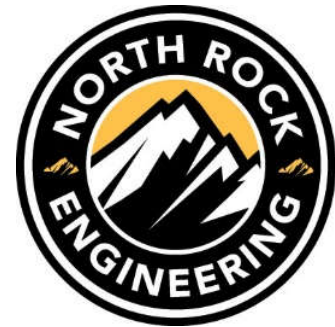


ENVIRONMENTAL IMPACT STATEMENT

**Part of Lot 8, Concession 1, Part of Lot 8, 9 and 10, Concession 2, Lot 2, 8, 9, 19, 20 and 21
Part of North Avenue (Closed by BY-Law 672).
Municipality of Oliver Paipoonge,
District of Thunder Bay, Ontario**



Prepared By:
North Rock Engineering Inc.
1411 Goods Road
Thunder Bay, ON P7G 1J1
807 620-8431
September 21, 2022



EXECUTIVE SUMMARY

Eugene Garritano (Garritano) has retained North Rock Engineering Inc. (North Rock) to provide an Environmental Impact Statement (EIS) for their proposed lot development on Vibert Road, located on the former Buchanan mill site in the Municipality of Oliver-Paipoonge. The lot development is within the Lakehead Regional Conservation Authority (LRCA) and municipal zoning is industrial with an environmental protection buffer around Pennock Creek at the northern boundary of the lot area.

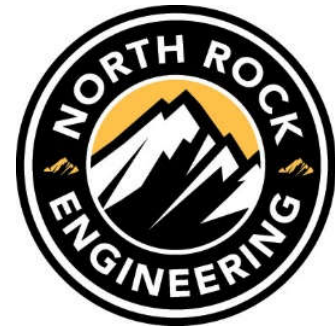
The proposed development will be serviced by residential water wells with individual on-site septic systems. This study has been initiated by the proponent after a pre-consultation meeting with the Municipality of Oliver-Paipoonge planning department which requested a review of potential impacts of the development. Specifically, the potential impacts on the hydraulic functions of the EP zoned buffer along the northern boundary of the site.

The proposed lot development is in the Municipality of Oliver-Paipoonge, Part of Lot 8, Concession 1, Part of Lots 8, 9, and 10, Concession 2, Lots 2, 8, 9, 19, 20 and 21, and Part of North Avenue (closed by By-Law 672), District of Thunder Bay, Ontario. The development proposes 18 lots on a 66 hectare (ha) parcel of land for an average lot size of 3.5 ha, accessed via the existing Buckhorn Dr., south from Highway 130 off of Vibert Road. Each lot will be serviced by residential wells and individual on-site septic systems. The development is bound to the east and south by residential zoned land, by environmental protection zoned land to the east and north, and by light industrial zoned land to the west. southern boundary of the lot development is confined by the CN Rail line.

The proposed development is generally flat with a gentle overall gradient to the southeast. The property is underlain by glaciolacustrine plain deposits composed of silty sand which overly Sibley Basin sedimentary rocks. Surface water in the northern portion of the development drains north to Pennock Creek, while the southern half of the area drains southeast, reporting directly to the Kaministiquia River.

Land Information Ontario (LIO) data was reviewed in context to the proposed development to evaluate the potential impact the lot development may have on the surrounding natural environment. The southwestern half of the proposed development is adjacent to a small, perched wetland (OGF ID 108161317) and the northern development boundary is the Pennock Creek wetland (OGF ID 108161345). Both wetlands are 'type: swamp' and neither wetland has been evaluated.

Species at Risk (SARs) known to exist in the ecoregion were reviewed as well as documents obtained from the Lakehead Conservation Authority. Species at risk in the region are Caribou, Wolverines, Monarch Butterflies, Peregrine Falcon, snapping turtle, Canada Warbler and Little



Brown Bats. The proposed development has the potential to impact habitat of Little Brown Bat, Canada Warbler and Snapping Turtle.

The nearest Area of Natural and Scientific Interest (ANSI) to the proposed development is the Slate River ANSI, located approximately 3 km southeast of the property. The ANSI is an Earth Science class that is non-sensitive with Provincial significance and no restrictions. Based on this desktop review, no wetland or woodland Significant Wildlife Habitat (SWH) is identified on or within 120 m of the proposed development. Based on the Municipal Zoning Map the wetland area to the north is all classified as environmentally protected, it is recommended that an appropriate 30 m buffer zone be established along the northern property boundary

The purpose of this EIS is to ensure the proposed lot development (i.e. driveway, house, fill placement etc.) will not have an impact on the hydraulic functions of the EP zoned area at the northern edge of the lots. The hydraulic function of the Pennock Creek wetland and the Environmental Protection zone at the north edge of the site is not anticipated to be altered by the development, provided that buildings, structures and access/egress routes are not constructed within the EP zoned area.

