



# Upper Hidden Valley Sanitary Pump Station and Forcemain

## Schedule B Class Environmental Assessment (EA)

**Project Location:**

Upper Hidden Valley  
Kitchener, ON

**Prepared for:**

City of Kitchener  
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Kitchener, ON

**Prepared by:**

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**MTE File No.:** 48301-100





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## E.0 Executive Summary and Recommendations

### E1.0 Executive Summary

In January 2021, the City of Kitchener initiated a Schedule “B” Class Environmental Assessment (EA) Study to identify the preferred alternative and preliminary design for Upper Hidden Valley Sanitary Pump Station and Forcemain.

The Study was identified as a requirement to support development in the Hidden Valley Area, as outlined in the Hidden Valley Land Use Master Plan (June 2019). The Study will identify a location for a sanitary servicing pumping station and forcemain route. The Study Area is bounded by Highway 8, the Grand River, the CN railway, and Wabanaki Dr. The currently developed portions of the Study Area consist of mostly residential lots to the south and some industrial and utility properties to the north. The majority of the lands in the Study Area are vacant, forests, wetlands, or agricultural fields.

The scope of this Study included the collection and identification of the constraints and opportunities within the Study Area for evaluation by the project team. Utilizing this information, the project team developed options for the servicing of these lands. The options were then evaluated in a manner consistent with the Class Environmental Assessment process for Schedule “B” projects, with the primary objective to identify a “Preferred Alternative” for the Upper Hidden Valley Sanitary Pumping Station and Forcemain.

The problem statement developed for this study is as follows:

***“The purpose of the current study is to define a sanitary servicing solution that will support responsible development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan (June 2019). The servicing solution will include identifying a sanitary pumping station location and forcemain alignment.”***

To guide the decision making process for this Class EA Study, a Project Team was assembled consisting of representatives of various City of Kitchener departments (including Development Engineering, Operations, Planning, Environment, Cultural Heritage Planning and Parks), the Grand River Conservation Authority, Region of Waterloo, and a consultant team led by MTE Consultants Inc. Formal Project Team meetings were held throughout the duration of the study.

A formal "Notice of Study Commencement" was published in The Record on January 9, 2021 to invite the Public to review and comment on the identification of a sanitary sewage servicing solution. Presentation, discussion and input on the identified alternatives were presented at the Virtual Public Information Centre #1 held via Zoom on November 4, 2021. A “Notice of Public Information Centre #1” was advertised in The Record on October 15, 2021. A recording of the PIC was also posted on the City’s website.

A second “Notice of Public Information Centre #2 – “Preferred Alternative” was advertised January 28, 2022 in the same newspaper to invite public review and comment on the “Preferred Alternative”. The “Preferred Alternative” was Option 2a; constructing a new sanitary pumping station at Location A in the north part of the study with part of the Service Area to drain by gravity. The Information Centre was held on February 17, 2022, again via the Zoom platform due to the COVID-19 pandemic.

Based on an evaluation of natural and social environment concerns, operational and economic analysis, as well as public health and safety concerns, it was confirmed that the final “Preferred Alternative” as shown in **Figure 3b** was approved by the Project Team.

All correspondence and subsequent responses have been documented in this final Class EA Schedule “B” Project File. The EA Study has been completed in accordance with the Environmental Assessment Act. This Upper Hidden Valley Sanitary Pumping Station and Forcemain Schedule “B” Municipal Class Environmental Study project file report was presented to the City of Kitchener Planning and Strategic Initiatives Committee on Monday, June 13th, 2022 and brought forth for approval by City Council on Monday, June 20, 2022.

Pending Council approval, the “Notice of Study Completion” will be advertised and this report will be made available for public viewing at the Kitchener City Hall Service Centre, 200 King Street West, Kitchener, Ontario as well as the front desk at the Kitchener Public Library, 85 Queen St N, Kitchener, Ontario and on the City of Kitchener website for the 30 day mandatory period.

Preliminary Design will be completed in 2022 subsequent to City Council approval of the project file.

## E2.0 Recommendations

Based on the results of this Class EA Study, the following are recommended:

- A Sanitary Pumping Station (SPS) be constructed in the north part of the Study Area, south of River Road extension and ION tracks;
- The Forcemain from the SPS discharge to the trunk sewer at Wabanaki Rd and Hidden Valley Road;
- The SPS will service the developable area in the north and northwest part of the Study Area with the available capacity to service additional lands to the east in the future;
- The developable areas in the western part of the Study Area will drain by gravity to the trunk sewer or to the River Birch Pumping Station;
- An Environmental Impact Study of the Preferred Alternative be undertaken in order to identify environmental impacts and mitigation measures;
- A preliminary design of the Preferred Alternative be completed, taking into account the foregoing recommendations; and
- The City of Kitchener solicit a consulting engineering firm to develop the detailed design of the Preferred Alternative.

# 1.0 Introduction and Background

## 1.1 Project Initiation

In December 2020, the City of Kitchener initiated a Schedule “B” Class Environmental Assessment Study to select the optimum location for a Sanitary Pumping Station and Forcemain to service the Upper Hidden Valley area. Terms of Reference for this project (**Appendix A**) were developed and MTE Consultants Inc. was engaged by the City of Kitchener to complete this assignment.

## 1.2 Class Environmental Assessment

The Class EA has been planned as a Schedule “B” undertaking in accordance with Part C of the Municipal Class Environmental Assessment Document published by the Municipal Engineer’s Association. For Schedule “B” projects, the proponent shall apprise specific agencies and potentially affected members of the public of the situation and proposed solution with two mandatory points of contact.

This project conforms to the Class EA planning process (**Refer to Figure 1**) and is described under Section 3 of the Class EA Document as a new pumping station to accommodate future growth and development. The study process consists of three of the five Phases of Planning and Design Process. Phases 1, 2 and 3 will be covered in this document with the Preliminary Design being completed separate from this document.

The purpose of this Class EA is to summarize all information collected and alternatives developed and evaluated (including the “do nothing” alternative), in a manner consistent with the Class Environmental Assessment process for Schedule “B” projects. The primary objective is to identify the “Preferred Solution” for the location of the Upper Hidden Valley Sanitary Pumping Station and Forcemain based on an evaluation of natural and social environmental concerns, operational, constructability and economic analysis, as well as public health and safety concerns.

If the project is approved, it will then proceed to preliminary design, final design and construction.

## 1.3 Study Organization

A Project Team was assembled comprising various stakeholders and review agencies as follows:

### Project Team Members

Name	Company
Katie Wood	City of Kitchener
Linda Cooper	City of Kitchener
Barbara Steiner	City of Kitchener
Richard Kelly-Ruetz	City of Kitchener
Chris Spere	City of Kitchener
Andrew Pinnell	City of Kitchener

Name	Company
C. Foster Pengelly	Grand River Conservation Authority
Jason Lane	Region of Waterloo
Dave Wilhelm	MTE Consultants Inc.
Gemma Charlebois	MTE Consultants Inc.
Samir Dhanvantari	MTE Consultants Inc.

Formal Project Team meetings were held throughout the duration of the study to assess pertinent data, to develop alternative concepts, to solicit public/agency input, and to prepare for the two Public Information Centres. Minutes of meetings and relevant Project Team correspondence have been included in **Appendix B** of this report.

A number of sub-consultants were contracted by MTE to conduct various studies within the Upper Hidden Valley Service Area and provide input on the proposed alternatives:

### Sub-consultants

Name of Company	Work Provided
Archaeological Research Associates Ltd	Archaeological and Built Heritage
LGL Limited	Environmental

## 1.4 Indigenous and Agency Consultation

Full communication and participation by the review agencies (both directly and indirectly involved) in the Study was encouraged from the outset of the project. Each of the following review agencies received notification directly by email prior to the first of two Public Information Centres as well as the Notice of Commencement confirming that a Schedule “B” Class EA was being conducted and requesting their comment and input to the Study (refer to **Appendix F** for list of contacts and communications log):

- Region of Waterloo;
- Grand River Transit;
- Canadian Pacific Railway;
- Environment Canada;
- Grand River Conservation Authority;
- Ministry of the Environment, Conservation and Parks; and
- Ministry of Natural Resources and Forestry

The following indigenous communities were also notified directly by email:

- Six Nations of the Grand River;
- Mississaugas of the Credit First Nation; and
- Haudenosaunee Development Institute.

**Appendix C** contains municipal and agency correspondence. Section 5 of this report discusses stakeholder involvement in further detail.

## 1.5 Description of Study Area

The Study Area consists primarily of the undeveloped portions of the Upper Hidden Valley area of south-east Kitchener. The Study Area is shown on **Figure 2**. Upper Hidden Valley is generally bounded by Highway 8 to the north-west, the Grand River to the east and south, Wabanaki Drive to the west and Fairway Road to the north-west.

The Study Area is primarily undeveloped and includes Regionally Significant Core Environmental Features. The vacant areas consist of agricultural fields, wetlands and forests. The developed areas to the south consist of residential lots with a mix of fully serviced lots and large estate lots on private servicing. The northern portion of the Study Area features industrial lots, Kitchener –Wilmot Hydro Transformer Station #7 and a few residential lots.

In the near future, two significant municipal infrastructure projects are planned for the Study Area:

- i. Phase 2 of the Region of Waterloo's Light Rapid Transit will extend along the north and east limits of the Study Area;
- ii. River Road will be extended through the Study Area and an overpass and interchange will be constructed at Highway 8.

The sanitary outlet for the area is the existing trunk sewer located on Wabanaki Drive at Hidden Valley Road.

## 2.0 Objective of the Study and Problem Statement

### 2.1 Objective

In 2019 the City of Kitchener adopted a Land Use Master Plan for Upper Hidden Valley. The Master Plan was developed subject to the Official Plan and Zoning By-Law. It provides a thorough definition of the approved land uses in the area. The Master Land Use Plan is shown on **Figure 2**. The objective of this study is to determine the location of a municipal sanitary pumping station and associated forcemain route. The pumping station is required to provide sanitary servicing to the undeveloped portions of the Study Area that have been identified as developable lands in the Master Land Use Plan. Given the undulating topography of the Study Area, there is no single low point that can be used to provide servicing to the entire area. As such, the area was carefully studied to identify the optimum location for the pumping station.

The primary objective of this Class EA Study was to identify the “Preferred Alternative” for the pumping station location. The selection of the “Preferred Alternative” was based on the evaluation of opportunities and constraints as they relate to the natural, economic, operational, constructability, technical and social implications of each alternative.

## 2.2 Problem Statement

This Municipal Class EA addresses the following Problem Statement:

***“The purpose of the current study is to define a sanitary servicing solution that will support responsible development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan (June 2019). The servicing solution will include identifying a sanitary pumping station location and forcemain alignment.”***

## 3.0 Existing Conditions

Below is a brief description of the existing conditions within the Study Area, which provides the context within which solutions for the project were considered. Further detail of the existing conditions is contained in the various studies which were undertaken as part of this Environmental Assessment (**Appendix D**).

### 3.1 Physical Environment

#### 3.1.1 Surface Water Features and Topography

The area is bisected by Hofstetter Creek and Hidden Valley Creek which both flow independently to the Grand River. Hidden Valley Creek has three distinct reaches (North, West and East) that further bisect the Study Area.

The Upper Hidden Valley Area features undulating topography that has a total relief exceeding 40 m from the high point to lowest point on Hidden Valley Road which lies at approximately 290 mAMSL.

#### 3.1.2 Geotechnical Conditions

The area is immediately adjacent to the Grand River valley and was formed by the most recent glacial activity. The upper soil deposits consist predominantly of kame gravel and outwash gravel formations. The soils can be characterized as porous sand and gravel layers overlying clay and silt till deposits. The local, shallow hydrogeology is influenced by the two creeks as well as the Grand River. Geotechnical boreholes in the vicinity indicate that the local groundwater can be less than 1.5 m below ground surface.

### 3.2 Municipal Infrastructure

#### 3.2.1 Municipal Infrastructure

There is limited municipal servicing infrastructure currently within the Upper Hidden Valley Study Area. The River Birch Subdivision on the south side of Hidden Valley Road is serviced by 200mm sanitary sewers that outlet to the River Birch Sanitary Pumping Station. The following streets are serviced: River Valley Dr, River Birch Ct. and River Birch St. The sanitary servicing terminates on River Birch St. just before Hidden Valley Crescent. The sanitary pumping station discharges through a 150mm forcemain that runs from the SPS along River Birch St. and terminates in a manhole located on Wabanaki Drive. All other residential properties in the Study Area are serviced with on-site private wastewater systems. All of the streets have municipal water services.

Twin 400mm forcemains from Freeport Pumping station run through the Study Area. These forcemains cross beneath Highway 8 from Cameo Dr. then follow Hidden Valley Road to the northwest and running south along Wabanaki Drive where they discharge into a manhole south of the Hidden Valley and Wabanaki intersection.

On Hidden Valley Rd. in the south east section of the Study Area, there is a Region of Waterloo raw water reservoir which is supplied by the low lift pump station at the Grand River. The reservoir in turn supplies the Hidden Valley Pumping Station which pumps the raw water to the Mannheim Water Treatment Plant. The raw water is conveyed via 1200mm water main which runs along Hidden Valley Road towards Wabanaki Drive.

### 3.2.2 River Birch Pumping Station Condition Assessment

River Birch Sewage Pumping Station is an existing pumping station within the Study Area. This existing pumping station was designed for a peak flow of 17.3 L/s and consists of a 2.4 m diameter wet well equipped with two submersible pumps, one for duty and one for standby. The wet well is complete with ultrasonic level transmitter with back-up float switches connected to City of Kitchener's Central monitoring system. There is an emergency storage manhole which is 3.6 m in diameter and is connected to via overflow piping. In December of 2021, R.J. Burnside conducted a condition assessment of the existing River Birch Sewage Pumping Station key conclusions of the Condition Assessment are that:

The station is in good to acceptable condition, future repairs listed below:

- Generator Load Testing should take place in the short term (0-2 Years)
- Installation of air conditioning unit (2-5 Years)
- Installation of grinder on incoming sewer (2-5 Years)
- Replacement of Level Transducers (2023)

### 3.2.3 Design Flow

Based on the Region of Waterloo and Area Municipal Design Guidelines and Supplemental Specifications for Municipal Services (DGSSMS), the Design Flow for the Upper Hidden Valley SPS has been assessed. This assessment should be considered preliminary and must be confirmed during the preliminary and detailed design stages for the pumping station. Similarly, the receiving capacity of the receiving sewer on Wabanaki Dr. must be confirmed during the preliminary design stage.

Refer to **Appendix E** for Upper Hidden Valley SPS Flow Analysis. Refer to **Figure 2** for a map of the Service Area. The Design Flow is based on full buildout of the Service Area according to the land uses identified in the City's 2019 Land Use Master Plan. The Design Flow for the Upper Hidden Valley SPS is 91 L/s.

## 3.3 Natural Environment

LGL Limited (LGL) conducted natural environment field studies between April and October 2021. The following provides a brief description of LGL's findings; further detail can be found in LGL's Natural Sciences Report, included in **Appendix D**.

### 3.3.1 Designated Natural Areas

The following designated natural areas were identified within the Study Area:

- Provincially significant wetlands,
- Significant wildlife habitat,
- Regulated Habitat for Species at Risk,
- Significant woodlands,
- Upland forest area,
- Watercourses (Grand River)

### 3.3.2 Terrestrial Environment

The natural vegetation communities include remnant woodlots near Highway 8, the Hidden Valley core, and vegetation associated with the Grand River corridor. A total of 54 Ecological Land Classification (ELC) vegetation communities have been identified in the Study Area. A summary is discussed in the table below.

**Table 1. Vegetation Communities Identified within the Study Area (LGL 2022)**

ELC Code	ELC Description	Community Description
<b>Forest</b>		
FOD5, FOM, FOD4, FOD3, FOC3, FOD-7, FOD8	Dry-Fresh Sugar Maple Deciduous, Mix Forest, Dry-Fresh Deciduous, Dry-Fresh Polar Deciduous, Fresh-Moist White Cedar Coniferous, Fresh-Moist Lowland Willow Deciduous, and Fresh-Moist Poplar Deciduous	Within Hidden Valley area, a mixture of upland and wetland communities. This includes isolated groves of mixed and coniferous forests. Forested communities also located along fringe of wooded areas and along bank of the Grand River
<b>Marsh and Swamp</b>		
MAS2-1, SWM, SWD, MAM2-5, MAM2-10	Cattail Mineral Shallow Marsh, Mixed Swamp, Deciduous Swamp, Narrow-leaved Sedge Mineral Meadow Marsh, and Meadow Marsh	The large Cattail Mineral Shallow Marsh is located at the base of the esker slope in the central portion of the Study Area. The Mixed and Deciduous swamps are to the north and southwest along the creek, respectively. A second wetland area is adjacent to Hidden Valley Road at the northeast corner. There are also wetland communities along the bank and tributary of the Grand River
<b>Cultural Communities</b>		
CUM1-1, CUT1, CUW1, CUS1, CUP1, and CUP3	Dry-Moist Old Field Meadows, Mineral Cultural Thickets, Mineral Cultural Woodlands, Mineral Cultural Savannah, Deciduous and Coniferous Plantations.	Located in areas around the periphery of woodlands and natural areas. Dominant in the southern portion of the Study Area.

A total of 410 vascular plant taxa have been recorded within the Study Area. No new locally or provincially significant species were noted in the 2021 field investigation.

The following are the Plant Species at Risk (SAR), Provincially Rare (PR), and Regionally Rare (RR) that were previously documented to inhabit the Study Area:

- Butternut (SAR): 18 are recorded in the Study Area
- James' sedge, Purple joe-pye weed (PR): located in deciduous forests, south-centrally in Study Area
- Wood's sedge, richweed, fringed gentian, bristle-stalked sedge, sand dropseed: rare in Region of Waterloo, located in forested and woodland areas in south-central and northeastern portions of Study Area, respectively
- Ginseng: single plant reported in 1979. None observed between 2004-2021

### 3.3.3 Aquatic Environment

The subject area consists of the Hidden Valley Creek System, which includes West Creek, North Creek, and East Creek. Other watercourses include Hofstetter Creek, Hidden Valley Pond, Hidden Valley Marsh, Frog Pond, and the Grand River.

No presence of fish previously observed in West Creek, North Creek, East Creek, and Hofstetter Creek. North Creek contributes indirectly to known fish habitat located downstream in the Grand River.

Hidden Valley Marsh is designated as a Provincially Significant Wetland. It is also known as the Central Wetland Area. It consists of a shallow marsh. Since 2008 investigations, this area is flooded due to beaver activity and is an open water feature. No fish were observed or captured in previous investigations.

Frog Pond is a depressional area adjacent to a residence and Hidden Valley Road. It is perched and not connected with groundwater levels. The pond is well utilized by breeding amphibians. No evidence of fish has been noted in previous investigations.

The following Aquatic Species at Risk are identified in the Study Area:

- Silver shiner: listed as Schedule 1 species (Species At Risk Act (SARA)), found within Hidden Valley Creek System and Grand River;
- Black Redhorse: listed as Schedule 1 species (SARA), found within Grand River;
- Wavy Rayed Lampmussel, found within Grand River; and
- Rainbow Mussel, listed as Schedule 1 species (SARA), found within Grand River.

### 3.3.4 Wildlife

A total of 47 wildlife species were documented during the 2021 field investigations, including one amphibian species, 40 bird species, 5 mammal species, and one reptile species.

#### 3.3.4.1 Birds

Since 1979, 112 bird species have been recorded in the Study Area. Forty-one of these are considered Regionally significant to Waterloo Region. Of the bird species observed in 2021, 30 are regulated under the Migratory Birds Convention Act (MBCA), and the following bird species are protected under the Fish and Wildlife Conventions Act (FWCA):

- Belted kingfisher
- Blue jay
- Red-tailed hawk
- Turkey vulture

Species at risk (SAR) include the Barn Swallow and Eastern Wood-pewee. The Barn Swallow is regulated as Threatened under Ontario's Endangered Species Act, and the Eastern Wood-pewee is listed as Special Concern provincially and federally.

#### 3.3.4.2 Mammals

Twenty-three mammal species have been previously documented in the Study Area. Of the 5 mammal species observed in 2021, all are regulated under the FWCA:

- Eastern chipmunk (protected)
- Eastern cottontail (game)
- Eastern gray squirrel (game)
- White-tailed deer (game)
- Muskrat (furbearing)

None of the mammal species are SAR.

#### 3.3.4.3 Amphibian and Reptile

The Green frog and Midland Painted Turtle were the amphibian and reptile species, respectively, observed during the 2021 investigations. The Midland Painted Turtle is designated as Special Concern by SARA. In previous investigations, 13 amphibian and 6 reptile species have been documented.

Previous investigations by LGL in 2007/08 have confirmed the presence of Jefferson Salamander – designated as endangered by SARA. A 2018 ESA Regulated Habitat for Jefferson Salamander was provided by the City of Kitchener, on record from the MRNF.

### 3.4 Cultural Environment

#### 3.4.1 Archaeological Environment

Archaeological Research Associates (ARA) carried out a Stage 1 archaeological assessment of the entire Study Area. Assessments included background research, and fieldwork. A report summarizing the archaeological assessment can be found in **Appendix D**.

The Stage 1 assessment determined that the Study Area contained areas of archaeological potential, no archaeological potential, and previously assessed lands of no further concern. It is

recommended that all identified areas of archaeological potential be subject to a Stage 2 property assessment, should the area be intended for development.

The Archaeological report was entered into the Ontario Public Register of Archaeological Reports in December 2021.

### 3.4.2 Built Heritage Environment

Archaeological Research Associates (ARA) carried out a Built Heritage and Cultural Heritage Landscape Assessment of structures and landscapes with the potential to be impacted by the proposed alternatives. The report summarizing the assessment is included in **Appendix D**.

The assessment included:

- Background research concerning the project context, natural context and historical context of the Study Area;
- Consultation with Ministry of Culture, Tourism and Sport (MTCS), Ontario Heritage Trust (OHT) and Parks Canada databases;
- Consultation with City of Kitchener and Region of Waterloo Cultural Heritage Planners;
- Identification of any designated or recognized properties with potential Built Heritage Resources (BHR) and Cultural Heritage Landscapes (CHL) within the Study Area;
- A description of the location and nature of potential cultural heritage resources;
- Evaluation of each potential cultural heritage resource against the criteria set out in O.Reg. 9/06 and 10/06 where applicable for determining cultural heritage value or interest (CHVI);
- Evaluation of potential project impacts for each proposed alternative; and
- Provision of suggested strategies for the future conservation of identified cultural heritage resources.

A total of 2 BHR's were identified as having potential CHVI: 602 Hidden Valley Road (BHR-1) and 691 Hidden Valley Road (BHR-2). Three potential CHLs were identified within the Study Area: Hidden Valley Road (CHL-1), Hidden Valley Road – Heritage Corridor (CHL-2), and the Grand River Corridor (CHL-3).

ARA recommended that the BHRs and CHLs be taken into account in the final design of the "Preferred Alternative" in order to mitigate direct or indirect impacts. All identified BHRs and CHLs are within the Study Area and have the potential to be impacted.

## 4.0 Alternative Solutions

### 4.1 Development of Alternatives

A range of options were developed to address the problem statement. A total of Six (6) Alternatives were considered for the pumping station location as follows:

- ✓ **Option 1** Do Nothing;
- ✓ **Option 2** Install sanitary pumping station in Location A (in future residential subdivision);
- ✓ **Option 2a** Install sanitary pumping station in Location A (in future residential subdivision) with part of Service Area to drain by gravity;
- ✓ **Option 3** Install sanitary pumping station in Location B (on Hidden Valley Rd. adjacent to Highway 8);
- ✓ **Option 3a** Install sanitary pumping station in Location B (on Hidden Valley Rd. adjacent to Highway 8) with part of Service Area to drain by gravity;
- ✓ **Option 4** Install sanitary pumping station in Location C (in future commercial area near Wabanaki / Hidden Valley intersection).

A virtual presentation complete with maps illustrating these six Options as they were presented at Public Information Centre # 1 are included in **Appendix F**. Note that Options 2 and 3 were both presented with a sub-option (# 2a and 3a respectively). This was done to assess the cost and implications of servicing the developable lands in the NE corner of the Wabanaki / Hidden Valley intersection. One of the main considerations was the requirement to cross the Hidden Valley West Creek with both a trunk sewer draining to the north and the forcemains discharging to the south. Initially it was determined that only a portion of the commercial lands would be serviceable by gravity to the Wabanaki trunk.

## 5.0 Stakeholder Involvement

### 5.1 Notice of Project Commencement

From the outset of this project, public involvement was recognized as being important to the overall success of the project. A formal “Notice of Study Commencement” was published in the Waterloo Region Record newspaper (The Record) on January 9, 2021 to advise the Public of the Class EA process and provide notification that the EA study for the Upper Hidden Valley Sanitary Pump Station and Forcemain was to proceed. In addition to the newspaper advertisement, notices of commencement were delivered to residences within the Upper Hidden Valley Study Area and notices were also mailed to non-resident property owners.

Copies of all notice(s) as they appeared in the newspapers or as they were delivered / posted are included in **Appendix F**.

## 5.2 Public Information Centre #1

A formal “Notice of Public Information Centre” was published in The Record on October 15, 2021 to invite public comment on the identification of a sanitary sewage servicing solution for the study area (refer to **Appendix F** for copies of all notices). In addition to the newspaper advertisement, notices of commencement were delivered to residences within the Upper Hidden Valley area; notices were also mailed to non-resident property owners and stakeholder agencies.

The intent of the Public Information Centre (PIC) #1 was to present to the Public the alternative solutions under consideration by the Project Team. PIC #1 was held virtually on November 4, 2021 between 6:00 pm and 8:00 pm. The project was presented in a powerpoint slide presentation to pre-registered attendees. A question and answer period followed. The PIC presentation materials are provided in **Appendix F**.

## 5.3 Public Information Centre #2

The formal “Notice of Public Information Centre #2 – “Preferred Alternative” was published in the Record on January 28, 2022. As with PIC #1, notices and information packages were also delivered to residents within the Study Area and mailed to non-resident property owners and stakeholder agencies (refer to **Appendix F** for copies of all notices).

Public Information Centre #2 was held virtually on February 17, 2022. The intent of the second PIC was to summarize the information presented at PIC #1, respond to comments received at PIC #1, review the evaluation process and results and present the “Preferred Alternative” to the Public. Approximately 6 individuals attended PIC #2 and provided feedbacks to the Project Team (refer to Appendix F for a copy of the powerpoint presentation).

Comments from PIC #2 were most concerned with the servicing potential of various lands by the preferred alternative. These comments have been addressed in this study report.

**Appendix F** contains documentation from Public Information Centre #2 including the following:

- ✓ Powerpoint Presentation, as presented at PIC #2;
- ✓ Emails from residents regarding PIC #2 and response letters;

## 5.4 Agency Correspondence

**Appendix C** includes a log of all communications conducted with various agencies for this project, as well as copies of communications (emails, letters, etc.). Some key contact with agencies is as follows:

## 5.5 Ministry of Environment and Climate Change (MOECC)

The new mandatory notification procedures dated October 14, 2021 was provided by the Ministry of Environment, Conservation, and Parks.

Subsequent to receipt of the new notification procedures, the Ministry was provided with the notices of both PICs.

## 5.6 Grand River Conservation Authority (GRCA)

The GRCA was involved throughout the project as part of the Project Team and helped to develop evaluation criteria and evaluate the proposed options.

## 5.7 Region of Waterloo

The Region of Waterloo is responsible for the construction of the River Road extension and construction of the ION from Fairway Rd Station through the Upper Hidden Valley area. The Region was a stakeholder in the project and part of the project team that helped to develop evaluation criteria and evaluate the proposed options.

## 5.8 City of Kitchener Planning Division

Concurrent to this Class EA, the City of Kitchener is undertaking an update to their Secondary Land Use Plan. This Plan is intended to address the zoning and development potential for areas within the Upper Hidden Valley area that were previously undesignated in the Land Use Master Plan. Discussions with Planning staff were held and their input requested to address questions from residents and stakeholders on development and servicing potential for various lands within the Upper Hidden Valley area.

## 5.9 City of Kitchener Committee and Council

This Upper Hidden Valley Sanitary Pumping Station and Forcemain Schedule “B” Municipal Class Environmental Study project file report was presented to the City of Kitchener Community and Infrastructure Services Committee on Monday, June 13th, 2022 and brought forth for approval by City Council on Friday, June 20, 2022.

# 6.0 Evaluation of Alternatives and Preferred Alternative

After the alternatives for the various components of the project were presented at Public Information Centre No. 1, they were evaluated by the project team considering input from the stakeholder agencies and the general public.

An evaluation matrix (**Appendix G**) was developed to evaluate and score each option according to the following criteria; Natural Environment; Social Environment; Heritage/Cultural Impacts; City Operations; Technical; Servicing Potential; and Cost.

Six alternative solutions were evaluated:

- Option 1 - Do Nothing
- Option 2 - Install SPS at Location A
- Option 2a - Install SPS at Location A with part of Service Area to drain by gravity
- Option 3 - Install SPS at Location B
- Option 3a - Install SPS at Location B with part of Service Area to drain by gravity
- Option 4 - Install SPS at Location C

The alternatives were given a score between 0 and 4 for each of these criteria and then the scores were totaled to determine the “Preferred Alternative” (i.e. the alternative receiving the highest score out of 28). The scores from each of the seven criteria had the same weight.

Option 1 – Do Nothing was not considered a viable option since it did not fulfill the Problem Statement. It was not evaluated with the remaining Options.

Late in the Study period, it was determined that virtually all of the commercial lands in the NE corner of the Wabanaki / Hidden Valley intersection could be serviced by gravity directly to the trunk sewer on Wabanaki. As such, Options 2, 3 and 4 all became redundant since technically they were not viable options. A new pumping station was not required in order to service any of the commercial lands in the NE corner of the Wabanaki / Hidden Valley intersection. As such, from a technical and cost perspective, the only viable options were Option 2a and Option 3a.

During the evaluation of alternatives, Option 3a had a lower score for a number of reasons:

- i. It would have a higher impact on sensitive environmental lands; and
- ii. It had higher capital cost.

The development potential for the Area 2B lands will be determined through additional studies completed by the owner of that parcel of land. Additional studies will also be done by the City of Kitchener through the development process under the Planning Act to the satisfaction of the City, Region of Waterloo, MECP, MNRF and GRCA. A servicing solution for these lands will be determined following the outcome of these studies.

The “Preferred Alternative” was determined to be Option 2a: constructing a new sanitary pumping station at Location A with part of the Service Area to drain by gravity. Refer to Figure 3b for a depiction of the preferred alternative. The forcemain for this alternative will be routed through the future residential subdivision and southerly along River Road discharging into the trunk sewer at the Wabanaki / Hidden Valley intersection. Refer to the Tech Memo in Appendix E for the Conceptual Design of the Upper Hidden Valley SPS.

## 7.0 Next Steps

### 7.1 Notice of Study Completion

Upon Council approval, a Notice of Study Completion will be advertised and filed with the Ministry of Environment and Climate Change. The Notice of Study Completion will also be emailed to the Stakeholders. This Project File Report will be available for public viewing for a period of 30 days.

## 8.0 Additional Work and Monitoring

### 8.1 Geotechnical Investigation

A geotechnical investigation will be undertaken to identify ground conditions on the proposed site of the new Upper Hidden Valley SPS site. The geotechnical investigation and subsequent report will provide information to guide the preliminary design of the SPS.

### 8.2 Hydrogeological Study

MTE will prepare a Hydrogeological Study (EIS) in conjunction with the geotechnical investigation. Based on the preliminary pumping station design, the hydrogeological study will identify potential dewatering requirements and design parameters for the pumping station. Permit to Take Water requirements will be assessed.

### 8.3 Topographical Survey

MTE will conduct a topographical survey in the vicinity of the pumping station to assist with the design and to record the locations of the geotechnical and hydrogeological wells.

### 8.4 Preliminary Design

Barring any Part II Orders, MTE will complete a preliminary design brief for the Preferred Alternative – Option 2a. The preliminary design brief will:

- Provide key design criteria, including required emergency storage volume and pumping rates;
- Provide further details of the proposed pumping station site layout and space requirements;
- Provide recommendations for odour control and noise suppression;
- Identify required approvals;
- Identify future study requirements (if any) related to hydrogeology, environmental, archeological, etc.

All of which is respectfully submitted,

**MTE Consultants Inc.**



**Dave Wilhelm, P.Eng.**

Director, Water/Wastewater

519-743-6500 ext. 1225

[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)

DJW:zeg

Cc: Katie Wood, City of Kitchener



**Gemma Charlebois, M.A.Sc., P.Eng.**

Technical Manager, Water/Wastewater

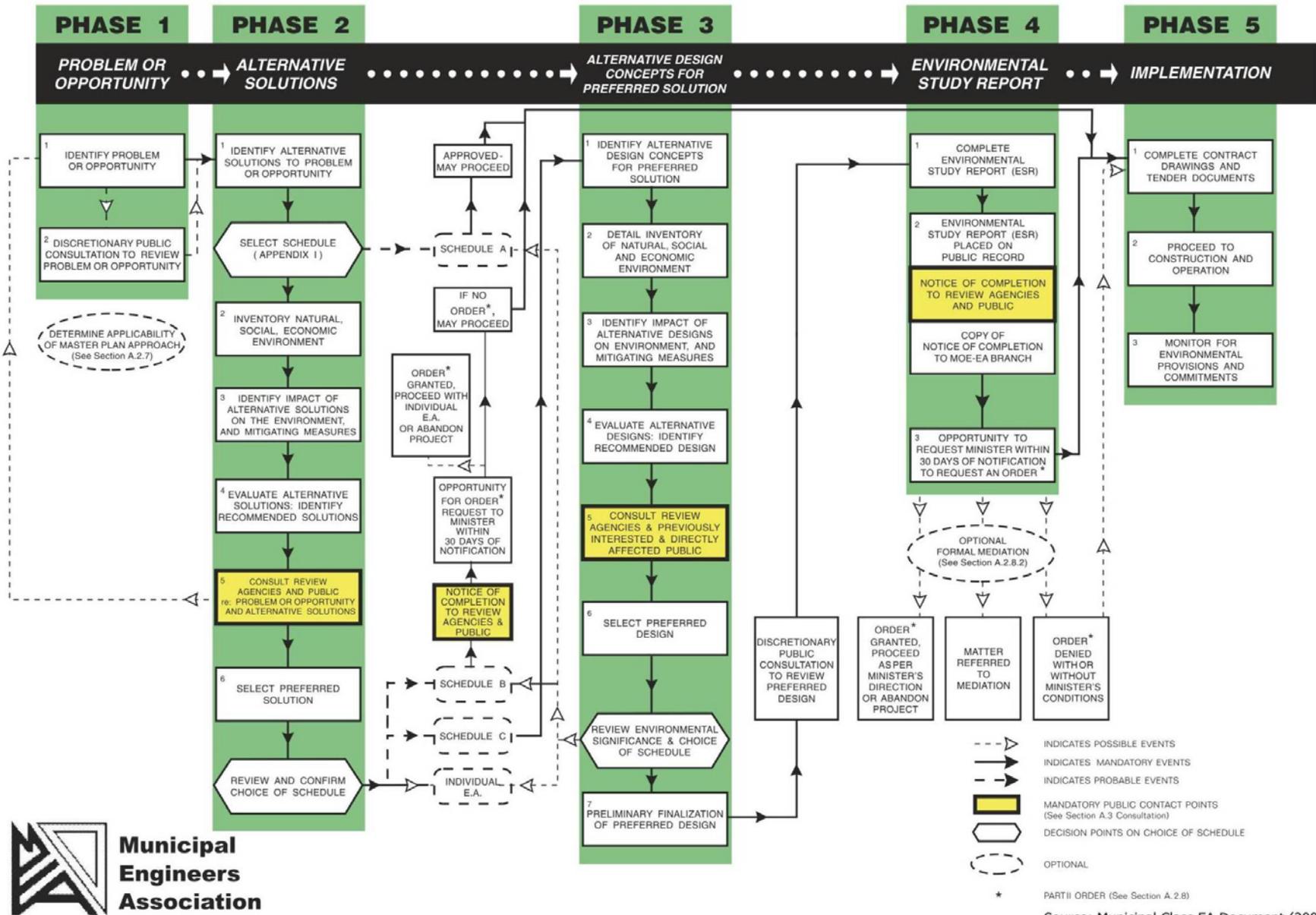
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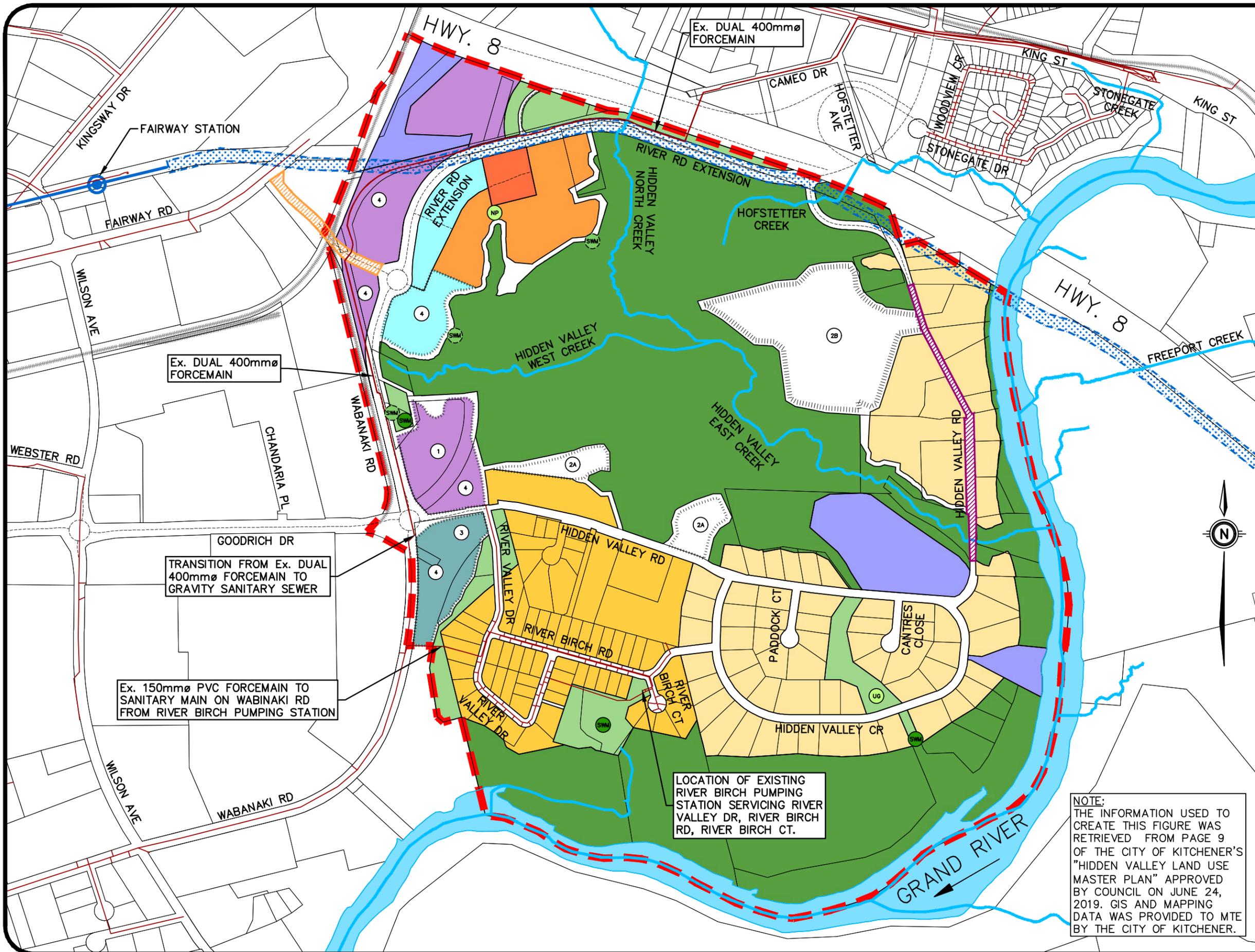
[gcharlebois@mte85.com](mailto:gcharlebois@mte85.com)

# FIGURES

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Figure 1 – Class EA Planning Process





**LEGEND:**

- LOW RISE RESIDENTIAL – ESTATE
- LOW RISE RESIDENTIAL – LARGE LOT
- MEDIUM RISE RESIDENTIAL
- HIGH RISE RESIDENTIAL
- MIXED USE
- COMMERCIAL
- BUSINESS PARK EMPLOYMENT
- MAJOR INFRASTRUCTURE & UTILITIES
- NATURAL HERITAGE CONSERVATION
- OPEN SPACE

SITE SPECIFIC POLICY AREA | | | | |

1. COMMUNITY & INSTITUTIONAL USES ALSO ALLOWED,
- 2A. & 2B. SUBJECT TO REGULATION AND FURTHER STUDY,
3. SOME NEIGHBOURHOOD COMMERCIAL USES ALSO ALLOWED,
4. COMPATIBILITY OF SENSITIVE USES.

- LAND USE MASTER PLAN BOUNDARY
- PROPOSED ROAD
- EXISTING SANITARY
- STREAMS
- HERITAGE CORRIDOR
- PRIORITY STREET
- NP NEIGHBOURHOOD PARK
- UG URBAN GREEN
- SWM EXISTING SWM FACILITY
- SWM POTENTIAL SWM FACILITY (LOCATION TBD)
- LRT LRT STATION
- LRT CORRIDOR (CONSTRUCTED)
- LRT CORRIDOR (UNDER REVIEW)
- RAIL TRACKS



Ex. DUAL 400mmø FORCEMAIN

TRANSITION FROM Ex. DUAL 400mmø FORCEMAIN TO GRAVITY SANITARY SEWER

Ex. 150mmø PVC FORCEMAIN TO SANITARY MAIN ON WABINAKI RD FROM RIVER BIRCH PUMPING STATION

LOCATION OF EXISTING RIVER BIRCH PUMPING STATION SERVICING RIVER VALLEY DR, RIVER BIRCH RD, RIVER BIRCH CT.

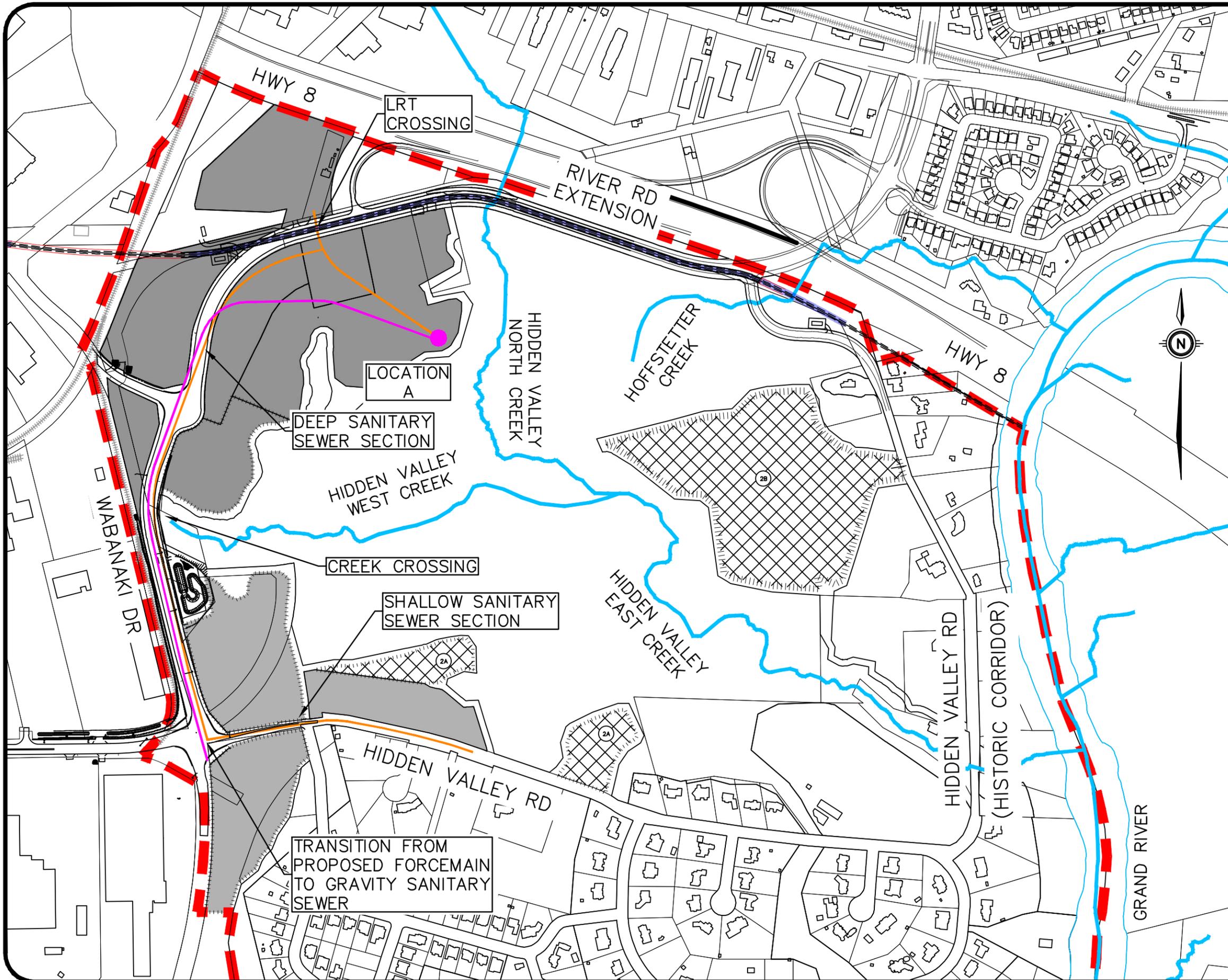
**NOTE:**  
THE INFORMATION USED TO CREATE THIS FIGURE WAS RETRIEVED FROM PAGE 9 OF THE CITY OF KITCHENER'S "HIDDEN VALLEY LAND USE MASTER PLAN" APPROVED BY COUNCIL ON JUNE 24, 2019. GIS AND MAPPING DATA WAS PROVIDED TO MTE BY THE CITY OF KITCHENER.

**Figure 2** Date: DEC.11/20 Scale: N.T.S.

**CITY OF KITCHENER HIDDEN VALLEY LAND USE MASTER PLAN - CLASS EA STUDY AREA**

Engineers, Scientists, Surveyors

Project No.: 48301-100



**LEGEND:**

-  PROPOSED SPS LOCATION
-  APPROX. AREA SERVICED BY PROPOSED SPS
-  APPROX. AREA SERVICED BY PROPOSED GRAVITY SEWER
-  LAND USE UNDER REVIEW
-  FUTURE SAN SEWER
-  PROPOSED FORCEMAIN
-  CLASS EA STUDY LIMITS
-  RAIL TRACKS

**NOTES:**  
 AREAS UNDER REVIEW LABELLED AS PER FIGURE 2 – LAND USE MASTER PLAN–CLASS EA STUDY AREA

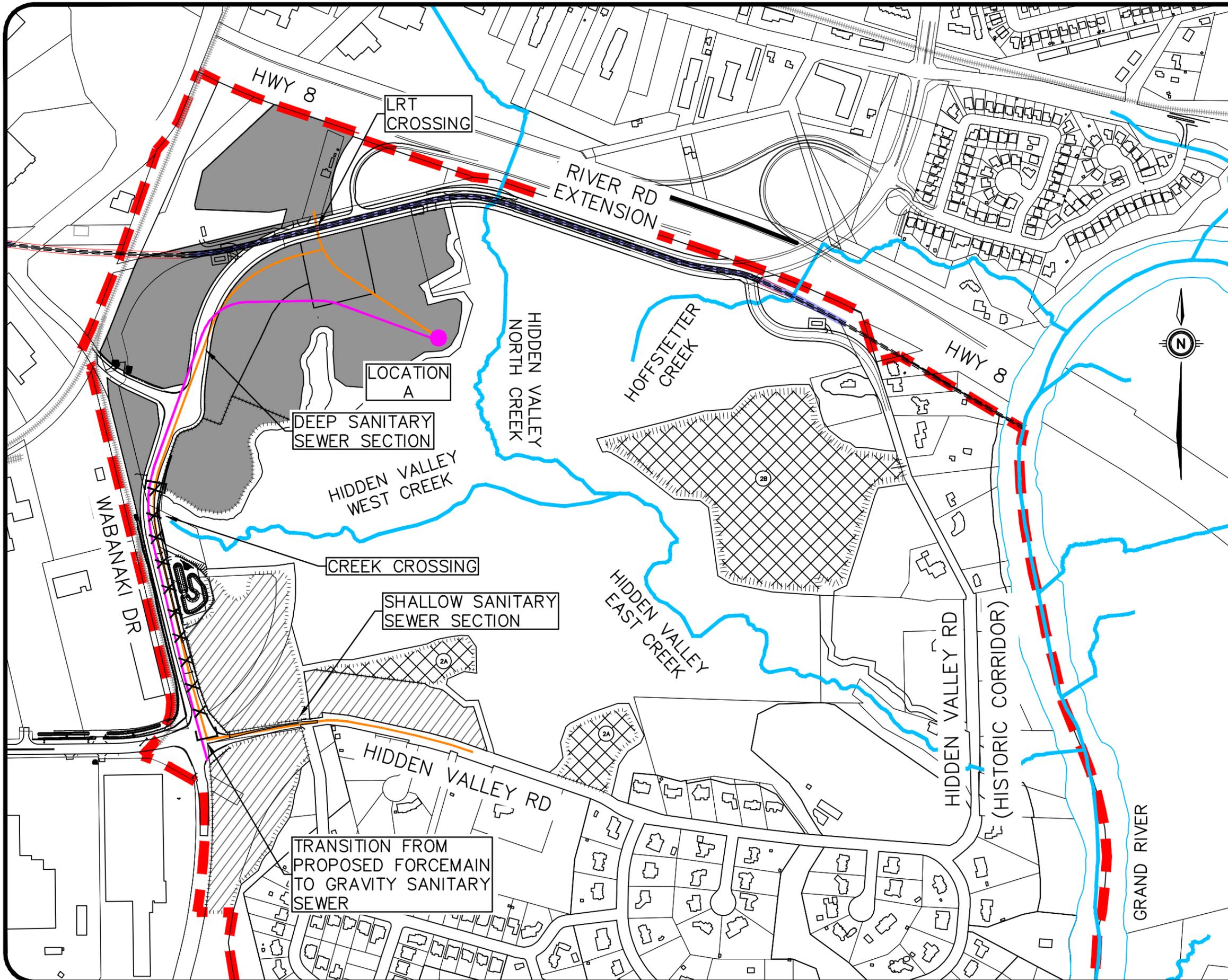
**FIGURE 3a** Date: MAY.10/22  
 Scale: N.T.S.

**CITY OF KITCHENER  
 UPPER HIDDEN VALLEY SANITARY  
 SEWER ROUTES OPTION 2**



Engineers, Scientists, Surveyors

Project No.: 48301-100



**LEGEND:**

- PROPOSED SPS LOCATION
- APPROX. AREA SERVICED BY PROPOSED SPS
- APPROX. AREA SERVICED BY PROPOSED GRAVITY SEWER
- LAND USE UNDER REVIEW
- FUTURE SAN SEWER
- FUTURE SAN SEWER NOT REQUIRED FOR OPTION 2A
- PROPOSED FORCEMAIN
- CLASS EA STUDY LIMITS
- RAIL TRACKS

**NOTES:**  
 AREAS UNDER REVIEW LABELLED AS PER FIGURE 2 – LAND USE MASTER PLAN–CLASS EA STUDY AREA

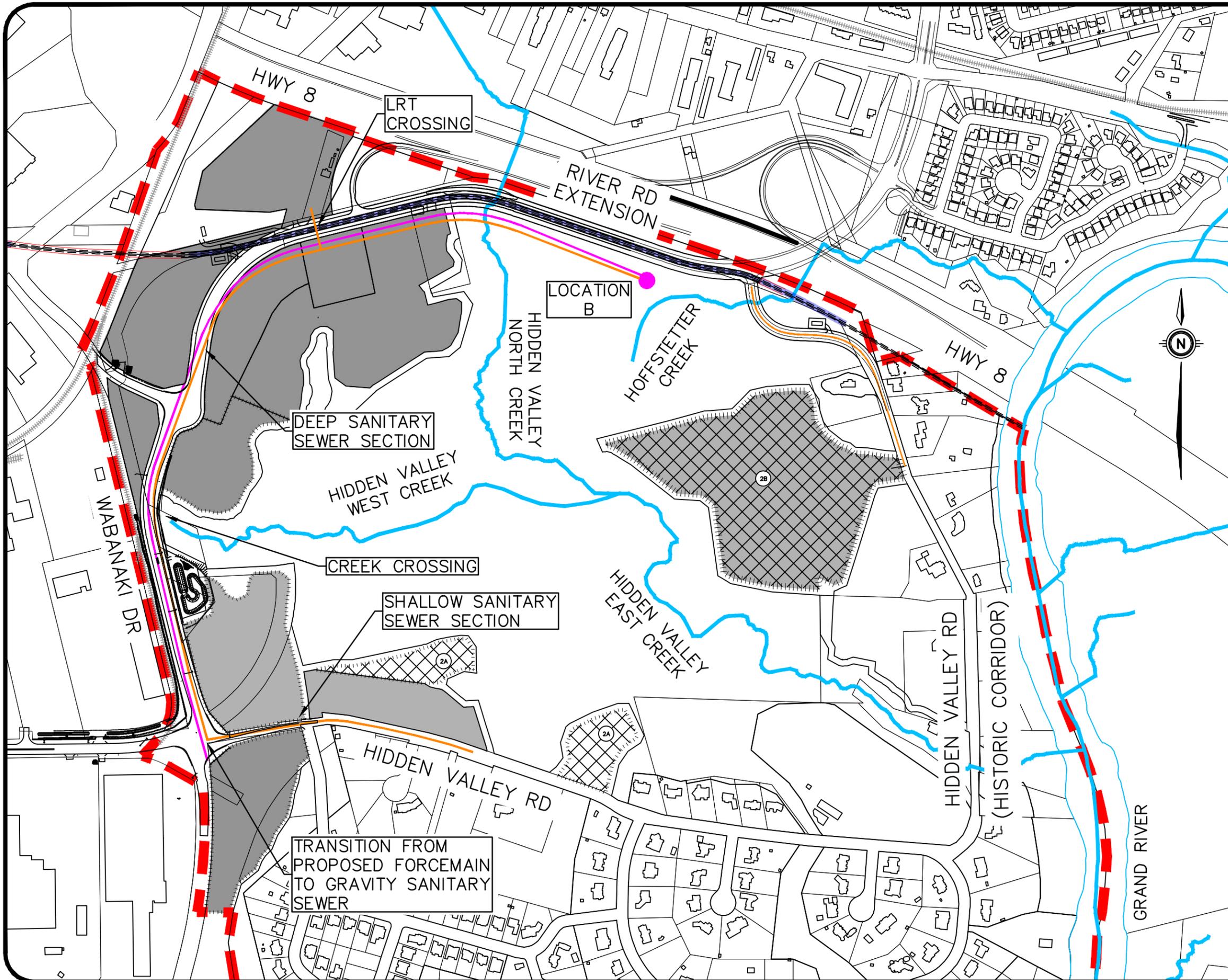
**FIGURE 3b** Date: MAY.10/22  
Scale: N.T.S.

**CITY OF KITCHENER  
 UPPER HIDDEN VALLEY SANITARY  
 SEWER ROUTES OPTION 2a**



**MTE**  
 Engineers, Scientists, Surveyors

Project No.: 48301-100



**LEGEND:**

- PROPOSED SPS LOCATION
- APPROX. AREA SERVICED BY PROPOSED SPS
- APPROX. AREA SERVICED BY PROPOSED GRAVITY SEWER
- LAND USE UNDER REVIEW
- FUTURE SAN SEWER
- PROPOSED FORCEMAIN
- CLASS EA STUDY LIMITS
- RAIL TRACKS

**NOTES:**  
 AREAS UNDER REVIEW LABELLED AS PER FIGURE 2 – LAND USE MASTER PLAN – CLASS EA STUDY AREA

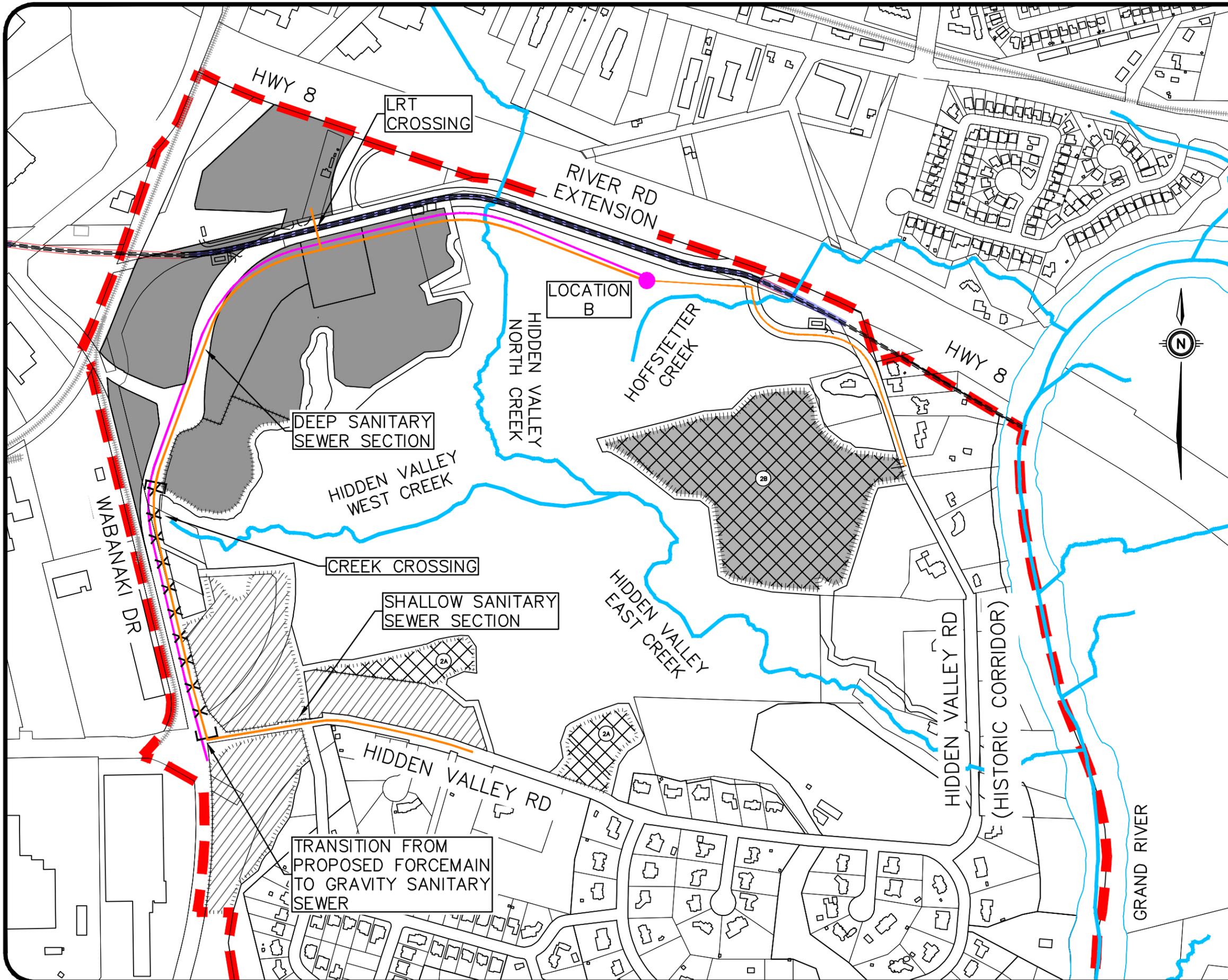
**FIGURE 3c** Date: MAY.10/22  
 Scale: N.T.S.

**CITY OF KITCHENER  
 UPPER HIDDEN VALLEY SANITARY  
 SEWER ROUTES OPTION 3**



Engineers, Scientists, Surveyors

Project No.: 48301-100



**LEGEND:**

-  PROPOSED SPS LOCATION
-  APPROX. AREA SERVED BY PROPOSED SPS
-  APPROX. AREA SERVED BY PROPOSED GRAVITY SEWER
-  LAND USE UNDER REVIEW
-  FUTURE SAN SEWER
-  FUTURE SAN SEWER NOT REQUIRED FOR OPTION 3A
-  PROPOSED FORCEMAIN
-  CLASS EA STUDY LIMITS
-  RAIL TRACKS

**NOTES:**  
 AREAS UNDER REVIEW LABELLED AS PER FIGURE 2 – LAND USE MASTER PLAN – CLASS EA STUDY AREA

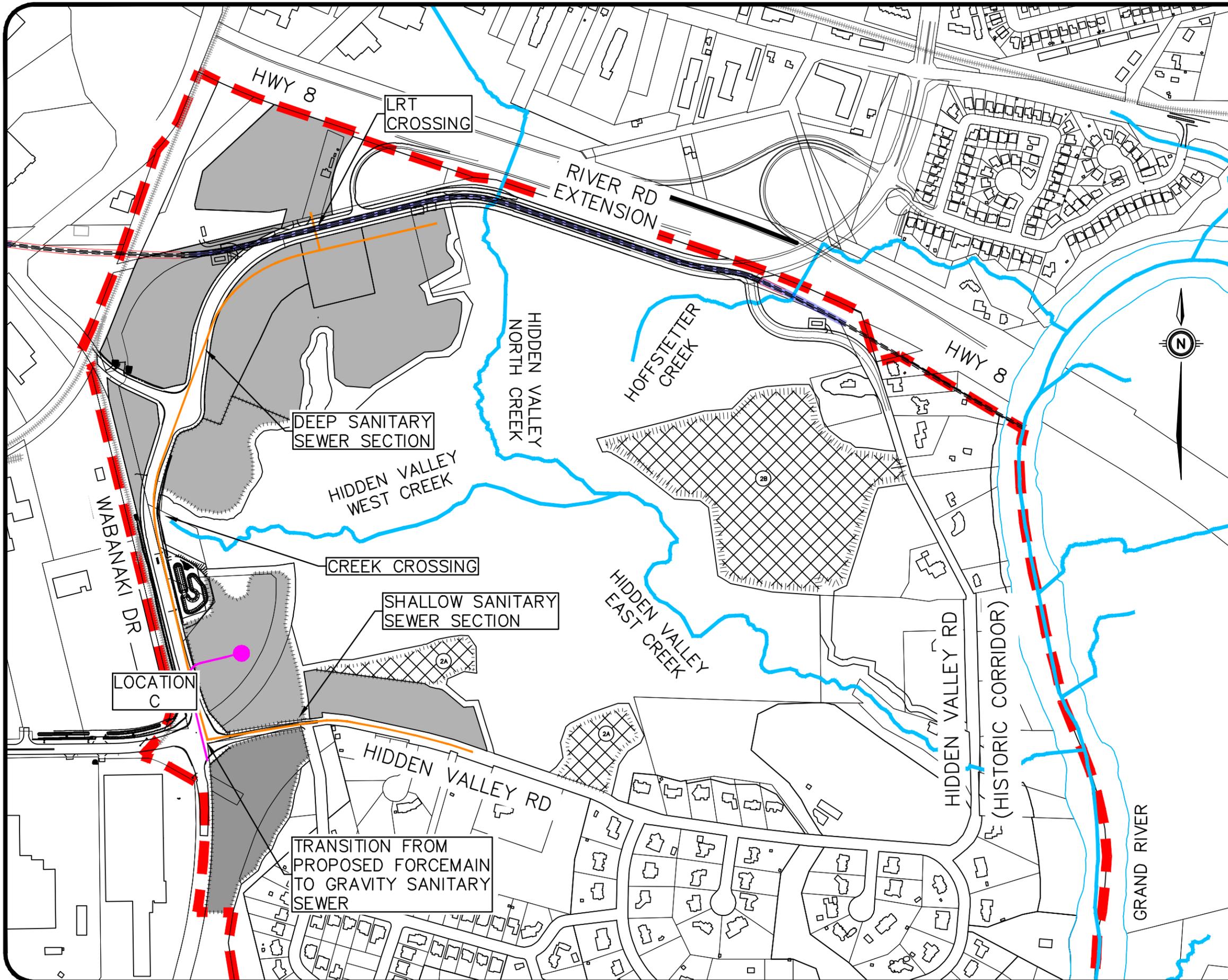
**FIGURE 3d** Date: MAY.10/22  
 Scale: N.T.S.

**CITY OF KITCHENER  
 UPPER HIDDEN VALLEY SANITARY  
 SEWER ROUTES OPTION 3a**



Engineers, Scientists, Surveyors

Project No.: 48301-100



**LEGEND:**

- PROPOSED SPS LOCATION
- APPROX. AREA SERVICED BY PROPOSED SPS
- APPROX. AREA SERVICED BY PROPOSED GRAVITY SEWER
- LAND USE UNDER REVIEW
- FUTURE SAN SEWER
- PROPOSED FORCEMAIN
- CLASS EA STUDY LIMITS
- RAIL TRACKS

**NOTES:**  
 AREAS UNDER REVIEW LABELLED AS PER FIGURE 2 – LAND USE MASTER PLAN – CLASS EA STUDY AREA

**FIGURE 3e** Date: MAY.10/22  
Scale: N.T.S.

**CITY OF KITCHENER  
 UPPER HIDDEN VALLEY SANITARY  
 SEWER ROUTES OPTION 4**



**MTE**  
 Engineers, Scientists, Surveyors

Project No.: 48301-100



**LEGEND:**

- LAND USE TO BE DETERMINED DURING CLASS EA STUDY
- LOW RISE RESIDENTIAL- LARGE LOT
- MEDIUM RISE RESIDENTIAL
- HIGH RISE RESIDENTIAL
- MIXED USE
- COMMERCIAL
- BUSINESS PARK EMPLOYMENT
- FORCEMAIN OPTION
- CLASS EA STUDY LIMITS
- PROPOSED ROAD
- EXISTING SANITARY
- EXISTING WTM
- RAIL TRACKS



**NOTE:**  
 THE INFORMATION USED TO CREATE THIS FIGURE WAS RETRIEVED FROM PAGE 9 OF THE CITY OF KITCHENER'S "HIDDEN VALLEY LAND USE MASTER PLAN" APPROVED BY COUNCIL ON JUNE 24, 2019. GIS AND MAPPING DATA WAS PROVIDED TO MTE BY THE CITY OF KITCHENER.

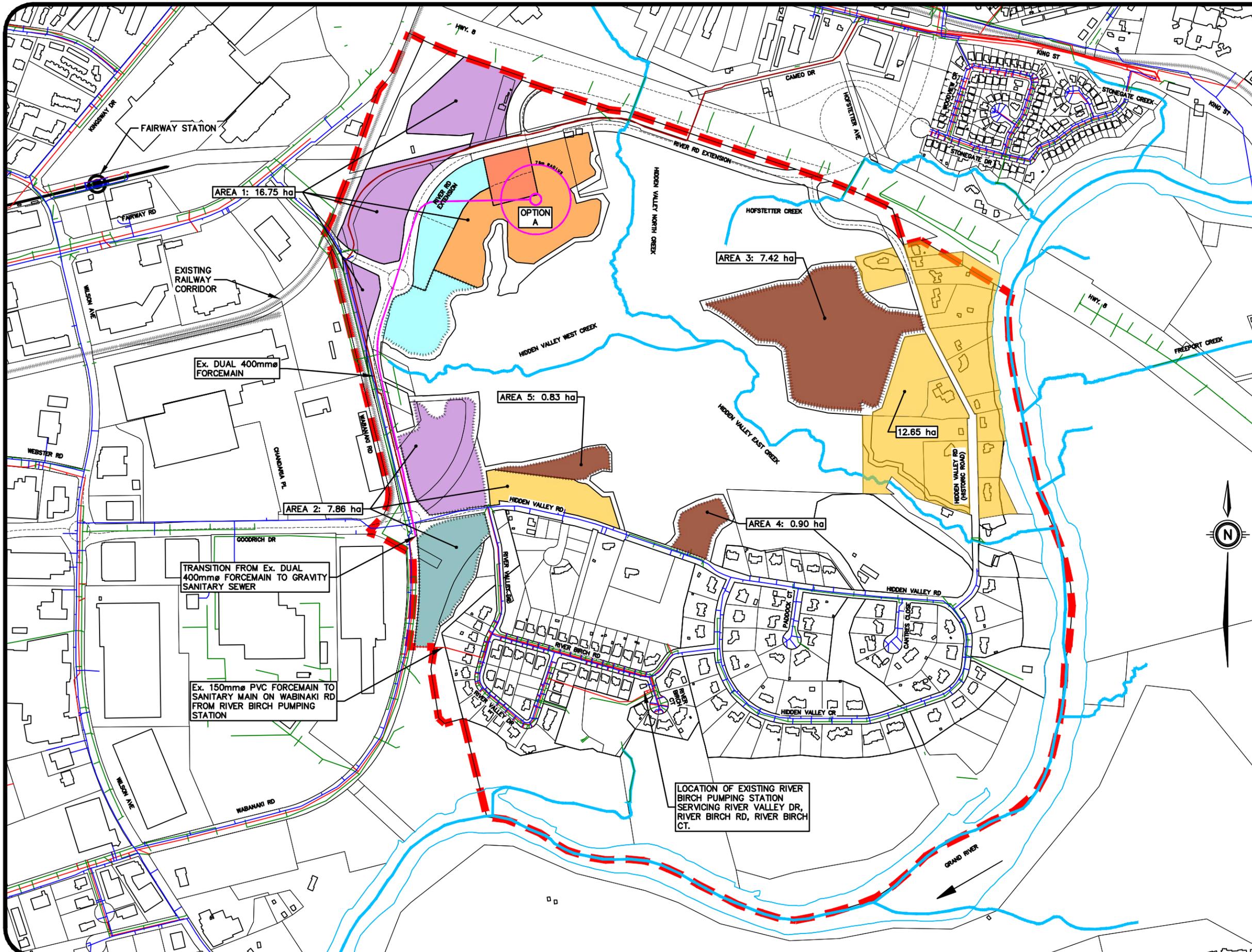
Figure 1 Date: JUL 25/22  
 Scale: N.T.S.

**CITY OF KITCHENER  
 UPPER HIDDEN VALLEY CLASS EA  
 AND CATCHMENTS AREAS**



Engineers, Scientists, Surveyors

Project No.: 48301-100



AREA 1: 16.75 ha

OPTION A

AREA 3: 7.42 ha

12.65 ha

AREA 5: 0.83 ha

AREA 2: 7.86 ha

AREA 4: 0.90 ha

TRANSITION FROM Ex. DUAL 400mm $\phi$  FORCEMAIN TO GRAVITY SANITARY SEWER

Ex. 150mm $\phi$  PVC FORCEMAIN TO SANITARY MAIN ON WABINAKI RD FROM RIVER BIRCH PUMPING STATION

LOCATION OF EXISTING RIVER BIRCH PUMPING STATION SERVICING RIVER VALLEY DR, RIVER BIRCH RD, RIVER BIRCH CT.

# Appendix A

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## Terms of Reference



**THE CORPORATION OF THE CITY OF KITCHENER**

**REQUEST FOR PROPOSAL**

**P20-094 Professional Services -  
Class Environmental Assessment and Preliminary Design for Upper Hidden  
Valley Sanitary Pumping Station and Forcemain**

---

July 7, 2020

The City is seeking Engineering and Environmental consulting services to explore alternatives and generate a preliminary design which addresses sanitary servicing needs in the Upper Hidden Valley community, consistent with the Environmental Assessment Act.

This assignment is to identify and define a suitable sanitary sewer servicing solution to support the development in the Hidden Valley community using the current Hidden Valley Land Use Master Plan, June 2019. Within the purpose of this study, the following objectives must be achieved:

- a) Protection of the environment, as defined in the Environmental Assessment Act, through the wise management of resources. This goal will be met through monitoring, mitigation, and extensive consultation with all affected and interested parties.
- b) Minimal disruption to existing residents and travelers during construction.
- c) Participation of a broad range of stakeholders in the study process to allow for sharing of ideas, education, testing of creative solutions, and development of alternatives.
- d) Documentation of the study process in compliance with all phases of the Municipal Class Environmental Assessment Schedule "B" process.

A 30% design must be completed in accordance with the Region of Waterloo's Design Guidelines and Supplemental Specifications for Municipal Services (DGSSMS) – most recent version, and the City of Kitchener Development Manual, along with any other relevant City and industry standards (CKSS, OPS etc.), and community plans.

A Review Committee will review the Proposals received and proceed with the selection process.

Your response **MUST** include the following:

- A list of all personnel to be assigned to the project team together with a personal resume for each individual to be associated with the project.

**\* ONLY ELECTRONIC BID SUBMISSIONS WILL BE ACCEPTED FOR THIS PROPOSAL \***

- A description of previous projects of a similar nature performed by your firm, including a complete description of the work completed by your firm, the names of your staff and their assignments in the project, the names of your clients and the name and phone number of an individual that may be contacted for reference purposes.
- Detailed costing will not be required at the time of submission of your Proposal, but will be required at the time of the shortlisting.

Responses that do not include all requested information will NOT be considered.

**SUBMISSION NO LATER THAN: Thursday July 23, 2020 – 1:00 p.m. Local Time**

Questions, clarifications or interpretations regarding this Request for Proposal shall be submitted through the City's bidding system "**Submit a Question**" feature.

The designated official for this Request for Proposal is:  
**Polina Semenov, Procurement Specialist.**

**\* ONLY ELECTRONIC BID SUBMISSIONS WILL BE ACCEPTED FOR THIS PROPOSAL \***

**TERMS OF REFERENCE**  
**P20-094**  
**Professional Services**  
**Class Environmental Assessment and Preliminary Design**  
**for Upper Hidden Valley Sanitary Pumping Station and**  
**Forcemain**

*(See Figure 1 for Project Location Plan)*

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## TERMS OF REFERENCE

### P20-094 - Proponent Services

## Class Environmental Assessment and Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain

### 1. PURPOSE

The City is seeking Engineering and Environmental consulting services to explore alternatives and generate a preliminary design which addresses sanitary servicing needs in the Upper Hidden Valley community, consistent with the Environmental Assessment Act.

This assignment is to identify and define a suitable sanitary sewer servicing solution to support the development in the Hidden Valley community using the current Hidden Valley Land Use Master Plan, June 2019. Within the purpose of this study, the following objectives must be achieved:

- a) Protection of the environment, as defined in the Environmental Assessment Act, through the wise management of resources. This goal will be met through monitoring, mitigation, and extensive consultation with all affected and interested parties.
- b) Minimal disruption to existing residents and travelers during construction.
- c) Participation of a broad range of stakeholders in the study process to allow for sharing of ideas, education, testing of creative solutions, and development of alternatives.
- d) Documentation of the study process in compliance with all phases of the Municipal Class Environmental Assessment Schedule “B” process.

A 30% design must be completed in accordance with the Region of Waterloo’s Design Guidelines and Supplemental Specifications for Municipal Services (DGSSMS) – most recent version, and the City of Kitchener Development Manual, along with any other relevant City and industry standards (CKSS, OPS etc.), and community plans which are outlined in **Appendix A**.

### 2. BACKGROUND

The Hidden Valley Community is located in the south east portion of the municipality. This area comprises approximately 183 hectares of land bounded by the Grand River,

Highway 8, Wabanaki Drive and the rail corridor near Fairway Road. The area is within the East Side Watershed however there is currently a Hidden Valley Sub-Watershed that is being reviewed and revised through the Land Use Planning project that is more specific to this area.

The Hidden Valley neighbourhood has varying land uses and zoning. The lands immediately south of Hidden Valley Road (east of its intersection with Goodrich Drive), and east of Hidden Valley Road along the Grand River are mainly estate / large lot residential (30T-04201 and 30T-88045) with some open spaces. The Hidden Valley High Lift Reservoir and Pump Station (River Birch Sanitary Sewage Pumping Station) is a Regional raw water supply facility located at the northwest corner of the east intersection of Hidden Valley Road and Hidden Valley Crescent. The area between Fairway Road, Highway 8, and Hidden Valley Road is a mixture of residential, industrial and utility land uses, including Kitchener-Wilmot Hydro Transformer Substation #7. The remainder of the lands within the study area are currently vacant, existing as either agricultural fields, wetlands / woodlot areas or vacant commercial / industrial lots. The natural environmental features in this area have been identified in the Regional Official Plan as “Regionally Significant Core Environmental Features”. Some of the land designations above are subject to change through the Hidden Valley Land Use Master Plan, June 2019.

The City is responsible for operating and maintaining the sanitary sewer networks and pumping stations within its boundaries while the Region of Waterloo is responsible for operating and maintaining the wastewater treatment plants within the City of Kitchener’s boundaries. In accordance with the 2019 Development Charge Background Studies, the 2019 Land Use Master Plan and the 2019-2021 Kitchener Growth Master Plan the City has identified the need to design and construct a new pumping station and forcemain connection to provide sanitary servicing for the Hidden Valley Lands. **(Figure 1, Project Location Map)**

With the exception of the land that can utilize the existing sanitary pumping station (which is at-capacity or slightly undersized) on River Birch Street, the remainder of the area requires a wastewater servicing solution that is informed by the Land Use Master Plan. A preliminary servicing assessment was completed to determine that the Hidden Valley catchment could be serviced.

The Proponent is to assume at this time that the Municipal Class Environmental Assessment component will begin in fall 2020, utilizing one consultant tender and submit their Request for Proposal accordingly. Budgets are subject to Council approval each year for each following calendar year, therefore timing cannot be guaranteed.

### 3. PROJECT SCOPE

The project goal is to determine a preferred option and preliminary design for the Hidden Valley Sanitary Pumping Station and Forcemain, by generating and evaluating various alternatives while considering environmental effects.

The project will be addressed in two parts.

- “**Part 1**” will consist of a Municipal Class Environmental Assessment for the pumping station and forcemain.
- “**Part 2**” of the project includes the preliminary (30%) design of the proposed the pumping station and forcemain.

Consultants will be expected to identify, schedule and perform all tasks necessary to complete the study in accordance with the purpose of the project.

#### 3.1 PART 1 – MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

To complete a Schedule “B” Class Environmental Assessment in accordance with the requirements as detailed in the Municipal Engineers Association document “Municipal Class Environmental Assessment, October 2000, as amended in 2007, 2011 & 2015.” The work shall include, but not be limited to, the following items:

##### 3.1.1 SUMMARY OF TASKS

- a) Complete the Schedule “B” Class Environmental Assessment in accordance with the requirements of the Municipal Engineers Association document “Municipal Class Environmental Assessment”, October 2000, as amended in 2007, 2011 & 2015.
- b) Review previous studies, existing legislative documents, Provincial, Regional, and Municipal standards, By-laws, Official Plans, Secondary Plans, and other related documents.
- c) Establish the Hidden Valley Sanitary Pumping Station drainage catchment area.
- d) Evaluate the capacity of the existing sanitary network system for the study catchment area and establish the need and justification for this project.
- e) Audit all existing sanitary services within the catchment area to determine their capacities and potential impacts with the proposed infrastructure and change in land use.
- f) Audit all existing utilities, establish any conflicts/relocations, and obtain approvals for relocation/protection plans.

- g) Analysis of all the servicing options for surrounding lands.
- h) Establish pumping capacity, forcemain capacity, and downstream gravity sewer capacity.
- i) Develop alternative pumping station sites and forcemain alignments to service the study area. The alternative alignments should be identified with respect to the positioning of the pump station.
- j) Develop an evaluation criteria based on the environmental factors such as: Land-use Planning Objectives, Natural Environmental/Heritage Features, Social Environment, Cultural Environment Heritage, First Nations/Aboriginal Peoples, Economic Environment, Preliminary cost estimates, and other identified issues.
- k) Evaluate alternative pumping station sites, and forcemain alignments with respect to the positioning of the pumping station, based on evaluation criteria developed by the project team.
- l) Identify all environmental features that may be impacted.
- m) Assess the need for advanced odor control technologies, noise suppression, insulation equipment and architectural discharge stacks for diesel fired standby power equipment and present accordingly at Public Information Centers.
- n) Evaluate the alignment of the existing River Birch Sanitary Pumping Station and sanitary forcemain and the sewage flows, with recommendation for any required relocation due to the proposed works. Evaluation to include if the existing River Birch Sanitary Pumping Station should discharge to the proposed pumping station, and if the forcemains should be combined.
- o) Identify property requirements including temporary and permanent easements.
- p) Develop a Communication Plan and data base including project contact list, and a detailed Project Schedule/Work Plan.
- q) Prepare all graphics and handouts for presentations, as directed by the City. The Consultant must submit copies of handouts and display boards to the City for review one week prior to a public meeting.
- r) Undertake a comprehensive Public Consultation Program and facilitate at least two (2) Public Information Centers, recommending preferred infrastructure location.
- s) Identify and document the permit requirements of review agencies.
- t) Recommend the adoption of mitigating measures during and after construction of the pumping station and forcemain to avoid or minimize negative environmental impacts.
- u) Describe monitoring requirements during and after construction to ensure that environmental impacts are as predicted.
- v) Prepare a final report to be filed with the Ministry of Environment and placed on the public record.

- w) Address any questions or concerns during the 30-day review period.
- x) During the filing of the Final EA Report if there is any bump up request, comments, or questions, the consultant shall address. This must be included in the fees.
- y) Prepare functional design and drawings.

### **3.1.2 TASKS OUTLINE**

The scope of work for this project will include, but not necessarily be limited to the following tasks:

- Task 1 – Background Review
- Task 2 – Site Inventory
- Task 3 – Definition of Opportunities and Constraints
- Task 4 – Identification of Alternative Solutions/Designs
- Task 5 – Evaluation of Alternatives
- Task 6 – Selection and Detailed Analysis of Preferred Alternative
- Task 7 – Functional Design
- Task 8 – Final Report

The tasks identified are grouped into eight main headings each representing decision points or areas of similar types of tasks. The study process has been structured to achieve compliance with the process outlined in the Municipal Class Environmental Assessment, October 2000, as amended in 2007, 2011 & 2015. Read these tasks in conjunction with the Scope of Work.

### **3.1.3 TASK 1 – BACKGROUND REVIEW**

Collect, review and summarize, from available sources, existing background data including, but not restricted to, the following:

- a) Topographic and aerial mapping
- b) Inventory of public and private land
- c) Parcel fabric
- d) Previous relevant drainage studies and functional sanitary assessments
- e) Floodplain mapping
- f) Relevant planning documents and environmental studies
- g) Inventory of vegetation, in areas of potential impact
- h) Wetland evaluations, in areas of potential impact
- i) Aquatic features

- j) Historical and existing land use
- k) Future land use
- l) Existing corridors and easements
- m) Previously documented issues/concerns
- n) Examples of similar projects undertaken in other municipalities

### **3.1.4 TASK 2 – SITE INVENTORY**

Conduct onsite investigations to complement background information, identify constraints and opportunities. At a minimum, the investigations will include:

- a) Identification of existing/potential flooding and erosion locations
- b) Inventory vegetation communities, wildlife, in areas of potential impact
- c) Existing infrastructure and utilities

### **3.1.5 TASK 3 – DEFINITION OF OPPORTUNITIES AND CONSTRAINTS**

As a key part of assessing the viability of the proposed alternatives, the study will identify a series of criteria by which to evaluate each alternative. These criteria will include, but not be limited to, the following:

- a) Social Environment
  - i. Land use
  - ii. Agricultural impacts
  - iii. Community cohesiveness
  - iv. Noise
  - v. Vibration
  - vi. Construction impacts
  - vii. Heritage
  - viii. Archaeology
  - ix. Quality of life (health and safety)
  - x. Aesthetics
  - xi. Property requirement impacts
  - xii. Emergency access
  - xiii. Impacts on water wells
  
- b) Natural Environment
  - i. Environmentally Sensitive Areas (ESAs)
  - ii. Areas of Natural or Scientific Interest (ANSIs)
  - iii. Woodlots
  - iv. Creeks
  - v. Wetlands

- vi. Wildlife and habitat
- vii. Vegetation
- viii. Air quality
- ix. Species at Risk

c) Technical

- i. Capacity requirements
- ii. Servicing feasibility
- iii. Pumping capacity requirements
- iv. Identification of drainage zones
- v. Structural
- vi. Utilities conflicts

d) Cost

- i. Capital
- ii. Operating
- iii. Maintenance

e) Institutional

- i. Policies and objective of the City of Kitchener, RMOW, GRCA, MOECP, MNR, DRO, Transport Canada, MTO

### **3.1.6 TASK 4 – IDENTIFICATION OF ALTERNATIVE SOLUTIONS**

Based on Tasks 1 through 4, the consultant will identify alternative solutions/designs.

The Consultant will identify alternative forcemain alignments and/or pumping station sites including combinations of alternative solutions, which address the above-noted objectives. The Project Team will review the alternative solutions. Only reasonable alternative solutions and combinations of alternative solutions, which meet the study objectives, will be carried forward.

### **3.1.7 TASK 5 – EVALUATION OF ALTERNATIVES**

The alternative solutions will be evaluated based on the EA process and the following criteria:

1) Effectiveness

- Reliability that the objectives will be achieved in both the short and long term

2) Ability to Implement

- Time required to implement
- Compatibility with existing policy and legislative requirements

### 3) Ability to Maintain

- Ability to implement a maintenance program, taking into account existing maintenance activities and potential improvements to the program
- Sufficient flexibility to institute changes if targets are changed or if improvements are required

### 4) Cost

- Capital costs
- Operational and maintenance costs

### 5) Environmental Benefits/Enhancements

### 6) Policies and Land Use

The study shall include evaluation and discussion of the following, but not limited to:

- Existing and future land uses throughout the study area.
- Review previous studies, existing legislative documents, Provincial, Regional, and Municipal standards, By-Laws, Official Plans, Secondary Plans, and other related documents including recommendations.
- Future land development and road links.

Based on the study area, the Project Team will assess the potential impacts of each alternative forcemain alignment and pumping station site. This evaluation will be an iterative process including refinement of alternatives, new options and combinations as they arise. A matrix evaluation method may be employed to ensure that each alternative solution is assessed against the same criteria.

The Project Team will complete the net effects evaluation of the alternative solutions and identify the recommended alternative alignment or combination of alternative solutions. Mitigations methods for the alternative designs are to be presented in sufficient detail for preferred alternative selection.

### **3.1.8 TASK 6 – SELECTION AND DETAILED ANALYSIS OF PREFERRED ALTERNATIVE**

This stage involves the analysis of the components which best achieve the goals of the study objectives and will include:

- a) Select the most effective combination of alternatives based on environmental considerations, technical, economic, aesthetic, public and institutional feasibility as required by the Class EA process
- b) Quantify all benefits, capital, monitoring, operation, maintenance costs that can be quantified in present value dollar terms
- c) Describe qualitatively all other benefits, costs and liabilities
- d) Combine these factors in a benefit cost matrix to compare and justify alternative components

The consultant will recommend the preferred alternative. This alternative will be to the satisfaction of the City of Kitchener, in consultation (as required) with: RMOW, GRCA, MECP, MNR, DFO and Environment Canada.

The study will summarize in detail the selection process used for the following components:

1) Recommended Works

- Servicing Area
- Pumping station site
- Forcemain alignment
- Sewer Upgrades

2) Implementation Plan

- Project phasing, costs, prioritization and schedules

3) Mitigation Measures

- Recommend the mitigating measures to be used during and after construction to avoid or minimize negative environmental impacts.
- Describe monitoring requirements during and after construction to ensure that the project is built and operated in accordance with the approved design and that environmental impacts are as predicted

### **3.1.9 TASK 7 – FUNCTIONAL DESIGN**

The consultant will prepare a functional design of the preferred alternative for all project components. The functional design will include cross-sections, profiles and details including enough figures and supporting calculations to provide realistic cost estimates for the work.

### **3.1.10 TASK 8 – FINAL REPORT**

The consultant will prepare a comprehensive technical report with appendices for review that addresses the Class EA process from Phase 1 to Phase 2. The report should be submitted in draft form at which time, comments will be solicited from the study team, review agencies and the public. Draft reports shall be submitted (six copies) as required through the course of the study. The consultant will finalize the Final EA Report and provide six (6) copies to the City. The final report will:

- Present the findings of the study complete with conclusions and recommendations
- Be supported by technical appendices giving all the details required to make the report a complete document for future reference
- Contain functional design for all aspects of the project (Pumping Station and Forcemain)

### **3.2 PART 2 – PRELIMINARY (30%) DESIGN**

The consultant shall prepare the preliminary (30%) design drawings and Design Report for the recommended alternative. All reports, plans or other deliverables shall be prepared using the latest version of AutoCAD and Word and provided to the City electronically on USB in original application and PDF formats.

The preliminary (30%) design shall be prepared in accordance with City of Kitchener's Standards, City of Kitchener Design Standards and Procedures Manual - Wastewater Pumping Facilities, MECP Guidelines, Ontario Building Code, and Ontario Provincial Standards (OPS).

#### **3.2.1 SUMMARY OF TASKS**

The work shall include, but not be limited to, the following items.

- a) Conduct all surveys as required for the pumping station and forcemain required as part of this project, as per City Standards.
- b) Illustrate property requirements.
- c) Assessment on impact to utilities and relocation requirements.
- d) Undertake a geotechnical investigation and provide a report with recommendations for the suitability of the soil and related construction activities, with detailed recommendations for groundwater in the design and construction of the proposed works. The geotechnical field investigation should include at least six (6) boreholes on the preferred pumping station site, to a depth of at least 4m below the wet well elevation. Geotechnical information is also required for the forcemain alignments to

- a level of detail enough for the detailed design.
- e) Undertake a hydrogeological investigation and provide a report containing recommendation for design and other infrastructures on the pumping station and emergency storage tank.
  - f) Undertake Archaeological Assessment Stage 1 & Stage 2 where required.
  - g) Provide environmental considerations recommendations, including proposed mitigation measures.
  - h) Preliminary plan and profile drawings for the selected alignment and profile.
  - i) Contact and discuss preliminary design with all appropriate authorities and incorporate all relevant comments.
  - j) Prepare design criteria of the recommended works for City review and approval.
  - k) Preliminary Design Report, plans/drawings (including cross-section, plan and profile), quantities, specifications and documentation.
  - l) Design calculation sheets for all services and estimates shall be submitted to the City for consideration and approval.
  - m) Finalize the preliminary design and submit to the relevant authorities for approval.
  - n) Provide breakdown of detailed design data and criteria necessary to obtain approval in principle from all interested agencies and authorities.
  - o) Pumping station design to address use of: advanced odor control technologies, noise suppression, insulation equipment and architectural discharge stacks for diesel fired standby power equipment as identified warranted through the Class EA process.
  - p) Address aesthetic considerations and community land usage criteria which will be developed during the EA. The station shall be designed to be as unobtrusive and architecturally pleasant as possible.
  - q) The preliminary pumping station design will address power supply requirements including provisions for standby power, provisions for emergency overflow and SCADA requirements.
  - r) The pumping station preliminary design shall be in accordance with the City of Kitchener Site Plan standards.
  - s) Detailed cost estimates, including cost of construction using preliminary quantities and current unit prices within 20% accuracy and cost of engineering.
  - t) Assessment of Noise.
  - u) Rehabilitation/reconstruction of any structures.
  - v) Recommendations for staging and preferable contract packages, if applicable.
  - w) Identify need for, and probable duration of, any road closure during the forcemain

construction.

- x) Identification of permits required by review agencies.
- y) Identification of all pre-engineering outstanding tasks, or additional studies required to complete final design.
- z) Prepare implementation plan.

Preliminary (30%) design concept to be prepared and presented at the project team meeting shall include:

- i. Preliminary design criteria,
- ii. Analysis of existing services,
- iii. Preliminary site plan arrangements for the pumping station and including outlet and inlet pipes,
- iv. Preliminary plan and profile drawings including proper pipe width for the true impact of forcemain during construction (drawings should identify temporary working easements required during construction),
- v. Major conflicts and/or issues,
- vi. Property requirements, and
- vii. Cost estimates.

### **3.2.2 DELIVERABLES**

Parts of the preliminary (30%) design may form part of the EA process and report and will need to be included as part of the preliminary (30%) design report. The successful consulting firm will be expected to provide the preliminary design to the City of Kitchener six (6) weeks after the completion of the Class Environmental Assessment, including the following:

- a) Preliminary Design Report with Drawings (six (6) copies one (1) electronic copy).
- b) Geotechnical Report (two (2) copies one (1) electronic copy).
- c) Hydrogeological Investigation Report (two (2) copies one (1) electronic copy).
- d) Archaeological Assessment.
- e) Topographic Survey (plus any additional control established beyond what was provided by the City).
- f) Utility Relocation Analysis.
- g) Detailed Cost Estimate and Cost Analysis for the recommended alternative.

The above shall include but not be limited to:

- a) Preliminary (30%) Design Report with Drawings  
When the preferred/recommended alternative is defined and selected, the consultant shall complete and prepare the preliminary (30%) design submission in

accordance with the Standards of the City of Kitchener and Region of Waterloo, Ontario Building Code (OBC), Ontario Provincial Standards (OPS), and all relevant ministry guidelines.

All the base plans are to be prepared as per the City of Kitchener standards, and submitted on USB with each submission. The preliminary (30%) design drawings shall include but not be limited to the following aspects:

- i. Preliminary design of the structures i.e. Site Plan (grading, SWM), building, wet-well, reservoir, etc.,
- ii. Preliminary design of the forcemain alignment with plan/profiles and cross-sections,
- iii. Construction staging drawings,
- iv. Location and description of utility requirements (i.e. relocation impacts),
- v. Location and description of environmental mitigation measures (e.g. plantings etc.),
- vi. Tree inventory assessment where necessary,
- vii. Grading/Easement requirements including cut/fill lines extending outside R.O.W. or property line,
- viii. Traffic control device requirements,
- ix. Details of any construction / rehabilitation of structures,
- x. General grading/drainage requirements and drainage area plans, including stormwater management plans and reports, along with storm sewer layout,
- xi. Erosion and sediment control plans
- xii. Design brief, quantities, documentations, design criteria or references.

b) Geotechnical Report

- Undertake a detailed geotechnical investigation and provide report. The Geotechnical report must include enough details to complete the Detailed Design. As part of the geotechnical report, conduct information search for site contamination or conduct site investigation for contamination.
- Geotechnical investigations and recommendations shall also include full foundation investigations, design and disposal of surplus materials in conformance to the MECP Clean-up guidelines for this project where required.

c) Hydrogeological Report

- Hydrogeological Investigation and provide report
- Determine any water well/aquifers impacts.
- Detailed Recommendations for construction of the pumping station and emergency storage tank.

d) Archeological Assessment

- Assess archeological reports already complete for project lands to ensure sufficient Ministry clearance is in place. Prepare Archeological Assessment Report Stage 1

and Stage 2 (if required) and submit to Ministry for approval.

e) Topographic Survey

The Consultant shall as part of the deliverables submit any additional project control plus the detailed topographic survey.

- Vertical Surveys

The Consultant shall use only City of Kitchener Vertical Control Network benchmarks for establishing elevations throughout the project.

- Horizontal Surveys

Project control information will be provided by the City of Kitchener for the topographic survey and shall be used throughout to collect the field data. Refer to attached **Appendix B**, Guidelines for Total Station Engineering/Topographical Surveys.

f) Utility Relocations Analysis

- Audit all utilities and establish any utility conflicts and obtain approvals for relocation or protection plans.
- Coordinate with all utility companies during the EA process to identify property or easements requirements for relocation of utilities including guy wire easements during proposed improvements.
- Obligate utility companies to provide relocation timings and incorporate this in project schedule.
- Identify proposed location of utilities and secure consent from utility companies in writing. The proposed location of utilities to be identified through offsets from curbs and the reasons for selecting offsets should be explained in final report under utility section.
- Consult with the Region of Waterloo regarding preferred forcemain alignment for future right-of-way use and watermain configurations.

### 3.2.3 PUBLIC CONSULTATION AND EDUCATION

a. **Agency Consultation**

The City will arrange the Municipal Coordination Meeting and the Consultant will arrange Agency Coordination Meeting to solicit comments and suggestions on the following:

- a) finalize the purpose of the EA study determined in Phase 1
- b) evaluate Phase 1 of the study including problem definition
- c) evaluation of alternative solutions and combinations of alternative solutions
- d) criteria by which the alternative forcemain alignments and pumping station sites have been evaluated

**b. Additional Meetings**

The public consultation process is flexible and can represent an enhancement of the requirements for compliance with the Class EA. Additional opportunities for the general public to learn about the study could be provided through other appropriate means, such as newsletters, web site, community TV announcements, etc. As a part of this Terms of Reference the consultant will be required to attend any additional meetings required to provide more detailed consultation during the study with special interest groups or directly affected agencies. Therefore, in addition to the Project Team meetings, Municipal, Agency, Utility Co-ordination meetings, and public consultation process, the consultant should include at least five (5) such meetings into the consultant's budget for this study. The project schedule should show these meetings on a separate line item.

The City and consultant together will conduct the following tasks: facilitate public forums, maintain mailing lists, prepare advertisements, and respond to enquiries. The consultant will be responsible for the taking and distribution of minutes, preparation of agendas, technical summaries and drafting comments to public comments/concerns, creating display materials and providing professional staff to assist at public forums.

All display boards (including roadway drawings) must be produced in PDF format for posting on the City's project website at least one (1) week in advance of each PIC.

The City will pay and arrange the newspaper advertisement for the Public notices and Public meeting facilities. Also, the City will provide the list of names and mailing addresses of the property owners.

In addition to public consultation, other groups will be contacted directly including residents and businesses which are directly affected.

**c. Communication Plan & Meetings**

The following shall be considered to develop a Communication Plan and submit to the City of Kitchener for approval:

- a) Provide for a Project Initiation Meeting.
- b) Provide for Municipal Coordination Meeting.
- c) Provide for an Agency and Utility Coordination Meeting.
- d) Undertake a comprehensive Public Consultation program and facilitate at least two Public Information Centers.
- e) Brief Mayor, Councilors and Senior Management prior to selecting dates for Public Meetings.

- f) Contact and meet with appropriate agencies and interested and affected parties, and document issues and mitigation measures.
- g) Develop and maintain a comprehensive mailing list of all agencies, study area property owners, and other stakeholders.
- h) Prepare all notices and mail out to the public, agencies, and stakeholders.
- i) Prepare correspondence in response to public, agency, and stakeholder comments and questions related to the study.
- j) Contact and meet with appropriate agencies, interested and affected parties, and document issues and mitigation measures. A partial contact list is as follows:
  - City of Kitchener staff including
    - Operations
    - Planning
    - Other departments as needed
  - Region of Waterloo
  - Ministry of Natural Resources (MNR)
  - Ministry of the Environment, Conservation and Parks (MECP)
  - Ministry of Agriculture and Rural Affairs
  - Waterloo Regional Police Services
  - Waterloo District School Board
  - Waterloo Catholic District School Board
  - Department of Fisheries and Oceans (DFO)
  - Major utility companies
  - Grand River Conservation Authority (GRCA)
- k) Assist with responses to public inquiries regarding the Study.
- l) Regular Project Team meetings and monthly status reports.

The consultant is required to provide an agenda one (1) week prior to the meeting and written minutes of these meetings to all parties within one (1) week and shall address all issues based on action, information, or when a resolution is required.

The Consultant will carry out the work under day-to-day direction of the City of Kitchener. The Consultant will report to the Project Manager. Quality assurance will ultimately rest with the consultant.

A study team will be established at the commencement of the study comprising of appropriate City staff and affected agency representatives.

#### **d. Study Team Meetings**

The consultant will be expected to meet with the study team on six (6) occasions. These meetings will be used to report on findings, progress, budget and deliverables.

#### **e. Public Information Centers and Presentations**

It is expected that at least two (2) Public Information Center will be required for this study and will be hosted by the consultant. The consultant should be aware that if found to be necessary or beneficial to the project consultation process, additional Public Information Centre may be required. The City of Kitchener will provide the facilities for the Public Information Centers. The consultant will also be required to present the final recommendations to Committee of Council and to the Environmental Advisory Committee.

### **3.2.4 PUBLIC INFORMATION CENTRE**

Before the Public Information Centre, meet with Grand River Conservation Authority, Region of Waterloo and Utility companies to discuss the proposed pumping station location, forcemain alignment and obtain comments.

The Consultant will prepare a draft copy of the Commencement of the Environmental Assessment Notice. The City shall then finalize and post in the local newspapers. This advertisement will advise of public participation opportunities to be held at key points in the study process. The initial mail out by the City will be sent to all impacted property owners and individuals that have previously enquired about the study.

- The Project Team will hold the public meeting to solicit public comments and suggestions on the following:
  - a) the purpose of the study,
  - b) a profile of the study area,
  - c) issues and concerns within the study area,
  - d) alternative alignments and pumping station sites,
  - e) criteria by which alternative alignment and pumping station sites are evaluated, and
  - f) the next steps in the study process.
- The Project Team will hold the public meeting to present information, including the recommended design concept to solicit public comments and suggestions on the following:
  - a) recommended design concept or combinations of concepts,
- Documentation on the preferred alternative design should include, but is not limited to, the following information:
  - a) recommended plan and profile, horizontal (1:1000) and vertical (1:100),
  - b) recommended typical cross-section of the forcemain including road right-of-way width/easement and all the surrounding features,

- c) provide detailed cross-sections at critical locations,
- d) location and description of utility requirements (e.g., relocation impacts),
- e) location and description of environmental mitigation measures (e.g., plantings, etc.),
- f) tree inventory assessment where necessary,
- g) details of any rehabilitation/reconstruction of structures,
- h) preliminary property requirements for both acquisition and easements.

### **3.2.5 REPORTING**

After each group of tasks is completed, the consultant will be required to prepare a Progress Report outlining the progress made to date, a summary of the data collected, and any input or comments received. The progress report must be in the format of the draft report. If applicable, the Progress Reports will provide the Project Team with responses to comments made and any revisions to the process required in response to comments made. The Project Team will use these reports primarily to monitor the study progress. The format should be reflective of the final content of the relevant sections of the Environmental Assessment Report with references to other study documents as needed. These progress reports, taken together, will form the basis of the draft report. These progress reports should be in a form suitable for reproduction, in whole or in part, by the City and for use in a public forum.

Draft reports shall be prepared as required, in sufficient quantities, by the consultant through the course of the study to facilitate review by members of the Project Team, review agencies or specific stakeholders.

Six (6) copies of the Draft Final Reports shall be prepared for review by the Project Team prior to the presentation to Council.

Six (6) copies of the Final Report shall be prepared and available to City staff prior to the advertising of the Notice of Completion. This does not include reports required for agency review.

All reports, supporting documentation, drawings, presentations, etc. shall also be provided to the City of Kitchener in a digital format.

## **4. DELIVERABLES**

To facilitate the City's compliance with O. Reg. 191/11 *Integrated Accessibility Standards* under the *Accessibility for Ontarians with Disabilities Act, 2005*, S.O. 2005, c. 11., the Consultant shall provide any final report and any other document identified by the Project Manager/City Representative as intended City website content in an accessible format that complies with the World Wide Web Consortium Web Content Accessibility

Guidelines 2.0 AA [other than success criteria 1.2.4. Captions (Live) and success criteria 1.2.5 Audio Descriptions (Pre-Recorded)]. However, this requirement shall not apply to drawings, photos, maps, site plans, or other documents that the Project Manager/City Representative agrees cannot practicably be converted to an accessible format.

## 5. PROJECT SCHEDULE

Part 1 – Municipal Class Environmental Assessment needs to be completed within **eight (8) months** from the commencement of the study.

Part 2 - Preliminary Design needs to be complete within **six (6) weeks** after the completion of Part 1 – Municipal Class Environmental Assessment.

The selected consultant is to submit a GANTT chart schedule showing the start and finish dates for the various tasks incorporated in the Work Plan (prepared in accordance with the Terms of Reference) and the dates of all proposed meetings. The schedule should be broken down into weekly increments. Also, indicate requirements for client-supplied information/decisions that are required to maintain the proposed schedule.

The selected consultant shall maintain the Project Schedule and submit updated copies to the City on a monthly basis. Updates shall include current activities and identification of actual completion/delivery dates for the key activities. The consultant shall refine the project schedule/work plan for the Environmental Assessment study in consultation with City staff (this project schedule/work plan will be reviewed and updated in each Progress Report).

The Consultant shall:

- Submit a final project schedule for approval by the Study Team within one (1) week of award of the project
- Ensure that the project schedule fits within the best time frames for public consultation and meetings of Committees and Committee of Council

As part of the RFP the consultant shall include a detailed schedule including the anticipated start and completion for each task and all meeting dates.

The Consultant must note that the City has the right to cancel the project at any time and the Consultant will be paid only up to that stage. If any delays occur during the project due to any reason the Consultant will not be compensated for the stand by time.

The City of Kitchener reserves the right to revise the dates in this Request for Proposal or to cancel this Request for Proposal without penalty or cost to the City of Kitchener.

The City reserves the right to modify specified target dates and to reject any or all submissions or to cancel or withdraw the Request for Proposal for any reason without incurring any cost or liability for costs and damages incurred by any Consultant, including, without limitations, any expenses incurred in the preparation of the submission.

The Proponent shall:

Submit a final project schedule for approval by the Project Team at the project initiation meeting.

Ensure that the project schedule fits within the best time frames for public consultation and meetings of Committees and Committee of Council.

A list of project action items and milestone dates is provided below.

<b>MILESTONE DATES</b>	<b>REVIEW PERIOD/TIMING REQUIREMENTS</b>	<b>ACTION ITEM</b>
August 3, 2020		Request for Proposal (RFP) Closes
Week of August 17, 2020		Shortlist Interviews
September 14, 2020		Council Award
Week of September 21, 2020	1 week after award of the project	Submit the Final Schedule
September 28, 2020	8 months	Kick-Off Meeting (start the EA – Part 1))
February 2021	Identify all of the options	Tentative PIC
April 2021	Identify the preferred design	Tentative PIC
May 28, 2020		Completion of Part 1 (Class EA)
July 9, 2021	6 weeks after completion of the Class EA	30% Design (Preliminary Design – Part 2)
TBD		Council

Specific milestone dates will be determined in consultation with the selected proponent following award of the project.

For projects of this nature it is common for Proponent work to pause as a result of City or Approval, Agency review or for other unforeseen circumstances. No additional fees will be paid for perceived inefficiencies due to these pauses and restarts.

## **6. PROJECT DIRECTION**

The hiring of Proponent Services is to be considered as an extension of City Staff and as such Proponent Staff are expected to conduct themselves as representatives of the City. City Staff will be part of the Project Team to provide support and guidance to the Proponent as required. The Proponent will report to the City Project Manager and quality assurance will ultimately rest with the consultant.

A Project Team will be established at the commencement of the assignment comprising of appropriate City staff and affected agency representatives.

The selected proponent will enter into the M.E.A. / C.E.O. 1989 - City of Kitchener Modified 2006 Standard Engineering Agreement.

## 7. AVAILABLE DOCUMENTATION

To assist in undertaking and completing the project, the City of Kitchener offers the following data and graphics at no cost for sole use by the Proponent on this project only. Receipt of any or all of this data should not be considered a substitute for field surveys and measurements to confirm all existing surface and underground site conditions. Details of each item below can be confirmed with Engineering Staff.

- Digital IIMS mapping including:
  - sanitary manholes, pipe runs,
  - storm manholes, catchbasins, pipe runs,
  - parcel fabric (not to be taken as OLS survey data)
- As-built Drawings of the project area and cross streets where available in hard copy format or digital
- Watermain/Gas “detail sheets” and service plans
- Limited tree inventory and assessment is available as a part of the Land Use Planning Study
- Consolidated plan of survey by OLS in hard copy and digital format where available
- Mailing addresses of property owners and hand delivery addresses for all occupants
- Digital samples outlining format and content for all documents noted in **Appendix C**
- CCTV reports for sanitary sewers (where available)
- Work management history
- Additional community reports as per **Appendix A**
- Detailed Field Survey if previously completed (detailed review and possible additional survey pick up required)
- Available studies and designs
- Limited geotechnical investigation report may be available
- Concrete road base map
- Coal tar street index

## 8. REQUEST FOR PROPOSAL REQUIREMENTS

The selection of the successful proponent will be based on a shortlisting of Request for Proposal which may be followed by an interview (where costs will be provided). The fee

structure and detailed work plan will be requested for shortlisted proponents only. Clarification may be required during this process to ensure a fair comparison.

The first stage comprises of submitting a Request for Proposal with a maximum length of seven (7) pages (excluding CV's and other supporting materials).

The RFP shall include the following elements:

- Project Team members experience and qualifications, including field staff and sub-consultants
- Recent and related projects including value of work
- Understanding and Approach
- Work Program
- Schedule
- Knowledge of the area - insights into the project, experience in past or current projects in proximity, knowledge of City processes and standards and demonstrated knowledge of the site
- Declaration of Conflict of Interest
- Reference to Comprehensive General Liability Insurance (value of no less than \$2,000,000.00) and Professional Liability Insurance (value of no less than \$2,000,000.00);
- Reference intent to enter into the M.E.A. / C.E.O. 1989 - City of Kitchener Modified 2006 Standard Engineering Agreement (available for review at City Hall)
- Signed by Person Authorized to Bind the Company
- Fee Table – Form 1 (*required only if shortlisted*)
- Copy of corporate Quality Assurance / Quality Control policies and practices

Request for Proposal will be evaluated based on the criteria shown in **Appendix H**.

### **8.1 FEES AND PRESENTATION REQUIREMENTS**

Presentation of fees shall include detailed costs for each major task identified in the consultant's work program including total cost (including HST). These costs should be subdivided in terms of fees and expenses. In addition, the approximate per diem rates for each individual who would be involved in the project should be included. Additional items the proponent feels to be necessary for completion of the project should be listed and priced separately. Fees related to Resident Inspection must be calculated based on a **ten (10)** hour working day (7:00am to 6:00pm with a 1-hour lunch break) at **five (5)** days per week. The consultant's detailed engineering fee should be no longer than five (5) pages in total.

The presentation should also have regard for the details of the work program and schedule as well as any other pertinent information that may be of assistance to the Selection Committee in selecting the successful consultant.

Outline in detail your firm's procedures for ensuring the Quality and Cost Control for the project.

**Detailed costing will not be required at this time but will be required at the shortlisting or interview stage.**

Candidates selected for an interview will be required to provide detailed costs for each major task identified in the consultant's work program including total cost (including HST). These costs should be subdivided in terms of fees and expenses (use FORM 1 – CONSULTANT FEE SUMMARY as a template in **Appendix F**). In addition, the approximate per diem rates for each individual who would be involved in the project should be included. Where fees include overtime, the dollar value of regular time must be differentiated from overtime. Additional items the consultant feels to be necessary for completion of the project should be costed separately.

The City of Kitchener reserves the right to refuse any or all submissions and is not obliged to accept the lowest priced Request for Proposal. It should also be noted that the City of Kitchener will view the submitted Request for Proposal as a commitment by the respondent with respect to personal dedication, work schedule, and fees. At their discretion, the City may elect to interview any number of the submitting candidates. Candidates will be contacted in this event, and a mutually agreeable interview time will be established. Consultants' submissions will be evaluated based on the evaluation criteria shown in **Appendix H**.

City of Kitchener Policy I-305 prohibits the acceptance of any tender from *"any person or corporation who, or which, has a claim or has instituted a legal proceeding against the City or against whom the City has a claim or has instituted a legal proceeding with respect to any previous contract, without the prior approval of Council."*

Note that the details of these Terms of Reference will be incorporated into the Standard Engineering Agreement between the Proponent and the City.

## **9. PROPONENT PERFORMANCE EVALUATION**

Please be advised that the City of Kitchener will be undertaking a formal proponent performance evaluation for this project. A blank copy of this form is included with this Terms of Reference document in **Appendix G**.

This form will be filled out by the City of Kitchener. This process has been implemented in order to record an assessment of the consultant's performance during this assignment. It is intended to reveal the consultant's strengths and areas for improvement as a basis for future dialogue at the end of the project.

The proponent will be given a copy of the completed evaluation form for review, comment and sign off. The proponent will be given the opportunity to discuss the results of this evaluation with the City of Kitchener.

The evaluation will be used to supplement information on Proponent past performance for future assignments.



**APPENDIX A**

**Listing of Potentially Relevant Community Plans**

### Council and Community Plans Influencing Design

The following is a list of various Community plans and reports which may influence designs for various projects:

- City of Kitchener Official Plan
- Region of Waterloo Official Plan
- Development Charge Studies, 2019-2021
- City of Kitchener Design Standards and Procedures Manual Wastewater Pumping Facilities
- City of Kitchener Engineering Standards and Specifications
- City of Kitchener Guidelines for Total Station Engineering/Topographical Surveys
- City of Kitchener Infrastructure Plan and Profile Drawing Standard
- City of Kitchener Report DTS-04-164 Design-based approach to City Building: Kitchener by Design
- City of Kitchener Culture Plan I & II
- City of Kitchener Urban Design Standards and Policies
- City of Kitchener Pedestrian Charter
- City of Kitchener Development Manual
- Regional Municipality of Waterloo DGSSMS
- Regional Municipality of Waterloo Growth Management Strategy
- Regional Municipality of Waterloo Rapid/Light Rail Transit Study (Class EA)
- Ontario Provincial Standards and Specifications/Drawings (OPSS/OPSD)
- Ontario Building Code (OBC) and National Building Code of Canada (NBC)
- Municipal Class Environmental Assessment – Municipal Engineers Association
- The Municipal Act and Planning Act – Government of Canada
- City of Kitchener Cycling Master Plan
- Regional Municipality of Waterloo Cycling Master Plan
- City of Kitchener Sidewalk Infill Policy
- City of Kitchener Integrated Stormwater Management Master Plan (ISWM-MP)
- City of Kitchener City-wide Sanitary System Capacity Study
- Hidden Valley Land Use Master Plan, June 2019
- Hidden Valley Sanitary Servicing Functional Assessment, September 2018

**APPENDIX B**

**City of Kitchener Standard for Survey**



**Guidelines For Total Station Engineering/Topographical Surveys**

1. City Right-of-Way Property Line to Property Line

City of Kitchener standard codes shall be used.

- curbs to be delineated by showing back of curb location and edge of pavement location @ 15-meter intervals.
  - edge of pavement to be picked up independently in absence of curb/gutter.
  - shoulder (if any) to be picked up
  - ditch (if any) to be picked up
  - road material changes (if any) to be illustrated (i.e. pavement to gravel)
  - centreline elevations to be picked up at approx. 15m intervals starting approx. at STA. = 1+000. back of curb and shots to be taken at approx. parallel positions to centreline shot locations. Stationing to progress upchainage south to north and east to west.
  - all driveway ramps to be shown (old style “concrete & curb”, and new style “drop curb and asphalt”)
  - bus stop pads, etc. (note material)
  - all vegetation other than ground cover (note hedge & bush size)
  - all trees and stumps (city and private) that shows the centre of trunk and includes a measurement of the tree’s diameter at 1.3 m above ground level.
  - all sign posts, guardrails, handrails, footbridges, bollards, barricades, parking meters, fences, etc.
  - retaining walls, etc. (note: material type and width)
  - footsteps, footbridges
  - utility poles, light poles, signal light poles, etc.
  - any bridge structures crossing overhead are to show columns & abutments
  - if road is passing on a bridge, show expansion joints, edge of bridge and side barriers
  - all permanent or semi-permanent garbage receptacles, planters, bench seats, etc.
  - monuments, statues, plaques, etc.
  - survey bars, benchmark plates, cut crosses, etc.
  - significant berms or swales
  - boulders & cobbles & rip-rap, and other erosion control devices
  - Creeks and Ponds - edge of water
    - berms
    - retaining walls
    - rip-rap and other gabions
    - conc. – lined channels
    - dams
    - current velocity reducer dams
- Will mainly be on City lands but applies to
- fish ladders
  - headwalls, pipe outlets
  - pipe inlets

- creeks on PVT property also
  - intentionally placed cobbles
  - boulders
  - note obvious wildlife habitats e.g. swan's nest
  - any other erosion – control equipment
- bush lines of forests (edge of bush or edge of canopy) (both when requested)
- **ALL** - sidewalks (note material if other than concrete)
  - access roads (note if other than asphalt)
  - parking areas (note if other than asphalt, show curbs if any) label as such
  - aprons (note material) label as such
  - graveled or stone dust areas
- any permanent or semi-permanent structures e.g. bus stop shelters, playground equipment, pumphouses, etc. note description
- railroad tracks, track bed (if any), and signals with gate (if any)

2. Required Level of Detail Pick-up to Front of Building/House Private Property (**Residential**)

- all structures permanent and semi-permanent. Note municipal address number and description if other than single family residence (building name, company name, apartments, garage, shed, etc.) if plaza or mall – note mall's name)
- all vegetation other than ground cover (note hedge and bush size)
- all sidewalks (note if other than concrete)
- all driveways (note if other than asphalt)
- parking areas (note if other than asphalt) show curbs if existing – label as such
- aprons (note material) label as such
- graveled or stone dust areas
- signs
- gates or other restricted admission devices
- fences, handrails, guardrails, bollards, barricades, footbridges, porches, etc.
- all steps
- retaining walls (note: material type and width)
- any poles of any kind (poles that are permanent or semi-permanent)
- any permanent or semi-permanent garbage receptacles, planters, bench seats, etc.
- electrical outlets
- monuments, statues, fountains, plaques, etc.
- significant berms or swales, ditches etc.
- boulders
- gas pumps and islands, etc.
- bush line of forests
- pressurized storage vessels
- hazardous material storage vessels
- rip-rap and other erosion control devices

- private in-ground lawn sprinkler equipment
3. Utilities Based in Ground – Everywhere within survey limits (unless noted)
- all catchbasins and drains
  - all manholes – note if other than sewer
  - all telecommunications and hydro structures above ground
  - all telecommunications and hydro structures below ground. Show structure perimeter and access hatches and cooling grates
  - all sewer catchbasin and manholes inverts
  - if CCTV is required contact: The Engineering Rehabilitation Section for assistance with obtaining information.
  - if catchbasins or manholes are blocked due to water or debris, note as such, and contact The Engineering Rehabilitation Section to coordinate Operation's Staff assistance as required.
  - all water/gas valves (including all water service curb stops) provide "dip" measurement to top nut of valve or extension.
  - all culverts (on City property)
  - all drainage inlets/outlets, headwalls, etc.
  - on cross streets or side easements with sewers that feed in to sewer system being surveyed – show location and inverts of the next manhole or catchbasin beyond drawing limits. (same for water valve info if possible)
  - if manhole or catchbasin is larger than normal size – document dimensions in field book.
  - gasmain and watermain vent devices
  - hydrants
  - utility meters on City property
  - handwells (note: size, use, including gas meters at side and front of structures)

**APPENDIX C**

**Public Information Centre Checklist**

**Public Information Session 1 Checklist**

The following information boards should be developed for PIC #1: Note that all boards should be in full colour.

- Signage into the building with arrows directing to the appropriate room
- Standard Welcome board
- Existing and proposed condition drawings (Plan only)
- Photograph of each property placed in vicinity of correct property on Plan
- Board with project highlights
- Coal tar/environmental information board (if applicable)

The following information should be included in the information package:

- List of contacts – City (PM and Traffic) and Consultant
- Anticipated construction timing (anticipated start date and duration)
- Summary of works
- Project highlights summary sheet (identify elements such as road widening, sidewalk widening, changes to intersections, streetscape issues, etc.)
- General information on garbage collection, parking, etc.
- Coal tar/environmental information handout if applicable

**Public Information Session 2 Checklist**

The following information boards should be developed for PIC #2

- Signage into the building with arrows directing to the appropriate room
- Standard Welcome board
- Existing and proposed condition drawings
- Staging Plan
- Detour info and alternative parking locations
- Board with project highlights
- Coal tar/environmental information board (if applicable)

The following information should be included in the information package:

- List of contacts – City (PM and Traffic), Consultant, Contractor
- Staging Plan (as a graphic)
- Anticipated construction timing (start dates, end dates, times of the day)
- Project highlights summary sheet (identify elements such as road widening, sidewalk widening, changes to intersections, streetscape issues, etc.)
- Detour routes and alternate parking locations if available
- Information on garbage collection
- Coal tar/environmental information handout if applicable

**APPENDIX D**

**Project Mailing Requirements**

Document/Letter/Survey	Timing	Mailing Recipients			
		Property Owner	Property Occupant	Apartment Unit (Occupant)*	Peripheral Properties (Occupants Only) within one block outside of construction limits
- Initial Notice of Project -Resident's Questionnaire -Sanitary Service Survey	Just prior to start of survey of existing condition	Yes Yes Yes	Yes Yes No	Yes Yes No	Yes No No
Invitation to Open House #1	At least two weeks prior to the open house and coinciding with newspaper advertisement	Yes	Yes	Yes	Yes
Invitation to Open House #2	At least two weeks prior to the open house and coinciding with newspaper advertisement	Yes	Yes	Yes	Yes
Notice of Completion	Immediately following Council approval of Final EA Report	Yes No	Yes No	Yes No	Yes No

Other letters may be required to suit the project. For example, project updates or project delay letters.

**APPENDIX E**

**Typical Tree Management Plan Details**

### Typical Tree Management Plan Details

- The City of Kitchener's Tree Bylaw (Chapter 690.3.1 – Trees and Construction Projects) clearly identifies the need to protect city trees during construction projects and follow any direction by Operations – Environmental Services. The City also has a strong interest in ensuring that private trees worthy of preservation are also protected.
- The Proponent will be responsible for the following:
  - pick up all City and private trees during the total station survey
  - ensure that the conservation of existing trees and the planting of new trees is considered and addressed through all stages of design and construction
  - consult with Operations – Environmental Services throughout the design\construction process whenever any proposed work (e.g. new sidewalks, road widening, sewers, etc.) may have a negative effect on the existing or future tree resource
  - follow any direction by CSD, in consultation with Engineering Services, regarding the existing or future tree resource
  - include CSD in all design and tender review stages
  - provide CSD with a full set of existing condition drawings in a pdf format immediately upon their completion
  - provide CSD with a full set of AutoCAD drawings of the proposed conditions at 90% completion immediately upon completion
  - provide CSD with a full set of AutoCAD drawings of the final proposed conditions at least two weeks prior to the final drawings being submitted to Supply Services Division.
  - insert the CSD Tree Management Plan & Planting Plan Drawings into the final drawing set, and all required cost items within the tender documents
- Operations – Environmental Services will be responsible for the following:
  - a pre-assessment of the tree resource, and preparation of the draft and final tree management plan
  - approval of all city tree removals
  - attending and providing all required information panels regarding trees at all public meetings, and committees (e.g. Heritage Committee)
  - provide pdf copies of the final tree management and planting plan to be included in the contract drawing

**APPENDIX F**

**Form 1 – Consultant Fee Summary**

## Form 1 – Consultant Fee Summary Form

# Class EA & Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain P20-094

The following table is to be prepared for comparison of Consultant Fee Estimates. It is not intended to represent a detailed description of the full range of services to be provided.

The Consultant is to ascertain the degree of detail to be summarized under each category and shall provide the summary for review at the Consultant Interview along with any other related information for consideration.

The Consultant's summary must include each of the major categories (**Highlighted in Bold Text**) for the Fee estimate to be considered for this project. The *sub-tasks (italic text)* are only samples and do not necessarily represent a complete list.

Task Description/Activity	Cost
<b>PART 1 – MUNICIPAL CLASS EA</b>	
<b>Advertise Notice of Commencement:</b>	\$6000
<b>Schedule:</b>	
<b>Background Review:</b>	
<b>Site Inventory:</b>	
<b>Definition of Opportunities &amp; Constraints:</b>	
<b>Identification of Alternative Solutions/Designs:</b>	
<b>Evaluation of Alternatives:</b>	
<b>Public Information Centre:</b>	
<b>Public Information Centre #2</b>	
<b>Selection and Detailed Analysis of Preferred Alternative:</b>	
<b>Functional Design:</b>	

<b><u>Final Report:</u></b>	
<b><u>Disbursements: (List)</u></b>	
<b><u>Meetings: (List)</u></b>	
<b><u>Presentation to Council:</u></b>	
<b><u>Advertising Notice of Completion:</u></b>	\$6000
<b>PART 2 – PRELIMINARY DESIGN</b>	
<b><u>Preliminary Design Report:</u></b>	
<b><u>Geotechnical Report:</u></b>	
<b><u>Hydrogeological Investigation Report:</u></b>	
<b><u>Archaeological Assessment:</u></b>	
<b><u>Topographic Survey:</u></b>	
<b><u>Utility Relocation Analysis:</u></b>	
<b><u>Detailed Cost Estimate:</u></b>	
<i>Administration</i>	
<i>Sub-total</i>	\$0
<i>Contingency (10%)</i>	\$0
<i>HST (13%)</i>	\$0
<i>Total</i>	\$0

Consultants must bid on all Parts. Partial bids will not be accepted.

The City intends to award all Parts to one Consultant however; the City reserves the right to award each Part separately at the sole discretion of the City. The City reserves the right to award this Request For Proposal in whole or in part and reserves the right to add or delete from the award, if so desired.

The lowest or any Request For Proposal will not necessarily be accepted and the City reserves the right to award any portion thereof.

**APPENDIX G**

**Proponent/ Consultant Evaluation Forms**

SECTION I - CONSULTANT DATA			SECTION II - PROJECT DATA			
Report Type <input type="checkbox"/> Interim <input type="checkbox"/> Final	Consultant's Name		Project Name/Number			
Address		Phone #	Contract Working Days		Actual Working Days	
Project Manager		Contract Inspector	Construction Start Date		Substantial Completion Date	
Council Project Award Date			Original Design PO Amount	Final Design PO Amount	Original Contract Admin PO Amount	Final Contract Admin PO Amount
Tender Advertisement Date			Original Construction PO Amount		Final Construction PO Amount	
Brief Description of Work						

SECTION 111 - NUMERICAL RATING:	
1- Unacceptable 2- Below Average 3- Acceptable & Expected 4-Above Average 5- Exceptional	
<b>A Design Phase</b>	<b>Rating (1-5)</b>
1. Supervision and decision making	
2. Coordination and communication with City Staff and sub-consultants	
3. Submission of documents and reports	
4. Adequacy and timeliness of progress schedules	
5. Responsiveness to City Staff requests and direction	
6. Compliance with laws, ordinances and regulations	
7. Solidity of design principles and elements (is it practical and cost effective?)	
8. Relations with general public, other agencies & adjacent Consultants	
<b>10 TOTAL / 40 x 100</b>	
<b>B Quality of Work</b>	
1. Adherence to proposal terms of reference and fee management (staying on budget)	
2. Standards of workmanship and integrity	
3. Completeness of final design work tender documents and approval processes	
<b>11 TOTAL / 15 x 100</b>	
<b>C Construction Phase</b>	
1. Cost management/estimating, adherence to project scope AND BUDGET	
2. Consultants handling of change orders and credits.	
3. Consultant relations and communications	
4. Communications with City Staff during construction	
5. Overall project management including attention to WSIB and MOL regulations.	
6. Site Supervision	
7. Handling of deficiencies and project wrap-up.	
<b>12 TOTAL / 30 / 100</b>	
<b>GRAND TOTAL (A+B+C)</b>	
<b>OVERALL AVERAGE RATING (A+B+C) / 3</b>	

**\*An explanation must be provided for any Inadequate, Below Standard and Superior rating in Narrative Section (IV) (page 2)**

DISTRIBUTION: Original: Financial Planning and Supply Services Division, Copy: Departmental Project File, Copy: Consultant

Contract Number: \_\_\_\_\_

**SECTION IV - Narrative Rating**

**GENERAL COMMENTS:**

[Empty box for general comments]

**Comments:**

I certify that I have objectively prepared this evaluation basing it upon data contained in available project records and discussed the evaluation with the Managers of: Engineering Design & Approvals, Construction and/or the Chief Purchasing Officer.

