MUNICIPALITY OF NORTH GRENVILLE
COMMITTEE OF ADJUSTMENT
AGENDA

3

Wednesday, April 16, 2025, 6:30 p.m. - 7:30 p.m.

Held in Council Chambers, 285 County Road 44

Pages

A. OPEN MEETING

B. LAND ACKNOWLEDGMEMT

The Municipality of North Grenville acknowledges that the Municipality operates on the territory of the Anishnabek.

We recognize all First Nations, Métis, and Inuit peoples who now call North Grenville their home. We respect and support the need for cultivating a strong relationship, and we commit to Indigenous-informed decision making to foster the path towards reconciliation.

C. APPROVAL OF MINUTES 1

From February 12, 2025, and March 25, 2025

D. DISCLOSURE OF INTEREST

E. PUBLIC HEARING - APPLICATION FOR MINOR VARIANCE

1. A-05-25 – 51 Hurd Street 6
2. A-04-25 – 3642 Gliderway Private 62
3. A-02-25 116 Clothier Street E 83

F. ADJOURNMENT

Corporation of The Municipality of North Grenville

Committee of Adjustment No. 1

Draft Meeting Minutes
Held on Wednesday, February 12, 2025, at 6:30 p.m.

Committee Members Present:
Chair Nancy Peckford
John Barclay
Doreen O'Sullivan
Debbie Wilson
Kristin Strackerjan

Committee Members Absent:
None

Staff Present:
Amy Martin, Director of Planning and Development
Phil Mosher, Deputy Director of Planning and Development
Debbie Wood, Secretary-Treasurer of the Committee of Adjustment

Public:
Luke Geleynse

A. Land Acknowledgement

B. Call to Order
Chair, Nancy Peckford, declared the meeting open.

C. Disclosures of Interest
None.

D. Approval of the Previous Meeting Minutes

Moved by John Barclay and Seconded by Kristin Strackerjan.

That the Municipality of North Grenville Committee of Adjustment approve the minutes of November 13, 2024, Committee of Adjustment meetings as circulated.

Motion: Carried.

E. Business

E.1. Application A-16-24 for 460 Dennison Road

Deputy Director Phil Mosher gave an overview of the application, subject property and explained that the application was seeking relief from the following Section of the Comprehensive Zoning Bylaw 50-12:

1. Section 6.17 to increase the permitted height of an accessory structure from 6 metres to 7.6 metres.

Deputy Director Mosher explained this application arose when a building permit was submitted, adding the reason for the structure itself was to store personal items and equipment related to a wood business. Deputy Director Mosher further explained the individual does do some wood processing – which was not the main purpose, just something that was occurring on the site and a forestry business was supported by the agricultural Official Plan designation.

Deputy Director Mosher clarified the Rural Special Exception (RU-15) zoning simply identifies a requirement for an increased setback from neighbours that front on Denison Road. Deputy Director Mosher also noted the environmental features on the property, adding that the proposed structure would be outside of the limit of those hazards – which have been reduced from 120 meters to 30 metres from the wetland. Deputy Director Mosher noted the current use of the property was residential and would continue to be residential.

Deputy Director Mosher provided staff circulated to members of the community as well as agencies as required under the *Planning Act*, adding staff received no objection from Rideau Valley Conservation (RVCA) and the Septic Office, no comments from Emergency Protective Services, Public Works, and By-Law, plus a note from Building that a building permit will be required to commence with the work.

Deputy Mosher concluded this application does uphold the intent of the Official Plan, adding that, in the Zoning By-law, the proposal was for an accessory structure and would continue the accessory use of a residential property mostly for personal storage, but there may be some other equipment that is stored for a minor business. All of which was in keeping with the agriculture designation of the Official Plan and meets with the spirit and intent of the Zone By-law. Deputy Director Mosher further added that the application was also minor and represents good land use planning and staff recommend approval

Council members asked questions which were answered by staff.

There were no comments from the applicant or the public.

Moved to approve by John Barclay and Seconded by Doreen O'Sullivan.

Motion: Carried

E.2. Application A-01-25 for 1001 County Road 20

Deputy Director Phil Mosher gave an overview of the application, subject property and explained that the application was seeking relief from the following Section of the Comprehensive Zoning Bylaw 50-12:

1. Section 6.25 [c] to waive the requirement for a 15-meter setback from the regulatory floodplain for a septic system.

Deputy Director Mosher explained this unique application where discussions with the owner for the property to obtain a building permit began back in the summer of 2024 and, at that time, a zone review was completed. However, the planning department made an error in the zone review - the proposed septic system would be closer than 30 m to the provincially significant wetland.

Deputy Director Mosher further explained that staff contacted the applicant to ask if there was the ability to move the septic system and mercifully there was this willingness to do so. As a result, the septic system would be 30 m from the wetland, but not 15 m from the edge of the floodplain – though the proposed septic system itself would be completely outside the floodplain.

Deputy Director Mosher noted the property does have safe access - meaning that in the event of a one and 100 year flood County Road 20 would not experience volumes of flooding greater than 30 cm – which was required under the Provincial Planning Statement (PPS) for development to occur. Deputy Director Mosher also noted that, if this variance was approved, the applicant must get a permit from the conservation authority.

Deputy Director Mosher added staff received comments from the United Counties

Leeds & Grenville, no concerns from Building, Public Works, By-law or Emergency and Protective Services plus a combined letter from the RVCA and the Septic Office stating no objections to the minor variance, but noted that a regulatory permit would be required if the variance was approved by the committee.

Deputy Director Mosher concluded that the development does maintain the 30 m setback from the edge of the Kemptville Creek wetland, was consistent with the PPS, and, because it will be outside of the hazard, has safe access and maintains a minimum distance from the wetland, plus the application does not contravene North Grenville or the Counties Official Plans. Furthermore, this application was minor, meets the general intent of the Official Plan, the Zoning By-law and was appropriate and desirable for the use of land

Council members asked questions which were answered by staff and the applicant.

There were no comments from the public.

Moved to approve by Doreen O'Sullivan and Seconded by John Barclay.

Motion: Carried

F. Adjournment

Moved by Debbie Wilson and Seconded by Kristin Strackerjan that the meeting of the Municipality of North Grenville Committee of Adjustment do now adjourn at 7:06 p.m.

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Debbie Wood
Secretary-Treasurer

Corporation of The Municipality of North Grenville

Committee of Adjustment No. 2

Draft Meeting Minutes
Held on Wednesday, March 25, 2025, at 6:30 p.m.

Committee Members Present:
Chair Nancy Peckford
John Barclay
Doreen O'Sullivan
Debbie Wilson

Committee Members Absent:
Kristin Strackerjan

Staff Present:
Amy Martin, Director of Planning and Development
Phil Mosher, Deputy Director of Planning and Development
Debbie Wood, Secretary-Treasurer of the Committee of Adjustment

Public:
Bruce McNulty

A. Call to Order
Chair, Nancy Peckford, declared the meeting open.

B. Land Acknowledgement
John Barclay read the land acknowledgement.

C. Disclosures of Interest
None.

D. Approval of the Previous Meeting Minutes
None.

E. Business

E.1. Application A-03-25 for 609 Rock Rd

Director Amy Martin gave an overview of the application, subject property and explained that the application was seeking relief from the following Section of the Comprehensive Zoning Bylaw 50-12:

1. 6.43.2 (a) to permit a reduced setback of 229 metres from the proposed residential dwelling and the boundary of a licensed pit.

Director Martin explained the zoning was more restrictive than the Official Plan (OP) regarding the setback to above the water table pits – 300 meters versus 150 meters. Director Martin added that a housekeeping amendment would be brough forward to match up these provisions. Director Martin further added that other dwellings currently exist much closer, whereas this proposed dwelling would be constructed outside of the OP setback.

Director Martin informed the Committee that staff received no comments from the public and no agency comments were received prior to the slide deck preparation, adding Building provided a building permit was required.

Council members asked questions which were answered by staff.

There were no comments from the applicant or the public.

Moved to approve by Doreen O'Sullivan and Seconded by John Barclay.

Motion: Carried

F. Adjournment

Moved by Debbie Wilson and Seconded by John Barclay that the meeting of the Municipality of North Grenville Committee of Adjustment do now adjourn at 6:43 p.m.

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Debbie Wood
Secretary-Treasurer

Item #

Municipality of North Grenville

To: **Committee of Adjustment** Meeting Date: April 16, 2025

Subject: A-05-25 – 51 Hurd Street Report No: PD-2025-024

Prepared by: Phil Mosher, Deputy Director of Planning

Recommendation(s)

THAT the Committee of Adjustment grant relief for the property located at 51 Hurd Street geographic Township of Oxford-on-Rideau, now the Municipality of North Grenville from the following sections of Comprehensive Zoning By-law 50-12:

1. To provide relief from Section 6.25[c] of the Comprehensive Zoning By-law to allow a deck to be screened in at a distance of 13.67 metres from the regulatory floodline;

Subject to the following conditions:

- That this decision be contingent upon obtaining a Section 28 permit from RVCA in support of the general development plan most appropriately depicted in Drawing A10, prepared by Lockwood Brothers Construction and dated December 16, 2024.
- That an erosion and sediment control plan be submitted in support of the application (Section 5.3.1[d][iv];
- That the development enter into a site plan control agreement (Section 5.3.1[f]);
- That the development be generally in keeping with the submitted Site Plan drawing prepared by Morey Associates Ltd., Drawing No. 1 of 1 and dated March 17, 2025.

because the request is minor, the intent of the Comprehensive Zoning By-law and Official Plan are being maintained, and the variances are within the parameters for reconstruction in the Floodplain Hazards designation.

Executive Summary

Purpose

- **To seek variance from provisions of the Zoning By-law to allow additional living space, including additional outdoor living space to be constructed at the subject property.**

Key Findings

- **The majority of the subject property is located within an area subject to flooding as identified by the Municipality's Official Plan.**
- **A portion of the lands, about 3000 m^2 is located outside of the floodplain and all construction is proposed outside the regulatory floodplain.**
- **An existing natural feature of the property is its steep slope, described in the submitted slope stability assessment.**
- **While all construction is proposed to occur outside the floodplain, it is proposed within 15 metres of the regulatory flood line and also within an area identified as a geotechnical hazard based on partner mapping products from Rideau Valley Conservation Authority. Based on the distance to the regulatory flood line, a variance application is triggered.**
- **Section 6.25[d] of the Zoning By-law allows reductions to development setbacks associated with slopes where a geotechnical investigation has been prepared which details the extent of the physical hazard.**
- **The applicant has been in discussions with the Municipality since Fall, 2024 as this application was prepared.**

Financial Implications

- There are no financial implications with respect to this application. All costs for the application are borne by the applicant.

Background/Analysis

Commencing in November, 2024, the applicant began discussing plans with municipal staff to construct an addition to the existing single-detached dwelling at the subject property.

Municipal staff noted that a minor variance would be required based on the proposed proximity to the floodplain.

A final version of the development proposal was submitted in March, 2025 with the application for minor variance.

Based on a review of the Municipality's Official Plan and zoning information, and the Counties' Official Plan, the following has been identified:

- The subject property is designated Rural and Floodplain Hazards in accordance with Schedule "A" of North Grenville's Official Plan and "Rural" and "Rural" pursuant to Schedule "A" of the United Counties of Leeds and Grenville Official Plan.
- It is currently zoned Residential – Density 1 (R1) and Flooding and Erosion Protection (FEP) in accordance with Schedule "A4" of the Municipality's Comprehensive Zoning By-law.

The Property

- The subject property is located within a "Rural" land use designation and is just adjacent to the "Urban Serviced Area" in the geographic Town of Kemptville.
- It is located about 200 metres south of the Clothier Street West / Somerville Road intersection.
- The property is a corner lot with technical frontage on Karda Terrace (a new municipal (unassumed) road) and an exterior side yard on Hurd Street. It's frontage and depth are approximately 55 and 122 metres, respectively.
- The property backs onto the Kemptville Creek and is considered to be a waterfront lot.
- The area of the property is approximately 6000 m^2 with about 3000 m^2 being located within the R1 zone category.
- A site visit was undertaken to the property early in 2025.

Provincial Policy Statement

The Provincial Planning Statement 2024 (PPS) provides overarching policies for growth and development in Ontario. The PPS provides direction for growth on properties affected by natural hazards within Section 5. Of note, this property enjoys certain non-complying rights by being an existing dwelling within 15 metres of the regulatory flood line as well as being on an existing slope.

Section 5.3 of the PPS states that "[d]evelopment and site alteration shall not be permitted within…areas that would be rendered inaccessible to people and vehicles during times of flooding hazards [or] erosion hazards…unless it has beem demonstrated that the site has safe access appropriate for the nature of the development and the natural hazard."

Of note for this application, the "Slope Stability Assessment" submitted with this variance application has assessed the nature of the slope hazard. In the opinion of the author,

> "the subject slope at the site, with consideration for the above described proposed site development, is adequately stable and no limit of hazard lands for the subject slope at the site is required."

It is important to note that the document cannot be reduced to just the quote above. Any development at this property will be required to enter into a site plan control agreement with the Municipality which will require full adherence to the submitted slope stability assessment.

With the use of appropriate conditions, and site plan control, staff is confident that this application is consistent with the PPS.

United Counties of Leeds and Grenville Official Plan

The subject site is designated as “Rural” pursuant to Schedule “A” of the Counties’ Official Plan.

Importantly, Section 5.2.2 deals with flooding hazards, steep slopes, unstable soils, unstable bedrock and erosion hazards. The Counties’ OP directs development outside these hazardous areas. It further notes that local municipal Official Plans will identify hazards and provide associated policies. Subsection [e] of 5.2.2 echoes the PPS stating that development shall not be permitted within areas that would be rendered inaccessible to people and vehicles during times of flood hazards and erosion hazards, unless it has been demonstrated that the site has safe access appropriate for the nature of the development and natural hazard.

Subsection [f] of 5.2.2 states that minor additions to existing buildings or structures will only be permitted on an existing lot of record in an erosion hazard if it has been demonstrated that there is no alternative building envelope on the outside the erosion hazard and subject to the policies of the UCLG Plan.

Subsection [m] of 5.2.2 states that the stable top of the slope will be determined by a qualified Professional Engineer, in consultation with the local municipality and applicable Conservation Authority. It notes further that the required setback, if any, will reflect the degree, severity and extent of the hazard.

Subsection [n] of 5.2.2 provides authority to request geotechnical studies or engineering analysis to determine the feasibility of proposed development adjacent to hazardous lands.

Staff are of the opinion that the proposed variance does not contravene policies of the United Counties’ Official Plan.

North Grenville Official Plan

With respect to the Official Plan of the Municipality of North Grenville, the subject site is designated Residential and Floodplain Hazards. The lands are also adjacent to the Kemptville Creek Provincially Significant Wetland, although development is proposed a sufficient distance from the wetland and this policy is not considered further.

Most importantly to this application, “erosion hazards” are described in Section 5.3 of the Official Plan. Subsection [a] of 5.3 provides that where detailed geotechnical engineering information is available or has been provided, the erosion hazard limit shall be defined

based on the findings of the engineering recommendations. It is noted that these findings must be completed in accordance with the MNRF Technical Guidelines for Natural Hazards.

Section 5.3.1 [c] states that “development on existing lots of record containing erosion hazards and slopes shall…only proceed where an assessment, approved by the Conservation Authority, prepared by a qualified geotechnical engineer, determines the property can be safely developed.”

The Plan goes further, noting that “…a geotechnical evaluation must contain erosion control measures associated with all structural, landscaping and surface drainage components of the development of the property.”

Section 5.3.1[d] states that “additions to existing buildings and structures…shall only be considered when:

i. The addition is supported by a geotechnical evaluation, approved by the Conservation Authority;
ii. The addition does not extend further into the erosion hazard limit than the existing structure;
iii. The addition generally does not exceed 30% of the floor area footprint that existed as of May 11, 2009; and,
iv. The addition incorporates all identified erosion control measures associated with all structural, landscaping and surface drainage components of the development of the property.”

Section 5.3.1[f] states that “[w]here development on existing lots of record or additions to existing buildings and structures on erosion hazards and slopes is appropriate, such development shall be subject to site plan control.”

Section 6.4 of the Official Plan discusses public ownership and acquisition of natural heritage lands. It should be noted that certain areas may be desirable for public ownership or accessible for recreational uses where appropriate. In such cases, the Municipality shall explore options for purchasing, or otherwise acquiring, managing, or providing access to these lands. Based on historic decisions, staff does not think the Committee should consider exploring waterfront land acquisition here, but the Committee can include that as a condition of the decision if desired.

In the opinion of staff, this application is consistent with the Municipal Official Plan, specifically Section 5.3.1. Namely, the proposed addition does not extend further into the erosion hazard limit (the proposed addition occurs on an existing deck). Also, the addition size does not exceed 30% of the floor area footprint of the existing dwelling. The submitted slope stability report identifies required erosion control measures, and staff proposes an appropriate condition of this variance application to require the development enter into a site plan control agreement as per Section 5.3.1[f] of the Official Plan.

It should be noted that an application has been submitted to RVCA to evaluate the geotechnical investigation, but the results of that permit have not been received. Therefore, staff would propose that if the Committee of Adjustment approves this application, a condition be added requiring a successful RVCA permit be obtained.

In addition to the RVCA permit condition, staff also proposes the following conditions:

- That this decision be contingent upon obtaining a Section 28 permit from RVCA in support of the general development plan most appropriately depicted in Drawing A10, prepared by Lockwood Brothers Construction and dated December 16, 2024.
- That an erosion and sediment control plan be submitted in support of the application (Section 5.3.1[d][iv];
- That the development enter into a site plan control agreement (Section 5.3.1[f]);
- That the owner and the Municipality discuss options for purchasing, acquiring, managing or providing access for lands for recreational purposes – trails (Section 6.4)
- That the development be generally in keeping with the submitted Site Plan drawing prepared by Lockwood Brothers Construction, Drawing A10 and dated December 16, 2024.

Comprehensive Zoning By-law 50-12

The subject property has dual zoning and is located on lands zoned Residential – Density 1 (R1) and Flooding and Erosion Protection (FEP) Zone as per Land Use Schedule "A4" of the Comprehensive Zoning By-law.

Existing buildings and uses that were lawfully established prior to the date of the passage of the Zoning By-law are a permitted use, therefore the dwelling as it exists, has grandfathered rights. Certain zone regulations (setback to the regulatory flood line) are currently not met at the subject property and are difficult to meet given the existing dwelling location. These standards will need to be formally varied in the decision of the Committee of Adjustment if construction is to occur.

Staff are of the opinion that the requested variances are in keeping with the Municipal Zoning By-law.

Four Tests

Minor Variances must satisfy the four tests as outlined in the *Planning Act* to be permitted. It is the opinion of Staff that the four tests are met in the following ways:

1) The application is minor in nature: The request relates to constructing an addition in keeping with the Municipality's Official Plan, and not in excess of the 30% floor area footprint requirement.

2) The application meets the intent of the Zoning By-law: the proposed minor variance has an appropriate geotechnical report which supports the proposed addition. In

addition. Any existing non-compliance with the Zoning By-law is not exacerbated by this application, and minor improvements are realized with erosion protection.

3) The application meets the intent of the Official Plan: the proposed minor increase in floor area is within allowable limits for a property that contains a slope hazard. The proposed renovation is not located closer to the normal highwater mark than currently exists but occupies existing deck area. Finally, the development will be subject to site plan control as a condition.

4) The application is appropriate and represents good land use planning. It allows a minor increase in floor area for non-conforming and non-complying property. Future erosion protection measures as outlined in the slope report will safeguard construction.

Relevance to Strategic Priorities

Strategic Pillar	Pillar #3 - Diverse and Resilient Economic Development
Goal	Goal #3.5 - Leverage the Benefits of Partner Organizations, and Natural Assets
Key Action	Action #3.5.2 - Review existing programs with Conservation Authorities, and work in collaboration with Conservation Authorities to define new areas for protection

Options and Discussion

1. Approve the recommendation – **RECOMMENDED, subject to above-noted conditions.**
2. Do not approve the recommendation – Not Recommended

Financial Impact

This item has been identified in the current budget: Yes □ No □ N/A X

This item is within the budgeted amount: Yes □ No □ N/A X

Staffing implications, as they relate to implementing Council's decision on this matter, are limited to the existing staff complement and applicable administrative policies as approved by Council.

Internal/External Consultation

Public agencies are circulated in accordance with the Planning Act.

Comments received after the report is published will be circulated to members of the Committee and summarized at the Public meeting.

Planning Division circulates all Planning Act applications internally for further review by Municipal Departments and comments have been incorporated into the report. At the time of writing, the following had been received:

- A no comment email By-law.

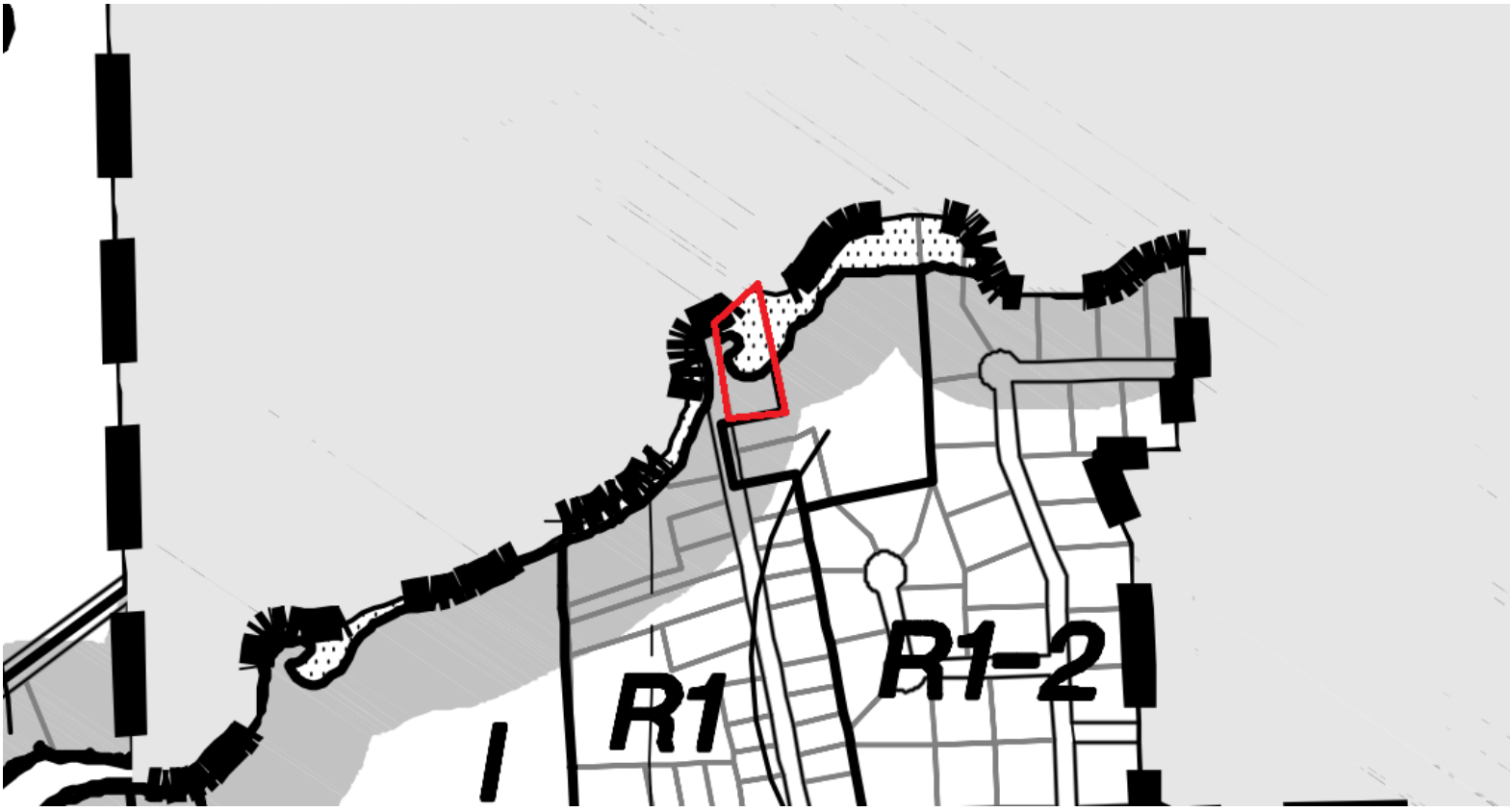
Any comments received after the report will be circulated to members.

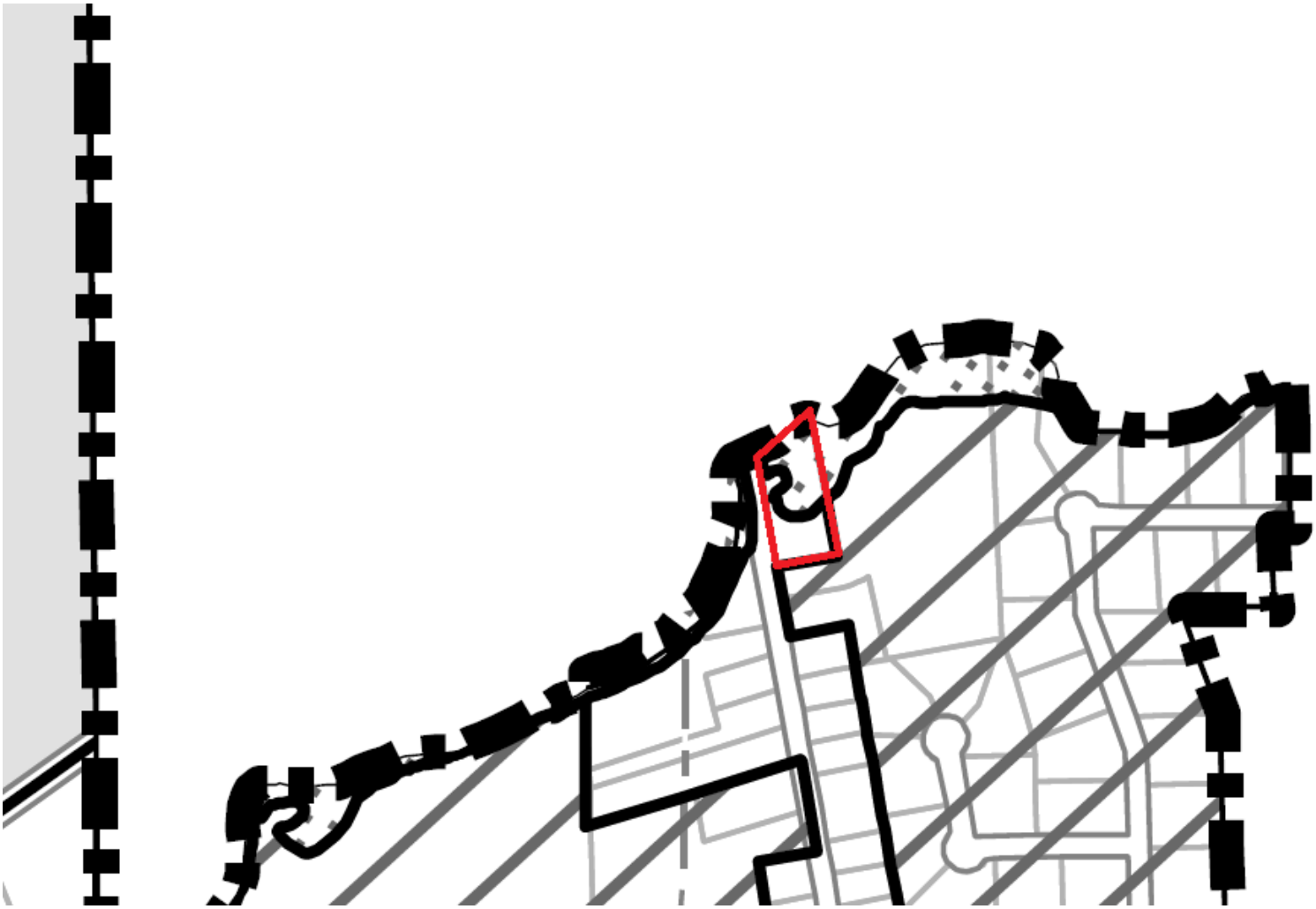
Communications

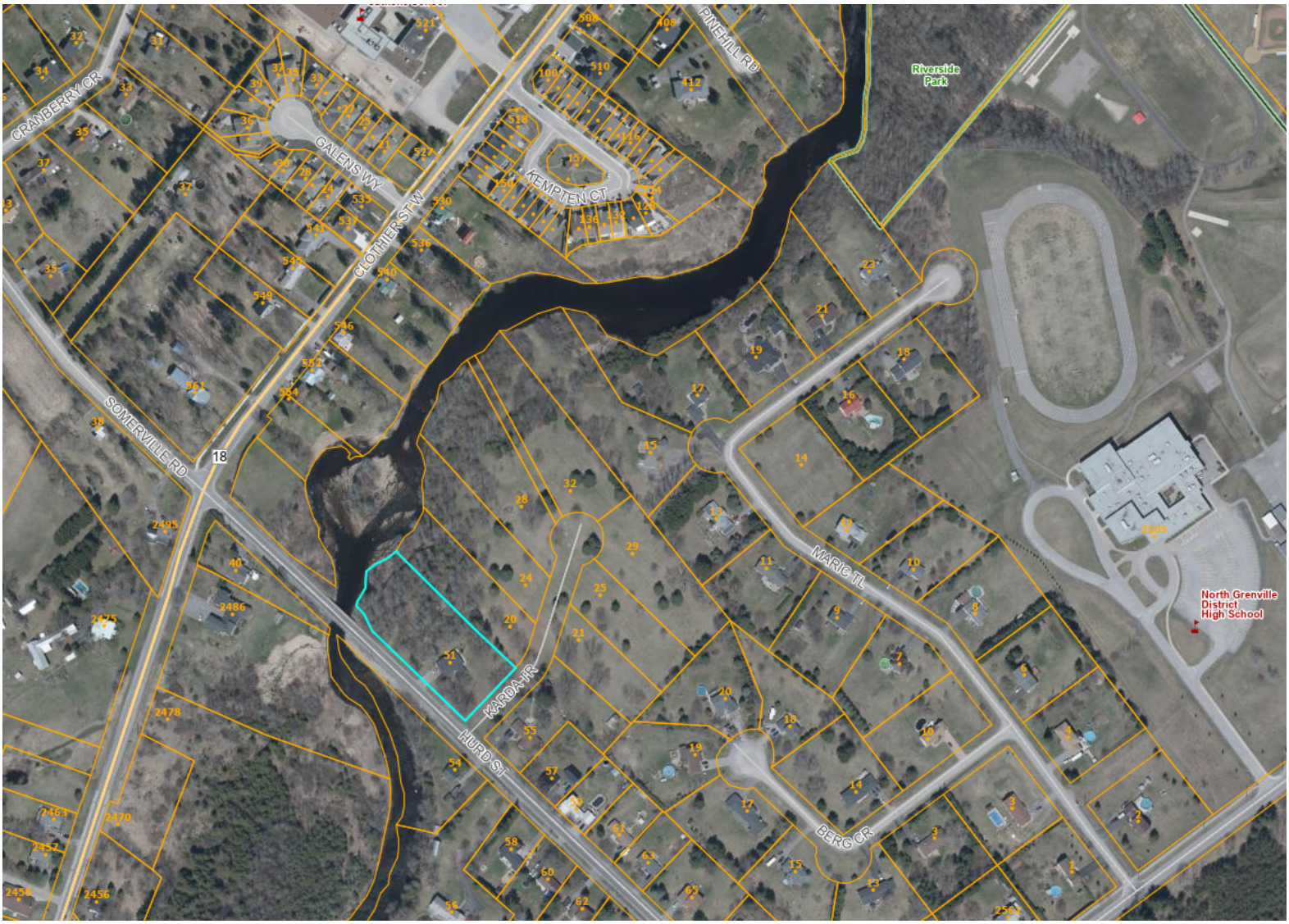
Implementing the decision of the Committee is subject to the Provisions of the Planning Act and will not require further communication resources to implement the decision of the Committee.

Attachments

- Attachment 1 – Zoning Map
- Attachment 2 – Official Plan
- Attachment 3 – Context Map
- Attachment 4 – Site Plan
- Attachment 5 – Slope Stability Assessment


R1
R1-2




CRANBERRY CR
CALENS WY
CLOTHIER ST W
KEMPTEN CT
PINEHILL RD
Riverside Park
SOMERVILLE RD
18
MARIC TL
North Grenville District High School
KARDA JR
HURD ST
BERG CR

LEGEND

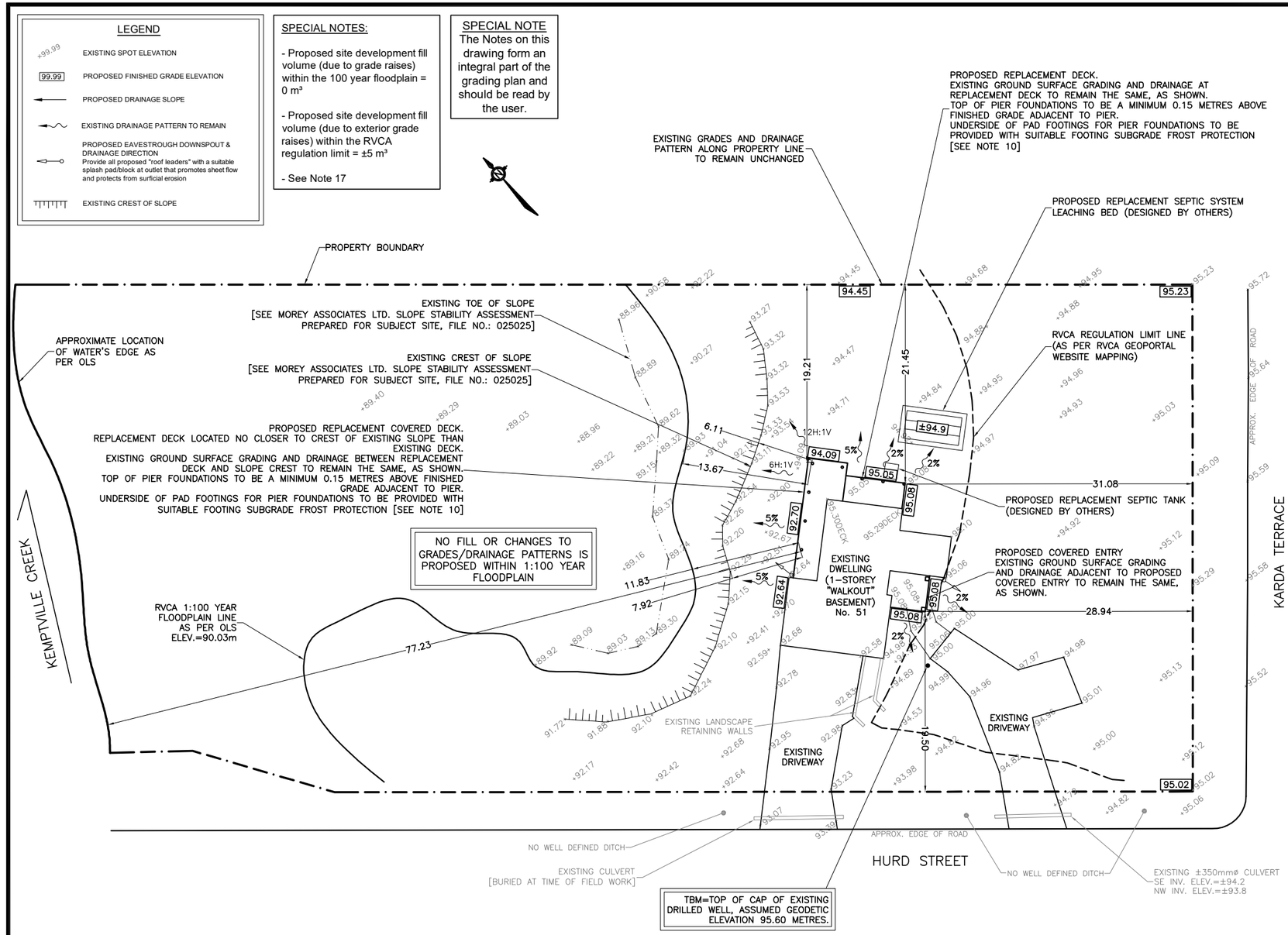
- +99.99 — EXISTING SPOT ELEVATION
- 99.99 — PROPOSED FINISHED GRADE ELEVATION
- PROPOSED DRAINAGE SLOPE
- EXISTING DRAINAGE PATTERN TO REMAIN
- PROPOSED EAVESTROUGH DOWNSPOUT & DRAINAGE DIRECTION
  Provide all proposed "roof leaders" with a suitable splash pad/block at outlet that promotes sheet flow and protects from surficial erosion
- EXISTING CREST OF SLOPE

SPECIAL NOTES:

- Proposed site development fill volume (due to grade raises) within the 100 year floodplain = 0 m³
- Proposed site development fill volume (due to exterior grade raises) within the RVCA regulation limit = ±5 m³
- See Note 17

SPECIAL NOTE

The Notes on this drawing form an integral part of the grading plan and should be read by the user.