Based on a desktop review of the proposed lot development and potential impacts to the Pennock Creek watershed, the following recommendations are provided for consideration:

- The wetland area OGF ID 108161345 should have a 30 meter buffer zone maintained around it to prevent any potential impacts to the environmental protection zoned area.
- All waste debris located on site should be properly disposed of at an appropriate licensed facility.
- Lot buildings, structures and access/egress routes should not be constructed within the EP zoned wetland area on the north edge of the property.
- Adequate drainage should be constructed to channel surface water flow south toward the CN Rail line and away from Pennock Creek utilizing existing drainage infrastructure wherever possible.
- **If the final intended use of the property is to include residential property usage, then a Phase 1 Environmental Site Assessment should be conducted for the property.**

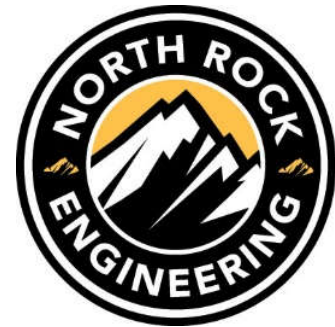


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- Figure 1: Regional Location Plan
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Appendices

- Appendix A: Municipality of Oliver-Paipoonge Official Plan Schedule 'B'
Appendix B: Draft Plan of Subdivision, Part of Lot 8, Concessions 1, Part of Lots 8, 9 & 10
Concession 2, Lots 2, 8, 9, 19, 20 & 21, Part of North Avenue (Closed by By-Law 672)
Appendix C: Setback and Floodplain Location Plan

1 INTRODUCTION

Eugene Garritano (Garritano) has retained North Rock Engineering Inc. (North Rock) to provide an Environmental Impact Statement (EIS) for their proposed lot development on Vibert Road, located on the former Buchanan mill site in the Municipality of Oliver-Paipoonge (Figure 1). The lot development is within the Lakehead Regional Conservation Authority (LRCA) and municipal zoning is industrial with an environmental protection buffer around Pennock Creek at the northern boundary of the lot area (Appendix A).

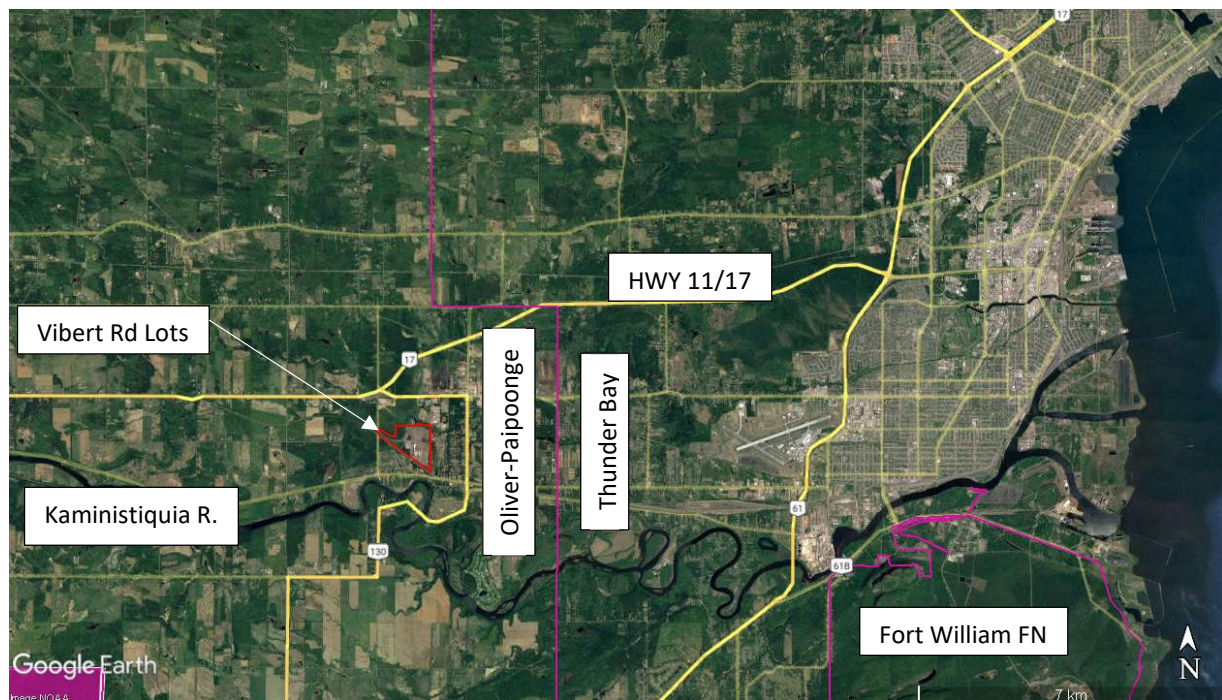
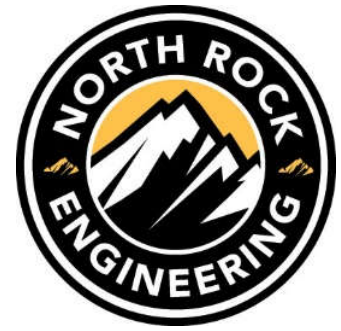


Figure 1 Regional location of proposed lot development (red) showing municipal boundaries (purple), local infrastructure, Fort William First Nation, the Kaministiquia River and the City of Thunder Bay.

It is understood that the proposed development will be serviced by residential water wells with individual on-site septic systems. The current land use at the proposed severance is not for agricultural purposes.

1.1 Background

This study has been initiated by the proponent after a pre-consultation meeting with the Municipality of Oliver-Paipoonge planning department in March 2021. The purpose of the EIS is to ensure the proposed lot development (i.e. driveway, house, fill placement etc.) will not have an impact on the hydraulic functions of the EP zoned area at the northern edge of the lots. This



report is intended to review features existing on or within 120 metres of the proposed development, such as:

- Significant wetlands;
- Significant habitat of endangered and threatened species (SARs);
- Significant Areas of Natural and Scientific Interest (ANSIs);
- Significant Wildlife Habitat (SWH); and
- Fish habitat.