Comments:

[Empty line for comments]

<hr/>	<hr/>	<hr/>	<hr/>
Development Engineering Project Manager City of Kitchener	Date	Construction Project Manager City of Kitchener	Date
<p>I have reviewed this evaluation for objectivity and accuracy. I have forwarded a copy of this evaluation to the rated Consultant and I have advised the Consultant that any appeal must be made in writing to the Chief Purchasing Officer within 20 calendar days.</p> <p>Comments:</p>			
<hr/>	<hr/>	<hr/>	<hr/>
Manager, Development Engineering City of Kitchener	Date	Manager, Engineering Construction City of Kitchener	Date
<p>I have reviewed this Consultant Performance Evaluation and make the following comments, recommendations and changes as cited herein or on attached sheets.</p> <p>Comments:</p>			
<hr/>	<hr/>	<hr/>	<hr/>
Project Manager- Consultant	Date		
<p>I have reviewed this Consultant Performance Evaluation, including comments by the Consultant and make the following comments:</p> <p>Comments:</p>			
<hr/>	<hr/>	<hr/>	<hr/>
Director, Engineering Services Development Services Department City of Kitchener	Date		



## **APPENDIX H**

### **Evaluation Criteria**

- **Proposal Evaluation**

**(for general information only – criteria and weighting subject to change)**

**INITIAL PROPOSAL RATING SHEET**

<b>Number</b>	<b>Criteria</b>	<b>MAX. POINTS</b>
1.	Evaluation of Proposed Project Manager	20
2.	Completeness of the Proposal	25
3.	Qualifications/Expertise	25
4.	Variety & Quality of Disciplines In House/In Consortium	10
5.	Past Performance	10
6.	Knowledge of the City (re: this area)	10
	TOTAL	100

Shortlisted firms will be contacted for detailed work plans and pricing. The City may elect to conduct interviews with all that are shortlisted.

**INTERVIEW RATING SHEET (IF APPLICABLE)**

<b>Number</b>	<b>Criteria</b>	<b>MAX. POINTS</b>
1.	Initial Proposal Score – Carried Over	50
2.	Effect of Interview <ul style="list-style-type: none"> <li>- Project Manager</li> <li>- Project Team</li> <li>- Understanding of project/site</li> <li>- Overall presentation</li> </ul>	20
3.	Cost of Consultant's Fees	20
4.	Work Plan	10
	TOTAL	100

**NO INTERVIEW RATING SHEET (IF APPLICABLE)**

<b>Number</b>	<b>Criteria</b>	<b>MAX. POINTS</b>
1.	Initial Proposal Score – Carried Over	50
3.	Cost of Consultant's Fees	40
4.	Work Plan	10
	TOTAL	100

**APPENDIX I**

**Comment Tracking Form**





**P20-094 - Professional Services Class Environmental Assessment and Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain**

**Addendum #1**

---

July 10, 2020

This Addendum is issued for the purpose of clarifying, amending or revising information contained in the Contract Documents.

**Question 1:**

Please provide clarification on the closing date for the submission. The bid submission deadline on Pg. 20 of the RFP document indicates a closing date of August 3rd, 2020 whereas the Bids and Tenders advertisement page indicates July 23, 2020.

**Answer 1:**

We got the RFP document out earlier than expected and therefore the closing date will be July 23, 2020.

**Question 2:**

August 3rd, 2020 is Civic holiday. Would the City consider extending the closing date as to not fall on the holiday?

**Answer 2:**

As noted above the closing date is now July 23, 2020 and will not fall on a holiday.

**Question 3:**

How is “5) Past Performance” within the proposal evaluation criteria table scored? Is it based on previous projects as verified by reference checks? Or is it strictly based on past performance on City of Kitchener assignments?

**Answer 3:**

Experience is a cross of past performance on City projects as well as us calling references from past jobs not within the City of Kitchener. Half of the marks will be for our experience and half will be for reference checks.

**Question 4:**

How is “4) Variety & Quality of Disciplines in house/In Consortium” within the proposal evaluation criteria table scored? Will proponents that have multiple disciplines in-house be favoured over proponents carrying appropriate sub-consultants?

**Answer 4:**

In consortium would include subs as a well inhouse consultant teams.

Proponents shall acknowledge receipt of all addenda through the City’s bidding system prior to submitting their proposal.



**P20-094 - Professional Services Class Environmental Assessment and Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain**

**Addendum #2**

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July 14, 2020

This Addendum is issued for the purpose of clarifying, amending or revising information contained in the Contract Documents.

**Question 1:**

What level of detail will be required for the SCADA requirements in the preliminary design?

**Answer 1:**

The general SCADA requirements will be based on the updated City standards to be provided to the successful bidder.

**Question 2:**

What are the requirements of the Assessment of Noise?

**Answer 2:**

The noise assessment requirements will be based on the Ministry's NPC-300 guidelines and the Regional Noise Implementation Guidelines.

**Question 3:**

What will be the subject of the rehabilitation of structures?

**Answer 3:**

The rehabilitation will be required based on the existing infrastructure and upgrades that may be identified through the preliminary design.

Proponents shall acknowledge receipt of all addenda through the City's bidding system prior to submitting their Proposal.



**P20-094 - Professional Services Class Environmental Assessment and Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain**

**Addendum #3**

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July 17, 2020

This Addendum is issued for the purpose of clarifying, amending or revising information contained in the Contract Documents.

**Question 1:**

Would the City please consider granting a one week extension to the closing date for the proposal?

**Answer 1:**

The City is not considering extension at this time.

Proponents shall acknowledge receipt of all addenda through the City's bidding system prior to submitting their Proposal.

# Appendix B

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## Team Meeting Minutes



<b>Project Name:</b>	Upper Hidden Valley SPS Class EA	<b>MTE File No.:</b>	C48301-100
<b>Purpose:</b>	Potential SPS Locations Meting	<b>Date:</b>	August 4, 2021
<b>Time:</b>	1:00 pm	<b>Meeting Location:</b>	Remote via Webex

Attendees:	Initials	Representation
Katie Wood	KW	City of Kitchener
Linda Cooper	LC	City of Kitchener
Barbara Steiner	BS	City of Kitchener
Richard Kelly-Ruetz	RKR	City of Kitchener
Dave Wilhelm	DW	MTE Consultants Inc.
Gemma Charlebois	GC	MTE Consultants Inc.
Samir Dhanvantari	SD	MTE Consultants Inc.

**Distribution:** All Attendees;  
 Andrew Pinnell, Chris Spere – City of Kitchener  
 C. Foster Pengelly – Grand River Conservation Authority

Item No.	Discussion	Action
<b>1.0</b>	<b>Status Updates</b>	
1.1	Feedback to Date <ul style="list-style-type: none"> <li>○ Mailout of notices to all stakeholders including residents and three First Nations.</li> <li>○ Received comments from a few residents expressing interest and request to be notified of PIC. Two residents expressed interest in municipal servicing. DW to send names/contact info to City.</li> <li>○ MTE expressed difficulty in obtaining environmental reports from Pearl Development.</li> <li>○ BS notes that they have not had impression that Pearl Development is withholding data.</li> </ul>	DW –MTE
1.2	Potential SPS locations and forcemain routing <ul style="list-style-type: none"> <li>○ BS: Area 4 has draft approval status for development however is part of core environmental features. Not likely for development.</li> <li>○ BS: Area 3 is a regulated area. It is not feasible for residential development unless the Region makes an exception to the “no septic systems” rule as municipal servicing in this area is difficult.</li> </ul>	

Item No.	Discussion	Action
1.3	Archaeology and Cultural Heritage Results	
1.4	Preliminary Natural Heritage Results	
1.5	Presentation of Evaluation Criteria <ul style="list-style-type: none"> <li>○ BS: include induced impacts to Natural Environment criteria. Induced impacts = how presence/construction of SPS in location affects other areas. e.g. risk to adjacent natural features due to SPS failure or emergency overflow</li> <li>○ KW open to any scoring system for evaluation matrix</li> <li>○ BS prefer more pictorial representation for scoring to avoid impression that numbers represent quantitative values.</li> <li>○ KW to review criteria with Operations Staff.</li> </ul>	KW - City
<b>2.0</b>	<b>Next Steps and Schedule</b>	
2.1	PIC <ul style="list-style-type: none"> <li>○ Set PIC for early October in digital/virtual format</li> </ul>	
2.2	Evaluation of Options	
2.3	Next meeting <ul style="list-style-type: none"> <li>○ Next meeting set for September 8 or 9, 2021. Meeting will include City, GRCA, MTE, LGL, and ARA to discuss PIC presentation material. Material to be prepared in advance of meeting.</li> </ul>	

**Minutes completed by:** Gemma Charlebois – please report any errors or omissions. Thank you.

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<b>Project Name:</b>	Upper Hidden Valley SPS Class EA	<b>MTE File No.:</b>	C48301-100
<b>Purpose:</b>	PIC Preparations with City	<b>Date:</b>	September 8, 2021
<b>Time:</b>	1:00 pm	<b>Meeting Location:</b>	Remote via Webex

Attendees:	Initials	Representation
Katie Wood	KW	City of Kitchener
Barbara Steiner	BS	City of Kitchener
Linda Cooper	LC	City of Kitchener
Andrew Pennell	AP	City of Kitchener
Chris Foster Pengally	CFP	GRCA
Allison Featherstone	AF	LGL Limited
Monica Maika	MM	ARA Heritage
Victoria Cafik	VC	ARA Heritage
Amy Barnes	AB	ARA Heritage
Dave Wilhelm	DW	MTE Consultants Inc.
Gemma Charlebois	GC	MTE Consultants Inc.
Samir Dhanvantari	SD	MTE Consultants Inc.

**Distribution:** All Attendees;

Item No.	Discussion	Action
<b>1.0</b>	<b>Project Status</b>	
	Discussion of project to-date and next steps following PIC <ul style="list-style-type: none"> <li>○ Team meeting following PIC</li> <li>○ Evaluation sub-committee or all to provide individual input. Katie to confirm and address.</li> <li>○ Each city department namely engineering, environmental, planning and GRCA to comment.</li> <li>○ Evaluations will take place prior to the meeting then discussed in the meeting.</li> </ul>	KW
<b>2.0</b>	<b>Presentation of Field Investigations</b>	
	Archaeological Findings <ul style="list-style-type: none"> <li>○ Test pit or pedestrian or combination survey for stage 2. Marine survey for Grand River (if required)</li> </ul> Cultural Heritage Findings <ul style="list-style-type: none"> <li>○ Grand River and Heritage road corridor has three built heritage structures</li> </ul>	





**Minutes completed by:** Gemma Charlebois – please report any errors or omissions. Thank you.

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**Project Name:** Upper Hidden Valley SPS Class EA

**MTE File No.:** C48301-100

**Purpose:** Evaluation of Alternative Solutions

**Date:** January 17, 2022

**Time:** 10:00 pm

**Meeting Location:** Webex

Invitees	Initials	Representation
Katie Wood	KW	City of Kitchener
Chris Spere	CS	City of Kitchener
Linda Cooper	LC	City of Kitchener
Barbara Steiner	BS	City of Kitchener
Andrew Pinnell	AP	City of Kitchener
Richard Kelly-Ruetz	RR	City of Kitchener
Victoria Grohn	VG	City of Kitchener
C. Foster Pengelly	CFP	Grand River Conservation Authority
Jason Lane	JL	Region of Waterloo
Dave Wilhelm	DW	MTE Consultants Inc.
Gemma Charlebois	GC	MTE Consultants Inc.
Allison Featherstone	AF	LGL Environmental

Item No.	Discussion	Action
<b>1.0</b>	<b>Project Status</b>	
	1.1 Recap of status of project to-date; review of PIC #1	DW
	1.2 Recap of correspondence from PIC #1:	
	1.2.1 Pearl Developments	GC
	1.2.2 Annemarie Hall	GC
	1.3 Future events and dates	
	1.3.1 PIC #2	KW
	1.3.2 Coordination with River Road and LRT projects	DW
<b>2.0</b>	<b>Presentation of Evaluation Matrix</b>	
	2.1 Description and Presentation of Evaluation categories	
	2.1.1 Natural Environment	AF
	2.1.2 Social Environment	GC
	2.1.3 Heritage/Cultural Impacts	GC
	2.1.4 City Operations	DW
	2.1.5 Technical, including plan and profiles of sewers and forcemain	DW
	2.1.6 Servicing Potential	GC



Item No.	Discussion	Action
	2.1.7 Costs	GC
<b>3.0</b>	<b>Evaluation of Alternatives</b>	
	3.1 Assessment of each option presented for each category of criteria 3.2 Overall scoring of each option	
<b>4.0</b>	<b>Other Business</b>	



**Project Name:** Upper Hidden Valley SPS Class EA  
**MTE File No.:** C48301-100  
**Purpose:** Evaluation of Alternative Solutions  
**Date:** January 18, 2022  
**Time:** 10:00 am  
**Meeting Location:** Remote via Webex

Invitees	Initials	Representation
Katie Wood	KW	City of Kitchener
Chris Spere	CS	City of Kitchener
Linda Cooper	LC	City of Kitchener
Barbara Steiner	BS	City of Kitchener
Andrew Pinnell	AP	City of Kitchener
Richard Kelly-Ruetz	RR	City of Kitchener
Victoria Grohn	VG	City of Kitchener
C. Foster Pengelly	CFP	Grand River Conservation Authority
Jason Lane	JL	Region of Waterloo
Dave Wilhelm	DW	MTE Consultants Inc.
Gemma Charlebois	GC	MTE Consultants Inc.
Allison Featherstone	AF	LGL Environmental

**Distribution:** All Attendees;

Item No.	Discussion	Action
<b>1.0</b>	<b>Project Status</b>	
1.1	Reviewed project status to-date with brief re-cap of PIC #1 and a refresher of the various options (DW).	
1.2	Correspondence from Pearl Developments and Annemarie Hall has been received since PIC #1. It expressed development interest in the area and provided input into the Class E (GC)	
1.3	<p>PIC No. 2 Scheduled for Thursday, February 17, 2022, 6:00 to 8:00pm. Presentation will include the preferred option</p> <ul style="list-style-type: none"> <li>▪ Regional Council debate in December requested coordination from Kitchener Mayor with Region of Waterloo and Developers (JL)</li> <li>▪ City's timing of funding may have to be advanced to coordinate Sanitary Sewer installation with River Road Extension project (JL)</li> <li>▪ City to confirm sizing and alignment of trunk sewers to service development after the Class EA (KW)</li> <li>▪ River Road construction is scheduled and Region and City agree that servicing should be completed at time of road construction (JL)</li> </ul>	

Item No.	Discussion	Action
	<ul style="list-style-type: none"> <li>▪ The Alternate Location B is between MTO HWY 8 and LRT tracks and given required setbacks the available space is constrained (JL)</li> <li>▪ Between Hidden Valley Road and River Road there is an extensive grade separation. Access to the pump station site will be challenging. It is also in close proximity to the intersection (JL)</li> <li>▪ Regarding Location B - 10m off Woodlot would trigger full assessment of species at risk – 6months to 1 year for permit. (AF)</li> </ul>	
<b>2.0</b>	<b>Presentation of Evaluation Matrix</b>	
2.1	<p>Detailed discussion of the options was held. For each evaluation criteria, the individual options were discussed and evaluated. The following is the evaluation committee's discussion. Each member submitted their individual scores post meeting (LGL excepted).</p> <p><b>Natural Environmental</b> GRCA, KW, DW</p> <ul style="list-style-type: none"> <li>○ Location B – less desirable</li> <li>○ Location A – more desirable than Location B</li> <li>○ Location C – Most desirable</li> </ul> <p>AF, BS Evaluation based on proximity to SAR limit and provincially significant wetlands Alt Location B – less desirable; located in natural heritage conservation area, environmental setbacks</p> <ul style="list-style-type: none"> <li>○ Location A - more desirable</li> <li>○ Location C - most desirable</li> </ul> <p><b>Social Environment</b></p> <ul style="list-style-type: none"> <li>○ Construction impacts will be all similar (RR)</li> <li>○ Location A in middle of residential not ideal for SPS (RKR &amp; AP)</li> <li>○ Location B and C more desirable due to commercial and traffic (RKR &amp; AP)</li> <li>○ Location B more desirable (AP)</li> <li>○ Location B more roads to construct; more impact during construction</li> <li>○ Aesthetic considerations would be important for location A (RKR)</li> <li>○ Propose the SPS closer to arterial road if possible to reduce impacts to community</li> </ul> <p><b>Heritage/Cultural Impacts</b> Most significant impact is to heritage corridor of Hidden Valley Road. Each location requires archeological assessment including pedestrian surveys, test pit surveys or both</p> <ul style="list-style-type: none"> <li>○ Location B – future induced impacts to heritage corridor if lands serviced in that area (KW).</li> </ul>	

Item No.	Discussion	Action
	<ul style="list-style-type: none"> <li>○ Test pits have environmental impact (BS)</li> <li>○ concerns regarding the depth of sewer in heritage corridor (BS)</li> <li>○ Location A and C - more desirable</li> <li>○ Location B – less desirable, impacts to road corridor</li> </ul> <p><b>City Operations</b></p> <ul style="list-style-type: none"> <li>○ All options have similar ratings (DW).</li> <li>○ Location B – Access considerations due to River Road configuration. Restricted access for sewage hauling.</li> <li>○ Location A and C – more desirable</li> <li>○ Location B – less desirable</li> </ul> <p><b>Technical</b></p> <p>Consider length of infrastructure, number of creek crossing, depth of sewers, constructability</p> <ul style="list-style-type: none"> <li>○ Option 2, 3, 3a - less desirable</li> <li>○ Option 2a - most desirable</li> <li>○ Option 4 – least desirable</li> </ul> <p><b>Servicing Potential</b></p> <p>Team commented that servicing potential could be part of Technical criteria</p> <p>It was agreed that, generally, the more lands serviced by gravity to the SPS, the higher the score</p> <ul style="list-style-type: none"> <li>○ Option 2, 3a - less desirable</li> <li>○ Option 3 - most desirable</li> <li>○ Option 2a, 4 - least desirable</li> </ul> <p>Cost estimates for each option to be sent to evaluation committee – MTE to follow up with costing information.</p> <p>Weighting on Evaluation matrix will be assessed, summarized and finalized based on individual scores of committee members.</p>	

**Minutes completed by:** Gemma Charlebois – please report any errors or omissions. Thank you.

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**Project Name:** Upper Hidden Valley SPS Class EA

**MTE File No.:** C48301-100

**Purpose:** Evaluation Follow Up Meeting

**Date:** January 20, 2022

**Time:** 10:00am

**Meeting Location:** Remote via Microsoft Teams

Invitees	Initials	Representation
Linda Cooper	LC	City of Kitchener
Dave Wilhelm	DW	MTE Consultants Inc.

Item No.	Discussion	Action
	<ul style="list-style-type: none"> <li>Jason Lane and Barbara Steiner would like Natural Environment to be weighed more and Technical, Operations, and Servicing should be combined if Natural Environment not weighted.</li> <li>Richard Kelly-Ruetz to follow-up on feasibility of Area 2B being developed - Environmental and SWM work.</li> <li>City to initiate studies and meeting to include Planners regarding septic application for Area 2B.</li> <li>Pearl Valley did not initiate conversation to expand River Birch Sanitary Pump Station.</li> <li>Decision is not to weight criteria.</li> <li>Show all options of one figure (For PIC) to be sent to all</li> <li>Fillable spreadsheet with criteria to be sent to all.</li> <li>Advertisement for the newspaper must be ready two weeks prior to the PIC – January 26.</li> </ul>	

Notes taken by Gemma Charlebois. Please report any errors or omissions.

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## ENVIRONMENTAL COMMITTEE MINUTES

January 20, 2022

CITY OF KITCHENER

The Environmental Committee met this date commencing at 4:04 p.m.

Present:

Messrs. G. Johns – Chair Pro Tem. S. Fulop, T. Belanger, D. Bailey, Cllr. Debbie Chapman

Regrets: R. Fyck, J. Duchesne, Dr. J. Gaudon – Chair, M. Jennings, J. Sherwood, Cllr. Bil Ioannidis

Staff: K. Wood, Project Manager Development Engineering  
C. Musselman, Senior Environmental Planner  
B. Steiner, Senior Environmental Planner  
S. Lodenquai, Committee Administrator

In the absence of both Chair and Vice-Chair, Mr. Grant Johns was elected as Chair Pro Tem for the January 20, 2022 meeting.

1. **Upper Hidden Valley Sanitary Pump Station Class EA – Katie Wood, Project Manager  
City of Kitchener**

The committee was in receipt this date of an Internal Memo and presentation on the matter of the Upper Hidden Valley Sanitary Pump Station Class EA.

Katie Wood provided a project summary explaining that to support development in the Hidden Valley area, the study will identify a sanitary servicing solution through location selection and a preliminary design of a sanitary pumping station and forcemain. The preferred solution will be determined by maintaining the objectives of protection of the environment, minimal disruption to residents and surrounding areas, engaging a broad range of stakeholders, and documenting the study process in compliance with the Municipal Class EA Schedule B process.

Following the project summary, K. Wood outlined the Municipal Class Environmental Assessment process which was accompanied by an exhibit illustrating the Class EA process in phases.

Reviewed was a map depicting the Upper Hidden Valley Pump Station and Forcemain EA Study Area, excerpted from the City's Land Use Master Plan.

K. Wood then summarized the Sanitary Pumping Station Location Options.

- Option 1: Do Nothing
- Option 2: Install Sanitary Pumping Station at Location A
  - Feasible to service but under study to determine land use
- Option 2a: Install Sanitary pumping station at Location A
  - Drain by gravity to existing trunk sanitary on Wabanaki Drive with potential for smaller pumping station and forcemain
- Option 3: Install Sanitary Pumping Station at Location B
  - Area subject to study for land use
- Option 3a: Install Sanitary Pumping Station at Location B
  - areas would drain by gravity to the trunk station on Wabanaki (similar to Option 2a)
- Option 4: Install Sanitary Pumping Station at Location C

K. Wood explained the Stage 1 key archeological findings, key cultural heritage findings, and the key environmental features of the study.

An overview of the proposed alternative evaluation matrix and preliminary evaluation was provided which uses the following criteria:

- natural environment
- social environment – how this location will affect the local community
- impacts to cultural and heritage aspects
- city operations
- technical feasibility
- servicing potential
- cost

## ENVIRONMENTAL COMMITTEE MINUTES

January 20, 2022

CITY OF KITCHENER

The following next steps were outlined:

- Assessing the locations against the matrix and determining the preferred location for the pumping station and forcemain alignment and once the project team has come to a decision on recommending the preferred option Katie Wood will return to this committee to present the solution.

In response to the presentation, it was questioned if evaluation criteria are weighed equally or if some are weighted more than others.

K. Wood advised all criteria is weighted the same way to remain fair.

It was asked if there are more details to the main concerns raised by residents on this study.

K. Wood advised the first PIC was run in November 2021 and residential concerns received to date were surrounding development and if certain areas can be developed. From landowners that have large plots of land who are looking for development solutions, the zoning the land use plan has provided as well as if this project will provide a servicing solution for them.

It was asked what the white zones depicted in the Upper Hidden Valley Study Area were designated as.

B. Steiner advised the white areas are within a regulated area or polygon for the at-risk Jefferson Salamanders species. Regulated habitat in an area does not preclude development rather studies have to be completed and a permit must be issued by the province.

### ADJOURNMENT

On motion, this meeting adjourned at 4:31 p.m.

Shannon Lodenquai  
Committee Administrator



**Project Name:** Upper Hidden Valley SPS Class EA

**MTE File No.:** C48301-100

**Purpose:** Preferred Alternative Discussion

**Date:** February 7, 2022

**Time:** 11:00

**Meeting Location:** Webex

Invitees	Initials	Representation
Katie Wood	KW	City of Kitchener
Chris Spere	CS	City of Kitchener
Linda Cooper	LC	City of Kitchener
Barbara Steiner	BS	City of Kitchener
Andrew Pinnell	AP	City of Kitchener
Richard Kelly-Ruetz	RR	City of Kitchener
Chris Spere	CS	City of Kitchener
C. Foster Pengelly	CFP	Grand River Conservation Authority
Jason Lane	JL	Region of Waterloo
Dave Wilhelm	DW	MTE Consultants Inc.
Gemma Charlebois	GC	MTE Consultants Inc.

Item No.	Discussion	Action
<b>1.0</b>	<b>Update on Alternative Location B</b>	<b>DW</b>
	1.1 Information from Region of Waterloo LRT and River Road alignment confirms that there is insufficient space for an SPS in the Alternative Location B. This is not a valid alternative.	
<b>2.0</b>	<b>Cost Estimates for each Option</b>	<b>DW/GC</b>
	The following cost estimates were provided and has been used for ranking: Option 2 (location A): \$20.0 M Option 2a (location A, gravity service at Wabanaki/Hidden Valley): \$17.5 M Option 3 (location B): \$24.0 M Option 3a (location B, gravity service at Wabanaki/Hidden Valley): \$21.4 M Option 4 (location C): \$18.5 M	
<b>3.0</b>	<b>Location C Considerations</b>	<b>DW/GC</b>
	3.1 The area south of Hidden Valley Road and east of Wabanaki Dr. is included in the sanitary drainage area for River Birch SPS 3.2 According to the condition assessment by Burnside in December 2021, and confirmed by City Operations personnel, there is significant remaining capacity at the River Birch SPS	



Item No.	Discussion	

# Appendix C

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## Agency Correspondence



Hydro One Networks Inc  
483 Bay St  
Toronto, ON

November 11, 2021

Re: Upper Hidden Valley Sanitary Pumping Station and Forcemain

Attention:

Katie Wood, C.E.T. Project Manager Development Engineering City of Kitchener

Thank you for sending us notification regarding (Upper Hidden Valley Sanitary Pumping Station and Forcemain). In our preliminary assessment, we have confirmed that Hydro One has existing high voltage Transmission facilities within your study area. At this time we do not have sufficient information to comment on the potential resulting impacts that your project may have on our infrastructure. As such, we must stay informed as more information becomes available so that we can advise if any of the alternative solutions present actual conflicts with our assets, and if so; what resulting measures and costs could be incurred by the proponent. Note that this response does not constitute approval for your plans and is being sent to you as a courtesy to inform you that we must continue to be consulted on your project.

In addition to the existing infrastructure mentioned above, the applicable transmission corridor may have provisions for future lines or already contain secondary land uses (e.g., pipelines, watermains, parking). Please take this into consideration in your planning.

Also, we would like to bring to your attention that should (Upper Hidden Valley Sanitary Pumping Station and Forcemain) result in a Hydro One station expansion or transmission line replacement and/or relocation, an Environmental Assessment (EA) will be required as described under the Class Environmental Assessment for Minor Transmission Facilities (Hydro One, 2016). This EA process would require a minimum of 6 months for a Class EA Screening Process (or up to 18 months if a Full Class EA were to be required) to be completed. Associated costs will be allocated and recovered from proponents in accordance with the Transmission System Code. If triggered, Hydro One will rely on studies completed as part of the EA you are current undertaking.

Consulting with Hydro One on such matters during your project's EA process is critical to avoiding conflicts where possible or, where not possible, to streamlining processes (e.g., ensuring study coverage of expansion/relocation areas within the current EA). Once in receipt of more specific project information regarding the potential for conflicts (e.g., siting, routing), Hydro One will be in a better position to communicate objections or not objections to alternatives proposed.

If possible at this stage, please formally confirm that Hydro One infrastructure and associated rights-of-way will be completely avoided, or if not possible, allocate appropriate lead-time in your project schedule to collaboratively work through potential conflicts with Hydro One, which ultimately could result in timelines identified above.

In planning, note that developments should not reduce line clearances or limit access to our infrastructure at any time. Any construction activities must maintain the electrical clearance from the transmission line conductors as specified in the Ontario Health and Safety Act for the respective line voltage.

Be advised that any changes to lot grading or drainage within, or in proximity to Hydro One transmission corridor lands must be controlled and directed away from the transmission corridor.

Please note that the proponent will be held responsible for all costs associated with modifications or relocations of Hydro One infrastructure that result from your project, as well as any added costs that may be incurred due to increased efforts to maintain said infrastructure.

We reiterate that this message does not constitute any form of approval for your project. Hydro One must be consulted during all stages of your project. Please ensure that all future communications about this and future project(s) are sent to us electronically to [secondarylanduse@hydroone.com](mailto:secondarylanduse@hydroone.com)

Sent on behalf of,

***Secondary Land Use  
Asset Optimization  
Strategy & Integrated Planning  
Hydro One Networks Inc.***



MTE Consultants

520 Binghamans Centre Drive, Kitchener, Ontario N2B 3X9

November 16, 2021  
MTE File No.: C48301-100

Secondary Land Use  
Asset Optimization  
Strategy and Integrated Planning  
Hydro One Networks Inc.  
483 Bay Street  
Toronto ON  
Email: [secondarylanduse@hydroone.com](mailto:secondarylanduse@hydroone.com)

**RE: Upper Hidden Valley Sanitary Pumping Station and Forcemain**

MTE received your letter of November 11, 2021 regarding the presence of Hydro One transmission facilities in the Upper Hidden Valley study area.

We will keep you informed of developments in our Environmental Assessment.

We can confirm that the design of the pumping station, sewer, and forcemain will aim to avoid Hydro One infrastructure. If we identify areas where Hydro One infrastructure cannot be avoided, we will advise you of the specific location and our intended solution to minimize conflicts.

Yours truly,

**MTE Consultants Inc.**

A handwritten signature in blue ink that reads 'G. Charlebois'.

**Gemma Charlebois, M.A.Sc., P.Eng.**

Design Engineer

519-743-6500 ext. 1227

[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)

GSC:zeg

cc: Katie Wood, City of Kitchener

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**Ministry of Heritage, Sport, Tourism, and  
Culture Industries**

Archaeology Program Unit  
Programs and Services Branch  
Heritage, Tourism and Culture Division  
5th Floor, 400 University Ave.  
Toronto ON M7A 2R9  
Tel.: (437) 339-9231  
Email: Teresa.Tremblay@ontario.ca

**Ministère des Industries du patrimoine, du sport, du  
tourisme et de la culture**

Unité des programme d'archéologie  
Direction des programmes et des services  
Division du patrimoine, du tourisme et de la culture  
5e étage, 400 ave. University  
Toronto ON M7A 2R9  
Tél. : (437) 339-9231  
Email: Teresa.Tremblay@ontario.ca



Dec 13, 2021

Monica Maika (P1021)  
Archaeological Research Associates Ltd.  
632 Waterloo Cambridge ON N3H 1P5

**RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "Stage 1 Archaeological Assessment, Class Environmental Assessment and Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain, City of Kitchener, Regional Municipality of Waterloo, Part of Lots 51 and 53, German Company Tract & Bechtel's Tract, Geographic Township of Waterloo, Former Waterloo County, Ontario", Dated Oct 13, 2021, Filed with MHSTCI Toronto Office on Oct 20, 2021, MHSTCI Project Information Form Number P1021-0004-2021, MHSTCI File Number 0013805**

Dear Ms. Maika:

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18.<sup>1</sup> This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 *Standards and Guidelines for Consultant Archaeologists* set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.

The report documents the assessment of the study area as depicted in Map 9: Potential Modelling and Recommendations of the above titled report and recommends the following:

The Stage 1 assessment determined that the study area comprises a mixture of areas of archaeological potential, areas of no archaeological potential and previously assessed lands of no further concern. It is recommended that all identified areas of archaeological potential be subject to a Stage 2 property assessment in accordance with Section 2.1 of the 2011 S&Gs. Although the study area was defined to include part of the Grand River, it is ARA's understanding that the City has no intention to conduct any works within the river. If any such works are contemplated, a marine assessment would be required prior to any river impacts.

The agricultural fields must be assessed using the pedestrian survey method at an interval of 5 m. All ground surfaces must be recently ploughed (typically within the month prior to assessment), weathered by one heavy rainfall or several light rains, and provide at least 80% visibility. If archaeological materials are

encountered, the transect interval must be decreased to at least 1 m and a close inspection of the ground must be conducted over a minimum of a 20 m radius around the find. This interval must be continued until the full extent of the scatter has been defined.

The wooded areas, overgrown areas and lawns must be assessed using the test pit survey method. A survey interval of 5 m will be required due to the proximity of the lands to the identified features of archaeological potential. Given the likelihood that several parts of the study area were impacted by past construction activities, a combination of visual inspection and test pit survey should be utilized to confirm the extent of disturbance in accordance with Section 2.1.8 of the 2011 S&Gs This will allow for the empirical evaluation of the integrity of the soils and the depth of any impacts. If disturbance cannot be confirmed, then a test pit survey interval of 5 m must be maintained. Each test pit must be excavated into at least the first 5 cm of subsoil, and the resultant pits must be examined for stratigraphy, potential features and/or evidence of fill. The soil from each test pit must be screened through mesh with an aperture of no greater than 6 mm and examined for archaeological materials. If archaeological materials are encountered, all positive test pits must be documented and intensification may be required.

One area along the northern edge of the study area appears to be either sloped >20 degrees or permanently wet, but this locality could not be inspected due to a lack of permission to enter the property and its distance from accessible public areas. This area must be subject to a visual inspection to confirm that it has no archaeological potential. If archaeological potential is identified, these lands must be assessed using the test pit survey method outlined above.

The identified areas of no archaeological potential and previously assessed lands of no further concern do not require any additional assessment. Given that there are still outstanding archaeological concerns within the project lands, no ground alterations or development of any kind may occur until the Stage 2 assessment is complete, a recommendation that the lands require no further archaeological assessment is made, and the associated report is entered into the Ontario Public Register of Archaeological Reports.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

Teresa Tremblay  
Archaeology Review Officer

cc. Archaeology Licensing Officer  
Gemma Charlebois, MTE Consultants Inc.  
Dave Wilhelm, MTE Consultants Inc  
Andrew Pinnell, City of Kitchener

<sup>1</sup>In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.



MTE Consultants

520 Bingham Centre Drive, Kitchener, Ontario N2B 3X9

October 18, 2021  
MTE File No.: C48301-100

Archaeology Program Unit  
Ministry of Heritage, Sport, Tourism and Culture Industries  
Culture Division, Programs and Services Branch  
401 Bay Street, Suite 1700  
Toronto, ON M7A 0A7  
Fax: (416) 212-1802

Dear Archaeology Team,

**RE: Request for Expedited Review of Report Entitled “Stage 1 Archaeological Assessment, Class Environmental Assessment and Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain, City of Kitchener, Regional Municipality of Waterloo, Part of Lots 51 and 53, German Company Tract & Bechtel’s Tract, Geographic Township of Waterloo, Former Waterloo County, Ontario”**

We are requesting that the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) expedite the review of the Stage 1 archaeology report for the Class Environmental Assessment and Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain in the City of Kitchener, Regional Municipality of Waterloo, Ontario. This letter and the Expedited Review request are being submitted by Archaeological Research Associates Ltd. (ARA) as part of the digital report package.

An Expedited Review is required as the report’s acceptance into the Ontario Public Register of Archaeological Reports is a condition of the approvals process, and a timely turnaround is needed to maintain the project schedule. Specifically, the City of Kitchener would like to proceed with selection of a pumping station location to facilitate development as identified in its Master Plan. In order to meet the established timeline, we kindly request a review date of November 19, 2021 or earlier.

Thank you in advance for your consideration.

Sincerely,

**MTE Consultants Inc.**

A handwritten signature in blue ink, appearing to read 'G. Charlebois'.

**Gemma Charlebois, M.A.Sc., P.Eng.,**

Design Engineer

519-743-6500 ext. 1227

[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)

GXC:zeg

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**From:** Gemma Charlebois  
**Sent:** Monday, January 31, 2022 12:22 PM  
**To:** Zenova E. Gentles  
**Subject:** FW: Upper Hidden Valley Evaluation Meeting  
**Attachments:** Upper\_Hidden\_Valley\_SPS\_and\_Forcemain\_Alternatives\_grca\_comments\_20220131.pdf

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**Client First | Right Solution | Work Together** Gemma Charlebois, M.A.Sc., P.Eng.  
*Technical Manager, Water/Wastewater*  
Kitchener x1227

---

**From:** Chris Foster-Pengelly <cfosterpengelly@grandriver.ca>  
**Sent:** Monday, January 31, 2022 12:19 PM  
**To:** Katie Wood <Katie.Wood@kitchener.ca>  
**Cc:** Gemma Charlebois <GCharlebois@mte85.com>; Dave Wilhelm <dwillhelm@mte85.com>  
**Subject:** RE: Upper Hidden Valley Evaluation Meeting

Hi Katie,

My apologies for the delayed response. We understand that based on your email you may have moved forward, but would like to provide them for consideration.

Thank you,  
Chris

**Chris Foster-Pengelly, M.Sc.,**  
Office: 519-621-2763 ext. 2319  
Toll-free: 1-866-900-4722  
[www.grandriver.ca](http://www.grandriver.ca) | [Connect with us on social media](#)

---

**From:** Katie Wood <[Katie.Wood@kitchener.ca](mailto:Katie.Wood@kitchener.ca)>  
**Sent:** Thursday, January 27, 2022 11:28 AM  
**To:** Barbara Steiner <[Barbara.Steiner@kitchener.ca](mailto:Barbara.Steiner@kitchener.ca)>; Andrew Pinnell <[Andrew.Pinnell@kitchener.ca](mailto:Andrew.Pinnell@kitchener.ca)>; Chris Spere <[Chris.Spere@kitchener.ca](mailto:Chris.Spere@kitchener.ca)>; Chris Foster-Pengelly <[cfosterpengelly@grandriver.ca](mailto:cfosterpengelly@grandriver.ca)>; 'Jason Lane' <[JLane@regionofwaterloo.ca](mailto:JLane@regionofwaterloo.ca)>  
**Cc:** 'Gemma Charlebois' <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>; Linda Cooper <[Linda.Cooper@kitchener.ca](mailto:Linda.Cooper@kitchener.ca)>  
**Subject:** RE: Upper Hidden Valley Evaluation Meeting  
**Importance:** High

Hello Everyone,  
To move forward with the project and to prepare for our PIC#2 on Feb. 17 we really need these evaluations submitted to Gemma right away. If we don't hear back from you by 10am tomorrow (Friday, Jan 28<sup>th</sup>) we will be forced to not include your evaluation in the decision made.

Sincerely,

*Katie Wood*, C.E.T.

Project Manager | Development Engineering | City of Kitchener  
519-741-2200 ext. 7135 | TTY 1-866-969-9994 | [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)



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**From:** Gemma Charlebois <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>

**Sent:** Wednesday, January 26, 2022 1:39 PM

**To:** Katie Wood <[Katie.Wood@kitchener.ca](mailto:Katie.Wood@kitchener.ca)>; Victoria Grohn <[Victoria.Grohn@kitchener.ca](mailto:Victoria.Grohn@kitchener.ca)>; Barbara Steiner <[Barbara.Steiner@kitchener.ca](mailto:Barbara.Steiner@kitchener.ca)>; Andrew Pinnell <[Andrew.Pinnell@kitchener.ca](mailto:Andrew.Pinnell@kitchener.ca)>; Richard Kelly-Ruetz <[Richard.Kelly-Ruetz@kitchener.ca](mailto:Richard.Kelly-Ruetz@kitchener.ca)>; Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>; Linda Cooper <[Linda.Cooper@kitchener.ca](mailto:Linda.Cooper@kitchener.ca)>; Chris Spere <[Chris.Spere@kitchener.ca](mailto:Chris.Spere@kitchener.ca)>; 'Chris Foster-Pengelly' <[cfosterpengelly@grandriver.ca](mailto:cfosterpengelly@grandriver.ca)>; 'Jason Lane' <[JLane@regionofwaterloo.ca](mailto:JLane@regionofwaterloo.ca)>

**Subject:** [EXTERNAL] RE: Upper Hidden Valley Evaluation Meeting

To-date I have only received 3 evaluations. If you have not yet provided your evaluation, please do so today so we can complete the scoring.

Thanks,  
Gemma

---

**Gemma Charlebois, M.A.Sc., P.Eng. | Technical Manager, Water/Wastewater  
MTE Consultants Inc.**

T: 519-743-6500 x1227 | [GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)  
520 Bingemans Centre Drive, Kitchener, Ontario N2B 3X9  
[www.mte85.com](http://www.mte85.com) | [Twitter](#) | [LinkedIn](#) | [Instagram](#) | [Facebook](#)

**COVID-19 Update:** We remain operational and are currently available by email and phone, however, our offices are closed. Staff that are required to visit job sites or perform field work are required to follow MTE health and safety policies and procedures, as well as additional COVID-19 protocols, which can be viewed [here](#).

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---

**From:** Gemma Charlebois <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>

**Sent:** Thursday, January 20, 2022 4:14 PM

**To:** 'Katie Wood' <[Katie.Wood@kitchener.ca](mailto:Katie.Wood@kitchener.ca)>; Victoria Grohn <[Victoria.Grohn@kitchener.ca](mailto:Victoria.Grohn@kitchener.ca)>; Barbara Steiner <[Barbara.Steiner@kitchener.ca](mailto:Barbara.Steiner@kitchener.ca)>; Andrew Pinnell <[Andrew.Pinnell@kitchener.ca](mailto:Andrew.Pinnell@kitchener.ca)>; Richard Kelly-Ruetz <[Richard.Kelly-Ruetz@kitchener.ca](mailto:Richard.Kelly-Ruetz@kitchener.ca)>; Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>; Linda Cooper <[Linda.Cooper@kitchener.ca](mailto:Linda.Cooper@kitchener.ca)>; Chris Spere <[Chris.Spere@kitchener.ca](mailto:Chris.Spere@kitchener.ca)>; 'Chris Foster-Pengelly' <[cfosterpengelly@grandriver.ca](mailto:cfosterpengelly@grandriver.ca)>; 'Jason Lane' <[JLane@regionofwaterloo.ca](mailto:JLane@regionofwaterloo.ca)>

**Subject:** RE: Upper Hidden Valley Evaluation Meeting

Please find attached a figure showing all locations and corresponding options for ease of assessing the evaluation criteria for each option.

A spreadsheet is also attached to provide a numerical scoring for each criteria. As I will be compiling each person's scores, a numerical score would be appreciated.

All categories are equally weighted.

Please provide your completed spreadsheet by end of day Tuesday January 25, 2022.

Thanks.

Gemma

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**Client First | Right Solution | Work Together** Gemma Charlebois, M.A.Sc., P.Eng.

*Technical Manager, Water/Wastewater*

Kitchener x1227

-----Original Appointment-----

**From:** Katie Wood <[Katie.Wood@kitchener.ca](mailto:Katie.Wood@kitchener.ca)>

**Sent:** Wednesday, December 15, 2021 12:10 PM

**To:** Katie Wood; Victoria Grohn; Gemma Charlebois; Barbara Steiner; Andrew Pinnell; Richard Kelly-Ruetz; Dave Wilhelm; Linda Cooper; Chris Spere; 'Chris Foster-Pengelly'; 'Jason Lane'

**Subject:** Upper Hidden Valley Evaluation Meeting

**When:** Tuesday, January 18, 2022 10:00 AM-11:30 AM (UTC-05:00) Eastern Time (US & Canada).

**Where:** Microsoft Teams Meeting

Hello,

We wanted to set up the Hidden Valley Evaluation Meeting now knowing that January will become quite busy. We intend to send out the evaluation criteria January 4<sup>th</sup> to give you enough time to go over everything and complete the evaluation. At the meeting we will discuss every ones scores and come to a final decision regarding what option will be chosen.

If you cannot make this meeting perhaps you can send someone in your place. Alternately, please send me your evaluation form ahead of the meeting.

Katie

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Microsoft Teams meeting

**Join on your computer or mobile app**

[Click here to join the meeting](#)

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January 31, 2022

Katie Wood  
City of Kitchener  
Via email: [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)

**Re: Upper Hidden Valley Sanitary Pumping Station and Forcemain Municipal Class Environmental Assessment, City of Kitchener**

Dear Ms. Wood,

Thank you for the opportunity to provide input onto the Upper Hidden Valley Sanitary Pumping Station and Forcemain Municipal Schedule Class Environmental Assessment (Class EA) process. Grand River Conservation Authority (GRCA) staff reviewed the five (5) alternative options presented at the November 4, 2021 Public Information Centre#1 and the seven (7) alternative options subsequently discussed at the January 18, 2022 meeting to review the proposed alternative evaluation matrix and preliminary evaluation. We have reviewed the following project materials:

- Location Options Figures, dated January 4, 2022
- Location Options Figure, dated January 22, 2022
- Letter dated January 6, 2021 with the Notice of Study Commencement
- Public Information Centre notice and boards

As there are no technical reports available for review at this time, GRCA's comments are provided only in context to the general location of the proposed infrastructure to features regulated by the GRCA under Ontario Regulation 150/06.

Based on our review of the materials identified above and information currently available at this office, the GRCA has the following comments on each Option:

### Option 1: Do Nothing

The GRCA understands that Option 1 is not being carried forward for consideration. The GRCA would have had no concerns related to option 1.

## Option 2: Location A

Location A is located within an area regulated by the GRCA. Based on information available at our office, the following features regulated by the GRCA under Ontario Regulation 150/06 are in the vicinity of Location A:

- The Provincially Significant Hidden Valley Wetland
- Hidden Valley North Creek and its associated floodplain
- Valley slope hazards
- Regulated allowances associated with these features

It is GRCA's understanding that there are two options associated with Location A.

- i) Option 2 would include an installation of the Proposed SPS at location A, as well as the construction of the proposed forcemain which would cross Hidden Valley West Creek, extending south to Hidden Valley Road.
- ii) Option 2a would include in installation of the Proposed SPS at location A, as well as the construction of the proposed forcemain which would terminate prior the crossing of Hidden Valley West Creek.

Option 2 requires a crossing for the gravity sewer and forcemain near the headwater of Hidden Valley West Creek. Depending on construction methodology, this may increase the risk of sediment in the wetland and watercourse, and is therefore considered a greater risk to features regulated by the GRCA and less desirable than Option 2a.

## Option 3: Location B – West of Hoffstetter Creek

Location B, as presented at PIC#1, is located within an area regulated by the GRCA. Based on information available at our office, the following features regulated by the GRCA under Ontario Regulation 150/06 are in the vicinity near Location B:

- The Provincially Significant Hidden Valley Wetland
- Hofstetter Creek and its associated floodplain
- Regulated allowances associated with these features

It is GRCA's understanding that there are two options associated with Location B (west of Hoffstetter Creek).

- i) Option 3 would include in installation of the Proposed SPS at location B, as well as the construction of the proposed forcemain which would cross Hidden Valley West Creek, extending south to Hidden Valley Road.
- ii) Option 3a would include in installation of the Proposed SPS at location B, as well as the construction of the proposed forcemain which would terminate prior the crossing of Hidden Valley West Creek.

It appears that pump station is located in or very close to the wetland and Hoffstetter Creek. Development within the wetland would not be supported by the GRCA. Construction of the pump station infrastructure, as well as sanitary sewer and forcemain crossings at Hidden Valley North Creek and near the headwater of Hidden Valley West Creek increases risk of impacts to wetlands and watercourses.

Location B west of Hoffstetter Creek, Options 3 and 3a, are considered to have the greatest risk to features regulated by the GRCA and therefore would be the least preferred Options, respectively.

### Option 3: Location B Alternative Location – East of Hoffstetter Creek

Location B, Alternative location, as identified during the January 18, 2022 meeting and shown on the Location Options Drawing, dated January 22, 2022, is located within an area regulated by the GRCA. Based on information available at our office, the following features regulated by the GRCA under Ontario Regulation 150/06 are in the vicinity near Location B:

- The regulated allowance associated with the Provincially Significant Hidden Valley Wetland.

It is noted that the boundaries of the Provincially Significant Hidden Valley Wetland Complex have not been verified in the field by the GRCA and the boundaries as shown on GRCA's online mapping tool should be revised based on site specific wetland delineation.

It is GRCA's understanding that there are two options associated with Location B – alternative location.

- i) Option 3 would include in installation of the Proposed SPS at location B, as well as the construction of the proposed forcemain which would cross wetlands, Hoffstetter Creek, and Hidden Valley West Creek, extending south to Hidden Valley Road.
- ii) Option 3a would include in installation of the Proposed SPS at location B, as well as the construction of the proposed forcemain which would cross wetlands and Hoffstetter Creek, terminating prior the crossing of Hidden Valley West Creek.

Option 3, alternative location, requires a crossing for the gravity sewer and forcemain near the headwater of Hidden Valley West Creek. Depending on construction methodology, this may increase the risk of sediment in the wetland and watercourse, and is therefore considered a greater risk to features regulated by the GRCA than Option 3a, alternative location.

## Option 4: Location C

The area identified for Location C is not within an area regulated by the GRCA. However, the parcel in which Location C is located may contain valley slope hazards and their regulated allowances, which are regulated by the GRCA.

The location of the pump station results in gravity sewer crossing near the headwater of Hidden Valley West Creek. Depending on construction methodology, this may increase the risk of sediment in the wetland and watercourse

## Option 5: Location D

The GRCA understands that Location D is not being carried forward for consideration. Location D was not within an area regulated by the GRCA. The GRCA would have had no concerns related to Location D.

## General Comments:

As there is regulated area within the proposed areas, GRCA has an interest in the proposed work and would like to review and comment on the preferred alternative when available. Based on our review of the initial options, we can provide the following general comments for consideration:

1. The EA should examine impacts to the natural heritage and hazard lands and incorporate impacts into the decision-making process.
2. As part of the EA process, an Environmental Impact Study (EIS) should be completed to characterize the natural heritage features, potential impacts, and mitigation measures. A Terms of Reference for the EIS should be completed and provided to GRCA for review.
3. Option A should consider the requirement to develop access into the area, including the extent of grading required and potential impacts to slope hazards.
4. Location B (west of Hoffstetter Creek) appears to be the least preferred option based on the provided information.
5. Location B (east of Hoffstetter Creek) appears to be the second least preferred option based on the provided information.
6. Location C may increase the risk of sediment in the wetland and watercourse, however, it appears to have lower overall impact compared to Locations A and B.
7. For all of the options, the overflow should be confirmed and evaluated with the alternatives and it should be clarified if emergency overflow from the proposed pump stations are expected to discharge into the tributaries or if an alternative overflow route/chamber will be provided. It is noted that the Mannheim intake is immediately downstream of where the tributaries enter the Grand River.

8. Depending on the extent of the proposed development, slopes should be considered, a geotechnical assessment may be required, and appropriate measures taken to avoid aggravating the existing slopes.
9. GRCA would be interested in knowing the extent of proposed development, including any grading required.
10. Under the Natural Environment category of the evaluation criteria, the evaluation should assess impacts on GRCA regulated features, including wetlands, watercourses and slope hazards.
11. Depending on the preferred option and timing of construction in relation to other development in the area, the GRCA can provide feedback on design criteria, studies and reports required.

Please note that any development proposed within the GRCA regulated area will require prior permission from the GRCA in the form of a permit pursuant to Ontario Regulation 150/06. The requirements for the GRCA permit will be dependent on the alternative chosen and can be discussed further during the planning process.

If you have any questions or concerns, please do not hesitate to contact the undersigned at 519-621-2763 ext. 2319 or [cfosterpengelly@grandriver.ca](mailto:cfosterpengelly@grandriver.ca).

Sincerely,



---

Chris Foster-Pengelly, M.Sc.  
Resource Planner  
Grand River Conservation Authority

c.c. Dave Wilhelm, MTE Consultants Inc. (via email)  
Gemma Charlebois, MTE Consultants Inc. (via email)

## **For Your Information – Ministry of the Environment, Conservation and Parks (MECP) Notification Procedure**

The MECP becomes aware of streamlined environmental assessments (e.g., class environmental assessment projects, electricity projects and waste management projects) through notifications by project owners. Notifying the ministry is an important step in the streamlined environmental assessment processes. As part of the ministry's ongoing efforts to improve processes and ensure the ministry has an opportunity to provide input on projects undergoing streamlined environmental assessments, the ministry has established dedicated email accounts in each regional office. These accounts will be used as a one-window approach to receive notices as required in your class environmental assessment process along with a new "Project Information Form". As of May 1, 2018, proponents must use this process.

### 4 Step Process for Submitting Notices of Commencement for Streamlined EAs

To submit your notice you need to do the following:

1. Download and complete the Project Information Form. (The Form can be found here Ontario.ca under "Streamlined EAs". It is an excel spreadsheet with columns that need to be filled out by the proponent. The form has been developed for ease of use (i.e. drop down pick list for most fields). Instructions on filling out the form are contained in 2 tabs within the form itself).

2. Create an email. The subject line of your email should include this order: project location, type of streamlined EA and project name

- For example:

- York Region, MEA Class EA, Elgin Mills Rd East (Bayview to Woodbine)
- Durham Region, Electricity Screening Process, New Cogeneration Station
- City of Ottawa, Waste Management Screening Process, Landfill Expansion

3. Attach the completed Project Information Form (in excel format) and a copy of your project notice (in PDF format) to the email.

4. Send by email to the appropriate ministry regional office:

Central Region – [eanotification.cregion@ontario.ca](mailto:eanotification.cregion@ontario.ca)

Eastern Region – [eanotification.eregion@ontario.ca](mailto:eanotification.eregion@ontario.ca)

Northern Region – [eanotification.nregion@ontario.ca](mailto:eanotification.nregion@ontario.ca)

South West Region – [eanotification.swregion@ontario.ca](mailto:eanotification.swregion@ontario.ca)

West Central Region – [eanotification.wcregion@ontario.ca](mailto:eanotification.wcregion@ontario.ca)

### 3 Step Process for Submitting Notices of Completion/Notices of Filing of Addendum/Revised Notice of Completion/Statement of Completion for Streamlined EA

To submit your notice you need to do the following:

1. Create an email. The subject line of your email should include this order: project location, type of streamlined EA and project name.
2. Attach a copy of your project notice (in PDF format) to the email.
3. Send by email to the appropriate ministry regional office:

Central Region – [eanotification.cregion@ontario.ca](mailto:eanotification.cregion@ontario.ca)

Eastern Region – [eanotification.eregion@ontario.ca](mailto:eanotification.eregion@ontario.ca)

Northern Region – [eanotification.nregion@ontario.ca](mailto:eanotification.nregion@ontario.ca)

South West Region – [eanotification.swregion@ontario.ca](mailto:eanotification.swregion@ontario.ca)

West Central Region – [eanotification.wcregion@ontario.ca](mailto:eanotification.wcregion@ontario.ca)

Notes:

- The hyperlink to the District Officer Locator website can be used to assist with determining what ministry region your project is located.
- If your project is located in more than one ministry region, you need to submit your notices to all appropriate regions.
- You must still fulfil all other mandatory notification requirements outlined in the applicable environmental assessment process.
- Other notices besides the ones mentioned above (such as Notices of Open House for example) may be sent to the regional email address for consistency purposes but are not required to be. However, the MECP Regional Environmental Assessment Coordinator is required to be notified in all cases, and therefore other notices must be sent either directly to the appropriate Regional Environmental Assessment Coordinator or to the regional email address.



Hydro One Networks Inc  
483 Bay St  
Toronto, ON

March 08, 2022

Re: Upper Hidden Valley Sanitary Pumping Station and Forcemain

Attention:  
Katie Wood, C.E.T.  
Project Manager  
Development Engineering City of Kitchener

Thank you for sending us notification regarding (Upper Hidden Valley Sanitary Pumping Station and Forcemain). In our preliminary assessment, we have confirmed that Hydro One has existing high voltage Transmission facilities within your study area. At this time we do not have sufficient information to comment on the potential resulting impacts that your project may have on our infrastructure. As such, we must stay informed as more information becomes available so that we can advise if any of the alternative solutions present actual conflicts with our assets, and if so; what resulting measures and costs could be incurred by the proponent. Note that this response does not constitute approval for your plans and is being sent to you as a courtesy to inform you that we must continue to be consulted on your project.

In addition to the existing infrastructure mentioned above, the applicable transmission corridor may have provisions for future lines or already contain secondary land uses (e.g., pipelines, watermains, parking). Please take this into consideration in your planning.

Also, we would like to bring to your attention that should (Upper Hidden Valley Sanitary Pumping Station and Forcemain) result in a Hydro One station expansion or transmission line replacement and/or relocation, an Environmental Assessment (EA) will be required as described under the Class Environmental Assessment for Minor Transmission Facilities (Hydro One, 2016). This EA process would require a minimum of 6 months for a Class EA Screening Process (or up to 18 months if a Full Class EA were to be required) to be completed. Associated costs will be allocated and recovered from proponents in accordance with the Transmission System Code. If triggered, Hydro One will rely on studies completed as part of the EA you are current undertaking.

Consulting with Hydro One on such matters during your project's EA process is critical to avoiding conflicts where possible or, where not possible, to streamlining processes (e.g., ensuring study coverage of expansion/relocation areas within the current EA). Once in receipt of more specific project information regarding the potential for conflicts (e.g., siting, routing), Hydro One will be in a better position to communicate objections or not objections to alternatives proposed.

If possible at this stage, please formally confirm that Hydro One infrastructure and associated rights-of-way will be completely avoided, or if not possible, allocate appropriate lead-time in your project schedule to collaboratively work through potential conflicts with Hydro One, which ultimately could result in timelines identified above.

In planning, note that developments should not reduce line clearances or limit access to our infrastructure at any time. Any construction activities must maintain the electrical clearance from the transmission line conductors as specified in the Ontario Health and Safety Act for the respective line voltage.

Be advised that any changes to lot grading or drainage within, or in proximity to Hydro One transmission corridor lands must be controlled and directed away from the transmission corridor.

Please note that the proponent will be held responsible for all costs associated with modifications or relocations of Hydro One infrastructure that result from your project, as well as any added costs that may be incurred due to increased efforts to maintain said infrastructure.

We reiterate that this message does not constitute any form of approval for your project. Please note that your project may require you to submit a Property Management Proposal (PMP) for Hydro One to fully assess the impact to our assets. To learn more about this process please visit [Secondary Land Uses \(hydroone.com\)](http://hydroone.com)

Sent on behalf of,

***Secondary Land Use  
Asset Optimization  
Strategy & Integrated Planning  
Hydro One Networks Inc.***

---

**From:** EA Notices to SWRegion (MECP) <eanotification.swregion@ontario.ca>  
**Sent:** Thursday, January 7, 2021 9:32 AM  
**To:** Zenova E. Gentles  
**Subject:** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Zenova, can you please update your mailing list for MECP. This notice should have gone only to the email for WCR and not SWR as Waterloo Region is in WCR of the MECP.

Also, please remove Crystal Lafrance from your mailing list. Crystal is on a secondment to OMAFRA and EA has been taken out of the Regional Offices due to a reorganization that occurred in April of 2020.

Thank you

Barb Slattery, EA/Planning Coordinator  
**Ministry of the Environment, Conservation and Parks**  
Project Review Unit, Environmental Assessment Branch  
(365) 366-8185

***We want to hear from you. How was my service? You can provide feedback at 1-888-745-8888.***

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**From:** Zenova E. Gentles  
**Sent:** January 06, 2021 4:52 PM  
**To:** 'cfosterpengelly@grandriver.ca'; 'Planning@Grandriver.ca'; 'Mark.LaForme@mncfn.ca'; 'Fawn.Sault@mncfn.ca'; 'Megan.DeVries@mncfn.ca'; 'tanyahill-montour@sixnations.ca'; 'dlaforme@sixnations.ca'; 'lonnybomberry@sixnations.ca'; 'tworowarchaeology@gmail.com'; 'williams.todde@gmail.com'; 'maxime.picard@cnhw.qc.ca'; 'Rob.Dobos@ec.gc.ca'; Species at Risk (MECP); Shaw, Amy (MECP); Species at Risk (MECP); Orphan, Lee (MECP); 'Crystal.Lafrance@ontario.ca'; EA Notices to SWRegion (MECP); Verhaeghe, Tammy (MNRF); Thornton, Ian (MNRF); Harvard, Jennifer (MNRF); MNRF Ayl Planners (MNRF); 'katie.wood@kitchener.ca'; 'Linda.Cooper@kitchener.ca'; 'Laura.anderson@kitchener.ca'; 'Admin@kitchener.ca'; 'john.gazzola@kitchener.ca'; 'shevaughne.wynter@hydroone.com'; 'moneil@regionofwaterloo.ca'; 'mkroker@regionofwaterloo.ca'; 'Jlane@regionofwaterloo.ca'; 'Jennifer\_Benedict@cpr.ca'; 'jack\_carello@cpr.ca'  
**Cc:** Gemma Charlebois; Dave Wilhelm; 'katie.wood@kitchener.ca'  
**Subject:** 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

**CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.**

Good afternoon:

Please find attached a digital copy of Notice of Commencement informing you of the Upper Hidden Valley Sanitary Pumping Station and Forcemain Class EA.

This study is being carried out in accordance with the requirements of the Environmental Assessment Act, as a Schedule B Municipal Class Environmental Assessment. All notices related to this project can be found on the City of Kitchener's website at the following link: <https://www.kitchener.ca/en/city-services/environmental-assessments.aspx>

The purpose of the current study is to define a sanitary servicing solution that will support responsible development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan (June 2019). The servicing solution will include identifying a sanitary pumping station location and forcemain alignment.

We would welcome the opportunity to meet with you to discuss this study should you wish to do so. Please feel free to call or email me using the contact details below should you require additional information. We look forward to hearing from you.

Regards,

---

**Zenova Gentles, B.Sc | Administrative Assistant**

**MTE Consultants Inc.**

T: 519-743-6500 x1359 | [ZGentles@mte85.com](mailto:ZGentles@mte85.com)

520 Bingemans Centre Drive, Kitchener, Ontario N2B 3X9

[www.mte85.com](http://www.mte85.com) | [Twitter](#) | [LinkedIn](#) | [Instagram](#) | [Facebook](#)

**COVID-19 Update:** We remain operational and are currently available by email and phone, however, our offices are closed. Staff that are required to visit job sites or perform field work are required to follow MTE health and safety policies and procedures, as well as additional COVID-19 protocols, which can be viewed [here](#).

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**From:** MNRF Ayl Planners (MNRF) <MNRF.Ayl.Planners@ontario.ca>  
**Sent:** Friday, January 15, 2021 10:32 AM  
**To:** Dave Wilhelm; katie.wood@kitchener.ca  
**Cc:** Zenova E. Gentles  
**Subject:** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA  
**Attachments:** image001.wmz; Notice of Study Commencement - Upper Hidden Valley.pdf; NHGuide\_MNRF\_2019-04-01.pdf

**Ministry of Natural Resources  
Ministère des Richesses  
Resources and Forestry naturelles et des Forêts**



January 15, 2021  
Dave Wilhelm, P.Eng  
Manager, Water/Wastewater  
MTE Consultants Inc.  
520 Bingham Centre Drive  
Kitchener, ON N2B 3X9  
Phone : (519) 743-6500 ext. 1225  
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Katie Wood, C.E.T.  
Project Manager Development Engineering  
City of Kitchener  
200 King St. W Kitchener, ON N2G 4V6  
Phone: (519) 741-2200 ext. 7135  
Email: [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)

**Subject: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA**

The Ministry of Natural Resources and Forestry (MNRF) received the attached notice for the proposed Upper Hidden Valley Sanitary Pumping Station and Forcemain project. Thank you for circulating this information to our office, however, please note that we have not completed a screening of natural heritage or other resource values for the project at this time. Please also note that it is your responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals.

This response provides information to guide you in identifying and assessing natural features and resources as required by applicable policies and legislation, and engaging with the MNRF for advice as needed.

**Natural Heritage & Endangered Species Act**

In order to provide the most efficient service possible, the attached Natural Heritage Information Request Guide has been developed to assist you with accessing natural heritage data and values from convenient online sources. It remains the proponent's responsibility to complete a preliminary screening for each project, to obtain available information from multiple sources, to conduct any necessary field studies, and to consider any potential environmental impacts that may result from an activity. We wish to emphasize the need for the proponents of development activities to complete screenings prior to contacting the Ministry or other agencies for more detailed technical information and advice.

The Ministry continues to work on updating data housed by Land Information Ontario and the Natural Heritage Information Centre, and ensuring this information is accessible through online resources. Species at risk data is regularly

being updated. To ensure access to reliable and up to date information, please contact the Ministry of the Environment, Conservation and Parks at [SAROntario@ontario.ca](mailto:SAROntario@ontario.ca).

#### **Petroleum Wells & Oil, Gas and Salt Resource Act**

There may be petroleum wells within the proposed project area. Please consult the Ontario Oil, Gas and Salt Resources Library website ([www.ogsrlibrary.com](http://www.ogsrlibrary.com)) for the best known data on any wells recorded by MNRF. Please reference the 'Definitions and Terminology Guide' listed in the publications on the Library website in order to better understand the well information available. Any oil and gas wells in your project area are regulated by the *Oil, Gas and Salt Resource Act*, and the supporting regulations and operating standards. If any unanticipated wells are encountered during development of the project, or if the proponent has questions regarding petroleum operations, the proponent should contact the Petroleum Operations Section at [POSRecords@ontario.ca](mailto:POSRecords@ontario.ca) or 519-873-4634.

#### **Public Lands Act & Lakes and Rivers Improvement Act**

Some projects may be subject to the provisions of the *Public Lands Act* or the *Lakes and Rivers Improvement Act*. Please review the information on MNRF's web pages provided below regarding when an approval is required or not. Please note that many of the authorizations issued under the *Lakes and Rivers Improvement Act* are administered by the local Conservation Authority.

- For more information about the *Public Lands Act*: <https://www.ontario.ca/page/crown-land-work-permits>
- For more information about the *Lakes and Rivers Improvement Act*: <https://www.ontario.ca/document/lakes-and-rivers-improvement-act-administrative-guide>

The MNRF would appreciate the opportunity to review any draft reporting completed in support of this project when it becomes available.

If you have any questions or concerns, please feel free to contact me.

Sincerely,

Karina

---

**Karina Černiavskaja, District Planner**

Ministry of Natural Resources and Forestry

Email: [MNRF.Ayl.Planners@ontario.ca](mailto:MNRF.Ayl.Planners@ontario.ca)



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**Sent:** January-06-21 4:52 PM

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**Cc:** Gemma Charlebois; Dave Wilhelm; 'katie.wood@kitchener.ca'

**Subject:** 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

**CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.**

Good afternoon:

Please find attached a digital copy of Notice of Commencement informing you of the Upper Hidden Valley Sanitary Pumping Station and Forcemain Class EA.

This study is being carried out in accordance with the requirements of the Environmental Assessment Act, as a Schedule B Municipal Class Environmental Assessment. All notices related to this project can be found on the City of Kitchener's website at the following link: <https://www.kitchener.ca/en/city-services/environmental-assessments.aspx>

The purpose of the current study is to define a sanitary servicing solution that will support responsible development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan (June 2019). The servicing solution will include identifying a sanitary pumping station location and forcemain alignment.

We would welcome the opportunity to meet with you to discuss this study should you wish to do so. Please feel free to call or email me using the contact details below should you require additional information. We look forward to hearing from you.

Regards,

---

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**COVID-19 Update:** We remain operational and are currently available by email and phone, however, our offices are closed. Staff that are required to visit job sites or perform field work are required to follow MTE health and safety policies and procedures, as well as additional COVID-19 protocols, which can be viewed [here](#).

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# Appendix D

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## Environmental Studies

# Cultural Heritage Assessment Report

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**DRAFT**

**Cultural Heritage Assessment Report**

**Class Environmental Assessment and Preliminary Design  
for Upper Hidden Valley Sanitary Pumping Station and Forcemain  
City of Kitchener**

**Regional Municipality of Waterloo  
Lots 51 and 53, German Company Tract & Bechtels Tract  
Geographic Township of Waterloo  
Former Waterloo County**

Prepared for  
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HR-210-2020  
ARA File # 2020-0287

Original  
10/05/2021

**Revised**  
**09/05/2022**

## **EXECUTIVE SUMMARY**

Under a contract awarded in December 2020, Archaeological Research Associates Ltd. carried out a Cultural Heritage Assessment Report, for the *Class Environmental Assessment and Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain* in the City of Kitchener, Regional Municipality of Waterloo, Ontario. The Upper Hidden Valley sanitary pumping station and forcemain improvements are intended to support development in the Hidden Valley area as outlined by the Hidden Valley Land Use Master Plan. This assessment was carried out as part of a Schedule 'B' Municipal Class Environmental Assessment in accordance with the *Environmental Assessment Act*.

The purpose of this assessment is to identify and evaluate the cultural heritage resources within and adjacent to the study area that may be impacted by the sanitary pumping station and forcemain project. This assessment was conducted in accordance with the aims of the *Environmental Assessment Act*, R.S.O. 1990, *Provincial Policy Statement (2020)* and the *Ontario Heritage Act*, R.S.O. 1990, c. O.18, *Region of Waterloo Official Plan (2015)*, *City of Kitchener Official Plan (2014)*, and the *Hidden Valley Land Use Master Plan (2019)*.

The study area consists of an irregularly shaped parcel of land with a total area of ±183 acres. This study area is bounded by Highway 8 to the north, the Grand River to the east and south, and Wabanaki Drive to the west. In legal terms, the project falls on part of Lots 51 and 53, German Company Tract & Bechtels Tract, Geographic Township of Waterloo, Former Waterloo County.

The Cultural Heritage Assessment Report approach included:

- Background research concerning the project and historical context of the study area;
- Consultation with City of Kitchener staff regarding heritage matters in the study area;
- Identification of any designated or recognized properties within and adjacent to the study area;
- On-site inspection and creation of an inventory of all properties with potential Built Heritage Resources and Cultural Heritage Landscapes within and adjacent to the study area;
- A description of the location and nature of potential cultural heritage resources;
- Evaluation of each potential cultural heritage resource against the criteria set out in Ontario Regulation 9/06 for determining cultural heritage value or interest;
- Evaluation of potential project impacts; and
- Provision of suggested strategies for the future conservation of identified cultural heritage resources.

As a result of consultation and field surveys the following Built Heritage Resources were identified within and adjacent to the study area: 602 Hidden Valley Road (BHR-1), 691 Hidden Valley Road (BHR-2). The property at 681 Hidden Valley Road was identified in the preliminary review, however, as a direct result of information provided by the owner through the consultation process, it was removed. As a result of consultation and the field survey the following Cultural Heritage

Landscapes were identified within the study area: Hidden Valley Road (CHL-1), Hidden Valley Road- Heritage Corridor (CHL-2), and Grand River Corridor (CHL-3).

Detailed designs or plans for the sanitary pumping station and forcemain were not available at the time this report was written, however there is the potential that the identified Built Heritage Resources and Cultural Heritage Landscapes may be directly or indirectly impacted by the proposed project. All identified Built Heritage Resources and Cultural Heritage Landscapes fall within the study area. Depending on the nature and extent of the proposed project and project location, the Built Heritage Resources and Cultural Heritage Landscapes have the potential for direct and indirect impacts.

As a result of this Cultural Heritage Assessment Report, the following mitigation strategies are recommended:

- That any construction and staging areas should avoid the use of land which are part of BHR-1 at 602 Hidden Valley Road, and BHR-2 at 691 Hidden Valley, as well as, Hidden Valley Road (CHL-1), Hidden Valley Road- Heritage Corridor (CHL-2), and Grand River Corridor (CHL-3);
- That should project-related activities be expected to impact the property associated with BHR-1 BHR-2, CHL-1, CHL-2 or CHL-3, a qualified heritage consultant should be contracted to complete property specific or Cultural Heritage Landscape specific Cultural Heritage Impact Assessments and provide detailed mitigation options to address the proposed design on the resources;
- That design alternatives (i.e., sanitary pumping station location and design as well as forcemain location) should consider the heritage attributes of CHL-1 and CHL-2. Specifically, the narrow two-lane alignment without shoulders, the scenic views to surrounding agricultural fields and the Grand River, the diverse roadside vegetation that abuts the road and provides a defined edge as well as the corresponding and undulating topography which is part of the original historic alignment; this may be achieved through appropriate setbacks.
- That design alternatives should consider the heritage attributes of CHL-3, specifically the well-defined river valley with alternating steep and shallow banks, and the meandering river with significant vegetation communities and associated wildlife habitat. Design alternatives should avoid impacts to the well-defined river valley and the vegetation associated with the steep and shallow banks. This may be achieved by avoiding this area entirely. Should a design alternative (i.e. sanitary pumping station location) be considered within the river valley, it is recommended that a Cultural Heritage Impact Assessment be done to ensure that the proposed design considers height, massing, architectural style elements, etc., to minimize any impacts and ensure it is sympathetic to the surrounding character of the Grand River.
- That the physical design of any proposed structures should not detract from the character of the area. Any new structure for the sanitary pumping station should be sympathetic to the surrounding area and minimize impacts through appropriate height, massing and architecture style;
- That public consultation may result in additional potential cultural heritage resources being identified. These potential cultural heritage resources should be reviewed by a qualified

heritage consultant to: 1) determine their cultural heritage value or interest, 2) evaluate potential project impacts, and 3) suggest strategies for future conservation of any identified cultural heritage resources;

- That should the proposed project or the proposed study area expand beyond the scope examined in this report, a qualified heritage consultant should be retained to determine the potential impacts and suggest mitigation measures;
- That should the proposed project create publicly accessible areas, this may provide an opportunity to interpret some of the identified cultural heritage resources associated with the Cultural Heritage Landscapes (i.e., with plaques, public art);
- That this Cultural Heritage Assessment Report should be provided to staff/planners at the City of Kitchener;
- That a Stage 1 archaeological assessment is currently being undertaken to address the identified archaeological potential associated with the study area and no soil disturbing activities should take place until all archaeological concerns are mitigated and all reports are accepted by the Ministry of Heritage, Sport, Tourism and Culture Industries.

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### **GLOSSARY OF ABBREVIATIONS**

ARA – Archaeological Research Associates Ltd.  
BHR – Built Heritage Resource  
CHAR – Cultural Heritage Assessment Report  
CHL – Cultural Heritage Landscape  
CHVI – Cultural Heritage Value or Interest  
EA – Environmental Assessment  
GRCA- Grand River Conservation Authority  
CHIA – Cultural Heritage Impact Assessment  
HSMBC – Historic Sites and Monuments Board of Canada  
MCEA – Municipal Class Environmental Assessment  
MHSTCI – Ministry of Heritage, Sport, Tourism and Culture Industries  
OHA – Ontario Heritage Act  
OHT – Ontario Heritage Trust  
OP – Official Plan  
O. Reg. – Ontario Regulation  
PIC – Public Information Centre  
PPS – Provincial Policy Statement  
ROP– Regional Official Plan

## **PERSONNEL**

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Two-page Curriculum Vitae (CV) for key team members that demonstrate the qualifications and expertise necessary to perform cultural heritage work in Ontario are provide in Appendix B.

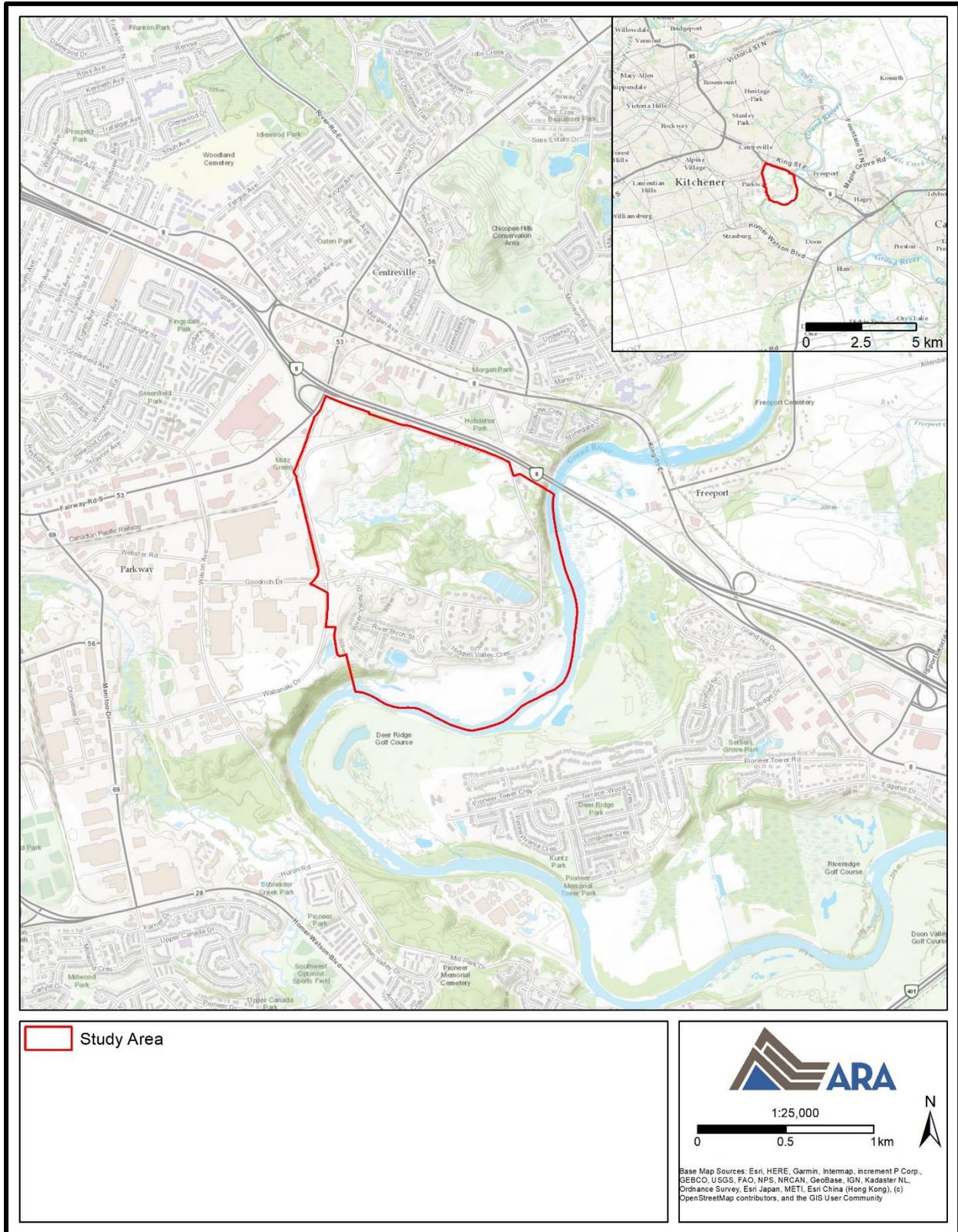
## **1.0 PROJECT CONTEXT**

Under a contract awarded in December 2020, Archaeological Research Associates Ltd. (ARA) carried out a Cultural Heritage Assessment Report (CHAR), for the *Class Environmental Assessment and Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain* (henceforth proposed project) in the City of Kitchener, Regional Municipality of Waterloo, Ontario. The proposed project is intended to support development in the Hidden Valley area as outlined by the *Hidden Valley Land Use Master Plan* (City of Kitchener 2019). This assessment was carried out as part of a Schedule ‘B’ Municipal Class Environmental Assessment (EA) in accordance with the *Environmental Assessment Act*.

The study area consists of an irregularly shaped parcel of land with a total area of ±183 acres (see Map 1). This study area is bounded by Highway 8 to the north, the Grand River to the east and south, and Wabanaki Drive to the west. In legal terms, the study area falls on part of Lots 51 and 53, German Company Tract & Bechtels Tract, Geographic Township of Waterloo, Former Waterloo County.

The study area is characterized by rolling topography, agricultural fields, low rise large lot residential dwelling and estates and other infill lots, roadways, and steep slopes and grade changes surrounding the valley. Hidden Valley Road, starting and ending at Wabanaki Drive, is located within the study area and has a narrow two-lane alignment without shoulders. Roadside vegetation provides definition to the road edge. The study area includes a significant natural environmental system as several branches of the creek flow in and out the project area in the valley and are connected to the Grand River.

The purpose of this assessment is to identify and evaluate the cultural heritage resources within and adjacent to the study area that may be impacted by the proposed project. This assessment was conducted in accordance with the aims of the *Environmental Assessment Act*, R.S.O. 1990, *Provincial Policy Statement* (2020) and the *Ontario Heritage Act*, R.S.O. 1990, c. O.18, *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (MHSTCI 1992), *Ontario Heritage Tool Kit series* (MHSTCI 2006a), the *Region of Waterloo Official Plan* (2015) and *City of Kitchener Official Plan* (2014), and the *Hidden Valley Land Use Master Plan* (2019).



**Map 1: Study Area in the City of Kitchener**  
 (Produced by ARA under licence using ArcGIS® software by Esri, © Esri)

## **2.0 LEGISLATION AND POLICY REVIEW**

The framework for this assessment report is provided by federal guidelines, provincial environmental and planning legislation, and policies as well as regional and local municipal Official Plans and guidelines.

### **2.1 Federal Guidelines**

At the national level, *The Standards and Guidelines for Conservation of Historic Places in Canada* (Parks Canada 2010) provides guidance for the preservation, rehabilitation, and restoration of historic places, including cultural heritage landscapes (CHLs) and built heritage resources (BHRs). Such guidance includes the planning and implementation of heritage conservation activities.

### **2.2 Provincial Policies and Guidelines**

#### ***2.2.1 Environmental Assessment Act and Guideline***

Within the *Environmental Assessment Act*, the environment includes “any building, structure, machine or other device or thing made by humans.” An Environmental Assessment (EA) is a study that evaluates both the potential positive and/or negative effects of a project on the environment. This study is conducted as part of a streamlined EA process known as a Municipal Class EA (MCEA), which applies to routine projects grouped into classes that range from A (minor undertakings) to C (new construction of large facilities). The MCEA applies to municipal infrastructure undertakings including roads, water, and wastewater projects. The Upper Hidden Valley proposed project constitutes a Schedule “B” undertaking.

The *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* indicates a need to describe the “affected environment” that is “a spatially defined area within which land will be altered as a result of the proponent’s development” (MHSTCI 1992:3). As such, ARA completes in-depth research and evaluation of any potential cultural heritage resource within the study area. ARA’s business practice also considers the study area and any adjacent properties. This ensures that every BHR and CHL that may be subject to potential indirect project impacts is identified.

#### ***2.2.2 Planning Act***

Section 2 of the Ontario *Planning Act* indicates that a council of a Municipality have regard for matters of provincial interest such as:“(d) the conservation of features of significant architectural, cultural, historical, archaeological or scientific interest” (Government of Ontario 2018). Section 3 of the *Planning Act* directs a municipal Council’s decisions to be consistent with the *Provincial Policy Statement* (PPS 2020).

#### ***2.2.3 The Provincial Policy Statement (2020)***

The *Provincial Policy Statement* (PPS 2020) contains a combined statement of the Province’s land use planning policies. It provides the provincial government’s policies on a range of land use planning issues including cultural heritage outlined. As outlined in Section 2.0 on Wise Use of and Management of Resources: “Ontario’s long-term prosperity, environmental health, and social well-

being depend on conserving biodiversity, protecting the health of the Great Lakes, and protecting natural heritage, water, agricultural, mineral and cultural heritage and archaeological resources for their economic, environmental and social benefits” (MMAH 2020:24). The PPS 2020 promotes the conservation of cultural heritage resources through detailed polices in Section 2.6, such as “2.6.1 Significant built heritage resources and significant cultural heritage landscapes shall be conserved” and “2.6.3 Planning authorities shall not permit development and site alteration on adjacent lands to protected heritage property except where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved.” (MMAH 2020:31).

#### **2.2.4 Ontario Heritage Act**

The *Ontario Heritage Act (OHA)*, R.S.O. 1990, c.018 is the guiding piece of provincial legislation for the conservation of significant cultural heritage resources in Ontario. The *OHA* gives provincial and municipalities governments the authority and power to conserve Ontario’s heritage. The *OHA* has policies which address individual properties (Part IV), heritage districts (Part IV), and allows municipalities to create a register of non-designated properties which may have cultural heritage value or interest (Section 27).

In order to objectively identify cultural heritage resources, O. Reg. 9/06 made under the *OHA* sets out three principal criteria with nine sub-criteria for determining cultural heritage value or interest (CHVI) (MHSTCI 2006b:20–27). The criteria set out in the regulation were developed to identify and evaluate properties for designation under the *OHA*. Best practices in evaluating properties that are not yet protected employ O. Reg. 9/06 to determine if they have CHVI. In the absence of specific CHL evaluation criteria, potential CHLs O. Reg 9/06 is also applied to consider the built and natural features and the property as a whole. The O. Reg. 9/06 criteria include: design or physical value, historical or associative value and contextual value.

1. *The property has design value or physical value because it,*
  - i. *is a rare, unique, representative or early example of a style, type, expression, material or construction method,*
  - ii. *displays a high degree of craftsmanship or artistic merit, or*
  - iii. *demonstrates a high degree of technical or scientific achievement.*
  
2. *The property has historical value or associative value because it,*
  - i. *has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community,*
  - ii. *yields, or has the potential to yield, information that contributes to an understanding of a community or culture, or*
  - iii. *demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.*
  
3. *The property has contextual value because it,*
  - i. *is important in defining, maintaining or supporting the character of an area,*
  - ii. *is physically, functionally, visually or historically linked to its surroundings, or*
  - iii. *is a landmark. O. Reg. 9/06, s. 1 (2).*

The *OHA* provides three key tools for the conservation of built heritage resources (BHRs) and cultural heritage landscapes (CHLs). It allows for protection as:

1. A single property (i.e., farmstead, park, garden, estate, cemetery), a municipality can designate BHRs and CHLs as individual properties under Part IV of the *OHA*.
2. Multiple properties or a specific grouping of properties may be considered a CHL, as such, a municipality can designate the area as a Heritage Conservation District (HCD) under Part V of the *OHA*.
3. Lastly, a municipality has the authority to add an individual or grouping of non-*OHA* designated property(ies) (often called “listed” properties) of heritage value or interest on their Municipal Heritage Register.

An *OHA* designation provides the strongest heritage protection available for conserving cultural heritage resources. It allows a municipality to deny demolition permits, to guide change through development review of protected property(ies) and adjacent protected property(ies) and to control property alterations through a heritage permit system.

### **2.2.5 Summary of Provincial Policies**

The PPS addresses cultural heritage resources, including cultural heritage landscapes. The PPS notes that significant heritage resources “shall be conserved”. This cultural heritage assessment will evaluate the potential cultural heritage resources located within the area to be affected by the *Class Environmental Assessment and Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain*.

## **2.3 Municipal Policies**

### **2.3.1 Region of Waterloo Official Plan**

The Region of Waterloo *Regional Official Plan 2031* (ROP) Chapter 3 focuses on “Liveability in Waterloo.” Section 3.G contains policies related specifically to cultural heritage in Waterloo Region. Policy 3.G.1 indicates that: “The Region and Area Municipalities will ensure that cultural heritage resources are conserved using the provisions of the Heritage Act, the Planning Act, the Environmental Assessment Act...” (2015:48). This policy is relevant for the current project. Building on Policy 3.G.1, Policy 3.G.3 states:

*Area Municipalities will identify cultural heritage resources by establishing and maintaining a register of properties that are of cultural heritage value or interest. Area Municipalities will include on their register properties designated under Part IV, V or VI of the Heritage Act, and will consider including, but not be limited to, the following additional cultural heritage resources of cultural heritage value or interest:*

- (a) properties that have heritage conservation easements or covenants registered against title;*
- (b) cultural heritage resources of Regional interest; and*
- (c) cultural heritage resources identified by the Grand River Conservation Authority and the Federal or Provincial governments (Region of Waterloo 2015:48-49).*

In Policy 3.G.4 the Region indicates it will also coordinate and maintain a “region-wide inventory of cultural heritage resources” which will include the resources noted above as well as resources identified by “postsecondary institutions or local historical societies” (Region of Waterloo 2014:49).

There are policies that are for the identification and protection of Regionally Significant Cultural Heritage Resources. The policy information below is also outlined in the *Regional Implementation Guideline for Conserving Regionally Significant Cultural Heritage Resources (RSCHR)* (2018:9).

*3.G.2 The Region will prepare and update a Regional Implementation Guideline for Conserving Regionally Significant Cultural Heritage Resources. In accordance with the Ontario Heritage Act, this guideline will outline the criteria and processes the Region will follow to identify and conserve cultural heritage resources of Regional interest including regional roads that have cultural heritage value or interest.*

Specifically, cultural heritage landscapes are to be conserved through the preparation and updating of a “Regional Implementation Guideline for Cultural Heritage Conservation” which will provide an identification and implementation framework and will allow for the highlighting of CHLs of Regional interest (Policy 3.G.5 Region of Waterloo 2014:49). This guide addresses the above as well as provides detailed guidance on CHL conservation and relates it to the *Environmental Assessment Act* process (Region of Waterloo 2013:1). Policy 3.G.6 further states: “Area Municipalities will designate Cultural Heritage Landscapes in their official plans and establish associated policies to conserve these areas. The purpose of this designation is to conserve groupings of cultural heritage resources...” (Region of Waterloo 2014:50).

### **2.3.2 City of Kitchener Official Plan**

The *City of Kitchener Official Plan* outlines goals of the OP which includes providing:

*...a framework for the creation and maintenance of a safe and healthy urban environment within which opportunities are provided for people to satisfy their social, economic, cultural and physical needs and for maintaining and conserving the integrity of the natural and cultural heritage (City of Kitchener 2014:2-4).*

Section 12 of *City of Kitchener Official Plan* contains policies addressing cultural heritage resources. Within this section there are objectives for the conservation of cultural heritage resources including:

- 12.C.1.1. To conserve the city’s cultural heritage resources through their identification, protection, use and/or management in such a way that their heritage values, attributes and integrity are retained.*
- 12.C.1.2. To ensure that all development or redevelopment and site alteration is sensitive to and respects cultural heritage resources and that cultural heritage resources are conserved. (2014:12-1).*

Similar to the Region, the City of Kitchener will use legislation to conserve cultural heritage resources which will include the *Environmental Assessment Act*, legislation which this project falls under (Policy 12.C.1.1 City of Kitchener 2014:2-1). Cultural heritage resources to be included in a list maintained by the City include:

- a) properties listed as non-designated properties of cultural heritage value or interest on the Municipal Heritage Register;*
- b) properties designated under Part IV and V of the Ontario Heritage Act; c) cultural heritage landscapes; and,*
- d) heritage corridors (Policy 12.C.1.3. City of Kitchener 2014:12-2).*

The City also acknowledges that all cultural heritage resources have not been identified and as such, Policy 12.C.1.4. provides for properties that are not “listed or designated to be considered as having cultural heritage value or interest” (2014:12-2).

The protection of CHLs is outlined in policies 12.C.1.8. – 12.C.1.12. which provide for inventorying and listing of CHLs on the Municipal Heritage Register, their mapping and their conservation through legislation and along the Grand River (2014:12-2 - 12-3). Beyond these policies the OP contains cultural heritage policies within Section 12 that address Heritage Conservation Districts; archaeology; conservation measures for cultural heritage resources; Heritage Impact Assessments and Heritage Conservation Plans; Heritage Permit application process; the demolition/damage of cultural heritage resources; public infrastructure; incentives; the role and resources of Kitchener including leading by example with the care and management of City-owned cultural heritage resources; and the design and integration of cultural heritage resources in the City.

Section 13 of the OP entitled “Integrated Transportation System” focusses on the creation of “An integrated transportation system [which] is an essential part of the city’s urban structure and a key element in shaping the form and character of growth in the city” (City of Kitchener 2014:13-1). A component of the integrated transportation system is the conservation of cultural heritage resources. Specifically, there are policies focussing on “Heritage Corridors” which are identified as a cultural heritage resource, mapped in the Official Plan and there are policies for their management and conservation (City of Kitchener 2014:13-13 – 13-16). Policy 13.C.4.18 lists seven streets that have been identified as having “potential cultural heritage value or interest to be considered a potential cultural heritage resource” and Hidden Valley Road is included in this list (2014:13-16).

### ***2.3.3 Hidden Valley Land Use Master Plan***

The Hidden Valley area is approximately 183 acres of land and it has been characterized as “primarily...rolling topography, including several agricultural fields, with large lot estate residential dwellings towards the river” (City of Kitchener 2019:2). As noted in the Master Plan’s discussion of Issues and Opportunities, “Hidden Valley is a special character area with some unique attributes” (City of Kitchener 2019:4). The Master Plan identifies certain considerations from a land use policy perspective and one of these considerations is:

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*Hidden Valley Road is a significant 'Cultural Heritage Landscape' and under consideration as a 'Heritage Corridor' (City of Kitchener 2019:4).*

There are several key policy directions for Hidden Valley area, as identified in the Master Plan report, including a subsection on Cultural Heritage (2019:6) which states:

- 1. The portion of Hidden Valley Road from approximately just south of Hidden Valley Creek to the location of the start of the new access arrangement to River Road extension near Highway 8 is the only portion of the road that would be the significant Cultural Heritage Landscape (CHL).*
- 2. Find opportunities to acknowledge and celebrate the Grand River, Indigenous Culture and the historical context of the area. This could be connected with future park and open space features, wayfinding, interpretive panels, views and vistas or other opportunities (2019:6)*

The portion of Hidden Valley Road that is to be considered as a heritage corridor is from approximately just south of Hidden Valley Creek to just south of Highway 8. As part of the implementation of the Master Plan one of the Official Plan implications is to prepare a draft amendment to “Integrated Transportation System” Map 11 with the illustration of this portion of Hidden Valley Road as a heritage corridor (City of Kitchener 2019:10). Another OP implementation implication is: “As part of the Corridor Enhancement Plan, prepare a cross section(s) and guidelines for Hidden Valley Road from the creek to Highway 8 that respects and enhances the character and significance of the significant Cultural Heritage Landscape/Heritage Corridor” (2019:11).

#### **2.3.4 Summary of Municipal Policies**

The Official Plan policies in the ROP and the City of Kitchener’s OP call for the conservation of cultural heritage resources, the maintaining and promotion of heritage registers and provide policies related to potential development impacts to cultural heritage resources. Therefore, this CHAR will address these cultural heritage policies as it analyzes the *Class Environmental Assessment and Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain*.

### **3.0 KEY CONCEPTS**

The following concepts require clear definition in advance of the methodological overview and proper understanding is fundamental for any discussion pertaining to cultural heritage resources:

- **Cultural Heritage Value or Interest (CHVI)**, also referred to as Heritage Value, is identified if a property meets one of the criteria outlined in O. Reg. 9/06 namely historic or associate value, design or physical value and/or contextual value. Provincial significance is defined under *Ontario Heritage Act (OHA) O. Reg. 10/06*.
- **Built Heritage Resource (BHR)** can be defined in the *PPS* as: “a building, structure, monument, installation or any manufactured or constructed part or remnant that contributes to a property’s cultural heritage value or interest as identified by a community, including Indigenous community. Built heritage resources are located on property that has been

designated under Parts IV or V of the *Ontario Heritage Act*, or that may be included on local, provincial and/or federal and/or international registers” (MMAH 2020:41).

- **Cultural Heritage Landscape (CHL)** is defined in the *PPS* as: “a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Aboriginal community. The area may involve features such as structures, spaces, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Examples may include, but are not limited to, heritage conservation districts designated under the *Ontario Heritage Act*; villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trailways, viewsheds, natural areas and industrial complexes of heritage significance; and areas recognized by federal or international designation authorities (e.g., a National Historic Site or District designation, or a UNESCO World Heritage Site)” (MMAH 2020:42).
- **Conserved** means “the identification, protection, management and use of built heritage resources, cultural heritage landscapes and archaeological resources in a manner that ensures their cultural heritage value or interest is retained. This may be achieved by the implementation of recommendations set out in a conservation plan, archaeological assessment, and/or heritage impact assessment that has been approved, accepted or adopted by relevant planning authority and/or decision-makers. Mitigative measures and/or alternative development approaches can be included in these plans and assessments” (MMAH 2020:41).
- **Heritage Attributes** are defined as: “the principal features or elements that contribute to a protected heritage property’s cultural heritage value or interest, and may include the property’s built, constructed, or manufactured elements, as well as natural landforms, vegetation, water features, and its visual setting (e.g. significant views or vistas to or from a protected heritage property).” (MMAH 2020:44-45).
- **Protected heritage property** is defined as “property designated under Parts IV, V or VI of the *Ontario Heritage Act*; property subject to a heritage conservation easement under Parts II or IV of the *Ontario Heritage Act*; property identified by the Province and prescribed public bodies as provincial heritage property under the *Standards and Guidelines for Conservation of Provincial Heritage Properties*; property protected under federal legislation, and UNESCO World Heritage Sites” (MMAH 2020:49).
- **Significant** in reference to cultural heritage is defined as: “resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the *Ontario Heritage Act*” (MMAH 2020:51).

Key heritage definitions from the *Region of Waterloo Official Plan* are as follows:

- **Built heritage resources** are defined as “one or more significant buildings, structures, monuments, installations or remains associated with architectural, cultural, social, political, economic or military history and identified as being important to the community. These resources may be identified through designation or heritage conservation easement under the *Ontario Heritage Act*, or listed by local, regional, provincial or federal jurisdictions” (2015:G-4).

- **Cultural Heritage Impact Assessment** is detailed as “a study to determine if cultural heritage resources will be negatively impacted by a proposed development or site alteration. It can also demonstrate how the cultural heritage resource will be conserved in the context of redevelopment or site alteration. Mitigative or avoidance measures or alternative development approaches may also be recommended” (2015:G-5).
- **Cultural heritage landscape** is “a defined geographical area of heritage significance which has been modified by human activities and is valued by a community. It involves a grouping(s) of individual heritage features such as structures, spaces, archaeological sites and natural elements, which together form a significant type of heritage form, distinctive from that of its constituent elements or parts” (2015:G-5).
- **Cultural heritage resources** are “the physical remains and the intangible cultural traditions of past human activities. These include, but are not limited to:
  - buildings (residential, commercial, institutional, industrial and agricultural);
  - cultural heritage landscapes (designed, organic/evolved);
  - structures (water tower; bridge, fence and dam);
  - monuments (cenotaph, statue and cairn);
  - archaeological resources;
  - cemeteries;
  - scenic roads;
  - vistas/viewsheds;
  - culturally significant natural features (tree and landform);
  - movable objects (archival records and artifacts); and
  - cultural traditions (language, stories, music, dance, food, celebrations, art and crafts”) (2015:G-6).

Key heritage definitions from the *City of Kitchener Official Plan* are as follows:

- **Adaptive Re-use** “the recycling of a building and/or structure usually for a new function, such as the use of a former industrial building for residential purposes.” (2014:A-1)
- **Cultural Heritage Resources** “includes buildings, structures and properties designated under the Ontario Heritage Act or listed on the Municipal Heritage Register, properties on the Heritage Kitchener Inventory of Historic Buildings, built heritage resources and cultural heritage landscapes as defined in the Provincial Policy Statement.” (2014:A-5).
- **Cultural Heritage Landscapes** “a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community. The area may involve features such as structures, spaces, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Examples may include, but are not limited to, heritage conservation districts designated under the Ontario Heritage Act; villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trailways, viewsheds, natural areas and industrial complexes of heritage significance; and areas recognized by federal or international designation authorities (2014:A-5).

It is recognized that the heritage value of a CHL is often derived from its association with historical themes that characterize the development of human settlement in an area (see Scheinman 2006 for discussion of typical themes).

The *Standards and Guidelines for the Conservation of Historic Places* define a CHL as “any geographical area that has been modified, influenced or given special cultural meaning by people, and that has been formally recognized for its heritage value” (Parks Canada 2010:113). It identifies the three categories of cultural landscapes which are also contained within the UNESCO (2019) Operational Guidelines for the Implementation of the World Heritage Convention: designed; organically evolved (vernacular); and associative. The *Standards and Guidelines* further outlines specific guidelines for cultural heritage landscapes, including 11 subsections on: “evidence of land use; evidence of traditional practices; land patterns; spatial organization; visual relationships; circulation; ecological features; vegetation; landforms; water features; and built features” (Parks Canada 2010:50). The Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) *Information Sheet #2 Cultural Heritage Landscapes* (2006c:1-2) continues these definitions:

- Designed Cultural Landscapes – These are areas that are clearly defined and created intentionally by human design. They may include garden and parkland landscapes constructed for aesthetic reasons and may be associated with religious or monumental buildings.
- Evolved Cultural Landscapes – This type of landscape is often the result of a social, economic, administrative and/or religious motivation that has continued to develop into its present form due to associations with, or in response to, its natural environment. There are two sub-categories of this CHL type:
  - Relic Landscape – One in which an evolutionary process came to an end but its significant distinguishing features are still visible.
  - Continuing Landscape – One that retains associations with traditional practices but which retains an active social role in the current community while continuing to evolve and exhibit material evidence of this ongoing evolution.
- Associative Cultural Landscapes – These landscapes have religious, artistic, or cultural associations with nature rather than with material cultural evidence, which may be insignificant or absent.

#### 4.0 HISTORICAL CONTEXT

The site history of study area was constructed using background information obtained from aerial photographs, historical maps (i.e., illustrated atlases) and published secondary sources (online and print). Given the limited time frame for the production of this report, and closures due to the current pandemic, there is always the possibility that additional historical information exists but may not have been identified or accessible for review.

The City of Kitchener and Waterloo County have a long history of settlement including pre-contact and post-contact Indigenous campsites and villages due to its productive riverside lands, as well as favourable farmland. The study area has strong associations with Indigenous communities, and the heritage resources considered in this report can be associated with both Pre-Contact and Post-Contact cultural developments. Accordingly, this historical context section spans the Pre-Contact

Indigenous occupation history through Euro-Canadian settlement history to present. The early history of the study area can be effectively discussed in terms of major historical events.

## 4.1 Settlement History

### 4.1.1 Pre-Contact

The Pre-Contact history of the region is lengthy and rich, and a variety of Indigenous groups inhabited the landscape. Archaeologists generally divide this vibrant history into three main periods: Palaeo, Archaic, and Woodland. Each of these periods comprise a range of discrete sub-periods characterized by identifiable trends in material culture and settlement patterns, which are used to interpret past lifeways. The principal characteristics of these sub-periods are summarized in Table 1.

**Table 1: Pre-Contact Settlement History**  
 (Wright 1972; Ellis and Ferris 1990; Warrick 2000; Munson and Jamieson 2013)

Sub-Period	Timeframe	Characteristics
<i>Early Palaeo-Indian</i>	9000–8400 BC	Gainey, Barnes and Crowfield traditions; Small bands; Mobile hunters and gatherers; Utilization of seasonal resources and large territories; Fluted projectiles
<i>Late Palaeo-Indian</i>	8400–7500 BC	Holcombe, Hi-Lo and Lanceolate biface traditions; Continuing mobility; Campsite/Way-Station sites; Smaller territories are utilized; Non-fluted projectiles
<i>Early Archaic</i>	7500–6000 BC	Side-notched, Corner-notched (Nettling, Thebes) and Bifurcate traditions; Growing diversity of stone tool types; Heavy woodworking tools appear (i.e., ground stone axes and chisels)
<i>Middle Archaic</i>	6000–2500 BC	Stemmed (Kirk, Stanly/Neville), Brewerton side- and corner-notched traditions; Reliance on local resources; Populations increasing; More ritual activities; Fully ground and polished tools; Net-sinkers common; Earliest copper tools
<i>Late Archaic</i>	2500–900 BC	Narrow Point (Lamoka), Broad Point (Genesee) and Small Point (Crawford Knoll) traditions; Less mobility; Use of fish-weirs; True cemeteries appear; Stone pipes emerge; Long-distance trade (marine shells and galena)
<i>Early Woodland</i>	900–400 BC	Meadowood tradition; Crude cord-roughened ceramics emerge; Meadowood cache blades and side-notched points; Bands of up to 35 people
<i>Middle Woodland</i>	400 BC–AD 600	Saugeen tradition; Stamped ceramics appear; Saugeen projectile points; Cobble spall scrapers; Seasonal settlements and resource utilization; Post holes, hearths, middens, cemeteries and rectangular structures identified
Middle/Late Woodland Transition	AD 600–900	Gradual transition between Saugeen and Algonkian lifeways; Princess Point tradition emerges elsewhere (i.e., within the drainages around the western end of Lake Ontario, Grand River and the north shore of Lake Erie)
<i>Late Woodland (Early Iroquoian)</i>	AD 900–1300	Glen Meyer tradition; Settled village-life based on agriculture; Small villages (0.4 ha) with 75–200 people and 4–5 longhouses; Semi-permanent settlements
<i>Late Woodland (Middle Iroquoian)</i>	AD 1300–1400	Uren and Middleport traditions; Classic longhouses emerge; Larger villages (1.2 ha) with up to 600 people; More permanent settlements (30 years)
<i>Late Woodland (Late Iroquoian)</i>	AD 1400–1600	Pre-Contact Neutral tradition; Larger villages (1.7 ha); Examples up to 5 ha with 2,500 people; Extensive croplands; also hamlets, cabins, camps and cemeteries; Potential tribal units; Fur trade begins circa 1580; European trade goods appear

Although Iroquoian-speaking populations tended to leave a much more obvious mark on the archaeological record and are therefore emphasized in the Late Woodland entries above, it must be understood that Algonquian-speaking populations also represented a significant presence in southern Ontario. Due to the sustainability of their lifeways, archaeological evidence directly associated with the Anishinaabeg remains elusive, particularly when compared to sites associated with the more sedentary agriculturalists. Many artifact scatters in southern Ontario were likely

camps, chipping stations or processing areas associated with the more mobile Anishinaabeg, utilized during their travels along the local drainage basins while making use of seasonal resources. It must be recognized that this part of southern Ontario represents the ancestral territory of various Indigenous groups, each with their own land use and settlement pattern tendencies.

#### 4.1.2 Post-Contact

The arrival of European explorers and traders at the beginning of the 17<sup>th</sup> century triggered widespread shifts in Indigenous lifeways and set the stage for the ensuing Euro-Canadian settlement process. Documentation for this period is abundant, ranging from the first sketches of Upper Canada and the written accounts of early explorers to detailed township maps and lengthy histories. The Post-Contact period can be effectively discussed in terms of major historical events, and the principal characteristics associated with these events are summarized in Table 2.

**Table 2: Post-Contact Settlement History**  
(Smith 1846; Coyne 1895; Lajeunesse 1960; Cumming 1972, Ellis and Ferris 1990; Surtees 1994; Bloomfield 2006; Hayes 1997)

Historical Event	Timeframe	Characteristics
Early Contact	Early 17 <sup>th</sup> century	Brûlé explores the area in 1610; Champlain visits in 1613 and 1615/1616; Iroquoian-speakers (Huron, Petun and Neutral) and Algonkian-speakers (Anishinabeg) encountered; European goods begin to replace traditional tools.
Five Nations Invasion	Mid-17 <sup>th</sup> century	Haudenosaunee (Five Nations) invade circa 1650; Neutral, Huron and Petun Nations are defeated/removed; vast Iroquoian hunting territory established in the second half of the 17 <sup>th</sup> century; Explorers continue to document the area.
Anishinabeg Influx	Late 17 <sup>th</sup> and early 18 <sup>th</sup> century	Ojibway, Odawa and Potawatomi expand into Haudenosaunee lands in the late 17 <sup>th</sup> century; Nanfan Treaty between Haudenosaunee and British in 1701; Anishinabeg occupy the area and trade directly with the French and English.
Fur Trade Development	Early and mid-18 <sup>th</sup> century	Growth and spread of the fur trade; Peace between the French and English with the Treaty of Utrecht in 1713; Ethnogenesis of the Métis; Hostilities between French and British lead to the Seven Years' War in 1754; French surrender in 1760.
British Control	Mid-18 <sup>th</sup> century	<i>Royal Proclamation</i> of 1763 recognizes the title of the First Nations to the land; Numerous treaties arranged by the Crown; First acquisition is the Seneca surrender of the west side of the Niagara River in August 1764.
Loyalist Influx	Late 18 <sup>th</sup> century	United Empire Loyalist influx after the American Revolutionary War (1775-1783); British develop interior communication routes and acquire additional lands; 'Between the Lakes Purchase' orchestrated by Haldimand in 1784 to obtain lands for Six Nations; Constitutional Act of 1791 creates Upper and Lower Canada.
County Development	Late 18 <sup>th</sup> and early 19 <sup>th</sup> century	Became part of York County's 'West Riding' in 1792; Additional lands acquired in the second 'Between the Lakes Purchase' in 1792; Brant surrenders Blocks 1-6 of the Haldimand Tract to the Crown in 1798; Became part of Gore District and Halton County in 1816; Wellington District and Waterloo County created in 1840; Waterloo County independent after the abolition of the district system in 1849.
Township Formation	Early 19 <sup>th</sup> century	Waterloo was originally Block 2 of the Haldimand Tract; Block 2 sold to United Empire Loyalist Richard Beasley and his partners in 1798; Nearly 5,750 ha sold to Pennsylvania Mennonites and non-Mennonites in 1800; German Company formed to facilitate the bulk sale of 24,281 ha in 1805, represented by Daniel Erb and Samuel Bricker; Lots drawn by shareholders

Historical Event	Timeframe	Characteristics
		in Pennsylvania; Steady and rapid stream of settlers ensued, disrupted only by the Napoleonic Wars and War of 1812
Township Development	Mid-19 <sup>th</sup> and early 20 <sup>th</sup> century	Twenty saw mills and eight grist mills in operation by 1846; Population was 4,424 at that time; the arrival of the Grand Trunk Railway, the Galt & Guelph Railway and the Preston & Berlin Railway in the 1850s ushered in a golden era; Prominent communities existed at Berlin, Breslau, Shantz, Williamsburg, New Aberdeen, Strasburg, German Mills, Freeport, Oregon (Upper Doon), Doon, Blair, Preston and Hespeler in 1881.

### 4.1.3 German Mills

Historical maps show that the community of German Mills was located within and adjacent to the northwest section of the study area. German Mills, also known as Parkway, Jewsbury, Edenburg, Hopewell Mills and Bleams Mills, seems to have originated when Philip Bliehm built a sawmill on Schneider Creek in 1812. The mill, which was serviced by one dam, was purchased by Samuel Liebschuetz in 1835 (Janusas 1988:169). During Liebschuetz’s period of mill ownership (1835–1851) he laid plans for the village of Jewsbury, a name reflecting his religion (Benjamin and Berge 2012:56). The southern part of the Township of Waterloo owed much of its early development to the establishment of major thoroughfares in the first quarter of the 19<sup>th</sup> century. The earliest of these was Bleams Road, built by Philip Bliehm in the 1820s to link the Township of Wilmot and the western part of the Township of Waterloo to his businesses at German Mills (Bloomfield 2006:73–76). The flour mills were the epicentre of the small community, with related businesses that included a stave mill, cooperage and general store. Today, the last vestiges of the settlement are Cress Lane and Webster Road as they are currently aligned (Benjamin and Berge 2012:54).

## 4.2 Study Area History

### 4.2.1 Mapping and Imagery Analysis

In order to gain a general understanding of the study area, two historic settlement maps, four topographic maps and two aerial images were examined during the research component of the study. Specifically, the following resources were consulted:

- G.R. and G.M. Tremaine’s *Tremaine’s Map of the County of Waterloo, Canada West* (1861) (OCHMP 2015);
- *Waterloo Township* from H. Parsell & Co.’s *Illustrated Historical Atlas of the County of Waterloo, Ontario* (1881) (McGill University 2001);
- Topographic maps from 1916, 1923, 1929 and 1936 (OCUL 2019); and
- Aerial images from 1955 and 1963 (UW 2021).

The limits of the study area are shown on georeferenced versions of the consulted historical resources in Map 2–Map 6. *Tremaine’s Map of the County of Waterloo, Canada West* (1861) indicates that the study area comprises part of Bechtel’s Tract and Beasley’s Old Survey. Henry C. Wismer, David [Surarus], A.C. Weber, Andrew [Surarus], Amos Weaver and Jonas Wilfong are indicated as owners of parcels within the study area and Bechtel’s Tract, while Henry Strickler owned part of Lot 53, German Company Tract (see Map 2). Structures are depicted on the

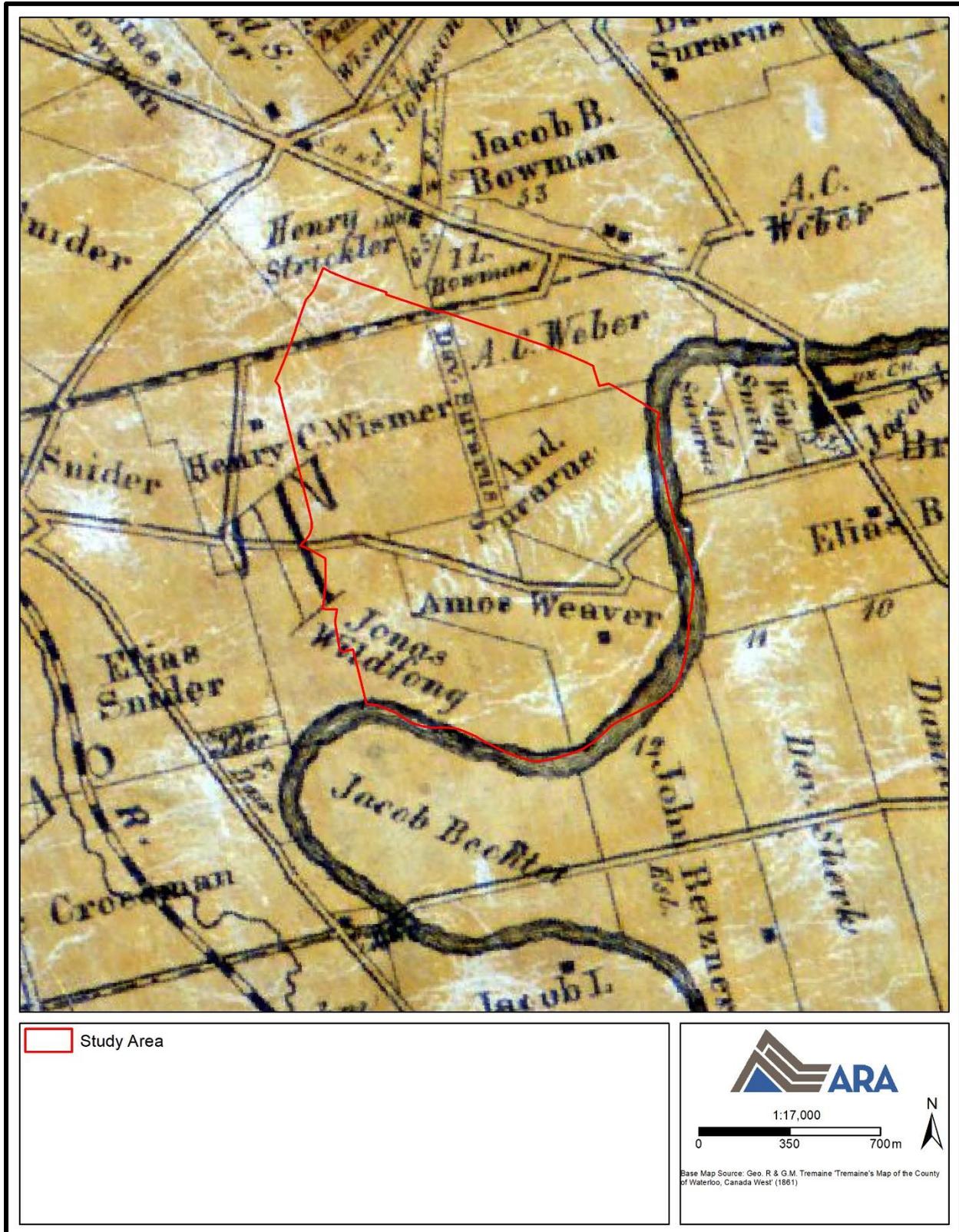
properties of Henry C. Wismer (just west of the study area) and Amos Weaver (within the study area). Many of the families that owned property in the study area were some of the earliest settlers to the area. Hidden Valley Road bisects the study area east–west and appears to have crossed the Grand River before continuing east to Freeport.

The *Illustrated Historical Atlas of the County of Waterloo, Ontario* (1881) is not as detailed as the 1861 map, however it indicates that Hidden Valley Road continued to cross the Grand River at this time. Moses Wismer is the owner of the former Henry C. Wismer property and a residence is shown on the property just west of the study area (see Map 3). While some lot divisions are depicted on the map, no additional owners nor buildings are shown. The proximity of the study area to nearby Freeport to the east, German Mills to the west and Centreville to the north, coupled with the proximity to the Grand River likely made the study area ideal for settlement.

Topographic maps from 1916, 1923 and 1929 indicate that there were no apparent changes to the landscape (see Map 4). Frame structures are depicted along Hidden Valley Road, a bridge crossed the tributary of the Grand River at the east part of the study area and a ford existed at the crossing of Hidden Valley Road and the Grand River. The ford at Hidden Valley Road was a shallow place in the Grand River that allowed for easy crossing. By 1936 the ford at Hidden Valley Road and the Grand River had been removed. Hidden Valley Road was realigned at the east part of the study area and a Bell Telephone Line crossed southwest–northeast. The bridge at the tributary of the Grand River remained along Hidden Valley Road at this time (Map 4).

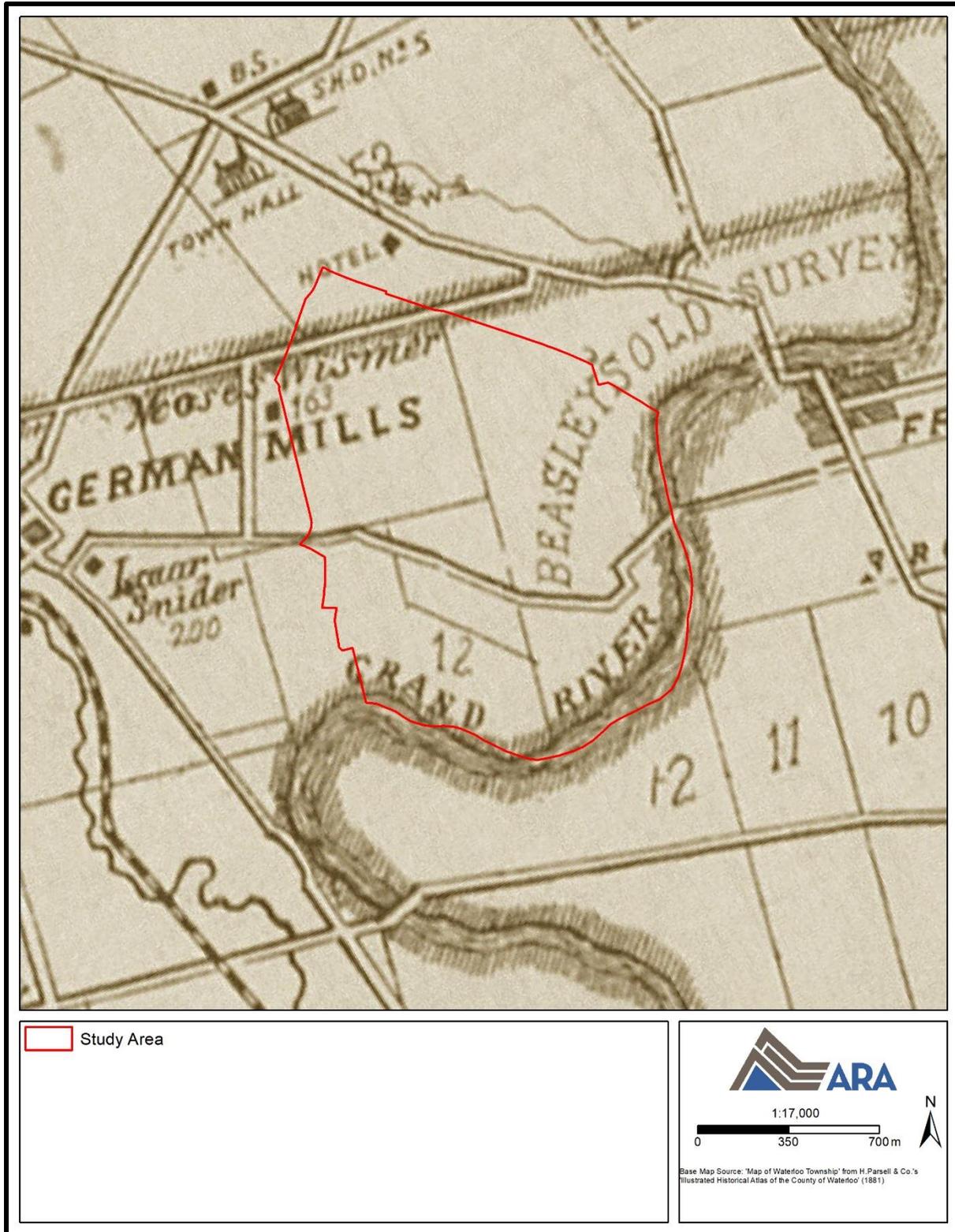
An aerial image from 1955 demonstrates that the study area remained settled similarly as it was in 1936 (see Map 5). Properties situated along Hidden Valley Road west of the Grand River have long driveways extending from the former alignment to the new alignment of the road. The former alignment of Hidden Valley Road leading to the former fording location remains visible on the landscape within the study area. The road trace of the continuation of Hidden Valley Road can also be seen east of the Grand River.

By 1963, Highway 8 had been laid north of the study area and Wabanaki Drive was laid north–south at the western edge of the study area. The road trace for the former alignment of Hidden Valley Road at the eastern part of the study area is barely visible on the landscape by this time (see Map 6).

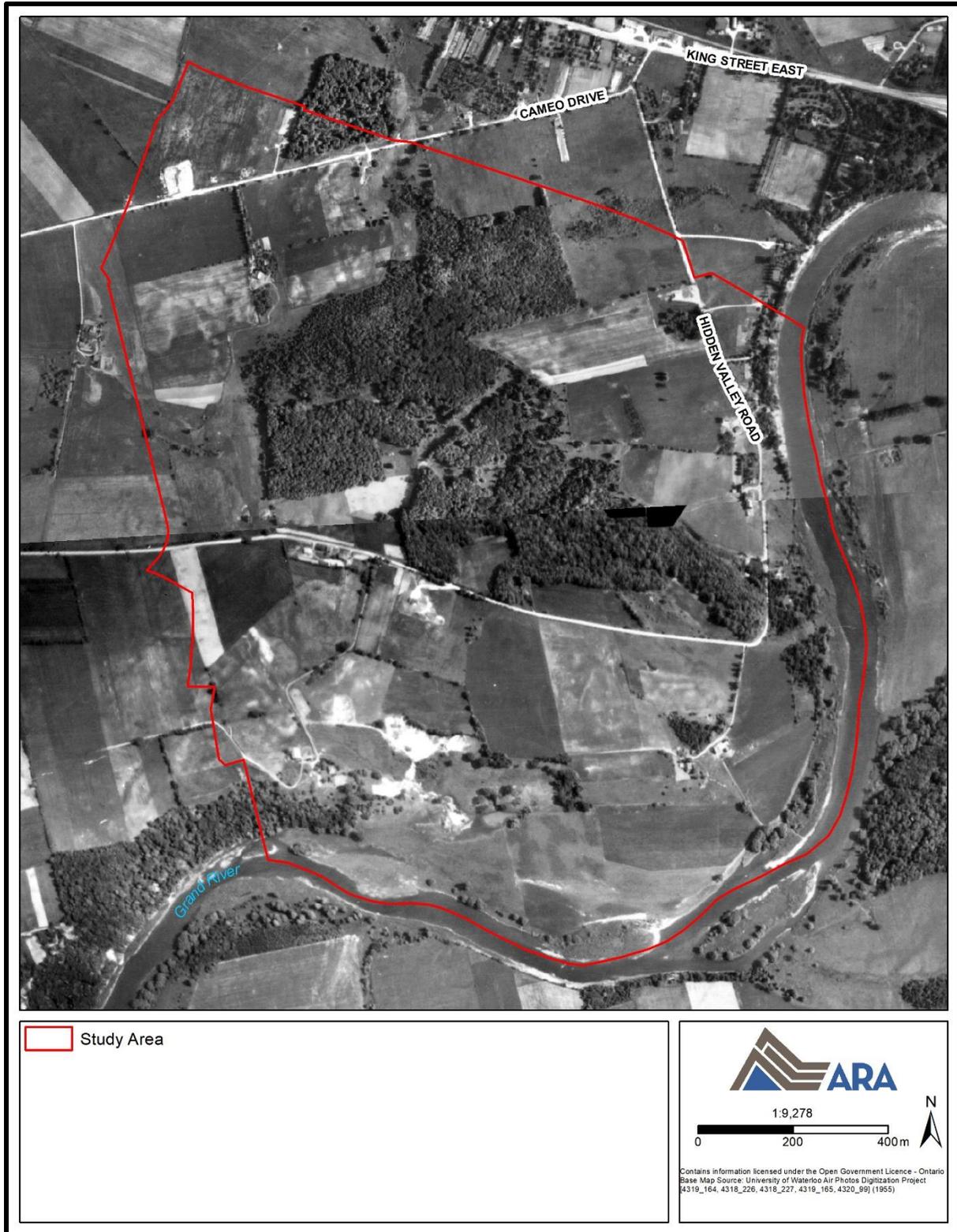


Map 2: G.R. and G.M. Tremaine's *Tremaine's Map of the County of Waterloo, Canada West* (1861)

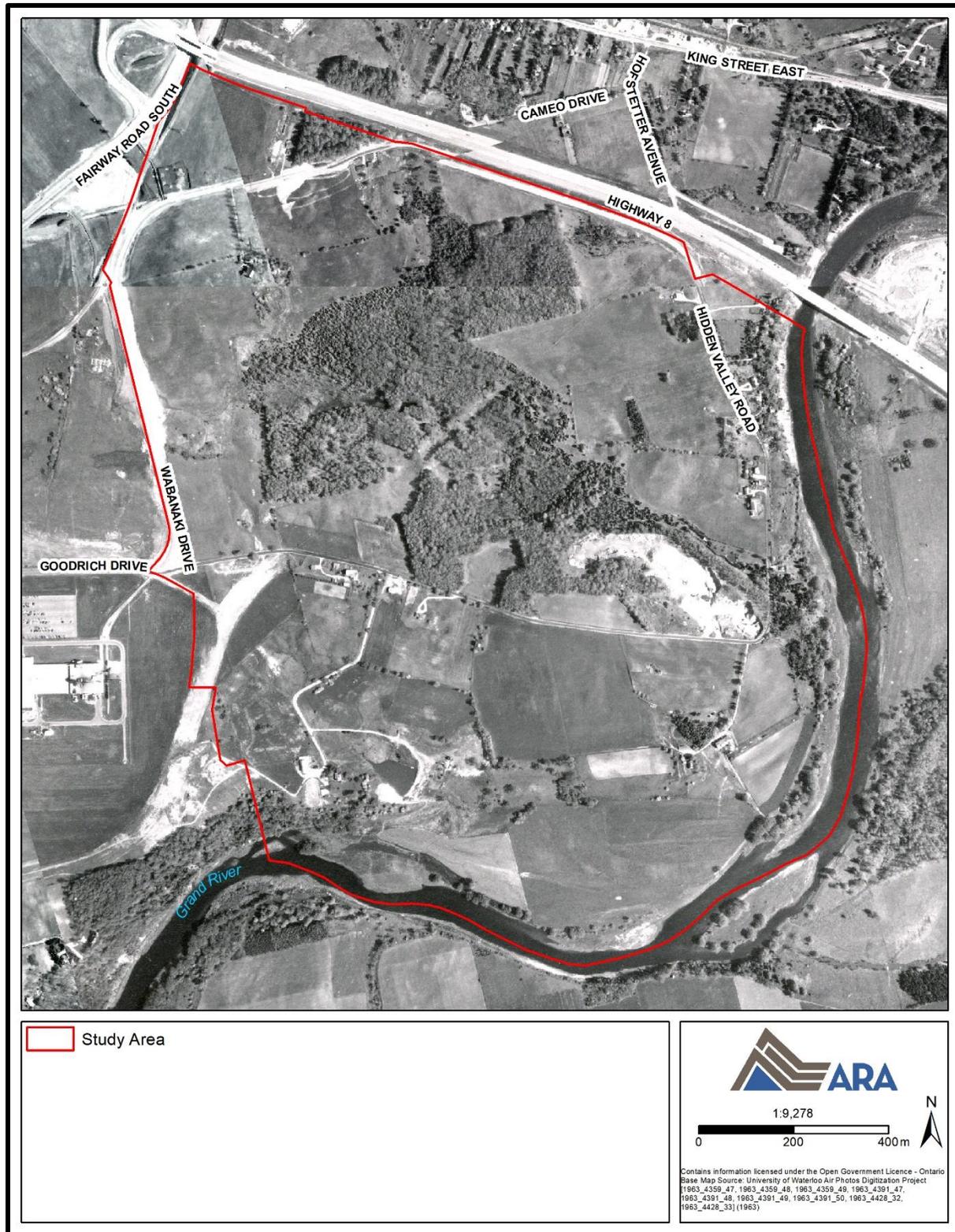
(Produced under licence using ArcGIS® software by Esri, © Esri; OHCMP 2021)







**Map 5: Aerial Image (1955)**  
(Produced under licence using ArcGIS® software by Esri, © Esri; University of Waterloo 2021)



**Map 6: Aerial Image (1963)**  
(Produced under licence using ArcGIS® software by Esri, © Esri; University of Waterloo 2021)

## 5.0 CONSULTATION

BHRs and CHLs are broadly referred to as cultural heritage resources. A variety of types of recognition exist to commemorate and/or protect cultural heritage resources in Ontario.

