systems contributing to hydrologic functions are avoided or mitigated as demonstrated by qualified professional;
- access for emergency works and maintenance of flood or erosion control works is available;
- sedimentation and erosion during construction and post-construction is minimized using best management practices including site, landscape, infrastructure and/or facility design (whichever is applicable based on the scale and scope of the project), construction controls, and appropriate remedial measures;
- the control of flooding, erosion, and unstable soil or bedrock will not be affected during and post development, interference or alteration; and
- proposed development is constructed, repaired and/or maintained in accordance with accepted engineering principles and approved engineering standards to the satisfaction of CVCA, whichever is applicable based on the structural scale and scope, and the purpose of the project.

Specific Flood Hazard Policies



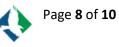
Residential Accessory Buildings or Structures - Additions

5.3.1.14 Additions to existing accessory buildings or structures located within a flooding hazard will be permitted provided it can be demonstrated that:

provided	n i can be demonstrated that:	Conformity / Status	Comments
•	the total size of the building or structure that would result from the addition does not exceed the maximum size identified in Policy 5.3.1.12 [46.5 m ² / 500 ft ²];	×	Resulting building would be 82.50 m ² .
•	there is no habitable floor space associated with the addition and no opportunity for conversion into habitable floor space in the future;	\mathbf{Y}	No habitable floor space proposed.
•	there is no basement or crawl space;	\	No basement or crawl space.
•	the risk of property damage is minimized through site and facility design to ensure that the development will not result in a pollution hazard (e.g. release of a biohazard substance, nutrients, pesticides or other chemicals during a flood event);	5	It is not expected that the garage and associated use would result in a pollution hazard, however a condition of the permit could be to ensure all hazardous materials are stored above the 100- year flood elevation or appropriately stored / contained.
•	where dry floodproofing cannot be achieved, wet floodproofing is undertaken in accordance with floodproofing standards identified in Appendix C – Floodproofing Guidelines [CVCA Policy Manual];	7	The building has been designed to be wet floodproofed, with vent system that will intentionally flood the building during the 100- year flood event. All electrical components will be located above the 100-year flood level.
•	the proposed development will not prevent access for emergency works, maintenance, and evacuation;		The depth of flooding along the access route is not expected to surpass the minimum standards for pedestrian and vehicular ingress and egress.
•	the potential for surficial erosion has been addressed through submission of proper drainage, erosion and sediment control and site stabilization / restoration plans;	7	Unless the proposed development creates increased erosion risk, it is standard practice for the CVCA to include erosion and sediment control measures as a condition of the permit approval.
•	erosion hazards have been adequately addressed; and	5	Although the combination of erosion and flooding forces are in the purview of the CVCA, erosion is not considered a risk based on the topography of the subject lands.
•	the plan has been carried out by a qualified professional	Y	Yes – flood forces calculated, assessed and appropriate wet floodproofing methods integrated into design. (See Appendix B and C)

Conformity:

The proposed development does not conform as it is exceeds the maximum allowable size of an accessory structure within the floodplain. Note that all other criteria are satisfied.



Flooding Hazard

Hazardous lands are defined in the Conservation Authorities Act as land that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches and/or unstable soil or bedrock.

In Ontario, regulatory flood event standards are prescribed based on geography. In the CVCA watershed, the 100-year flood event is used. This is a frequency-based flood event that is determined through analysis of precipitation, snow melt, or combination thereof, having a return period of once every 100 years on average. That is not to say that a 100-year event cannot occur two years in a row or may not be experienced for 500 years – it is a statistical probability. Note: if a flood event is experienced that exceeds the current 100-year level, that observed event may be used.

The 100-year flood level for Chandos Lake is 314.17 metres (CGVD2013).

Floodplain Management Approach

The objective of Conservation Authorities in the planning and management of flood risk areas is to protect society, including all levels of government, from being forced to bear unreasonable social and economic burdens due to unwise individual choices. The management of flood susceptible lands involves the combination of three main program components:

- i) prevention, by land use planning and regulation of development,
- ii) protection, by applying structural and non-structural measures, and acquisition, and
- iii) emergency response, by flood forecasting/warning and flood/erosion disaster relief.

Over the long term, prevention is the preferred method for the management of flood plain lands.

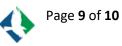
Discussion: Potential Floodplain Impacts

Hazard land management was delegated to Conservation Authorities by the Province of Ontario through the establishment of the Conservation Authorities Act and Ontario Regulation 41/24. The CVCA's Watershed Planning and Regulations Policies have been developed to assist CVCA staff with the administration of the Regulation. CVCA staff review development proposals in an effort to protect people and their property in areas susceptible to natural hazards.

Effective hazard management must occur on a comprehensive watershed basis. Therefore, site specific and individual development activities should be evaluated on an overall watershed basis, and in consideration of the effects of cumulative development over a long-term planning horizon (i.e. 100 years).

Virtually all of the existing building and structures on the subject property are located within the flood hazard. Some of this development may have pre-dated Conservation Authorities development regulations. However, a substantial amount of development has occurred under the purview of the CVCA. With CVCA approval of permit #241/23, the dwelling was increased from 303.79 m² / 3269.97 ft² to 371.68 m² / 4000.73 ft² – an increase of 67.89 m² / 730.76 ft². (CVCA Policy only allows an increase up to 46.5 m² / 500 ft², demonstrating that CVCA staff have already afforded flexibility for the applicant and subject property. This should be factored into deliberations when considering the significant increase to the garage, which is at the forefront of this Hearing.

The garage and dwelling additions have both been reviewed by a professional engineer (See Appendix B and C). This review has assessed anticipated flooding forces in relation to the proposed structures and has been integrated into the design. The fact that the structures will be wet floodproofed (designed to be intentionally flooded) likely reduces impacts on the floodplain and potential adverse impacts to upstream and downstream areas.



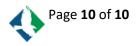
That said, the CVCA enforces size restrictions on development in the floodplain to systematically reduce widespread risks to life and property during severe flood events. This type of damage reduction is accomplished by simply limiting the amount of investment into development (i.e. buildings or structures) within a flood hazard area on an individual property – and thereby reducing the potential for flood damages. Consider these effects on a watershed and province-wide scale. It is important to acknowledge that the CVCA's approach to development within the floodplain is not outright prohibition. Some development is permitted to balance various needs and wants of our communities, while trying to achieve our mandated objective of floodplain management.

Summary

The proposed development does not conform with the CVCA's Policies because:

- The addition to the garage would result in a structure that exceeds the maximum allowable size of an accessory structure within the floodplain, which is a total of 46.50 m² / 500 ft².
 - \circ The proposed accessory structure would be 82.50 m² / 888.02 ft².

CVCA staff recommend that the application be **denied**, as it does not conform with the CVCA's Watershed Planning and Regulations policies and is likely to affect the control of flooding.





JAN 07/1

Date Received

ERMIT APPLICATION FORM

PROHIBITED ACTIVITIES, EXEMPTIONS AND PERMITS (CONSERVATION AUTHORITIES ACT - ONTARIO REG. 41/24)

Please provide the completed Permit Application Form to info@crowevalley.com

Contact	Information (please pri	nt clearly and le	gi <mark>bly</mark>)			
Property Or Grant Gilm	wner's Name(s): Iour					
	dress (Street, P.O. Box) r Oitment Rd.		City	City Postal Code North Kawartha K0L 1A0		
Telephone:	Home		Work 416-409	-0325	Mobile 416-409-0325	
Email grant@	teamgilmour.com					
Agent's Na Raed Al-F	me(s): Rawi (Professional Flo	oor Plans Inc.)		property owner's letter of auth	orization or signature to be attached	
	dress (Street, P.O. Box)		City Postal Code Mississauga L5L 3W3			
Telephone:			Work Mobile 289-937-6442 289-937-6442			
Email raed@prot	loorplans.ca					
Is the Owner a	ware of this application? Yes tacted the municipality/town Act Application (minor varian	ship to determine it	f a Planning	Act Application is required? nt) required for the propose	Yes 🖌 No 🔄 d development? Yes 🖌 No 🗌	
Leastion of	Proposed Works (please en	sure a map and dri	iving direct	tions are attached)		
Lot 9	Concession 10	Municipality North Kawart				
	ss (i.e. 70 Hughes Lane) Pr Oitment Rd., North K	awartha, ON, k	K0L 1A0			
	Roll Number (can be found or 100068000000	ı your tax bill)		Watercourse/Waterbody (i.e Chandos Lake	e. Belmont Lake, Crowe River, creek)	
	Use (vacant, residential, etc.)			Proposed Land Use		

Residential

The processing fee will be determined by the Conservation Authority. The site plan and application MUST include the following:

1. General location of property in relation to roads, shoreline, natural features, etc.

2. Location and dimensions of all existing structure(s) on property and a site plan with lot dimensions.

3. Location of any waterway, open water, wetland, steep slope on or near the property and any drainage features (ditches/culverts).

Residential

- 4. Intended location and dimensions of fill, construction, or waterway alteration proposed.
- 5. Cross-section of proposal showing existing and final grade with elevations from the current water level of any nearby waterway, and elevations of the lowest structure(s) opening if applicable.
- 6. Current photographs of the property (shoreline, area of proposed development, etc.) with no snow on the ground.

Proposed Works (please complete all sections that apply)	
Section A, please refer to page 7:	Section C, please refer to page 12:
Construction of a new structure	Watercourse Crossing (culvert)
Add to an existing structure(s)	
Renovations resulting in a change in use of an existing	Section D, please refer to page 13:
structure(s)	Shoreline Protection
Alter an existing structure(s)	Section E:
New dock	If proposing a bridge, please contact the CVCA office to
Replace existing dock	determine permit application requirements
	Pond Construction, clean out or repair.
Section B, please refer to page 11:	Other: If you do not see your proposed active here, please
Install Sewage System	contact the office for direction and information or see our
Place or Remove Fill Material	website.
dwelling with covered deck and detached garage all being at I Example 2: Replace existing septic bed in same location as exis Example : Complete 15 metres of shoreline protection using g 1. Addition to dwelling at basement (3.14 sq.m) a 2. Addition to the detached garage (36.05 sq.m) Refer to site plan for location and setbacks	sting. abion stone.)
documentation and information is correct and true. I/we further s of this application and specifically the terms and conditions on the fe By signing this application, consent is given to the Crowe Valle	dge and belief that all of the above-noted, attached and/or supporting colemnly declare that I/we have read and fully understand the contents ollowing page, and the declaration written below. y Conservation Authority, its employees and authorized ining information and monitoring any approved works pursuant
I, (please print name) Grant Gilmour	dealers also also also also also also also als
knowledge and I agree to an de by Optario Regulation 41/24.	_declare that the above information is correct to the best of my
Junio Regulation 41/24.	l I
Signature:Date:	DEC 13/24
	Mandatory. Landowner authorization form follows this page.
I am the: Owner Agent Contractor	Other:
The information on this form is being collected, and will be used, for Section 28 of the <u>Conservation Authorities Act. R.S.O. 1990 C27</u> .	the purposes of administering a Regulation made pursuant to
NOTE: Further information and studies may be required by the C this file, the cost of which will be borne by the applicant or their ag floodplains, hydraulics, slope stability or stream systems. Once con the landowner and the information may be used by the CVCA, its r public to view any studies, plans and reports related to your permir Protection and Privacy Act , RSO 1990, c.M.56, is required. Access wish to access any studies, plans and reports pertaining to other's publication. This application does not relieve the applicant of the o subject to change without notice.	gent. This information may include details related to wetlands, inpleted, all studies become the joint property of the CVCA and member municipalities and partners. In order for members of the t, a formal request under the <i>Municipal Freedom of Information</i> is subject to statutory exemptions. The same is true should you permits. Insufficient information may delay the processing of your

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Please note that the Crowe Valley Conservation Authority staff reserve the right to discuss any or all aspects of the permitting process with the property owner.

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I/ We Grant Gilmour

Print full name of owner

Raed Al-Rawi (Professional Floor Plans Inc.)

Print full name of Solicitor/ Contractor/ Agent)

To submit the enclosed Application of Permit to the Crowe Valley Conservation Authority and to provide any further information or material required by Authority Staff relevant to the Application of Permit for the purpose of obtaining a Permit to fill, construct or alter a watercourse in accordance with the requirements of Ontario Regulation 41/24.

Date DEC 13/24 Signature of Owner(s) Signature of Solicitor/ Contractor/ Agent

TERMS AND CONDITIONS

The Applicant, by acceptance and in consideration of the issuance of this Permit Application agrees to the following conditions:

- 1. The Owner and Applicant agrees:
 - a. to indemnify and save harmless, the CVCA and its officers, employees, or agents, from and against all damage, loss, costs, claims, demands, actions and proceedings, arising out of or resulting from any act or omissions of the Owner and Applicant or any of his/her agents, employees or contractors relating to any of the particulars, terms or conditions of this Permit Application
 - b. that this Permit Application shall not release the Owner and Applicant from any legal liability or obligation and remains in force subject to all limitations, requirements and liabilities imposed by law;
- 2. This Permit Application shall not be assigned or assumed by any subsequent purchaser, transferee or grantee.
- 3. This Permit Application does not absolve the Applicant of the responsibility of obtaining necessary permission from applicable federal, provincial or local agencies.
- 4. Should default be made by the Owner and Applicant in compliance with, or satisfaction of, the enumerated conditions and or submitted application, the CVCA may enter upon the property with respect to which conditional approval is granted and cause said conditions to be satisfied if necessary, the expense of which will be the sole responsibility of the Owner and Applicant.
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MINIMUM APPLICATION REQUIREMENTS

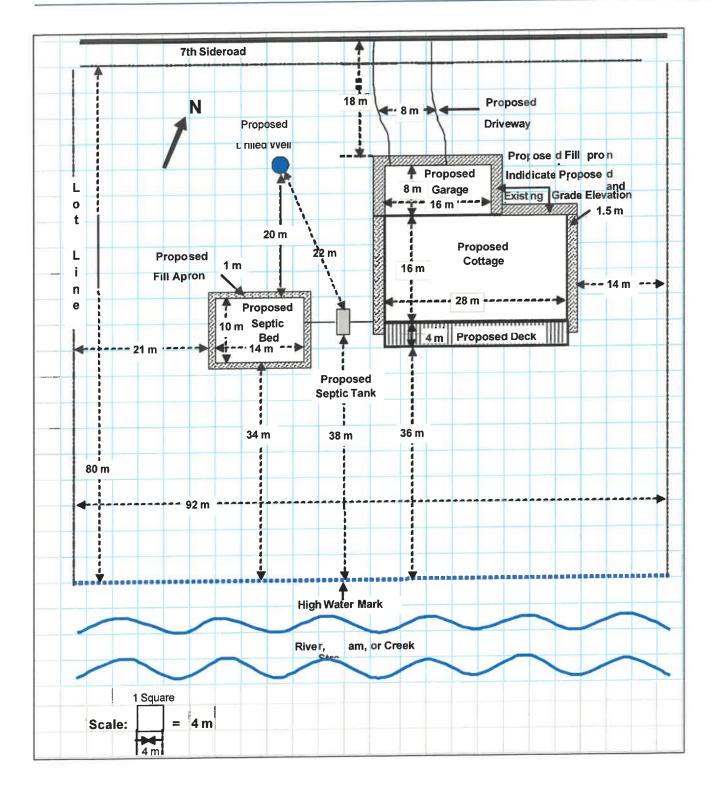
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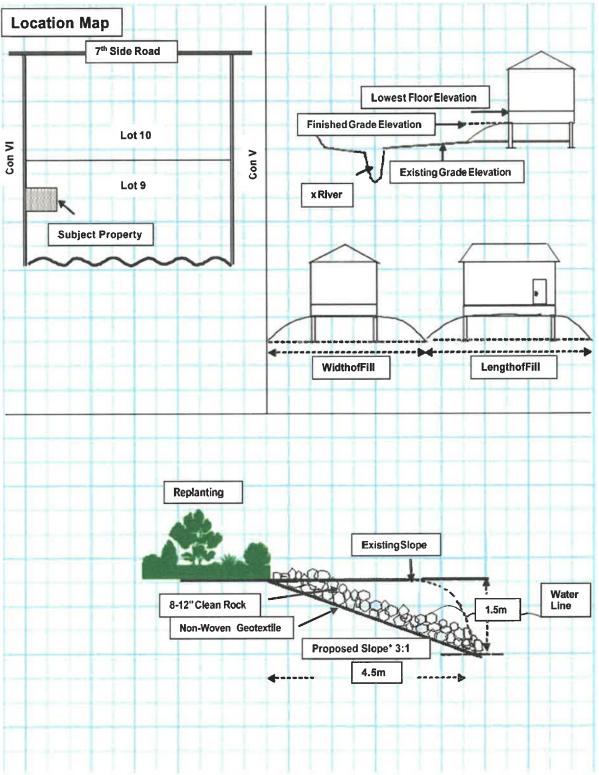
Your Checklist.

Please check off each of these items once they are completed.

\checkmark	Completed application form signed and dated by landowner or authorized agent.
	Location map of subject property, and clear driving directions.
\checkmark	Site Plan of property showing location, area and dimensions of existing structure(s), wells and septic systems to scale on the property.
\checkmark	Location of any natural features on or adjacent to the property including: watercourses, shorelines, wetlands, ponds, drainage routes (including seasonal/annual spring flood areas), woodlots and valleys.
\checkmark	Detailed design drawings of the proposed development (if available).
	Current photographs of the property (shoreline, area of proposed development, etc.) with no snow on the ground
	Do you own shoreline allowance? Yes No If no, please obtain a letter of permission from your municipality/township.
	Detailed Site Plan (accurate & legible). Please provide measurements in metres or feet (not inches or millimeters). As an example measurement should read 37 feet 4 inches or 11.4 metres not 448 inches or 11,379 mm. <i>If a site plan is not provided, your application will be considered incomplete and WILL NOT BE PROCESSED.</i> -If renovating or replacing or adding to an existing structure(s) please provide: (1) a site plan of the existing development, (2) a site plan of the proposed development and (3) a site plan of the proposed development overlaid on the existing development on three (3) separate site plans.
	 Should your proposed development fall within a known or potential hazard (i.e. floodplain or erosion hazard) Additional information that may be required to process a permit application includes but is not limited to: Copy of a legal survey of the property; Professionally prepared topographic survey, Lot Grading/Drainage Plan; Flood Plain Analysis/Delineation Study, Hydrology/Hydraulic Analysis; Environmental Impact Study, Planting or Vegetation Plan or Tree Retention Plan; Hydrogeological Analysis, Fluvial Geomorphological Assessment, Meander Belt Allowance Assessment; Stormwater Management Plan or Sediment and Erosion Control Plan; and/or, Slope Stability/Erosion Study.

SAMPLE SITE PLAN





*Slopes must be 3:1 or gentler unless there is not enough space, the rise is less than 1m, or it is replacing a vertical wall.

Section A: Structure(s) (New or Altered).

In addition to the general requirements the following is required. If there is not sufficient space below, please provide the required information on a separate piece of paper and/or in the body of your email. If a portion is not applicable, please fill in as N/A. If it is determined that the proposed works are within the floodplain or erosion hazard additional information will be required, please see page 14.

Existing Dwelling (if applicable):

Size of main/ground level of existing dwelling. We will require both the square footage **and** footprint dimensions. (i.e. square footage = 720 square feet, footprint =36 foot by 20 foot):

1,926 sq.ft (62'x50')

Number of storey(s) of existing dwelling including second storey, basement (finished or unfinished), lofts, and crawlspace:

Basement, first floor and loft (3)

Size of additional storey(s)/loft of existing dwelling. We will require both the square footage and footprint dimensions

Loft 880sq.ft (16'x16')

Size of basement (finished or unfinished) or crawlspace of existing dwelling. We will require both the square footage **and** footprint dimensions.

Basement 1,872 sq.ft (62'x50')

Distance from high water mark or natural feature(s), roadway, property lines, other structure(s) to existing dwelling:

26.20 m (refer to site plan)

Existing Deck/Porch/Veranda (if applicable):

Size of existing deck. We will require both the square footage **and** footprint dimensions. (i.e. square footage = 144 square feet, footprint = 12 foot by 12 foot)_

1,087 sq.ft (16'x65')

is the existing deck/porch/veranda covered [•] of oncovered [_	Is the existing deck/porch/veranda covered	\checkmark	or Uncovered	
--	--	--------------	--------------	--

Distance from high water mark, natural feature(s), roadway, property lines, other structure(s) to existing deck/

porch/veranda: 22.60 m (refer to site plan)

Existing Garage (if applicable):

Size of existing garage We will require both the square footage and footprint dimensions.

(i.e. square footage = 240 square feet, footprint = 20 foot by 12 foot)

500sq.ft (20'10"x24')	_
Is the existing garage attached Detached 🖌	
Is the existing garage habitable? Yes No	
Number of storey(s) of existing garage (if applicable):	
Distance from high water mark, natural feature(s), roadway, property lines, other structure(s) to existing garage:	
30.56 m (refer to site plan)	

Proposed Dwelling (if applicable):

Size of proposed dwelling. We will require both the square footage **and** footprint dimensions. (i.e. square footage = 1,200, footprint = 40 foot by 30 foot)

1,929 sq.ft (62'x50')

Number of storey(s) of proposed dwelling including second storey, basement, lofts, and crawlspace:

Basement, first floor and loft (3)

Size of additional storey(s)/loft of proposed dwelling. We will require both the square footage and footprint dimensions:

Loft 880sq.ft (16'x16') (no addition)

Size of basement or crawlspace of proposed dwelling. We will require both the square footage and footprint dimensions.

Basement 1,907 sq.ft (62'x50')

Distance from high water mark or natural feature(s), roadway, property lines, other structure(s) to proposed dwelling: 26.20 m (refer to site plan)

Proposed Deck/Porch/Veranda (if applicable):

Size of proposed deck. We will require both the square footage and footprint dimensions. (i.e. square footage = 300 square feet, footprint = 15 foot by 20 foot).

1,087 sq.ft (16'x65') (existing)	
1,007 Sq.it (10 x00) (existing)	
Is the proposed deck/porch/veranda covered 🚺 or Uncovered	
Distance from high water mark, natural feature(s), roadway, property lines, other structure(s) to proposed deck/porch/veranda:	
22.60 m (refer to site plan)	
	_
Proposed Garage (if applicable):	

Size of proposed garage We will require both the square footage **and** footprint dimensions. (i.e. square footage = 400 square feet, footprint = 20 foot by 20 foot)

888sq.ft (24'x37')
Is the proposed garage Attached or Detached
Will the proposed garage be habitable? Yes No
Number of storey(s) of proposed garage, if more than one storey please provide details (i.e. loft, full second storey):

Distance from shoreline or natural feature(s), roadway, property lines, other structure(s) to proposed garage:

30.56 m (refer to site plan)

1

Section A(i): Accessory and Detached Structure(s) (i.e. boathouse(s), dock(s), shed(s), bunkie(s), etc.). In addition to the general requirements the following is required. If there is not sufficient space below, please provide the required information on a separate piece of paper and/or in the body of your email. If a portion is not applicable, please fill in as N/A.