2 PROJECT DESCRIPTION

The proposed lot development is in the Municipality of Oliver-Paipoonge, Part of Lot 8, Concession 1, Part of Lots 8, 9, and 10, Concession 2, Lots 2, 8, 9, 19, 20 and 21, and Part of North Avenue (closed by By-Law 672), District of Thunder Bay, Ontario (Figure 2). The proposed development is in NTS 052A/06, centered near UTM NAD 83, Zone 16, 319877 mE, 5360404 mN. The development proposes 18 lots on a 66 hectare (ha) parcel of land for an average lot size of 3.5 ha, accessed via the existing Buckhorn Dr., south from Highway 130 off of Vibert Road (Figure 2). The southern boundary of the lot development is confined by the CN Rail line (Figure 2).

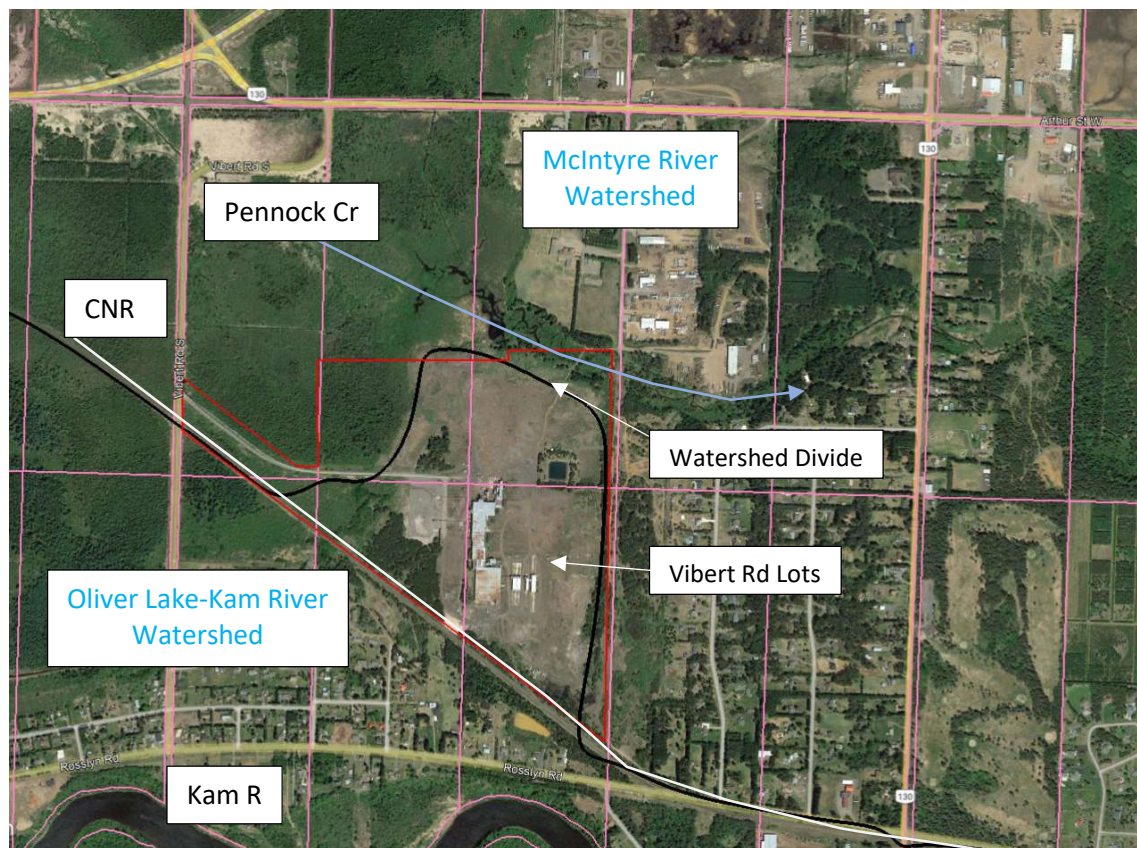
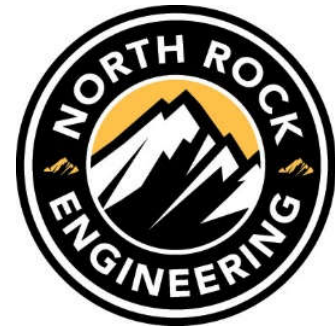


Figure 2 Proposed lot development (red) showing lot and concession lines (pink), local infrastructure, watershed boundaries and the Kaministiquia River.

2.1 Servicing

The proposed development is approximately 66 ha in plan view, with a planned development of 18 lots with an average lot size of 3.5 ha and a minimum lot size of 1.2 ha (Appendix B). Each lot will be serviced by residential wells and individual on-site septic systems.



2.2 Surrounding Land Use

Properties within 120 m of the proposed include:

- North – Pennock Creek;
- East – Land zoned light Industrial, and lands zoned Residential;
- South – CN Rail line, Rosslyn Road and lands zoned Residential; and
- West – Land zoned Environmental Protection and land zoned Residential.

2.3 Topography

The site is relatively flat with a gentle overall gradient to the southeast. The MNRF has mapped the Pennock Creek wetland as a swamp area that has not been evaluated. A second swamp area is located to the east adjacent to portions of proposed lots 14 – 17 of (Appendix B).

2.4 Surficial Geology

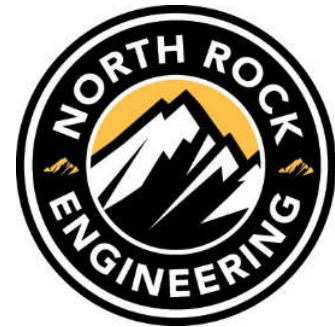
The proposed severance is underlain by glaciolacustrine plain deposits composed of silty sand with low relief and dry drainage (Mollard & Mollard, 1983).