NOTES:

1. All dimensions and elevations are in metres, unless otherwise indicated. Do not scale drawing.
2. TBM = As shown/described on drawing, assumed Geodetic elevation 95.60 metres. Geodetic elevations shown on drawing are derived from the Can-Net VRS Real-Time GNSS network at the time of the fieldwork. Morey Associates Ltd. accepts no responsibility for any third party use of the above mentioned TBM.
3. Property boundary information, existing dwelling size/location, 1:100 year floodplain line, and some existing topography shown on this drawing is from or referenced from Annis, O'Sullivan, Vollebekk Ltd. sketch showing "RVCA 1:100 Year Floodplain Elevation Contour, 51 Hurd Street, Kemptville, Municipality of North Grenville, County of Grenville", sketch not dated, provided to us by client by email dated February 28, 2025. The proposed replacement decks and covered entry sizes/locations shown on this drawing is based on the Lockwood Brothers Construction plans titled "Aldham", no revision date, dated May 29, 2024, provided to us by client by email dated February 28, 2025. This drawing should not be used at time of construction to locate the proposed replacement decks at the site. The original topography/ground elevations, structure locations and existing site features shown on this plan are supplied for design and approval purposes only and assumed to be accurate. The topographical field work was carried out under winter conditions and as such some topographical information may have been affected and/or obscured due to snow and ice ground cover conditions. It shall be the responsibility of the contractor to verify the accuracy of all information obtained from plans for construction purposes.
4. This drawing is not a legal survey plan. This drawing is not a site control plan. This drawing is not a septic system design. This drawing is not a landscape design plan.
5. The intent of this grading plan drawing is to show the potential for surface water drainage to be directed away from the proposed replacement decks and proposed front porch at the site. Surface water ponding may occur at the site.
6. All dimensions to be verified on site by contractor prior to construction.
7. Boundary information and proposed structures' locations/sizes and dimensions shown on this drawing have been provided to us or derived from information provided to us by others. Information provided to us by others is assumed to be accurate and verification of information provided to us by others is outside the scope of this drawing (see Note 22). Morey Associates Ltd. should be retained if dimensions verified on site by contractor differ from this drawing as this may require design changes.
8. Design and location of all utilities, such as but not limited to, hydro wires, telephone wires, cable wires, gas lines, underground services, etc., and easements are outside the scope of this grading plan drawing. Contractor is responsible for location and protection of all existing and proposed utilities and easements. Morey Associates Ltd. accepts no responsibility and no liability for damage to services, utilities, and structures due to construction operations.
9. Client is responsible for acquiring all necessary permits. This drawing is not for construction until all necessary permits have been acquired.
10. Information regarding top of pier foundations and underside of pier foundations pad footings for the proposed replacement decks and covered entry shown on this drawing is based on the above mentioned Lockwood Brothers Construction plans, on providing a minimum 1.8 metres of earth cover above underside of pier foundations pad footings, and on providing a minimum 0.15 metre difference between the top of pier foundations level(s) and the adjacent proposed finished grade level(s). Should less than 1.8 metres of adequate cover above pier foundations pad footings be provided, rigid insulation in combination with earth cover may be required for footing subgrade frost protection purposes. No adverse undermining of the existing dwelling footings is to take place. The existing dwelling's underside of footing elevation has not been provided as at time of preparation of this drawing. Contractor is responsible to determine the existing dwelling's USF level prior to construction and ensure that no adverse undermining of the existing dwelling footings is to take place, regardless of what is shown on this drawing.
11. The underside of footing elevations and finished grade at the proposed replacement decks/covered entry has been set based on limited information and may not have accounted for actual groundwater and/or soil/bedrock conditions at the proposed replacement decks/covered entry location. It should be noted that groundwater levels are expected to fluctuate seasonally. Higher groundwater levels are expected during wet periods of the year such as the early spring. Contractor and/or owner is responsible for determining, prior to or at time of excavating, if the actual in-situ groundwater and/or soil/bedrock conditions at the proposed replacement decks/covered entry location warrant changes to the USF elevation and/or finished grade at the proposed replacement decks/covered entry. As such, if consideration is being given by the contractor and/or owner for changes to the USF elevation and/or finished grade at the proposed replacement decks/covered entry, Morey Associates Ltd. should be retained as this may require changes to this drawing.
12. Finished grade to slope downwards and away from proposed replacement decks/covered entry everywhere, whether or not indicated on this drawing.
13. Maximum allowable proposed landscape (overburden) slope on site is 3H:1V. Finished grade adjacent to proposed replacement decks/covered entry to slope downwards and away from proposed replacement decks/covered entry at all sides at a minimum of 2% (minimum 1% for concrete slabs) and a maximum of 5% out beyond those structures a minimum 0.5 metres. Beyond 0.5 metres the finished grade slope downwards and away from proposed replacement decks/covered entry may be increased up to 3H:1V.
14. The proposed grades have been set for the proposed replacement decks/covered entry areas at the subject site only. All grading and drainage control beyond the proposed subject replacement decks/covered entry areas and beyond the subject site property boundaries and within the Municipal roadway right-of-way is outside the scope of this grading plan and is the responsibility of the property owners and the Municipality, respectively. Any proposed/existing retaining wall(s) material and retaining wall(s) design is by others and is outside the scope of this drawing. Any requirements for guards/railings in relation to any proposed/existing retaining walls is outside the scope of this drawing.
15. No excess overland drainage, during and after construction should be directed onto the neighbours' properties and no alteration to existing grade and drainage pattern on or beyond property lines is to take place.
16. Contractor is to ensure eavestrough drainage (if eavestroughs are to be installed - eavestroughs are not an OBC requirement) outletting at proposed downspouts is ultimately directed to a legal drainage outlet (ie: existing catch basin/storm sewers/drainage easement/historical drainage outlet/on-site infiltration/etc.), and that no eavestrough drainage outletting at proposed downspouts is directed overland onto neighbouring properties. Contractor to ensure that proposed eavestroughs and downspouts are adequate to convey the proposed replacement (covered) deck/covered entry roof drainage.
17. Fill volumes indicated on this drawing are not for cost estimate purposes and are only for conservation authority permit purposes and have been estimated based on assumptions regarding site construction. Any fill imported to the subject site is to be free of contamination and deleterious material.
18. The soil subgrade conditions at the proposed replacement decks/covered entry locations should be verified as acceptable by qualified geotechnical personnel from an allowable soil bearing pressure point of view for the proposed dwelling addition construction at the site. It is the responsibility of the contractor and/or owner to retain qualified geotechnical personnel to carry out the above prior to or at time of excavating.
19. This drawing has been prepared for the exclusive use of Lockwood Brothers Construction for the purposes of obtaining municipal/RVCA permits only. This drawing has not been prepared for the purposes of contractors bidding on the construction of the proposed grading and drainage works. Contractors bidding on or undertaking the grading and drainage works should examine the information shown on this drawing, satisfy themselves as to the adequacy of the information for construction [which may require site investigation(s), additional design work, preparation of additional drawings, etc.] and how it affects their construction techniques, schedule, safety, equipment capabilities and costs.
20. By use of this drawing for construction of the project, the client/owner confirms that they have reviewed and approved the drawing and the contractor confirms that they have visited the site, familiarized themselves with the local conditions, verified field dimensions and correlated their observations with the requirements of the drawing.
21. This drawing provides a limited illustration of the work to be done to construct the proposed grading and drainage works. Morey Associates Ltd. is not responsible for the means, methods, techniques, sequences and/or procedures used to carry out the work, or the safety aspects of construction, and nothing on this drawing expressed or implied changes this condition. Contractor shall determine all conditions at the site and shall be responsible for knowing how they affect the work.
22. Morey Associates Ltd. accepts no responsibility for any deficiency, misstatement or inaccuracy shown on this drawing as a result of information provided to us by others. Morey Associates Ltd. accepts no responsibility for any damages and/or delays to construction due to any deficiency, misstatement or inaccuracy shown on this drawing as a result of information provided to us by others.
23. It is the responsibility of the contractor and/or owner and/or user of this drawing to obtain and follow the engineer's guidance with respect to any errors, omissions, inconsistencies, ambiguities or conflicts which are alleged regarding this drawing and with respect to actual in-situ conditions at the site as it relates to this drawing. The engineer waives any and all responsibility and liability for problems which arise from failure to follow this drawing, specifications and the design intent they convey, or for problems which arise from others' failure to obtain and/or follow the engineer's guidance with respect to any errors, omissions, inconsistencies, ambiguities or conflicts which are alleged and/or from others' failure to obtain and/or follow the engineer's guidance with respect to actual in-situ conditions at the site as it relates to this drawing.
24. Morey Associates Ltd. reserves the right to define and interpret any and all notes, values, lines, shapes and design intent on this drawing and those definitions and interpretations shall govern the use and intent of this drawing prior to, during, and after construction.
25. Any changes to this design/drawing must be verified and approved by Morey Associates Ltd. If any changes to this design/drawing are made without obtaining Morey Associates Ltd. written consent, the client and/or contractor shall assume full responsibility for the results of such changes and the client and contractor agrees to waive any claim against Morey Associates Ltd. and to release Morey Associates Ltd. from any liability arising directly or indirectly from such unauthorized changes. In addition, the client and contractor agrees, to the fullest extent permitted by law, to indemnify and hold harmless Morey Associates Ltd. from any damages, liabilities or cost, including reasonable attorney's fees and cost of defence, arising from such unauthorized changes.

LICENSED PROFESSIONAL ENGINEER
D.G.MOREY
100208030
Mar. 17/25
PROVINCE OF ONTARIO

DRAWING: GRADING PLAN

REV.	DRAWN BY	DATE	DESCRIPTION

LOCATION: 51 HURD STREET
MUNICIPALITY OF NORTH GRENVILLE
ONTARIO

PROJECT: EXISTING DWELLING
PROPOSED REPLACEMENT DECKS AND
PROPOSED COVERED ENTRY

CLIENT: LOCKWOOD BROTHERS CONSTRUCTION

DATE	DRAWING No.	DRAWN BY	SCALE	FILE NO.
March 14, 2025	1 of 1	DGM	1:500	025025

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March 17, 2025 File: 025025

Lockwood Brothers Construction
2010 Totem Ranch Road East
Oxford Station, Ontario
K0G 1T0

Attention: Michael Barkhouse, Construction Manager

RE: SLOPE STABILITY ASSESSMENT
EXISTING SINGLE FAMILY DWELLING
PROPOSED DECKS REPLACEMENT
51 HURD STREET, KEMPTVILLE
MUNICIPALITY OF NORTH GRENVILLE, ONTARIO

Dear Michael:

As requested by Lockwood Brothers Construction (client) this letter provides the results of a slope stability assessment carried out for the existing slope adjacent to the north side of the existing dwelling at the above noted site. The purpose of the slope stability assessment was to observe the condition of the existing subject slope at the site and based on an interpretation of the observations made and the results of slope stability analyses, to provide a limit of hazards lands if applicable, from a slope stability point of view, in consideration of the proposed replacement of the existing decks at the north and east sides of the subject dwelling. In addition to the above, an allowable bearing pressure for the design of spread footing foundations for the proposed replacement decks was to be provided.

The reader of this letter is referred to the 'Important Information And Limitations Of This Letter' which follows the text of this letter and forms an integral part of this letter.

PROJECT DESCRIPTION AND BACKGROUND

For discussion purposes Hurd Steet is considered to exist at the west side of the subject site (see attached Key Plan, Figure 1). The existing dwelling at the site is on the east side of Hurd Street with the South Branch of the Rideau River (Kemptville Creek) located at the north boundary of the site, see Key Plan, Figure 1. A review of a site plan provided to us by Lockwood Brothers Construction indicates that Kemptville Creek exists some 75 metres north of the existing dwelling/proposed replacement decks and that the 1:100 year flood plain established by the Rideau Valley Conservation Authority (RVCA) for Kemptville Creek at the site is located some 12 to 14 metres north of the existing dwelling/proposed replacement decks.

It is understood that plans are being prepared to replace an existing covered deck at the north side of the existing dwelling and an existing deck at the east side of the existing dwelling by a proposed covered and screened in deck at the north side of the existing dwelling and a deck at the east side of the existing dwelling. A review of drawings provided by Lockwood Brothers Construction for the proposed decks replacement indicate that the proposed covered and screened in deck at the north side of the existing dwelling (subject slope side) will be no closer to and possibly somewhat further back from the crest of the subject slope than the existing covered deck at the north side of the existing dwelling. The foundations for the proposed covered and screened in deck located at the north side of the existing dwelling are indicated to be a minimum of about 6.1 metres back of the subject slope crest.

The existing covered deck and the existing deck are, in general, supported by wood posts founded on concrete piers. It is understood, based on the above mentioned drawings, that the replacement covered and screened in deck at the north side of the existing dwelling and the replacement deck at the east side of the existing dwelling are proposed to be, in general, supported on isolated concrete pier spread footing foundations.

It is further understood that a replacement septic system leaching bed is proposed to be constructed at the east side of the existing dwelling.

The field work for this assessment was carried out by a member of our technical field staff between February 27 and March 14, 2025. A test pit, TP25-1, advanced using a track mounted excavator supplied and operated by the client, and an augerhole, AH25-1, put down using hand augering

equipment were advanced near the crest of the slope and near the slope toe, respectively, to check the soil and groundwater conditions at the subject slope (see attached Aerial Sketch Plan, Figure 2). At the time of the field work, measurements of the height and inclination of the steepest, tallest portion (based on visual observations) of the subject slope were carried out using Spectra SP60 GNSS surveying equipment. The state of erosion of the subject slope and any evidence of slope instability was visually assessed.

A review of the surficial geology map for the site area indicates that the slope at the site is underlain by till plains (Chapman & Putnam, 2007, Ontario Geological Survey), see attached Figure 3. The bedrock geology map for the site area indicates that the bedrock underlying the site consists of dolostone, minor shale, and sandstone of the Oxford Formation (2011, Ontario Geological Survey), see attached Figure 4. Drift thickness mapping published by the Ontario Geological Survey (2006) provides limited data points within relatively close proximity to the subject slope. The available data points within relatively close proximity to the subject slope indicate an overburden thickness between some 4.5 to 8.3 metres within the tableland at/near the site and about 3.0 metres in thickness beyond the subject slope toe (between the slope toe and Kemptville Creek).

The Ministry of the Environment, Conservation and Parks (MECP) well records for three drilled wells located within about 150 metres of the subject site were obtained from the Province of Ontario, Map: Well Records website and are attached as Appendix A. One of those wells is located about 80 metres east of the subject slope. The three drilled wells were constructed as test wells for a hydrogeological investigation carried out for the proposed residential subdivision located immediately adjacent to the east side of the subject site. The MECP well records indicate that the overburden thickness at the drilled wells is between some 4.3 to 5.5 metres and the native overburden materials encountered by the well drillers at those wells is indicated to consist of clay and hard pan. The bedrock underlying the overburden material at the drilled wells is indicated by the well drillers to consist of limestone.

OBSERVATIONS

The measurements of the subject slope carried out by a member of our technical field staff indicate that the subject slope at the site is some 2.8 to 3.8 metres high and has an overall inclination of about 21 to 26 degrees to the horizontal. The face of the subject slope is inclined between about 13 and 26 degrees to the horizontal. The tableland south of the slope crest is inclined at a gentle

downward gradient (about 1 percent) towards the slope crest. A relatively flat floodplain exists at the bottom of the subject slope, from about the toe of the slope to some 60 metres to the edge of the Kemptville Creek.

The ground cover of the subject slope at the time of the field work consists, in general, of some grass, shrubs and occasional young to mature trees. The ground cover of the above mentioned floodplain at the time of the field work consists, in general, of grass, shrubs and young to mature trees with some cobble and boulder patches. Some pooled water was observed within the flood plain at the time of the field work.

No evidence of major slope instability was observed at the time of the field work. No evidence of active or previous erosion at the subject slope toe was observed. The Kemptville Creek was measured to be some 60 metres from the subject slope toe.

A description of the subsurface conditions encountered at the above mentioned test pit and augerhole is provided in the attached Table I – Record of Test Pit and Augerhole and the approximate locations of the test pit and augerhole are provided on the attached Aerial Sketch Plan, Figure 2. From the ground surface at the test pit about a 1.2 metre thickness of fill materials was encountered. The fill materials, in general, consist of topsoil, sand, silt and clay and an occasional cobble and piece of wood. The fill materials were underlain by a deposit of grey brown silty clay with a trace of sand and gravel. The test pit was terminated within the silty clay material at a depth of some 3.1 metres below the existing ground surface. Based on tactile examination and on the difficulty to advance the test pits within the silty clay material, the silty clay material encountered at the test pit is considered to be very stiff in consistency. No groundwater was observed in the test pit at the time of the field work on February 27, 2025.

From the ground surface at the augerhole about a 0.2 metre thickness of branches and cobbles was encountered over about a 0.6 metre thickness of silty clay. The test pit was terminated below the silty clay material at a depth of some 0.8 metres below the existing ground surface on refusal to auger on a possible boulder. Tactile examination of the recovered auger cuttings indicated that the auger cuttings were moist.

A sample of the native silty clay material obtained from the test pit was delivered to a soils laboratory for grain size distribution testing. The results of that laboratory testing are provided in Appendix B and indicate that the silty clay sample tested consists of 1.6 percent gavel, 7.1 percent sand, 62.3 percent silt and 29.0 percent clay.

A Slope Stability Rating Chart provided as Table 4.2 from Section 4.3.2 of the Ministry of Natural Resources Technical Guide, River & Stream Systems: Erosion Hazard Limit (MNR Technical Guide) was completed for the subject slope (specifically, for the below mentioned analyzed slope section A-A) and is provided in the attached Appendix C. The completed Slope Stability Rating Chart resulted in a rating value of 26. Based on the MNR Technical Guide slope stability rating, values between 25 and 35 are categorized as “Slight Potential”.

Three photographs showing the site are provided in the attached Appendix D. Photographs 1 and 2 were taken at the time of the above mentioned field work on March 14, 2025, at which time the subject site was snow covered. It is pointed out that snow was removed by hand shovel by a member of our technical field staff at the time of the field work at spot check locations on the tableland, slope crest, slope face, slope toe and floodplain for ground surface observations of the subject slope. Photograph 3 obtained from the Google Street View Website (photograph date November 2024) shows the site without snow cover.

SLOPE STABILITY ANALYSES

Computer slope stability analyses were carried out for what is considered the steepest/highest portion of the subject slope at the site using GeoStudio 2018 Slope/W software package produced by GEO-SLOPE International Ltd., in order to determine a factor of safety of the slope against overall rotational failure (global slope stability analysis). The slope section used in the analyses was chosen by Morey Associates Ltd. based on slope geometry, slope height and the location of the slope section relative to the proposed replacement decks at the site. The approximate location of the slope section analyzed (A-A) is shown on the attached Aerial Sketch Plan, Figure 2.

The soil conditions used for the slope stability analyses were based on the above described subsurface information. It is pointed out that the bedrock was considered impenetrable from a critical slip surface point of view.

The slope stability analyses parameters used for the existing fill material are:

Cohesion, c' = 0.5 kilopascals
Internal Friction Angle, ϕ' = 30 degrees
Unit Weight, γ = 16.5 kilonewtons per cubic metre

The slope stability analyses parameters used for the possible septic sand fill material are:

Cohesion, c' = 0 kilopascals
Internal Friction Angle, ϕ' = 30 degrees
Unit Weight, γ = 18 kilonewtons per cubic metre

The slope stability analyses parameters used for the native silty clay material are:

Cohesion, c' = 10 kilopascals
Internal Friction Angle, ϕ' = 33 degrees
Bulk Unit Weight, γ = 17 kilonewtons per cubic metre

The slope stability analyses parameters used for the native glacial till are:

Cohesion, c' = 1.5 kilopascals
Internal Friction Angle, ϕ' = 35 degrees
Unit Weight, γ = 20.5 kilonewtons per cubic metre

The above parameters used in the analyses are based on experience with similar soil types in the Ottawa Valley and surrounding area as well as information published by the City of Ottawa and Ministry of Natural Resources (MNR) relating to the subsurface conditions described above.

In view of the presence of the existing/proposed replacement decks at the slope section analyzed and the above mentioned proposed septic system leaching bed near the slope section analyzed, the following was included in the computer slope stability analyses.

- Point loads in relation to the decks foundations and as per the foundation sizes/locations/level indicated in the above mentioned drawings provided by Lockwood Brothers Construction (and as per the allowable soil bearing pressure discussed below).

- Septic sand fill grade raise in relation to the proposed replacement septic system leaching bed and as per the size/location indicated in the above mentioned drawings provided by Lockwood Brothers Construction. It is point out the height of the septic sand fill grade raise was estimated at 1 metre above the existing ground surface, which is considered conservative based on discussion with the replacement septic system designer from Lockwood Brothers Construction.

No groundwater was observed in the above mentioned test pit which was put down at the subject slope to a depth of some 3.1 metres below the existing ground surface. However, for a conservative approach and based on the location of the replacement septic system and for a septic system leaching bed sand mantle extending to the existing slope crest, the slope was assumed to be nearly fully saturated with a groundwater level at or within about 0.1 metres of the existing ground surface.

Slope stability analyses for the subject slope were carried out for both static conditions and pseudo-static (seismic) conditions. Based on the material comprising the slope and the subject site setting it is considered that a pseudo-static analysis is adequate for the purposes of this present slope stability assessment. For a conservative approach a conventional pseudo-static analysis was carried out as opposed to a two stage pseudo-static analysis since typically a two stage pseudo-static analysis will result in a higher factor of safety.

The peak (horizontal) ground acceleration (PGA) for the subject site was obtained from the 2015 National Building Code Seismic Hazard calculation (website), see Appendix E. The PGA for the subject site is indicated to be 0.28 for a 2 percent probability of exceedance in 50 years. A seismic coefficient, k, was used for the above mentioned pseudo-static analysis, where k is equal to 0.5PGA.

For the purposes of this assessment, a factor of safety of 1.5 or greater is considered to indicate long term stability for static conditions and a factor of safety of 1.1 or greater is considered to indicate adequate slope stability for pseudo-static conditions.

The result of the slope stability analysis for the subject slope for static conditions at the slope section analyzed indicates that the slope has a factor of safety against failure of about 1.8, see attached Figure 5. The result of the slope stability analysis for the subject slope for pseudo-static conditions at the slope section analyzed indicates that the slope has a factor of safety against failure of about 1.2, see attached Figure 6.

SLOPE SETBACKS AND LIMIT OF HAZARD LANDS

As per the Ontario Ministry of Natural Resources (MNR), for unstable slopes the “Limit of Hazard Lands” should be determined based on a stable slope allowance, a slope toe erosion allowance, and an erosion access allowance in order to provide a safe setback line for development.

As previously mentioned, the stable slope allowance is the distance from the slope crest to the point at which a factor of safety against failure of 1.5 is calculated for static conditions, or the distance from the slope crest to the point at which a factor of safety against failure of 1.1 is calculated for pseudo-static conditions, whichever is greater. As the results of the above mentioned slope stability analyses for the subject slope gave values for static conditions and pseudo-static conditions greater than 1.5 and 1.1, respectively, no stable slope allowance for the subject slope is required.

As previously mentioned, the toe of the slope is some 60 metres from the Kemptville Creek. No evidence of active or previous erosion at the subject slope toe was observed at the time of the field work. Based on the observations made at the time of the field work and on the subject site setting it is considered that the subject slope toe is not located in an area prone to toe erosion. Based on the above, it is considered that no significant future erosion should occur at the slope toe of the subject slope. Based on the above no toe erosion allowance for the subject slope is required.

The MNR technical guide includes a 6 metre erosion access allowance beyond the toe erosion allowance to allow for access by equipment to repair a possible failed slope. The access allowance is measured back from (or added to) the stable slope allowance.

The MNR technical guide indicates the three main principles to support the inclusion of an erosion access allowance are:

- *"Providing for emergency access to erosion prone areas;"*
- *"Providing for construction access for regular maintenance and access to the site in the event of an erosion event or failure of a structure; and"*
- *"Providing protection against unforeseen or predicted external conditions which could have an adverse effect on the natural conditions or processes acting on or within an erosion prone area of provincial interest."*

As mentioned above, it is considered that the subject slope toe is not located in an area prone to toe erosion and that no significant future erosion should occur at the slope toe of the subject slope. Based on the above, it is considered that the three main principles to support the inclusion of an erosion access allowance are not applicable to the subject slope/subject site. It is pointed out that the subject site is already developed, and the proposed replacement decks are located no closer to the slope crest than the existing decks they are replacing. Based on the above, it is considered that no erosion access allowance is required.

Based on the results of the slope stability analyses and the slope setback requirements mentioned above it is considered that no limit of hazard lands for the subject slope at the site is required, from a slope stability point of view.

CONCLUSIONS

Based on the results of this slope stability assessment, the subject slope at the site, with consideration for the above described proposed replacement decks and proposed replacement septic system leaching bed, is adequately stable and no limit of hazard lands for the subject slope at the site is required, from a slope stability point of view.

Based on the above calculated factors of safety against slope failure, it is considered that the above described proposed site development, is not in danger of a global slope failure.

Based on the limited observations within the test pit put down for this assessment, the proposed spread footing foundations supporting the proposed replacement decks founded as mentioned

above on the native, very stiff, undisturbed, grey brown silty clay, should be designed using an allowable bearing pressure of 95 kilopascals SLS and 140 kilopascals for a factored bearing resistance at ultimate limit states, ULS.

To ensure that the foundations for the proposed replacement decks are founded on a competent and suitably prepared subgrade, it is considered that prior to foundation formwork placement, a subgrade evaluation should be carried out by qualified geotechnical engineering personnel. A subgrade evaluation is considered a common construction site evaluation.

From a slope stability assessment point of view, it is considered that the extended sand mantle for the above mentioned proposed septic system leaching bed could extend to the crest of the subject slope.

The existing surficial topsoil and vegetation material on the slope should be maintained or be suitably reinstated should it be disturbed during construction, in order to mitigate the potential for surficial erosion. No concentrated surface water flow should be directed towards the slope. Surface water drainage directed towards the slope, if needed, should be minimal sheet flow drainage. Should eavestrough drainage for the proposed replacement covered deck directed towards the slope, the eavestrough drainage should be directed to “splash pads/splash blocks” that promote sheet flow drainage and protect from surficial erosion. No regrading of the existing subject slope should take place that steepens the current inclination of the subject slope or increases the height of the subject slope.

Should changes to the proposed site development be considered from that described in this present letter, Morey Associates Ltd. should be retained to review the proposed changes to ensure compatibility with any engineering guidelines and conclusions contained in this letter.

We trust the above information is sufficient for your present purposes. If you have any questions concerning this letter, please do not hesitate to contact our office.

Yours truly,
Morey Associates Ltd.

D. G. Morey, P.Eng.
Principal | Consulting Engineer

Attachments: Important Information And Limitations Of This Letter
Figures 1 to 6
Table I – Record of Test Pit and Augerhole
Appendices A to E

File: 025025

IMPORTANT INFORMATION AND LIMITATIONS OF THIS LETTER

This letter provides a summary of work that was carried out with generally accepted professional standards at the time and location in which the services were provided and in a manner consistent with a level of care and skill normally exercised by other professional engineering firms practicing under similar conditions and subject to the time limits and financial and physical constraints applicable to the services. No other warranty, expressed or implied, is made.

This letter was prepared for the exclusive use of Lockwood Brothers Construction. This letter may not be relied upon by any other person or entity without the express written consent of Lockwood Brothers Construction and Morey Associates Ltd. Any party that relies on services and/or work carried out by Morey Associates Ltd. and/or on a letter prepared by Morey Associates Ltd. without Morey Associates Ltd. express written consent, does so at their own risk. Morey Associates Ltd. specifically disclaims any liability and disclaims any responsibility to any such party for any loss, damage, expense, fine, penalty or other such thing which may arise or result from the use of any information, recommendation or other matter arising from the services, work or letters provided by Morey Associates Ltd.

It is understood based on instruction given to Morey Associates Ltd. by the client and/or by other design professionals associated with and retained by the client for this project and/or by municipal/county/provincial/ regulatory approval agency personnel that this letter may be used for guidance of the designers of the project and submitted for a specific site development permit application process. Any other use of this letter by the client and/or by others is prohibited and is without responsibility of Morey Associates Ltd. Further, Morey Associates Ltd. cannot be responsible for use of only portions of this letter by the client and/or by others without reference to the entire letter.

This letter is of a summary nature and is not intended to stand alone without reference to the instructions given to Morey Associates Ltd. by the client and/or by other design professionals associated with and retained by the client for this project and/or by municipal/county/provincial/regulatory approval agency personnel. This letter has been prepared based on our interpretation of the instructions given to Morey Associates Ltd. by the client and/or by other design professionals associated with and retained by the client for this project and/or by municipal/county/provincial/regulatory approval agency personnel only. Regulatory agency requirements may change in real time during a development permit application process and regulatory agency requirements are subject to interpretation and these interpretations may change over time. As such, no warranty, expressed or implied, is made by Morey Associates Ltd. that this letter meets others' interpretations of any regulatory agency requirements.

It is stressed that the information presented in this letter is provided for the guidance of the design professionals associated with and retained by the client for this project and is intended for this project only. The use of this letter as a construction document is neither intended nor authorized by Morey Associates Ltd.

Contractors bidding on or undertaking works related to the proposed project at the subject site should examine the factual results of the assessment, satisfy themselves as to the adequacy of the information for construction, which may require the contractor(s) to carry out additional investigation(s) and reporting, as it affects their construction techniques, schedule, safety and equipment capabilities.

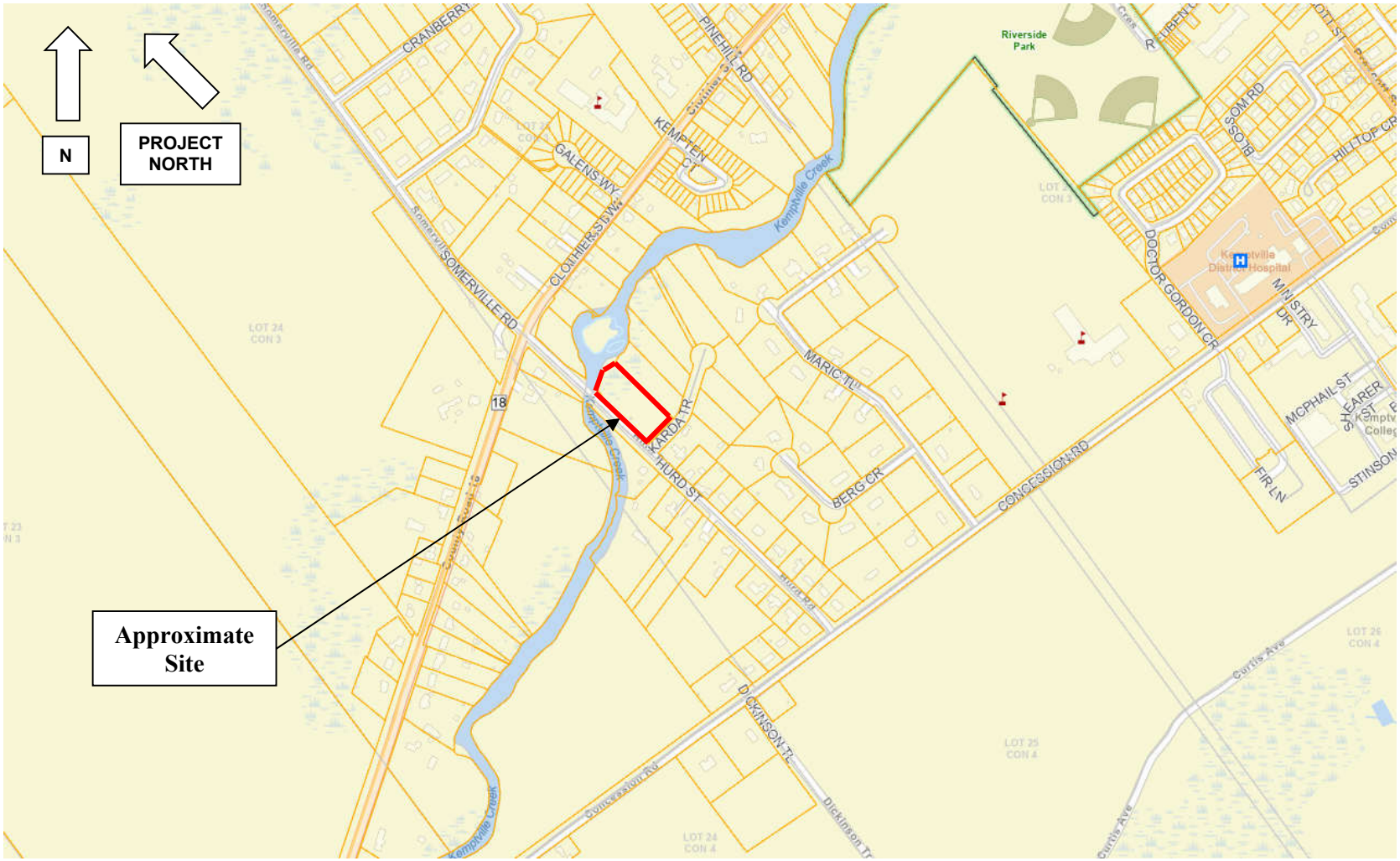
Any letter recommendations/engineering guidelines are applicable only to the project described in the letter. Any changes in the scope of the project will require a review by Morey Associates Ltd. to ensure compatibility with any letter recommendations/engineering guidelines contained in this letter.

The professional services for this project include the slope stability aspects of the assessment described above/in the letter only. The presence or implications of possible surface and/or subsurface contamination resulting from previous uses or activities at this site or adjacent properties, and/or resulting from the introduction onto the site of materials from offsite sources are outside the terms of reference for this letter and have not been addressed.

The engineering guidelines provided in this letter are based on subsurface data obtained at the specific test hole locations only. Boundaries between zones on the logs are often not distinct but transitional and were interpreted. A geotechnical (subsurface) assessment is a limited sampling of a site. Experience indicates that the subsurface soil and groundwater conditions can vary significantly between and beyond the test hole locations. Should any conditions at the site be encountered which differ from those at the test hole locations, Morey Associates Ltd. should be notified to carry out a review regarding the encountered conditions as they relate to the engineering guidelines/recommendations contained in this letter.