Existing Development (if applicable)

Size of existing development/structure(s). We will require both the square footage **and** footprint dimensions. (i.e. square footage = 300 square feet, footprint = 20 foot by 15 foot)

231sq.ft (11'x21')

Number of storey(s) of existing structure(s) (if applicable):

Distance from high water mark, natural feature(s), roadway, property lines, other structure(s):

ר)

Proposed Development (if applicable):

Size of proposed development/structure(s) We will require both the square footage **and** footprint dimensions. (i.e. square footage = 500 square feet, footprint = 25 foot by 20 foot)

N/A

Distance from high water mark, natural feature(s), roadway, property lines, other structure(s):

Section B: Fill Placement, Grading or Sewage Systems (In addition to the general requirements the following is required)

Dimensions of the proposed fill area and the depth of fill required:

N/A

Description of proposed fill (e.g. crushed stone, sand, and/or mix):

Volume of fill (in cubic metres):

New Sewage System or Replacement of Existing
If replacing an existing septic system is this an emergency replacement? Yes No
Size of septic tank (if applicable):
If the sewage system is a replacement system is it the same size as the existing system? Yes No
If no, please explain the reason for the change in size:
Is the sewage system in a new location? Yes No
If yes, please explain:
Size (footprint dimensions) of septic bed:
If the sewage system is replacing a failed sewage system please explain (if known) why the existing sewage system
failed:
Distance from high water mark, natural feature(s), edge of roadway, property lines, other structure(s) of the proposed
Distance from high water mark, natural reactive(s), cuge of routing, property most of and on active of the state of the st

sewage system: ____

Section C: Culverts and Water Crossings. In addition to the general requirements the following is required, please check off once you have confirmed you have included the below. If the proposed works is a bridge, please contact the CVCA office for permit application requirements

	Statement and purpose of proposed works.
\square	Drawing showing in plain view and cross-sectional detail the existing and proposed watercourse or watercourse crossing including dimensions.
	Location, length, diameter, type and pipe invert for any proposed culvert(s).
	Details of staging construction (commencement, order of works, completion, etc.) if required.
	Drawing showing plan view and cross-sectional detail of existing and proposed shoreline including dimensions.
	Site restoration plan including planting details.
	Details of erosion and sediment control measures to be implemented prior to commencement of work and throughout construction period.
Drawi	e provide the following information: ng showing in plain view and cross-sectional detail the existing and proposed watercourse or watercourse crossing including dimensions.

Is it replacing an existing culvert? Yes No 💟
If yes, reason for culvert replacement:
Is the proposed culvert in the same location as the existing culvert? Yes No If the proposed culvert is in different location, please provide details:

Length of existing culvert:	Diameter of existing culvert:	
Length of proposed culvert:	Diameter of proposed culvert:	
Type and pipe invert for any propose	d culvert(s):	

Same Number of Culvert(s)? Yes	No	

If no, please provide number of new culverts, sizes and reason for change:

Details of any proposed fill (i.e. rip rap) to be placed around culvert:

Length;		-	

Width:

Please provide a detailed de-watering plan: ______

Section D: Shoreline Works. In addition to the general requirements the following is required.

Photographs of the shoreline are required (no snow), demonstrating that active erosion is taking place

Have you considered a natural shoreline (i.e. planting of native plants, targeted placement of rocks, bioengineering)?

Yes No 🖌 , if no please explain why:
Please explain, in detail, the erosion concern(s) you or your client are experiencing and why hardening of the shoreline is proposed:
Total length of shoreline:
Total length of shoreline with active erosion:
Total length of proposed shoreline works:
Height of existing shoreline embankment:
Height of proposed shoreline embankment:
Type of material (i.e. gabion stone, boulders):
Volume of material (cubic metres):
Is the material going on non-woven geotextile material? Yes No
Will the proposed works maintain the existing contours and height of the shoreline embankment? Yes No
If no, please explain:
Please indicate the proposed slope (check all that apply). Below we are requesting information on the proposed slope measured as run over rise, i.e. 3 Horizontal feet for every 1 foot of Vertical rise.
3H:1V or gentler 2H:1V 1H:1V Existing Retaining Wall Replacement
Replacement of existing retaining walls exceeding two tiers (greater than one metre in height) will require engineered drawings.

Please note: Bioengineering combines structural engineering principles with the use of vegetation for shoreline stabilization and erosion control. Hard material such as rocks, boulders, and armour stone do NOT qualify as bioengineering

New retaining walls are not permitted.

Requirements for Development within the Floodplain and Erosion Hazard

New development will not be permitted within hazardous lands unless the proposed development is replacing an existing development or development that by its nature is within hazardous lands (i.e. docks by their nature are within the flood and erosion hazard). Development within hazardous lands that cannot be moved outside of the hazard will be subject to current CVCA Board Approved Polices (i.e. size limitations, floodproofing, additional engineering requirements, etc.).

Floodplain

0

If it has been determined that your proposed development is within the floodplain additional information and requirements will be requested as part of your permit application. Size restrictions will also be applied. As part of a complete application for development within a floodplain the CVCA will require the following:

- The applicant will have to demonstrate that there is no feasible alternative outside of the flood hazard. If there is room to move outside of the floodplain the existing footprint will not be honoured regardless of other approvals such as the Planning Act.
- An elevation survey, completed by an Ontario Land Surveyor, showing the following:
 - Plot the 1:100-year floodplain in CGDV28 (please contact the CVCA office for the regulatory flood elevations)
 - Spot elevations (in 2m by 2m grid pattern.)
 - o Plot the 6 metre setback from the floodplain
 - Elevations of the proposed build footprint taken in an "X" pattern (four corners and center)
 - Elevations of the finished floor elevation of the main level, finished floor elevation of the crawlspace or basement and lowest opening into the proposed structure(s). Please see table below for floodproofing requirements.
 - Elevations of the lowest level opening and finished floor elevation of existing structures (if applicable)

The minimum standards for floodproofing are based on the Regulatory Flood elevation. The following table depicts the minimum elevations for various features and structure(s):

Opening into structure(s)	Regulatory flood elevation +0.3m
Basement Floor	Regulatory flood elevation -1.0m
Fill places around buildings and structure(s)	Regulatory flood elevation
Electrical and Heating circuits	Regulatory flood elevation +0.3m
1st floor (main) on raised buildings and structure(s)	Regulatory flood elevation +0.3m
Access roads, parking areas	Regulatory flood elevation -0.3m
Pedestrian Access	Regulatory flood elevation -0.8m

Erosion Hazard

If it has been determined that your proposed development is within the erosion hazard additional information and requirements will be requested as part of your permit application. Size restrictions will also be applied. As part of a complete permit application for development within the erosion hazard the CVCA will require the following:

- The applicant will have to demonstrate that there is no feasible alternative outside of the erosion hazard (if there is room to move outside of the erosion hazard the existing footprint will not be honoured regardless of other approvals such i.e. the Planning Act).
- If there is no alternative outside of the erosion hazard, a geotechnical assessment, completed by a qualified professional, may be required to include the following:
 - Toe erosion allowance
 - o Stable slope allowance
 - Erosion access allowance. A minimum erosion access allowance of 6 metres is used from the top of stable slope (after accounting for toe erosion).
 - o A cross section showing the top of slope (after accounting for toe erosion)
 - Completion of a slope inspection record and a slope stability rating chart (Tables 4.1 and 4.2 from the MNR Technical Guide River & Stream Systems: Erosion Hazard Limit (2002). The results of these findings will determine the level of investigation required.
 - o Potential impacts of the proposed development on neighbouring properties
 - o Design bearing values
 - o Caisson/pile/foundation designs
 - o Potential for settlement
 - o Potential causes of instability
 - o Safe slopes of banks and excavation walls
 - o Soil stabilization methods and comparison of benefits
 - o Relation of hazards to proposed development
 - o Long-term stable slope crest position and inclination
 - o Factor of safety
 - o Failure surfaces
 - o Methods for soil erosion/sedimentation control
 - o Methods for minimizing impacts on vegetation and root systems



JAN 07/1

Date Received

ERMIT APPLICATION FORM

PROHIBITED ACTIVITIES, EXEMPTIONS AND PERMITS (CONSERVATION AUTHORITIES ACT - ONTARIO REG. 41/24)

Please provide the completed Permit Application Form to info@crowevalley.com

Contact	Information (please pri	nt clearly and le	gi <mark>bly</mark>)		
Property Or Grant Gilm	wner's Name(s): Iour				
Mailing Address (Street, P.O. Box) 200 Trotter Oitment Rd.		City North Kawartha		Postal Code K0L 1A0	
Telephone:	Home				Mobile 416-409-0325
Email grant@	teamgilmour.com				
Agent's Na Raed Al-F	me(s): Rawi (Professional Flo	oor Plans Inc.)		property owner's letter of auth	orization or signature to be attached
	dress (Street, P.O. Box)		City Posta Mississauga L5L 3		
Telephone:			Work 289-937-6442		Mobile 289-937-6442
Email raed@prot	loorplans.ca				
Is the Owner a	ware of this application? Yes tacted the municipality/town Act Application (minor varian	ship to determine it	f a Planning	Act Application is required? nt) required for the propose	Yes 🖌 No 🔄 d development? Yes 🖌 No 🗌
Leastion of	Proposed Works (please en	sure a map and dri	iving direct	tions are attached)	
Lot 9					
	ss (i.e. 70 Hughes Lane) Pr Oitment Rd., North K	awartha, ON, k	K0L 1A0		
	Roll Number (can be found or 100068000000	ı your tax bill)		Watercourse/Waterbody (i.e Chandos Lake	e. Belmont Lake, Crowe River, creek)
	Existing Land Use (vacant, residential, etc.)			Proposed Land Use	

Residential

The processing fee will be determined by the Conservation Authority. The site plan and application MUST include the following:

1. General location of property in relation to roads, shoreline, natural features, etc.

2. Location and dimensions of all existing structure(s) on property and a site plan with lot dimensions.

3. Location of any waterway, open water, wetland, steep slope on or near the property and any drainage features (ditches/culverts).

Residential

- 4. Intended location and dimensions of fill, construction, or waterway alteration proposed.
- 5. Cross-section of proposal showing existing and final grade with elevations from the current water level of any nearby waterway, and elevations of the lowest structure(s) opening if applicable.
- 6. Current photographs of the property (shoreline, area of proposed development, etc.) with no snow on the ground.

Proposed Works (please complete all sections that apply)			
Section A, please refer to page 7:	Section C, please refer to page 12:		
Construction of a new structure	Watercourse Crossing (culvert)		
Add to an existing structure(s) Renovations resulting in a change in use of an existing structure(s)			
	Section D, please refer to page 13:		
	Shoreline Protection		
Alter an existing structure(s)	Section E:		
New dock	If proposing a bridge, please contact the CVCA office to		
Replace existing dock	determine permit application requirements		
	Pond Construction, clean out or repair.		
Section B, please refer to page 11:	Other: If you do not see your proposed active here, please		
Install Sewage System	contact the office for direction and information or see our		
Place or Remove Fill Material	website.		
dwelling with covered deck and detached garage all being at I Example 2: Replace existing septic bed in same location as exis Example : Complete 15 metres of shoreline protection using g 1. Addition to dwelling at basement (3.14 sq.m) a 2. Addition to the detached garage (36.05 sq.m) Refer to site plan for location and setbacks	sting. abion stone.)		
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I, (please print name) Grant Gilmour	dealers also also also also also also also als		
knowledge and I agree to an de by Optario Regulation 41/24.	_declare that the above information is correct to the best of my		
Junio Regulation 41/24.	l I		
Signature:Date:	DEC 13/24		
	Mandatory. Landowner authorization form follows this page.		
I am the: Owner Agent Contractor	Other:		
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I/ We Grant Gilmour

Print full name of owner

Raed Al-Rawi (Professional Floor Plans Inc.)

Print full name of Solicitor/ Contractor/ Agent)

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Date DEC 13/24 Signature of Owner(s) Signature of Solicitor/ Contractor/ Agent

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 - b. that this Permit Application shall not release the Owner and Applicant from any legal liability or obligation and remains in force subject to all limitations, requirements and liabilities imposed by law;
- 2. This Permit Application shall not be assigned or assumed by any subsequent purchaser, transferee or grantee.
- 3. This Permit Application does not absolve the Applicant of the responsibility of obtaining necessary permission from applicable federal, provincial or local agencies.
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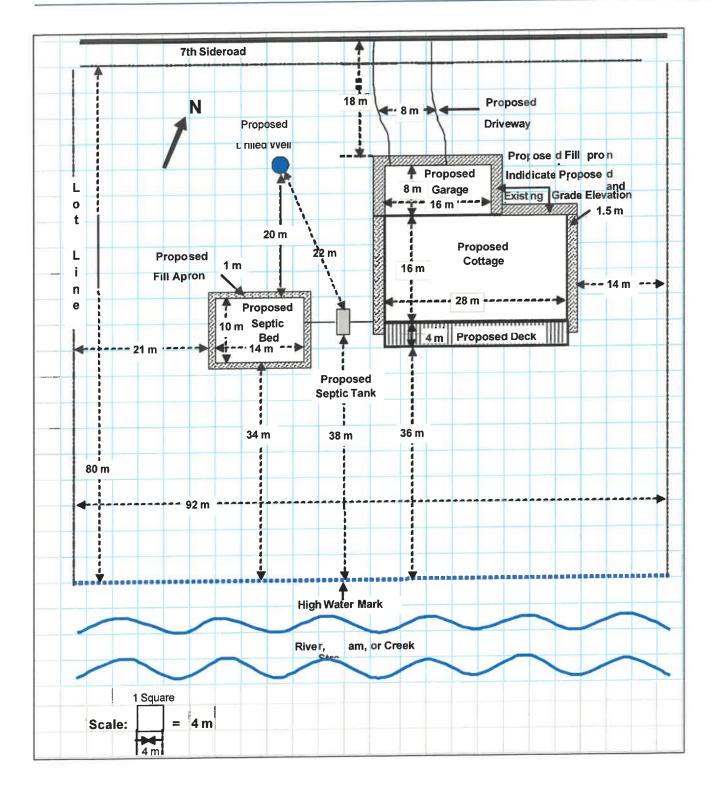
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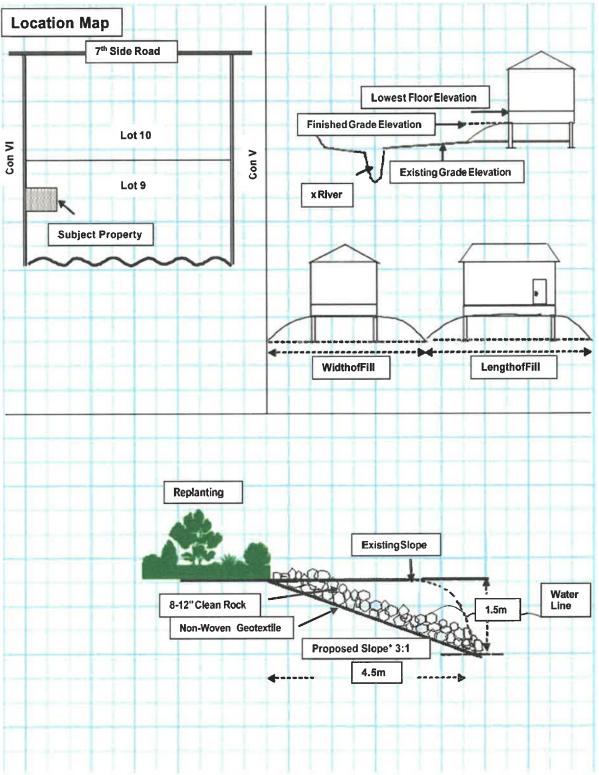
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Please check off each of these items once they are completed.

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\checkmark	Location of any natural features on or adjacent to the property including: watercourses, shorelines, wetlands, ponds, drainage routes (including seasonal/annual spring flood areas), woodlots and valleys.				
\checkmark	Detailed design drawings of the proposed development (if available).				
	Current photographs of the property (shoreline, area of proposed development, etc.) with no snow on the ground				
	Do you own shoreline allowance? Yes No If no, please obtain a letter of permission from your municipality/township.				
	Detailed Site Plan (accurate & legible). Please provide measurements in metres or feet (not inches or millimeters). As an example measurement should read 37 feet 4 inches or 11.4 metres not 448 inches or 11,379 mm. <i>If a site plan is not provided, your application will be considered incomplete and WILL NOT BE PROCESSED.</i> -If renovating or replacing or adding to an existing structure(s) please provide: (1) a site plan of the existing development, (2) a site plan of the proposed development and (3) a site plan of the proposed development overlaid on the existing development on three (3) separate site plans.				
	 Should your proposed development fall within a known or potential hazard (i.e. floodplain or erosion hazard) Additional information that may be required to process a permit application includes but is not limited to: Copy of a legal survey of the property; Professionally prepared topographic survey, Lot Grading/Drainage Plan; Flood Plain Analysis/Delineation Study, Hydrology/Hydraulic Analysis; Environmental Impact Study, Planting or Vegetation Plan or Tree Retention Plan; Hydrogeological Analysis, Fluvial Geomorphological Assessment, Meander Belt Allowance Assessment; Stormwater Management Plan or Sediment and Erosion Control Plan; and/or, Slope Stability/Erosion Study. 				

SAMPLE SITE PLAN





*Slopes must be 3:1 or gentler unless there is not enough space, the rise is less than 1m, or it is replacing a vertical wall.

Section A: Structure(s) (New or Altered).

In addition to the general requirements the following is required. If there is not sufficient space below, please provide the required information on a separate piece of paper and/or in the body of your email. If a portion is not applicable, please fill in as N/A. If it is determined that the proposed works are within the floodplain or erosion hazard additional information will be required, please see page 14.

Existing Dwelling (if applicable):

Size of main/ground level of existing dwelling. We will require both the square footage **and** footprint dimensions. (i.e. square footage = 720 square feet, footprint =36 foot by 20 foot):

1,926 sq.ft (62'x50')

Number of storey(s) of existing dwelling including second storey, basement (finished or unfinished), lofts, and crawlspace:

Basement, first floor and loft (3)

Size of additional storey(s)/loft of existing dwelling. We will require both the square footage and footprint dimensions

Loft 880sq.ft (16'x16')

Size of basement (finished or unfinished) or crawlspace of existing dwelling. We will require both the square footage **and** footprint dimensions.

Basement 1,872 sq.ft (62'x50')

Distance from high water mark or natural feature(s), roadway, property lines, other structure(s) to existing dwelling:

26.20 m (refer to site plan)

Existing Deck/Porch/Veranda (if applicable):

Size of existing deck. We will require both the square footage **and** footprint dimensions. (i.e. square footage = 144 square feet, footprint = 12 foot by 12 foot)_

1,087 sq.ft (16'x65')

is the existing deck/porch/veranda covered [•] of oncovered [_	Is the existing deck/porch/veranda covered	\checkmark	or Uncovered	
--	--	--------------	--------------	--

Distance from high water mark, natural feature(s), roadway, property lines, other structure(s) to existing deck/

porch/veranda: 22.60 m (refer to site plan)

Existing Garage (if applicable):

Size of existing garage We will require both the square footage and footprint dimensions.

(i.e. square footage = 240 square feet, footprint = 20 foot by 12 foot)

500sq.ft (20'10"x24')	_
Is the existing garage attached Detached 🖌	
Is the existing garage habitable? Yes No	
Number of storey(s) of existing garage (if applicable):	
Distance from high water mark, natural feature(s), roadway, property lines, other structure(s) to existing garage:	
30.56 m (refer to site plan)	

Proposed Dwelling (if applicable):

Size of proposed dwelling. We will require both the square footage **and** footprint dimensions. (i.e. square footage = 1,200, footprint = 40 foot by 30 foot)

1,929 sq.ft (62'x50')

Number of storey(s) of proposed dwelling including second storey, basement, lofts, and crawlspace:

Basement, first floor and loft (3)

Size of additional storey(s)/loft of proposed dwelling. We will require both the square footage and footprint dimensions:

Loft 880sq.ft (16'x16') (no addition)

Size of basement or crawlspace of proposed dwelling. We will require both the square footage and footprint dimensions.

Basement 1,907 sq.ft (62'x50')

Distance from high water mark or natural feature(s), roadway, property lines, other structure(s) to proposed dwelling: 26.20 m (refer to site plan)

Proposed Deck/Porch/Veranda (if applicable):

Size of proposed deck. We will require both the square footage and footprint dimensions. (i.e. square footage = 300 square feet, footprint = 15 foot by 20 foot).

1,087 sq.ft (16'x65') (existing)	
1,007 Sq.it (10 x00) (existing)	
Is the proposed deck/porch/veranda covered 🚺 or Uncovered	
Distance from high water mark, natural feature(s), roadway, property lines, other structure(s) to proposed deck/porch/veranda:	
22.60 m (refer to site plan)	
	_
Proposed Garage (if applicable):	

Size of proposed garage We will require both the square footage **and** footprint dimensions. (i.e. square footage = 400 square feet, footprint = 20 foot by 20 foot)

888sq.ft (24'x37')
Is the proposed garage Attached or Detached
Will the proposed garage be habitable? Yes No
Number of storey(s) of proposed garage, if more than one storey please provide details (i.e. loft, full second storey):

Distance from shoreline or natural feature(s), roadway, property lines, other structure(s) to proposed garage:

30.56 m (refer to site plan)

1

Section A(i): Accessory and Detached Structure(s) (i.e. boathouse(s), dock(s), shed(s), bunkie(s), etc.). In addition to the general requirements the following is required. If there is not sufficient space below, please provide the required information on a separate piece of paper and/or in the body of your email. If a portion is not applicable, please fill in as N/A.