2.5 Bedrock Geology

The proposed severance is underlain by the Sibley Basin, a Paleo- to Mesoproterozoic (ca. 1.8-1.1 Ga) sedimentary basin, approximately 1 km thick, that is relatively flat lying and unconformably underlain by Archean (ca. 4.2-2.5 Ga) basement rocks (Jefferson et al., 2007). Animikie Group rocks overly the Archean basement and is subdivided into the Gunflint and Rove Formations, which are overlain by the Sibley Formation (Moorehouse, 1960). In the proposed severance area, Animikie rocks are composed of the Gunflint formation, which was deposited during the Penokean Orogeny in a back-arc extension setting, consisting of chemical sediments with intercalated fine clastic grainstone and black shale (Cundari, 2012).

2.6 Hydrology

The proposed severance is affected by the Lake Superior watershed. Using the Ontario Flow Assessment Tool (OFAT III), approximate watershed boundaries indicate surface water in the northern portion of the development drains northeast to Pennock Creek, while the southern half of the area drains southeast, discharging directly to the Kaministiquia River (Figure 2). Pennock Creek eventually discharges to the Neebing River at the western limit of the Thunder Bay Airport.



3 DESKTOP REVIEW

Land Information Ontario (LIO) data was reviewed in context to the proposed development to evaluate the potential impact the lot development may have on the surrounding natural environment.

3.1 Significant Wetlands

The Ontario Ministry of Natural Resources (MNRF) Wetlands GeoHub data indicates a wetland area adjacent to the southeastern portion of the proposed development (OGF ID 108161317) and the northern development boundary is bounded by the Pennock Creek wetland (OGF ID 108161368). Both wetlands are 'type: swamp' and neither wetland has been evaluated.

In 2010, the Lakehead Region Conservation Authority (LRCA) commissioned a Pennock Creek Watershed Assessment Update which compared surface water quality at six sampling locations in 2010 and nine locations from 2006 to the Provincial Water Quality Objectives (PWQO). The report concluded it was likely that aluminum, phosphorus, iron and total coliform concentrations that exceeded the PWQO in 2010 were the result of natural occurring processes within the watershed.

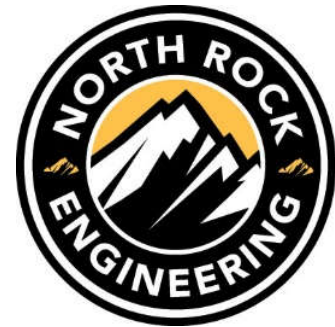
Comparison between 1996 to 2010 data indicates the watershed has negligible change in iron concentrations between the two study periods. Dissolved Oxygen (DO) concentrations were below the PWQO at two locations in 2010, thought to be due to stagnant flow with highly organic substrates.

3.2 Significant Habitat of Endangered or Threatened Species (SARs)

A desktop review was conducted to examine the potential risk to SARs species in the study area, species known to exist in the ecoregion were reviewed as well as documents obtained from the Lakehead Conservation Authority. Species at risk in the region are Caribou, Wolverines, Monarch Butterflies, Peregrine Falcon, snapping turtle, Canada Warbler and Little Brown Bats. Desktop examination of the proposed lot indicates the potential for habitat, for Little Brown Bat, Canada Warbler, with potential habitats for snapping turtle present within the wetland located on site.

3.3 Significant Areas of Natural and Scientific Interest (ANSI)

The nearest ANSI to the proposed development is the Slate River ANSI, located approximately 3 km southeast of the property. The ANSI is an Earth Science class that is non-sensitive with Provincial significance and no restrictions. General comments provided for the ANSI are *"NRVIs mapping was inaccurate, missing the main deposits (concretion's(sic)) of concretions. ANSI in NRVIS was significantly(sic) and unnecessarily over sized"*.



3.4 Significant Wildlife Habitat (SWH)

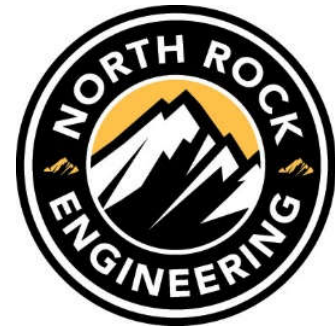
To ensure a comprehensive approach to identifying and evaluating significant wildlife habitat, wildlife habitat has been divided into four broad categories:

- seasonal concentration areas;
- rare vegetation communities or specialised habitats for wildlife;
- habitats of species of conservation concern, excluding the habitats of endangered and threatened species; and
- animal movement corridors.

Based on a desktop review, no woodland SWH areas are identified on or within 120 m of the proposed development. A wetland exists along the northern edge of the property, while the wetland has not been evaluated by the MNRF, the municipality of Oliver Paipoonge has the listed the area as environmentally protected (Appendix A).

3.5 Fish Habitat

The subject property contains a wetland feature that, based on a desktop review of MNRF mapping is connected to Pennock Creek. The wetland drains into the unnamed ponds along the northern property boundary before discharging to Pennock Creek where it ultimately discharges to the Neebing river. The wetland may potentially support fish habitat as well as other sensitive aquatic life due to its direct connection to the larger watershed. Based on the Municipal Zoning Map (Appendix A) the wetland area to the north is all classified as environmentally protected, it is recommended that an appropriate 30 m buffer zone be established along the northern property boundary along Block A, Block B and Lots 7-10 to prevent any potential impacts to this area. Lot development plans should be created for these areas on a case-by-case basis should development of these lots proceed forward.