The Minister of Canadian Heritage, on the advice of the Historic Sites and Monuments Board of Canada (HSMBC), makes recommendations to declare a site, event or person of national significance. The National Historic Sites program commemorates important sites that had a nationally significant effect on, or illustrates a nationally important aspect of, the history of Canada. A National Historic Event is a recognized event that evokes a moment, episode, movement or experience in the history of Canada. National Historic People are people who are recognized as those who through their words or actions, have made a unique and enduring contribution to the history of Canada. There exists Parks Canada's online *Directory of Federal Heritage Designations* which captures these national commemorations. This directory also lists Heritage Railway Stations, Federal Heritage Buildings and Heritage Lighthouses. The *Federal Canadian Heritage Database* was searched, and no plaques or properties were noted within or adjacent to the study area (Parks Canada 2021). It is important to note that these federal commemoration programs do not offer protection from alteration or destruction.

The Ontario Heritage Trust (OHT) operates the Provincial Plaque Program that has over 1,250 provincial plaques recognizing key people, places and events that shaped the province. Additionally, properties owned by the province may be recognized as a "provincial heritage property" (MHSTCI 2010). The OHT plaque database were searched and none of the properties within or adjacent to the study area are commemorated with an OHT plaque (OHT 2021).

The Grand River is within and adjacent to the study area and is commemorated with plaques by the Grand River Conservation Authority as a Canadian Heritage River. There are five plaques at various points along the Grand River at associated tributaries which include: Grand River: Cambridge (Galt); Conestogo River: St. Jacobs; Nith River: New Hamburg; Speed River: Guelph; Eramosa River: Halton Hills (GRCA 2021). No plaques relating to the Grand River are located within the study area.

MHSTCI's current list of Heritage Conservation Districts was consulted. No designated districts were identified in or adjacent to the study area (MHSTCI 2019). The list of properties designated by the MHSTCI under Section 34.5 of the OHA was consulted. No properties in or adjacent to the study area are listed.

Many municipal heritage committees and historical societies provide plaques for local places of interest. "One role of municipal heritage groups (i.e., municipal heritage committees, historical societies) is to educate and inform the community on local heritage and several ways this could occur could include: producing descriptive guides and newsletters or by installing commemorative plaques" (MHSTCI 2007:8).

At project commencement, ARA contacts the City of Kitchener Planning staff to inquire about: 1) protected properties within or adjacent to the study area, 2) properties with other types of recognition in or adjacent to the study area, 3) previous studies relevant to the current study, and 4) other heritage concerns regarding the study area.

ARA staff contacted the City of Kitchener staff via email on December 15, 2020 and followed up with a meeting on December 18, 2020. City of Kitchener staff identified several heritage related items to be considered as part of this report. It was noted that Hidden Valley Road has been identified in the 2014 *Cultural Heritage Landscape Study* as a CHL (L-RD-4), and that the *Hidden Valley Land Use Master Plan* was approved by Council in June 2019. Staff identified that the Official Plan recognizes Hidden Valley Road as having potential cultural heritage value or interest.

Lastly, it was noted that there are no listed or designated properties which fall within the study area. There are four properties which were re-evaluated as part of the City of Kitchener's four step listing process, however all the evaluations resulted in 'no further action'. The properties include:

- 602 Hidden Valley Road
- 691 Hidden Valley Road
- 1070 Hidden Valley Road
- 2107 Hidden Valley Crescent

It is worthwhile to note that access to inspect 602 Hidden Valley Road was not granted during the City's re-evaluation process and the City of Kitchener considers the property still under review.

## **5.1 Cultural Heritage Landscape Study**

### **5.1.1 Cultural Heritage Landscape Study (2014)**

The *City of Kitchener Cultural Heritage Landscape Study* (2014) is a planning tool which provides a legislative framework and planning tools to guide and manage change within identified CHLs. The purpose of the CHL Study to build upon the existing database and consider "large scale areas that express both the historical process of development and the physical outcomes of that process" (2014: 5). The CHL study considered numerous factors which influence the formation of a CHL. This includes:

- Natural Features (Rivers, Water Bodies, and Drainage Patterns);
- Settlement Patterns (Original Surveys); and
- Historical Themes

The Study resulted in the identification of 55 CHLs with the City of Kitchener. The CHLs are categorized within one of the following nine categories:

- Residential Neighbourhoods
- Parks, Natural Areas and other Public/Private Open Spaces
- Transportation Corridors and Streetscapes
- Institutional Landscapes
- Commercial Industrial and Retail Landscapes.
- Agricultural Landscapes
- Large Lot Residential/Estate Landscapes
- Cemeteries

- Grand River Valley Landscapes

The CHL Study resulted in a comprehensive data sheet for each CHL which included the following information:

- Location
- Historic Theme
- Landscape Type
- Archaeological Potential
- Identification of any properties recognized under the Ontario Heritage Act or Municipal Register
- A Description
- An evaluation against the criteria for significance (Historical Integrity, Cultural Value and Community value)
- Character defining elements
- Photographs and map

The CHL Study, and applicable datasheets, have been considered as part of this report.

## **6.0 INDIGENOUS COMMUNITY CONSULTATION**

Following the initial project introduction, ARA contacted The Mississaugas of the Credit First Nation (MCFN) via the Department of Consultation & Accommodation (DOCA) and The Six Nations of the Grand River (SNGR) represented by The Haudenosaunee Confederacy Chiefs Council (HCCC) via the Haudenosaunee Development Institute (HDI); and The Six Nations of the Grand River Elected Council (SNGREC) via the Six Nations Lands & Resources Office (SNLR) to inquire about any Traditional or Ecological Knowledge the groups may have to share about the study area. No responses were received. Information regarding pre-contact history has been generated by ARA and is found in Section 4.1.1 of this report. Furthermore, it has also been incorporated into the understanding of Grand River Corridor Landscape (CHL-3).

## **7.0 FIELD SURVEY**

The field survey component of an assessment involves the collection of primary data through systematic photographic documentation of all potential cultural heritage resources within the study area, as identified through historical research and consultation. Generally, potential cultural heritage resources are identified by applying a 40-year rolling timeline. This timeline is considered an industry best practice (i.e., MTO 2008). A date of 40 years does not automatically attribute CHVI to a resource; rather, that it should be flagged as a potential resource and evaluated for CHVI.

Additional cultural heritage resources may also be identified during the survey itself. Photographs capturing all properties with potential BHRs and CHLs are taken, as are general views of the surrounding landscape. The field survey also assists in confirming the location of each potential cultural heritage resource and helps to determine the relationship between resources. Given that such surveys are limited to areas of public access (i.e., roadways, intersections, non-private lands,

etc.), there is always the possibility that obscured cultural heritage resources may be missed or that heritage attributes may be refined upon closer inspection.

A field survey was conducted on March 30, 2021, April 6, 2021 and April 22, 2021 to photograph and document the study area. The field survey enables the team to record any local features that could enhance ARA’s understanding of their setting in the landscape and contribute to the cultural heritage evaluation process. The field survey was conducted from publicly accessible, non-private lands.

## 8.0 HERITAGE ASSESSMENT

As a result of consultation with City of Kitchener staff, existing heritage considerations, and the field survey, the following BHRs and CHLs were considered, and their potential heritage status is summarized in Table 3

**Table 3: Potential Cultural Heritage Resources Examined**

Address/Name	Type	CHVI (Y/N)	Discussion
602 Hidden Valley Road	BHR	Yes	The field survey suggests that the property located at 602 Hidden Valley Road has the potential to meet the criteria for cultural heritage value or interest. See Table 4 and Table 5 for assessment summary and Appendix A BHR-1 for an information sheet.
691 Hidden Valley Road	BHR	Yes	The Central Ontario Barn present on 691 Hidden Valley Road has the potential to meet the criteria for cultural heritage value or interest. See Table 4 and Table 5 for assessment summary and Appendix A BHR-2 for an information sheet.
681 Hidden Valley Road	BHR	No	The property was originally flagged as it was thought to be the two-storey vernacular farmhouse originally associated with 691 Hidden Valley and therefore having the potential to meet the criteria for cultural heritage value or interest . During the consultation process, the owners of the property provided commentary that the house was not historically associated with 691 Hidden Valley Road. Given that this was the preliminary basis for its consideration as a BHR, it was removed.
772 Hidden Valley Road	BHR	No	The property known as 772 Hidden Valley Road was designated in 1991 under Part IV of the Ontario Heritage Act (By-Law 91-98). The reason for designation was listed as being of historical and architectural value.  The Statement of Significance describes the property as: <i>“one of the finest examples of early pioneer homesteads being a well-preserved example of a method of construction rarely used today. The strategic positioning of the building; consisting of a log cabin, built in the late 1700s or early 1800s and the 1 ½ storey addition, c. 1860 representing the early farmhouse Gothic style, high on the west bank of the Grand River, boast panoramic views. The early period of construction strongly suggest that this is one of the first homesteads on the west side of the Grand River with further rural community development happening either side of the homestead.”</i> (By-Law 91-98).

Address/Name	Type	CHVI (Y/N)	Discussion
			<p>The designation included the following attributes, “all elevations and all rooflines of the original log cabin and 1 ½ storey addition, including the bell tower. The specific features of the designation include: the 42” thick foundation walls of the log cabin, the Gothic windows and 2 dormers on the second storey, the front porch with ornate trim, the keystone on the corners, the stone cornice window heads and the 2 over 2 double hung windows of the 1 ½ storey addition”.</p> <p>In 1998, the designation was repealed through City of Kitchener By-Law 98-5. It is unclear if the homestead is still extant or has been integrated into 2107 Hidden Valley Crescent. 2107 Hidden Valley Crescent contains a large brick dwelling and aerial images show a small dwelling at the rear. It is possible that the homestead has been retained and converted into a pool house, however this can not be confirmed without an onsite inspection. Given that the City of Kitchener has deemed ‘no further action’ and the property is surrounded by residential development <b>no further heritage considerations are warranted.</b></p>
1070 Hidden Valley Road	BHR	No	<p>1070 Hidden Valley Road was evaluated as part of the City of Kitchener’s Four-step listing process on July 18, 1995. The evaluation report noted that the property contained a 1 ½ storey Georgian Vernacular dwelling even though “major/unsympathetic alterations have rendered these characteristics almost undistinguishable” noting that the “rear portion of the home retains more of the original design features (including some windows)” (Evaluation Form, 1995). The evaluation suggested that the property warranted placement on the City of Kitchener Municipal Inventory as a listed property and that further historical research be conducted.</p> <p>The field survey confirmed the dwelling at 1070 Hidden Valley Road is not longer extant. <b>No further heritage considerations are warranted.</b></p>
Hidden Valley Road	CHL	Yes	Hidden Valley Road is recognized as a CHL in the City of Kitchener CHL Study (2014). See Table 4 and Table 5 for assessment summary and Appendix A CHL-1 for an information sheet.
Hidden Valley Road-Heritage Corridor	CHL	Yes	A section of Hidden Valley Road is recognized in the <i>Hidden Valley Land Use Master Plan</i> as a ‘Heritage Corridor’ (City of Kitchener 2019). See Table 4 and Table 5 for assessment summary and Appendix A CHL-2 for an information sheet.
Grand River Corridor	CHL	Yes	The Grand River is recognized as a CHL in the City of Kitchener CHL Study (2014). See Table 4 and Table 5 for assessment summary and Appendix A CHL-3 for an information sheet.

A summary of the results of the evaluation of remaining BHRs and CHLs against the criteria set out in O. Reg. 9/06 can be found in Table 4 and Table 5 and the information sheets with background information, and the evaluations of each heritage resource can be found in Appendix A. Heritage attributes may include, but are not limited to, those listed in this table. The assessment determined that two BHRs and three CHLs met, or have the potential to meet one or more, O. Reg. 9/06 criteria.



**Map 7: Built Heritage Resource Assessment Results Map**  
 (Produced by ARA under licence using ArcGIS® software by Esri, © Esri)



**Map 8: Cultural Heritage Landscape Assessment Results Map**  
 (Produced by ARA under licence using ArcGIS® software by Esri, © Esri)

**Table 4: BHRs and CHLs with CHVI**

Type and Number	Address/Name	Adjacent/ Participating	CHVI (Y/N)	Criteria Met
BHR-1	602 Hidden Valley Road	Participating	Y	Potential Design and Physical Value, Historical and/or Associative Value, Potential Contextual Value
BHR-2	691 Hidden Valley Road	Participating	Y	Design and Physical Value, Contextual Value
CHL-1	Hidden Valley Road	Participating	Y	Historical Value, Contextual Value
CHL-2	Hidden Valley Road-Heritage Corridor	Participating	Y	Historical Value, Contextual Value
CHL-3	Grand River Corridor	Participating and Adjacent	Y	Historical Value and Contextual Value.

**Table 5: BHR and CHL Value Statements and Heritage Attributes**

Type and Number	Address/Name	Value Statement(s)	Heritage Attributes
BHR-1	602 Hidden Valley Road	Unknown without site access.	<p>Until further assessment is conducted the following heritage attributes should be considered:</p> <ul style="list-style-type: none"> <li>The entire property including all natural and built elements.</li> </ul>
BHR-2	691 Hidden Valley Road	The property contains a representative example of a Central Ontario Barn, also referred to as a “bank barn”. The two-storey barn includes a gambrel roof and timber construction. The barn rests on a stone foundation. The barn is highly visible from Hidden Valley Road and from the Grand River Trail. The barn reinforces the rural character of the surrounding area.	<ul style="list-style-type: none"> <li>The visibility of the barn from Hidden Valley Road.</li> <li>The two storey, L shaped bank barn with gambrel roof, timber construction and stone foundation.</li> <li>The visibility and views from the Grand River Trail south of the Grand River.</li> </ul>
CHL-1	Hidden Valley Road	<i>Hidden Valley Road is the remnant of a road that ran from Freeport to the settlement of German Mills with an alignment shown in the 1881 Atlas of Waterloo Township. Hidden Valley Drive is of local historical and contextual value given that the road was built as part of initial settlement activities in the southern part of the Township of Waterloo, forming part of Beasley's Old Survey; relates to the development of the Township of Waterloo and German Mills for agricultural purposes in the 19th Century; is partially bound by cultivated fields and a rural landscape, and forms part of the local road network.</i>	<ul style="list-style-type: none"> <li><i>The narrow two-lane alignment without shoulders;</i></li> <li><i>The scenic views to surrounding agricultural fields and the Grand River Valley;</i></li> <li><i>The diverse roadside vegetation that abuts the roadside provides a defined edge to the road; and</i></li> <li><i>The correspondence to the undulating topography which is part of the original historic alignment.</i></li> </ul>

Type and Number	Address/Name	Value Statement(s)	Heritage Attributes
CHL-2	Hidden Valley Road- Heritage Corridor	<i>Hidden Valley Road is the remnant of a road that ran from Freeport to the settlement of German Mills with an alignment shown in the 1881 Atlas of Waterloo Township. Hidden Valley Road is of local historical and contextual value given that the road was built as part of initial settlement activities in the southern part of the Township of Waterloo, forming part of Beasley's Old Survey; relates to the development of the Township of Waterloo and German Mills for agricultural purposes in the 19th Century; is partially bound by cultivated fields and a rural landscape, and forms part of the local road network.</i>	<ul style="list-style-type: none"> <li>• <i>The narrow two-lane alignment without shoulders;</i></li> <li>• <i>The scenic views to surrounding agricultural fields and the Grand River Valley;</i></li> <li>• <i>The diverse roadside vegetation that abuts the roadside provides a defined edge to the road; and</i></li> <li>• <i>The correspondence to the undulating topography which is part of the original historic alignment.</i></li> </ul>
CHL-3	Grand River Corridor	<i>The Grand River was the main feature that attracted the first pioneer Mennonite settlers from Pennsylvania to the Kitchener area. Has been the ancestral home of First Nations peoples for 10,000 year. The Grand River Corridor is one of the best-known watersheds in southwestern Ontario and is nationally designated as a Canadian Heritage River. It provides large natural areas and scenic views and is of outstanding recreational and educational value.</i>	<ul style="list-style-type: none"> <li>• <i>Well-defined river valley with alternating steep and shallow banks.</i></li> <li>• <i>Wonderful meandering river with significant vegetation communities and associated wildlife habitat.</i></li> </ul>

\* The value statement and heritage attributes which have been taken directly from CHL Datasheets or existing plans are noted in italics.

## 9.0 DEVELOPMENT PLAN

The Region of Waterloo is responsible for maintaining and operating wastewater treatment plants within the City of Kitchener while the City of Kitchener is responsible for maintaining and operating the sanitary sewer system and associated pumping stations within its geographical boundaries. It is understood that the existing sanitary pumping station on River Birth Street is at capacity or slightly undersized, and a preliminary servicing assessment determined that the Hidden Valley catchment could be used for services. The CHAR will aid in the determination of a preferred option and preliminary design.

There are currently no detailed designs available for review. According to the Municipal Class Environmental Assessment Notice of Study Commencement:

*This project is being carried out in accordance with the requirements of the Environmental Assessment Act and it is being planned under Schedule B of the*

*Municipal Class Environmental Assessment (Class EA). The project scope involves an evaluation of alternatives, selection of preferred alternative and evaluation of environmental impacts and their mitigation measures.*

*This study will complete a Municipal Class EA for the construction of a sanitary pump station and forcemain and prepare the preliminary design. The study will follow guidance outlined in the Municipal Class EA document (as amended in 2007, 2011, and 2015). Upon completion of this study, an Environmental Study Report (ESR) documenting the process will be submitted to the Ministry of the Environment, Conservation, and Parks (MECP) and will be available for public review for a period of 30 calendar days. Before any decisions are made on the recommendation, or acceptance of the preferred solution, all interested parties will have an opportunity to attend a Public Information Centre (PIC) meeting. Notification of the PIC will be provided at the appropriate time by means of a similar advertisement in this newspaper (MTE and City of Kitchener 2021).*

This CHAR is being completed as part of a larger EA study to aid in the process of generating alternatives and generating a preliminary design with a goal to address sanitary servicing needs in the Upper Hidden Valley community.

## **10.0 ANALYSIS OF POTENTIAL IMPACTS**

The construction of a sanitary pump station and forcemain have the potential to affect cultural heritage resources. MHSTCI InfoSheet #5: *Heritage Impact Assessments and Conservation Plans* (MHSTCI 2006d:3) provides a list of potential negative impacts (for evaluating against any proposed development impacts) which can be classified as either direct or indirect.

Direct impacts (those that physically affect the heritage resources themselves) include, but are not limited to: initial project staging, excavation/levelling operations, construction of access roads and renovations or repairs over the life of the project. These direct impacts may destroy some or all significant heritage attributes or may alter soils and drainage patterns and adversely impact unknown archaeological resources.

Indirect impacts include but are not limited to: alterations that are not compatible with the historic fabric and appearance of the area, the creation of shadows that alter the appearance of an identified heritage attribute, the isolation of a heritage attribute from its surrounding environment, the obstruction of significant views and vistas, change in land use such as rezoning allowing for a reduction in open spaces and other less-tangible impacts. There may be positive environmental and cultural effects as a result of an EA undertaking.

An EA project has the potential for creating the above negative impacts. However, there may be positive effects as well. For example, more recent infrastructure may be removed to restore the original views to cultural heritage resources or streetscape improvements might be made.

This project entails the construction of a sanitary pump station and forcemain. There are currently no designs available that would aid in the identification of project impacts. Therefore, the potential impacts and mitigation options related to the project will be discussed at a high level.

The heritage value, and potential heritage value, associated with BHR-1 and BHR-2 may be directly or indirectly impacted by the proposed project. Specifically, the Ontario Central Barn (BHR-1) and the unknown heritage potential associated with the property known as 602 Hidden Valley Road (BHR-2) may be impacted if the sanitary pump station and forcemain are located on these properties.

The heritage value associated with the CHLs may be directly or indirectly impacted by the proposed project, specifically the narrow two-lane alignment without shoulders, the scenic views to surrounding agricultural field and the Grand River, the diverse roadside vegetation that abuts the road and provides a defined edge and the corresponding and undulating topography which is part of the original historic alignment may be impacted if the sanitary pump station and forcemain route are located within the boundaries of the CHLs. Furthermore, depending on the nature and location of the proposed sanitary pump and forcemain, the defined Grand River valley edge with alternating steep and shallow banks and the meandering river with associated wildlife and significant vegetation, may be directly or indirectly impacted.

Any impacts to potential, and known, archaeological sites are being addressed through the archaeological assessment process.

## **11.0 MITIGATION MEASURES AND RECOMMENDATIONS**

The study area consists of an irregularly-shaped parcel of land with a total area of ±183 acres. The study area is bounded by Highway 8 to the north, the Grand River to the east and south, and Wabanaki Drive to the west.

As a result of consultation and field survey the following BHRs and CHLs were identified within and adjacent to the study area: 602 Hidden Valley Road (BHR-1) and 691 Hidden Valley Road (BHR-2). As a result of consultation and the field survey the following CHLs were identified within the study area: Hidden Valley Road (CHL-1), Hidden Valley Road- Heritage Corridor (CHL-2), and Grand River Corridor (CHL-3).

Detailed designs or plans for the construction of a sanitary pump station and forcemain were not available at the time this report was written, however there is potential that the identified BHRs and CHLs may be directly or indirectly impacted by the proposed project. All identified BHRs and CHLs fall within the study area. Depending on the nature and extent of the proposed project and study area, the BHRs and CHLs have potential for direct and indirect impacts.

Given that potential impacts have been identified, mitigation measures must be recommended. The MHSTCI *InfoSheet #5: Heritage Impact Assessments and Conservation Plans* (2006c:3) lists specific methods to minimize any potential negative impacts.

As a result of this CHAR, the following mitigation strategies are recommended:

- That any construction and staging areas should avoid the use of land which are part of BHR-1 at 602 Hidden Valley Road, and BHR-2 at 691 Hidden Valley Road. as well as,

Hidden Valley Road (CHL-1), Hidden Valley Road- Heritage Corridor (CHL-2), and Grand River Corridor (CHL-3);

- That should project-related activities be expected to impact the property associated with BHR-1 BHR-2, CHL-1, CHL-2 or CHL-3, a qualified heritage consultant should be contracted to complete property specific or Cultural Heritage Landscape specific Cultural Heritage Impact Assessments and provide detailed mitigation options to address the proposed design on the resources;
- That design alternatives (i.e., sanitary pumping station location and design as well as forcemain location) should consider the heritage attributes of CHL-1 and CHL-2. Specifically, the narrow two-lane alignment without shoulders, the scenic views to surrounding agricultural fields and the Grand River, the diverse roadside vegetation that abuts the road and provides a defined edge as well as the corresponding and undulating topography which is part of the original historic alignment; this may be achieved through appropriate setbacks;
- That design alternatives should consider the heritage attributes of CHL-3, specifically the well-defined river valley with alternating steep and shallow banks, and the meandering river with significant vegetation communities and associated wildlife habitat. Design alternatives should avoid impacts to the well-defined river valley and the vegetation associated with the steep and shallow banks. This may be achieved by avoiding this area entirely. Should a design alternative (i.e. sanitary pumping station location) be considered within the river valley, it is recommended that a Cultural Heritage Impact Assessment be done to ensure that the proposed design considers height, massing, architectural style elements, etc., to minimize any impacts and ensure it is sympathetic to the surrounding character of the Grand River;
- That the physical design of any proposed structures should not detract from the character of the area. Any new structure for the sanitary pumping station should be sympathetic to the surrounding area and minimize impacts through appropriate height, massing and architecture style;
- That public consultation may result in additional potential cultural heritage resources being identified. These potential cultural heritage resources should be reviewed by a qualified heritage consultant to: 1) determine their cultural heritage value or interest, 2) evaluate potential project impacts, and 3) suggest strategies for future conservation of any identified cultural heritage resources;
- That should the proposed project or the proposed study area expand beyond the scope examined in this report, a qualified heritage consultant should be retained to determine the potential impacts and suggest mitigation measures;
- That should the proposed project create publicly accessible areas, this may provide an opportunity to interpret some of the identified cultural heritage resources associated with the Cultural Heritage Landscapes (i.e., with plaques, public art);
- That this CHAR should be provided to staff/planners at the City of Kitchener; and
- That a Stage 1 archaeological assessment is currently being undertaken to address the identified archaeological potential associated with the study area and no soil disturbing activities should take place until all archaeological concerns are mitigated and all reports are accepted by the MHSTCI.

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**Appendix A: Built Heritage Resources and Cultural Heritage Landscapes**

**BUILT HERITAGE RESOURCE NO. 1**

DESCRIPTION OF PROPERTY	
<b>Street Address</b>	602 Hidden Valley Road
<b>Name</b>	n/a
<b>Recognition</b>	Considered 'Under review'- City of Kitchener
<b>Location</b>	City of Kitchener
<b>Type of Property</b>	Residential
<b>Date(s)</b>	Unknown
<b>Description</b>	<p>There is limited information available regarding the cultural heritage value or interest associated with 602 Hidden Valley Road. The City of Kitchener requested access to the property as part of the City of Kitchener four step listing process. The request was denied, and no further action was undertaken by the City of Kitchener.</p> <p>The field survey provided partial views of the property which suggest that the property has the potential to meet one or more of O. Reg 9/06 criteria. The main building on the property has the potential to be a representative example of a Tudor architectural style, Regency architectural style or a Vernacular architectural style influenced by Tudor or Regency architectural style. The two-storey structure has a hipped roof with multiple large dormers. The structure has a large set back and is not visible from Hidden Valley Road. The structure is set close the rear of the property (east) with uninterrupted views to the Grand River Corridor. There is a second building on site, which was not visible during the field survey, but present on aerial imagery. The property has the potential to meet for design or physical value.</p>
<b>Photograph</b>	



**Date of Photo**

March 30, 2031; April 6, 2021

EVALUATION OF PROPERTY			
Criteria	Description	✓	Value Statement(s)
<b>Design or Physical Value</b>	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	✓	The property has the potential to be a representative example of a Tudor architectural style, Regency architectural style or a Vernacular architectural style influenced by Tudor or Regency architectural style. A full onsite survey is required to confirm.
	Displays a high degree of craftsmanship or artistic value		Unknown at this time.
	Displays a high degree of technical or scientific achievement		Unknown at this time.
<b>Historical or Associative Value</b>	Has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community	✓	The historic or associative value is unknown. The property appears to be represented on the Topographical map as early as 1916. Further research is required.
	Yields or has the potential to yield information that contributes to the understanding of a community or culture		Unknown at this time. Further research is required.
	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		Unknown at this time. Further research is required.
<b>Contextual Value</b>	Is important in defining, maintaining or supporting the character of an area	✓	The property is heavily wooded and reinforces the rural and natural character of the surrounding area. The property has a long gravel driveway which is lined with mature trees. The main structure has a large set back and is not visible from the Hidden Valley Road.
	Is physically, functionally, visually or historically linked to its surroundings		Unknown at this time. Further research is required.
	Is a landmark		The property is not a landmark.

RESULTS OF HERITAGE ASSESSMENT	
<b>CHVI Evaluation</b>	Has the potential to possess CHVI. Additional research is required.
<b>Heritage Attributes</b>	Additional research is required to determine the specific heritage attributes associated with the property. As a cautionary approach, the following heritage attribute should be considered: <ul style="list-style-type: none"> <li>• The entire property including all natural and built elements.</li> </ul>

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**BUILT HERITAGE RESOURCE NO. 2**

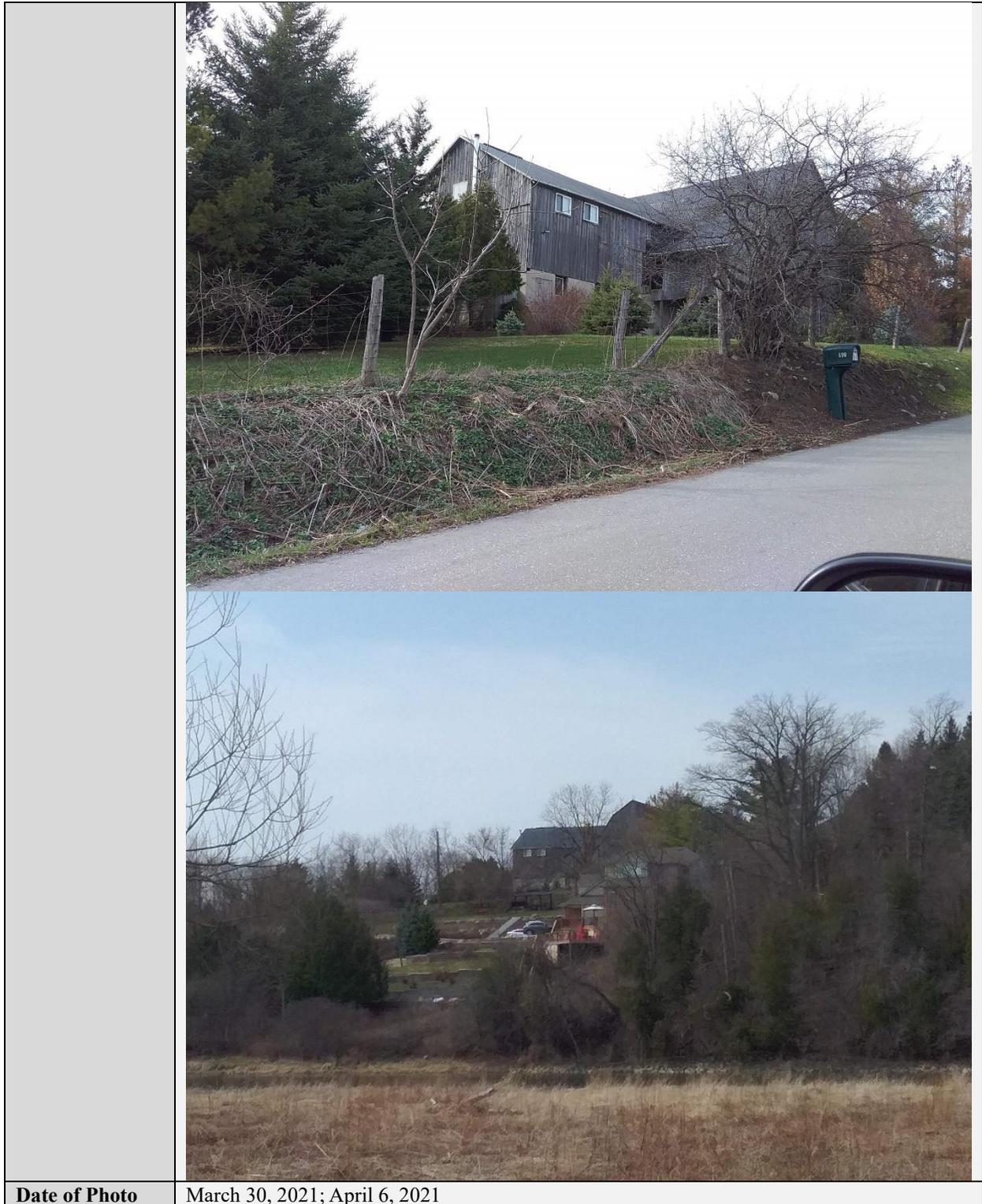
<b>DESCRIPTION OF PROPERTY</b>	
<b>Street Address</b>	691 Hidden Valley Road
<b>Name</b>	n/a
<b>Recognition</b>	No further action, however, the bank barn was noted by City of Kitchener as still having some interest.
<b>Location</b>	City of Kitchener
<b>Type of Property</b>	Residential
<b>Date(s)</b>	Central Ontario Barn (circa 1890s)

<b>Description</b>	<p>The property was evaluated from the streetscape as part of the City of Kitchener’s Four-step listing process on November 14, 2014.</p> <p>Using the criteria laid out in the Cultural Heritage Resource Evaluation Form, it was noted that the property meets three of the criteria. This includes:</p> <ul style="list-style-type: none"> <li>• Continuity: Does this structure contribute to the continuity or character of the street, neighbourhood, or area?</li> <li>• Site: Does the structure occupy its original site? Note: if relocated, i.e., relocated on its original site, moved from another site, etc.</li> <li>• Condition: Is this building in good condition?</li> </ul> <p>Due to the absence of interior access at the time of the evaluation, the following criteria is listed as unknown:</p> <ul style="list-style-type: none"> <li>• Interior: Is the interior arrangement, finish, craftsmanship, and/or detail noteworthy</li> </ul> <p>The Cultural Heritage Resource Evaluation Form does not recommend any further action and/or did not result in the property being added to the Municipal Heritage Register. The City of Kitchener noted that the bank barn on the property was still of some interest.</p> <p>The field survey confirmed the property contains an L-shaped Central Ontario Barns are also referred to as “bank barns” as they were often built into the side of a hill, or bank, allowing both the upper and lower floors to be accessed from ground level, with one access at the top of the hill and the other at the bottom. Often the ground floor in a bank barn is used as stables for cattle, horses and other livestock. One side of the barn is then “banked” so that there is a ramp for wagons or tractors to drive up to the mow (Kyles 2016a).</p> <p>The Central Ontario barn has a gambrel metal roof. It appears that the barn rests on a rubblestone foundation while the other section appears to rest on concrete foundation. The wood barn has various shaped windows and doorways and is appears to be a timber frame construction. When examined against the typical characteristics of the Central Ontario Barn styles as outlined by Shannon Kyles on Ontario Architecture (2016a) and Peter Ennals’ discussion of the Central Ontario Barn type (1972), the barn meets many of the characteristics of the style and can be considered a representative example.</p> <p>The field study confirmed the Central Ontario Barn is highly visible from the Hidden Valley Road, and visible from the Grant River Trail on the south side of the Grand River.</p>	
	<b>Characteristics (adapted Ennals 1972; Kyles 2016a)</b>	<b>691 Hidden Valley Road Characteristics</b>
Large, two storeys	Yes	
Two mows at right angles	Unknown	

Wooden structure on stone foundation	Yes
Gable or gambrel roof	Yes – Gambrel roof
Ramp leading to large door on long side	Yes
Set into a slope (bank barn) with large door on long side	Yes
Timber or Lumber frame construction	Unknown

**Photograph**





**Date of Photo**

March 30, 2021; April 6, 2021

EVALUATION OF PROPERTY			
Criteria	Description	✓	Value Statement(s)
<b>Design or Physical Value</b>	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	✓	The property contains a representative example of a Central Ontario Barn.
	Displays a high degree of craftsmanship or artistic value		Unknown at this time.
	Displays a high degree of technical or scientific achievement		Unknown at this time.
<b>Historical or Associative Value</b>	Has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community		The property does not appear to have a direct association with a theme, event, belief, person, activity which is significant to the community.
	Yields or has the potential to yield information that contributes to the understanding of a community or culture		The property does appear to have the potential to yield information that contributes to the understanding of the community or culture.
	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		The builder is unknown.
<b>Contextual Value</b>	Is important in defining, maintaining or supporting the character of an area	✓	The Central Ontario Barn reinforces the rural character of the surrounding area. The barn is visible from Hidden Valley Road and from the Grand River Trail south of the Grand River.
	Is physically, functionally, visually or historically linked to its surroundings		The bank barn does not appear to be used directly with any agricultural pursuits although this could not be confirmed without additional consultation.
	Is a landmark		The property is not a landmark.

RESULTS OF HERITAGE ASSESSMENT	
<b>CHVI Evaluation</b>	Has CHVI
<b>Heritage Attributes</b>	<ul style="list-style-type: none"> <li>• The visibility of the barn from Hidden Valley Road</li> <li>• The two storey, L shaped Central Ontario Barn with gambrel roof and stone foundation.</li> <li>• The visibility to the Grand River and view from the Grand River Trail south of the Grand River to the Central Ontario Barn.</li> </ul>

**CULTURAL HERITAGE LANDSCAPE RESOURCE NO. 1**

<b>DESCRIPTION OF PROPERTY</b>	
<b>Boundary</b>	Hidden Valley Road starting and ending at Wabanaki Drive
<b>Name</b>	Hidden Valley Road
<b>Recognition</b>	Cultural Heritage Landscape Study (L-RD-4) City of Kitchener Official Plan (Section 13.C.4.18 ) identifies Hidden Valley Road as a potential cultural heritage resource.
<b>Location</b>	City of Kitchener
<b>Type of Landscape</b>	As per the Cultural Heritage Landscape Datasheet, Hidden Valley Road is identified as a as Transportation Corridor (L-RD-4) Associated Historic Themes: Pioneer Settlement, Transportation, Agriculture, Grand River
<b>Description</b>	<p>Section 13.C.4.18 of the City of Kitchener Official Plan reads:</p> <p>Streets identified as having potential cultural heritage value or interest to be considered a potential cultural heritage resource include:                      B) Hidden Valley Road</p> <p>Section 15.D.12 Area Specific/Site Specific Policy Area include Section 15.D.12.2 Hidden Valley and reads:</p> <p><i>Natural Heritage Conservation/Open Space</i>                      b) <i>All lands in the Hidden Valley Community and along the Grand River which are designated Natural Heritage Conservation or Open Space lands will be dedicated to and/or acquired by the City for conservation, recreation and trail purposes.</i></p> <p>In 2014, the City of Kitchener completed a Cultural Heritage Landscape Study. Within the study, Hidden Valley Road was identified as a Cultural Heritage Landscape (L-RD-4). The Cultural Heritage Landscape Data Sheet (2019) provided additional information about the cultural heritage value or interest of the road.</p> <p>The datasheet identified the following associated historic themes with Hidden Valley Road:</p> <ul style="list-style-type: none"> <li>• <i>Pioneer Settlement,</i></li> <li>• <i>Transportation,</i></li> <li>• <i>Agriculture,</i></li> <li>• <i>Grand River”.</i></li> </ul> <p>The datasheet provides the following description of Hidden Valley Road.</p> <p><i>Hidden Valley Road is the remnant of a road that ran from Freeport to the settlement of German Mills. The alignment is shown in the 1881 Atlas of Waterloo Township. Travellers forded the river just west of the current Highway 8 bridge. The road climbed the steep bank on the west side of the river and followed a random alignment to just south of German Mills where it joined Mill Park road and the combination of roads that lead south to Blair and north to Berlin. The road falls within the Beasley's Old Survey. The road follows an undulating topography that gently slopes up and down with the small creek valleys and swales that run at right angles to the river. The road has scattered trees in its right-of-way and is bound by agricultural fields, small, wooded areas associate with the top of bank of the Grand River and small natural drainage areas. The road alignment has no shoulders and sections of the road open up to clear views across adjacent cultivated fields. Like many roads in the Township of Waterloo, it was not formally laid out in a geometric concession and side road grid during a township survey as in other parts of County of Waterloo and Upper Canada. Instead, it is part of an irregular network of roads developed to meet the</i></p>

	<p><i>needs of early local settlers as they cleared their lots, and to meet their requirements for access to villages, settlements, other farms, markets and in particular the mills at German Mills. The surrounding area remained agricultural landscape until recently when new contemporary residential developments have taken advantage of wonderful locations along the top of bank of the Grand River. These new plans of subdivision appear to incorporate most of Hidden Valley's alignment into the network of new subdivision roads and open space. It remains part of the local road network. Hidden Valley Drive is considered to be of local historical and contextual value given that the road was built as part of initial settlement activities in the southern part of the Township of Waterloo, forming part of Beasley's Old Survey; relates to the development of the Township of Waterloo and German Mills for agricultural purposes in the 19th Century; is partially bound by cultivated fields and a rural landscape, and forms part of the local road network. The following attributes are evocative of the road's historic and scenic character: the narrow two-lane alignment without shoulders; the scenic views to surrounding agricultural fields and the Grand River Valley; the diverse roadside vegetation that abuts the roadside provides a defined edge to the road; and follows the undulating topography and is part of the original historic alignment.</i></p> <p>The Datasheet includes an assessment of Hidden Valley Road which considered Historical Integrity, Cultural Value, and Community Value. The following outline where criteria was met along with additional information:</p> <p><i>Historical Integrity:</i></p> <ul style="list-style-type: none"> <li>• <i>Land Use- Continuity of Use</i></li> </ul> <p><i>Hidden Valley Road is the remnant of a road that ran from Freeport to the settlement of German Mills with an alignment shown in the 1881 Atlas of Waterloo Township.</i></p> <p><i>Cultural Value</i></p> <ul style="list-style-type: none"> <li>• <i>Historic Value- Historic Understanding of Area</i></li> <li>• <i>Contextual Value- Historically, Physically, Functionally, or Visually linked to surrounding.</i></li> </ul> <p><i>Hidden Valley Drive is considered to be of local historical and contextual value given that the road was built as part of initial settlement activities in the southern part of the Township of Waterloo, forming part of Beasley's Old Survey; relates to the development of the Township of Waterloo and German Mills for agricultural purposes in the 19th Century; is partially bound by cultivated fields and a rural landscape, and forms part of the local road network.</i></p> <p><i>Community Value</i></p> <p><i>The road remains a part of the local road network but has an overlay of the history of the development of the community.</i></p> <p>Lastly, the CHL Datasheet notes the following Character Defining Elements (also known as heritage attributes) of Hidden Valley Road as:</p> <ul style="list-style-type: none"> <li>• <i>the narrow two-lane alignment without shoulders;</i></li> <li>• <i>the scenic views to surrounding agricultural fields and the Grand River Valley;</i></li> <li>• <i>the diverse roadside vegetation that abuts the roadside provides a defined edge to the road; and</i></li> <li>• <i>the correspondence to the undulating topography which is part of the original historic alignment.</i></li> </ul>
<b>Photographs</b>	



		
<b>Date of Photos</b>	March 30, 2021; April 6, 2021	

EVALUATION OF PROPERTY			
Criteria	Description	✓	Value Statement(s)*
<b>Design or Physical Value</b>	Is a rare, unique, representative or early example of a style, type, expression, material or construction method		Hidden Valley Road does not illustrate or exemplify a style, type, expression, material or construction method.

			The present physical conditions of Hidden Valley Road, including two lanes of traffic, gravel shoulder, and ditching, are typical of other rural roads in the City of Kitchener and Region of Waterloo.
	Displays a high degree of craftsmanship or artistic value		Hidden Valley Road does not display a high degree of craftsmanship or artistic merit.
	Displays a high degree of technical or scientific achievement		Hidden Valley Road does not display a high degree of technical or scientific achievement.
<b>Historical or Associative Value</b>	Has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community	✓	Hidden Valley Road is historically associated with the theme of pioneer settlement, transportation, agriculture and the Grand River.  <i>Hidden Valley Road is the remnant of a road that ran from Freeport to the settlement of German Mills. The alignment is shown in the 1881 Atlas of Waterloo Township. Travellers forded the river just west of the current Highway 8 bridge. The road climbed the steep bank on the west side of the river and followed a random alignment to just south of German Mills where it joined Mill Park road and the combination of roads that lead south to Blair and north to Berlin. The road falls within the Beasley's Old Survey.</i>
	Yields or has the potential to yield information that contributes to the understanding of a community or culture	✓	The CHL datasheet notes the property has archaeological potential. The property has the potential to yield information contributing to the understanding of Indigenous history in the area.
	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		Hidden Valley Road has evolved over time and does not reflect the work or idea of an architect, builder, artist, designer or theorist who is significant to a community.
<b>Contextual Value</b>	Is important in defining, maintaining or supporting the character of an area	✓	Hidden Valley Road is important in maintaining and supporting the character of the surrounding landscape through its <i>scenic views to surrounding agricultural fields and the Grand River, the diverse roadside vegetation that abuts the roadside and provides a defined edge to the road. And the topography which is part of the historic alignment.</i>
	Is physically, functionally, visually or historically linked to its surroundings	✓	<i>Hidden Valley Road is considered to be of local historical and contextual value given that the road was built as part of initial settlement activities in the southern part of the Township of Waterloo, forming part of Beasley's Old Survey; relates to the development of the Township of Waterloo and German Mills for agricultural purposes in the 19th Century; is partially bound by cultivated fields and a rural landscape, and forms part of the local road network.</i>

	Is a landmark	✓	Hidden Valley Road is not considered a landmark recognized by the community.
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\* The value statement which have been taken directly from CHL Datasheet are noted in italics.

<b>RESULTS OF HERITAGE ASSESSMENT</b>	
<b>CHVI Evaluation</b>	Has CHVI
<b>Heritage Attributes*</b>	The heritage attributes, as identified by the CHL Study include: <ul style="list-style-type: none"> <li>• the narrow two-lane alignment without shoulders;</li> <li>• the scenic views to surrounding agricultural fields and the Grand River Valley;</li> <li>• the diverse roadside vegetation that abuts the roadside provides a defined edge to the road;</li> <li>• and follows the undulating topography and is part of the original historic alignment.</li> </ul>

**CULTURAL HERITAGE LANDSCAPE RESOURCE NO. 2**

<b>DESCRIPTION OF PROPERTY</b>	
<b>Boundary</b>	Hidden Valley Road -Heritage Corridor ( <i>approximately just south of Hidden Valley Creek to the location of the start of the new access arrangement to River Road extension near Highway 8</i> )
<b>Name</b>	Hidden Valley Road- Heritage Corridor
<b>Recognition</b>	The Hidden Valley Road Master Plan identifies a specific section of Hidden Valley Road as a significant CHL “and under consideration as a ‘Heritage Corridor’ (2019:4).
<b>Location</b>	The ‘Heritage Corridor’ is ‘ <i>approximately just south of Hidden Valley Creek to the location of the start of the new access arrangement to River Road extension near Highway 8</i> ’.
<b>Type of Landscape</b>	Streets and Roads
<b>Description</b>	<p><i>The Hidden Valley Road Master Plan states:</i></p> <p><i>The portion of Hidden Valley Road from approximately just south of Hidden Valley Creek to the location of the start of the new access arrangement to River Road extension near Highway 8 is the only portion of the road that would be the significant Cultural Heritage Landscape (CHL).</i></p> <p>The ‘heritage corridor’ is set along a narrow two- land road with no sidewalks or curbs along a portion of Hidden Valley Road. The section of Hidden Valley Road contains a wide range of building sizes and architectural styles with varying setbacks. A handful of highly visible, large, newer, homes are set closer to the road. Natural vegetation and a mature tree canopy dominant the entire corridor. The ‘heritage corridor’ has direct views to the Grand River to the east, and smaller sections of the road provide views to the agricultural fields to the west.</p> <p>The heritage attributes associated with the ‘heritage corridor’ are consistent with those identified in the Cultural Heritage Landscape Study (2019). This includes:</p> <ul style="list-style-type: none"> <li>• <i>the narrow two-lane alignment without shoulders;</i></li> <li>• <i>the scenic views to surrounding agricultural fields and the Grand River Valley;</i></li> <li>• <i>the diverse roadside vegetation that abuts the roadside provides a defined edge to the road; and</i></li> <li>• <i>the correspondence to the undulating topography which is part of the original historic alignment.</i></li> </ul>
<b>Photographs</b>	



		
<b>Date of Photos</b>	March 30, 2021; April 6, 2021	

EVALUATION OF PROPERTY			
Criteria	Description	✓	Value Statement(s)*
<b>Design or Physical Value</b>	Is a rare, unique, representative or early example of a style, type, expression, material or construction method		Hidden Valley Road- Heritage Corridor does not illustrate or exemplify a style, type, expression, material, or construction method.

			The present physical conditions of Hidden Valley Road- Heritage Corridor, including the narrow two-lane alignment, gravel shoulder, and ditching, are typical of other rural roads in the City of Kitchener and Region of Waterloo.
	Displays a high degree of craftsmanship or artistic value		Hidden Valley Road- Heritage Corridor does not display a high degree of craftsmanship or artistic merit.
	Displays a high degree of technical or scientific achievement		Hidden Valley Road- Heritage Corridor does not display a high degree of technical or scientific achievement.
<b>Historical or Associative Value</b>	Has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community	✓	As noted in the CHL Study, this section of Hidden Valley Road noted as a heritage corridor is historically associated with the theme of pioneer settlement, transportation, agriculture and the Grand River.
	Yields or has the potential to yield information that contributes to the understanding of a community or culture	✓	The CHL Study notes the property has archaeological potential. The property has the potential to yield information contributing to the understanding of Indigenous history in the area.
	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community		Hidden Valley Road -Heritage Corridor has evolved over time and does not reflect the work or idea of an architect, builder, artist, designer or theorist who is significant to a community.
<b>Contextual Value</b>	Is important in defining, maintaining or supporting the character of an area	✓	Hidden Valley Road- Heritage Corridor is important in maintaining and supporting the character of the surrounding landscape through its <i>scenic views to surrounding agricultural fields and the Grand River; the diverse roadside vegetation that abuts the roadside and provides a defined edge to the road. And the topography which is part of the historic alignment.</i>
	Is physically, functionally, visually or historically linked to its surroundings	✓	Hidden Valley Road <i>is considered to be of local historical and contextual value given that the road was built as part of initial settlement activities in the southern part of the Township of Waterloo, forming part of Beasley's Old Survey; relates to the development of the Township of Waterloo and German Mills for agricultural purposes in the 19th Century; is partially bound by cultivated fields and a rural landscape, and forms part of the local road network.</i>
	Is a landmark		Hidden Valley Road is not considered a landmark recognized by the community.

\* The value statement and heritage attributes which have been taken directly from CHL Datasheet are noted in italics.

<b>RESULTS OF HERITAGE ASSESSMENT</b>	
<b>CHVI Evaluation</b>	Has CHVI
<b>Heritage Attributes</b>	<p>The heritage attributes, as identified in the Cultural Heritage Landscape Study and Data Sheet for Hidden Valley Road, apply to the Hidden Valley Road- Heritage Corridor. This includes:</p> <ul style="list-style-type: none"><li>• <i>the narrow two-lane alignment without shoulders;</i></li><li>• <i>the scenic views to surrounding agricultural fields and the Grand River Valley;</i></li><li>• <i>the diverse roadside vegetation that abuts the roadside provides a defined edge to the road; and</i></li><li>• <i>the correspondence to the undulating topography which is part of the original historic alignment.</i></li></ul>

**CULTURAL HERITAGE LANDSCAPE RESOURCE NO. 3**

<b>DESCRIPTION OF PROPERTY</b>	
<b>Boundary</b>	Grand River Corridor
<b>Name</b>	The Grand River
<b>Recognition</b>	Canadian Heritage River (1994) Cultural Heritage Landscape Study (L-GRC-1) Official Plan Section 12.C.1.12
<b>Location</b>	The City of Kitchener CHL Datasheet notes ‘The Grand River Corridor, in large part, defines the east limit of the City. It is continuous from the northern limit where Kitchener meets Waterloo at Kiwanis Park south to the meander bend just north of Bloomingdale Road’.
<b>Type of Landscape</b>	Open Spaces (L-GRC-1) Associated Historic Themes: Prehistoric Habitation, Grand River, First Exploration, Pioneer Settlement, Mennonite.
<b>Description</b>	<p>The Grand River Corridor has been identified within several OP policies. With respect to cultural heritage value as a Canadian Heritage River, Section 12.C.1.12 reads:</p> <p><i>The City recognizes the Grand River as a Canadian Heritage River and will co-operate with the Region and the Grand River Conservation Authority in efforts to conserve, manage and enhance, where practical, the river’s natural, cultural, recreational, scenic and ecological features.</i></p> <p>Within the City of Kitchener Cultural Heritage Landscape Study, the Grand River Corridor is identified as a Cultural Heritage Landscape (L-GRC-1). The Cultural Heritage Landscape Data Sheet provided additional information about the cultural heritage value or interest. .</p> <p>The datasheet identified the following associated historic themes with Hidden Valley Road:</p> <ul style="list-style-type: none"> <li>• <i>Prehistoric Habitation</i></li> <li>• <i>Grand River</i></li> <li>• <i>First Exploration</i></li> <li>• <i>Pioneer Settlement</i></li> <li>• <i>Mennonite.</i></li> </ul> <p>The datasheet provides the following description of the Grand River Corridor CHL:</p> <p><i>Few rivers in Canada have seen as much of the flow of history as the Grand River. First Nations have flourished in the watershed for more than 10,000 years. The last three centuries have brought an influx of European, American and other settlers, initially seeking agricultural land, but eventually diversifying into centres of industry with the arrival of the railway. Although the River provided sustenance to the early pioneers of the Kitchener area, it did not play the same role it did in other watershed communities where waterpower was the genesis of founding industries. Instead, the River was probably perceived as more of an obstacle, restricting the flow of goods and services eastward and requiring substantial investment to connect Kitchener to its eastern and southern markets. The Grand and its tributaries drain approximately 6735 square kilometres (2600 square miles) and the combined watershed is the largest catchment basin in Southwestern Ontario. The Kitchener reaches of the Grand create the eastern boundary of the City. Along the eastern edge of Kitchener, the Grand cuts its way through an ancient glacial spillway and has alternating banks that range in height from a few metres to over 30 metres. The alluvial plains in which the River runs vary in width, from less than a kilometre to more than 2 kilometres and have been a source of an abundant supply of sands and gravels for many decades. The Grand River Forest, with its rare Carolinian species south of Kitchener, lines much of the shore in the southernmost reaches. This Forest changes to a mixed deciduous hardwood forest with black willow communities lining the banks through the Kitchener reaches. The River is subject to occasional extreme flows and flooding. In 1954, Hurricane Hazel caused flows of more than 10 times normal levels. This resulted in significant changes to the landscape in the Bridgeport reach due to the construction of dikes and other</i></p>

*flood control measures. The Kitchener reaches have been the location of a variety of settlements and other historical activities since the arrival of pioneer settlers beginning around 1800. The highlights of these activities include the following. In 1829, Jacob Shoemaker established Glasgow Mills at the mouth of Laurel Creek on the west bank of the River. At about the same time John Tyson settled on the east bank and called the settlement Bridgeport. The Bridgeport Bridge was built on Bridge Street in 1934, eight years after its sister bridge was constructed at Freeport. The bridge is a five-span reinforced concrete bowstring and is 126 metres long. Shoemaker's Ford & Wooden Bridge is located south of the current Bridgeport Bridge. It was used to connect the two sides of the early settlement of Bridgeport. The first wooden bridge at Shoemaker's Ford was constructed in 1847. The Grand Trunk Railway Bridge (at Breslau) embankments were started in 1854 and constructed over a period of 2 years. The abutments are made of limestone block. Two concrete piers in the river complete the span. The original bridge spans were constructed of wrought iron imported from England. The iron tube structure was replaced by steel girders in 1905. Other early fords along the Kitchener reaches included the Breslau Ford, the Zeller's Ford, and the Sam Bricker's Ford. Livergood's Ford was first called Reichert's Ford and later the Livergood's Ford, after Christian Reichert and George Livergood early local settlers. After the first permanent major bridge in Waterloo Township was erected here in 1820, the area became known as Toll Bridge (and later Bridgeville). Tolls came to an end in 1857 and the area was renamed Freeport in 1865. In 1880, the first iron bridge in Waterloo County was erected here. The existing Freeport Bridge is a seven span, six-pier, concrete bowstring arch. There was a lane or road from the Dundas Road in Preston to Freeport and beyond. This road was extended to the Grand River in the vicinity of the Pioneer Memorial Tower. Soon after 1800, Bechtel's Ford and later a wooden bridge were established from this road westward across the Grand River. On the western side, the bank was quite steep (over 30 metres in height), but the pioneers built the incline of the road from south to north up the steep bank and gradually emerged on the Huron Road. About 1836, a wooden bridge was built across the Grand River at the Bechtel's Ford location and lasted until about 1857, when it was removed by an early spring flood. In 1994, the Grand River and its major tributaries, the Nith, Conestogo, Speed and Eramosa rivers, were designated as Canadian Heritage Rivers. It was the 15th Canadian Heritage River to be designated in Canada. Although the river has been much altered by its people, it still provides large natural areas and scenic views and is of outstanding recreational and educational value. Many decades of careful management have maintained these values even as the urban nature of the watershed grew. While use of the river has changed, the major recreational role it plays, and the well-preserved evidence of the cultures that were drawn to its banks, makes it worthy of its status as a Canadian Heritage River.*

**Photographs**





	
<b>Date of Photos</b>	March 30, 2021; April 6, 2021

<b>EVALUATION OF PROPERTY</b>			
<b>Criteria</b>	<b>Description</b>	<b>✓</b>	<b>Value Statement(s)*</b>
<b>Design or Physical Value</b>	Is a rare, unique, representative or early example of a style, type, expression, material or construction method	✓	The Grand River Corridor does not contain a rare, unique, representative or early example of a style, type, expression, material or construction method.
	Displays a high degree of craftsmanship or artistic value	✓	The Grand River Corridor does not display a high degree of craftsmanship or artistic merit.
	Displays a high degree of technical or scientific achievement	✓	The Grand River Corridor does not display a high degree of technical or scientific achievement.
<b>Historical or Associative Value</b>	Has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community	✓	The Grand River Corridor <i>was the main feature that attracted the first pioneer Mennonite settlers from Pennsylvania to the Kitchener area. Has been the ancestral home of First Nations peoples for 10,000 years.</i>
	Yields or has the potential to yield information that contributes to the understanding of a community or culture	✓	The CHL datasheet notes the property has archaeological potential. The property has the potential to yield information contributing to the understanding of Indigenous history in the area, however, this is address in a separate process.
	Demonstrates or reflects the work or ideas of an architect, builder, artist, designer or theorist who is significant to a community	✓	The Grand River Corridor does not reflect the work or idea of an architect, builder, artist, designer or theorist who is significant to a community.
<b>Contextual Value</b>	Is important in defining, maintaining or supporting the character of an area	✓	The Grand River Corridor is important in defining, maintaining and supporting the character of the surrounding landscape. The

			Grand River Corridor has influenced settlement and the surrounding development.
	Is physically, functionally, visually or historically linked to its surroundings	✓	The Grand River Corridor is physically, functionally, visually, and historically linked to its surroundings. It was a principle factor that influence Pre-Contact lifeways and historic settlement patterns.
	Is a landmark	✓	The Grand River Corridor is considered a landmark recognized by the community.

\* The value statement which have been taken directly from CHL Datasheet are noted in italics.

<b>RESULTS OF HERITAGE ASSESSMENT</b>	
<b>CHVI Evaluation</b>	Has CHVI
<b>Heritage Attributes</b>	The character defining elements (also known as heritage attributes), as identified by the CHL Study include: <ul style="list-style-type: none"> <li>• Well-defined river valley with alternating steep and shallow banks.</li> <li>• Wonderful meandering river with significant vegetation communities and associated wildlife habitat.</li> </ul>

## Appendix B: Team Member Curriculum Vitae

Kayla Jonas Galvin, MA, RPP, MCIP, CAHP  
Heritage Operations Manager  
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### Biography

Kayla Jonas Galvin, Archaeological Research Associates Ltd.'s Heritage Operations Manager, has extensive experience evaluating cultural heritage resources and landscapes for private and public-sector clients to fulfil the requirements of provincial and municipal legislation such as the *Environmental Assessment Act*, the *Standards & Guidelines for the Conservation of Provincial Heritage Properties* and municipal Official Plans. She served as Team Lead on the Ministry of Tourism, Culture and Sport Historic Places Initiative, which drafted over 850 Statements of Significance and for *Heritage Districts Work!*, a study of 64 heritage conservation districts in Ontario. Kayla was an editor of *Arch, Truss and Beam: The Grand River Watershed Heritage Bridge Inventory* and has worked on Municipal Heritage Registers in several municipalities. Kayla has drafted over 150 designation reports and by-laws for the City of Kingston, the City of Burlington, the Town of Newmarket, Municipality of Chatham-Kent, City of Brampton and the Township of Whitchurch-Stouffville. Kayla is the Heritage Team Lead for ARA's roster assignments for Infrastructure Ontario and oversees evaluation of properties according to *Standards & Guidelines for the Conservation of Provincial Heritage Properties*. Kayla is a Registered Professional Planner (RPP), a Member of the Canadian Institute of Planners (MCIP), is a professional member of the Canadian Association of Heritage Professionals (CAHP) and sits on the board of the Ontario Association of Heritage Professionals.

### Education

2016 MA in Planning, University of Waterloo. Thesis Topic: *Goderich – A Case Study of Conserving Cultural Heritage Resources in a Disaster*  
2003-2008 Honours BES University of Waterloo, Waterloo, Ontario  
Joint Major: Environment and Resource Studies and Anthropology

### Professional Memberships and Accreditations

Current Registered Professional Planner (RPP)  
Member of the Canadian Institute of Planners (MCIP)  
Professional Member, Canadian Association of Heritage Professionals (CAHP)  
Board Member, Ontario Association of Heritage Professionals

### Work Experience

Current **Heritage Operations Manager, Archaeological Research Associates Ltd.**  
Oversees business development for the Heritage Department, coordinates completion of designation by-laws, Heritage Impact Assessments, Built Heritage and Cultural Heritage Landscape Assessments, and Cultural Heritage Resource Evaluations.

- 2009-2013 **Heritage Planner, Heritage Resources Centre, University of Waterloo**  
Coordinated the completion of various contracts associated with built heritage including responding to grants, RFPs and initiating service proposals.
- 2008-2009, 2012 **Project Coordinator–Heritage Conservation District Study, ACO**  
Coordinated the field research and authored reports for the study of 32 Heritage Conservation Districts in Ontario. Managed the efforts of over 84 volunteers, four staff and municipal planners from 23 communities.
- 2007-2008 **Team Lead, Historic Place Initiative, Ministry of Culture**  
Liaised with Ministry of Culture Staff, Centre’s Director and municipal heritage staff to draft over 850 Statements of Significance for properties to be nominated to the Canadian Register of Historic Places. Managed a team of four people.

### **Selected Professional Development**

- 2019 OPPI and WeirFoulds Client Seminar: Bill 108 – More Homes, More Choice, 2019
- 2019 Annual attendance at Ontario Heritage Conference, Goderich, ON (Two-days)
- 2019 Information Session: Proposed Amendments to the OHA, by Ministry of Tourism, Culture and Sport
- 2018 Indigenous Canada Course, University of Alberta
- 2018 Volunteer Dig, Mohawk Institute
- 2018 Indigenizing Planning, three webinar series, Canadian Institute of Planners
- 2018 Cultural Heritage, Archaeology and Planning Symposium
- 2018 Transforming Public Apathy to Revitalize Engagement, Webinar, MetorQuest
- 2018 How to Plan for Communities: Listen to the Them, Webinar, CIP
- 2017 Empowering Indigenous Voices in Impact Assessments, Webinar, International Association for Impact Assessments
- 2017 Cultural Heritage, Archaeology and Planning Symposium
- 2017 Capitalizing on Heritage, National Trust Conference, Ottawa, ON.
- 2016 Cultural Heritage, Archaeology and Planning Symposium
- 2016 Heritage Rising, National Trust Conference, Hamilton
- 2016 Ontario Heritage Conference St. Marys and Stratford, ON.
- 2016 Heritage Inventories Workshop, City of Hamilton & ERA Architects
- 2015 Cultural Heritage, Archaeology and Planning Symposium
- 2015 City of Hamilton: Review of Existing Heritage Permit and Heritage Designation Process Workshop.
- 2015 Leadership Training for Managers Course, Dale Carnegie Training

### **Selected Publications**

- 2018 “Conserving Cultural Heritage Landscapes in Waterloo: An Innovative Approach.” *Ontario Association of Heritage Professionals Newsletter*, Winter 2018.
- 2018 “Restoring Pioneer Cemeteries” *Ontario Association of Heritage Professionals Newsletter*. Spring 2018. *In print*.
- 2015 “Written in Stone: Cemeteries as Heritage Resources.” *Municipal World*, Sept. 2015.
- 2015 “Bringing History to Life.” *Municipal World*, February 2015, pages 11-12.
- 2014 “Inventorying our History.” *Ontario Planning Journal*, January/February 2015.
- 2014 “Assessing the success of Heritage Conservation Districts: Insights from Ontario Canada.” with R. Shipley and J. Kovacs. *Cities*.

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Heritage Project Manager  
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### **Biography**

Amy Barnes, a Project Manager with the Heritage Team, has over ten years of experience evaluating cultural heritage resources and leading community engagement. Amy has extensive experience working with provincial and municipal legislation and guidelines, including the Ontario Heritage Act, Official Plans, the Standards and Guidelines for the Conservation of Historic Places, and the Ontario Heritage Toolkit. Ms. Barnes has completed over fifty heritage related projects including 150+ cultural assessments and has been qualified as an expert witness at the Ontario Superior Court of Justice. Amy has worked in the public and private sector where her duties included project management, public consultation, facilitator, research, database and records management, and report author. Amy has worked with the Town of Oakville, City of Cambridge, City of Kitchener, Niagara-on-the-Lake, City of London, and the City of Kingston on projects which range in size, scale and complexity. Amy Barnes holds an M.A. in Heritage Conservation from the School of Canadian Studies at Carleton University in Ottawa, Ontario. Amy has successfully completed the International Association of Public Participation (IAP2) Foundations in Public Participation, the IAP2 Planning and Techniques for Effective Public Participation, and Indigenous Awareness Training through Indigenous Awareness Canada. Amy is a professional member of the Canadian Association of Heritage Professionals (CAHP) and currently serves as the Vice-Chair of the Cambridge Municipal Heritage Advisory Committee.

### **Education**

2009 MA in Heritage Conservation, School of Canadian Studies, Carleton University, Ottawa, Ontario.  
2006 Honours BA, Carleton University, Ottawa, Ontario  
Canadian Studies (Major) and Psychology (Minor).

### **Professional Memberships and Accreditations**

Current Professional Member, Canadian Association of Heritage Professionals (CAHP)  
Member, International Network for Traditional Building, Architecture & Urbanism, Guelph Chapter.

### **Work Experience**

Current **Heritage Project Manager, Archaeological Research Associates Ltd.**  
Coordinates the completion of designation by-laws, Heritage Impact Assessments, Built Heritage and Cultural Heritage Landscape Assessments, and Cultural Heritage Resource Evaluations.  
2020 **Principal Heritage Consultant, Amy Barnes Consulting.**  
2012-2015 Coordinated the completion of various contracts associated with built heritage, cultural heritage landscapes, including Heritage Impact Assessments, Cultural Heritage Evaluation Reports, Designation Reports and professional consultation.

- 2019-2020 **Manager of Operations- Outreach and Engagement, Yorklands Green Hub.**  
Coordinated the development of a feasibility study and strategic planning initiatives for the anticipated purchase of a Provincial Property of Provincial Heritage Significance. Coordination of workshops and community events, external outreach and communications and implementing strategic planning initiatives. Liaison with Infrastructure Ontario, Ministry of Heritage, Sport, Tourism and Cultural Industries, non-profits, charities, school boards and community members.
- 2015-2019 **Project Manager and Senior Cultural Heritage Specialist – Letourneau Heritage Consulting Inc.**  
Coordinated and authored various heritage related contracts. Duties included historic research, heritage impact assessments, cultural heritage assessments and evaluations, and public engagement activities. Served as the firm’s Public Engagement Specialist.
- 2011-2012 **Creative Content Developer, Virtual Museums Canada.**  
Worked as part of an interdisciplinary team to help create an online virtual exhibit for Virtual Museums Canada. Responsible for historical research, record management, creative design, narrative and content development and internal coordination for the Archives and Research Team.
- 2010 **Junior Heritage Planner, Municipality of North Grenville.**  
Responsible for historic research, public consultation and engagement and community development for heritage related projects. Worked with local heritage committees, Council and planning staff in accordance with the Ontario Heritage Act, Official Plans and other guiding policies.
- 2009 **Heritage Planner Intern, City of Kingston.**  
Aided in heritage related projects and worked closely with heritage committees, Council, and planning staff.

### **Selected Professional Development**

- 2020 Indigenous Awareness Training and Certification, Indigenous Awareness Canada.  
– Indigenous Awareness Certification  
– Indigenous Peoples and Cultures  
– Indigenous Communication & Consultation  
– Indigenous Employment Outreach, Recruit, and Retain
- 2019 Enviroseries “Creating a Heritage Landmark Park For Guelph at The Former Ontario Reformatory”. Yorklands Green Hub..
- 2017 International Association of Public Participation Certification  
- Foundations in Public Participation  
- Planning and Techniques for Effective Public Participation.

### **Publications**

- 2013 “Landmark Series.” Cambridge Times. Selected Issues.  
“Alice King Sculthorpe.” Acorn Magazine, 2013.

Penny M. Young, MA, CAHP (#P092)  
Heritage Project Manager  
**ARCHAEOLOGICAL RESEARCH ASSOCIATES LTD.**  
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Web: [www.arch-research.com](http://www.arch-research.com)

## Biography

Penny Young has 27 years of cultural heritage management experience, 21 years working in government, as a Heritage Planner, Heritage Coordinator, Regional Archaeologist and Archaeological Database Coordinator where she managed and coordinated the impacts to cultural heritage resources including built heritage, archaeological sites and cultural heritage landscapes for compliance with municipal, provincial and federal legislation and policy. She has conducted results-driven and collaborative management of complex cultural heritage resource projects within the public sector involving developing project terms of reference, defining scope of work, preparation of budgets and conducting sites visits to monitor and provide heritage/archaeological and environmental advice and direction. At the Ministry of Transportation Penny revised, updated and developed policy, as part of a team, for the *Ontario Heritage Bridge Guidelines for Provincially Owned Bridge Guidelines for Provincially Owned Bridges*. She received the MTO Central Region Employee Recognition Award in 2001 and 2002. While at MTO she provided technical advice and input into the development of the *MTO Environmental Reference for Highway Design - Section 3.7 Built Heritage and Cultural Heritage Landscapes* and the *MTO Environmental Guide for Built Heritage and Cultural Heritage Landscapes*. She is a professional member of the Canadian Association of Heritage Planners (CAHP) and holds Professional License #P092 from MTCS. She also holds memberships in the Ontario Professional Planners Institute (OPPI) and the Ontario Archaeological Society (OAS).

## Education

1990-1993 Master of Arts, Department of Anthropology McMaster University, Hamilton Ontario. Specializing in Mesoamerican and Ontario archaeology.  
1983-1987 Honours Bachelor of Arts (English and Anthropology), McMaster University, Hamilton, Ontario.

## Professional Memberships and Accreditations

Current Professional Member, Canadian Association of Heritage Professionals (CAHP)  
Member of Ontario Archaeological Society  
Pre-Candidate Member, Ontario Professional Planners Institute (OPPI)  
Ministry of Tourism Culture & Sport Professional Licence (#P092)

## Work Experience

Current **Project Manager - Heritage, Archaeological Research Associates Ltd.**  
Coordinates ARA project teams and conducts heritage assessment projects including Heritage Impact Assessments, Built Heritage and Cultural Heritage Landscape Assessments, and Cultural Heritage Resource Evaluations. Additional responsibilities include the completion of designation by-laws and heritage

- inventories. Liaises with municipal staff, provincial ministries and Indigenous communities to solicit relevant project information and to build relationships.
- 2008-2016 **Heritage Planner, Culture Services Unit, Ministry of Tourism, Culture & Sport (MTCS)**  
Responsible for advising and providing technical review for management of cultural heritage resources in environmental assessment undertakings and planning projects affecting provincial ministries, municipalities, private sector proponents and Indigenous communities. Advised on municipalities' Official Plan (OP) policies cultural heritage conservation policies. Provided guidance on compliance with the Public Work Class EA, other Class EA legislation and 2010 *Standards and Guidelines for Provincial Heritage Properties*.
- 2014 **Senior Heritage Planner, Planning and Building Department, City of Burlington** (temporary assignment)  
Project manager of the study for a potential Heritage Conservation District. Provided guidance to a multiple company consultant team and reported to municipal staff and the public. Liaised with Municipal Heritage Committee and municipal heritage property owners approved heritage permits and provided direction on Indigenous engagement, archaeological site assessments and proposed development projects.
- 2011 **Heritage Coordinator, Building, Planning and Design Department, City of Brampton** (temporary assignment)  
Project lead for new Heritage Conservation District Study. The assignment included directing consultants, managing budgets, organizing a Public Information Session, and reporting to Senior Management and Council. Reviewed development/planning documents for impacts to heritage including OP policies, OP Amendments, Plans of subdivision and Committee of Adjustment applications and Municipal Class EA undertakings.
- 2010-2011 **Senior Heritage Coordinator, Culture Division, City of Mississauga** (temporary assignment)  
Provided advice to Senior Management and Municipal Council on heritage conservation of built heritage, archaeological sites and cultural heritage landscapes. Liaised with multiple municipal staff including the Clerks' office, Parks and development planners and the public. Supervised and directed project work for junior heritage planner.
- 1999-2008 **Regional Archaeologist, Planning and Environmental Section, Ministry of Transportation (MTO)**  
Responsibilities included: project management and coordination of MTO archaeology and heritage program, managed multiple consultants, conducted and coordinated field assessments, surveys and excavations, liaised with First Nations' communities and Band Councils, estimated budgets including \$200,000 retainer contracts.

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## Biography

Sarah Clarke is Archaeological Research Associates Ltd.'s Heritage Research Manager. Sarah has over 12 years of experience in Ontario archaeology and 10 years of experience with background research. Her experience includes conducting archival research (both local and remote), artifact cataloguing and processing, and fieldwork at various stages in both the consulting and research-based realms. As Team Lead of Research, Sarah is responsible for conducting archival research in advance of ARA's archaeological and heritage assessments. In this capacity, she performs Stage 1 archaeological assessment field surveys, conducts preliminary built heritage and cultural heritage landscape investigations and liaises with heritage resource offices and local community resources in order to obtain and process data. Sarah has in-depth experience in conducting historic research following the *Ontario Heritage Toolkit* series, and the *Standards and Guidelines for Provincial Heritage Properties*. Sarah holds an Honours B.A. in North American Archaeology, with a Historical/Industrial Option from Wilfrid Laurier University and is currently enrolled in Western University's Intensive Applied Archaeology MA program. She is a member of the Ontario Archaeological Society (OAS), the Society for Industrial Archaeology, the Ontario Genealogical Society (OGS), the Canadian Archaeological Association, and is a Council-appointed citizen volunteer on the Brantford Municipal Heritage Committee. Sarah holds an R-level archaeological license with the MTCS (#R446).

## Education

Current	MA Intensive Applied Archaeology, Western University, London, ON. Proposed thesis topic: Archaeological Management at the Mohawk Village.
1999–2010	Honours BA, Wilfrid Laurier University, Waterloo, Ontario Major: North American Archaeology, Historical/Industrial Option

## Professional Memberships and Accreditations

Current	Member of the Ontario Archaeological Society
Current	Member of the Society for Industrial Archaeology
Current	Member of the Brant Historical Society
Current	Member of the Ontario Genealogical Society
Current	Member of the Canadian Archaeological Association
Current	Member of the Archives Association of Ontario

## Work Experience

Current	<b>Team Lead – Research; Team Lead – Archaeology, Archaeological Research Associates Ltd.</b> Manage and plan the research needs for archaeological and heritage projects. Research at offsite locations including land registry offices, local libraries and local
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- and provincial archives. Historic analysis for archaeological and heritage projects. Field Director conducting Stage 1 assessments.
- 2013-2015 **Heritage Research Manager; Archaeological Monitoring Coordinator, Archaeological Research Associates Ltd.**  
Stage 1 archaeological field assessments, research at local and distant archives at both the municipal and provincial levels, coordination of construction monitors for archaeological project locations.
- 2010-2013 **Historic Researcher, Timmins Martelle Heritage Consultants Inc.**  
Report preparation, local and offsite research (libraries, archives); correspondence with the Ministry of Tourism, Culture, and Sport; report submission to the MTCS and clients; and administrative duties (PIF and Borden form completion and submission, data requests).
- 2008-2009 **Field Technician, Archaeological Assessments Ltd.**  
Participated in field excavation and artifact processing.
- 2008-2009 **Teaching Assistant, Wilfrid Laurier University.**  
Responsible for teaching and evaluating first year student lab work.
- 2007-2008 **Field and Lab Technician, Historic Horizons.**  
Participated in excavations at Dundurn Castle and Auchmar in Hamilton, Ontario. Catalogued artifacts from excavations at Auchmar.
- 2006-2010 **Archaeological Field Technician/Supervisor, Wilfrid Laurier University.**  
Field school student in 2006, returned as a field school teaching assistant in 2008 and 2010.

### Professional Development

- 2019 Annual attendance at Ontario Heritage Conference, Goderich, ON
- 2018 Cultural Heritage, Archaeology and Planning Symposium
- 2018 Grand River Watershed 21<sup>st</sup> Annual Heritage Day Workshop & Celebration
- 2018 Mississaugas of the New Credit First Nation Historical Gathering and Conference
- 2017 Ontario Genealogical Society Conference
- 2016 Ontario Archaeological Society Symposium
- 2015 Introduction to Blacksmithing Workshop, Milton Historical Society
- 2015 Applied Research License Workshop, MTCS
- 2014 Applied Research License Workshop, MTCS
- 2014 Heritage Preservation and Structural Recording in Historical and Industrial Archaeology. Four-month course taken at Wilfrid Laurier University, Waterloo, ON. Professor: Meagan Brooks.

### Presentations

- 2018 *The Early Black History of Brantford.* Brant Historical Society, City of Brantford.
- 2017 *Mush Hole Archaeology.* Ontario Archaeological Society Symposium, Brantford.
- 2017 *Urban Historical Archaeology: Exploring the Black Community in St. Catharines, Ontario.* Canadian Archaeological Association Conference, Gatineau, QC.

### Volunteer Experience

- Current Council-appointed citizen volunteer for the Brantford Municipal Heritage Committee.

# Natural Sciences Report

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## UPPER HIDDEN VALLEY PUMPING STATION AND FORCEMAIN SCHEDULE B CLASS ENVIRONMENTAL ASSESSMENT

for:

MTE CONSULTANTS

On Behalf of:  
The City of Kitchener

by:

LGL Limited  
environmental research associates

MAY 2022

LGL FILE NO. TA9080



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recommended alternative

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## 1.0 INTRODUCTION

To support development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan, a study was initiated to identify a sanitary servicing solution. The City of Kitchener has retained MTE Consultants to initiate a study to identify and evaluate alternative solutions, and to select the preferred solution. MTE Consultants has retained LGL Limited (LGL) to provide natural sciences support for the project as part of their technical team. This project is being carried out in accordance with the requirements of the Environmental Assessment Act and it is being planned under Schedule B of the Municipal Class Environmental Assessment (EA). The project scope involves an evaluation of alternatives, selection of preferred alternative and evaluation of environmental impacts and their mitigation measures. The preferred solution will be determined by maintaining the objectives of protection of the environment, minimal disruption to residents and surrounding areas, engaging a broad range of stakeholders, and documenting the study process in compliance with the Municipal Class Environmental Assessment Schedule “B” process.

This report represents a combination of desktop assessment and background information, and results of the field surveys conducted in 2021 on April 27, May 10, June 1, June 17, and October 13. The information collected to describe existing conditions was used to identify potential impacts to vegetation and wildlife habitat, document the presence of species at risk (SAR) and their habitat; and to provide recommendations for additional studies, where warranted, at detailed design.

The City of Kitchener completed the Hidden Valley Land Use Master Plan (approved by Council in June of 2019). The Master Plan indicated that wastewater servicing solutions are to be explored and analysed through a Municipal Class EA informed by the Land Use Master Plan. Three potential pumping station locations have been identified (Sites A through C; **Figure 1**).

The limits of the study area include lands bordered by Wabanaki Drive and Hidden Valley Road, located west of the Grand River and southeast of Fairway Road in Kitchener, Ontario. Option A is located south of Hidden Valley Rd in the northeast section of the study area. Option B is located south of Hidden Valley Rd where it parallels Highway 8, and to the east of North Creek. Option C is located in the northeast corner of the intersection between Hidden Valley Rd and Wabanaki Dr.

## 2.0 BACKGROUND

The intent of this Natural Sciences Report (NSR) is to describe existing natural heritage conditions within the study area through a combination of desktop review of background information and site investigations. For the purpose of the natural sciences investigation, the study area was reviewed in the context of the following:

- designated natural areas;
- physiography and soils;
- aquatic habitat;
- vegetation and vegetation communities; and,
- wildlife and wildlife habitat.



**LEGEND**

-  Future Sanitary Sewer Options 2, 2A, 3, 3A and 4
-  Proposed Forcemain Options 2, 2A, 3, 3A and 4
-  Future Sanitary Sewer Not Required for Options 2A and 3A
-  Study Area
-  Watercourse (GRCA)
-  Waterbody (GRCA)

Contains Information made available under Grand River Conservation Authority's Open Data Licence v2.0.

**Hidden Valley  
Pumping Station EA  
Study Area**



Project	TA9080	Figure	1
Date	May 2022	Prepared By:	KC
Scale	1:10,000	Verified By:	AHF

## 2.1 DESKTOP REVIEW

LGL has been involved in several studies in the Hidden Valley area in the past on behalf of the Region of Waterloo and the City of Kitchener (2003-2021), and the information collected in these past studies was incorporated into this Natural Sciences Report, in addition to other available background sources of information to include:

- River Road Extension Schedule ‘C’ Municipal Class Environmental Assessment. Environmental Study Report. (IBI Group 2014);
- River Road Extension Natural Heritage Study Existing Conditions (LGL 2014);
- Stage 2 Ion: Light Rail Transit from Kitchener to Cambridge. Environmental Project Report. (WSP 2021);
- Stage 2 Ion LRT from Kitchener to Cambridge Transit Project Assessment Process Natural Heritage Report (LGL 2020);
- Hidden Valley Land Use Master Plan (City of Kitchener 2019);
- Hidden Valley Inventory of Environmental Features and Functions (Ecologistics 1979);
- Biodiversity Explorer (maintained by the Ministry of Environment, Conservation and Parks);
- E-bird, i-Naturalist databases;
- Natural Heritage Information Center database; and,
- Ontario Breeding Bird, Mammal, and Reptile Atlases.

At the time of this report, available information from consultants conducting field work on behalf of landowners in the study area, including the landowner of the central Hidden Valley natural area, was not available to incorporate into existing conditions.

The MECP was contacted to confirm the limit and extent of available Species at Risk (SAR) information (including regulated habitat for SAR) for the project area. No additional information on SAR was provided.

## 2.2 FIELD SURVEYS

Focused field surveys were done in 2021 to update information on natural heritage in the study area, in particular in areas where infrastructure was feasible and likely for alternative solutions. **Table 1** provides a summary of the field work conducted within the study area in 2021, which includes a review of vegetation and vegetation communities, wildlife habitat and aquatic habitat.

**Table 1 – Summary of field visits in 2021**

Date	Details of field visit
April 27, 2021	Vegetation inventory and community characterization; incidental wildlife observations
May 10, 2021	Aquatic habitat characterization; incidental wildlife observations
June 1, 2021	Breeding bird surveys first visit; incidental wildlife observations
June 17, 2021	Breeding bird surveys second visit; incidental wildlife observations
October 13, 2021	Vegetation inventory and community characterization; incidental wildlife observations

### 3.0 EXISTING CONDITIONS

The Hidden Valley study area includes the natural environment features of the esker ridge, Provincially Significant Wetlands, significant woodlands and upland forest area, significant wildlife habitat and watercourses include the Grand River and its associated valley and steep slopes. The study area's natural heritage features were further characterized near potential pumping station locations through field investigations that were conducted between April 27 and October 13, 2021 (**Table 1**), and also through a review of the available body of technical work prepared through extensive public processes of environmental assessments in the study area. Information was compiled and analysed to develop a description of the terrestrial and aquatic ecosystems, vegetation and wildlife within the study area and to support a screening for Species at Risk (SAR) or SAR habitat.

SAR background review and site investigation findings are documented in their respective guilds in the following subsections specific to aquatic, vegetation or wildlife species at risk and habitat.

Records review mapping for natural heritage is shown on Figure 2.

### 3.1 DESIGNATION NATURAL AREAS

The study area was screened for any designated natural heritage features and functions within various local, regional and provincial policies, the results of which are noted in the following sections.

#### 3.1.1 Data Sources

Key data sources for review of designated natural areas included:

- Region of Waterloo Official Plan (2015);
- City of Kitchener Official Plan (2014);
- City of Kitchener Natural Heritage;
- MNRF Biodiversity Explorer; and,
- Lands Information Ontario (LIO) data layers (MNRF 2021b).

#### 3.1.2 Findings

A summary of background review for designated natural areas is provided in the following sections.

##### 3.1.2.1 Areas of Natural and Scientific Interest (ANSIs)

Provincial Areas of Natural and Scientific Interest (ANSI) are determined by the MNRF. The agency defines ANSIs as “areas of land and water containing natural landscapes or features that have been identified as having life science or earth science values related to protection, scientific study or education” (MNRF 2005). ANSI's can be significant provincially, regionally, or locally and typically represent areas with high biodiversity or support earth science features or processes. No ANSI's are identified in the study

area based on a review of LIO data (MNRF 2021b).

Southwest of the study area is the closest ANSI, known as Homer Watson Park, it's considered a Provincially Significant ANSI of Earth Science type. The site is a geological exposure created by the eroding banks of the Grand River (Karrow 2011).

### 3.1.2.2 Significant Wetlands

The presence of wetland features was screened through a review of available GIS data layers provided by MNRF and through a review of Grand River Conservation Authority mapping tool. Three types of wetland features are identified in the data layers:

- Provincially significant wetlands (PSWs);
- Unevaluated wetlands; and,
- other wetlands.

The status of wetlands is determined through an evaluation according to the Ontario Wetland Evaluation System (OWES). PSWs are those for which an OWES evaluation has resulted in a score sufficient to qualify as a provincially significant feature. Unevaluated wetlands are wetland features that have not undergone an OWES evaluation; while those presented as evaluated or as 'other' wetlands are features where an OWES evaluation has been completed and the resulting score was insufficient to qualify as a provincially significant feature. Evaluated/other wetlands may also be considered locally significant wetlands.

Hidden Valley Wetland has been designated as a PSW by the Ministry of Natural Resources and Forestry (MNRF) (**Figure 2**). Additional wetland units are identified as unevaluated along the Grand River corridor in the southwestern end of the study area.

Situated just outside the study area are the Lower Freeport Creek Wetland Complex ('other' wetland, indicated as evaluated but did not score as PSW) and the Grandview Wetland PSW (**Figure 2**).

### 3.1.2.3 Significant Wildlife Habitat

Wildlife habitat features identified through background review included areas identified as Significant Wildlife Habitat (SWH)- Deer Wintering Area (Stratum 2) (**Figure 5**). This type of habitat is identified and managed by the MNRF. This area encompasses most of the central Hidden Valley area. These are areas of concentration by White-tailed deer (*Odocoileus virginianus*), where deer are able to withstand winter conditions. These areas are small, at 10-15% of their summer range (MNRF 2000), often used year after year, and sensitive to development. If development is proposed within the Stratum 2 yarding area, movement corridors will also require assessment. The deer yards are mapped in Kitchener's Natural Heritage System as Deer Wintering Area SWH.

Areas within the Grand River corridor itself in the southern end of the study area identified as Waterfowl Concentration Areas by the MNRF. This reflects areas of open water in the Grand River corridor that may have bird congregations as open water decreased during winter. This area is not included in the City of Kitchener's Natural Heritage System SWH mapping.

Lastly, an Osprey (*Pandion haliaetus*) nesting area is identified to the northeast outside the study area limits. This occurs on manmade infrastructure and is not considered sensitive habitat.

### 3.1.24 Regulated Habitat for Species at Risk

Protection for SAR in Ontario is provided through the *Endangered Species Act, 2007* (ESA). That protection is afforded to species that have been listed as Endangered (END) or Threatened (THR) on the Species at Risk in Ontario (SARO) list, as designated by the Committee on the Status of Species at Risk in Ontario (COSSARO). Species listed as Special Concern (SC) are not afforded protection on the ESA but are considered to be at risk to become endangered if there is further decline of the species. The federal Species at Risk Act (SARA) generally applies on federal land, for federal projects or on projects where Environment and Climate Change Canada (ECCC) is of the opinion that protection has not been sufficiently provided by the province for a particular species.

When the responsibility for SAR was transitioned from the Ministry of Natural Resources and Forestry (MNR) to the Ministry of Environment, Conservation and Parks (MECP), there was a change in direction for information and permitting requests and the process is still being resolved. Current direction is to rely on available online resources for screening purposes and to contact the MECP later in the project design process when potential impacts to SAR are better known.

Therefore, an information request was submitted to the MECP for this project to confirm the current habitat mapping for species at risk in the project area. At this time, the MECP has advised that clients should undertake their own mapping based on features in the project area and LGL has referenced a 2018 version of regulation mapping authored by the MECP and available through the City of Kitchener background records for the study area to assess alternative solutions for the pumping station and forcemain. No additional mapping or staking of habitat has been undertaken.

### 3.1.25 Environmentally Sensitive Policy Areas (ESPAs)

Under prior planning in the Region, designated natural areas were identified as Environmentally Sensitive Policy Areas or ESPAs. There are 4 ESPA's that are within or close to the study area.

One Environmentally Sensitive Policy Area (ESPA) is identified by the Region of Waterloo and is located within the study area - ESPA # 27 Hidden Valley. The Hidden Valley ESPA, known locally as Hidden Valley Woods, consists of a high-quality mature sugar maple-beech upland woodlot bordered by successional conifer and sumac thickets and cedar swamps. Some areas of this woodlot contain trails that are used by hikers/runners, dog-walkers, mountain bikers, equestrian riders (less so in recent years), ATV's and off-road vehicles (more prevalent in recent years). This Hidden Valley ESPA currently remains under private ownership. The inner portions of this natural area contain a mosaic of forest, agricultural lands, creeks, and wetland pockets containing an assortment of unusual flora, as well as a diversity of wildlife habitat. The various natural heritage attributes of Hidden Valley Woods meet the criteria for ESPAs (as defined by Policy 4.3.2. of the Regional Official Policy Plan). Portions of the ESPA have also been designated as a PSW.

Other ESPA's include ESPA 28 Petrifying Spring located to the southwest of the study area; ESPA 73 Grandview Woods located south of Highway 8 and east of the Grand River, and ESPA 31 Homer Watson Park located contiguous to ESPA 28 but outside the study area.

### 3.1.26 Region of Waterloo Official Plan

A review of the Region of Waterloo Official Plan (2015) indicates that the Grand River and its major tributaries (including the Speed River) form a component of the Greenlands Network of the Region of Waterloo, along with significant valleys, wetlands and forests which contribute to the environmental health of the Grand River Watershed.

#### 3.1.2.7 City of Kitchener Official Plan

The City of Kitchener Official Plan (2014) indicates that significant woodlands, wetlands and valleys of the Grand River and its tributaries form the Natural Heritage System of the City of Kitchener. The Hidden Valley Land Use Master Plan by the City of Kitchener Planning Division (2019) includes residential, mixed use and commercial development land use for parts of the study area adjacent to Wabanaki Drive and Hidden Valley Road, as well as Natural Heritage Conservation land use for the central area of Hidden Valley.

#### 3.1.2.8 Grand River Conservation Authority Regulated Area

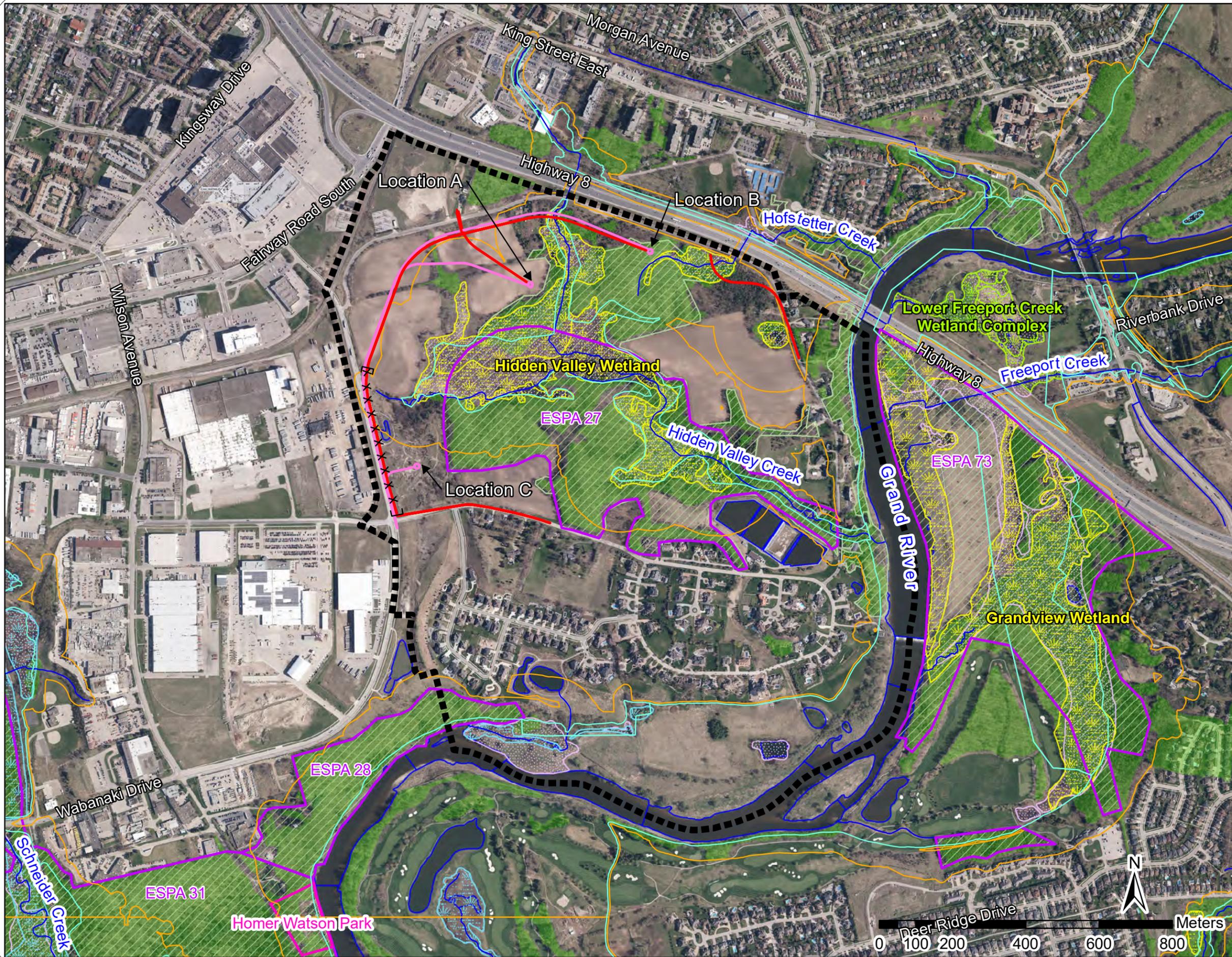
Watercourses, wetlands and hazard lands (and the greatest extent of the combined hazard plus a prescribed allowance) in the study area regulated by the Grand River Conservation Authority (GRCA) (**Figure 2a**), under Ontario Regulation 150/06 *Grand River Conservation Authority: Regulation of Development, Interference with Wetlands and Alternations to Shorelines and Watercourses*. The Conservation Authority can “prohibit or regulate development in river or stream valleys, wetlands, shorelines and hazardous lands”.

## 3.2 PHYSIOGRAPHY AND SOILS

Hidden Valley ESPA or ESPA 27 is situated near the Grand River and is comprised of a distinct bowl feature, with the Hidden Valley PSW at the central area, and an esker ridge rising in the south (**Figure 2a**). The ESPA overlies a mixture of sandy silty tills, silty clays, fine sands, peat and marl (within the wetland components) and fluvial glacial sands (esker) (Ecologistics 1979).

The most significant landform feature is the Freeport Esker which runs from Highway 401 and the Grand River to near Highway 8 and the Grand River, with an interruption of the Grand River Valley totalling over 4 miles (6.4 kilometres) in length (Ecologistics 1979). Slopes of up to 60% are present, with the main esker ridge up to 18 meters in height, and smaller sections of 6 meters in the Hidden Valley area. Portions of the esker have been quarried historically in the south west corner of Hidden Valley. While the esker landform may not be unique within the context of the Waterloo Region, it provides a diversity of microhabitats and microclimates within Hidden Valley ESPA.

The west portion of the study area consists of relatively flat topography. The surrounding industrial lands have been modified through the remainder of the study area by previous disturbances, grading, and parking lot creation associated with existing commercial properties. Additional information on the study area physiography and soils can be found in a draft report prepared for the South Kitchener Transportation Corridor Study entitled “Preliminary Geotechnical Inventory” (Naylor Engineering Associates Ltd., July 2004).



**LEGEND**

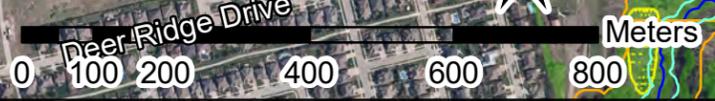
-  Future Sanitary Sewer Options 2, 2A, 3, 3A and 4
-  Proposed Forcemain Options 2, 2A, 3, 3A and 4
-  Future Sanitary Sewer Not Required for Options 2A and 3A
-  Study Area
-  ANSI (LIO)
-  Provincially Significant Wetland (LIO)
-  Other Wetland (LIO)
-  Unevaluated Wetland (LIO)
-  Wetland (GRCA)
-  Regulatory Floodplain (GRCA)
-  Regulation Limit (GRCA)
-  ESPA 27
-  Core Environmental Feature
-  Wooded Area (LIO)
-  Watercourse (GRCA)
-  Waterbody (GRCA)

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**Hidden Valley Pumping Station EA**  
 Natural Heritage



Project	TA9080	Figure	2
Date	May 2022	Prepared By:	KC
Scale	1:10,000	Verified By:	AHF



### 3.3 AQUATIC HABITAT

Regulated watercourses and potential drainage features were assessed through a combination of visual reconnaissance and compilation of background information. Fish sampling was not part of field surveys as sufficient fisheries community information is available to characterize the Hidden Valley creeks and Grand River.

Background information on the extent of aquatic habitat and associated fish and wildlife communities of watercourses and water bodies within the study area is from targeted aquatic habitat investigations on May 25, 2004, electrofishing surveys on June 10, 2004, and minnow traps set on April 15, 2004. Subsequent aquatic habitat surveys were conducted on May 29, June 6 and June 11, 2013 and May 10, 2021. These investigations included the Hidden Valley PSW complex and tributaries of the Grand River known as West, East, and North Creek. The locations of the Hidden Valley watercourses are shown in **Figure 3**.

A detailed wildlife investigation for the presence/absence of salamanders occurred in 2007 and 2008 by LGL. In 2007, all areas of standing water were trapped, and in 2008 the main salamander breeding pond was trapped for many consecutive nights. No fish were captured at any time during the 2007 and 2008 surveys.

Fish habitat was characterized, and physical habitat features were surveyed in sufficient detail to enable mapping and identification of key habitat types. The physical habitat attributes assessed include:

- Water quality, temperature and water colour
- In-stream cover
- Bank stability
- Substrate characteristics
- Stream dimensions and flow
- Barriers
- Stream morphology
- Terrain characteristics
- Stream canopy cover
- Stream gradient
- Aquatic vegetation
- Groundwater seepage areas
- General comments

The following discussion summarizes the aquatic habitats and features within the study area.

#### 3.3.1 Hidden Valley Creek System

##### 3.3.1.1 West Creek

The West Creek flow originates from stormwater drainage in the Fairview Park Mall area and discharges into the central wetland area. Discharge (via pipe) from a stormwater pond facility located immediately east of Wabanaki Drive, also appears to contribute flow to this system. The stormwater outfall channel has been reconstructed with armour stone banks and bed, with portions of bed comprised of cemented rip rap substrates. Armour stone blocks are present instream, presumably for flood control. The stream flows in between these blocks and over a one meter high elevation drop (cemented rip rap) within approximately 15 m downstream of the channel origin (see barrier location on Figure 3). Approximately 25 m downstream

of the outlet, a natural channel begins, meandering along the edge of a wooded area. This channel eventually flows through cattail marsh, where it becomes increasingly indistinct and where it eventually widens into a series of open water ponds. A smaller minor branch of this creek also meanders in a northward direction within the cattail marsh, but the channel at this location is also indistinct. In 2021, the 165 m reach upstream of the wetland reach was investigated.

Between the outfall channel section and the wetland, the bankfull channel measures 2.3 – 3.5 m wide and up to 0.6 m deep. At the time of the 2013 survey, the wetted channel measured between 0.95 - 2.3 m wide and between 6-10 cm deep (with deeper areas noted amongst woody debris jams). On May 10, 2021, wetted depths ranged between 7 cm deep (in riffles) and up to 40 cm deep in pools. And wetted channel width appears similar to 2004 surveys. The channel morphology appears to be dominated by flats (70%), with some riffles (30%) and substrates are variable, comprised of 10% boulders, 40% rubble, 10% gravel, 20% sand/silt and 20% clay. Channel dimensions and morphology appear to differ between 2004 and 2021 surveys. The 2004 surveys documented a 1.0 - 1.5 m wide bankfull channel and 70% riffles, 20% pools, and 10% flats at this location. It appears that the presence of debris jams and all-terrain vehicles (ATVs) crossing the channel in the reach has resulted in channel widening and erosion. A backwater area/overflow channel was observed near a bend in the creek located approximately 100m downstream of the creek origin.

Cover within the channel consists of 30% undercut banks, 10% boulders and 10% woody debris. Some Reed Canary Grass grows instream, some of which has originated from banks via slumping. Bank slumping and erosion is prevalent along both banks (noted historically and in 2021); likely due to the fluctuating nature of the stormwater flows and ATV disturbance. This is prevalent in the reach immediately upstream from the wetland. Some iron staining is present in the channel, which may reflect some groundwater input.

Riparian cover is fairly open, with scattered trees/shrubs including willow, poplar trees within the vicinity of the stormwater outfall. Planted trees (White Pine (*Pinus strobus*), maple, cherry) are present further back from the bank within this area. Unfortunately, the tree stakes have been left on these trees, therefore many of them are now becoming girdled and in fair condition as a result. Red-osier dogwood (*Cornus stolonifera*), Manitoba Maple (*Acer negundo*), ash (*Fraxinus spp.*) and White Cedar (*Thuja occidentalis*) provide approximately 30-60% cover further downstream along the natural reach.

Intensive electrofishing and reconnaissance investigations of the West Creek in 2004 did not reveal the presence of fish, despite the presence of sufficient water flows along this reach. This creek would be considered indirect fish habitat, as it contributes allochthonous materials, nutrients and flow to fish habitat within the receiving watercourse (Grand River).

### 3.3.1.2 North Creek

The North Creek drains an area across Highway 8 including residential and industrial areas in the King Street area. The channel appears to originate within the vicinity of the Heffner Toyota Dealership via a drainage channel/SWM pond. The channel flows in a south-easterly direction under Highway 8 and eventually discharges to the central wetland area within ESPA 27. The creek flows through a high gradient section via 2 CSPs under a trail/access upstream of Highway 8 and flows through a perched 1.2 m x 1.2 m box culvert under Highway 8. Downstream of the highway, the channel is defined but becomes braided further downstream within marsh/swamp habitat, as outlined on **Figure 3**. The creek eventually outlets to Hidden Valley Marsh, within approximately 400 m downstream of Hidden Valley Road.

Downstream of the Hidden Valley Road, the channel wetted width averaged 1.4 - 1.75 m wide with average depths of 0.04 - 0.37 m deep on May 29, 2013. Bankfull width measured a maximum of 2.6 m (average of 1.7 m), with bankfull depths measuring 0.4 m deep on May 29/2013. Dimensions are slightly larger than what was previously documented in 2004, likely due to some beaver influence in the reach (2 small dams noted). At the culvert outlet, a large plunge pool measuring approximately 4 m wide x 5 m long and 1 m deep exists, with eroding, steep (2 m high) banks. The culvert was perched approximately 90 cm above the water at the time of the May 29, 2013 survey, similar to May 10, 2021 conditions.

Generally, morphology is dominated by 85% flats, 10% pools and 5% riffles (compared to 30% riffles, 20% runs, 30% pools and 20% flats documented in 2004 field work). Creek substrate is dominated by sand and gravel, with some scattered boulders and cobble. Boulders have been placed along the banks and instream a short distance downstream of the culvert, likely to provide bank stabilization. A debris jam was present instream backing up some flow a short distance downstream of the culvert outlet in May 2021. Within the wetland downstream, the channel contains low flow conditions (flats dominant) and the channel braids approximately 65 m downstream of Hidden Valley Road.

Riparian habitat consists of cultural thicket, including Staghorn Sumac (*Rhus typhina*), Hawthorn (*Crataegus spp.*), Crack Willow (*Salix fragilis*), Alternate-leaved Dogwood (*Cornus alternifolia*) and juniper (*Juniperus spp.*), growing along the banks. Within approximately 40 m downstream of the road, overhead cover decreases, as the creek flows through marsh habitat comprised of mainly Reed Canary Grass and cattail. Further downstream, the creek flows along the wooded edge of upland habitat for a portion of its length, with Common Buckthorn (*Rhamnus cathartica*), Eastern White Cedar and Sugar Maple (*Acer saccharum ssp. Saccharum*), providing cover. The channel flows through a short moderate-high gradient section in this reach. As noted further above, the main channel diffuses into the wetland. A portion of this wetland was previously considered to be coniferous swamp, however, a large beaver dam located downstream (**Figure 3**) has flooded the swamp, and its presence appears to be converting the swamp to a marsh, with dead standing trees present. These dams were confirmed to be present in May 2015.

Electrofishing efforts and reconnaissance investigations did not reveal the presence of fish in this tributary during the 2004 survey and further during a 2015 survey completed as part of the Waterloo Ion LRT project (LGL 2020). As this creek originates a short distance upstream of Highway 8 from industrial lands; fish colonization opportunities are limited. In addition, several beaver dams, and barriers are known downstream. This creek contributes indirectly to known fish habitat located downstream in the Grand River.

### 3.3.1.3 East Creek

East Creek is the main drainage stream for the central basin and flows south-easterly and into the Grand River. Erosion has been documented during peak flows (Planck 1979). The corrugated steel pipe culvert at Hidden Valley Road is significantly perched, and along with steep gradients provides a significant barrier to fish movement. This watercourse was only investigated at the Hidden Valley Road crossing in 2021. Descriptions and mapping details (see **Figure 3** notes) from reaches upstream are taken from the results of previous LGL investigations.

East Creek arises from the convergence of North and West Creeks and contains moderate gradients. Portions of this watercourse were investigated in 2013. In 2013, the average wetted channel width ranged from 1.5 to 1.7 m; with a mean depth of 0.15 m (bankfull width is 3.2 m and bankfull depths are 0.4 m). The creek channel morphology consisted of riffles along 75% of its reach, with pools and flats comprising

the remaining 25% of its reaches. The creek was shaded for about 60% of its reach through ESPA 27 and is comprised of 85% rubble, 10% gravel, and 5% sand substrates. Instream cover is dominated by boulders and undercut banks. Creek banks are generally stable throughout the ESPA 27.

At Hidden Valley Road, the creek forms a large meander upstream of the road. Toe rock has been placed along the outer bank of this bend. Riffle morphology is dominant, measuring 2.5-3 m wide (bankfull) and water depth measuring 10-15 cm deep at the time of the May 10, 2021 survey. Seepage is abundant here, entering the channel by travelling down the road embankment. The seepage appears to originate from the private property located to the west, originating from an underground pipe.

The culvert under Hidden Valley Road is a 90 cm CSP that is encased in concrete. The crossing is comprised of two outlets (one overflow) and is steeply sloped. Armourstone lines the culvert inlet/outlet and a portion of the banks upstream and downstream of the road. Downstream of the road, large boulders have been placed perpendicular to the flow, creating a riffle pool morphology. No fish were observed in May 2021 survey and no fish were captured in East Creek during electrofishing efforts in 2004. East Creek and its riparian vegetation provide the most direct vegetation connection to the main Grand River corridor from the central Hidden Valley area. The presence of a perched culvert at Hidden Valley Road prevents the colonization by fish within this creek. This creek provides indirect contributions (i.e., allochthonous materials, nutrients and flow) to the Grand River.

### 3.3.2 Hofstetter Creek

Hofstetter Creek drains an area that has been referred to as the Hofstetter Basin, which includes a portion of the woodlot adjacent to Highway 8 and flows from the wetland area at the northeast section of Hidden Valley underneath Highway 8. The creek empties into the Grand River on the north side of Highway 8. A spring was located at the edge of the adjacent hardwood forest that contributes flow to Hofstetter Creek and was noted to have water quality characteristics typical of groundwater in the area (Planck 1979). Hofstetter Creek lost about one third of its contributing area when Highway 8 was constructed, and River Road was re-routed (Limnoterra 1980) as cited in the River Road Extension Class EA Natural Heritage Features Report (LGL 2014).

As noted, the creek originates from a wetland pocket located on the south side of Hidden Valley Road (shallow marsh/ mixed swamp). In 2004 and 2021 survey, groundwater seeps were noted in the wetland. One defined channel is present within approximately 20 m upstream of the Hidden Valley Road culvert, with braided channels present upstream of this point. The culvert measures 1.5 m wide (open footed) and extends under both Hidden Valley Road and Highway 8. Wetted channel widths range from 0.3 – 1 m, and channel depths of 0.05 – 0.08 m, with a substrate mix of 100% silt/organics near the wetland, with coarser substrates present within approximately 10 m of the culvert (sand 70%; cobble 20%; gravel 10%). Water conditions were clear, and water was slow flowing on all visits. Vegetation adjacent to the stream is dominated by ash and poplar, with skunk cabbage and water speedwell near the culvert and cattail dominant further upstream within the marsh. Phragmites dominates the wetland further west.



**LEGEND**

- Future Sanitary Sewer Options 2, 2A, 3, 3A and 4
- Proposed Forcemain Options 2, 2A, 3, 3A and 4
- X Future Sanitary Sewer Not Required for Options 2A and 3A
- Study Area
- ▨ Beaver Dam / Debris Jam
- X Fish Barriers
- Hidden Valley Pond
- ▨ Watercourse (GRCA)
- ▭ Waterbody (GRCA)

**Hidden Valley  
Pumping Station EA**  
Aquatics



Project TA9080	Figure 3
Date May 2022	Prepared By: KC
Scale 1:10,000	Verified By: AHF

Downstream of Highway 8, the channel is ditched, with placed riprap along the banks within approximately 8 m downstream of the culvert, as recorded in previous LGL studies (LGL 2004). This channel widens into a 20 m wide cattail wetland pocket, and drainage flows through another culvert under a private driveway, and into a deciduous forest on the north side of the laneway. As this is private property, the channel could not be followed after this point, but flow is eventually directed through a 75 cm diameter plastic culvert and drains down a high gradient boulder channel (with steps) located within approximately 17 m upstream of the Highway 8 bridge at the Grand River.

No fish were observed within Hofstetter Creek during aquatic habitat surveys conducted in 2004 and no fish were captured (LGL 2014). The gradient of the slope along the Grand River is considered a barrier to upstream fish and mussel movement. DFO and MNRF databases do not identify any species at risk in Hofstetter Creek.

### 3.3.3 Hidden Valley Pond

The Hidden Valley Pond is situated at the north base of the Esker Ridge and adjacent to the marsh in the southern portion of Hidden Valley as shown on **Figure 3**. It is located at the base of one of the steepest sloping areas of the esker and within the edge of Beech-Maple Forest with forest on three sides, and the side that is open provides a surface water connection to the remaining marsh, although a large amount of woody debris/beaver dam acts effectively to close in the pond. The pond is approximately 100 m in length and 40 m wide, with a depth ranging from 1.0 m at a distance of 0.3 m from the shore to unknown depths in the middle, as identified in 2013 investigations.

### 3.3.4 Hidden Valley Marsh

The Hidden Valley Marsh is designated as a Provincially Significant Wetland, with limits as shown in **Figure 3**. The marsh was known in previous studies as the “Central Wetland Area” because of its location within the central portion of Hidden Valley ESPA. The marsh consists of a shallow marsh with an open water component, notably along the southern edges of the marsh, as well as in the form of wetland channels through cattail-dominant vegetation. North of this community, an equally large adjacent coniferous swamp is present. Subsequent visits in 2012 and 2013 indicate the coniferous swamp has become flooded out presumably due to beaver activity, and most of the trees are now dead as the area has also converted, or is in the process of converting, to marsh. There also exists coniferous and deciduous swamp in the south easterly area of Hidden Valley in the vicinity of East Creek. Since 2004-2008 field investigations, this area is also flooded out presumably due to beaver activity and is now a large open water feature (Stantec 2013). This marsh was not visited in 2021; however, air photo interpretation continues to show shallow water habitat. No fish were observed or captured in the main marsh during prior electrofishing or during salamander/minnow trapping from 2004 to 2008. Previous reports indicated that fish habitat within this unit was limited by the high summer temperatures and low dissolved oxygen levels associated with poor water quality of the shallow marsh, as well as limited opportunity to gain access to this area through the receiving and discharging watercourses (Ecologistics 1979).

### 3.3.5 Frog Pond

The ‘frog pond’ is situated east of the main area of Hidden Valley and is a depression area adjacent to a residence and Hidden Valley Road. The pond is comprised of swamp thicket with dense shrubs within the wetted basin area. Edges consist of scattered trees and shrubs with pioneering vegetation beneath. No inflow

or outflow channel is noted for this feature. Stantec (2013) indicates that surface water at this location is perched and not connected with groundwater levels in the shallow aquifer, that water in the pond is sourced from local runoff. The pond is well utilized by breeding amphibians as documented through anuran calling. No evidence of fish use has been noted by LGL through trapping in 2007 and 2008, and Stantec (2013) did indicate the pond dries up completely at times. Stantec (2013) indicated that in 2012 monitoring, the pond contained water from April until late June, but was dry on July 4, 2012, as confirmed through direct observation.

### 3.3.6 Aquatic Species at Risk

Department of Fisheries and Oceans (DFO) Aquatic Species at Risk mapping identifies the following Species at Risk found or potentially found within the Hidden Valley Creek System:

- Silver Shiner (*Notropis photogenis*), designated as Threatened COSSARO and COSEWIC and listed as a Schedule 1 species (under SARA).

Within the Grand River (reach adjacent to Hidden Valley), the following is identified:

- Black Redhorse (*Moxostoma duquesnei*), designated as Threatened by COSSARO and COSEWIC and listed on Schedule 1 (under SARA), Critical Habitat identified
- Silver Shiner, Critical Habitat identified
- Wavy Rayed Lampmussel (*Lampsilis fasiola*), designated as Threatened by COSSARO and Special Concern by COSEWIC
- Rainbow Mussel (*Villosa iris*), designated as Special Concern by COSSARO and COSEWIC, Schedule 1 (under SARA)

Given the barriers present within the Hidden Valley system upstream of the Grand River confluence as well as the lack of direct evidence of fish use, Silver Shiner presence within these reaches is unlikely. In addition, this species is typically found in large streams (30-100 m wide), supporting deep pool habitats and swift currents; habitat which is not present within this system. The Grand River has high potential to support all species listed above, and critical habitat for Silver Shiner and Black Redhorse have been identified. Critical habitat is identified as the species' crucial habitat in the recovery strategy or in an action plan for the species. Wavy Rayed and Rainbow mussel federal designations have been downgraded within the last five years; however, Wavy Rayed Lampmussel remains protected under the Endangered Species Act, as a Threatened species.

## 3.4 VEGETATION AND VEGETATION COMMUNITIES

Vegetation communities were identified through air photo interpretation, compiling data from background studies in Hidden Valley, and field investigations done on April 27 and October 13 of 2021 to update existing information on vegetation communities and address data gaps within the study area, with a focus on potential pumping station locations. Air photos were interpreted to determine the limits and general characteristics of vegetation communities. Field investigations of natural/semi-natural vegetation as part of studies in the past were conducted within the study area in 2004 on April 29 and 30, May 20, June 30, July 9 and 29, September 15 and September 24 to map and describe vegetation communities and to conduct a botanical survey.

Vegetation communities were classified according to the Ecological Land Classification for Southern Ontario: First Approximation and Its Application (Lee et al. 1998). Communities were sampled using a plotless method for the purpose of determining general composition and structure of the vegetation. Vascular plant nomenclature follows Newmaster and Ragupathy (2008) with a few exceptions. Plant species status was reviewed for the Regional Municipality of Waterloo (2009) and Ontario (Oldham and Brinker 2009).

The ELC classification for the study area is provided on **Figure 4**.

DRAFT



**LEGEND**

-  Study Area
-  ELC Communities
- AS** Agriculture
- CUM1-1** Dry-Moist Old Field Meadow Type Plantation
- CUP1** Deciduous Plantations
- CUP1-3** Black Walnut Deciduous Plantation Type
- CUP2** Mixed Plantations
- CUP3** Coniferous Plantations
- CUP3-1** Red Pine Coniferous Plantation Type
- CUP3-2** White Pine Coniferous Plantation Type
- CUP3-3** Scotch Pine Coniferous Plantation Type
- CUT1** Mineral Cultural Thicket Ecosite
- CUT1-1** Sumac Cultural Thicket Type
- CUW1** Mineral Cultural Woodland Ecosite
- FOC2** Dry-Fresh Cedar Coniferous Forest Ecosite
- FOC2-2** Dry-Fresh White Cedar Coniferous Forest Type
- FOC3** Fresh-Moist Hemlock Coniferous Forest Ecosite
- FOC3-1** Fresh-Moist Hemlock Coniferous Forest Type
- FOC4-1** Fresh-Moist White Cedar Coniferous Forest Type
- FOC4-2** Fresh-Moist White Cedar-Hemlock Coniferous Forest Type
- FOD** Deciduous Forest
- FOD3** Dry-Fresh Poplar-White Birch Deciduous Forest Ecosite
- FOD3-1** Dry-Fresh Poplar Deciduous Forest Type
- FOD4** Dry-Fresh Deciduous Forest Ecosite
- FOD4-2** Dry-Fresh White Ash Deciduous Forest Type
- FOD5** Dry-Fresh Sugar Maple Deciduous Forest Ecosite
- FOD5-1** Dry-Fresh Sugar Maple Deciduous Forest Type
- FOD5-2** Dry-Fresh Sugar Maple-Beech Deciduous Forest Type
- FOD5-3** Dry-Fresh Sugar Maple-Oak Deciduous Forest Type
- FOD5-6** Dry-Fresh Sugar Maple-Basswood Deciduous Forest Type
- FOD5-7** Dry-Fresh Sugar Maple-Black Cherry Deciduous Forest Type
- FOD5-8** Dry-Fresh Sugar Maple-White Ash Deciduous Forest Type
- FOD7** Fresh-Moist Lowland Deciduous Forest Ecosite
- FOD8-1** Fresh-Moist Poplar Deciduous Forest Type Type
- FOM** Mixed Forest
- FOM6-1** Fresh-Moist Sugar Maple-Hemlock Mixed Forest Type
- FOM7-1** Fresh-Moist White Cedar-Sugar Maple Mixed Forest Type
- H** Hedgerow
- M** Manicured
- MAM2** Mineral Meadow Marsh Ecosite
- MAM2-2** Reed-canary Grass Mineral Meadow Marsh Type
- MAM2-5** Narrow-leaved Sedge Mineral Meadow Marsh Type
- MAM2-10** Forb Mineral Meadow Marsh Type
- MAS2-1** Cattail Mineral Shallow Marsh Type
- MAS3-1** Cattail Organic Shallow Marsh Type
- OAO** Open Aquatic
- SWC3-2** White Cedar-Conifer Organic Coniferous Swamp Type
- SWD2-2** Green Ash Mineral Deciduous Swamp Type
- SWD4** Mineral Deciduous Swamp Ecosite
- SWD4-1** Willow Mineral Deciduous Swamp Type
- SWD5-1** Black Ash Organic Deciduous Swamp Type
- SWM1-1** White Cedar-Hardwood Mineral Mixed Swamp Type
- SWM6-1** Birch-Conifer Organic Mixed Swamp Type
- SWT2-5** Red-osier Mineral Thicket Swamp Type
- TPO1** Dry Tallgrass Prairie Ecosite

**Hidden Valley Pumping Station EA Vegetation Communities**



Project	TA9080	Figure	4
Date	May 2022	Prepared By:	KC
Scale	1:8,000	Verified By:	AHF

### 3.4.1 Vegetation Communities

Land use within the study area comprises residential, commercial, agricultural and industrial developments. Natural vegetation communities include remnant woodlots near Highway 8, the Hidden Valley core, and the vegetation associated with the Grand River corridor. Anthropogenic vegetation communities such as ornamental plantings, agricultural fields, hedgerows and old fields surround these natural vegetation communities.

To date, a total of 54 Ecological Land Classification (ELC) vegetation communities have been identified in the study area. The composition of these vegetation communities outlined in **Appendix A**.

Within the Hidden Valley area, a mixture of upland and wetland communities is present. Dry-Fresh Sugar Maple Deciduous Forest (FOD5) is the dominant community type in upland locations. In these communities, Sugar Maple (*Acer saccharum saccharum*) grows in pure stands or in association with American beech (*Fagus grandifolia*), basswood (*Tilia americana*) and white ash (*Fraxinus americana*). In 2012, a severe storm toppled the trees and opened a portion of the canopy near Highway 8 and in 2021 forest management further opened the canopy of these communities. Isolated groves of mixed and coniferous forests exist within the forested units, including a Fresh-Moist Hemlock Coniferous Forest (FOC3-1), a Fresh-Moist Sugar Maple-Hemlock Mixed Forest (FOM6-1), both dominated by eastern hemlock (*Tsuga canadensis*), and a Fresh-Moist White Cedar Coniferous Forests (FOC4-1), dominated by eastern white cedar (*Thuja occidentalis*).

Forested communities located along the fringe of these extensively wooded areas include Fresh-Moist White Cedar-Hardwood Mixed Forests (FOM7), Dry-Fresh Polar Deciduous Forests (FOD3-1), Dry-Fresh White Ash Deciduous Forests (FOD4-2) and Fresh-Moist Poplar Deciduous Forests (FOD8-1). These communities are typically comprised of younger stands of trembling aspen (*Populus tremuloides*), large-tooth aspen (*P. grandidentata*), white ash, basswood, yellow birch (*Betula alleghaniensis*) and white birch (*B. papyrifera*).

Forested communities located along the bank of the Grand River include Dry-Fresh Sugar Maple Deciduous Forest (FOD5), Mix Forest (FOM), Dry-Fresh Deciduous Forest (FOD4), Fresh-Moist White Cedar Coniferous Forest (FOC3), and Fresh-Moist Lowland Willow Deciduous Forest (FOD7). These communities have varying degrees of disturbance due to the steep slope and influence from the adjacent residential community.

A large Cattail Mineral Shallow Marsh (MAS2-1) dominated by common cattail (*Typha latifolia*) is situated at the base of the esker slope in the central portion of the study area. An extensive Mixed Swamp (SWM) dominated by yellow birch, black ash (*Fraxinus nigra*), eastern white cedar, tamarack (*Larix laricina*) lies to the north and a Deciduous Swamp (SWD) extends along the creek to the southwest of the MAS2-1 community. Wetland boundaries and community dominance has changed since 2005. The tamarack coniferous swamp (SWC3-2) along the creek had transitioned into a cattail dominated community, noted during the 2012 field investigation. Dead standing conifers remain in this swamp community in 2021. A second wetland area directly adjacent to Hidden Valley Road at the northeast corner of the study area is dominated by a Narrow-leaved Sedge Mineral Meadow Marsh (MAM2-5) and a White Cedar-Hardwood Mineral Mixed Swamp (SWM1-1). Additionally, wetland communities occur along the bank and an outfall to the Grand River in the southern portion of the study area, Willow and Manitoba Maple Deciduous Swamp (SWD4 and SWD4-1) are found throughout. Small pockets of Cattail Mineral Shallow Marsh (MAS2-1) and Meadow Marsh (MAM2-10) communities line the bank of the river.

Cultural communities persist in areas around the periphery of the woodlands, natural areas and dominate the southern portion of the study area. Cultural community types include Dry-Moist Old Field Meadows (CUM1-1), Mineral Cultural Thickets (CUT1), Mineral Cultural Woodlands (CUW1), Mineral Cultural Savannah (CUS1) and Deciduous (CUP1) and Coniferous Plantations (CUP3). These communities are under various stages of maturity and contribute to the diversity of habitat within the intact natural vegetation communities.

Vegetation communities south of Hidden Valley Road and River Birch Street consist of cultural communities that have established following agricultural land use. These communities consist of Dry-Moist Old Field Meadows (CUM1-1), Willow Mineral Deciduous Swamp (SWD4-1), Dry-Fresh Poplar Deciduous Forest (FOD3), White Pine Cultural Plantation (CUP3-2), Cultural Thicket (CUT1), Reed-canary Grass Mineral Meadow (MAM2-2), and Common Reed Mineral Meadow (MAM2). This area contains three storm water management ponds.