Existing Development (if applicable)

Size of existing development/structure(s). We will require both the square footage **and** footprint dimensions. (i.e. square footage = 300 square feet, footprint = 20 foot by 15 foot)

231sq.ft (11'x21')

Number of storey(s) of existing structure(s) (if applicable):

Distance from high water mark, natural feature(s), roadway, property lines, other structure(s):

ר)

Proposed Development (if applicable):

Size of proposed development/structure(s) We will require both the square footage **and** footprint dimensions. (i.e. square footage = 500 square feet, footprint = 25 foot by 20 foot)

N/A

Distance from high water mark, natural feature(s), roadway, property lines, other structure(s):

Section B: Fill Placement, Grading or Sewage Systems (In addition to the general requirements the following is required)

Dimensions of the proposed fill area and the depth of fill required:

N/A

Description of proposed fill (e.g. crushed stone, sand, and/or mix):

Volume of fill (in cubic metres):

New Sewage System or Replacement of Existing
If replacing an existing septic system is this an emergency replacement? Yes No
Size of septic tank (if applicable):
If the sewage system is a replacement system is it the same size as the existing system? Yes No
If no, please explain the reason for the change in size:
Is the sewage system in a new location? Yes No
If yes, please explain:
Size (footprint dimensions) of septic bed:
If the sewage system is replacing a failed sewage system please explain (if known) why the existing sewage system
failed:
Distance from high water mark, natural feature(s), edge of roadway, property lines, other structure(s) of the proposed
Distance from high water mark, natural reactive(s), cuge of routing, property most of and on active of the state of the st

sewage system: ____

Section C: Culverts and Water Crossings. In addition to the general requirements the following is required, please check off once you have confirmed you have included the below. If the proposed works is a bridge, please contact the CVCA office for permit application requirements

	Statement and purpose of proposed works.
\square	Drawing showing in plain view and cross-sectional detail the existing and proposed watercourse or watercourse crossing including dimensions.
	Location, length, diameter, type and pipe invert for any proposed culvert(s).
	Details of staging construction (commencement, order of works, completion, etc.) if required.
	Drawing showing plan view and cross-sectional detail of existing and proposed shoreline including dimensions.
	Site restoration plan including planting details.
	Details of erosion and sediment control measures to be implemented prior to commencement of work and throughout construction period.
Drawi	e provide the following information: ng showing in plain view and cross-sectional detail the existing and proposed watercourse or watercourse crossing including dimensions.

Is it replacing an existing culvert? Yes No 💟
If yes, reason for culvert replacement:
Is the proposed culvert in the same location as the existing culvert? Yes No If the proposed culvert is in different location, please provide details:

Length of existing culvert:	Diameter of existing culvert:	
Length of proposed culvert:	Diameter of proposed culvert:	
Type and pipe invert for any propose	d culvert(s):	

Same Number of Culvert(s)? Yes	No	

If no, please provide number of new culverts, sizes and reason for change:

Details of any proposed fill (i.e. rip rap) to be placed around culvert:

Length;		-	

Width:

Please provide a detailed de-watering plan: ______

Section D: Shoreline Works. In addition to the general requirements the following is required.

Photographs of the shoreline are required (no snow), demonstrating that active erosion is taking place

Have you considered a natural shoreline (i.e. planting of native plants, targeted placement of rocks, bioengineering)?

Yes No 🖌 , if no please explain why:
Please explain, in detail, the erosion concern(s) you or your client are experiencing and why hardening of the shoreline is proposed:
Total length of shoreline:
Total length of shoreline with active erosion:
Total length of proposed shoreline works:
Height of existing shoreline embankment:
Height of proposed shoreline embankment:
Type of material (i.e. gabion stone, boulders):
Volume of material (cubic metres):
Is the material going on non-woven geotextile material? Yes No
Will the proposed works maintain the existing contours and height of the shoreline embankment? Yes No
If no, please explain:
Please indicate the proposed slope (check all that apply). Below we are requesting information on the proposed slope measured as run over rise, i.e. 3 Horizontal feet for every 1 foot of Vertical rise.
3H:1V or gentler 2H:1V 1H:1V Existing Retaining Wall Replacement
Replacement of existing retaining walls exceeding two tiers (greater than one metre in height) will require engineered drawings.

Please note: Bioengineering combines structural engineering principles with the use of vegetation for shoreline stabilization and erosion control. Hard material such as rocks, boulders, and armour stone do NOT qualify as bioengineering

New retaining walls are not permitted.

Requirements for Development within the Floodplain and Erosion Hazard

New development will not be permitted within hazardous lands unless the proposed development is replacing an existing development or development that by its nature is within hazardous lands (i.e. docks by their nature are within the flood and erosion hazard). Development within hazardous lands that cannot be moved outside of the hazard will be subject to current CVCA Board Approved Polices (i.e. size limitations, floodproofing, additional engineering requirements, etc.).

Floodplain

0

If it has been determined that your proposed development is within the floodplain additional information and requirements will be requested as part of your permit application. Size restrictions will also be applied. As part of a complete application for development within a floodplain the CVCA will require the following:

- The applicant will have to demonstrate that there is no feasible alternative outside of the flood hazard. If there is room to move outside of the floodplain the existing footprint will not be honoured regardless of other approvals such as the Planning Act.
- An elevation survey, completed by an Ontario Land Surveyor, showing the following:
 - Plot the 1:100-year floodplain in CGDV28 (please contact the CVCA office for the regulatory flood elevations)
 - Spot elevations (in 2m by 2m grid pattern.)
 - o Plot the 6 metre setback from the floodplain
 - Elevations of the proposed build footprint taken in an "X" pattern (four corners and center)
 - Elevations of the finished floor elevation of the main level, finished floor elevation of the crawlspace or basement and lowest opening into the proposed structure(s). Please see table below for floodproofing requirements.
 - Elevations of the lowest level opening and finished floor elevation of existing structures (if applicable)

The minimum standards for floodproofing are based on the Regulatory Flood elevation. The following table depicts the minimum elevations for various features and structure(s):

Opening into structure(s)	Regulatory flood elevation +0.3m
Basement Floor	Regulatory flood elevation -1.0m
Fill places around buildings and structure(s)	Regulatory flood elevation
Electrical and Heating circuits	Regulatory flood elevation +0.3m
1st floor (main) on raised buildings and structure(s)	Regulatory flood elevation +0.3m
Access roads, parking areas	Regulatory flood elevation -0.3m
Pedestrian Access	Regulatory flood elevation -0.8m

Erosion Hazard

If it has been determined that your proposed development is within the erosion hazard additional information and requirements will be requested as part of your permit application. Size restrictions will also be applied. As part of a complete permit application for development within the erosion hazard the CVCA will require the following:

- The applicant will have to demonstrate that there is no feasible alternative outside of the erosion hazard (if there is room to move outside of the erosion hazard the existing footprint will not be honoured regardless of other approvals such i.e. the Planning Act).
- If there is no alternative outside of the erosion hazard, a geotechnical assessment, completed by a qualified professional, may be required to include the following:
 - o Toe erosion allowance
 - o Stable slope allowance
 - Erosion access allowance. A minimum erosion access allowance of 6 metres is used from the top of stable slope (after accounting for toe erosion).
 - o A cross section showing the top of slope (after accounting for toe erosion)
 - Completion of a slope inspection record and a slope stability rating chart (Tables 4.1 and 4.2 from the MNR Technical Guide River & Stream Systems: Erosion Hazard Limit (2002). The results of these findings will determine the level of investigation required.
 - o Potential impacts of the proposed development on neighbouring properties
 - o Design bearing values
 - o Caisson/pile/foundation designs
 - o Potential for settlement
 - Potential causes of instability
 - o Safe slopes of banks and excavation walls
 - o Soil stabilization methods and comparison of benefits
 - o Relation of hazards to proposed development
 - o Long-term stable slope crest position and inclination
 - o Factor of safety
 - o Failure surfaces
 - o Methods for soil erosion/sedimentation control
 - o Methods for minimizing impacts on vegetation and root systems



Appendix B

Structural Calculations Report – Design for Flood Loads



200 TROTTER OITMENT RD., HARCOURT, ON KOL 1A0 - STRUCTURAL CALCULATIONS REPORT – - DESIGN FOR FLOOD LOADS -

REPORT BY:

PROFESSIONAL FLOOR PLANS INC.

6850 MILLCREEK DR., MISSISSAUGA, ON, L5N 4J9

REV. 02-Jan. 23rd, 2025

REV. 01-Feb. 07th, 2024

PROFESSIONAL FLOOR PLANS INC. 6850 Millcreek Dr., Mississauga, ON, L5N 4J9

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- 1. INTRODUCTION
- 2. AVAILABLE INFORMATION
 - 2.1 REPORTS
 - 2.2 DRAWINGS
 - 2.3 CROWE VALLEY CONSERVATION AUTHORITY INFORMATION AND REQUIREMENTS
- 3. FLOODPROOFING MEASURES
- 4. STRUCTURAL CALCULATIONS
 - 4.1 ANALYSIS/DESIGN ASSUMPTIONS
 - 4.2 UPLIFT PRESSURE
 - 4.3 LATERAL RESISTANCE
- 5. CONCLUSIONS AND RECOMMENDATIONS
- 6. APPENDICES

200 TROTTER OITMENT RD. STRUCTURAL CALCULATIONS REPORT

1. INTRODUCTION

Owner of 200 Trotter Oitment Rd, Harcourt, ON KOL 1A0 retained the services of Professional Floor Plans Inc. (PFP) to prepare a Structural Calculations Report and provide the required design/construction measures to ensure the structural integrity and safety of the building while subject to maximum flood levels.

The existing two-storey (Basement & first floor) residential cottage. Based on continuous discussions with Crowe Valley Conservation Authority staff, the modified building configuration shall include the following:

- Small size attached addition to the dwelling at basement level to allow for proper door access from the north side (front yard entrance).
- Expanding the detached garage from 46.45 sq.m to 82.50 sq.m.
- Maintaining building foot-print for the existing dwelling

Current report is prepared based on the available flood information, existing grade and entrance levels and client vision for developing the property.

2. AVAILABLE INFORMATION

2.1 Legal Topographic and Boundary Survey

- Appendix A: Legal survey performed by JBF Surveyors with updated elevations.

2.2 Drawings

- Appendix B: Architectural & Structural Drawings prepared by Professional Floor Plans Inc. Re-Issued for Permit on Jan. 17th, 2025

2.3 Crowe Valley Conservation Authority Information and Requirements

Initial Emails correspondences with CVCA staff providing the following information:

 The CVCA has updated flood hazard information that applies to Chandos Lake. The regulatory flood elevation for Chandos Lake is now 314.17m CGVD2013. The new flood elevation is 0.20m higher than the previous flood elevation, which was in force when permit #241/23 was applied for and approved. The proposed garage 200 TROTTER OITMENT RD. STRUCTURAL CALCULATIONS REPORT

slab is at 313.70, which means it would experience floodwaters to a depth of 0.47m during the regulatory flood event. Given this increase, that the garage will be wet flood proofed, a new assessment is required including calculations and rationale will be required.

3. FLOODPROOFING MEASURES

In order to achieve client vision without compromising CVCA requirements, the following is proposed:

- Garage: Garage floor level will be completely below the flood plane. However, foundations and foundation walls are designed to withstand the buoyancy (Uplift) water pressure and any lateral water pressure. The concrete foundation wall is extended 150mm above the surrounding grade level (Appendix B).
- Dwelling: Raising the exterior envelope of the proposed addition above the surrounding grade level by at least 150mm, (Appendix B). Foundations and foundation walls are designed to withstand the buoyancy (Uplift) water pressure and any lateral water pressure.

4. STRUCTURAL CALCULATIONS

4.1 ANALYSIS/DESIGN ASSUMPTIONS

The structure is designed for the possible extreme conditions, namely:

- Assumed vertical soil bearing capacity (SLS) = 1,570 psf (75 kPa)
- Assumed lateral soil bearing capacity (SLS) = 523 psf (25 kPa)
- Maximum lateral/overturning effect: Floors with dead load only are considered.
- Footings and columns are checked as individual elements neglecting the additional safety factor from the connectivity at floor levels.
- Concrete properties:
 - Compressive strength = 4,640 psi (32 MPa)
 - Tensile strength = 435 psi (3 MPa)

200 TROTTER OITMENT RD. STRUCTURAL CALCULATIONS REPORT

4.2 UPLIFT PRESSURE

The uplift forces are calculated at the bottom of the footings 2' below grade level (0.6m). The uplift force is active till the water level equals or exceeds the grade level.

Water density, $\gamma_w = 62.4 \text{ lb/cu.ft}$

Water pressure is calculated at depth, d = 2' 0" below grade, $F_{uplift} = \gamma_w x d = 62.4 x 2.0 x2.0 = 249.6 lb/ft^2$

Weight of footing and foundation wall per linear ft = 150x (2'0''x10''+10''x2'2'')= 520.8 lb/ft².

Only considering the weight of the footing and foundation wall provides ample safety factor against uplift forces. There will be no issues with the building stability against uplift pressure.

4.3 LATERAL RESISTANCE

When the water level exceeds the grade level, it starts exerting a lateral force on the exterior walls of the building. This lateral force, F lateral, tends to overturn the wall/column.

The lateral hydrostatic pressure of the water is calculated as:

 $P_{lateral} = = \gamma_w x h_w$

Where h_w is the height of water above grade level

The lateral force of the water is calculated as:

F lateral = $\gamma_w \mathbf{x} h_w^2/2$,

The lateral bending moment, M lateral, exerted by the lateral force is calculated as:

M lateral = F lateral x $h_w/3 = \gamma_w x h_w^3/6$

The height of water above designed floor levels would be 314.17m - 313.70 = 0.47m (1' 6.5"). This value will be used to check the stability.

 $M_{lateral} = 62.4 \times 1.54^3/6 = 38.0 \text{ lb.ft per linear foot}$

The ± effect of the lateral force shall be calculated in accordance with the following equation:

Stress = $P/A \pm M_{lateral} C/I$,

Where,

P = vertical building load per linear foot (Dead load only) = 520+14.5x12 = 694.0 lb A = Area of foundation wall at grade level = (10''x1') = 0.83 ft²

200 TROTTER OITMENT RD. STRUCTURAL CALCULATIONS REPORT

C = $\frac{1}{2}$ foundation wall thickness in direction of load (5") = 0.417 ft I = Moment of inertia of the wall in direction of load per linear ft = 0.0482 ft⁴ Stress = (694/0.83) ± (38.0*0.417/0.0482)

Maximum stress = 832.8 + 328.8 = 1,161.6 psf < 1,570 psf (o.k.)

Minimum stress = 832.8 - 328.8 = 504.0 psf < 1,570 psf (o.k.). No Tension

The building has sufficient safety factor against lateral pressure.

5. CONCLUSIONS AND RECOMMENDATIONS

- 1. A conservative approach is used to calculate the hydrostatic and hydrodynamic loads resulting from flood and to estimate the structural members resistance.
- 2. The proposed building design can safely withstand the uplift pressures with ample safety factor.
- 3. The proposed building design can safely withstand the lateral hydrostatic and hydrodynamic pressures with ample safety factor.
- 4. Wet floodproofing will meet the requirements based on existing ground and dwelling levels and based on the proposed scope of work for construction.

Point of Contact:

Point of contact from PFP shall be Raed Al-Rawi – General Manager (289-937-6442)

Sincerely yours

R.A.oth

Raed Al-Rawi, P Eng. Ph. D., M. sc., B. Sc., Civil engineering General Manager - PFP



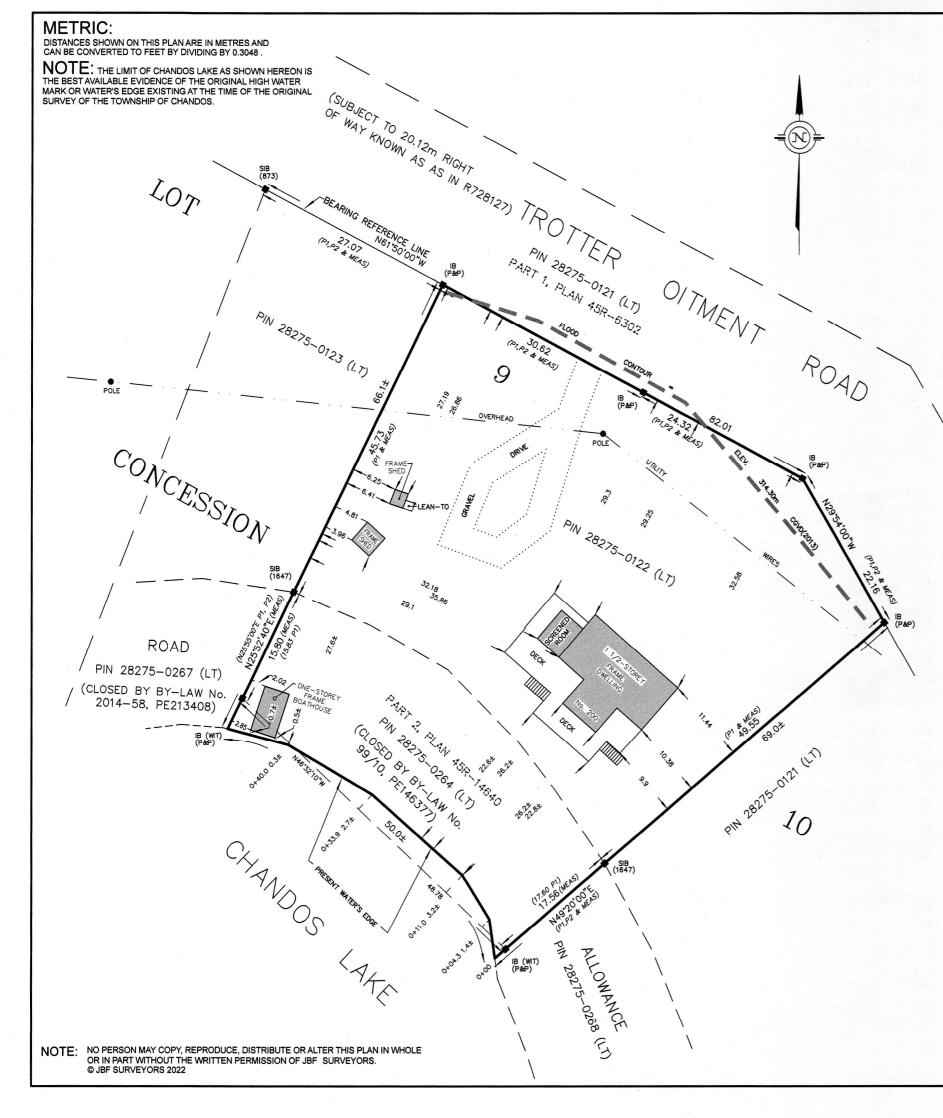
200 TROTTER OITMENT RD. STRUCTURAL CALCULATIONS REPORT

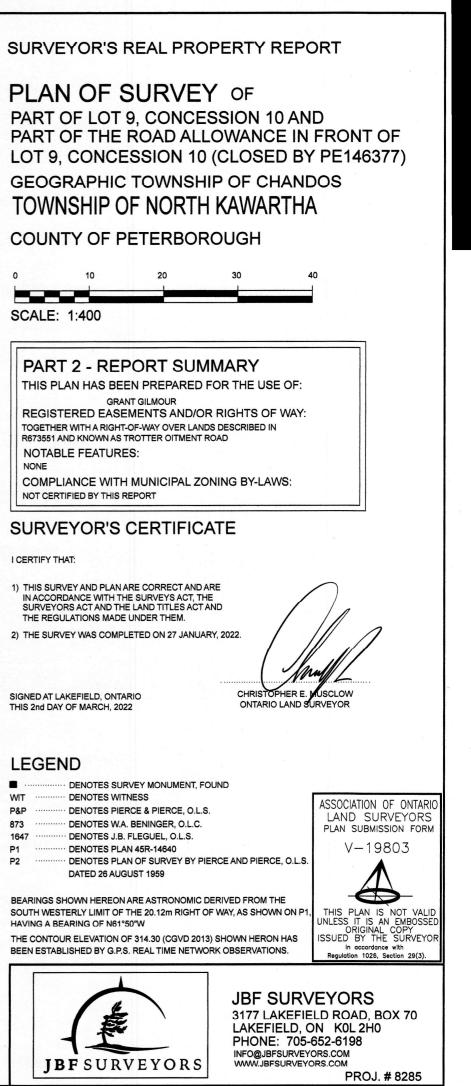
6. APPENDICES

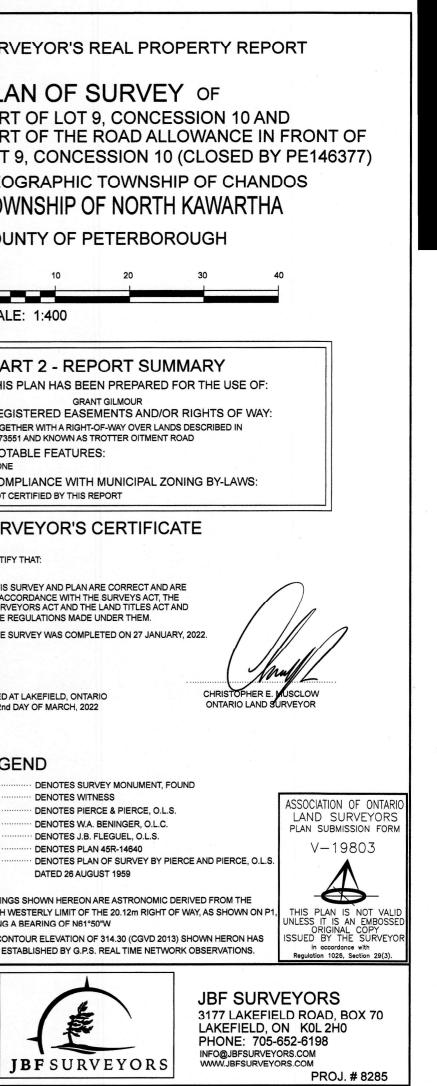
200 TROTTER OITMENT RD. STRUCTURAL CALCULATIONS REPORT

APPENDIX (A)

200 TROTTER OITMENT RD. STRUCTURAL CALCULATIONS REPORT







APPENDIX (B)

200 TROTTER OITMENT RD. STRUCTURAL CALCULATIONS REPORT

PROFESSIONAL FLOOR PLANS INC.