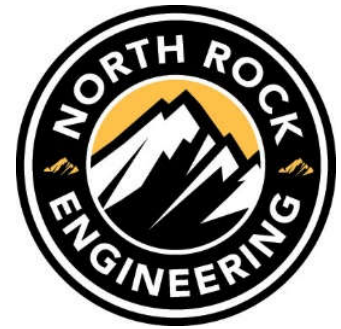
4 SITE INVESTIGATION

On May 11, 2022 Charles Sprovieri with North Rock completed a site investigation of the subject property. The majority of the site has been cleared as it formerly operated as a hardwood manufacturing site, conditions at the site are relatively flat gravel packed roads and grassland areas previously used as interim storage for the placement of lumber products. The southeastern corner of the site was observed to be a geographical low point at the site and was in a flooded state at the time of the site inspection.

The areas adjacent to the former mill building, were observed to be occupied with varying forms of waste, from scrap metal piles, discarded containers of mechanical and construction materials, piles of construction waste, lifts of lumber from when the site was in operation and partially constructed modular homes. Several above ground storage tanks (ASTs) were observed next to the main building, all AST's still connected had concrete barricades to protect them from impact and contain leaks that all appeared to be in good condition. Several containers labeled as chain oil were present on a concrete pad in front of the former wood kilns on site as well as a discarded AST; as well as a transformer station for the site which may contain PCB's.

The area immediately north of the main building contained a large amount of concrete and metal debris because of a fire that had occurred on the property previously, in 2021, the concrete pad where the structure once stood appeared to be in good condition. A former fueling station was found near the main entrance and check in building located on site, the pumps were not connected and based on aerial photographs were supplied with fuel from two AST located immediately adjacent to the west of the pumps. The AST had been removed at the time of the site investigation and no evidence of stressed vegetation or signs of leaks were observed beneath their former location.

The northern edge of the property borders a wetland the municipality has zoned as environmentally protected. A portion of this wetland encompasses the northeastern corner of the property. The wetland appears to drain into Pennock Creek along the north edge of the property. A 30 m buffer should be maintained along the edge of the wetland to protect it from any potential impacts from future development. Drawings detailing the setback position can be found in Appendix C.

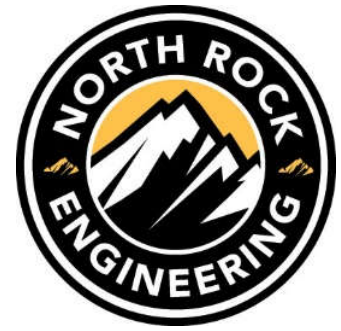


5 ENVIRONMENTAL IMPACT ASSESSMENT

The proposed lot development and neighbouring properties are serviced with private water wells and individual on-site septic systems. The purpose of this EIS is to ensure the proposed lot development (i.e. driveway, house, fill placement etc.) will not have an impact on the hydraulic functions of the EP zoned area at the northern edge of the lots. This evaluation is proponent driven in response to a pre-consultation meeting with the Municipality of Oliver-Paipoonge planning department in March 2021.

The hydraulic function of the Pennock Creek wetland and the Environmental Protection zone at the north edge of Block A, Lots 7-10 is not anticipated to be altered by the development. Lot buildings, structures and access/egress routes should not be constructed within the EP zoned wetland area, and a 30 meter setback should be maintained from the wetland for all planned development that may occur on these lots. It is recommended that adequate drainage is constructed to channel surface water south toward the CN Rail line.

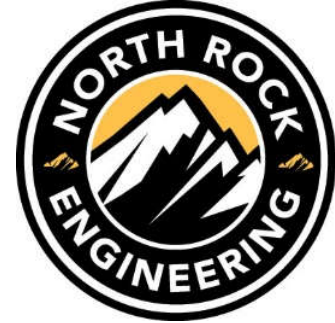
On May 11th, 2022, North Rock personnel conducted a field investigation of the subject property. Field observations from the site indicated that surficial geology at the site is a layer of topsoil underlain by sand and gravel. Due to the former use of the site for lumber production, nearly all the site has been cleared. During the field investigation no SWH or species at risk were observed and are not expected to exist on the property.



6 RECOMMENDATIONS

Based on a desktop review of the proposed lot development and potential impacts to the Pennock Creek watershed, the following recommendations are provided for consideration:

- The wetland area OGF ID 108161345 should have a 30 meter buffer zone maintained around it to prevent any potential impacts to the environmental protection zoned area.
- All waste debris located on site should be properly disposed of at an appropriate licensed facility.
- Lot buildings, structures and access/egress routes should not be constructed within the EP zoned wetland area on the north edge of the property.
- Adequate drainage should be constructed to channel surface water flow south toward the CN Rail line and away from Pennock Creek utilizing existing drainage infrastructure wherever possible.
- **If the final intended use of the property is to include residential property use, a Phase 1 Environmental Site Assessment should be conducted for the property.**



7 CLOSURE

We trust that the above report meets with your current requirements. If you have any questions or require clarification, please contact the undersigned at 807.620-8431.

NORTH ROCK ENGINEERING INC.