KEY PLAN

FIGURE 1



Reference: Leeds Grenville Public Map Viewer GIS website

NOT TO SCALE

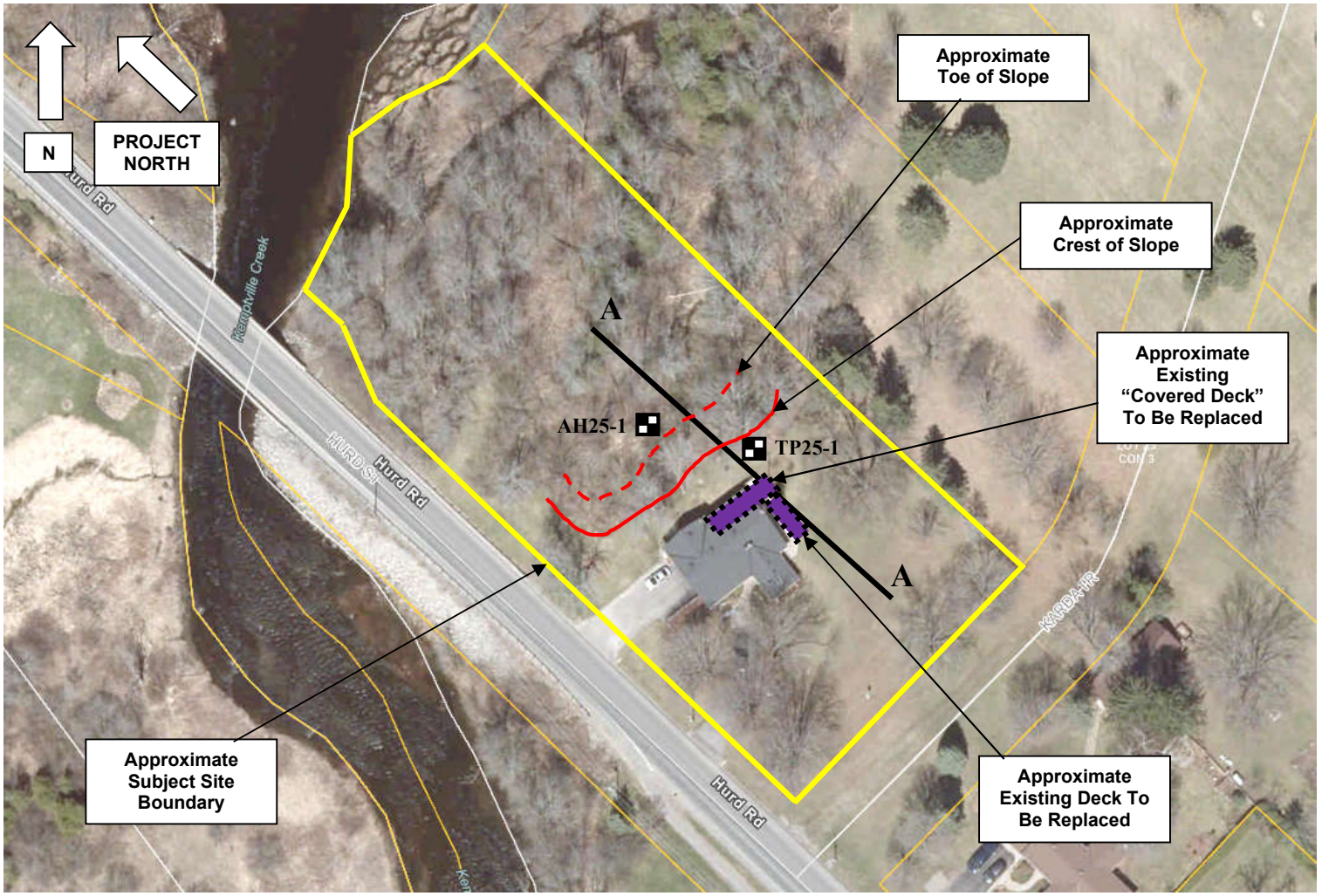
MOREY ASSOCIATES LTD.
CONSULTING ENGINEERS

Project No. 025025

Date March 2025

AERIAL SKETCH PLAN

FIGURE 2



Reference: Leeds Grenville Public Map Viewer GIS website

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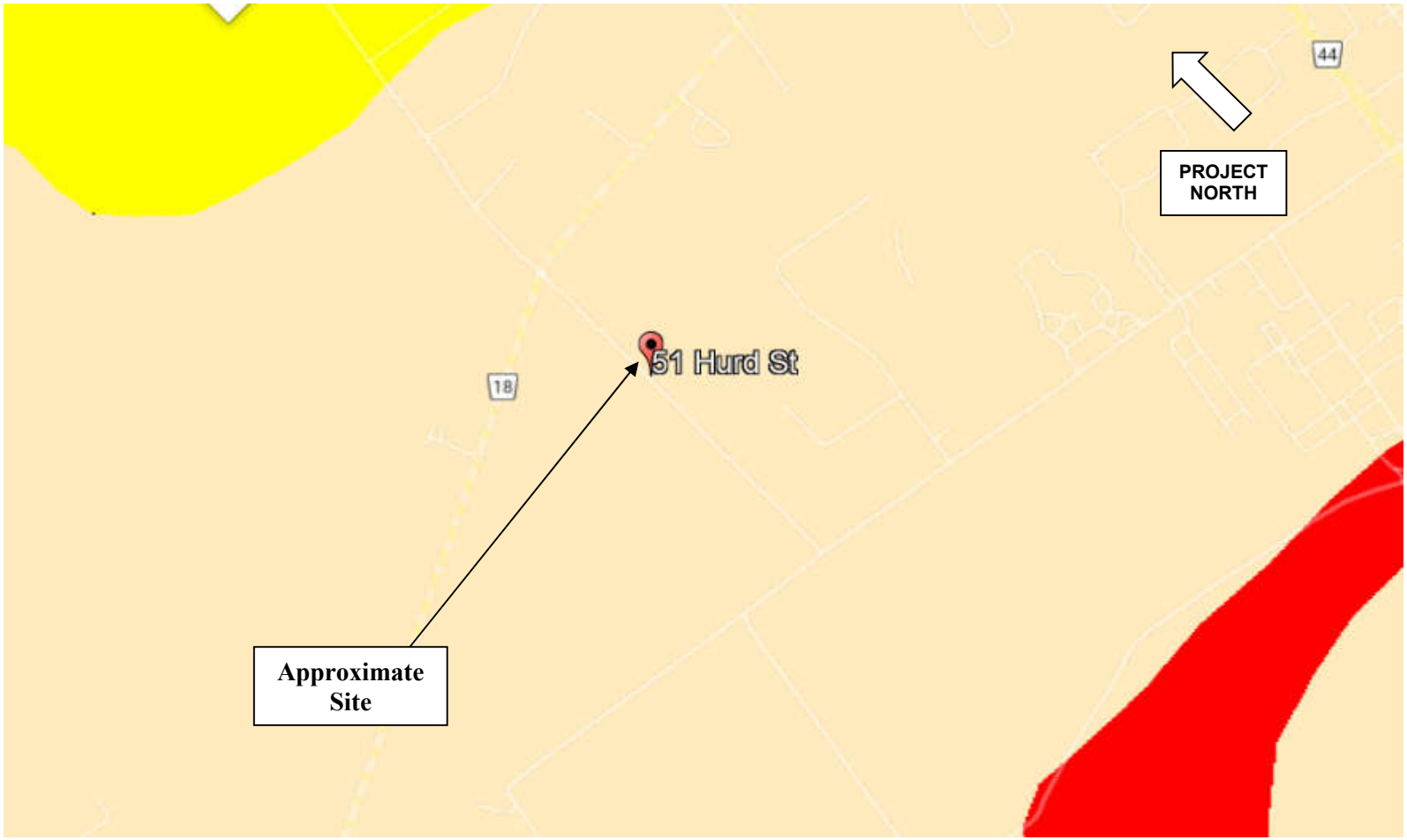
CONSULTING ENGINEERS

Project No. 025025

Date March 2025

SURFICIAL GEOLOGY MAP

FIGURE 3



Reference: Physiography of South Ontario, OGS, Chapman and Putnam, 2007

NOT TO SCALE

6 Till Plains (Drumlinized)

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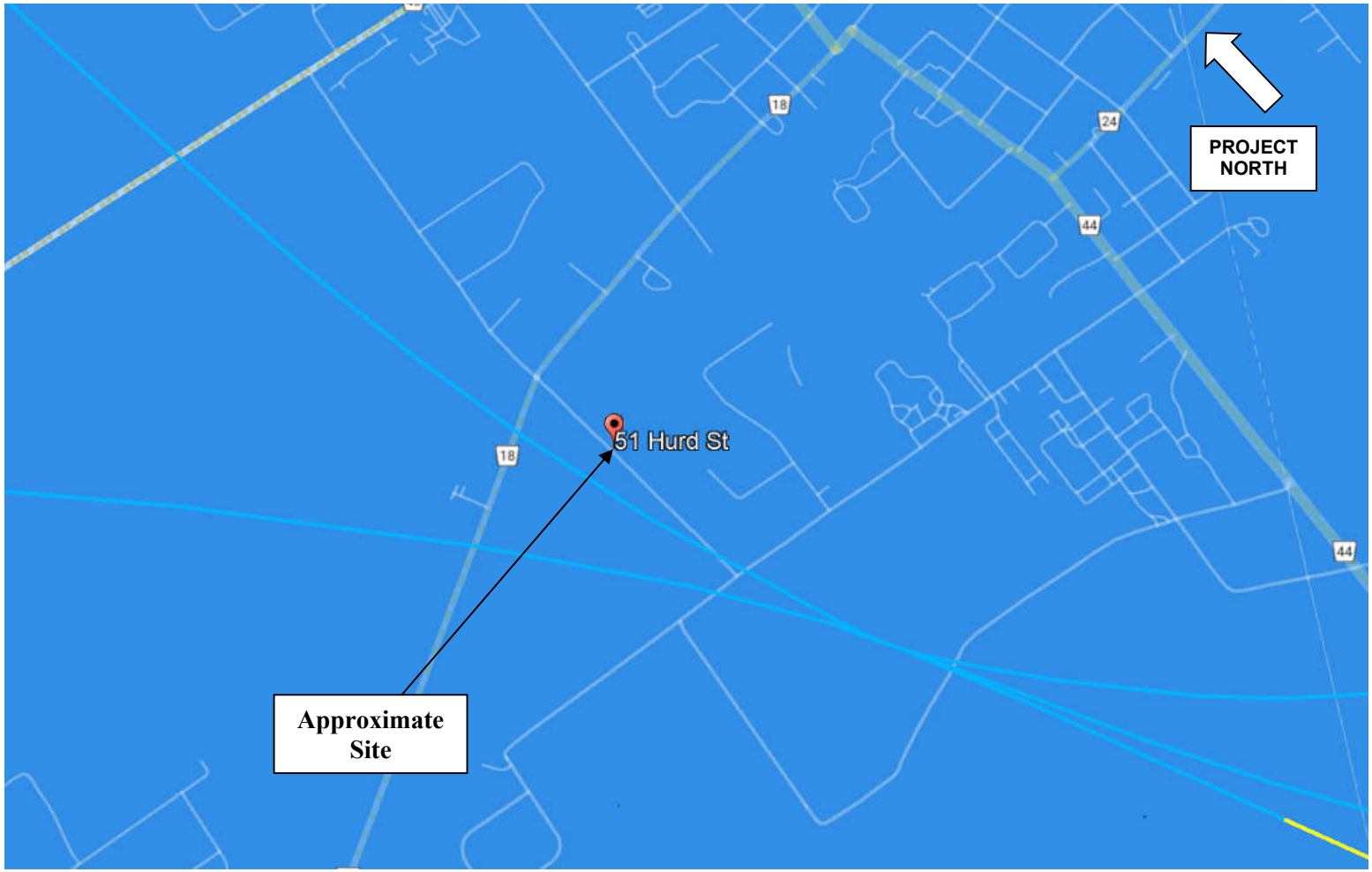
Date March 2025

BEDROCK GEOLOGY MAP

FIGURE 4



Reference: Ontario Geological Survey, 2011

NOT TO SCALE

5 **Oxford Formation**: dolostone, minor shale and sandstone

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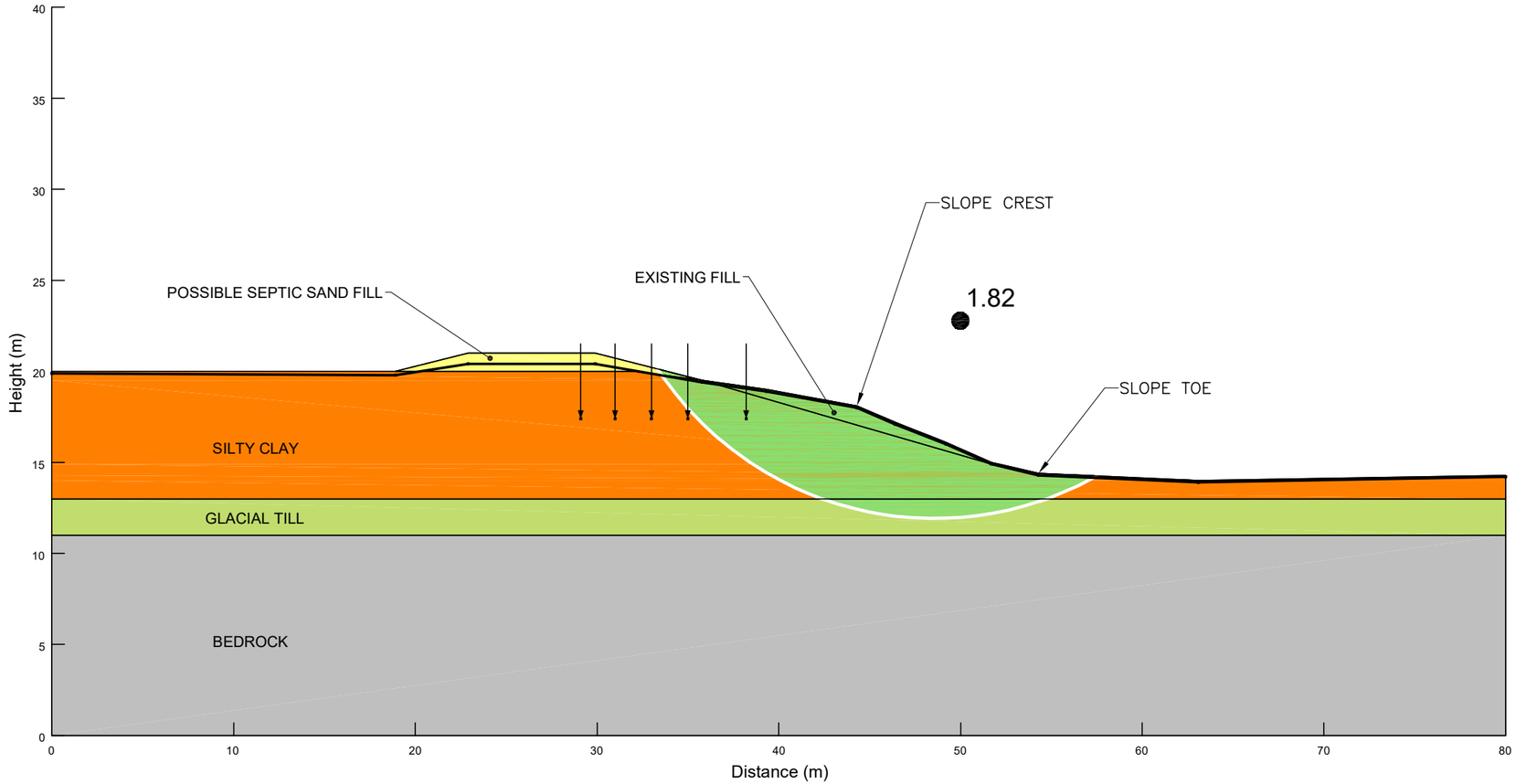
Project No. 025025

Date March 2025



ANALYSIS NAME

STATIC CONDITIONS - SLOPE SECTION A-A
FIGURE 5

LOCATION

51 HURD STREET
MUNICIPALITY OF NORTH GRENVILLE
ONTARIO

PROJECT

SLOPE STABILITY ASSESSMENT

CLIENT

LOCKWOOD BROTHERS CONSTRUCTION

DATE	DRAWN BY	APPROX.SCALE	FILE NO.
March 2025	DGM	As Shown	025025

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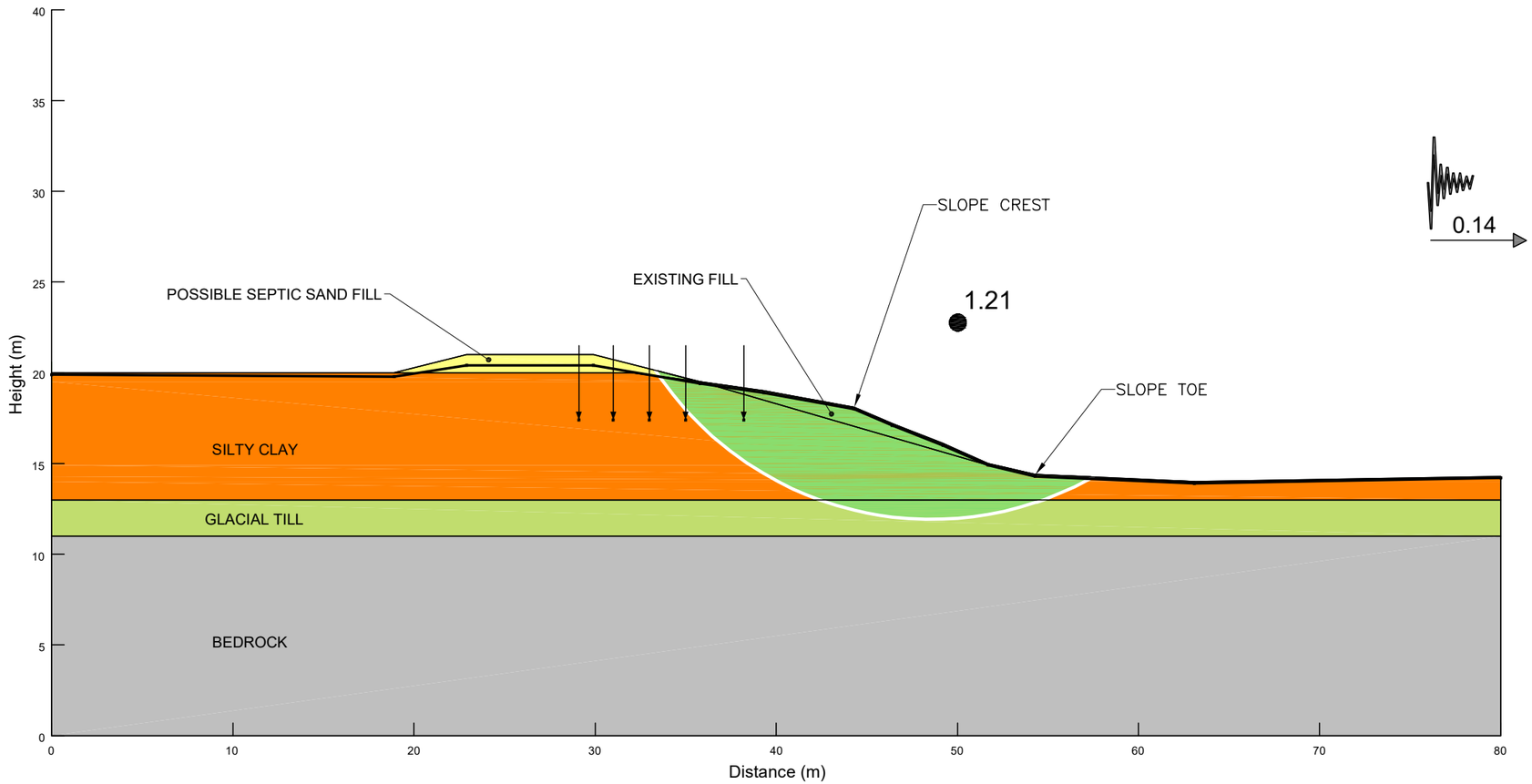
T:613.215.0605
info@moreyassociates.com



ANALYSIS NAME

PSEUDO-STATIC CONDITIONS - SLOPE SECTION A-A
FIGURE 6

LOCATION

51 HURD STREET
MUNICIPALITY OF NORTH GRENVILLE
ONTARIO

PROJECT

SLOPE STABILITY ASSESSMENT

CLIENT

LOCKWOOD BROTHERS CONSTRUCTION

DATE	DRAWN BY	APPROX.SCALE	FILE NO.
March 2025	DGM	As Shown	025025

MOREY ASSOCIATES LTD.
CONSULTING ENGINEERS

2672 HWY.43, PO BOX 184
KEMPTVILLE, ONTARIO
K0G 1J0

T:613.215.0605
info@moreyassociates.com

TABLE I
RECORD OF TEST PIT AND AUGERHOLE

51 HURD STREET, KEMPTVILLE
MUNICIPALITY OF NORTH GRENVILLE
ONTARIO

TEST PIT/AUGERHOLE NO. [APPROX. ELEV.]	DEPTH (METRES)	DESCRIPTION
TP25-1 [±93.5m]	0.00 – 1.20	Topsoil, sand, silt, clay, occasional boulder, occasional piece of wood (FILL)
	1.20 – 3.05	Grey brown SILTY CLAY, trace sand, trace gravel
	3.05	End of test pit

No groundwater seepage observed into test pit at time of field work, February 27, 2025.

AH25-1 [±89.2m]	0.00 – 0.20	Branches, cobbles
	0.20 – 0.80	Grey brown SILTY CLAY
	0.80	Refusal to advance auger/soil probe on possible boulder

Soil moist in augerhole at time of field work, March 14, 2025.

APPENDIX A

MECP WELL RECORDS

Ontario — Ministry of the Environment, Conservation and Parks

Tag#: A318397 (r Print Below)

A318397

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☒ Metric ☐ Imperial

Page ____ of ____

Well Owner's Information

First Name	Last Name/Organization	E-mail Address	☐ Well Constructed by Well Owner
	12518791 Canada Inc		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
10278 Hyndman Road	Mountain	ON	K0E 1S0	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
53 Hurd Street	Oxford on the Rideau	25	3

County/District/Municipality	City/Town/Village	Province	Postal Code
North Grenville	Kemptville	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	448575	4984031	TW # 1/3	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Clay, Hard Pan &	Gravel		0	18
Grey & Black	Limestone			18	132
Grey & Black	Limestone			132	138

Test Well # 1 of 3

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
28	18	Neat cement	9.36
18	0	Bentonite slurry	12.6

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 1/4"	Steel	.188"	+2	28
6"	Open Hole		28	138

Status of Well

☒ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, specify
☐ Other, specify

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water: Fresh	Untested	Other, specify
132	☐	☐	☒	
	☐	☐	☐	
	☐	☐	☐	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	28	9 3/4"
28	138	6"

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd	C7681

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
6659 Franktown Road	Richmond	ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted Y Y Y Y M M D D
6138382170	Hanna, Jeremy	T3632		2021 05 31

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify Not tested

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 120

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 17.9"

If flowing give rate (l/min/GPM): X

Recommended pump depth (m/ft): 100'

Recommended pump rate (l/min/GPM): 20

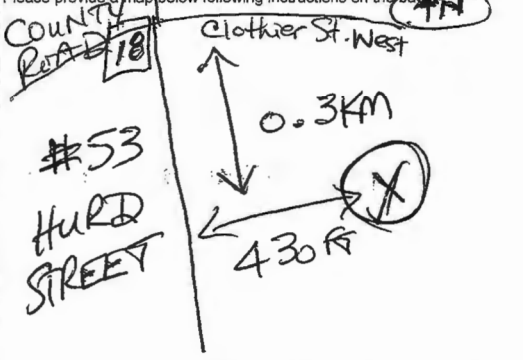
Well production (l/min/GPM): 20

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	17'5"		17.9"
1	17.8	1	17.5
2	17.8	2	17.5
3	17.9	3	17.5
4	17.9	4	17.5
5	17.9	5	17.5
10	17.9	10	17.5
15	17.9	15	17.5
20	17.9	20	17.5
25	17.9	25	17.5
30	17.9	30	17.5
40	17.9	40	17.5
50	17.9	50	17.5
60	17.9"	60	17.5"

Map of Well Location

Please provide a map below following instructions on the back.



Comments: 1/2 HP - 10 GPM Set @ 100 FT

Well owner's information package delivered	Date Package Delivered Y Y Y Y M M D D	Date Work Completed Y Y Y Y M M D D
☒ Yes ☐ No	2021 05 19	2021 05 14

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Ontario — Ministry of the Environment, Conservation and Parks

Measurements recorded in: ☐ Metric ☒ Imperial

We Tag#:A318396 int Below)

A318396

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

Well Owner's Information

First Name	Last Name/Organization	E-mail Address	☐ Well Constructed by Well Owner
	12518791 Canada Inc		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
10278 Hyndman Road	Mountain	ON	K0E 1S0	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
53 Hurd Street	Oxford on the Rideau	25	3

County/District/Municipality	City/Town/Village	Province	Postal Code
North Grenville	Kemptville	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	448513	4984118	TW# 2/3	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Clay	& Hard Pan		0'	14'
Grey & Black	Limestone			14'	130'
Grey & Black	Limestone			130'	136'

Test well #2 of 3

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/cft)
24'	14'	Neat cement	9.36
14'	0'	Bentonite slurry	12.6

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 1/4"	Steel	.188"	+2'	24'
6"	Open Hole		24'	136'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To

Status of Well

☒ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, specify
☐ Other, specify

Water Details

Water found at Depth (m/ft)	☐ Gas	Kind of Water: ☐ Fresh ☒ Untested ☐ Other, specify
130		
		Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify
		Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0'	24'	9 3/4"
24'	136'	6"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify Not tested

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 120

Pumping rate (l/min/GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 9.8"

If flowing give rate (l/min/GPM): X

Recommended pump depth (m/ft): 100'

Recommended pump rate (l/min/GPM): 20

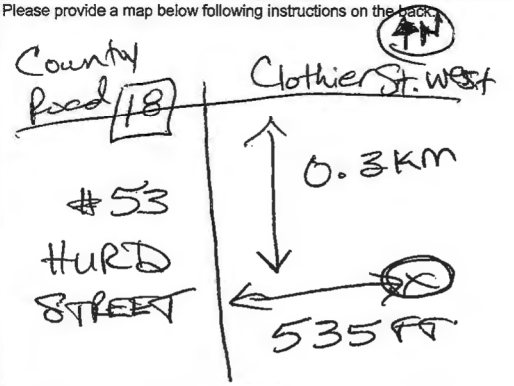
Well production (l/min/GPM): 20

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	7'9"		9.8"
1	9.6	1	8.1
2	9.6	2	7.9
3	9.6	3	7.9
4	9.7	4	7.9
5	9.7	5	7.9
10	9.7	10	7.9
15	9.8	15	7.9
20	9.8	20	7.9
25	9.8	25	7.9
30	9.8	30	7.9
40	9.8	40	7.9
50	9.8	50	7.9
60	9.8"	60	7.9"

Map of Well Location

Please provide a map below following instructions on the back.



Comments: 1/2HP-10 GPM Set @ 100 FT

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	7681

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
6659 Franktown Road	Richmond	ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted (Y Y Y Y M M D D)
6138382170	Hanna, Jeremy	T3632		2021 05 31

Well owner's information package delivered: ☒ Yes ☐ No

Date Package Delivered (Y Y Y Y M M D D): 2021 05 19

Date Work Completed (Y Y Y Y M M D D): 2021 05 14

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Audit No. Z355138

Received

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Ministry's Copy

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Ontario — Ministry of the Environment, Conservation and Parks

Tag#: A318395 (Print Below)

A318395

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page ____ of ____

Well Owner's Information

First Name	Last Name/Organization	E-mail Address	☐ Well Constructed by Well Owner
	12518791 Canada Inc		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
10278 Hyndman Road	Mountain	ON	K0E 1S0	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
53 Hurd Street	Oxford on the Rideau	25	3

County/District/Municipality	City/Town/Village	Province	Postal Code
North Grenville	Kemptville	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	448497	4984028	TW# 3/3	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Clay + Hard Pan + Gravel			0'	18'
Grey & Black	Limestone			18'	135'
Grey & Black	Limestone			135'	141'

<Test Well #3 of 3.

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
28'	18'	Neat cement	9.36
18'	0'	Bentonite slurry	12.6

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, specify ____

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify ____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 1/4"	Steel	.188"	+2'	28'
6"	Open Hole		28'	141'

Status of Well

☒ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, specify
☐ Other, specify

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To

Water Details

Water found at Depth	Kind of Water	Hole Diameter Depth From	Depth To	Diameter (cm/in)
135 (m/ft) ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify ____	0'	28'	9 3/4"
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify ____	28'	141'	6"
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify ____			

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify **Not tested**

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 130

Pumping rate (l/min/GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 13.2"

If flowing give rate (l/min/GPM): X

Recommended pump depth (m/ft): 100'

Recommended pump rate (l/min/GPM): 20

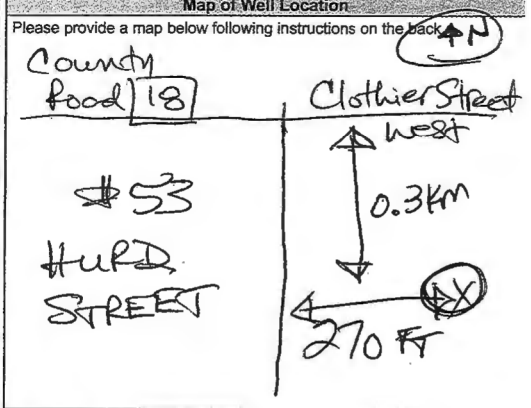
Well production (l/min/GPM): 20

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	10'1"		13.2"
1	12.7	1	11.7
2	12.7	2	10.1
3	12.8	3	10.1
4	12.9	4	10.1
5	12.9	5	10.1
10	13.2	10	10.1
15	13.2	15	10.1
20	13.2	20	10.1
25	13.2	25	10.1
30	13.2	30	10.1
40	13.2	40	10.1
50	13.2	50	10.1
60	13.2"	60	10.1"

Map of Well Location

Please provide a map below following instructions on the back.



Comments: 1/2HR-10GPM Set @ 100 FT

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	7681

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
6659 Franktown Road	Richmond	ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
6138382170	Hanna, Jeremy	T3632		2021 05 31

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☒ Yes ☐ No	2021 05 19	2021 05 14

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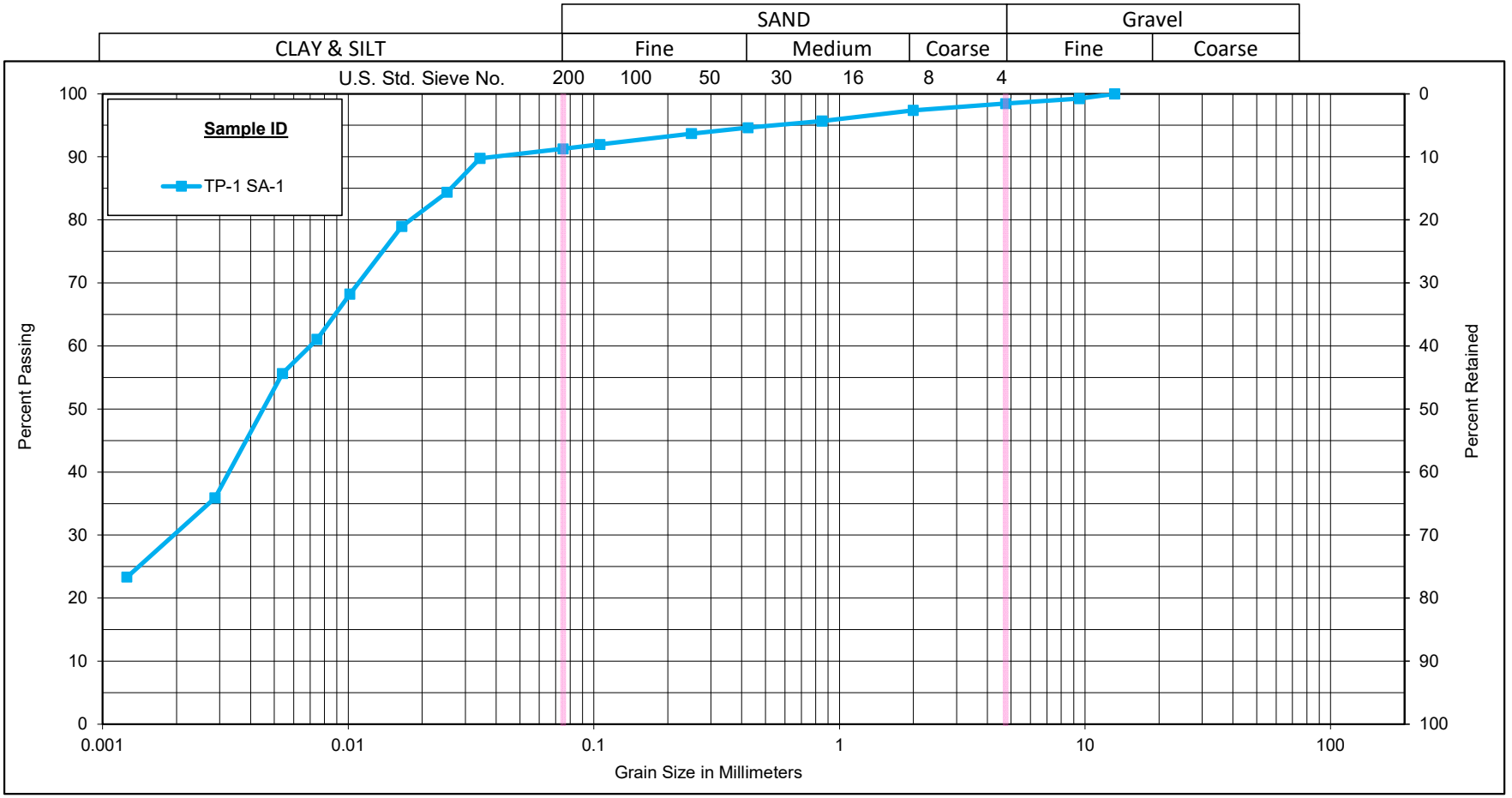
APPENDIX B

LABORATORY GRAIN SIZE DISTRIBUTION TESTING RESULTS

Unified Soil Classification System



Sample ID	Depth	% Gravel	% Sand	% Silt	% Clay
TP-1 SA-1	10'	1.6	7.1	62.3	29.0

Stantec

GRAIN SIZE DISTRIBUTION

Morey Associates, File #025025

Materials Testing

Figure No.