### 3.4.1.1 Flora

To date, a total of 410 vascular plant taxa have been recorded within the study area. One hundred and fourteen (114) taxa, (28 % of the recorded flora) are considered introduced and non-native to Ontario. Southern species include James’ Sedge (*Carex jamesii*), purple joe-pye-weed (*Eupatorium purpureum*), richweed (*Collinsonia canadensis*) and spicebush (*Lindera benzoin*) which were observed during initial surveys (2004, 2012 and 2013). A master list of all flora recorded from background data, prior field investigations by LGL and 2021 investigations in support of this study is attached in **Appendix A**.

### 3.4.2 Plant Species at Risk, Provincially Rare, and Regionally Rare

#### 3.4.2.1 Plants

No new locally or provincially significant species were noted during the 2021 field investigation, except for Common Juniper (*Juniperus communis*). All other species listed below were identified during the previous field investigations for the South Kitchener River Road Extension (2013). An extensive search for these species was not completed during the updated survey as many of these species were outside of the proposed pumping station and forcemain alternatives. The following description describes in further detail the species and where they were previously found. It’s possible some of these species have been extirpated, such as fringed gentian (*Gentianopsis crinita*). Mapping of known records for rare or SAR plants is shown on Figure 4, where this information is available, and summarized on **Table 2**.

**Table 2: Summary of Local Status Plants Observed in Study Area**

Common Name	GRank	SRank	MNR	COSEWIC	Local Status Waterloo
white spruce	G5	S5			x
common juniper	G5	S5			x
common hackberry	G5	S4			x
black walnut	G5	S4			x
fringed gentian		S5			x

stoneroot	G5	S4			x
white wild licorice	G5	S5			x
purple joe-pye-weed	G5T?	S3			x
James' sedge	G5	S3			x
bristle-stalked sedge	G5T?	S5			x
burreed sedge	G5	S5			x
wood's sedge	G4Q	S4			x
sand dropseed		S4			x
wild leek	G4G5	S1?			x

**James' sedge, Purple joe-pye weed** – Two species considered provincially rare was noted during prior field investigations (2004, 2012 and 2013). James' sedge (*Carex jamesii*), which is both provincially rare (SRank: S3) and rare in the Region of Waterloo, is located on steeper slopes in the Dry-Fresh Sugar Maple-Basswood Deciduous Forest (FOD5-6)/Dry-Fresh Sugar Maple-White Ash Deciduous Forest (FOD5-8) located south-centrally in the Hidden Valley ESPA area. Purple joe-pye weed (*Eupatorium purpureum*), which is both provincially rare (SRank: S3) and rare in the Region of Waterloo, occurs in the same general location, but it is restricted to the upper slope. These species were not reconfirmed in 2021.

**Wood's sedge, richweed, fringed gentian, bristle-stalked sedge, sand drop sedge** – Over the course of botanical inventories since 1979, several species considered rare in the Regional Municipality of Waterloo were noted, including Wood's sedge (*Carex woodii*), richweed (*Collinsonia canadensis*), fringed gentian and bristle-stalked sedge (*Carex leptalea*). Wood's sedge and richweed were found mainly on the steeper slopes in the Dry-Fresh Sugar Maple-Basswood Deciduous Forest (FOD5-6)/Dry-Fresh Sugar Maple-White Ash Deciduous Forest (FOD5-8) located south-centrally in the study area. A population of fringed gentian was located in the Mineral Cultural Thicket (CUT1)/Mineral Cultural Woodland (CUW1) community located in the northeastern portion of the study area (but has not been reconfirmed since the early 2000's). Bristle-stalked sedge occurs widely in wetlands in the study area. Sand dropseed (*Sporobolus cryptandrus*) was documented in the old quarry at the north east corner of Wabanaki Road and Hidden Valley Road.

**White spruce, black walnut, common juniper, common hackberry** (not mapped)– these species are throughout the study area, often associated with former homesteads.

**White Wild Licorice, Burreed Sedge, Stoneroot and Wild Leek** (not mapped) – Over the course of the botanical inventories since 1979, these species, considered rare in the Regional Municipality of Waterloo, were noted within the Sugar Maple Deciduous Forest (FOD5) of the study area. This includes White Wild Licorice (*Galium circaezans*), Burreed Sedge (*Carex sparganioides*), Wild Leek (*Allium burickii*) and Stoneroot (*Collinsonia canadensis*). The latter species was also observed with the Birch-Conifer Organic Swamp which is a community in the larger wetland in the centre of the study area.

#### 3.4.2.2 SAR Plants

**Ginseng** - Ecologistics Limited (1979) reported 'a single plant' of ginseng (*Panax quinquefolius*) occurring in the south-central portion of the study area (Ecologistics Limited 1979). Ginseng is endangered in Canada and Ontario (SRank: S3). No ginseng was observed during the 2004- 2021 field work, despite extensive

searches based on Ecologistics' (1979) mapping. It is possible it is extirpated from the study area as it has not been reconfirmed since the 1979 reporting. No location is shown on mapping for this record.

**Black Ash (not mapped)** - LGL notes that black ash is recorded in the study area within the swamps (SWD 2-2, SWM 1-1, SWD 2-2, SWM 6-1, FOC 2-1, FOC 3-1, FOC 4-2 and SWM 6-1). This species was added to the Species at Risk in Ontario (SARO) list on January 26, 2022 as Endangered, and is listed a Threatened under COSEWIC. However, the MECP has temporarily suspected protections for black ash, for a period of two years from the date it was added to the SARO list (O.Reg. 23/22). Proponents will not need to seek authorizations for black ash during that time. Given the timeframe of projects occurring in the study area, considering for this species and its habitat may need to be considered at future stages.

**Butternut** –Butternut (*Juglans cinerea*) were documented in the study area in 2007, 2012 and 2013 during prior site investigations by LGL. Additionally, one Butternut was observed in 2021, located outside of the proposed pumping station and forcemain alternatives. No additional details were provided by the MECP at this time. Eighteen (18) Butternut are recorded in the project summary database by LGL for this study area, but no health status updates were completed in 2021. No additional details were provided by the MECP at this time.

### 3.4.2.3 Communities

Vegetation community status was reviewed for Ontario (OMNR 2021a). All but one of the vegetation communities identified within the study area are considered widespread and common in Ontario and secure globally (OMNR 2021).

The one community with status is the Open Tallgrass Prairie (TPO1) habitat noted along the roadsides and berms surrounding the newer housing developments south of Hidden Valley Road. This is likely as a result of applied seed mix, as opposed to establishing from native seed bank at site given the extent of site alteration during development. This community type is ranked S1 provincially.

## 3.5 WILDLIFE AND WILDLIFE HABITAT

Wildlife habitat in the study area was characterized to inform the EA through background information and field work in 2021 which included updated breeding bird surveys. Wildlife habitat and incidental wildlife was documented through evidence of presence (scat, tracks, dens, etc.) during all site visits. Screening for suitable SAR habitat and the potential for SAR was also conducted.

Wildlife habitat in the study area is generally comprised of a mix of wetland, forest, riparian and field habitat bordered by the Grand River corridor to the south and east of the study area, and by the urban landscape to the north and west. Highway 8 runs parallel to Hidden Valley to the northeast of the study area, and there are small remnant woodlots on either side of highway. Prior to the construction of the highway, these woodlots would have been contiguous with the woodlots at the Hidden Valley area.

In Hidden Valley, specialized wildlife habitat has been noted in previous studies (Ecologistics 1979, LGL 2014, LGL 2020). The open water, vernal pools and pond features of the southern woodlot are known amphibian breeding ponds for Species at Risk.

Hidden Valley is known locally for its richness particularly in numbers of bird species, as noted by local naturalists, and previous works. Hence, it has been referred to as “Bird Ridge” in past studies (Ecologistics 1979). It continues to be a popular birding site for residents, visitors and clubs, including the former Kitchener Waterloo Field Naturalists. Forest interior habitat is present in the deciduous forests, supporting

both interior species (Ovenbird (*Seiurus aurocapilla*) and area sensitive species (Pileated woodpecker (*Dryocopus pileatus*)). In addition, the Hidden Valley PSW is documented as supporting Sora (*Porzana carolina*) and Virginia Rail (*Rallus limicola*).

A total of 47 wildlife species were documented during 2021 field investigations, including one amphibian species, 40 bird species, 6 mammal species and one reptile species (**Appendix B**). The following subsections summarize the wildlife habitat and features within the study area.

### 3.5.1 Breeding Birds

To document the bird species of the project area, a review of background information and breeding bird surveys were conducted as part of field investigations in 2021. Background information included data from field investigations completed by LGL in 2004, 2012, 2013, and 2020 for other projects in the Hidden Valley area. Breeding bird surveys in the study area were completed in June 2021 (**Figure 5**).

#### 3.5.1.1 Background Information

Background information included data from field investigations completed by LGL in 2004, 2012, 2013, and 2020 for other projects in the Hidden Valley area. In 2004, breeding bird surveys were conducted using 5-minute point counts in selected habitats representative of the study area, as well as owl surveys; snag, stick nest and tree cavity searches; and incidental observations. In 2012 focused area searches were completed adjacent to road right of ways and agricultural fields in Hidden Valley to target potential habitat use by Eastern Meadowlark (*Sturnella magna*) and Bobolink (*Dolichonyx oryzivorus*), species at risk under the ESA. In 2013, point counts for breeding birds and area searches (to document all species seen and heard) were completed in Hidden Valley, with a focus in areas where road alignments were likely and feasible as part of the River Road Extension Project. In 2020, breeding bird point counts were conducted within the Hidden Valley Road right-of-way where it parallels Highway 8 as part of wildlife investigations for the Waterloo Ion LRT alignment.

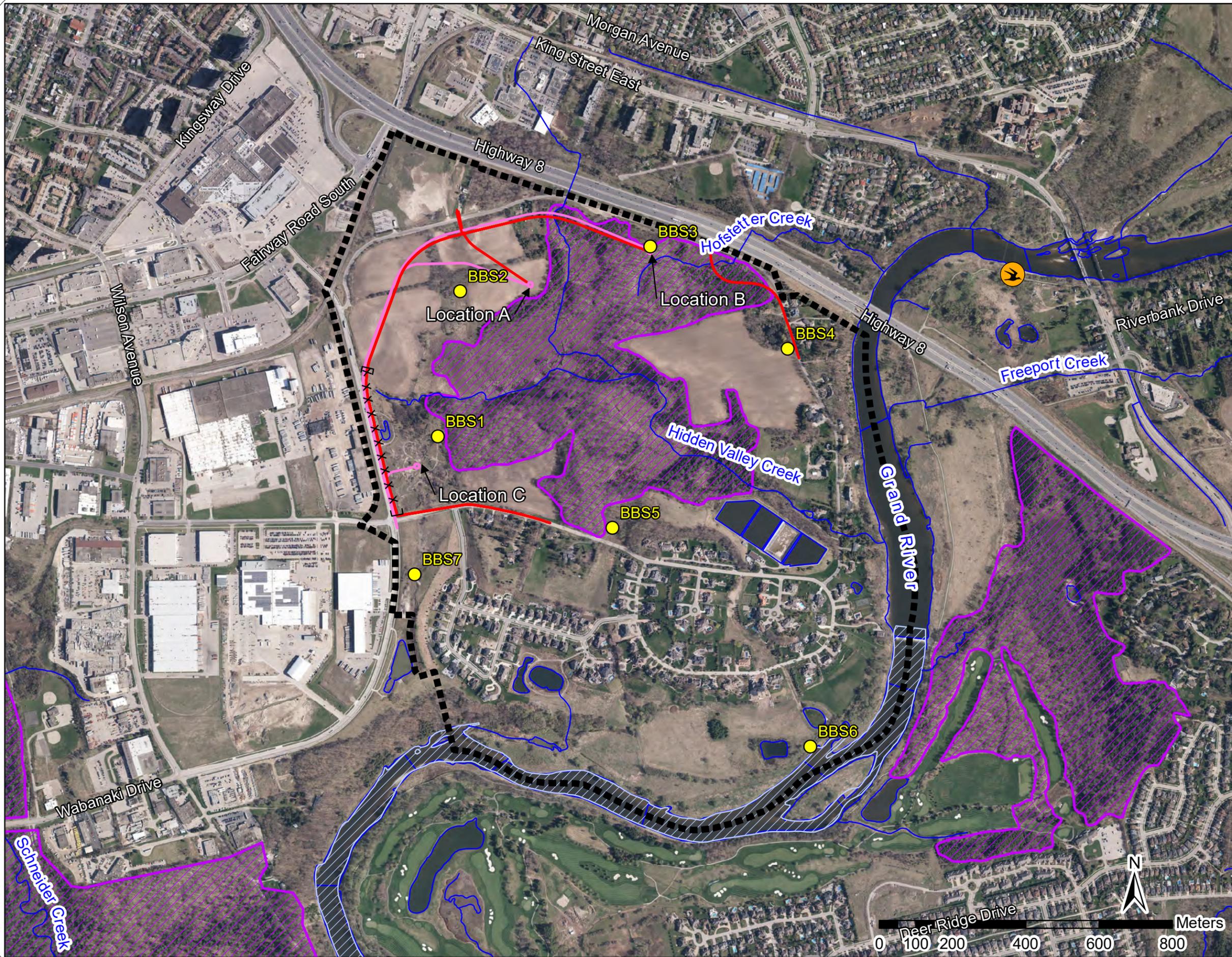
#### 3.5.1.2 Findings

Breeding bird surveys using 10-minute point counts were completed in the study area on June 1 and 17, 2021. Weather conditions were optimal on both days, with low wind, 60% cloud cover and a temperature of 15°C on June 1; and no wind, clear skies and a temperature of 9°C on June 17. In addition to the bird survey, incidental wildlife observations were completed through visual and auditory observations as well as indirect incidental observations (i.e. tracks, scat, and scents). A list of all wildlife species documented by LGL within the study area is provided in **Appendix B**. Breeding bird survey locations in 2021 were focused on the short list of pumping station location alternatives as provided to LGL by MTE (**Figure 5**).

A total of 112 bird species have been recorded for the Hidden Valley area from records dating back to 1979 up to, and including, 2021 breeding bird surveys by LGL. Of these records, 24 species are considered area sensitive when reviewed against criteria outlined in the MNR (1998) Significant Wildlife Habitat Technical Guide, and 15 are considered interior forest species. Of the species recorded, 41 species are considered Regionally Significant in the Region of Waterloo. A detailed running list of species documented in the project area is provided in **Appendix B**. There are five bird species that were documented in 1979 and have not been documented since, these include Blue-winged Teal, Bobolink, Eastern Towhee, Ruffed Grouse and Veery.

A total of 40 bird species were observed during 2021 breeding bird surveys, 30 of the bird species observed are regulated under the Migratory Birds Convention Act (MBCA) (**Table 3**). Four of the bird species, Belted Kingfisher (*Megaceryle alcyon*), Blue Jay (*Cyanocitta cristata*), Red-tailed Hawk (*Buteo jamaicensis*), and Turkey Vulture (*Cathartes aura*) are protected under the Fish and Wildlife Conventions Act (FWCA) and Wild Turkey (*Meleagris gallopavo*) is a game species under FWCA. Some of the observed species are not under any legislative protection and these include: American Crow (*Corvus brachyrhynchos*), Common Grackle (*Quiscalus quiscula*), European Starling (*Sturnus vulgaris*), House Sparrow (*Passer domesticus*), and Red-winged Blackbird (*Agelaius phoeniceus*).

DRAFT



**LEGEND**

-  Future Sanitary Sewer Options 2, 2A, 3, 3A and 4
-  Proposed Forcemain Options 2, 2A, 3, 3A and 4
-  Future Sanitary Sewer Not Required for Options 2A and 3A
-  Study Area
-  2021 Breeding Bird Survey Point Count Location (LGL)
-  Nesting Site
-  Deer Wintering Area (Stratum 2)
-  Waterfowl Winter Concentration Area
-  Watercourse (GRCA)
-  Waterbody (GRCA)

Areas prescribed as habitat under Ontario Regulation 242/08 Section 28 Jefferson salamander habitat are not mapped.

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**Hidden Valley Pumping Station EA**  
 Wildlife Habitat



Project	TA9080	Figure	5
Date	May 2022	Prepared By:	KC
Scale	1:10,000	Verified By:	AHF

Species at risk (SAR) encountered during the 2021 field surveys include Barn Swallows (*Hirundo rustica*) seen foraging over point count location BBS6 on June 1, 2021. The Barn Swallow is regulated as ‘Threatened’ under the Ontario Endangered Species Act (ESA) and offered habitat protection and is also listed as ‘Threatened’ on Schedule 1 of the Species at Risk Act (SARA). The other SAR bird encountered during field surveys was Eastern Wood-pewee (*Contopus virens*), heard singing at point count locations BBS1 and BBS5 on June 1, 2021. Eastern Wood-pewee is listed as Special Concern provincially and federally.

The breeding bird surveys found breeding bird evidence (BBE) for 38 species of birds (**Table 3**). Breeding evidence was confirmed for four species, determined as probable for 16 species, and possible for 18 species (**Table 3**). Note that species tallied under confirmed were excluded from probable and possible tallies, and species tallied under probable were excluded from possible tallies as only the highest degree of breeding evidence was considered for each species. Confirmed BBE was demonstrated by a nest containing eggs for Killdeer, and by fledged or downy young for American Goose, Downy Woodpecker, and Mallard. Species classified as probable breeders were recorded through evidence such as a permanent breeding territory, and a pair observed in their breeding season in suitable nesting habitat. Species classified as possible breeders were recorded through evidence such as observations of a male singing or an individual recorded in suitable breeding habitat.

**Table 3 – Results of breeding bird surveys conducted in the study area in 2021**

Common Name	Scientific Name	SARA/ ESA	Legal Status	BBE
American Crow	<i>Corvus brachyrhynchos</i>		-	Possible (H)
American Goldfinch	<i>Spinus tristis</i>		MBCA	Probable (P)
American Robin	<i>Turdus migratorius</i>		MBCA	Probable (P)
Baltimore Oriole	<i>Icterus galbula</i>		FWCA(P)	Probable (T)
Barn Swallow	<i>Hirundo rustica</i>	THR	MBCA	Possible (H)
Belted Kingfisher	<i>Megasceryle alcyon</i>		FWCA(P)	Possible (H)
Black-capped Chickadee	<i>Poecile atricapillus</i>		MBCA	Probable (T)
Blue Jay	<i>Cyanocitta cristata</i>		FWCA(P)	Probable (T)
Canada Goose	<i>Branta canadensis</i>		MBCA	Confirmed (FY)
Chipping Sparrow	<i>Spizella passerina</i>		MBCA	Possible (S)
Common Grackle	<i>Quiscalus quiscula</i>		-	Possible (H)
Common Merganser	<i>Mergus merganser</i>		MBCA	Possible (H)
Common Yellowthroat	<i>Geothlypis trichas</i>		MBCA	Probable (T)
Downy Woodpecker	<i>Picoides pubescens</i>		MBCA	Confirmed (FY)
Eastern Kingbird	<i>Tyrannus tyrannus</i>		MBCA	Possible (H)
Eastern Wood-Pewee	<i>Contopus virens</i>	SC	MBCA	Possible (S)
European Starling	<i>Sturnus vulgaris</i>		-	Possible (H)
Field Sparrow	<i>Spizella pusilla</i>		MBCA	Possible (S)
Gray Catbird	<i>Dumetella carolinensis</i>		MBCA	Probable (P)
Great Crested Flycatcher	<i>Myiarchus crinitus</i>		MBCA	Possible (H)
Hairy Woodpecker	<i>Picoides villosus</i>		MBCA	Possible (S)
House Sparrow	<i>Passer domesticus</i>		-	Possible (H)
House Wren	<i>Troglodytes aedon</i>		MBCA	Probable (T)
Indigo Bunting	<i>Passerina cyanea</i>		MBCA	Possible (S)

Common Name	Scientific Name	SARA/ ESA	Legal Status	BBE
Killdeer	<i>Charadrius vociferus</i>		MBCA	Confirmed (NE)
Mallard	<i>Anas platyrhynchos</i>		MBCA	Confirmed (FY)
Mourning Dove	<i>Zenaida macroura</i>		MBCA	Possible (H)
Northern Cardinal	<i>Cardinalis</i>		MBCA	Probable (T)
Northern Flicker	<i>Colaptes auratus</i>		MBCA	Possible (S)
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>		MBCA	Probable (T)
Pied-billed Grebe	<i>Podilymbus podiceps</i>		MBCA	Possible (H)
Red-eyed Vireo	<i>Vireo olivaceus</i>		MBCA	Probable (T)
Red-tailed Hawk	<i>Buteo jamaicensis</i>		FWCA(P)	Probable (T)
Red-winged Blackbird	<i>Agelaius phoeniceus</i>		-	Probable (T)
Ring-billed Gull	<i>Larus delawarensis</i>		MBCA	Observed (X)
Song Sparrow	<i>Melospiza melodia</i>		MBCA	Probable (T)
Tree Swallow	<i>Tachycineta bicolor</i>		MBCA	Possible (H)
Turkey Vulture	<i>Cathartes aura</i>		FWCA(P)	Observed (X)
Wild Turkey	<i>Meleagris gallopavo</i>		FWCA(G)	Probable (P)
Yellow Warbler	<i>Setophaga petechia</i>		MBCA	Probable (T)

**Legend:**

**Abbreviation Description**

**SARA/ESA**

THR Designated Threatened under Ontario *Endangered Species Act* and Canada *Species at Risk Act*

SC Designated Special Concern under Ontario *Endangered Species Act* and Canada *Species at Risk Act*

**Legal Status:**

- Not protected

MBCA *Migratory Bird Convention Act*

FWCA(P) *Fish and Wildlife Conservation Act* Protected Species

FWCA(G) *Fish and Wildlife Conservation Act* Game Species

**BBE:** Breeding Bird Evidence

**Observed:**

X Species observed in its breeding season (no evidence of breeding).

**Possible Breeding:**

H Species observed in its breeding season in suitable nesting habitat.

S Singing male present in its breeding season in suitable nesting habitat.

**Probable Breeding:**

T Permanent territory presumed through registration of territorial song on at least two days, a week apart, at the same place.

P Pair observed in their breeding season in suitable nesting habitat.

**Confirmed Breeding:**

FY Fledged young or downy young, including young incapable of sustained flight.

CE Nest containing eggs.

### 3.5.2 Mammals

Mammals can be difficult to sample, as they are secretive by nature and mainly nocturnal or crepuscular. For the purposes of this study, mammal surveys were limited to incidental observations and background review from previous studies. A total of 23 mammal species have been documented in the study area during

previous studies done prior to 2021, and five of these species were documented in 2021 (**Table 3**). Many of the mammal species documented are protected under the Fish and Wildlife Conservation Act (FWCA), as protected, game or furbearing species (**Table 3**). The six mammal species documented in the study area as incidental observations during site investigations in 2021 are regulated under the FWCA: eastern chipmunk is a protected species; eastern cottontail, eastern gray squirrel, and white-tailed deer are game species; muskrat and mink are considered furbearing species. None of the mammal species documented in the study area are species at risk.

Hidden Valley provides habitat for a variety of mammal species. The majority of the species documented are tolerant of human activities such as coyotes, raccoons, eastern cottontail, and skunks are commonly observed throughout this area. The most prominent mammal species in Hidden Valley is white-tailed deer (*Odocoileus virginianus*), where a herd of 10 individuals was noted in March 2004. In addition, 3 fawns were observed in the summer of 2004. This agrees with incidental observations of past and present residents who report that the deer herd seems to reach its peak at approximately 13 to 15 individuals (W. Tschirhart pers. comm.). Both fawning and wintering areas were noted within Hidden Valley area bounded by Hidden Valley Road, with numerous trails through the interior. Agricultural areas in the northwestern portion and browse are significant food sources for the herd. A minor corridor of travel was noted in the vicinity of the southeast corner, where the deer herd was noted several times, which would be a short route to the ESPAs associated with the Grand River corridor, most notably ESPA 28 Petrifying Spring and ESPA 31 Homer Watson Park. The East Creek is the most prominent corridor connecting the Hidden Valley interior to the Grand River, and one deer carcass was found in this area during earlier aquatic investigations (prior to 2021).

Bat surveys were not conducted during 2021 field investigations and were not done during previous studies in Hidden Valley by LGL. There are currently four bat species listed as Endangered in Ontario and afforded protection under the provincial *Endangered Species Act, 2007* (ESA 2007): Little Brown Myotis (*Myotis lucifugus*); Northern Myotis (*Myotis septentrionalis*); Eastern Small-footed Bat (*Myotis leibii*); and, Tri-colored Bat (*Perimyotis subflavus*). The ESA 2007 affords protection for individuals of these species (subsection 9(1)) and their habitat (subsection 10(1)). Given that species-specific habitat regulations have not yet been developed for SAR bats, habitat is protected according to the general definition provided in the Act. Specifically, according to section 2(1), the Act protects “an area on which the species depends, directly or indirectly, to carry on its life processes, including processes such as reproduction, rearing, hibernation, migration or feeding”.

Of the SAR bats listed above, Little Brown Myotis tends to be the most commonly encountered in treed communities because its population is larger than those of other SAR in the province (MNRF 2017). In the case of some SAR bats, maternal roost habitat can include buildings/bridges, rock crevices, caves and other features. Three of the four bat SAR in Ontario use trees with openings, cavities or peeling/sloughing bark in various stages of decay (commonly referred to as snag trees). The Tri-coloured Bat relies on tree foliage to establish roosts and in particular, clusters of dead or dying leaves mainly in mature oak trees and sometimes in maple trees (MNRF 2017).

At the time of this report, we are not aware of any bat studies that may have been undertaken in the Hidden Valley area, and as such, LGL would recommend that treed habitat is treated as candidate SAR habitat for bats.

**Table 4 – Mammal species documented in the study area**

Common Name	Scientific Name	FWCA	Documented during surveys prior to 2021	Documented during 2021 surveys
American Mink	<i>Mustela vison</i>	F	X	X
Beaver	<i>Castor canadensis</i>	F	X	
Coyote	<i>Canis latrans</i>	F	X	
Deer Mouse	<i>Peromyscus maniculatus</i>	-	X	
Eastern Chipmunk	<i>Tamias striatus</i>	P	X	X
Eastern Cottontail	<i>Sylvilagus floridanus</i>	G	X	X
Eastern Gray Squirrel	<i>Sciurus carolinensis</i>	G	X	X
Ermine	<i>Mustela ermina</i>	-	X	
European Hare	<i>Lepus europaeus</i>	G	X	
Groundhog	<i>Marmota monax</i>	-	X	
Least Weasel	<i>Mustela rixosa (nivalis)</i>	F	X	
Long-tailed Weasel	<i>Mustela frenata</i>	F	X	
Meadow Jumping Mouse	<i>Zapus hudsonius</i>	-	X	
Meadow Vole	<i>Microtus pennsylvanicus</i>	-	X	
Muskrat	<i>Ondatra zibethica</i>	F	X	X
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	P	X	
Northern Raccoon	<i>Procyon lotor</i>	F	X	
Northern Short-tailed Shrew	<i>Blarina brevicauda</i>	P	X	
Red Fox	<i>Vulpes vulpes</i>	F	X	
Red Squirrel	<i>Tamiasciurus hudsonicus</i>	F	X	
Striped Skunk	<i>Mephitis mephitis</i>	F	X	
White-footed Mouse	<i>Peromyscus leucopus</i>	-	X	
White-tailed Deer	<i>Odocoileus virginianus</i>	G	X	X

**Legend:**

Abbreviation	Description
<b>FWCA:</b>	<b>Fish and Wildlife Conservation Act</b>
-	Not protected
F	Furbearing Species
P	Protected Species
G	Game Species

### 3.5.3 Reptiles and Amphibians

#### 3.5.3.1 Background Information

Previous work by Ecologistics (1979) documented an extensive list of herpetofauna species, including Jefferson salamander complex (*Ambystoma jeffersonianum* and associated jeffersonianum-laterale polyploids), Five-lined skink (*Eumeces fasciatus*) and American bullfrog (*Lithobates catesbeianus*) in addition to other common amphibian species. Five-lined skink and American bullfrog have not been confirmed for the project area by LGL.

Field efforts in 2004 were directed towards determining the presence/absence and extent of habitat use by reptile and amphibian species in Hidden Valley. Spotted salamanders (*Ambystoma maculatum*) were noted in the main pond at the base of the esker ridge and were the only species of mole salamander noted during night time surveys in 2004. Subsequently, additional intensive sampling completed in 2007 and 2008 confirmed the presence of Jefferson salamander and Jefferson dominated polyploids. The information on

the detailed investigations was provided to the MNR, who then determined the extent of habitat regulations in Hidden Valley. Since that time, the 2018 habitat regulations obtained through City records indicate an update the regulated habitat for the species in the study area, and are the most current lines under consideration. During 2021 field investigations, drift fences and closed pitfall traps were noted in locations in the study area, indicating that ongoing surveys for salamanders are being conducted by consultants for the landowner, but those results were not available to the us for this report.

Targeted skink surveys (area searches) were conducted within the forested areas with a focus on the esker ridge in 2004. No five-lined skinks were observed during these efforts, or in any of the other field work conducted in the project area between 2004 and 2013.

Surveys in spring 2013 specifically targeted reptile (basking) and amphibians, and observations were also completed as part of observations during bird and aquatic habitat work. Snapping turtle (*Chelydra serpentina*) was a new addition in 2013 to the list of reptile species. This species is listed as Special Concern both provincially and federally. There were two separate observations of Snapping turtle, including one female actively laying eggs within an agricultural field. The second observation was of one individual Snapping turtle basking in the pond that is about 100 m southeast of the agricultural fields that border residential properties along Hidden Valley Road.

### 3.5.3.2 Findings

One amphibian and one reptile species were observed in the study area during daytime site investigations in 2021 as incidental observations: Green Frog (*Lithobates clamitans*) and Midland Painted Turtle (*Chrysemys picta marginata*). Painted turtles have previously been seen within the majority of ponds and marsh areas of Hidden Valley, including within the storm water management pond along Wabanaki Drive.

A complete summary of species documented in the study area is provided in the running wildlife list in **Appendix B**. To date, a total of 13 amphibian and 6 reptile species have been documented through a review of background resources and field investigations by LGL (**Table 5**).

**Table 5 – Amphibian and reptile species documented in the study area**

Common Name	Scientific Name	SARA/ ESA	Documented during surveys prior to 2021	Documented during 2021 surveys
American Bullfrog	<i>Lithobates catesbeianus</i>		X*	
American Toad	<i>Anaxyrus americanus</i>		X	
Blue-spotted Salamander	<i>Ambystoma laterale</i>		X	
Eastern (Red-spotted) Newt	<i>Notophthalmus viridescens</i>		X	
Eastern Red-backed Salamander	<i>Plethodon cinereus</i>		X	
Gray Treefrog	<i>Hyla versicolor</i>		X	
Green Frog	<i>Lithobates clamitans</i>		X	X
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	END	X	
Jefferson Salamander x Blue-spotted Salamander, Jefferson genome dominates	<i>Ambystoma hybrid pop. 1</i>		X	
Northern Leopard Frog	<i>Lithobates pipiens</i>		X	
Spotted Salamander	<i>Ambystoma maculatum</i>		X	
Spring Peeper	<i>Pseudacris crucifer</i>		X	
Wood Frog	<i>Lithobates sylvatica</i>		X	
Dekay's Brown Snake	<i>Storeria dekayi</i>		X	

Common Name	Scientific Name	SARA/ ESA	Documented during surveys prior to 2021	Documented during 2021 surveys
Eastern Gartersnake	<i>Thamnophis sirtalis sirtalis</i>		X	
Five-lined Skink (Gr.Lakes/St.Lawr. pop'n)	<i>Plestiodon fasciatus</i>	SC	X*	
Milksnake	<i>Lampropeltis triangulum</i>	SC/-	X	
Midland Painted Turtle	<i>Chrysemys picta marginata</i>	SC/-	X	X
Snapping Turtle	<i>Chelydra serpentina</i>	SC	X	

**Legend:**

**Abbreviation Description**

**SARA/ESA**

END Designated Endangered under Ontario *Endangered Species Act* and Canada *Species at Risk Act*

SC Designated Special Concern under Ontario *Endangered Species Act* and Canada *Species at Risk Act*

\* Species only documented during 1979 surveys

### 3.5.4 Wildlife Species at Risk

Species at risk (SAR) birds encountered during the 2021 field surveys include Barn Swallow, listed as ‘Threatened’, and Eastern Wood-pewee, listed as ‘Special Concern’ both provincially and federally (**Table 6**).

Prior to 2021, several additional bird species at risk were documented during previous studies in the study area: Bank Swallow, Bobolink, Chimney Swift, Eastern Meadowlark, and Wood Thrush (*Hylochila mustelina*) (**Table 6**). Bank Swallow is listed as Threatened both provincially and federally and was seen foraging over the Grand River west of Highway 8 during surveys done in 2020 for the LRT Ion project. Bobolink is listed as Threatened both provincially and federally, they were reported in 1979 but were not detected in 2004, 2012, 2013 or 2021; currently the habitat patches are too small to support this species. Chimney Swift are listed as Threatened by ESA and SARA, and were recorded in the project area in 2004 and 2013 by LGL foraging near hedgerows in the northwest corner of the Hidden Valley area. Eastern Meadowlark is listed as Threatened both provincially and federally, they were detected by LGL in 2004, but were not detected in 2012, 2013 or 2021; suitable habitat is not present as fields are planted with corn and the small remnant cultural meadow is too small to support this species. Wood Thrush is listed as Threatened federally, and as Special Concern provincially; this species was reported in 1979 by Ecologistics.

**Table 6 – Wildlife Species at Risk documented in the study area**

Common Name	Scientific Name	SARA/ESA	Documented during surveys prior to 2021	Documented during 2021 surveys
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	THR/END	X	
Bank Swallow	<i>Riparia riparia</i>	THR	X	
Barn Swallow	<i>Hirundo rustica</i>	THR	X	X
Bobolink	<i>Dolichonyx oryzivorus</i>	THR	X*	
Chimney Swift	<i>Chaetura pelagica</i>	THR	X	
Eastern Meadowlark	<i>Sturnella magna</i>	THR	X	
Eastern Wood-Pewee	<i>Contopus virens</i>	SC	X	X
Wood Thrush	<i>Hylocichla mustelina</i>	THR/SC	X	
Five-lined Skink (Gr.Lakes/St.Lawr. pop'n)	<i>Plestiodon fasciatus</i>	SC	X*	
Milksnake	<i>Lampropeltis triangulum</i>	SC/-	X	
Midland Painted Turtle	<i>Chrysemys picta marginata</i>	SC/-	X	X
Snapping Turtle	<i>Chelydra serpentina</i>	SC	X	

**Legend:**

**Abbreviation Description**

**SARA/ESA**

- END Designated Endangered under Ontario *Endangered Species Act* and/or Canada *Species at Risk Act*
- THR Designated Threatened under Ontario *Endangered Species Act* and/or Canada *Species at Risk Act*
- SC Designated Special Concern under Ontario *Endangered Species Act* and/or Canada *Species at Risk Act*
- \* Species only documented during 1979 surveys

A reported occurrence of overwintering or winter habitat use by Short-eared owl (*Asio flammeus*) is provided by a local naturalist (pers. comm. to the project team). This species is Special Concern under the ESA. Winter habitat use studies were not completed for the project area and this habitat use is unverified by LGL.

The NHIC database lists four additional bird species at risk in the study area, with records from 1935 to 1974: Louisiana Waterthrush (*Parkesia motacilla*), recorded in 1953; Acadian Flycatcher (*Empidonax vireescens*), recorded in 1974; Henslow's Sparrow (*Centronyx henslowii*), recorded in 1948; and Loggerhead Shrike (*Lanius ludovicianus*), recorded in 1935. There are no confirmed records of these species in more recent times, and records are considered historical.

No mammal species at risk have been confirmed for the project area.

There are four herpetofauna species at risk documented within the Hidden Valley study area from previous studies (**Table 6**). Midland painted turtle, a species listed as Special Concern by SARA, was observed in 2021. Five-lined skink has not been reconfirmed for the project area since the 1979 Ecological report, and has not been confirmed by LGL. Studies by LGL in 2007 and 2008 confirmed the presence of Jefferson salamander and Jefferson dominated polyploids in Hidden Valley. Habitat regulations for Jefferson salamander have been developed for the project area (see section 4.5.4.1). A single Milksnake was

documented due to a road kill on Hidden Valley Road in 2004; given the habitat in the project area, it is possible this species is still present, although cryptic and rarely encountered. Milksnake is no longer considered at risk. Field investigations in 2013 confirmed the presence of Snapping turtle (*Chelydra serpentina*), a species of Special Concern. It was recorded laying eggs in agricultural fields adjacent to the PSW.

#### 3.5.4.1 Jefferson Salamander Regulated Habitat

Work by LGL in 2004-2008 confirmed the presence of Jefferson salamander and Jefferson dominated polyploids in Hidden Valley. Habitat regulations have been developed for the study area. A 2018 map of ESA Regulated Habitat for Jefferson Salamander was provided by the City of Kitchener on record from the MRNF to document the extent of regulated habitat in the study area. Regulated habitat for this SAR includes most of the forested and wetland habitat types located in the centre of the Hidden Valley study area. Without explicit permission to do so from the MECP and given the sensitivity of SAR habitat, LGL has not mapped or shown the extent of regulated habitat on the figures for this project. However, project solutions will be evaluated against this habitat during the evaluation of alternatives.

#### 3.5.4.2 Other SAR

A table of potential SAR species (see Appendix D) has been compiled using information from various sources such as NHIC, OBBA, eBird, Ontario Nature, DFO Aquatic SAR Mapping as well as LGL's surveys.

Further mitigation, where warranted, and further planning considerations for SAR wildlife are provided in the mitigation recommendations in the following sections under the relevant sub-sections.

### 3.5.5 Wildlife Habitat Summary

The central portion of Hidden Valley bounded by Hidden Valley Road comprises the largest contiguous block of wildlife habitat in the study area. Interior forest habitat is present in this area, and a great diversity of microhabitats results in a diverse wildlife community. The outlying fragments of natural vegetation communities and woodlots across Highway 8 contain fewer observations of wildlife as the highway itself poses a significant barrier to animal movement. The smaller woodlot blocks containing intact vegetation tend to support wildlife tolerant of human disturbance, and may provide limited forage opportunities to resident species within the study area.

Animal movement corridors exist within the aquatic corridors within Hidden Valley where East Creek connects the larger contiguous habitat block in the centre to the Grand River Corridor. White tailed deer were also noted to use the agricultural and old fields southwest of Hidden Valley (next to the CNR Tracks) as a corridor to access the ESPAs (ESPA 28 Petrifying Spring and ESPA 31 Homer Watson Park) associated with the Grand River corridor.

Bat maternity colonies are considered to be significant wildlife habitat if they meet certain criteria (MNR 2015). The guide for determining significant wildlife habitat (MNR 2015) outlines that forest or swamp communities that are larger than 10 hectares and have mature trees may be significant. As previously mentioned, bat surveys were not conducted during 2021 field investigations and were not done during previous studies in Hidden Valley, however, there is high potential for SAR bat habitat to be present in the study area.

## 4.0 PROJECT DESCRIPTION

The Project Team has provided three alternative locations for the pumping station and the associated forcemain and/or sanitary sewer routing, as shown on **Figure 1**. Locations A and C are outside the limits of the Natural Heritage Conservation (City), Core Environmental Feature (Region) and Endangered Species habitat. Location A is within a GRCA regulated area.

Location B is within an area with multiple designations: as Core Environmental Feature, Natural Heritage Conservation lands, Provincially Significant Wetland, Significant Woodland, GRCA regulated area, regulated habitat for Endangered Species, and adjacent to the Hofstetter Creek watercourse.

A preliminary evaluation of the alternatives has been undertaken to determine potential natural heritage impacts for each option. **Table 7** is a summary of the natural heritage features evaluation against the alternatives.

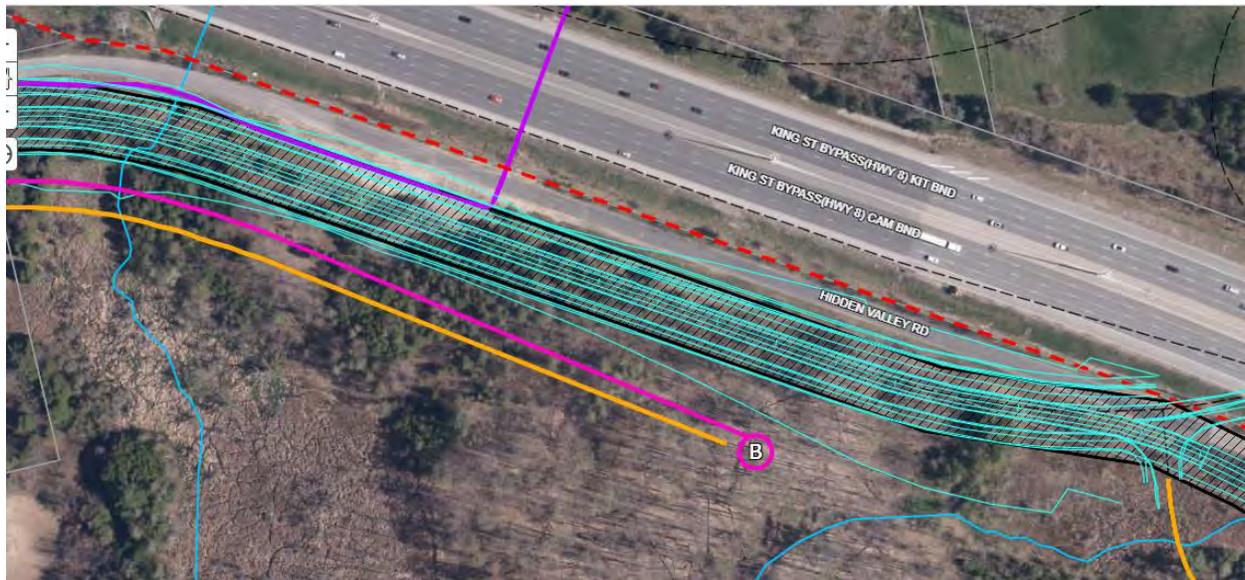
**Option 1** Do nothing – while this alternative does not address the study problem statement, it avoids any impacts to natural heritage features.

**Option 2 and 2a** – Options 2 and 2a involve a pumping station located at Location A and related sanitary and forcemains. This alternative pumping location is situated in an open agricultural area under active cultivation. It is low lying in the area, and setbacks to wetlands, woodlands, Core Environmental Features, ESPA, wooded areas should be employed to ensure to no impacts to the features or functions. There is potential for indirect impacts to natural heritage features if unmitigated, such as disturbance, or alternation of water balance or risk of deleterious substances entering into wetlands or watercourses. The pumping station is:

- Within GRCA regulation limits;
- Approximately 25m from the regulated Jefferson Salamander habitat (within open agricultural field);
- Sanitary sewer and forcemains are approximately 25m from Butternut locations;
- Approximately 40m from PSW;
- Pumping station approximately 70m from North Creek; and,
- Forcemain/sanitary sewer alignments would avoid creek crossings as it is likely the alignment would occur within the road right away and upstream of the outlet of West Creek.

**Option 3 and 3a**- Options 3 and 3a involve the pumping station location at Location B. While Location B is intended to coincide with planned infrastructure (the ION and River Road Extension), it will require a footprint at surface that will occur outside of the transportation corridor footprint and presents an increase of encroachment or intrusion into the natural heritage features outlined in this area. In addition, a section of the future sanitary sewer for this section is identified within the future River Road extension crossing to the southeast. Figure 6 below approximates the footprint of the ION corridor in relation to location B for the pumping station. LGL was not able to access the most current design footprint for this infrastructure, and we have assumed that pumping station will extend outside the transportation corridor at least in part. It is assumed that the forcemain and sanitary sewer will be placed in the future road right of way. In summary, the pumping station and forcemain/sanitary sewer in relation to identified natural heritage features is:

- Within GRCA regulation limits;
- Approximately 5m from the regulated Jefferson Salamander habitat (alignment outside the habitat regulation limits, but within the FOD5-7/FOD5-8 Deciduous Forest and areas where individuals of the species have been recorded);
- Forcemain and sanitary sewer are in close proximity to Butternut (approximately less than 10m);
- Within habitat that has high potential to support SAR bats;
- Within habitat that is identified as Significant Wildlife Habitat (deer wintering) by the MNRF;
- Within ESPA;
- Within Core Environmental Feature;
- Approximately 20m from PSW;
- Approximately 20m from Hofstetter Creek; and
- Forcemain/sanitary sewer alignments would require a crossing of North Creek, however in areas within the future alignment of the revised River Road and ION right of ways.



**Figure 6: Ion footprint (approximate, in blue) in relation to the Proposed Location B and forcemain/sanitary sewer.**

**Option 4** – Option 4 includes the pumping station at Location C. The pumping station is:

- Outside GRCA regulation limits;
- Approximately 80m from the regulated Jefferson Salamander regulated habitat (within CUT1/CUM1-1 communities);
- Over 120m from PSW;
- Over 120m from West Creek;
- Does not appear to be in conflict with rare or uncommon plant species; and
- Does not cross any creeks with associated forcemain/sanitary sewer alignment.

#### **4.1 PREFERRED ALTERNATIVE**

The overall outcome of the EA evaluation recommended Location A as the preferred alternative for the pumping station (and associated sewer/forcemain) location when assessed against all evaluation factors. The details of the overall evaluation are not included herein.

LGL has screened the preferred location to provide mitigation recommendations, as well as potential next steps to be undertaken through detailed design. The following outlines the impact assessment for the preferred alternative. However, as the exact footprint and construction limits are not yet defined, further mitigation may be required or warranted at later stages of the design as project details become available.

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**Table 7: Evaluation Matrix for Natural Environment Criteria**

Description	Option 1	Option 2	Option 2a	Option 3	Option 3a	Option 4
General Description of Alternative	Do Nothing	Install Sanitary Pumping Station at Location A	Install Sanitary Pumping Station at Location A	Install Sanitary Pumping Station at Location B	Install Sanitary Pumping Station at Location B with part of service area to drain by gravity	Install Sanitary Pumping Station at Location C
How do the alternatives compare with respect to effects on vegetation, water quality, wildlife and aquatic habitat, wetlands, terrestrial resources, woodlands, species at risk?  Note: LRT and River Rd Extension construction will alter landscape from current conditions	N/A	Removal of some vegetation, including: hedgerow, Cultural Thicket and Coniferous Forest.  No direct impacts to wetlands or aquatic habitat anticipated.  No direct impacts to confirmed significant wildlife habitat identified.  Within 25m of regulated JESA SAR habitat.	Removal of some vegetation, including: hedgerow, Cultural Thicket and Coniferous Forest.  No impacts to wetlands or aquatic habitat anticipated.  No direct impacts to confirmed significant wildlife habitat identified.  Within 25m of regulated JESA SAR habitat.	Removal of some vegetation, including: Cultural Thicket, Cultural Woodland and Deciduous Forest.  Within 20m of Hofstetter Creek and PSW.  Forcemain crossing of North Creek.  Removal of some area identified significant wildlife habitat (deer wintering area).  Within 5m of regulated JESA SAR habitat.	Removal of some vegetation, including: Cultural Thicket, Cultural Woodland and Deciduous Forest.  Within 20m of Hofstetter Creek and PSW.  Forcemain crossing of North Creek.  Removal of some area identified significant wildlife habitat (deer wintering area).  Within 5m of regulated JESA SAR habitat.	Removal of some previously disturbed, cultural vegetation including: Cultural Meadow, Thicket.  No impacts to wetlands or aquatic habitat.  No impacts to confirmed significant wildlife habitat on site. However, may impact local deer movement between ESPA's.  Approximately 80m from regulated JESA SAR habitat.  Approximately 120m from Butternut (no impacts anticipated).

		Within 25m of Butternut.	Within 25m of Butternut records.	Forcemain approximately 10m from Butternut.	Forcemain approximately 10m from Butternut.	Potential removal of sand dropseed (Regionally Significant) last recorded approximately 40m away.
What are the induced impacts of each location? (i.e. How is the environment in other areas affected by change to the environment at this location) e.g. wildlife migration, increased predation.	N/A	Induced impacts are considered low likelihood as the site is used largely as active agricultural land.  Some potential evidence of deer foraging on remnant crops.  There is some potential to impact passive animal movement through agricultural lands.		Increased edge effects to the FOD community and JESA SAR habitat are likely.  Given proximity to headwater of Hofstetter Creek and the Hidden Valley PSW, direct hydrological connection to the Grand River corridor, indirect impacts to wetland and aquatic habitat have potential to occur.		Consideration for deer movement corridors may be required for this site given the identified Deer Yarding Habitat and available connections through the landscape, as well as prior observations of movement (LGL 2014).
What is the impact of spills or overflows for each alternative? e.g. proximity to watercourses,	N/A	This option is 120m from nearest watercourse (North Creek),	This option is 120m from nearest watercourse (North Creek),	This option is closest to a watercourse and wetland, Hofstetter Creek headwater	This option is closest to a watercourse and wetland, Hofstetter Creek headwater	This option is 120m from nearest watercourse (West

wetlands, effect of topography		and 20 m from Hidden Valley PSW.	and 20 m from Hidden Valley PSW.	and Hidden Valley PSW.	and Hidden Valley PSW.	Creek), and 120 m from PSW.
Note: The effect of LRT and River Road extension construction should be considered in evaluation of the Options.		Forcemain and sanitary sewer options are assumed to be co-located in the future ROW where feasible.  Pumping station is proposed outside of the ROW.	Forcemain and sanitary sewer options are assumed to be co-located in the future ROW where feasible.  Pumping station is proposed outside of the ROW.	Forcemain and sanitary sewer options are assumed to be co-located in the future ROW where feasible (where it extends westward from pumping station).  Pumping station is proposed outside of the ROW.  Additional sanitary sewer is to be located east within the future River Road extension ROW.	Forcemain and sanitary sewer options are assumed to be co-located in the future ROW where feasible (where it extends westward from pumping station).  Pumping station is proposed outside of the ROW.  Additional sanitary sewer is to be located east within the future River Road extension ROW.	n/a
A culvert will be installed at Hoffstetter Creek and Hidden Valley North Creek as part of River Road extension.	n/a	n/a	n/a	Forcemain crossing of North Creek, assumed to be under new culvert.	Forcemain crossing of North Creek, assumed to be under new culvert.	n/a

Total Score	Lowest Impact	Moderate Natural Heritage Impacts	Moderate Natural Heritage Impacts	Highest Natural Heritage Impacts	Highest Natural Heritage Impacts	Moderate-Low Natural Heritage Impacts
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## 5.0 POTENTIAL IMPACTS AND MITIGATION

A review of the preferred alternative has been undertaken to evaluate the potential impacts to natural heritage features and functions. Wherever feasible, avoidance of features is preferred, and other general mitigation measures may be implemented to mitigate either direct or indirect impacts from the proposed pumping station and sanitary sewer/forcemain. After application of the general mitigation measures, which are assumed to adopt best management practices, specific mitigation measures are provided in subsequent sections.

### 5.1 GENERAL MITIGATION

- Methods to isolate the construction area;
- Effective Erosion and Sediment Control (ESC) measures shall be installed before starting work to prevent the entry of sediment into the watercourse or adjacent areas. Inspect regularly during the course of construction and conduct regular maintenance and repairs as necessary;
- A plan to dispose of any water accumulated onsite from dewatering or pooled stormwater;
- Minimize vegetation and tree removals through facility design;
- Minimize construction area to the extent possible;
- Use appropriate tree protection measures for any work around tree resources within the project area to help protect trees identified to be retained;
- Use previously disturbed areas for construction laydown and staging to the extent possible;
- Clearly identify stockpiling and staging areas;
- No vegetation removal should occur between April 1 and August 30 of any given year in order to protect birds afforded protection under the Migratory Birds and Convention Act;
- Locate site maintenance; vehicle washing and refuelling stations where contaminants are handled of site, and outside of the wellhead protection area and greater than 30m from wetlands or watercourses; and,
- Ensure that a Spills Management Plan (including materials, instructions regarding their use, education of contract personnel, emergency contact numbers) is on-site at all times for implementation in event of an accidental spill during construction. An emergency spill kit shall be kept on site. A response plan shall also be developed that is to be implemented immediately in the event of a sediment release.
- Ensure that a qualified Environmental Monitor is available to ensure the efficacy of the mitigation measures, has the authority to increase mitigation measures where warranted, and is available on-

call in the event of any emergency (which may include wildlife conflict).

## 5.2 VEGETATION AND VEGETATION COMMUNITIES

Vegetation community impacts for the pumping station are assumed to be largely avoidable, pending final design of the pumping station footprint. But the general location of the preferred alternative Location A avoids the features identified as the central contiguous block of wetland and forest mosaic that comprise the ESPA and Core Environmental Features. The forcemain/sanitary sewer alignment does cross a section of vegetation that is considered 'wooded area' under the LIO layers, with communities described as cultural woodland (CUT) and hedgerow (H). Although the preferred alternative utilizes open agricultural lands, there is some potential for vegetation impacts, and potential SAR vegetation impacts if unmitigated.

### Direct Impacts

The forcemain and sanitary sewer conceptual location may directly impact:

- A hedgerow that is generally characterized as cultural thicket/coniferous forest CUT1/FOC4-1;
- Cultural meadow/deciduous forest CUM1-1/FOD3-1 at road edge; and,
- A Hedgerow (H) that is oriented north south on the former laneway to the homestead in this area. This hedgerow was identified as containing Butternut.

None of these communities are identified as sensitive or at risk, but include SAR trees.

### Indirect Impacts

Indirect impacts to vegetation communities include:

- The potential for silt or sedimentation;
- Introduction of invasive or non-native plant species;
- Alteration of water in quantity or quality;

Mitigation measures recommended, in addition to the General Mitigation outlined prior, include:

- Impacts such a silt or sedimentation entering adjacent vegetation communities should be addressed through a robust ESC plan.
- Project activities should ensure water balance is maintained to the adjacent wetlands.
- Where impacts are unavoidable, restoration is recommended. Restoration should consider avoidance of non-native and invasive species, and consider the existing assemblage of species present in the area and avoid adding or introducing species not already present in the natural area.
- Ensure that temporarily disturbed areas are adequately restored with native, non-invasive vegetation post-construction, and monitor the effectiveness of restoration making adjustments as necessary, which may include management of nuisance and invasive species. Restoration and edge management planning will be undertaken and implemented to mitigate impacts related to vegetation removals and/or impacts near existing edges of natural areas. Restoration and edge management planning shall be undertaken by experienced, qualified professionals. Maintenance and warranty should be in place for any restoration works undertaken. Where impacts to locally rare species are identified during detail design, these are recommended for transplanting and/or replacement as part of the restoration/ compensation plan.

### 5.2.1 Species at Risk

There are potential for SAR impacts related to the Butternut presence identified in the hedgerow. Where project works are proposed within 50m of Butternut, next steps may include:

- Designing the alignments to avoid the habitat for Butternut;
- Completion of a Butternut Health Assessment;
- Genetic sampling (where warranted);
- Consultation with the MECP; and,
- Potential for following Exemption Regulations of the ESA.

Black ash is also identified in the study area as a Species at Risk. This species was recently uplisted under the Species at Risk in Ontario list, but is exempt from permitting until 2024. Known polygons of vegetation that contain black ash are well outside the project footprint at Location A (over 100m). It does highlight the presence of two SAR tree species and potential tree impacts must ensure compliance with the ESA, and in the future may need to consider protection of black ash.

## 5.3 WILDLIFE AND WILDLIFE HABITAT

The preferred alternative at Location A avoids the core central area of Hidden Valley, and much of the identified wildlife habitat that supports deer wintering, Jefferson Salamander, area sensitive bird species and known amphibian breeding habitat.

### Direct Impacts

Direct vegetation removals will impact non-sensitive wildlife habitat and areas likely to support birds regulated under the MBCA.

### Indirect Impacts

Indirect impacts may include:

- Disturbance (as work will occur within 30m of SWH Deer Wintering habitat for example);
- Alteration of water balance;
- Incidental take or harm to wildlife (note that individual salamanders may wander or move outside the regulated habitat limits, but both individuals AND their habitat are protected under the ESA);
- Removal or reduction of available wildlife habitat, although not identified as sensitive, habitat would be considered supporting to the central features (such as through forage opportunities).

Mitigation recommendations specific to wildlife include those outlined under General Mitigation and also the following measures:

- Ensure design includes measures to exclude wildlife from the proposed infrastructure footprint to avoid animal/human conflict to the extent possible. This may include the use of retaining walls or exclusionary fencing around the perimeter of the pumping station, and at minimum during construction. However operational impacts should consider measures to exclude wildlife to avoid conflicts.
- Consider signage to indicate the sensitive adjacent habitat to be protected and to watch for wildlife.
- For maintenance roads and access routes, consider the implementation of slow travel speeds and training for SAR and wildlife awareness to operators.

- Ensure the pumping station is secure to avoid the potential for animals being trapped in any wells or underground structures (salamanders are known to find their way into pool pumps, wells, etc.).
- Construction timing should ensure no disturbance effects to the wintering habitat for deer identified as SWH. Although avoided, proximity to the habitat and its function may warrant the application of timing windows, which should be confirmed with the MNRF.
- All vegetation clearing must comply with the MBCA.
- Consider restoration options that enhance wildlife habitat to the extent possible, such as including forage species for Monarch or other pollinators.

### 5.3.1 Species at Risk

Given that the study area includes regulated habitat for Jefferson Salamander, projects works are advised to be screened with the MECP, such as through an Information Gathering Form (IGF) submission. In particular, the proposed project activities may trigger a permit under the Endangered Species Act, 2007 if direct or indirect impacts are not well mitigated.

Given the proximity of the pumping station to known regulated habitat for Jefferson Salamander, and the potential for indirect impacts through silt or sedimentation or water balance effects, an Information Gathering Form should be submitted to the MECP so the MECP can determine if additional permitting steps are required.

All stages of the project must adhere to the ESA, and where tree removals may be required potential SAR bat habitat may require further screening in field and with the MECP. Suitable trees should be considered as potential SAR bat habitat.

Chimney Swift, Bank Swallow and Barn Swallow habitat are not considered impacted by the project. Bobolink and Eastern Meadowlark are not considered impacted by the project. There is no intrusion into the larger forested habitat proposed, and therefore impacts to Eastern Wood-Pewee or Wood Thrush are not anticipated as direct impacts, but indirect impacts must be considered given the proximity to the available suitable habitat.

There is potential for removal of milkweed or the host plant for Monarch. Although not specifically mapped, avoidance of milkweed removal during the growing season is recommended. And restoration should consider opportunities to include milkweed and foraging plants for pollinators.

There is potential for Snapping Turtle to occur in the study area, and they can wander overland seeking suitable nesting sites. Exclusionary fencing should keep species out of the construction working area. Avoid using substrates in the building design or stock piling areas that may attract nesting turtles and increase the potential for conflict.

## 5.4 AQUATIC HABITAT AND COMMUNITIES

Alternative A will require the installation of a forcemain in the vicinity of the West Creek at Wabanaki Drive.

## Direct

Direct impacts are anticipated to be avoided. The proposed forcemain alignment will occur above the outfall/outlet to West Creek at about 15m or more above the outlet. No in-water works are proposed. It is anticipated that timing windows won't be applicable to this construction.

## Indirect

Indirect impacts may include the potential for silt, sediment or other deleterious substances entering into the watercourse or waterbodies; and the potential for alteration of flows or water balance. No fish habitat is anticipated to be impacted by these works, assuming best management practices for ESC measures and to protect from deleterious substances entering into the watercourse.

## Mitigation

Mitigation measures are as outlined under General Mitigation. Further mitigation measures should include:

- Ensuring the maintenance of water balance to the wetland and the watercourses in the study area;
- Dewatering needs are not well known at this time. Should dewatering be required then a dewatering plan should be developed in accordance with MECP guidance to include the following:
  - Ensure dewatering activities are addressed in site specific Environmental Management Plans to address alterations to baseflow and discharge of water back to surface features (from both a quantity and quality aspect);
  - Direct any dewatering discharge to a sediment containment/filtration system or settling basin prior to release to a watercourse;
  - Maintain existing flow patterns to avoid changing character of vegetation communities and habitat functions;
  - Release treated water into naturally vegetated, flat areas at least 30 m from a watercourse streambank and,
  - Filter groundwater discharge prior to it entering a waterbody using treatment train approach (e.g., via tanks, dewatering pads and filter bags) prior to being released.

### 5.4.1 Species at Risk

The central wetland area where West Creek drains into is sensitive aquatic habitat for Jefferson Salamander with a direct surface water connection to breeding habitat. As such, the potential for impacts through the aquatic pathways should also be screened with the MECP for potential effects to regulated habitat.

Other aquatic SAR (fish or mussels specifically) are considered likely to occur in the receiving waterbody of the Grand River. No direct impacts to SAR aquatic habitat is anticipated to the Grand River. A robust ESC Plan and Spills Prevention Plan is recommended given the site drains to the Grand River from the study area.

## **6.0 SUMMARY AND NEXT STEPS**

This natural sciences report provides a characterization of the study area for the Hidden Valley Pumping Station, Forcemain and Sanitary Sewer. A total of four alternative locations for the pumping station were evaluated (including a 'do nothing' solution). The outcome of the EA evaluation for all factors identified Location A for the pumping station as the preferred solution. Mitigation recommendations are provided for this location and associated forcemain/sanitary sewer, to avoid and/or minimize impacts to natural heritage features in the Hidden Valley study area.

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## **Appendix A – Summary of ELC Vegetation Communities in the Hidden Valley Study Area**

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ELC Code	Vegetation Type	Species Association	Comments
<b>Terrestrial – Natural/Semi-natural</b>			
TPO	OPEN TALLGRASS PRAIRIE		
TPO1	Dry Tallgrass Prairie	<b>Ground Cover:</b> Indian Grass ( <i>Sorghastrum nutans</i> ), Little Bluestem ( <i>Schizachyrium scoparium</i> ), Switch Grass ( <i>Panicum virgatum</i> ),	<b>Canopy Cover:</b> less than 25 percent <b>Stand Age:</b> Young <b>Level of Disturbance:</b> Low due to it being a restored berm
FOC	CONIFEROUS FOREST		
FOC2	Dry-Fresh White Cedar Coniferous Forest Type	<b>Overstorey:</b> Eastern white cedar dominant	<b>Canopy Cover:</b> 80 to 100 percent <b>Stand Age:</b> Young to Mature <b>Level of Disturbance:</b> Low, along bank of the Grand River
FOC2-2	Dry-Fresh White Cedar Coniferous Forest Type	<b>Overstorey:</b> Eastern white cedar dominant <b>Understorey:</b> common buckthorn ( <i>Rhamnus cathartica</i> ) <b>Ground Cover:</b> wild strawberry ( <i>Fragaria virginiana</i> )	<b>Canopy Cover:</b> 80 to 100 percent <b>Stand Age:</b> Young to Mature
FOC3	Fresh-Moist Coniferous Forest	<b>Overstorey:</b> Easter White Cedar ( <i>Thuja occidentalis</i> )	<b>Canopy Cover:</b> 80 to 100 percent <b>Stand Age:</b> Young to Mature <b>Level of Disturbance:</b> Low to moderate, along bank of the Grand River
FOC3-1	Fresh-Moist Hemlock Coniferous Forest Type	<b>Overstorey:</b> Eastern hemlock ( <i>Tsuga canadensis</i> ) dominant with eastern white cedar ( <i>Thuja occidentalis</i> ), yellow birch ( <i>Betula alleghaniensis</i> ) and sugar maple ( <i>Acer saccharum saccharum</i> ) <b>Understorey:</b> Choke cherry ( <i>Prunus virginiana virginiana</i> ), common buckthorn ( <i>Rhamnus cathartica</i> ) <b>Ground Cover:</b> Side-flowering aster ( <i>Aster lateriflorus</i> ), white snakeroot ( <i>Eupatorium rugosum</i> ), long-stalked sedge ( <i>Carex</i>	<b>Canopy Cover:</b> 80 to 100 percent  <b>Stand Age:</b> Mature  <b>Level of Disturbance:</b> Low to moderate due to proximity of pedestrian trail

		<i>pedunculata</i> ), spinulose wood fern ( <i>Dryopteris carthusiana</i> )	
FOC4-1	Fresh-Moist White Cedar Coniferous Forest Type	<p><b>Overstorey:</b> Eastern white cedar dominant</p> <p><b>Understorey:</b> Low shrub cover</p> <p><b>Ground Cover:</b> Sensitive fern (<i>Onoclea sensibilis</i>), marsh fern (<i>Thelyptis palustris</i>), spotted touch-me-not (<i>Impatiens capensis</i>)</p>	<p><b>Canopy Cover:</b> 80 to 100 percent</p> <p><b>Stand Age:</b> Young to mature</p> <p><b>Level of Disturbance:</b> Low</p>
FOC4-2	Fresh-Moist White Cedar-Hemlock Coniferous Forest	<p><b>Overstorey:</b> Eastern white cedar dominant with eastern hemlock, white pine (<i>Pinus strobus</i>) and sugar maple</p> <p><b>Understorey:</b> Eastern white cedar, sugar maple, common buckthorn</p> <p><b>Ground Cover:</b> Spinulose wood fern, bulblet fern (<i>Cystopertis bulbifera</i>)</p>	<p><b>Canopy Cover:</b> 80 to 100 percent</p> <p><b>Stand Age:</b> Young to mature</p> <p><b>Level of Disturbance:</b> Low</p>
FOM	MIXED FOREST		
FOM6-1	Fresh-Moist Sugar Maple-Hemlock Mixed Forest Type	<p><b>Overstorey:</b> Eastern hemlock with sugar maple, beech (<i>Fagus grandifolia</i>), white ash (<i>Fraxinus americana</i>) and yellow birch</p> <p><b>Understorey:</b> Sugar maple, white ash</p> <p><b>Ground Cover:</b> Wood ferns, wild ginger (<i>Asarum canadense</i>), Jack-in-the-pulpit (<i>Arisaemea triphyllum triphyllum</i>), lady fern (<i>Athrium filix-femina</i>)</p>	<p><b>Canopy Cover:</b> 80 to 100 percent</p> <p><b>Stand Age:</b> Mature</p> <p><b>Level of Disturbance:</b> Low</p>
FOM7-1	Fresh-Moist White Cedar-Hardwood Mixed Forest Ecosite	<p><b>Overstorey:</b> Eastern white cedar with yellow birch, white ash (<i>Fraxinus americana</i>) and sugar maple</p> <p><b>Understorey:</b> White ash, sugar maple, choke cherry, common buckthorn</p> <p><b>Ground Cover:</b> Lance-leaved aster (<i>Aster lanceolatus lanceolatus</i>), spinulose wood fern</p>	<p><b>Canopy Cover:</b> 60 to 100 percent</p> <p><b>Stand Age:</b> Young to mid-aged</p> <p><b>Level of Disturbance:</b> Moderate due to proximity of cultural communities and pedestrian trails</p>
FOD	DECIDUOUS FOREST		
FOD3	Dry-Fresh Cottonwood Deciduous Forest Type	<p><b>Overstorey:</b> Eastern Cottonwood (<i>Populus deltoides</i>) dominant</p>	<p><b>Canopy Cover:</b> 60 to 100 percent</p> <p><b>Stand Age:</b> Pioneer</p> <p><b>Level of Disturbance:</b> Low to Moderate due to</p>

			proximity to top of bank of the Grand River
FOD3-1	Dry-Fresh Poplar Deciduous Forest Type	<p><b>Overstorey:</b> Trembling aspen (<i>Populus tremuloides</i>) dominant</p> <p><b>Understorey:</b> Trembling aspen</p> <p><b>Ground Cover:</b> Kentucky bluegrass (<i>Poa pratensis pratensis</i>), Canada bluegrass (<i>P. compressa</i>), quack grass (<i>Elymus repens</i>)</p>	<p><b>Canopy Cover:</b> 60 to 100 percent</p> <p><b>Stand Age:</b> Pioneer</p> <p><b>Level of Disturbance:</b> Moderate due to proximity to road and agricultural fields</p>
FOD4	Dry-Fresh Deciduous Forest Type	<p><b>Overstorey:</b> Black walnut (<i>Juglans nigra</i>), white ash, basswood (<i>Tilia americana</i>), trembling aspen,</p> <p><b>Understorey:</b> common buckthorn, staghorn sumac (<i>Rhus typhina</i>), riverbank grape (<i>Vitis riparia</i>)</p> <p><b>Ground Cover:</b> Garlic mustard (<i>Allaria petiolata</i>), motherwort (<i>Leonurus cardiaca cardiaca</i>), Kentucky bluegrass, Canada bluegrass, wild strawberry (<i>Fragaria virginiana</i>)</p>	<p><b>Canopy Cover:</b> 60 to 100 percent</p> <p><b>Stand Age:</b> Young to mature</p> <p><b>Level of Disturbance:</b> Low to moderate due to proximity to pedestrian trail and end of Cameo Drive</p>
FOD4-2	Dry-Fresh White Ash Deciduous Forest Type	<p><b>Overstorey:</b> White ash, basswood (<i>Tilia americana</i>), trembling aspen</p> <p><b>Understorey:</b> Eastern white cedar, common buckthorn, staghorn sumac (<i>Rhus typhina</i>), riverbank grape (<i>Vitis riparia</i>)</p> <p><b>Ground Cover:</b> Garlic mustard (<i>Allaria petiolata</i>), motherwort (<i>Leonurus cardiaca cardiaca</i>), Kentucky bluegrass, Canada bluegrass, wild strawberry (<i>Fragaria virginiana</i>)</p>	<p><b>Canopy Cover:</b> 60 to 100 percent</p> <p><b>Stand Age:</b> Young to mature</p> <p><b>Level of Disturbance:</b> Low to moderate due to proximity to pedestrian trails</p>
FOD5	Dry-Fresh Sugar Maple Deciduous Forest Type	<p><b>Overstorey:</b> Sugar Maple mixed forest dominant</p>	<p><b>Canopy Cover:</b> 80 to 100 percent</p> <p><b>Stand Age:</b> Mature</p> <p><b>Level of Disturbance:</b> Low to moderate due to adjacent residential properties</p>
FOD5-1	Dry-Fresh Sugar Maple Deciduous Forest Type	<p><b>Overstorey:</b> Sugar maple dominant</p> <p><b>Understorey:</b> Low shrub cover</p> <p><b>Ground Cover:</b> white trillium (<i>Trillium grandiflorum</i>), yellow trout lily (<i>Erythronium americanum americanum</i>), wild sarsaparilla (<i>Aralia nudicaulis</i>),</p>	<p><b>Canopy Cover:</b> 80 to 100 percent</p> <p><b>Stand Age:</b> Mature</p> <p><b>Level of Disturbance:</b> Moderate due to recent clearing of common buckthorn and proximity to roads and highway</p>

		blue cohosh ( <i>Caulophyllum thalictroides</i> )	
FOD5-2	Dry-Fresh Sugar Maple-Beech Deciduous Forest Type	<p><b>Overstorey:</b> Sugar maple dominant with American beech (<i>Fagus grandifolia</i>)</p> <p><b>Understorey:</b> Alternate-leaved dogwood (<i>Cornus alternifolia</i>), common buckthorn, red-berried elder (<i>Sambucus racemosa pubens</i>)</p> <p><b>Ground Cover:</b> white trillium (<i>Trillium grandiflorum</i>), yellow trout lily (<i>Erythronium americanum americanum</i>), Pennsylvania sedge (<i>Carex pensylvanica</i>)</p>	<p><b>Canopy Cover:</b> 80 to 100 percent</p> <p><b>Stand Age:</b> Mature</p> <p><b>Level of Disturbance:</b> Low to moderate due to proximity of pedestrian trail</p>
FOD5-3	Dry-Fresh Sugar Maple-Oak Deciduous Forest Type	<p><b>Overstorey:</b> Sugar maple dominant with red oak (<i>Quercus rubra</i>)</p> <p><b>Understorey:</b> Alternate-leaved dogwood, red-berried elder</p> <p><b>Ground Cover:</b> white trillium, yellow trout lily, wild sarsaparilla, blue cohosh, jack-in-the-pulpit (<i>Arisaema triphyllum triphyllum</i>)</p>	<p><b>Canopy Cover:</b> 80 to 100 percent</p> <p><b>Stand Age:</b> Mature</p> <p><b>Level of Disturbance:</b> Low to moderate due to usage by campers/inhabitants</p>
FOD5-6	Dry-Fresh Sugar Maple-Basswood Deciduous Forest Type	<p><b>Overstorey:</b> Sugar maple dominant with basswood</p> <p><b>Understorey:</b> Alternate-leaved dogwood, red-berried elder, common buckthorn</p> <p><b>Ground Cover:</b> white trillium, yellow trout lily, wild sarsaparilla, blue cohosh, jack-in-the-pulpit</p>	<p><b>Canopy Cover:</b> 80 to 100 percent</p> <p><b>Stand Age:</b> Mature</p> <p><b>Level of Disturbance:</b> Low to moderate due to presence of pedestrian trails</p>
FOD5-7	Dry-Fresh Sugar Maple-Black Cherry Deciduous Forest Type	<p><b>Overstorey:</b> Sugar maple dominant with black cherry</p> <p><b>Understorey:</b> Alternate-leaved dogwood, red-berried elder, common buckthorn</p> <p><b>Ground Cover:</b> white trillium, yellow trout lily, wild sarsaparilla, blue cohosh, jack-in-the-pulpit</p>	<p><b>Canopy Cover:</b> 80 to 100 percent</p> <p><b>Stand Age:</b> Mature</p> <p><b>Level of Disturbance:</b> Low to moderate due to presence of pedestrian trails</p>
FOD5-8	Dry-Fresh Sugar Maple-White Ash Deciduous Forest Type	<p><b>Overstorey:</b> Sugar maple dominant with white ash</p> <p><b>Understorey:</b> Alternate-leaved dogwood, red-berried elder, common buckthorn</p> <p><b>Ground Cover:</b> white trillium, yellow trout lily, wild sarsaparilla, blue cohosh, jack-in-the-pulpit</p>	<p><b>Canopy Cover:</b> 80 to 100 percent</p> <p><b>Stand Age:</b> Mature</p> <p><b>Level of Disturbance:</b> Low to moderate due to presence of pedestrian trails</p>

FOD7	Fresh-Moist Manitoba Maple Lowland Deciduous Forest	<b>Overstorey:</b> Manitoba Maple ( <i>Acer negundo</i> ) and Hybrid Crack Willow ( <i>Salix X rubens</i> )	<b>Canopy Cover:</b> 60 to 80 percent <b>Stand Age:</b> Mid-aged
FOD7-3	Fresh-Moist Willow Lowland Deciduous Forest Type	<b>Overstorey:</b> Hybrid crack willow ( <i>Salix X rubens</i> ), Manitoba maple ( <i>Acer negundo</i> ) and black walnut ( <i>Juglans nigra</i> ) <b>Understorey:</b> Manitoba maple, common buckthorn, staghorn sumac <b>Ground Cover:</b> Garlic mustard, tall goldenrod, dame's rocket, motherwort, Canada bluegrass, Kentucky bluegrass	<b>Canopy Cover:</b> 60 to 80 percent <b>Stand Age:</b> Mid-aged <b>Level of Disturbance:</b> Moderate due to proximity of pedestrian trails and local businesses
FOD8-1	Fresh-Moist Poplar Deciduous Forest Type	<b>Overstorey:</b> Trembling aspen, large-tooth aspen ( <i>Populus grandidentata</i> ) and balsam poplar ( <i>P. balsamifera</i> ) dominant <b>Understorey:</b> Common buckthorn, choke cherry, red-berried elder <b>Ground Cover:</b> Sensitive fern, bittersweet nightshade ( <i>Solanum dulcamara</i> ), poison ivy ( <i>Rhus radicans rhydbergii</i> ), spinulose wood fern	<b>Canopy Cover:</b> 60 to 100 percent <b>Stand Age:</b> Young <b>Level of Disturbance:</b> Moderate due to proximity to roads and highway
<b>Terrestrial – Cultural</b>			
CUP	CULTURAL PLANTATION		
CUP1	Deciduous Plantation Type	<b>Overstorey:</b> Black walnut ( <i>Juglans nigra</i> ) dominant	<b>Canopy Cover:</b> 60 to 90 percent <b>Stand Age:</b> Mature <b>Level of Disturbance:</b> Low to moderate due to proximity to agricultural fields
CUP1-3	Black Walnut Deciduous Plantation Type	<b>Overstorey:</b> Black walnut ( <i>Juglans nigra</i> ) dominant <b>Understorey:</b> Common buckthorn, glossy buckthorn ( <i>Rhamnus frangula</i> ), riverbank grape, thicket creeper ( <i>Parthenocissus inserta</i> ), wild red raspberry <b>Ground Cover:</b> Garlic mustard, dame's rocket, motherwort, bittersweet nightshade, poison ivy	<b>Canopy Cover:</b> 60 to 90 percent <b>Stand Age:</b> Mature <b>Level of Disturbance:</b> Low to moderate due to proximity to agricultural fields
CUP2	Mixed Plantation	<b>Overstorey:</b> Black walnut and red pine ( <i>Pinus resinosa</i> )	<b>Canopy Cover:</b> 80 to 100 percent

		<p><b>Understorey:</b> Common buckthorn, glossy buckthorn (<i>Rhamnus frangula</i>), riverbank grape, thicket creeper (<i>Parthenocissus inserta</i>), wild red raspberry</p> <p><b>Ground Cover:</b> Garlic mustard, dame's rocket, motherwort, bittersweet nightshade, poison ivy</p>	<p><b>Stand Age:</b> Mid-aged to Mature</p> <p><b>Level of Disturbance:</b> Low to moderate due to proximity to agricultural fields</p>
CUP3	Coniferous Plantation	<p><b>Overstorey:</b> Eastern white cedar, red pine (<i>Pinus resinosa</i>)</p> <p><b>Understorey:</b> Eastern white cedar</p> <p><b>Ground Cover:</b> Little evident</p>	<p><b>Canopy Cover:</b> 100 percent</p> <p><b>Stand Age:</b> Young to Mid-aged</p> <p><b>Level of Disturbance:</b> Low</p>
CUP3-1	Red Pine Coniferous Plantation Type	<p><b>Overstorey:</b> Red pine, eastern white cedar</p> <p><b>Understorey:</b> Red pine</p> <p><b>Ground Cover:</b> Little evident</p>	<p><b>Canopy Cover:</b> 100 percent</p> <p><b>Stand Age:</b> Young to Mid-aged</p> <p><b>Level of Disturbance:</b> Low to moderate due to proximity of road and pedestrian trails</p>
CUP3-3	Scotch Pine Coniferous Plantation	<p><b>Overstorey:</b> Scotch pine (<i>Pinus sylvestris</i>), eastern white cedar</p> <p><b>Understorey:</b> Scotch pine</p> <p><b>Ground Cover:</b> Little evident</p>	<p><b>Canopy Cover:</b> 100 percent</p> <p><b>Stand Age:</b> Young to Mid-aged</p> <p><b>Level of Disturbance:</b> Low to moderate due to proximity of road and pedestrian trails</p>
CUM	CULTURAL MEADOW		
CUM1-1	Dry-Moist Old Field Meadow Type	<p><b>Ground Cover:</b> Tall goldenrod, Canada goldenrod (<i>Solidago canadensis</i>), Canada thistle (<i>Cirsium canadense</i>), common milkweed (<i>Asclepias syriaca</i>), bittersweet nightshade, Kentucky bluegrass, Canada bluegrass, quack grass (<i>Elymus repens</i>), orchard grass (<i>Dactylis glomerata</i>)</p>	<p><b>Level of Disturbance:</b> Moderate to high due to presence of pedestrian trails and proximity to agricultural fields</p>
CUT	CULTURAL THICKET		
CUT1	Mineral Cultural Thicket Ecosite	<p><b>Overstorey:</b> Common buckthorn, staghorn sumac, hawthorn (<i>Crataegus</i> sp.), apple (<i>Malus</i> sp.)</p> <p><b>Ground Cover:</b> Tall goldenrod, Canada goldenrod (<i>Solidago canadensis</i>), Canada thistle (<i>Cirsium canadense</i>), common milkweed (<i>Asclepias syriaca</i>), bittersweet nightshade, Kentucky bluegrass, Canada</p>	<p><b>Level of Disturbance:</b> Moderate to high due to presence of pedestrian trails and proximity to agricultural fields</p>

		bluegrass, quack grass ( <i>Elymus repens</i> ), orchard grass ( <i>Dactylis glomerata</i> )	
CUT1-1	Sumac Cultural Thicket Ecosite	<p><b>Overstorey:</b> Staghorn sumac, hawthorn (<i>Crataegus</i> sp.), riverbank grape, common buckthorn, white ash</p> <p><b>Ground Cover:</b> Tall goldenrod, Canada goldenrod (<i>Solidago canadensis</i>), Canada thistle (<i>Cirsium canadense</i>), common milkweed (<i>Asclepias syriaca</i>), bittersweet nightshade, Kentucky bluegrass, Canada bluegrass, quack grass (<i>Elymus repens</i>), orchard grass (<i>Dactylis glomerata</i>)</p>	<p><b>Level of Disturbance:</b> Moderate to high due to being within Highway 8 and Hydro right-of-way</p>
CUW	CULTURAL WOODLAND		
CUW1	Mineral Cultural Woodland Ecosite	<p><b>Overstorey:</b> Green ash (<i>Fraxinus pennsylvanica</i>), Manitoba maple (<i>Acer negundo</i>)</p> <p><b>Understorey:</b> Crab apple (<i>Malus pumila</i>), riverbank grape</p> <p><b>Ground Cover:</b> Tall goldenrod, Canada goldenrod (<i>Solidago canadensis</i>), Canada thistle (<i>Cirsium canadense</i>), common milkweed (<i>Asclepias syriaca</i>), bittersweet nightshade, Kentucky bluegrass, Canada bluegrass, quack grass (<i>Elymus repens</i>), orchard grass (<i>Dactylis glomerata</i>)</p>	<p><b>Canopy Cover:</b> 35 to 60 percent</p> <p><b>Stand Age:</b> Young to mature</p> <p><b>Level of Disturbance:</b> Moderate to high due to presence of pedestrian trails, proximity to agricultural fields and usage by campers/inhabitants</p>
CUS1	Mineral Cultural Savannah	<p><b>Overstorey:</b> Black Cherry (<i>Prunus nigra</i>), Sugar Maple (<i>Acer saccharinum</i>), Pear (<i>Pyrus communis</i>), Eastern Red Cedar (<i>Juniperus virginiana</i>), White Cedar (<i>Thuja occidentalis</i>), Black Walnut and Scott's Pine (<i>Pinus sylvestris</i>)</p>	<p><b>Canopy Cover:</b> 25 to 35 percent</p> <p><b>Stand Age:</b> Young to Mature</p> <p><b>Disturbance:</b> High, selectively cut</p>
<b>Wetland</b>			
SWC	CONIFEROUS SWAMP		
SWC3-2	White Cedar-Conifer Organic Coniferous Swamp Type	<p><b>Overstorey:</b> Eastern white cedar, tamarack (<i>Larix laricina</i>), white pine, yellow birch</p> <p><b>Understorey:</b> Eastern white cedar, tamarack, white pine</p> <p><b>Ground Cover:</b> Reed-canary grass (<i>Phalaris arundinacea</i>), swamp aster (<i>Aster puniceus</i>), swamp goldenrod (<i>Solidago patula</i>), sensitive fern, creeping bent grass (<i>Agrostis stolonifera</i>), purple loosestrife (<i>Lythrum salicaria</i>), spotted touch-me-not, marsh fern, fowl manna grass (<i>Glyceria striata</i>)</p>	<p><b>Canopy Cover:</b> 80 to 100 percent</p> <p><b>Stand Age:</b> Young</p> <p><b>Level of Disturbance:</b> Low</p>
SWM	MIXED SWAMP		

SWM1-1	White Cedar-Hardwood Mineral Mixed Swamp Type	<p><b>Overstorey:</b> Eastern white cedar dominant with white birch, yellow birch, green ash, black ash (<i>Fraxinus nigra</i>), trembling aspen, balsam fir (<i>Abies balsamea</i>), balsam poplar and white elm</p> <p><b>Understorey:</b> Eastern white cedar</p> <p><b>Ground Cover:</b> Sensitive fern (<i>Onoclea sensibilis</i>), marsh marigold (<i>Caltha palustris</i>), spotted touch-me-not (<i>Impatiens capensis</i>), creeping bent grass</p>	<p><b>Canopy Cover:</b> 100 percent</p> <p><b>Stand Age:</b> Young</p> <p><b>Level of Disturbance:</b> Low</p>
SWM6-1	Birch-Conifer Organic Mixed Swamp Type	<p><b>Overstorey:</b> Yellow birch, trembling aspen, tamarack</p> <p><b>Understorey:</b> Eastern white cedar, white elm, yellow birch, tamarack, red-osier dogwood (<i>Cornus stolonifera</i>), red-berried elder, highbush cranberry (<i>Viburnum trilobum</i>), Tartarian honeysuckle (<i>Lonicera tatarica</i>), common buckthorn, glossy buckthorn</p> <p><b>Ground Cover:</b> Swamp aster, swamp goldenrod, common cattail (<i>Typha latifolia</i>), sensitive fern, creeping bent grass, purple loosestrife, spotted touch-me-not, marsh fern, fowl manna grass</p>	<p><b>Canopy Cover:</b> 60 to 80 percent</p> <p><b>Stand Age:</b> Young to mid-aged</p> <p><b>Level of Disturbance:</b> Low</p>
SWD	DECIDUOUS SWAMP		
SWD2-2	Green Ash Mineral Deciduous Swamp Type	<p><b>Overstorey:</b> Green ash, trembling aspen, yellow birch</p> <p><b>Understorey:</b> Eastern white cedar, common buckthorn, blue beech (<i>Ostrya virginiana</i>)</p> <p><b>Ground Cover:</b> Sensitive fern, spotted touch-me-not, creeping bent grass</p>	<p><b>Canopy Cover:</b> 40 to 100 percent</p> <p><b>Stand Age:</b> Young to Mature</p> <p><b>Level of Disturbance:</b> Moderate to high due to proximity to pedestrian trails and flooding by beavers in portions of this community type</p>
SWD4	Manitoba Maple Mineral Deciduous Swamp Type	<p><b>Overstorey:</b> Manitoba Maple (<i>Acer negundo</i>)</p>	<p><b>Canopy Cover:</b> 40 to 60 percent</p> <p><b>Stand Age:</b> Young</p>
SWD4-1	Willow Mineral Deciduous Swamp Type	<p><b>Overstorey:</b> Hybrid Crack Willow (<i>Salix x rubens</i>)</p>	<p><b>Canopy Cover:</b> 40 to 60 percent</p> <p><b>Stand Age:</b> Young</p>

SWD5-1	Black Ash Organic Deciduous Swamp Type	<p><b>Overstorey:</b> Black ash, white elm, tamarack, red maple</p> <p><b>Understorey:</b> Common buckthorn, glossy buckthorn, red-osier dogwood</p> <p><b>Ground Cover:</b> Sensitive fern, purple loosestrife, swamp aster, fowl manna grass, swamp goldenrod, narrow-leaved cattail (<i>Typha angustifolia</i>), creeping bent grass</p>	<p><b>Canopy Cover:</b> 40 to 60 percent</p> <p><b>Stand Age:</b> Young</p> <p><b>Level of Disturbance:</b> Low to moderate due to proximity of pedestrian trails</p>
SWT	THICKET SWAMP		
SWT2-5	Red-osier Mineral Thicket Swamp Type	<p><b>Overstorey:</b> Red-osier dogwood, winterberry (<i>Ilex verticillata</i>), common buckthorn, glossy buckthorn</p> <p><b>Ground Cover:</b> Sensitive fern, spotted touch-me-not, marsh fern, creeping bent grass</p>	<p><b>Level of Disturbance:</b> Low</p>
MAM	MEADOW MARSH		
MAM2	Common Reed Mineral Meadow Marsh Type	<p><b>Ground Cover:</b> Common reed (<i>Phragmites australis</i>), Reed-canary grass (<i>Phalaris arundinacea</i>), common cattail, narrow-leaved cattail,</p>	<p><b>Level of Disturbance:</b> Low to moderate due to proximity to pedestrian trail</p>
MAM2-2	Reed-canary Grass Mineral Meadow Marsh Type	<p><b>Ground Cover:</b> Reed-canary grass (<i>Phalaris arundinacea</i>), common cattail, narrow-leaved cattail, swamp aster, creeping bent grass</p>	<p><b>Level of Disturbance:</b> Low to moderate due to proximity to road</p>
MAM2-5	Narrow- leaved Sedge Mineral Meadow Marsh Type	<p><b>Ground Cover:</b> Yellow Sedge (<i>Carex flava</i>), Inland Sedge (<i>Carex interior</i>), creeping bent grass, rough-leaved goldenrod (<i>Solidago patula</i>), reed-canary grass</p>	<p><b>Level of Disturbance:</b> Low to moderate due to proximity to road</p>
MAM2-10	Forb Mineral Meadow Marsh Type	<p><b>Ground Cover:</b> Spotted touch-me-not, swamp aster, common cattail, narrow-leaved cattail, reed-canary grass, fowl manna grass,</p>	<p><b>Level of Disturbance:</b> Low to moderate due to proximity to agricultural fields</p>
MAS	SHALLOW MARSH		
MAS2-1	Cattail Mineral Shallow Marsh Type	<p><b>Ground Cover:</b> Common cattail, narrow-leaved cattail, reed-canary grass, creeping bent grass</p>	<p><b>Level of Disturbance:</b> Low to moderate due to proximity to road and pedestrian trails</p>
MAS3-1	Cattail Organic Shallow Marsh Type	<p><b>Ground Cover:</b> Common cattail, narrow-leaved cattail, reed-canary grass, creeping bent grass</p>	<p><b>Level of Disturbance:</b> Low</p>
OAO	OPEN AQUATIC	N/A	

## Appendix B -Running Wildlife List

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Running Wildlife List			Earlier Studies					Current Study	Species Status			
Taxa	Species Common Name	Scientific Name	Ecologists 1979	LGL 2004	LGL 2007- 2008	LGL 2013	LGL 2019- 2020	LGL 2021	SARA	ESA	FWCA	SWH-TG Area Sensitive Species
Amphibians	American Bullfrog	<i>Lithobates catesbeianus</i>	X								G	Stable water levels
	American Toad	<i>Anaxyrus americanus</i>	X	X	X		X					
	Blue-spotted Salamander	<i>Ambystoma laterale</i>					X				P	
	Eastern (Red-spotted) Newt	<i>Notophthalmus viridescens</i>	X	X	X							
	Eastern Red-backed Salamander	<i>Plethodon cinereus</i>	X	X							P	
	Gray Treefrog	<i>Hyla versicolor</i>	X	X		X	X				P	
	Green Frog	<i>Lithobates clamitans</i>	X		X	X	X	X				
	Jefferson Salamander	<i>Ambystoma jeffersonianum</i>			X				THR	END	P	
	Jefferson Salamander x Blue-spotted Salamander, Jefferson genome dominates	<i>Ambystoma hybrid pop. 1</i>	X		X							
	Northern Leopard Frog	<i>Lithobates pipiens</i>	X	X	X	X	X					
	Spotted Salamander	<i>Ambystoma maculatum</i>	X	X	X						P	
	Spring Peeper	<i>Pseudacris crucifer</i>		X			X					
	Wood Frog	<i>Lithobates sylvatica</i>	X	X	X		X					
American Crow	<i>Corvus brachyrhynchos</i>	X	X		X	X	X					
American Goldfinch	<i>Spinus tristis</i>	X	X		X	X	X					
American Kestrel	<i>Falco sparverius</i>		X							P		
American Redstart	<i>Setophaga ruticilla</i>	X			X	X					>100 ha forest	
American Robin	<i>Turdus migratorius</i>	X	X		X	X	X					
American Tree Sparrow	<i>Spizelloides arborea</i>		X									
American Woodcock	<i>Scolopax minor</i>	X	X	X								
Baltimore Oriole	<i>Icterus galbula</i>	X	X		X	X	X					
Bank Swallow	<i>Riparia riparia</i>					X		THR	THR			
Barn Swallow	<i>Hirundo rustica</i>	X			X	X	X	THR	THR			
Belted Kingfisher	<i>Megaceryle alcyon</i>	X	X			X	X			P		
Black-and-white Warbler	<i>Mniotilta varia</i>		X			X					>100 ha continuous forest	
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	X	X			X						
Black-capped Chickadee	<i>Poecile atricapillus</i>	X	X		X	X	X					
Blackpoll Warbler	<i>Setophaga striata</i>		X									
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>		X								>100 ha of dense forest	
Black-throated Green Warbler	<i>Setophaga virens</i>		X								30 ha variable forest	
Blue Jay	<i>Cyanocitta cristata</i>	X	X		X	X	X			P		
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>		X								30 ha forest	
Blue-winged Teal	<i>Anas discors</i>	X										
Bobolink	<i>Dolichonyx oryzivorus</i>	X						THR	THR		>50 ha dense grassland	
Brown Creeper	<i>Certhia americana</i>	X	X		X						30 ha mature forest	
Brown Thrasher	<i>Toxostoma rufum</i>	X	X		X	X						
Brown-headed Cowbird	<i>Molothrus ater</i>	X	X		X	X						

Canada Goose	<i>Branta canadensis</i>		X		X	X	X				
Cedar Waxwing	<i>Bombycilla cedrorum</i>	X	X		X	X					
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>		X								
Chimney Swift	<i>Chaetura pelagica</i>	X	X		X	X		THR	THR		
Chipping Sparrow	<i>Spizella passerina</i>	X	X		X	X	X				
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>		X			X					
Common Grackle	<i>Quiscalus quiscula</i>	X	X		X	X	X				
Common Merganser	<i>Mergus merganser</i>						X				clear water, nesting
Common Yellowthroat	<i>Geothlypis trichas</i>	X	X		X	X	X				
Cooper's Hawk	<i>Accipiter cooperii</i>		X			X				P	dense Carolinian forest habitat >50 ha
Dark-eyed Junco	<i>Junco hyemalis</i>		X								
Double-crested Cormorant	<i>Phalacrocorax auritus</i>					X					
Downy Woodpecker	<i>Picoides pubescens</i>	X	X		X	X	X				
Eastern Bluebird	<i>Sialia sialis</i>		X		X						
Eastern Kingbird	<i>Tyrannus tyrannus</i>	X	X		X	X	X				
Eastern Meadowlark	<i>Sturnella magna</i>	X	X					THR	THR		open grasslands >10 ha
Eastern Phoebe	<i>Sayornis phoebe</i>					X					
Eastern Screech-Owl	<i>Megascops asio</i>			X						P	
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	X									
Eastern Wood-Pewee	<i>Contopus virens</i>	X	X		X	X	X	SC	SC		
European Starling	<i>Sturnus vulgaris</i>	X	X		X	X	X				
Field Sparrow	<i>Spizella pusilla</i>	X	X		X	X	X				
Gray Catbird	<i>Dumetella carolinensis</i>	X	X		X	X	X				
Great Blue Heron	<i>Ardea herodias</i>	X	X		X	X					
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	X	X		X	X	X				
Great Horned Owl	<i>Bubo virginianus</i>	X	X							P	
Green Heron	<i>Butorides virescens</i>	X	X								
Hairy Woodpecker	<i>Picoides villosus</i>		X		X		X				forests with tall
Horned Lark	<i>Eremophila alpestris</i>				X	X					
House Finch	<i>Haemorhous mexicanus</i>		X			X					
House Sparrow	<i>Passer domesticus</i>	X	X		X	X	X				
House Wren	<i>Troglodytes aedon</i>		X		X	X	X				
Indigo Bunting	<i>Passerina cyanea</i>	X	X		X	X	X				
Killdeer	<i>Charadrius vociferus</i>	X	X		X	X	X				
Least Flycatcher	<i>Empidonax minimus</i>		X		X	X					open habitat >100 ha
Magnolia Warbler	<i>Setophaga magnolia</i>	X	X								30 ha forest with dense shrubs
Mallard	<i>Anas platyrhynchos</i>	X	X		X	X	X				
Mourning Dove	<i>Zenaida macroura</i>	X	X		X	X	X				
Mourning Warbler	<i>Geothlypis philadelphia</i>		X								
Nashville Warbler	<i>Oreothlypis ruficapilla</i>		X			X					
Northern Cardinal	<i>Cardinalis cardinalis</i>	X	X		X	X	X				
Northern Flicker	<i>Colaptes auratus</i>				X	X	X				

Northern Goshawk	<i>Accipiter gentilis</i>		X							P	extensive forests >100 ha
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	X			X	X	X				
Northern Waterthrush	<i>Parkesia noveboracensis</i>		X								
Osprey	<i>Pandion haliaetus</i>					X				P	
Ovenbird	<i>Seiurus aurocapilla</i>		X								>70 ha continuous
Philadelphia Vireo	<i>Vireo philadelphicus</i>		X								
Pied-billed Grebe	<i>Podilymbus podiceps</i>						X				
Pileated Woodpecker	<i>Dryocopus pileatus</i>	X	X	X							40-260 ha mature decid/mixed forest w/large diameter trees
Pine Warbler	<i>Setophaga pinus</i>		X			X					15-30 ha white pine forest
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>					X					
Red-breasted Nuthatch	<i>Sitta canadensis</i>					X					X (10ha interior forest)
Red-eyed Vireo	<i>Vireo olivaceus</i>	X	X		X	X	X				
Red-tailed Hawk	<i>Buteo jamaicensis</i>	X	X	X	X	X	X			P	
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	X	X		X	X	X				
Ring-billed Gull	<i>Larus delawarensis</i>		X		X	X	X				
Rock Pigeon	<i>Columba livia</i>		X			X					
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	X	X			X					
Ruby-crowned Kinglet	<i>Regulus calendula</i>		X								
Ruffed Grouse	<i>Bonasa umbellus</i>	X								G	
Savannah Sparrow	<i>Passerculus sandwichensis</i>	X	X			X					>50 ha grassland
Scarlet Tanager	<i>Piranga olivacea</i>		X								20 ha mature forest
Song Sparrow	<i>Melospiza melodia</i>	X	X		X	X	X				
Sora	<i>Porzana carolina</i>		X								
Spotted Sandpiper	<i>Actitis macularius</i>		X		X	X					
Swainson's Thrush	<i>Catharus ustulatus</i>		X								
Swamp Sparrow	<i>Melospiza georgiana</i>		X			X					
Tennessee Warbler	<i>Oreothlypis peregrina</i>		X								
Tree Swallow	<i>Tachycineta bicolor</i>		X		X	X	X				
Tundra Swan	<i>Cygnus columbianus</i>										
Turkey Vulture	<i>Cathartes aura</i>				X	X	X			P	
Veery	<i>Catharus fuscescens</i>	X									10 ha young forest, habitat fragmentation
Virginia Rail	<i>Rallus limicola</i>		X								
Warbling Vireo	<i>Vireo gilvus</i>	X	X		X	X					
White-breasted Nuthatch	<i>Sitta carolinensis</i>	X	X			X					10 ha continuous forest
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>		X								
White-winged Scoter	<i>Melanitta fusca</i>		X	X							
Wild Turkey	<i>Meleagris gallopavo</i>				X	X	X			G	
Willow Flycatcher	<i>Empidonax traillii</i>		X		X	X					
Wilson's Warbler	<i>Cardellina pusilla</i>		X		X						

	Wood Duck	<i>Aix sponsa</i>	X	X											
	Wood Thrush	<i>Hylocichla mustelina</i>	X				X		THR	SC					
	Yellow Warbler	<i>Setophaga petechia</i>	X	X		X	X	X							
	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>		X										dry, second growth forests	
	Yellow-billed Cuckoo	<i>Coccyzus americanus</i>		X			X								
	Yellow-rumped Warbler	<i>Setophaga coronata</i>		X											
	Yellow-throated Vireo	<i>Vireo flavifrons</i>		X										30 ha of open decid forest	
Invert	Monarch	<i>Danaus plexippus</i>					X		SC	SC	P				
Mammals	American Mink	<i>Mustela vison</i>					X	X					F		
	Beaver	<i>Castor canadensis</i>		X	X	X							F		
	Coyote	<i>Canis latrans</i>		X		X	X						F		
	Deer Mouse	<i>Peromyscus maniculatus</i>	X				X								
	Eastern Chipmunk	<i>Tamias striatus</i>	X	X		X	X	X					P		
	Eastern Cottontail	<i>Sylvilagus floridanus</i>	X	X		X	X	X					G		
	Eastern Gray Squirrel	<i>Sciurus carolinensis</i>	X	X		X	X	X					G		
	Ermine	<i>Mustela ermina</i>					X								
	European Hare	<i>Lepus europaeus</i>	X										G		
	Groundhog	<i>Marmota monax</i>	X		X	X	X								
	Least Weasel	<i>Mustela rixosa (nivalis)</i>	X (possible)											F	
	Long-tailed Weasel	<i>Mustela frenata</i>	X (possible)											F	
	Meadow Jumping Mouse	<i>Zapus hudsonius</i>	X												
	Meadow Vole	<i>Microtus pennsylvanicus</i>	X	X	X		X								
	Muskrat	<i>Ondatra zibethica</i>		X		X		X						F	
	Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	X (possible)											P	51-100 ha continuous forest
	Northern Raccoon	<i>Procyon lotor</i>	X	X		X	X							F	
	Northern Short-tailed Shrew	<i>Blarina brevicauda</i>	X				X							P	
	Red Fox	<i>Vulpes vulpes</i>					X							F	
	Red Squirrel	<i>Tamiasciurus hudsonicus</i>		X			X							F	
Striped Skunk	<i>Mephitis mephitis</i>	X	X			X							F		
White-footed Mouse	<i>Peromyscus leucopus</i>	X													
White-tailed Deer	<i>Odocoileus virginianus</i>	X	X	X	X	X	X						G		
Reptiles	Dekay's Brown Snake	<i>Storeria dekayi</i>		X	X		X								
	Eastern Gartersnake	<i>Thamnophis sirtalis sirtalis</i>	X	X	X	X	X								
	Five-lined Skink (Gr.Lakes/St.Lawr. pop'n)	<i>Plestiodon fasciatus</i>	X (probable ID)							SC	SC	P			
	Milksnake	<i>Lampropeltis triangulum</i>		X						SC		P			
	Midland Painted Turtle	<i>Chrysemys picta marginata</i>		X	X	X	X	X					P		
Snapping Turtle	<i>Chelydra serpentina</i>				X	X			SC	SC	G				

## Legend

### G-Rank Global Rank

Global ranks are assigned by a consensus of the network of Conservation Data Centres, scientific experts, and the Nature Conservancy to designate a rarity rank based on the range-wide status of a species, subspecies or variety.

- G1= Extremely rare; usually 5 or fewer occurrences in the overall range or very few remaining individuals; or because of some factor(s) making it especially vulnerable to extinction.
- G2 = Very rare; usually between 5 and 20 occurrences in the overall range or with many individuals in fewer occurrences; or because of some factor(s) making it vulnerable to extinction.
- G3 = Rare to uncommon; usually between 20 and 100 occurrences; may have fewer occurrences, but with a large number of individuals in some populations; may be susceptible to large-scale disturbances.
- G4 = Common; usually more than 100 occurrences; usually not susceptible to immediate threats.
- G5 = Very common; demonstrably secure under present conditions.
- GH = Historic, no records in the past 20 years.
- GU = Status uncertain, often because of low search effort or cryptic nature of the species; more data needed.
- GX = Globally extinct. No recent records despite specific searches.
- ? = Denotes inexact numeric rank (i.e. G4?).
- G" " = A "G" (or "T") followed by a blank space means that the NHIC has not yet obtained the Global Rank from The Nature Conservancy.
- G? = Unranked, or, if following a ranking, rank tentatively assigned (e.g. G3?).
- Q = Denotes that the taxonomic status of the species, subspecies, or variety is questionable.
- T = Denotes that the rank applies to a subspecies or variety.

### S-Rank Provincial Rank

- S1 = Critically imperiled in Ontario because of extreme rarity (often 5 or fewer occurrences) or because of some factor (s) such as very steep declines making it especially vulnerable to extirpation.
- S2 = Imperiled in Ontario because of rarity due to very restricted range, very few populations (often 20 or fewer occurrences) steep declines or other factors making it very vulnerable to extirpation.
- S3 = Vulnerable in Ontario due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

S4 =	Apparently secure - uncommon but not rare; some cause for long-term concern due to declines or other factors.
S5 =	Secure - common, widespread, and abundant in Ontario.
SX =	Presumed Extirpated - specie or community is believed to be extirpated from Ontario.
SNR =	Unranked - conservation status in Ontario not yet assessed
SU =	Unrankable - currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
SNA =	Not applicable - a conservation status rank is not applicable because the species is not a suitable target for conservation activities.
S#S# =	Range rank - a numeric range rank (e.g. S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g. SU is used rather than S1S4).

### **COSEWIC Committee On The Status Of Endangered Wildlife in Canada**

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses the national status of wild species that are considered to be at risk in Canada.

Extinct (X)	A wildlife species that no longer exists.
Extirpated (XT)	A wildlife species no longer existing in the wild in Canada, but occurring elsewhere.
Endangered (E)	A wildlife species facing imminent extirpation or extinction.
Threatened (T)	A wildlife species likely to become endangered if limiting factors are not reversed.
Special Concern (SC)	A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.
Not at Risk (NAR)	A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.
Data Deficient (DD)	A category that applies when the available information is insufficient (a) to resolve a wildlife species' eligibility for assessment or (b) to permit an assessment of the wildlife species' risk of extinction.

### **COSSARO/OMNR Committee On The Status Of Species At Risk In Ontario/Ontario Ministry Of Natural Resources**

The Committee on the Status of Species at Risk in Ontario (COSSARO)/Ontario Ministry of Natural Resources (OMNR) assess the provincial status of wild species that are considered to be at risk in Ontario.

Extinct (EXT)	A species that no longer exists anywhere.
Extirpated (EXP)	A species that no longer exist in the wild in Ontario but still occurs elsewhere.
Endangered (Regulated) (END-R)	A species facing imminent extinction or extirpation in Ontario which has been regulated under Ontario's <i>Endangered Species Act</i> .
Endangered (END)	A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's <i>Endangered Species Act</i> .
Threatened (THR)	A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
Special Concern (SC)	A species with characteristics that make it sensitive to human activities or natural events.
Not at Risk (NAR)	A species that has been evaluated and found to be not at risk.
Data Deficient (DD)	A species for which there is insufficient information for a provincial status recommendati

SWH-TG Significant Wildlife Habitat Technical Guide. (MNR 2000)

## Appendix C – Vascular Plant List

DRAFT

Scientific Name	Common Name	GRank	SRank	MNR	COSEWIC	Local Status Waterloo	Previous Field Surveys	Field Visit 2021
<b>SELAGINELLACEAE</b>	<b>SELAGINELLA FAMILY</b>							
<i>Selaginella eclipes</i>	meadow spike-moss	G4	S4				x	
<b>EQUISETACEAE</b>	<b>HORSETAIL FAMILY</b>							
<i>Equisetum arvense</i>	field horsetail	G5	S5				x	
<i>Equisetum hyemale</i> <i>var. affine</i>	scouring-rush	G5T5	S5				x	
<i>Equisetum sylvaticum</i>	wood horsetail	G5	S5				x	
<b>OSMUNDACEAE</b>	<b>ROYAL FERN FAMILY</b>							
<i>Osmunda cinnamomea</i>	cinnamon fern	G5	S5				x	
<b>PTERIDACEAE</b>	<b>MAIDENHAIR FERN FAMILY</b>						x	
<i>Adiantum pedatum</i>	northern maidenhair fern	G5	S5				x	
<b>DENNSTAEDTIACEAE</b>	<b>BRACKEN FERN FAMILY</b>							
<i>Pteridium aquilinum</i> <i>var. latiusculum</i>	eastern bracken-fern	G5T	S5				x	
<b>THELYPTERIDACEAE</b>	<b>MARSH FERN</b>							
<i>Thelypteris palustris</i> <i>var. pubescens</i>	marsh fern	G5T?	S5				x	
<b>DRYOPTERIDACEAE</b>	<b>WOOD FERN FAMILY</b>							
<i>Athyrium filix-femina</i> <i>var. angustum</i>	northern lady fern	G5T5	S5				x	
<i>Cystopteris bulbifera</i>	bulblet bladder fern	G5	S5				x	
<i>Dryopteris carthusiana</i>	spinulose wood fern	G5	S5				x	
<i>Dryopteris clintoniana</i>	Clinton's wood fern	G5	S4				x	
<i>Dryopteris cristata</i>	crested wood fern	G5	S5				x	
<i>Dryopteris intermedia</i>	evergreen wood fern	G5	S5				x	

Scientific Name	Common Name	GRank	SRank	MNR	COSEWIC	Local Status Waterloo	Previous Field Surveys	Field Visit 2021
<i>Dryopteris marginalis</i>	marginal wood fern	G5	S5				x	
<i>Matteuccia struthiopteris</i> var. <i>pennsylvanica</i>	ostrich fern	G5	S5				x	
<i>Onoclea sensibilis</i>	sensitive fern	G5	S5				x	
<i>Polystichum acrostichoides</i>	Christmas fern	G5	S5				x	
<b>PINACEAE</b>	<b>PINE FAMILY</b>							
<i>Larix decidua</i>	European larch	G?	SE2				x	x
<i>Larix laricina</i>	tamarack	G5	S5				x	x
<i>Picea abies</i>	Norway spruce	G?	SE3				x	x
<i>Picea glauca</i>	white spruce	G5	S5			x	x	x
<i>Picea pungens</i>	Colorado spruce	G5	SE1					x
<i>Pinus mugo</i>	mugo pine	G?	SE1					x
<i>Pinus nigra</i>	Austrian pine	G?	SE2					x
<i>Pinus resinosa</i>	red pine	G5	S5				x	x
<i>Pinus strobus</i>	eastern white pine	G5	S5				x	x
<i>Pinus sylvestris</i>	scotch pine	G?	SE5				x	x
<i>Tsuga canadensis</i>	eastern hemlock	G5	S5				x	x
<b>CUPRESSACEAE</b>	<b>CEDAR FAMILY</b>							x
<i>Chamaecyparis nootkatensis</i>	false cypress		S?					x
<i>Juniperus communis</i>	common juniper	G5	S5			x		x
<i>Juniperus virginiana</i>	eastern red cedar	G5	S5				x	x
<i>Thuja occidentalis</i>	eastern white cedar	G5	S5				x	x
<b>TAXACEAE</b>	<b>YEW FAMILY</b>							x
<i>Taxus cuspidata</i>	Japanese Yew							x
<b>MAGNOLIACEAE</b>	<b>MAGNOLIA FAMILY</b>							x
<i>Magnolia soulangeana</i>	saucer magnolia							x
<b>LAURACEAE</b>	<b>LAUREL FAMILY</b>							x
<i>Lindera benzoin</i>	spicebush	G5	S5				x	x

Scientific Name	Common Name	GRank	SRank	MNR	COSEWIC	Local Status Waterloo	Previous Field Surveys	Field Visit 2021
<b>ARISTOLOCHIACEAE</b>	<b>DUCHMAN'S-PIPE FAMILY</b>							x
<i>Asarum canadense</i>	wild ginger	G5	S5				x	x
<b>RANUNCULACEAE</b>	<b>BUTTERCUP FAMILY</b>							x
<i>Actaea pachypoda</i>	white baneberry	G5	S5				x	x
<i>Actaea rubra</i>	red baneberry	G5	S5				x	x
<i>Anemone acutiloba</i>	sharp-lobed hepatica	G5	S5				x	x
<i>Anemone virginiana</i> var. <i>alba</i>		G5T	SU				x	x
<i>Aquilegia canadensis</i>	wild columbine	G5	S5				x	x
<i>Caltha palustris</i>	marsh-marigold	G5	S5				x	x
<i>Ranunculus abortivus</i>	kidney-leaf buttercup	G5	S5				x	x
<i>Ranunculus acris</i>	tall buttercup	G5	SE5				x	x
<i>Ranunculus recurvatus</i> var. <i>recurvatus</i>	hooked buttercup	G5	S5				x	x
<i>Thalictrum dioicum</i>	early meadow-rue	G5	S5				x	x
<i>Thalictrum pubescens</i>	tall meadow-rue	G5	S5				x	x
<b>BERBERIDACEAE</b>	<b>BARBERRY FAMILY</b>						x	x
<i>Berberis vulgaris</i>	common barberry	G?	SE5				x	x
<i>Caulophyllum thalictroides</i>	blue cohosh	G	S5				x	x
<i>Podophyllum peltatum</i>	may-apple	G5	S5				x	x
<b>PAPAVERACEAE</b>	<b>POPPY FAMILY</b>						x	x
<i>Chelidonium majus</i>	celandine	G?	SE5				x	x
<i>Sanguinaria canadensis</i>	bloodroot	G5	S5				x	x
<b>ULMACEAE</b>	<b>ELM FAMILY</b>						x	x
<i>Celtis occidentalis</i>	common hackberry	G5	S4			x	x	x
<i>Ulmus americana</i>	white elm	G5?	S5				x	x
<i>Ulmus pumila</i>	Siberian elm	G?	SE3				x	x
<b>MORACEAE</b>	<b>MULBERRY FAMILY</b>						x	x

Scientific Name	Common Name	GRank	SRank	MNR	COSEWIC	Local Status Waterloo	Previous Field Surveys	Field Visit 2021
<i>Morus alba</i>	white mulberry	G?	SE5				x	x
<b>URTICACEAE</b>	<b>NETTLE FAMILY</b>						x	x
<i>Boehmeria cylindrica</i>	false nettle	G5	S5				x	x
<i>Laportea canadensis</i>	wood nettle	G5	S5				x	x
<i>Pilea pumila</i>	dwarf clearweed	G5	S5				x	x
<i>Urtica dioica ssp. dioica</i>	European stinging nettle	G5T?	SE2				x	x
<b>JUGLANDACEAE</b>	<b>WALNUT FAMILY</b>						x	x
<i>Carya cordiformis</i>	bitternut hickory	G5	S5				x	x
<i>Carya ovata var. ovata</i>	shagbark hickory	G5	S5				x	x
<i>Juglans cinerea</i>	butternut	G3G4	S3?	END	END		x	x
<i>Juglans nigra</i>	black walnut	G5	S4			x	x	x
<b>FAGACEAE</b>	<b>BEECH FAMILY</b>						x	x
<i>Fagus grandifolia</i>	American beech	G5	S5				x	x
<i>Quercus alba</i>	white oak	G5	S5				x	x
<i>Quercus macrocarpa</i>	bur oak	G5	S5				x	x
<i>Quercus robur</i>	English oak	G?	SE1				x	x
<i>Quercus rubra</i>	red oak	G5	S5				x	x
<b>BETULACEAE</b>	<b>BIRCH FAMILY</b>						x	x
<i>Betula alleghaniensis</i>	yellow birch	G5	S5				x	x
<i>Betula papyrifera</i>	white birch	G5	S5				x	x
<i>Betula pendula</i>	European weeping birch	G?	SE4				x	x
<i>Carpinus caroliniana ssp. virginiana</i>	blue beech	G5T	S5				x	x
<i>Ostrya virginiana</i>	ironwood	G5	S5				x	x
<b>PORTULACACEAE</b>	<b>PURSLANE FAMILY</b>						x	x
<i>Claytonia virginica</i>	Virginia spring beauty	G5	S5				x	x
<b>CARYOPHYLLACEAE</b>	<b>PINK FAMILY</b>						x	x
<i>Dianthus armeria</i>	deptford pink	G?	SE5				x	x
<i>Saponaria officinalis</i>	bouncing-bet	G?	SE5				x	x
<i>Silene vulgaris</i>	catchfly	G?	SE5				x	x
<b>POLYGONACEAE</b>	<b>SMARTWEED FAMILY</b>						x	x

Scientific Name	Common Name	GRank	SRank	MNR	COSEWIC	Local Status Waterloo	Previous Field Surveys	Field Visit 2021
<i>Polygonum cuspidatum</i>	Japanese knotweed	G?	SE4				x	x
<i>Polygonum lapathifolium</i>	green smartweed		SEU				x	x
<i>Polygonum persicaria</i>	lady's-thumb	G?	SE5				x	x
<i>Rumex crispus</i>	curly-leaf dock	G?	SE5				x	x
<i>Rumex orbiculatus</i>	great water dock	G5	S4S5				x	x
<b>GUTTIFERAE</b>	<b>ST. JOHN'S-WORT FAMILY</b>						x	x
<i>Hypericum perforatum</i>	common St. John's-wort	G?	SE5				x	x
<b>TILIACEAE</b>	<b>LINDEN FAMILY</b>						x	x
<i>Tilia americana</i>	basswood	G5	S5				x	x
<b>MALVACEAE</b>	<b>MALLOW FAMILY</b>						x	x
<i>Malva neglecta</i>	cheeses	G?	SE5				x	x
<b>VIOLACEAE</b>	<b>VIOLET FAMILY</b>						x	x
<i>Viola canadensis</i>	Canada violet	G5	S5				x	x
<i>Viola cucullata</i>	marsh blue violet	G4G5	S5				x	x
<i>Viola pubescens</i>	downy yellow violet	G5	S5				x	x
<i>Viola sororia</i>	woolly blue violet	G5	S5				x	x
<b>SALICACEAE</b>	<b>WILLOW FAMILY</b>						x	x
<i>Populus balsamifera ssp. balsamifera</i>	balsam poplar	G5T?	S5				x	x
<i>Populus deltoides</i>	cottonwood	G5T?	S5				x	x
<i>Populus grandidentata</i>	large-tooth aspen	G5	S5				x	x
<i>Populus tremuloides</i>	trembling aspen	G5	S5				x	x
<i>Salix eriocephala</i>	Missouri willow	G5	S5				x	x
<i>Salix petiolaris</i>	slender willow	G4	S5				x	x
<i>Salix X rubens</i>	reddish willow	HYB	SE4				x	x
<i>Salix X sepulcralis</i>	hybrid willow	HYB	SE2				x	x
<b>BRASSICACEAE</b>	<b>MUSTARD FAMILY</b>						x	x
<i>Alliaria petiolata</i>	garlic mustard	G5	SE5				x	x

Scientific Name	Common Name	GRank	SRank	MNR	COSEWIC	Local Status Waterloo	Previous Field Surveys	Field Visit 2021
<i>Barbarea vulgaris</i>	yellow rocket	G?	SE5				x	x
<i>Cardamine concatenata</i>	cut-leaved toothwort	G5	S5				x	x
<i>Cardamine diphylla</i>	two-leaved toothwort	G5	S5				x	x
<i>Cardamine pennsylvanica</i>	Pennsylvania bitter-cress	G5	S5				x	x
<i>Hesperis matronalis</i>	dame's rocket	G4G5	SE5				x	x
<i>Rorippa microphylla</i>	small-leaved water-cress	G?	SE5				x	x
<i>Rorippa nasturtium-aquaticum</i>	water-cress	G?	SE?				x	x
<b>PRIMULACEAE</b>	<b>PRIMROSE FAMILY</b>						x	x
<i>Lysimachia ciliata</i>	fringed loosestrife	G5	S5				x	x
<i>Lysimachia nummularia</i>	moneywort	G?	SE5				x	x
<i>Lysimachia thysiflora</i>	tufted loosestrife	G5	S5				x	x
<b>GROSSULARIACEAE</b>	<b>GOOSEBERRY FAMILY</b>						x	x
<i>Ribes americanum</i>	wild black currant	G5	S5				x	x
<i>Ribes cynosbati</i>	prickly gooseberry	G5	S5				x	x
<i>Ribes triste</i>	wild red currant	G5	S5				x	x
<b>SAXIFRAGACEAE</b>	<b>SAXIFRAGE FAMILY</b>						x	x
<i>Mitella diphylla</i>	two-leaved bishop's cap	G5	S5				x	x
<i>Tiarella cordifolia</i>	false mitrewort	G5	S5				x	x
<b>ROSACEAE</b>	<b>ROSE FAMILY</b>						x	x
<i>Agrimonia gryposepala</i>	tall hairy agrimony	G5	S5				x	x
<i>Argentina anserina</i>	silverweed		S5				x	x
<i>Crataegus punctata</i>	large-fruited thorn	G5	S5				x	x
<i>Fragaria vesca ssp. americana</i>	woodland strawberry	G5T?	S5				x	x
<i>Fragaria virginiana ssp. glauca</i>	scarlet strawberry						x	x

Scientific Name	Common Name	GRank	SRank	MNR	COSEWIC	Local Status Waterloo	Previous Field Surveys	Field Visit 2021
<i>Fragaria virginiana</i> <i>ssp. virginiana</i>	scarlet strawberry	G5T?	SU				x	x
<i>Geum aleppicum</i>	yellow avens	G5	S5				x	x
<i>Geum canadense</i>	white avens	G5	S5				x	x
<i>Malus coronaria</i>	narrow-leaved crabapple	G5	S4				x	x
<i>Malus pumila</i>	common apple	G5	SE5				x	x
<i>Potentilla norvegica</i> <i>ssp. norvegica</i>	cinquefoil	G5T?	SU				x	x
<i>Potentilla recta</i>	rough-fruited cinquefoil	G?	SE5				x	x
<i>Prunus avium</i>	sweet cherry	G?	SE4				x	x
<i>Prunus serotina</i>	black cherry	G5	S5				x	x
<i>Prunus virginiana</i> <i>var. virginiana</i>	choke cherry	G5T?	S5				x	x
<i>Pyrus communis</i>	common pear	G5	SE4				x	x
<i>Rosa blanda</i>	smooth rose	G5	S5				x	x
<i>Rosa multiflora</i>	multiflora rose	G?	SE4				x	x
<i>Rubus allegheniensis</i>	alleghany blackberry	G5	S5				x	x
<i>Rubus idaeus</i> <i>ssp. strigosus</i>	wild red raspberry	G5T	S5				x	x
<i>Rubus occidentalis</i>	thimble-berry	G5	S5				x	x
<i>Rubus pensilvanicus</i>	Pennsylvania raspberry	G5	SU				x	x
<i>Rubus pubescens</i>	dwarf raspberry	G5	S5				x	x
<i>Sanguisorba minor</i>	salad burnet	G5	SE4				x	x
<i>Waldsteinia fragarioides</i>	barren strawberry	G5	S5				x	x
<b>FABACEAE</b>	<b>PEA FAMILY</b>						x	x
<i>Amphicarpaea bracteata</i>	hog peanut	G5	S5				x	x
<i>Coronilla varia</i>	variable crown-vetch	G?	SE5				x	x
<i>Gleditsia triacanthos</i> <i>var. inermis</i>	'shade master' honey locust		SE?				x	x
<i>Lotus corniculatus</i>	bird's-foot trefoil	G?	SE5				x	x
<i>Medicago lupulina</i>	black medick	G?	SE5				x	x
<i>Medicago sativa</i> <i>ssp. sativa</i>	alfalfa	G?T?	SE5				x	x

Scientific Name	Common Name	GRank	SRank	MNR	COSEWIC	Local Status Waterloo	Previous Field Surveys	Field Visit 2021
<i>Melilotus alba</i>	white sweet-clover	G?	SE5				x	x
<i>Robinia pseudo-acacia</i>	black locust	G5	SE5				x	x
<i>Trifolium pratense</i>	red clover	G?	SE5				x	x
<i>Vicia cracca</i>	tufted vetch	G?	SE5				x	x
<b>ELAEAGNACEAE</b>	<b>OLEASTER FAMILY</b>						x	x
<i>Elaeagnus angustifolia</i>	Russian olive	G?	SE3				x	x
<b>LYTHRACEAE</b>	<b>LOOSESTRIFE FAMILY</b>						x	x
<i>Lythrum salicaria</i>	purple loosestrife	G5	SE5				x	x
<b>THYMELAEACEAE</b>	<b>MEZEREUM FAMILY</b>						x	x
<i>Dirca palustris</i>	leatherwood	G4	S4?				x	x
<b>ONAGRACEAE</b>	<b>EVENING-PRIMROSE FAMILY</b>						x	x
<i>Circaea lutetiana ssp. canadensis</i>	yellowish enchanter's nightshade	G5T5	S5				x	x
<i>Epilobium hirsutum</i>	great hairy willow-herb	G?	SE5				x	x
<i>Epilobium parviflorum</i>	sparse-flowered willow-herb	G?	SE4				x	x
<i>Ludwigia palustris</i>	marsh purslane	G5	S5				x	x
<i>Oenothera fruticosa ssp. glauca</i>	common sundrops	G5T5	SX				x	x
<b>CORNACEAE</b>	<b>DOGWOOD FAMILY</b>						x	x
<i>Cornus alternifolia</i>	alternate-leaved dogwood	G5	S5				x	x
<i>Cornus amomum</i>	silky dogwood	G5T?	S5				x	x
<i>Cornus racemosa</i>	red paniced dogwood	G5?	S5				x	x
<i>Cornus rugosa</i>	round-leaved dogwood	G5	S5				x	x
<i>Cornus sericea ssp. sericea</i>	red-osier dogwood	G5	S5				x	x

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<b>CELASTRACEAE</b>	<b>STAFF-TREE FAMILY</b>						x	x
<i>Celastrus scandens</i>	climbing bittersweet	G5	S5				x	x
<i>Euonymus obovata</i>	running strawberry-bush	G5	S5				x	x
<i>Euonymus sp.</i>	euonymus						x	x
<b>AQUIFOLIACEAE</b>	<b>HOLLY FAMILY</b>						x	x
<i>Ilex verticillata</i>	winterberry	G5	S5				x	x
<b>EUPHORBIACEAE</b>	<b>SPURGE FAMILY</b>						x	x
<i>Acalypha rhomboidea</i>	three-seeded mercury	G5T5	S5				x	x
<b>RHAMNACEAE</b>	<b>BUCKTHORN FAMILY</b>						x	x
<i>Frangula alnus</i>	glossy buckthorn	G?	SE5				x	x
<i>Rhamnus alnifolia</i>	alder-leaved buckthorn	G5	S5				x	x
<i>Rhamnus cathartica</i>	common buckthorn	G?	SE5				x	x
<b>VITACEAE</b>	<b>GRAPE FAMILY</b>						x	x
<i>Parthenocissus vitacea</i>	inserted Virginia-creeper	G5	S5				x	x
<i>Vitis riparia</i>	riverbank grape	G5	S5				x	x
<b>ACERACEAE</b>	<b>MAPLE FAMILY</b>						x	x
<i>Acer ginnala</i>	amur maple	G?	SE1				x	x
<i>Acer negundo</i>	Manitoba maple	G5	S5				x	x
<i>Acer palmatum</i>	Japanese maple						x	x
<i>Acer platanoides</i>	Norway maple	G?	SE5				x	x
<i>Acer rubrum</i>	red maple	G5	S5				x	x
<i>Acer saccharinum</i>	silver maple	G5	S5				x	x
<i>Acer saccharum var. saccharum</i>	sugar maple	G5T?	S5				x	x
<i>Acer X freemanii</i>	freeman's maple						x	x
<b>ANACARDIACEAE</b>	<b>SUMAC FAMILY</b>						x	x
<i>Cotinus coggygria</i>	smoke-tree	G?	SE1				x	x