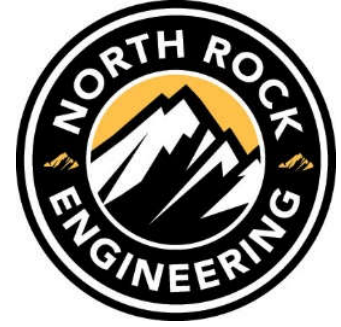
Prepared by:

Reviewed by:

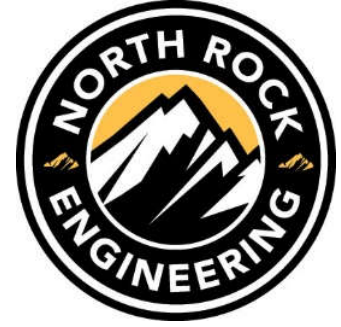
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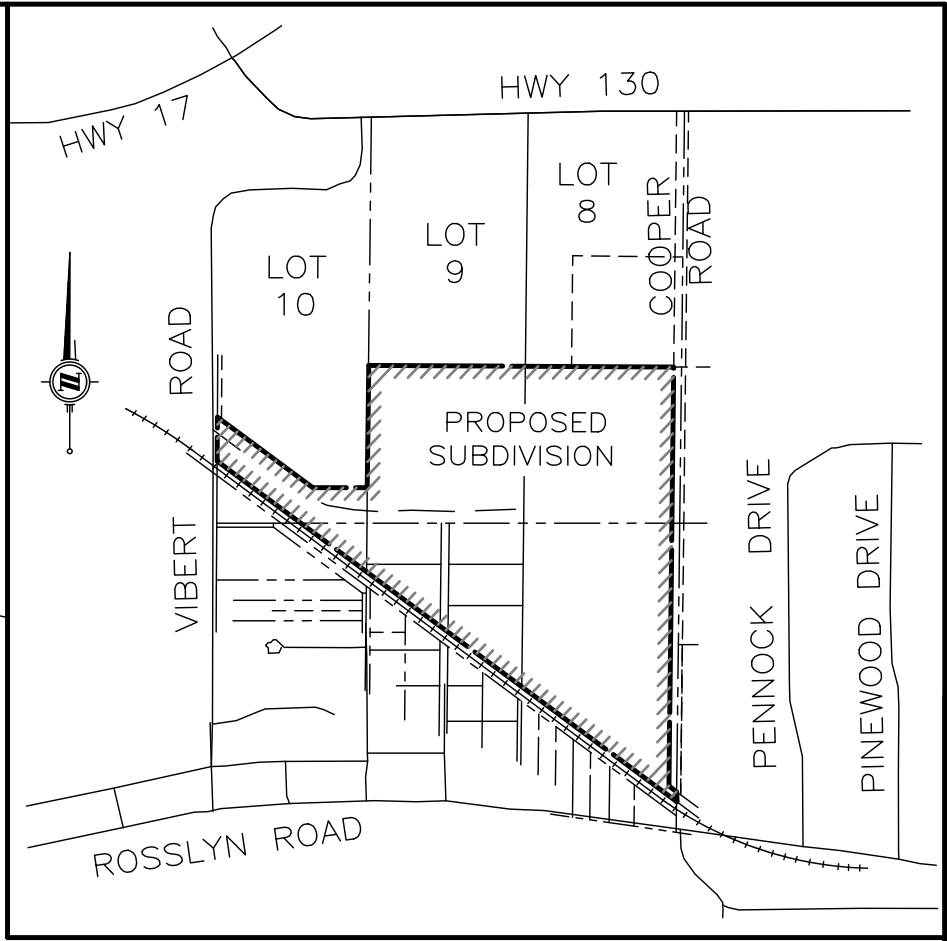
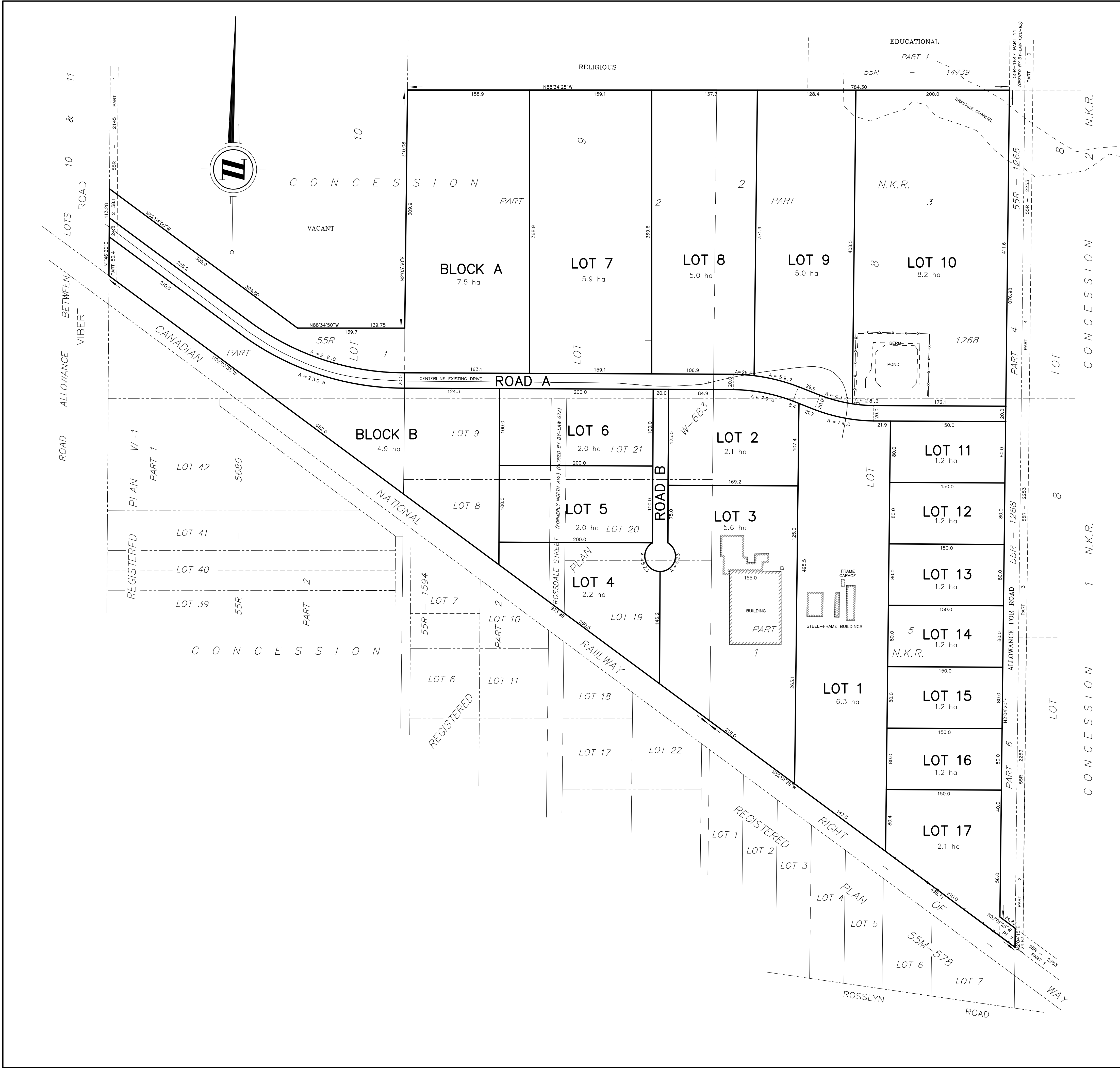
This report has been prepared by North Rock Engineering Inc., ("North Rock") for the purposes of the client to whom it is prepared for and addressed. The data and information contained in this report represents North Rock's best professional judgment in consideration of the knowledge and information available to North Rock at the time of the report preparation. Except as required by law, this report and all contained herein are to be treated as confidential and may be used and relied upon only by the client, its officers, and employees. North Rock denies any liability whatsoever to other parties who may obtain access to this report for any injury, loss or damage suffered by such parties arising from their use of, or reliance upon, this report or any of its contents without the express written consent of North Rock and the client.