Project No. 121625580

Stantec

Particle-Size Analysis of Soils

LS702

AASHTO T88

PROJECT DETAILS			
Client:	**Morey Associates, File #025025**	Project No.:	**121625580**
Project:	**Materials Testing**	Test Method:	**LS702**
Material Type:	**Soil**	Sampled By:	**Morey Associates**
Source:	**TP-1**	Date Sampled:	**January 30, 2025**
Sample No.:	**SA-1**	Tested By:	**Brian Prevost**
Sample Depth	**10'**	Date Tested:	**March 4, 2025**

WASH TEST DATA	
Oven Dry Mass In Hydrometer Analysis (g)	53.07
Sample Weight after Hydrometer and Wash (g)	3.35
Percent Passing No. 200 Sieve (%)	**93.7**
Percent Passing Corrected (%)	**91.22**

PERCENT LOSS IN SIEVE	
Sample Weight Before Sieve (g)	**262.10**
Sample Weight After Sieve (g)	**260.40**
Percent Loss in Sieve (%)	**0.65**

SOIL INFORMATION		
Liquid Limit (LL)		
Plasticity Index (PI)		
Soil Classification		
Specific Gravity (G_s)	2.750	
Sg. Correction Factor (α)	0.978	
Mass of Dispersing Agent/Litre	40	g

CALCULATION OF DRY SOIL MASS	
Oven Dried Mass (W_o), (g)	144.79
Air Dried Mass (W_a), (g)	145.10
Hygroscopic Corr. Factor ($F=W_o/W_a$)	0.9979
Air Dried Mass in Analysis (M_a), (g)	53.18
Oven Dried Mass in Analysis (M_o), (g)	53.07
Percent Passing 2.0 mm Sieve (P_{10}), (%)	97.37
Sample Represented (W), (g)	54.50

SIEVE ANALYSIS		
Sieve Size mm	**Cum. Wt. Retained**	**Percent Passing**
75.0		100.0
63.0		100.0
53.0		100.0
37.5		100.0
26.5		100.0
19.0		100.0
13.2	0.0	100.0
9.5	2.0	99.2
4.75	4.1	98.4
2.00	6.9	97.4
Total (C + F)[1]	260.40	
0.850	0.92	95.68
0.425	1.50	94.62
0.250	2.00	93.70
0.106	2.95	91.95
0.075	3.32	91.28
PAN	3.33	

Note 1: (C + F) = Coarse + Fine

HYDROMETER DETAILS	
Volume of Bulb (V_B), (cm^3)	63.3
Length of Bulb (L_2), (cm)	14.2
Length from '0' Reading to Top of Bulb (L_1), (cm)	10.3
Scale Dimension (h_s), (cm/Div)	0.17
Cross-Sectional Area of Cylinder (A), (cm^2)	27.25
Meniscus Correction (H_m), (g/L)	1.0

START TIME 9:41 AM

HYDROMETER ANALYSIS

Date	Time	Elapsed Time T Mins	H_s Divisions g/L	H_c Divisions g/L	Temperature T_c °C	Corrected Reading $R = H_s - H_c$ g/L	Percent Passing P %	L cm	η Poise	K	Diameter D mm
04-Mar-25	9:42 AM	1	55.0	5.0	20.0	50.0	89.76	6.71798	10.09098	0.013286	0.03444
04-Mar-25	9:43 AM	2	52.0	5.0	20.0	47.0	84.37	7.22798	10.09098	0.013286	0.02526
04-Mar-25	9:46 AM	5	49.0	5.0	20.0	44.0	78.99	7.73798	10.09098	0.013286	0.01653
04-Mar-25	9:56 AM	15	43.0	5.0	20.0	38.0	68.22	8.75798	10.09098	0.013286	0.01015
04-Mar-25	10:11 AM	30	39.0	5.0	20.0	34.0	61.03	9.43798	10.09098	0.013286	0.00745
04-Mar-25	10:41 AM	60	36.0	5.0	20.0	31.0	55.65	9.94798	10.09098	0.013286	0.00541
04-Mar-25	1:51 PM	250	25.0	5.0	20.5	20.0	35.90	11.81798	9.96839	0.013205	0.00287
05-Mar-25	9:41 AM	1440	18.0	5.0	20.5	13.0	23.34	13.00798	9.96839	0.013205	0.00126

Remarks:

Reviewed By: Daniel Boateng

Date: March 5, 2025

V:\01216\active\laboratory_standing_offers\2025 Laboratory Standing Offers\121625580 Morey Associates\February 7, Hydrometer, Morey #025025\Hydrometer-Lab Standing Offers.xlsx

APPENDIX C

COMPLETED TABLE 4.2 SLOPE STABILITY RATING CHART (EXCERPT FROM SECTION 4.3.2 OF THE MNR "TECHNICAL GUIDE - RIVER & STREAM SYSTEMS: EROSION HAZARD LIMIT")

TABLE 4.2 - SLOPE STABILITY RATING CHART

Site Location: *51 Hurd Street, Kemptville, ON* File No. *025025*

~~Property Owner:~~ Client *Lockwood Brothers Construction* ~~Inspection~~ Site Visits Date: *January to March, 2025*

~~Inspected~~ Site Visit By: *Morey Associates Ltd. technical staff* Weather: *Varied*

1.	**SLOPE INCLINATION**		
	degrees	**horiz. : vert.**	
	a) 18 or less	3 : 1 or flatter	0
	b) 18 - 26	2 : 1 to more than 3 : 1	6
	c) more than 26	steeper than 2 : 1	16
2.	**SOIL STRATIGRAPHY**		
	a) Shale, Limestone, Granite (Bedrock)		0
	b) Sand, Gravel		6
	c) Glacial Till		9
	d) Clay, Silt		12
	e) Fill		16
	f) Leda Clay		24
3.	**SEEPAGE FROM SLOPE FACE**		
	a) None or Near bottom only		0
	b) Near mid-slope only		6
	c) Near crest only or, From several levels		12
4.	**SLOPE HEIGHT**		
	a) 2 m or less		0
	b) 2.1 to 5 m		2
	c) 5.1 to 10 m		4
	d) more than 10 m		8
5.	**VEGETATION COVER ON SLOPE FACE**		
	a) Well vegetated; heavy shrubs or forested with mature trees		0
	b) Light vegetation; Mostly grass, weeds, occasional trees, shrubs		4
	c) No vegetation, bare		8
6.	**TABLE LAND DRAINAGE**		
	a) Table land flat, no apparent drainage over slope		0
	b) Minor drainage over slope, no active erosion		2
	c) Drainage over slope, active erosion, gullies		4
7.	**PROXIMITY OF WATERCOURSE TO SLOPE TOE**		
	a) 15 metres or more from slope toe		0
	b) Less than 15 metres from slope toe		6
8.	**PREVIOUS LANDSLIDE ACTIVITY**		
	a) No - no evidence of previous slope failures at proposed site development area		0
	b) Yes		6

SLOPE INSTABILITY RATING VALUES INVESTIGATION RATING SUMMARY **TOTAL** ***26***

APPENDIX D

SITE PHOTOGRAPHS

Photograph 1: Subject slope with existing dwelling/covered deck in background, floodplain in foreground.
[Looking in project south direction]

Photograph 2: Crest of subject slope in foreground, floodplain in background with Kemptville Creek beyond.
[Looking in project north direction]

Photograph 3 [Google Street View Webiste – Nov.2024]: Existing dwelling/covered deck and subject slope [Looking in project east direction]

APPENDIX E

2015 NATIONAL BUILDING CODE SEISMIC HAZARD CALCULATION

2015 National Building Code Seismic Hazard Calculation

INFORMATION: Eastern Canada English (613) 995-5548 français (613) 995-0600 Facsimile (613) 992-8836
Western Canada English (250) 363-6500 Facsimile (250) 363-6565

Site: 45.010N 75.650W

2025-03-15 15:32 UT

Probability of exceedance per annum	0.000404	0.001	0.0021	0.01
Probability of exceedance in 50 years	2 %	5 %	10 %	40 %
Sa (0.05)	0.438	0.237	0.138	0.039
Sa (0.1)	0.511	0.288	0.175	0.055
Sa (0.2)	0.427	0.245	0.152	0.050
Sa (0.3)	0.323	0.187	0.118	0.041
Sa (0.5)	0.228	0.133	0.084	0.029
Sa (1.0)	0.113	0.067	0.043	0.015
Sa (2.0)	0.054	0.032	0.020	0.006
Sa (5.0)	0.014	0.008	0.005	0.001
Sa (10.0)	0.005	0.003	0.002	0.001
PGA (g)	0.273	0.156	0.096	0.029
PGV (m/s)	0.189	0.106	0.065	0.020

Notes: Spectral (Sa(T), where T is the period in seconds) and peak ground acceleration (PGA) values are given in units of g (9.81 m/s^2). Peak ground velocity is given in m/s. Values are for "firm ground" (NBCC2015 Site Class C, average shear wave velocity 450 m/s). NBCC2015 and CSAS6-14 values are highlighted in yellow. Three additional periods are provided - their use is discussed in the NBCC2015 Commentary. Only 2 significant figures are to be used. **These values have been interpolated from a 10-km-spaced grid of points. Depending on the gradient of the nearby points, values at this location calculated directly from the hazard program may vary. More than 95 percent of interpolated values are within 2 percent of the directly calculated values.**

References

National Building Code of Canada 2015 NRCC no. 56190; Appendix C: Table C-3, Seismic Design Data for Selected Locations in Canada

Structural Commentaries (User's Guide - NBC 2015: Part 4 of Division B)
Commentary J: Design for Seismic Effects

Geological Survey of Canada Open File 7893 Fifth Generation Seismic Hazard Model for Canada: Grid values of mean hazard to be used with the 2015 National Building Code of Canada

See the websites www.EarthquakesCanada.ca and www.nationalcodes.ca for more information

A-05-25
51 Hurd Street

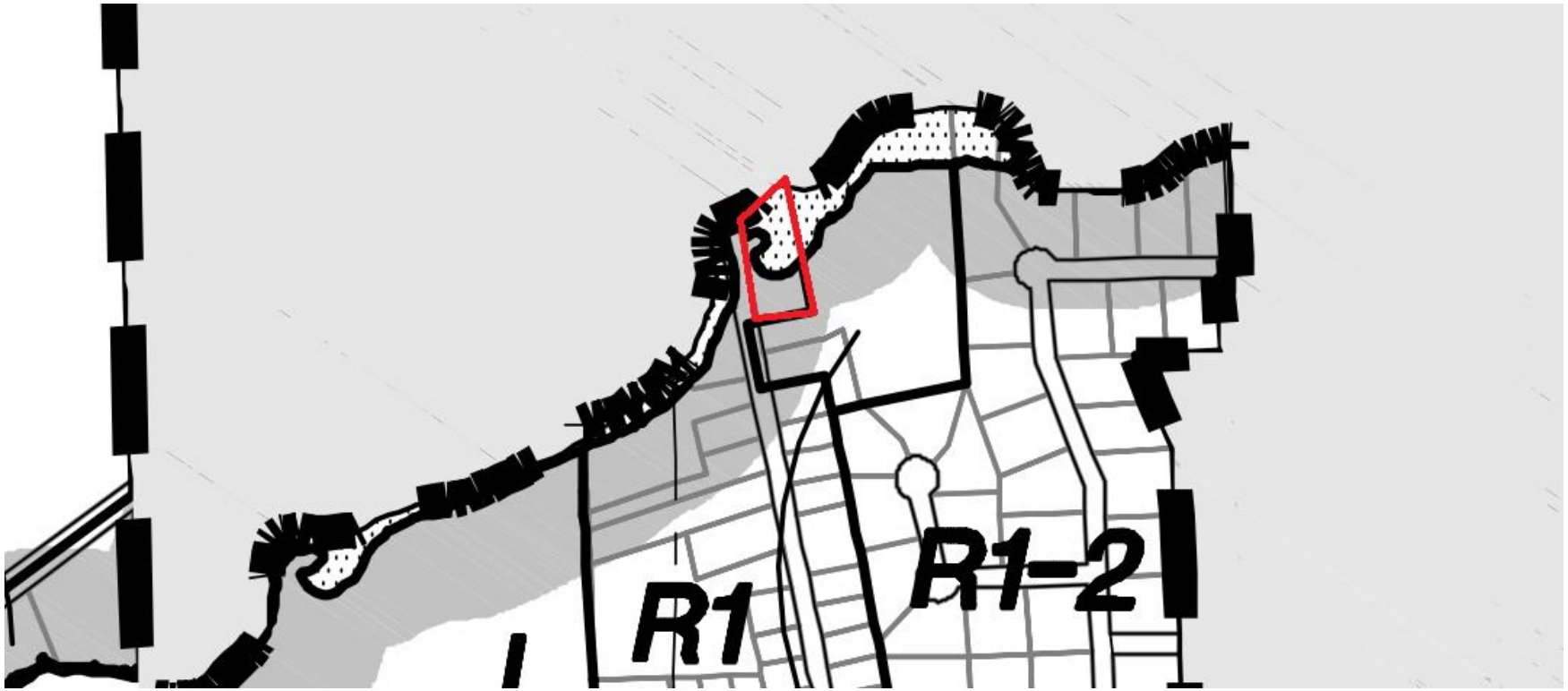
April 16, 2025

Department: Planning and Development

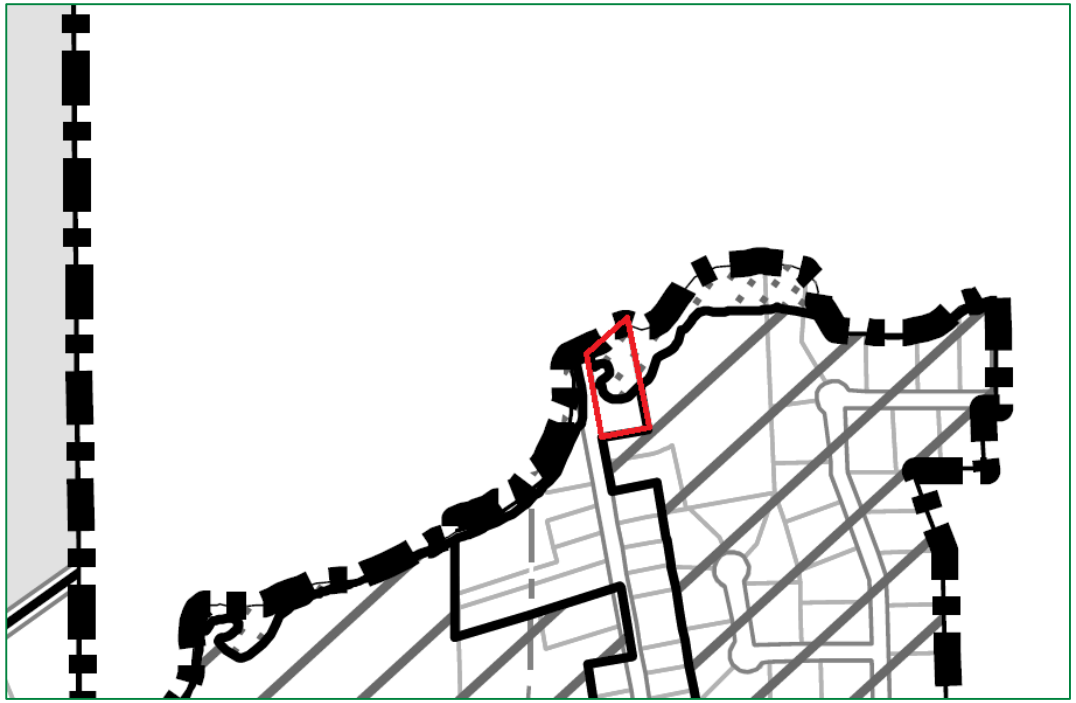
Minor Variance Request

1. **To provide relief from Section 6.25[c] of the Comprehensive Zoning By-law to allow a deck to be screened in at a distance of 13.67 metres from the regulatory floodline;**

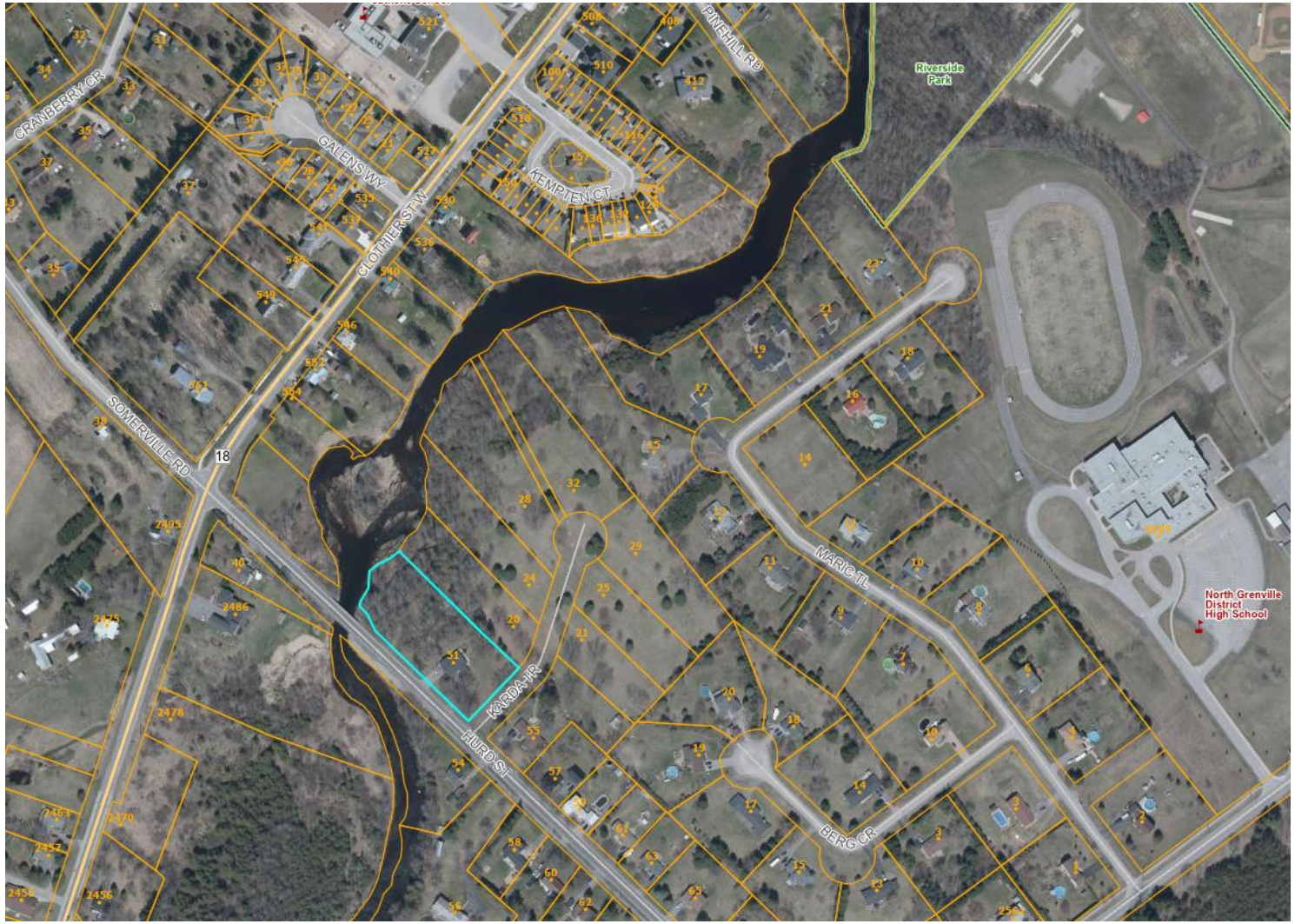
Department: Planning and Development



Zoning

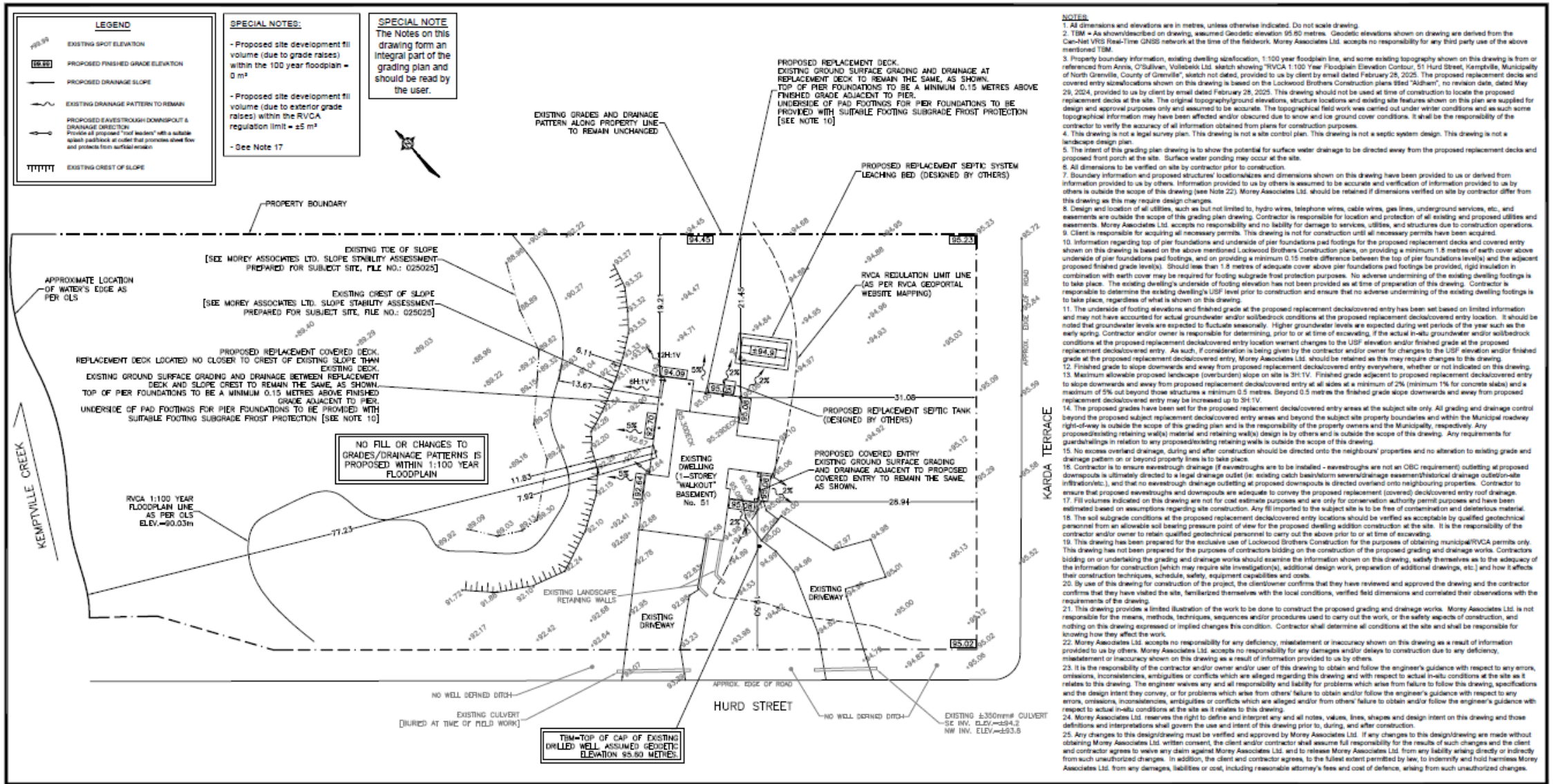


Official Plan



Context Map

Department: Planning and Development



NOTES:

1. All dimensions and elevations are in metres, unless otherwise indicated. Do not scale drawing.
2. TBM = As shown/described on drawing, assumed Geodetic elevation 95.50 metres. Geodetic elevations shown on drawing are derived from the Can-Net VRS Real-Time GNSS network at the time of the fieldwork. Morey Associates Ltd. accepts no responsibility for any third party use of the above mentioned TBM.
3. Property boundary information, existing dwelling size/location, 1:100 year floodplain line, and some existing topography shown on this drawing is from or referenced from Annis, O'Sullivan, Vollebekk Ltd. sketch showing "RVCA 1:100 Year Floodplain Elevation Contour, 51 Hurd Street, Kemptville, Municipality of North Grenville, County of Grenville", sketch not dated, provided to us by client by email dated February 28, 2025. The proposed replacement decks and covered entry sizes/locations shown on this drawing is based on the Lockwood Brothers Construction plans titled "Aldhem", no revision date, dated May 29, 2024, provided to us by client by email dated February 28, 2025. This drawing should not be used at time of construction to locate the proposed replacement decks at the site. The original topography/ground elevations, structure locations and existing site features shown on this plan are supplied for design and approval purposes only and assumed to be accurate. The topographical field work was carried out under winter conditions and as such some topographical information may have been effected and/or obscured due to snow and ice ground cover conditions. It shall be the responsibility of the contractor to verify the accuracy of all information obtained from plans for construction purposes.
4. This drawing is not a legal survey plan. This drawing is not a site control plan. This drawing is not a septic system design. This drawing is not a landscape design plan.
5. The intent of this grading plan drawing is to show the potential for surface water drainage to be directed away from the proposed replacement decks and proposed front porch at the site. Surface water ponding may occur at the site.
6. All dimensions to be verified on site by contractor prior to construction.
7. Boundary information and proposed structures' locations/sizes and dimensions shown on this drawing have been provided to us or derived from information provided to us by others. Information provided to us by others is assumed to be accurate and verification of information provided to us by others is outside the scope of this drawing (see Note 22). Morey Associates Ltd. should be retained if dimensions verified on site by contractor differ from this drawing as this may require design changes.
8. Design and location of all utilities, such as but not limited to, hydro wires, telephone wires, cable wires, gas lines, underground services, etc., and easements are outside the scope of this grading plan drawing. Contractor is responsible for location and protection of all existing and proposed utilities and easements. Morey Associates Ltd. accepts no responsibility and no liability for damage to services, utilities, and structures due to construction operations.
9. Client is responsible for acquiring all necessary permits. This drawing is not valid for construction until all necessary permits have been acquired.
10. Information regarding top of pier foundations and underside of pier foundations pad footings for the proposed replacement decks and covered entry shown on this drawing is based on the above mentioned Lockwood Brothers Construction plans, on providing a minimum 1.8 metres of earth cover above underside of pier foundations pad footings, and on providing a minimum 0.15 metre difference between the top of pier foundations level(s) and the adjacent proposed finished grade level(s). Should less than 1.8 metres of adequate cover above pier foundations pad footings be provided, rigid insulation in combination with earth cover may be required for footing subgrade frost protection purposes. No adverse undermining of the existing dwelling footings is to take place. The existing dwelling's underside of footing elevation has not been provided as at time of preparation of this drawing. Contractor is responsible to determine the existing dwelling's USF level prior to construction and ensure that no adverse undermining of the existing dwelling footings is to take place, regardless of what is shown on this drawing.
11. The underside of footing elevations and finished grade at the proposed replacement decks/covered entry has been set based on limited information and may not have accounted for actual groundwater and/or soil/bedrock conditions at the proposed replacement decks/covered entry location. It should be noted that groundwater levels are expected to fluctuate seasonally. Higher groundwater levels are expected during wet periods of the year such as the early spring. Contractor and/or owner is responsible for determining, prior to or at time of excavating, if the actual in-situ groundwater and/or soil/bedrock conditions at the proposed replacement decks/covered entry location warrant changes to the USF elevation and/or finished grade at the proposed replacement decks/covered entry. As such, if consideration is being given by the contractor and/or owner for changes to the USF elevation and/or finished grade at the proposed replacement decks/covered entry, Morey Associates Ltd. should be retained as this may require changes to this drawing.
12. Finished grade to slope downwards and away from proposed replacement decks/covered entry everywhere, whether or not indicated on this drawing.
13. Maximum allowable proposed landscape (overburden) slope on site is 3H:1V. Finished grade adjacent to proposed replacement decks/covered entry to slope downwards and away from proposed replacement decks/covered entry at all sides at a minimum of 2% (minimum 1% for concrete slabs) and a maximum of 5% out beyond those structures a minimum 0.5 metres. Beyond 0.5 metres the finished grade slope downwards and away from proposed replacement decks/covered entry may be increased up to 3H:1V.
14. The proposed grades have been set for the proposed replacement decks/covered entry areas at the subject site only. All grading and drainage control beyond the proposed subject replacement decks/covered entry areas and beyond the subject site property boundaries and within the Municipal roadway right-of-way is outside the scope of this grading plan and is the responsibility of the property owners and the Municipality, respectively. Any proposed/existing retaining wall(s) material and retaining wall(s) design is by others and is outside the scope of this drawing. Any requirements for guards/railings in relation to any proposed/existing retaining walls is outside the scope of this drawing.
15. No excess overland drainage, during and after construction should be directed onto the neighbours' properties and no alteration to existing grade and drainage pattern on or beyond property lines is to take place.
16. Contractor is to ensure eavestrough drainage (if eavestroughs are to be installed - eavestroughs are not an OBC requirement) outletting at proposed downspouts is ultimately directed to a legal drainage outlet (ie: existing catch basin/storm sewers/drainage easement/historical drainage outlet/on-site infiltration/etc.), and that no eavestrough drainage outletting at proposed downspouts is directed overland onto neighbouring properties. Contractor to ensure that proposed eavestroughs and downspouts are adequate to convey the proposed replacement (covered) deck/covered entry roof drainage.
17. Fill volumes indicated on this drawing are not for cost estimate purposes and are only for conservation authority permit purposes and have been estimated based on assumptions regarding site construction. Any fill imported to the subject site is to be free of contamination and deleterious material.
18. The soil subgrade conditions at the proposed replacement decks/covered entry locations should be verified as acceptable by qualified geotechnical personnel from an allowable soil bearing pressure point of view for the proposed dwelling addition construction at the site. It is the responsibility of the contractor and/or owner to retain qualified geotechnical personnel to carry out the above prior to or at time of excavating.
19. This drawing has been prepared for the exclusive use of Lockwood Brothers Construction for the purposes of obtaining municipal/RVCA permits only. This drawing has not been prepared for the purposes of contractors bidding on the construction of the proposed grading and drainage works. Contractors bidding on or undertaking the grading and drainage works should examine the information shown on this drawing, satisfy themselves as to the adequacy of the information for construction (which may require site investigation(s), additional design work, preparation of additional drawings, etc.) and how it affects their construction techniques, schedule, safety, equipment capabilities and costs.
20. By use of this drawing for construction of the project, the client/owner confirms that they have reviewed and approved the drawing and the contractor confirms that they have visited the site, familiarized themselves with the local conditions, verified field dimensions and correlated their observations with the requirements of the drawing.
21. This drawing provides a limited illustration of the work to be done to construct the proposed grading and drainage works. Morey Associates Ltd. is not responsible for the means, methods, techniques, sequences and/or procedures used to carry out the work, or the safety aspects of construction, and nothing on this drawing expressed or implied changes this condition. Contractor shall determine all conditions at the site and shall be responsible for knowing how they affect the work.
22. Morey Associates Ltd. accepts no responsibility for any deficiency, misstatement or inaccuracy shown on this drawing as a result of information provided to us by others. Morey Associates Ltd. accepts no responsibility for any damages and/or delays to construction due to any deficiency, misstatement or inaccuracy shown on this drawing as a result of information provided to us by others.
23. It is the responsibility of the contractor and/or owner and/or user of this drawing to obtain and follow the engineer's guidance with respect to any errors, omissions, inconsistencies, ambiguities or conflicts which are alleged regarding this drawing and with respect to actual in-situ conditions at the site as it relates to this drawing. The engineer waives any and all responsibility and liability for problems which arise from failure to follow this drawing, specifications and the design intent they convey, or for problems which arise from others' failure to obtain and/or follow the engineer's guidance with respect to any errors, omissions, inconsistencies, ambiguities or conflicts which are alleged and/or from others' failure to obtain and/or follow the engineer's guidance with respect to actual in-situ conditions at the site as it relates to this drawing.
24. Morey Associates Ltd. reserves the right to define and interpret any and all notes, values, lines, shapes and design intent on this drawing and those definitions and interpretations shall govern the use and intent of this drawing prior to, during, and after construction.
25. Any changes to this design/drawing must be verified and approved by Morey Associates Ltd. If any changes to this design/drawing are made without obtaining Morey Associates Ltd. written consent, the client and/or contractor shall assume full responsibility for the results of such changes and the client and contractor agrees to waive any claim against Morey Associates Ltd. and to release Morey Associates Ltd. from any liability arising directly or indirectly from such unauthorized changes. In addition, the client and contractor agrees, to the fullest extent permitted by law, to indemnify and hold harmless Morey Associates Ltd. from any damages, liabilities or cost, including reasonable attorney's fees and cost of defence, arising from such unauthorized changes.

LICENSED PROFESSIONAL ENGINEER
D.G.MOREY
100208030
Mar. 17/25
PROVINCE OF ONTARIO

DRAWING: GRADING PLAN

REV.	DRAWN BY	DATE	DESCRIPTION

LOCATION: 51 HURD STREET
MUNICIPALITY OF NORTH GRENVILLE
ONTARIO

PROJECT: EXISTING DWELLING
PROPOSED REPLACEMENT DECKS AND
PROPOSED COVERED ENTRY

CLIENT: LOCKWOOD BROTHERS CONSTRUCTION

DATE	DRAWING No.	DRAWN BY	SCALE	FILE NO.
March 14, 2025	1 of 1	DGM	1:500	025025

MOREY ASSOCIATES LTD.
CONSULTING ENGINEERS
2672 HWY. 43, PO BOX 184
KEMPTVILLE, ONTARIO
K0G 1J0
T:613.215.0605
info@moreyassociates.com

Site Development Considerations

- **Development maintains a 30-metre setback from the edge of the Kemptville Creek Provincially Significant Wetland**
- **Development is consistent with the PPS, in the opinion of the Planner, and does not contravene the UCLG or MNG Official Plans.**

Comments Received

- **Email of no comment from By-law Services and EPS.**

Proposed Conditions

- **That this decision be contingent upon obtaining a Section 28 permit from RVCA in support of the general development plan most appropriately depicted in Drawing A10, prepared by Lockwood Brothers Construction and dated December 16, 2024.**
- **That an erosion and sediment control plan be submitted in support of the application (Section 5.3.1[d][iv]);**
- **That the development enter into a site plan control agreement (Section 5.3.1[f]);**
- **That the development be generally in keeping with the submitted Site Plan drawing prepared by Lockwood Brothers Construction, Drawing A10 and dated December 16, 2024.**

Recommendation

Staff recommend supporting the requested variances, subject to the noted conditions

The requested variances is minor, the intent of the Comprehensive Zoning By-law and Official Plan is being maintained and the reduction is desirable and appropriate.

Item #

Municipality of North Grenville

To: **Committee of Adjustment** Meeting Date: April 16, 2025

Subject: A-04-25 – 3642 Gliderway Private Report No: PD-2025-025

Prepared by: Phil Mosher, Deputy Director of Planning

Recommendation(s)

THAT the Committee of Adjustment grant relief for the properties located at 3642 Gliderway Private, Part Lot 38, Concession 2, former Township of South Gower, now the Municipality of North Grenville from the following sections of Comprehensive Zoning By-law 50-12:

1. To provide relief from Section 6.25[c] of the Comprehensive Zoning By-law to allow reduce the setback from the regulatory floodline from 15 metres to 10 metres; and

2. To provide relief from Section 9.2 of the Comprehensive Zoning By-law to reduce the minimum required interior side yard from 6 metres to 3 metres and to allow an increase in lot coverage from 15% to 30%.

because the request is minor, the intent of the Comprehensive Zoning By-law and Official Plan are being maintained, and the variances are within the parameters for additions in the Floodplain Hazards designation.

Executive Summary

Purpose

- **To seek relief from the regulatory setback provisions of the By-law, and from interior side yard requirements and lot coverage to allow a single-detached dwelling to be constructed at an existing lot of record.**

Key Findings

- **The subject property is partially located within an area subject to flooding as identified by the Municipality's Official Plan.**
- **The property is also zoned Flooding and Erosion Protection (FEP) and Rural (RU) according to By-law 50-12.**
- **The applicant has been in discussions with the Municipality since 2023 regarding development at this property.**
- **To proposed development exceeds a 30 metre setback from the normal highwater mark of the Rideau River and the nearby wetland.**
- **Variances to side yard and lot coverage requirements are needed, which is not uncommon on smaller, cottage lots.**

Financial Implications

- There are no financial implications with respect to this application. All costs for the application are borne by the applicant.

Background/Analysis

Commencing in 2024, the applicant's agent began discussing plans with municipal staff to develop a single-detached dwelling at the subject property. Based on the proposed discussions, staff discussed that variances may be required depending on proximity to lot lines, regulatory floodplain and lot coverage.

A final version of the development proposal was submitted in March, 2025, together with an application for minor variance.

Based on a review of the Municipality's Official Plan and zoning information, and the Counties' Official Plan, the following has been identified:

- The subject property is designated Floodplain Hazards and Rural in accordance with Schedule "A" of North Grenville's Official Plan and "Rural" and "Floodplain Hazards" pursuant to Schedule "A" of the United Counties of Leeds and Grenville Official Plan.
- It is currently zoned Flooding and Erosion Protection (FEP) and Rural (RU) in accordance with Schedule "A4" of the Municipality's Comprehensive Zoning By-law.

The Property

- The subject property is located near the border with the former Township of Osgoode.
- It's located within Part lot 38, Concession 2 of the geographic Township of South Gower.

- It has frontage on a private road (Gliderway Private) which accesses off County Road 19. The RVCA has previously confirmed that the property enjoys safe access.
- The property has a frontage and depth of 26.23 metres and 102.19 metres respectively. The area is indicated as 2379.62 m^2.