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<i>Rhus hirta</i>	staghorn sumac	G5	S5				x	x
<i>Toxicodendron rydbergii</i>	western poison-ivy	G5T	S5				x	x
<b>OXALIDACEAE</b>	<b>WOOD SORREL FAMILY</b>						x	x
<i>Oxalis stricta</i>	upright yellow wood-sorrel	G5	S5				x	x
<b>GERANIACEAE</b>	<b>GERANIUM FAMILY</b>						x	x
<i>Geranium robertianum</i>	herb-robert	G5	SE5				x	x
<b>BALSAMINACEAE</b>	<b>TOUCH-ME-NOT FAMILY</b>						x	x
<i>Impatiens capensis</i>	spotted touch-me-not	G5	S5				x	x
<b>ARALIACEAE</b>	<b>GINSENG FAMILY</b>						x	x
<i>Aralia nudicaulis</i>	wild sarsaparilla	G5	S5				x	x
<b>APIACEAE</b>	<b>PARSLEY FAMILY</b>						x	x
<i>Cicuta maculata</i>	spotted water-hemlock	G5	S5				x	x
<i>Cryptotaenia canadensis</i>	honestwort	G5	S5				x	x
<i>Daucus carota</i>	wild carrot	G?	SE5				x	x
<i>Hydrocotyle americana</i>	American marsh-pennywort	G5	S5				x	x
<i>Sanicula marilandica</i>	black snakeroot	G5	S5				x	x
<i>Sium suave</i>	hemlock water-parsnip	G5	S5				x	x
<b>GENTIANACEAE</b>	<b>GENTIAN FAMILY</b>						x	x
<i>Gentianopsis crinita</i>	fringed gentian		S5			x	x	x
<b>APOCYNACEAE</b>	<b>DOGBANE FAMILY</b>						x	x
<i>Apocynum androsaemifolium ssp. androsaemifolium</i>	spreading dogbane	G5T?	S5				x	x
<i>Vinca minor</i>	periwinkle	G?	SE5				x	x

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<b>ASCLEPIADACEAE</b>	<b>MILKWEED FAMILY</b>						x	x
<i>Asclepias exaltata</i>	poke milkweed	G5	S4				x	x
<i>Asclepias incarnata</i> <i>ssp. incarnata</i>	swamp milkweed	G5T5	S5				x	x
<i>Asclepias syriaca</i>	common milkweed	G5	S5				x	x
<b>SOLANACEAE</b>	<b>POTATO FAMILY</b>						x	x
<i>Physalis heterophylla</i>	clammy ground-cherry	G5	S4				x	x
<i>Solanum dulcamara</i>	bitter nightshade	G?	SE5				x	x
<b>CONVOLVULACEAE</b>	<b>MORNING-GLORY FAMILY</b>						x	x
<i>Cuscuta gronovii</i>	Gronovius' dodder	G5	S5				x	x
<b>POLEMONIACEAE</b>	<b>PHLOX FAMILY</b>						x	x
<i>Phlox divaricata</i>	wild blue phlox	G5	S4				x	x
<b>HYDROPHYLLACEAE</b>	<b>WATER-LEAF FAMILY</b>						x	x
<i>Hydrophyllum canadense</i>	broad-leaved water-leaf	G5	S4				x	x
<i>Hydrophyllum virginianum</i>	Virginia water-leaf	G5	S5				x	x
<b>BORAGINACEAE</b>	<b>BORAGE FAMILY</b>						x	x
<i>Echium vulgare</i>	blueweed	G?	SE5				x	x
<i>Myosotis laxa</i>	smaller forget-me-not	G5	S5				x	x
<b>VERBENACEAE</b>	<b>VERVAIN FAMILY</b>						x	x
<i>Verbena hastata</i>	blue vervain	G5	S5				x	x
<i>Verbena urticifolia</i>	white vervain	G5	S5				x	x
<b>LAMIACEAE</b>	<b>MINT FAMILY</b>						x	x
<i>Clinopodium vulgare</i>	wild basil	G?	S5				x	x
<i>Collinsonia canadensis</i>	stoneroot	G5	S4			x	x	x
<i>Glechoma hederacea</i>	creeping Charlie	G?	SE5				x	x
<i>Leonurus cardiaca</i> <i>ssp. cardiaca</i>	common motherwort	G?T?	SE5				x	x

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<i>Lycopus americanus</i>	cut-leaved water-horehound	G5	S5				x	x
<i>Lycopus uniflorus</i>	northern water-horehound	G5	S5				x	x
<i>Mentha arvensis</i>	American wild mint	G5T5	S5				x	x
<i>Monarda fistulosa</i>	wild bergamot	G5	S5				x	x
<i>Nepeta cataria</i>	catnip	G?	SE5				x	x
<i>Prunella vulgaris ssp. vulgaris</i>	common heal-all	G5T?	SE3				x	x
<i>Scutellaria lateriflora</i>	mad-dog skullcap	G5	S5				x	x
<b>PLANTAGINACEAE</b>	<b>PLANTAIN FAMILY</b>						x	x
<i>Plantago lanceolata</i>	ribgrass	G5	SE5				x	x
<i>Plantago major</i>	common plantain	G5	SE5				x	x
<b>OLEACEAE</b>	<b>OLIVE FAMILY</b>						x	x
<i>Fraxinus americana</i>	white ash	G5	S5				x	x
<i>Fraxinus excelsior</i>	European ash	G?	SE2				x	x
<i>Fraxinus nigra</i>	black ash	G5	S5				x	x
<i>Fraxinus pennsylvanica</i>	red ash	G5	S5				x	x
<i>Ligustrum vulgare</i>	common privet	G?	SE5				x	x
<i>Syringa vulgaris</i>	common lilac	G?	SE5				x	x
<b>SCROPHULARIACEAE</b>	<b>FIGWORT FAMILY</b>						x	x
<i>Chelone glabra</i>	turtlehead	G5	S5				x	x
<i>Linaria vulgaris</i>	butter-and-eggs	G?	SE5				x	x
<i>Pedicularis canadensis</i>	Canada wood-betony	G5	S5				x	x
<i>Verbascum thapsus</i>	common mullein	G?	SE5				x	x
<i>Veronica officinalis</i>	common speedwell	G5	SE5				x	x
<b>BIGNONIACEAE</b>	<b>TRUMPET-CREEPER FAMILY</b>						x	x
<i>Catalpa speciosa</i>	northern catalpa	GU	SE1				x	x

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<b>CAMPANULACEAE</b>	<b>BLUEBELL FAMILY</b>						x	x
<i>Lobelia inflata</i>	Indian tobacco	G5	S5				x	x
<b>RUBIACEAE</b>	<b>MADDER FAMILY</b>						x	x
<i>Galium asprellum</i>	rough bedstraw	G5	S5				x	x
<i>Galium circaezans</i>	white wild licorice	G5	S5			x	x	x
<i>Galium mollugo</i>	white bedstraw	G?	SE5				x	x
<i>Galium palustre</i>	marsh bedstraw	G5	S5				x	x
<i>Galium trifidum ssp. trifidum</i>	small bedstraw	G5T?	S5				x	x
<i>Galium verum</i>	yellow bedstraw	G?	SE5				x	x
<b>CAPRIFOLIACEAE</b>	<b>HONEYSUCKLE FAMILY</b>						x	x
<i>Diervilla lonicera</i>	bush honeysuckle	G5	S5				x	x
<i>Linnaea borealis ssp. longiflora</i>	twinline	G5T?	S5				x	x
<i>Lonicera dioica</i>	douglas honeysuckle						x	x
<i>Lonicera tatarica</i>	tartarian honeysuckle	G?	SE5				x	x
<i>Sambucus nigra ssp. canadensis</i>	common elderberry	G5	S5				x	x
<i>Sambucus racemosa var. racemosa</i>	red-berried elderberry	G5T4T5	S5				x	x
<i>Triosteum aurantiacum</i>	wild coffee	G5	S5				x	x
<i>Viburnum opulus</i>	guelder rose	G5	SE4				x	x
<b>VALERIANACEAE</b>	<b>VALERIAN FAMILY</b>						x	x
<i>Valeriana officinalis</i>	common valerian	G?	SE3				x	x
<b>DIPSACACEAE</b>	<b>TEASEL FAMILY</b>						x	x
<i>Dipsacus fullonum ssp. sylvestris</i>	wild teasel	G?T?	SE5				x	x
<b>ASTERACEAE</b>	<b>ASTER FAMILY</b>						x	x
<i>Achillea millefolium var. millefolium</i>	common yarrow	G5T?	SE?				x	x

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<i>Ageratina altissima</i> var. <i>altissima</i>	white snakeroot	G5	S5				x	x
<i>Ambrosia artemisiifolia</i>	common ragweed	G5	S5				x	x
<i>Ambrosia trifida</i>	giant ragweed	G5	S5				x	x
<i>Anaphalis margaritacea</i>	pearly everlasting	G5	S5				x	x
<i>Antennaria neglecta</i>	field pussytoes	G5	S5				x	x
<i>Arctium minus</i>	common burdock	G?T?	SE5				x	x
<i>Artemisia biennis</i>	biennial wormwood	G5	SE5				x	x
<i>Aster ericoides</i> var. <i>ericoides</i>	white heath aster	G5T?	S5				x	x
<i>Aster laevis</i> var. <i>laevis</i>	smooth blue aster	G5T?	S5				x	x
<i>Aster lanceolatus</i> ssp. <i>lanceolatus</i>	tall white aster	G5T?	S5				x	x
<i>Aster lateriflorus</i> var. <i>lateriflorus</i>	calico aster	G5T5	S5				x	x
<i>Aster pilosus</i> var. <i>pilosus</i>	hairy aster	G5T?	S5				x	x
<i>Bidens cernua</i>	stick-tight	G5	S5				x	x
<i>Bidens frondosa</i>	devil's beggar-ticks	G5	S5				x	x
<i>Bidens tripartita</i>	European beggar-ticks	G5	S5				x	x
<i>Bidens vulgata</i>	tall beggar-ticks	G5	S5				x	x
<i>Centaurea jacea</i>	brown knapweed	G?	SE5				x	x
<i>Centaurea macrocephala</i>	bighead knapweed	G?	SE1				x	x
<i>Centaurea paniculata</i>	panicked knapweed	G?	SE1				x	x
<i>Cichorium intybus</i>	chicory	G?	SE5				x	x
<i>Cirsium arvense</i>	Canada thistle	G?	SE5				x	x
<i>Cirsium vulgare</i>	bull thistle	G5	SE5				x	x
<i>Conyza canadensis</i>	horseweed	G5	S5				x	x
<i>Coreopsis lanceolata</i>	lance-leaved tickseed	G5	S4?				x	x
<i>Erigeron annuus</i>	daisy fleabane	G5	S5				x	x

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<i>Erigeron philadelphicus</i> var. <i>philadelphicus</i>	Philadelphia fleabane	G5T?	S5				x	x
<i>Erigeron strigosus</i>	daisy fleabane	G5	S5				x	x
<i>Eupatorium maculatum</i> var. <i>maculatum</i>	spotted joe-pye-weed	G5T5	S5				x	x
<i>Eupatorium perfoliatum</i>	perfoliate thoroughwort	G5	S5				x	x
<i>Eupatorium purpureum</i> var. <i>purpureum</i>	purple joe-pye-weed	G5T?	S3			x	x	x
<i>Eurybia macrophylla</i>	large-leaved aster	G5	S5				x	x
<i>Euthamia graminifolia</i>	flat-topped bushy goldenrod	G5	S5				x	x
<i>Hieracium aurantiacum</i>	devil's paintbrush	G?	SE5				x	x
<i>Hieracium caespitosum</i>	field hawkweed		SE5				x	x
<i>Hieracium piloselloides</i>	glaucous king devil	G?	SE5				x	x
<i>Leucanthemum vulgare</i>	ox-eye daisy	G?	SE5				x	x
<i>Prenanthes alba</i>	white rattlesnake-root	G5	S5				x	x
<i>Prenanthes altissima</i>	tall white rattlesnake-root	G5?	S5				x	x
<i>Rudbeckia hirta</i>	black-eyed Susan	G5	S5				x	x
<i>Rudbeckia triloba</i>	brown-eyed coneflower	G4	SE4				x	x
<i>Solidago caesia</i>	blue-stem goldenrod	G5	S5				x	x
<i>Solidago canadensis</i>	canada goldenrod	G5	S5				x	x
<i>Solidago canadensis</i> var. <i>scabra</i>	tall goldenrod	G5	S5				x	x
<i>Solidago flexicaulis</i>	zig-zag goldenrod	G5	S5				x	x
<i>Solidago gigantea</i>	giant goldenrod	G5	S5				x	x

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<i>Solidago juncea</i>	early goldenrod	G5	S5				x	x
<i>Solidago nemoralis</i> <i>var. nemoralis</i>	gray goldenrod	G5T?	S5				x	x
<i>Solidago patula</i>	rough-leaved goldenrod	G5	S5				x	x
<i>Solidago rugosa</i> ssp. <i>rugosa</i>	rough goldenrod	G5T?	S5				x	x
<i>Sonchus arvensis</i> ssp. <i>arvensis</i>	field sow-thistle	G?T?	SE5				x	x
<i>Symphyotrichum cordifolium</i>	heart-leaved aster	G5	S5				x	x
<i>Symphyotrichum ericoides</i> var. <i>pansum</i>	white heath aster	G5T?	S1				x	x
<i>Symphyotrichum novae-angliae</i>	New England aster	G5	S5				x	x
<i>Symphyotrichum puniceum</i> var. <i>puniceum</i>	shining aster	G5T?Q	SU				x	x
<i>Symphyotrichum urophyllum</i>	arrow-leaved aster	G4	S4				x	x
<i>Tanacetum vulgare</i>	common tansy	G?	SE5				x	x
<i>Taraxacum officinale</i>	common dandelion	G5	SE5				x	x
<i>Tragopogon dubius</i>	doubtful goat's-beard	G?	SE5				x	x
<i>Tussilago farfara</i>	coltsfoot	G?	SE5				x	x
<b>ALISMATACEAE</b>	<b>WATER-PLANTAIN FAMILY</b>						x	x
<i>Alisma plantago-aquatica</i>	common water-plantain	G5	S5				x	x
<i>Sagittaria latifolia</i>	broad-leaved arrowhead	G5	S5				x	x
<b>ARACEAE</b>	<b>ARUM FAMILY</b>						x	x
<i>Arisaema triphyllum</i> <i>ssp. triphyllum</i>	small jack-in-the-pulpit	G5T5	S5				x	x
<b>LEMNACEAE</b>	<b>DUCKWEED FAMILY</b>						x	x
<i>Lemna minor</i>	lesser duckweed	G5	S5				x	x
<b>JUNCACEAE</b>	<b>RUSH FAMILY</b>						x	x
<i>Juncus arcticus</i>	arctic rush	G5	S2S3				x	x

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<i>Juncus bufonius</i>	toad rush	G5	S5				x	x
<i>Juncus dudleyi</i>	Dudley's rush	G5	S5				x	x
<i>Juncus effusus ssp. solutus</i>	soft rush	G5T?	S5				x	x
<i>Juncus nodosus</i>	knotted rush	G5	S5				x	x
<i>Juncus tenuis</i>	path rush	G5	S5				x	x
<i>Luzula acuminata</i>	hairy woodrush	G5	S5				x	x
<i>Luzula multiflora ssp. frigida</i>	many-flowered woodrush	G5T?	S4S5				x	x
<b>CYPERACEAE</b>	<b>SEDGE FAMILY</b>						x	x
<i>Carex albursina</i>	white bear sedge	G5	S5				x	x
<i>Carex arctata</i>	drooping wood sedge	G5?	S5				x	x
<i>Carex bebbii</i>	Bebb's sedge	G5	S5				x	x
<i>Carex blanda</i>	woodland sedge	G5?	S5				x	x
<i>Carex bromoides</i>	bromelike sedge	G5	S5				x	x
<i>Carex cephaloidea</i>	thin-leaved sedge	G5	S5				x	x
<i>Carex communis</i>	fibrous rooted sedge	G5	S5				x	x
<i>Carex comosa</i>	bristly sedge	G5	S5				x	x
<i>Carex deweyana</i>	Dewey's sedge	G5	S5				x	x
<i>Carex flava</i>	yellow sedge	G5	S5				x	x
<i>Carex gracillima</i>	graceful sedge	G5	S5				x	x
<i>Carex granularis</i>	meadow sedge	G5	S5				x	x
<i>Carex hitchcockiana</i>	Hitchcock's sedge	G5	S5				x	x
<i>Carex hystericina</i>	porcupine sedge	G5	S5				x	x
<i>Carex interior</i>	inland sedge	G5	S5				x	x
<i>Carex jamesii</i>	James' sedge	G5	S3			x	x	x
<i>Carex laxiflora</i>	loose-flowered sedge	G5	S5				x	x
<i>Carex leptalea ssp. leptalea</i>	bristle-stalked sedge	G5T?	S5			x	x	x
<i>Carex pedunculata</i>	long-stalked sedge	G5	S5				x	x
<i>Carex pellita</i>	woolly sedge	G5	S5				x	x

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<i>Carex pensylvanica</i>	Pennsylvania sedge	G5	S5				x	x
<i>Carex plantaginea</i>	plantain-leaved sedge	G5	S5				x	x
<i>Carex radiata</i>	radiate sedge	G4	S5				x	x
<i>Carex retrorsa</i>	retorse sedge	G5	S5				x	x
<i>Carex rosea</i>	stellate sedge	G5	S5				x	x
<i>Carex sparganioides</i>	burreed sedge	G5	S5			x	x	x
<i>Carex stipata</i>	awl-fruited sedge	G5	S5				x	x
<i>Carex stricta</i>	tussock sedge	G5	S5				x	x
<i>Carex tonsa</i> var. <i>rugosperma</i>	red-seeded sedge	G5T5	S5				x	x
<i>Carex vulpinoidea</i>	fox sedge	G5	S5				x	x
<i>Carex woodii</i>	wood's sedge	G4Q	S4			x	x	x
<i>Schoenoplectus tabernaemontani</i>	American great bulrush	G?	S5				x	x
<i>Scirpus atrovirens</i>	dark-green bulrush	G5?	S5				x	x
<i>Scirpus cyperinus</i>	wool-grass	G5	S5				x	x
<b>POACEAE</b>	<b>GRASS FAMILY</b>						x	x
<i>Agrostis gigantea</i>	red-top	G4G5	SE5				x	x
<i>Agrostis stolonifera</i>	redtop	G5	S5				x	x
<i>Bromus ciliatus</i>	fringed brome	G5	S5				x	x
<i>Bromus inermis</i> ssp. <i>inermis</i>	awnless brome	G4G5T?	SE5				x	x
<i>Dactylis glomerata</i>	orchard grass	G?	SE5				x	x
<i>Danthonia spicata</i>	poverty oat grass	G5	S5				x	x
<i>Dichanthelium acuminatum</i> var. <i>acuminatum</i>	acuminate panic grass	G5T	S5				x	x
<i>Echinochloa crusgalli</i>	common barnyard grass	G?	SE5				x	x
<i>Elymus hystrix</i>	bottle-brush grass	G5	S5				x	x
<i>Elymus repens</i>	quack grass	G?	SE5				x	x
<i>Elymus virginicus</i> var. <i>virginicus</i>	Virginia wild rye	G5T?	S5				x	x
<i>Festuca rubra</i> ssp. <i>rubra</i>	red fescue	G5T4	S5				x	x

Scientific Name	Common Name	GRank	SRank	MNR	COSEWIC	Local Status Waterloo	Previous Field Surveys	Field Visit 2021
<i>Festuca subverticillata</i>	nodding fescue	G5	S4				x	x
<i>Glyceria grandis</i>	tall manna grass	G5	S4S5				x	x
<i>Glyceria striata</i>	fowl manna grass	G5	S5				x	x
<i>Leersia oryzoides</i>	rice cut grass	G5	S5				x	x
<i>Lolium pratense</i>	meadow fescue	G5	SE5				x	x
<i>Miscanthus sacchariflorus</i>	amur silver grass	G?	SE3				x	x
<i>Oryzopsis asperifolia</i>	white-grained mountain-rice	G5	S5				x	x
<i>Panicum capillare</i>	witch grass	G5	S5				x	x
<i>Phalaris arundinacea</i>	reed canary grass	G5	S5				x	x
<i>Phleum pratense</i>	timothy	G?	SE5				x	x
<i>Phragmites australis</i>	common reed	G5	S5				x	x
<i>Poa compressa</i>	Canada blue grass	G?	S5				x	x
<i>Poa pratensis ssp. pratensis</i>	Kentucky bluegrass	G5T	S5				x	x
<i>Schizachne purpurascens ssp. purpurascens</i>	false melic grass	G5T?	S5				x	x
<i>Setaria sp.</i>	foxtail						x	x
<i>Sphenopholis intermedia</i>	slender wedge grass	G5	S4S5				x	x
<i>Sporobolus cryptandrus</i>	sand dropseed		S4			x	x	x
<i>Sporobolus neglectus</i>	overlooked dropseed	G5	S4				x	x
<b>TYPHACEAE</b>	<b>CATTAIL FAMILY</b>						x	x
<i>Typha angustifolia</i>	narrow-leaved cattail	G5	S5				x	x
<i>Typha latifolia</i>	broad-leaved cattail	G5	S5				x	x
<b>LILIACEAE</b>	<b>LILY FAMILY</b>						x	x
<i>Allium burdickii</i>	wild leek	G4G5	S1?			x	x	x
<i>Allium tricoccum</i>	wild leek	G5	S5				x	x
<i>Asparagus officinalis</i>	garden asparagus	G5?	SE5				x	x

Scientific Name	Common Name	GRank	SRank	MNR	COSEWIC	Local Status Waterloo	Previous Field Surveys	Field Visit 2021
<i>Convallaria majalis</i>	lily-of-the-valley	G5	SE5				x	x
<i>Erythronium americanum ssp. americanum</i>	yellow dog's-tooth violet	G5T5	S5				x	x
<i>Heemerocallis fulva</i>	orange day-lily	G?	SE5				x	x
<i>Hosta plantaginea</i>	hosta	G?	SE?				x	x
<i>Lilium michiganense</i>	Michigan lily	G5	S5				x	x
<i>Maianthemum canadense</i>	wild lily-of-the-valley	G5	S5				x	x
<i>Maianthemum racemosum ssp. racemosum</i>	false Solomon's seal	G5T	S5				x	x
<i>Maianthemum stellatum</i>	star-flowered Solomon's seal	G5	S5				x	x
<i>Polygonatum pubescens</i>	hairy Solomon's seal	G5	S5				x	x
<i>Streptopus lanceolatus var. roseus</i>	rose twisted-stalk	G5	S5				x	x
<i>Trillium erectum</i>	purple trillium	G5	S5				x	x
<i>Trillium grandiflorum</i>	white trillium	G5	S5				x	x
<i>Uvularia grandiflora</i>	large-flowered bellwort	G5	S5				x	
<i>Iris versicolor</i>	multi-coloured blue-flag	G5	S5				x	
<b>SMILACACEAE</b>	<b>CATBRIER FAMILY</b>						x	
<i>Smilax herbacea</i>	herbaceous carrion flower	G5	S4				x	
<b>ORCHIDACEAE</b>	<b>ORCHID FAMILY</b>						x	
<i>Epipactis helleborine</i>	common helleborine	G?	SE5				x	
<i>Liparis loeselii</i>	fen twayblade	G5	S4S5				x	

## Legend

### 1) G-Rank Global Rank

Global ranks are assigned by a consensus of the network of Conservation Data Centres, scientific experts, and the Nature Conservancy to designate a rarity rank based on the range-wide status of a species, subspecies or variety.

The most important factors considered in assigning global ranks are the total number of known, extant sites world-wide, and the degree to which they are potentially or actively threatened with destruction. Other criteria the number of known populations considered to be securely protected, the size of the various populations, and the ability of the taxon to persist at its known sites. The taxonomic distinctness of each taxon has also been considered. Hybrids, introduced species, and taxonomically dubious species, subspecies and varieties have not been included.

- G1= Extremely rare; usually 5 or fewer occurrences in the overall range or very few remaining individuals; or because of some factor(s) making it especially vulnerable to extinction.
- G2 = Very rare; usually between 5 and 20 occurrences in the overall range or with many individuals in fewer occurrences; or because of some factor(s) making it vulnerable to extinction.
- G3 = Rare to uncommon; usually between 20 and 100 occurrences; may have fewer occurrences, but with a large number of individuals in some populations; may be susceptible to large-scale disturbances.
- G4 = Common; usually more than 100 occurrences; usually not susceptible to immediate threats.
- G5 = Very common; demonstrably secure under present conditions.
- GH = Historic, no records in the past 20 years.
- GU = Status uncertain, often because of low search effort or cryptic nature of the species; more data needed.
- GX = Globally extinct. No recent records despite specific search
- ? = Denotes inexact numeric rank (i.e. G4?).
- G" " = A "G" (or "T") followed by a blank space means that the NHIC has not yet obtained the Global Rank from The Nature Conservancy.
- G? = Unranked, or, if following a ranking, rank tentatively assigned (e.g. G3
- Q = Denotes that the taxonomic status of the species, subspecies, or variety is questionable.
- T = Denotes that the rank applies to a subspecies or variety.

### 2) S-Rank Provincial Rank

Provincial (or Sub-national) ranks are used by the Ontario Ministry of Natural Resources Natural Heritage Information Centre (NHIC) to set protection priorities for rare species and natural communities. These ranks are not legal designations. Provincial ranks are assigned in a manner similar to that described for the global ranks, but consider only those factors within the political boundaries of Ontario. By comparing the global and provincial ranks, the status, rarity, and the urgency of conservation needs can be ascertained. The NHIC evaluates provincial ranks on a continual basis and produces updated list at least annually.

- S1 = Critically imperiled in Ontario because of extreme rarity (often 5 or fewer occurrences) or because of some factor (s) such as very steep declines making it especially vulnerable to extirpation.
- S2 = Imperiled in Ontario because of rarity due to very restricted range, very few populations (often 20 or fewer occurrences) steep declines or other factors making it very vulnerable to extirpation.
- S3 = Vulnerable in Ontario due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

- S4 = Apparently secure - uncommon but not rare; some cause for long-term concern due to declines or other factors.
- S5 = Secure - common, widespread, and abundant in Ontario.
- SX = Presumed Extirpated - specie or community is believed to be extirpated from Ont;
- SNR = Unranked - conservation status in Ontario not yet assesse
- SU = Unrankable - currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
- SNA = Not applicable - a conservation status rank is not applicable because the species is not a suitable target for conservation activities.
- S#S# = Range rank - a numeric range rank (e.g. S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g. SU is used rather than S1S4).

### 3) COSEWIC Committee On The Status Of Endangered Wildlife in Canada

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses the national status of wild species that are considered to be at risk in Canada.

- Extinct (X) A wildlife species that no longer exists.
- Extirpated (XT) A wildlife species no longer existing in the wild in Canada, but occurring elsewhere
- Endangered (E) A wildlife species facing imminent extirpation or extinction.
- Threatened (T) A wildlife species likely to become endangered if limiting factors are not reversed.
- Special Concern (SC) A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.
- Not at Risk (NAR) A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.
- Data Deficient (DD) A category that applies when the available information is insufficient (a) to resolve a wildlife species' eligibility for assessment or (b) to permit an assessment of the wildlife species' risk of extinction.

### 4) COSSARO/OMNR Committee On The Status Of Species At Risk In Ontario/Ontario Ministry Of Natural Resources

The Committee on the Status of Species at Risk in Ontario (COSSARO)/Ontario Ministry of Natural Resources (OMNR) assess the provincial status of wild species that are considered to be at risk in Ontario.

- Extinct (EXT) A species that no longer exists anywhere.
- Extirpated (EXP) A species that no longer exist in the wild in Ontario but still occurs elsewhere.
- Endangered (Regulated) (END-R) A species facing imminent extinction or extirpation in Ontario which has been regulated under Ontario's *Endangered Species Act*.
- Endangered (END) A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's Endangered Species Act.
- Threatened (THR) A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
- Special Concern (SC) A species with characteristics that make it sensitive to human activities or natural
- Not at Risk (NAR) A species that has been evaluated and found to be not at
- Data Deficient (DD) A species for which there is insufficient information for a provincial status recomr

### 5) Local Status -Waterloo Region

x Species status within the Waterloo Region was used to determine local vascular plant status for the study area.

## Appendix D – Species at Risk Screening

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Appendix D: Species at Risk Screening Summary Table

Type	Species	Ecologistics (1979)	LGL Surveys (2004-2021)	MNRF NHIC (November 2021)	DFO SAR Mapping (Jan 2021)	Ontario Butterfly Atlas	Ontario Reptile and Amphibian Atlas	OBBA (2001-2005)	eBird (November 2021)	MNRF Screening (List for Waterloo)	Endangered Species Act Designation <sup>1</sup>	Habitat	Potential for Habitat/Screening Conducted by LGL	Mitigation Recommendations
Vegetation	American Chestnut ( <i>Castanea dentata</i> )									X	Endangered	Generally found in deciduous or mixed forests with well drained soils. Most often found in the Carolinian zone in Ontario.	Not detected during field investigations	None
Vegetation	Butternut ( <i>Juglans cinerea</i> )		X							X	Endangered	Generally grows in rich, moist, and well-drained soils often found along streams. It may also be found on well-drained gravel sites, especially those made up of limestone. It is also found, though seldom, on dry, rocky and sterile soils. In Ontario, the Butternut Generally grows alone or in small groups in deciduous forests as well as in hedgerows	Species confirmed in the study area (18 records).	At detail design: -Ensure up to date Butternut Health Assessment area completed for trees where a 50m protection zone cannot be maintained; -Follow exemption regulations and/or ensure compliance with the ESA through next stages of design.
Vegetation	Black Ash ( <i>Fraxinus nigra</i> )	X	X								Endangered	Black Ash is a medium-sized, shade-intolerant hardwood tree species that occurs on moist to wet sites such as swamps, bogs and riparian areas.  It is a broad-leaved hardwood tree in the Olive family, growing 15 to 20 m in height, but can grow to as high as 27 m, and 30 to 50 cm in diameter. The leaves are roughly 15-30 cm in size.	This species has been documented in the past in the vegetation communities in Hidden Valley. While no specific survey was completed in 2021, this species is suspected to occur outside the project activities.	From Ontario.ca:  The Ministry of the Environment, Conservation and Parks needs time to determine the best way to protect and recover Black Ash, including how to balance protections for Black Ash with managing invasive Emerald Ash Borer (EAB) and the social and economic realities of Ontarians.  The ministry temporarily suspended protections for Black Ash for a period of two years from the time the species was added to the Species at Risk in Ontario List (Ontario Regulation 230/08). During this time, proponents will not need to seek authorizations for activities that impact Black Ash and its habitat.  Therefore, no mitigation recommended at this time.

Vegetation	Pigmy pocket moss ( <i>Fissidens exilis</i> )								X	Special Concern	Generally grows in moist, barren soil, typically clay, often associated with forests	Not detected during field investigations	None
Vegetation	American ginseng ( <i>Panax quinquefolius</i> )	X							X	Endangered	Generally grows in rich, moist, undisturbed and relatively mature deciduous woods in areas of neutral soil (such as over limestone or marble bedrock).	Not detected during field investigations	None
Vegetation	Green dragon ( <i>Arisaema dracontium</i> )								X	Special Concern	Generally grows in damp deciduous forests and along streams.	Not detected during field investigations	None
Vegetation	Kentucky coffee-tree ( <i>Gymnocladus dioicus</i> )								X	Threatened	Generally inhabits open areas of floodplains and the edges of wetlands. Shade-intolerant.	Not detected during field investigations	None
Bird	Acadian flycatcher ( <i>Empidonax virescens</i> )								X	Endangered	Generally requires large areas of mature, undisturbed forest; avoids the forest edge; often found in well wooded swamps and ravines	Not detected during field investigations	None
Bird	Bald eagle ( <i>Haliaeetus leucocephalus</i> )							X	X	Special Concern	Prefers deciduous and mixed-deciduous forest; and habitat close to water bodies such as lakes and rivers; They roost in super canopy trees such as Pine	Known to occur along the Grand River. Overwintering habitat identified along Grand River corridor in areas downstream. High potential as occasional visitor to Hidden Valley area.  No nesting evidence to date for Hidden Valley area. Foraging and perching habitat is present in the study area.	None specific to Bald Eagle given the preferred alternative and no suitable habitat identified in this section.
Bird	Barn Swallow ( <i>Hirundo rustica</i> )	X					X	X	X	Threatened	Prefers farmland; lake/river shorelines; wooded clearings; urban populated areas; rocky cliffs; and wetlands. They nest inside or outside buildings; under bridges and in road culverts; on rock faces and in caves etc.	Detected in 2021 surveys.  Suitable nesting and foraging habitat is present in the study area.	None given preferred alternative and no nesting habitat anticipated to be impacted.
Bird	Black Tern ( <i>Chidonias niger</i> )								X	Special Concern	generally prefer freshwater marshes and wetlands; nest either on floating material in a marsh or on the ground very close to water	Potential habitat identified. Species not detected.	None

Bird	Bobolink ( <i>Dolichonyx oryzivorus</i> )	X							X	Threatened	This species occurs in tallgrass prairies, open meadows, and fallow agricultural fields. It's also often found in hay fields.	Reported in background documentation (Ecologistics 1979).  Currently, habitat patches too small to support species. Only small patches of cultural meadow occur in the project area at southern edge of woodlot at ESPA 27, and within unopened road allowance to Schneider Creek. Agricultural fields were under row crops.	None
Bird	Canada warbler ( <i>Wilsonia canadensis</i> )		X						X	Special Concern	Generally prefers wet coniferous, deciduous and mixed forest types, with a dense shrub layer. Nests on the ground, on logs or hummocks, and uses dense shrub layer to conceal the nest.	Species reported in breeding bird atlas for the square. Not detected in 2004 or 2013 for Hidden Valley.  Suitable breeding and foraging habitat is present in the project area.	Ensure compliance with MBCA with all project activities.
Bird	Cerulean warbler ( <i>Dendroica cerulean</i> )								X	Threatened	generally found in mature deciduous forests with an open understorey; also nests in older, second-growth deciduous forests.	Not detected during field investigations	None
Bird	Chimney Swift ( <i>Chaetura pelagica</i> )	X	X					X	X	Threatened	Historically found in deciduous and coniferous, usually wet forest types, all with a well-developed, dense shrub layer; now most are found in urban areas in large, uncapped chimneys.	Recorded in project area in 2004 and 2013 by LGL Limited.  Suitable foraging habitat is present in the study area. No nesting habitat has been confirmed in the study area.	None
Bird	Common Nighthawk ( <i>Chordeiles minor</i> )						X	X	X	Special Concern	Generally prefer open, vegetation-free habitats, including dunes, beaches, recently harvested forests, burnt-over areas, logged areas, rocky outcrops, rocky barrens, grasslands, pastures, peat bogs, marshes, lakeshores, and river banks. This species also inhabits mixed and coniferous forests. Can also be found in urban areas (nest on flat roof-tops)	Not detected. This species wasn't identified in OBBA data, 1979 studies or by 2004-2013 LGL field investigations, where it may be incidentally encountered during evening frog monitoring.  E-bird provided a record for an August (migratory) observation over Hidden Valley wetland in 2018.  Suitable breeding habitat is present, including in the former quarry northeast of the Hidden Valley Road and Wabanaki Road intersection. Suitable feeding and foraging habitat is present through the study area.	No impacts to known or suitable habitat for preferred alternative. No further mitigation recommended.
Bird	Eastern Meadowlark ( <i>Sturnella magna</i> )	X					X	X	X	Threatened	This species occurs in tallgrass prairies, open meadows, and fallow agricultural fields.	This species was detected in 2004 by LGL Limited. Subsequent surveys in 2012 and 2013 did not detect the species presence. Suitable habitat not present as fields are planted in corn. Small remnant cultural meadow not of the size typical to support this species.	None

Bird	Eastern whip-poor-will ( <i>Caprimulgus vociferous</i> )								X	Threatened	Generally prefer semi-open deciduous forests or patchy forests with clearings; areas with little ground cover are also preferred; In winter they occupy primarily mixed woods near open areas.	Not detected. This species wasn't identified in OBBA data, 1979 studies or by 2004-2013 LGL field investigations, where in may be incidentally encountered during evening frog monitoring. No suitable breeding habitat is identified in the study area.	None	
Bird	Eastern Wood-Pewee ( <i>Contopus virens</i> )	X	X					X	X	X	Special Concern	Mixed and deciduous forests in the mid-canopy layer near forest clearings and edges. The forests usually have little understory vegetation.	Recorded in project area in 2021 by LGL Limited.	Ensure compliance with MBCA with all project activities.
Bird	Golden-winged warbler ( <i>Vermivora chrysoptera</i> )								X	X	Special Concern	Generally prefer areas of early successional vegetation, found primarily on field edges, hydro or utility right-of-ways, or recently logged areas.	Not detected during field investigations	None
Bird	Henslow's sparrow ( <i>Ammodramus henslowii</i> )									X	Endangered	Generally found in old fields, pastures and wet meadows. They prefer areas with dense, tall grasses, and thatch, or decaying plant material	Not detected during field investigations	None
Bird	King rail ( <i>Rallus elegans</i> )									X	Endangered	Generally this species requires large marshes with open shallow water that merges with shrubby areas	Not detected during field investigations, habitat not suitable	None
Bird	Least Bittern ( <i>Ixobrychus exilis</i> )									X	Threatened	Found in wetland habitats with open water. They prefer cattail marshes.	Not detected during field investigations	None
Bird	Louisiana waterthrush ( <i>Seiurus motacilla</i> )									X	Special concern	Generally inhabits mature forests along steeply sloped ravines adjacent to running water. It prefers clear, cold streams and densely wooded swamps	Not detected during field investigations	None
Bird	Northern bobwhite ( <i>Colinus virginianus</i> )							X		X	Endangered	Generally inhabits a variety of edge and grassland type - habitats including non-intensively farmed agricultural lands.	Not detected during field investigations	None
Bird	Olive-sided flycatcher ( <i>Contopus cooperi</i> )									X	Special concern	Generally prefers natural forest edges and openings adjacent to rivers or wetlands. Commonly nest in conifers such as White and Black Spruce, Jack Pine and Balsam Fir.	Not detected during field investigations	None
Bird	Peregrine falcon ( <i>Falco peregrinus</i> )									X	Special concern	Generally nest on tall, steep cliff ledges adjacent to large waterbodies; some birds adapt to urban environments and nest on ledges of tall buildings, even in densely populated downtown areas.	Not detected during field investigations	None
Bird	Red-headed woodpecker ( <i>Melanerpes erythrocephalus</i> )							X	X	X	Special concern	Generally prefer open oak and beech forests, grasslands, forest edges, orchards, pastures, riparian forests, roadsides, urban parks, golf courses, cemeteries, as well as along beaver ponds and brooks	Not detected during field investigations	None
Bird	Short-eared owl ( <i>Asio flammeus</i> )									X	Special concern	Generally prefers a wide variety of open habitats, including grasslands, peat bogs, marshes, sand-sage concentrations, old pastures and agricultural fields	Not confirmed, agricultural fields are growing soy and are less suitable for use, leaving very small remnant cultural field patches.	None

Bird	Yellow-breasted chat ( <i>Icteria virens</i> )								X	Endangered	Generally prefer dense thickets around wood edges, riparian areas, and in overgrown clearings	Not detected during field investigations	None
Fish	Black redhorse ( <i>Mozostoma duquesnei</i> )			X	X				X	Threatened	Generally lives in moderately sized rivers and streams, with generally moderate to fast currents	Not detected in previous fisheries surveys and not shown as being potentially present in watercourses (DFO SAR mapping). Present in Main Branch of Grand River.	Ensure project activities protect receiving wetlands and waterbodies through Best Management Practices and Erosion and Sediment Control Plans.
Fish	Silver shiner ( <i>Notropis photogenis</i> )			X	X				X	Threatened	Generally prefer moderate to large, deep, relatively clear streams with swift currents, and moderate to high gradients	Not detected in previous fisheries surveys, and not shown as being potentially present in watercourses (DFO SAR mapping). Possible/suitable habitat in Grand River.	Ensure project activities protect receiving wetlands and waterbodies through Best Management Practices and Erosion and Sediment Control Plans.
Invertebrate	Monarch butterfly ( <i>Danaus plexippus</i> )								X	Special concern	Exist primarily wherever milkweed and wildflowers exist; abandoned farmland, along roadsides, and other open spaces	Detected as incidental encounters.	Avoid milkweed removals during development stages of the Monarch.  Ensure restoration plans include suitable host plants.
Invertebrate	Rusty-patched bumble bee ( <i>Bombus affinis</i> )								X	Endangered	Generally inhabits a range of diverse habitats including mixed farmland, sand dunes, marshes, urban and wooded areas. It usually nests underground in abandoned rodent burrows	Not detected. This species is only known to inhabit Pinery Provincial Park in Ontario.	None.
Invertebrate	West Virginia white ( <i>Pieris virginiensis</i> )								X	Special concern	Generally prefer moist, deciduous woodlands. The larvae feed only on the leaves of the two-leaved toothwort ( <i>Cardamine diphylla</i> ), which is a small, spring-blooming plant of the forest floor.	Not detected during field investigations	None
Mammal	American badger ( <i>Taxidea taxus jacksoni</i> )								X	Endangered	Generally prefer open habitats, whether natural (grasslands) or man-made (agricultural fields, road right-of-ways, golf courses)	Not detected during field investigations	None
Mammal	Little brown myotis ( <i>Myotis lucifugus</i> )								X	Endangered	Overwintering habitat: Caves and mines that remain above 0C, Maternal Roosts: Often associated with buildings (attics, barns etc.). Occasionally found in trees (25-44 cm dbh).	No targeted surveys completed. Potential habitat present.	Where a project or activity avoids Section 9 or 10 contraventions of the ESA, no additional field work is required, and no authorizations are required. The level of detail required to determine if there is potential for impacts to bats or bat habitat will be required at detailed design.
Mammal	Northern myotis ( <i>Myotis septentrionalis</i> )								X	Endangered	Overwintering habitat: Caves and mines that remain above 0C, Maternal Roosts: Often associated with cavities of large diameter trees (25-44 cm dbh). Occasionally found in structures (attics, barns etc.)	No targeted surveys completed. Potential habitat present.	Where a project or activity avoids Section 9 or 10 contraventions of the ESA, no additional field work is required, and no authorizations are required. The level of detail required to determine if there is potential for impacts to bats or bat habitat will be required at detailed design.
Mussel	Rainbow mussel ( <i>Villosa iris</i> )			X					X	Threatened	Most abundant in shallow, well-oxygenated reaches of small- to medium-sized rivers and sometimes lakes, on substrates of cobble, gravel, sand and occasionally mud	Not detected or recorded as being potentially present (as indicated by DFO SAR mapping).	None
Mussel	Wavy-rayed lampmussel ( <i>Lampsilis fasciola</i> )			X					X	Threatened	Generally inhabit clear rivers and streams of a variety of sizes, where the water flow is steady and the substrate is stable	Not detected or recorded as being potentially present (as indicated by DFO SAR mapping).	None

Reptile	Blanding's turtle ( <i>Emydonidea blandingii</i> )					X			X	Threatened	Generally occur in freshwater lakes, permanent or temporary pools, slow-flowing streams, marshes and swamps. They prefer shallow water that is rich in nutrients, organic soil and dense vegetation. Adults are generally found in open or partially vegetated sites, and juveniles prefer areas that contain thick aquatic vegetation including sphagnum, water lilies and algae. They dig their nest in a variety of loose substrates, including sand, organic soil, gravel and cobblestone. Overwintering occurs in permanent pools that average about one metre in depth, or in slow-flowing streams	Not detected during field investigations	None
Reptile	Eastern ribbonsnake ( <i>Thamnophis sauritus</i> )					X			X	Special Concern	Generally occur along the edges of shallow ponds, streams, marshes, swamps, or bogs bordered by dense vegetation that provides cover. Abundant exposure to sunlight is also required, and adjacent upland areas may be used for nesting	Not detected during field investigations	None
Reptile	Milksnake ( <i>Lampropeltis triangulum</i> )		X			X			X	No longer listed	Generally occur in rural areas, where it is most frequently reported in and around buildings, especially old structures. It is also found in a wide variety of habitats, from prairies, pastures, and hayfields, to rocky hillsides and a wide variety of forest types. They must also be in proximity of water, and suitable locations for basking and egg-laying.	Not detected during field investigations	None
Reptile	Northern map turtle ( <i>Graptemys geographica</i> )								X	Special concern	Generally inhabits both lakes and rivers, showing a preference for slow moving currents, muddy bottoms, and abundant aquatic vegetation. These turtles need suitable basking sites (such as rocks and logs) and exposure to the sun for at least part of the day.	Not detected during field investigations	None
Reptile	Queensnake ( <i>Regina septemvittata</i> )								X	Endangered	Generally require a permanent body of water, flowing or still, with a temperature remaining at or above 18.3°C throughout most of the active season; abundant cover, such as flat rocks submerged and/or on the bank; and an abundance of crayfish. Other important habitat features may include rocky, gravelly, or slate stream-bed substrates, swift to moderate current, and woodland surroundings.	Not detected during field investigations	None

Reptile	Snapping turtle ( <i>Chelydra serpentina</i> )		X				X			X	Special concern	Generally inhabit shallow waters where they can hide under the soft mud and leaf litter. Nesting sites usually occur on gravely or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dams and aggregate pits.	Confirmed present in study area.	Ensure construction areas are isolated from habitat to avoid wildlife entering the construction area; Ensure a qualified Environmental Monitor is available in the event of wildlife conflict or encounter; Contractor training for wildlife mitigation; Avoid stockpiling or storing of materials (loose gravel, sands, that may attract nesting turtles). Avoiding using materials in the project design that would attract nesting turtles (such as exposed or loose sand or gravel).
Reptile	Wood turtle ( <i>Glyptemys insculpta</i> )									X	Endangered	Generally inhabit fresh-water rivers and streams with sandy or gravely-sandy bottoms and prefers clear meandering watercourses with a moderate current. They nest on sand or gravel-sand beaches and banks. Although they prefer riparian areas with diverse, patchy cover, females also lay in gravel holes, at the edges of roads and railways, in utility right-of-ways, in farming fields, pastures and former fields – any sunny and easily dug spot.	Not detected during field investigations	None
Amphibian	Jefferson salamander ( <i>Ambystoma jeffersonianum</i> )		X				X			X	Endangered	Inhabit deciduous and mixed deciduous forests with suitable breeding areas which generally consist of ephemeral (temporary) bodies of water that are fed by spring runoff, groundwater, or springs.	Species confirmed in project area, habitat regulations obtained for project area.	Ensure project activities are in compliance with the ESA through all project stages; Ensure sufficient setback to the regulated habitat is maintained; Ensure water balance to breeding habitat is maintained; Ensure water quality to breeding habitat is maintained; Ensure construction areas are isolated from habitat to avoid wildlife entering the construction area; Ensure a qualified Environmental Monitor is available in the event of wildlife conflict or encounter; Contractor training for wildlife mitigation and sensitivities, including for species and habitat regulated under the ESA; Consider landscaping and restoration treatments to minimize risk to salamanders, such as retaining walls to exclude salamanders from entering traffic or work zones.

# Stage 1 Archaeological Report

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**Stage 1 Archaeological Assessment  
Class Environmental Assessment and Preliminary Design  
for Upper Hidden Valley Sanitary Pumping Station and Forcemain  
City of Kitchener  
Regional Municipality of Waterloo  
Part of Lots 51 and 53, German Company Tract & Bechtel's Tract  
Geographic Township of Waterloo  
Former Waterloo County, Ontario**

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ARA File #2020-0220

**13/10/2021**

**Original Report**

## **EXECUTIVE SUMMARY**

Under a contract awarded in October 2020, Archaeological Research Associates Ltd. (ARA) carried out a Stage 1 assessment for the *Class Environmental Assessment and Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain* in the City of Kitchener, Regional Municipality of Waterloo, Ontario. The Upper Hidden Valley sanitary pumping station and forcemain improvements are intended to support development in the Hidden Valley area as outlined by the Hidden Valley Land Use Master Plan. The assessment was carried out as part of a Schedule 'B' Municipal Class Environmental Assessment in accordance with the *Environmental Assessment Act*. This report documents the background research and potential modelling involved in the investigation, and presents conclusions and recommendations pertaining to archaeological concerns.

The Stage 1 assessment was conducted in April 2021 under Project Information Form #P1021-0004-2021. The investigation encompassed the entirety of the project lands. Field observations were made from accessible public areas where no permissions were required for property access and an area where legal permission to enter and conduct all necessary fieldwork activities within the assessed lands was granted by the property owner. At the time of assessment, the study area comprised the roadway platforms, shoulders, ditches, culverts and sidewalks associated with Wabanaki Drive, Hidden Valley Road and Hidden Valley Crescent, various driveways and developed properties, as well as agricultural fields, wooded areas and overgrown areas.

The Stage 1 assessment determined that the study area comprises a mixture of areas of archaeological potential, areas of no archaeological potential and previously assessed lands of no further concern. It is recommended that all identified areas of archaeological potential be subject to a Stage 2 property assessment in accordance with Section 2.1 of the 2011 *Standards and Guidelines for Consultant Archaeologists*. Although the study area was defined to include part of the Grand River, it is ARA's understanding that the City has no intention to conduct any works within the river. If any such works are contemplated, a marine assessment would be required prior to any river impacts.

The identified areas of no archaeological potential and previously assessed lands of no further concern do not require any additional assessment. Given that there are still outstanding archaeological concerns within the project lands, no ground alterations or development of any kind may occur until the Stage 2 assessment is complete, a recommendation that the lands require no further archaeological assessment is made, and the associated report is entered into the Ontario Public Register of Archaeological Reports.

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## ABBREVIATIONS

ARA – Archaeological Research Associates Ltd.  
CIF – Contract Information Form  
EA – Environmental Assessment  
MHSTCI – Ministry of Heritage, Sport, Tourism and Culture Industries  
PIF – Project Information Form  
ROW – Right-of-Way  
S&Gs – Standards and Guidelines for Consultant Archaeologists

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## 1.0 PROJECT CONTEXT

### 1.1 Development Context

Under a contract awarded in October 2020, Archaeological Research Associates Ltd. (ARA) carried out a Stage 1 assessment for the *Class Environmental Assessment and Preliminary Design for Upper Hidden Valley Sanitary Pumping Station and Forcemain* in the City of Kitchener, Regional Municipality of Waterloo, Ontario. The Upper Hidden Valley sanitary pumping station and forcemain improvements are intended to support development in the Hidden Valley area as outlined by the Hidden Valley Land Use Master Plan. The assessment was carried out as part of a Schedule 'B' Municipal Class Environmental Assessment (EA) in accordance with the *Environmental Assessment Act*. This report documents the background research and potential modelling involved in the investigation, and presents conclusions and recommendations pertaining to archaeological concerns.

The project lands ('study area') consist of an irregularly-shaped parcel of land with a total area of 213.6 ha (Map 1). This parcel is generally bounded by Highway 8 to the north, the Grand River to the east and south, and Wabanaki Drive to the west. In legal terms, the study area falls on part of Lots 51 and 53, German Company Tract and part of Bechtel's Tract in the Geographic Township of Waterloo, former Waterloo County. The Crown obtained these lands from the Mississaugas as part of a much larger purchase in 1784, but there were uncertainties relating to the area involved. The extent of the cession was clarified during the Between the Lakes Purchase (Treaty 3) of 1792. The Haldimand Proclamation of 1784 granted a tract of land along the Grand River to Six Nations, and the clarifying Simcoe Patent (Treaty 4) was issued in 1793.

The Stage 1 assessment was conducted in April 2021 under Project Information Form (PIF) #P1021-0004-2021. The investigation encompassed the entirety of the project lands. Field observations were made from accessible public areas where no permissions were required for property access and an area where legal permission to enter and conduct all necessary fieldwork activities within the assessed lands was granted by the property owner. In compliance with the objectives set out in Section 1.0 of the 2011 *Standards and Guidelines for Consultant Archaeologists (S&Gs)* this investigation was carried out in order to:

- Provide information concerning the geography, history and current land condition of the study area;
- Determine the presence of known archaeological sites in the study area;
- Present strategies to mitigate project impacts to such sites, if they are located;
- Evaluate in detail the archaeological potential of the study area; and
- Recommend appropriate strategies for Stage 2 archaeological assessment, if some or all of the study area has archaeological potential.

The Ministry of Heritage, Tourism and Culture Industries (MHSTCI) is asked to review the results and recommendations presented herein and enter the report into the Ontario Public Register of Archaeological Reports. A Record of Indigenous Engagement is included in the project report package in accordance with the requirements set out in Section 7.6.2 of the 2011 *S&Gs*.

## 1.2 Historical Context

After a century of archaeological work in southern Ontario, scholarly understanding of the historical usage of the area has become very well-developed. With occupation beginning in the Palaeo period approximately 11,000 years ago, the greater vicinity of the study area comprises a complex chronology of Indigenous and Euro-Canadian histories. Section 1.2.1 summarizes the region’s settlement history, whereas Section 1.2.2 documents the study area’s past and present land uses. Multiple previous archaeological reports containing relevant background information were obtained during the research component of the study. These reports are summarized in Section 1.3.3, and the references (including title, author and PIF number) appear in Section 7.0.

### 1.2.1 Settlement History

#### 1.2.1.1 Pre-Contact

The Pre-Contact history of the region is lengthy and rich, and a variety of Indigenous groups inhabited the landscape. Archaeologists generally divide this vibrant history into three main periods: Palaeo, Archaic and Woodland. Each of these periods comprise a range of discrete sub-periods characterized by identifiable trends in material culture and settlement patterns, which are used to interpret past lifeways. The principal characteristics of these sub-periods are summarized in Table 1.

**Table 1: Pre-Contact Settlement History**  
 (Wright 1972; Ellis and Ferris 1990; Warrick 2000; Munson and Jamieson 2013)

Sub-Period	Timeframe	Characteristics
Early Palaeo	9000–8400 BC	Gainey, Barnes and Crowfield traditions; Small bands; Mobile hunters and gatherers; Utilization of seasonal resources and large territories; Fluted projectiles
Late Palaeo	8400–7500 BC	Holcombe, Hi-Lo and Lanceolate biface traditions; Continuing mobility; Campsite/Way-Station sites; Smaller territories are utilized; Non-fluted projectiles
Early Archaic	7500–6000 BC	Side-notched, Corner-notched (Nettling, Thebes) and Bifurcate traditions; Growing diversity of stone tool types; Heavy woodworking tools appear (e.g., ground stone axes and chisels)
Middle Archaic	6000–2500 BC	Stemmed (Kirk, Stanly/Neville), Brewerton side- and corner-notched traditions; Reliance on local resources; Populations increasing; More ritual activities; Fully ground and polished tools; Net-sinkers common; Earliest copper tools
Late Archaic	2500–900 BC	Narrow Point (Lamoka), Broad Point (Genesee) and Small Point (Crawford Knoll) traditions; Less mobility; Use of fish-weirs; True cemeteries appear; Stone pipes emerge; Long-distance trade (marine shells and galena)
Early Woodland	900–400 BC	Meadowood tradition; Crude cord-roughened ceramics emerge; Meadowood cache blades and side-notched points; Bands of up to 35 people
Middle Woodland	400 BC–AD 600	Saugeen tradition; Stamped ceramics appear; Saugeen projectile points; Cobble spall scrapers; Seasonal settlements and resource utilization; Post holes, hearths, middens, cemeteries and rectangular structures identified
Middle/Late Woodland Transition	AD 600–900	Princess Point tradition; Cord roughening, impressed lines and punctate designs on pottery; Adoption of maize horticulture at the western end of Lake Ontario; Oval houses and ‘incipient’ longhouses; First palisades; Villages with 75 people
Late Woodland (Early)	AD 900–1300	Glen Meyer tradition; Settled village-life based on agriculture; Small villages (0.4 ha) with 75–200 people and 4–5 longhouses; Semi-permanent settlements
Late Woodland (Middle)	AD 1300–1400	Uren and Middleport traditions; Classic longhouses emerge; Larger villages (1.2 ha) with up to 600 people; More permanent settlements (30 years)

Sub-Period	Timeframe	Characteristics
Late Woodland (Late)	AD 1400–1600	Pre-Contact Neutral tradition; Larger villages (1.7 ha); Examples up to 5 ha with 2,500 people; Extensive croplands; Also, hamlets, cabins, camps and cemeteries; Potential tribal units; Fur trade begins ca. 1580; European trade goods appear

Although Iroquoian-speaking populations tended to leave a much more obvious mark on the archaeological record and are therefore emphasized in the Late Woodland entries above, it must be understood that Algonquian-speaking populations also represented a significant presence in southern Ontario. Due to the sustainability of their lifeways, archaeological evidence directly associated with the Anishinaabeg remains elusive, particularly when compared to sites associated with the more sedentary agriculturalists. Many artifact scatters in southern Ontario were likely camps, chipping stations or processing areas associated with the more mobile Anishinaabeg, utilized during their travels along the local drainage basins while making use of seasonal resources. This part of southern Ontario represents the ancestral territory of various Indigenous groups, each with their own land use and settlement pattern tendencies.

#### 1.2.1.2 Post-Contact

The arrival of European explorers and traders at the beginning of the 17<sup>th</sup> century triggered widespread shifts in Indigenous lifeways and set the stage for the ensuing Euro-Canadian settlement process. Documentation for this period is abundant, ranging from the first sketches of Upper Canada and the written accounts of early explorers to detailed township maps and lengthy histories. The Post-Contact period can be effectively discussed in terms of major historical events, and the principal characteristics associated with these events are summarized in Table 2.

**Table 2: Post-Contact Settlement History**

(Smith 1846; Sutherland 1864; Coyne 1895; Lajeunesse 1960; Cumming 1972; Janusas 1988; Ellis and Ferris 1990; Surtees 1994; Hayes 1997; Bloomfield 2006; AO 2015)

Historical Event	Timeframe	Characteristics
Early Exploration	Early 17 <sup>th</sup> century	Brûlé explores southern Ontario in 1610/11; Champlain travels through in 1613 and 1615/1616, making contact with a number of Indigenous groups (including the Algonquin, Huron-Wendat and other First Nations); European trade goods become increasingly common and begin to put pressure on traditional industries
Increased Contact and Conflict	Mid- to late 17 <sup>th</sup> century	Conflicts between various First Nations during the Beaver Wars result in numerous population shifts; European explorers continue to document the area, and many Indigenous groups trade directly with the French and English; ‘The Great Peace of Montreal’ treaty established between roughly 39 different First Nations and New France in 1701
Fur Trade Development	Early to mid-18 <sup>th</sup> century	Growth and spread of the fur trade; Peace between the French and English with the Treaty of Utrecht in 1713; Ethnogenesis of the Métis; Hostilities between French and British lead to the Seven Years’ War in 1754; French surrender in 1760
British Control	Mid- to late 18 <sup>th</sup> century	<i>Royal Proclamation</i> of 1763 recognizes the title of the First Nations to the land; Numerous treaties subsequently arranged by the Crown; First land cession under the new protocols is the Seneca surrender of the west side of the Niagara River in 1764; The Niagara Purchase (Treaty 381) in 1781 included this area

Historical Event	Timeframe	Characteristics
Loyalist Influx	Late 18 <sup>th</sup> century	United Empire Loyalist influx after the American Revolutionary War (1775–1783); British develop interior communication routes and acquire additional lands; Between the Lakes Purchase completed with the Mississaugas in 1784 and confirmed in 1792 (Treaty 3); Haldimand Proclamation of 1784 grants land to Six Nations (the Haldimand Tract), clarified by the Simcoe Patent (Treaty 4) in 1793; <i>Constitutional Act of 1791</i> creates Upper and Lower Canada
County Development	Late 18 <sup>th</sup> to early 19 <sup>th</sup> century	Became part of York County's 'West Riding' in 1792; Brant surrenders Blocks 1–6 of the Haldimand Tract to the Crown in 1798; Became part of the Gore District and Halton County in 1816; Wellington District and Waterloo County created in 1840; Waterloo County independent after the abolition of the district system in 1849
Township Formation	Early 19 <sup>th</sup> century	Waterloo initially comprised Block 2 of the Haldimand Tract; Purchased by United Empire Loyalist R. Beasley and his partners in 1798; Deeds could not be issued until full payment was made to Six Nations; Nearly 5,750 ha sold to Pennsylvania Mennonites and non-Mennonites in 1800; German Company formed to facilitate a bulk sale of land to Pennsylvania Mennonites, represented by D. Erb and S. Bricker; Remaining 24,281 ha purchased in 1805 with clear title; Lots drawn by shareholders in Pennsylvania; Steady and rapid stream of settlers ensued, disrupted only by the Napoleonic Wars and the War of 1812
Township Development	Mid-19 <sup>th</sup> to early 20 <sup>th</sup> century	Population reached 4,424 by 1841 (mostly Pennsylvania Dutch and German); 33,518 ha taken up by 1846, with 12,151 ha under cultivation; 20 saw mills and 8 grist mills in operation at that time; Traversed by the Grand Trunk Railway (1856), Galt & Guelph Railway (1855/57), Preston & Berlin Railway (1857/1873) and Waterloo Junction Railway (1889/91); Principal settlements at Berlin, Hespeler, Preston and Waterloo, Other communities at Blair, Bloomingdale, Breslau, Bridgeport, Doon, Freeport, Freiburg, German Mills, New Aberdeen, Oregon (Upper Doon), Shantz, Strasburg and Williamsburg

## 1.2.2 Past and Present Land Use

### 1.2.2.1 Overview

During Pre-Contact and Early Contact times, the vicinity of the study area would have comprised a mixture of coniferous trees, deciduous trees and open areas. Indigenous communities would have managed the landscape to some degree, particularly during the Late Woodland period when clearings were made for agriculture. During the early 19<sup>th</sup> century, Pennsylvania Mennonites and later Euro-Canadian settlers arrived in the area and continued to clear the forests for agricultural and settlement purposes. The study area was located east of the historical community of German Mills. The land use at the time of assessment can be classified as transportation (the roadways and associated infrastructure), residential (developed properties), agricultural (fields) and natural lands (the undeveloped areas).

### 1.2.2.2 German Mills

German Mills, also known as Parkway, Jewsbury, Edenburg, Hopewell Mills and Bleams Mills, seems to have originated when Philip Bliehm built a sawmill on Schneider Creek in 1812. The mill, which was serviced by one dam, was purchased by Samuel Liebschuetz in 1835 (Janusas 1988:169). During Liebschuetz's period of mill ownership (1835–1851), he laid plans for the village of Jewsbury, a name reflecting his religion (Benjamin and Berge 2012:56). The southern part of the Township of Waterloo owed much of its early development to the establishment of major thoroughfares in the first quarter of the 19<sup>th</sup> century. The earliest of these was Bleams Road,

built by Philip Bliehm in the 1820s to link the Township of Wilmot and the western part of the Township of Waterloo to his businesses at German Mills (Bloomfield 2006:73–76). The flour mills were the epicentre of the small community, with related businesses that included a stave mill, cooperage and general store. Today, the last vestiges of the settlement are Cress Lane and Webster Road as they are currently aligned (Benjamin and Berge 2012:54).

### 1.2.2.3 Mapping and Imagery Analysis

In order to gain a general understanding of the study area's past land uses, two historical settlement maps, four topographic maps and two aerial images were examined during the research component of the study. Specifically, the following resources were consulted:

- *Tremaine's Map of the County of Waterloo, Canada West* (1861) (OHCMP 2019);
- *The Illustrated Historical Atlas of the County of Waterloo, Ont.* (1881) (McGill University 2001);
- Topographic maps from 1916, 1923, 1929 and 1936 (OCUL 2021); and
- Aerial images from 1955 and 1963 (University of Waterloo 2021).

The limits of the study area are shown on georeferenced versions of the consulted historical resources in Map 2–Map 6.

*Tremaine's Map of the County of Waterloo, Canada West* (1861) indicates that Henry C. Wismer, David Surarus, A.C. Weber, Andrew Surarus, Amos Weaver and Jonas Wilfong occupied the subject parts of Bechtel's Tract, while Elias Snider and Henry Strickler occupied the subject parts of Lots 51 and 53, German Company Tract, respectively (Map 2). Structures are depicted on the properties of Henry C. Wismer (just west of the study area) and Amos Weaver (within the study area). Many of the families that owned property in the study area were some of the earliest settlers to the area. Hidden Valley Road bisects the study area east–west and appears to have crossed the Grand River before continuing east to Freeport.

The *Illustrated Historical Atlas of the County of Waterloo, Ontario* (1881) provides fewer details regarding properties and occupants compared to the 1861 map, but some additional information is provided. Moses Wismer is listed as the occupant of the former Henry C. Wismer property, for example, and a residence is shown on the property just west of the study area (Map 3). No additional residents are identified within the study area, but this lack of data should not be taken as evidence that the properties were unimproved, as typically only subscribers would have their names and farmsteads included in the published content. The proximity of the study area to nearby Freeport to the east, German Mills to the west and Centreville to the north, coupled with the proximity to the Grand River, would have made the study area ideal for settlement.

Topographic maps from 1916, 1923 and 1929 indicate that six frame structures once stood within the study area, the majority of which were located along Hidden Valley Road. A bridge crossed a tributary of the Grand River in the eastern part of the study area, and a ford existed at the crossing of Hidden Valley Road and the Grand River (Map 4). The ford at Hidden Valley Road was a shallow place in the Grand River that allowed for easy crossing. Several changes are apparent in

the 1936 topographic map, including the removal of the ford, the realignment of the eastern part of Hidden Valley Road and the establishment of a Bell Telephone Line.

The aerial image from 1955 demonstrates that settlement within the study area changed little, save for some driveway modifications associated with the realignment of Hidden Valley Road (Map 5). By 1963, Highway 8 had been built north of the study area and Wabanaki Drive had been established along the west (Map 6). No new structures or features appear within the study area.

### **1.3 Archaeological Context**

The Stage 1 assessment (property inspection) was conducted on April 27, 2021 under PIF #P1021-0004-2021. The limits of the study area were confirmed using georeferenced aerial imagery showing artificial and natural formations in relation to the subject lands.

The archaeological context of any given study area must be informed by 1) the condition of the property as found (Section 1.3.1), 2) a summary of registered or known archaeological sites located within a minimum 1 km radius (Section 1.3.2) and 3) descriptions of previous archaeological fieldwork carried out within the limits of, or immediately adjacent to the property (Section 1.3.3).

#### **1.3.1 Condition of the Property**

The study area lies within the Great Lakes–St. Lawrence forest region, which is a transitional zone between the southern deciduous forest and the northern boreal forest. This forest extends along the St. Lawrence River across central Ontario to Lake Huron and west of Lake Superior along the border with Minnesota, and its southern portion extends into the more populated areas of Ontario. This forest is dominated by hardwoods, featuring species such as maple, oak, yellow birch, white and red pine. Coniferous trees such as white pine, red pine, hemlock and white cedar commonly mix with deciduous broad-leaved species, such as yellow birch, sugar and red maples, basswood and red oak (MNR 2021).

In terms of local physiography, the majority of the subject lands fall within the Waterloo Hills. This region consists mainly of sandy hills, including ridges of sandy till (unsorted glacial sediment), kames and kame moraines (large deposits of till, sand and gravel left after melting). Outwash sands occupy the hollows between the hills. An extensive area of alluvial terraces adjoins the hilly region, which are associated with the Grand River spillway system (Chapman and Putnam 1984:136–137). The southeastern portion of the study area falls within the Guelph Drumlin Field. This region is located northwest of the Paris Moraine and includes roughly 300 broad oval drumlins of various sizes. The drumlins themselves consist largely of loamy and calcareous till, and analyses have placed the average grain sizes in the neighbourhood of 50% sand, 35% silt and 15% clay. These drumlins are not closely grouped, and the intervening low ground supports mainly fluvial materials created by river action (Chapman and Putnam 1984:137–138).

According to the Ontario Soil Survey, a variety of soil types occur within the study area. In terms of distribution, most of the study area was classified as a grouping of Burford gravelly loam, Burford cobbly loam and St. Jacobs loam (Bg>Bu=Sj), with a large north-central area consisting of a grouping of Waterloo fine sandy loam, Colwood loam and organic soil (Wa>Cd=Mc). In the southern portion of the study area along the Grand River, the soils are classified as a grouping of

Hespler sandy loam, Martin sand and gravel and Donald loam (Hr=Mn=Dn). The northwest corner of the study area was classified as Kitchener and Waterloo Urban Land due to past development impacts. A small area adjacent to the Grand River in the southwestern portion of the study area was classified as scarp and gravel pit soils which have been subject to erosion and gravel extraction. The soils along the narrow band of Highway 8 are considered disturbed soils as they have impacted to significant degree by infrastructure construction. A small grouping of Camilla sandy loam, Caledon sandy loam and Burford gravelly loam was found along the southwestern edge (Cm=Ca>Bg). The specific characteristics of these soil types are summarized in Table 3 (Presant and Wicklund 1971; Cressman 1996:Sheet 3).

**Table 3: Soil Types**

Soil Code	Soil Type	Parent Material	Topography	Drainage
Bg	Burford gravelly loam	Loam or sandy loam overlying gravelly soil materials	Gently sloping	Good
Bu	Burford cobbly loam	Loam or sandy loam overlying gravelly soil materials	Gently sloping	Good
Ca	Caledon sandy loam	Outwash sand and gravel deposits (sandy loam sediments overlying gravel)	Nearly level	Good
Cd	Colwood loam	Loam and silt loam	Level	Poor
Cm	Camilla sandy loam	Outwash gravel deposits (sandy loam sediments overlying gravel)	Level	Imperfect
Dn	Donald loam	Loam and sandy loam sediments overlying gravel	Level	Imperfect
Hr	Hespler sandy loam	Sandy loam	Level	Poor
Mc	Organic soil	Coarse textured soil materials	Level	Very poor
Mn	Martin sand and gravel	Sand and gravel deposits	Level	Variable
Sj	St. Jacobs loam	Well-drained loam and silt loam over gravel deposits	Very gently sloping	Good
Wa	Waterloo fine sandy loam	Fine sandy loam lacustrine deposits	Gently sloping	Good

The subject lands fall within the Middle Grand drainage basin, which is under the jurisdiction of the Grand River Conservation Authority (GRCA 2021). Specifically, the study area is traversed by the Grand River and several of its tributaries as well as a handful of associated wetlands.

At the time of assessment, the study area comprised the roadway platforms, shoulders, ditches, culverts and sidewalks associated with Wabanaki Drive, Hidden Valley Road and Hidden Valley Crescent, various driveways and developed properties, as well as agricultural fields, wooded areas and overgrown areas. Soil conditions were ideal for the activities conducted. No unusual physical features were encountered that affected the results of the Stage 1 assessment.

### 1.3.2 Registered or Known Archaeological Sites

The Ontario Archaeological Sites Database and the Ontario Public Register of Archaeological Reports were consulted to determine whether any registered or known archaeological resources occur within a 1 km radius of the study area. The available search facility returned a total of 23

registered sites located within at least a 1 km radius (the facility returns sites in a rectangular area, rather than a radius, potentially resulting in returns beyond the specified distance). In terms of other known resources (e.g., Isolated Non-Diagnostic Find Spots, Leads or unreported deposits), six unregistered sites were identified within a 1 km radius. The sites are summarized in Table 4.

**Table 4: Registered or Known Archaeological Sites**

Borden No. / ID No.	Site Name / Identifier	Time Period	Affinity	Site Type	Distance from Study Area
AiHc-12	Dalgleish	Woodland	Indigenous	Camp/Campsite	> 1 km
AiHc-58	Displaced	Post-Contact	Unspecified	Dump	> 1 km
AiHc-83	Jacob Furtney Homestead	Post-Contact	Euro-Canadian	Homestead	Within
AiHc-89	George Israel	Post-Contact	Euro-Canadian	Homestead, house, outbuilding	> 1 km
AiHc-91	Breslau Farms IV	Unknown	Unspecified	Unspecified	> 1 km
AiHc-93	-	Pre-Contact	Indigenous	Camp/Campsite	> 1 km
AiHc-96	Old Chicapee II	Early Woodland	Indigenous	Findspot	> 1 km
AiHc-123	Gateway 1	Early Archaic	Indigenous	Findspot	> 1 km
AiHc-124	Gateway 2	Late Archaic, Middle Woodland	Indigenous	Findspot	> 1 km
AiHc-125	Woolner	Middle Archaic	Indigenous	Findspot	> 1 km
AiHc-194	Deer Ridge	Pre-Contact	Indigenous	Unspecified	300 m–1 km
AiHc-205	Shupe	Post-Contact	Euro-Canadian	Building, homestead	> 1 km
AiHc-241	-	Pre-Contact	Indigenous	Unspecified	> 1 km
AiHc-258	-	Pre-Contact	Indigenous	Small scatter, campsite	> 1 km
AiHc-439	-	Pre-Contact	Indigenous	Findspot	> 1 km
AiHc-440	-	Pre-Contact	Indigenous	Findspot	> 1 km
AiHc-441	-	Pre-Contact	Indigenous	Findspot	> 1 km
AiHc-443	Robson	Post-Contact	Euro-Canadian	Midden	> 1 km
AiHc-473	E. Snider	Post-Contact	Euro-Canadian	Homestead	> 1 km
AiHc-490	-	Pre-Contact, Post-Contact	Indigenous, Euro-Canadian	Burial, other refuse	> 1 km
AiHc-492	-	Middle Archaic	Indigenous	Short-term campsite	> 1 km
AiHc-505	-	Pre-Contact	Indigenous	Scatter	> 1 km
AiHc-508	Riverbank	Woodland	Indigenous	Hunting loss	> 1 km
Unregistered	Location 1 (Detritus 2015)	Post-Contact	Euro-Canadian	Findspot	Within
Unregistered	Location 2 (Detritus 2015)	Post-Contact	Euro-Canadian	Findspot	Within
Unregistered	Location 1	Unknown	Unspecified	Unspecified	300 m–1 km
Unregistered	Location 2	Unknown	Unspecified	Unspecified	300 m–1 km
Unregistered	Location 3	Unknown	Unspecified	Unspecified	300 m–1 km
Unregistered	Location 5	Unknown	Unspecified	Unspecified	300 m–1 km

The Jacob Furtney Homestead (AiHc-83), Location 1 and Location 2 are located within the study area. As relevant archaeological resources that could impact fieldwork strategy decisions and recommendations, these sites are fully discussed in Section 1.3.3. The remaining sites are located over 300 m away and represent distant archaeological resources.

### **1.3.3 Previous Archaeological Work**

Reports documenting assessments conducted within the subject lands and assessments that resulted in the discovery of sites within adjacent lands were sought during the research component of the study. In order to ensure that all relevant past work was identified, an investigation was launched to identify reports involving assessments within 50 m of the study area. The investigation determined that there are 10 available reports documenting previous archaeological fieldwork within the specified distance (Map 7; SD Map 1). The relevant results and recommendations are summarized below as required by Section 7.5.8 Standards 4–5 of the 2011 S&Gs.

#### *1.3.3.1 Jacob Furtney Homestead (Stage 4)*

Although the early assessments of the Jacob Furtney Homestead were conducted in the 1980s and were not available at the time of writing, a Stage 4 excavation was conducted in May 1996 under Licence #96-015 (MHC 1996). The excavated area falls on part of Lot 8, Registered Plan 1741 within the residential development in the southeast portion of the study area. The investigation resulted in the discovery of only a few artifacts, and no cultural features were encountered. The site was fully mitigated and was not recommended for further assessment (MHC 1996:10). The overlapping area of previous assessment is therefore of no further archaeological concern.

#### *1.3.3.2 Wabanaki Road Extension (Stage 1–2)*

Between October and November 2001, Stage 1 and 2 assessments were conducted for the proposed Wabanaki Road extension from Goodrich Drive to Fairway Road under CIF #2001-007-010 (PAC 2001). The assessed area traverses the western portion of the study area. The Stage 1 assessment identified multiple areas of archaeological potential, and the Stage 2 assessment did not result in the discovery of any archaeological materials. The property was not recommended for further assessment (PAC 2001:6). The overlapping area of previous assessment is therefore of no further archaeological concern.

#### *1.3.3.3 602 Hidden Valley Road (Stage 1–2)*

Between October and November 2002, Stage 1 and 2 assessments were conducted in support of an application of severance for a property located at 602 Hidden Valley Road under CIF #2002-047-018 (Detritus 2002). The assessed area overlaps the northeastern portion of the study area near the bridge over the Grand River. The Stage 1 assessment identified minimal archaeological potential, and the Stage 2 assessment did not result in the discovery of any archaeological materials. The property was not recommended for further assessment (Detritus 2002:8). The overlapping area of previous assessment is therefore of no further archaeological concern.

#### *1.3.3.4 572 Hidden Valley Road (Stage 1–2)*

Between March and April 2003, Stage 1 and 2 assessments were conducted in support of an application of severance for a property located at 572 Hidden Valley Road under CIF #2002-047-022 (Detritus 2003). The assessed area traverses the northeastern portion of the study area south of the Highway 8 right-of-way (ROW). The Stage 1 assessment identified minimal archaeological potential, and the Stage 2 assessment did not result in the discovery of any archaeological

materials. The property was not recommended for further assessment (Detritus 2003:8). The overlapping area of previous assessment is therefore of no further archaeological concern.

#### *1.3.3.5 1038 Hidden Valley Road (Stage 1–2)*

In July 2003, Stage 1 and 2 assessments were conducted in support of a draft plan of subdivision for lands located on Lot 8, Registrars Compiled Plan 1519 and Block 30, Registered Plan 1740 under CIF #2003-53-053 (Archaeologix 2003). The assessed area encompasses the extant subdivision within the southwestern part of the study area. The Stage 1 assessment identified areas of archaeological potential and an area of no archaeological potential resulting from deep disturbances caused by gravel extraction activities. The Stage 2 assessment of the identified areas of archaeological potential did not result in the identification of any archaeological materials. The property was not recommended for further assessment (Archaeologix 2003:10). The overlapping area of previous assessment is therefore of no further archaeological concern.

#### *1.3.3.6 Highway 8 and Fairway Road Interchange Improvements (Stage 1)*

In August 2003, a Stage 1 assessment was conducted for the proposed reconstruction and widening of a 2.0 km section of Highway 8 from 0.5 km north of the Grand River Bridge northerly to Fergus Avenue as well as improvements to Fairway Boulevard under CIF #050-013 (ASI 2003). The assessed area overlaps the northern portion of the study area between Highway 8 and the Fairway Road interchange. The Stage 1 assessment identified archaeological potential beyond the ROWs and it was recommended that a Stage 2 archaeological assessment be conducted prior to development (ASI 2003:6).

#### *1.3.3.7 Highway 8 Reconstruction and Widening (Stage 1–2)*

In June 2006, Stage 1 and 2 assessments were conducted for the proposed reconstruction and widening of Highway 8 from 1 km north of the Grand River to Sportsworld Drive under CIF #P035-026-2006 (AMAA 2007). The assessed area abuts the northeastern edge of the study area. The Stage 1 assessment identified archaeological potential, and the Stage 2 assessment did not result in the discovery of any archaeological materials. The assessed area was not recommended for further assessment (AMAA 2007:10).

#### *1.3.3.8 Wabanaki Drive Extension Class EA (Stage 1–2)*

In November 2008, Stage 1 and 2 assessments were conducted for the proposed extension of Wabanaki Drive from Wilson Avenue to Goodrich Drive under PIF #P223-011-2008 (ASI 2009). The assessed area traverses the southwestern portion of the study area. The Stage 1 assessment identified multiple areas of archaeological potential, and the Stage 2 assessment of the identified areas of potential did not result in the discovery of any archaeological materials. The assessed area was not recommended for further assessment (ASI 2009:7). The overlapping area of previous assessment is therefore of no further archaeological concern.

#### *1.3.3.9 Hidden Valley Road Development (Stage 1–2)*

In August 2011, Stage 1 and 2 assessments were conducted for lands on the south side of Hidden Valley Road under PIF #P017-197-2011 (Detritus 2015). The assessed area overlaps the southwestern portion of the study area. The Stage 1 assessment determined that the majority of the property had archaeological potential. The Stage 2 assessment resulted in the discovery of two isolated Euro-Canadian findspots (Locations 1–2). These sites were found to be of no further cultural heritage value or interest, and the assessed area was not recommended for further assessment (Detritus 2015:11). The overlapping area of previous assessment is therefore of no further archaeological concern.

#### *1.3.3.10 River Road Phase 1 (Stage 1–2)*

Between May 2018 and November 2019, Stage 1 and 2 assessments were conducted for the proposed extension of Regional Road No. 56 (River Road) between Wabanaki Drive and Manitou Drive under PIF #P089-0092-2018 (ARA 2020). The assessed area traverses the western portion of the study area. The Stage 1 assessment identified a mixture of areas of archaeological potential, areas of no archaeological potential and previously assessed lands of no further concern. The Stage 2 assessment did not result in the identification of any archaeological materials. The assessed area was not recommended for further assessment (ARA 2020:18). The overlapping area of previous assessment is therefore of no further archaeological concern.

## **2.0 STAGE 1 BACKGROUND STUDY**

### **2.1 Background**

The Stage 1 assessment involved background research to document the geography, history, previous archaeological fieldwork and current land condition of the study area. This desktop examination included research from archival sources, archaeological publications and online databases. It also included the analysis of a variety of historical maps and aerial imagery. The results of the research conducted for the background study are summarized below.

With occupation beginning approximately 11,000 years ago, the greater vicinity of the study area comprises a complex chronology of Pre-Contact and Post-Contact histories (Section 1.2). Artifacts associated with Palaeo, Archaic, Woodland and Early Contact traditions are well-attested in the City of Kitchener, and Euro-Canadian archaeological sites dating to pre-1900 and post-1900 contexts are likewise common. The presence of 29 previously identified sites in the surrounding area demonstrates the desirability of this locality for early settlement (Section 1.3.2). The investigation confirmed that three of these sites fall within the subject lands. Background research identified multiple areas of previous assessment within the study area (Section 1.3.3).

The natural environment of the study area would have been attractive to both Indigenous and Euro-Canadian populations as a result of proximity to the Grand River, its tributaries and associated wetlands. The majority of the soils would have been ideal for agriculture, and the diverse local vegetation would also have encouraged settlement throughout Ontario's lengthy history. Euro-Canadian populations would have been particularly drawn to Hidden Valley Road, Goodrich Drive and Cameo Drive, all of which were historically-surveyed thoroughfares.

In summary, the background study included an up-to-date listing of sites from the Ontario Archaeological Sites Database (within at least a 1 km radius), the consideration of previous local archaeological fieldwork (within at least a 50 m radius), the analysis of historical maps (at the most detailed scale available) and the study of aerial imagery. ARA therefore confirms that the standards for background research set out in Section 1.1 of the 2011 *S&Gs* were met.

### **2.2 Field Methods (Property Inspection)**

In order to gain first-hand knowledge of the geography, topography and current condition of the study area, a property inspection was conducted on April 27, 2021. Environmental conditions were ideal during the inspection, with partly cloudy skies, bright lighting and a temperature of 10 °C. ARA therefore confirms that fieldwork was carried out under weather and lighting conditions that met the requirements set out in Section 1.2 Standard 2 of the 2011 *S&Gs*.

The study area was subjected to random spot-checking in accordance with the requirements set out in Section 1.2 of the 2011 *S&Gs*. The inspection confirmed that all surficial features of archaeological potential were present where they were previously identified and did not result in the identification of any additional features of archaeological potential not visible on mapping (e.g., relic water channels, patches of well-drained soils, etc.).

The inspection determined that parts of the study area were disturbed by past roadworks, residential development and associated infrastructure. Permanently wet areas and sloped lands were also encountered. No other natural features (e.g., overgrown vegetation, heavier soils than expected, etc.) that would affect assessment strategies were identified. Three built heritage resources (602, 681 and 691 Hidden Valley Road) and three cultural heritage landscapes (Hidden Valley Road, Hidden Valley Road - Heritage Corridor and the Grand River Corridor) were documented during ARA's concurrent heritage assessment (ARA 2021). No other significant built features (e.g., plaques, monuments, cemeteries, etc.) were identified.

### 2.3 Analysis and Conclusions

In addition to relevant historical sources and the results of past archaeological assessments, the archaeological potential of a property can be assessed using its soils, hydrology and landforms as considerations. Section 1.3.1 of the 2011 *S&Gs* recognizes the following features or characteristics as indicators of archaeological potential: previously identified sites, water sources (past and present), elevated topography, pockets of well-drained sandy soil, distinctive land formations, resource areas, areas of Euro-Canadian settlement, early transportation routes, listed or designated properties, historic landmarks or sites, and areas that local histories or informants have identified with possible sites, events, activities or occupations.

The Stage 1 assessment resulted in the identification of several features of archaeological potential in the vicinity of the study area (Map 8; SD Map 2). The closest and most relevant indicators of archaeological potential (i.e., those that would directly affect survey interval requirements) include 3 previously identified sites (AiHc-83, Location 1 and Location 2), 4 primary water sources (the Grand River and three of its tributaries), 10 secondary water sources (parts of the Grandview Provincial Wetland, Hidden Valley Wetland Provincial Swamp, Lower Freeport Creek Wetland Complex and 4 unnamed wetlands), 2 physiographic landforms (an eroded scarp and an esker), 8 historical transportation routes (a ford across the Grand River, Cameo Drive, Goodrich Drive, 2 iterations of Hidden Valley Road and 3 unnamed roads) and multiple historical structure localities (19<sup>th</sup> and early 20<sup>th</sup>-century structures). Background research did not identify any features indicating that the study area has potential for deeply buried archaeological resources.

Although proximity to a feature of archaeological potential is a significant factor in the potential modelling process, current land conditions must also be considered. Section 1.3.2 of the 2011 *S&Gs* emphasizes that 1) quarrying, 2) major landscaping involving grading below topsoil, 3) building footprints and 4) sewage/infrastructure development can result in the removal of archaeological potential, and Section 2.1 states that 1) permanently wet areas, 2) exposed bedrock and 3) steep slopes (> 20°) can also be considered as having no archaeological potential. Areas previously assessed and not recommended for further work also require no further assessment.

Three locations of archaeological materials were identified within the study area: the Jacob Furtney Homestead (AiHc-83), Location 1 and Location 2. None of these sites were recommended for further assessment. Multiple previously assessed areas of no further concern were also identified within the subject lands, none of which warrant additional assessment.

ARA's visual inspection, coupled with the analysis of historical sources and digital environmental data, resulted in the identification of multiple areas of no archaeological potential within the remaining lands. Specifically, deep land alterations have resulted in the removal of archaeological potential from multiple roadway platforms, shoulders and ditches as well as residential developments and related infrastructure (Image 1–Image 6). These areas had clearly been impacted by past earth-moving/construction activities, resulting in the disturbance of the original soils to a significant depth and severe damage to the integrity of any archaeological resources.

Several areas of previously assessed lands were photo-documented during the property inspection (Image 7–Image 8), and a variety of natural areas of no archaeological potential were identified. Lands sloped  $> 20^\circ$  were encountered in the central, eastern and southwestern portions of the study area (Image 9–Image 12), and a large permanently wet area was found in the north-centre. Various smaller permanently wet areas were also documented in the east and south (Image 13–Image 15). The remainder of the study area has potential for Indigenous and Euro-Canadian archaeological materials, requires test pit survey to confirm the presence/extent of any subsurface disturbances or must be subject to a visual inspection to clarify potential. The areas of archaeological potential include agricultural fields, wooded areas, overgrown areas and lawns (Image 16–Image 24).

In summary, the Stage 1 assessment determined that the study area comprises a mixture of areas of archaeological potential, areas of no archaeological potential and previously assessed lands of no further concern. The potential modelling results are presented in Map 9. The project lands ('study area') are depicted as a layer in this map.

### 3.0 RECOMMENDATIONS

The Stage 1 assessment determined that the study area comprises a mixture of areas of archaeological potential, areas of no archaeological potential and previously assessed lands of no further concern. It is recommended that all identified areas of archaeological potential be subject to a Stage 2 property assessment in accordance with Section 2.1 of the 2011 *S&Gs*. Although the study area was defined to include part of the Grand River, it is ARA's understanding that the City has no intention to conduct any works within the river. If any such works are contemplated, a marine assessment would be required prior to any river impacts.

The agricultural fields must be assessed using the pedestrian survey method at an interval of 5 m. All ground surfaces must be recently ploughed (typically within the month prior to assessment), weathered by one heavy rainfall or several light rains, and provide at least 80% visibility. If archaeological materials are encountered, the transect interval must be decreased to at least 1 m and a close inspection of the ground must be conducted over a minimum of a 20 m radius around the find. This interval must be continued until the full extent of the scatter has been defined.

The wooded areas, overgrown areas and lawns must be assessed using the test pit survey method. A survey interval of 5 m will be required due to the proximity of the lands to the identified features of archaeological potential. Given the likelihood that several parts of the study area were impacted by past construction activities, a combination of visual inspection and test pit survey should be utilized to confirm the extent of disturbance in accordance with Section 2.1.8 of the 2011 *S&Gs*. This will allow for the empirical evaluation of the integrity of the soils and the depth of any impacts. If disturbance cannot be confirmed, then a test pit survey interval of 5 m must be maintained. Each test pit must be excavated into at least the first 5 cm of subsoil, and the resultant pits must be examined for stratigraphy, potential features and/or evidence of fill. The soil from each test pit must be screened through mesh with an aperture of no greater than 6 mm and examined for archaeological materials. If archaeological materials are encountered, all positive test pits must be documented and intensification may be required.

One area along the northern edge of the study area appears to be either sloped  $> 20^\circ$  or permanently wet, but this locality could not be inspected due to a lack of permission to enter the property and its distance from accessible public areas. This area must be subject to a visual inspection to confirm that it has no archaeological potential. If archaeological potential is identified, these lands must be assessed using the test pit survey method outlined above.

The identified areas of no archaeological potential and previously assessed lands of no further concern do not require any additional assessment. Given that there are still outstanding archaeological concerns within the project lands, no ground alterations or development of any kind may occur until the Stage 2 assessment is complete, a recommendation that the lands require no further archaeological assessment is made, and the associated report is entered into the Ontario Public Register of Archaeological Reports.

#### 4.0 ADVICE ON COMPLIANCE WITH LEGISLATION

Section 7.5.9 of the 2011 *S&Gs* requires that the following information be provided for the benefit of the proponent and approval authority in the land use planning and development process:

- This report is submitted to the Minister of Heritage, Sport, Tourism and Culture Industries as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the MHSTCI, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.
- It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.
- The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 requires that any person discovering human remains must notify the police or coroner and the Registrar at the Ministry of Government and Consumer Services.

## 5.0 IMAGES



**Image 1: Disturbed Lands**  
(April 27, 2021; Facing Southwest)



**Image 2: Disturbed Lands**  
(April 27, 2021; Facing South)



**Image 3: Disturbed Lands**  
(April 27, 2021; Facing South)



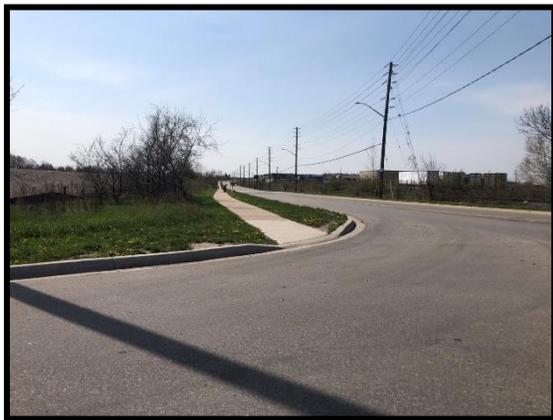
**Image 4: Disturbed Lands**  
(April 27, 2021; Facing Southwest)



**Image 5: Disturbed Lands**  
(April 27, 2021; Facing Southwest)



**Image 6: Disturbed Lands**  
(April 27, 2021; Facing North)



**Image 7: Previously Assessed Lands**  
(April 27, 2021; Facing South)



**Image 8: Previously Assessed Lands**  
(April 27, 2021; Facing Southeast)



**Image 9: Sloped Lands**  
(April 27, 2021; Facing Southeast)



**Image 10: Sloped Lands**  
(April 27, 2021; Facing North)



**Image 11: Sloped Lands**  
(April 27, 2021; Facing South)



**Image 12: Sloped Lands**  
(April 27, 2021; Facing West)



**Image 13: Permanently Wet Lands**  
(April 27, 2021; Facing North)



**Image 14: Permanently Wet Lands**  
(April 27, 2021; Facing West)



**Image 15: Permanently Wet Lands**  
(April 27, 2021; Facing South)



**Image 16: Area of Potential**  
(April 27, 2021; Facing East)



**Image 17: Area of Potential**  
(April 27, 2021; Facing West)



**Image 18: Area of Potential**  
(April 27, 2021; Facing Southwest)



**Image 19: Area of Potential**  
(April 27, 2021; Facing Northeast)



**Image 20: Area of Potential**  
(April 27, 2021; Facing North)



**Image 21: Area of Potential**  
(April 27, 2021; Facing East)



**Image 22: Area of Potential**  
(April 27, 2021; Facing North)

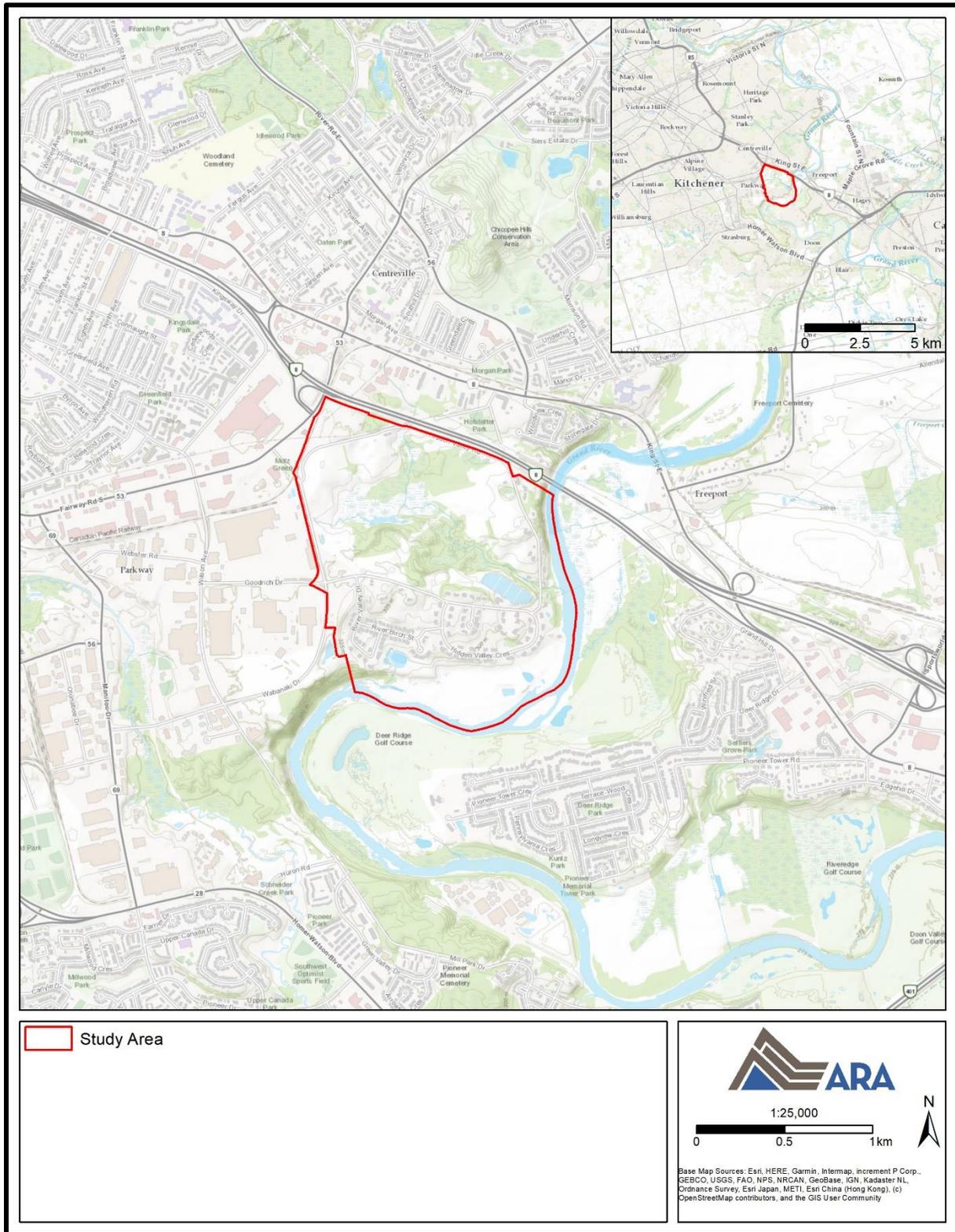


**Image 23: Area of Potential**  
(April 27, 2021; Facing South)

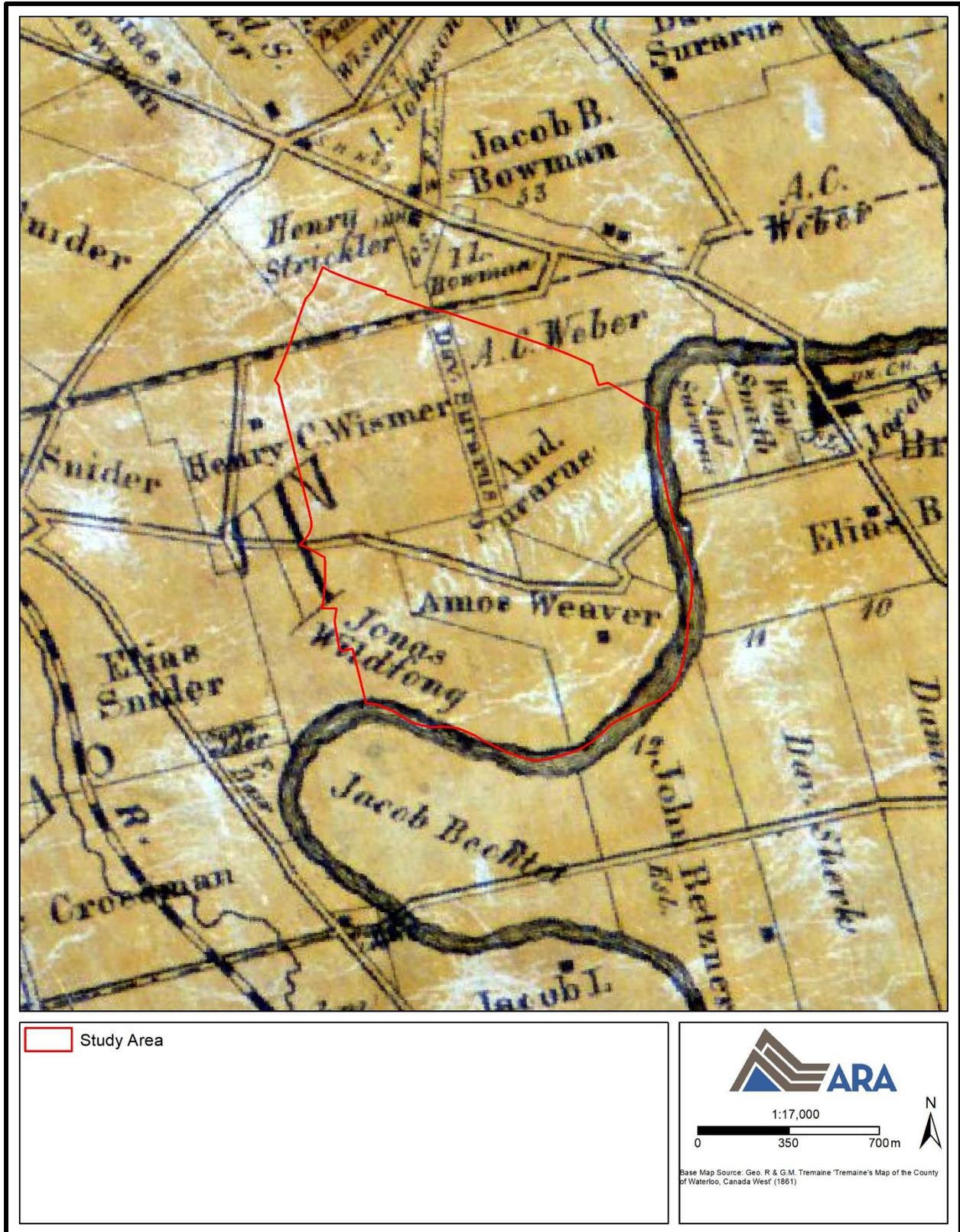


**Image 24: Area of Potential**  
(April 27, 2021; Facing Southeast)

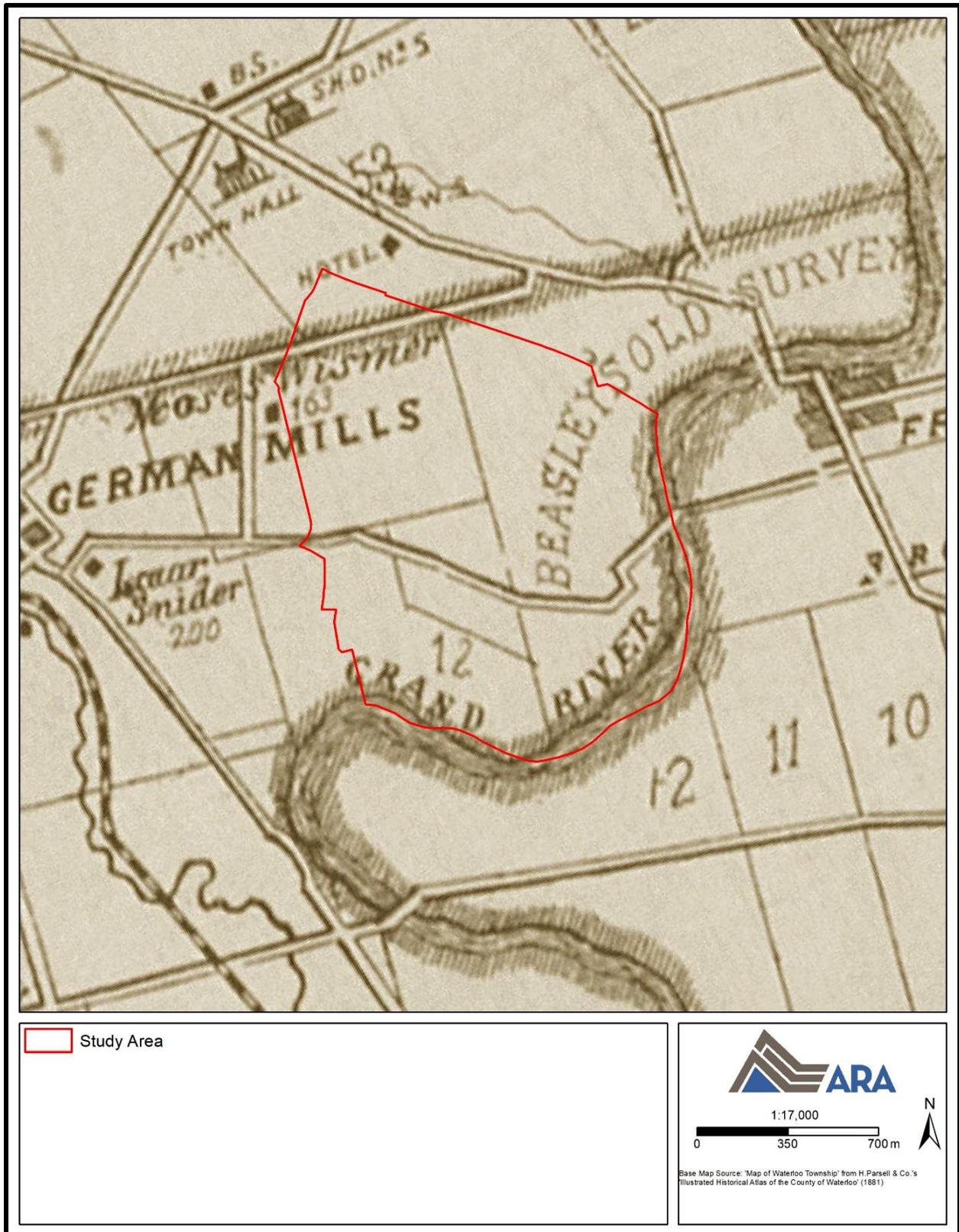
## 6.0 MAPS



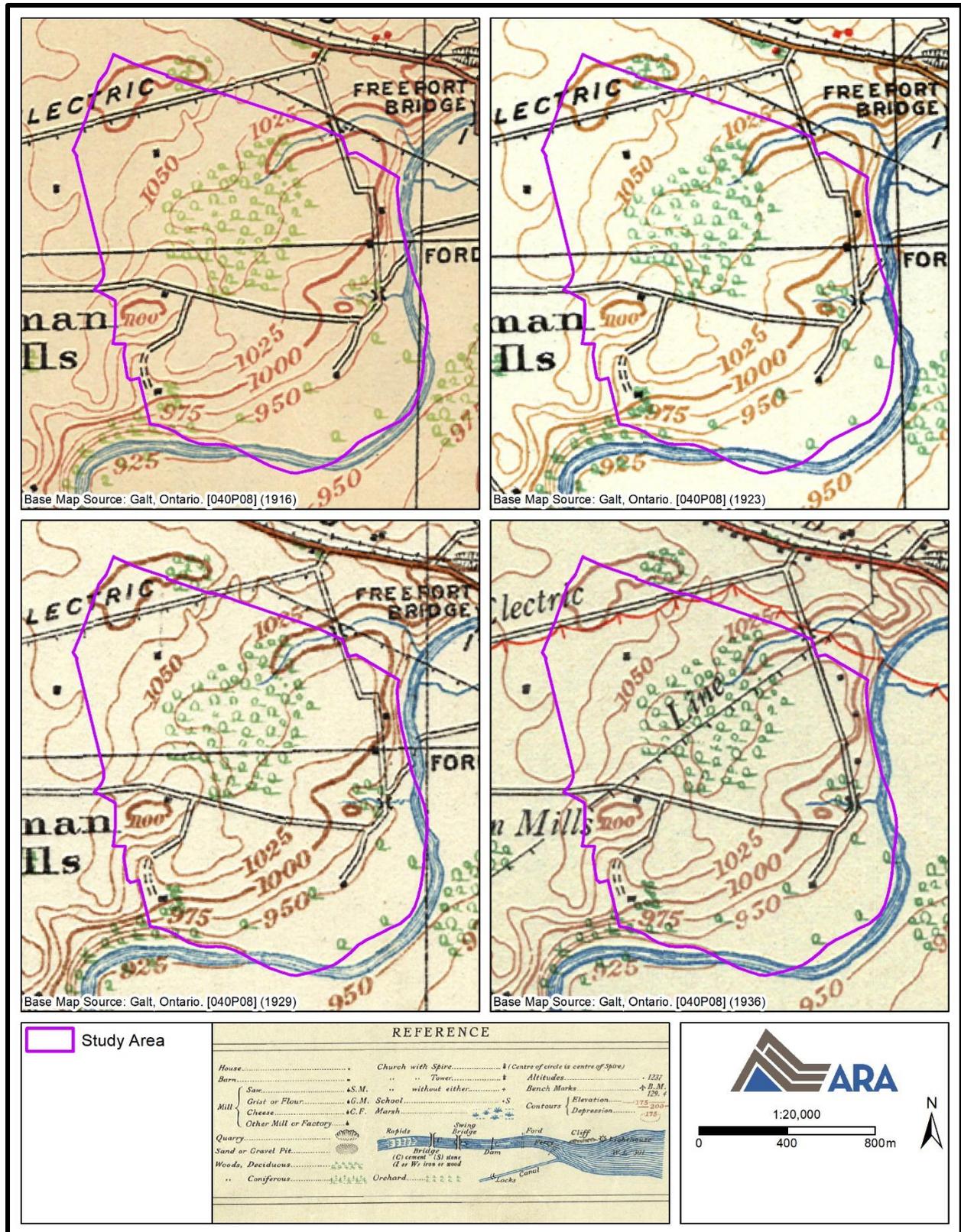
**Map 1: Location of the Study Area**  
(Produced under licence using ArcGIS® software by Esri, © Esri)



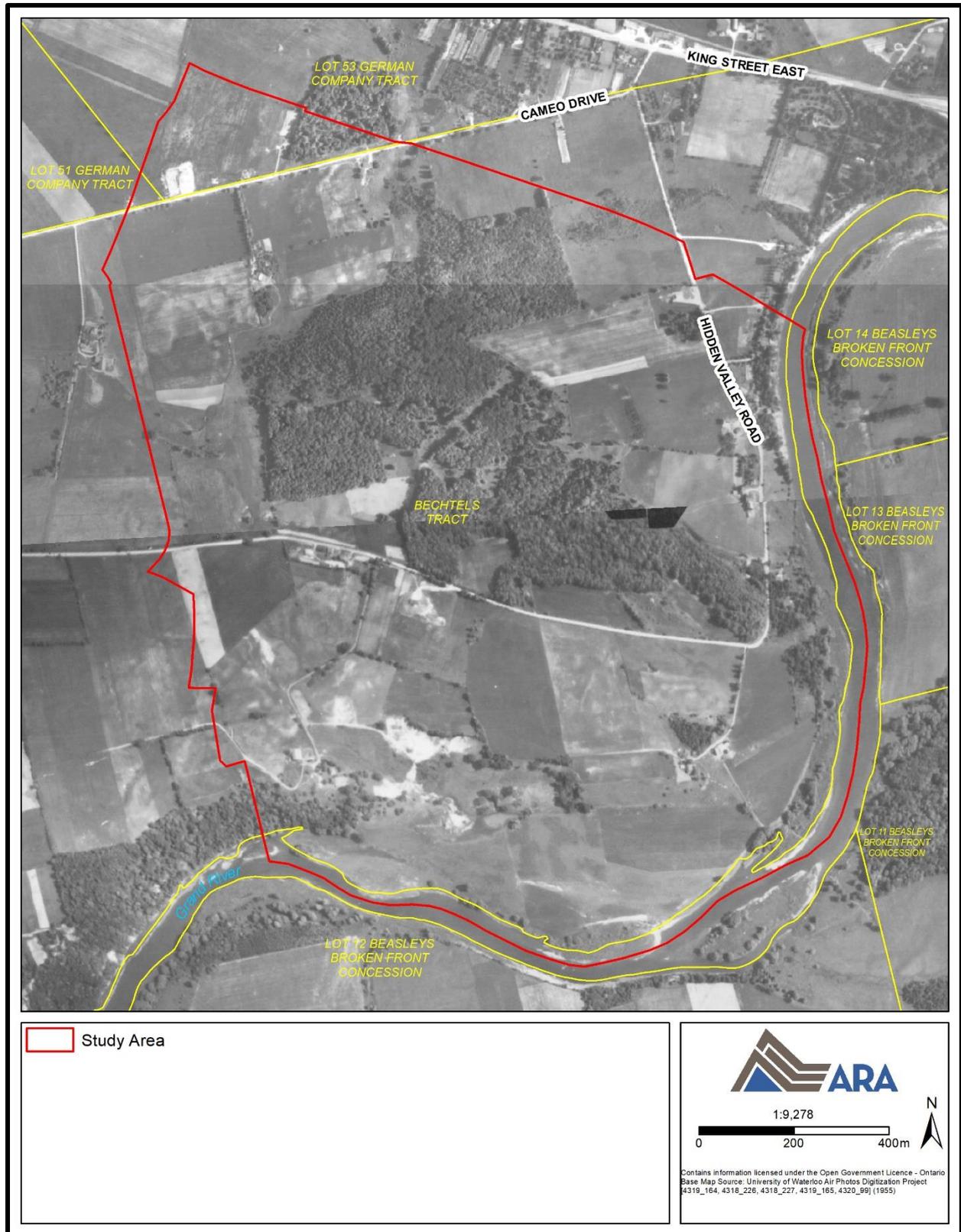
**Map 2: Tremaine's Map of the County of Waterloo, Canada West (1861)**  
(Produced under licence using ArcGIS® software by Esri, © Esri; OHCMP 2019)



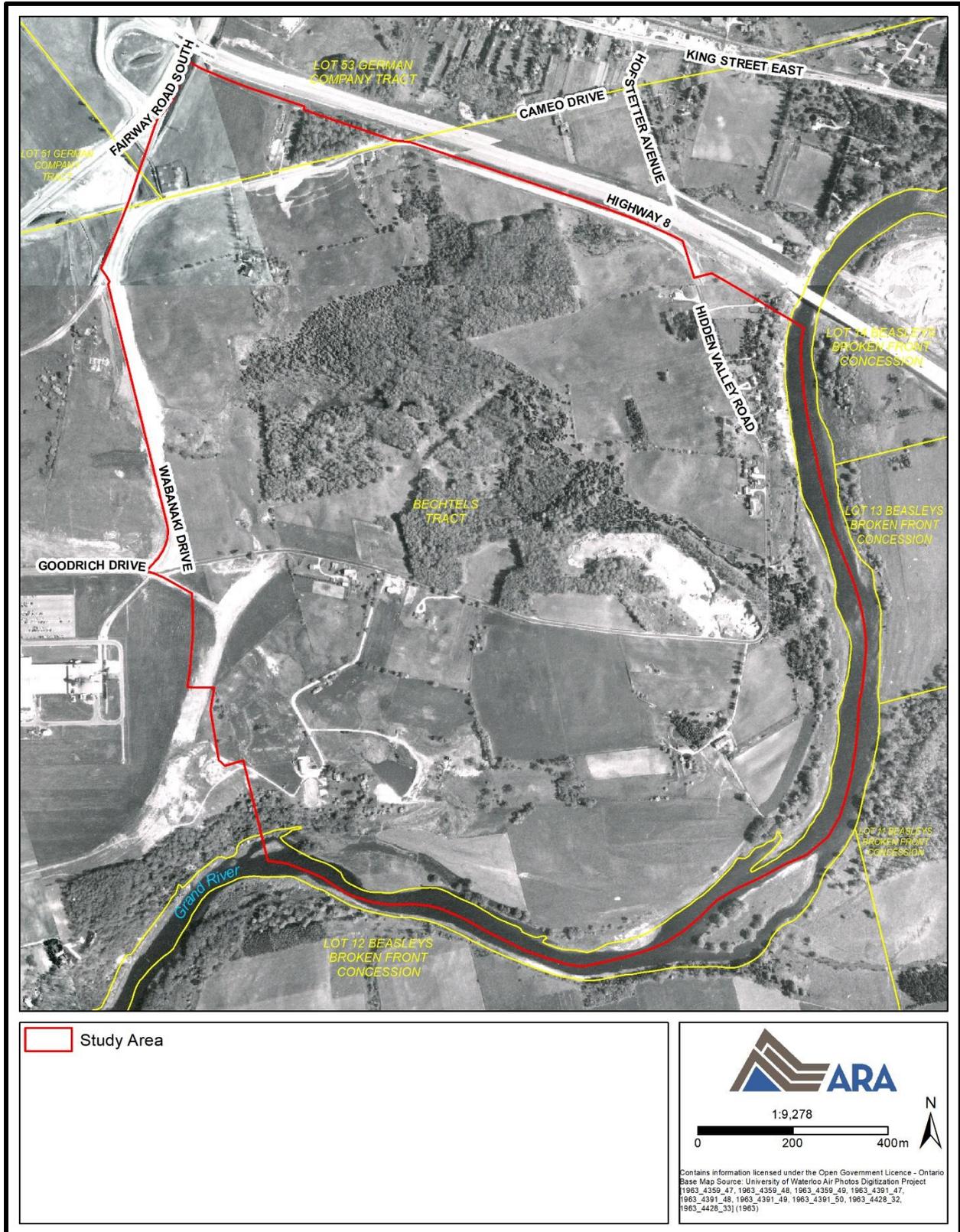
**Map 3: The Illustrated Historical Atlas of the County of Waterloo, Ont. (1881)**  
(Produced under licence using ArcGIS® software by Esri, © Esri; McGill University 2001)



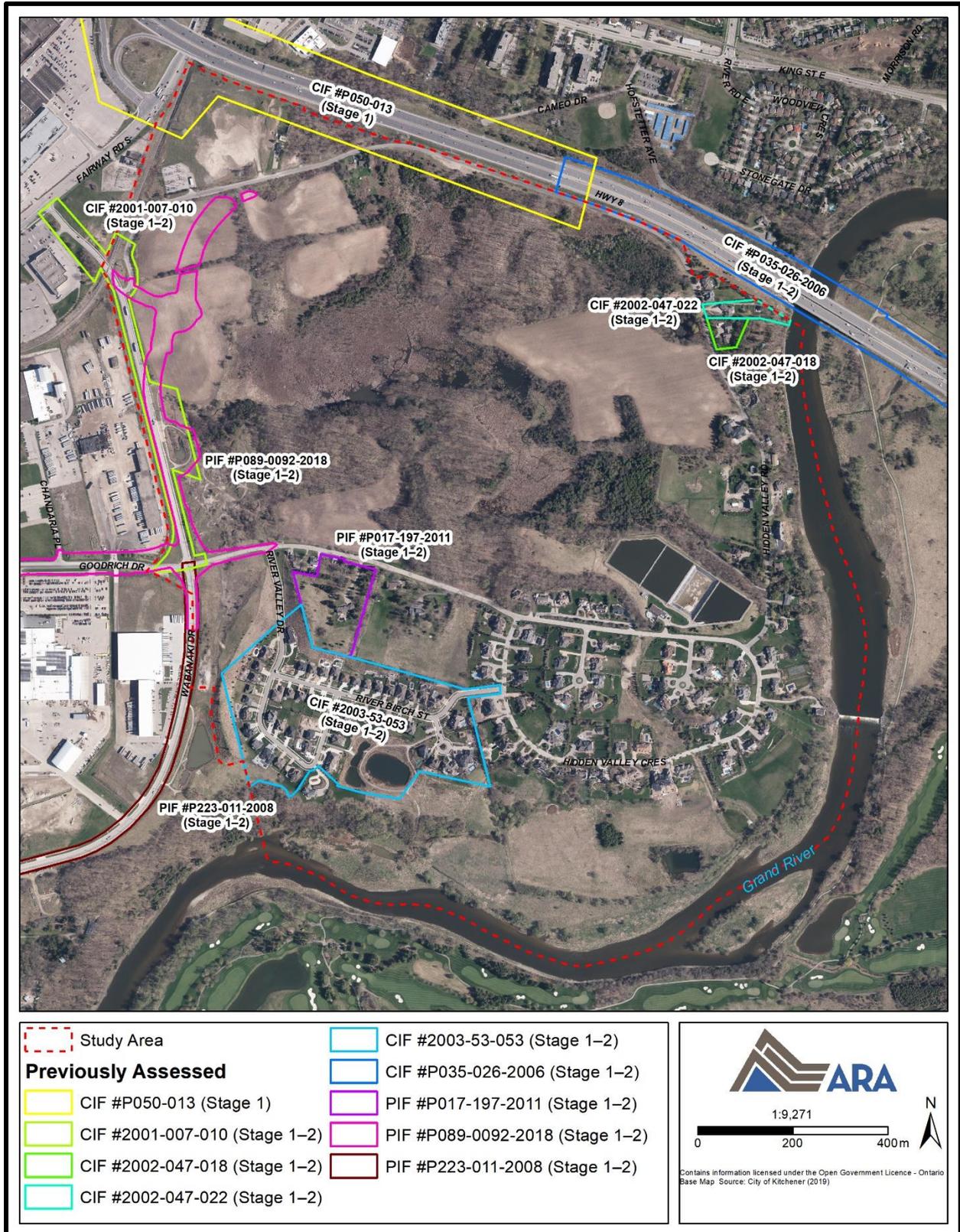
**Map 4: Topographic Maps (1916–1936)**  
 (Produced under licence using ArcGIS® software by Esri, © Esri, OCUL 2021)



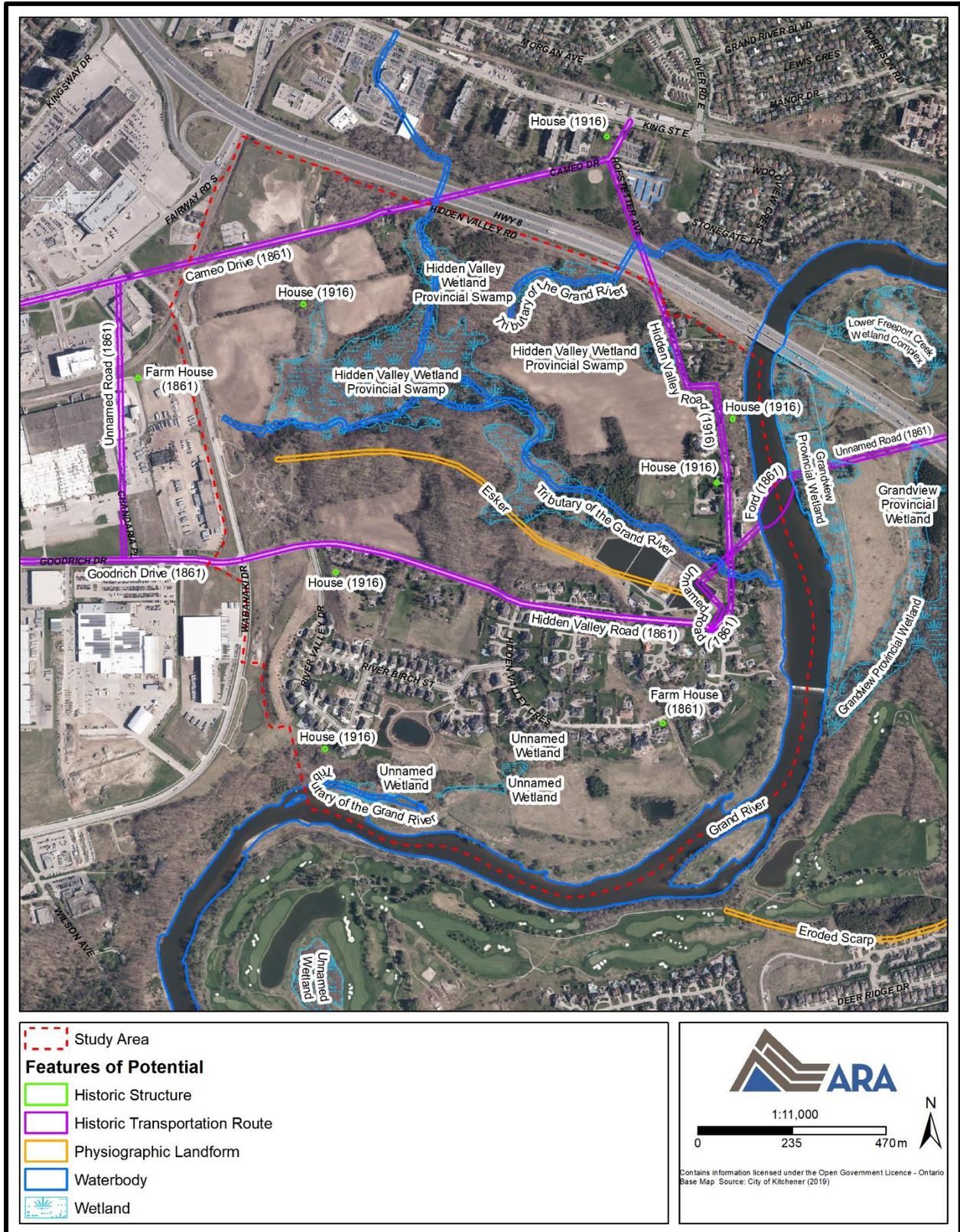
**Map 5: Aerial Image (1955)**  
(Produced under licence using ArcGIS® software by Esri, © Esri; University of Waterloo 2021)

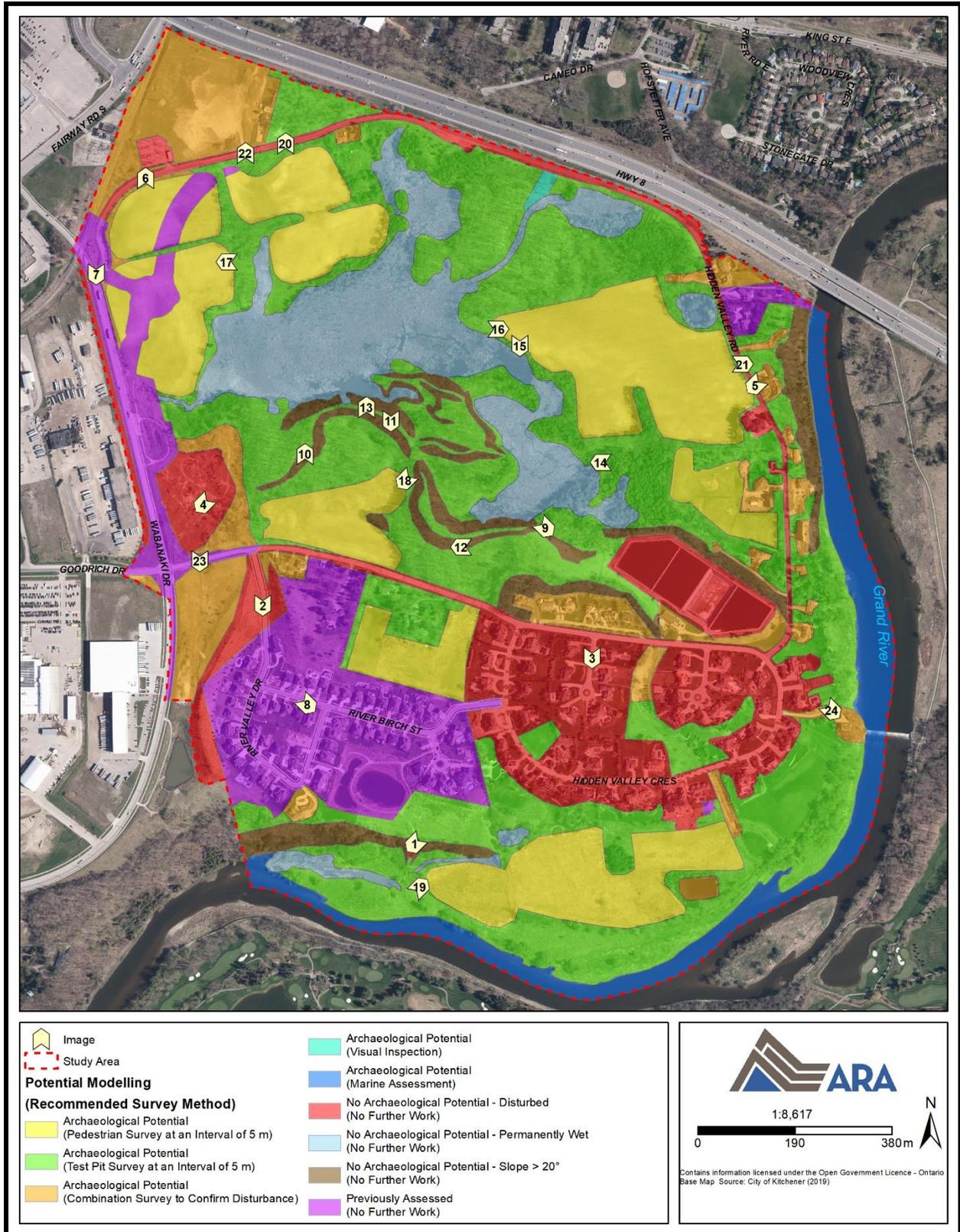


**Map 6: Aerial Image (1963)**  
(Produced under licence using ArcGIS® software by Esri, © Esri; University of Waterloo 2021)



**Map 7: Previous Assessments (Stage 1-2)**  
 (Produced under licence using ArcGIS® software by Esri, © Esri)





**Map 9: Potential Modelling and Recommendations**  
 (Produced under licence using ArcGIS® software by Esri, © Esri)

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**Stage 1 Archaeological Assessment  
Class Environmental Assessment and Preliminary Design  
for Upper Hidden Valley Sanitary Pumping Station and Forcemain  
City of Kitchener  
Regional Municipality of Waterloo  
Part of Lots 51 and 53, German Company Tract & Bechtel's Tract  
Geographic Township of Waterloo  
Former Waterloo County, Ontario**

Prepared for  
**MTE Consultants Inc.**  
520 Bingemans Centre Drive  
Kitchener, ON N2B 3X9  
Tel: (519) 743-6500

Licensed under  
**M. Maika**  
MHSTCI Licence #P1021  
PIF #P1021-0004-2021  
ARA File #2020-0220

**13/10/2021**

**Supplementary Documentation**

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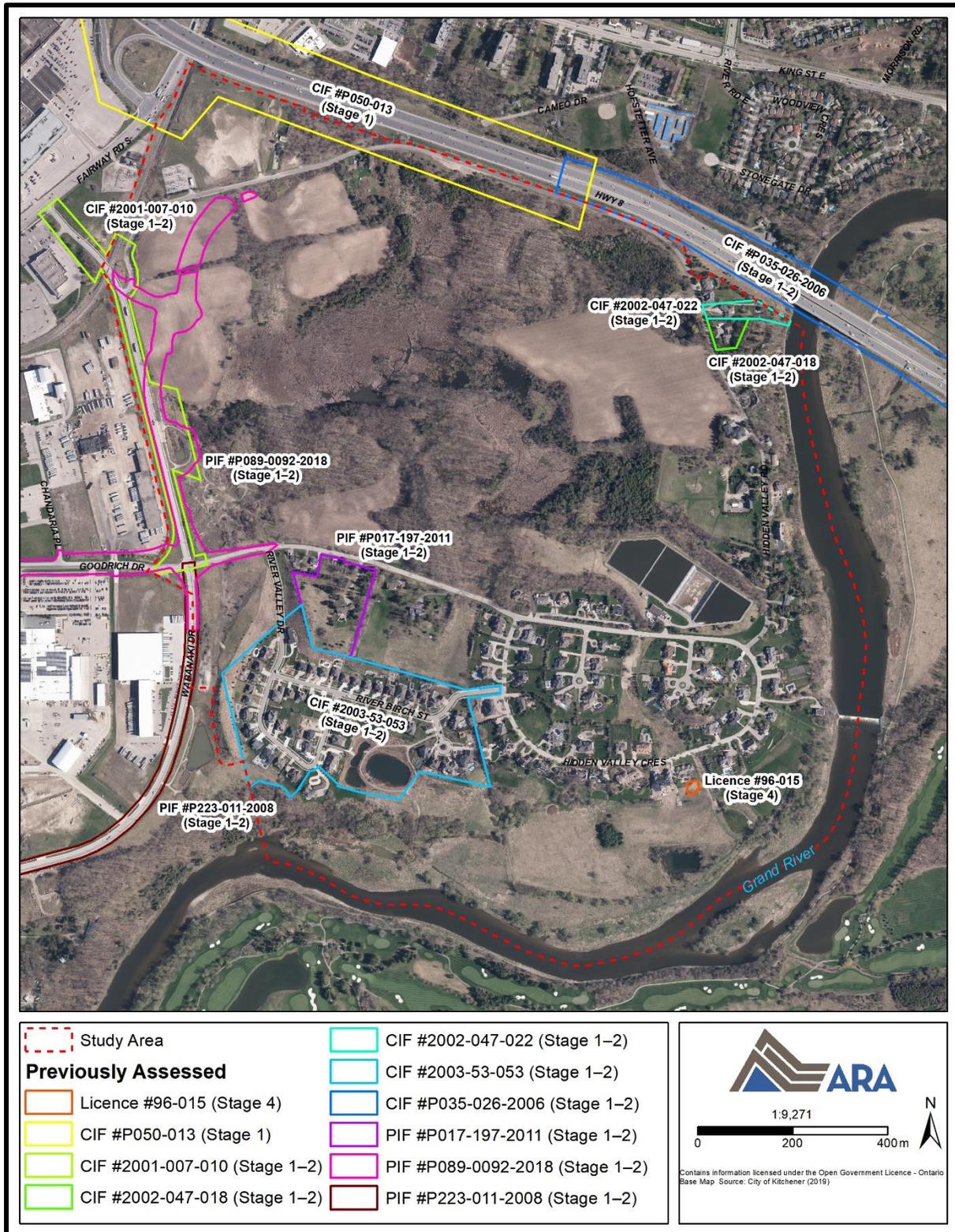
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## **1.0 SUPPLEMENTARY DOCUMENTATION**

### **1.1 Detailed Site Location Information**

In keeping with Section 7.6.1 of the 2011 *Standards and Guidelines for Consultant Archaeologists*, detailed site location information was not included within the project report. The previous assessments located within 50 m of the study area appear in SD Map 1, and the previously identified archaeological sites falling within 300 m are shown in SD Map 2.