6850 Millcreek Dr., Mississauga, ON, L5N 4J9

Tel.: 905-858-3434 Ext. 2801

email: info@profloorplans.ca

TOWN OF NORTH KAWARTH.	A ZONING BY-LAW		
	BY LAW		PROPOSED
ZONING LOT AREA LOT FRONTAGE	SR 0.50 Hectares 46.00 m		RECREATION DWELLING HOUSE 0.42 Hectares (Existing) 71.57 m
MIN. FRONT YARD MIN. EXTERIOR SIDE YARD MIN. INTERIOR SIDE YARD MIN. REAR YARD WATER SETBACK DWELLING WATER SETBACK (DECK) MAX. HEIGHT	9.00 m 4.50 m 9.00 m 30.00 m		24.22 m N.A. 21.81 m, 10.38 m 26.43 m 26.43 m 22.60 m (Existing) 7.23 m
	7.60 m		7.23 m
BUILDING AREA BASEMENT FLOOR FIRST FLOOR LOFT TOTAL	EXISTING 73.98 m ² 78.98 m ² 8.71 m ² 371.67 m ²	0.00 m²	TOTAL 177.12 m ² 179.21 m ² 18.71 m ² 375.04 m ²
GARAGE REAR DECK	46.45 m² 101.01 m²		82.50 m² IOI.01 m²
TOTAL COVERAGE (FIRST+E BUILDING AREA (FIRST) BUILDING AREA	,	00 m2)	362.72 m² 179.21 m² 4.27 %
PARKING SPACES	2 MIN.		2 GARAGES

GENERAL DEMOLITION NOTES

- DISPOSE OF REMOVED ITEMS IN A LAWFUL MANNER IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE MUNICIPALITY HAVING JURISDICTION
- ALL EXISTING WALLS AND ITEMS TO BE REMOVED ARE SHOWN DASHED.
- OWNER TO HAVE RIGHT TO FIRST REFUSAL OF ALL ITEMS REMOVED. ALL REMOVED ITEM SHALL BE. DISPOSED OF ASPERNOTE No. 1.
- COORDINATE WITH STRUCTURAL MECHANICAL AND ELECTRICAL DRAWINGS ALL RELATED COMPONENTS OF DEMOLITION, MODIFICATION AND NEW INSTALLATION.
- SAWCUT AND REMOVE THE EXISTING SLAB ON GRADE TO FACILITATE ANY BURIED MECHANICAL AND/OR ELECTRICALITEMS. PATCH AND MAKE GOOD SLAB ON GRADE AFTER NEW SERVICES ARE IN PLACE. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS.
- REMOVE, RELOCATE AND/OR REROUTE ALL MECHANICAL AND ELECTRICAL SERVICES AND CONNECTIONS AS REQUIRED TO ACCOMMODATE DEMOLITION OR AS NECESSARY AS A RESULT. OF DEMOLITION.
- SUPPLY AND INSTALL NECESSARY SHORING AND/OR BRACING AS REQUIRED FOR TEMPORARY SUPPORT OF EXISTING STRUCTURE. COORDINATE WITH A STRUCTURAL ENGINEER AS REQUIRED.
- ENSURE ALL FLOOR AREAS ARE FREE OF HAZARDS AFTER DEMOLITION IS COMPLETE. LEVEL PATCH, FILL AND GRIND FLOOR AS REQUIRED TO ACHIEVE A SMOOTH SANITARY SURFACE READY TO RECEIVE FLOOR FINISH
- CARE SHALL BE TAKEN TO MINIMIZE DAMAGE TO EXISTING AS BUILT WALLS, SURFACES AND 9. FINISHES TO REMAIN.
- 10. PROTECT SALVAGED AND/OR ITEMS TO REMAIN FROM DAMAGE. PROVIDE ADEQUATE COVERINGS AND/OR STORAGE AS REQUIRED.
- EXISTING EXIT SIGNAGE, FIRE ALARM SYSTEM AND EMERGENCY LIGHTING TO BE LEFT IN 11 OPERATION DURING DEMOLITION AND DURATION OF CONTRACT OR UNTIL NEW INSTALLED.
- 12 SUPPLY AND MAINTAIN ON A DAILY BASIS ALL INTERIOR AND EXTERIOR TEMPORARY COVERINGS, FENCING, TARPING, HOARDING, FLOOR PLATES, SIGNAGE AND OTHER SEPARATIONS REOURED TO MAINTAIN THE SAFETY OF THE PUBLIC DURING WORK OF THIS CONTRACT. COORDINATE THESE PROTECTIVE MEASURES WITH THE OWNER REMOVE AND/OR DISPOSE OF ALL FROM SITE AFTER COMPLETION OF WORK OF THIS CONTRACT.
- MAINTAIN A CLEAN, SAFE AND ORDERLY SITE AT ALL TIMES. 13
- COORDINATE WITH OWNER THE STAGING AREAS FOR SITE TRAILER AND MATERIALS STORAGE. 14.
- COORDINATE WITH OWNER AREA(S) FOR WASTE BIN LOCATION. SUPPLY AND MAINTAIN PROTECTIVE 15 MEASURES TO ENSURE THE PUBLICS SAFETY.
- COORDINATE WITH THE OWNER ANY STAGING OF WORK AND/OR DISRUPTION OF PARKING AND 16. TRAFFIC FLOWS.
- 17 SHOULD MATERIAL RESEMBLING SPRAY OR TROWEL APPLIED ASBESTOS OR OTHER TOXIC OR HAZARDOUS MATERIALS BE ENCOUNTERED IN THE COARSE OF DEMOLITION, STOP WORK, TAKE PREVENTATIVE MEASURES AND NOTIFY ARCHITECT AND/OR OWNER IMMEDIATELY. DO NOT PROCEED UNTIL WRITTEN INSTRUCTIONS HAVE BEEN RECEIVED.
- THE DRAWINGS INDICATE THE PHYSICAL DIMENSIONS, EXISTING LEVELS AND SIMILAR ITEMS BEING INDICATED WHERE KNOWN: ALL INFORMATION RELATIVE TO EXISTING SHE CONDITIONS IS OFFERED TO ASSIST THE CONTRACTOR IN EVALUATION OF THE WORK, BUT WITH NO SPECIFIC REPRESENTATION EITHER EXPRESSED OR IMPLIED, AS TO COMPLETENESS OR ACCURACY.

	CATIO	N: 200 ⁻	Frott	er Oii	NTMENT	Rd., 1	NORTH	h Kawa	rtha, O	N KOL 14	40					
ЕМ		Ontario	Building	g Code [Οάτα Μάτι	rix Parts	389	9		OBC SECTIO	N REFERENCE					
	PROJECT DESCRIPTION:				PART 3											
	PROPOSED TWO-STOREIS X ADDITION										X PART 9 2.1.1					
				HANGE OF	Use 🛛 🕅	ALTERATIC	N		3.2.2.43 [Δ]	9.10.1.3.					
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TRUSSES

FLOOR TRUSS MANUFACTURER SHALL DESIGN AND PROVIDE TRUSSES TO HAVE A MAXIMUM DEFLECTION OF 3/8" FOR SPANS GREATER THAN 16'-0" AND L/480 FOR SPANS UNDER 16'-0"

TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR ALL TRUSS DESIGNS INCLUDING GIRDERS, HANGERS, BEARING SEATS AND ANCHORS FOR TRUSSES. TRUSS FRAMING SHOWN ON PLANS IS FOR GENERAL REFERENCE AND TO INDICATE BEARING LOCATIONS. MANUFACTURER SHALL NOTIFY ARCHITECT IF ADDITIONAL BEARING POINTS AND/OR WALLS ARE NEEDED PRIOR TO FABRICATION AND ERECTION.

ALL ROOF TRUSSES SHALL BE BRACED PER MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED ON DRAWINGS.

INSULATION NOTE:

PROVIDE INSULATION AS REQUIRED TO MEET CURRENT OBC CODE SEE ENERGY CALCULATIONS FOR INSULATION R-VALUES.

FRAMING MATERIALS

BEARING WALLS:

EXTERIOR: 8'-1 1/8" PLATE HEIGHT OR LESS: 2X4 SPRUCE-PINE-FIR #2 KD OR BETTER

9'-1 1/8" PLATE HEIGHT OR LESS: 2X4 SPRUCE-PINE-FIR #1 KD OR BETTER.

16'-1 1/8" PLATE HEIGHT OR LESS: 2X6 HEM-FIR #2 KD OR BETTER.

INTERIOR: BEARING WALLS- SPRUCE-PINE-FIR #2 KD OR BETTER NON-BEARING WALLS- SPRUCE-PINE-FIR. KILN DRIED, STUD GRADE OR BETTER. HEADER: HEM-FIR #2 KD OR BETTER; FIBER BENDING STRESS=850 P.S. (SINGLE MEMBER) ELASTICITY MODULUS=1,300,000 P.S.I. JOIST AND RAFTERS: HEM-FIR #2 KD OR BETTER; FIBER BENDING STRESS= 1.075 P.S.I. (REPETITIVE MEMBER) ELASTICITY MODULUS=1,300,000 P.S.I.

FURRING: SPRUCE-PINE-FIR KILN DRIED, NO.3 OR BETTER.

BEARING WALLS:

PROVIDE 2X4 SOLID BLOCKING AT 16" O.C. ON 2X4 LEDGER BOARDS BETWEEN HEADER JOISTS (SEE DRAWINGS FOR SIZE OF MEMBER) UNDER ALL BEARING PARTITIONS PARALLEL TO FLOOR FRAMING DIRECTION.

PROVIDE SOLID BLOCKING UNDER ALL POINT LOAD CONDITIONS CONTINUOUS TO SOLID BEARING AT HEADERS OR FOUNDATION.

PROVIDE SOLID BLOCKING BETWEEN JOIST UNDER ALL BEARING WALLS PERPENDICULAR TO FRAMING DIRECTION.

WALL FRAMING:

STUDS IN ALL WALLS SHALL BE SPACED AT 16" O.C. UNLESS OTHERWISE NOTED.

EXTERIOR WOOD FRAME WALLS OVER 9'-2" IN HEIGHT SHALL BE OF MINIMUM 2X6 CONSTRUCTION. ALL STUDS SHALL BE CONTINUOUS FROM FLOOR TO UNDERSIDE OF FLOOR OR ROOF FRAMING ABOVE. SEE FRAMING MATERIALS FOR MINIMUM STUD SIZES AND GRADES.

ALL STRUCTURAL MULLIONS TO HAVE MINIMUM DOUBLE STUD CONSTRUCTION CONTINUOUS FROM FLOOR TO UNDERSIDE OF FLOOR FRAMING ABOVE. WINDOW TRANSOM HEADERS SHALL SPAN BETWEEN CONTINUOUS STUDS WITH FLUSH HANGER BRACKETS AS REQUIRED.

PROVIDE CONTINUOUS WALL STUDS FROM FLOOR TO UNDERSIDE OF ROOF FRAMING AT ALL SLOPED CEILING CONDITIONS. (BALOON FRAMING)

LOWER LEVEL (BASEMENT) EXTERIOR FRAME WALLS SHALL BE MINIMUM 2X6 FRAMING @16" O.C. WITH PRESSURE TREATED BASE PLATE. INTERIOR LEVEL BEARING WALLS SHALL BE 2X6 FRAMING @16" O.C. WHEN CARRYING (2) FLOORS OR MORE.

WALL SHEATHING:

STRUCTURAL GRADE FOR LATERAL BRACING OF EXTERIOR WALL LOADING. WHEN NON-STRUCTURAL SHEATHING IS USED PROVIDE LET-IN DIAGONAL BRACING OR OTHER APPROVED TYPE OF BRACING AT ALL EXTERIOR CORNERS OF STRUCTURE.

ROOFING

ASPHALT SHINGLES SHALL BE SECURED TO THE ROOF WITH NOT LESS THAN (4) FASTENERS PER STRIP SHINGLE, OR NOT LESS THAN (2) FASTENERS PER INDIVIDUAL SHINGLE. SHINGLE HEADLAP SHALL NOT BE LESS THAN 2 INCHES (15 MM).

ROOF PENETRATIONS

ALL PLUMBING, MECHANICAL VENT STACKS AND FURNACE FLUES SHALL BE OFFSET TO REAR ROOF LINES. FURNACE FLUES SHALL COMPLY WITH CODE FOR MAXIMUM SLOPE AND NUMBER OF TURNS ALLOWED FOR OFFSETS.

ATTIC ACCESS

A READILY-ACCESSIBLE OPENING NOT LESS THAN 22"X30" SHALL BE PROVIDED TO ANY ATTIC AREA HAVING A CLEAR HEIGHT OF OVER 30".

ALL STAIRS SHALL CONFORM TO CODE FOR ALLOWABLE RISER HEIGHT AND TREAD DEPTH, (MINIMUM 10" TREADS AND MAXIMUM 7 3/4" RISERS IN SINGLE FAMILY DWELLINGS). NOSING PROFILE SHALL BE CONSTRUCTED AS REQUIRED BY CODE

HANDRAIL TO HAVE A DIAMETER SIZE OF 1 1/2" MIN. 2" MAX. ALL HANDRAILS SHALL BE LOCATED AT A HEIGHT OF 34" MIN. AND 38" MAX. ABOVE NOSE OF TREAD. THE SIZE AND SHAPE OF HANDRAILS SHALL CONFORM TO CURRENT CODE REQUIREMENTS.

GUARD RAIL:

BALUSTERS SHALL BE SPACED SO THAT A SPHERE WITH A DIAMETER OF 4" CANNOT PASS THROUGH ANY OPENING.

TOP OF GUARD RAILS AT STAIRS TO SERVE AS HANDRAIL SHALL BE A MIN. OF 36" HIGH TO A MAX. OF 42" HIGH. ALL OTHER GUARD RAILS SHALL BE A MIN. OF 42" HIGH (OR 36" HIGH IN SINGLE FAMILY DWELLING).

WINDOWS AND GLAZING:

A MINIMUM OF ONE (1) WINDOW IN EACH SLEEPING AREA SHALL MEETS EMERGENCY EGRESS RÉQUIREMENTS. WINDOW CONTRACTOR SHALL PROVIDE EGRESS HARDWARE NECESSARY TO ALLOW WINDOWS TO MEET APPLICABLE EGRESS REQUIREMENTS

PROVIDE FLASHING AT ALL WINDOW/DOOR HEAD, JAMB AND SILL CONDITIONS. PROVIDE THE APPROPRIATE SAFETY GLASS (IN ACCORDANCE WITH ALL APPLICABLE BUILDING CODES) FOR ALL HAZARDOUS LOCATIONS LISTED BELOW:

A) GLAZING IN FIXED AND SLIDING PANELS OF SLIDING TYPE DOORS (PATIO AND MALL TYPE).

- B) GLAZING IN STORM DOORS.
- C) GLAZING IN ALL UNFRAMED SWINGING DOORS.
- D) GLAZING IN SHOWER AND BATHTUB DOORS AND ENCLOSURES.

PROPOSED VENT AREA: TO BE CALCULATED PER MANUFACTURE RECOMMENDATIONS

VENT AREA:

VENT AREA RATIO 1:150 ATTIC AREA= _1,976.46_SQ.FT_ VENT AREA =_13.18_ SQ.FT_ x 144= _1,897.40_ SQ.IN. 50% SOFFIT AND 50% RIDGE= _948.70_ SQ.IN

INSULATION:

PROVIDE AND INSTALL BUILDING INSULATION FOR COMPLIANCE TO CURRENT ENERGY CODE REQUIREMENTS.

PROVIDE RIGID INSULATION AT ALL EXPOSED PERIMETER SLAB ON GRADE CONDITIONS AS REQUIRED TO MEET CURRENT ENERGY CODE REQUIREMENTS. PROVIDE INSULATION AT ALL BOND CONDITIONS-SEE INSULATION NOTE PROVIDE INSULATION AROUND ALL SKYLIGHT SHAFTS-SEE INSULATION NOTE. THERMAL BATT AND BLANKET INSULATION SHALL HAVE A VAPOR BARRIER, WITH A PERM RATING OF 1 OR LESS APPLIED TO THE INTERIOR FACE. INSULATION SHALL BE INSTALLED IN SUCH A MANNER AS TO ALLOW FREE AIR FLOW FROM THE SOFFIT TO THE ROOF/ATTIC SPACE. VENTILATION OF CONCEALED ROOF SPACES SHALL BE MAINTAINED.

GARAGE SEPARATIONS

PRIVATE GARAGES ATTACHED SIDE BY SIDE TO HABITABLE ROOMS SHALL BE COMPLETELY SEPARATED FROM THE INTERIOR SPACES BY FIRE PARTITIONS AND FLOOR/CEILING ASSEMBLIES WHICH ARE CONSTRUCTED WITH NOT LESS THAN A 1-HOUR FIRE RESISTANCE RATING. (SEE DETAILS)

ELECTRICAL

- 1) MAINTAIN SEPARATION AT SERVICE-GAS & ELECTRICAL TO BE 36" APART. (METERS)
- 2) ASSURE MECHANICAL & ELECTRICAL SYSTEMS, MAINTAIN SEPERATION-WIRE & DUCTS,
- WIRE & PLUMBING 2" MINIMUM.
 MAINTAIN SEPARATION OF OUTLETS IN PARTY WALLS, I.E. BACK TO BACK OUTLETS AND PROVIDE FOR FIRE SAFETY WITH RATED BOXES AND FIRE PROTECTIVE PADS (SUCH AS 3-M).
- 4) 20 AMP CIRCUITS FOR KITCHEN, LAUNDRY, & TOILETS. 5) GFI CIRCUITS FOR KITCHEN & TOILET OUTLETS.
- 6) ASSURE PROPER CIRCUITS FOR FOR SEPARATE CIRCUIT ITEMS, SUCH AS SUMP, FURNACE, ETC.
- 7) 3 WIRE MULTI-BRANCH CIRCUITS TO HAVE COMMON TRIP BREAKERS.

PLUMBING:

- 1) SUMP PUMP-TERMINATE TO AN APPROVED LOCATION
- 2) INSTALL AUTOMATIC TRAP PRIMERS DEEP SEAL TRAPS TO ALL FLOOR/HUB OUTLET DRAINS. PRIMERS TO INACCESSIBLE FLOOR DRAINS. (LAUNDRY AND/OR CONDENSATE 1002.4)
- 3) SANITARY SUMPS/EJECTORS INSTALL AND VENT TO CODE REQUIREMENTS
- 4) INSTALL BACKWATER VALVES PER CODE REQUIREMENTS.
- 5) ALL WORK SUBJECT TO FIELD VERIFICATION AND APPROVAL.

MECHANICAL

- 1) PROVIDE APPROPRIATE GAS SHUT OFF TO FIREPLACES.
- 2) BE AWARE OF ISSUES REGARDING VENT TERMINATION.
- 3) CONSIDER ALL ISSUES IN REFERENCE TO FIRE-STOPPING.
- 4) ALL WORK MUST BE VERIFIED.

GENERAL NOTES

THESE NOTES ARE FOR GENERAL REFERENCE. WHERE CONFLICTS EXIST BETWEEN THESE NOTES AND CURRENT CODES THE MORE STRINGENT REQUIREMENTS SHALL PREVAIL.

THIS STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE CURRENT 2015 OBC BUILDING CODE. ALL CONSTRUCTION MUST CONFORM TO ALL REQUIREMENTS OF THE CURRENT CODE

MATERIALS OR CONSTRUCTION PROCEDURES WHICH ARE PROHIBITED BY LAW OR SHALL CAUSE A HARMFUL EFFECT TO THE NATURAL ENVIRONMENT OR TO THE HEALTH OF ANY PERSON ON THE SITE DURING CONSTRUCTION AND/OR DURING OCCUPANCY SHALL NOT BE USED IN THIS PROJECT.

ALL TRADES SHALL CONFORM WITH ALL APPLICABLE FEDERAL, PROVENCE, AND LOCAL CODES, RULES AND REGULATIONS. IN CASE OF CONFLICT, THE MOST STRINGENT REQUIREMENTS SHALL APPLY.

DIMENSIONS OF INTERIOR WALLS ON PLANS SHALL BE 5" (ROUGH STUD DIMENSIONS) UNLESS OTHERWISE INDICATED.

ALL EXTERIOR WALLS AND INTERIOR BEARING WALLS 10' HIGH AND HIGHER MUST BE CONSTRUCTED OF 2" X 6" OR 2" X 8" STUDS AT 16" O.C. THIS SHALL BE CONSTRUED AS TO INCLUDE THE GARAGE WALLS. FIRESTOP BETWEEN THE STUDS AT THE 8' LINE. DO NOT DRILL HOLES IN MICRO-LAM BEAMS UNLESS APPROVED BY THE MANUFACTURER OR ENGINEER. APPROVED FIRESTOP MATERIAL REQUIRED FOR ALL DROPS AND FLOOR-CEILING PENETRATIONS

APPROVED HARDWIRE SMOKE DETECTOR REQUIRED ON EACH FLOOR AND IN EACH BEDROOM WITH BATTERY BACKUP (INTERCONNECTED) AS PER CODE

STEPS REQUIRED AT ACTIVE DOORS PER CODE.

ALL SAFETY GLAZING CODE REQUIREMENTS MUST BE MET

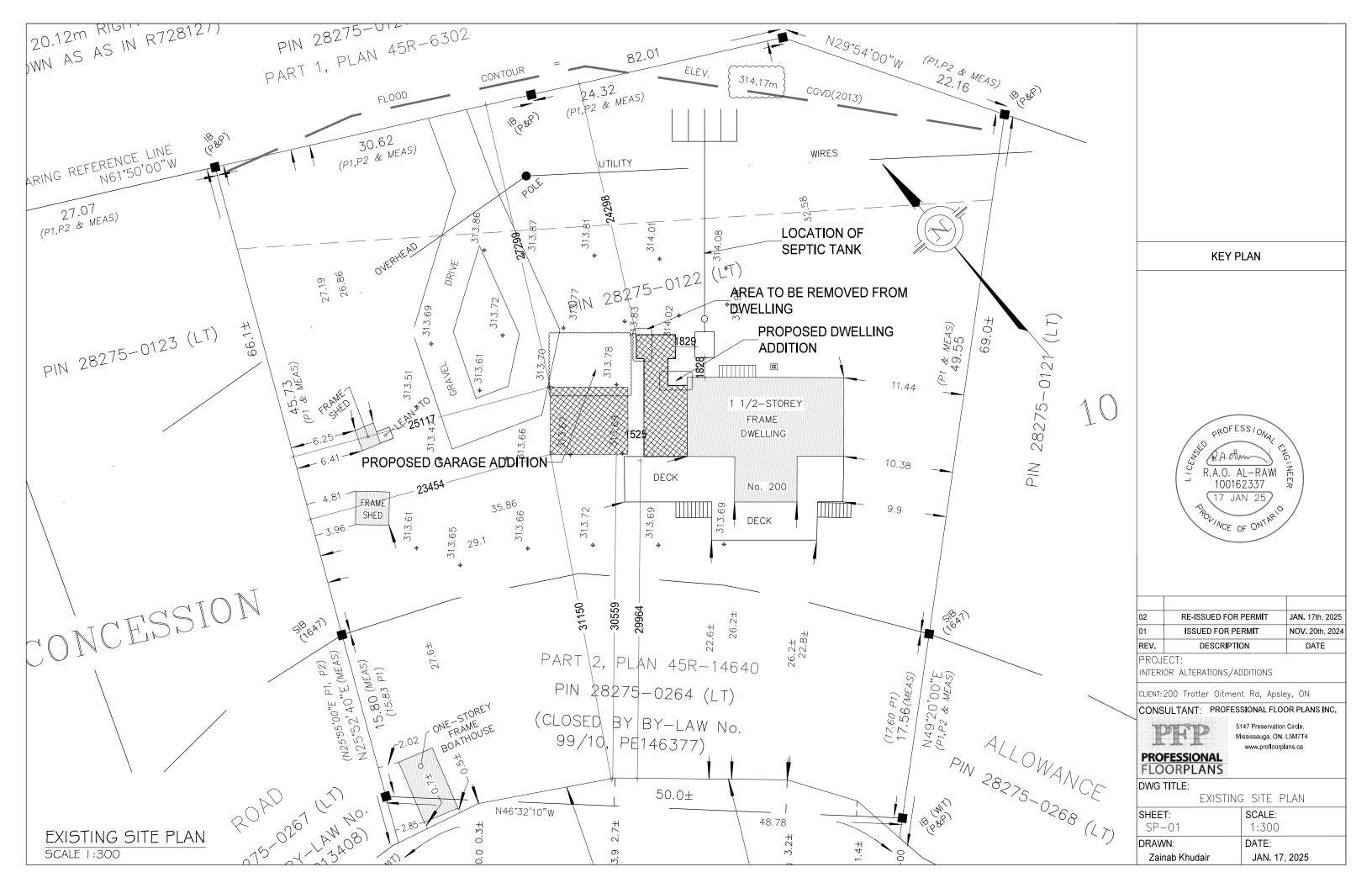
PROVIDE ATTIC ACCESS OF 22" X 30" MINIMUM AS REQUIRED.