ANALYSIS

Provincial Policy Statement

The Provincial Planning Statement 2024 (PPS) provides overarching policies for growth and development in Ontario. The PPS provides direction for growth on properties affected by natural hazards within Section 5.

Section 5.3 of the PPS states that "[d]evelopment and site alteration shall not be permitted within…areas that would be rendered inaccessible to people and vehicles during times of flooding hazards [or] erosion hazards…unless it has beem demonstrated that the site has safe access appropriate for the nature of the development and the natural hazard."

Based on correspondence with RVCA, this property has safe access. Further, all proposed development is able to occur outside of the 1:100 year regulatory floodplain and be setback approximately 10 metres from the floodplain at its closest point.

In the opinion of staff, this application is consistent with the PPS.

United Counties of Leeds and Grenville Official Plan

The subject site is designated as Rural Lands and Floodplain Hazards pursuant to Schedule "A" of the Counties' Official Plan.

The Floodplain Hazard policies (Section 5.2.2) take precedence in this application. Development is permitted adjacent to flooding hazards and on existing lots of record. The Counties' Plan requires that development which is able to be located outside of the floodplain shall do so, and this application is able to achieve consistency with this policy.

Staff are of the opinion that the proposed variance does not contravene policies of the United Counties' Official Plan.

North Grenville Official Plan

With respect to the Official Plan of the Municipality of North Grenville, the subject site is designated Floodplain Hazards and Rural.

While the Official Plan requires that floodplain developments be subject to site plan control (Section 5.2.3[b], this property is not within the floodplain and therefore does not require a site plan control agreement.

Floodproofing requirements of the proposed dwelling must be able to be provided and any such requirements would be addressed by RVCA during the future permitting process at the subject property.

Section 4 of the Official Plan contains policies for development in the Rural area. Relevant to this application, residential uses are generally intended to be single-detached dwellings and avoid natural hazards. The Plan does support permanent residences on private cottage roads where the lot is of a sufficient size to accommodate private water and sewage systems. It is a requirement that the lot and proposed use be positioned in order that there will be sufficient setback to protect adjacent waterbodies and natural habitats. Vehicular access must be confirmed to be "safe" in accordance with the Municipality's Floodplain policies.

In the opinion of staff, the subject application is consistent with North Grenville's Official Plan policies. The lot is able to develop with private services, it has safe access and maintains a sufficient setback distance from the adjacent Rideau River.

Comprehensive Zoning By-law 50-12

The subject property is within the Flooding and Erosion Protection (FEP) Zone and Rural (RU) Zone as per Land Use Schedule "A4" of the Comprehensive Zoning By-law.

It is not uncommon for waterfront lots to seek some type of relief from the Rural (RU) zone standards. A variety of land use zones are utilized throughout North Grenville with nearby properties having received various approvals for a variety of zone standards, including reduced interior side yards and increased lot coverage.

The requested reduction to the floodline setback, interior side yard setback, and the requested increase in lot coverage are generally in keeping with the requirements of the zoning by-law and still maintain appropriate setbacks. Supplementary information demonstrates how appropriate grading and drainage can be achieved at the subject property.

Staff are of the opinion that the requested variances are in keeping with the Municipal Zoning By-law.

Four Tests

Minor Variances must satisfy the four tests as outlined in the *Planning Act* to be permitted. It is the opinion of Staff that the four tests are met in the following ways:

1) The application is minor in nature: the request relates to reducing the setback from the regulatory floodline and interior side yard setback and increasing lot coverage. The development will be fully located outside the floodplain, will have safe access, and still maintains appropriate setback standards for cottage-lot development.

2) The application meets the intent of the Zoning By-law: the reductions and increase still meet the intent of the Zoning By-law and maintain appropriate standards for development.

3) The application meets the intent of the Official Plan: the proposed minor will see a fully-floodproofed development located outside the floodplain and with safe access.

4) The application is appropriate and represents good land use planning. It allows a greenfield lot to be developed with a dwelling which respects all municipal and provincial policy.

Relevance to Strategic Priorities

Strategic Pillar	Pillar #3 - Diverse and Resilient Economic Development
Goal	Goal #3.5 - Leverage the Benefits of Partner Organizations, and Natural Assets
Key Action	Action #3.5.2 - Review existing programs with Conservation Authorities, and work in collaboration with Conservation Authorities to define new areas for protection

Options and Discussion

1. Approve the recommendation – **RECOMMENDED**
2. Do not approve the recommendation – Not Recommended

Financial Impact

This item has been identified in the current budget: Yes □ No □ N/A X

This item is within the budgeted amount: Yes □ No □ N/A X

Staffing implications, as they relate to implementing Council's decision on this matter, are limited to the existing staff complement and applicable administrative policies as approved by Council.

Internal/External Consultation

Public agencies are circulated in accordance with the Planning Act.

Comments received after the report is published will be circulated to members of the Committee and summarized at the Public meeting.

Planning Division circulates all Planning Act applications internally for further review by Municipal Departments and comments have been incorporated into the report. At the time of writing, the following had been received:

- An email from the Building Division that setbacks must ensure they meet limiting distances from the Ontario Building Code.
- A no comment email from Emergency and Protective Services.
- A no comment email from By-law Services.
- A request for more information from a member of the public.

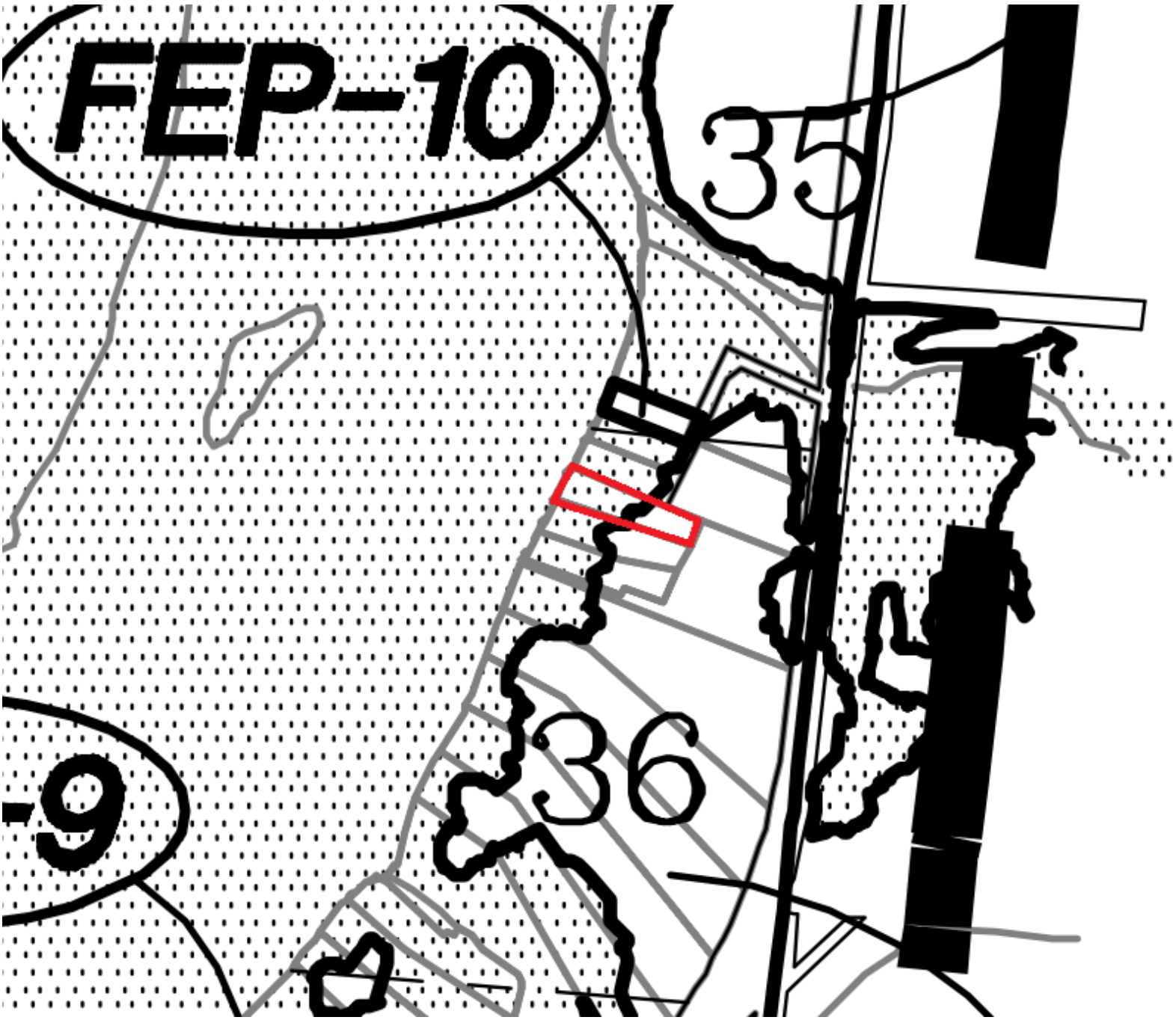
Any comments received after the report will be circulated to members.

Communications

Implementing the decision of the Committee is subject to the Provisions of the Planning Act and will not require further communication resources to implement the decision of the Committee.

Attachments

- Attachment 1 – Zoning
- Attachment 2 – Official Plan
- Attachment 3 – Context Plan
- Attachment 4 – Site Plan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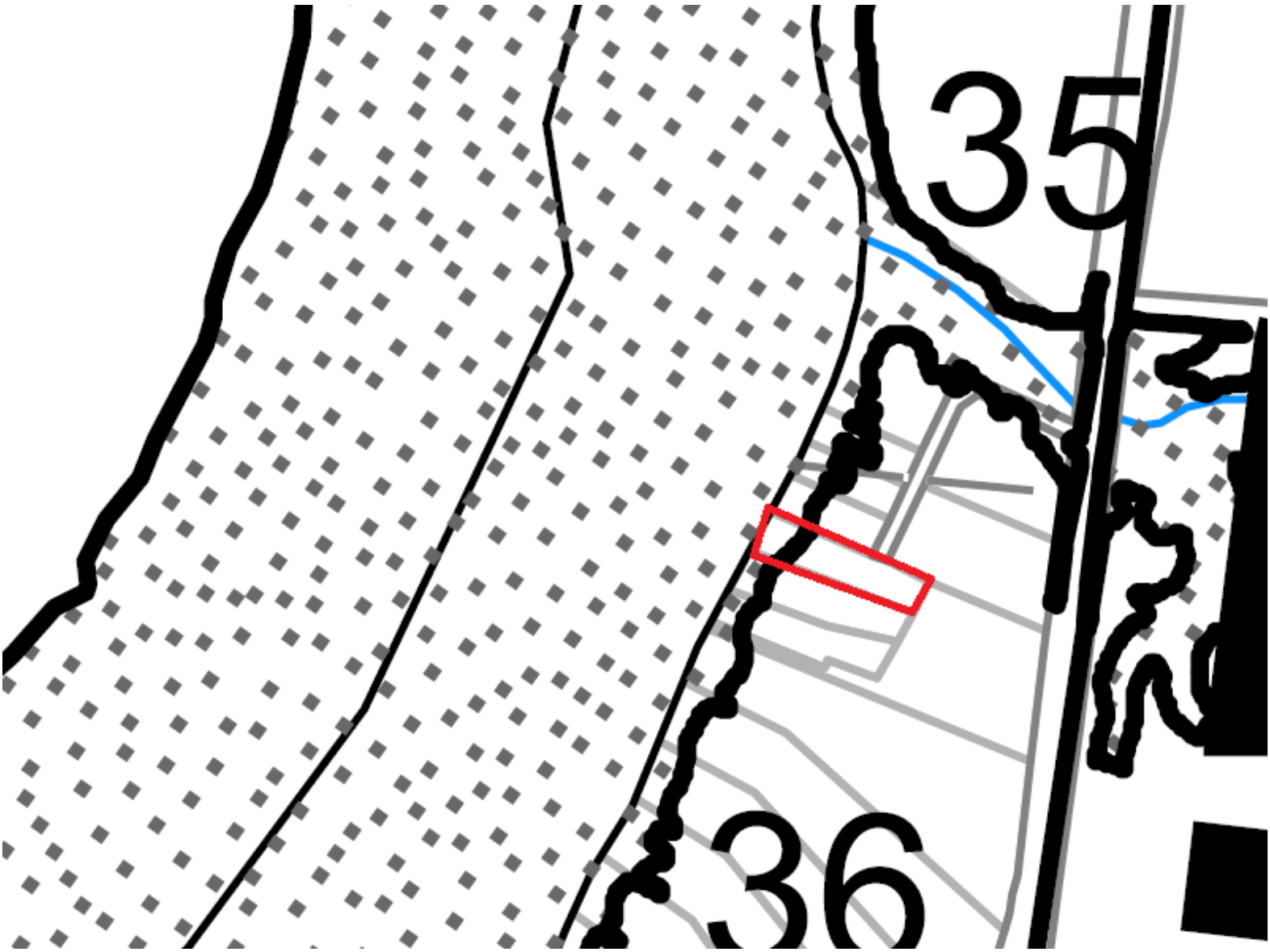
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NORTHCREST PV
3612
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3630
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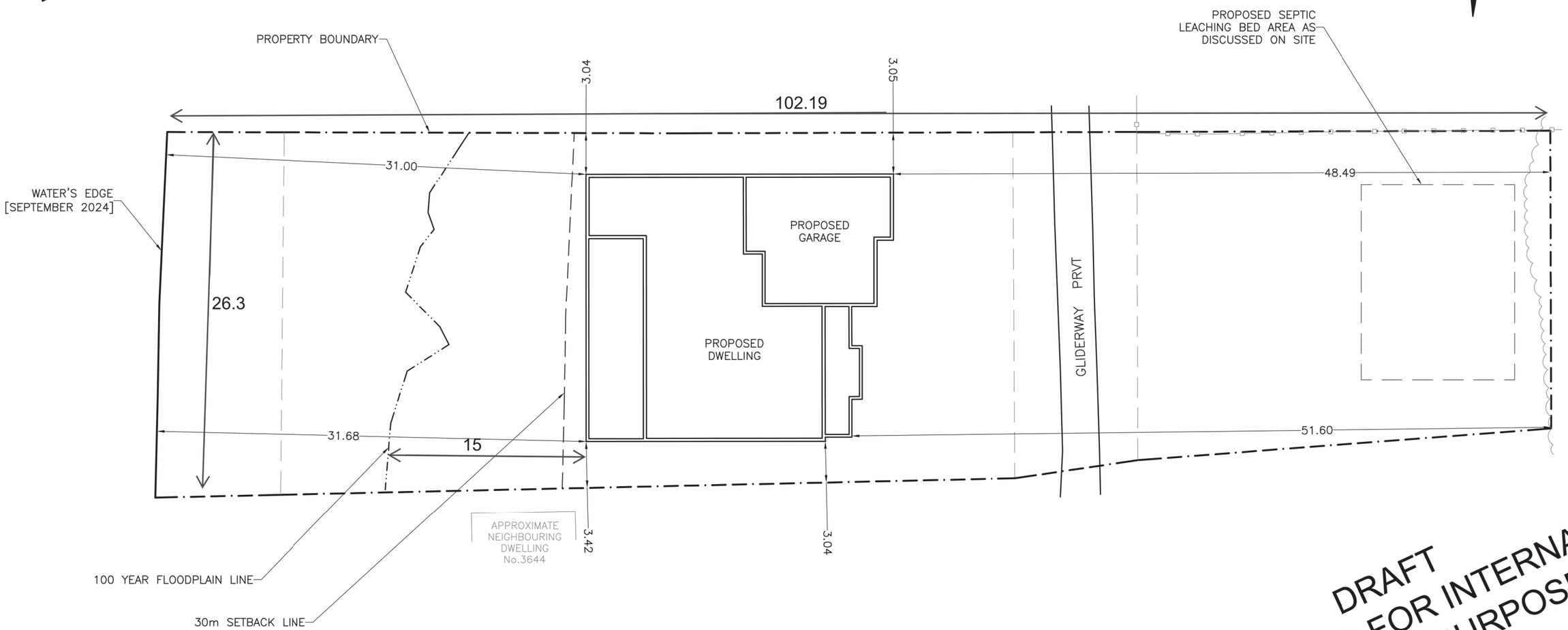
3642
RIDEAU RIVER RD
3638
3644
GLIDERWAY PV
3646
3650
3710

DRAWING FOR DISCUSSION PURPOSES ONLY



DRAFT
DRAWING FOR INTERNAL DISCUSSION PURPOSES ONLY

SCALE 1:300

ZANUTTA CONSTRUCTION

DO NOT SCALE DRAWINGS.
ALL DIMENSIONS TO BE CHECKED AND VERIFIED
CONCEPT PLANS FOR DESIGN AND CONTRACT PURPOSES ONLY

ARTIST RENDERING ONLY
SOME FEATURES AND FINISHES DISPLAYED ON FLOOR PLAN ARE FOR DESIGN PURPOSES ONLY AND MAY NOT BE RELIED UPON AS STANDARD INCLUSIONS

Final Construction plans and permit plans may be altered to represent building code requirements and on-site conditions.

PROJECT: WRIGHT

ZANUTTA CONSTRUCTION
MODEL GEOFF
2623 Sq.Ft. Bungalow
Custom Home
Osgoode, Ontario

NO.	DESCRIPTION	DATE
05		
04	UPDATED FOR PERMIT	
03	OUT FOR PERMIT	
02	FINAL DESIGN	11/21/24
01	FLOOR LAYOUT REVIEW	08/21/24

DRAWING: SITE PLAN
TYPE: PRLIM
SCALE:
DESIGNED BY: BC
DRAWN BY: BC
SHEET: A-14

CAVAN DESIGN & CONSTRUCTION

NO FILL OR CHANGES TO EXISTING GRADES AND DRAINAGE PATTERNS ARE PROPOSED WITHIN THE 100 YEAR FLOODPLAIN.

PROPERTY BOUNDARY

100 YEAR FLOODPLAIN LINE (AS PER RVCA WEBSITE MAPPING)

WATER'S EDGE [SEPTEMBER 2024]

PROPOSED DWELLING No.3642 (1-Storey) TOF=89.22 USF=86.58

PROPOSED GARAGE

PROPOSED DRIVEWAY

PRVT GLIDERWAY

PORCH

PORCH

APPROXIMATE NEIGHBOURING DWELLING No.3644

SHOULD FINISHED GRADE BE GREATER THAN 450mm ABOVE TOP OF ELJEN MODULE THEN ELJEN SYSTEM TO BE VENTED IN ACCORDANCE WITH ELJEN MANUFACTURER REQUIREMENTS

ELJEN SPECIFIED SAND CONTACT AREA. MINIMUM REQUIRED=130sqm AS SHOWN=~131sqm

PROPOSED ELJEN LEACHING BED, 4 ROWS OF 7 GSF A-42 MODULES PER ROW

75mmø SOLID FOOTER PVC PIPE

ELJEN SAMPLING PORT. INSTALL AS PER "ELJEN GSF SYSTEM ONTARIO DESIGN AND INSTALLATION MANUAL"

PROPOSED DISTRIBUTION BOX. EXACT MODEL/TYPE IS AT DISCRETION OF CONTRACTOR, HOWEVER MUST MEET ELJEN MANUFACTURER REQUIREMENTS AND CONTRACTOR TO ENSURE EVEN DISTRIBUTION OF EFFLUENT TO EACH ROW OF THE ELJEN LEACHING BED.

100 YEAR FLOODPLAIN LINE (INTERPOLATED FROM TOPO SURVEY)

PROPOSED DRILLED WELL. EXACT LOCATION BY OTHERS. CONTRACTOR TO ENSURE PROPOSED WELL LOCATION MEETS ALL RELEVANT OBC CLEARANCE DISTANCES. WELL TO BE INSTALLED IN ACCORDANCE WITH O.REG 903.

30m SETBACK LINE FROM WATER'S EDGE

TBM=TWO NAILS IN UTILITY POLE, ASSUMED GEODETIC ELEVATION 88.25 METRES.

PROPOSED 900 LITRE PUMP CHAMBER C/W SUBMERSIBLE DEMAND DOSE EFFLUENT PUMP DISCHARGING BY 38mmø FORCED MAIN PIPE TO LEACHING BED (SEE ATTACHED PROPOSED EFFLUENT PUMP INFORMATION SHEET). INSTALL FORCED MAIN TO ALLOW FORCED MAIN TO COMPLETELY DRAIN BY GRAVITY BACK TO PUMP CHAMBER WHEN NOT PRESSURIZED (IE: WHEN PUMP IS OFF) OR PROVIDE SUITABLE RIGID INSULATION FOR FORCED MAIN PIPE FROST PROTECTION [SEE NOTES 16 TO 20]

PROPOSED DOUBLE CHAMBER SEPTIC TANK WITH MINIMUM 5,200 LITRE WORKING CAPACITY C/W EFFLUENT FILTER MEETING OBC REQUIREMENTS (SEE NOTE 16)

SCALE 1:300

ZANUTTA CONSTRUCTION

DO NOT SCALE DRAWINGS.
ALL DIMENSIONS TO BE CHECKED AND VERIFIED
CONCEPT PLANS FOR DESIGN AND CONTRACT PURPOSES ONLY

ARTIST RENDERING ONLY
SOME FEATURES AND FINISHES DISPLAYED ON FLOOR PLAN ARE FOR DESIGN PURPOSES ONLY AND MAY NOT BE RELIED UPON AS STANDARD INCLUSIONS

Final Construction plans and permit plans may be altered to represent building code requirements and on-site conditions.

PROJECT: WRIGHT

ZANUTTA CONSTRUCTION
MODEL GEOFF
2623 Sq.Ft. Bungalow
Custom Home — Osgoode, Ontario

NO.	DESCRIPTION	DATE
05		
04	UPDATED FOR PERMIT	
03	OUT FOR PERMIT	
02	FINAL DESIGN	11/21/24
01	FLOOR LAYOUT REVIEW	08/21/24

DRAWING: GRADE PLAN
TYPE: PRLIM
SCALE:
DESIGNED BY: BC
DRAWN BY: BC
SHEET: A-15

CAVAN DESIGN & CONSTRUCTION

A-04-2025
3642 Gliderway Pvt

April 16, 2025

Department: Planning and Development

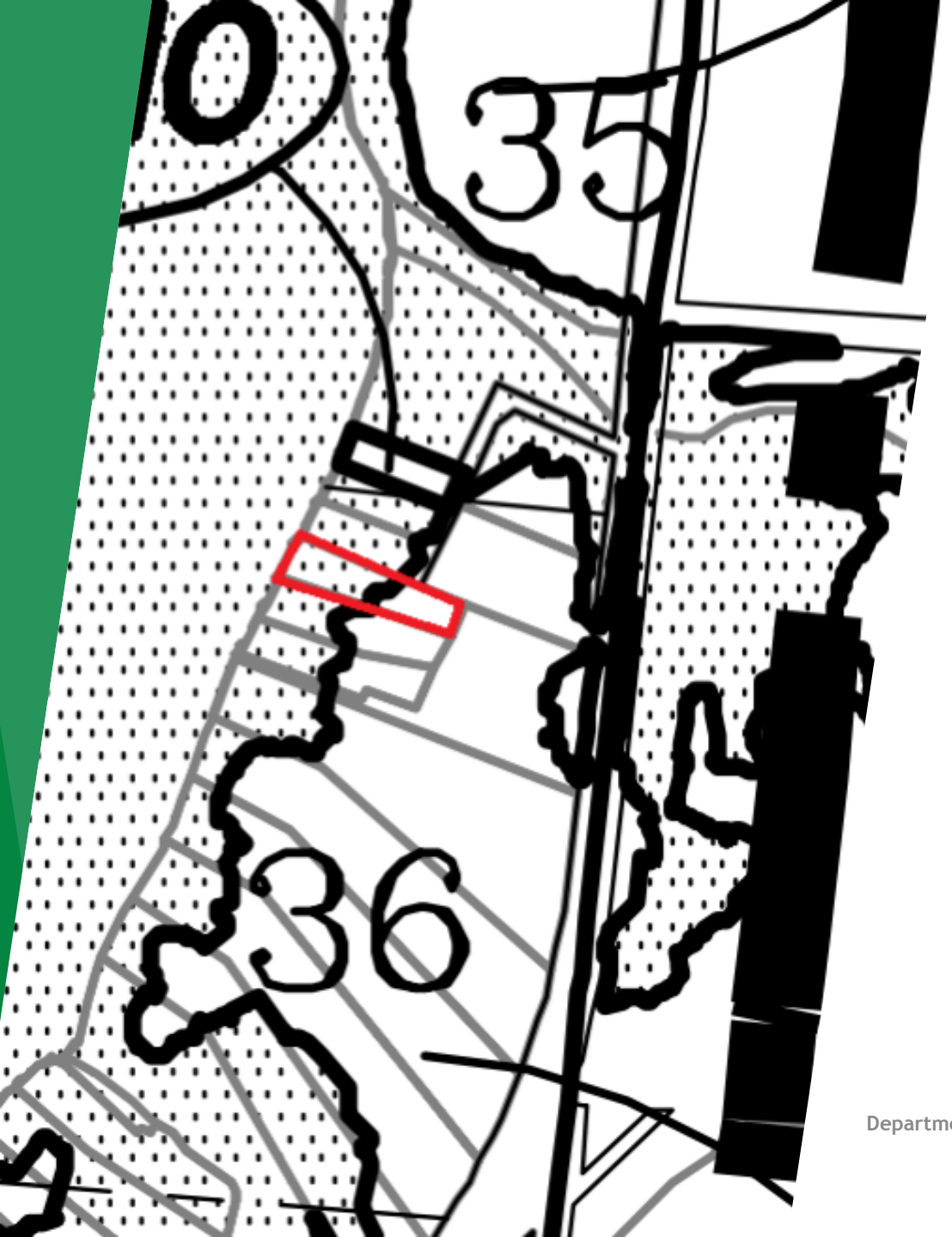
Minor Variance Request

1. **To provide relief from Section 6.25[c] of the Comprehensive Zoning By-law to allow reduce the setback from the regulatory floodline from 15 metres to 10 metres; and**

2. **To provide relief from Section 9.2 of the Comprehensive Zoning By-law to reduce the minimum required interior side yard from 6 metres to 3 metres and to allow an increase in lot coverage from 15% to 30%.**

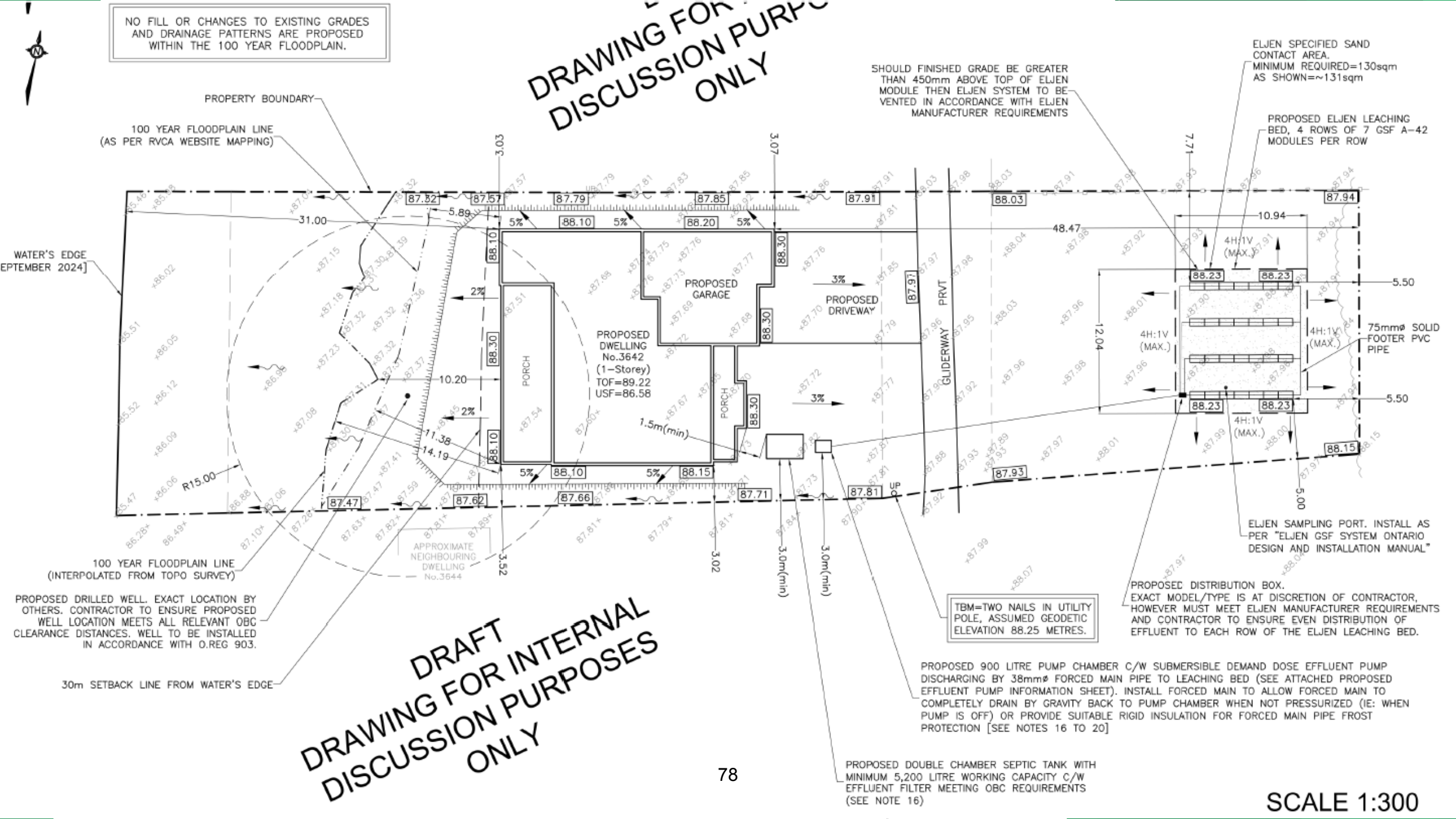
Department: Planning and Development

Property Location / Aerial Image



Zoning

Official Plan


NO FILL OR CHANGES TO EXISTING GRADES AND DRAINAGE PATTERNS ARE PROPOSED WITHIN THE 100 YEAR FLOODPLAIN.
DRAWING FOR DISCUSSION PURPOSES ONLY
PROPERTY BOUNDARY
100 YEAR FLOODPLAIN LINE (AS PER RVCA WEBSITE MAPPING)
WATER'S EDGE EPTEMBER 2024]
PROPOSED DWELLING No.3642 (1-Storey) TOF=89.22 USF=86.58
PROPOSED GARAGE
PROPOSED DRIVEWAY
PORCH
PORCH
GLIDERWAY
PRVT
APPROXIMATE NEIGHBOURING DWELLING No.3644
100 YEAR FLOODPLAIN LINE (INTERPOLATED FROM TOPO SURVEY)
PROPOSED DRILLED WELL. EXACT LOCATION BY OTHERS. CONTRACTOR TO ENSURE PROPOSED WELL LOCATION MEETS ALL RELEVANT OBC CLEARANCE DISTANCES. WELL TO BE INSTALLED IN ACCORDANCE WITH O.REG 903.
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ELJEN SPECIFIED SAND CONTACT AREA. MINIMUM REQUIRED=130sqm AS SHOWN=~131sqm
PROPOSED ELJEN LEACHING BED, 4 ROWS OF 7 GSF A-42 MODULES PER ROW
4H:1V (MAX.)
75mmø SOLID FOOTER PVC PIPE
ELJEN SAMPLING PORT. INSTALL AS PER "ELJEN GSF SYSTEM ONTARIO DESIGN AND INSTALLATION MANUAL"
TBM=TWO NAILS IN UTILITY POLE, ASSUMED GEODETIC ELEVATION 88.25 METRES.
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PROPOSED DOUBLE CHAMBER SEPTIC TANK WITH MINIMUM 5,200 LITRE WORKING CAPACITY C/W EFFLUENT FILTER MEETING OBC REQUIREMENTS (SEE NOTE 16)
DRAFT DRAWING FOR INTERNAL DISCUSSION PURPOSES ONLY
SCALE 1:300

Site Development Considerations

- The property exceeds the 30 metre setback from the normal highwater mark of the Rideau River.
- To obtain a building permit will require permits from Rideau Valley and the Septic Office.

Planning Policy

- **The development meets all planning policies, including the PPS, UCLG Official Plan and Municipal Official Plan.**

Comments Received

- An email from the Building Division that setbacks must ensure they meet limiting distances from the Ontario Building Code.
- A no comment email from Emergency and Protective Services.
- A no comment email from By-law Services.
- A request for more information from a member of the public.

Recommendation

Staff recommend supporting the proposed development.

The requested variances are minor, the intent of the Comprehensive Zoning By-law and Official Plan are being maintained and recognition of existing non-complying and non-conforming status does not affect overall development.

Item #

Municipality of North Grenville

To: **Committee of Adjustment** Meeting Date: April 16, 2025

Subject: A-02-25 116 Clothier Street E Report No: PD-2025-023

Prepared by: Phil Mosher, Deputy Director of Planning

Recommendation(s)

THAT the Committee of Adjustment grant relief for the property located at 116 Clothier Street East Part of Lot 5, Plan 11, geographic Town of Kemptville, now the Municipality of North Grenville from the following sections of Comprehensive Zoning By-law 50-12:

1. To provide relief from Section 6.25[c] of the Comprehensive Zoning By-law to allow an addition and deck to be constructed at a setback of 1.8 metres from the regulatory flood line; and,

2. To provide relief from Section 13.2 of the Comprehensive Zoning By-law to interpret lot coverage as applying to the entire lot area.

Subject to the following conditions:

- That this decision be contingent upon obtaining a Section 28 permit from RVCA in support of the general development plan most appropriately depicted in Drawing A10, prepared by Lockwood Brothers Construction and dated December 16, 2024.
- That an erosion and sediment control plan be submitted in support of the application (Section 5.3.1[d][iv];
- That the development enter into a site plan control agreement (Section 5.3.1[f]);
- That the owner and the Municipality discuss options for purchasing, acquiring, managing or providing access for waterfront lands for recreational purposes – trails (Section 6.4)
- That the development be generally in keeping with the submitted Site Plan drawing prepared by Lockwood Brothers Construction, Drawing A10 and dated December 16, 2024.

because the request is minor, the intent of the Comprehensive Zoning By-law and Official Plan are being maintained, and the variances are within the parameters for reconstruction in the Floodplain Hazards designation.

Executive Summary

Purpose

- **To seek variance from provisions of the Zoning By-law to allow additional living space, including additional outdoor living space, and a detached shed to be constructed at the subject property.**

Key Findings

- **The majority of the subject property is located within an area subject to flooding as identified by the Municipality's Official Plan.**
- **A portion of the lands, about 351 m^2 is located outside of the floodplain and all construction is proposed outside the regulatory floodplain.**
- **An existing natural feature is a steep slope, described in the submitted slope stability assessment.**
- **While all construction is proposed to occur outside the floodplain, it is proposed within 15 metres of the regulatory flood line and also within an area identified as a geotechnical hazard based on partner mapping products from Rideau Valley Conservation Authority. Based on the distance to the regulatory flood line, a variance application is triggered.**
- **A variance is also required to increase lot coverage. North Grenville's Zoning By-law determines that lot coverage is calculated within each distinct zone category.**
- **Section 6.25[d] of the Zoning By-law allows reductions to development setbacks associated with slopes where a geotechnical investigation has been prepared which details the extent of the physical hazard.**
- **The applicant has been in discussions with the Municipality since Fall, 2024 as this application was prepared.**

Financial Implications

- Depending on if the Committee supports discussions for potential land acquisition, this application may result in financial implications to the Municipality.

Background/Analysis

Commencing in November, 2024, the applicant began discussing plans with municipal staff to construct an addition to the existing single-detached dwelling at the subject property.