APPENDIX A



APPENDIX B



KEYPLAN SCALE - 1:25,000

DRAFT PLAN OF SUBDIVISION OF
PART OF LOT 8
CONCESSION 1
PART OF LOTS 8, 9 & 10
CONCESSION 2
LOTS 2, 8, 9, 19, 20 & 21
PART OF NORTH AVENUE
(CLOSED BY BY-LAW 672)
GEOGRAPHIC TOWNSHIP OF PAIPOONGE
MUNICIPALITY OF OLIVER PAIPOONGE
DISTRICT OF THUNDER BAY

SCALE - 1:2500

40m	0	50m	100m
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PROPOSED LAND USE	
LOT 1- 9	HEAVY INDUSTRIAL 36.1± ha
LOT 10 - 17	LIGHT INDUSTRIAL 17.5± ha
BLOCKS A & B	OPEN SPACE 12.4± ha
STREETS A & B	STREET 2.9± ha
TOTAL 68.9± ha	

- ADDITIONAL INFORMATION**
- UNDER SECTION 51(17) OF THE PLANNING ACT
 - (A) BOUNDARIES-AS SHOWN ON DRAFT PLAN
 - (B) ROADS- AS SHOWN ON DRAFT PLAN
 - (C) AS SHOWN ON KEY PLAN
 - (D) AS SHOWN ON DRAFT PLAN
 - (E) ADJOINING LAND USE-AS SHOWN ON DRAFT PLAN
 - (F) LOT DIMENSIONS-AS SHOWN ON DRAFT PLAN
 - (G) AS SHOWN ON DRAFT PLAN
 - (H) INDIVIDUAL WELLS
 - (I) SOILS - SANDY SILT & CLAY LAYER WITH IMPORTED FILL
 - (J) N/A
 - (K) MUNICIPAL SERVICES-HYDRO, TELEPHONE, CABLE T.V., SCHOOL BUS, GARAGE PICK-UP, FIRE PROTECTION
 - (L) EXISTING RESTRICTIONS OR EASEMENTS-NONE

METRIC
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048
AREAS SHOWN ON THIS PLAN ARE IN HECTARES AND CAN BE CONVERTED TO ACRES BY MULTIPLYING BY 2.471

SURVEYOR'S CERTIFICATE
I CERTIFY THAT:
THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED
AND THEIR RELATIONSHIP TO THE ADJACENT LANDS
ARE CORRECTLY SHOWN.

DATE _____ PETER de HAAN
ONTARIO LAND SURVEYOR

OWNER'S AUTHORIZATION
I AUTHORIZE TBT ENGINEERING LTD. TO PREPARE
THIS DRAFT PLAN OF SUBDIVISION.
1974862 ONTARIO INC.