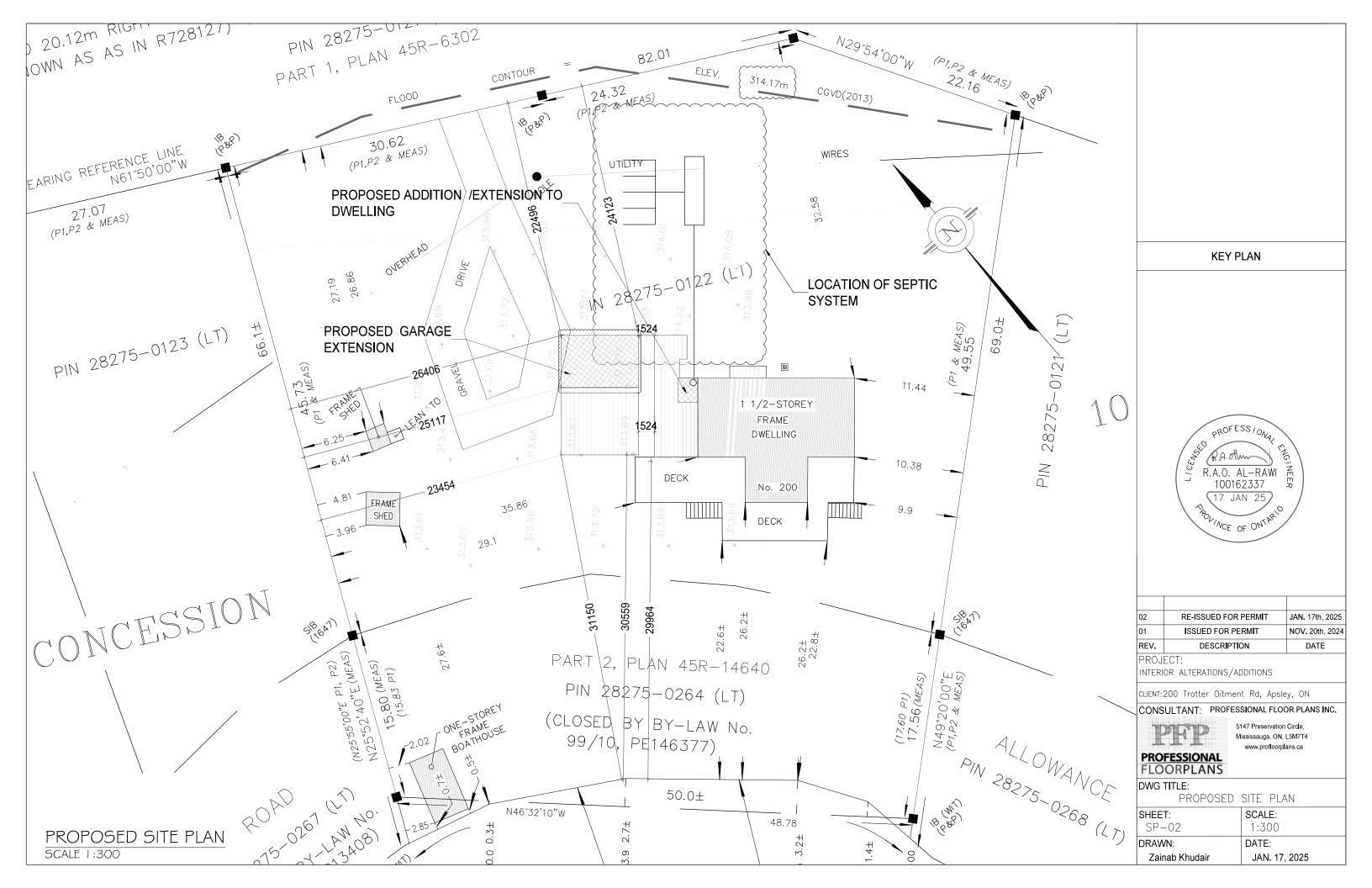
PROVIDE 2'-8" WIDE DOORS TO ALL ROOMS GREATER THAN 9 S.F. AND 3'-0" WIDE DOOR AT MAIN ENTRANCE AS PER CODE

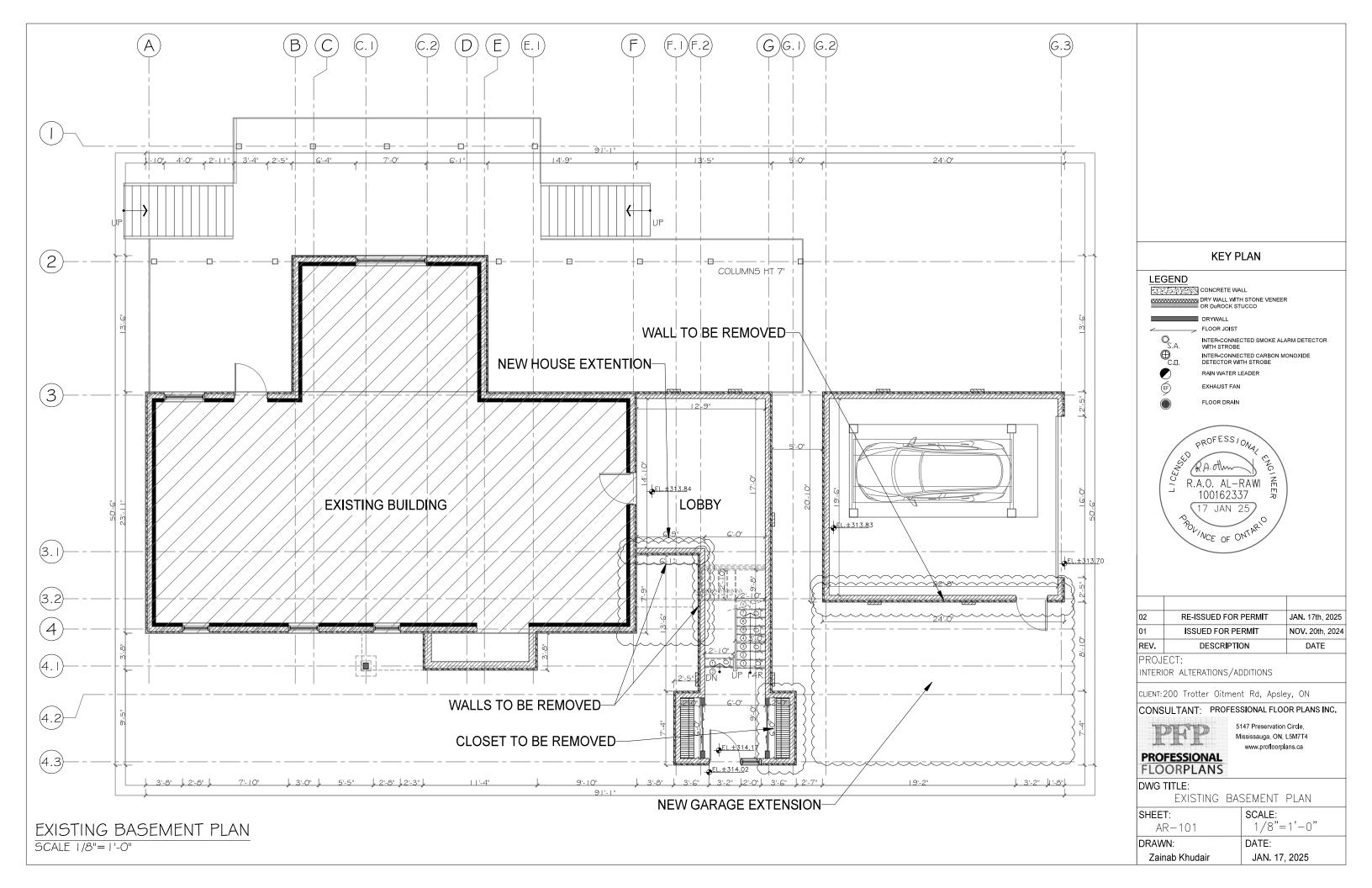
ALL BATHS TO HAVE EXHAUST FAN TO EXTERIOR AS PER CODE.

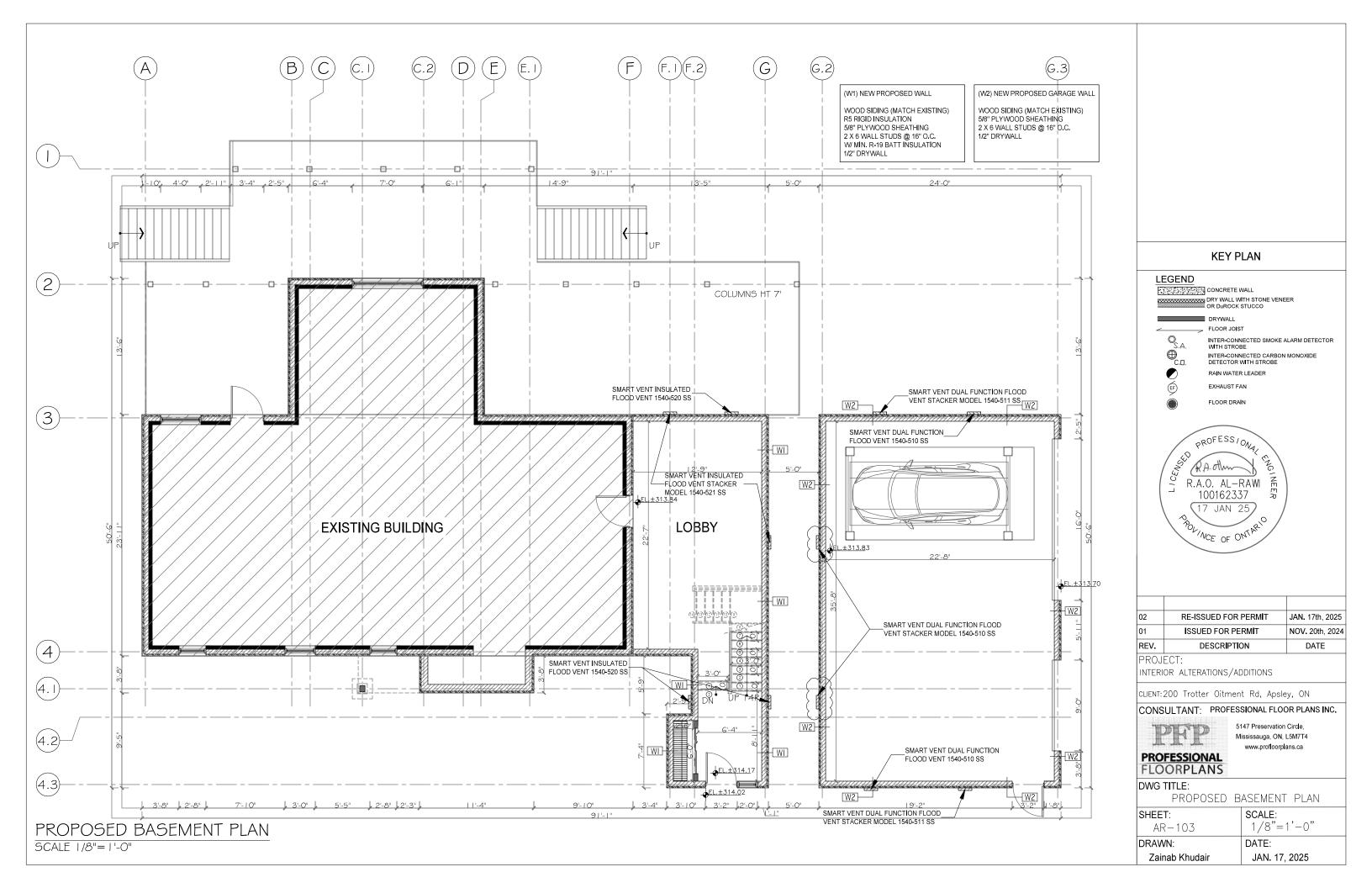
ALL SHOWER. TUB DOORS AND GLAZING TO BE TEMPERED GLASS AS PER CODE. PROVIDE EMERGENCY ESCAPE WINDOWS PER CODE IN BEDROOMS ELECTRICAL WORK SHALL BE DONE AS PER CODE