## 2.0 SD MAPS



**SD Map 1: Previous Assessments (Stage 1-4)**  
 (Produced under licence using ArcGIS® software by Esri, © Esri)



# Appendix E

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## Technical Memos



**Project Name:** Upper Hidden Valley Sanitary Pumping Station – Class EA

**MTE File No.:** C48301-100

**To:** Katie Wood, City of Kitchener

**Date:** May 18, 2022

**cc:** Gemma Charlebois – MTE Consultants Inc.  
Samir Dhanvantari – MTE Consultants Inc.

**From:** Dave Wilhelm, P.Eng.

---

**RE: Upper Hidden Valley Sanitary Pumping Station, Conceptual Design**

The conceptual design for the Upper Hidden Valley sanitary pumping station is described in the following sections.

**Design Flow:**

MTE has prepared a separate Tech Memo that identifies the sanitary flows for the subject lands within the Study Area. The flows were developed in accordance with the DGSSMS. The pumping station will have a firm capacity of 48 L/s. This capacity includes receiving flows from Area 2B as identified in the City's Land Use Master Plan.

**Design Basis:**

The pumping station design will be based on the City of Kitchener pumping station Design Guidelines and the MECP 2008 Design Guidelines. The structures will be designed to meet the Ontario Building Code.

**Sanitary Pumping Station Conceptual Design:**

City of Kitchener design guidelines and current practices require the following pumping station configuration:

- Wet Well / Dry Well arrangement;
- Multiple pumps located in the Dry Well
- A divided Dry Well with Inlet structure such that either side of the Wet Well can be isolated for inspection / cleaning / maintenance
- Channel grinder at the station inlet
- Magnetic flow meter on the pump discharge
- Standby generator (typically diesel)
- Odour control unit
- Control building complete with bathroom, generator, electrical equipment and station controls/alarms
- Pump and personnel extraction systems
- Emergency Storage Tank (EST) sized for one hour of storage at peak flow



Specifically, for the UHV SPS, it is anticipated that the forcemain will be 200 mm dia. There will be two pumps required. The EST will have a capacity of approximately 173 cubic meters.

The forcemain and gravity inlet sewer are conceptually shown on the attached plan / profile drawings (PP1.1 to PP1.6).

The Conceptual Site Layout for the SPS is shown on the attached Figure 1A.

#### **Construction Costs:**

Construction cost estimates will be prepared during the preliminary and detailed design stages.

#### **Approvals Requirements:**

The following is a listing of the major approvals that will be required:

- Site Plan Approval;
- Building Permit;
- Environmental Compliance Approval; and
- Grand River Conservation Authority approval.

#### **Further Investigation:**

To assist the preliminary design of the pumping station, MTE intends to complete the following investigations:

- Geotechnical report; and
- Hydrogeological assessment of the site.

The conceptual design presented herein is subject to review and confirmation during the preliminary and detailed design stages of the project.

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FUTURE MUNICIPAL ROAD

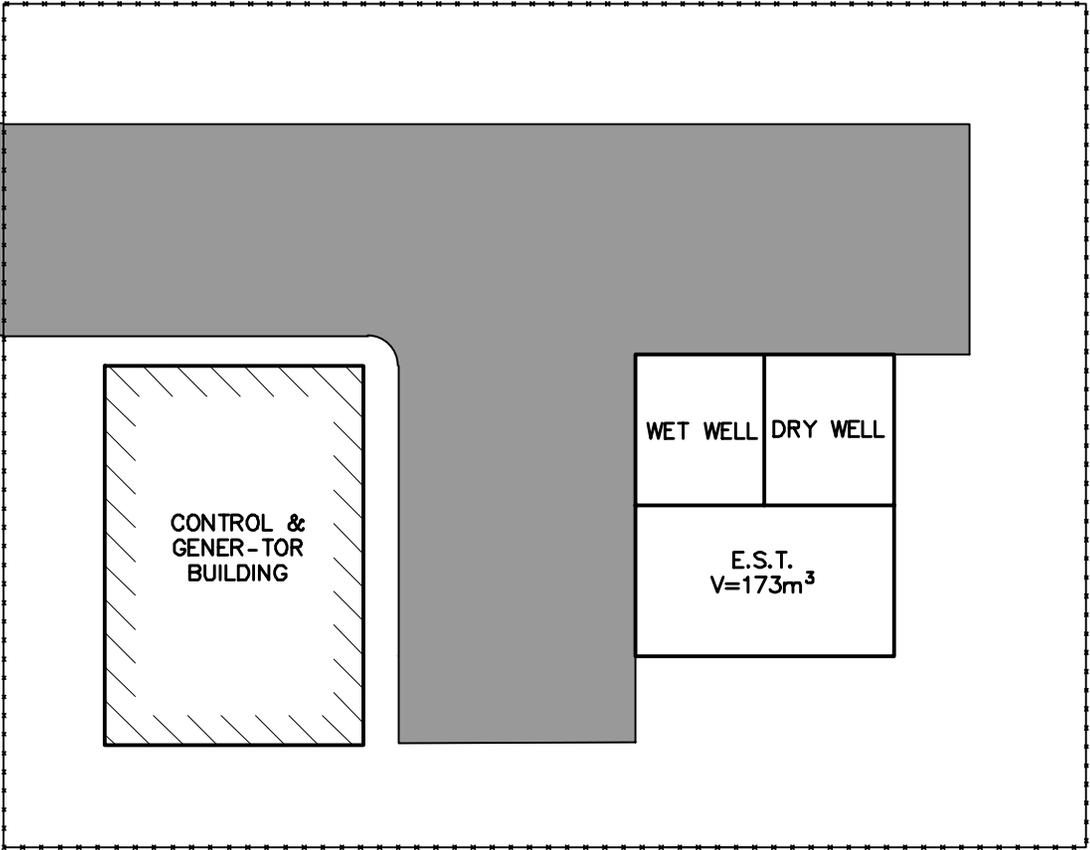


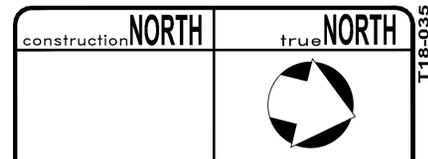
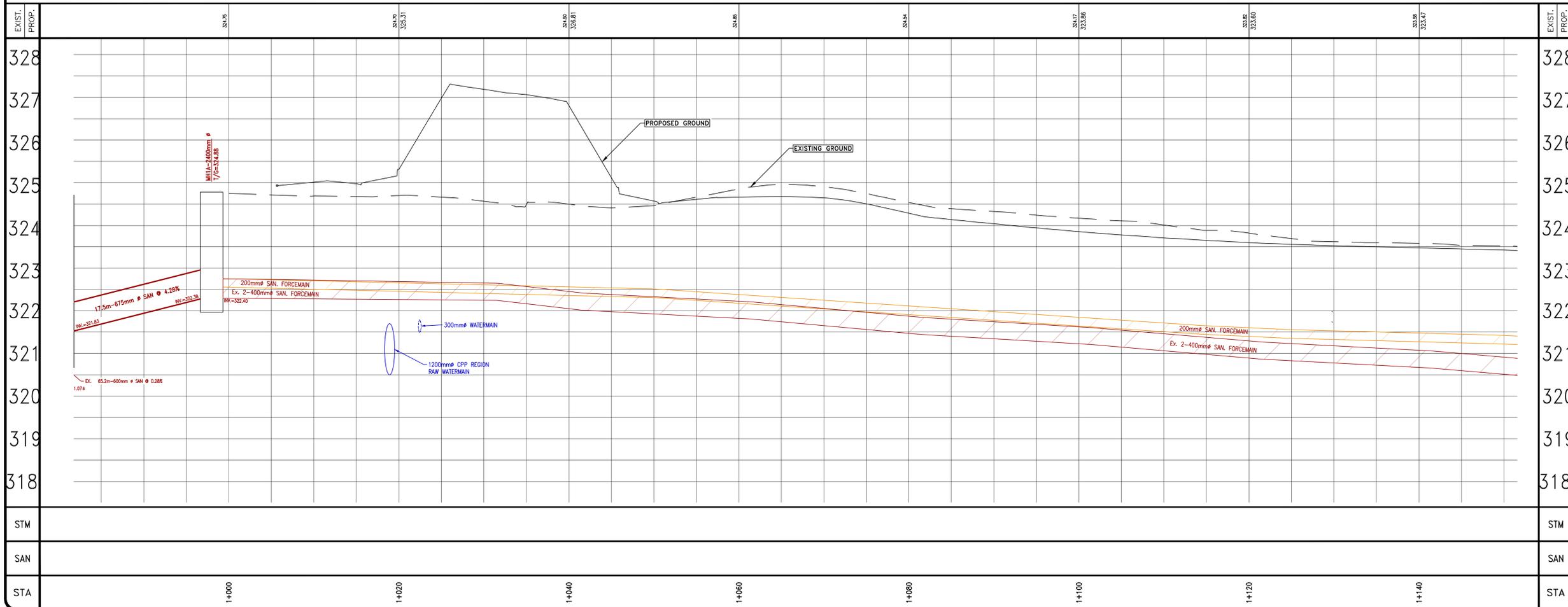
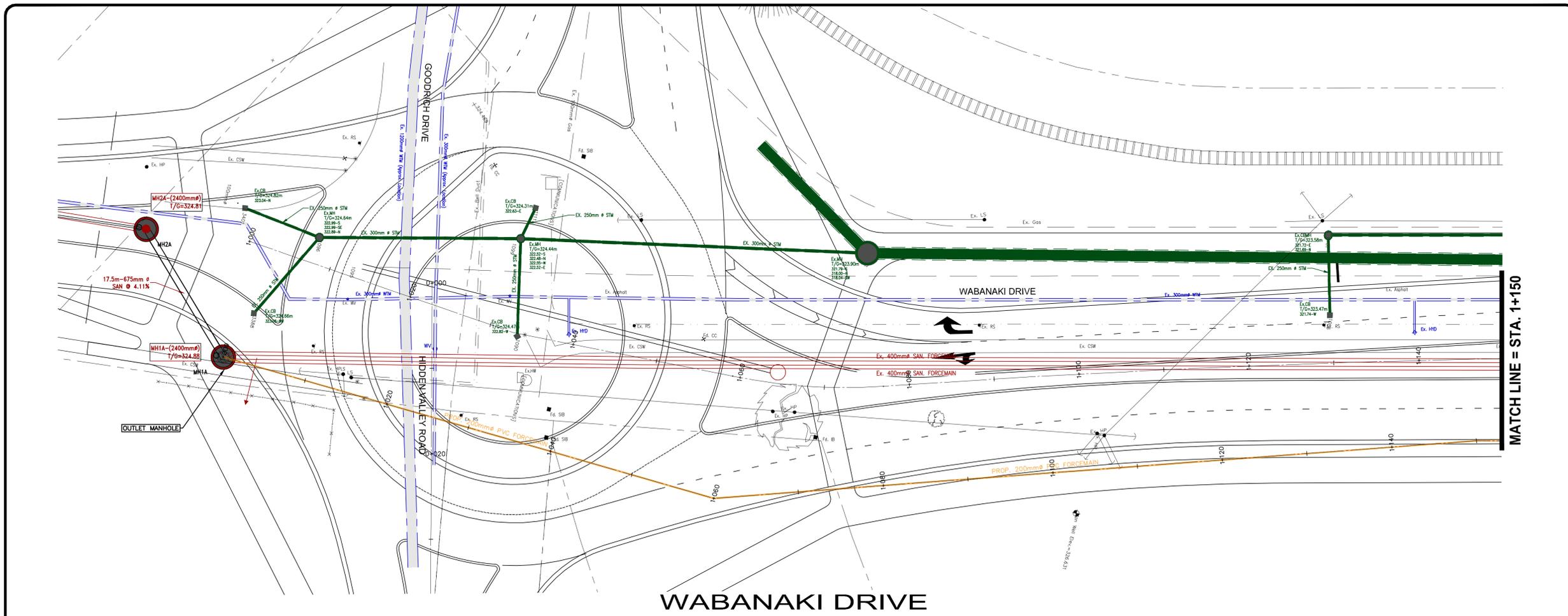
Figure 1A

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**CONCEPTUAL  
SITE LAYOUT**



Engineers, Scientists, Surveyors



THE POSITION OF THE POLE LINES, CONDUITS, WATERMANS, SEWERS, AND OTHER UTILITIES AND STRUCTURES ARE N O T NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED.

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THE CONTRACTOR SHALL CONFIRM THE POSITION AND EXACT LOCATION OF ALL SUCH UTILITIES, AND SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE TO THEM DURING THE COURSE OF THE CONTRACT WORK.

**NOTES:**

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AUG.2015 SURVEY FILE # 40370100A.SDR & 40370100B.SDR. SURVEY COMPLETED BY BMH.

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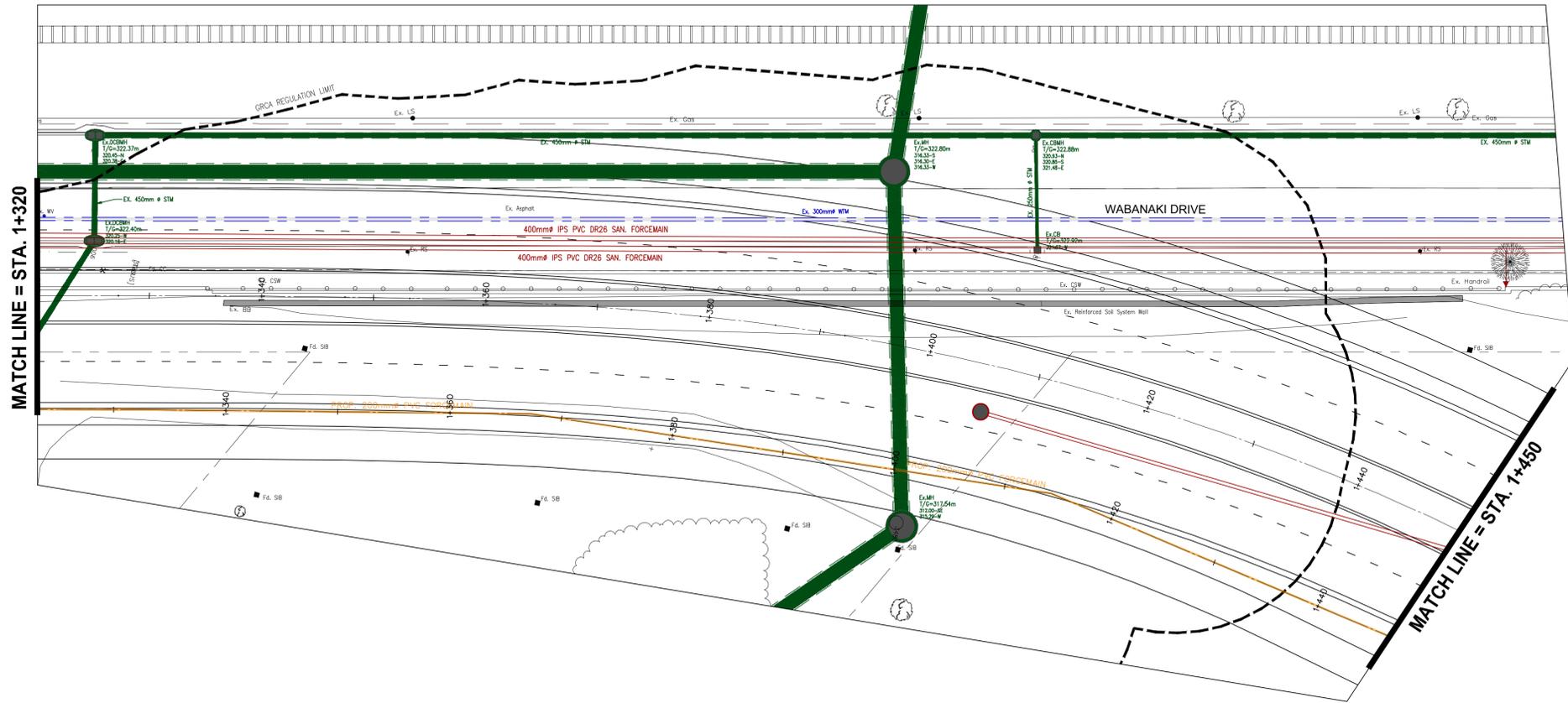
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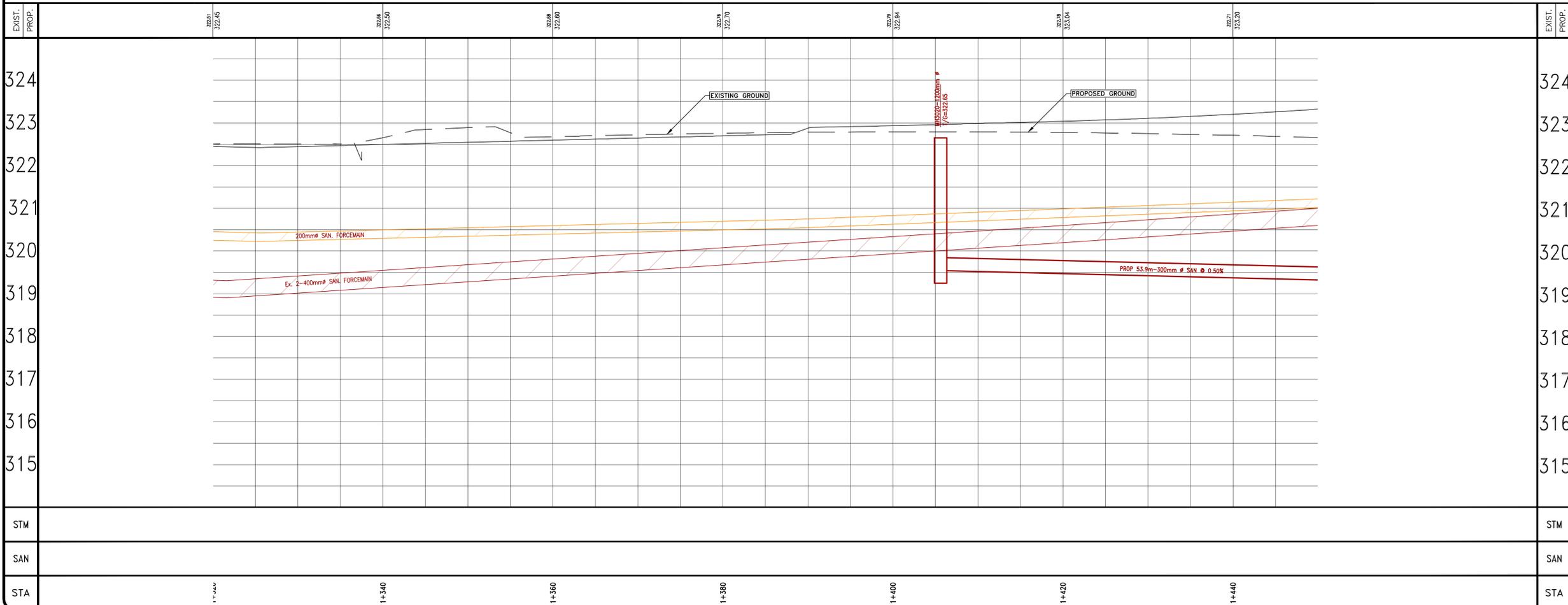
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CONSULTANT DWG. No. 48301-100-PP1.1	SHEET No. 1 of 6	DWG. No. PP1.1

T18-035





WABANAKI DRIVE



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**NOTES:**

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**BENCHMARK**

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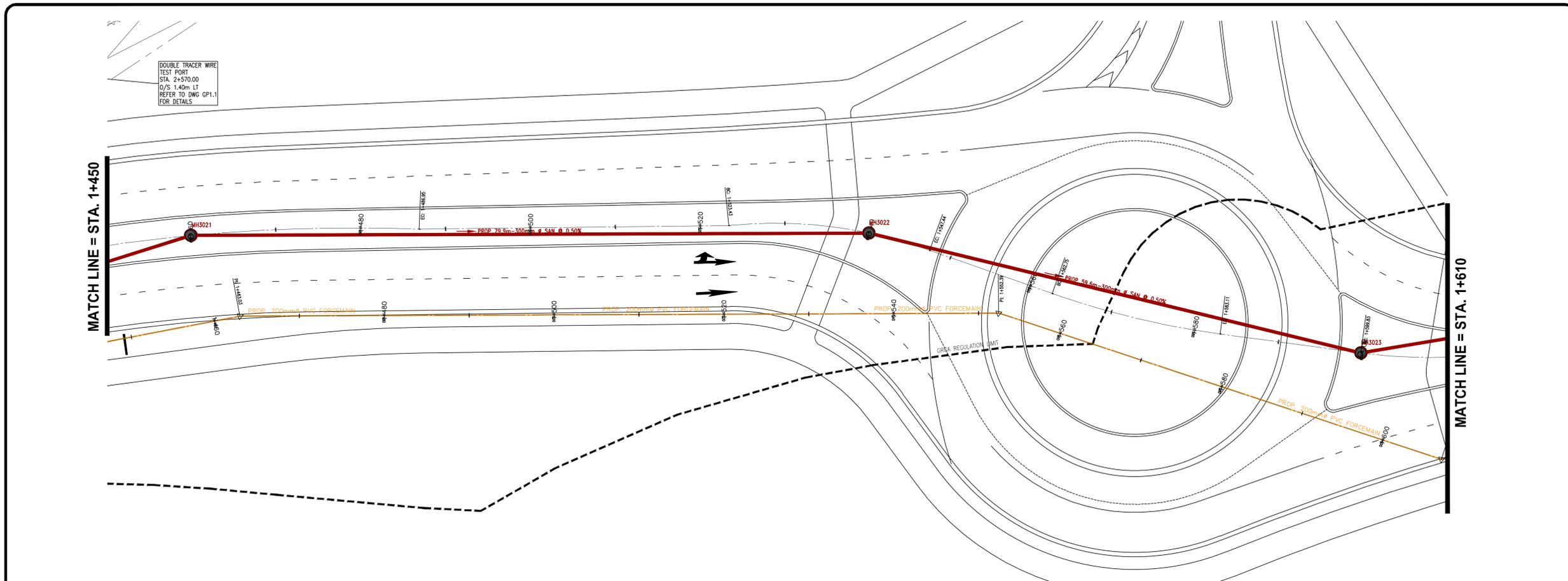
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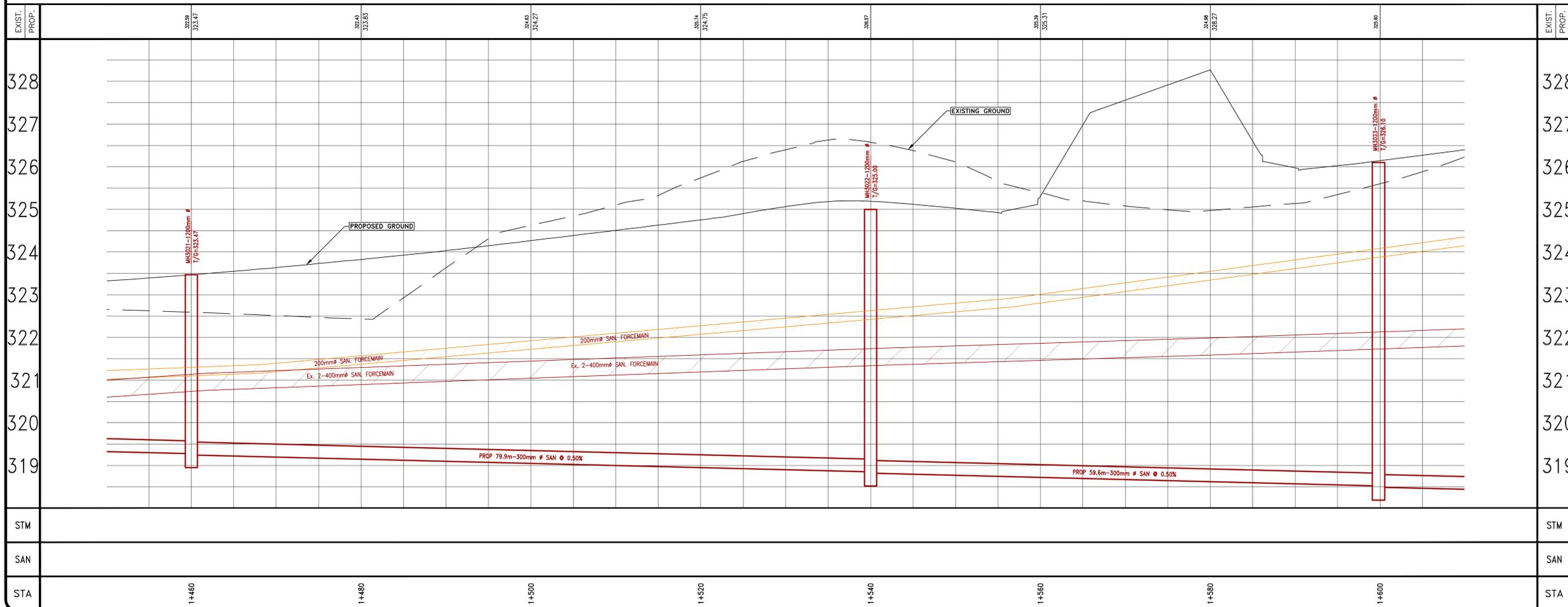
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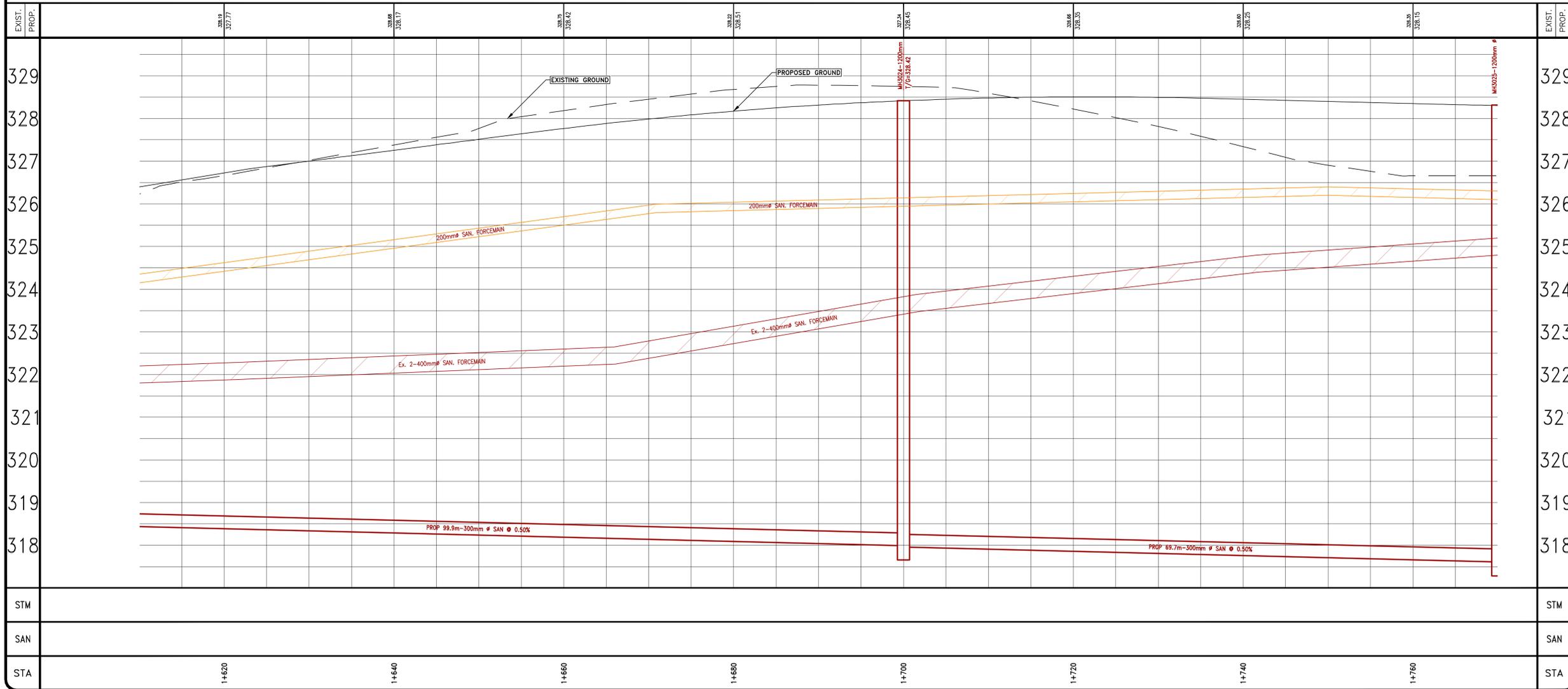
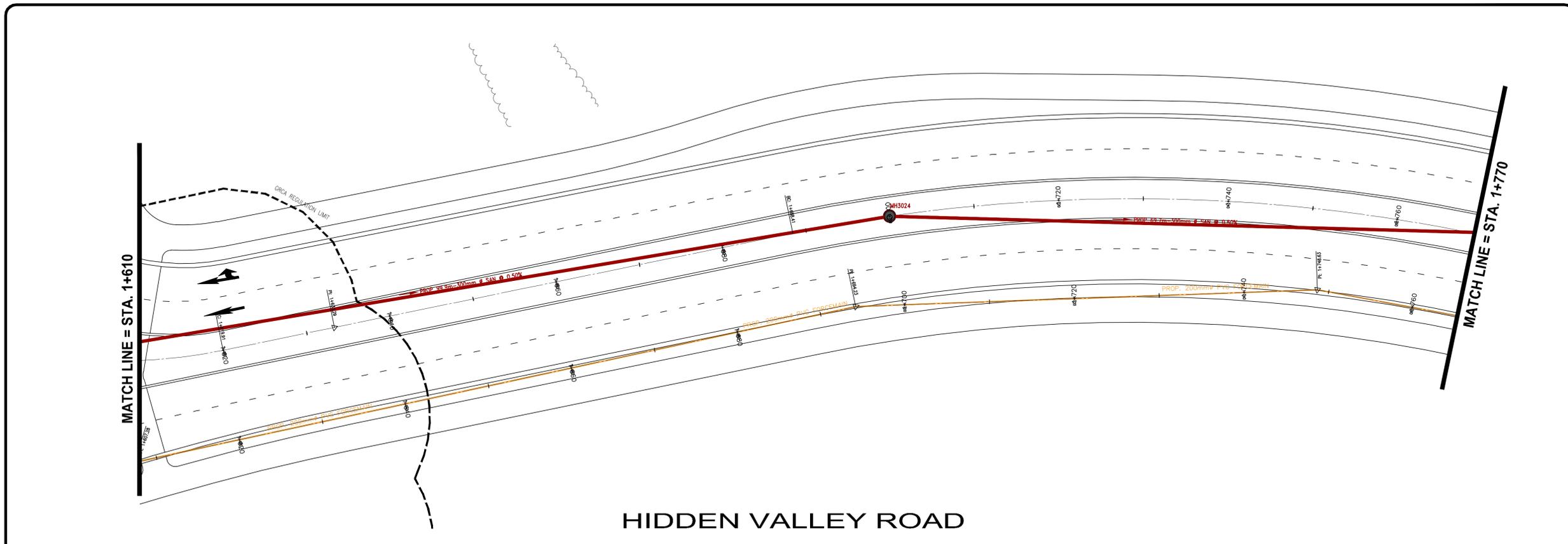
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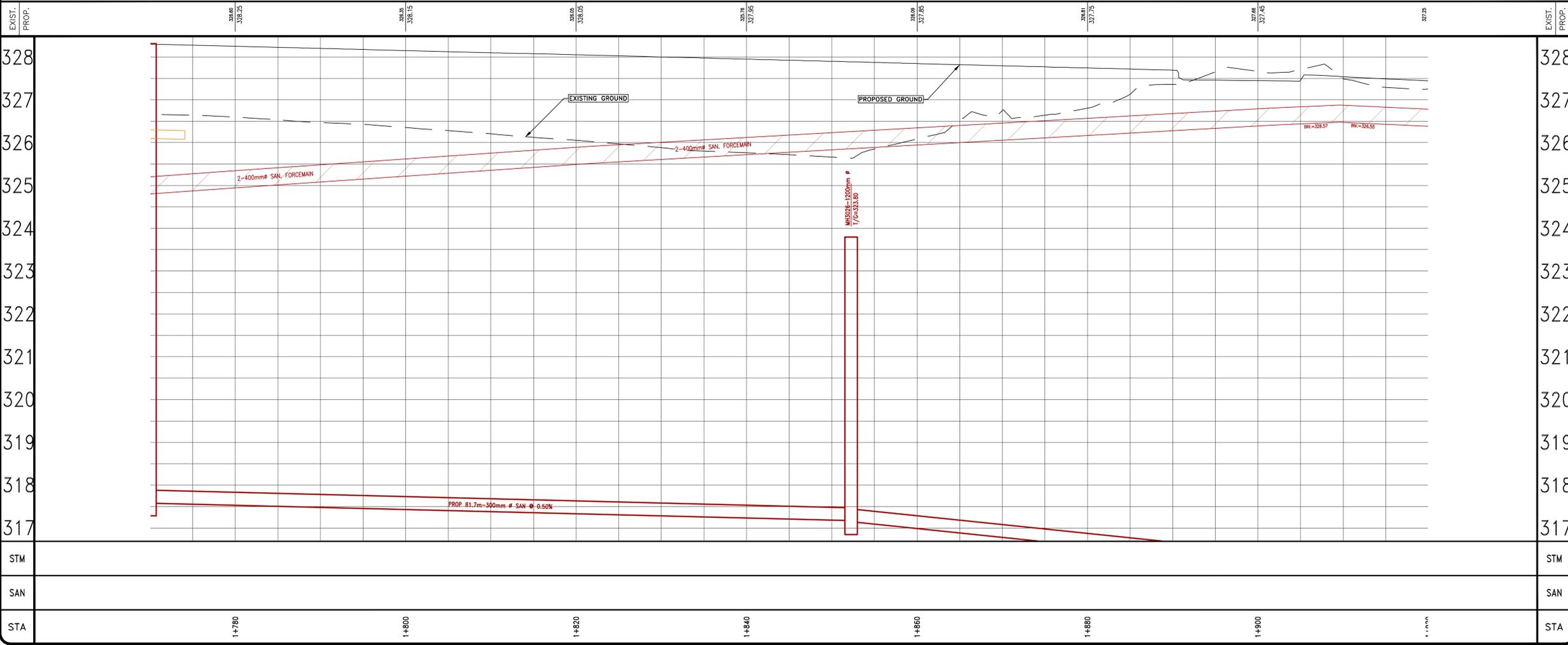
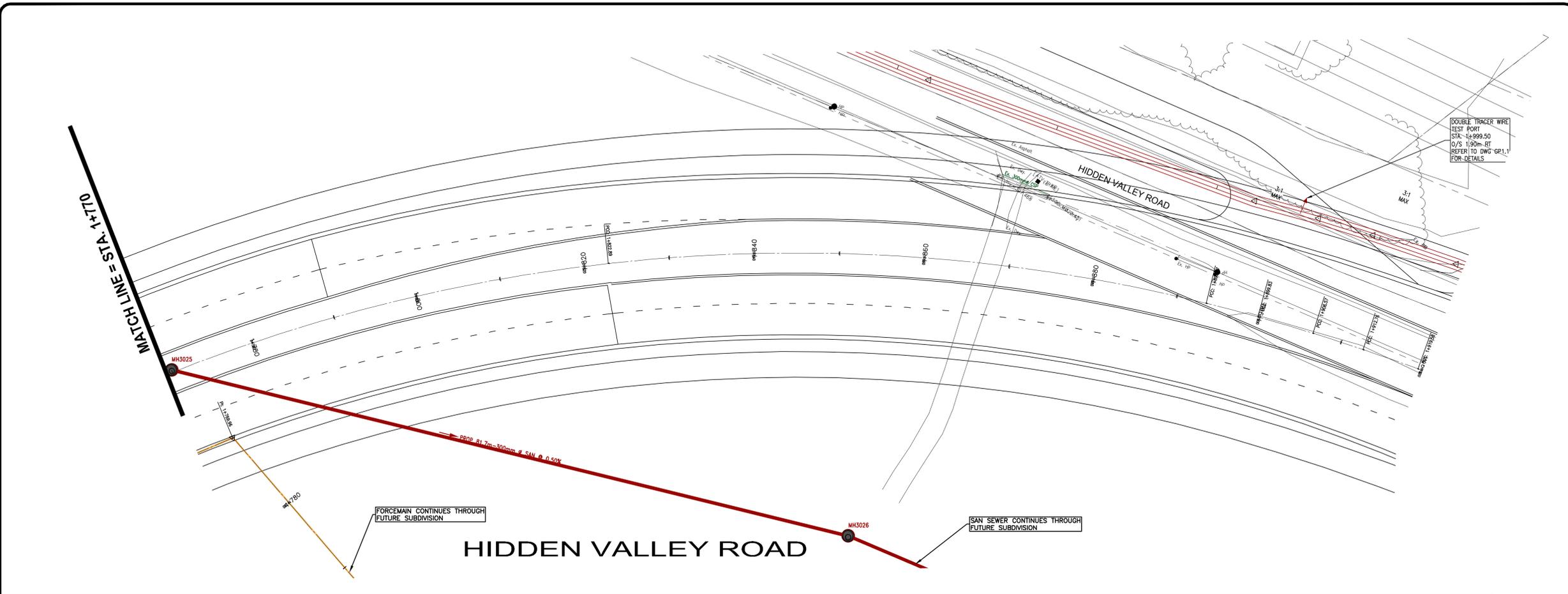
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FROM Sta. 1+770 TO Sta. 1+920**

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CONSULTANT DWG. NO. 48391-100-PP1.6	SHEET NO. 6 of 6	DWG. NO. PP1.6



**Project Name:** Upper Hidden Valley Class EA      **MTE File No.:** C48301-100  
**To:** Katie Wood, City of Kitchener      **Date:** July 21, 2022  
**cc:**      **From:** Gemma Charlebois / Dave Wilhelm

**Design Flow, Upper Hidden Valley Sanitary Pumping Station (SPS)**

The Design Flow for the Upper Hidden Valley SPS has been assessed based on the Region of Waterloo and Area Municipal Design Guidelines and Supplemental Specifications for Municipal Services (DGSSMS) and City of Kitchener Design Guidelines. This assessment should be considered preliminary and must be confirmed during the preliminary and detailed design stages for the pumping station. Similarly, the receiving capacity of the receiving sewer on Wabanaki Dr. must be confirmed during the preliminary design stage of the project.

This memo summarizes the design flow for the Preferred Alternative along with the attached flow calculation spreadsheet.

This preliminary assessment of the design flow for Upper Hidden Valley SPS was completed using the City of Kitchener’s “Hidden Valley Land Use Master Plan” (Approved by council, June 24, 2019). This land use plan describes current and future land for the lands within the Study Area for the Upper Hidden Valley Class EA. The City of Kitchener’s Sewer Design spreadsheet was the source of unit flow rates and constants associated with design flow calculations. A unit flow of 305 L/cap/d was used along with a commercial unit flow rate (peak) of 2.375 L/s/ha. Residential densities were based on projected zoning.

Proposed catchment areas were created based on the Land Use Master Plan and location options for construction of the Upper Hidden Valley SPS. Catchments areas were numbered 1-5 and are shown in MTE Figure 1: City of Kitchener Upper Hidden Valley Class EA Catchment Areas. The size of the catchment areas was sourced from page nine of the City of Kitchener’s “Hidden Valley Land Use Master Plan” report.

**Existing and Proposed Land Uses**

Within the Study Area there is a blend of land uses which are listed below:

Zoning Designation	People/hectare (p/ha)
Natural Heritage Conservation	N/A
Low Rise Residential- Estate	36
Low Rise Residential- Large Lot	36
Medium Rise Residential	387
High Rise Residential	775
Mixed Use	387

Zoning Designation	People/hectare (p/ha)
Commercial	0.95 L/s/ha; peak factor – 2.5
Business Park Development (some Neighbourhood Commercial uses Allowed)	0.95 L/s/ha; peak factor – 2.5
Unknown Use (Land Subject to Further Study, see Figure 1)	36 – 196 (to be determined)

## Design Flows

### Servicing Areas

The preferred alternative identified during the Environmental Assessment (EA) was Option 2A. The option includes construction of the SPS in Area 1 (see Figure 1). Area 1 will be serviced by the SPS. Areas 2, 4, and 5 will drain by gravity to the trunk sewer on Wabanaki Rd or be directed to the River Birch SPS. Area 3 flows will be accommodated by the SPS located in Area 1, however the servicing solution for Area 3 will be determined upon completion and approval of the necessary environmental studies. Area 3's zoning designation is currently under review as part of the Secondary Land Use planning process and for the purposes of estimating flows, a range between 36-196 people per hectare (RES-1 to RES-5 zoning) is assumed.

### Projected Land Use

This assessment is based on interpretations of the anticipated zoning as outlined in the Land Use Master Plan. The final zoning and land use for the Study Area will be established based on ongoing and future planning approvals. As such, the interpretations utilized herein should not be interpreted as final planning approval for lands within the Study Area.

### Design Flow from Unknown Land Use

As the zoning for Area 3 is subject to further study and has not been determined to-date, two spreadsheets were generated to account for the largest possible range of flows. The first spreadsheet includes Area 1, Area 3 as zoned for 196 p/ha (RES-5), and the surrounding large estate lands (RES-1) to be serviced by the SPS. The second spreadsheet includes Area 1 only as serviced by the SPS since Area 3 is zoned as RES-1 (36 p/ha) – the same as the surrounding large estate lands. Under this zoning scenario, Area 3 and the surrounding large estate lands would not have municipal servicing.

### Inflow and Infiltration (I/I)

To calculate the infiltration contribution to the flow rate the serviced area was taken and compared against an infiltration rate of 0.15 litres per second per hectare.

### Total Contributing Wastewater Flow

Total flow to the proposed pumping station was calculated in accordance with the two attached spreadsheets. The spreadsheet that reflects low density development assumes that Area 3 is zoned for



large estate lots, similar to the surrounding lands and is not serviced by the SPS. Under this scenario, the design flow is 69 L/s. In the spreadsheet that reflects medium density development of Area 3 (RES-5), the SPS services Area 3 and the surrounding large estate lots (RES-1). The resulting design flow is 91 L/s. Additional study and planning approvals will finalize the zoning and corresponding design flow.

The preferred option uses proposed location under Option 2A and provides capacity to service development Areas 1 and 3. The Upper Hidden Valley SPS should be designed based on the final zoning. Further future studies and review of the northeast corner of the study area will be undertaken prior to detailed design of the SPS, which will be based on final zoning. It is recommended that, at this time, the Preliminary Design of the Upper Hidden Valley SPS be based on a Firm Capacity of 91 L/s.

**END OF MEMO**

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CITY OF KITCHENER	<b>SANITARY SEWER DESIGN SHEET</b> <b>ENGINEERING AND PUBLIC WORKS</b>		<b>Design Parameters</b>			
			<b>Average Daily Flow</b> Residential 0.00353 L/s/c Commercial 0.95 L/s/ha peak fact Industrial 0.40 L/s/ha Inst. / School 2.50 L/s/ha	Mannings "n" 0.013 Min. Velocity 0.8 m/sec Max. Velocity 3.0 m/sec Residential Harmon Peaking Factor $F = 1 + 14/(4 + P^{0.5})$ Residential Area Infiltration 0.15 L/s/ha		
Project Number: 48301-100 Date: 2022/07/20 Design By: GSC Checked By: DJW File: M:\48301\100\03 Design\Sanitary Sewer Design Sheet Kitchener (SSMS)_EA.xls	Drainage Area Plan No:					

LOCATION			RESIDENTIAL AREAS and POPULATION							SCHOOL, INSTITUTIONAL			COMMERCIAL			INDUSTRIAL			INFILTRATION						
STREET	AREA NO.	SPS	HECTARES OF EACH DENSITY						POPUL.	CUMUL POPUL.	PEAK FACTOR "F"	PEAK RES. FLOW	HECTARES AND FLOW OF EACH ZONING						TOTALS- C-I FLOW	AREA	CUMUL AREA	INFIL FLOW	TOTAL VOLUME FLOW		
			RES-1	RES-2	RES-3/4	RES-5	RES-6	RES-7					2.50 L/s/ha	0.95 L/s/ha	0.40 L/s/ha	AREA	CUMUL AREA	PEAK FLOW						AREA	CUMUL AREA
			ha	ha	ha	ha	ha	ha	1000s	1000s	L/sec	ha	ha	L/sec	ha	ha	L/sec	ha	ha	L/sec	L/sec	ha	ha	L/sec	L/sec
<b>AREA BREAKDOWN</b>																									
AREA 1	1					9.02	1.04		4.297	4.297	3.3	50.1350	0.00	0.0000	6.72	6.72	15.9600	0.00	0.0000	15.9600	16.78	16.78	2.5170	68.6120	
AREA 3 Additional Large Estate Lands	3		0.00			0.00			0.000	0.000	4.5	0.0000	0.00	0.0000		0.00	0.0000	0.00	0.0000	0.0000	0.00	0.00	0.0000	0.0000	0.0000
<b>Pumped Collection System</b>																									
Option 2A (Preferred Alternative)*	1&3	A	0.00	0.00	0.00	0.00	9.02	1.04	4.297	4.297	3.3	50.1350	0.00	0.0000	6.72	15.9600	0.00	0.0000	15.9600		16.78	2.5170	69		

**Note:**  
 \*Preferred Alternative includes catchment area 1 area draining via gravity with capacity allowance for catchment area 3 to be pumped via pump station



**LEGEND:**

- LAND USE TO BE DETERMINED DURING CLASS EA STUDY
- LOW RISE RESIDENTIAL- LARGE LOT
- MEDIUM RISE RESIDENTIAL
- HIGH RISE RESIDENTIAL
- MIXED USE
- COMMERCIAL
- BUSINESS PARK EMPLOYMENT
- FORCEMAIN OPTION
- CLASS EA STUDY LIMITS
- PROPOSED ROAD
- EXISTING SANITARY
- EXISTING WTM
- RAIL TRACKS



**NOTE:**  
 THE INFORMATION USED TO CREATE THIS FIGURE WAS RETRIEVED FROM PAGE 9 OF THE CITY OF KITCHENER'S "HIDDEN VALLEY LAND USE MASTER PLAN" APPROVED BY COUNCIL ON JUNE 24, 2019. GIS AND MAPPING DATA WAS PROVIDED TO MTE BY THE CITY OF KITCHENER.

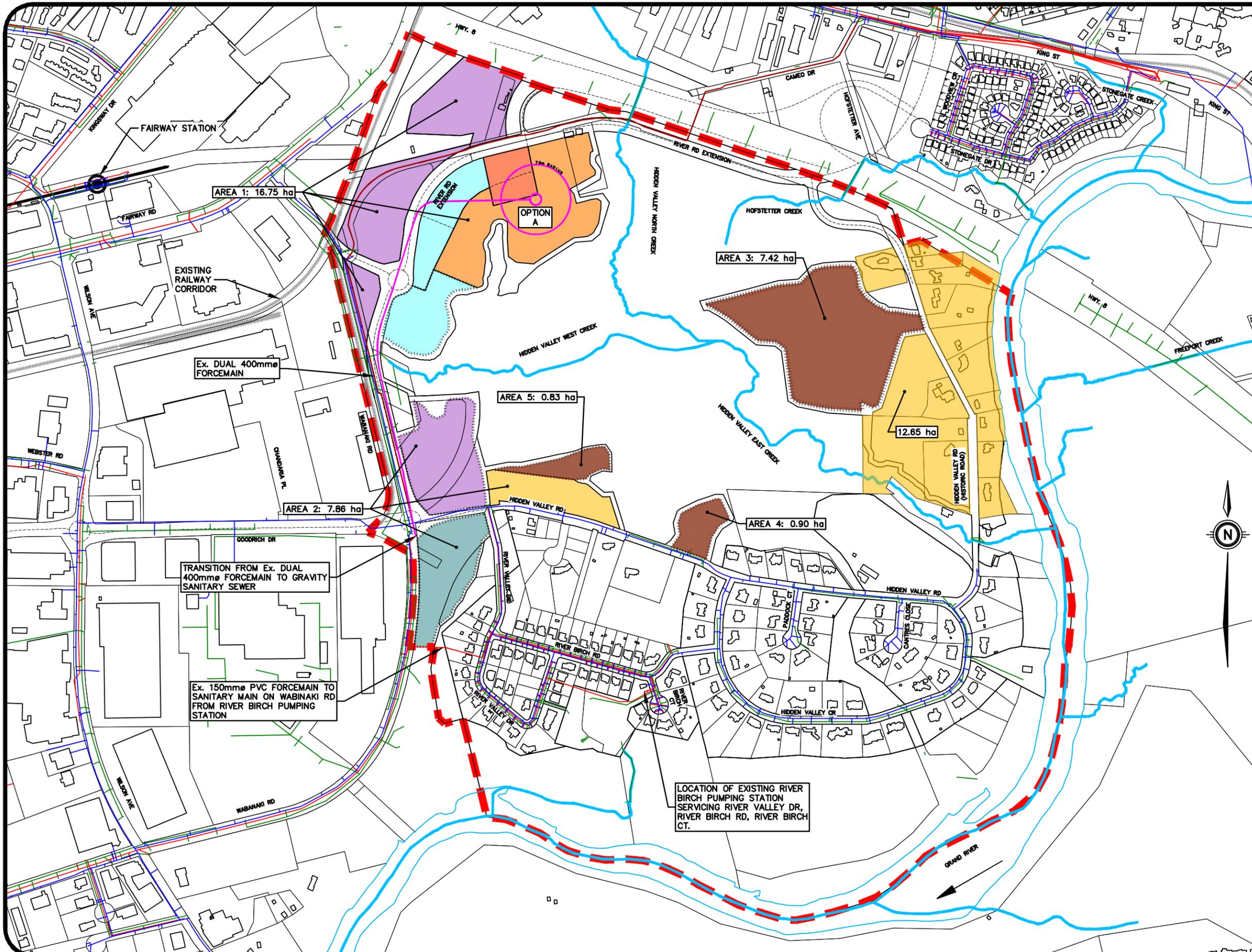
Figure 1 Date: JUL. 25/22  
 Scale: N.T.S.

**CITY OF KITCHENER  
 UPPER HIDDEN VALLEY CLASS EA  
 AND CATCHMENTS AREAS**



Engineers, Scientists, Surveyors

Project No.: 48301-100



AREA 1: 16.75 ha

AREA 3: 7.42 ha

AREA 5: 0.83 ha

AREA 2: 7.86 ha

AREA 4: 0.90 ha

12.65 ha

OPTION A

TRANSITION FROM Ex. DUAL 400mm $\phi$  FORCEMAIN TO GRAVITY SANITARY SEWER

Ex. 150mm $\phi$  PVC FORCEMAIN TO SANITARY MAIN ON WABINAKI RD FROM RIVER BIRCH PUMPING STATION

LOCATION OF EXISTING RIVER BIRCH PUMPING STATION SERVICING RIVER VALLEY DR, RIVER BIRCH RD, RIVER BIRCH CT.

# Appendix F

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## Public Consultation



January 6, 2021

MTE File No.: C48301-100

Resident/Owner

**RE: City of Kitchener – Municipal Class Environmental Assessment  
Upper Hidden Valley Sanitary Pumping Station and Forcemain**

Please find attached a Notice of Study Commencement for the above noted project. This study is being carried out in accordance with the requirements of the Environmental Assessment Act, as a Schedule B Municipal Class Environmental Assessment. All notices related to this project can be found on the [City of Kitchener's website](https://www.kitchener.ca/en/city-services/environmental-assessments.aspx) at the following link: <https://www.kitchener.ca/en/city-services/environmental-assessments.aspx>

The purpose of the current study is to define a sanitary servicing solution that will support responsible development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan (June 2019). The servicing solution will include identifying a sanitary pumping station location and forcemain alignment.

We would welcome the opportunity to meet with you to discuss this study should you wish to do so. Please feel free to call or email me using the contact details below should you require additional information. We look forward to hearing from you.

Yours truly,

**MTE Consultants Inc.**

**Dave Wilhelm, P.Eng.**  
Manager, Water/Wastewater  
519-743-6500 ext. 1225  
DWilhelm@mte85.com

DJW:zeg

Encl.: Notice of Study Commencement

cc: Katie Wood, Project Manager, Development Engineering, City of Kitchener

## Municipal Class Environmental Assessment (Class EA) Upper Hidden Valley Sanitary Pump Station and Forcemain Notice of Study Commencement

To support development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan, this study will identify a sanitary servicing solution. The City of Kitchener has requested MTE Consultants to initiate a study to identify and evaluate alternative solutions, and to select the preferred solution.

This project is being carried out in accordance with the requirements of the Environmental Assessment Act and it is being planned under Schedule B of the Municipal Class Environmental Assessment (Class EA). The project scope involves an evaluation of alternatives, selection of preferred alternative and evaluation of environmental impacts and their mitigation measures.

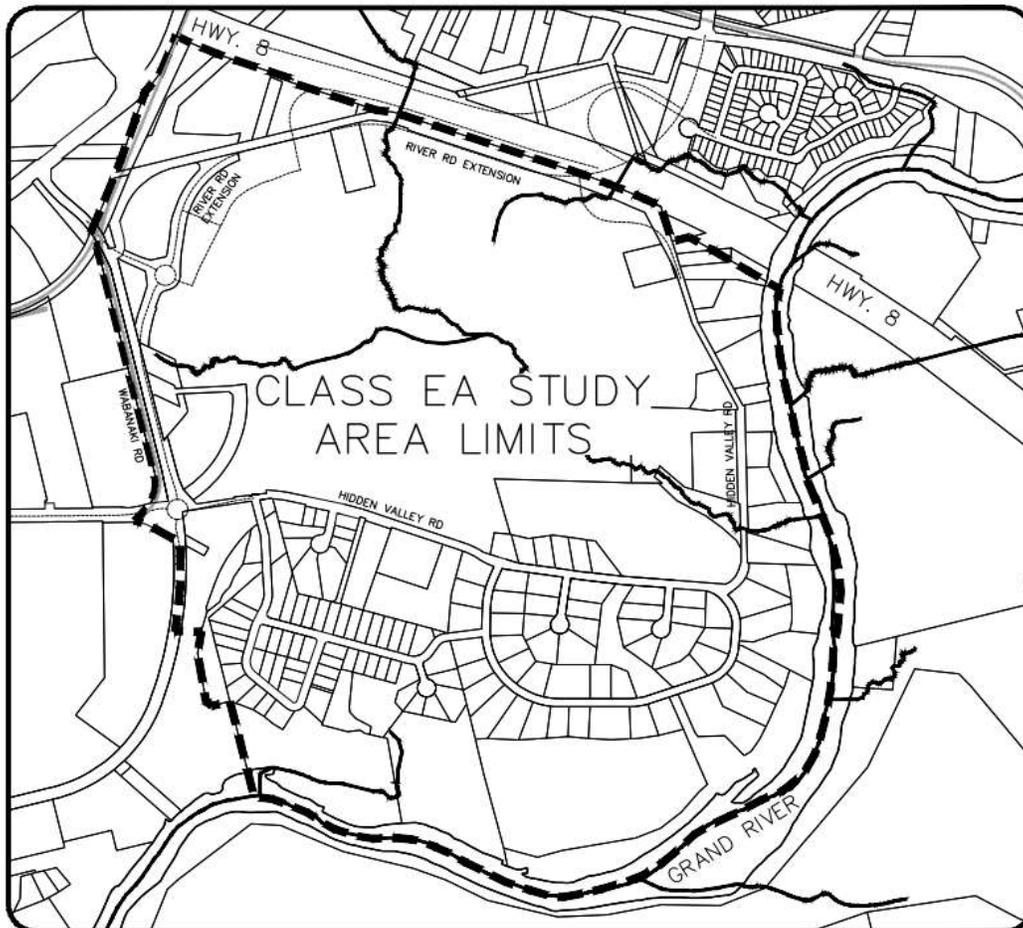


Figure 1. Upper Hidden Valley Study Area



This study will complete a Municipal Class EA for the construction of a sanitary pump station and forcemain and prepare the preliminary design. The study will follow guidance outlined in the Municipal Class EA document (as amended in 2007, 2011, and 2015).

Upon completion of this study, an Environmental Study Report (ESR) documenting the process will be submitted to the Ministry of the Environment, Conservation, and Parks (MECP) and will be available for public review for a period of 30 calendar days. Before any decisions are made on the recommendation, or acceptance of the preferred solution, all interested parties will have an opportunity to attend a Public Information Centre (PIC) meeting. Notification of the PIC will be provided at the appropriate time by means of a similar advertisement in this newspaper.

Public, Indigenous, and agency consultation is a key component of the Class EA process, and we value your input during the planning process. If you wish to be placed on the mailing list to receive notices and information, or, if you wish to provide comments at any time during the Class EA process, you can do so by contacting:

**Dave Wilhelm, P.Eng**

Manager, Water/Wastewater  
MTE Consultants Inc.  
520 Bingemans Centre Drive  
Kitchener, ON N2B 3X9  
Phone : (519) 743-6500 ext. 1225  
Cell Phone : (519) 651-7903  
Email: [dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)

**Katie Wood, C.E.T.**

Project Manager  
Development Engineering  
City of Kitchener  
200 King St. W  
Kitchener, ON N2G 4V6  
Phone: (519) 741-2200 ext. 7135  
Email: [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)

Please note that comments will be maintained for reference throughout the project and will become part of the public record. Under the *Municipal Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, any personal information such as name, address, and telephone number included in a submission will become part of the public record unless the comments specifically request that such personal details not be included in the public record.

Project information will be made available on the City's Website:

<https://www.kitchener.ca/en/city-services/environmental-assessments.aspx>

This Notice was issued on January 6, 2021.

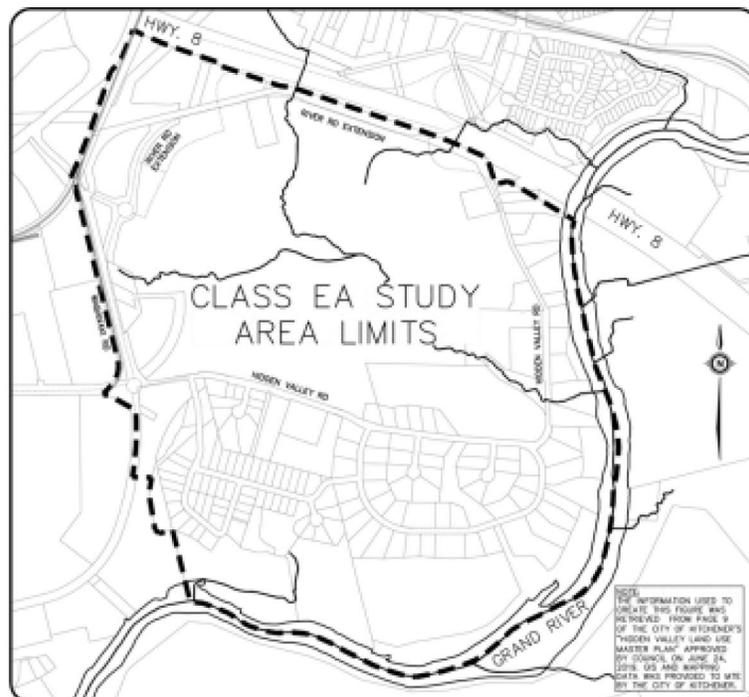


**Municipal Class Environmental Assessment (Class EA)  
Upper Hidden Valley Sanitary Pump Station and Forcemain  
Notice of Public Information Centre**

To support development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan, this study will identify a sanitary servicing solution. The City of Kitchener has requested MTE Consultants to initiate a study to identify and evaluate alternative solutions, and to select the preferred solution.

This study will complete a Municipal Class EA for the construction of a sanitary pump station and forcemain and prepare the preliminary design. The study will follow guidance outlined in the Municipal Class EA document (as amended in 2007, 2011, and 2015).

At this stage of the project, and in accordance with the requirements of the Environmental Assessment Act, archaeological and heritage, environmental, and technical investigations have been conducted. MTE has identified alternative sanitary servicing solutions.



**Figure 1. Upper Hidden Valley Study Area**

Presentation, discussion, and input on the identified alternatives will be conducted at the Public Information Centre (PIC). MTE Consultants and the City of Kitchener invite all interested parties to attend a PIC meeting on

**NOVEMBER 4, 2021 AT 6PM.**

Due to the current COVID-19 pandemic, the PIC meeting will be held virtually via the Zoom meeting platform. Registration is required to attend the PIC. Register in advance for this meeting:

[https://us06web.zoom.us/webinar/register/WN\\_tz39pnLnTh2SNrL-smqzJg](https://us06web.zoom.us/webinar/register/WN_tz39pnLnTh2SNrL-smqzJg)

After registering, you will receive a confirmation email containing information about joining the PIC 24 hours before the meeting begins.

Notification of this PIC will also be provided via advertisement in The Waterloo Region Record.

Please note that comments will be maintained for reference throughout the project and will become part of the public record. Under the *Municipal Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, any personal information such as name, address, and telephone number included in a submission will become part of the public record unless the comments specifically request that such personal details not be included in the public record.

Project information will be made available on the City's Website:

[www.kitchener.ca/en/development-and-construction/infrastructure-projects.aspx](http://www.kitchener.ca/en/development-and-construction/infrastructure-projects.aspx)

This Notice was issued on October 7, 2021.



October 7, 2021

MTE File No.: C48301-100

Resident/Owner

**RE: City of Kitchener – Municipal Class Environmental Assessment  
Upper Hidden Valley Sanitary Pumping Station and Forcemain**

Please find attached a Notice of Public Information Centre (PIC) for the above noted project. This study is being carried out in accordance with the requirements of the Environmental Assessment Act, as a Schedule B Municipal Class Environmental Assessment. All notices related to this project can be found on the City of Kitchener's website at the following link: [www.kitchener.ca/en/development-and-construction/infrastructure – projects](http://www.kitchener.ca/en/development-and-construction/infrastructure-projects).

The purpose of the PIC is to present, discuss, and receive your input on the alternative sanitary servicing solutions developed. The preferred servicing solution will include identifying a sanitary pumping station location and forcemain alignment.

We look forward to the opportunity to meet with you at the PIC. Please feel free to call or email me using the contact details below should you require additional information.

Yours truly,

**MTE Consultants Inc.**

---

**Gemma Charlebois, M.A.Sc., P.Eng.**  
MTE Consultants Inc.  
Engineer, Water/Wastewater  
519-743-6500 ext. 1227  
[gcharlebois@mte85.com](mailto:gcharlebois@mte85.com)

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**Katie Wood, C.E.T.**  
City of Kitchener  
Project Manager – Development Engineering  
519-741-2200 ext 7135  
[katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)

Encl.: Notice of Public Information Centre

# Municipal Class Environmental Assessment (Class EA) Upper Hidden Valley Sanitary Pump Station and Forcemain Notice of Public Information Centre

To support development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan, this study will identify a sanitary servicing solution. The City of Kitchener has requested MTE Consultants to initiate a study to identify and evaluate alternative solutions, and to select the preferred solution.

This study will complete a Municipal Class EA for the construction of a sanitary pump station and forcemain and prepare the preliminary design. The study will follow guidance outlined in the Municipal Class EA document (as amended in 2007, 2011, and 2015).

At this stage of the project, and in accordance with the requirements of the Environmental Assessment Act, archaeological and heritage, environmental, and technical investigations have been conducted. MTE has identified alternative sanitary servicing solutions.

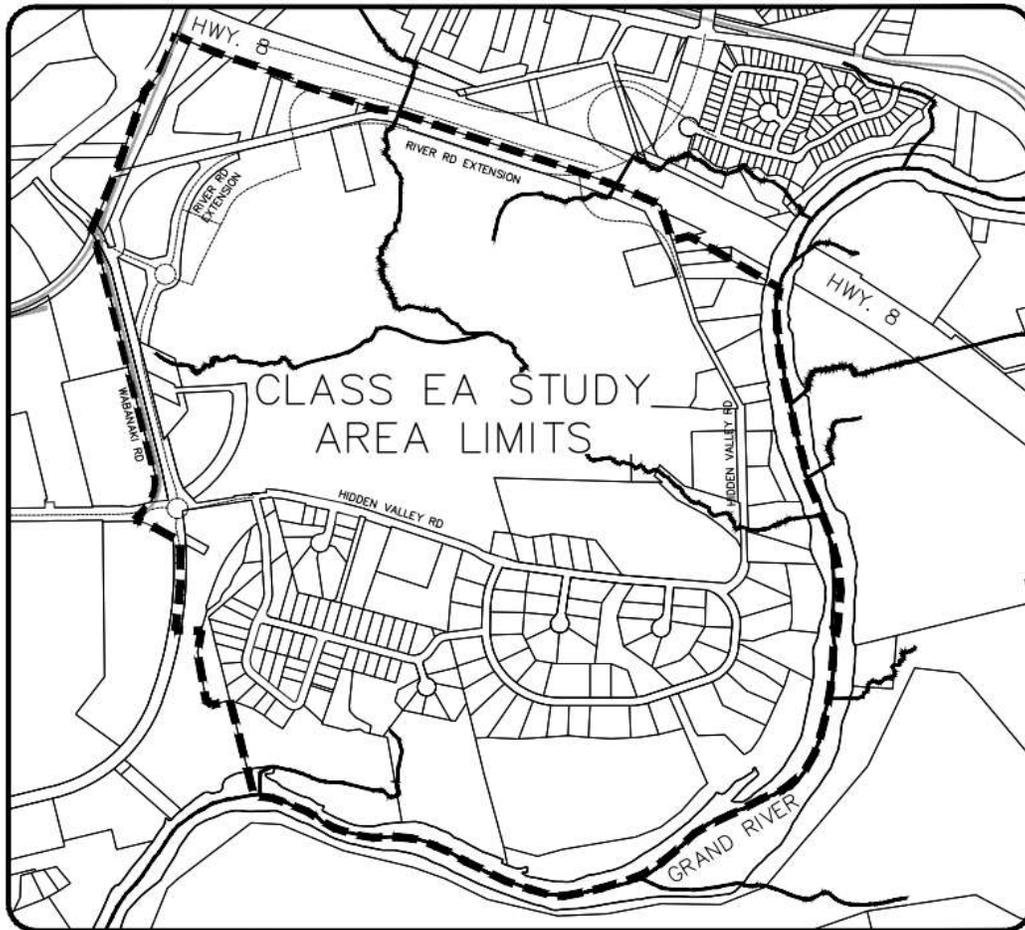


Figure 1. Upper Hidden Valley Study Area

Presentation, discussion, and input on the identified alternatives will be conducted at the Public Information Centre (PIC). MTE Consultants and the City of Kitchener invite all interested parties to attend a PIC meeting on

**NOVEMBER 4, 2021 AT 6PM.**

Due to the current COVID-19 pandemic, the PIC meeting will be held virtually via the Zoom meeting platform. Registration is required to attend the PIC. Register in advance for this meeting:

[https://us06web.zoom.us/webinar/register/WN\\_tz39pnLnTh2SNrL-smqzJg](https://us06web.zoom.us/webinar/register/WN_tz39pnLnTh2SNrL-smqzJg)

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Please note that comments will be maintained for reference throughout the project and will become part of the public record. Under the *Municipal Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, any personal information such as name, address, and telephone number included in a submission will become part of the public record unless the comments specifically request that such personal details not be included in the public record.

Project information will be made available on the City's Website:  
[www.kitchener.ca/en/development-and-construction/infrastructure-projects.aspx](http://www.kitchener.ca/en/development-and-construction/infrastructure-projects.aspx)

This Notice was issued on October 7, 2021.

# Upper Hidden Valley Sanitary Pump Station Class EA

Public Information Centre





**This meeting is being recorded and will be posted to the project website.**

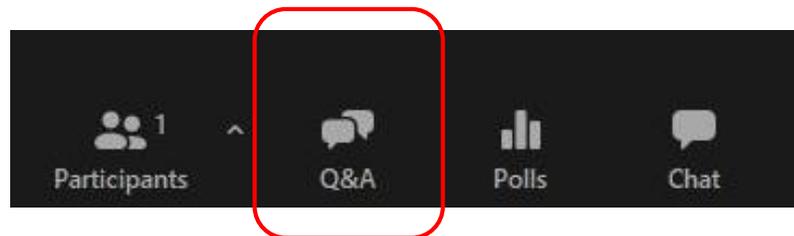


## **Project Website:**

**<https://www.kitchener.ca/en/development-and-construction/infrastructure-projects.aspx#Upper-Hidden-Valley-pumping-station>**



**Use the Q&A button to ask a question or let us know about technical difficulties. Questions will be answered after the presentation.**



# Thank you for participating!

Thank you for participating in the Online Public Information Centre (PIC) for the City of Kitchener's Class Environmental Assessment (EA) for the Upper Hidden Valley Sanitary Pumping Station.

The Province of Ontario has implemented restrictions on public gatherings to deal with the COVID-19 pandemic. This Public Information Centre is relying on web-based communications.

There is an opportunity at any time during the Class EA process for interested persons to provide written input. Any comments received will be collected under the *Environmental Assessment Act* and, with the exception of personal information, will become part of the public record.

Comments can be submitted by emailing [Katie.Wood@Kitchener.ca](mailto:Katie.Wood@Kitchener.ca) and/or by [Dwilhelm@mte85.com](mailto:Dwilhelm@mte85.com) by **November 18, 2021**.



# Project Summary

To support development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan (June 2019), this study will identify a sanitary servicing solution through location selection and preliminary design of a sanitary pumping station and forcemain.

The preferred solution will be determined by maintaining the objectives of protection of the environment, minimal disruption to residents and surrounding areas, engaging a broad range of stakeholders, and documenting the study process in compliance with the Municipal Class EA Schedule B process.

# Class Environmental Assessment Process

**This study is being initiated as a Municipal Schedule B** project as defined by the Municipal Class Environmental Assessment (MCEA). Consultation is a key component of the Class EA process. The goal of consultation is to provide stakeholders and affected individuals opportunities to make their interests and concerns known to the project team throughout the EA process. The early identification of issues and concerns allows the project team to investigate with the goal of, if possible, resolving the concern.

At the completion of the EA process, a Project File will be produced. The Report will document key components of the study: need and justification; the range and types of consultation; natural and socio-economic environmental inventories; evaluation of alternatives; selection of the recommended alternative; and supporting reports produced for the project. Upon the completion of the ESR, the public and interested stakeholders will be made aware of 30-day public review of the Report.

If, after viewing the future Project File and having made your concerns known to the project team, you still have concerns during the 30-day review period, you have rights under the Environmental Assessment Act. These rights will be outlined in the public notice advising of the 30-day public review period.

An overview of the Municipal Class EA process is illustrated on the following exhibit.

# Class EA Process: Phases



Phase 1:  
Problem or Opportunity



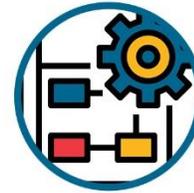
Phase 2:  
Alternative Solutions



Phase 3:  
Alternative Design  
Concepts for Preferred  
Solution



Phase 4:  
Environmental  
Study Report

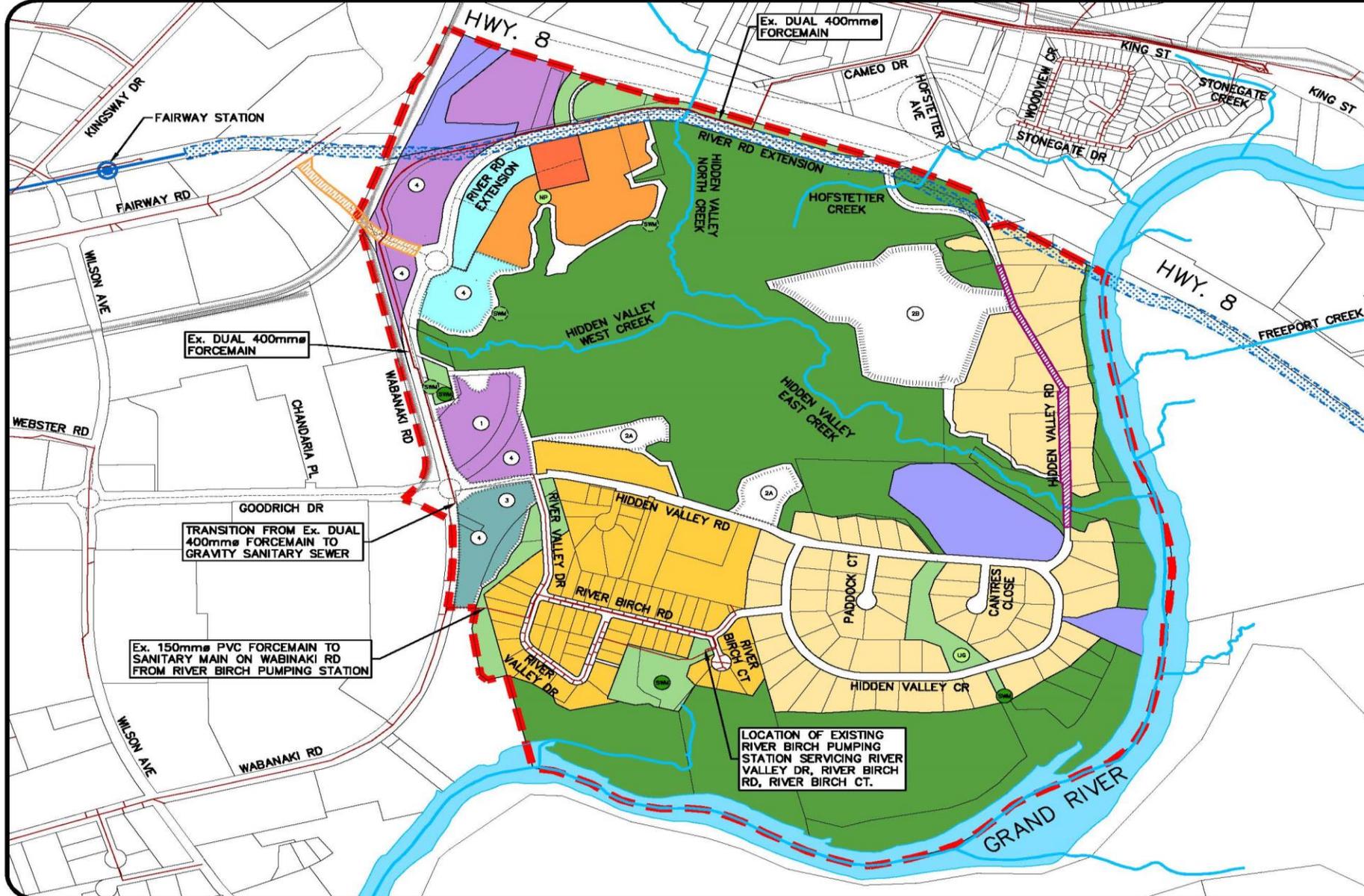


Phase 5:  
Implementation

# Schedule



# Upper Hidden Valley Study Area



## LEGEND:

- LOW RISE RESIDENTIAL – ESTATE
  - LOW RISE RESIDENTIAL – LARGE LOT
  - MEDIUM RISE RESIDENTIAL
  - HIGH RISE RESIDENTIAL
  - MIXED USE
  - COMMERCIAL
  - BUSINESS PARK EMPLOYMENT
  - MAJOR INFRASTRUCTURE & UTILITIES
  - NATURAL HERITAGE CONSERVATION
  - OPEN SPACE
- SITE SPECIFIC POLICY AREA | | | | |
1. COMMUNITY & INSTITUTIONAL USES ALSO ALLOWED.
  - 2A. & 2B. SUBJECT TO REGULATION AND FURTHER STUDY.
  3. SOME NEIGHBOURHOOD COMMERCIAL USES ALSO ALLOWED.
  4. COMPATIBILITY OF SENSITIVE USES.
- LAND USE MASTER PLAN BOUNDARY
  - PROPOSED ROAD
  - EXISTING SANITARY
  - STREAMS
  - HERITAGE CORRIDOR
  - PRIORITY STREET
- NP NEIGHBOURHOOD PARK
  - UG URBAN GREEN
  - SWM EXISTING SWM FACILITY
  - SWM POTENTIAL SWM FACILITY (LOCATION TBD)
  - LRT STATION
- LRT CORRIDOR (CONSTRUCTED)
  - LRT CORRIDOR (UNDER REVIEW)
  - RAIL TRACKS

Figure 1 Date: DEC 11/20 Scale: N.T.S.

**CITY OF KITCHENER**  
**HIDDEN VALLEY LAND USE MASTER PLAN**

**MTE**  
 Engineers, Scientists, Surveyors

Project No.: 48301-100

# Nearby City of Kitchener Pumping Station

Freeport Sanitary Pumping Station  
3563 King Street East, Kitchener

## Typical Station

- Footprint, including underground structures  
- 700 to 1,000 square metres (sq. m)
- Building size  
- 100 to 150 sq. m



# Nearby City of Kitchener Pumping Station

## Homer Watson Sanitary Pumping Station

- Footprint, including underground structures  
- 2,500 sq. m
- Building size  
- 85 sq. m



# Nearby City of Kitchener Pumping Station

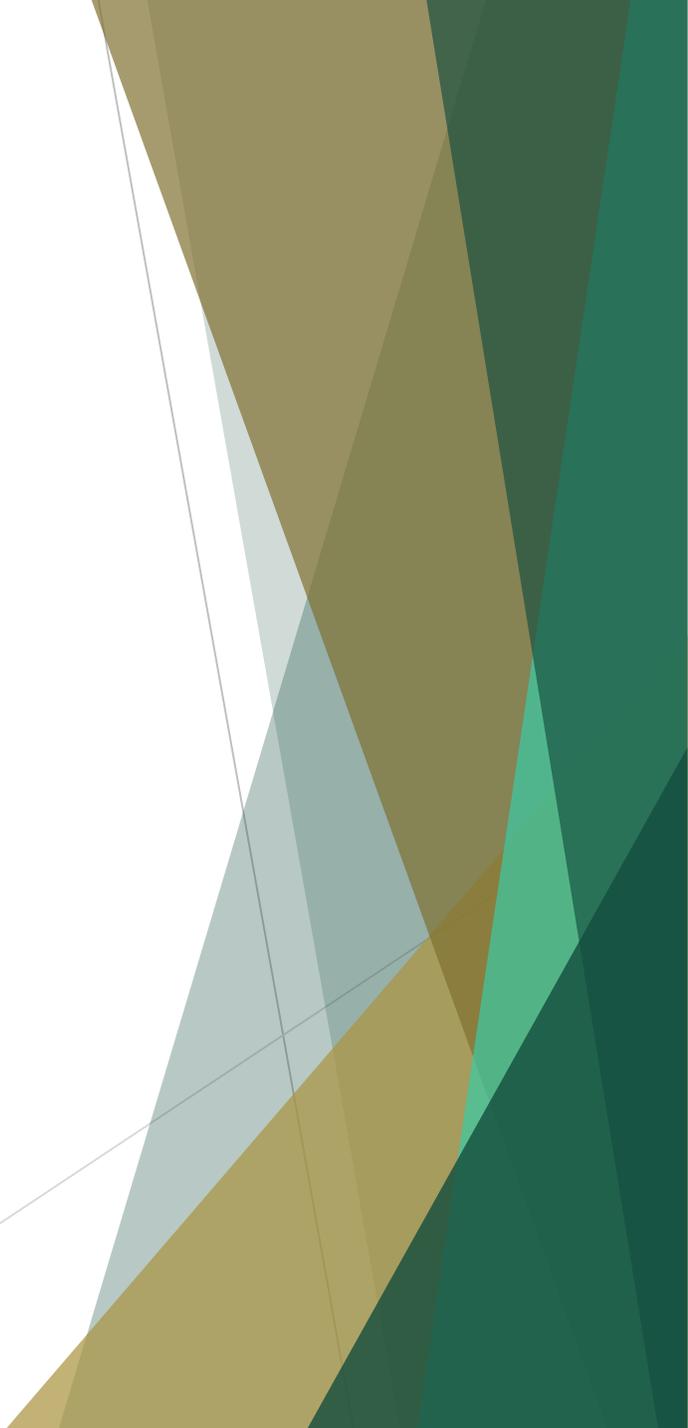
## Victoria Street Sanitary Pumping Station

### Victoria Street North & Shirley Avenue, Kitchener

- Footprint, including underground structures  
- 1,575 sq. m
- Building size  
- 145 sq. m



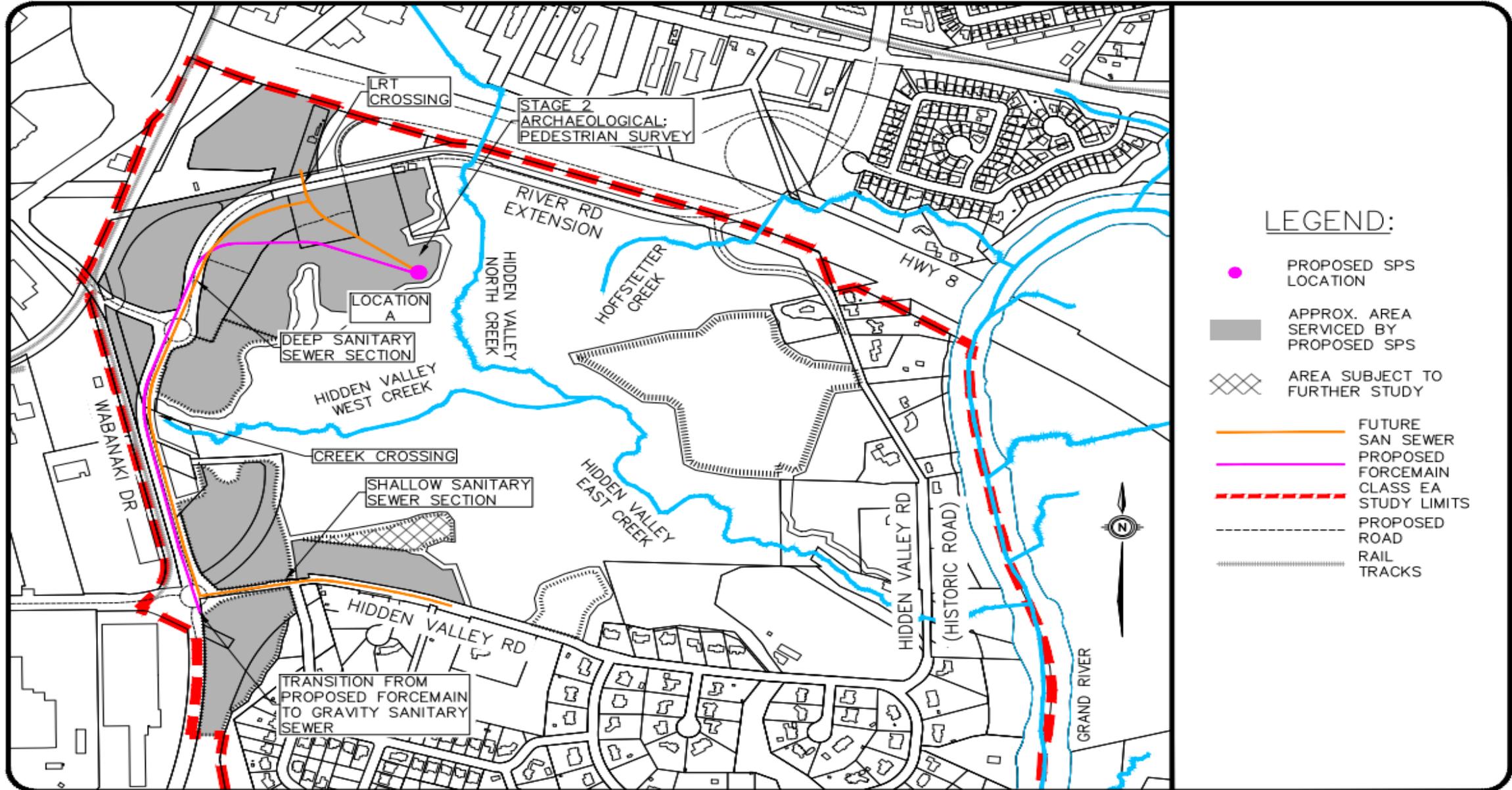
# **Sanitary Pumping Station Location Options**



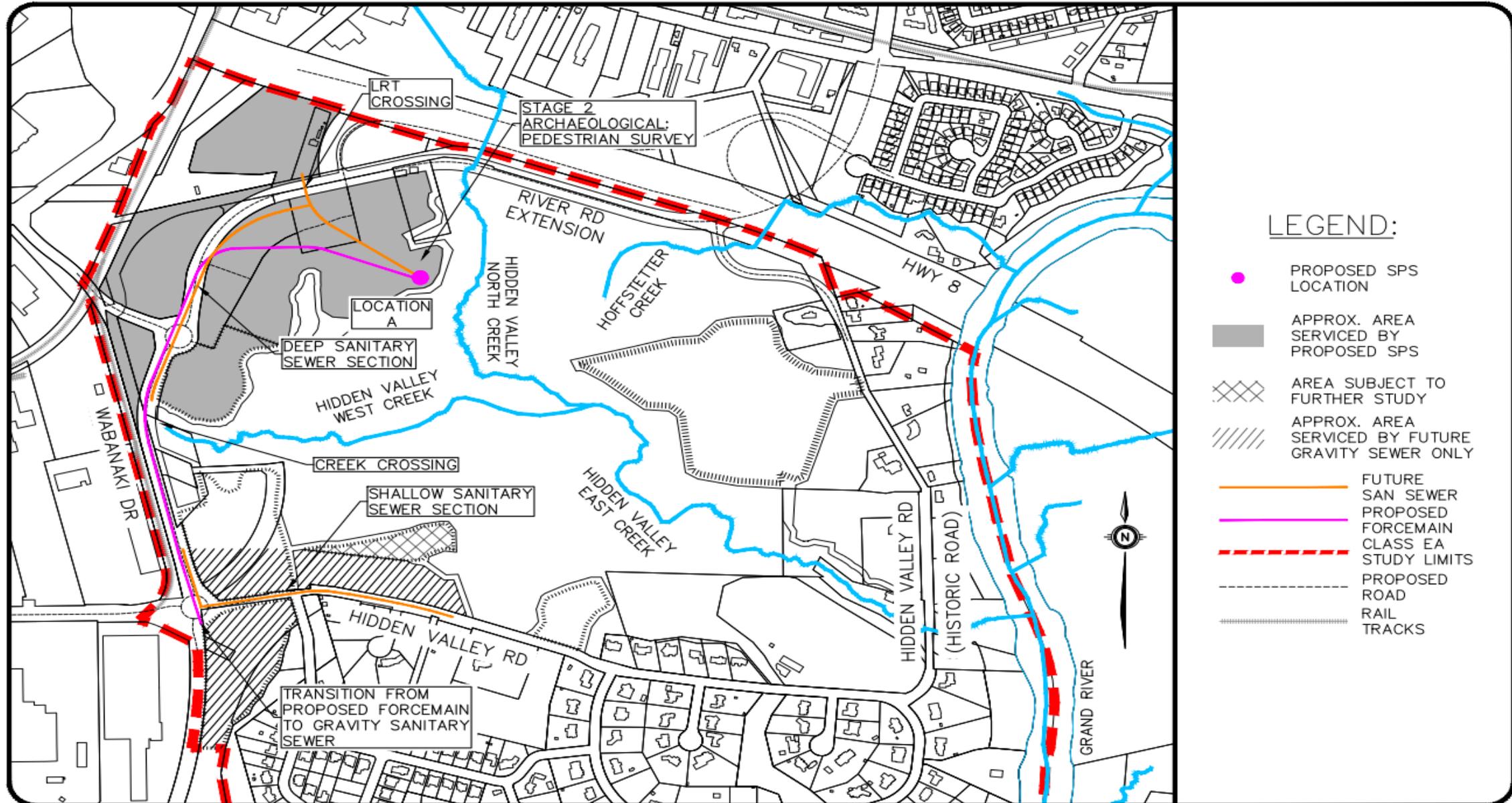
# Option 1: Do Nothing

- ▶ The “Do Nothing” option does not support the developable land uses as identified in the 2019 Master Plan and will not be considered further.

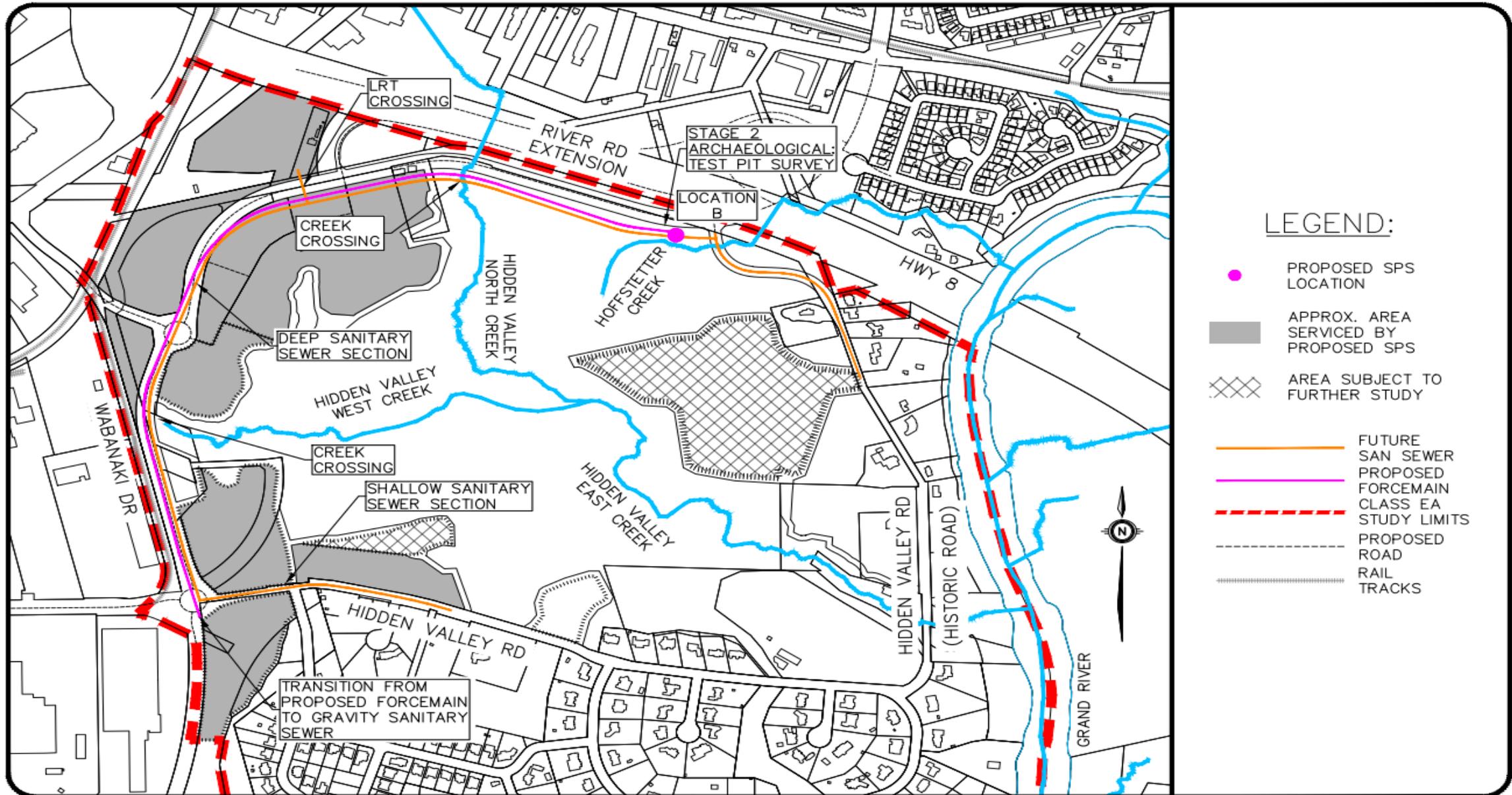
# Option 2: Install Sanitary Pumping Station at Location A



# Option 2a: Install Sanitary Pumping Station at Location A



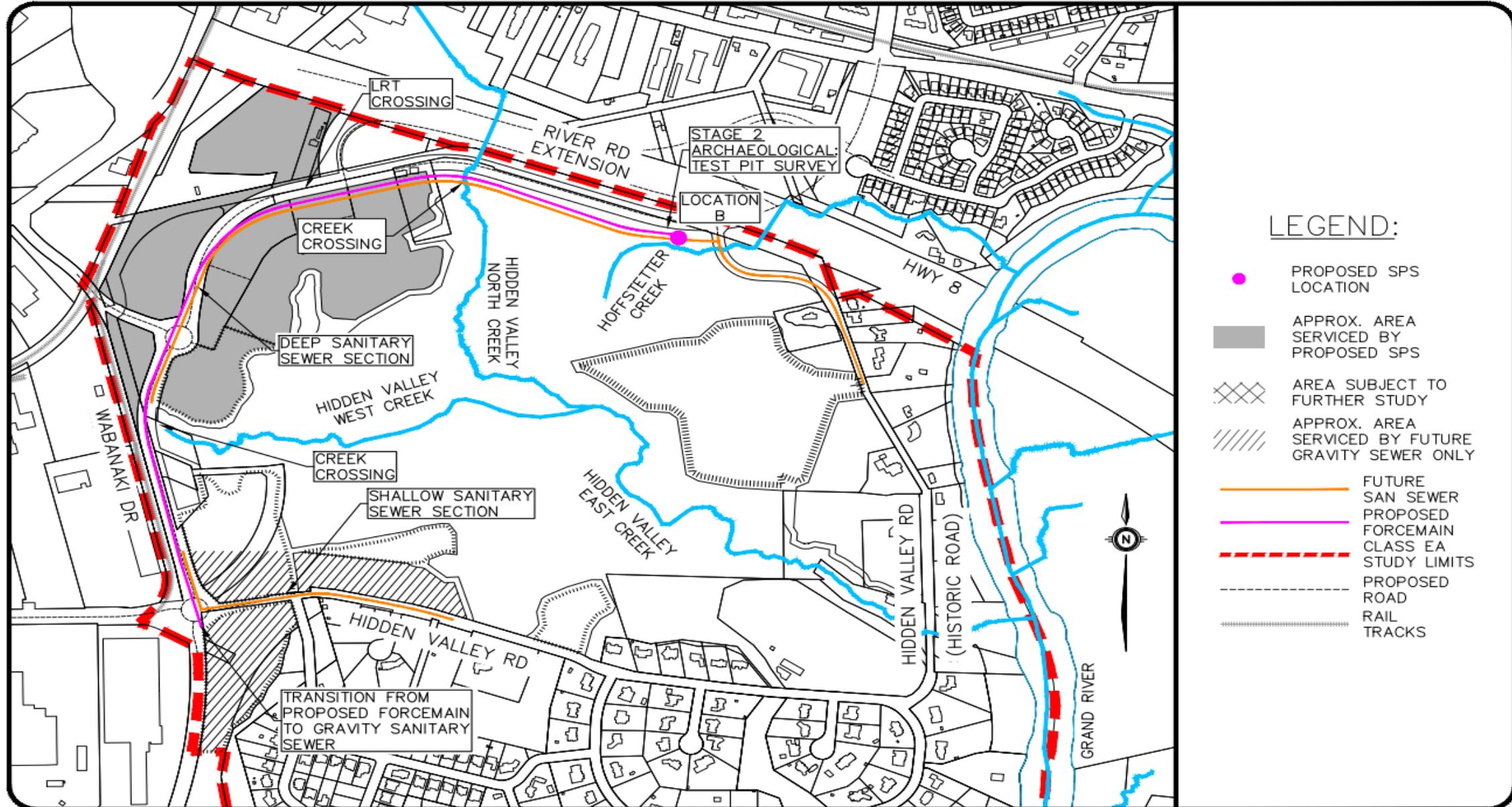
# Option 3: Install Sanitary Pumping Station at Location B



## LEGEND:

- PROPOSED SPS LOCATION
- APPROX. AREA SERVICED BY PROPOSED SPS
- AREA SUBJECT TO FURTHER STUDY
- FUTURE SAN SEWER
- PROPOSED FORCEMAIN
- CLASS EA STUDY LIMITS
- PROPOSED ROAD
- RAIL TRACKS

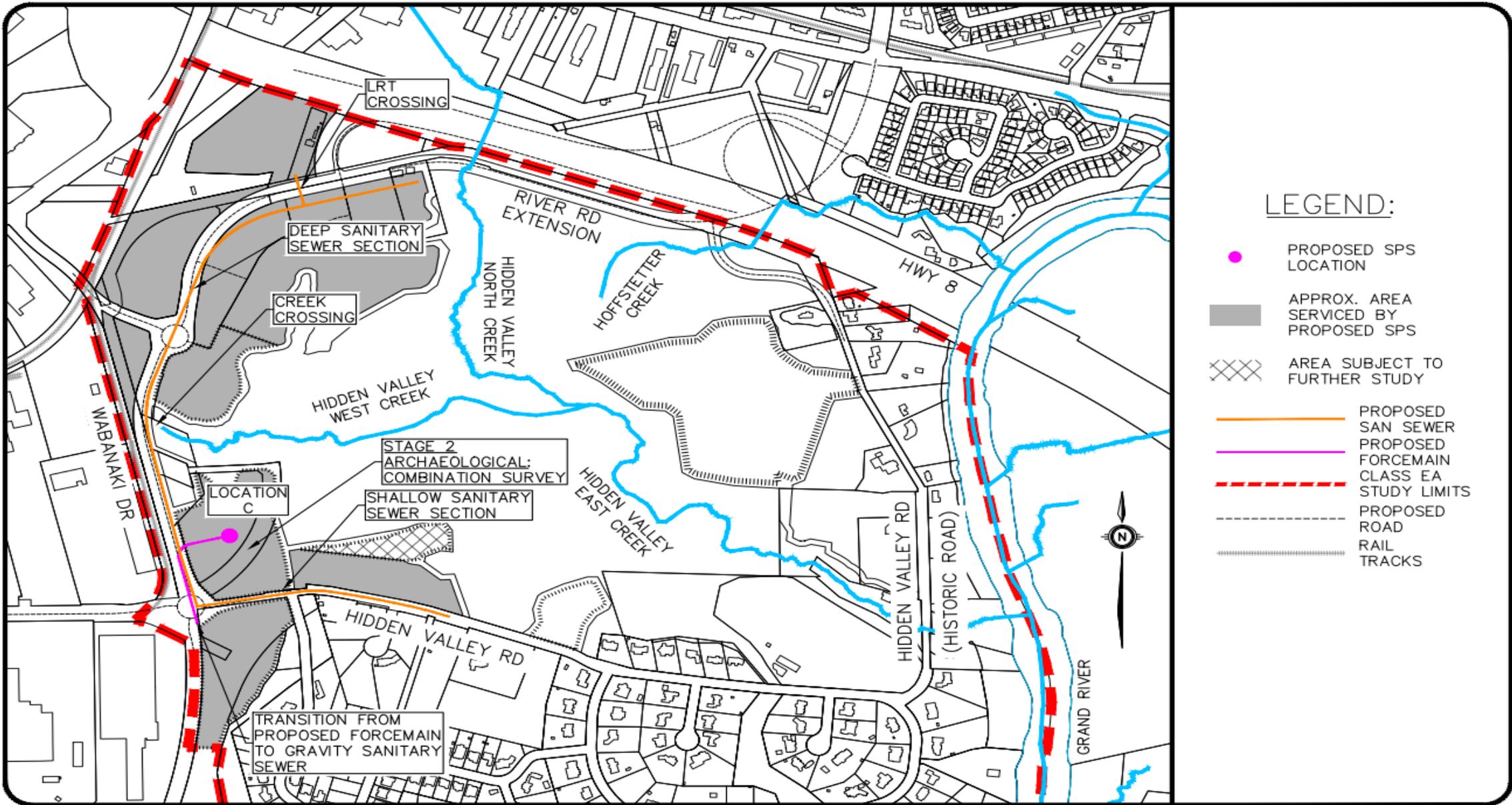
# Option 3a: Install Sanitary Pumping Station at Location B



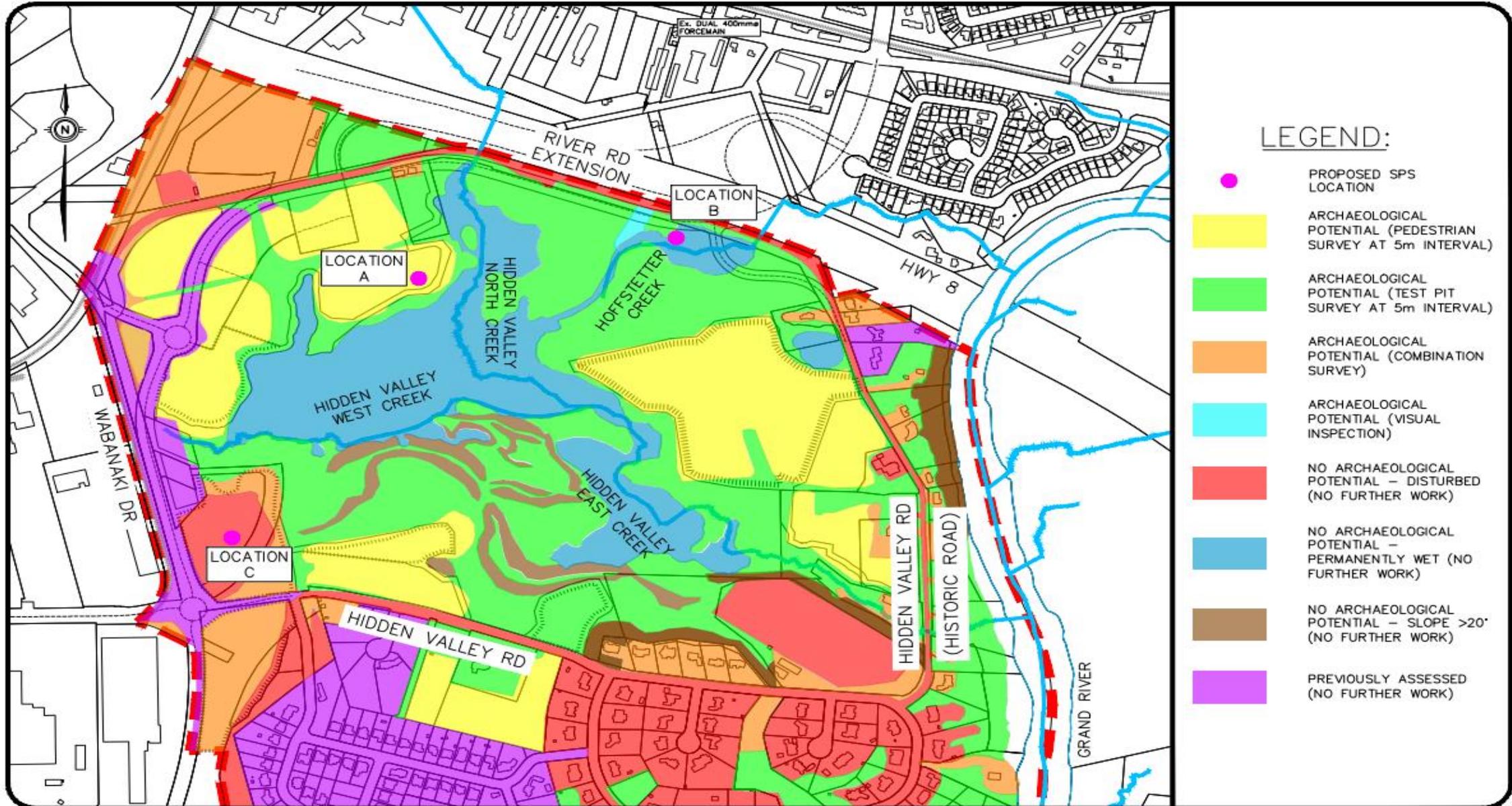
## LEGEND:

- PROPOSED SPS LOCATION
- APPROX. AREA SERVICED BY PROPOSED SPS
- AREA SUBJECT TO FURTHER STUDY
- APPROX. AREA SERVICED BY FUTURE GRAVITY SEWER ONLY
- FUTURE SAN SEWER
- PROPOSED FORCEMAIN
- CLASS EA STUDY LIMITS
- PROPOSED ROAD
- RAIL TRACKS

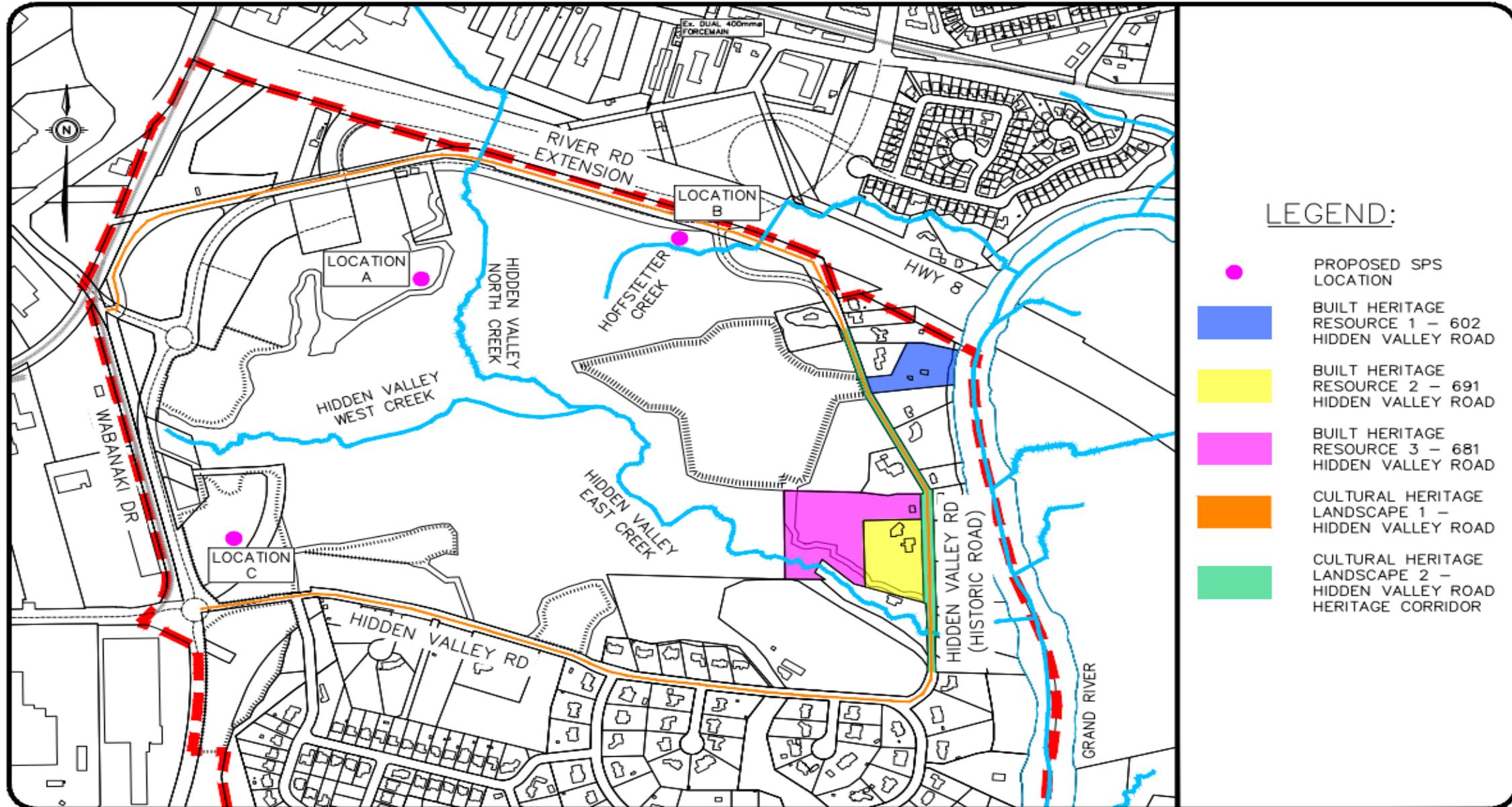
# Option 4: Install Sanitary Pumping Station at Location C



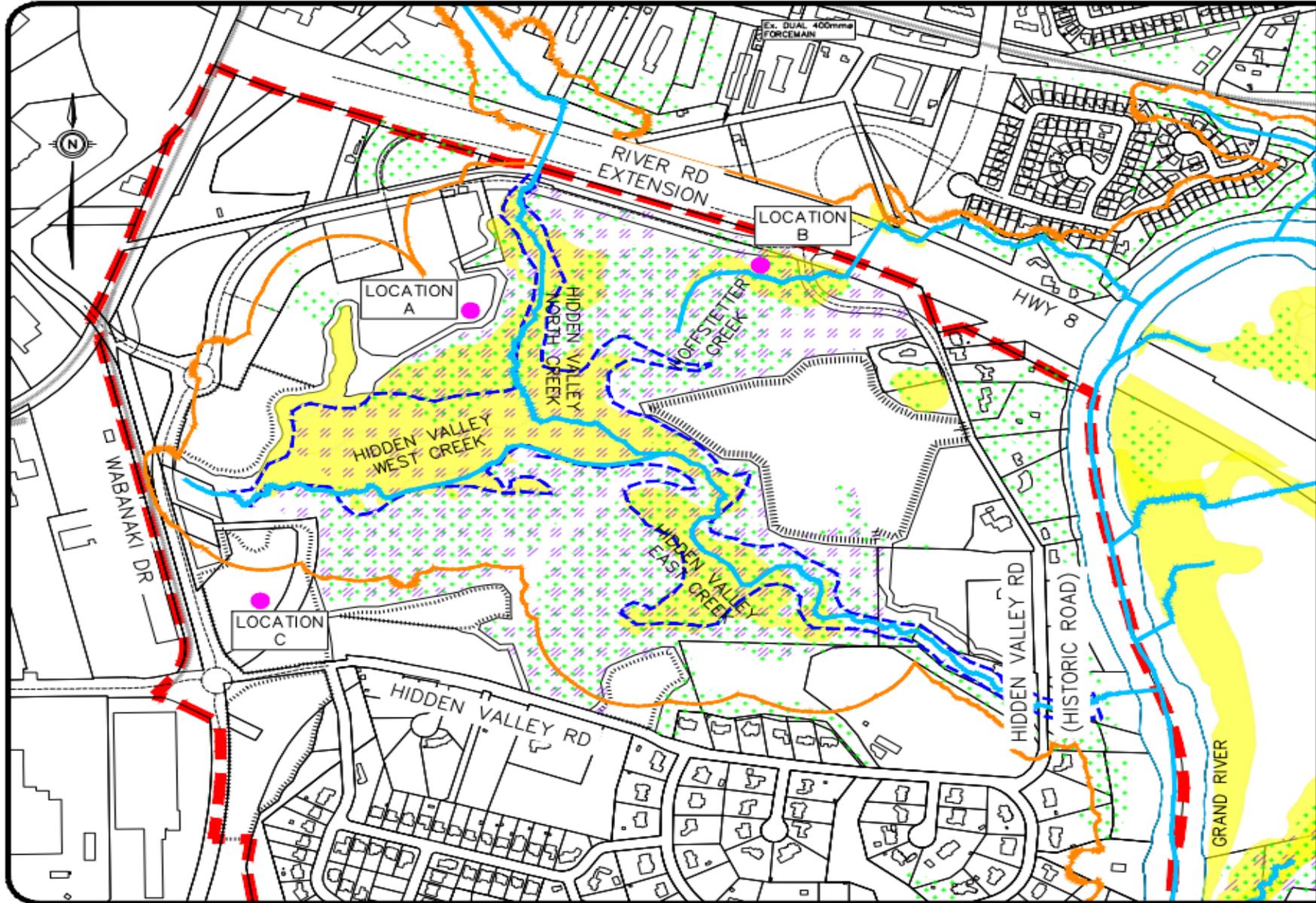
# Stage 1 Key Archeological Findings



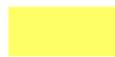
# Key Cultural Heritage Findings



# Key Environmental Features



## LEGEND:

-  PROPOSED SPS LOCATION
-  WETLAND AREA (PROVINCIALY SIGNIFICANT, GRCA)
-  DEER WINTERING AREA
-  WOODED AREA
-  GRCA FLOODPLAIN
-  GRCA REGULATION LIMIT

# We Want to Hear From You!

Please provide comments by filling out the comment form or by contacting the City's representative or the consultant below:

**Katie Wood, C.E.T.**

City Project Manager

200 King Street West Kitchener,  
Ontario N2G 4G7

Tel: 519-741-2200 ext. 7135

Email: [Katie.Wood@Kitchener.ca](mailto:Katie.Wood@Kitchener.ca)

**Dave Wilhelm, P.Eng.**

Consultant Project Manager

520 Bingemans Centre Drive  
Kitchener, Ontario N2B 3X9

Tel: 519-743-650 ext. 1225

Email: [Dwilhelm@mte85.com](mailto:Dwilhelm@mte85.com)

To receive updates on the project, request that your name/email be added to the mailing list.

Your information into this study is valuable and appreciated.

All information is collected in accordance with the Freedom of Information and Privacy Act.

**Project Website:**

<https://www.kitchener.ca/en/development-and-construction/infrastructure-projects.aspx#Upper-Hidden-Valley-pumping-station>



January 25, 2022

MTE File No.: C48301-100

Resident/Owner

**RE: City of Kitchener – Municipal Class Environmental Assessment  
Upper Hidden Valley Sanitary Pumping Station and Forcemain**

Please find attached a Notice of Public Information Centre #2 (PIC#2) for the above noted project. This study is being carried out in accordance with the requirements of the Environmental Assessment Act, as a Schedule B Municipal Class Environmental Assessment. All notices related to this project can be found on the City of Kitchener's website at the following link: [www.kitchener.ca/en/development-and-construction/infrastructure](http://www.kitchener.ca/en/development-and-construction/infrastructure) – projects.

The purpose of the PIC is to present the selected preferred sanitary servicing solution, including sanitary pump station location and forcemain alignment. The PIC is also an opportunity to provide your input and ask any questions about the preferred solution.

We look forward to the opportunity to meet with you at the PIC. Please feel free to call or email me using the contact details below should you require additional information.

Yours truly,

**MTE Consultants Inc.**

---

**Gemma Charlebois, M.A.Sc., P.Eng.**  
MTE Consultants Inc.  
Engineer, Water/Wastewater  
519-743-6500 ext. 1227  
[gcharlebois@mte85.com](mailto:gcharlebois@mte85.com)

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**Katie Wood, C.E.T.**  
City of Kitchener  
Project Manager – Development Engineering  
519-741-2200 ext 7135  
[katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)

Encl.: Notice of Public Information Centre

# Municipal Class Environmental Assessment (Class EA) Upper Hidden Valley Sanitary Pump Station and Forcemain Notice of Public Information Centre #2

To support development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan, this study will identify a sanitary servicing solution. The City of Kitchener has requested MTE Consultants to initiate a study to identify and evaluate alternative solutions, and to select the preferred solution.

This study will complete a Municipal Class EA for the construction of a sanitary pump station and forcemain and prepare the preliminary design. The study will follow guidance outlined in the Municipal Class EA document (as amended in 2007, 2011, and 2015).

After a thorough review, MTE along with the project team have selected a preferred sanitary servicing solution and will present this recommendation at the PIC.

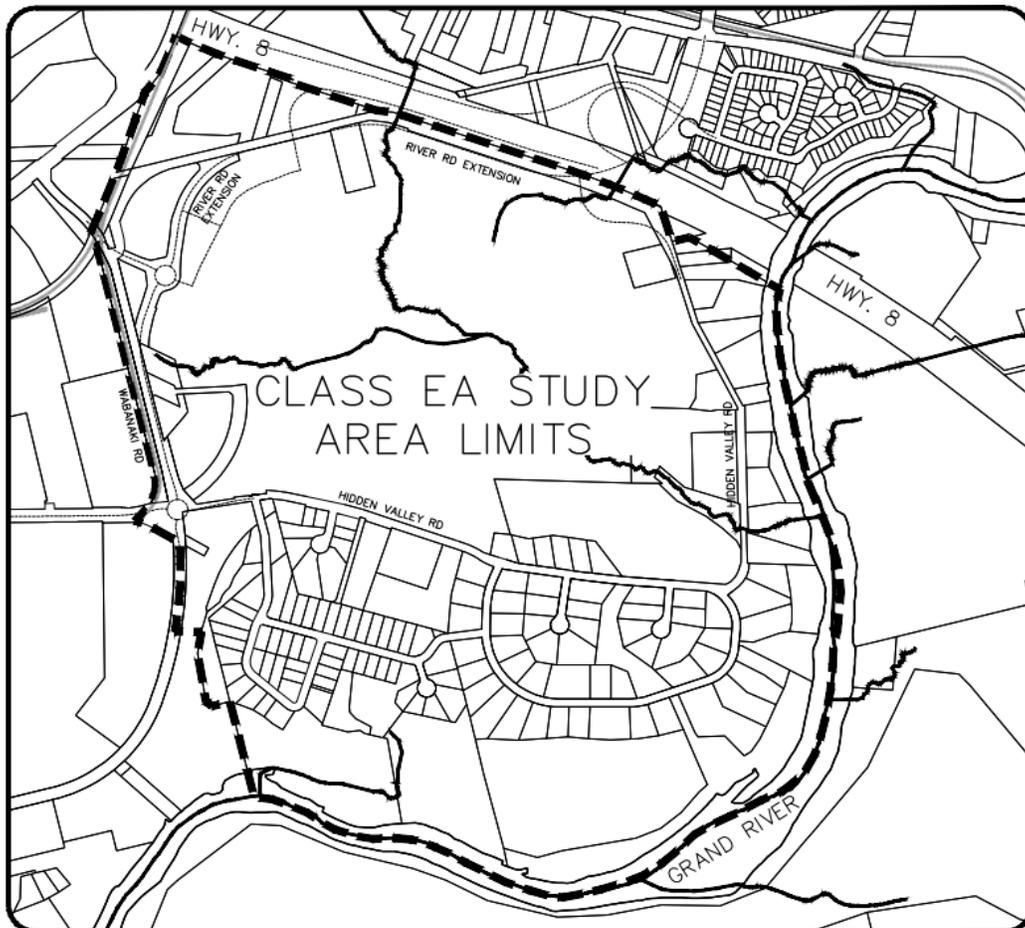


Figure 1. Upper Hidden Valley Study Area

Presentation, discussion, and input on the preferred solution will be conducted at the Public Information Centre (PIC). MTE Consultants and the City of Kitchener invite all interested parties to attend this PIC#2 meeting on

**THURSDAY, FEBRUARY 17, 2022 AT 6PM.**

Due to the current COVID-19 pandemic, the PIC meeting will be held virtually via the Zoom meeting platform. Registration is required to attend the PIC. Register in advance for this meeting:

[https://us06web.zoom.us/webinar/register/WN\\_4kH3A6I5RR-qxzpRDasQFQ](https://us06web.zoom.us/webinar/register/WN_4kH3A6I5RR-qxzpRDasQFQ)

After registering, you will receive a confirmation email containing information about joining the PIC 24 hours before the meeting begins.

Notification of this PIC#2 will also be provided via advertisement in The Waterloo Region Record.

Please note that comments will be maintained for reference throughout the project and will become part of the public record. Under the *Municipal Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, any personal information such as name, address, and telephone number included in a submission will become part of the public record unless the comments specifically request that such personal details not be included in the public record.

Project information will be made available on the City's Website: [Infrastructure projects - City of Kitchener](#)

This Notice was issued on January 25, 2022.

## Municipal Class Environmental Assessment (Class EA) Upper Hidden Valley Sanitary Pump Station and Forcemain

### Notice of Public Information Centre #2

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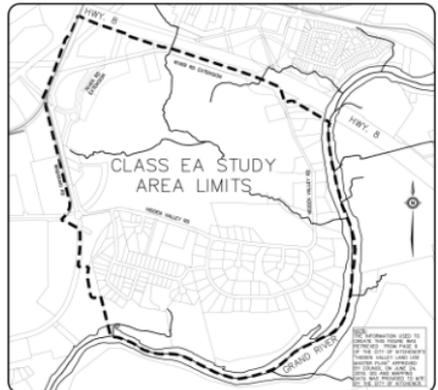
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This Notice was issued on January 25, 2022.



**Figure 1. Upper Hidden Valley Study Area**

# Upper Hidden Valley Sanitary Pump Station Class EA

Public Information Centre #2





**This meeting is being recorded and will be posted to the project website.**

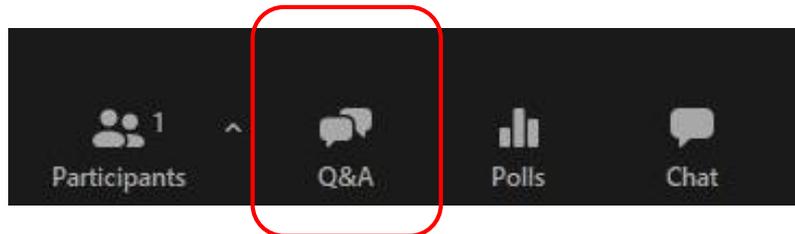


### **Project Website:**

**<https://www.kitchener.ca/en/development-and-construction/infrastructure-projects.aspx#Upper-Hidden-Valley-pumping-station>**



**Use the Q&A button to ask a question or let us know about technical difficulties. Questions will be answered after the presentation.**



# Thank you for participating!

Thank you for participating in the Online Public Information Centre (PIC) for the City of Kitchener's Class Environmental Assessment (EA) for the Upper Hidden Valley Sanitary Pumping Station.

The Province of Ontario has implemented restrictions on public gatherings to deal with the COVID-19 pandemic. This Public Information Centre is relying on web-based communications.

There is an opportunity at any time during the Class EA process for interested persons to provide written input. Any comments received will be collected under the *Environmental Assessment Act* and, with the exception of personal information, will become part of the public record.

Comments can be submitted by emailing [Katie.Wood@Kitchener.ca](mailto:Katie.Wood@Kitchener.ca) and/or by [Dwilhelm@mte85.com](mailto:Dwilhelm@mte85.com) by **March 3, 2022**.



# Project Summary

To support development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan (June 2019), this study will identify a sanitary servicing solution through location selection and preliminary design of a sanitary pumping station and forcemain.