DATE _____ EUGENIO GARRITANO
PRESIDENT
"I HAVE THE AUTHORITY TO BIND THE CORPORATION"

ZONING-- HEAVY & LIGHT INDUSTRIAL AND RURAL

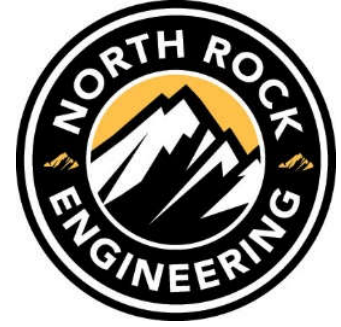
TBT ENGINEERING
CONSULTING GROUP

TBT SURVEYORS INC. - A WHOLLY OWNED SUBSIDIARY OF TBT ENGINEERING LIMITED

1918 YONGE STREET, THUNDER BAY, ON P7E 6T9
T: (807) 624-5160 F: (807) 624-5161 www.tbte.ca

DRAWN BY: PD	CHECKED BY: PdGH	DATED: 2021/02/20
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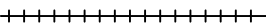
APPENDIX C

LEGEND

SUBJECT
PROPERTY



RAIL LINE



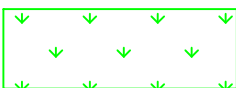
WATERSHED
DIVIDE



30m SETBACK



WETLAND



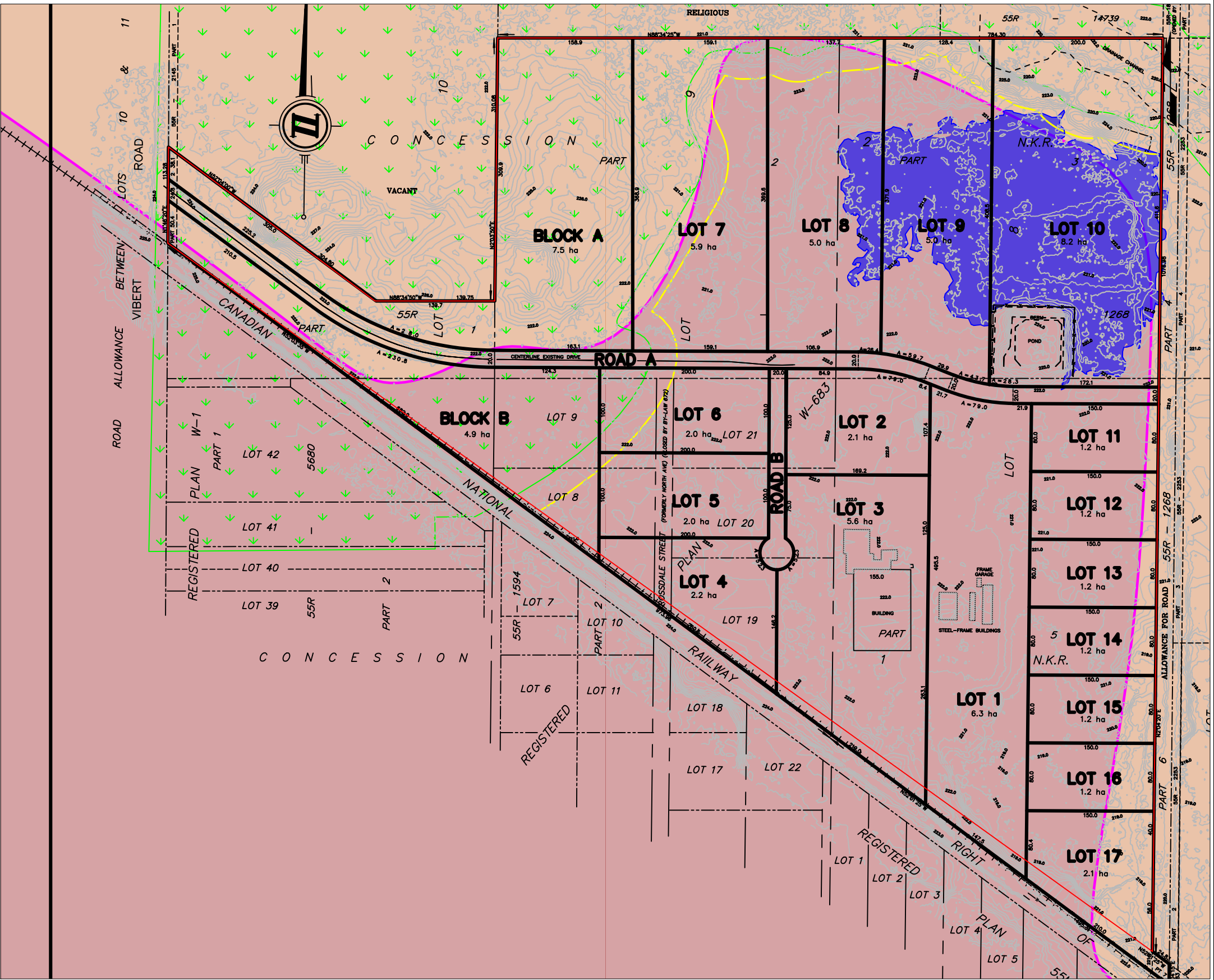
MCINTYRE RIVER
WATERSHED



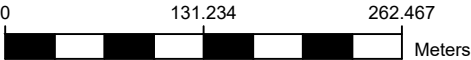
OLIVER LAKE/
KAMINISTIQUIA RIVER
WATERSHED



LRCA FLOODPLAIN



DD/MM/YY	DESCRIPTION	DRN	CHK	DES	ENG
2003-08-22		CS	KB		



CLIENT/PROJECT
EUGENE GARRITANO

ENVIRONMENTAL IMPACT STUDY

TITLE
SETBACK AND FLOODPLAIN
LOCATION

PROJECT NO.	REVISION.	DATE	DRAWING NO.
E21-010-01	01	Aug/3/22	01