Municipal staff noted that a minor variance would be required based on the proposed proximity to the floodplain. It was also noted that lot coverage would need to be varied due to Section 3.5 (More than one zone on a lot) provisions of the Comprehensive Zoning By-law.

A final version of the development proposal was submitted in March, 2025 with the application for minor variance.

Based on a review of the Municipality's Official Plan and zoning information, and the Counties' Official Plan, the following has been identified:

- The subject property is designated Residential and Floodplain Hazards in accordance with Schedule "B" of North Grenville's Official Plan and "Rural" and "Urban Settlement Area" pursuant to Schedule "A" of the United Counties of Leeds and Grenville Official Plan.
- It is currently zoned Residential – Density 3 (R3) and Floding and Erosion Protection (FEP) in accordance with Schedule "C" of the Municipality's Comprehensive Zoning By-law.

The Property

- The subject property is located within "Urban Service Area 1" and is just adjacent to the "Downtown Commercial Core" in the geographic Town of Kemptville.
- It is located about 200 metres east of the Clothier Street / Prescott Street intersection or Rotary Park.
- The property has frontage of approximately 16 metres on Clothier Street East and a depth of approximately 107 metres.
- The property backs onto the Kemptville Creek and is considered to be a waterfront lot.
- The area of the property is approximately 2711 m^2 with about 351 m^2 being located within the R3 zone category.
- The property also borders an unopened road allowance that would be considered to be a continuation of Barnes Street.
- A site visit was undertaken to the property on December 5, 2024.

Provincial Policy Statement

The Provincial Planning Statement 2024 (PPS) provides overarching policies for growth and development in Ontario. The PPS provides direction for growth on properties affected by natural hazards within Section 5. Of note, this property enjoys certain non-complying rights by being an existing dwelling within 15 metres of the regulatory flood line as well as being on an existing slope.

Section 5.3 of the PPS states that "[d]evelopment and site alteration shall not be permitted within…areas that would be rendered inaccessible to people and vehicles during times of flooding hazards [or] erosion hazards…unless it has beem demonstrated that the site has safe access appropriate for the nature of the development and the natural hazard."

Of note for this application, the "Slope Stability Assessment" submitted with this variance application has assessed the nature of the slope hazard. In the opinion of the author,

> "the subject slope at the site, with consideration for the above described proposed site development, is adequately stable and no limit of hazard lands for the subject slope at the site is required."

It is important to note that the document cannot be reduced to just the quote above. Any development at this property will be required to enter into a site plan control agreement with the Municipality which will require full adherence to the submitted slope stability assessment.

With the use of appropriate conditions, and site plan control, staff is confident that this application is consistent with the PPS.

United Counties of Leeds and Grenville Official Plan

The subject site is designated as "Urban Settlement Area" pursuant to Schedule "A" of the Counties' Official Plan.

Importantly, Section 5.2.2 deals with flooding hazards, steep slopes, unstable soils, unstable bedrock and erosion hazards. The Counties' OP directs development outside these hazardous areas. It further notes that local municipal Official Plans will identify hazards and provide associated policies. Subsection [e] of 5.2.2 echoes the PPS stating that development shall not be permitted within areas that would be rendered inaccessible to people and vehicles during times of flood hazards and erosion hazards, unless it has been demonstrated that the site has safe access appropriate for the nature of the development and natural hazard.

Subsection [f] of 5.2.2 states that minor additions to existing buildings or structures will only be permitted on an existing lot of record in an erosion hazard if it has been demonstrated that there is no alternative building envelope on the outside the erosion hazard and subject to the policies of the UCLG Plan.

Subsection [m] of 5.2.2 states that the stable top of the slope will be determined by a qualified Professional Engineer, in consultation with the local municipality and applicable Conservation Authority. It notes further that the required setback, if any, will reflect the degree, severity and extent of the hazard.

Subsection [n] of 5.2.2 provides authority to request geotechnical studies or engineering analysis to determine the feasibility of proposed development adjacent to hazardous lands.

Staff are of the opinion that the proposed variance does not contravene policies of the United Counties' Official Plan.

North Grenville Official Plan

With respect to the Official Plan of the Municipality of North Grenville, the subject site is designated Residential and Floodplain Hazards. The lands are also adjacent to the Kemptville Creek Provincially Significant Wetland, although development is proposed a sufficient distance from the wetland and this policy is not considered further.

Most importantly to this application, "erosion hazards" are described in Section 5.3 of the Official Plan. Subsection [a] of 5.3 provides that where detailed geotechnical engineering information is available or has been provided, the erosion hazard limit shall be defined based on the findings of the engineering recommendations. It is noted that these findings must be completed in accordance with the MNRF Technical Guidelines for Natural Hazards.

Section 5.3.1 [c] states that "development on existing lots of record containing erosion hazards and slopes shall…only proceed where an assessment, approved by the Conservation Authority, prepared by a qualified geotechnical engineer, determines the property can be safely developed."

The Plan goes further, noting that "…a geotechnical evaluation must contain erosion control measures associated with all structural, landscaping and surface drainage components of the development of the property."

Section 5.3.1[d] states that "additions to existing buildings and structures…shall only be considered when:

i. The addition is supported by a geotechnical evaluation, approved by the Conservation Authority;
ii. The addition does not extend further into the erosion hazard limit than the existing structure;
iii. The addition generally does not exceed 30% of the floor area footprint that existed as of May 11, 2009; and,
iv. The addition incorporates all identified erosion control measures associated with all structural, landscaping and surface drainage components of the development of the property."

Section 5.3.1[f] states that "[w]here development on existing lots of record or additions to existing buildings and structures on erosion hazards and slopes is appropriate, such development shall be subject to site plan control."

Section 6.4 of the Official Plan discusses public ownership and acquisition of natural heritage lands. It should be noted that certain areas may be desirable for public ownership or accessible for recreational uses where appropriate. In such cases, the Municipality shall explore options for purchasing, or otherwise acquiring, managing, or providing access to these lands.

In the opinion of staff, this application is consistent with the Municipal Official Plan, specifically Section 5.3.1. Namely, the proposed addition does not extend further into the erosion hazard limit (the proposed addition occurs on an existing deck). Also, the addition size does not exceed 30% of the floor area footprint of the existing dwelling. The submitted slope stability report identifies required erosion control measures, and staff proposes an appropriate condition of this variance application to require the development enter into a site plan control agreement as per Section 5.3.1[f] of the Official Plan.

It should be noted that an application has been submitted to RVCA to evaluate the geotechnical investigation, but the results of that permit have not been received. Therefore, staff would propose that if the Committee of Adjustment approves this application, a condition be added requiring a successful RVCA permit be obtained.

In addition to the RVCA permit condition, staff also proposes the following conditions:

- That an erosion and sediment control plan be submitted in support of the application (Section 5.3.1[d][iv];
- That the development enter into a site plan control agreement (Section 5.3.1[f]);
- That the owner and the Municipality discuss options for purchasing, acquiring, managing or providing access for lands for recreational purposes – trails (Section 6.4)
- That the development be generally in keeping with the submitted Site Plan drawing prepared by Lockwood Brothers Construction, Drawing A10 and dated December 16, 2024.

Comprehensive Zoning By-law 50-12

The subject property has dual zoning and is located on lands zoned Residential – Density 3 (R3) and Flooding and Erosion Protection (FEP) Zone as per Land Use Schedule “C” of the Comprehensive Zoning By-law.

Existing buildings and uses that were lawfully established prior to the date of the passage of the Zoning By-law are a permitted use, therefore the dwelling as it exists, has grandfathered rights. Certain zone regulations (15 metres from the regulatory floodline, lot coverage in the R3 zone) are currently not met at the subject property and cannot be met given the size of the property. These standards will need to be formally varied in the decision of the Committee of Adjustment if construction is to occur.

Staff are of the opinion that the requested variances are in keeping with the Municipal Zoning By-law.

Four Tests

Minor Variances must satisfy the four tests as outlined in the *Planning Act* to be permitted. It is the opinion of Staff that the four tests are met in the following ways:

1) The application is minor in nature: The request relates to constructing an addition in keeping with the Municipality's Official Plan, and not in excess of the 30% floor area footprint requirement.

2) The application meets the intent of the Zoning By-law: the proposed minor variance has an appropriate geotechnical report which supports the proposed addition. In addition, lot coverage can be interpreted for the entire property for this addition. Any existing non-compliance with the Zoning By-law is not exacerbated by this application.

3) The application meets the intent of the Official Plan: the proposed minor increase in floor area is within allowable limits for a property that contains a slope hazard. The proposed renovation is not located closer to the normal highwater mark than currently exists but occupies existing deck area. Finally, the development will be subject to site plan control as a condition.

4) The application is appropriate and represents good land use planning. It allows a minor increase in floor area for non-conforming and non-complying property. Future erosion protection measures as outlined in the slope report will safeguard construction.

Relevance to Strategic Priorities

Strategic Pillar	Pillar #2 - A Strong, Connected, and Vibrant Community
Goal	Goal #2.3 - Build and Grown in a Connected Way
Key Action	Action #2.3.3 - Promote development policies that incorporate connectivity and coordination with the surrounding area

Options and Discussion

1. Approve the recommendation – **RECOMMENDED, subject to conditions**
2. Do not approve the recommendation – Not Recommended

Financial Impact

This item has been identified in the current budget: Yes □ No □ N/A X

This item is within the budgeted amount: Yes □ No □ N/A X

Staffing implications, as they relate to implementing Council's decision on this matter, are limited to the existing staff complement and applicable administrative policies as approved by Council.

Internal/External Consultation

Public agencies are circulated in accordance with the Planning Act.

Comments received after the report is published will be circulated to members of the Committee and summarized at the Public meeting.

Planning Division circulates all Planning Act applications internally for further review by Municipal Departments and comments have been incorporated into the report. At the time of writing, the following had been received:

- A no comment email from UCLG
- A no comment email By-law
- A request for information from a member of the public

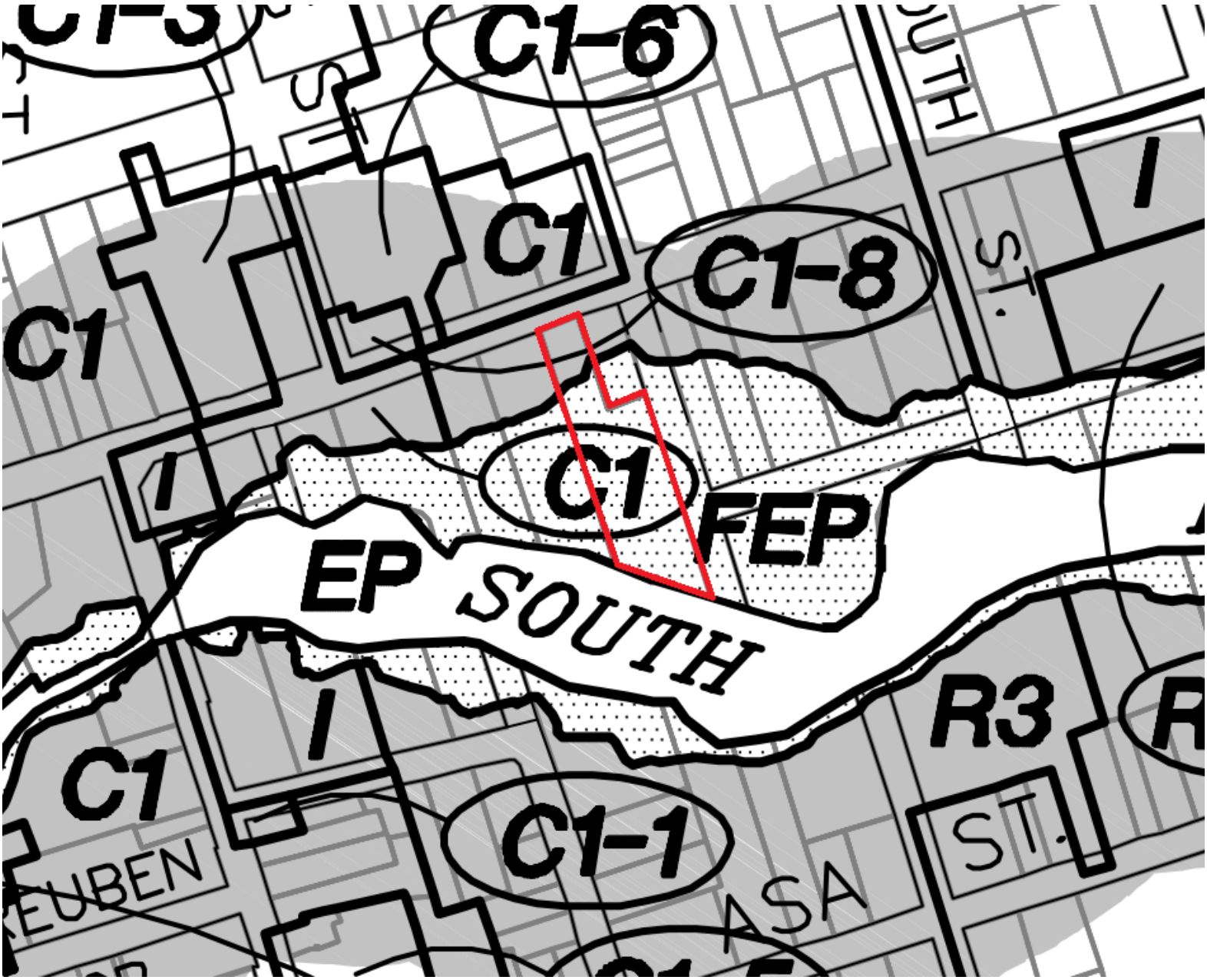
Any comments received after the report will be circulated to members.

Communications

Implementing the decision of the Committee is subject to the Provisions of the Planning Act and will not require further communication resources to implement the decision of the Committee.

Attachments

- Attachment 1 – Zoning Map
- Attachment 2 – Official Plan
- Attachment 3 – Development Site Plan
- Attachment 4 – Slope Stability Assessment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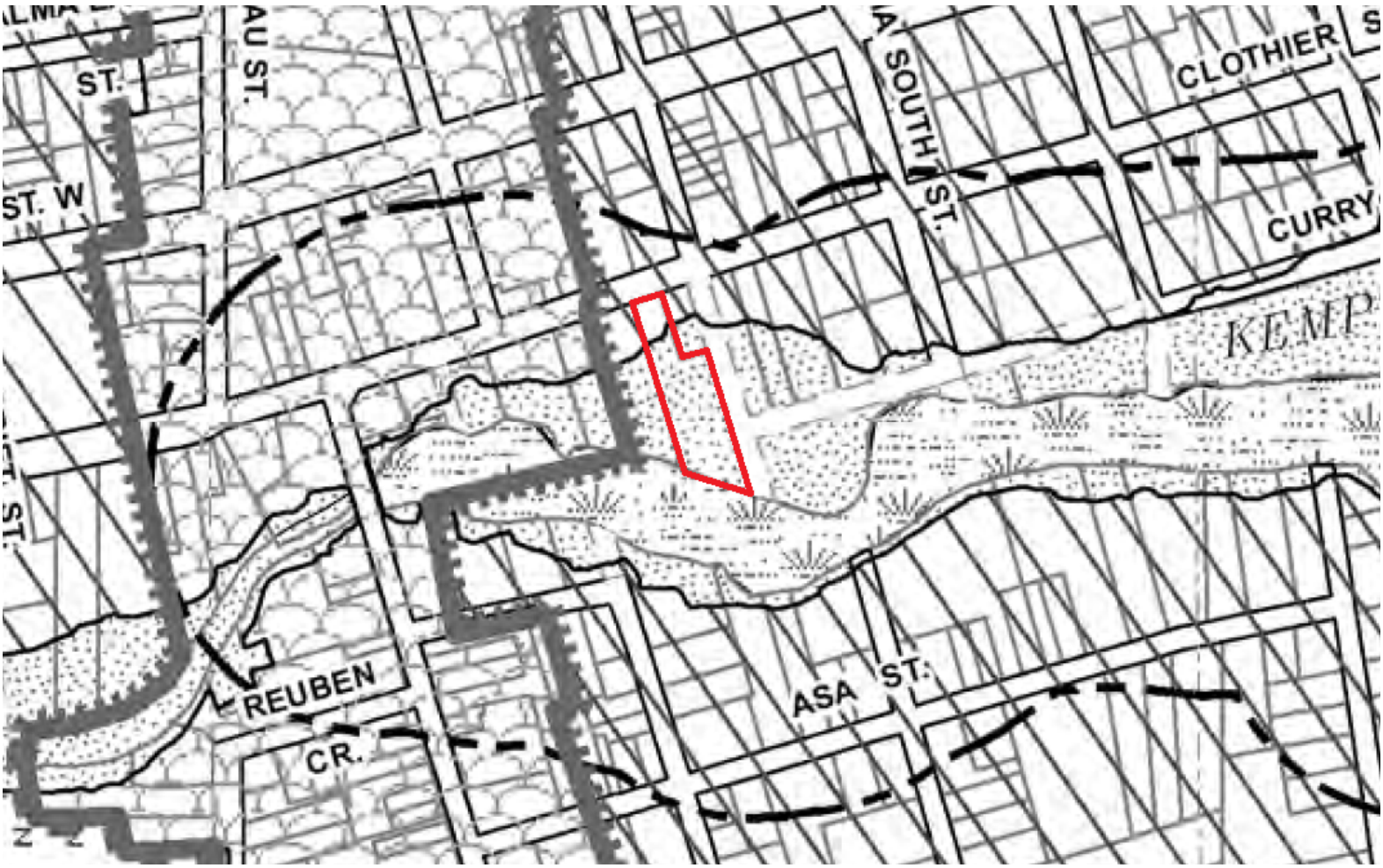
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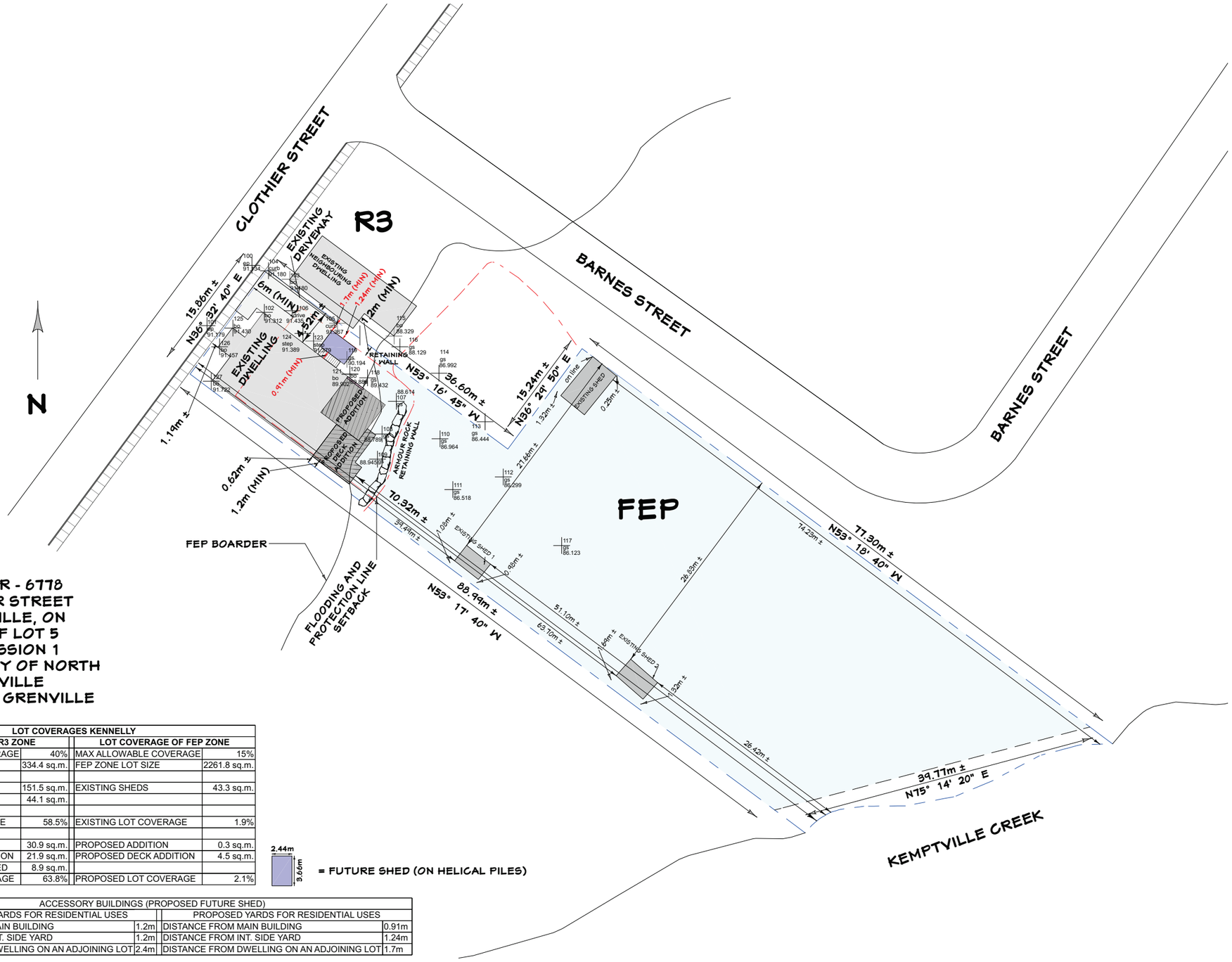
SOUTH ST.
CLOTHIER
CURRY
KEMP
REUBEN
CR.
ASA ST.



PLAN 15R - 6778
CLOTHIER STREET
KEMPTVILLE, ON
PART OF LOT 5
CONCESSION 1
MUNICIPALITY OF NORTH GRENVILLE
COUNTY OF GRENVILLE

LOT COVERAGES KENNELLY			
LOT COVERAGE R3 ZONE		LOT COVERAGE OF FEP ZONE	
MAX ALLOWABLE COVERAGE	40%	MAX ALLOWABLE COVERAGE	15%
R3 ZONE LOT SIZE	334.4 sq.m.	FEP ZONE LOT SIZE	2261.8 sq.m.
EXISTING DWELLING	151.5 sq.m.	EXISTING SHEDS	43.3 sq.m.
EXISTING DECK	44.1 sq.m.		
EXISTING LOT COVERAGE	58.5%	EXISTING LOT COVERAGE	1.9%
PROPOSED ADDITION	30.9 sq.m.	PROPOSED ADDITION	0.3 sq.m.
PROPOSED DECK ADDITION	21.9 sq.m.	PROPOSED DECK ADDITION	4.5 sq.m.
PROPOSED FUTURE SHED	8.9 sq.m.		
PROPOSED LOT COVERAGE	63.8%	PROPOSED LOT COVERAGE	2.1%

2.44m × 3.66m = FUTURE SHED (ON HELICAL PILES)

ACCESSORY BUILDINGS (PROPOSED FUTURE SHED)			
ZONING BY-LAW YARDS FOR RESIDENTIAL USES		PROPOSED YARDS FOR RESIDENTIAL USES	
MIN. DISTANCE FROM MAIN BUILDING	1.2m	DISTANCE FROM MAIN BUILDING	0.91m
MIN. DISTANCE FROM INT. SIDE YARD	1.2m	DISTANCE FROM INT. SIDE YARD	1.24m
MIN. DISTANCE FROM DWELLING ON AN ADJOINING LOT	2.4m	DISTANCE FROM DWELLING ON AN ADJOINING LOT	1.7m

Lockwood Brothers CONSTRUCTION

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirements set out in the Ontario Building Code.

Qualification Information

JOHN SPYK — NAME — SIGNATURE — 47179 BCIN

LOCKWOOD BROTHERS CONSTRUCTION — FIRM — 38088 BCIN

CUSTOMER: KENNELLY

DRAWING NAME: SITE PLAN

SCALE :

DATE : DEC 16, 2024

Sheet # A10

MOREY ASSOCIATES LTD.
CONSULTING ENGINEERS

2672 Highway 43, PO Box 184
Kemptville, Ontario, K0G 1J0
info@moreyassociates.com
613.215.0605

March 14, 2025 File: 024634

Lockwood Brothers Construction
2010 Totem Ranch Road East
Oxford Station, Ontario
K0G 1T0

Attention: Michael Barkhouse, Construction Manager

RE: SLOPE STABILITY ASSESSMENT
EXISTING SINGLE FAMILY DWELLING – PROPOSED ADDITION AND SHED
116 CLOTHIER STREET EAST, KEMPTVILLE
MUNICIPALITY OF NORTH GRENVILLE, ONTARIO

Dear Michael:

As requested by Lockwood Brothers Construction (client) this letter provides the results of a slope stability assessment carried out for the existing slope adjacent to the existing dwelling at the above site. The purpose of the slope stability assessment was to observe the condition of the existing subject slope at the site and based on an interpretation of the observations made, in consideration of the proposed dwelling addition and proposed detached shed at the site, and the results of slope stability analyses, to provide a limit of hazards lands if applicable, from a slope stability point of view. In addition to the above, an allowable bearing pressure for the design of spread footing foundations for the proposed dwelling addition was to be provided.

The reader of this letter is referred to the 'Important Information And Limitations Of This Letter' which follows the text of this letter and forms an integral part of this letter.

PROJECT DESCRIPTION AND BACKGROUND

For discussion purposes Clothier Street East is considered to exist at the north side of the subject site (see attached Key Plan, Figure 1). The subject slope is located within about the rear half of the east side yard adjacent to the existing dwelling at the site and extends into the rear yard some 4 metres. The subject site is an irregular shaped parcel of land some 0.27 hectares in plan area, with about 16 metres of frontage on Clothier Street East which borders the north side of the site and about 36 metres of frontage on the South Branch of the Rideau River (Kemptville Creek) which borders the south side of the site. It is understood that plans are being prepared to construct a 1-storey addition onto the main level of the existing dwelling (consisting of additional living space and a covered deck), with no basement. The portion of the proposed dwelling addition extending beyond the existing dwelling concrete foundation walls is planned to be supported, in general, by wood posts on isolated concrete pier foundations. The proposed dwelling is located at the rear of the existing dwelling where a wood framed deck currently exists. It is understood that the existing deck is to be removed. Beneath the proposed dwelling addition (and beneath the existing deck) is the existing dwelling “walk out” basement foundation. It is further understood that plans are being prepared to construct a detached, single storey, about 8 feet by 12 feet in plan area, shed, within the above mentioned east side yard at about the south end of the existing driveway at the site. The proposed detached shed is planned to be supported on helical screw piles (see attached Aerial Sketch Plan, Figure 2).

In addition to the above, it is understood that some landscaping works at the site are proposed, which includes, in general, a proposed less than 1 metre high armour stone retaining wall near the toe of the subject slope, and an exterior wood framed staircase, supported by helical screw piles, extending from about the slope crest to the existing dwelling “walk out” basement. It is further understood that no changes to the existing grade/ground surface are planned for the upper portion of the subject slope within the east side yard (beneath the proposed shed).

The field work for this assessment was carried out by members of our technical field staff between November 11 and December 18, 2024. Two test pits, advanced using a track mounted excavator supplied and operated by the client, were put down at the subject slope, within the face of the upper portion of the slope and within the face of the lower portion of the slope to check the soil comprising the subject slope. At the time of the field work, measurements of the height and inclination of the steepest, tallest portion (based on visual observations) of the subject slope were carried out using

Spectra SP60 GNSS surveying equipment. The state of erosion of the subject slope and any evidence of slope instability was visually assessed.

A review of the surficial geology map for the site area indicates that the slope at the site is underlain by sand plains (Chapman & Putnam, 2007, Ontario Geological Survey), see attached Figure 3. The bedrock geology map indicates that the bedrock underlying the site consists of dolostone, minor shale and sandstone of the Oxford Formation (Armstrong & Dodge, 2007, Ontario Geological Survey), see attached Figure 4. Drift thickness mapping published by the Ontario Geological Survey (2006) provides limited data points within relatively close proximity to the subject site. However, the available data points within relatively close proximity to the subject site indicate an overburden thickness between some 4 to 6 metres.

The Ministry of the Environment, Conservation and Parks (MECP) well records for two abandoned dug wells and two drilled wells indicated to be located within relatively close proximity to the subject site were obtained from the Province of Ontario, Map: Well Records website and are attached as Appendix A. The MECP well records indicate that the overburden thickness at the drilled wells is between some 5 to 6 metres and the native overburden material encountered by the well drillers at those wells is indicated to consist of hard pan and clay with stones. The MECP well records for the two abandoned dug wells indicate overburden was encountered up to depths of some 6 to 7 metres and where indicated the overburden was found by the well drillers to consist of sand with silt. The bedrock underlying the overburden material at the drilled wells is indicated by the well drillers to consist of limestone.

OBSERVATIONS

The measurements of the subject slope carried out by a member of our technical field staff indicate that the subject slope at the site is some 3.6 metres high and has an overall inclination of about 14 degrees to the horizontal or about 4 horizontal to 1 vertical. A relatively short, steeper portion of the slope exists at the slope crest (inclined at about 28 degrees to the horizontal), however, that portion of the existing slope is less than 0.3 metres high. A relatively small flat area exists within about the lower portion of the slope face, inclined at about 4 degrees to the horizontal). This relatively flat area for the below mentioned analyzed slope section is about 1 metre in width. The remaining portions of the face of the subject slope are inclined between about 11 to 15 degrees to the horizontal. The tableland north of the slope crest consists of the existing concrete paver surfaced

driveway at the site and is relatively flat with a gentle downward gradient towards Clothier Street East. A relatively flat floodplain exists at the bottom of the subject slope, from about the toe of the slope extending some 69 metres to the edge of the Kemptville Creek.

The ground cover of the subject slope at the time of the field work consists, in general, of some gravel, grass, shrubs and young trees. The ground cover of the above mentioned floodplain at the time of the field work consists, in general, of grass, shrubs and young to mature trees.

No evidence of major slope instability was observed at the time of the field work. No evidence of active or previous erosion at the subject slope toe was observed. The Kemptville Creek was measured to be some 69 metres from the subject slope toe.

A description of the subsurface conditions encountered at the above mentioned test pits is provided in the attached Table I – Record of Test Pits and the approximate locations of the test pits are provided on the attached Aerial Sketch Plan, Figure 2. From the ground surface about a 1.7 to 1.9 metre thickness of fill materials was encountered. The fill materials, in general, consisted of topsoil, sand, silt, clay, cobbles, occasional brick and a trace to some ash. The fill material was underlain by a deposit of red brown to grey brown fine sand, with some silt, and a trace of clay and gravel. The test pits were terminated within the sand material at depths of some 2.0 to 2.3 metres below the existing ground surface. Based on tactile examination and on the difficulty to advance the test pits within the sand material, the sand material encountered at the test pits is considered to be in a loose to compact state of packing. No groundwater was observed in the test pits at the time of the field work.

A sample of the native sand material obtained from one of the test pits was delivered to a soils laboratory for grain size distribution testing. The results of that laboratory testing are provided in Appendix B and indicate that the sand sample tested consists of 62.9 percent sand, 29.9 percent silt, 7.0 percent clay, and 0.2 percent gravel.

A Slope Stability Rating Chart provided as Table 4.2 from Section 4.3.2 of the Ministry of Natural Resources Technical Guide, River & Stream Systems: Erosion Hazard Limit (MNR Technical Guide) was completed for the subject slope (specifically, for the below mentioned analyzed slope section A-A) and is provided in the attached Appendix C.

The completed Slope Stability Rating Chart resulted in rating value of 22. Based on the MNR Technical Guide slope stability rating values of less than 24 are categorized as “Low Potential”.

Photographs taken at the time of the above mentioned field work are provided in the attached Appendix D.

SLOPE STABILITY ANALYSES

Computer slope stability analyses were carried out for what is considered the steepest/highest portion of the subject slope at the site using GeoStudio 2018 Slope/W software package produced by GEO-SLOPE International Ltd., in order to determine a factor of safety of the slope against overall rotational failure (global slope stability analysis). The slope section used in the analyses was chosen by Morey Associates Ltd. based on slope geometry, slope height and the location of the slope section relative to the existing and proposed development at the site. The approximate location of the slope section analyzed (A-A) is shown on the attached Aerial Sketch Plan, Figure 2.

The soil conditions used for the slope stability analyses were based on the above described subsurface information. It is pointed out that the bedrock was considered impenetrable from a critical slip surface point of view.

The slope stability analyses parameters used for the existing fill material are:

Cohesion, c’ = 0.5 kilopascals
Internal Friction Angle, ϕ’ = 30 degrees
Unit Weight, γ = 16.5 kilonewtons per cubic metre

The slope stability analyses parameters used for the native sand, with some silt, and a trace of clay and gravel material are:

Cohesion, c’ = 0.5 kilopascals
Internal Friction Angle, ϕ’ = 32 degrees
Bulk Unit Weight, γ = 18.0 kilonewtons per cubic metre

The slope stability analyses parameters used for the proposed landscape fill material are:

Cohesion, c' = 0 kilopascals
Internal Friction Angle, ϕ' = 30 degrees
Unit Weight, γ = 20 kilonewtons per cubic metre

The above parameters used in the analyses are based on experience with similar soil types in the Ottawa Valley and surrounding area as well as information published by the City of Ottawa and Ministry of Natural Resources (MNR) relating to the subsurface conditions described above.

No groundwater was observed in the above mentioned test pits which were put down at the subject slope to depths of some 2.0 and 2.3 metres below the existing ground surface. However, for a conservative approach, the slope was assumed to be nearly fully saturated with a groundwater level within about 0.2 to 0.6 metres of the existing ground surface.

Based on the above mentioned existing and proposed site development, the following was included in the computer slope stability analyses.

- A 4.8 kilopascals surcharge load was applied at and back of the crest of the slope in consideration of vehicular use of the existing driveway at the site.

- The proposed stone retaining wall and associated landscape grade raise at the lower portion of the slope (near the toe of the slope).

It is pointed out that based on preliminary plans provided to us by the client and on discussion with the client, the above mentioned proposed isolated, pier foundations supporting the proposed dwelling addition will be founded at depths meeting earth frost protection requirements which should result in the founding depths of those piers being about at/or below the level of the toe of the slope. Further, it is understood that the proposed helical screw piles supporting the proposed detached shed and wood framed staircase are to extend below the existing fill materials and well into the underlying native sand material at the site. As such, it is considered that the helical screw piles are likely to be founded at depths being about at/or below the level of the toe of the slope. Based on the above, the proposed pier foundations and helical screw piles are not considered to

have a significant impact on the subject slope and are not included in the computer slope stability analyses.

Slope stability analyses for the subject slope were carried out for both static conditions and pseudo-static (seismic) conditions. Based on the material comprising the slope and the subject site setting it is considered that a pseudo-static analysis is adequate for the purposes of this present slope stability assessment. For a conservative approach a conventional pseudo-static analysis was carried out as opposed to a two stage pseudo-static analysis since typically a two stage pseudo-static analysis will result in a higher factor of safety.

The peak (horizontal) ground acceleration (PGA) for the subject site was obtained from the 2015 National Building Code Seismic Hazard calculation (website), see Appendix E. The PGA for the subject site is indicated to be 0.28 for a 2 percent probability of exceedance in 50 years. A seismic coefficient, k, was used for the above mentioned pseudo-static analysis, where k is equal to 0.5PGA.

For the purposes of this assessment, a factor of safety of 1.5 or greater is considered to indicate long term stability for static conditions and a factor of safety of 1.1 or greater is considered to indicate adequate slope stability for pseudo-static conditions.

The result of the slope stability analysis for the subject slope for static conditions at the slope section analyzed indicates that the slope has a factor of safety against failure of about 1.93, see attached Figure 5. The result of the slope stability analysis for the subject slope for pseudo-static conditions at the slope section analyzed indicates that the slope has a factor of safety against failure of about 1.13, see attached Figure 6.

SLOPE SETBACKS AND LIMIT OF HAZARD LANDS

As per the Ontario Ministry of Natural Resources (MNR), for unstable slopes the “Limit of Hazard Lands” should be determined based on a stable slope allowance, a slope toe erosion allowance, and an erosion access allowance in order to provide a safe setback line for development.