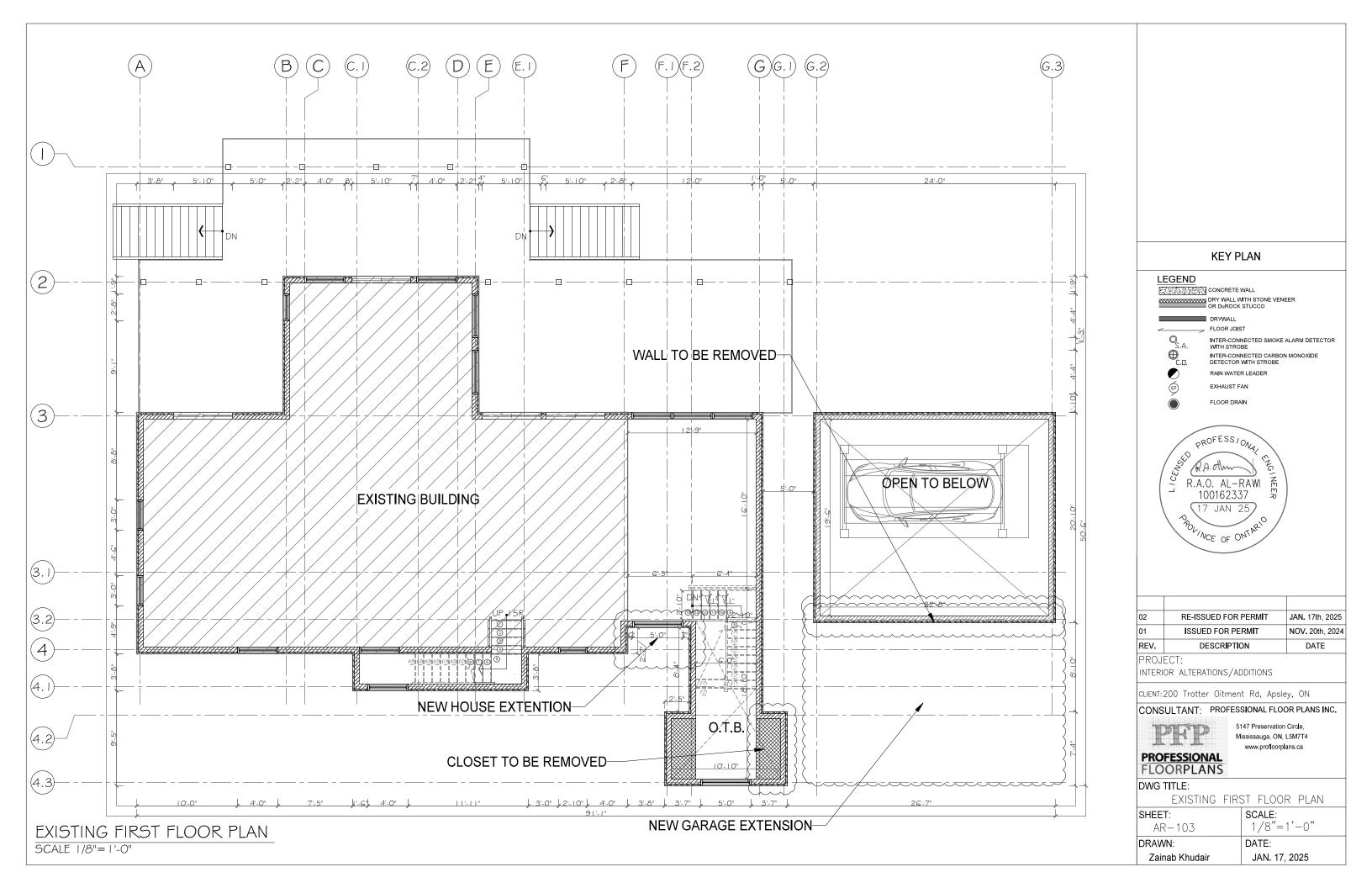


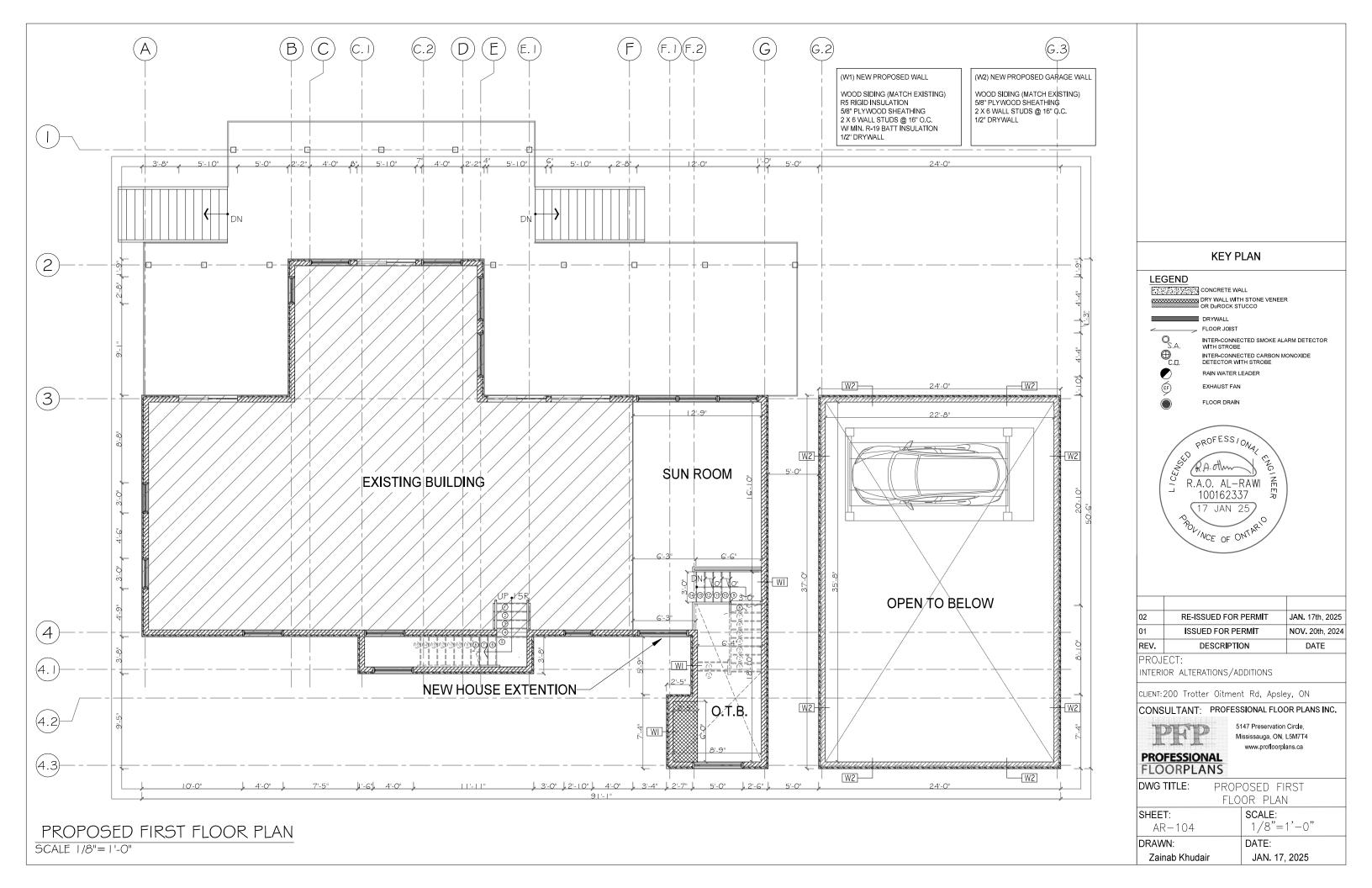


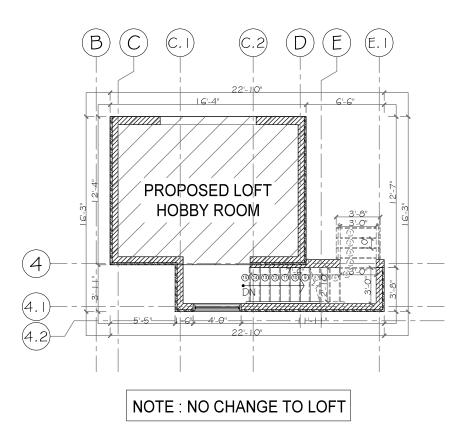






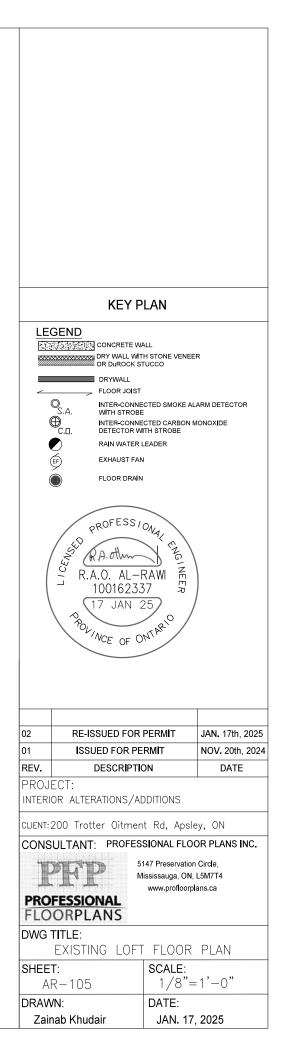


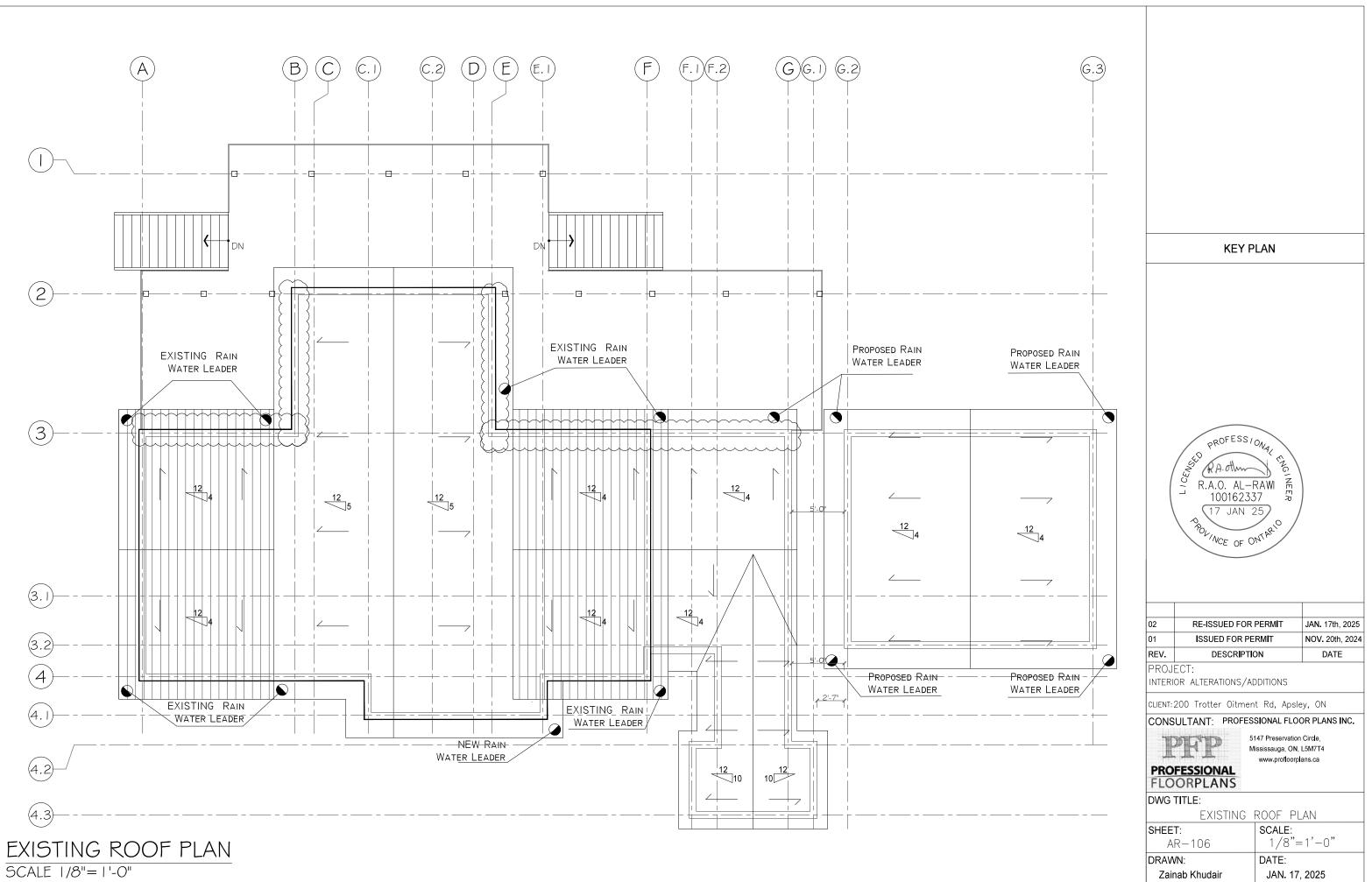


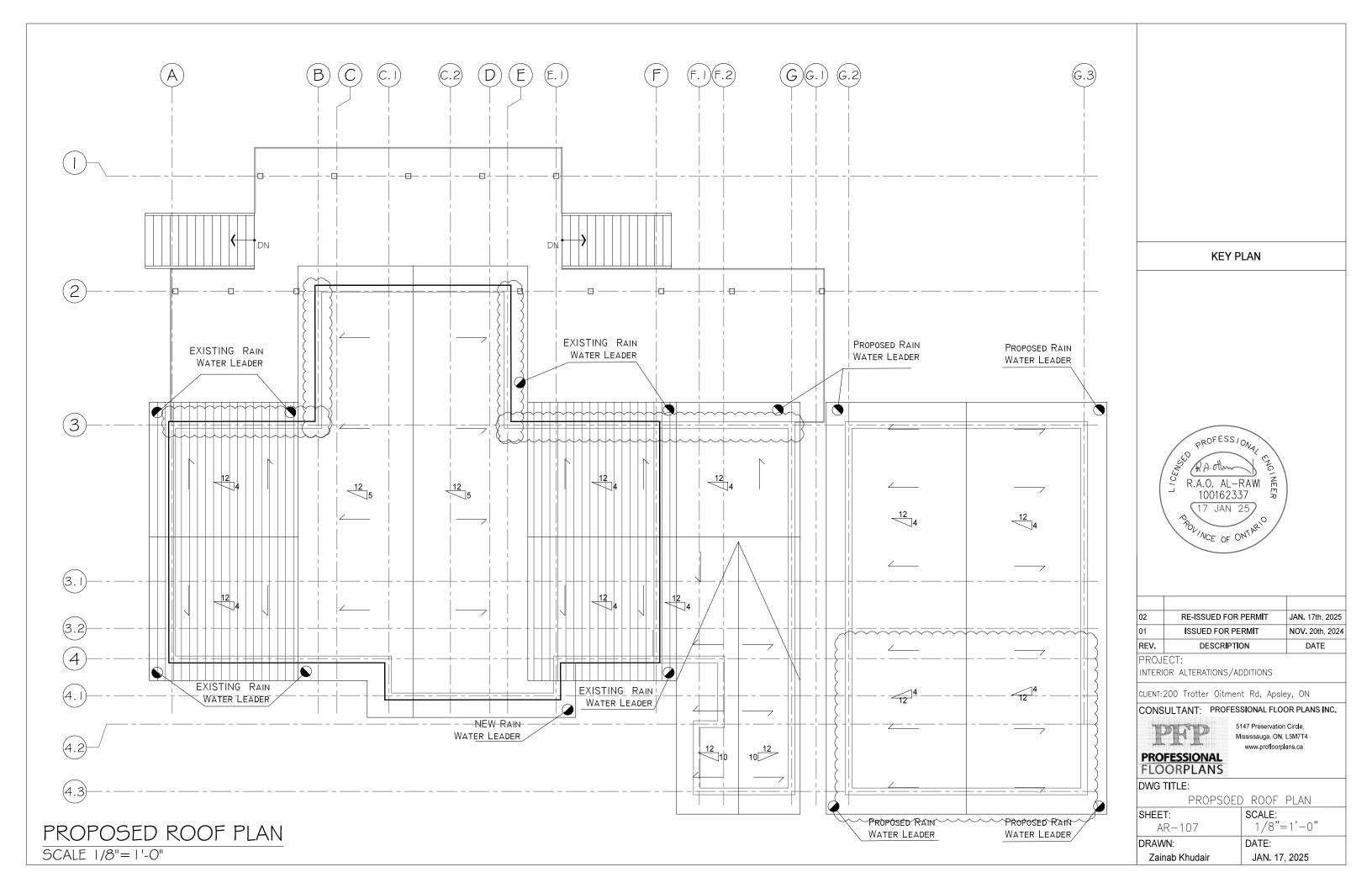


LOFT FLOOR PLAN

SCALE 1/8"=1'-0"

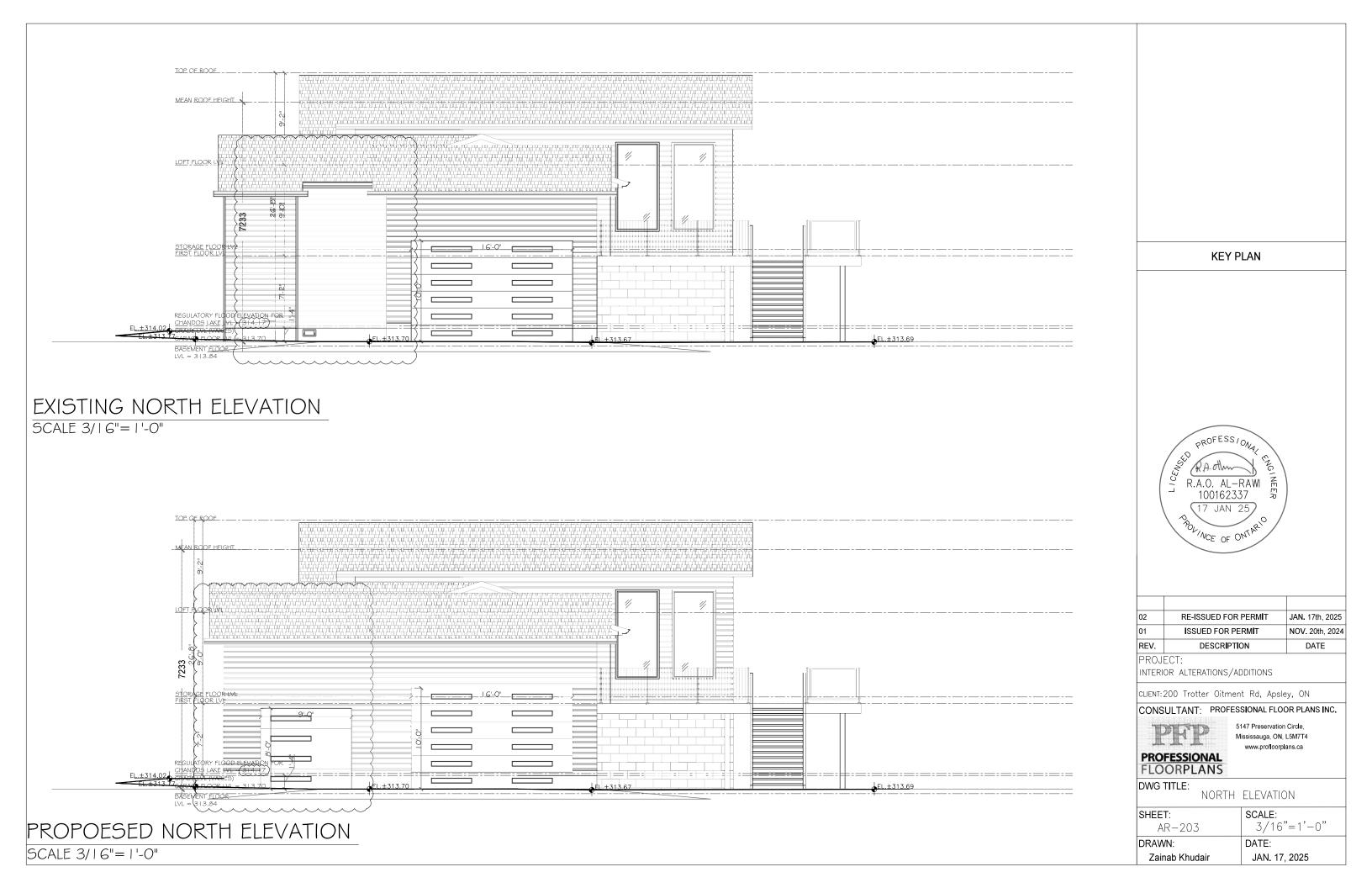








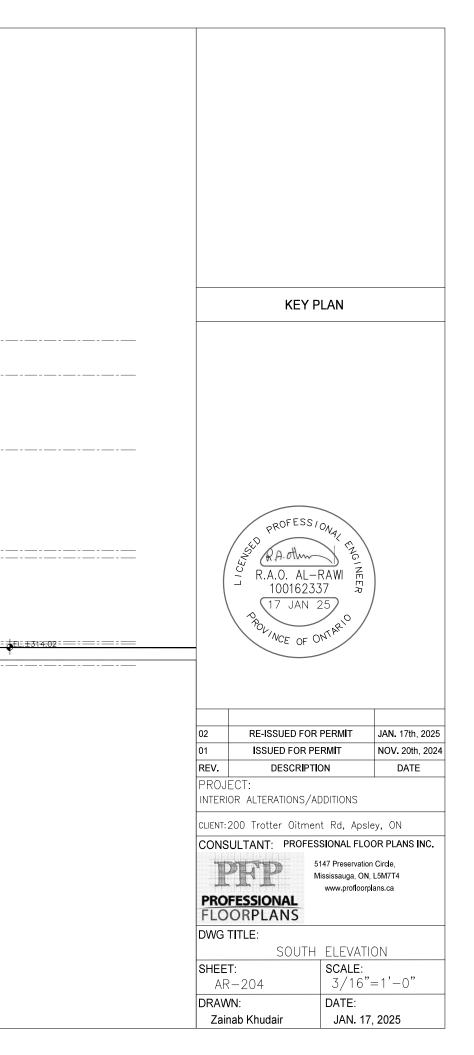


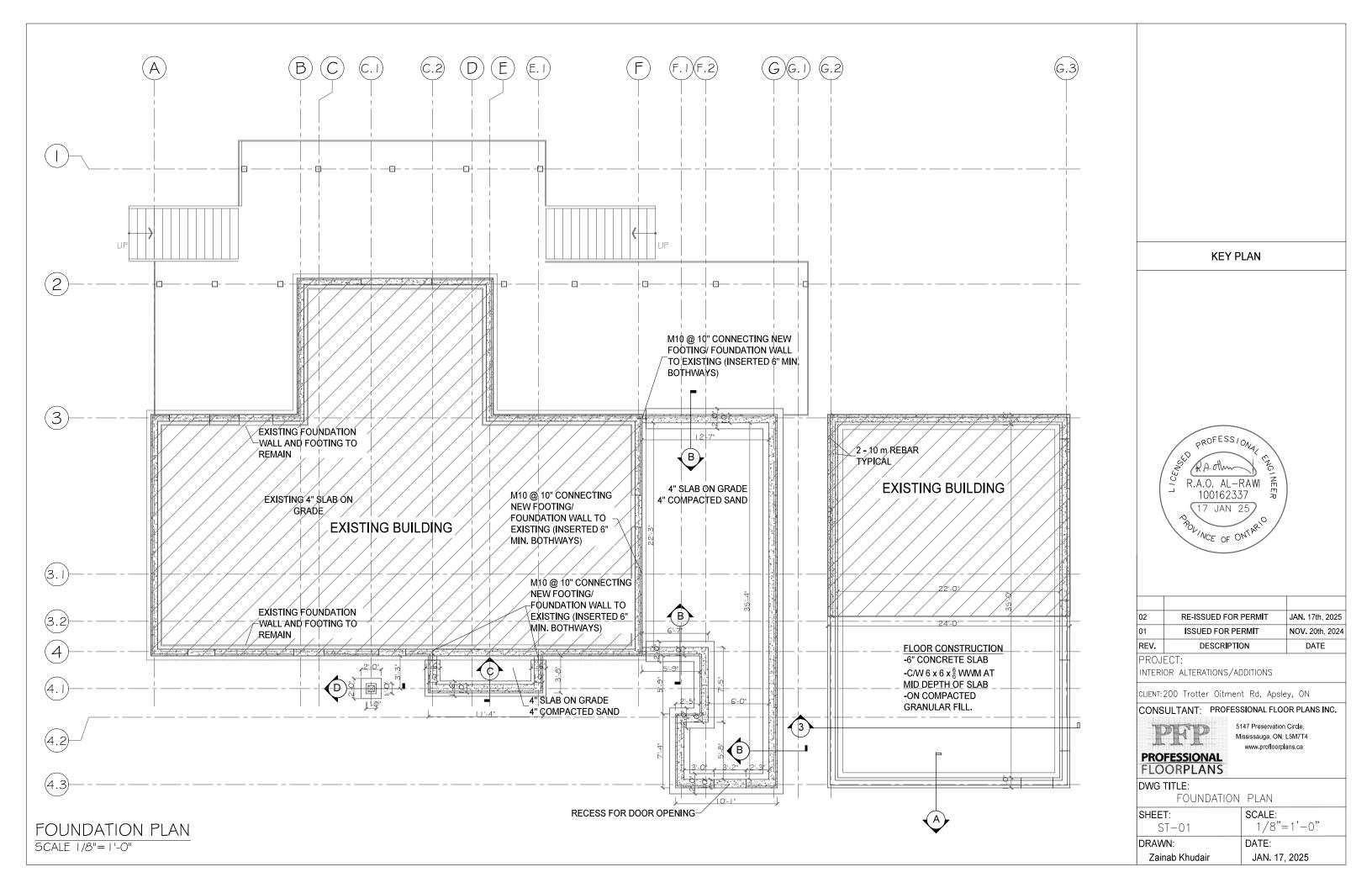


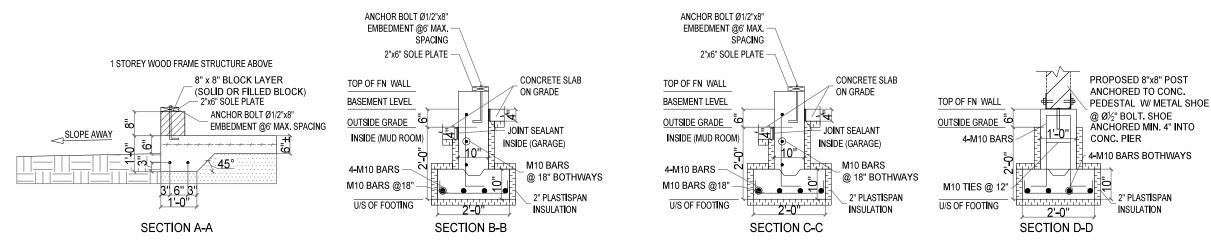


BASEMENT FLOOR LVL = 313.84

SOUTH ELEVATION







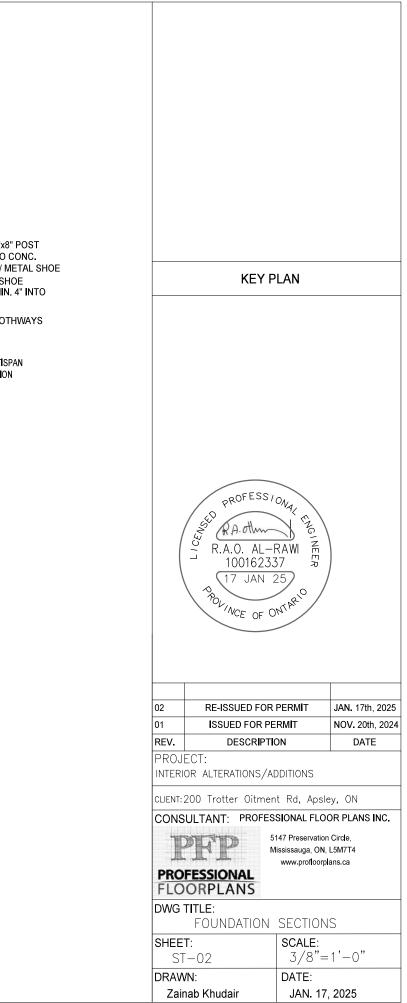
FOUNDATION NOTES :

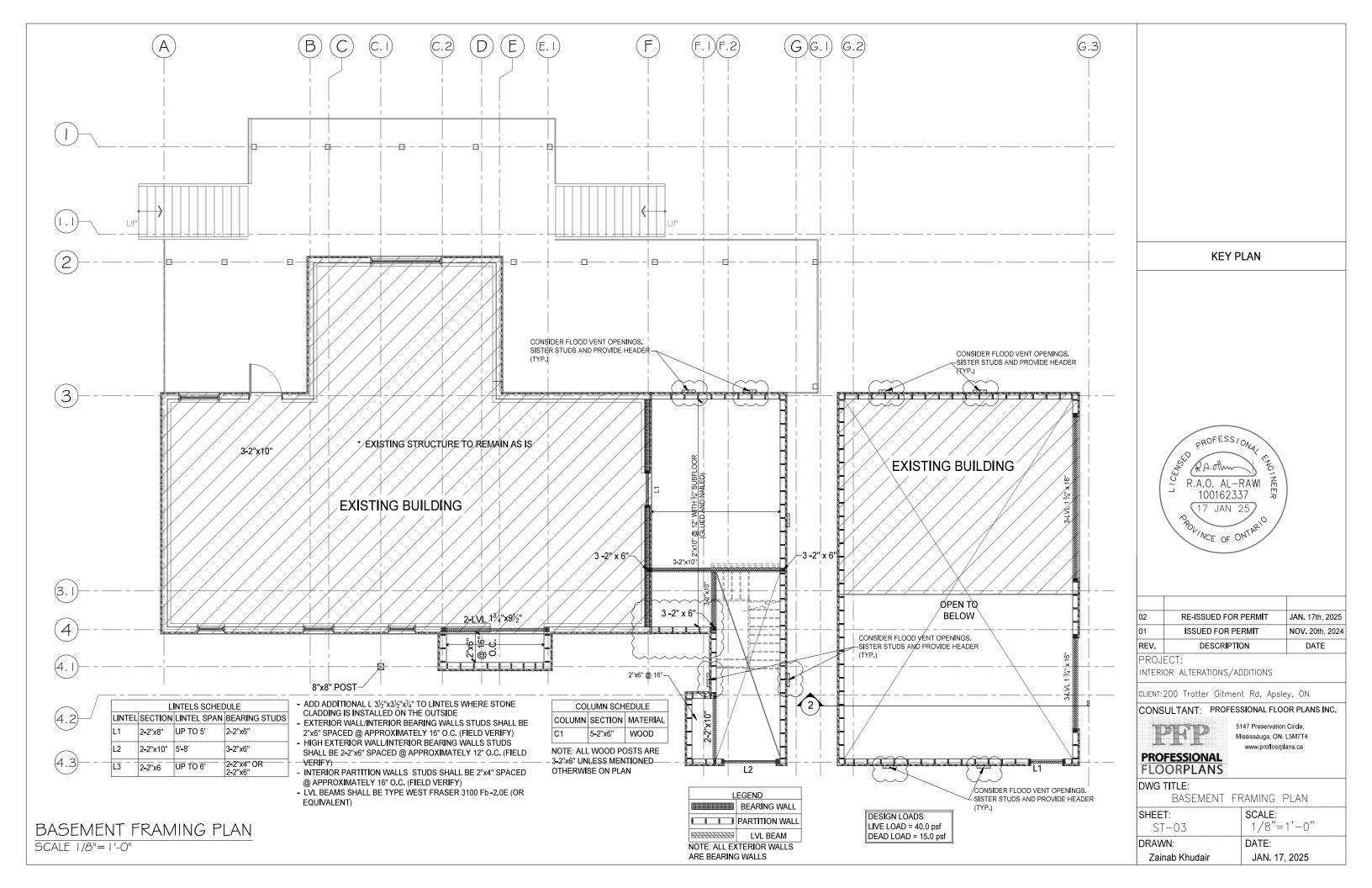
- SLAB THICKENING 12"x12" ALL ROUND PERIMETER ON COMPACTED LEVEL GRANULAR, ON UNDISTURBED SOIL. REMOVE ALL ORGANIC MATERIALS.
- 1/2"∅ A. BOLTS EMBEDDED INTO CONCRETE @ 6'c/c ± ALL AROUND PERIMETER. 2 ROWS OF 10M REBAR ALL AROUND PERIMETER WITH MINIMUM 3" OFF BOTTOM, 18" LAP LENGTHS. 6"x6"x6 GAUGE WWM THROUGHOUT SLAB WITH 3" COVER ±.
- THIS DESIGN HAS BEEN COMPLETE TO THE 2012 ONTARIO BUILDING CODE.
- BEAR SLAB ON GRANULAR FILL, 6" MINIMUM ON SOUND ORIGINAL SUBGRADE WITH 75 kPg(1500 PSF)
- CONCRETE STRENGTH TO BE 32 MPa, MINIMUM.