The preferred solution will be determined by maintaining the objectives of protection of the environment, minimal disruption to residents and surrounding areas, engaging a broad range of stakeholders, and documenting the study process in compliance with the Municipal Class EA Schedule B process.

# Class EA Process: Phases



Phase 1:  
Problem or Opportunity



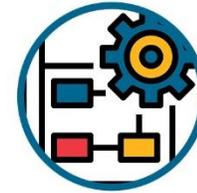
Phase 2:  
Alternative Solutions



Phase 3:  
Alternative Design  
Concepts for Preferred  
Solution



Phase 4:  
Environmental  
Study Report

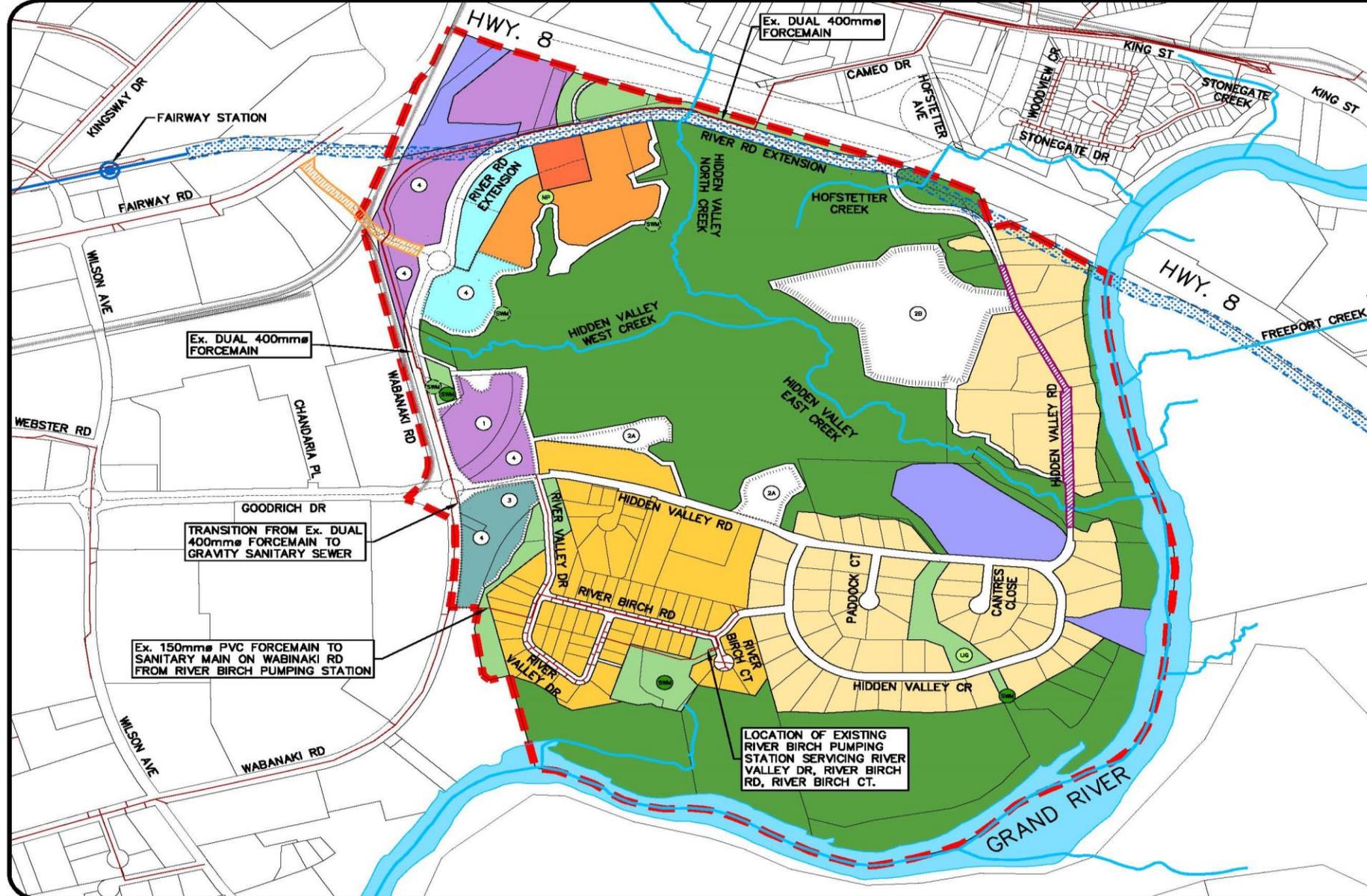


Phase 5:  
Implementation

# Schedule



# Upper Hidden Valley Study Area



## LEGEND:

- LOW RISE RESIDENTIAL – ESTATE
  - LOW RISE RESIDENTIAL – LARGE LOT
  - MEDIUM RISE RESIDENTIAL
  - HIGH RISE RESIDENTIAL
  - MIXED USE
  - COMMERCIAL
  - BUSINESS PARK EMPLOYMENT
  - MAJOR INFRASTRUCTURE & UTILITIES
  - NATURAL HERITAGE CONSERVATION
  - OPEN SPACE
- SITE SPECIFIC POLICY AREA
1. COMMUNITY & INSTITUTIONAL USES ALSO ALLOWED.
  - 2A. & 2B. SUBJECT TO REGULATION AND FURTHER STUDY.
  3. SOME NEIGHBOURHOOD COMMERCIAL USES ALSO ALLOWED.
  4. COMPATIBILITY OF SENSITIVE USES.
- LAND USE MASTER PLAN BOUNDARY
  - PROPOSED ROAD
  - EXISTING SANITARY
  - STREAMS
  - HERITAGE CORRIDOR
  - PRIORITY STREET
- NP NEIGHBOURHOOD PARK
  - UG URBAN GREEN
  - EXISTING SWM FACILITY
  - POTENTIAL SWM FACILITY (LOCATION TBD)
  - LRT STATION
- LRT CORRIDOR (CONSTRUCTED)
  - LRT CORRIDOR (UNDER REVIEW)
  - RAIL TRACKS

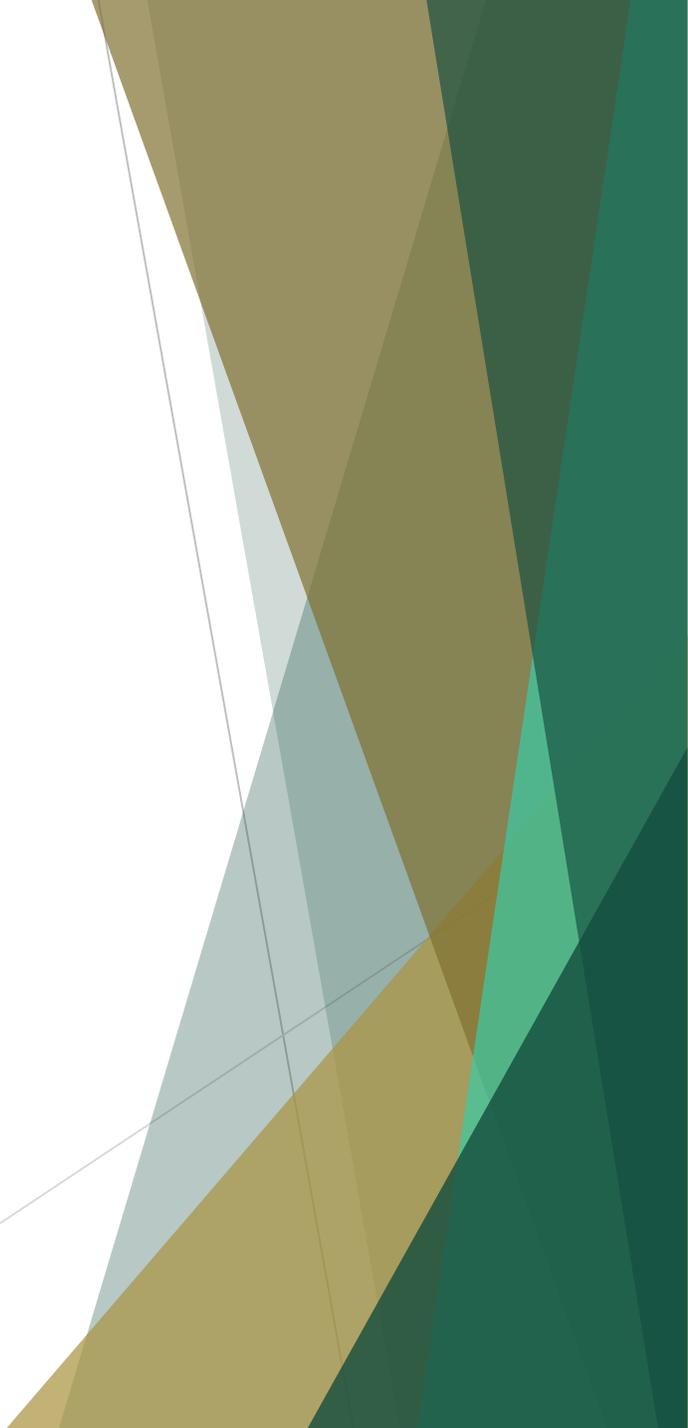
Figure 1 Date: DEC 11/20 Scale: N.T.S.

**CITY OF KITCHENER**  
**HIDDEN VALLEY LAND USE MASTER PLAN**

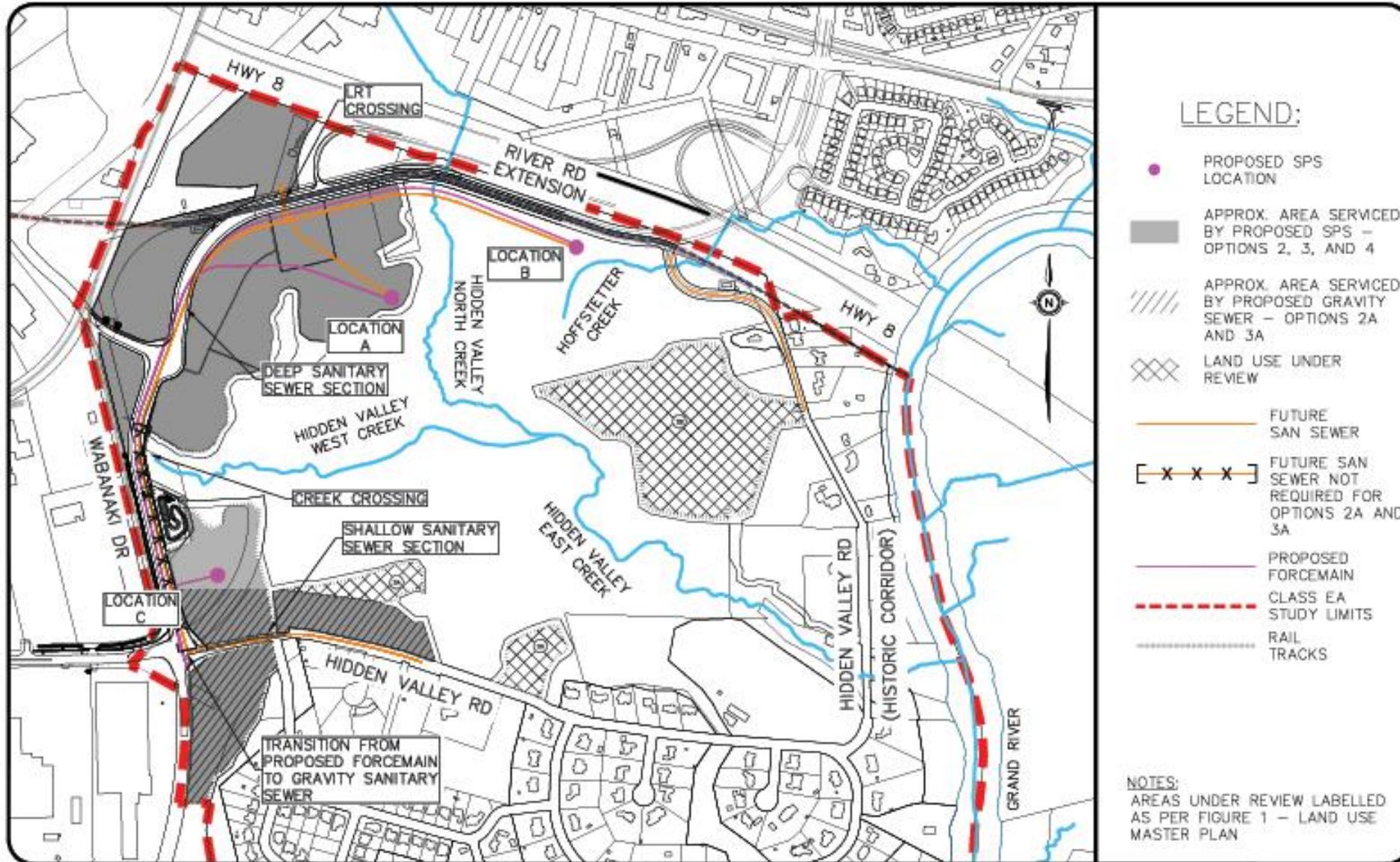
**MTE**  
 Engineers, Scientists, Surveyors

Project No.: 48301-100

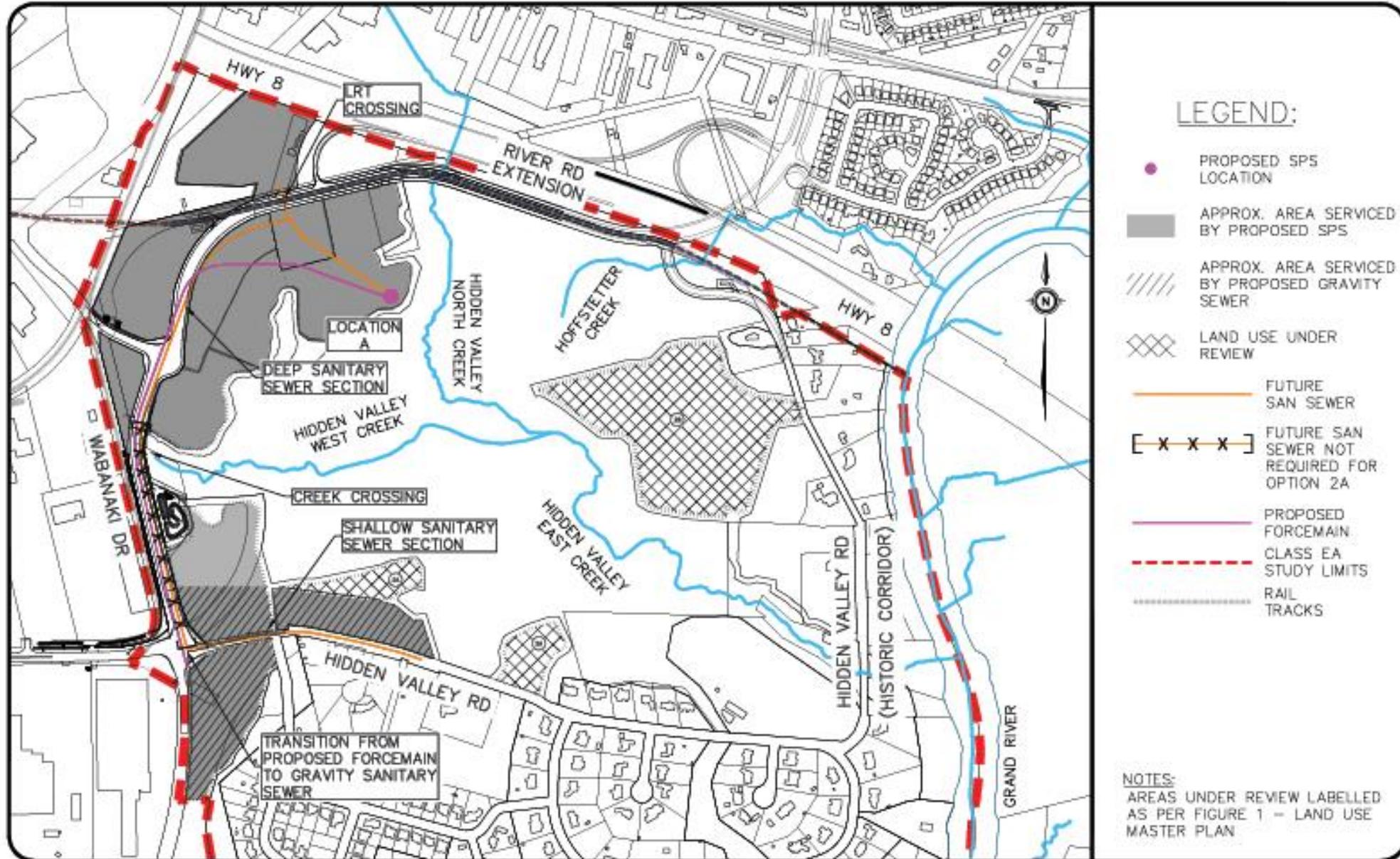
# **Sanitary Pumping Station Location Options**



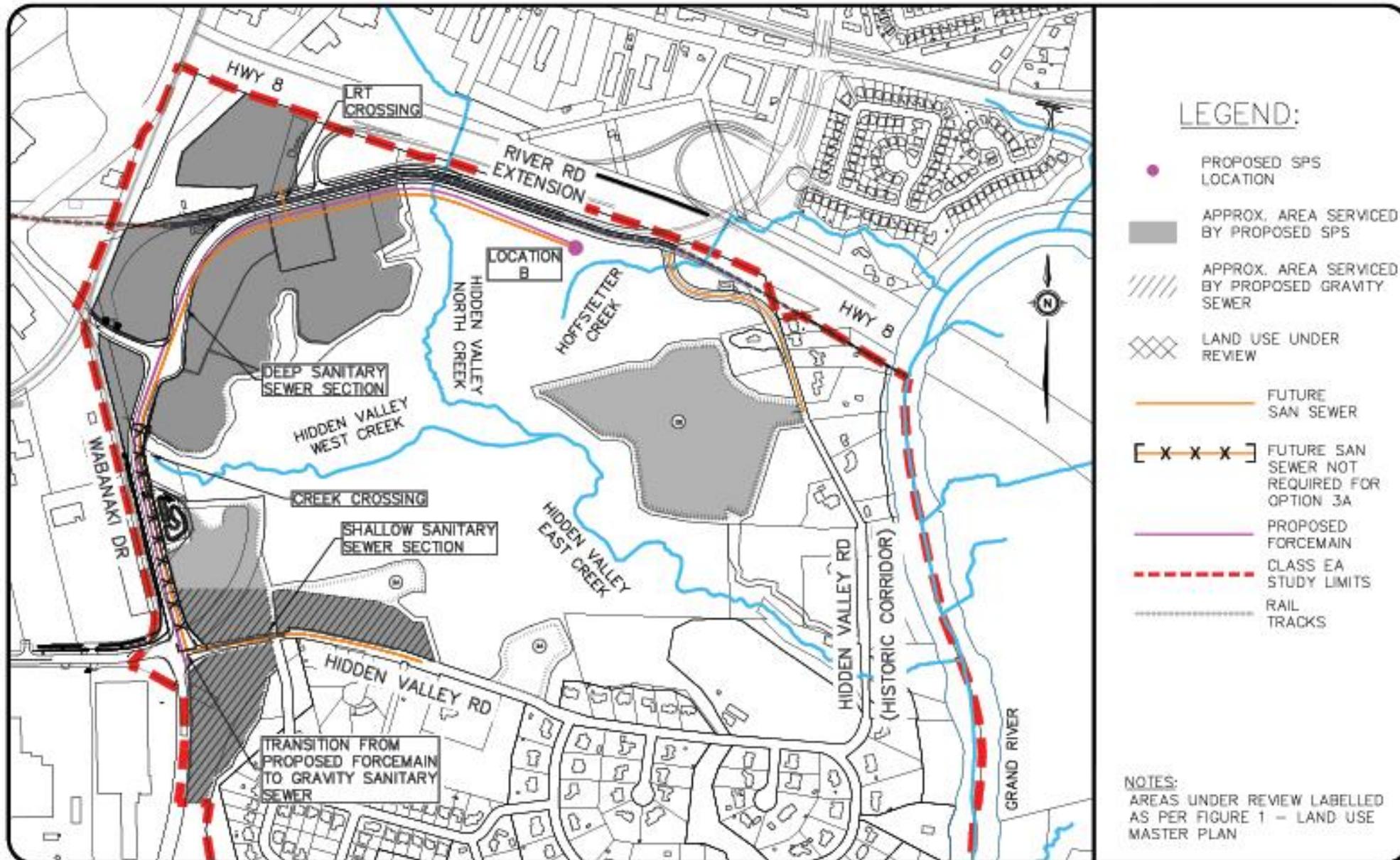
# Options 2 and 2a (Location A), Options 3 and 3a (Location B), and Option 4 (Location C)



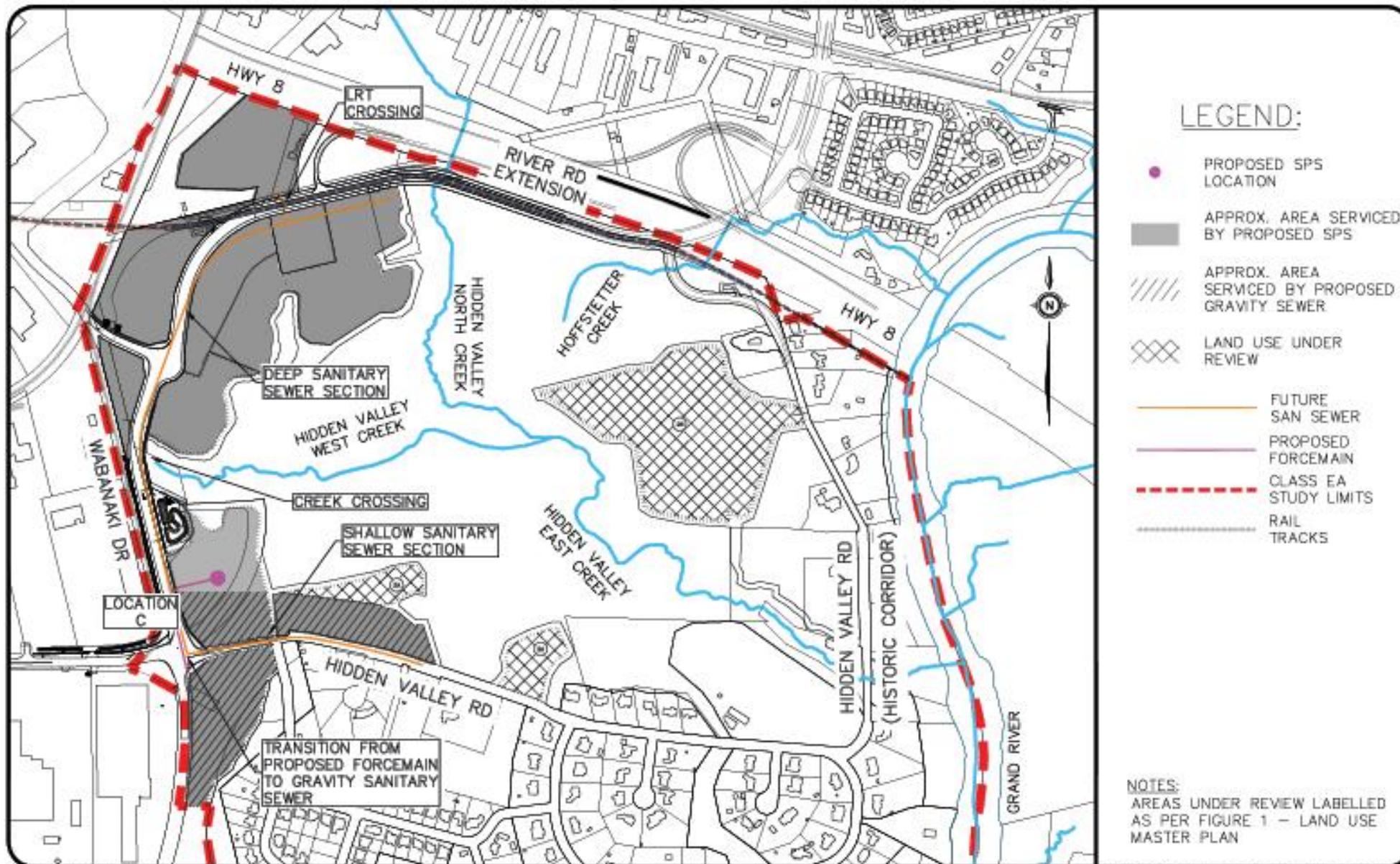
# Options 2 and 2a (Location A)



# Options 3 and 3a (Location B)



# Option 4 (Location C)



# Evaluation Criteria

Criteria	Description
Natural Environment	<b>General Description of Alternative</b>
	<ul style="list-style-type: none"> <li>• How do the alternatives compare with respect to effects on vegetation, water quality, wildlife and aquatic habitat, wetlands, terrestrial resources, woodlands, species at risk?</li> <li>• What are the induced impacts of each location? (i.e. How is the environment in other areas affected by change to the environment at this location) e.g. wildlife migration, increased predation.</li> <li>• What is the impact of spills or overflows for each alternative? e.g. proximity to watercourses, wetlands, effect of topography</li> <li>• A culvert will be installed at Hoffstetter Creek and Hidden Valley North Creek as part of River Road extension.</li> <li>• Note: LRT and River Rd Extension construction will alter landscape from current conditions.</li> </ul>
Social Environment	<ul style="list-style-type: none"> <li>• What impacts will the alternative have on the local community (e.g. noise, odour, traffic / parking, recreational facilities, trails, etc.)?</li> <li>• What are the anticipated impacts during construction (including forcemain install)?</li> <li>• How will the pumping station contribute/detract from the community aesthetic?</li> </ul>
Heritage / Cultural Impacts	<ul style="list-style-type: none"> <li>• What are the potential impacts upon the heritage significance of the heritage structures or landscapes and the potential disturbance of archaeological resources as identified in the Stage 1 Archeological Assessment?</li> <li>• What are the potential impacts upon the heritage significance of the heritage structures or landscapes and the potential disturbance of and Cultural Heritage Assessment Report?</li> </ul>
City Operations	<ul style="list-style-type: none"> <li>• How do the alternatives compare with respect to the operation of the pump station (safety, emergency response, site access / parking, truck turning and access)</li> </ul>
Technical	<ul style="list-style-type: none"> <li>• How do the alternatives compare with respect to technical feasibility of construction and operation?</li> <li>• Are there concerns regarding slope stability of forcemain, flow re-routing*, regulatory / agency approval, groundwater table, surface drainage, location in floodplain, length of forcemain</li> </ul> <p>*flow re-routing refers to ability to by-pass pump around the pump station or to pump to tanker trucks in an emergency.</p>
Servicing Potential	<ul style="list-style-type: none"> <li>• How much of the developable lands, in accordance with the City's Land Use Master Plan can be serviced?</li> <li>• Consider serviceability of lands NOT including 2a, 2b, and 2c in Master Plan.</li> <li>• Consider serviceability of lands INCLUDING 2a, 2b, and 2c in Master Plan.</li> </ul>
Costs	<ul style="list-style-type: none"> <li>• How do the alternatives compare with respect to anticipated capital costs?</li> </ul>

# Evaluation of Alternatives

## Options

2	2a	3	3a	4
Install SPS at Location A	Install SPS at Location A with part of service area to drain by gravity	Install SPS at Location B	Install SPS at Location B with part of service area to drain by gravity	Install SPS at Location C

## Legend

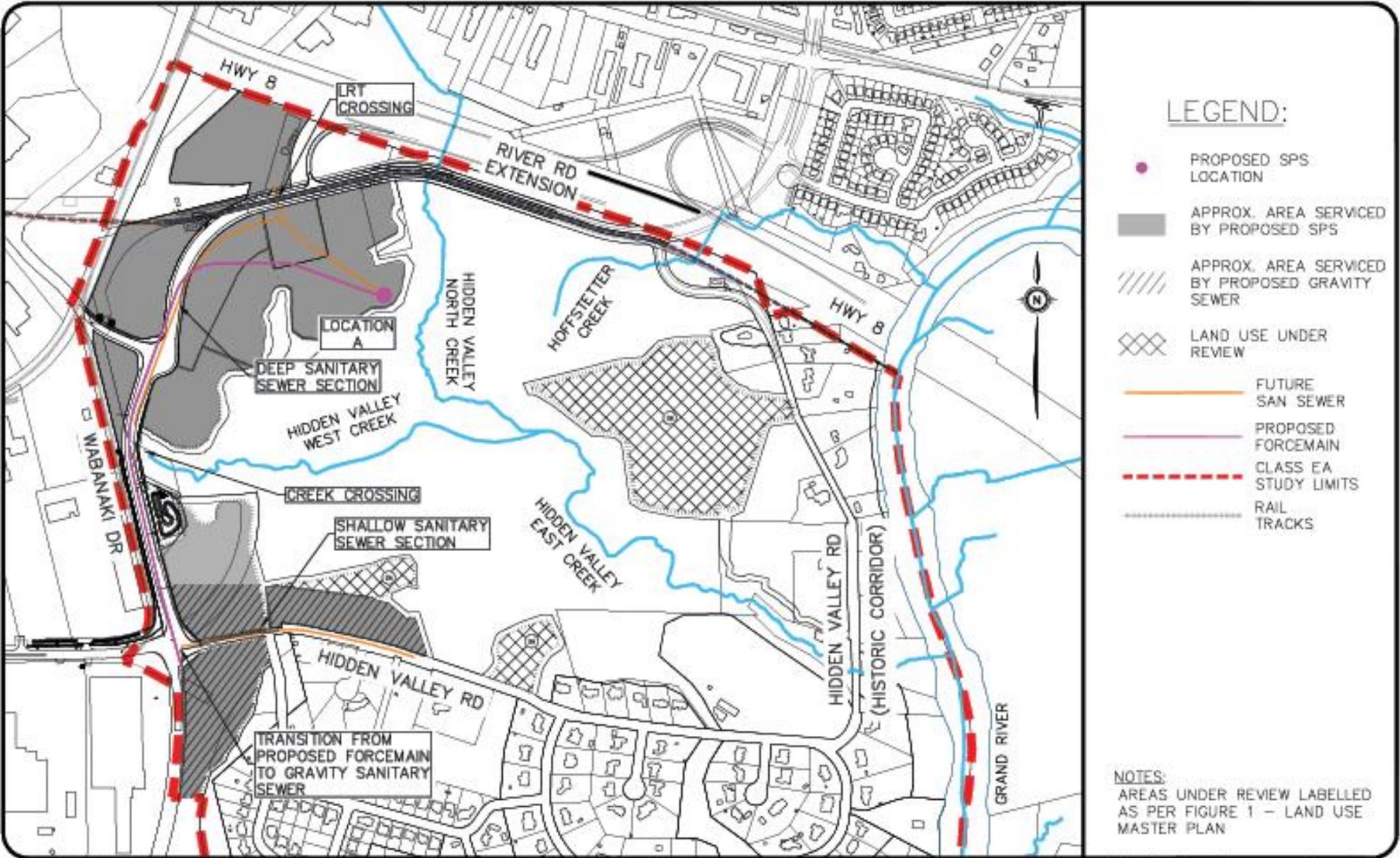
	Most Desirable
	Least Desirable

The evaluation team included:

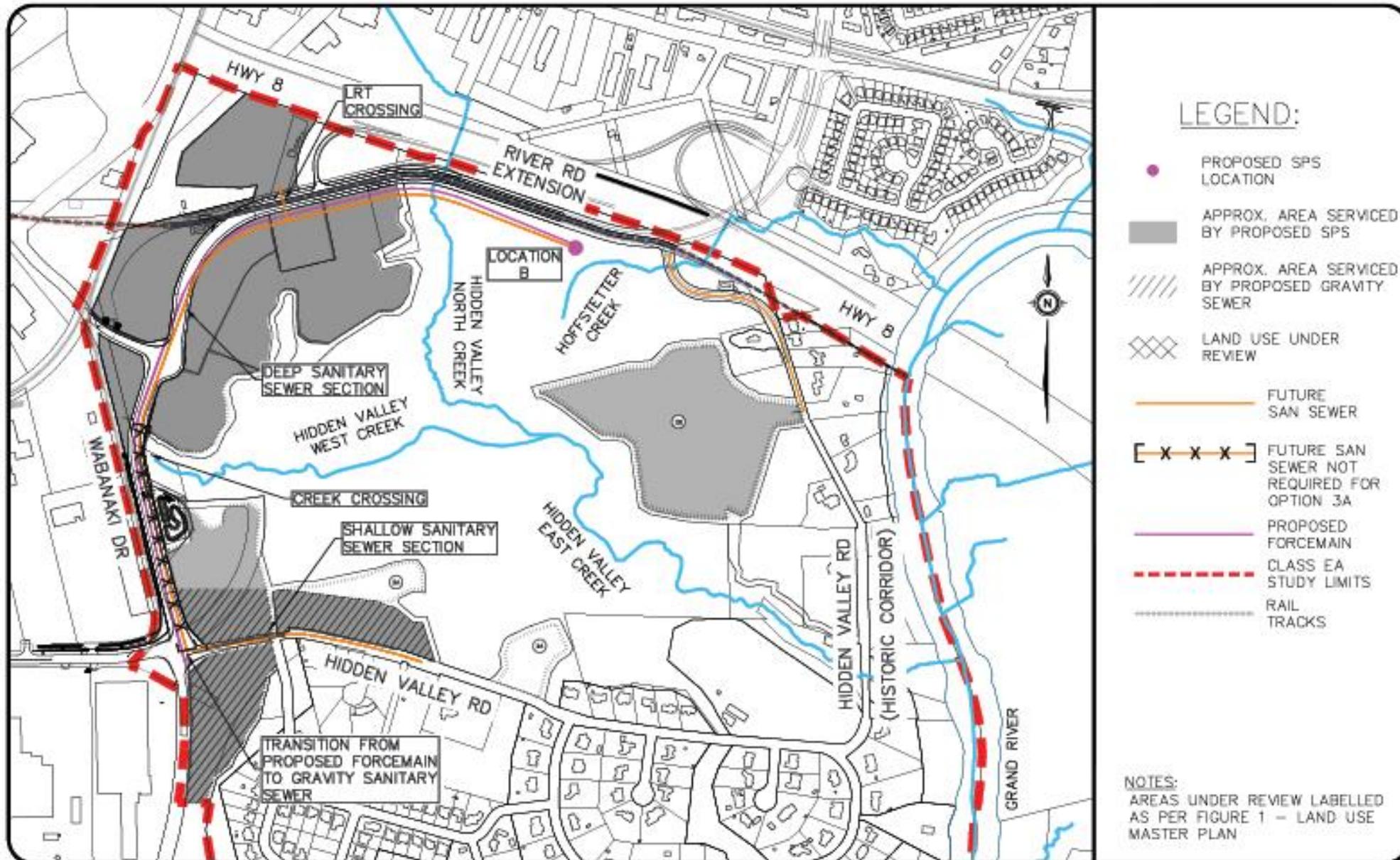
- MTE Consultants Inc.
- City of Kitchener
- Grand River Conservation Authority
- Region of Waterloo

\*Note: Option 1 – Do Nothing did not meet the intention of the problem statement. Thus, it was not evaluated.

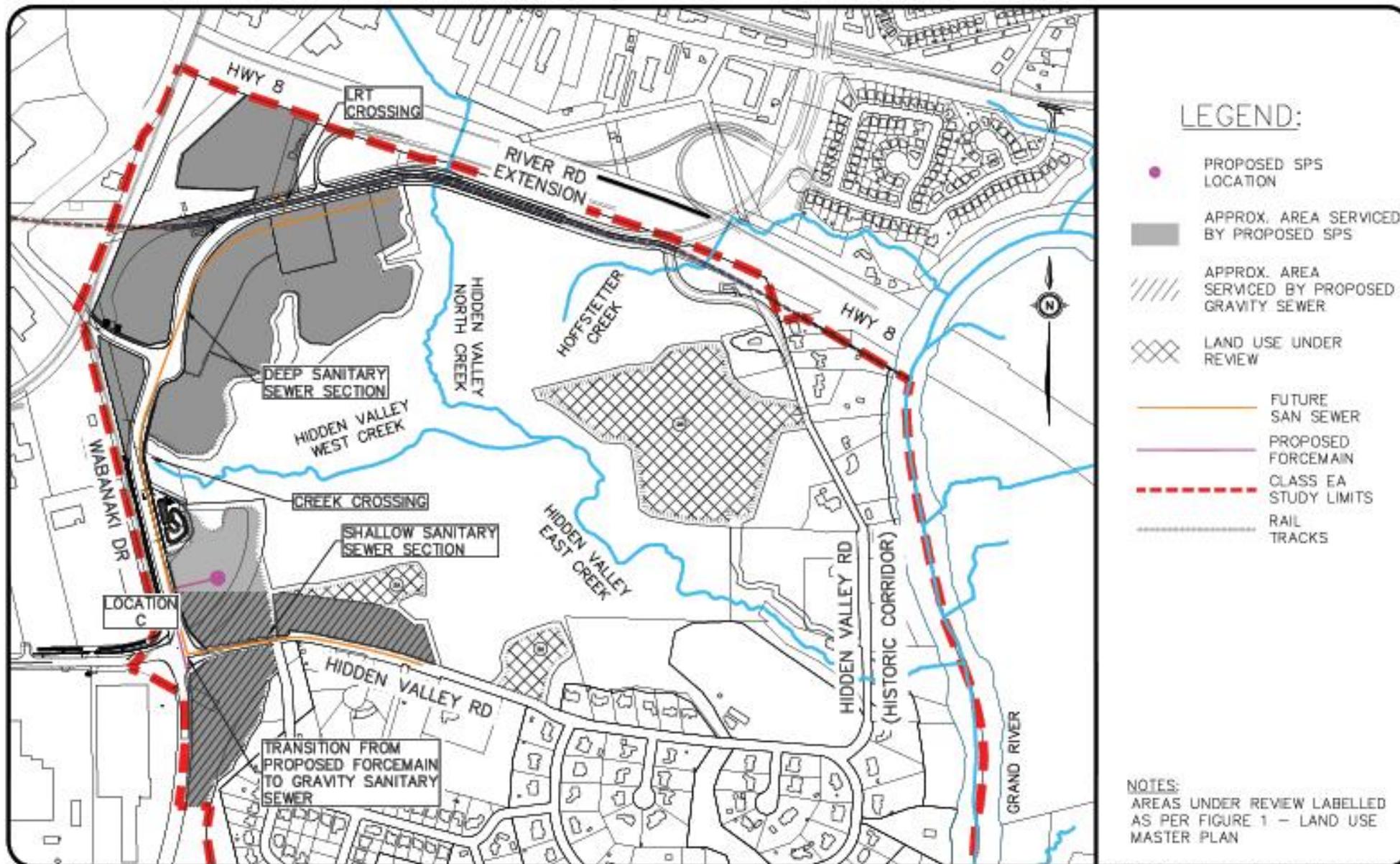
# Option 2 (Location A)



# Options 3 and 3a (Location B)



# Option 4 (Location C)



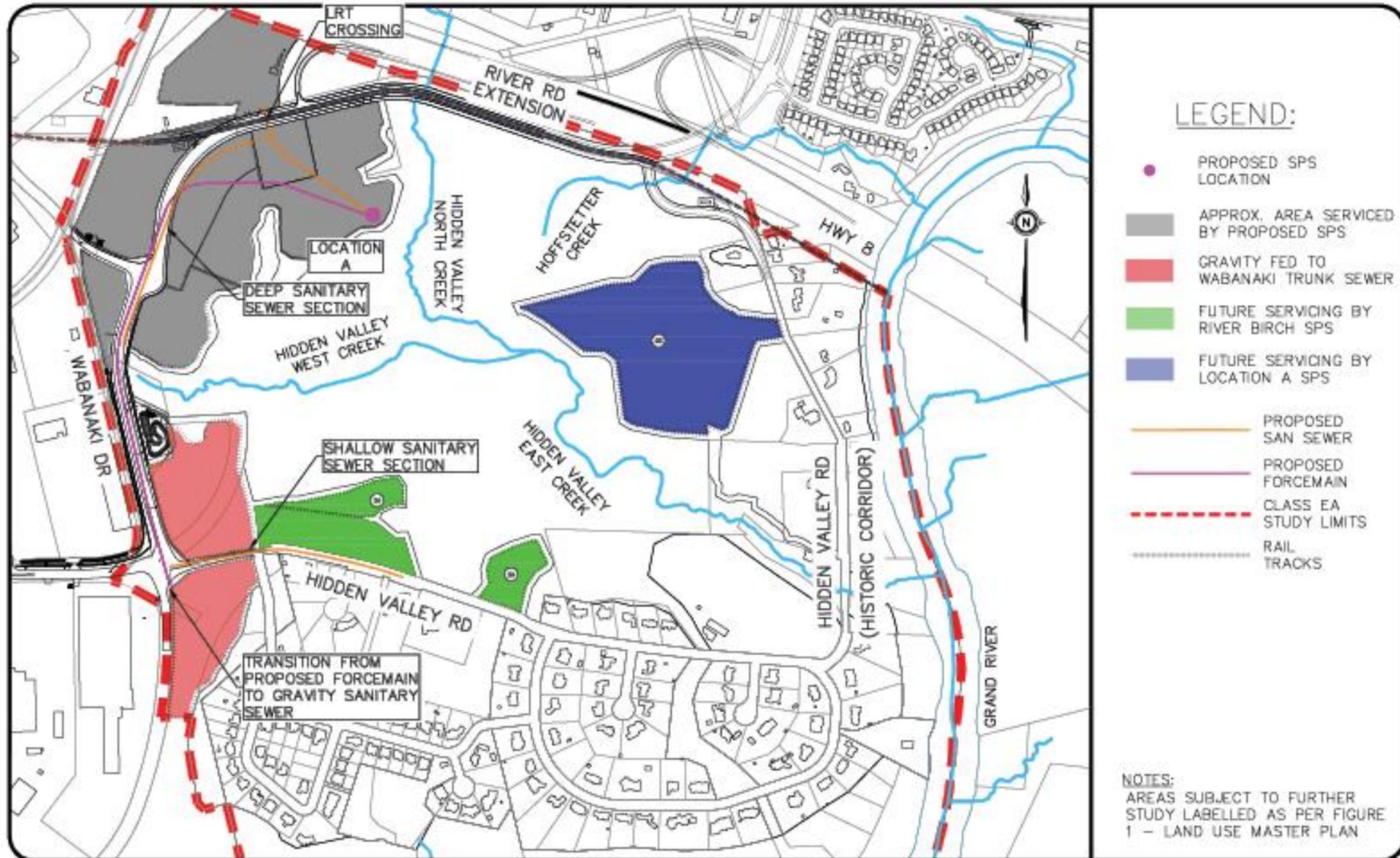
## LEGEND:

- PROPOSED SPS LOCATION
- APPROX. AREA SERVICED BY PROPOSED SPS
- ▨ APPROX. AREA SERVICED BY PROPOSED GRAVITY SEWER
- ▩ LAND USE UNDER REVIEW
- FUTURE SAN SEWER
- PROPOSED FORCEMAIN
- - - CLASS EA STUDY LIMITS
- ⋯ RAIL TRACKS

NOTES:  
AREAS UNDER REVIEW LABELLED AS PER FIGURE 1 - LAND USE MASTER PLAN

# PREFERRED ALTERNATIVE

## Option 2a – Location A



# Next Steps

- ▶ Preparation and submission of Environmental Study Report (ESR) to Ministry of Environment, Conservation, and Parks
- ▶ Council meeting for approval of ESR: May 30, 2022
- ▶ Preliminary Design: Spring 2022
- ▶ Pumping Station Design and Approvals – 2026/27
- ▶ Pumping Station Construction – 2027

\*\* This schedule may be revised to align with the timing of Regional infrastructure projects (ION and/or River Road)

Thank you!

The background features a series of overlapping, semi-transparent geometric shapes, primarily triangles, in various shades of green and gold. These shapes are positioned on the right side of the frame, creating a modern, layered effect against the white background.

# We Want to Hear From You!

Please provide comments by filling out the comment form or by contacting the City's representative or the consultant below:

**Katie Wood, C.E.T.**

City Project Manager  
200 King Street West  
Kitchener, Ontario N2G 4G7  
Tel: 519-741-2200 ext. 7135  
Email: [Katie.Wood@Kitchener.ca](mailto:Katie.Wood@Kitchener.ca)

**Dave Wilhelm, P.Eng.**

Consultant Project Manager  
520 Bingemans Centre Drive  
Kitchener, Ontario N2B 3X9  
Tel: 519-743-6500 ext. 1225  
Email: [Dwilhelm@mte85.com](mailto:Dwilhelm@mte85.com)

To receive updates on the project, request that your name/email be added to the mailing list.

Your information into this study is valuable and appreciated.

All information is collected in accordance with the Freedom of Information and Privacy Act.



**Project Website:**

<https://www.kitchener.ca/en/development-and-construction/infrastructure-projects.aspx#Upper-Hidden-Valley-pumping-station>

Ms. Katie Wood  
Project Manager, Development Engineering  
City of Kitchener  
200 King Street West  
Kitchener, ON N2G 4G7

November 25, 2021

**RE: Hidden Valley Sanitary Pumping Station and Forcemain Environmental Assessment – Alternative Solutions**

Dear Ms. Wood,

This letter is in response to the information presented at the Public Information Centre held on November 4<sup>th</sup>, 2021. On behalf of Pearl Valley Development Corp., a landowner in Hidden Valley, I would like to offer the following comments related foremostly to the planning approach and some technical aspects as presented on November 4<sup>th</sup>, 2021, during the Sanitary Pumping Station and Forcemain Environmental Assessment (the "EA") Public Information Centre ("PIC").

In April of this year, I wrote to you about the Terms of Reference for this environmental assessment, and the likelihood of exclusion of some of our developable areas from this study as per information and maps included in the EA's terms of reference. The recently presented alternative options and their mapping demonstrate such a fragmented approach. In particular, areas identified as A and B on the map in Appendix A herewith, should be included in all servicing options. It appears that Options 2, 2A and 4 do not include these areas and as such cannot be supported by PVDC.

**PVDC views this EA as a tool for the City to realize the full development potential of these lands through the preparation of a complete servicing analysis. One that, with provincial policies in mind, focuses on servicing all available lands, as designated in the Official Plan, for a maximum population. Only this methodology will adequately integrate good planning principles with technical considerations.**

An EA must be based on planning policies in force. The land use master plan ("LUMP") included in the PIC materials does not reflect all lands currently designated for development in the City of Kitchener's Official Plan and the Regional Official Plan. Just as the presented Option A – the "do nothing" alternative - was discounted as not supporting development at all, other alternatives not addressing serviceability of all sections within Hidden Valley as well as existing homes on private services, ought also not be considered.

Options that entail the servicing of all lands designated for development should be deliberated when developing pumping station alternatives and provided for in selecting a preferred alternative to ensure the EA does not prejudice the development potential of any lands. The EA should thus evaluate and conclude with respect to the feasibility of providing sanitary services for all lands designated Low Rise Residential on Map 3 of the city's official plan. This is required by the *area specific policies* that are now in place in the OP.

Planning for partial services within the Urban Area (i.e. municipal water and septic tanks) is not consistent with the land use policy framework that currently is in place. The EA should consider these policies and ensure all lands designated for development are accommodated by the alternatives. It should also make provisions (to the extent possible) for eliminating and/or phasing out existing septic tanks in the area. This presents an environmentally responsible approach.

To fully analyze and comment on the presented alternatives more information is needed than was presented at the PIC. The information shown is not sufficient and does not reflect all aspects requiring consideration as part of an EA. The presentation focused on locating the forcemain and pumping station only. The design capacity of the pumping station, one that accommodates the maximum anticipated population within the study area, and the available capacity within the downstream sanitary sewer are equally important and necessary for analysis. Servicing and land use planning for the area should utilize available capacity. Please confirm the available capacity at the connection point with existing services.

Of concern is also the information incorporated into the archeological and natural environment slides. The purpose of the archaeological information should be limited to the evaluation of the pumping station alternatives and not give direction to future planning applications. Similarly, the purpose of the natural heritage information should be limited to the evaluation of the pumping station alternatives.

It is also critical to acknowledge and present to all stakeholders and the public the fact that other infrastructure planning processes have already begun within Hidden Valley. Processes that will significantly impact this area, even more than the pumping station itself. For example, the natural heritage evaluation must consider and account for impacts associated with new road construction (River Road Extension), the realignment of Hidden Valley Road and future rapid transit in this area. In other words, natural features will be impacted by infrastructure planning that has already occurred. As such, certain pumping station locations will have limited impacts on these features. This must be reflected in the evaluation and clearly presented to adequately illustrate the scale of impacts. Specifically, pumping station location B is shown adjacent to future River Road Extension and rapid transit, and therefore would likely have minimal impacts on natural features.

Below are additional technical comments to the alternative servicing options presented at the PIC:

1. Servicing of the pocket of lands between the central wetland and Hidden Valley Road near the Grand River has been included in Option 3 and 3a through a sanitary sewer located within the realigned Hidden Valley Road where it connects with the new River Road Extension. An alternative route for a local gravity sewer to service these lands is shown in Appendix A. This alignment considers local topography and takes advantage of more natural draining patterns.
2. Please ensure that services are planned within public right-of-ways along River Road Extension as the presented options show some services through private properties at the north end.
3. The presented mapping shows incorrect shading on slide 21, around pumping station location B, which is important to note from the natural heritage analysis perspective. The PSW here is shown as being a deer wintering and wooded area, which it is neither. Also, the extent of the deer wintering area to the south of this PSW is not fully correct as it actually does not cover the entire area between the wetland and the field designated for residential uses to the south of it.
4. Sanitary servicing for developable sections between the eskars and Hidden Valley Road south (shaded green in Appendix A) can drain by gravity regardless of the pumping station alternatives. These lands should be identified and servicing plans for lands to the south of these sections should be required to provide for and accommodate the servicing of all lands in this area.

I would also like to provide additional information regarding the planning processes PVDC has been involved in with the City over the last 20 years. Realizing the significant staff changes at the City over

the last months, including the change of Project Manager for Hidden Valley, we believe some context to this EA and other technical studies needed for the Hidden Valley Secondary Plan, is of value.

The Hidden Valley area has been enveloped by the City's built environment for decades now. Already in the late 1970s and early 1980s there were attempts to develop it. Several employment and residential plans of subdivisions were proposed. Current land uses still reflect former plans for a business park to be located in the northwest section of PVDC lands and residential in remaining areas. For many years the non-residential sections have been protected for employment uses. However, with the changing planning environment over the last 2 decades - focused on sustainability through the protection of the countryside and reurbanization and the introduction of rapid transit and its intensification-supportive measures - more balanced visions have been developed for Hidden Valley.

Already the City's 2010 *Comprehensive Review of Employment Lands Study* identified lands within Hidden Valley as ones to be further studied to determine if there are a better uses for it - based on then new Provincial Policy Statement and Growth Plan directives. The following decade addressed ambitious plans of light rail transit development for which station area planning was key. The northwest sections of Hidden Valley lands were identified as being within 800m of the Fairway terminus pointing towards transit-oriented planning. While station area planning for this location has not come to fruition to this day, it has always provided context for more recent planning. Together with Hidden Valley's exquisite location and surrounding amenities within an already built-up area, it has been discussed with City staff over the last few years as a site for a stunning mixed-use neighbourhood. This has been somewhat reflected in the 2019 Land Use Master Plan for which PVDC provided sound argumentation for even higher densities. While City's Planning Staff was not opposed to more densities than proposed in the LUMP, they indicated that a detailed servicing analysis is needed to ensure capacities are reflected in the final plan.

Between the above background information and formal planning directives in place, the EA ought to include all developable parcels with their maximum build out potential in any presented and selected alternatives. Only this approach will maximize opportunities for fulfilling the City's strategic goals and sustainable growth while not prejudicing development potential and built out over time.

We would appreciate the opportunity to meet with you to review our comments and how they will be addressed.

Sincerely,



Hanna Domagala  
*Senior Project Manager*

Cc:

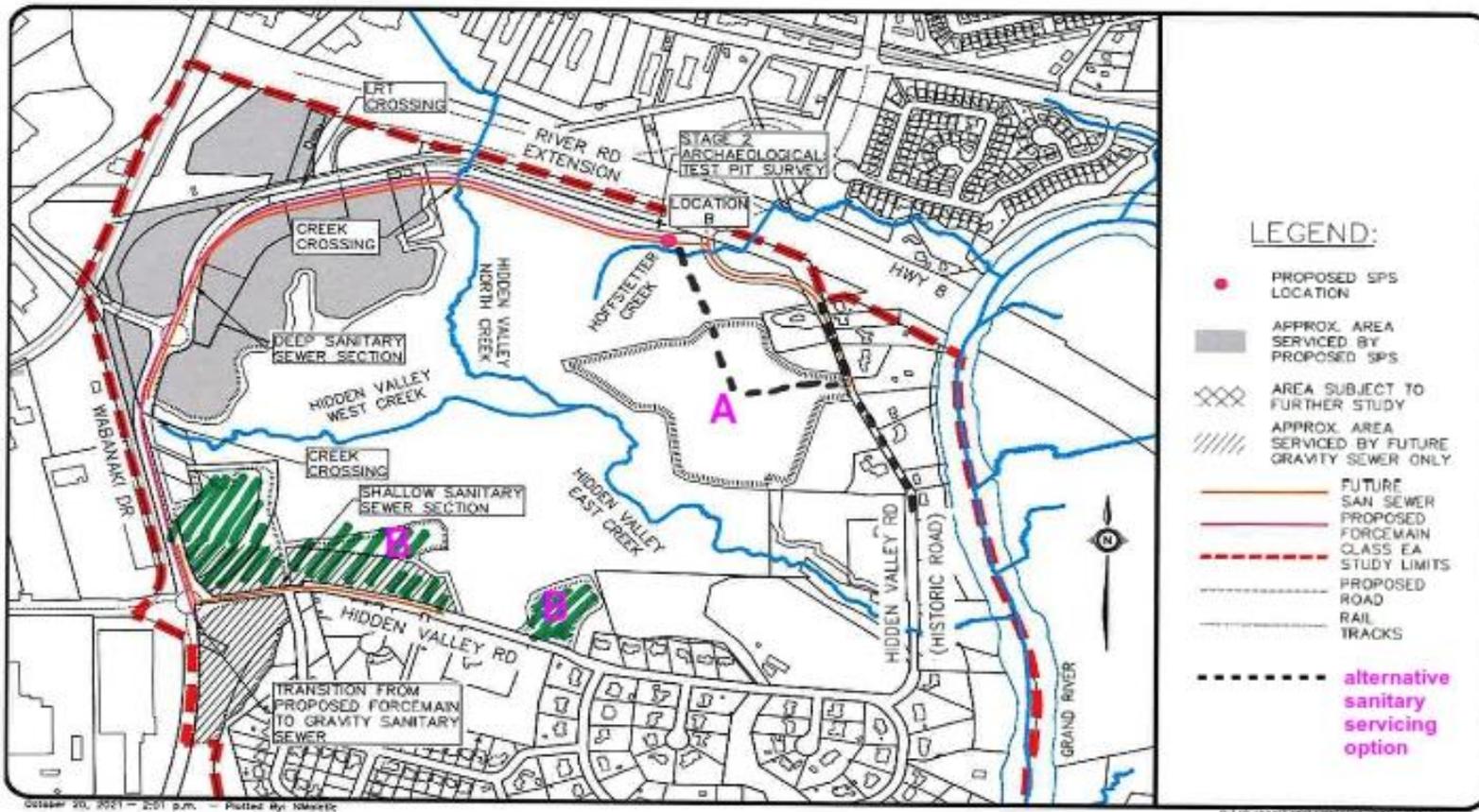
1. Richard Kelly-Ruetz, Planner, City of Kitchener

Attachment:

1. *Appendix A* - map

Appendix A

Option 3a: Install Sanitary Pumping Station at Location B





MTE Consultants

520 Bingham Centre Drive, Kitchener, Ontario N2B 3X9

January 6, 2022

MTE File No.: C48301-100

Hanna Domagala  
Senior Project manager  
Pearl Valley Development Corp  
508 Riverbend Drive  
Kitchener, ON N2K 3S2  
Email: [hanna@pbenninger.com](mailto:hanna@pbenninger.com)

Dear Hanna:

**RE: Upper Hidden Valley Sanitary Pumping Station  
Class Environmental Assessment (EA) – Response to Comments**

We acknowledge receipt of your letter dated 25<sup>th</sup> November 2021, providing comments and alternative solutions in relation to captioned project. For clarity, we have included your comment/solutions, followed by our response in *Italics*.

Following this letter, the following document is included:

Comments from PVDC Re: HV SPSF Alternative Solutions, November 25, 2021

1. In April of this year, I wrote to you about the Terms of Reference for this environmental assessment and the likelihood of exclusion of some of our developable areas from this study as per information and maps included in the EA's terms of reference. The recently presented alternative options and their mapping demonstrate such a fragmented approach. In particular, areas identified as A and B on the map in Appendix A herewith, should be included in all servicing options. It appears that Options 2, 2A and 4 do not include these areas and as such cannot be supported by PVDC. PVDC views this EA as a tool for the City to realize the full development potential of these lands through the preparation of a complete servicing analysis. One that, with provincial policies in mind, focuses on servicing all available lands, as designated in the Official Plan, for a maximum population. Only this methodology will adequately integrate good planning principles with technical considerations.

*MTE Response:*

*The three (3) pump station locations were chosen based on providing servicing to the greatest developable area (km<sup>2</sup>) while balancing off other evaluation criteria (cost, technical feasibility, environmental impact, etc.). The three (3) locations (5 options in total) in the Public Information Centre (PIC) presentation have the potential to provide sanitary servicing to much of the developable lands while meeting many of the other criteria.*

*The lands that can not be serviced by a location is due to the existing topography of the area relative to that of the pump station location. Providing servicing for those areas would result in very deep sanitary sewers and a very deep pump station. This would incur a high cost and has a low technical feasibility. Servicing for some of those areas may be available via sewer extensions from existing serviced areas.*

*MTE notes that PVDC does not support Options 2, 2a, and 4.*

2. An EA must be based on planning policies in force. The land use master plan (“LUMP”) included in the PIC materials does not reflect all lands currently designated for development in the City of Kitchener’s Official Plan and the Regional Official Plan. Just as the presented Option A – the “do nothing” alternative - was discounted as not supporting development at all, other alternatives not addressing serviceability of all sections within Hidden Valley as well as existing homes on private services, ought also not be considered.

*MTE Response:*

*The scope of the Class EA is to identify the optimum pumping station location and forcemain route to service developable lands in accordance with the City of Kitchener’s Land Use Master Plan. The preferred solution will be based on factors such as serviceability of the greatest developable area, cost, technical feasibility, social, and environmental factors, among others.*

*With respect to land uses, the scope of the Class EA is to consider those endorsed by Council in the 2019 Land Use Master Plan as these will ultimately be implemented through Official Plan and Zoning By-law Amendments via the Secondary Plan work. It is well-established that certain lands within the study area may not be able to be municipally serviced. The question of future development on lots with private services will be further explored through the Secondary Plan.*

3. Options that entail the servicing of all lands designated for development should be deliberated when developing pumping station alternatives and provided for in selecting a preferred alternative to ensure the EA does not prejudice the development potential of any lands. The EA should thus evaluate and conclude with respect to the feasibility of providing sanitary services for all lands designated Low Rise Residential on Map 3 of the city’s official plan. This is required by the area specific policies that are now in place in the OP.

*MTE Response:*

*Due to topography, sanitary servicing of much of the Low Rise Residential area is not technically feasible by any of the 3 location options presented. In order for the area to have sanitary servicing by a pump station at, for example, Location Option B, the sanitary sewer and pump station would need to be nearly 20m deeper. At this depth, the cost of pump station and sewers is very high and the technical feasibility is low. The Low Rise Residential area between River Valley Dr. and Hidden Valley Cr. along Hidden Valley Road could be serviced by the City’s existing River Birch Pumping Station.*

*A dedicated pump station would be required in order to provide sanitary servicing to the areas designated as Low Rise Residential. Additionally, it would not be technically feasible for the other developable lands within the Upper Hidden Valley area to be serviced by this pump station, due to topography. Thus, a future development in the Low Rise Residential lands could install a private pump station to connect to municipal services.*

4. Planning for partial services within the Urban Area (i.e., municipal water and septic tanks) is not consistent with the land use policy framework that currently is in place. The EA should consider these policies and ensure all lands designated for development are accommodated by the alternatives. It should also make provisions (to the extent possible)

for eliminating and/or phasing out existing septic tanks in the area. This presents an environmentally responsible approach.

*MTE Response:*

*The scope of this Class EA is to identify municipal sanitary servicing in accordance with the City's Land Use Master Plan.*

*Other sanitary servicing options, such as septic, are outside of the scope of this EA.*

*Development on septic systems requires consideration and approval by the Region of Waterloo, not the City of Kitchener. If the Region is supportive of septic, approvals are still required from the City's Building Division, Engineering Division, and Planning Division. The City did not indicate that it would support development on septic in this area during the presentation. The question of future development on lots on private services will be further explored through the Hidden Valley Secondary Plan work*

5. To fully analyze and comment on the presented alternatives more information is needed than was presented at the PIC. The information shown is not sufficient and does not reflect all aspects requiring consideration as part of an EA. The presentation focused on locating the forcemain and pumping station only. The design capacity of the pumping station, one that accommodates the maximum anticipated population within the study area, and the available capacity within the downstream sanitary sewer are equally important and necessary for analysis. Servicing and land use planning for the area should utilize available capacity. Please confirm the available capacity at the connection point with existing services.

*MTE Response:*

*At this stage of the Class EA process, we have identified several servicing options with corresponding pump station locations and forcemain routes. The selection of the preferred option will be based on the analysis and investigations completed to-date, including assessing available capacity based on the City of Kitchener's development manual guidelines. Since capacity of the receiving sewer will not affect the selection of the Preferred Option, the City will confirm the available capacity and mitigating actions, if required, as part of the Preliminary Design upon completion of the Class EA.*

6. Of concern is also the information incorporated into the archeological and natural environment slides. The purpose of the archaeological information should be limited to the evaluation of the pumping station alternatives and not give direction to future planning applications. Similarly, the purpose of the natural heritage information should be limited to the evaluation of the pumping station alternatives.

*MTE Response:*

*The archeological, cultural heritage, and natural heritage investigations' scope of study for this Class EA was to evaluate the Upper Hidden Valley study area and provide information and assessment of the considerations necessary for the construction of a pumping station, forcemain, and sanitary sewers. Each investigation's findings and conclusions were based on this scope of work.*

7. It is also critical to acknowledge and present to all stakeholders and the public the fact that other infrastructure planning processes have already begun within Hidden Valley. Processes that will significantly impact this area, even more than the pumping station itself. For example, the natural heritage evaluation must consider and account for impacts associated with new road construction (River Road Extension), the realignment of Hidden Valley Road and future rapid transit in this area. In other words, natural features will be impacted by infrastructure planning that has already occurred. As such, certain pumping station locations will have limited impacts on these features. This must be reflected in the evaluation and clearly presented to adequately illustrate the scale of impacts. Specifically, pumping station location B is shown adjacent to future River Road Extension and rapid transit, and therefore would likely have minimal impacts on natural features.

*MTE Response:*

*The City is aware, acknowledges, and will utilize the information gathered from other planned infrastructure projects to inform the evaluation of the proposed pump station location and forcemain routes.*

**Additional Technical Comments to the alternative servicing Options presented at PIC:**

1. Servicing of the pocket of lands between the central wetland and Hidden Valley Road near the Grand River has been included in Option 3 and 3a through a sanitary sewer located within the realigned Hidden Valley Road where it connects with the new River Road Extension. An alternative route for a local gravity sewer to service these lands is shown in Appendix A. This alignment considers local topography and takes advantage of more natural draining patterns.

*MTE Response:*

*The alternative route presented does not follow existing or proposed roadways. The alternative route would extend the sanitary sewer through non-developable lands. We do not consider this to be a viable option in accordance with the City of Kitchener's Land Use Master Plan.*

2. Please ensure that services are planned within public right-of-ways along River Road Extension as the presented options show some services through private properties at the north end.

*MTE Response:*

*The trunk sewer and forcemain are intended to be within existing or proposed road right-of-ways. The PIC mapping was intended to only show a general indication of the infrastructure locations. Specific design details will be addressed during the preliminary and detailed design phases.*

3. The presented mapping shows incorrect shading on slide 21, around pumping station location B, which is important to note from the natural heritage analysis perspective. The PSW here is shown as being a deer wintering and wooded area, which it is neither. Also, the extent of the deer wintering area to the south of this PSW is not fully correct as it actually does not cover the entire area between the wetland and the field designated for residential uses to the south of it.

*MTE Response:*

*The mapping delineation was based on data from the Ministry of Northern Development, Mines, Natural Resources, and Forestry (MNRF) and Land Information Ontario, as provided through the Ontario Geohub site. Should PVDC have additional information that they would like considered it can be provided.*

4. Sanitary servicing for developable sections between the eskars and Hidden Valley Road south (shaded green in Appendix A) can drain by gravity regardless of the pumping station alternatives. These lands should be identified and servicing plans for lands to the south of these sections should be required to provide for and accommodate the servicing of all lands in this area.

*MTE Response:*

*We acknowledge that the areas shaded in green in Appendix A of your letter have the technical potential to drain by gravity to the River Birch Pumping Station however they were not included in the drainage area for the River Birch PS design.*

*Options 2a and 3a presented in the PIC show the areas that have the potential to drain by gravity to the trunk sewer on Wabanaki Rd. and Goodrich Dr., which is the drainage location for the proposed pump station and forcemain.*

*A condition assessment completed of the River Birch PS suggests that the pumps are functioning at-capacity. Any additional land that was not originally part of the designed River Birch PS drainage area would require supplementary studies and potentially upgrades to the pumping station and associated forcemain at the developers cost.*

Yours truly,

**MTE Consultants Inc.**



**Gemma Charlebois, M.A.Sc., P.Eng.**

Design Engineer

519-743-6500 ext. 1227

[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)

GSC:sgd

Encl.

cc: Katie Wood, City of Kitchener

Dave Wilhelm, MTE Consultants Inc.

M:\48301\100\00 Correspondence\PIC\Comments and Responses from PIC\Pearl Valley\Response Letter to Pearl Valley\_2022-01-06.docx

Ms. Katie Wood  
Project Manager, Development Engineering  
City of Kitchener  
200 King Street West  
Kitchener, ON N2G 4G7

November 25, 2021

**RE: Hidden Valley Sanitary Pumping Station and Forcemain Environmental Assessment – Alternative Solutions**

Dear Ms. Wood,

This letter is in response to the information presented at the Public Information Centre held on November 4<sup>th</sup>, 2021. On behalf of Pearl Valley Development Corp., a landowner in Hidden Valley, I would like to offer the following comments related foremostly to the planning approach and some technical aspects as presented on November 4<sup>th</sup>, 2021, during the Sanitary Pumping Station and Forcemain Environmental Assessment (the "EA") Public Information Centre ("PIC").

In April of this year, I wrote to you about the Terms of Reference for this environmental assessment, and the likelihood of exclusion of some of our developable areas from this study as per information and maps included in the EA's terms of reference. The recently presented alternative options and their mapping demonstrate such a fragmented approach. In particular, areas identified as A and B on the map in Appendix A herewith, should be included in all servicing options. It appears that Options 2, 2A and 4 do not include these areas and as such cannot be supported by PVDC.

**PVDC views this EA as a tool for the City to realize the full development potential of these lands through the preparation of a complete servicing analysis. One that, with provincial policies in mind, focuses on servicing all available lands, as designated in the Official Plan, for a maximum population. Only this methodology will adequately integrate good planning principles with technical considerations.**

An EA must be based on planning policies in force. The land use master plan ("LUMP") included in the PIC materials does not reflect all lands currently designated for development in the City of Kitchener's Official Plan and the Regional Official Plan. Just as the presented Option A – the "do nothing" alternative - was discounted as not supporting development at all, other alternatives not addressing serviceability of all sections within Hidden Valley as well as existing homes on private services, ought also not be considered.

Options that entail the servicing of all lands designated for development should be deliberated when developing pumping station alternatives and provided for in selecting a preferred alternative to ensure the EA does not prejudice the development potential of any lands. The EA should thus evaluate and conclude with respect to the feasibility of providing sanitary services for all lands designated Low Rise Residential on Map 3 of the city's official plan. This is required by the *area specific policies* that are now in place in the OP.

Planning for partial services within the Urban Area (i.e. municipal water and septic tanks) is not consistent with the land use policy framework that currently is in place. The EA should consider these policies and ensure all lands designated for development are accommodated by the alternatives. It should also make provisions (to the extent possible) for eliminating and/or phasing out existing septic tanks in the area. This presents an environmentally responsible approach.

To fully analyze and comment on the presented alternatives more information is needed than was presented at the PIC. The information shown is not sufficient and does not reflect all aspects requiring consideration as part of an EA. The presentation focused on locating the forcemain and pumping station only. The design capacity of the pumping station, one that accommodates the maximum anticipated population within the study area, and the available capacity within the downstream sanitary sewer are equally important and necessary for analysis. Servicing and land use planning for the area should utilize available capacity. Please confirm the available capacity at the connection point with existing services.

Of concern is also the information incorporated into the archeological and natural environment slides. The purpose of the archaeological information should be limited to the evaluation of the pumping station alternatives and not give direction to future planning applications. Similarly, the purpose of the natural heritage information should be limited to the evaluation of the pumping station alternatives.

It is also critical to acknowledge and present to all stakeholders and the public the fact that other infrastructure planning processes have already begun within Hidden Valley. Processes that will significantly impact this area, even more than the pumping station itself. For example, the natural heritage evaluation must consider and account for impacts associated with new road construction (River Road Extension), the realignment of Hidden Valley Road and future rapid transit in this area. In other words, natural features will be impacted by infrastructure planning that has already occurred. As such, certain pumping station locations will have limited impacts on these features. This must be reflected in the evaluation and clearly presented to adequately illustrate the scale of impacts. Specifically, pumping station location B is shown adjacent to future River Road Extension and rapid transit, and therefore would likely have minimal impacts on natural features.

Below are additional technical comments to the alternative servicing options presented at the PIC:

1. Servicing of the pocket of lands between the central wetland and Hidden Valley Road near the Grand River has been included in Option 3 and 3a through a sanitary sewer located within the realigned Hidden Valley Road where it connects with the new River Road Extension. An alternative route for a local gravity sewer to service these lands is shown in Appendix A. This alignment considers local topography and takes advantage of more natural draining patterns.
2. Please ensure that services are planned within public right-of-ways along River Road Extension as the presented options show some services through private properties at the north end.
3. The presented mapping shows incorrect shading on slide 21, around pumping station location B, which is important to note from the natural heritage analysis perspective. The PSW here is shown as being a deer wintering and wooded area, which it is neither. Also, the extent of the deer wintering area to the south of this PSW is not fully correct as it actually does not cover the entire area between the wetland and the field designated for residential uses to the south of it.
4. Sanitary servicing for developable sections between the eskars and Hidden Valley Road south (shaded green in Appendix A) can drain by gravity regardless of the pumping station alternatives. These lands should be identified and servicing plans for lands to the south of these sections should be required to provide for and accommodate the servicing of all lands in this area.

I would also like to provide additional information regarding the planning processes PVDC has been involved in with the City over the last 20 years. Realizing the significant staff changes at the City over

the last months, including the change of Project Manager for Hidden Valley, we believe some context to this EA and other technical studies needed for the Hidden Valley Secondary Plan, is of value.

The Hidden Valley area has been enveloped by the City's built environment for decades now. Already in the late 1970s and early 1980s there were attempts to develop it. Several employment and residential plans of subdivisions were proposed. Current land uses still reflect former plans for a business park to be located in the northwest section of PVDC lands and residential in remaining areas. For many years the non-residential sections have been protected for employment uses. However, with the changing planning environment over the last 2 decades - focused on sustainability through the protection of the countryside and reurbanization and the introduction of rapid transit and its intensification-supportive measures - more balanced visions have been developed for Hidden Valley.

Already the City's 2010 *Comprehensive Review of Employment Lands Study* identified lands within Hidden Valley as ones to be further studied to determine if there are a better uses for it - based on then new Provincial Policy Statement and Growth Plan directives. The following decade addressed ambitious plans of light rail transit development for which station area planning was key. The northwest sections of Hidden Valley lands were identified as being within 800m of the Fairway terminus pointing towards transit-oriented planning. While station area planning for this location has not come to fruition to this day, it has always provided context for more recent planning. Together with Hidden Valley's exquisite location and surrounding amenities within an already built-up area, it has been discussed with City staff over the last few years as a site for a stunning mixed-use neighbourhood. This has been somewhat reflected in the 2019 Land Use Master Plan for which PVDC provided sound argumentation for even higher densities. While City's Planning Staff was not opposed to more densities than proposed in the LUMP, they indicated that a detailed servicing analysis is needed to ensure capacities are reflected in the final plan.

Between the above background information and formal planning directives in place, the EA ought to include all developable parcels with their maximum build out potential in any presented and selected alternatives. Only this approach will maximize opportunities for fulfilling the City's strategic goals and sustainable growth while not prejudicing development potential and built out over time.

We would appreciate the opportunity to meet with you to review our comments and how they will be addressed.

Sincerely,



Hanna Domagala  
*Senior Project Manager*

Cc:

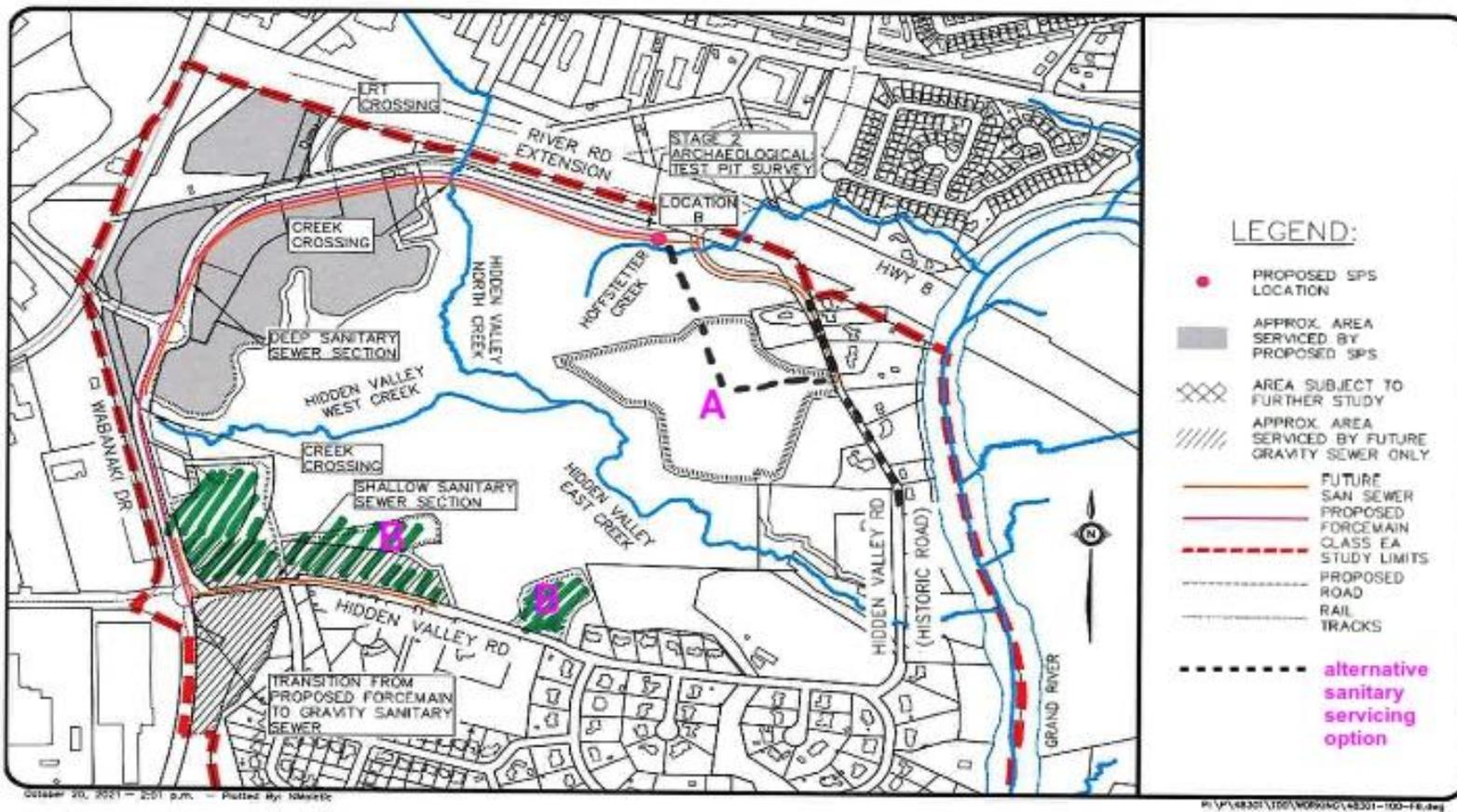
1. Richard Kelly-Ruetz, Planner, City of Kitchener

Attachment:

1. *Appendix A* - map

Appendix A

Option 3a: Install Sanitary Pumping Station at Location B



681 Hidden Valley Road Kitchener, ON N2C 2S4

**November 18, 2021**

Katie Wood  
Project Manager, Development Engineering  
City of Kitchener

Dave Wilhelm  
Consultant Project Engineer, Water/Wastewater  
MTE Consultants

**Dear Katie and Dave,**

I am writing on behalf of myself, the owner of 681 Hidden Valley Road, and Peter Kaune, the owner of 691 Hidden Valley Road. We appreciate the City's Forcemain Study Presentation and the opportunity to provide some comments and input that will be considered by the participating agencies. We recognize the opportunities and constraints of the area and understand the effort that was undertaken to arrive at the Forcemain options. Our goal as longstanding property owners who have seen the area change and grow over the last 20-30 years is to protect our property value and its future development potential. We are looking for some clarification on various items to ensure that we have the same potential for development as has already been afforded to other parcels in our neighbourhood.

We offer to you the following questions and comments:

1. We are requesting that the City clarify what the 'Built Heritage' overlay means on the Key Cultural Findings Map at 681 Hidden Valley Road. The small home on that parcel is not a heritage or significant structure as it was built in the late 1950's or early 1960's by our family. It is not an original farmhouse or original Hidden Valley Road home. In addition, the structure on 691 Hidden Valley Road is not listed on the City's Municipal

Heritage Register. We request that you please remove these overlays from the diagram.

2. The City presentation does not offer an option to bring a forcemain/sanitary sewer or water to the Eastern side of Hidden Valley Road. This area includes at least five parcels that are larger than the minimum Low Rise Residential - Estate Residential lot size of 0.4ha identified in the Hidden Valley Land Use Master Plan. As such, these properties have the potential for future development as outlined in the City's Master Plan. By not providing this area with services, how does the City plan to allow these land owners/residents to afford the same future development potential that the other landowners had for the southern portion of Hidden Valley Road? We have been working with the City since 2018 to clarify this issue and now the forcemain plan does not address this area in terms of formal servicing options. This may impact the value and development potential for this entire stretch of Hidden Valley Road. The EA should evaluate the feasibility of providing services for all lands within the Hidden Valley Area, designated Low Rise Residential by the Official Plan or describe options for alternatives such as septic.
3. If the City is not providing an alternative to bring City sewer or water to the Eastern side of Hidden Valley in the 'Heritage Corridor', how will the City assist us in securing severances/subdivision plans and/or support development in these areas? During the forcemain presentation, the City indicated that it would support development in this area using septic systems. Will the City provide a written document so that the Eastern Corridor landowners can provide this document to the Region/GRCA at the time of Planning Act applications to permit development? Will the City also support the use of wells in these areas as no plans presented identify the extension of City water along these zones?
4. There are currently several conceptual neighbourhood plans for 681 and 691 that have been presented to the City. Meetings and correspondence have taken place between the City and our representatives to identify the development potential and intent for the 681 and 691 parcels. How can we work together to move these concepts forward in a timely manner and determine a positive outcome for us as owners? We are concerned our options have been limited by the City's lack of an option that provides services to our parcels and the proposed designation of a 'heritage corridor' for our area. Our goal is to secure some assurance in the near future from the City in

writing that septic systems and wells are still appropriate for future development and new lots within the Eastern corridor of the Hidden Valley Area. Alternatively, and approvable by the City and other Agencies including the Region and GRCA.

5. If the Heritage Corridor is to remain as identified on the Land Use Master Plan December 2020 slide, will the City provide an allowance for any new development in the larger parcels along this boundary to be developed with the same 'heritage' character – i.e. narrower streets, no sidewalks, no streetlights, no formal street trees, and an allowance for both wells and septic? Will City Planning commit to coordinating these 'heritage character' items with the City Engineering so that a new estate residential neighbourhood can be built without the typical City Engineering street profiles including curb/gutter, storm drain, etc.? Will the City support an alternative septic and storm drain solution similar to that developed by the Bridlepath Estates neighborhood and other single family custom newly built homes along the Eastern Corridor?
6. If the City is not planning to bring forcemain/water into the Eastern Corridor, will the City consider returning the widened right of way along 681 and 691 Hidden Valley Road back to those properties? Lands along the frontage of these properties were dedicated to the City in the 1970's and we were required to pay a substantial amount to the City to "allow the City to create a ROW for future City services". Brandon Sloan - a former planner at the City suggested that the City was considering returning these parcels to the original lots.
7. If the City is not bringing sanitary services to the Eastern Corridor and the Region is currently discouraging the digging of new wells, will the City consider bringing City water across Hidden Valley Creek East from Bridlepath Estates and work with the Landowners to garner support from GRCA for this waterline extension? This creek is already an issue during storm events and floods the road and neighboring properties.
8. MHBC has presented some options for the development of 681 and 691 Hidden Valley Road to the City planners over the last four years. The City Planners have in general appeared to support the development and provided lists of documents and studies needed for the subdivision development. Will the City continue to support this development provided that the proper studies are executed?
9. The taxable value of these parcels is determined by the mapping on the Secondary Plan. The City is currently taxing the parcels as estate residential and this has an impact

on original owners who do not have “estate” homes on the parcels and have seen a huge increase in taxes over the last 10 years, while rental increases have been restricted and do not keep up with tax increases. The sale of these parcels is also compromised by the City's DRAFT Secondary Plan 'heritage corridor' classification, and the lack of coordination between the Region and the City as to how to provide for development along this corridor.

10. There is some concern that the 'heritage/historic' classification is driven by the City's lack of commitment to bring services to this area. The narrow road is currently subject to flooding with no curb and gutter system or storm drain, and the area is currently subject to security issues such as break-ins, theft, and a continued introduction of vagrancy. The 'heritage corridor' seems to make this area more 'remote' and subject to the sense of decreased security so close to the urban core of Kitchener.

Thank you both for your time on this matter, and I look forward to continued coordination in the future. I would be pleased to discuss my concerns in greater detail at your convenience.

Sincerely,



MTE Consultants

520 Bingham Centre Drive, Kitchener, Ontario N2B 3X9

January 5, 2022

MTE File No.: C48301-100

Annemarie Hall  
681 Hidden Valley Road  
Kitchener, ON NC2 2S4  
Email: [annemariehalldesign@gmail.com](mailto:annemariehalldesign@gmail.com)

Dear \_\_\_\_\_

**RE: Upper Hidden Valley Sanitary Pumping Station  
Class Environmental Assessment (EA)**

We acknowledge receipt of your letter dated 18<sup>th</sup> November 2021, providing comments and questions in relation to captioned project. For clarity, we have included your comment/question first, followed by our response in *Italics*.

Following this response letter, the following documents are included:

Comment Letter from \_\_\_\_\_, November 18, 2021  
City of Kitchener Procedure for Offsite Works by Private Contractor, March 2021

1. We are requesting that the City clarify what the 'Built Heritage' overlay means on the Key Cultural Findings Map at 681 Hidden Valley Road. The small home on that parcel is not a heritage or significant structure as it was built in the late 1950's or early 1960's by our family. It is not an original farmhouse or original Hidden Valley Road home. In addition, the structure of 691 Hidden Valley Road is not listed on the City's Municipal Heritage Register. We request that you please remove these overlays from the diagram.

*MTE Response:*

*A Cultural Heritage Assessment Report (CHAR) is undertaken to flag any known or potential cultural heritage resources during the early stages of an EA project. A CHAR includes a high-level examination of any property which is identified through existing recognition (listed or designated through the Ontario Heritage Act) and/or any property which appears to have potential cultural heritage value, is over 40 years old or has been noted through consultation with the City. The resulting list helps inform the "built heritage layer" that was presented through the Environmental Assessment (EA) mapping. Essentially the CHAR notes the properties identified on the 'Built Heritage Layer' should be considered during the design phase. It does not imply that they warrant any additional protection.*

*Regarding 691 Hidden Valley Road (the barn specifically), the property was included on the list as it was identified by the City of Kitchener. Our evaluation showed that it meets one of more criteria under Ontario Regulation 9/06. This property should continue to be considered a cultural heritage resource within the CHAR and as part of the EA, despite not being currently listed on the Register. Regarding 681 Hidden Valley Road, the property was included on the list because it is over 40 years old and its location aligned with the location of the farmhouse on historic map prior to the severance. Since a CHAR*

*does not include in depth research and analysis, this was the preliminary assessment. The CHAR does note that more information may arise through public consultation and adjustments may be needed. We will add the above commentary within the CHAR and suggest further research on the property in subsequent design phases if there are any potential impacts to the property.*

*A CHAR does not suggest that a cultural heritage resource should be added to the Heritage Register or be designated. That is a separate process undertaken by the City, typically in tandem or consultation with the property owner. A CHAR provides mitigation measures to consider during design phase. For this project, and these properties specifically, the mitigation measures are to avoid the areas if possible.*

*It is worth noting that these properties do not currently have status as listed or designated properties under the Ontario Heritage Act. The identification and evaluation of these properties was to assist with determining an appropriate location for the sanitary pump and forcemain route.*

2. The City presentation does not offer an option to bring a forcemain/sanitary sewer or water to the Eastern side of Hidden Valley Road. This area includes at least five parcels that are larger than the minimum Low Rise Residential – Estate Residential lot size of 0.4ha identified in the Hidden Valley Land Use Master Plan. As such, these properties have the potential for future development as outlined in the City's Master Plan. By not providing this area with services, how does the City plan to allow these land owners/residents to afford the same future development potential that the other landowners had for the southern portion of Hidden Valley Road? We have been working with the City since 2018 to clarify this issue and now the forcemain plan does not address this area in terms of formal servicing options. This may impact the value and development potential for this entire stretch of Hidden Valley Road. The EA should evaluate the feasibility of providing services for all lands within the Hidden Valley Area, designated Low Rise Residential by the Official Plan or describe options for alternatives such as septic.

*MTE Response:*

*The scope of the Upper Hidden Valley Sanitary Pump Station (SPS) and Forcemain EA is to propose a SPS location and forcemain route to provide sanitary servicing to developable lands as defined in the City's Land Use Master Plan.*

*We investigated locations in the Upper Hidden Valley area that would be able to provide servicing to the greatest developable area (km<sup>2</sup>). The three (3) location options in the Public Information Centre (PIC) presentation have the potential to provide sanitary servicing to much of the developable lands.*

*Due to topography, sanitary servicing of 681 and 691 Hidden Valley Road is not technically feasible by any of the 3 location options presented. In order for the area to have sanitary servicing by a pump station at, for example, Location Option B, the sanitary sewer and pump station would have to be approximately 10m deeper. At this depth, the cost of pump stations and sewers is very high and the technical feasibility is low.*

*A pump station dedicated to the area near 681 and 691 Hidden Valley Road would be required in order to provide sanitary servicing to this part of the Upper Hidden Valley area. Additionally, it would not be technically feasible for the other developable lands*

*within the Upper Hidden Valley area to be serviced by this pump station, due to topography.*

*Other sanitary servicing options, such as septic, are outside of the scope of this EA.*

3. If the City is not providing an alternative to bring City sewer or water to the Eastern side of Hidden Valley in the 'Heritage Corridor', how will the City assist us in securing severances/subdivision plans and/or support development in these areas? During the forcemain presentation, the City indicated that it would support development in this area using septic systems. Will the City provide a written document so that the Eastern Corridor landowners can provide this document to the Region/GRCA at the time of Planning Act applications to permit development? Will the City also support the use of wells in these areas as no plans presented identify the extension of City water along these zones?

*MTE Response:*

*Development on septic systems requires consideration and approval by the Region of Waterloo, not the City of Kitchener. If the Region is supportive of septic, approvals are still required from the City's Building Division, Engineering Division, and Planning Division. The City did not indicate that it would support development on septic in this area during the presentation. The question of future development on lots on private services will be further explored through the Hidden Valley Secondary Plan work. See further commentary below.*

4. There are currently several conceptual neighbourhood plans for 681 and 691 that have been presented to the City. Meetings and correspondence have taken place between the City and our representatives to identify the development potential and intent for the 681 and 691 parcels. How can we work together to move these concepts forward in a timely manner and determine a positive outcome for us as owners? We are concerned our options have been limited by the City's lack of an option that provides services to our parcels and the proposed designation of a 'heritage corridor' for our area. Our goal is to secure some assurance in the near future from the City in writing that septic systems and wells are still appropriate for future development and new lots within the Eastern corridor of the Hidden Valley area. Alternatively, and approvable by the City and other Agencies including the Region and GRCA.

*MTE Response:*

*It would be premature to make any commitments until the matter can be comprehensively evaluated. The question of future development on lots on private services will be further explored through the Hidden Valley Secondary Plan work. The Secondary Plan work is expected to continue over the next couple of years.*

5. If the Heritage Corridor is to remain as identified on the Land Use Master Plan December 2020 slide, will the City provide an allowance for any new development in the larger parcels along this boundary to be developed with the same 'heritage' character – i.e. narrower streets, no sidewalks, no streetlights, no formal street trees, and an allowance for both wells and septic? Will City Planning commit to coordinating these 'heritage character' items with the City Engineering so that a new estate residential neighbourhood can be built without the typical City Engineering Street profiles including curb/gutter, storm drain, etc.? Will the City support an alternative septic and storm drain

solution similar to that developed by the Bridlepath Estates neighbourhood and other single family custom newly built homes along the Eastern Corridor?

*MTE Response:*

*The current and future profile of the portion of Hidden Valley road recognized as a Heritage Corridor will be further examined through the Hidden Valley Secondary Plan project, which implements the 2019 Land Use Master Plan endorsed at Kitchener City Council. Heritage work as part of the Secondary Plan work is expected to recommend measures to be implemented to mitigate negative impacts and to conserve, enhance and maintain the scenic heritage attributes which contribute to defining any portion of Hidden Valley Road as a Heritage Corridor. Any more specifics will be determined through the Secondary Plan work.*

6. If the City is not planning to bring forcemain/water into the Eastern Corridor, will the City consider returning the widened right of way along 681 and 691 Hidden Valley Road back to those properties? Lands along the frontage of these properties were dedicated to the City in the 1970's and we were required to pay a substantial amount to the City to "allow the City to create a ROW for future City services". Brandon Sloan – a former planner at the City suggested that the City was considering returning these parcels to the original lots.

*MTE Response:*

*This is not in scope of the ongoing EA. Feel free to forward any previous correspondence with City Planning staff to the current Project Manager for the Hidden Valley Secondary Plan, Richard Kelly-Ruetz ([Richard.kelly-ruetz@kitchener.ca](mailto:Richard.kelly-ruetz@kitchener.ca)), where it can be considered, where relevant, as part of the upcoming Hidden Valley Secondary Plan work.*

7. If the City is not bringing sanitary services to the Eastern Corridor and the Region is currently discouraging the digging of new wells, will the City consider bringing City water across Hidden Valley Creek East from Bridlepath Estates and work with the Landowners to garner support from GRCA for this waterline extension? This creek is already an issue during storm events and floods the road and neighbouring properties.

*MTE Response:*

*At this time, the City has no current plans to extend the watermain across Hidden Valley Creek East. This decision would be made by Kitchener Utilities if it becomes a part of a City project in the future. If a private developer wishes to extend the watermain to service their lot, it would be completely at the applicant's expense. If you would like to explore this option, you would first need to contact a Civil Engineering Consultant to help you complete a design and go through the Off-Site Works Process (attached).*

8. MHBC has presented some options for the development of 681 and 691 Hidden Valley Road to the City Planners over the last four years. The City Planners have in general appeared to support the development and provided lists of documents and studies needed for the subdivision development. Will the City continue to support this development provided that the proper studies are executed?

*MTE Response:*

*The merits of a private development application are out of scope of the ongoing EA and the upcoming Hidden Valley Secondary Plan work. However, the issue of exploring*

*whether development can be supported on private services is within scope of the Secondary Plan and will impact any development on your property. Public consultation is part of the Secondary Plan process. Timing of public consultation has not yet been confirmed.*

9. The taxable value of these parcels is determined by the mapping of the Secondary Plan. The City is currently taxing the parcels as estate residential and this had an impact on original owners who do not have “estate” homes on the parcels and have seen a huge increase in taxes over the last 10 years, while rental increases have been restricted and do not keep up with tax increases. The sale of these parcels is also compromised by the City’s DRAFT Secondary Plan ‘heritage corridor’ classification, and the lack of coordination between the Region and the City as to how to provide for development along this corridor.

*MTE Response:*

*The Municipal Property Assessment Corporation (MPAC) assesses the value of properties, not the City. The assessed value is based on as many as 200 different factors. Five major factors usually account for 85% of a property’s value including location, lot size/dimensions, living area, age of the house and, quality of construction. More information on MPAC’s property assessment valuation process can be obtained by visiting:*

*<https://www.mpac.ca/PropertyOwners/MPACsRole/ResidentialPropertyAssessment>*

*Property taxes are not calculated based on the market value but rather the assessed value of the property. The market value of a property depends on a host of factors including the state of the economy and the individual purchaser’s preferences.*

10. There is some concern that the ‘heritage/historic’ classification is driven by the City’s lack of commitment to bring services to this area. The narrow road is currently subject to flooding with no curb and gutter system or storm drain, and the area is currently subject to security issues such as break-ins, theft, and a continued introduction of vagrancy. The ‘heritage corridor’ seems to make this area more ‘remote’ and subject to the sense of decreased security so close to the urban core of Kitchener.

*MTE Response:*

*A pump station dedicated to the area near 681 and 691 Hidden Valley Road would be required to provide sanitary servicing to this part of the Upper Hidden Valley area. Due to the remote nature of this area, a pump station, sanitary sewers and watermain is not proposed at this time. This area of Hidden Valley Road is not in the 5-year capital forecast for reconstruction.*

Yours truly,

**MTE Consultants Inc.**



**Dave Wilhelm, P.Eng.**

Project Manager

519-743-6500 ext. 1225

[DWilhelm@mte85.com](mailto:DWilhelm@mte85.com)

DJW:sgd

Encl.

cc: Katie Wood, City of Kitchener

Gemma Charlebois, MTE Consultants Inc.

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681 Hidden Valley Road Kitchener, ON N2C 2S4

**November 18, 2021**

Katie Wood  
Project Manager, Development Engineering  
City of Kitchener

Dave Wilhelm  
Consultant Project Engineer, Water/Wastewater  
MTE Consultants

**Dear Katie and Dave,**

I am writing on behalf of myself, the owner of 681 Hidden Valley Road, and the owner of 691 Hidden Valley Road. We appreciate the City's Forcemain Study Presentation and the opportunity to provide some comments and input that will be considered by the participating agencies. We recognize the opportunities and constraints of the area and understand the effort that was undertaken to arrive at the Forcemain options. Our goal as longstanding property owners who have seen the area change and grow over the last 20-30 years is to protect our property value and its future development potential. We are looking for some clarification on various items to ensure that we have the same potential for development as has already been afforded to other parcels in our neighbourhood.

We offer to you the following questions and comments:

1. We are requesting that the City clarify what the 'Built Heritage' overlay means on the Key Cultural Findings Map at 681 Hidden Valley Road. The small home on that parcel is not a heritage or significant structure as it was built in the late 1950's or early 1960's by our family. It is not an original farmhouse or original Hidden Valley Road home. In addition, the structure on 691 Hidden Valley Road is not listed on the City's Municipal

Heritage Register. We request that you please remove these overlays from the diagram.

2. The City presentation does not offer an option to bring a forcemain/sanitary sewer or water to the Eastern side of Hidden Valley Road. This area includes at least five parcels that are larger than the minimum Low Rise Residential - Estate Residential lot size of 0.4ha identified in the Hidden Valley Land Use Master Plan. As such, these properties have the potential for future development as outlined in the City's Master Plan. By not providing this area with services, how does the City plan to allow these land owners/residents to afford the same future development potential that the other landowners had for the southern portion of Hidden Valley Road? We have been working with the City since 2018 to clarify this issue and now the forcemain plan does not address this area in terms of formal servicing options. This may impact the value and development potential for this entire stretch of Hidden Valley Road. The EA should evaluate the feasibility of providing services for all lands within the Hidden Valley Area, designated Low Rise Residential by the Official Plan or describe options for alternatives such as septic.
3. If the City is not providing an alternative to bring City sewer or water to the Eastern side of Hidden Valley in the 'Heritage Corridor', how will the City assist us in securing severances/subdivision plans and/or support development in these areas? During the forcemain presentation, the City indicated that it would support development in this area using septic systems. Will the City provide a written document so that the Eastern Corridor landowners can provide this document to the Region/GRCA at the time of Planning Act applications to permit development? Will the City also support the use of wells in these areas as no plans presented identify the extension of City water along these zones?
4. There are currently several conceptual neighbourhood plans for 681 and 691 that have been presented to the City. Meetings and correspondence have taken place between the City and our representatives to identify the development potential and intent for the 681 and 691 parcels. How can we work together to move these concepts forward in a timely manner and determine a positive outcome for us as owners? We are concerned our options have been limited by the City's lack of an option that provides services to our parcels and the proposed designation of a 'heritage corridor' for our area. Our goal is to secure some assurance in the near future from the City in

writing that septic systems and wells are still appropriate for future development and new lots within the Eastern corridor of the Hidden Valley Area. Alternatively, and approvable by the City and other Agencies including the Region and GRCA.

5. If the Heritage Corridor is to remain as identified on the Land Use Master Plan December 2020 slide, will the City provide an allowance for any new development in the larger parcels along this boundary to be developed with the same 'heritage' character – i.e. narrower streets, no sidewalks, no streetlights, no formal street trees, and an allowance for both wells and septic? Will City Planning commit to coordinating these 'heritage character' items with the City Engineering so that a new estate residential neighbourhood can be built without the typical City Engineering street profiles including curb/gutter, storm drain, etc.? Will the City support an alternative septic and storm drain solution similar to that developed by the Bridlepath Estates neighborhood and other single family custom newly built homes along the Eastern Corridor?
6. If the City is not planning to bring forcemain/water into the Eastern Corridor, will the City consider returning the widened right of way along 681 and 691 Hidden Valley Road back to those properties? Lands along the frontage of these properties were dedicated to the City in the 1970's and we were required to pay a substantial amount to the City to "allow the City to create a ROW for future City services". Brandon Sloan - a former planner at the City suggested that the City was considering returning these parcels to the original lots.
7. If the City is not bringing sanitary services to the Eastern Corridor and the Region is currently discouraging the digging of new wells, will the City consider bringing City water across Hidden Valley Creek East from Bridlepath Estates and work with the Landowners to garner support from GRCA for this waterline extension? This creek is already an issue during storm events and floods the road and neighboring properties.
8. MHBC has presented some options for the development of 681 and 691 Hidden Valley Road to the City planners over the last four years. The City Planners have in general appeared to support the development and provided lists of documents and studies needed for the subdivision development. Will the City continue to support this development provided that the proper studies are executed?
9. The taxable value of these parcels is determined by the mapping on the Secondary Plan. The City is currently taxing the parcels as estate residential and this has an impact

on original owners who do not have “estate” homes on the parcels and have seen a huge increase in taxes over the last 10 years, while rental increases have been restricted and do not keep up with tax increases. The sale of these parcels is also compromised by the City's DRAFT Secondary Plan 'heritage corridor' classification, and the lack of coordination between the Region and the City as to how to provide for development along this corridor.

10. There is some concern that the 'heritage/historic' classification is driven by the City's lack of commitment to bring services to this area. The narrow road is currently subject to flooding with no curb and gutter system or storm drain, and the area is currently subject to security issues such as break-ins, theft, and a continued introduction of vagrancy. The 'heritage corridor' seems to make this area more 'remote' and subject to the sense of decreased security so close to the urban core of Kitchener.

Thank you both for your time on this matter, and I look forward to continued coordination in the future. I would be pleased to discuss my concerns in greater detail at your convenience.

Sincerely,

**cc. Peter Kaune**

## PROCEDURE FOR OFF-SITE WORKS BY PRIVATE CONTRACTORS



A Developer may retain a private Contractor to complete work (servicing, asphalt, concrete) within the City of Kitchener or Regional right-of-way, by following the steps and procedures provided below:

1. Development Engineering will receive a service connection request through the site development application process from the Applicant. In order for a service request to be considered, Development Engineering needs to receive a site grading and servicing plan stamped by a Professional Engineer showing the proposed and existing conditions for the site works including all existing and proposed landscaping and vegetation. Further, Engineering will require the PSAB (Public Sector Accounting Board) information for all proposed assets for which the City will take ownership. The information for PSAB submission and requirements can be found at [http://www.kitchener.ca/en/businessinkitchener/Development\\_manual.asp](http://www.kitchener.ca/en/businessinkitchener/Development_manual.asp). Development Engineering will review/approve the plans and PSAB information to ensure they meet City standards.
  - a. Please note that if Development Engineering decides that Kitchener Utilities will complete the water servicing connection or decommissioning within the right-of-way, then the process as in **(Attachment 1)** is to be followed.
2. After the plans are approved, one quote for all proposed works within the right-of-way including full restoration shall be submitted to Development Engineering. The quote shall be prepared on The City of Kitchener's Off-Site Works Cost Estimate Template **(Attachment 2)** for review and approval by Development Engineering. The quote will be prepared using the City of Kitchener's standard fee schedule as approved by Council. For a list of all fees please refer to the current City of Kitchener Fee Schedule on the City's website, [www.kitchener.ca](http://www.kitchener.ca). This quote will be used to determine the amount required for the Engineering Guarantee and Fees. The quote may be prepared by the Engineering Consultant or the Developer. Both the Engineering Consultant and the Developer need to sign off on the quote for accuracy. Once the quote has been approved by Development Engineering, notification of acceptance for the guarantee and fee will be sent via email to the Consultant and the Developer along with payment instruction as administration, inspection and utility fees will not be refunded. Also included in the email will be the Construction and Inspection Agreement that is to be reviewed and signed by both the Consultant and the Developer. A copy of the Off-Site Works Construction and Inspection Agreement is included in **(Attachment 3)**.
3. The Engineering Guarantee for the Off-Site Works will be deposited and held in the form of a letter of credit or certified cheque through Development Engineering (this is separate from the Site Development Letter of Credit which is held by the Planning Department for On-Site works). If the Developer is posting a letter of credit they should call the Legal Department (519-741-2200 ext. 7858) in advance to verify that the financial institution providing the letter of credit is acceptable to The City of Kitchener.

### **The City of Kitchener shall accept only the following approved securities:**

- (i) Letter of Credit (in prescribed form acceptable to the City Solicitor) issued by a Schedule I bank, Schedule II bank, Schedule III bank or Trust Company with a DBRS rating of R-1(middle or high) or AAA , AA(low, middle or high) (or its equivalent if unavailable).

(ii) Letter of Credit (in prescribed form acceptable to the City Solicitor) issued by a Credit Union provided that:

1. The Credit Union is verified as a member of the Central 1 Credit Union
2. The Central 1 Credit Union (rated R-1(middle)) maintains or improves on their rating
3. The Credit Union has its Head Office in Ontario
4. The cumulative Letters of Credit do not exceed 1% of the Credit Union's Tier 1 Capital as per the Credit Union's most recent audited financial statements.

If a Letter of Credit was previously accepted in accordance with the above, and the institution has since been downgraded and no longer meets the minimum requirements, the City may request a new acceptable Letter of Credit.

Other forms of performance security, acceptable to the City Treasurer and City Solicitor, may be substituted (e.g. cash or a certified cheque made out to the City of Kitchener). The developer should contact \_\_\_\_\_ in advance of obtaining their Letter of Credit, in order to have the DBRS rating checked and pre-cleared.

The Engineering Guarantee will be 60% of the approved Quote. The Letter of Credit/certified cheque will be deposited and held for a minimum of two years from Initial Maintenance Acceptance, until the final inspections are complete and are satisfactory to the City of Kitchener, at which time the letter of credit will be released as the City will take ownership of the infrastructure. The Letter of Credit may be reduced to 30% of the approved Quote after the servicing/asphalt/concrete are placed on maintenance.

4. The Developer must come to The City of Kitchener's Engineering Division (9<sup>th</sup> Floor) to fill out the Off-Site Works Application Form (**Attachment 4**). At that time Engineering will collect the Guarantee and Fee either by certified cheque or by Letter of Credit. Further, the original copy of the Off-Site Works Construction and Inspection Agreement signed by both the Consultant and the Developer shall be submitted at this time. A copy of the agreement form will not be accepted.
5. The Developer is responsible for employing the Engineering Consultant to have a qualified inspector on site at all times during construction. The inspector's current contact information is required on the Off-Site Works Application form as the main point of contact in case any problems arise during construction. Further, the Professional Engineer will be required to certify the site after the installation and restoration has been completed.
6. Once the Application Form is completed to the City's satisfaction, Development Engineering staff will sign the Off-Site Works Engineering Agreement and sign off any conditions in regards to the site plan process if applicable. After the Off Site Works Engineering Agreement has been executed, Development Engineering will then complete a pre-construction inspection and note any existing deficiencies.
7. The Contractor is responsible for obtaining all necessary permits including a Road Occupancy Permit from City of Kitchener Transportation Division (contact Lou Slijepcevic at 519-741-2200 ext. 7153) or if working in a Regional right-of-way, a Regional Work Permit from the Region of Waterloo Corridor Management prior to any work commencing. The Road Occupancy Permit requires both

WSIB information and insurance which must be approved by the Risk Management Division prior to issuing a permit. Please be aware that Transportation Division requires a minimum of five (5) days to process a Road Occupancy Permit. A checklist has been created by the City's Transportation Division highlighting all the required information and is attached to the Off-Site Works permit. A sample copy of this checklist is included in **(Attachment 5)**. Both the City's Transportation Division and the Region's Corridor Management require that the Off-Site Works Permit number be referenced when applying for a Road Occupancy Permit (City) or a Work Permit (Region).

8. For all watermain connections, Kitchener Utilities will complete the tapping of the water line at the watermain. The contractor must submit a commissioning plan prior to requesting a tap for all services 100mm and larger and submit to [angela.mick@kitchener.ca](mailto:angela.mick@kitchener.ca). The contractor is responsible to arrange and pay for all water sampling costs/lab fees. The contractor must **not** clean the pipe in the area or install the saddle/valve until Kitchener Utilities staff are present. Torqueing is to be done to manufacturer's specifications. The Contractor is responsible to supply all approved material as per the DGSSMS. The contractor is required to have chlorine on site. If a shut-down is required, the Contractor is responsible to provide hand-written notification at least 48 working hours in advance of the operation. To request a tap or inspection, obtain a Contractor Inspection Request Form from [INS-Utilities-Dispatchers@kitchener.ca](mailto:INS-Utilities-Dispatchers@kitchener.ca) and submit a completed form to the same address. with at least 48 hours notice, on a first come, first served basis. A form will be provided as part of the acceptance of the commissioning plan (send commissioning plan to [angela.mick@kitchener.ca](mailto:angela.mick@kitchener.ca)). Kitchener Utilities will only enter safe trenches with trench numbers.
9. The Contractor is responsible to remove any existing water services at the main, which are not being used. Kitchener Utilities shall be contacted to inspect the work. If a shut-down is required, the Contractor is responsible to provide hand-written notification at least 48 working hours in advance of the operation. To request an inspection, provide the Contractor Inspection Request Form to [INS-Utilities-Dispatchers@kitchener.ca](mailto:INS-Utilities-Dispatchers@kitchener.ca) with at least 48 hours notice, on a first come, first served basis. A form can be provided by emailing [INS-Utilities-Dispatchers@kitchener.ca](mailto:INS-Utilities-Dispatchers@kitchener.ca).
10. Gas services must be coordinated with Kitchener Utilities. Please contact [KU-sups@kitchener.ca](mailto:KU-sups@kitchener.ca)
11. Engineering is to be contacted at 519-741-2406 at the commencement of construction and again following restoration.
12. Restoration of the road (asphalt) is required within 72 hours of the installation/abandonment of services. During restoration of the right of way, cold patch may be used for a maximum of 24 hours at which time hot mix asphalt will be required for full restoration of the base and surface asphalt. Surface asphalt must be placed within 24 hours after the base asphalt has been placed. Gravel sidewalks are not permitted at any time if open to the public. Asphalt sidewalks are acceptable for a temporary condition but must be concrete for all works to be put onto initial maintenance. If at any time during construction the work zone is deemed unsafe, The City of Kitchener will immediately take the appropriate actions to rectify the situation and charge the Developer for the same.
13. Once the work within the right-of-way is complete and restored, the Developer/Consultant is required to send a letter to Development Engineering requesting that the new works be put on maintenance and reduce the Engineering Guarantee. Included in the request must be the City of Kitchener's Maintenance Package Checklist for Initial Acceptance **(Attachment 6)** stamped by a Professional Engineer that can certify the installation process. Along with the maintenance package all documents, pictures and test results must be submitted for review and approval. Test results to be submitted include: compaction testing results per trench (granulars, asphalt base and surface),

Marshall test, photo log of installation being completed, slump and air test results for concrete and confirmation from Kitchener Utilities that tapping and inspection was completed.

14. Development Engineering staff will complete an inspection and require any deficiencies to be rectified and re-inspected prior to Initial Acceptance and the commencement of the two (2) year maintenance period. If additional inspections are required due to deficiencies, then additional inspection fees will be charged by the City of Kitchener's Engineering Department. The developer will receive a letter from the City of Kitchener confirming that the infrastructure has been put on maintenance at which time the Development Engineering staff will reduce the Engineering Guarantee to 30%.
15. Prior to initial acceptance and during the two (2) year maintenance period, any problems arising from the construction and service installation will be the Developer's responsibility and the associated costs incurred by the City will be taken from the Engineering Guarantee at the City's discretion.
16. Upon completion of the two (2) year maintenance period, the Developer is required to send in a request for Final Acceptance of the works and release of the Engineering Guarantee. The developer must include CCTV video and report for the service laterals in the right-of-way which will be reviewed and signed off by the Engineering Division. Please be that the CCTV submission shall be in accordance with Off-Site Works CCTV Requirements Checklist for Sanitary and Storm Services (**Attachment 7**). Both Kitchener Utilities and Development Engineering will complete a final inspection. Any deficiencies noted, shall be rectified prior to re-inspection. If additional inspections are required due to deficiencies then additional inspection fees will be charged. Once the works are accepted, maintenance of the infrastructure will be assumed by The City of Kitchener. The developer will receive a letter from The City of Kitchener stating the infrastructure has been accepted and the release of the remaining Engineering Guarantee will be processed.

## Attachment 1 – Procedure for Servicing by Kitchener Utilities

1. Development Engineering will receive a service connection request via phone, public inquiry or mainly through site development applications. In order for a service request to be considered, Development Engineering needs to receive a site grading and servicing plan stamped by a Professional Engineer showing the proposed and existing conditions for the site works including all existing and proposed landscaping and vegetation. Further, Engineering will require the PSAB (Public Sector Accounting Board) information for all proposed assets which the City will take ownership for. The information for PSAB submission and requirements can be found at [http://www.kitchener.ca/en/businessinkitchener/Development\\_manual.asp](http://www.kitchener.ca/en/businessinkitchener/Development_manual.asp). Development Engineering will review/approve the plans and PSAB information to ensure it meets City standards.
2. After the plans are deemed acceptable, Engineering will prepare a quote for the proposed works in the right-of-way including all restoration costs. The quote will be prepared using the City of Kitchener's standard fee schedule as approved by council. For a list of all fees please refer to the current City of Kitchener Fee Schedule on our website at [www.kitchener.ca](http://www.kitchener.ca). Engineering will send notification via email to the Consultant and the Developer stating the amount required for the proposed work.
3. The developer must fill out the Off-Site Works Permit Application Form (**Attachment 4**) in person at the 9<sup>th</sup> floor Engineering Desk (City Hall) and submit payment via certified cheque for the proposed work.
4. Once payment has been received, Engineering will sign off on the applicable site plan conditions for issuance of the Building Permit.
5. Engineering will then deposit the certified cheque and create a work order to ensure Kitchener Utilities schedules the work as soon as they can. If the Developer wishes to follow up on estimated timing for the connection he/she should contact



**Attachment 3 – Off-Site Works Construction and Inspection Agreement**

**AGREEMENT**

**THIS AGREEMENT** made as of the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

**B E T W E E N:**

\_\_\_\_\_  
(hereinafter collectively called the “Developer”)

OF THE FIRST PART;

- and -

\_\_\_\_\_  
(hereinafter collectively called the “Consultant”)

OF THE SECOND PART

-and-

**THE CORPORATION OF THE CITY OF KITCHENER**

(hereinafter called “the City”)

OF THE THIRD PART;

**WHEREAS** the Developer proposes to construct the off-site works for the property, commonly referred to \_\_\_\_\_, as and reference by that number by the City of Kitchener (as hereinafter defined as “the works”), as shown on the attached Schedule ‘A’.

**NOW THEREFORE WITNESSETH** that in consideration of the mutual covenants hereinafter set forth and other good and valuable consideration, the parties hereto mutually agree as follows:

1. The Developer agrees to construct the works in accordance with the City of Kitchener Development Manual and all other applicable Provincial and Regional Standards set out in the Development Manual, as amended from time to time, hereinafter collectively referred to as “the Design Standards”,; a copy of which can be found on the City’s website at [www.kitchener.ca](http://www.kitchener.ca). The Developer agrees to comply with the Design Standards.
2. The Developer agrees to construct the works in accordance with the approved construction drawings and the Plan must be stamped by the consultant professional engineer and approved by the City.
3. The Developer hereby acknowledges that it has retained the services of the Consultant for the provision of engineering services for the development of the works and as part of that retainer,

the Developer requires the Consultant to monitor and inspect the works undertaken and provide to the City the required certifications, identified in the Design Standards all at the expense of the Developer. All invoicing and payment for the Consultant services shall be undertaken directly between the Developer and the Consultant.

4. The Consultant acknowledges that the Works must be constructed in accordance with the Design Standards; a copy of which can be found on the City's website at [www.kitchener.ca](http://www.kitchener.ca) and that the Consultant will take into account the Design Standards., as amended from time to time, when certifying any component of the development of the Works.
5. The Consultant agrees to administer, observe and certify that the construction is in accordance with the approved construction drawings and the Plan must be stamped by the consultant professional engineer or another professional engineer and approved by the City.
6. The Consultant agrees that it shall skilfully and competently perform its services in accordance with generally accepted engineering principles when it is monitoring and inspecting the work undertaken by the Developer, for which it will provide certification in accordance with the Design Standards.
7. The Developer and the Consultant shall notify the City immediately in the event the retainer between the Developer and Consultant for the Works is terminated or suspended for any reason. The Developer agrees to stop all work immediately until such time as a new Consultant is appointed to the City's satisfaction. The Developer agrees to hire a replacement Consultant within 2 weeks of said termination; the Developer acknowledges that failure to do so will result in the City calling upon the Letter of Credit to complete any work related to public safety.
8. The Consultant shall insure its undertaking, business and equipment so as to protect and indemnify and save harmless the City from any and all costs, claims, demands, damages, fines, suits, actions, and judgments made, brought or recovered against the City, for any bodily injury, death or property damage caused by or resulting from the operation and business carried on by the Consultant under this Agreement.
9. The Consultant shall maintain liability insurance acceptable to the City throughout the term of this Agreement. Coverage shall consist of a comprehensive policy of public liability and property damage insurance in an amount of not less than \$2,000,000 per occurrence. **Such insurance shall name The Corporation of the City of Kitchener as an additional insured** thereunder and shall be endorsed to include a Cross-Liability Endorsement with a Severability of Interests Clause and Blanket Contractual Liability.
10. The Consultant shall take out and keep in force until three (3) years after this Agreement is no longer in effect, Professional Liability insurance in the amount of \$1,000,000 providing coverage for acts, errors and omissions arising from their professional services performed under this Agreement.
11. The Developer shall insure its undertaking, business and equipment so as to protect and indemnify and save harmless the City from any and all costs, claims, demands, damages, fines, suits, actions, and judgments made, brought or recovered against the City, for any bodily injury, death or property damage caused by or resulting from the operation and business carried on by the Developer under this Agreement.
12. The Developer shall maintain liability insurance acceptable to the City throughout the term of this Agreement. Coverage shall consist of a comprehensive policy of public liability and property damage insurance in an amount of not less than \$2,000,000 per occurrence. **Such insurance**

shall name **The Corporation of the City of Kitchener as an additional insured** thereunder and shall be endorsed to include a Cross-Liability Endorsement with a Severability of Interests Clause and Blanket Contractual Liability.

13. The Consultant and the Developer shall forward Certificates of Insurance on either the City's Forms (**STANDARD CERTIFICATE OF INSURANCE and CERTIFICATE OF PROFESSIONAL LIABILITY INSURANCE** located on the internet at <http://www.kitchener.ca/tender.asp>) or produce their own form evidencing this insurance with the executed Agreement. These Certificates shall state that coverage will not be suspended, voided, cancelled, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail to the City. It is also understood and agreed that in the event of a claim any deductible or self-insured retention under this policy of insurance shall be the sole responsibility of the Consultant and the Developer and that this coverage shall be primary insurance as respects the City. Any insurance or self-insurance maintained by the City shall be considered excess of the Consultant's and Developer's insurance and shall not contribute with it. The City reserves the right to modify the insurance requirements as deemed suitable.
14. Neither the Consultant or any person, firm or corporation associated or affiliated with or subsidiary to the Consultant shall tender for the construction of the Works, or have an interest either directly or indirectly in the construction of the Works.
15. Neither the Developer or the Consultant shall assign this Agreement in whole, or in part, without the prior written consent of the City, which consent may not be withheld without reason but the City may impose terms and conditions.
16. The Developer and the Consultant permit the City, its employees or persons authorized by the City, to inspect, at all reasonable times or otherwise review the services performed, or being performed, by the Developer and the Consultant, their contractor, sub-contractor, officers, directors, employees, sub-consultants and agents in regards to the Works and the premises where they are being performed.
17. Any dispute, difference or disagreement between the parties hereto in relation to the Agreement may, with the consent of all three parties, be referred to arbitration. No person shall be appointed to act as arbitrator who is in any way interested, financially or otherwise, in the conduct of the work on the Works or in the business or other affairs of either the Developer or the Consultant. The award of the arbitrator shall be final and binding upon the parties. The provisions of The Arbitrations Act, S.O., 1991, as amended shall apply.
18. The Consultant is and will at all times remain an independent contractor, retained by the Developer and the Consultant is not and shall not represent itself to be the agent or employee of the City.
19. This Agreement supersedes all previous agreements, arrangements or understandings between the three parties whether written or oral in connection with or incidental to the Works.
20. Prior to work commencing on site the Developer must obtain a road permit from Transportation Services at The City of Kitchener. Further all works must be performed in conformance with Ontario Manual Book 7 Temporary Conditions.
21. The Developer accepts all roads being accessed under this agreement in "as is" condition and The City of Kitchener is not obligated to undertake any action or remediation on any road to accommodate or as a result of the Developers work. The Developer acknowledges that certain risks which may include, but are not limited to, motor vehicle traffic, ground water and soil contamination exist when entering onto or beneath the road allowance pursuant to the Work and

as such the Developer agrees to release and forever discharge The City of Kitchener, its elected officials, officers, employees, agents, contractors, successors and assigns (“the Releasees”) from any and all claims that the Developer or Consultant may have or may have in the future against the Releasees and to release the Releasees from any and all liability for any loss, damage, expense or injury the Developer or Consultant may suffer as a result of the Works and entrance upon or beneath the road allowance, due to any cause whatsoever, including negligence, breach of contract, or breach of any statutory or other duty of care, including any duty of care owned under the Occupiers’ Liability Act, R.S.O. 1990, c. O.2, as amended, on the part of the Releasees.

22. The Developer and the Consultant and their heirs, executors, administrators and assigns will indemnify and save harmless the City of Kitchener from any and all claims, damages, suits, actions and judgments made, brought or recovered against the City of Kitchener and from all loss, costs, damages, charges or expenses that may be incurred, sustained or paid by the City of Kitchener by reason of the granting of the Works, including any loss resulting from any violation under the Occupational Health and Safety Act, R.S.O. 1990, c. O.1, together with defence costs, fines and penalties. The Developer shall be considered the “constructor” for the purposes of the Occupational Health and Safety Act. The indemnity provisions of this Agreement shall survive the termination of the Agreement.

**IN WITNESS THEREOF** the parties hereto have caused to be executed those presents by their officers properly authorized in that behalf on the day and year first above written.

**SIGNED, SEALED AND DELIVERED**

**DEVELOPER**

\_\_\_\_\_  
**(DEVELOPER NAME)**

per: \_\_\_\_\_  
**(Signing Authority with Title/Position)**  
I have the authority to bind the Corporation

Type Name: \_\_\_\_\_  
Title: \_\_\_\_\_

per: \_\_\_\_\_  
**(Signing Authority with Title/Position)**  
I have the authority to bind the Corporation

Type Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**CONSULTANT**

\_\_\_\_\_  
**(CONSULTANT NAME)**

per: \_\_\_\_\_  
**(Signing Authority with Title/Position in Firm)**  
I have the authority to bind the Corporation

Type Name: \_\_\_\_\_  
Title: \_\_\_\_\_

per: \_\_\_\_\_  
**(Signing Authority with Title/Position in Firm)**  
**I have the authority to bind the Corporation**

Type Name: \_\_\_\_\_  
Title: \_\_\_\_\_

\_\_\_\_\_  
(Consultant Name)

\_\_\_\_\_  
(Street Address)

\_\_\_\_\_  
(City, Province)

\_\_\_\_\_  
(Postal Code)

**THE CORPORATION OF THE CITY OF KITCHENER**

Per: \_\_\_\_\_  
(Signature)

Name: Justin Readman  
Title: General Manager, DSD

SAMPLE

# OFF-SITE WORKS APPLICATION FORM



\_\_\_\_\_  
**Name of Owner**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**No. & Street Address of Owner**

\_\_\_\_\_  
**Telephone Number**

\_\_\_\_\_  
**City & Postal Code of Owner**

**Contact Person  
Name:**

**Phone:**

**Location of Site:**

All conditions below must be fulfilled prior to sign off on the process and applicable site plan conditions:

- The Fee and Guarantee for off-site works was paid by certified cheque or Letter of Credit in full in the amount of \$\_\_\_\_\_.

\_\_\_\_\_  
**Payment Received Date**

\_\_\_\_\_  
**Payment Received By**

- The City of Kitchener has approved the Grading, Servicing plan and PSAB information.
- The Developer has submitted the signed Off-Site Works Construction and Inspection Agreement.
- The owner has read and agrees to the most recent version of the 'Procedure for offsite works by private contractor'
- 'Form 1' approved by Kitchener Utilities (if required)
- The City of Kitchener has received all important inspector information.

**Engineering Firm:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Main contact person:** \_\_\_\_\_

**Phone number:** \_\_\_\_\_

**E-mail address:** \_\_\_\_\_

**NOTE:**

1. The Applicant must obtain Engineering approval prior to work being completed on the site or within the right-of-way.
2. Gas services must be coordinated with Kitchener Utilities (Sylvie Eastman (519) 741-2600 ext. 4178).
3. This Off-Site Works Permit is not the approval needed from Transportation Services; please contact Lou Slijepcevic 519-741-2200 ext. 7153 or 519-741-2379 for any and all work in the right of way and proper permits must be in place prior to any work commencing. Please note a Road Occupancy Permit takes a minimum of five (5) business days to process.
4. All work within the right-of-way must be Ontario Traffic Manual (OTM) Book 7 compliant.
5. Please note that proper communication with Transportation Services for Road Occupancy Permits and timing is required to complete your work. Short notice will not be accommodated and processing times must be adhered to.
6. The Traffic Control Plan (TCP) must be submitted for approval with your Road Occupancy Permit.
7. Full restoration and asphalt is required upon completion. All cost/fees related to the road closure (if road closure is required) is the responsibility of the owner. If the municipal right-of-way is not restored or maintained to City Standards by the Developer during construction and the maintenance period and City Forces are called out to do the repair, the full cost for the repair will be taken from the Developers Guarantee held by The City of Kitchener.
8. 519-741-2345 must be called to reopen the road upon work completion (if road closure is required).
9. Prior to the initial maintenance inspection, Engineering must receive all the necessary construction test results as listed below:
  - a. Compaction test results per trench (granular sub base, asphalt base and surface)
  - b. Marshall test
  - c. Photo log of installation be completed
  - d. Slump and air test result for concrete
  - e. Confirmation from Kitchener Utilities that tapping and inspection was completed
10. If no deficiencies are noted, 50% of the Guarantee will be refunded while the remaining 50% will be held for the 2 year maintenance period.
11. The Developer/Owner is responsible for the completed works within the municipal right-of-way for the 2 year maintenance period.
12. Prior to final acceptance and release of the remaining guarantee, CCTV videos and corresponding reports for all new sanitary and storm laterals or mains must be submitted and approved by Engineering. All works must be up to City standards and inspected and accepted by The City of Kitchener.

**Services to be completed within the Municipal Right-of-Way**

Sanitary Service	<input type="checkbox"/>
Storm Service	<input type="checkbox"/>
Water Service	<input type="checkbox"/>

Sidewalk	<input type="checkbox"/>
Curb & Gutter	<input type="checkbox"/>
Inspection	<input type="checkbox"/>

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Application Accepted By

\_\_\_\_\_  
Acceptance Date

## Attachment 5 – City of Kitchener’s Road Occupancy Permit Checklist

### ROAD OCCUPANCY PERMIT APPLICATION FOR OFF-SITE WORKS



Contractors, property owners and others who are planning any activity (such as, but not limited to construction, landscaping etc) that may cause a public road to be blocked in any way, including restricting access, disrupting vehicular/pedestrian traffic flow, must obtain a Road Occupancy Permit before starting any work.

Any work occurring in the public road allowance (property that is under the jurisdiction of the City of Kitchener, including the roadway, boulevard, sidewalk and in most cases a landscaped portion adjacent to each property) will require a Road Occupancy Permit.

In order to obtain a Road Occupancy Permit for off-site works, an approved Off-Site Permit from Engineering is required, certificate of insurances from both the property owner and contractor along with all of the information requested below. Note that a minimum of 5 days’ notice is required to process a road occupancy permit, provided all the information is provided and accurate.