As previously mentioned, the stable slope allowance is the distance from the slope crest to the point at which a factor of safety against failure of 1.5 is calculated for static conditions, or the distance

from the slope crest to the point at which a factor of safety against failure of 1.1 is calculated for pseudo-static conditions, whichever is greater. As the results of the above mentioned slope stability analyses for the subject slope gave values for static conditions and pseudo-static conditions greater than 1.5 and 1.1, respectively, no stable slope allowance for the subject slope is required.

As previously mentioned, the toe of the slope is some 69 metres from the Kemptville Creek. No evidence of active or previous erosion at the subject slope toe was observed at the time of the field work. Based on the observations made at the time of the field work and on the subject site setting it is considered that the subject slope toe is not located in an area prone to toe erosion. Based on the above, it is considered that no significant future erosion should occur at the slope toe of the subject slope. Based on the above no toe erosion allowance for the subject slope is required.

The MNR technical guide includes a 6 metre erosion access allowance beyond the toe erosion allowance to allow for access by equipment to repair a possible failed slope. The access allowance is measured back from (or added to) the stable slope allowance.

The MNR technical guide indicates the three main principles to support the inclusion of an erosion access allowance are:

- *"Providing for emergency access to erosion prone areas;"*
- *"Providing for construction access for regular maintenance and access to the site in the event of an erosion event or failure of a structure; and"*
- *"Providing protection against unforeseen or predicted external conditions which could have an adverse effect on the natural conditions or processes acting on or within an erosion prone area of provincial interest."*

As mentioned above, it is considered that the subject slope toe is not located in an area prone to toe erosion and that no significant future erosion should occur at the slope toe of the subject slope. Based on the above, it is considered that the three main principles to support the inclusion of an erosion access allowance are not applicable to the subject slope/subject site. It is pointed out that the subject site is already developed, and a driveway exists at the site allowing access to the crest of the slope. Based on the above, it is considered that no erosion access allowance is required.

Based on the results of the slope stability analyses and the slope setback requirements mentioned above it is considered that no limit of hazard lands for the subject slope at the site is required.

CONCLUSIONS

Based on the results of this slope stability assessment, the subject slope at the site, with consideration for the above described proposed site development, is adequately stable and no limit of hazard lands for the subject slope at the site is required.

Based on the above calculated factors of safety against slope failure, it is considered that the above described proposed site development, is not in danger of a global slope failure.

Based on the limited observations within the test pits put down for this assessment, the proposed spread footing foundations founded as mentioned above and on the native, undisturbed red brown to grey brown sand, supporting the proposed dwelling addition, should be designed using an allowable bearing pressure of 75 kilopascals SLS and 110 kilopascals for a factored bearing resistance at ultimate limit states, ULS. Spread footing foundations designed using the above allowable bearing pressure/resistance should be a minimum 0.6 metres wide for strip footings, and a minimum 0.8 metres square (0.8 metres by 0.8 metres) for square pad footings, and/or a minimum 0.9 metres diameter for circular pad footings (“Bigfoot System” footing forms).

The helical screw piles should be installed in accordance with the requirements of the helical screw pile qualified designer.

To ensure that the foundations for the proposed dwelling addition are founded on a competent and suitably prepared subgrade, it is considered that prior to foundation formwork placement, a subgrade evaluation should be carried out by qualified geotechnical engineering personnel. A subgrade evaluation is considered a common construction site evaluation.

The existing surficial topsoil and vegetation material on the slope should be maintained, or be suitably reinstated should it be disturbed during construction, in order to mitigate the potential for surficial erosion. No concentrated surface water flow should be directed towards the slope. Surface water drainage directed towards the slope, if needed, should be minimal sheet flow drainage. Should eavestrough drainage for the proposed dwelling addition and proposed detached shed be

directed on/towards the slope, the eavestrough drainage should be directed to “splash pads” that promote sheet flow drainage and protect from surficial erosion. No regrading of the existing subject slope should take place that steepens the current inclination of the subject slope or increases the height of the subject slope (with the exception of the above mentioned proposed armour stone retaining wall).

Should changes to the proposed site development be considered from that described in this present letter, Morey Associates Ltd. should be retained to review the proposed changes to ensure compatibility with any engineering guidelines and conclusions contained in this letter.

We trust the above information is sufficient for your present purposes. If you have any questions concerning this letter, please do not hesitate to contact our office.

Yours truly,
Morey Associates Ltd.

D. G. Morey, P.Eng.
Principal | Consulting Engineer

Attachments: Important Information And Limitations Of This Letter
Figures 1 to 6
Table I – Record of Test Pits
Appendices A to E

File: 024634

IMPORTANT INFORMATION AND LIMITATIONS OF THIS LETTER

This letter provides a summary of work that was carried out with generally accepted professional standards at the time and location in which the services were provided and in a manner consistent with a level of care and skill normally exercised by other professional engineering firms practicing under similar conditions and subject to the time limits and financial and physical constraints applicable to the services. No other warranty, expressed or implied, is made.

This letter was prepared for the exclusive use of Lockwood Brothers Construction. This letter may not be relied upon by any other person or entity without the express written consent of Lockwood Brothers Construction and Morey Associates Ltd. Any party that relies on services and/or work carried out by Morey Associates Ltd. and/or on a letter prepared by Morey Associates Ltd. without Morey Associates Ltd. express written consent, does so at their own risk. Morey Associates Ltd. specifically disclaims any liability and disclaims any responsibility to any such party for any loss, damage, expense, fine, penalty or other such thing which may arise or result from the use of any information, recommendation or other matter arising from the services, work or letters provided by Morey Associates Ltd.

It is understood based on instruction given to Morey Associates Ltd. by the client and/or by other design professionals associated with and retained by the client for this project and/or by municipal/county/provincial/ regulatory approval agency personnel that this letter may be used for guidance of the designers of the project and submitted for a specific site development permit application process. Any other use of this letter by the client and/or by others is prohibited and is without responsibility of Morey Associates Ltd. Further, Morey Associates Ltd. cannot be responsible for use of only portions of this letter by the client and/or by others without reference to the entire letter.

This letter is of a summary nature and is not intended to stand alone without reference to the instructions given to Morey Associates Ltd. by the client and/or by other design professionals associated with and retained by the client for this project and/or by municipal/county/provincial/regulatory approval agency personnel. This letter has been prepared based on our interpretation of the instructions given to Morey Associates Ltd. by the client and/or by other design professionals associated with and retained by the client for this project and/or by municipal/county/provincial/regulatory approval agency personnel only. Regulatory agency requirements may change in real time during a development permit application process and regulatory agency requirements are subject to interpretation and these interpretations may change over time. As such, no warranty, expressed or implied, is made by Morey Associates Ltd. that this letter meets others' interpretations of any regulatory agency requirements.

It is stressed that the information presented in this letter is provided for the guidance of the design professionals associated with and retained by the client for this project and is intended for this project only. The use of this letter as a construction document is neither intended nor authorized by Morey Associates Ltd.

Contractors bidding on or undertaking works related to the proposed project at the subject site should examine the factual results of the assessment, satisfy themselves as to the adequacy of the information for construction, which may require the contractor(s) to carry out additional investigation(s) and reporting, as it affects their construction techniques, schedule, safety and equipment capabilities.

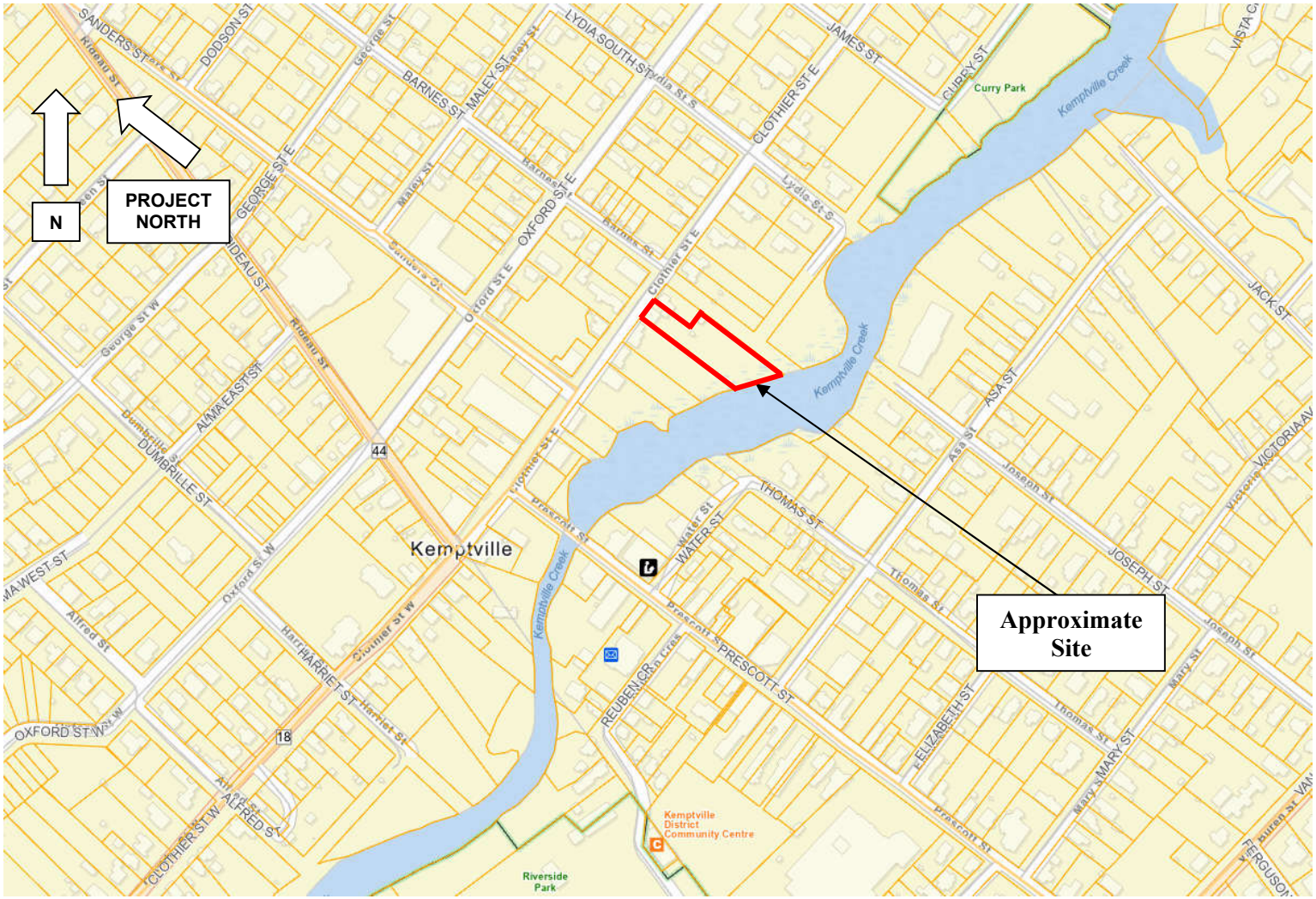
Any letter recommendations/engineering guidelines are applicable only to the project described in the letter. Any changes in the scope of the project will require a review by Morey Associates Ltd. to ensure compatibility with any letter recommendations/engineering guidelines contained in this letter.

The professional services for this project include the slope stability aspects of the assessment described above/in the letter only. The presence or implications of possible surface and/or subsurface contamination resulting from previous uses or activities at this site or adjacent properties, and/or resulting from the introduction onto the site of materials from offsite sources are outside the terms of reference for this letter and have not been addressed.

The engineering guidelines provided in this letter are based on subsurface data obtained at the specific test hole locations only. Boundaries between zones on the logs are often not distinct but transitional and were interpreted. A geotechnical (subsurface) assessment is a limited sampling of a site. Experience indicates that the subsurface soil and groundwater conditions can vary significantly between and beyond the test hole locations. Should any conditions at the site be encountered which differ from those at the test hole locations, Morey Associates Ltd. should be notified to carry out a review regarding the encountered conditions as they relate to the engineering guidelines/recommendations contained in this letter.

KEY PLAN

FIGURE 1



Reference: Leeds Grenville Public Map Viewer GIS website

NOT TO SCALE

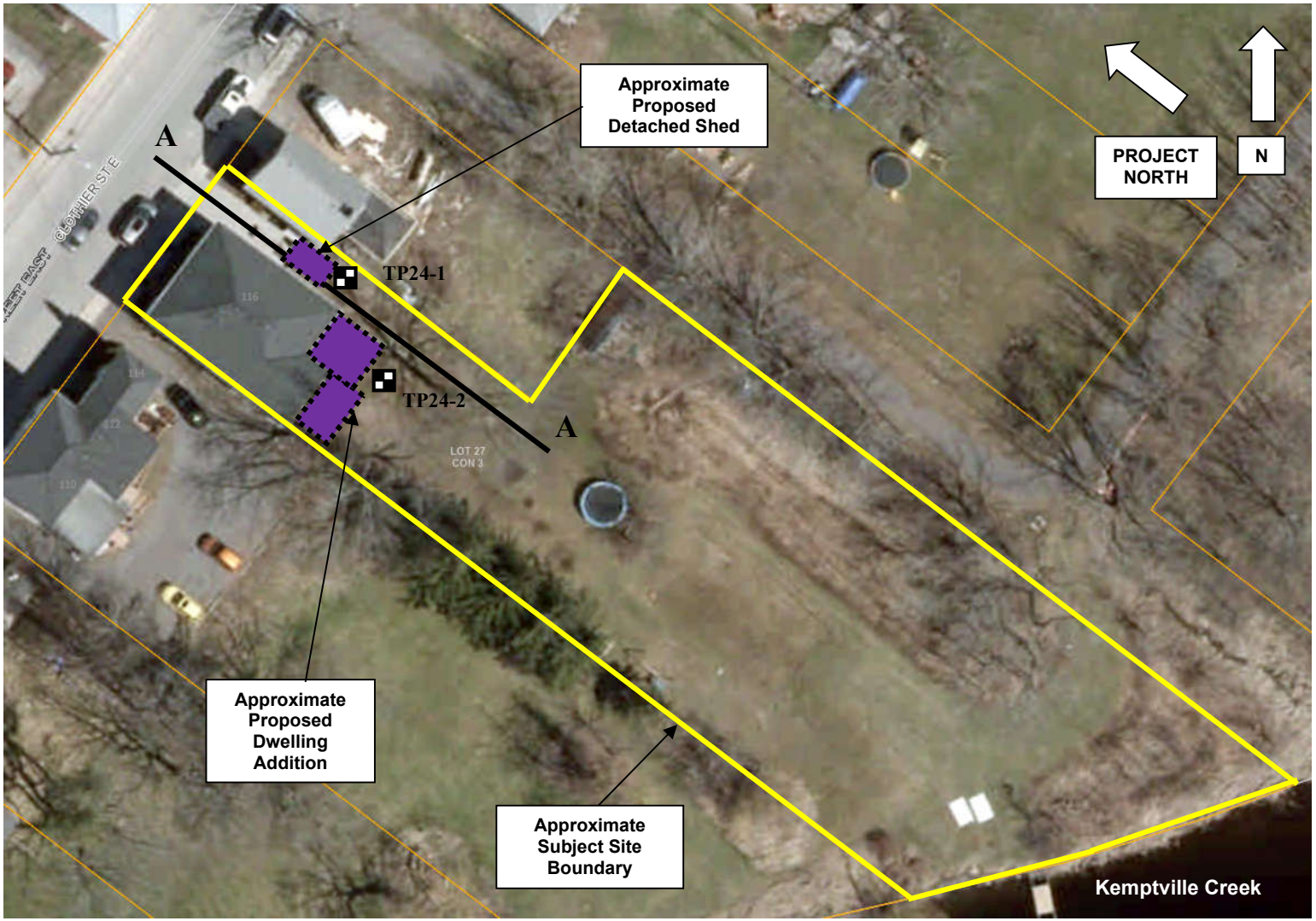
MOREY ASSOCIATES LTD.
CONSULTING ENGINEERS

Project No. 024634

Date March 2025

AERIAL SKETCH PLAN

FIGURE 2



Reference: Leeds Grenville Public Map Viewer GIS website

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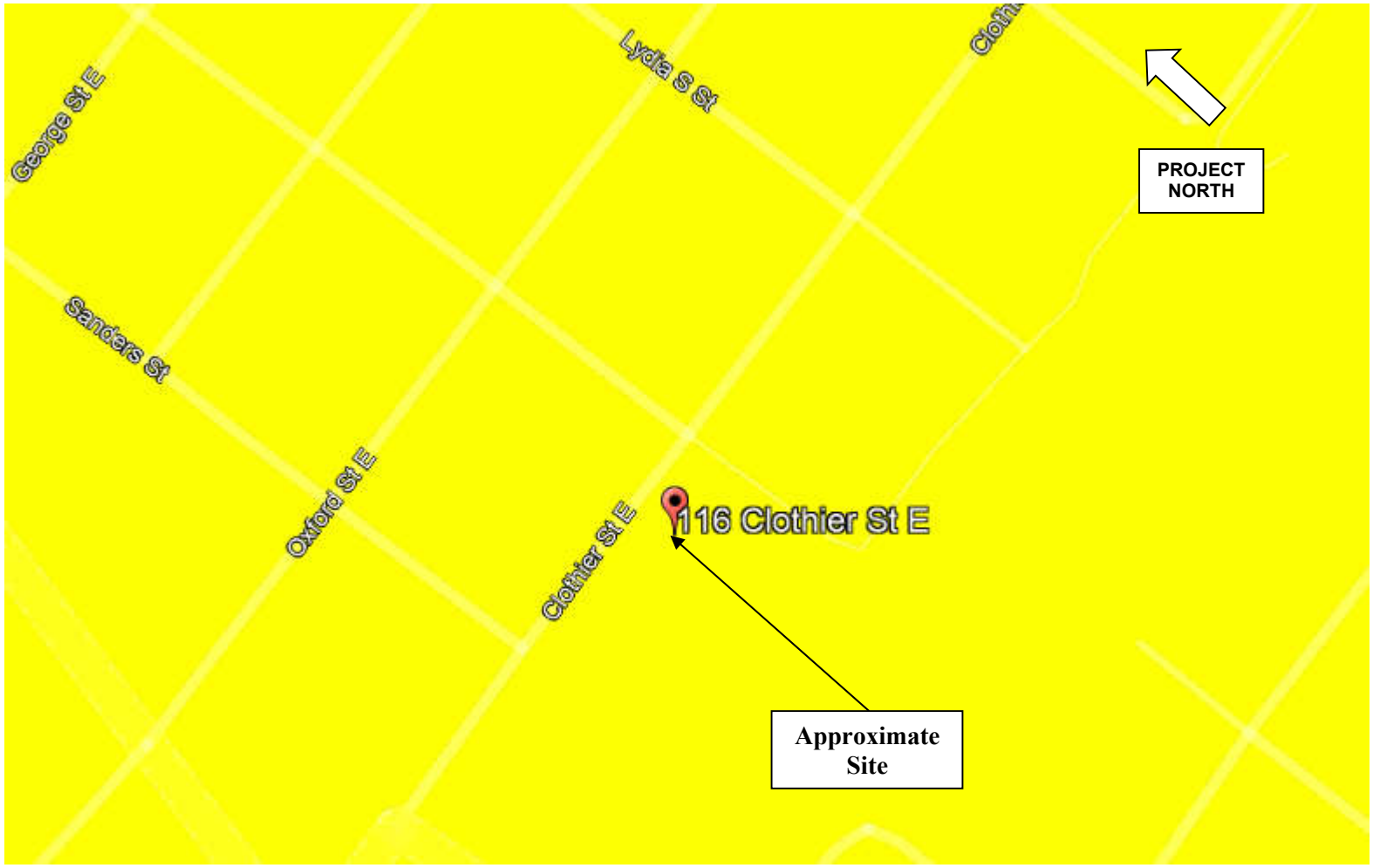
CONSULTING ENGINEERS

Project No. 024634

Date March 2025

SURFICIAL GEOLOGY MAP

FIGURE 3



Reference: Physiography of South Ontario, OGS, Chapman and Putnam, 2007

NOT TO SCALE

11 Sand Plains

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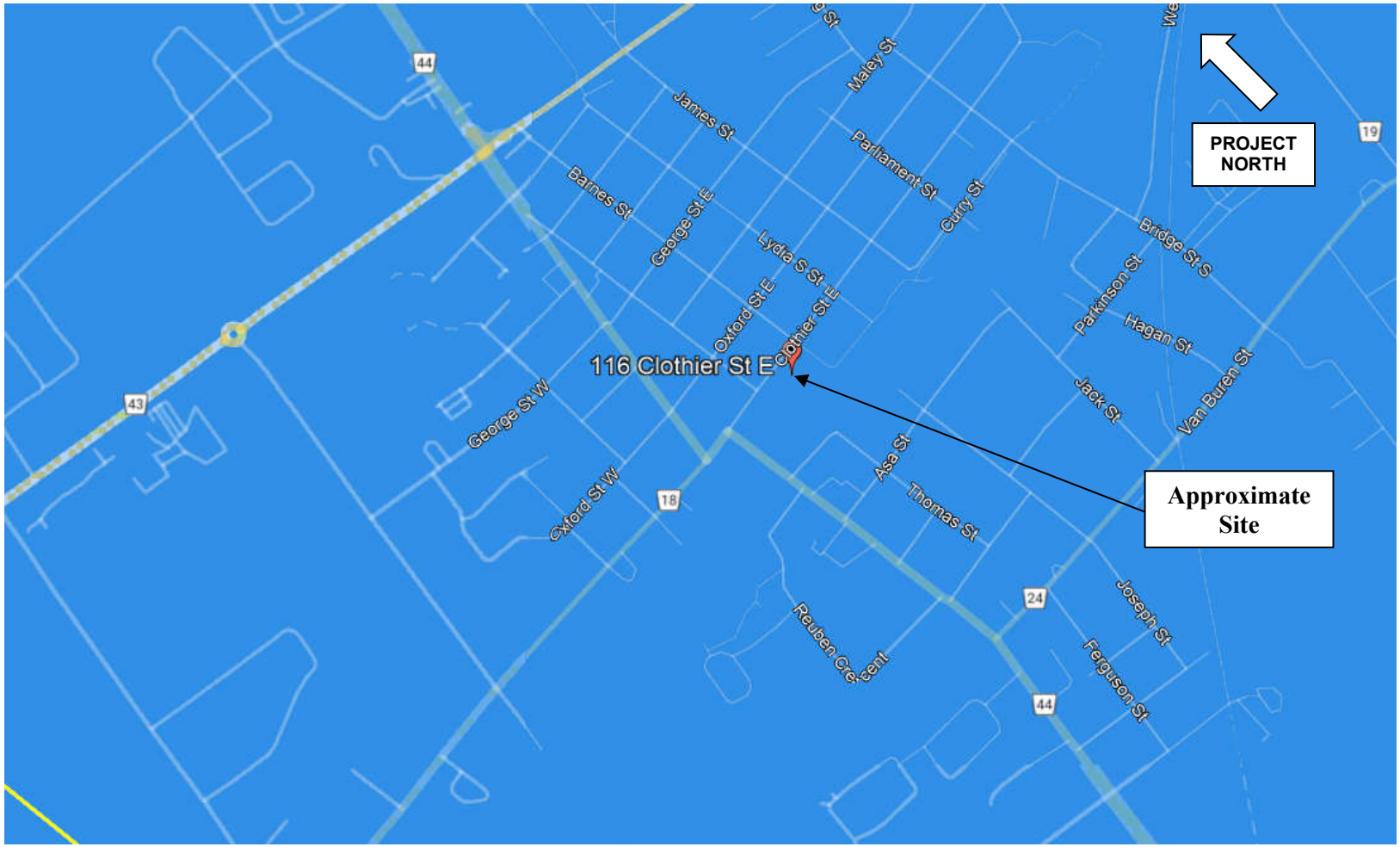
Date March 2025

BEDROCK GEOLOGY MAP

FIGURE 4



Reference: Ontario Geological Survey, 2011

NOT TO SCALE

5 **Oxford Formation**: dolostone, minor shale and sandstone

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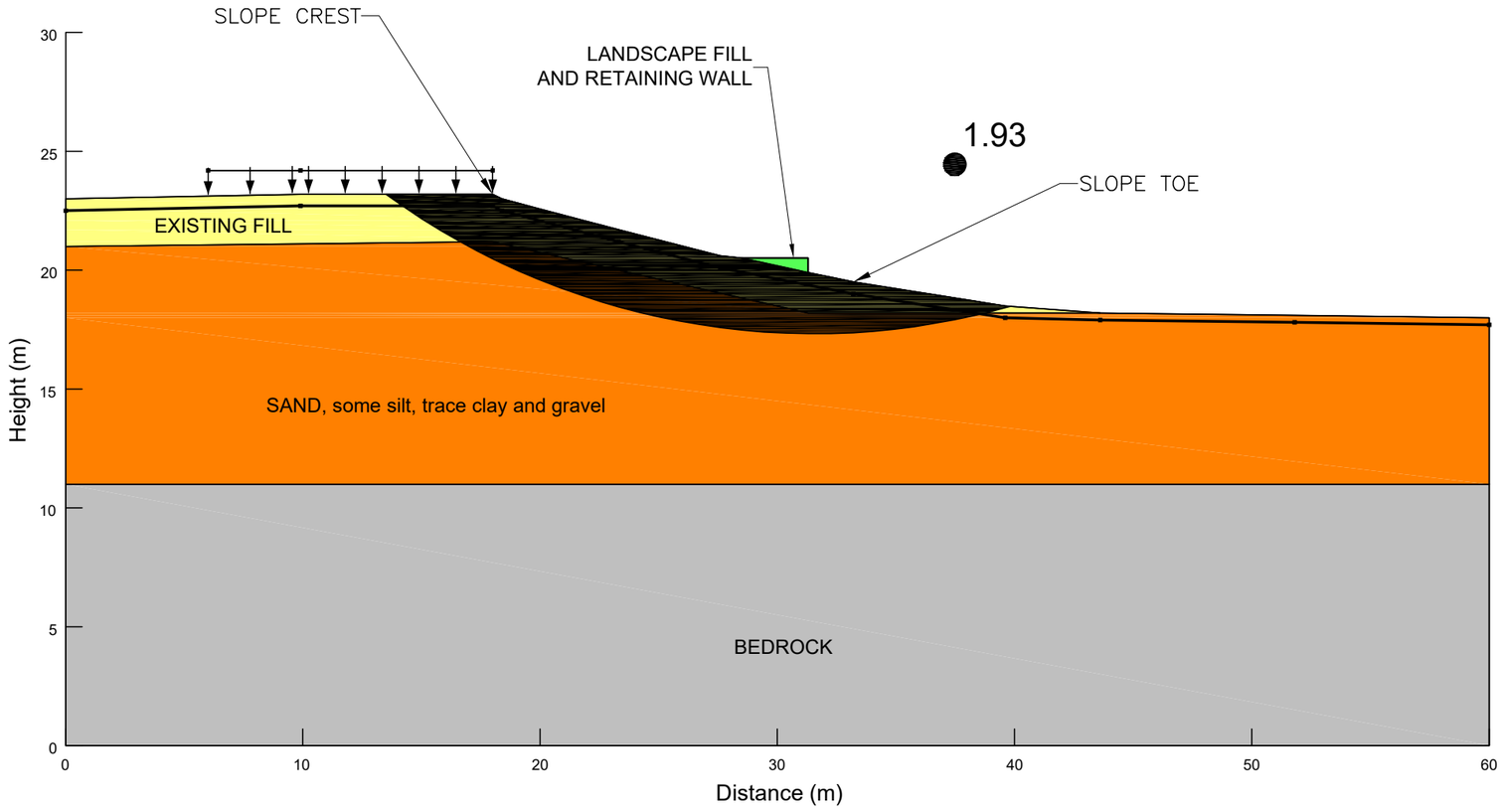
Date March 2025



ANALYSIS NAME

STATIC CONDITIONS - SLOPE SECTION A-A
FIGURE 5

LOCATION

116 CLOTHIER STREET EAST
MUNICIPALITY OF NORTH GRENVILLE
ONTARIO

PROJECT

SLOPE STABILITY ASSESSMENT

CLIENT

LOCKWOOD BROTHERS CONSTRUCTION

DATE	DRAWN BY	APPROX.SCALE	FILE NO.
March 2025	DGM	As Shown	024634

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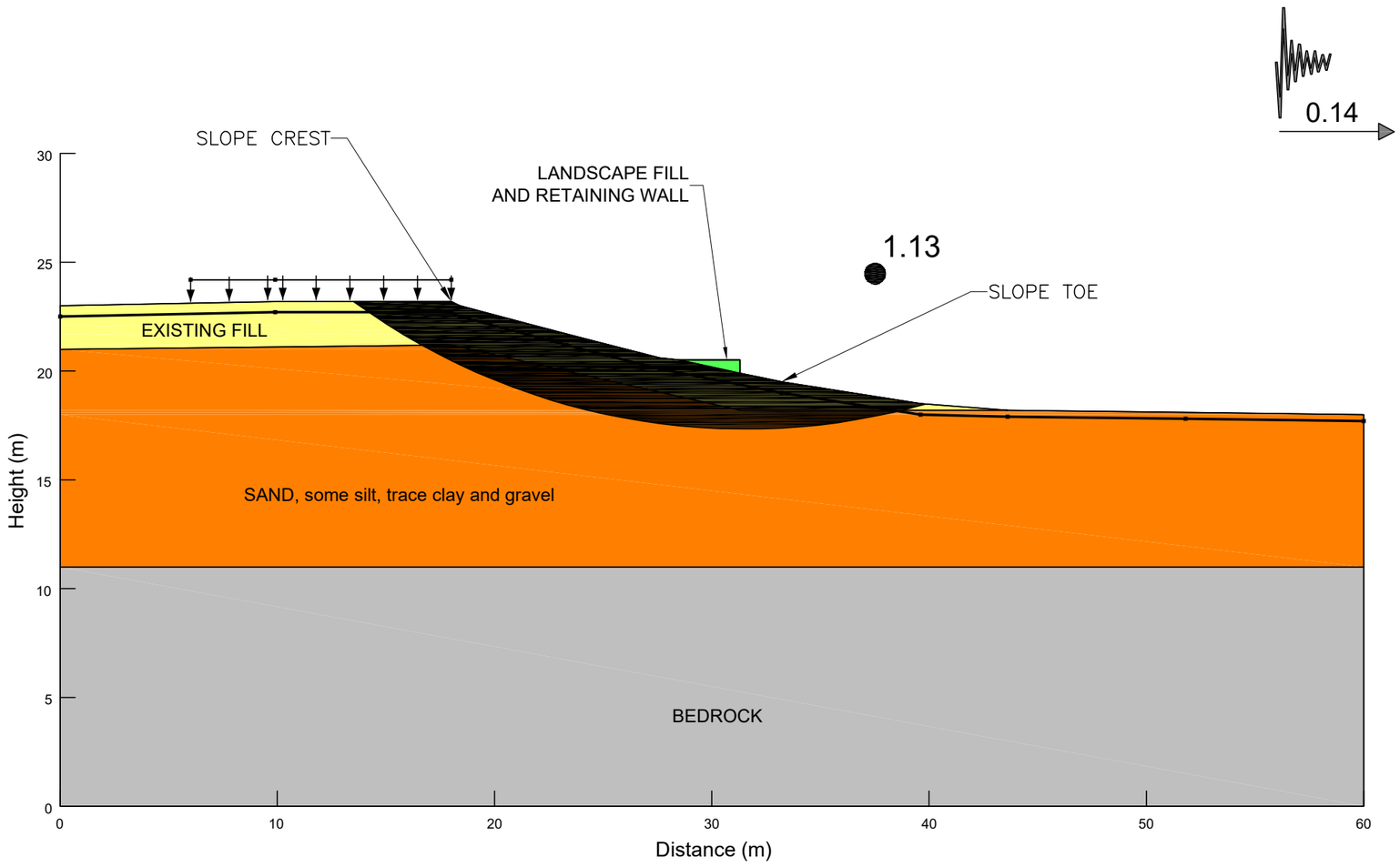

ANALYSIS NAME

PSEUDO-STATIC CONDITIONS - SLOPE SECTION A-A
FIGURE 6

LOCATION

116 CLOTHIER STREET EAST
MUNICIPALITY OF NORTH GRENVILLE
ONTARIO

PROJECT

SLOPE STABILITY ASSESSMENT

CLIENT

LOCKWOOD BROTHERS CONSTRUCTION

DATE	DRAWN BY	APPROX.SCALE	FILE NO.
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TABLE I
RECORD OF TEST PITS

116 CLOTHIER STREET EAST, KEMPTVILLE
MUNICIPALITY OF NORTH GRENVILLE
ONTARIO

TEST PIT NUMBER [APPROX. ELEV.]	DEPTH (METRES)	DESCRIPTION
TP24-1 [±89.5m]	0.00 – 1.70	Topsoil, sand, silt, clay, occasional brick, trace to some ash (FILL)
	1.70 – 2.00	Red brown to grey brown fine SAND, some silt, trace clay, trace gravel
	2.00	End of test pit

No groundwater seepage observed into test pit at time of field work, December 18, 2024.

TP24-2 [±88.5m]	0.00 – 1.90	Topsoil, sand, silt, clay, cobbles (FILL)
	1.90 – 2.30	Grey brown fine SAND, some silt, trace clay, trace gravel
	2.30	End of test pit

No groundwater seepage observed into test pit at time of field work, December 18, 2024.

APPENDIX A

MECP WELL RECORDS

3 1216 same as 1215

UTM | | |Z | | E

| 9 |R | | N

Elev. | 9 |R | 0 | 3 | 0 | 0 |

Basin | 2 5 | | |

24 № 1217 X

RECEIVED
MAR 3 1948
ONTARIO
GEOLOGICAL BRANCH
DEPARTMENT OF MINES

RECEIVED
FEB 18 1948
GEOLOGICAL BRANCH
DEPARTMENT OF MINES

The Well Drillers Act
Department of Mines, Province of Ontario

Water Well Record

[redacted] Con. ..... Lot House Pt. Lot Lot
[redacted] ..... Acres .....

Date Completed July 1st - 47 Cost of Well (not including pump) .....

Pipe and Casing Record		Pumping Test	
Casing diameter(s)	6"	Date	no test
Length(s) of casing(s)	16' 6"	Developed Capacity	
Length of screen		Duration of Test	
Type of screen		Pumping Rate	
Type of pump		Drawdown	
Capacity of pump		Static level of completed well	18' 4"
Depth of pump setting		Is well a gravel-wall type?	

Water Record

Kind (fresh or mineral) .... Fresh
Quality (hard, soft, contains iron, sulphur etc.) .... Hard
Appearance (clear, cloudy, coloured) .... Clear
For what purpose(s) is the water to be used? .... Domestic
How far is well from possible source of contamination? No source
What is source of contamination? .... None
Enclose a copy of any mineral analysis that has been made of water .....

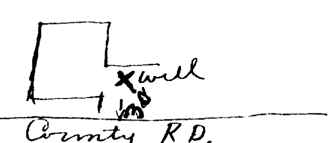
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
18'	Clear hard	28'

Well Log

Drift and Bedrock Record	From	To
16' 6" hard pan	0 ft.	ft.
13' Limestone		16'6
	16'6'	29'6"

Location of Well

In diagram below show distances of well from road and lot line



30' from County R.D south

Situation: Is well on upland, in valley, or on hillside? .... Hillside
Drilling Firm .... Fred Hillabaugh
Address .... Kemptville Ont.
Recorded by ..... Address .....
Date July 1st ..... 114 ..... Licence Number .....

CSS:S8

3164e

The Ontario Water Resources Commission Act

WATER WELL RECORD

Water management in Ontario

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11 | 2402321 | MUNICIP. 24602 | CON.