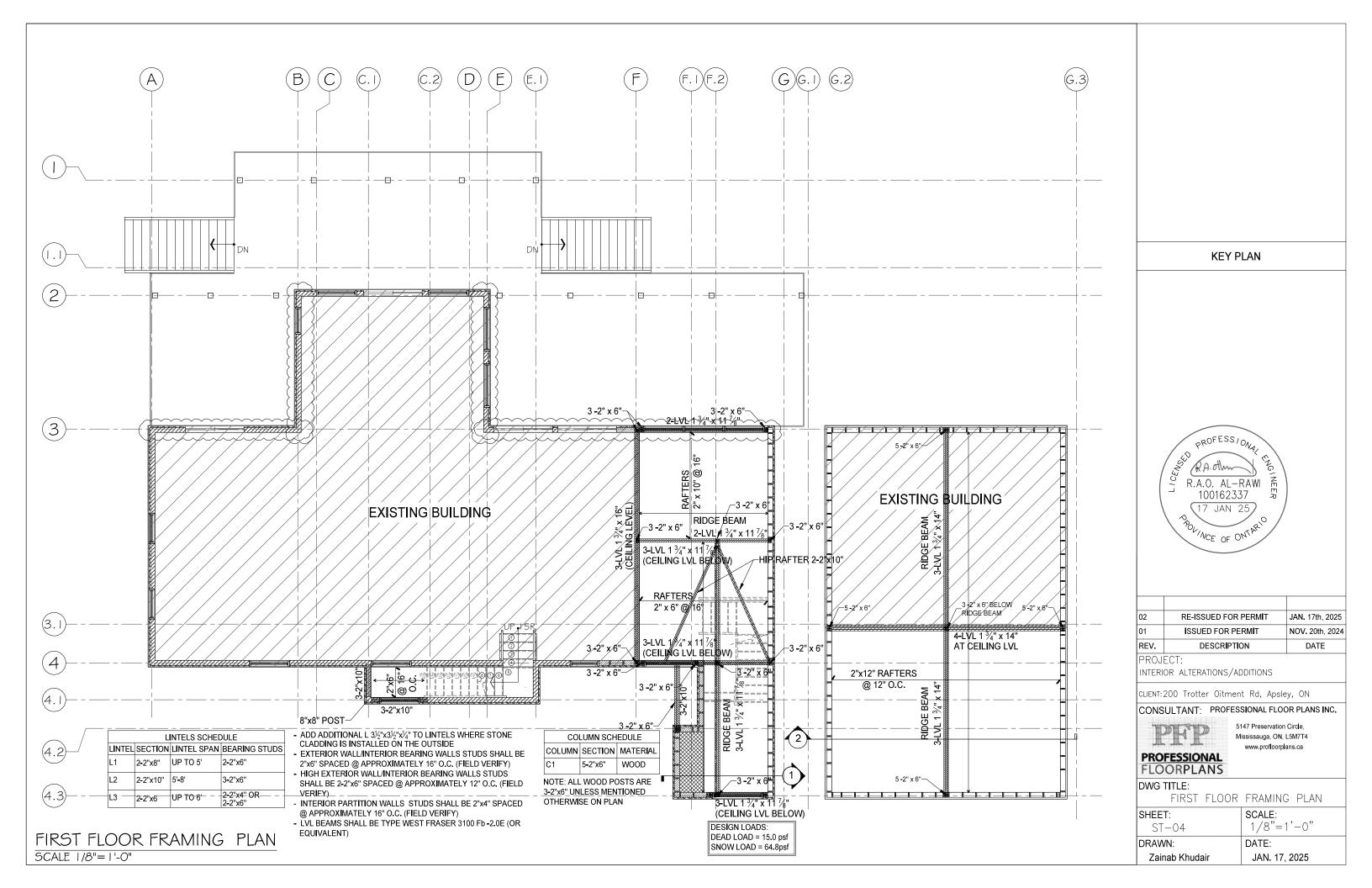
FOUNDATION NOTES :

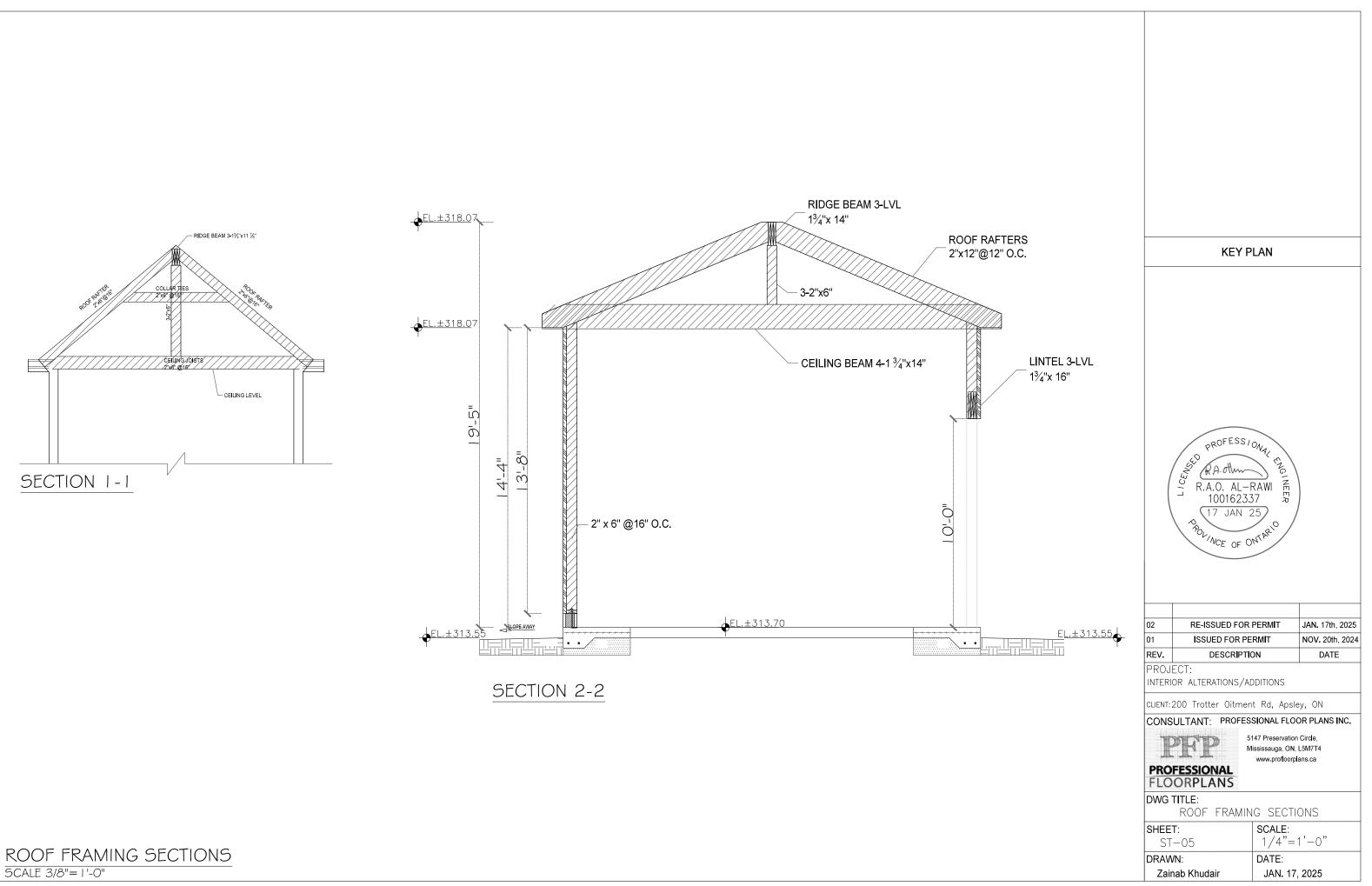
- SOIL BEARING CAPACITY MUST BE SUITABLE FOR DESIGNED FOUNDATION AND BE PLACED ON VIRGIN (UNDISTURBED) SOIL.
- FOUNDATION'S AND FOOTINGS HAVE BEEN DESIGNED ON A MINIMUM SOIL BEARING CAPACITY OF 1,500 PSF.
- CONCRETE STRENGTH SHALL BE MIN. 3,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS FOR ALL FOOTINGS, THICKENED SLABS AND CONCRETE SLABS NOT EXPOSED TO WEATHER. ALL CONCRETE EXPOSED TO WEATHER SHALL BE 4,650 PSI (32MPA) COMPRESSIVE STRENGTH WITH 6% +/- 1% ENTRAINED AIR. CONCRETE WORK AND PLACEMENT SHALL CONFORM TO THE LATEST SPECIFICATIONS.
- MINIMUM FOOTING DEPTH SHALL BE 24" BELOW FINISHED GRADE W/2" PLASTISPAN INSULATION
- REMOVE ALL FILL AND ORGANIC MATERIALS FROM AREAS TO RECEIVE FLOOR SLABS. PREPARE AREAS PER SOILS ENGINEER'S RECOMMENDATION.
- ALL REINFORCING BARS, DOWELS AND TIES SHALL CONFORM TO GRADE 60. REINFORCING STEEL SHALL BE CONTINUOUS AND SHALL HAVE MINIMUM 36 BAR DIAMETER LAP, UNLESS OTHERWISE SHOWN OR NOTED. ALL REINFORCING BARS SHALL BE DEFORMED.
- PROVIDE TEMPORARY BRACING AS REQUIRED TO INSURE THE STABILITY OF THE STRUCTURE UNTIL THE PERMANENT FRAMING IS IN PLACE.
- PROVIDE SILL PLATE ANCHOR BOLTS AT 6'-0" O.C. (MAX) AND 12" (MIN.) FROM END OF SILL PLATES. ANCHOR BOLTS SHALL BE 1/2" DIAMETER (MIN.) AND SHALL EXTEND 8" (MIN).
- PROVIDE RIGID INSULATION AT ALL PERIMETER SLAB ON GRADE CONDITIONS.
- WATERPROOF ALL BRICK, BLOCK AND POURED CONCRETE WALLS AT ANY LEVEL BELOW GRADE CONDITION UNLESS DIRECTED OTHERWISE BY THE SOILS
- PROVIDE 6 MIL VAPOR BARRIER UNDER ALL CONCRETE SLAB ON GRADE CONDITIONS FOR BASEMENT AREA AND ATTACHED GARAGE AREA

FOUNDATION SECTIONS









SCALE 3/8"=1'-0"



Appendix C

Letter from Raed Al-Rawi (P. Eng.) to CVCA





PFP-2025-0206-01

Date: 02/06/2025

- To: Crowe Valley Conservation Authority
 Planning & Regulations
 70 Hughes Lane, Marmora, Ontario, K0K 2M0
 (613) 472-3137, www.crowevalley.com
- Attn.: Andrew McIntyre Regulations Officer & Source Water Protection Tel: (613) 472-3137, Cell: (613) 847-0275, email: <u>andrew.mcintyre@crowevalley.com</u>
- Re: Permit Application 011/25 200 Trotter Oitment Road Part of Lot 9, Concession 10, Township of North Kawartha

Dear Mr. McIntyre,

Reference to denial letter dated February, 3rd, 2025, we would like to provide our reply/clarification as below:

The proposal is to extend the existing garage as described below:

Lot area = 4,149.36 sq,m

- Existing garage area = 46.45 sq.m (1.19% of lot area)
- Proposed garage extension area = 36.05 sq.m (0.87% of lot area)
- Proposed total garage area = 82.50 sq.m (1.99% of lot area)

Garage finished floor level = 313.70 m Regulated flood level CGVD (2013) = 314.17 m Garage finished floor level below regulated level = 0.47 m

The following points were carefully studied while proposing the garage extension:



Safety of public:

The garage floor is below the flood level and it is designed as a wet flood proof structure taking into consideration the following points:

- The garage is not a livable space and used for parking cars and boats.
- There are no plumbing installations inside the garage
- There are no electrical installations at the lower part of the garage that may be affected by flood. The lowest electrical plugs will be installed at Elevation 314.90m (higher than 314.17m)

Structural safety and stability:

The following measures were taken to ensure structural safety and stability

- Detailed structural calculations are made to confirm that the garage footings and structure are capable of resisting uplift and lateral flood forces/pressures with ample factor of safety (refer to Structural Report by PFP, Rev. 02, Jan 23rd, 2025)
- Smart vent dual function flood vent stackers will be installed within the flood level as an extra safety. These vents will be installed at an invert level of approximately 313.90m. The selected area of vents exceeds the requirements for water flow based on the area of the garage.

Garage area = 82.50 sq.m Smart vent flood coverage capacity (FLOOD VENT 1540-510 SS) = 18.58 sq.m (200 sq.ft) Smart vent flood coverage capacity (FLOOD VENT 1540-511 SS) = 37.16 sq.m (400 sq.ft) Provided vents: 4 No. 1540-510 SS and 2 No. 1540-511 SS Provided capacity = 4x18.58 + 2x37.16 = 148.64 sq.m > 82.5 sq.m (o.k.)

Adverse effect on flood level:

The proposed addition is for a non-livable space of only 0.87% of the lot area and associated with smart vents that ensure flow of flood water within the structure smoothly and will have a negligible effect on the flood levels. The proposed addition will not create a flood hazard that may adversely affect surrounding areas/properties.



We hope that the clarifications will satisfy the CVCA Watershed Advisory Board to approve the application.

Kindly feel free to contact the undersigned with any questions

Sincerely yours

R.A. other

Raed Al-Rawi, P. Eng. PhD., M. Sc., B. Sc., Civil Engineering General Manager 289-937-6442



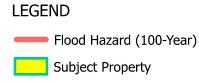
Appendix D

Maps



CROWE VALLEY CONSERVATION AUTHORITY Permit #011/25





3 February 2025

Produced by Crowe Valley Conservation Authority with data supplied under license by Ontario Geospatial Data Exchange and local County data. For demonstrative purposes only - not to be used as an official source of data.

0 115 230 460 Metres

0 487.5 975 1,950 Feet





15

30

60 Metres

CROWE VALLEY CONSERVATION AUTHORITY Permit #011/25



0



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CROWE VALLEY CONSERVATION AUTHORITY Permit #011/25





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0 5 10 20 Metres

0 30 60 120 Feet





CROWE VALLEY CONSERVATION AUTHORITY Permit #011/25





3 February 2025

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0 5 10 20 Metres

0 30 60 120 Feet







Appendix E

Ontario Regulation 41/24



Français

ONTARIO REGULATION 41/24

made under the

CONSERVATION AUTHORITIES ACT

Made: December 5, 2023 Filed: February 16, 2024 Published on e-Laws: February 16, 2024 Published in *The Ontario Gazette*: March 2, 2024

PROHIBITED ACTIVITIES, EXEMPTIONS AND PERMITS

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Definitions

1. (1) In section 28 of the Act and in this Regulation,

"development activity" means,

- (a) the construction, reconstruction, erection or placing of a building or structure of any kind,
- (b) any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure,
- (c) site grading, or
- (d) the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere; ("activité d'aménagement")

"hazardous land" means land that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock; ("terrain dangereux")

"watercourse" means a defined channel, having a bed and banks or sides, in which a flow of water regularly or continuously occurs; ("cours d'eau")

"wetland" means land that,

- (a) is seasonally or permanently covered by shallow water or has a water table close to or at its surface,
- (b) directly contributes to the hydrological function of a watershed through connection with a surface watercourse,
- (c) has hydric soils, the formation of which have been caused by the presence of abundant water, and
- (d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which have been favoured by the presence of abundant water. ("terre marécageuse")

(2) The definition of "wetland" in subsection (1) does not include periodically soaked or wet land used for agricultural purposes which no longer exhibits a wetland characteristic referred to in clause (c) or (d) of that definition.

Prohibited activities, subparagraph 2 iii of s. 28 (1) of the Act

2. (1) For the purposes of subparagraph 2 iii of subsection 28 (1) of the Act, river or stream valleys include river or stream valleys that have depressional features associated with a river or stream, whether or not they contain a watercourse, the limits of which are determined as follows:

- 1. Where the river or stream valley is apparent and has stable slopes, the valley extends from the stable top of the bank, plus 15 metres, to a similar point on the opposite side.
- 2. Where the river or stream valley is apparent and has unstable slopes, the valley extends from the predicted long term stable slope projected from the existing stable slope or, if the toe of the slope is unstable, from the predicted location of the toe of the slope as a result of stream erosion over a projected 100-year period, plus 15 metres, to a similar point on the opposite side.
- 3. Where the river or stream valley is not apparent, the valley extends,
 - (i) to the furthest of the following distances:
 - A. the distance from a point outside the edge of the maximum extent of the flood plain under the applicable flood event standard to a similar point on the opposite side, and
 - B. the distance from the predicted meander belt of a watercourse, expanded as required to convey the flood flows under the applicable flood event standard to a similar point on the opposite side, and
 - (ii) an additional 15-metre allowance on each side, except in areas within the jurisdiction of the Niagara Peninsula Conservation Authority.

(2) For the purposes of subparagraph 2 iv of subsection 28 (1) of the Act, areas adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to inland lakes that may be affected by flooding, erosion or dynamic beach hazards include,

- (a) the area starting from the furthest offshore extent of the authority's boundary to the furthest of the following distances:
 - (i) the 100-year flood level, plus the appropriate allowance for wave uprush, and, if necessary, for other waterrelated hazards, including ship-generated waves, ice piling and ice jamming, except in respect of Wanapitei Lake in the Nickel District Conservation Authority, the applicable flood event standard for that lake being the one set out in item 1 of Table 16 of Schedule 1,
 - (ii) the predicted long-term stable slope projected from the existing stable toe of the slope or from the predicted location of the toe of the slope as that location may have shifted as a result of shoreline erosion over a 100-year period, and
 - (iii) where a dynamic beach is associated with the waterfront lands, an allowance of 30 metres inland to accommodate dynamic beach movement, except in the areas within the jurisdictions of the Mattagami Region Conservation Authority, the Nickle District Conservation Authority and the North Bay-Mattawa Conservation Authority where the allowance is 15 metres inland; and
- (b) the area that is an additional 15 metres allowance inland from the area described in clause (a).

(3) For the purposes of subparagraph 2 v of subsection 28 (1) of the Act, other areas in which development activities are prohibited are the areas within an authority's area of jurisdiction that are within 30 metres of a wetland.

Applicable Flood Event Standards

3. The applicable flood event standards with respect to an authority, for the purposes of paragraph 3 of subsection 2 (1) and to determine the maximum susceptibility to flooding of lands or areas in the area of jurisdiction of an authority are the standards specified in Schedule 1 as those standards are described in Schedule 2.

Maps of regulated areas

4. (1) An authority shall develop maps depicting the areas within the authority's area of jurisdiction where development activities are prohibited under paragraph 2 of subsection 28 (1) of the Act which shall be filed at the head office of the authority and made available to the public on the authority's website, and by any other means that the authority considers advisable.

- (2) At least once annually, the authority shall,
- (a) review the maps referred to in subsection (1) and determine if updates to the maps are required;
- (b) make and file such updates to the maps at its head office if required; and
- (c) make the updated maps available to the public on its website and by any other means it considers advisable.

(3) Where new information or analysis becomes available that may result in significant updates to the areas where development activities are prohibited under paragraph 2 of subsection 28 (1) of the Act, including enlargements or reductions

to such areas, the authority shall ensure that stakeholders, municipalities and the public are notified of the proposed changes in any manner that the authority considers advisable, including making any relevant information or studies available online at least 30 days prior to an authority meeting during which the proposed changes are on the agenda.

(4) Where significant changes to the areas where development activities are prohibited have been made in accordance with subsection (3), the authority shall promptly update the maps described in subsection (1).

(5) For greater certainty, in case of a conflict regarding the boundaries of the areas where development activities are prohibited under paragraph 2 of subsection 28 (1) of the Act, the description of those areas in that paragraph and in section 2 of this Regulation prevail over the depiction of the areas in the maps referred to in subsection (1) of this section.

Exceptions

5. Paragraph 2 of subsection 28 (1) of the Act does not apply to,

- (a) the construction, reconstruction, erection or placement of,
 - (i) a seasonal or floating dock that,
 - (A) is 10 square metres or less,
 - (B) does not require permanent support structures, and
 - (C) can be removed in the event of flooding,
 - (ii) a rail, chain-link or panelled fence with a minimum of 75 millimetres of width between panels, that is not within a wetland or watercourse,
 - (iii) agricultural in-field erosion control structures that are not within and that do not have any outlet of water directed or connected to a watercourse, wetland or river or stream valley,
 - (iv) a non-habitable accessory building or structure that,
 - (A) is incidental or subordinate to the principal building or structure,
 - (B) is 15 square metres or less, and
 - (C) is not within a wetland or watercourse, or
 - (v) an unenclosed detached deck or patio that is 15 square metres or less, is not placed within a watercourse or wetland and does not utilize any method of cantilevering;
- (b) the installation of new tile drains that are not within a wetland or watercourse, within 30 metres of a wetland or within 15 metres of a watercourse, and that have an outlet of water that is not directed or connected to a watercourse, wetland or river or stream valley, or the maintenance or repair of existing tile drains;
- (c) the installation, maintenance or repair of a pond for watering livestock that is not connected to or within a watercourse or wetland, within 15 metres of a wetland or a watercourse, and where no excavated material is deposited within an area where subsection 28 (1) of the Act applies;
- (d) the maintenance or repair of a driveway or private lane that is outside of a wetland or the maintenance or repair of a public road, provided that the driveway or road is not extended or widened and the elevation, bedding materials and existing culverts are not altered;
- (e) the maintenance or repair of municipal drains as described in, and conducted in accordance with the mitigation requirements set out in the Drainage Act and the Conservation Authorities Act Protocol, approved by the Minister and available on a government of Ontario website, as it may be amended from time to time; and
- (f) the reconstruction of a non-habitable garage with no basement, if the reconstruction does not exceed the existing footprint of the garage and does not allow for a change in the potential use of the garage to create a habitable space.

Pre-submission consultation

6. (1) Prior to submitting an application for a permit under section 28.1 of the Act, an authority and the applicant may engage in pre-submission consultation for the purposes of confirming the requirements of a complete application to obtain a permit for the activity in question, which may include,

- (a) requests by the authority to the applicant for,
 - (i) initial information on the proposed activity such as a description of the project and any associated plans, or
 - (ii) details about the property upon which the activities are proposed to be carried out, including copies of plans, maps or surveys; or
- (b) meetings between the authority and the applicant prior to the submission of an application, including any site visits to the property where the activities are proposed to be carried out.

(2) If the applicant requests a pre-submission consultation under subsection (1), the authority is required to engage in the pre-submission consultation.

Application for permit

- 7. (1) An application for a permit under section 28.1 of the Act shall be submitted to an authority and shall include,
- (a) a plan of the area showing the type and location of the proposed development activity or a plan of the area showing plan view and cross-section details of an activity to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse, or change or interfere with a wetland;
- (b) the proposed use of any buildings and structures following completion of the development activity or a statement of the purpose of an activity to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse or to change or interfere with a wetland;
- (c) the start and completion dates of the development activity or other activity;
- (d) a description of the methods to be used in carrying out an activity to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse, or change or interfere with a wetland;
- (e) the elevations of existing buildings, if any, and grades and the proposed elevations of any buildings and grades after the development activity or other activity;
- (f) drainage details before and after the development activity or other activity;
- (g) a complete description of any type of fill proposed to be placed or dumped;
- (h) a confirmation of authorization for the proposed development activity or other activity given by the owner of the subject property, if the applicant is not the owner; and
- (i) any other technical information, studies or plans that the authority requests including information requested during presubmission consultations between the authority and the applicant.

(2) Upon receipt of the information required under subsection (1) and payment by the applicant of the fee charged by the authority under subsection 21.2 (4) of the Act, the authority shall notify the applicant in writing, within 21 days, whether or not the application complies with subsection 28.1 (3) of the Act and is deemed to be a complete application.

(3) If the authority notifies an applicant under subsection (2) that the application is complete, the authority shall not require new studies, technical information or plans under clause (1) (i) from the applicant to make a determination on the application, unless agreed to by the authority and the applicant. For greater certainty, the authority may ask the applicant for clarification or further details regarding any matter related to the application.

Request for review

- 8. (1) An applicant may request a review by the authority if,
- (a) the applicant has not received a notice from the authority within 21 days in accordance with subsection 7 (2);
- (b) the applicant disagrees with the authority's determination that the application for a permit is incomplete; or
- (c) the applicant is of the view that a request by the authority for other information, studies or plans under clause 7 (1) (i) is not reasonable.

(2) A review requested by an applicant under subsection (1) shall be completed by the authority no later than 30 days after it is requested and the authority shall, as the case may be,

- (a) confirm that the application meets the requirements of subsection 7 (1) and is complete or provide reasons why the application is incomplete; or
- (b) provide reasons why a request for other information, studies or plans under clause 7 (1) (i) is reasonable or withdraw the request for all or some of the information, studies or plans.

Conditions of permits

9. (1) An authority may attach conditions on a permit issued under section 28.1 of the Act only if, in the opinion of the authority, the conditions,

- (a) assist in preventing or mitigating any effects on the control of flooding, erosion, dynamic beaches or unstable soil or bedrock;
- (b) assist in preventing or mitigating any effects on human health or safety or any damage or destruction of property in the event of a natural hazard; or
- (c) support the administration or implementation of the permit, including conditions related to reporting, notification, monitoring and compliance with the permit.

(2) In addition to the conditions referred to in subsection (1), the Lake Simcoe Region Conservation Authority may attach conditions to a permit that relate to designated policies and other policies in the Lake Simcoe Protection Plan that apply to the issuance of the permit.

Lake Simcoe Protection requirements

10. For the purpose of clause 28.1 (1) (c) of the Act, a decision to issue a permit within the area of jurisdiction of the Lake Simcoe Region Conservation Authority shall,

- (a) conform with any designated policies in the Lake Simcoe Protection Plan that apply to the issuance of the permit; and
- (b) have regard to any other policies in the Lake Simcoe Protection Plan that apply to the issuance of the permit.

Period of validity of permits and extensions

11. (1) The maximum period of validity of a permit issued under sections 28.1, 28.1.1 and 28.1.2 of the Act, including any extension, is 60 months.

(2) If a permit is issued for less than the maximum period of validity, the holder of a permit may, at least 60 days before the expiry of the permit, submit an application for an extension of the permit to,

- (a) the authority that issued the permit, in the case of permits issued under section 28.1 or 28.1.2 of the Act; or
- (b) the Minister, in the case of permits issued under section 28.1.1 of the Act.

(3) An authority or the Minister, as the case may be, may approve an extension of the period of validity of a permit that was issued for a period of less than 60 months but the total period of validity of the permit, including the extension, shall not exceed 60 months.

(4) If an authority intends to refuse a request for an extension, the authority shall give notice of intent to refuse to the holder of the permit, indicating that the extension will be refused unless the holder requests a hearing under subsection (5).

(5) Within 15 days of receiving a notice of intent to refuse a request for an extension, the holder of the permit may submit a written request for a hearing to the authority.

(6) If a request for hearing is submitted under subsection (5), the authority shall hold the hearing within a reasonable time, and shall give the holder at least five days notice of the date of the hearing.

- (7) After holding a hearing under subsection (6), the authority may,
- (a) confirm the refusal of the extension; or
- (b) grant an extension for such period of time as it deems appropriate, as long as the total period of validity of the permit does not exceed the applicable maximum period specified in subsection (1).

Policy and procedure documents re permits

12. Each authority shall develop policy and procedure documents with respect to permit applications and reviews that, at a minimum, include the following:

- 1. Additional details regarding the pre-submission consultation process described in section 6 as well as additional details related to complete permit application requirements.
- 2. Procedures respecting the process for a review under section 8.
- 3. Standard timelines for the authority to make a decision on permit applications following a notification that an application is complete under subsection 7 (2), as the authority determines advisable.
- 4. Any other policies and procedures, as the authority considers advisable, for the purpose of administering the issuance of permits under Part VI of the Act.
- 5. A process for the periodic review and updating of the authority's policy and procedure documents, including procedures for consulting with stakeholders and the public during the review and update process, as the authority considers advisable.

Commencement

13. This Regulation comes into force on the later of the day subsection 25 (2) of Schedule 6 to the *Protect, Support* and *Recover from COVID-19 Act (Budget Measures), 2020* comes into force and the day this Regulation is filed.

SCHEDULE 1 FLOOD EVENT STANDARDS

1. For the following conservation authorities, the applicable flood event standards are those specified in Table 1 below:

1. Ausable Bayfield Conservation Authority.

- Catfish Creek Conservation Authority.
 Credit Valley Conservation Authority.
- Ganaraska Region Conservation Authority.
- 5. Grand River Conservation Authority.
- 6. Halton Region Conservation Authority.
- 7. Kettle Creek Conservation Authority.
- 8. Maitland Valley Conservation Authority.
- 9. Saugeen Valley Conservation Authority.
- 10. Toronto and Region Conservation Authority.

TABLE 1

Item	Areas	Applicable Flood Event Standards	
1.	All	The Hurricane Hazel Flood Event Standard,	
	areas	the 100 Year Flood Event Standard and the	
		100-year flood level plus wave uprush	

- 2. For the following conservation authorities, the applicable flood event standards are those specified in Table 2 below:
- 1. Cataraqui Region Conservation Authority.
- 2. Long Point Region Conservation Authority.
- 3. Quinte Region Conservation Authority.
- 4. Raisin Region Conservation Authority.
- 5. South Nation River Conservation Authority.

TABLE 2

Item	Areas	Applicable Flood Event Standards	
1.	All	The 100 Year Flood Event Standard and the	
	areas	100-year flood level plus wave uprush	

- 3. For the following conservation authorities, the applicable flood event standards are those specified in Table 3 below:
- 1. Mississippi Valley Conservation Authority.
- 2. Rideau Valley Conservation Authority.

			TABLE 3
Item	Areas	Applicable Flood Event Standards	
1.	All areas	The 100 Year Flood Event Standard]

4. For the following conservation authorities, the applicable flood event standards are those specified in Table 4 below:

- 1. Mattagami Region Conservation Authority.
- 2. Nottawasaga Valley Conservation Authority.
- 3. Sault Ste. Marie Region Conservation Authority.

Item	Areas	Applicable Flood Event Standards	
1.		The 100 Year Flood Event Standard, the	
	areas	Timmins Flood Event Standard, and the 100-	
		year flood level plus wave uprush	

5. For the Crowe Valley Conservation Authority, the applicable flood event standards are those specified in Table 5 below:

			TABLE 5
Item	Areas	Applicable Flood Event Standards	
1.	All	The 100 Year Flood Event Standard, the	

areas	Timmins Flood Event Standard, the Hurricane
	Hazel Flood Event Standard and the 100-year
	flood level

6. For the Kawartha Region Conservation Authority, the applicable flood event standards are those specified in Table 6 below:

			TABLE 6
Item	Areas	Applicable Flood Event Standards	
1.	All	The 100 Year Flood Event Standard and the	
	areas	Timmins Flood Event Standard	

7. For the Central Lake Ontario Conservation Authority, the applicable flood event standards are those specified in Table 7 below:

			TABLE 7
Item	Areas	Applicable Flood Event	
		Standards	
1.	Pringle Creek and Darlington	The 100 Year Flood	
		Event Standard	
2.	Lake Ontario in the Great	The 100-year flood	
	Lakes-St. Lawrence River	level plus wave uprush	
	System	· ·	
3.	All other areas	The Hurricane Hazel	
		Flood Event Standard	

8. For the Essex Region Conservation Authority, the applicable flood event standards are those specified in Table 8 below:

		,
Item	Areas	Applicable
		Flood Event
		Standards
1.	The main branch and the east branch	The March
	(Silver Creek) of the Ruscom River,	1985 Flood
	and its tributaries within the Town of	Event
	Lakeshore and the Town of Kingsville	Standard
	and the main and north branch of	
	Canard River in the Town of LaSalle,	
	Concessions I and II, and on the main	
	branch of the Canard River in the	
	Town of Amherstburg, Concessions I,	
	II, III and IV	
2.	All other areas	The 100
		Year Flood
		Event
		Standard

9. For the Grey Sauble Conservation Authority, the applicable flood event standards are those specified in Table 9 below:

			TABLE 9
Item	Areas	Applicable Flood	
		Event Standards	
1.	The Sauble River Watershed	The 100 Year Flood	
		Event Standard	
2.	Lake Huron and Georgian Bay	The 100-year flood	
	in the Great Lakes-St. Lawrence	level plus wave	
	River System	uprush	
3.	All other watersheds	The Timmins Flood	
		Event Standard	

10. For the Hamilton Region Conservation Authority, the applicable flood event standards are those specified in Table 10 below:

Item	Areas	Applicable Flood Event Standards
1.	Watercourses WCO, WCI, WC2, 3, 4, 5.0, 5.1, 6.0, 6.1, 6.2, 6.3, 6.4, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, 10.1, 10.2, 11.0 and 12.0 as indicated on Map Figure 1 of Project 98040-A, Stoney Creek, Stormwater Management Assessment, prepared by Philips Engineering and located at the Hamilton Region Conservation Authority head office and Hamilton Harbour in the Great Lakes- St. Lawrence River System	The 100- year flood level
2.	Lake Ontario in the Great Lakes-St. Lawrence River System	The 100- year flood level plus wave uprush
3.	All other areas	The Hurricane Hazel Flood Event Standard

11. For the Lake Simcoe Region Conservation Authority, the applicable flood event standards are those specified in Table 11 below:

		7	TABLE 11
Item	Areas	Applicable Flood Event Standards	
1.	Bunker's Creek and Sophia Creek	The 100 Year Flood Event Standard	
2.	Talbot River and the Trent-Severn waterway	The Timmins Flood Event Standard	
3.	Lake Simcoe	The 100-year flood level plus wave uprush	
4.	All other areas	The Hurricane Hazel Flood Event Standard	

12. For the Lakehead Region Conservation Authority, the applicable flood event standards are those specified in Table 12 below:

		r	TABLE 12
Item	Areas	Applicable Flood Event Standards	
1.	The main channel of the Kaministiquia River	The 100 Year Flood Event	
2.	Lake Superior in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush	
3.	All other areas	Timmins Flood Event Standard	

13. For the Lower Thames Valley Conservation Authority, the applicable flood event standards are those specified in Table 13 below:

		7	TABLE 13
Item	Areas	Applicable Flood Event Standards	
1.	All	The 1937 Regulatory Flood Event Standard and	
	areas	the 100-year flood level plus wave uprush	

14. For the Lower Trent Region Conservation Authority, the applicable flood event standards are those specified in Table 14 below:

TABLE 14

Item	Areas	Applicable Flood Event Standards
1.	The main	The rainfall, snowmelt, or a
	channels of	combination of rainfall and
	Rice Lake and	snowmelt, that would produce the
	Trent River	water surface elevations above
		Canadian Geodetic Datum described
		in Table 1 of Schedule 3
2.	Lake Ontario in	The 100-year flood level plus wave
	the Great	uprush
	Lakes-St.	-
	Lawrence River	
	System	
3.	All other areas	The Timmins Flood Event Standard

15. For the Niagara Peninsula Conservation Authority, the applicable flood event standards are those specified in Table 15 below:

Item	Areas	Applicable Flood Event Standards
1.	The watersheds associated with Shriner's Creek, Ten Mile Creek and Beaverdam Creek (including Tributary W-6-5) in the City of Niagara Falls	The Hurricane Hazel Flood Event Standard
2.	Lake Ontario and Lake Erie in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other areas	The 100 Year Flood Event Standard

TABLE 15

16. For the Nickel District Conservation Authority, the applicable flood event standards are those specified in Table 16 below:

		7	TABLE 16
Item	Areas	Applicable Flood Event Standards	
1.	Wanapitei	The maximum flood allowance elevation of	
	Lake	267.95 metres Canadian Geodetic Datum	
		(in accordance with Ontario Power	
		Generation's Licence of Occupation	
		Agreement #6168)	
2.	All other	The Timmins Flood Event Standard and the	
	areas	100 Year Flood Event Standard	

17. For the North Bay-Mattawa Conservation Authority, the applicable flood event standards are those specified in Table 17 below:

		11
Item	Areas	Applicable Flood Event Standards
1.	Chippewa Creek and its tributaries below the North Bay Escarpment, Parks Creek, the Mattawa River in the Town of Mattawa and the La Vase River	The 100 Year Flood Event Standard
2.	Lake Nipissing	100-year flood level plus wave uprush
3.	All other areas	The Timmins Flood Event Standard

18. For the Otonabee Region Conservation Authority, the applicable flood event standards are those specified in Table 18	
below:	

]	TABLE 18
Item	Areas	Applicable Flood Event	
		Standards	
1.	Rice Lake, Stony Lake,	The rainfall, snowmelt, or	
	Clear Lake, Lovesick	a combination of rainfall	
	Lake, Deer Bay, Buckhorn	and snowmelt, that would	
	Lake, Chemong Lake,	produce the water surface	
	Pigeon Lake,	elevations above Canadian	
	Katchiwanooka Lake and	Geodetic Datum described	
	Lower Buckhorn Lake	in Table 2 of Schedule 3.	
2.	All other areas	The Timmins Flood Event	1
		Standard	

19. For the St. Clair Region Conservation Authority, the applicable flood event standards are those specified in Table 19 below:

]	TABLE 19
Item	Areas	Applicable Flood	
		Event Standards	
1.	Perch Creek	The 100 Year Flood	
		Event Standard	
2.	Lake Huron, Lake St. Clair and	The 100-year flood	
	St. Clair River in the Great	level plus wave	
	Lakes-St. Lawrence River	uprusĥ	
	System		
3.	All other areas	The Hurricane	
		Hazel Flood Event	
		Standard	

20. For the Upper Thames Region Conservation Authority, the applicable flood event standards are those specified in Table 20 below:

Item	Areas	Applicable Flood Event Standards
1.	All areas	The 1937 Flood Event Standard

SCHEDULE 2 DESCRIPTION OF STANDARDS

- 1. The Hurricane Hazel Flood Event Standard means a storm that produces over a 48-hour period,
- (a) in a drainage area of 25 square kilometres or less, rainfall that has the distribution set out in Table 1; or
- (b) in a drainage area of more than 25 square kilometres, rainfall such that the number of millimetres of rain referred to in each case in Table 1 is modified by the percentage amount shown in Column 2 of Table 2 opposite the corresponding size of the drainage area set out Column 1 of Table 2.

	1/1
73 millimetres of rain in the first 36 hours	
6 millimetres of rain in the 37th hour	
4 millimetres of rain in the 38th hour	
6 millimetres of rain in the 39th hour	
13 millimetres of rain in the 40th hour	
17 millimetres of rain in the 41st hour	
13 millimetres of rain in the 42nd hour	
23 millimetres of rain in the 43rd hour	
13 millimetres of rain in the 44th hour	
13 millimetres of rain in the 45th hour	
53 millimetres of rain in the 46th hour	
38 millimetres of rain in the 47th hour	
13 millimetres of rain in the 48th hour	

TABLE 2	
---------	--

Column 1	Column 2
Drainage Area (square kilometres)	Percentage
26 to 45 both inclusive	99.2
46 to 65 both inclusive	98.2
66 to 90 both inclusive	97.1
91 to 115 both inclusive	96.3
116 to 140 both inclusive	95.4
141 to 165 both inclusive	94.8
166 to 195 both inclusive	94.2
196 to 220 both inclusive	93.5
221 to 245 both inclusive	92.7
246 to 270 both inclusive	92.0
271 to 450 both inclusive	89.4
451 to 575 both inclusive	86.7
576 to 700 both inclusive	84.0
701 to 850 both inclusive	82.4
851 to 1000 both inclusive	80.8
1001 to 1200 both inclusive	79.3
1201 to 1500 both inclusive	76.6
1501 to 1700 both inclusive	74.4
1701 to 2000 both inclusive	73.3
2001 to 2200 both inclusive	71.7
2201 to 2500 both inclusive	70.2
2501 to 2700 both inclusive	69.0
2701 to 4500 both inclusive	64.4
4501 to 6000 both inclusive	61.4
6001 to 7000 both inclusive	58.9
7001 to 8000 both inclusive	57.4

- 2. The Timmins Flood Event Standard means a storm that produces over a 12-hour period,
- (a) in a drainage area of 25 square kilometres or less, rainfall that has the distribution set out in Table 3; or
- (b) in a drainage area of more than 25 square kilometres, rainfall such that the number of millimetres of rain referred to in each case in Table 3 is modified by the percentage amount shown in Column 2 of Table 4 opposite the corresponding size of the drainage area set out in Column 1 of Table 4.

	TABLE 3
15 mm of rain in the 1st hour	
20 mm of rain in the 2nd hour	
10 mm of rain in the 3rd hour	
3 mm of rain in the 4th hour	
5 mm of rain in the 5th hour	
20 mm of rain in the 6th hour	
43 mm of rain in the 7th hour	
20 mm of rain in the 8th hour	
23 mm of rain in the 9th hour	
13 mm of rain in the 10th hour	
13 mm of rain in the 11th hour	
8 mm of rain in the 12th hour	

		T_{I}
Column 1	Column 2	
Drainage Area (km ²)	Percentage	
26 to 50 both inclusive	97	·
51 to 75 both inclusive	94	
76 to 100 both inclusive	90	,
101 to 150 both inclusive	87	'
151 to 200 both inclusive	84	•
201 to 250 both inclusive	82	

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56
53
50

3. The 100 Year Flood Event Standard means rainfall, snowmelt, or a combination of rainfall and snowmelt, producing at any location in a river, creek, stream or watercourse a peak flow that has a probability of occurrence of one per cent during any given year.

4. The 100-year flood level means the peak instantaneous still water level plus an allowance for wave uprush and other water-related hazards for inland lakes and the Great Lakes-St. Lawrence River System that has a probability of occurrence of one per cent during any given year.

5. The March 1985 Flood Event Standard means the flood levels observed, surveyed and mapped, and located at the Essex Region Conservation Authority head office, along portions of the relevant prescribed watercourses that exceeded the 100 Year Flood Event Standard.

6. The 1937 Flood Event Standard means the historical observed 1937 flood on the Thames River. This event is equivalent to the combination of events that caused the flood event on the Thames River in April of 1937. The 1937 flood event is estimated to be equivalent to a 1 in 250-year return flood.

7. The 1937 Regulatory Flood Event Standard means the historical observed 1937 flood on the Thames River. This event is equivalent to a flow of 1,540 cubic metres per second (cms) commencing at Delaware and proportionately reducing until 1,160 cms at Thamesville and 1,125 cms at Chatham. The 1937 flood event is estimated to be equivalent to a 1 in 250-year return flood.

SCHEDULE 3 WATER SURFACE ELEVATIONS

1. The water surface elevations above Canadian Geodetic Datum applicable to Item 1 in Table 14 of Schedule 1 are shown in Table 1.

LOV	WER TRENT REGION
Location	Water Surface
	Elevation
Rice Lake	187.9 metres
Trent River below Dam #1 (Trenton)	77.2 metres
Trent River below Dam #2 (Sidney)	81.3 metres
Trent River below Dam #3 (Glen	87.7 metres
Miller)	
Trent River below Dam #4 (Batawa)	95.7 metres
Trent River below Dam #5 (Trent)	101.7 metres
Trent River below Dam #6 (Frankford)	107.9 metres
Trent River below Dam #7 (Glen Ross)	113.5 metres
Trent River below Dam #8 (Meyers)	117.9 metres
Trent River below Dam #9 (Hagues	128.1 metres
Reach)	
Trent River below Dam # 10 (Ranney	143.4 metres
Falls)	
Trent River below Dam #11	148.3 metres
(Campbellford)	
Trent River below Dam #12 (Crowe	154.3 metres
Bay)	
Trent River below Dam #13 (Healy	175.5 metres
Falls)	

TABLE 1	

LOWER TRENT REGION CONSERVATION AUTHORITY

Trent River below Dam #14 (Hastings) 186.7 metres

2. The water surface elevations above Canadian Geodetic Datum applicable to Item 1 in Table 18 of Schedule 1 are shown in Table 2.

TABLE 2

	OTONABEE REGION	CONSERVATION AUTHORITY
Water Body	Water Surface Elevation	
Rice Lake	187.90 metres	
Stony Lake	235.95 metres	
Clear Lake	235.95 metres	
Lovesick Lake	242.16 metres	
Deer Bay	244.31 metres	
Buckhorn Lake	247.12 metres	
Chemong Lake	247.12 metres	
Pigeon Lake	247.12 metres	
Katchiwanooka Lake	233.68 metres	
Lower Buckhorn Lake	244.31 metres	

Made by: Pris par :

Le ministre des Richesses naturelles et des Forêts,

GRAYDON SMITH Minister of Natural Resources and Forestry

Date made: December 5, 2023 Pris le : 5 décembre 2023

Français

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