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT
Grenville	Kemptville	Saunders St	145

OWNER (SURNAME FIRST)	ADDRESS	DATE COMPLETED
Julia Construction	Richmond Ont	DAY 15 MO. May YR. 72

21 | UTM ZONE 18 | EASTING 448950 | NORTHING 4985000 | RC. 4 | ELEVATION 0300 | RC. 5 | BASIN CODE 25

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	DEPTH – FEET TO
grey	clay	stones		0	19
grey	limestone			19	63

31 | 0019205113 | 0063215

32

41 WATER RECORD

WATER FOUND AT – FEET	KIND OF WATER
0063	☒ 1 FRESH ☐ 2 SALTY ☐ 3 SULPHUR ☐ 4 MINERAL
	☐ 1 FRESH ☐ 2 SALTY ☐ 3 SULPHUR ☐ 4 MINERAL
	☐ 1 FRESH ☐ 2 SALTY ☐ 3 SULPHUR ☐ 4 MINERAL
	☐ 1 FRESH ☐ 2 SALTY ☐ 3 SULPHUR ☐ 4 MINERAL
	☐ 1 FRESH ☐ 2 SALTY ☐ 3 SULPHUR ☐ 4 MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH – FEET FROM	DEPTH – FEET TO
05	☒ 1 STEEL ☐ 2 GALVANIZED ☐ 3 CONCRETE ☐ 4 OPEN HOLE	.188	0	0021
	☐ 1 STEEL ☐ 2 GALVANIZED ☐ 3 CONCRETE ☒ 4 OPEN HOLE			0063
	☐ 1 STEEL ☐ 2 GALVANIZED ☐ 3 CONCRETE ☐ 4 OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET

MATERIAL AND TYPE | DEPTH TO TOP OF SCREEN FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT – FEET FROM	TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
☐ 1 PUMP ☒ 2 BAILER	0008 GPM.	01 HOURS 00 MINS.

STATIC LEVEL	WATER LEVEL END OF PUMPING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
007 FEET	055 FEET	040	050	055	055 FEET

WATER LEVELS DURING: ☒ 1 PUMPING ☐ 2 RECOVERY

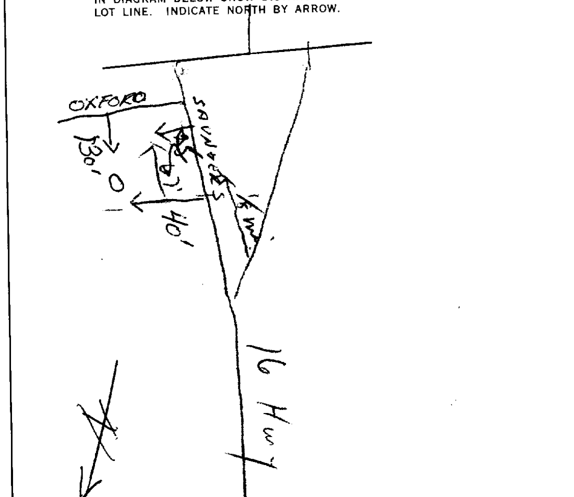
IF FLOWING, GIVE RATE: GPM. | PUMP INTAKE SET AT: FEET | WATER AT END OF TEST: ☐ 1 CLEAR ☒ 2 CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP | RECOMMENDED PUMP SETTING 055 FEET | RECOMMENDED PUMPING RATE 0005 GPM.

000.2 GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



DRILLERS REMARKS:

FINAL STATUS OF WELL

☒ 1 WATER SUPPLY ☐ 2 OBSERVATION WELL ☐ 3 TEST HOLE ☐ 4 RECHARGE WELL ☐ 5 ABANDONED, INSUFFICIENT SUPPLY ☐ 6 ABANDONED, POOR QUALITY ☐ 7 UNFINISHED

WATER USE 01

☒ 1 DOMESTIC ☐ 2 STOCK ☐ 3 IRRIGATION ☐ 4 INDUSTRIAL ☐ OTHER ☐ 5 COMMERCIAL ☐ 6 MUNICIPAL ☐ 7 PUBLIC SUPPLY ☐ 8 COOLING OR AIR CONDITIONING ☐ 9 NOT USED

METHOD OF DRILLING

☒ 1 CABLE TOOL ☐ 2 ROTARY (CONVENTIONAL) ☐ 3 ROTARY (REVERSE) ☐ 4 ROTARY (AIR) ☐ 5 AIR PERCUSSION ☐ 6 BORING ☐ 7 DIAMOND ☐ 8 JETTING ☐ 9 DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR: Jerry Mann Well Drilling | LICENCE NUMBER: 3644

ADDRESS: Box 396, Richmond Ont

NAME OF DRILLER OR BORER: Jerry Mann | LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: Jerry Mann | SUBMISSION DATE: DAY 16 MO. May YR. 72

OFFICE USE ONLY

DATA SOURCE 1 | CONTRACTOR 3644 | DATE RECEIVED 180872

DATE OF INSPECTION | INSPECTOR K

REMARKS: | P K | WI

OWRC COPY

Ontario — Ministry of the Environment

Well Tag No. *(Place Sticker and/or Print Below)*

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Grenville Lodge #279		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
119 Clouthier Street East	Kemptville	ON	K0G 1J0	6139895788

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
119 Clouthier Street East		34	

County/District/Municipality	City/Town/Village	Province	Postal Code
Grenville	Kemptville	Ontario	K0G 1J0

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	449083	4985189	Plan 11	

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Decomission Unused Dug Well				

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
21'	18'	Bentonite Chips	13.80
18'	7'	Clean Sand	108
7'	4'	Bentonite Chips	18.63
4'	ϕ	Clean Sand	81'

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify* _____

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☒ Abandoned, other, *specify* unused
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, *specify*
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, *specify*
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* _____

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping _____ hrs + _____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

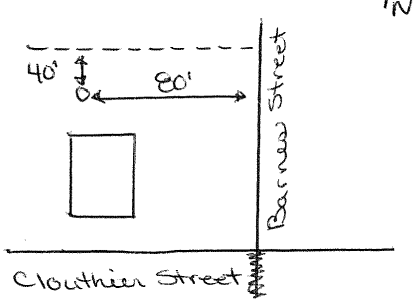
Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
1425486 Ontario Ltd o/a Splash Well Drilling	4877

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
PO Box 1083	Prescott	ON	K0E 1T0	

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
6139254885	Ferguson, Todd

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T478	Todd	2014/11/26

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☒ Yes ☐ No	2014/11/19	2014/11/13

Ministry Use Only

Audit No. Z 197246

NOV 28 2014

20-00069-00

Ontario Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)* No Tag

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
203 Clothier St. E			

County/District/Municipality	City/Town/Village	Province	Postal Code
North Grenville	Kemptville	Ontario	K0G1J0

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	449116	4918514		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brn	Sand	Silt	Loose	0'	24'
	Abandoned				

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0'	9'	clean Fill	
9'	12'	Bentonite chips	12 bags
12'	24'	cement	3 m

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☑ Digging
☐ Air percussion
☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify Abandoned

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
24"	stone	10"	0'	24'
	0' to 13' Removed			

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
24"	Stone	Stone		

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☑ Abandoned, other, specify Not in use
☐ Other, specify

Water Details

Water found at Depth (m/ft)	Kind of Water	Gas	Other, specify
22'	☐ Fresh ☑ Untested	☐	☐
	☐ Fresh ☐ Untested	☐	☐
	☐ Fresh ☐ Untested	☐	☐

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0'	24'	24"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

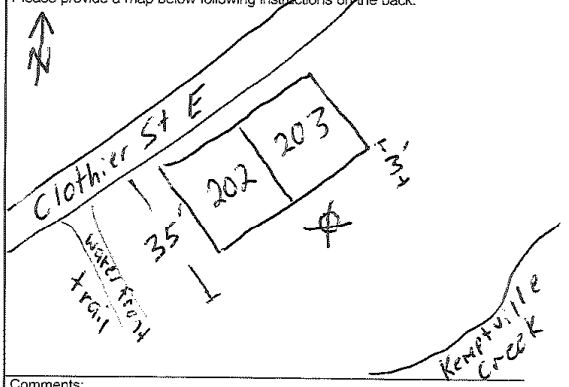
Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Aardvark Drilling Inc	7167 15

Business Address (Street Number/Name)	Municipality
25-C Lewis Rd	Guelph

Province	Postal Code	Business E-mail Address
ON	N1H 1G9	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
5199826913410	Smith, Kyle

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3591		2020/06/19

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No		2020/06/15

Ministry Use Only

Audit No. Z199747

Received JUL 21 2020

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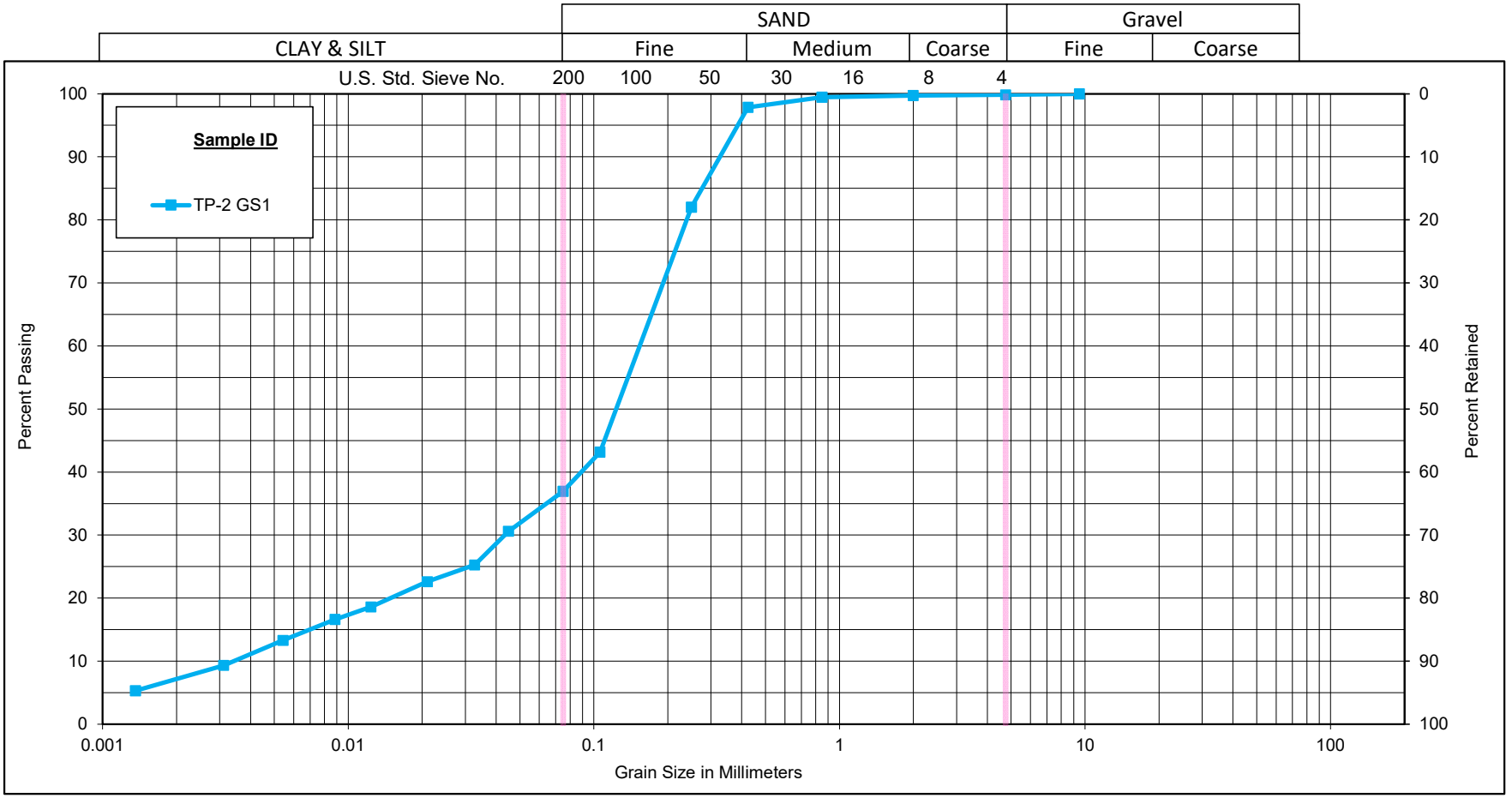
APPENDIX B

LABORATORY GRAIN SIZE DISTRIBUTION TESTING RESULTS

Unified Soil Classification System



Sample ID	Depth	% Gravel	% Sand	% Silt	% Clay
TP-2 GS1	80"-90"	0.2	62.9	29.9	7.0

Stantec

GRAIN SIZE DISTRIBUTION

Morey Associates, File #024634

Materials Testing

Figure No.

Project No. 121625580

Stantec

Particle-Size Analysis of Soils

LS702

AASHTO T88

PROJECT DETAILS			
Client:	**Morey Associates, File #024634**	Project No.:	**121625580**
Project:	**Materials Testing**	Test Method:	**LS702**
Material Type:	**Soil**	Sampled By:	**Morey Associates**
Source:	**TP-2**	Date Sampled:	**December 18, 2024**
Sample No.:	**GS1**	Tested By:	**Brian Prevost**
Sample Depth	**80"-90"**	Date Tested:	**December 22, 2024**

WASH TEST DATA	
Oven Dry Mass In Hydrometer Analysis (g)	73.38
Sample Weight after Hydrometer and Wash (g)	47.12
Percent Passing No. 200 Sieve (%)	**35.8**
Percent Passing Corrected (%)	**35.69**

PERCENT LOSS IN SIEVE	
Sample Weight Before Sieve (g)	**1075.20**
Sample Weight After Sieve (g)	**1072.40**
Percent Loss in Sieve (%)	**0.26**

SOIL INFORMATION		
Liquid Limit (LL)		
Plasticity Index (PI)		
Soil Classification		
Specific Gravity (G_s)	2.750	
Sg. Correction Factor (α)	0.978	
Mass of Dispersing Agent/Litre	24	g

CALCULATION OF DRY SOIL MASS	
Oven Dried Mass (W_o), (g)	219.31
Air Dried Mass (W_a), (g)	220.30
Hygroscopic Corr. Factor ($F=W_o/W_a$)	0.9955
Air Dried Mass in Analysis (M_a), (g)	73.71
Oven Dried Mass in Analysis (M_o), (g)	73.38
Percent Passing 2.0 mm Sieve (P_{10}), (%)	99.74
Sample Represented (W), (g)	73.57

SIEVE ANALYSIS		
Sieve Size mm	**Cum. Wt. Retained**	**Percent Passing**
75.0		100.0
63.0		100.0
53.0		100.0
37.5		100.0
26.5		100.0
19.0		100.0
13.2		100.0
9.5	0.0	100.0
4.75	1.8	99.8
2.00	2.8	99.7
Total (C + F)[1]	1072.40	
0.850	0.19	99.5
0.425	1.40	97.8
0.250	13.03	82.0
0.106	41.63	43.2
0.075	46.21	36.9
PAN	46.43	

Note 1: (C + F) = Coarse + Fine

HYDROMETER DETAILS	
Volume of Bulb (V_B), (cm^3)	63.3
Length of Bulb (L_2), (cm)	14.2
Length from '0' Reading to Top of Bulb (L_1), (cm)	10.3
Scale Dimension (h_s), (cm/Div)	0.17
Cross-Sectional Area of Cylinder (A), (cm^2)	27.25
Meniscus Correction (H_m), (g/L)	1.0

START TIME 10:32 AM

HYDROMETER ANALYSIS

Date	Time	Elapsed Time T Mins	H_s Divisions g/L	H_c Divisions g/L	Temperature T_c °C	Corrected Reading $R = H_s - H_c$ g/L	Percent Passing P %	L cm	η Poise	K	Diameter D mm
22-Dec-24	10:33 AM	1	27.0	4.0	20.0	23.0	30.59	11.47798	10.09098	0.013286	0.04501
22-Dec-24	10:34 AM	2	23.0	4.0	20.0	19.0	25.27	12.15798	10.09098	0.013286	0.03276
22-Dec-24	10:37 AM	5	21.0	4.0	20.0	17.0	22.61	12.49798	10.09098	0.013286	0.02101
22-Dec-24	10:47 AM	15	18.0	4.0	20.0	14.0	18.62	13.00798	10.09098	0.013286	0.01237
22-Dec-24	11:02 AM	30	16.5	4.0	20.0	12.5	16.62	13.26298	10.09098	0.013286	0.00883
22-Dec-24	11:52 AM	80	14.0	4.0	21.0	10.0	13.30	13.68798	9.84835	0.013126	0.00543
22-Dec-24	2:42 PM	250	11.0	4.0	21.5	7.0	9.31	14.19798	9.73081	0.013047	0.00311
23-Dec-24	10:32 AM	1440	8.0	4.0	19.0	4.0	5.32	14.70798	10.34409	0.013452	0.00136

Remarks:

Reviewed By: Brian Prevost

Date: December 23, 2024

V:\01216\active\laboratory_standing_offers\2024 Laboratory Standing Offers\121625580 Morey Associates\December 18, Hydrometer_TP2_GS1, Morey #024634\Hydrometer-Lab Standing Offers.xlsx

APPENDIX C

COMPLETED TABLE 4.2 SLOPE STABILITY RATING CHART (EXCERPT FROM SECTION 4.3.2 OF THE MNR "TECHNICAL GUIDE - RIVER & STREAM SYSTEMS: EROSION HAZARD LIMIT")

TABLE 4.2 - SLOPE STABILITY RATING CHART

Site Location: *116 Clothier St. E., Kemptville, ON* File No. *024634*

~~Property Owner~~ Client: *Lockwood Brothers Construction* ~~Inspection~~ Site Visit Date: *November 22, 2024*

~~Inspected~~ Site Visit By: *Morey Associates Ltd. technical staff* Weather: *Overcast, ~6 degrees C*

1. SLOPE INCLINATION			
	degrees	**horiz. : vert.**	
	a) 18 or less	3 : 1 or flatter	(0)
	b) 18 - 26	2 : 1 to more than 3 : 1	6
	c) more than 26	steeper than 2 : 1	16
2. SOIL STRATIGRAPHY			
	a) Shale, Limestone, Granite (Bedrock)		0
	b) Sand, Gravel		6
	c) Glacial Till		9
	d) Clay, Silt		12
	e) Fill		(16)
	f) Leda Clay		24
3. SEEPAGE FROM SLOPE FACE			
	a) None or Near bottom only		(0)
	b) Near mid-slope only		6
	c) Near crest only or, From several levels		12
4. SLOPE HEIGHT			
	a) 2 m or less		0
	b) 2.1 to 5 m		(2)
	c) 5.1 to 10 m		4
	d) more than 10 m		8
5. VEGETATION COVER ON SLOPE FACE			
	a) Well vegetated; heavy shrubs or forested with mature trees		0
	b) Light vegetation; Mostly grass, weeds, occasional trees, shrubs		(4)
	c) No vegetation, bare		8
6. TABLE LAND DRAINAGE			
	a) Table land flat, no apparent drainage over slope		(0)
	b) Minor drainage over slope, no active erosion		2
	c) Drainage over slope, active erosion, gullies		4
7. PROXIMITY OF WATERCOURSE TO SLOPE TOE			
	a) 15 metres or more from slope toe		(0)
	b) Less than 15 metres from slope toe		6
8. PREVIOUS LANDSLIDE ACTIVITY			
	a) No - no evidence of previous slope failures at proposed site development area		(0)
	b) Yes		6
SLOPE INSTABILITY RATING VALUES INVESTIGATION RATING SUMMARY			**TOTAL 22**

APPENDIX D

SITE PHOTOGRAPHS

Photograph 1: Upper portion of subject slope in background (east side yard), bottom portion of subject slope in foreground (rear yard). [Looking in project north direction]

Photograph 2: Toe of subject slope in foreground, floodplain in background with Kemptville Creek beyond. [Looking in project south direction]

APPENDIX E

2015 NATIONAL BUILDING CODE SEISMIC HAZARD CALCULATION

2015 National Building Code Seismic Hazard Calculation

INFORMATION: Eastern Canada English (613) 995-5548 français (613) 995-0600 Facsimile (613) 992-8836
Western Canada English (250) 363-6500 Facsimile (250) 363-6565

Site: 45.019N 75.645W

2025-03-13 13:25 UT

Probability of exceedance per annum	0.000404	0.001	0.0021	0.01
Probability of exceedance in 50 years	2 %	5 %	10 %	40 %
Sa (0.05)	0.445	0.240	0.140	0.039
Sa (0.1)	0.519	0.291	0.177	0.055
Sa (0.2)	0.432	0.247	0.154	0.051
Sa (0.3)	0.327	0.189	0.119	0.041
Sa (0.5)	0.231	0.134	0.085	0.029
Sa (1.0)	0.114	0.067	0.043	0.015
Sa (2.0)	0.054	0.032	0.020	0.006
Sa (5.0)	0.014	0.008	0.005	0.001
Sa (10.0)	0.005	0.003	0.002	0.001
PGA (g)	0.277	0.158	0.096	0.030
PGV (m/s)	0.191	0.107	0.065	0.020

Notes: Spectral (Sa(T), where T is the period in seconds) and peak ground acceleration (PGA) values are given in units of g (9.81 m/s^2). Peak ground velocity is given in m/s. Values are for "firm ground" (NBCC2015 Site Class C, average shear wave velocity 450 m/s). NBCC2015 and CSAS6-14 values are highlighted in yellow. Three additional periods are provided - their use is discussed in the NBCC2015 Commentary. Only 2 significant figures are to be used. **These values have been interpolated from a 10-km-spaced grid of points. Depending on the gradient of the nearby points, values at this location calculated directly from the hazard program may vary. More than 95 percent of interpolated values are within 2 percent of the directly calculated values.**

References

National Building Code of Canada 2015 NRCC no. 56190; Appendix C: Table C-3, Seismic Design Data for Selected Locations in Canada

Structural Commentaries (User's Guide - NBC 2015: Part 4 of Division B)
Commentary J: Design for Seismic Effects

Geological Survey of Canada Open File 7893 Fifth Generation Seismic Hazard Model for Canada: Grid values of mean hazard to be used with the 2015 National Building Code of Canada

See the websites www.EarthquakesCanada.ca and www.nationalcodes.ca for more information

A-02-25
116 Clothier Street E

April 16, 2025

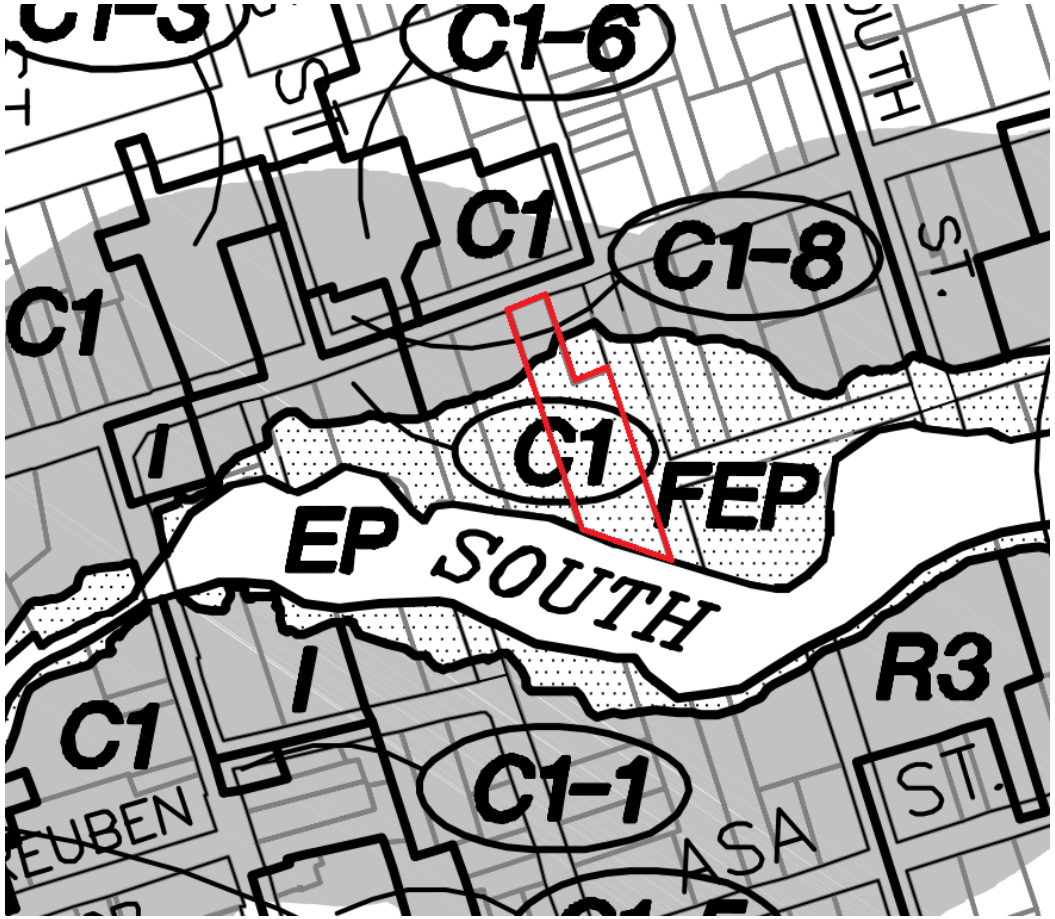
Department: Planning and Development

Minor Variance Request

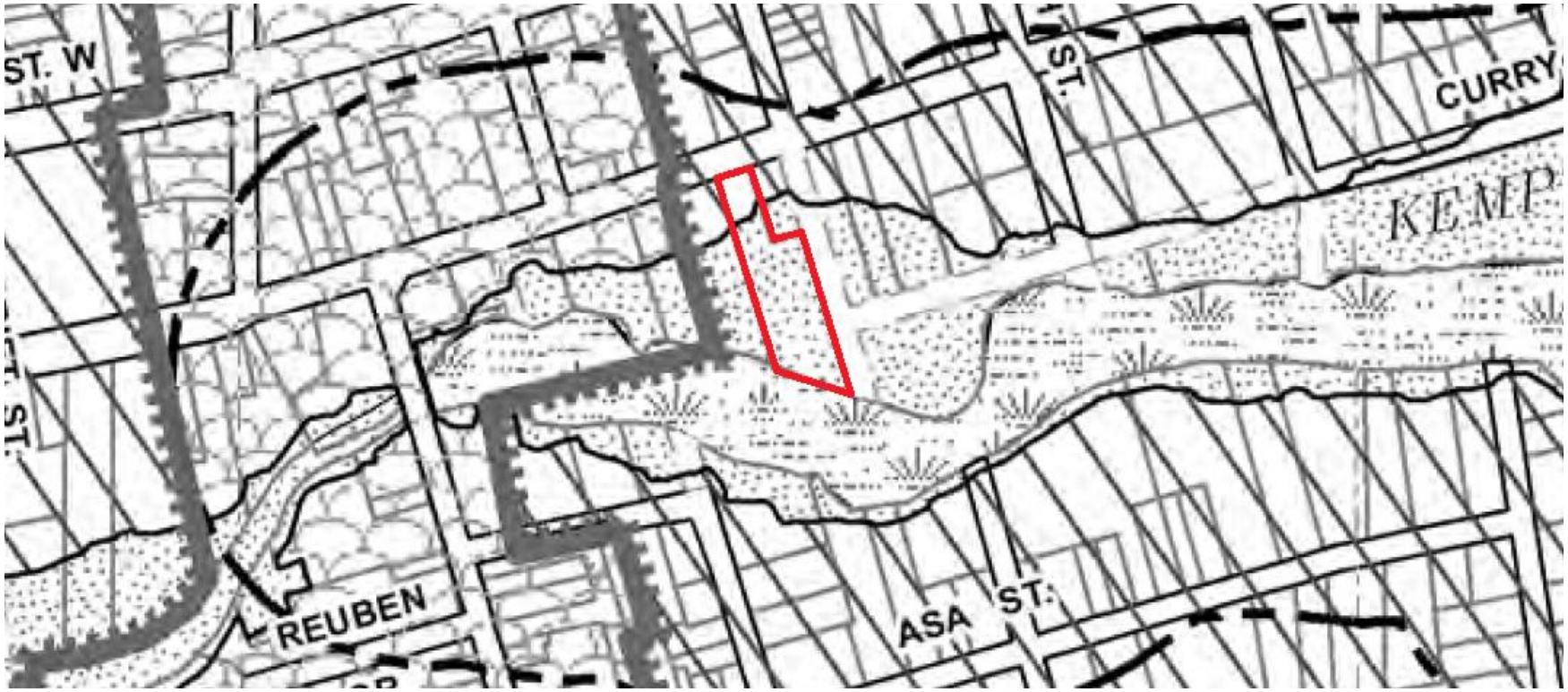
1. **To provide relief from Section 6.25[c] of the Comprehensive Zoning By-law to allow an addition and deck to be constructed at a setback of 1.8 metres from the regulatory flood line; and,**

1. **To provide relief from Section 13.2 of the Comprehensive Zoning By-law to interpret lot coverage as applying to the entire lot area.**

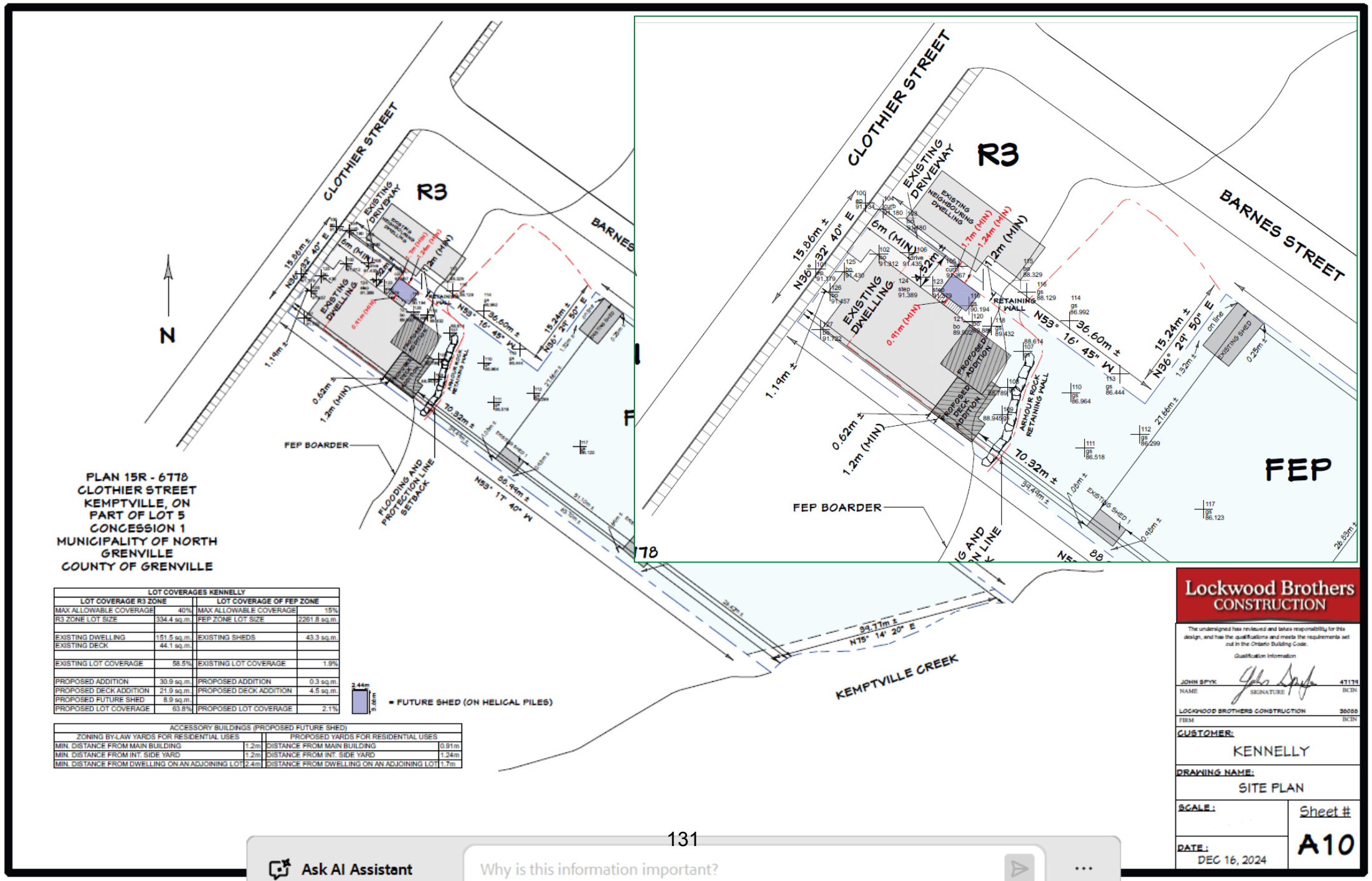
Department: Planning and Development



Zoning



Official Plan



LOT COVERAGES KENNELLY			
LOT COVERAGE R3 ZONE		LOT COVERAGE OF FEP ZONE	
MAX ALLOWABLE COVERAGE	40%	MAX ALLOWABLE COVERAGE	15%
R3 ZONE LOT SIZE	334.4 sq.m.	FEP ZONE LOT SIZE	2261.8 sq.m.
EXISTING DWELLING	151.5 sq.m.	EXISTING SHEDS	43.3 sq.m.
EXISTING DECK	44.1 sq.m.		
EXISTING LOT COVERAGE	58.5%	EXISTING LOT COVERAGE	1.9%
PROPOSED ADDITION	30.9 sq.m.	PROPOSED ADDITION	0.3 sq.m.
PROPOSED DECK ADDITION	21.9 sq.m.	PROPOSED DECK ADDITION	4.5 sq.m.
PROPOSED FUTURE SHED	8.9 sq.m.		
PROPOSED LOT COVERAGE	63.8%	PROPOSED LOT COVERAGE	2.1%

2.44m × 3.66m = FUTURE SHED (ON HELICAL PILES)

ACCESSORY BUILDINGS (PROPOSED FUTURE SHED)			
ZONING BY-LAW YARDS FOR RESIDENTIAL USES		PROPOSED YARDS FOR RESIDENTIAL USES	
MIN. DISTANCE FROM MAIN BUILDING	1.2m	DISTANCE FROM MAIN BUILDING	0.91m
MIN. DISTANCE FROM INT. SIDE YARD	1.2m	DISTANCE FROM INT. SIDE YARD	1.24m
MIN. DISTANCE FROM DWELLING ON AN ADJOINING LOT	2.4m	DISTANCE FROM DWELLING ON AN ADJOINING LOT	1.7m

Lockwood Brothers CONSTRUCTION

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirements set out in the Ontario Building Code.

Qualification Information

JOHN BFYK — NAME — SIGNATURE — 47179 BCIN

LOCKWOOD BROTHERS CONSTRUCTION — FIRM — 36088 BCIN

CUSTOMER: KENNELLY

DRAWING NAME: SITE PLAN

SCALE:

DATE: DEC 16, 2024

Sheet # A10

Site Development Considerations

- Development maintains a 30-metre setback from the edge of the Kemptville Creek Provincially Significant Wetland
- Development is consistent with the PPS, in the opinion of the Planner, and does not contravene the UCLG or MNG Official Plans.

Comments Received

- Email of no comment from By-law Services and UCLG

Proposed Conditions

- That this decision be contingent upon obtaining a Section 28 permit from RVCA in support of the general development plan most appropriately depicted in Drawing A10, prepared by Lockwood Brothers Construction and dated December 16, 2024.
- That an erosion and sediment control plan be submitted in support of the application (Section 5.3.1[d][iv]);
- That the development enter into a site plan control agreement (Section 5.3.1[f]);
- That the owner and the Municipality discuss options for purchasing, acquiring, managing or providing access for waterfront lands for recreational purposes – trails (Section 6.4)
- That the development be generally in keeping with the submitted Site Plan drawing prepared by Lockwood Brothers Construction, Drawing A10 and dated December 16, 2024.

Recommendation

Staff recommend supporting the requested variances, subject to the noted conditions

The requested variances is minor, the intent of the Comprehensive Zoning By-law and Official Plan is being maintained and the reduction is desirable and appropriate.