APPLICATION INFORMATION		
DETAILS	PROPERTY OWNER	CONTRACTOR
NAME/COMPANY		
ADDRESS		
OFFICE PHONE NO.		
CELL PHONE NO.		
EMAIL		

PROJECT INFORMATION	
START DATE:	COMPLETION DATE:
TYPE OF WORK:	
WORK DESCRIPTION:	
ADDRESS NO:	STREET NAME:
FROM INTERSECTION:	TO INTERSECTION:

## ROAD OCCUPANCY PERMIT CHECKLIST

### ATTACHMENTS INCLUDED:

- Certificate of Insurance:      Property Owner                       Contractor
- Traffic Control Plan (if applicable):       Work Zone Plan (if applicable)
- Work Plan/Schedule                       Supplemental Sketch
- Resident Notification Letter                       Off-Site Permit

1) Type of closure requested. Check all that apply:

- Full       Half       Lane       Sidewalk       None

2) Description and reason for road

closure: \_\_\_\_\_

\_\_\_\_\_

3) Is the roadway being open cut? YES       NO

a. When is full restoration occurring? \_\_\_\_\_

4) Is the curb being cut/removed? YES       NO

a. When is full restoration occurring? \_\_\_\_\_

5) Is the sidewalk being cut/removed? YES       NO

a. When is restoration occurring? \_\_\_\_\_

b. Restoration material being used? Asphalt       Concrete

c. If asphalt, when will concrete be reinstated? \_\_\_\_\_

6) Is the boulevard being affected? YES       NO

a. When is restoration occurring? \_\_\_\_\_

7) What day is garbage day? \_\_\_\_\_

a. Has Waste Management been contacted (contact information attached)?

YES  NO

8) When will resident notification occur? \_\_\_\_\_

9) Is there a school close to work area? YES  NO

10) Is the road a GRT bus route? YES  NO

11) Will residents be displaced from their driveways?

YES  Duration \_\_\_\_\_ NO

## ROAD OCCUPANCY PERMIT NOTES

- The applicant must have a valid and approved off-site work permit from Engineering prior to submitting for a road occupancy permit.
- A minimum of 5 days' notice is required to process a road occupancy permit, provided all the information noted previously is submitted and accurate.
- It is the responsibility of the property owner/contractor to ensure garbage/recycling is able to be collected during the proposed work. Region of Waterloo Waste Management can be reached 24 hours a day at 519-575-4400 or on the web at:  
[http://www.regionofwaterloo.ca/en/aboutTheEnvironment/Curbside\\_Collection.asp?\\_mid\\_=17564](http://www.regionofwaterloo.ca/en/aboutTheEnvironment/Curbside_Collection.asp?_mid_=17564)
- Certificate of Insurances (COI) are required from both the property owner and the contractor. Before a road occupancy permit can be issued, the COI must be vetted through risk management. The Corporation of The City of Kitchener must be listed as an additional insured, along with a minimum of \$2 million general liability.
- A letter of notification for residents/businesses of off-site works is required to be sent by the contractor. A copy is to be included with the road occupancy permit application, in order for staff to review.
- The City of Kitchener has a noise by-law which permits work only between 7 am - 7 pm, 7 days of the week. If work is being requested outside of these hours, a noise exemption will be required, which must be justified before consideration is given to the request. Noise exemptions require Council approval and must be done through a staff report. Further information will be required if a noise exemption is requested.
- A work plan and/or schedule are to be included with the application. The schedule will need to include restoration dates for the road, sidewalk and boulevard, if applicable.
- Sidewalks can be restored with asphalt on a temporary base, in lieu of concrete. However concrete must be reinstated upon completion of the development.
- All fees/costs associated with a road closure, will be the responsibility of the property owner. This could/may include installing advanced notification signs of impending road closure. All work zones will be the responsibility of the contractor. In these cases, a traffic control plan is required along with the application.
- Restoration of the roadway/sidewalk must be identified/included in the original work proposal. If restoration of the roadway and/or sidewalk cannot be accommodated within 72 hours of work being completed, a road occupancy permit will not be issued. If the municipal right-of-way is

not restored or maintained to City Standards by the Developer during construction and the maintenance period and City Forces are called out to do the repair, the full cost for the repair will be taken from the Developers Guarantee held by The City of Kitchener.

- All work within the right-of-way must be Ontario Traffic Manual (OTM) Book 7 compliant.
- 519-741-2345 must be called to arrange to reopen the road up work completion (if road closure is required).

**Attachment 6 – City of Kitchener’s Maintenance Package Checklist for Initial Acceptance**

**Off-Site Works Maintenance Package Checklist for Initial Acceptance  
Request Form**



**Developer:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Consultant:** \_\_\_\_\_

No.	Item Description	Included		Yr	's
		Yr	's		
<b>1.0</b>	<b>Letters</b>				
1.1	Engineer's Letter of Certificate				
<b>2.0</b>	<b>Inspection Reports</b>				
2.1	Daily				
<b>3.0</b>	<b>Sewers</b>				
<b>3.1</b>	<b>Sanitary</b>				
3.1.1	Backfill Material/Pipe Bedding				
3.1.2	Tracer Wire - Conductivity Test				
3.1.3	Photo log of installation (see note 1)				
<b>3.2</b>	<b>Watermain</b>				
3.2.1	Backfill Material/Pipe Bedding				
3.2.2	Tracer Wire - Conductivity Test				
3.2.3	Photo log of installation (see note 1)				
<b>4.0</b>	<b>Water Services</b>				
<b>4.1</b>	<b>Water Services</b>				
4.1.1	Backfill Material/Pipe Bedding				
4.1.2	Tracer Wire - Conductivity Test				
4.1.3	Photo log of installation (see note 1)				
<b>4.2</b>	<b>Watermain</b>				
4.2.1	Backfill Material/Pipe Bedding				
4.2.2	Tracer Wire - Conductivity Test				
4.2.3	Photo log of installation (see note 1)				

<b>5.0</b>	<b>Roads</b>			
5.1	<b>Sub-grade, Granular "A" and Granular "B" Material</b>			
5.1.1	Sub Grade - Geotechnical Certification			
5.1.2	Granular "B" Material Compaction Testing			
5.1.3	Granular "A" Material Compaction Testing			
<b>5.2</b>	<b>Asphalt</b>			
5.2.1	Mix Designs (base and surface)			
5.2.2	Asphalt tickets (surface asphalt must be virgin)			
5.2.3	Full Marshall Test Results (>75 tonnes)			
5.2.4	Compaction Testing			
<b>5.3</b>	<b>Concrete – Curbing and Sidewalk</b>			
5.3.1	Concrete tickets			
5.3.2	Mix Designs (see note 2)			
5.3.3	Air/Slump/Strength Testing (see note 2)			

Notes:

1. Representative digital photographs of the water connections, including services to document that wrapping as per Corrosion Protection in the DGSSMS has been completed.
2. Mix designs and testing for curb/sidewalk required for lengths greater than 50 linear metres.
3. Shaded cells indicate required items for initial acceptance.

## Attachment 7 - Off-Site Works CCTV Requirements Checklist for Sanitary and Storm Services

- The owner understands that failure to submit this cover checklist filled out will result in an incomplete submission and a resubmission will be required.
- Included in this submission package is a PACP certification document from the pipeline inspector who is capable of accurate observation and reporting of all conditions found.
- All storm and sanitary services have been flushed and cleaned prior to starting the CCTV inspection.

During cleaning operations, satisfactory precautions shall be taken to ensure that the water flow volumes and pressures created do not damage or cause flooding of any public or private property, while still ensuring satisfactory cleansing of the interior of the pipe for inspection. When possible, the flow of sewage in the sewer shall be utilized to aid in the cleaning process. A maximum pressure of 1800psi shall be used in all locations to prevent damage to the sewer lines or flooding into private structures. It shall be at the Contractor's discretion and judgment that flow volumes and cleaning pressures are adjusted appropriately for the age, condition, and circumstances of the inspection site. If in the Contractor's opinion "normal" cleaning procedures cannot be undertaken, or satisfactory results cannot be achieved in any section of sewer, the CCTV contractor must report the findings to City's staff.

All new storm and sanitary services from the main to the property line have been videoed and the CCTV inspections and corresponding reports have been submitted in this package electronically. All new storm and sanitary mains that were completed as part of the Off-Site Works process have been submitted with the same criteria given to the services if applicable.

A digital CCTV inspection **report** has been included with this submission. The City is currently accepting submissions in USB or CD format, as well as on-line submissions via fileshare or an ftp site. This CCTV inspection report includes:

- a general service plan which highlights the inspected sanitary and storm sewer.
- an English, computer-generated, typed-format, with a presenting cover page.
- a cover page with the following information on it:
  - 1st Line City of Kitchener
  - 2nd Line Developer's Name
  - 3rd Line Sewer Type (Sanitary or Storm Video Inspection)
  - 4th Line Report Number #
  - 5th Line Date of Report DD/MM/YYYY

A digital CCTV **video** had been included with this submission. The City is currently accepting submissions in USB or CD format, as well as on-line submissions via fileshare or an ftp site.

- While the camera is stationary, at the beginning of the section, the following appears on the video screen:
  - 1st Line Sanitary/Storm
  - 2nd Line From (starting location or MH#) to (ending location or MH#)
  - 3rd Line Address
  - 4th Line Flow Direction - North, South, East, West

- 5th Line Size of pipe, type of pipe
- 6th Line Date of inspection (MM/DD/YY)

While the camera is travelling the following information appears at the bottom left hand of the video screen:

- 1st Line From (starting location or MH#) to (ending location or MH#)
- 2nd Line Address
- 3rd Line Distance from center of manhole base in meters
- 4th Line Flow Direction – North, South, East, West

The internal pipe inspection has been completed using specifically designed cameras, video recording equipment and synchronized computer data recording. A continuous visual record of the internal condition of the piping system is provided digitally, with a playback visual resolution equivalent to the camera's recording resolution.

Camera equipment shall consist of a self-contained, closed-circuit pan and tilt video camera and monitoring unit per the latest OPSS revision. The unit shall have an adjustable lighting system capable of providing a clear monitor picture and a minimum illumination level of 100- foot candles. The camera travel speed shall be as per the latest OPSS revision. CCTV videos not meeting the camera speed will be rejected.

The CCTV Inspection Report and Video have been reviewed and submitted to the City free of deficiencies such as debris, cracks, backups, poor workmanship... etc.

Owner's Name:

Owner's Signature:

Address of the Development:

CCTV Submission Number:

Date:

681 Hidden Valley Road Kitchener, ON N2C 2S4

**February 15, 2022**

Katie Wood  
Project Manager, Development Engineering  
City of Kitchener

Dave Wilhelm  
Consultant Project Engineer, Water/Wastewater  
MTE Consultants

**Dear Katie and Dave,**

We received your response letter to our comments and questions regarding the EA study for the Hidden Valley Forcemain and servicing study, as well as the invitation to the **second** EA presentation scheduled for tomorrow.

As a 'Heritage' family on Hidden Valley Road, we have significant concerns with the response presented to us by the City and MTE in the letter we received mid-January. We are discouraged by the process and lack of consideration for the Eastern Hidden Valley Area as part of the EA and the City's change in direction with regards to supporting the continued creation of special neighbourhoods within Hidden Valley Road. This shift has occurred recently with the departure of Brandon Sloan who gave us positive communication that our parcel would be considered for development and City servicing similar to the Hidden Valley Estates to the South.

The speed with which the City has set up this second EA presentation has not afforded us enough time to respond to the MTE letter, secure Engineering consultants to review the City's statements, propose options, or properly respond to the letter, other than to say that the work completed to is not acceptable, and using the Secondary Plan status or 'Heritage Corridor' overlay as a reason to not consider servicing this area as unacceptable.

We will be attending the EA meeting and will be pushing the City to stop moving forward without considering all of Hidden Valley Road as part of the EA and servicing study. We will be working with our consultants to bring our interests and concerns more strongly to your attention.

681 Hidden Valley Road Kitchener Ontario |

**21 February 2022**

Katie Wood  
Project Manager  
City of Kitchener

Dave Wilhelm  
Project Manager  
MTE Consultants

Dear Katie and Dave,

We appreciate the work that you have done on the Hidden Valley Road EA #2 Presentation last week. We were happy to see Richard Kelly-Reutz in attendance representing the City Planning Department as this is a Planning, as well as, an Engineering project. We would like to set up a Zoom meeting with you and Richard at your earliest convenience to discuss your thoughts on the EA and the direction for servicing and development for the eastern side of Hidden Valley Road, and the draft Secondary Plan designations.

As I mentioned in my last letter to you, our family has owned 681 and 691 Hidden Valley Road for several generations. In the last 4-6 years, we have been working on conceptual neighborhood plans with MHBC and have recently been looking to sell the property to a local developer with the intent on keeping one acre lots with the existing homes for our family. Our goal is to offer the opportunity to develop the remaining severed parcel to a local developer in accordance with the City's Official Plan. The uncertainty on the servicing status and heritage corridor discussions have been concerning for all parties. A large sum of money has already been spent by our family to explore the potential for creating one-acre lots on our parcels and we are concerned that this was money not well spent given the current direction of the EA.

MHBC had been working with Brandon Sloan and more recently with Brian Bateman, to determine the potential for 5-8 lots on our combined parcels. Brandon gave us positive feedback that the City would support thoughtful development and that we would have access to City servicing for water (at our cost for connecting), and the allowance for private servicing (septic) or a connection to future City installed sewer infrastructure. Brandon Sloan also gave us the impression that the potential heritage status would be a positive element to maintain the Estate character of our neighbourhood but it has in effect created another burden and potential road block to careful and thoughtful development in our area of Hidden Valley. More recently, Brian Bateman gave us a list of required studies we needed to prepare for a simple severance plan in order for us to deliver a parcel for sale that made sense for a small neighborhood development, and we began some of this work after a Preliminary Meeting with the City. However, comments from the Region regarding servicing to our parcel placed a hold on these studies and the City and Region indicated that any severance processing would have to wait until we received direction from the City on the servicing status. We are now three years later at this point and still have no opportunity for servicing for our parcel in sight and no coordination between the Region, City and GRCA on how to provide for this.

We are disappointed that Richard in the City Planning Department may not have been aware of these conversations. The comment last week that the City was not aware of the desire for other property owners on the 'eastside' to have the ability to subdivide their parcels - as allowed for in the Official Plan and the draft Secondary Plan - is discouraging to say the least. We were never asked or consulted. The City's Official Plan does not designate our area as a heritage corridor and just the potential designation of a 'Heritage Corridor' in the draft Secondary Plan should not be what drives the lack of servicing to our area. The City should not assume that Landowners with smaller parcels do not want to have the opportunity to subdivide and service their parcels like those owners on the North or South side. The City should anticipate that all landowners in Hidden Valley would want to have the opportunity to follow the guidelines in the Official Plan especially given that the EA encompasses our properties.

The current direction of the EA has been especially discouraging as it appears to close the door on any future sewer servicing to our parcels as well as to that of our 'eastside' neighbours to the north and northeast of our parcels, some of whom own larger parcels than we do. We feel that the Estate Residential zoning fits the Hidden Valley character but the City is not providing the ability to achieve this type of development as allowed for in the Official Plan or the draft Secondary Plan.

As the current EA encompasses the entire Hidden Valley area, it should include a provision to allow for alternative servicing to areas that are not accessible by your four options. This might include private individual septic systems or grouped septic systems like Bridlepath Estates, and these should be studied and coordinated with the GRCA and the Region as part of this EA study and not pushed to the future. The City has the resources and connections with these other agencies and can negotiate and coordinate alternative servicing options especially if the current forcemain options cannot reach our area. The City and Region need to coordinate an option as part of this EA study to provide an allowance for alternative servicing. We were hopeful that the City was doing this during the last 'study' period after one of the City planners stated in the first EA Zoom presentation that they City would support private septic for our area, but then redacted this comment in the response letter sent to us mid-January.

The speed with which this next phase is moving makes us feel that our comments were not considered and we - as Landowners - haven't had sufficient time to respond or allow enough time for the City to look at alternatives. We, as a heritage family of Hidden Valley Road, are feeling ignored. Increasing costs from the Estate Residential Tax base, removal of agricultural tax base on our property, potential heritage designations, and the potential financial burden to maintain these 'heritage' structures is an immense burden on our family. In addition, expensive environmental, archeological and geological studies the City is requiring just to move or adjust a lot line, and the apparent lack of will by the City to allow landowners the ability to develop per the Official Plan or Secondary Plan - because servicing our area is too expensive - is unacceptable. We trust that there is still an opportunity to work together to create favorable options for all parties.

We look forward to meeting with you via Zoom to discuss the path forward. Please provide us with some available dates for a meeting where we may further discuss these concerns and opportunities.

Many thanks for your consideration.

Sincerely,

CC: John Gazzolla, Councillor – Ward 3



MTE Consultants

520 Bingham Centre Drive, Kitchener, Ontario N2B 3X9

February 2, 2021  
MTE File No.: C48301-100

Megan DeVries, MA  
Archaeological Operations Manager  
Department of Consultation and Accommodation (DOCA)  
Mississaugas of the Credit First Nation (MCFN)  
4065 Highway 6 North  
Hagersville, On N0A 1H0  
Email: [Megan.DeVries@mncfn.ca](mailto:Megan.DeVries@mncfn.ca)

Dear Megan:

**RE: Municipal Class Environmental Assessment  
Upper Hidden Valley Pump Station and Forcemain  
DOCA Project Response Letter – Archaeological Review**

We acknowledge receipt of your email dated January 19, 2021 with attachment pertaining to DOCA Project Response Letter re: Archaeological Review.

We have taken note of the contents of this document and wish to respond as follows with our response in *italics*:

- i. Outline of MCFN Rights and Territory**  
*MTE's response: Noted*
- ii. MCFN Standards and Guidelines for Archaeology**  
*MTE's Response: Noted*
- iii. MCFN Expectations Regarding Ancestors' Remains**  
*MTE's Response: Noted*
- iv. Technical Review**  
*MTE's Response: Noted*
- v. Request for Missing Information**
  - a. Is an Archaeological assessment required for this project? If no, why not.  
  
*MTE response: Yes, an archaeological assessment is required as part of the environment assessment study*
  - b. Have any archaeological assessments already been completed for this project and/or its study area? If yes, please provide all documentation including reports, supplementary documentation etc.

**MTE's Response:** Yes. ARA, the archeological and cultural heritage consultant for this project, has confirmed that a number of assessments have been completed within the study area for previous assessments including:

**1) DETRITUS CONSULTING :**

**Archaeological Assessment (Stages 1, 2)**

Shouftas Property, 1054, 1070 Hidden Valley Road,  
City of Kitchener, R.M. of Waterloo  
Company Project #2011-020, PIF# P017-197-2011  
Municipal File Number: (None assigned yet) Revised Report

**2) Archaeological Research Associates**

**Stage 1 and 2 Archaeological Assessments**

Regional Road No. 56 (River Road) Extension  
Phase 1 – Wabanaki Drive to Manitou Drive  
Municipal Class Environmental Assessment Study  
City of Kitchener, Regional Municipality of Waterloo  
Part of Bechtel's Tract, Geographic Township of Waterloo  
Waterloo County, Ontario  
PIF #P089-0092-2018, ARA File #2016-2039

**3) L.R. Bud Parker**

**Archaeological Assessment**

Proposed Wabanaki Road Extension  
Goodrich Drive to Fairway Road  
City of Kitchener, Regional Municipality of Waterloo  
CIF No. 2001-007-010

**4) Archaeological Services Inc.**

**Wabanaki Drive Extension**

Class Environmental Assessment  
City of Kitchener, Regional Municipality of Waterloo, Ontario  
PIF P223-011-2008

ARA has requested 9 further reports from the Ministry of Heritage, Sport, Tourism, and Culture Industries (MHSTCI) to confirm that they overlap with the study area. These reports include the following:

- ASI 1998 Jacob Furtney Homestead
- Licence #96-015 (Stage 4)
- Licence #001-053 (Stage 1–2)
- CIF #2002-047-018 (Stage 1–2)
- CIF #2002-047-022 (Stage 1–2)
- PIF #P049-379-2009 (Stage 1–2)
- Licence #P050-013 (Stage 1)
- Licence #92-090 (Stage 1–3)
- PIF #P013-486-2009 (Stage 1–2)

- c. Has the MHSTCI issued a letter of entry into register for some or all of the study area? If yes, please provide all documentation, including letter, communications to and from MHSTCI, etc.

**MTE's Response:** *Yes, portions of the study area have received letter of entry into the register. ARA does not have access to the letter of entries from other companies.*

- d. If the answer to #4 is yes, please provide the following:  
i. A description of the outstanding archaeological activity/activities.

**MTE's Response:** *Until all of the requested reports have been received from the MHSTCI we are unable to provide mapping and/or description of the outstanding areas required.*

- ii. Anticipated date of the activity/activities

**MTE's Response:** *Spring 2021*

- iii. The appropriate contact person overseeing the archaeological activity/activities

**MTE's Response:** *Victoria Cafik, [Victoria.cafik@araheritage.ca](mailto:Victoria.cafik@araheritage.ca), 519-212-5172*

We trust the above adequately provides the information needed. Please feel free to contact the undersigned if you have any further questions or concerns.

Yours truly,

**MTE Consultants Inc.**



**Asma Naseem, P.Eng.**

Project Manager

519-743-6500 ext. 1362

[ANaseem@mte85.com](mailto:ANaseem@mte85.com)

AXN:zeg

Encl.

cc: Katie Wood, City of Kitchener  
Fawn Sault/Mark LaForme, MCFN  
Gemma Charlebois/Dave Wilhelm, MTE Consultants Inc.

M:\48301\100\00 Correspondence\Notice of Study Commencement\Comments Received from Notice of Commencement\Indigenous\MTE Letter to Megan DeVries, MNCFN\_RE DOCA Response Archaeological Review\_2020-01-21.docx

Ms. Katie Wood  
Project Manager, Development Engineering  
City of Kitchener  
200 King Street West  
Kitchener, ON N2G 4G7

February 15, 2022

**RE: Consultant's response to PVDC letter re Hidden Valley Sanitary Pumping Station and Forcemain Environmental Assessment – Alternative Solutions**

Dear Ms. Wood,

I am writing in relation to the letter received from Gemma Charlebois' dated January 6, 2022, which was a response to our written submission commenting on the Hidden Valley pumping station alternatives presented at your November 2021 Public Information Centre for this project.

Please note that we have significant concerns with the response presented to us and the City's underlying approach to this Environmental Assessment. Our position is rooted in a vision for PVDC's lands in Hidden Valley that strives to create an extraordinary new neighbourhood for Kitchener – one that implements planning policies currently in place at all levels of government but also responds to today's urban and social challenges. As such, we put forward the following points as our further response:

1. Current provincial policies direct land use planning to be coordinated with planning for infrastructure. This has not occurred in this EA process. Instead, a sequential process is unfolding whereby a community plan, which was prepared with limited technical support, is being relied upon as the basis for the EA. Looking ahead, and in consideration of the land use policies that are in effect, the EA will be used as the rationale to identify lands that should be un-designated as residential lands because they can't be serviced. This process is not acceptable and appears to be based on a predetermined outcome.

The Community plan was adopted by council resolution, and as such has no legal foundation and should not be used to undermine or otherwise over-ride land use designations in the approved City Official Plan. There is a formal process to amend the official plan and it is recommended that the EA be coordinated with this process. A coordinated approach is encouraged by the MCEA and provincial policy framework.

2. The Consultant's response we received seems to suggest the areas shown in white in the LUMP, including the large eastern agricultural field, are not designated for development and as a result, servicing of the lands is not necessary. This assumption has no foundation given the residential designation in the approved City's Official Plan. As noted, a council resolution cannot amend an official plan or take away a land use designation. Failure to plan for adequate services through this EA process that is unfolding undermines the approved land use designation and effectively sterilizes lands designated for development.

3. The suggestion that development on private services will be explored in the future, and following approval of the EA, is not acceptable as it fails to coordinate land use with infrastructure. This approach does not consider the approved planning framework which clearly does not permit private services in Hidden Valley. This limitation is made in Policy 5.B.6 of the Regional Official Plan which prohibits the use of individual wastewater treatment systems in the Urban Area designation within the Region. We take no comfort from the empty gesture of future consideration of septic tanks given this option is not permitted by policies that are now in effect. Moreover, private services within the Urban Area ought not be considered from an environmental/sustainability perspective.
4. Most of the alternatives presented at the first PIC do not provide services for all lands that are designated for development in the Official Plan. This is a contravention of existing policies as failure to plan full municipal services for all lands designated for development does not conform with provincial and regional planning policies.
5. The EA work presented thus far also falls short in that it has not considered the complete range of servicing options possible to service all lands. Alternatives 1, 2, 2a and 4 can't be supported for this reason.
6. The range of options that are being considered suggest a built-in bias against developing all lands that are designated for development.
7. It is crucial to note that Hidden Valley Road is NOT designated a *Heritage Corridor* in the Official Plan. A "potential designation" of parts of Hidden Valley Road is an absolutely insufficient rationale for not servicing the eastern agricultural field.

Even if its east section was to be designated, services would be underground, any construction disruption would be temporary, and the visual character of the road could be restored. In fact, the City has been developing infrastructure through already designated heritage areas regularly. Dodge Drive in Kitchener is an example where a trunk sewer has been constructed by the City within an already designated Heritage Corridor. Similarly, Pioneer Tower Road is another example where this occurred. It is also understood the Region's approved East Side servicing scheme contemplates a trunk sewer to be built within such corridor and an above grade crossing of the Grand River is planned.

A road/servicing system must be planned to replace Hidden Valley Road in advance of any consideration for designating this road as a heritage corridor in the official plan. Alternatively, the EA must make clear provisions for services within and access to Hidden Valley Road. Again, the need for a comprehensive and coordinated approach to land use and infrastructure planning cannot be overstated.

We also ask for your detailed evaluation criteria and scoring methodology for all of the alternatives. Please provide as soon as possible.

We look forward to the 2<sup>nd</sup> Public Information Centre on February 17<sup>th</sup>, 2022 and further discussions to achieve the best outcome to this EA focusing on serviceability of the entire Hidden Valley area.

Sincerely,



Hanna Domagala  
*Senior Project Manager*



MTE Consultants

520 Bingham Centre Drive, Kitchener, Ontario N2B 3X9

May 6, 2022

MTE File No.: C48301-100

Ms. Hanna Domagala  
Senior Project Manager  
Pearl Valley Development Corp  
508 Riverbend Drive  
Kitchener ON N2K 3S2  
Email: [hanna@pbenninger.com](mailto:hanna@pbenninger.com)

Dear Ms.Domagala:

**RE: Response to: Consultant's response to PVDC Letter re Hidden Valley Sanitary Pumping Station and Forcemain Environmental Assessment – Alternative Solutions**

Further to your correspondence dated February 15, 2022, as it relates to the above-mentioned project, we offer the following response. For ease of reference, PVDC's comments have been incorporated within this letter and MTE's corresponding responses in *italics* thereafter.

1. Current provincial policies direct land use planning to be coordinated with planning for infrastructure. This has not occurred in this EA process. Instead, a sequential process is unfolding whereby a community plan, which was prepared with limited technical support, is being relied upon as the basis for the EA. Looking ahead, and in consideration of the land use policies that are in effect, the EA will be used as the rationale to identify lands that should be un-designated as residential lands because they can't be serviced. This process is not acceptable and appears to be based on a predetermined outcome.

The Community plan was adopted by council resolution, and as such has no legal foundation and should not be used to undermine or otherwise over-ride land use designations in the approved City Official Plan. There is a formal process to amend the official plan and it is recommended that the EA be coordinated with this process. A coordinated approach is encouraged by the MCEA and provincial policy framework.

***Response:***

*The Engineering EA is intended to identify and define a suitable sanitary sewer servicing solution to support development in the Hidden Valley community by generating and evaluating various alternatives while considering environmental effects using the Hidden Valley Land Use Master Plan endorsed by Council in June 2019. The Engineering EA is not being used to identify lands as undevelopable based on servicing constraints. Further, the forthcoming Secondary Plan will not remove potential development permissions for lands within the Hidden Valley area on the sole basis that they are not municipally serviced; a multitude of factors (environment, compatibility, traffic, etc.) will be considered when implementing updated development permissions through the Secondary Plan.*

*The evaluation of the alternative pumping station locations through the EA took into consideration all lands in the Hidden Valley area. We note that the preferred pumping*

*station location will be sized accordingly to accommodate additional lands from the east side of the Hidden Valley area when they are ready to develop.*

2. The Consultant's response we received seems to suggest the areas shown in white in the LUMP, including the large eastern agricultural field, are not designated for development and as a result, servicing of the lands is not necessary. This assumption has no foundation given the residential designation in the approved City's Official Plan. As noted, a council resolution cannot amend an official plan or take away a land use designation. Failure to plan for adequate services through this EA process that is unfolding undermines the approved land use designation and effectively sterilizes lands designated for development.

**Response:**

*The lands shown on white in the Land Use Master Plan (LUMP) were considered developable for the purposes of the EA. Developable area serviced by each of the options in the EA was one of several considerations in the evaluation.*

3. The suggestion that development on private services will be explored in the future, and following approval of the EA, is not acceptable as it fails to coordinate land use with infrastructure. This approach does not consider the approved planning framework which clearly does not permit private services in Hidden Valley. This limitation is made in Policy 5.B.6 of the Regional Official Plan which prohibits the use of individual wastewater treatment systems in the Urban Area designation within the Region. We take no comfort from the empty gesture of future consideration of septic tanks given this option is not permitted by policies that are now in effect. Moreover, private services within the Urban Area ought not be considered from an environmental/sustainability perspective.

**Response:**

*The approved planning framework – notably Policy 15.D.12.1 a) of the City's Official Plan – recognizes that portions of the Hidden Valley community designated Low Rise Residential "have limited access to municipal sanitary services and contain estate residential lots". Subsection i) further recognizes the possibility of new development where "individual septic systems are the only feasible servicing option".*

*As a result of these servicing policies in the City's Official Plan which are unique to the Hidden Valley Area, the Region of Waterloo has indicated to the City that they would generally support of septic system as a sanitary solution if:*

- *The lands are not able to be serviced by the proposed pumping station through the Hidden Valley PS EA, and*
- *The necessary supporting documents, including a scoped Hydro G, is submitted to the Region for review and approval.*

*The hydrogeological study will look at levels of nitrate produced and the negative impacts it may have on the ground water and wells in the area. If this is approved by the Region and the development is supported by the current City's Official Plan, the Region would approve a septic solution.*

*The City cannot add the "septic option" into the EA because the documents required are not yet completed or approved however, based on the above information it is a viable solution.*

4. Most of the alternatives presented at the first PIC do not provide services for all lands that are designated for development in the Official Plan. This is a contravention of existing policies as failure to plan full municipal services for all lands designated for development does not conform with provincial and regional planning policies.

**Response:**

*The mandate of the Class EA is to select a sanitary pump station location and forcemain route to service lands identified for development while balancing environmental and other impacts. We do not agree with the interpretation of the planning policies that all lands designated for development must be serviced through the preferred alternative identified in this Class EA. See response 5 for more details.*

5. The EA work presented thus far also falls short in that it has not considered the complete range of servicing options possible to service all lands. Alternatives 1, 2, 2a and 4 can't be supported for this reason.

**Response:**

*A complete range of servicing options for the Hidden Valley Area has been provided. Option 3 and 3a has the most servicing area potential compared to Options 1, 2, and Options 2a and 4 having lesser servicing area potential.*

*Servicing potential was just one set of criteria identified in our evaluation. Each option was evaluated for each of the seven criteria (Natural Environment, Social Environment, Heritage/Cultural Impacts, City Operations, Technical, Servicing Potential, Cost), utilizing a scale of least to most desirable. Each criterion was weighted equally, and the evaluation is the average of all the criteria for each option. Scores were averaged from across the project team which consisted of MTE Consultants, The City of Kitchener, The GRCA, and the Region of Waterloo. Option 2a was ranked most desirable of the options, followed by options 2 and 4, and lastly options 3 and 3a.*

*Options 3 and 3a, received the lowest scores. While this location could service the largest area by gravity directly to the proposed new pump station, it is a location that is adjacent to the species at risk habitat and a Provincially significant wetland. Additionally, due to the planned construction of River Rd extension and the LRT tracks this area will be constrained by transit infrastructure. This location is also furthest from the discharge location, and it also requires several creek crossings.*

6. The range of options that are being considered suggest a built-in bias against developing all lands that are designated for development.

**Response:**

*We acknowledge that the preferred location does not municipally service as many hectares of land as some of the other alternatives considered. As noted in response 5, "servicing potential" was one of seven criteria evaluated to select the preferred location. For example, location 3 and 3a – which were not selected as the preferred location but would service Pearl Valley's eastern agricultural field – scored highest for "servicing potential" but had lower scores for other equally weighted criteria.*

7. It is crucial to note that Hidden Valley Road is NOT designated a Heritage Corridor in the Official Plan. A “potential designation” of parts of Hidden Valley Road is an absolutely insufficient rationale for not servicing the eastern agricultural field.

Even if its east section was to be designated, services would be underground, any construction disruption would be temporary, and the visual character of the road could be restored. In fact, the City has been developing infrastructure through already designated heritage areas regularly. Dodge Drive in Kitchener is an example where a trunk sewer has been constructed by the City within an already designated Heritage Corridor. Similarly, Pioneer Tower Road is another example where this occurred. It is also understood the Region’s approved East Side servicing scheme contemplates a trunk sewer to be built within such corridor and an above grade crossing of the Grand River is planned.

A road/servicing system must be planned to replace Hidden Valley Road in advance of any consideration for designating this road as a heritage corridor in the official plan. Alternatively, the EA must make clear provisions for services within and access to Hidden Valley Road. Again, the need for a comprehensive and coordinated approach to land use and infrastructure planning cannot be overstated.

**Response:**

*Heritage was one of seven criteria used to evaluate the alternate options. The preferred option scored marginally higher in the heritage score than the other options. This alone did not significantly impact the rankings.*

*We recognize that the Hidden Valley Road is not designated as a Heritage Corridor, and we are changing the wording to “Potential Heritage Corridor”. We can confirm that designated Heritage Corridors within the City of Kitchener have been developed with servicing and other infrastructure. To develop within these rights-of-way several studies and reports must be completed to determine and minimize the impact to the Heritage infrastructure.*

Yours truly,

**MTE Consultants Inc.**



**Gemma Charlebois, M.A.Sc., P.Eng.**  
Technical Manager, Water/Wastewater  
519-743-6500 ext. 1227  
[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)

GSC:zeg

Cc: Katie Wood, City of Kitchener  
Dave Wilhelm, MTE Consultants Inc.

M:\48301\100\00 Correspondence\PIC\Comments and Responses from PIC\Pearl Valley\Response letter to Pearl Valley Response Draft (Apr 28 2022).docx

January 18,2021

**VIA EMAIL**

Katie Wood, C.E.T.  
Project Manager, Development Engineering  
City of Kitchener  
katie.wood@kitchener.ca

Dear Katie,

**RE: MCFN Response to** Municipal Class Environmental Assessment Upper Hidden Valley Sanitary Pump Station and Forcemain

Confirmation of Receipt

I am writing on behalf of the Mississaugas of the Credit First Nation (“MCFN”) to acknowledge that we have received your above named communication, dated January 7,2021 .

Outline of MCFN Rights and Territory

In 1792 , the Crown and MCFN entered into Between the Lakes, No. 3 (1792) regarding the lands in which your project is situated.

The Mississaugas of the Credit First Nation are the descendants of the “River Credit” Mississaugas. The undisputed Territory of the MCFN is defined as a Territory commencing at Long Point on Lake Erie thence eastward along the shore of the Lake to the Niagara River. Then down the River to Lake Ontario, northward along the shore of the Lake to the River Rouge east of Toronto then up that river to the dividing ridges to the head waters of the River Thames then southward to Long Point, the place of the beginning. Our Territory encompasses the lands and waters that were used and occupied by our Ancestors. Territories are usually large tracts of land that reflect the breadth required for seasonal activities and habitation and changes in those movement patterns through time. Through Treaties with the Crown, MCFN agreed to share our Territory with newcomers. However, not all of MCFN’s Territory has been dealt with through a Treaty.



With the exception of a small part of the Credit River, our Treaties with the Crown did not deal with the water parts of our Territory. We have not agreed to share any part of our waters with settlers. We formally gave notice to the Crown of this claim in 2016. We note that any lands that have been artificially created on our waters have also not been dealt with by any Treaty.

Like our ancestors before us, we continue to use the lands, waters, and watershed ecosystems within our Territory for a variety of livelihood, harvesting, ceremonial and spiritual purposes. We have always exercised governance functions and stewardship in order to protect our Territory, conserve the fish and wildlife that depend upon it, and ensure its ongoing ability to sustain our people. We assert that our Aboriginal and treaty rights fundamentally entitle us to continue to act as stewards of our Territory, to be involved in decisions that affect it, and to participate in the ongoing, responsible management of the resources it provides.

#### Duty to Consult and Accommodate

As you will know, the Crown has a constitutional duty to consult and accommodate MCFN in respect of any decisions that might affect its asserted or proven Aboriginal and/or Treaty Rights. We expect that, consistent with the Crown's constitutional duty, no approval should be issued to this project until MCFN has been sufficiently consulted and accommodated. Nothing in this letter shall be construed as to affect our Aboriginal and/or Treaty Rights and hence shall not limit any consultation and accommodation owed to MCFN by the Crown or any proponent, as recognized by section 35 of the Constitution Act, 1982.

MCFN has the right to free and informed consent prior to the approval of any project or any planning decision adversely impacting its Territory and to benefit economically from resource development within its Territory.

MCFN has formed the Department of Consultation and Accommodation ("DOCA") to represent its interests in consultation and accommodation matters. It is DOCA's mandate to ensure that we are directly involved in all planning and development that impacts the integrity of our Territory. In this regard, DOCA will assess and help alleviate impacts on our rights, land claims, and ways of life by building relationships with governments and private sector proponents. We share a mutual interest in ensuring that projects in the Territory are planned, reviewed, and developed in a manner which ensures healthy communities, ecological protection, and sustainable development for present and future generations in the Territory.



#### **DEPARTMENT OF CONSULTATION AND ACCOMMODATION**

Mississaugas of the Credit First Nation  
4065 Hwy #6, Hagersville, Ontario NOA 1H0



Phone: (905) 768-4260



MCFN is not opposed to development, but MCFN must to be involved in development decision making. MCFN has a deep connection to its Territory and we have a stewardship responsibility for our land. By engaging with us, a project proponent can learn our perspective on how to care for this land and we can work together to shape the project to mitigate damaging effects to our land and perhaps even work to improve our environment. MCFN is the only party who shall determine whether there are impacts to our Aboriginal and treaty rights.

One of the ways we require proponents to engage with us is in providing transparency during the environmental survey and archaeological assessment process. The best way to accomplish this is by having Field Liaison Representatives (“FLRs”) on location while fieldwork is occurring, who can ensure that the Nation’s special interests and concerns are respected and considered during fieldwork. The cultural and natural resources in question are part of MCFN’s territory and heritage and it is our responsibility to ensure their protection, on behalf of the Nation. MCFN’s stewardship of its territory extends through the life of any development project and beyond.

DOCA Project Registration

DOCA has completed an initial intake review of the project communication you have provided. This file has been assigned DOCA Project 2021-0011 ; please use this number in all future communications.

We respectfully ask you to immediately notify us if there are any changes to the project.

Referral to DOCA Units

Following DOCA’s initial intake review of the project communication, the file has been referred to the following DOCA Units for additional follow-up.

	<b>Unit Identification</b>	<b>Primary Contact</b>	<b>Email Address</b>
✓	Archaeology	Megan DeVries	<a href="mailto:megan.devries@mncfn.ca">megan.devries@mncfn.ca</a>
✓	Cultural/Historical	Darin Wybenga	<a href="mailto:darin.wybenga@mncfn.ca">darin.wybenga@mncfn.ca</a>
✓	Environment	Fawn Sault (Temp)	<a href="mailto:fawn.sault@mncfn.ca">fawn.sault@mncfn.ca</a>
✓	FLR Participation	Megan DeVries	<a href="mailto:megan.devries@mncfn.ca">megan.devries@mncfn.ca</a>
	Governance	Mark LaForme	<a href="mailto:mark.laforme@mncfn.ca">mark.laforme@mncfn.ca</a>
	Economic Development	Director	<a href="mailto:SED.Director@mncfn.ca">SED.Director@mncfn.ca</a>

If you have not been contacted by the indicated DOCA Units within fourteen days following receipt of this letter, please let me know.



### Request for Missing Information

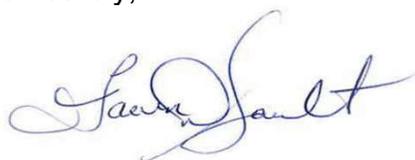
In order to proceed with our follow-up review, we ask you to ensure that all available information relating to the project has been transmitted to us. We have identified the following general information as missing from your initial project communication:

<b>Outstanding Project Information</b>	
✓	Name of person or body undertaking the action or decision.
✓	Contact information for the person or body undertaking the action or decision.
✓	List of documents pertaining to the proposed action/decision that are available for MCFN to review.
✓	Description of what other information is expected to become available before the proposed action/decision is undertaken.
✓	Deadlines or filing dates pertaining to the action/decision.
✓	The Crown or Municipal review/ approval that is required for the project.
✓	How the proposed action or decision may affect and/or benefit MCFN, its rights and territory.

### Closing

We ask that you respond with the above requested information within fourteen days following receipt of this letter. We thank you in advance for your attention to our requirements and we look forward to working with you further to shape the planning for development in our Territory.

Sincerely,



Fawn Sault  
Consultation Coordinator  
[fawn.sault@mncfn.ca](mailto:fawn.sault@mncfn.ca)





MTE Consultants

520 Bingham Centre Drive, Kitchener, Ontario N2B 3X9

February 2, 2021

MTE File No.: C48301-100

DOCA Project: 2021-0011

Fawn Sault  
Consultant Coordinator  
Mississaugas of the Credit First Nation (MCFN)  
4065 Highway 6 North  
Hagersville, On N0A 1H0  
Email: [Fawn.Sault@mncfn.ca](mailto:Fawn.Sault@mncfn.ca)

Dear Fawn:

**RE: Municipal Class Environmental Assessment  
Upper Hidden Valley Pump Station and Forcemain  
MCFN Response to COK Municipalities Class EA**

We acknowledge receipt of your email and attachment for 2021-011 MCFN Response to COK Municipalities Class EA in relation to the captioned project.

We have taken note of the contents of this document, and wish to respond as follows with our response in *italics*:

- i. Outline of MCFN Rights and Territory**  
*MTE's response: Noted*
- ii. Duty to Consult and Accommodate**  
*MTE's Response: Noted*
- iii. DOCA Project Registration**  
*MTE's Response: Noted*
- iv. Referral to DOCA Units**  
*MTE's Response: Noted*
- v. Request for Missing Information**
  - a. Name of person or body undertaking the action or decision.  
***MTE's Response:*** *Archaeological Research Associates (ARA) Ltd., Victoria Cafik, [Victoria.cafik@araheritage.ca](mailto:Victoria.cafik@araheritage.ca), 519-212-5172*
  - b. Contact information for the person or body undertaking the action or decision.  
***MTE's Response:*** *Archaeological Research Associates (ARA) Ltd., Victoria Cafik, [Victoria.cafik@araheritage.ca](mailto:Victoria.cafik@araheritage.ca), 519-212-5172*

- c. List of documents pertaining to the proposed action/decision that are available for MCFN to review.  
**MTE's Response:** *There are no documents available at this time for MCFN to review*
- d. Description of what other information is expected to become available before the proposed action/decision is undertaken.  
**MTE's Response:** *The following studies will be conducted:*  
*Geotechnical Investigation*  
*Hydrological Investigation*  
*Topographic Survey*  
*Environmental Assessment*  
*Archeological Survey*
- e. Deadlines or filing dates pertaining to the action/decision.  
**MTE's Response:** *This has not been decided. MCFN and DOCA will be notified in advance before any studies are conducted.*
- f. The Crown or Municipal review/approval that is required for the project.  
**MTE's Response:** *A Municipal Class Environmental Assessment, Environmental Study Report will be filed with the Ministry of Environment, Conservation, and Parks.*
- g. How the proposed action or decision may affect and/or benefit MCFN, its rights and territory?  
**MTE's Response:** *We are still in preliminary stages of the Class EA and no proposed decisions have been made at this time.*

We trust the above adequately provides the information needed. Please feel free to contact the undersigned if you have any further questions or concerns.

Yours truly,

**MTE Consultants Inc.**



**Asma Naseem, P.Eng.**  
Project Engineer  
519-743-6500 ext. 1326  
[ANaseem@mte85.com](mailto:ANaseem@mte85.com)

AXN:zeg

Encl.

cc: Katie Wood, City of Kitchener  
Megan DeVries/Mark LaForme, MCFN  
Gemma Charlebois/Dave Wilhelm, MTE Consultants Inc.

M:\48301\100\00 Correspondence\Notice of Study Commencement\Comments Received from Notice of Commencement\Indigenous\MTE Response Letter to Fawn Sault MNCFN\_Re Response to COK Municipalities\_2020-02-02.docx



MTE Consultants

520 Bingham Centre Drive, Kitchener, Ontario N2B 3X9

May 4, 2022

MTE File No.: C48301-100

681 and 691 Hidden Valley Road  
Kitchener, ON  
Email:

Dear

**RE: Upper Hidden Valley Class EA  
Property at 681 and 691 Hidden Valley Road**

Thank you for your email of March 10, 2022 wherein you requested clarification on a few items pertaining to your property and the Upper Hidden Valley Class EA project. The City of Kitchener and MTE's response is noted in bold italics below your comment/question:

1. We understand that the City doesn't want to include the provision for the 'septic option' in the EA, but we continue to feel strongly that since the EA report is focused on the foremain location to service the most parcels for the least cost, that it should provide for an alternative for the remaining parcels out of the EA budget and include work with City Planning the Region & GRCA. We don't feel comfortable with the City suggesting that we just shift the servicing options for areas that won't be serviced 'at this time' to a future unknown date. The Regional Policy 5.B.6 makes us uncomfortable not having the current EA address all servicing options for all parcels. If this is an issue throughout Kitchener, we expect our elected officials and City staff to tackle this now, to provide some level of certainty to Kitchener residents and taxpayers. This study should include the un-zoned parcel to the north as it has potential for Estate Residential as well as our parcel and those larger than 2 acres in Hidden Valley Road.

***Response:***

***As a result of servicing policies in the City of Kitchener's Official Plan unique to the Hidden Valley Area, the Region of Waterloo has indicated to the City that they would generally support a septic system as a sanitary solution if:***

- ***The lands are not able to be serviced by the proposed pumping station through the Hidden Valley PS EA, and***
- ***The necessary supporting documents, including a scoped hydrogeological report, is submitted to the Region for review and approval.***

***The hydrogeological study will look at levels of nitrate produced and the negative impacts it may have on the ground water and wells in the area. If this is approved by the Region and the development is supported by the current City's Official Plan, the Region would approve a septic solution.***

***The City cannot add the “septic option” into the EA because the documents required are not yet completed or approved however, based on the above information it is a viable solution.***

2. As mentioned in the meeting, we have been waiting since 1970's for City services, the 1980s for the River Road Extension, and watched every remaining urban or rural parcel in Kitchener be entitled and developed. Over the years, the GRCA, the Region, Heritage, and Engineering continue to make more significant overlays onto our property, and make it difficult to process simple severances, even between family members. This has made us question how and why we should remain on the property that we have owned for 4 generations. Our great grand-uncle owned all of Hidden Valley in the 1950s', and we have the last remaining family parcel. We have always anticipated that in the future, we would build a few new homes on this land for our family and friends, or work with a local builder/developer to provide thoughtful development for a new estate neighborhood. This is becoming more and more challenging to pursue.

***Response:***

***We appreciate your family history on the property. As noted in response #1, private servicing (septic solution) remains an option for you. Recognizing there are other land owners in the Hidden Valley area that will likely remain without a municipal sanitary solution, the City has taken steps to advance those servicing discussions with the Region of Waterloo.***

3. The City identified in a previous letter that on the Cultural Overlay Plan, the reason our house on 681 was identified was that it was over 40 years old and possibly connected to the 691 parcel. We would like to have this overlay removed as the house is not connected to the other parcel historically. If the City chooses to keep this house on the overlay, then they must also place this overlay on all the other homes on Hidden Valley Road that are over 40 years old, so those homeowners are made aware of this overlay and any restrictions this might have on their parcels in the future.

***Response:***

***The Cultural Heritage report will be updated to explain that due to additional information received during the study, the overlay does not apply. The overlay will be removed in the final report.***

4. On the one slide in the EA presentation 'Stage 1 Key Archeological Findings', the label of 'Historic Road' covers our parcel and we can't see how our parcel is mapped. What is a 'Combination survey vs Test Pit'? The EA also lists our zone as a "Historic Road" and 'Heritage Corridor' but this is not a formal designation and should be removed or listed as 'possible heritage' as the map gives the public and government agencies the impression that this is already heritage designation and somehow exempt from future development or servicing.

***Response:***

***A test pit survey is an archeological survey that involves a below-grade investigation of land by digging pits to assess for the presence of objects of archeological significance. A pedestrian survey is conducted at grade and does not alter the land. A combination survey is a combination of pedestrian and test pit***

**surveys. These investigations would be conducted in the location of the preferred alternative, as identified in the PIC.**

**The EA identified Hidden Valley Road as a Potential Heritage Corridor as part of the Cultural Heritage investigation; as required for all Class EAs. This identification does not preclude construction in the area. It identifies it as a consideration for any planned construction activities.**

5. The rest of the Hidden Valley Road has already been developed to current City standards even though it was a 'historic road'. It is frustrating that the rest of the road has been updated to current Engineering standards but the City has determined that our section cannot - there are currently issues with water run-off, vehicle speeds, sight lines, and vagrancy on our 'historic section' that should be addressed before the City decides not to provide for upgrades to our section of roadway, especially given that we have an easement on our parcel for road widening and services. If the City does not plan to update our section of roadway due to 'heritage considerations', then the City Engineering department needs to provide for an allowance for parcels with potential for Estate Residential as defined in the Secondary Plan, to have smaller street sections, the same 'heritage' road widths, lack of street lights and street trees that of the 'historic section' has. This could provide for a more 'heritage' feel for any new small developments like the one we are proposing to developers on our parcel. This should be part of the Secondary Plan development standards.

**Response:**

**When Hidden Valley Road is reconstructed it will be designed using the City's Complete Streets design standards. Timing for reconstruction is determined by The City's Engineering and Asset Management teams. While Hidden Valley is not scheduled for reconstruction in the current 5-year capital plan, this plan is reviewed and updated on an annual basis.**

**Kitchener Utilities has confirmed that there are no current plans to bring water to this section of Hidden Valley. If road upgrades or service extensions are required by a developer, it would be the developer's responsibility to go through the Local Improvement process or through a subdivision process. This would likely include several studies and would be paid for by all the parties participating in the Local Improvement.**

**The City is currently working on a watershed study to help with the issues with water run-off as each development moves forward. This should be completed by as part of the Secondary Plan work.**

**The City of Kitchener has three streams of traffic calming – Formal Traffic Calming, Seasonal Traffic Calming, and Resident-led Traffic Calming. In addition, because speeding and street safety are some of the top concerns we hear about from residents throughout the City, we are undertaking a number of other initiatives including lowering the speed limits in residential neighborhoods to 40 km/h and implementing a Vision Zero strategy to improve road safety throughout the City. Residents are encouraged to email Transportation Planning at**

**[TransportationPlanning@kitchener.ca](mailto:TransportationPlanning@kitchener.ca) to learn more and discuss specific locations and issues.**

***You should contact the police for any vagrancy issues.***

***An easement indicates that you still own the land and you have allowed another party to access it via a legal easement. This is not the case. Through a past severance the strip along the frontage of the lot was taken into City ownership. This is done on all new development property where a widening is indicated in the Official Plan. If the street width is deficient at the time of a planned development, the City would extend the widening until the road is at its designated width. This road widening was initiated by Transportation Planning.***

***As we understand your question, you are wondering about having reduced widths for internal private roads for a future development on your property. The specifics of development standards on private property such as internal road width would be determined through the standard development review process with input from the Fire Department & Transportation Division (among others).***

5. If the City is not planning on widening our section of roadway in the Easement, can the City return the easement to our property, as Brandon Sloan suggested was possible in 2019?

***Response:***

***Road widenings are required to ensure there is enough space for all required infrastructure both below ground and above ground. The right-of-way space is used to accommodate hydro poles, street lights, telecommunications, stormwater management, utilities etc. Road widenings at this location are not expected to be reversed.***

6. We are encouraged that Katie is reaching out to the Region and Kitchener Utilities for information on alternative serving for sewer and water and water and hope that Richard will also work with the agencies to include options for servicing options in the Secondary Plan for Hidden Valley Road. The conversation should also extend to the GRCA and any other agencies that might have issue with a private septic system on our parcel.

***Response:***

***We can confirm that discussions will continue to occur for sanitary servicing solutions for lots within Hidden Valley which are not municipally serviced. The Secondary Plan will address feasibility of development on private services.***

***The GRCA would need to be involved in the development of the lands through the site plan or subdivision process. They would need to confirm the location of the septic systems and make sure that they are above the flood line.***

7. We are asking the City and Engineering continue to study Options 3 and 3a, as these appear to have the potential to provide services to the most parcels for present and potential future development. The cost of Option 3 & 3a, based on our conversations

with our neighbors, also seem to be similar to those of Option 2, the currently proposed 'preferred' option.

**Response:**

***The City has not received any new documentation that would warrant a re-evaluation.***

The City would advise that any additional specific development concerns be taken up with the Planning Department regarding any proposals you make in the future.

We trust that the above responses were satisfactory. Please feel free to reach out to the undersigned if you require further clarifications.

Yours truly,

**MTE Consultants Inc.**



per / **Gemma Charlebois, M.A.Sc., P.Eng.**  
Technical Manager, Water/Wastewater  
519-743-6500 ext. 1227  
[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)

GSC:zeg  
cc: Katie Wood / Richard Kelly-Ruetz, City of Kitchener  
Dave Wilhelm, MTE Consultants Inc.  
Dave Aston / Emily Elliott – MHBC

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48301-100 Upper Hidden Valley Class EA  
 Communication Log  
 January 2021 to March 2022



Date	Sent By	Stakeholder Type	Sent To	Medium of Communication	Synopsis of Correspondence	Action Taken	Response By	Date of Response	Response Details
Jan 6 2021	Zen			Email	Notice of Commencement sent to all stakeholders listed in Stakeholder Registry	N/A	N/A	N/A	
Jan 13 2021		Resident	Katie Wood	Phone Call	wondering how the EA will affect them and if they will be made to connect to a sanitary sewer if one is provided	Yes	Asma	Jan 15 2021	Spoke with Brian and explained that we are still in the early stages and will update him once we have more information. Brian is interested to know how the line effects him and his neighbor's and if they can tap into the sewer line
Jan 13 2021		Resident	Katie Wood	Phone Call	wondering how the EA will affect them and if they will be made to connect to a sanitary sewer if one is provided	Yes	Asma	Jan 15 2021	Spoke with xxxx. He mentioned he spoke with Katie and will wait for information once its available
Jan. 18, 2021	Hanna Domagala	Pearl Valley Development	Dave	Email	the largest Owner within the study area of this EA, we would like to set up a meeting to discuss this study, its assumptions and directions, including developable areas within our lands, etc. We certainly are interested as a key stakeholder and look forward to cooperation on the completion of this EA.	Yes	Asma	Jan. 18, 2021	We are open to a meeting to discuss this study, however, we are at preliminary stages and unfortunately do not have much information to offer you at this point. We will be in touch with you in the near future and will set up a meeting to discuss this EA.
Jan. 19. 2021	Fawn Sault	Mississauga's of the Credit First Nation	Katie	Email	Sent Attachments in response to the Municipal Class EA; asking for permission to have a Field Liaison Representative on location while field work is occurring. Also they are looking for some more information regarding the project. Requested response within 14 days.	Yes			
Jan. 19, 2021	Meagan Devries	Mississauga's of the Credit First Nation	Katie	Email	Information regarding agreements, and response letters for asking for information, with timelines				
Jan. 26, 2021		Resident	Dave	Email	Excited about the study, want house connected to WW system, want to be added to mailing list	Yes	Dave	Jan. 26, 2021	Email response given, asked resident for address so it can be checked, and name added to list
Jan. 26, 2021		Resident	Dave	Phone Call	interested in timing, location of station, appearance of station	Yes	Dave	Jan. 26, 2021	Dave returned her call. She emailed thanking him and asking to be included on the mailing listName added to mailing list
Jan. 27, 2021		Resident	Dave	Email	thank you so much for returning my call and answering my questions. I would greatly appreciate it if you could please add me to the email list with updates on the study	Yes	Dave	Feb. 8, 2021	Thanks for your email and call ! We appreciate input into this study and we have added you to the mailing list. We will provide study notices to you in the future. Thanks again for your interest in this project
Jan. 27, 2021		Resident	Dave	Email	request to be added to mailing list	yes	Dave	Jan. 27, 2021	Name added to mailing list
Jan. 27, 2021		Resident	Dave	Phone Call	Neighbour informed him about the EA, want to be kept in loop; interested in timing. Would like to see at least some of the development proceed.	Yes	Dave	Jan. 27, 2021	Dave returned call and discussed the Class EA Study in general terms and requested to send Dave an email expressing their interest and providing contact information including their house address. Name added to mailing list
Jan. 27, 2021		Resident	Dave	Email	Neighbour informed him about the EA, want information	Yes	Dave	Jan. 27, 2021	Dave emailed asking for mailing address, Name added to mailing list
Jan. 28, 2021	Real (no surname given)	Resident	Dave	Phone Call	Phone Call - interested to know if we were considering servicing existing lots on septic systems. Expressed concern about expense.	Yes	Dave	Jan. 28, 2021	Dave returned call to resident and discussed the Class EA Study in general terms and requested to send Dave an email expressing their interest and providing contact information including their house address; no address received as yet.

Date	Sent By	Stakeholder Type	Sent To	Medium of Communication	Synopsis of Correspondence	Action Taken	Response By	Date of Response	Response Details
Jan. 28, 2021		Resident	Dave	Phone Call	development property owner 519-729-3305 – interested in timing, keen to develop lands adjacent to substation and hydro lines. Portion of land is being expropriated for the Hwy 8 on ramp	Yes	Dave	Jan. 28, 2021	Dave returned call; discussed the Class EA Study in general terms and I requested them to send me an email expressing their interest and providing contact information including their house address. Added to mailing list
Jan. 28, 2021		Resident	Dave	Email	confirming address: 74 Canters Close; and interest in the study	Yes	Dave	Jan. 28, 2021	Date emailed outlining steps in the study, ; Jan. 29, 2021 - Mike responded confirming that he now understand the process, and that he is on Septic like others in the neighborhood; and its working well since 2006 when he moved into his house.
Feb. 4, 2021		Resident	Dave	Email	Owners of 681 & 691 Hidden Valley: interested speaking with you to discuss the study you have proposed, its scope and anticipated completion date Proposal was submitted in email.	Yes	Dave	Feb. 4, 2021	Thanks for your input and participation in this Class EA Study. We will review the information that you provided and we will touch base with the City Planning Division. We'll assess if its beneficial to have a meeting as you mentioned.
Feb. 17, 2021		Resident	Dave	Email	Would you please add me to the contact list for this project? I am not a resident but Cook Lands Group has some business interests in the area and I would like to monitor the study.	Yes	Dave	Feb. 17, 2021	Thanks for your interest in this Class EA Study, Larry. We will add you to the mailing list. If you are a resident in the study area, do you mind letting us know your address? Thanks Dave
Feb. 23, 2021	Victoria Cafik	ARA Heritage	MCFN	Email	ARA Project Invitation to Participate in the study	Yes			
Feb. 23, 2021	Victoria Cafic, ARA	ARA Heritage	First Nations	Email	ARA Project Invitation to Participate in the study				
Feb. 23, 2021	Victoria Calif, ARA	ARA Heritage	tworowarcheology	Email	ARA Project Invitation to Participate in the study				
Feb. 23, 2021		Resident	Katie	Email	I am a resident at 668 Hidden Valley Road for over 35 years. In that time many promises by the city have been made and broken. I would like your assurance that the old part of Hidden Valley of which i am part has been designated a Heritage road and that we will not be forced to go to city water and sewage when the current project has been completed.	Yes	Asma	March 3, 2021	Municipal water servicing is not part of the scope of this Class EA Study. The extent of municipal sanitary servicing has not been determined but it is being assessed as part of this Study. Your concern about having to connect to municipal servicing is noted and will be considered as the Study proceeds. As part of this Study, a Cultural Heritage Assessment Report (CHAR) is currently being undertaken. The purpose of the CHAR is to identify and evaluate the cultural heritage resources within and adjacent to the Study Area that may be impacted. The CHAR is not completed at this time, however, our findings will take into consideration the identified Hidden Valley Road Cultural Heritage Landscape (L-RD-4) as described in Cultural Heritage Landscape Data Sheets (City of Kitchener, 2014) and The Hidden Valley Land Use Master Plan (approved by Council in 2019) which identifies a portion of the road as a Heritage Corridor. Although we are still in the preliminary stages of our ongoing Study, we assure you that you have been added on to our mailing list and will receive notifications as the project proceeds. In the meantime, please contact us if you have any further questions or concerns regarding this Class EA Study. Once again, thank you for your comments.
Feb. 24, 2021	Megan DeVries	Mississaugas of the Credit First Nation	Victoria Calif	Email	Responding to Victoria's invitation. Thank you for reaching out. MCFN does not require an FLR present during the Stage 1 site visit, but we ask to review the draft report when available.				

Date	Sent By	Stakeholder Type	Sent To	Medium of Communication	Synopsis of Correspondence	Action Taken	Response By	Date of Response	Response Details
May 18, 2021		Resident	Dave	Email	Do you have any more information regarding the Hidden Valley sanitary pumping station? The last time we chatted, I believe you were hoping to get approval by September 2021 and completion for the end of 2022 or early 2023. Is that still the approximate timeline. I'm curious to hear if it will cover any existing homes in the older section of Hidden Valley currently on private septic.	Yes	Dave	18-May-21	We are making progress on the study but have not assessed alternatives yet. No determination has been made with respect to servicing existing homes. The schedule you outline below is still correct.
Aug. 30, 2021		Resident	Dave	Email	Dave, just wanted to know the status of the project	Yes	Dave	Sept. 2, 2021	The environmental, cultural heritage and archeological field work for the Class EA Study has been completed. We are currently preparing to hold a Public Information Center (PIC) this Fall. We expect to finalize the date for the PIC in the next 2 to 3 weeks and will let you know the timing of the PIC at that time. The potential locations for the pumping station will be indicated as part of the PIC.....Regards, Dave
Sept. 7, 2021	Jason Cabral	MTE	Dave	Email	Requesting information on status of EA to give update to his client	Yes	Dave	Sept. 2, 2021	The environmental, cultural heritage and archeological field work for the Class EA Study has been completed. We are currently preparing to hold a Public Information Center (PIC) this Fall. We expect to finalize the date for the PIC in the next 2 to 3 weeks and will let you know the timing of the PIC at that time. The potential locations for the pumping station will be indicated as part of the PIC.....Regards, Dave
Sept. 7, 2021	Jason Cabral	MTE	Dave	Email	Thanks for the information, but we have two questions that hopefully you can help with. Was the east area of the Pearl Valley Development included in your study area and if so, will that area be included in one of your design options?	Yes	Dave	Sept. 8, 2021	Please refer to the attached Notice of Study Commencement that indicates the Study Area. This Class EA is building upon the planning work that has already been completed by the City as indicated on the attached Land Use Master Plan.....Regards, Dave
Oct. 12, 2021	Zenova Gentles	MTE	Stakeholders and copied to Katie, Dave and Gemma; See project email for list of stakeholders	Email	Please find attached a digital copy of Notice of Public Information Centre for the Upper Hidden Valley Sanitary Pumping Station and Forcemain Class EA. This study is being carried out in accordance with the requirements of the Environmental Assessment Act, as a Schedule B Municipal Class Environmental Assessment. All notices related to this project can be found on the City of Kitchener's website at the following link: Infrastructure projects - City of Kitchener. The purpose of the PIC is to present, discuss, and receive your input on the alternative sanitary servicing solutions developed. The preferred servicing solution will include identifying a sanitary pumping station location and forcemain alignment. We look forward to the opportunity to meet with you at the PIC. Please feel free to call or email any of the two contacts listed on the Notice of PIC should you require additional information				
Oct. 12, 2021	Mark Badali	MECP	Joan Del Villar Cuicas	Email	This Notice of PIC for a Class EA project in Kitchener was sent to my SWR email address. They may need to update their contact list – please see attached & email below.	Yes	Joan Del Villar Cuicas	Oct. 14, 2021	As of May 1, 2018, the MECP has a new mandatory notification procedure for providing Class EA notices to the MECP. Per our notification procedures: Notices of Commencement, Completion, Addendum and Statements of Completion when applicable are required to be sent to the appropriate MECP regional email address, and other notices such as notices of public information centres can either be sent to the regional email address or directly to the Regional Environmental Assessment Coordinator who is assigned to your project. Please review the attached document for future notices. Instructions on how to determine the appropriate email address are included in the document.  Zen responded and acknowledge this email from MECP.

Date	Sent By	Stakeholder Type	Sent To	Medium of Communication	Synopsis of Correspondence	Action Taken	Response By	Date of Response	Response Details
Oct. 13, 2021	Dominic Ste-Marie	Tiawenhk chia' öner	Zenova (in response to email sent with PIC Information)	Email	Thank you for your email. Could you please let us know if any archaeological studies or fieldwork will be necessary as part of this project?	yes	Victoria Cafik, ARA	Oct. 13, 2021	A Stage 1 archaeological assessment for this project has been completed and submitted to the MHSTCI. Would you like us to forward you a copy of the report that is under review at the Ministry? Alternatively, we can provide you a final copy of the report once it has been accepted into the public record of archaeological reports. Please let us know your preference and I am happy to accommodate.
Oct. 13, 2021	Dominic Ste-Marie	Tiawenhk chia' önenh	Victoria Calik, ARA	Email	Thank you for your email. The Huron-Wendat Nation wishes to be consulted for this project. We are also interested in participating in all archaeological fieldwork for this project, as well as receiving copies of the draft reports for review and comments. Is there any funding available to insure our participation? My colleague Marie-Sophie (cc'd) will be able to provide a quote and coordinate our participation to this project.				
Oct. 13, 2021	Marie-Sophie	Nation Huronne-Wendat	Victoria Calik, ARA	Email	I hope this email finds you well. Please, send the report directly to me once it is ready. I have attached a quote for our participation on reviewing the report. As I understand, a stage 2 archaeological assessment is not schedule? If this changes, please let me know and I will provide a quote for our participation on the field. - Quotation for \$550+HST included in Email	Yes	Victoria Cafik, ARA	Oct. 27, 2021	It seems there has been a misunderstanding somewhere along the line. At the outset of the project an invitation to participate was sent to the Huron Wendat for this project in error. The project location is in Kitchener, Ontario well outside of the Huron Wendat mapping which indicates the communities' area of interest. When I brought this up with Maxime at the time it was indicated that the Huron Wendat were still interested in the project and it was my understanding that we would send you the report for your files and interest however no formal engagement would take place given that the location is outside of your territory.  I have attached the report, which has already been sent to the MHSTCI and is under Ministry review. Please forgive me if I have misunderstood something here.
Oct. 20, 2021	Jason Cabral	MTE	Katie	Email	Is it possible to get some information from the City with regards to what will be presented at the PIC? Our client at Pearl Valley would like to review prior to the meeting.	Yes	Dave	Oct. 20, 201	The upcoming PIC for the Upper Hidden Valley Sanitary Pumping Station and Forcemain, Class Environmental Assessment will be held on November 4th. The PIC will be held live online in a Zoom meeting format. There will be information presented and there will be an opportunity for questions and comments. Subsequent to the meeting, there will be opportunity to submit comments in writing to the Study Team. During the PIC, the Study Team will: <ul style="list-style-type: none"> <li>• Provide a Project Summary;</li> <li>• Describe the Class EA process;</li> <li>• Identify the study progress to-date;</li> <li>• Outline the next steps and study schedule;</li> <li>• Present various Options being considered for pump station and forcemain locations;</li> <li>• Give example of other City of Kitchener pumping stations;</li> <li>• Summarize key Archeological findings within the Study Area;</li> <li>• Summarize key Cultural Heritage findings within the Study Area;</li> <li>• Summarize key Environmental features within the Study Area; and</li> <li>• Request Input from Stakeholders.</li> </ul> Anyone who is unable to attend the meeting can request an email of the PIC contents after November 4th. Alternatively, the PIC information will be posted on the City website for two weeks following the PIC.
Oct. 21, 2021		Resident	Gemma	Email	As my wife and I are 37 year residents at 668 Hidden Valley, I would like your assurance that after the completion of the subsequent work resulting in increased development in the area that we and our long time neighbors will not be forced to connect to the new water and waste lines.	Yes	Gemma	Oct. 15, 2021	Our work focuses on the selection of a pumping station location, and sanitary sewer and forcemain routes to facilitate the development identified in the City's Land Use Master Plan. We are holding a Public Information Centre (virtually) on November 4, 2021. Please advise if you have not yet received registration information. The proposed pumping station locations and routes are not in the vicinity of your residence.

Date	Sent By	Stakeholder Type	Sent To	Medium of Communication	Synopsis of Correspondence	Action Taken	Response By	Date of Response	Response Details
Nov. 4, 2021		Resident	Gemma	Email	unfortunately I cannot make the online meeting but would appreciate being apprised of any developments. thank you.				Noted
Nov. 8, 2021	Hanna Domagala	Pearl Valley Development	Katie Wood cc Dave W	Email	Pearl Valley Development Corp. will be submitting comments to the options presented at last week's presentation. Please advise when and where (link) the presentation will be posted online. Due to the size and complexity of our property, and the short time given for comments, we are only able to provide our comments after November 18 <sup>th</sup> .	Yes	Katie Wood	Nov. 8, 2021	I have attached the slides and the presentation to this email.
Nov. 6, 2021		Resident	Engineering at Kitchener.ca	Email	Hello, please send me the link to the video presentation from Thursday Nov. 4, 2021 regarding the Forcemain and Sanitary Sewer servicing for Hidden Valley Road.	Yes	Katie Wood	Nov. 8, 2021	We are still trying to get the full video presentation on the website however I can send you the slides for now.
					We may have a few questions. Should I direct them to you or via the City link for Hidden Valley? You also mentioned that we have 30 days to comment- is that 30 business days or calendar dates?	Yes	Katie Wood	Nov. 8, 2021	I have attached the video to this email for your reference. You can direct the questions to myself or Dave Wilhelm from MTE. We would like to have the comments to us by Nov. 18th which is 2 weeks after the presentation.
Nov. 8, 2021		Hydro One	Katie Wood	Email	Can you please send us PIC materials for Upper Hidden Valley Sanitary Pumping Station and Forcemain project since Hydro One has existing high voltage transmission facilities within your study area.	Yes	Katie Wood	Nov. 8, 2021	I have attached the video presentation as well as the pdf slides. I hope this is helpful.
Nov. 11, 2021	Erin Lee	MECP	Zenova Gentles	Email	This project is located in MECP's West Central Region. Please direct future notices to eanotification.wcregion@ontario.ca and Joan.DelVillarCuicas@ontario.ca (the West Central planner).	No.	Zen	Nov. 11, 2021	Information Noted and Stakeholders List updated,
Nov. 18, 2021		Resident	Katie/Dave	Email	We appreciate the plans and presentation you prepared for public review and comment. Attached please find our preliminary thoughts on the Forcemain/Sanitary Sewer servicing options for Hidden Valley Road. <i>(letter in correspondence folder)</i> We are still reviewing the plans with our Planner at MHBC and hope that we may still submit additional thoughts as we originally understood that we had 30 days to respond, and are still reviewing several items.	Yes	Dave		
Dec. 13, 2021	Teresa Tremblay	Min of Heritage Sport and culture	Monica at ARA Heritage	Email	The ministry has reviewed the Original report for PIF P1021-0004-2021 submitted by you as a condition of your licence; found report compliant with Ministry requirements for archaeological fieldwork and reporting. Report entered into the Ontario Public Register of Archaeological Reports.				
Jan 24, 2022	Katie Wood	project Manager	Dave/Gemma	Email	Minutes of Environmental Committee Meeting ..\01 Meetings\2021-01-20 Environmental Committee Minutes.pdf				<a href="#">..\01 Meetings\2021-01-20 Environmental Committee Minutes.pdf</a>
Jan. 27, 2022	Zenova Gentles		all Stakeholders and others	Email and Mail	Letter and Notice of PIC#2 to Residents Notice of PIC#2 to Stakeholders				
Jan. 31, 2022	Chris Foster-Pengelly		Katie	Email	GRCA Comments on Alternatives				PDF copy of letter saved in Info from Others Folder Jan 2022

Date	Sent By	Stakeholder Type	Sent To	Medium of Communication	Synopsis of Correspondence	Action Taken	Response By	Date of Response	Response Details
Feb. 21, 2022		Resident	Dave, Katie, Gemma		<p>Thank you for the updated information you provided at the Zoom Meeting for the Hidden Valley Road EA Presentation #2. We recognize that a lot of work has gone into the EA project and that the public presentation is a summary of your efforts. There are many opportunities and constraints the City has to juggle, but we are truly disappointed that the EA still doesn't address servicing along the Eastside of the Hidden Valley Road.</p> <p>I have attached a letter for your review and will also be sending a second letter with our comments and concerns to Richard Kelly-Ruetz and John Gazzola.</p> <p>Please let us know when you have an opening for a Zoom Meeting or a Phone Call. It would be great if the call could include Richard, but that maybe challenging given the City's schedule.</p>				<a href="#">Hidden Valley Rd EA #2 Engineering Response Letter.pdf</a>
March 8, 2022	Sun Hongxia	Hydro One	Katie	Email	See letter link in column J.				<a href="#">Response from Hydro One to PIC #2 Rec. March 8, 2022.pdf</a>
March 10, 2022		Resident	Katie	Email	Response to online meeting with team and concerns and questions that still needed clarification. See link response letter to the list of concerns presented.	Yes	Dave	4-May-22	

January 19,2021

**VIA EMAIL**

Katie Wood, C.E.T.  
Project Manager, Development Engineering  
City of Kitchener

Dear Katie Wood,

**RE: MCFN Archaeological Review for**

Upper Hidden Valley Sanitary Pump Station and Forcemain

Confirmation of Receipt

I am writing in follow up to the letter of response dated January 18,2021 by Fawn Sault, Consultation Coordinator, from the Department of Consultation and Accommodation (“DOCA”) on behalf of the Mississaugas of the Credit First Nation (“MCFN”) to acknowledge that we have received your above named communication, dated January 7,2021.

Outline of MCFN Rights and Territory

In 1792, the Crown and MCFN entered into Between the Lakes, No. 3 (1792) regarding the lands in which your project is situated.

MCFN has formed the Department of Consultation and Accommodation (“DOCA”) to represent its interests in consultation and accommodation matters. In this regard, it is DOCA’s mandate to ensure that we are directly involved in all planning and development that impacts the integrity of our Territory. DOCA will assess and help alleviate impacts on our rights, land claims, and ways of life by building relationships with governments and private sector proponents. We share a mutual interest in ensuring that projects in the Territory are planned, reviewed, and developed in a manner which ensures healthy communities, ecological protection, and sustainable development for present and future generations in the Territory.

MCFN has a stewardship responsibility over its Territory and asserts that our Aboriginal and treaty rights fundamentally entitle us to preserve our culture and heritage, including

**DEPARTMENT OF CONSULTATION AND ACCOMMODATION**

Mississaugas of the Credit First Nation  
4065 Hwy #6, Hagersville, Ontario N0A 1H0

Phone: (905) 768-4260



archaeological materials and human burials. Our Territory is the source of our identity as a First Nation and the basis for many cultural activities and spiritual ceremonies. It is home to sacred sites, burial grounds, traditional teachings and meeting places, and sites of profound archaeological and historical significance. We assert that our Aboriginal and treaty rights fundamentally entitle us to preserve our cultural and heritage.

Too much of our cultural objects and the remains of our ancestors have been lost already through development of the most intensely urbanized lands in Canada and we have a strong interest in ensuring that no more of it becomes bulldozed and desecrated.

#### MCFN Standards and Guidelines for Archaeology

In April 2018, MCFN Chief and Council adopted the *MCFN Standards and Guidelines for Archaeology*, a document aimed to provide guidance to consultant archaeologists, proponents, governments, etc. who are conducting archaeological assessment activities within MCFN's Territory. It sets out, in MCFN's own words, what engagement with our Nation should entail for archaeology as well as technical expectations for fieldwork, in relation to the provincial regulations which were created without our input and feedback. It is important to note that MCFN holds all archaeological resources present within its Territory as of interest to the Nation as part of their cultural patrimony. Resources, regardless of size, frequency, condition, etc., should not be interpreted by non-MCFN representatives in such a way as to remove the requirement for engagement with our Nation.

We are attaching a copy for your reference. We expect compliance with these *Standards and Guidelines* as any fieldwork you will be conducting will have the potential of disturbing MCFN's cultural artifacts or its ancestors' remains.

#### MCFN Expectations Regarding Ancestors' Remains

MCFN has obligations under Anishinaabe law to protect burials within its Territory and MCFN maintains its right to do so. Our ancestors buried their loved ones in our Territory with the understanding that they would not be disturbed.

We would also like to draw your attention to our expectation that at any time that ancestral remains are encountered during fieldwork, we expect all activities on site to stop and that MCFN be contacted immediately to determine a proper course of action.

#### Technical Review

In the exercise of its stewardship responsibility, DOCA seeks to work together with project proponents and their archaeological consultants to ensure that archaeological work is done properly and respectfully. DOCA has retained technical advisers with expertise in the field of archaeology. These experts will review the technical aspects and cultural appropriateness of the archaeological assessments and strategies associated with your project. Upon completion of these reviews, MCFN will identify, if



#### DEPARTMENT OF CONSULTATION AND ACCOMMODATION

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necessary, mitigation measures to address any project impacts upon MCFN rights. For cultural materials and human remains, DOCA may advise that this includes ceremonies required by Anishinaabe law, as well as request adjustments to the proposed fieldwork strategy.

The proponent is expected to pay the costs for MCFN to engage in a technical review of the project. DOCA anticipates at this time that all archaeological review will be undertaken by in-house technical experts, but will advise the proponent if an outside peer-review is required. Please find attached the agreement that covers MCFN's in-house technical review of the archaeological assessments and strategies associated with your project. Please fill in the additional required information, highlighted in yellow, and return to us a signed copy.

Please note that capacity at DOCA is limited. We maintain the right to review all material that comes to our office as part of our consultation process. If you have specific filing deadlines, please advise us as soon as possible. However, it is MCFN's assertion that part of the process of meaningful engagement is allowing our Nation a reasonable amount of time to review, reflect upon, and respond to reports and recommendations. On average, this process can be accomplished in 4-6 weeks. It is our position that no archaeological assessment – but especially Stage 4 mitigation – should begin until DOCA has completed our review and is in agreement that with the proposed strategy for fieldwork.

#### Request for Missing Information

In order to complete our project record, we ask that you provide the following information:

1. Is an archaeological assessment required for this project? If no, why not?
2. Have any archaeological assessments already been completed for this project and/or its study area? If yes, please provide all documentation including reports, supplementary documentation, etc.
3. Has the MHSTCI issued a letter of entry into register for some or all of the study area? If yes, please provide all documentation, including letter, communications to and from MHSTCI, etc.
4. Is there any archaeological activity (e.g. assessment, excavation, monitoring) that has not yet been completed for the project?
5. If the answer to #4 is yes, please provide the following:
  - a. A description of the outstanding archaeological activity/activities.
  - b. Anticipated date of the activity/activities.
  - c. The appropriate contact person overseeing the archaeological activity/activities.



### Closing

The review of project-related archaeological assessments is only one part of the consultation process that may be required for your development. Please contact DOCA's Consultation Coordinator, Fawn Sault, if you have any questions about the process.

We ask that you respond with the above requested information and executed agreement within fourteen days following receipt of this letter. We thank you in advance for your attention to our requirements and we look forward to working with you further to shape the planning for development in our Territory.

Sincerely,



Megan DeVries  
Archaeological Operations Supervisor  
[megan.devries@mncfn.ca](mailto:megan.devries@mncfn.ca)

Attachment(s)	MCFN <i>Standards and Guidelines for Archaeology</i> [2018] DOCA Archaeological Review Agreement [2020]
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February 23, 2021

Six Nations of the Grand River  
2498 Chiefswood Road, P.O Box 5000  
Ohsweken, ON N0A 1M0  
Tel: (519) 753-0665  
Fax: (519) 743-3449

**RE: Request for Participation in the Stage 1 Archaeological Assessment and Cultural Heritage Assessment Report for the Upper Hidden Valley Sewer and Forcemain Project in Kitchener, Ontario.**

Dear Ms. Hill-Montour and Ms. Vanstone,

Archaeological Research Associates Ltd. (ARA) has been contracted by MTE Consultants Inc. (MTE) to undertake the Stage 1 archaeological assessment and the Cultural Heritage Assessment Report (CHAR) required for the preliminary design for the sanitary servicing needs in the Upper Hidden Valley community (see Map 1). The project lands are approximately 183 ha (452 ac) in size and are located on part of Lots 51 and 53, German Company Tract & Bechtels Tract in the Geographic Township of Waterloo in the Former Waterloo County. MTE has asked us to take this time to invite your community to participate in the Stage 1 archaeological assessment and the CHAR.

### **1.0 Archaeological Assessments**

The Stage 1 assessment will consist of comprehensive background research into the study area. This is accomplished through an examination of the archaeology, history, geography, and current land conditions in the vicinity of the project lands. This stage also generates an inventory of known archaeological sites within 1 km and previous archaeological fieldwork results within 50 m of the study area, which are used to assist in predicting zones of archaeological potential. Sources utilized during a background study include archival sources (e.g., historical publications and records), current academic and archaeological publications (e.g., archaeological studies, reports and management plans), modern topographic maps, recent satellite imagery, historical maps/atlasses, and the MHSTCI's Ontario Archaeological Sites Database.

A property inspection (site visit) will be conducted by an MHSTCI-licensed Field Director to gain first-hand knowledge of geography, topography and current land conditions. This inspection will identify areas of archaeological potential for Pre-Contact and Euro-Canadian sites and conclusively map areas of no archaeological potential (i.e., lands disturbed by deep land alterations, steeply sloped areas, permanently wet areas, etc.) within the study area.

The results of ARA's background research and property inspection as well as the analysis and evaluation of the study area's archaeological potential will form appropriate recommendations (i.e., no further work in areas of no archaeological potential and Stage 2 Archaeological Assessment for all areas of archaeological potential).

As part of this project we would like to incorporate your input. Participation could include providing ARA with community specific Traditional and Ecological Knowledge, participating in Stage 1 site visit and/or reviewing the draft report and providing comments. Background research or oral knowledge could include providing (at your discretion) information regarding sacred or spiritual sites, undocumented archaeological sites, sites of value to the community, historical background information or any other traditional and ecological knowledge relevant to the study area. If provided, this information will be included in the Stage 1 report and considered when evaluating archaeological potential.

## **2.0 Heritage Assessment**

The most recent *Provincial Policy statement (PPS) 2020* includes the definitions of Built Heritage Resources and Cultural Heritage Landscapes (CHLs) that were revised in *PPS 2014* to include reference to value by Indigenous communities and it is to be implemented manner that is consistent with the recognition and affirmation of existing Aboriginal and treaty rights. Long before these inclusions, the Historic Sites and Monuments Board of Canada (HSMB) drafted *An Approach to Aboriginal Cultural Heritage Landscapes* (1999). This document defines an Aboriginal Cultural Heritage Landscape as "a place valued by an Aboriginal group (or groups) because of their long and complex relationship with that land. It expresses their unity with the natural and spiritual environment. It embodies their traditional knowledge of spirits, places, land uses, and ecology".

Given the documented ties of the study area to local Indigenous communities, ARA's proposed workplan includes exploring the incorporation of Indigenous Traditional or Ecological Knowledge (TEK) into the heritage report. ARA has composed several questions for review and would very much appreciate your feedback.

1. Has the location of the Upper Hidden Valley Sewer and Forcemain Project area been of interest in the past? For ecological reasons? Or for its use historically?
2. Are you aware of any traditional uses of the Upper Hidden Valley Sewer and Forcemain Project area?
3. Does your community have an oral history or stories of the use of these lands?
4. What do you see as valuable or important to your community within this area?
5. Do you use these lands for anything today?
6. Do you know of any locales/locations in the area that have cultural or spiritual significance? If so, are you willing to share some information about them with us?
7. Is there any other information about the area that you would like to share with us that has not been covered in the previous questions?

We are interested in talking to a community member regarding these questions to gather information about the area. This could be done via zoom meetings (due to Covid-19 we are not

currently conducting any in-person meetings), phone interviews, written responses to the questions sent via email or in another manner that meets the needs of the contributor.

In order to incorporate Traditional Knowledge into the report, we would appreciate your feedback no later than **April 1, 2021**. Please contact **Victoria Cafik** at [victoria.cafik@araheritage.ca](mailto:victoria.cafik@araheritage.ca) or at **519-212-5172** if you would like to provide a monitor to be present during the Stage 1 archaeological assessment. In order to begin the deployment process, we would like to confirm your interest in participating by **March 15th, 2021**.

We welcome your community's contribution to the project and are always happy to address any concerns that may arise.

Best,

A handwritten signature in blue ink, appearing to read 'P. Racher', with a small dot at the end.

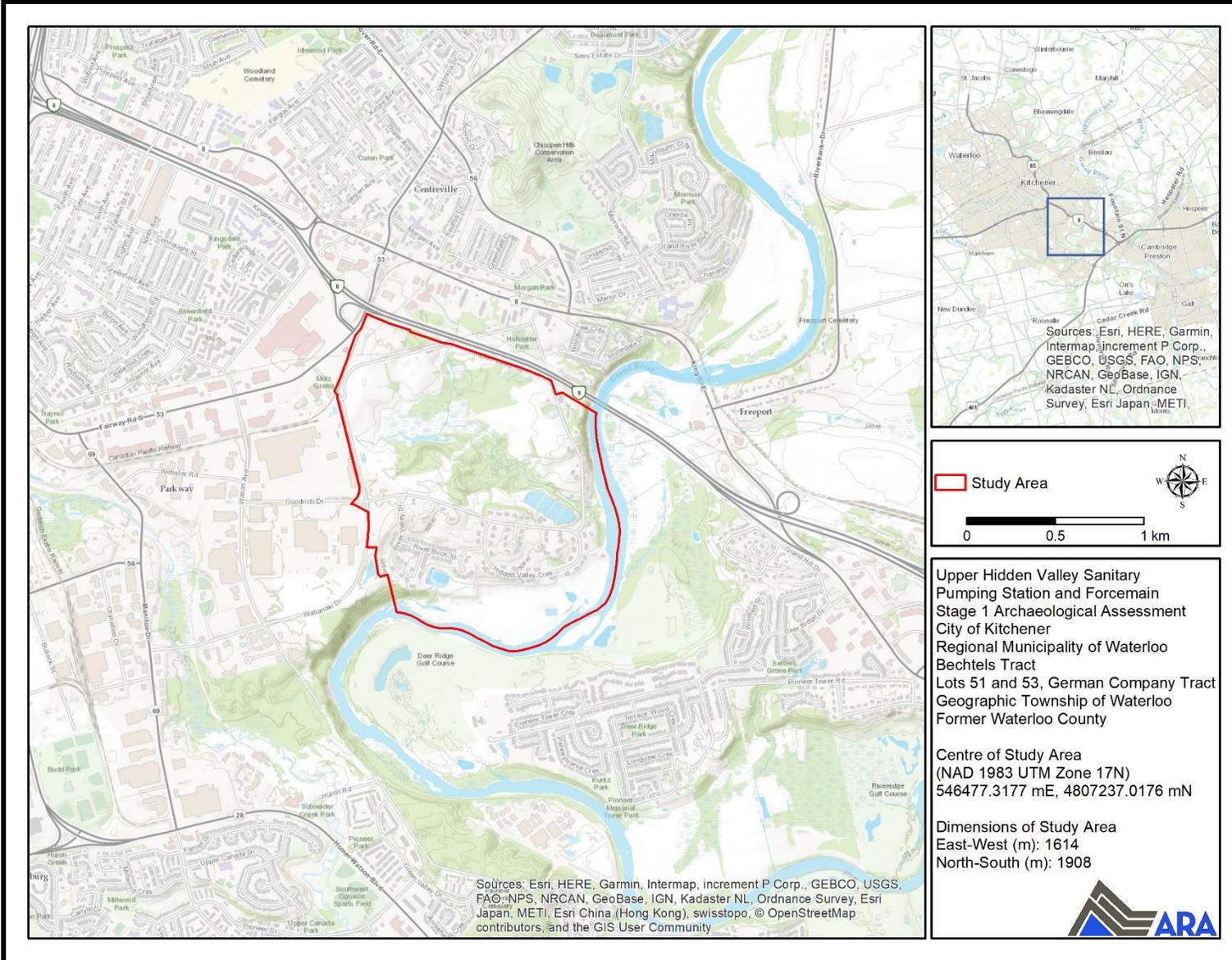
**Paul Racher, MA, CAHP, RPA**

**Principal - Management and Senior Review**

219-900 Guelph Street, Kitchener, ON, N2H 5Z6

P 519.804.2291 x100 | M 519.835.4427 | F 519.286.0493 E [paul.racher@araheritage.ca](mailto:paul.racher@araheritage.ca)

**Map 1: Location of Study Area**



January 19,2021

**VIA EMAIL**

Katie Wood, C.E.T.  
Project Manager, Development Engineering  
City of Kitchener

Dear Katie Wood,

**RE: MCFN FLR Participation for**

Upper Hidden Valley Sanitary Pump Station and Forcemain

Confirmation of Receipt

I am writing in follow up to the letter of response dated January 18,2021 sent by Fawn Sault, Consultation Coordinator, from the Department of Consultation and Accommodation (“DOCA”) on behalf of the Mississaugas of the Credit First Nation (“MCFN”) to acknowledge that we have received your above named communication, dated January 7,2021 .

Outline of MCFN Rights and Territory

In 1792 , the Crown and MCFN entered into Between the Lakes, No. 3 (1792) regarding the lands in which your project is situated.

MCFN has formed the Department of Consultation and Accommodation (“DOCA”) to represent its interests in consultation and accommodation matters. In this regard, it is DOCA’s mandate to ensure that we are directly involved in all planning and development that impacts the integrity of our Territory. DOCA will assess and help alleviate impacts on our rights, land claims, and ways of life by building relationships with governments and private sector proponents. We share a mutual interest in ensuring that projects in the Territory are planned, reviewed, and developed in a manner which ensures healthy communities, ecological protection, and sustainable development for present and future generations in the Territory.

One of the ways we require proponents to engage with us is in providing transparency during the environmental survey and archaeological assessment process. The best way



to accomplish this is by having Field Liaison Representatives (“FLRs”) on location while fieldwork is occurring, who can ensure that the Nation’s special interests and concerns are respected and considered during fieldwork. The cultural and natural resources in question are part of MCFN’s territory and heritage and it is our responsibility to ensure their protection, on behalf of the Nation. MCFN’s stewardship of its territory extends through the life of any development project and beyond.

It is our expectation that no project-related fieldwork will take place without the participation of our FLRs. MCFN considers it disrespectful of our rights as Indigenous peoples if our natural and cultural heritage is interfered with without our involvement.

### FLR Participation

DOCA deploys FLRs to be boots on the ground so that fieldwork by a proponent and their consultants/contractors is carried out with appropriate care, thoroughness, and respect. In the context of MCFN’s Territory, where so much natural and cultural heritage has already been lost or destroyed, MCFN’s monitoring of fieldwork is of utmost importance to ensure that the trail of desecration stops. FLRs are deployed to observe fieldwork, provide cultural advice, act as a direct link back to DOCA and MCFN, and assist with compliance.

FLRs are MCFN band members who have received training in environmental and archaeological assessments, traditional medicine identification and use, Anishinaabe burial practices, and more throughout their employment with DOCA.

DOCA requires, at minimum, FLR participation during the following project-related studies and/or activities:

- ecological and natural heritage technical studies
- archaeological assessments (Stages 2 through 4) and site visits
- monitoring of activities within 50m of areas of special concern (e.g. waterways and wetlands, archaeological sites, species at risk)
- post-construction remediation activities and follow-up impact monitoring

### Agreement for FLR Participation

The cost for the participation of our FLRs is covered by the proponent, not the consultant, whom we view as having the ultimate responsibility to consult with, and accommodate, the Nation. Therefore, please find attached the agreement that covers MCFN’s participation in the upcoming fieldwork. The costs associated with this involvement reflect a number of expenses not visible at first glance: payment for the FLRs themselves, operational costs for DOCA, and efforts to engage the community to garner feedback on development projects. If you could please fill in the additional required information, highlighted in yellow, and return to us a signed copy so that we may arrange for FLR participation on your project, that would be greatly appreciated.



Once a signed agreement is in place, DOCA generally arranges scheduling and other related matters directly with the consultant conducting the fieldwork, unless you prefer otherwise.

Please note that MCFN requires two of its FLRs to be on location whenever fieldwork is taking place within its territory. The reason for this is so that FLRs can provide support and security for each other in the field. This has become a requirement in light of uncommon, but unfortunate, occurrences when FLRs have felt pressured or intimidated from external persons while at work locations. We ask that you would respect this request.

#### Request for Missing Information

In order to complete our project record, we ask that you provide the following information:

1. Please provide a list of all completed technical studies for the project, their date of completion, and the contact information of the consultant who completed each study.
2. Please provide a list of all incomplete and/or upcoming technical studies for the project, the anticipated date of fieldwork for each, and the contact information for the consultant who will complete them.
3. Are there any short-term and/or long-term avoidance and protection strategies currently in place for the natural and/or cultural resources in the study area for this project? If yes, what are they?

#### Closing

The participation of FLRs in project fieldwork is only one part of the consultation process that may be required for your development. Please contact DOCA's Consultation Coordinator, Fawn Sault, if you have any questions about the process.

We ask that you respond with the above requested information and executed agreement within fourteen days following receipt of this letter. We thank you in advance for your attention to our requirements and we look forward to working with you further to shape the planning for development in our Territory.

Sincerely,



Megan DeVries  
Archaeological Operations Supervisor  
[megan.devries@mncfn.ca](mailto:megan.devries@mncfn.ca)



**DEPARTMENT OF CONSULTATION AND ACCOMMODATION**

Mississaugas of the Credit First Nation  
4065 Hwy #6, Hagersville, Ontario N0A 1H0



Phone: (905) 768-4260



Attachment(s)

*MCFN Standards and Guidelines for Archaeology* [2018]  
FLR Participation Agreement [2020]



**DEPARTMENT OF CONSULTATION AND ACCOMMODATION**

Mississaugas of the Credit First Nation  
4065 Hwy #6, Hagersville, Ontario NOA 1H0



Phone: (905) 768-4260



**Field Liaison Representative Participation Agreement**  
**between:**  
**The Mississaugas of the Credit First Nation**  
**and**  
**MTE Consultants Inc.**

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A - Background

1. The purpose of this agreement is to provide the Mississaugas of the Credit First Nation (hereinafter, “MCFN”) with capacity assistance to its Field Liaison Representatives (hereinafter, “FLRs”) in connection with all environmental and/or archaeological assessments required for the Municipal Class Environmental Assessment for the Upper Hidden Valley (hereinafter, “the Project”) located at [ the study area bounded by Highway 8, the Grand River, the CN railway, and Wabanaki Dr], in [Kitchener], Ontario, owned by [various stakeholders including the City of Kitchener, Region of Waterloo, residents in the area, and Pearl Development], (hereinafter, “the Proponent”).
2. The Proponent understands that MCFN wishes to send its FLRs to participate in and monitor the assessments associated with the Project, and that the FLRs’ mandate will be to ensure that MCFN’s perspectives and priorities are considered and to enable MCFN to provide timely and meaningful comment on the Project.
3. All archaeological work in connection with any Project in the Territory will be carried out in accordance with the *Ontario Heritage Act* and its Regulations. The archaeological work will meet or exceed the Ontario Ministry of Heritage, Sport, Tourism, and Culture Industries (hereinafter, “MHSTCI”) standards and guidelines for consultant archaeologists as amended, including the *Terms and Conditions for Archaeological Licences, Standards and Guidelines for Consultant Archaeologists (2011)* and the Draft *Engaging Aboriginal Communities in Archaeology Technical Bulletin (2011)*, (hereinafter collectively, “MHSTCI Standards 2011”).
4. The Proponent agrees that all archaeological work conducted for the Project will comply with the MCFN *Standards and Guidelines for Archaeology* (published April 2, 2018), (hereinafter, “MCFN Standards”) as long as the MCFN Standards do not fall below MHSTCI Standards 2011. The MHSTCI Standards 2011 will be paramount in the event of a direct conflict between MCFN Standards and the MHSTCI Standards 2011.

5. Nothing in this Agreement shall be interpreted or implemented so as to derogate or abrogate from any MCFN Aboriginal or Treaty right or claim, or to indicate consent to the Project.

## B – Fees and Cost Structure

6. The Proponent will provide capacity funding for each FLR in the amount of \$85.00 per hour for all activities relating to the Project. Activities relating to the Project include, but are not limited to:
  - a. Time spent on site monitoring assessment or predetermined construction-related activities;
  - b. Time spent completing data or artifact processing, identification, analysis, and interpretation activities alongside their consultant(s);
  - c. Actual travel time at the beginning of, during, and/or end of each day;
  - d. Time completing daily notes relating to the Project;
  - e. Time spent on standby at the request of the Proponent or their consultant(s); and
  - f. Time completing mandatory training at the request of the Proponent or their consultant(s).
7. The Proponent will pay a supervisory fee of 3.5%, based on the number of hours charged to the Proponent, to provide MCFN with the capacity to facilitate in-field technical support for the FLRs via the Field Archaeologist.
8. The Proponent will reimburse the FLRs for reasonable mileage and meals in accordance with current Federal Canada Treasury Board guidelines, over and above the hourly rate [see Schedule B]. Mileage rates are determined using the MCFN Department of Consultation and Accommodation as the place of departure.
9. The Proponent will provide capacity funding for each FLR in the amount of \$125.00 per hour for any work exceeding eight hours per day and/or forty hours per week. The above noted mileage and meal allowance remains in effect.
10. The Proponent will provide capacity funding for each FLR in the amount of \$125.00 per hour for any work occurring on the following holidays: New Year's Day, Family Day, Good Friday, Victoria Day, Indigenous Solidarity Day (June 21), Canada Day, Civic Holiday, Labour Day, Thanksgiving Day, Remembrance Day, Christmas Day, and Boxing Day. The above noted mileage and meal allowance rates remain in effect.

11. The Proponent agrees that the FLRs will be paid for a minimum of three hours, plus actual travel time, mileage, and meal allowance rates as noted above, on any day when work is cancelled by the Proponent or their consultant(s) while FLRs are en route to the work site or after the FLRs have already arrived.
12. If its use is deemed necessary by both Parties, the Proponent agrees to reimburse the FLRs for their use of the 407ETR upon receipt of a copy of the bill. This agreement will be provided in writing to MCFN's Field Coordinator.
13. If deemed reasonable by both Parties, the Proponent agrees to cover the cost of overnight accommodation for FLRs participating in environmental and/or archaeological fieldwork at locations which would otherwise require more than 90 minutes of travel time at both the beginning and end of the work day, as determined using the MCFN Department of Consultation and Accommodation as the place of departure. An additional Incidental Allowance fee is required for any work which requires overnight accommodations, as set out in Schedule B. This agreement will be provided in writing to MCFN's Field Coordinator.

C – Additional Conditions

14. The parties acknowledge that the Project, in whole or in part, takes place within MCFN Territory and agree that the Proponent shall provide capacity funding for FLR participation on the Project for the duration of the Project.
15. The Proponent agrees that two FLRs shall be on location whenever Project-related activities are taking place within its Territory, as set out in Schedule A.
16. Furthermore, additional FLRs are required if the number of field personnel utilized by the consultant exceeds fourteen (14) individuals and the Proponent agrees to provide capacity funding for additional FLRs as required. MCFN requires one additional FLR per five additional field crew, as outlined in the chart below:

<b>Number of Field Personnel</b>	<b>Number of FLRs Required</b>
1 to 14	2
15 to 19	3
20 to 24	4
25 to 29	5
30 to 34	6
35 to 39	7
40+	8+

17. The Parties acknowledge that the FLRs time and travel will be recorded and verified using the ClockShark Time Tracking Software System and that invoicing will be prepared using these records, not those of a third party.
18. If archaeological resources are encountered at any time during construction or other Project-related activity, all excavation or other activity that could disturb the site shall immediately cease, and the Proponent shall immediately notify MCFN's Archaeological Operations Supervisor or designate. The Parties shall work collaboratively to minimize impacts and ensure respectful treatment of any archaeological resources in accordance with the practices and values of MCFN as identified by MCFN.
19. If human remains are encountered at any time during construction or other Project-related activity, the following steps shall be taken:
  - a. All excavation or other activity that could disturb the site shall immediately cease, and the area shall be secured in a manner which protects the site location and prevents public access and trespass; and
  - b. In addition to any notifications required under the *Funeral, Burial and Cremation Services Act, 2002*, SO 2002, C 33, the Proponent shall immediately contact MCFN's duly appointed Archaeological Operations Supervisor or designate; and
  - c. MCFN shall be permitted to conduct any ceremonies on site in relation to the human remains that may be of Aboriginal ancestry ("Ancestral Remains"); and
  - d. MCFN shall be consulted about all steps in the investigation and any decisions or agreements to be made regarding Ancestral Remains.

#### D - Coordination of the FLRs

20. The Parties agree that the FLRs will follow the reasonable instructions of the Proponent and their consultant firm(s) conducting the environmental and/or archaeological work concerning safety practices, and that the FLRs will attend "tailgate" safety meetings if requested.
21. The contact person for activities relating to the environmental assessment portion of the Project is [Allison Featherstone] from [LGL Limited]. Contact information for this person is as follows:

Allison Featherstone  
Contact Number Office: 519-622-3300  
Mobile: 519-500-3758; Email: [afeatherstone@lgl.com](mailto:afeatherstone@lgl.com)]

22. The contact person for activities relating to the archaeological assessment portion of the Project is [Victoria Cafik] from [ARA Heritage]. Contact information for this person is as follows:

Victoria Cafik  
219-900 Guelph Street, Kitchener, ON, N2H 5Z6  
P 519.212.5172 | F 519.286.0493  
E [Victoria.cafik@araheritage.ca](mailto:Victoria.cafik@araheritage.ca)  
[www.araheritage.ca](http://www.araheritage.ca)

]

23. The Parties agree that the contact person for the consultant firm(s) will coordinate site meeting locations and times through MCFN's duly appointed Field Coordinator. Contact information for the Field Coordinator is as follows:

Joelle Williams  
Telephone: 905-768-4260  
Cell: 905-870-2918  
Email: [joelle.williams@mncfn.ca](mailto:joelle.williams@mncfn.ca)

#### E - Status of the FLRs

24. The FLRs selected by MCFN have appropriate qualifications for the work required – for example, training in environmental and/or archaeological monitoring – and experience in bridging Indigenous perspectives with Western approaches, as reasonably determined by MCFN.
25. The Parties agree that the FLRs are not employees, contractors, or sub-contractors of the Proponent or their consultant(s) and that the FLRs will be responsible for their own personal protective equipment, such as hard hats, safety boots, and safety vests, unless specific or otherwise unique personal protective equipment is required, which will therefore be provided or reimbursed by the Proponent.
26. FLRs take direction from MCFN. MCFN pays Workplace Safety and Insurance Board (“WSIB”) contributions in respect of the FLRs and will, at its own expense, maintain for the term of this agreement a comprehensive general liability (“CGL”) policy or policies with a limit of at least \$1 million and shall provide the Proponent with evidence of such insurance, upon request. MCFN agrees that FLRs will perform their activities safely, in a good and competent manner, in compliance with all applicable laws, regulations, and guidelines.

27. MCFN expects that the Proponent will comply with the *Occupational Health and Safety Act*, R.S.O. 1990, C. 0.1, the Ontario *Human Rights Code*, R. S. O. 1990, c. H.19, and maintain a safe, harassment-free work environment.
28. The Proponent is responsible for negligence or other failure to maintain a safe and harassment-free work environment. To the extent that the Proponent is responsible for negligence or other failure to maintain a safe and harassment-free work environment, the Proponent is liable and shall indemnify MCFN claims or demands related to injury, accident, discrimination, or harassment by the Proponent's employees, agents, consultants, or other parties under the control or direction of the Proponent.

#### F - Method of Payment

29. The Parties agree that the Proponent will pay the capacity funding as agreed to above by cheque or bank transfer and upon receipt of an invoice from MCFN. All invoices will be addressed directly to the Proponent, the Project will be noted in the text of each invoice, and all invoices will be prepared as per MCFN-DOCA's standard invoicing format. Invoices should be submitted electronically to the following address:

Email address: [anaseem@mte85.com](mailto:anaseem@mte85.com)  
Attention: MTE Consultants Inc.  
Asma Naseem  
(519) 743-6500  
520 Bingemans Centre Dr, Kitchener, ON N2B 3X9

30. All payment should be made to the MCFN Department of Consultation and Accommodation to the following address. For additional information, please call the office at 905-768-4260.

Email address: [nicole.laforme-hess@mncfn.ca](mailto:nicole.laforme-hess@mncfn.ca)  
Attention: MCFN-DOCA  
4065 Highway 6  
Hagersville, Ontario  
N0A 1H0

31. After thirty [30] days, a 5% monthly compounded interest rate will be charged on outstanding invoices. After six [6] months of non-payment, a 20% monthly compounded interest rate will be charged on outstanding invoices.

#### G – Disclaimer

32. The Parties agree that the capacity funding payments for the FLRs will be used only for the purposes described in this Agreement and will not be paid for the improper personal gain of any individual or for any other purpose that might violate any Canadian anti-corruption law.
33. This agreement may be executed in counterparts.
34. This agreement is legally binding on MCFN and the Proponent.
35. The term of this agreement is from February 3, 2021 to February 2, 2022. In the event that Project-related activities requiring FLR participation continue past this termination date, a new agreement will be executed between Parties.

[The remainder of this page is intentionally left blank.]

Signed this 4th day of February, 2021,



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Authorized Signatory on behalf of  
The Proponent

Dave Wilhelm  
Manager, Water/Wastewater  
Municipal  
MTE Consultants Inc.

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Authorized Signatory on behalf of  
Mississaugas of the Credit First Nation

Mark LaForme  
Director  
Dept. of Consultation and Accommodation  
Mississaugas of the Credit First Nation



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Witness

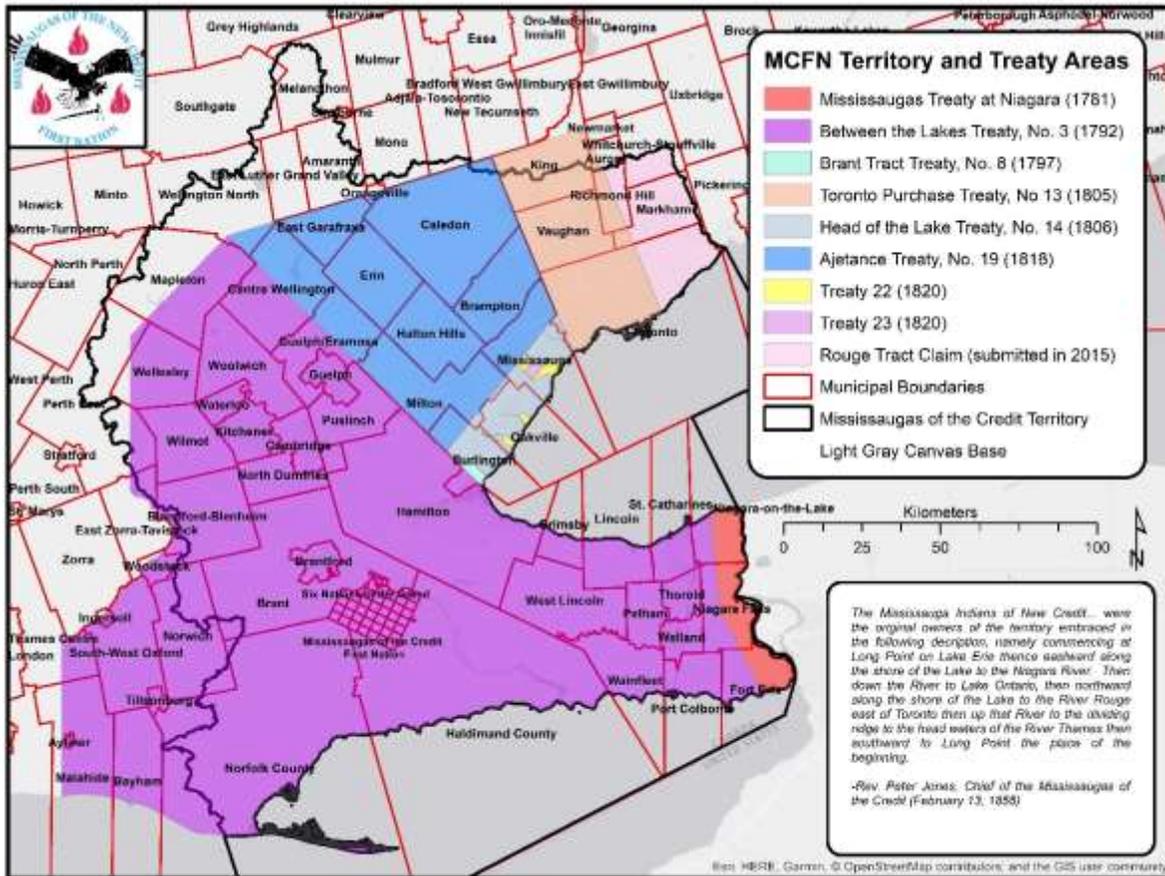
Gemma Charlebois  
Design Engineer  
Municipal  
MTE Consultants Inc.

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Witness

Megan DeVries  
Archaeological Operations Supervisor  
Dept. of Consultation and Accommodation  
Mississaugas of the Credit First Nation

## Schedule A



**Municipalities within Mississaugas of the Credit Treaty Lands and Territory**

Schedule B

MISSISSAUGAS OF THE CREDIT FIRST NATION MILEAGE & ALLOWANCE CHART

*EFFECTIVE APRIL 1, 2020 to MARCH 31, 2021*

**MILEAGE**

\$ 0.56 per KM

<https://www.njc-cnm.gc.ca/directive/d10/v238/s658/en#s658-tc-tm>

**MEAL ALLOWANCE**

**not eligible if:**

BREAKFAST	\$	20.65	leave after 8am; get home before 7:30am
LUNCH	\$	20.90	leave after 1:15pm; get home before 12:15pm
DINNER	\$	51.25	leave after 7pm; get home before 6:30pm
INCIDENTALS	\$	17.30	not staying overnight

<https://www.njc-cnm.gc.ca/directive/d10/v238/s659/en#s659-tc-tm>

NIGHTTIME*	\$	51.25	*Applies only to nighttime surveys that would not otherwise trigger dinner or breakfast.
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**From:** Victoria <victoria.cafik@araheritage.ca>  
**Sent:** Tuesday, January 12, 2021 10:26 AM  
**To:** Gemma Charlebois  
**Cc:** Asma Naseem; Zenova E. Gentles; Paul Racher; monica.maika@araheritage.ca  
**Subject:** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA  
**Attachments:** Huron Wendat Area of Interest.JPG; Huron Wendat Accidentally invited to Project outside their Area of Interest.eml; Upper Hidden Valley.kmz

Good Morning Gemma,

My name is Victoria Cafik and I am the Indigenous Engagement and Accommodation Manager for ARA. I was recently cc'd on an email to the Huron Wendat Nation (HWN) regarding engagement for the Upper Hidden Valley Sanitary Pumping Station and Forcemain project in the City of Kitchener and was tasked with drafting the invitation to participate letters. In reading the email and preparing the letter, I noticed that the study area for this project is a fair distance outside the HWN area of interest. The project is within the Haldimand Tract (see attached KMZ), which is part of the Traditional and/or Treaty Territory of the Mississaugas of the Credit First Nation and the Six Nations of the Grand River represented by the Haudenosaunee Confederacy Chiefs Council and the Six Nations of the Grand River Elected Council.

Upon recognizing this, I reached out to Maxime at HWN to point out the location of the project and confirm that it is located outside of the HWN's mapped area of interest anticipating that he would excuse the HWN from participating in the project. He responded to agree that it is outside of the HWN's mapped area of interest, but that the HWN still has interest in projects located outside of this area (correspondence attached). As a result, I need confirmation from you as to how you would like to proceed regarding engagement.

I suggest that given that HWN has expressed interest we could offer them the final report for their files – not for review and comment. If you have other suggestions of how you would like to proceed please let me know.

All the best,

Victoria

**Victoria Cafik, Hons. BA**  
**Indigenous Engagement and Accommodation Manager**  
**Business Development Team**

219-900 Guelph Street, Kitchener, ON, N2H 5Z6

P 519.212.5172 | F 519.286.0493

E [Victoria.cafik@araheritage.ca](mailto:Victoria.cafik@araheritage.ca)

[www.araheritage.ca](http://www.araheritage.ca)

[@ArchResearch @ARAHeritage](#)

Privileged to work within the treaty lands and traditional territories of the Indigenous peoples of Turtle Island.



ARCHAEOLOGY | HERITAGE | OUTREACH | CONSERVATION

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**From:** [Maxime Picard](#)

**Sent:** January 7, 2021 9:31 AM

**To:** [monica.maika@araheritage.ca](mailto:monica.maika@araheritage.ca)

**Cc:** [Asma Naseem](#); [Zenova E. Gentles](#); [Gemma Charlebois](#); [Victoria](#)

**Subject:** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Thanks for following-up quickly Monica.

We will wait to hear back from you.

Regards,

Maxime



---

**De :** [monica.maika@araheritage.ca](mailto:monica.maika@araheritage.ca) [mailto:[monica.maika@araheritage.ca](mailto:monica.maika@araheritage.ca)]

**Envoyé :** 7 janvier 2021 09:26

**À :** 'Maxime Picard'

**Cc :** 'Asma Naseem' ; 'Zenova E. Gentles' ; 'Gemma Charlebois' ; 'Victoria'

**Objet :** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Good morning Maxime,

Hope you are doing well in this New Year. ARA has been contracted to complete a Stage 1 archaeological assessment as part of the project. We received project mapping this week, and will be sending an invitation to participate to the HWN. No fieldwork will occur until ground conditions meet MHSTCI standards, so we are likely a couple months away from any site visits that will occur.

We will provide more information regarding the archaeology as soon as we are able.

Thank you for your interest in the archaeological portion of the project and we look forward to working with you again.

Regards,

Monica

---

**From:** Maxime Picard <[maxime.picard@cnhw.qc.ca](mailto:maxime.picard@cnhw.qc.ca)>

**Sent:** January 7, 2021 9:14 AM

**To:** [monica.maika@araheritage.ca](mailto:monica.maika@araheritage.ca)

**Cc:** Asma Naseem <[ANaseem@mte85.com](mailto:ANaseem@mte85.com)>; Zenova E. Gentles <[ZGentles@mte85.com](mailto:ZGentles@mte85.com)>; Gemma Charlebois <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>

**Subject:** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Good morning Monica,

Can you please let us know where you are with the archaeological studies of this project ?

Thanks and best regards,

Maxime



---

**De :** Gemma Charlebois [<mailto:GCharlebois@mte85.com>]

**Envoyé :** 7 janvier 2021 08:56

**À :** 'Maxime Picard' <[maxime.picard@cnhw.qc.ca](mailto:maxime.picard@cnhw.qc.ca)>

**Cc :** [monica.maika@araheritage.ca](mailto:monica.maika@araheritage.ca); Asma Naseem <[ANaseem@mte85.com](mailto:ANaseem@mte85.com)>; Zenova E. Gentles <[ZGentles@mte85.com](mailto:ZGentles@mte85.com)>

**Objet :** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Maxime,

Archeological studies are planned as part of the EA. Monica Maika with ARA (cc'd) is the archeologist for this project. Please direct any questions to her and cc MTE.

Thanks.

Gemma

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**Gemma Charlebois, M.A.Sc., P.Eng. | Design Engineer**

**MTE Consultants Inc.**

T: 519-743-6500 x1227 | [GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)

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**From:** Maxime Picard <[maxime.picard@cnhw.qc.ca](mailto:maxime.picard@cnhw.qc.ca)>

**Sent:** January 7, 2021 8:16 AM

**To:** Zenova E. Gentles <[ZGentles@mte85.com](mailto:ZGentles@mte85.com)>; [cfosterpengelly@grandriver.ca](mailto:cfosterpengelly@grandriver.ca); [Planning@Grandriver.ca](mailto:Planning@Grandriver.ca); [Mark.LaForme@mncfn.ca](mailto:Mark.LaForme@mncfn.ca); [Fawn.Sault@mncfn.ca](mailto:Fawn.Sault@mncfn.ca); [Megan.DeVries@mncfn.ca](mailto:Megan.DeVries@mncfn.ca); [tanyahill-montour@sixnations.ca](mailto:tanyahill-montour@sixnations.ca); [dlaforme@sixnations.ca](mailto:dlaforme@sixnations.ca); [lonnybomberry@sixnations.ca](mailto:lonnybomberry@sixnations.ca); [tworowarchaeology@gmail.com](mailto:tworowarchaeology@gmail.com); [williams.todde@gmail.com](mailto:williams.todde@gmail.com); [Rob.Dobos@ec.gc.ca](mailto:Rob.Dobos@ec.gc.ca); [SAROntario@ontario.ca](mailto:SAROntario@ontario.ca); [amy.shaw@ontario.ca](mailto:amy.shaw@ontario.ca); [SAROntario@ontario.ca](mailto:SAROntario@ontario.ca); [lee.orphan@ontario.ca](mailto:lee.orphan@ontario.ca); [Crystal.Lafrance@ontario.ca](mailto:Crystal.Lafrance@ontario.ca); [eanotification.swregion@ontario.ca](mailto:eanotification.swregion@ontario.ca); [tammy.verhaeghe@ontario.ca](mailto:tammy.verhaeghe@ontario.ca); [ian.thornton@ontario.ca](mailto:ian.thornton@ontario.ca); [jennifer.harvard@ontario.ca](mailto:jennifer.harvard@ontario.ca); [MNRF.Ayl.Planners@ontario.ca](mailto:MNRF.Ayl.Planners@ontario.ca); [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca); [Linda.Cooper@kitchener.ca](mailto:Linda.Cooper@kitchener.ca); [Laura.anderson@kitchener.ca](mailto:Laura.anderson@kitchener.ca); [Admin@kitchener.ca](mailto:Admin@kitchener.ca); [john.gazzola@kitchener.ca](mailto:john.gazzola@kitchener.ca); [shevaughne.wynter@hydroone.com](mailto:shevaughne.wynter@hydroone.com); [moneil@regionofwaterloo.ca](mailto:moneil@regionofwaterloo.ca); [mkroker@regionofwaterloo.ca](mailto:mkroker@regionofwaterloo.ca);

[Jlane@regionofwaterloo.ca](mailto:Jlane@regionofwaterloo.ca); [Jennifer\\_Benedict@cpr.ca](mailto:Jennifer_Benedict@cpr.ca); [jack\\_carello@cpr.ca](mailto:jack_carello@cpr.ca)

**Cc:** Gemma Charlebois <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>; Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>; [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)

**Subject:** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Good morning Zenova,

This is to acknowledge reception of your email and notice on the Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA.

Could you please clarify if any archaeological studies are anticipated as part of this EA process ?

Thanks and best regards,

Maxime Picard



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**De :** Zenova E. Gentles [<mailto:ZGentles@mte85.com>]

**Envoyé :** 6 janvier 2021 16:52

À : 'cfosterpengelly@grandriver.ca' <[cfosterpengelly@grandriver.ca](mailto:cfosterpengelly@grandriver.ca)>; 'Planning@Grandriver.ca' <[Planning@Grandriver.ca](mailto:Planning@Grandriver.ca)>; 'Mark.LaForme@mncfn.ca' <[Mark.LaForme@mncfn.ca](mailto:Mark.LaForme@mncfn.ca)>; 'Fawn.Sault@mncfn.ca' <[Fawn.Sault@mncfn.ca](mailto:Fawn.Sault@mncfn.ca)>; 'Megan.DeVries@mncfn.ca' <[Megan.DeVries@mncfn.ca](mailto:Megan.DeVries@mncfn.ca)>; 'tanyahill-montour@sixnations.ca' <[tanyahill-montour@sixnations.ca](mailto:tanyahill-montour@sixnations.ca)>; 'dlaforme@sixnations.ca' <[dlaforme@sixnations.ca](mailto:dlaforme@sixnations.ca)>; 'lonnybomberry@sixnations.ca' <[lonnybomberry@sixnations.ca](mailto:lonnybomberry@sixnations.ca)>; 'tworowarchaeology@gmail.com' <[tworowarchaeology@gmail.com](mailto:tworowarchaeology@gmail.com)>; 'williams.todde@gmail.com' <[williams.todde@gmail.com](mailto:williams.todde@gmail.com)>; 'maxime.picard@cnhw.qc.ca' <[maxime.picard@cnhw.qc.ca](mailto:maxime.picard@cnhw.qc.ca)>; 'Rob.Dobos@ec.gc.ca' <[Rob.Dobos@ec.gc.ca](mailto:Rob.Dobos@ec.gc.ca)>; 'SAROntario@ontario.ca' <[SAROntario@ontario.ca](mailto:SAROntario@ontario.ca)>; 'amy.shaw@ontario.ca' <[amy.shaw@ontario.ca](mailto:amy.shaw@ontario.ca)>;

'SAROntario@ontario.ca' <[SAROntario@ontario.ca](mailto:SAROntario@ontario.ca)>; 'lee.orphan@ontario.ca' <[lee.orphan@ontario.ca](mailto:lee.orphan@ontario.ca)>;  
'Crystal.Lafrance@ontario.ca' <[Crystal.Lafrance@ontario.ca](mailto:Crystal.Lafrance@ontario.ca)>; 'eanotification.swregion@ontario.ca'  
<[eanotification.swregion@ontario.ca](mailto:eanotification.swregion@ontario.ca)>; 'tammy.verhaeghe@ontario.ca' <[tammy.verhaeghe@ontario.ca](mailto:tammy.verhaeghe@ontario.ca)>;  
'ian.thornton@ontario.ca' <[ian.thornton@ontario.ca](mailto:ian.thornton@ontario.ca)>; 'jennifer.harvard@ontario.ca' <[jennifer.harvard@ontario.ca](mailto:jennifer.harvard@ontario.ca)>;  
'MNRF.Ayl.Planners@ontario.ca' <[MNRF.Ayl.Planners@ontario.ca](mailto:MNRF.Ayl.Planners@ontario.ca)>; 'katie.wood@kitchener.ca'  
<[katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)>; 'Linda.Cooper@kitchener.ca' <[Linda.Cooper@kitchener.ca](mailto:Linda.Cooper@kitchener.ca)>;  
'Laura.anderson@kitchener.ca' <[Laura.anderson@kitchener.ca](mailto:Laura.anderson@kitchener.ca)>; 'Admin@kitchener.ca' <[Admin@kitchener.ca](mailto:Admin@kitchener.ca)>;  
'john.gazzola@kitchener.ca' <[john.gazzola@kitchener.ca](mailto:john.gazzola@kitchener.ca)>; 'shevaughne.wynter@hydroone.com'  
<[shevaughne.wynter@hydroone.com](mailto:shevaughne.wynter@hydroone.com)>; 'moneil@regionofwaterloo.ca' <[moneil@regionofwaterloo.ca](mailto:moneil@regionofwaterloo.ca)>;  
'mkroker@regionofwaterloo.ca' <[mkroker@regionofwaterloo.ca](mailto:mkroker@regionofwaterloo.ca)>; 'Jlane@regionofwaterloo.ca'  
<[Jlane@regionofwaterloo.ca](mailto:Jlane@regionofwaterloo.ca)>; 'Jennifer\_Benedict@cpr.ca' <[Jennifer\\_Benedict@cpr.ca](mailto:Jennifer_Benedict@cpr.ca)>; 'jack\_carello@cpr.ca'  
<[jack\\_carello@cpr.ca](mailto:jack_carello@cpr.ca)>  
**Cc :** Gemma Charlebois <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>; Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>;  
'katie.wood@kitchener.ca' <[katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)>  
**Objet :** 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Good afternoon:

Please find attached a digital copy of Notice of Commencement informing you of the Upper Hidden Valley Sanitary Pumping Station and Forcemain Class EA.

This study is being carried out in accordance with the requirements of the Environmental Assessment Act, as a Schedule B Municipal Class Environmental Assessment. All notices related to this project can be found on the City of Kitchener's website at the following link: <https://www.kitchener.ca/en/city-services/environmental-assessments.aspx>

The purpose of the current study is to define a sanitary servicing solution that will support responsible development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan (June 2019). The servicing solution will include identifying a sanitary pumping station location and forcemain alignment.

We would welcome the opportunity to meet with you to discuss this study should you wish to do so. Please feel free to call or email me using the contact details below should you require additional information. We look forward to hearing from you.

Regards,

---

**Zenova Gentles, B.Sc | Administrative Assistant**

**MTE Consultants Inc.**

T: 519-743-6500 x1359 | [ZGentles@mte85.com](mailto:ZGentles@mte85.com)

520 Bingemans Centre Drive, Kitchener, Ontario N2B 3X9

[www.mte85.com](http://www.mte85.com) | [Twitter](#) | [LinkedIn](#) | [Instagram](#) | [Facebook](#)

**COVID-19 Update:** We remain operational and are currently available by email and phone, however, our offices are closed. Staff that are required to visit job sites or perform field work are required to follow MTE health and safety policies and procedures, as well as additional COVID-19 protocols, which can be viewed [here](#).

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**From:** Victoria <victoria.cafik@araheritage.ca>  
**Sent:** Tuesday, February 23, 2021 10:45 AM  
**To:** rlinn@sixnations.ca; Tanya Hill-Montour  
**Cc:** Dawn LaForme; lonnybomberry@sixnations.ca; monica.maika@araheritage.ca; Asma Naseem; Gemma Charlebois; Dave Wilhelm; Katie Wood; Zenova E. Gentles  
**Subject:** ARA Project Invitation - Upper Hidden Valley Sewer and Forcemain Project - SNGREC  
**Attachments:** 2020-0220 - Upper Hiddien Valley Sewer and Forcemain - St 1\_CHAR - Invitation to Participate - SNGREC.pdf

Dear Tanya and Robin,

The proponent has asked us to reach out to invite your community to participate in a Stage 1 archaeological assessment and Cultural Heritage Assessment being undertaken for the Upper Hidden Valley Sewer and Forcemain project in Kitchener, Ontario. Participation for each project could include joining ARA on the site visit, providing Traditional Knowledge and/or report reviews. Please find the formal invitation to participate letter attached.

In order to incorporate Traditional Knowledge into the report, we would appreciate your feedback no later than **April 1, 2021**. Please contact **Victoria Cafik** at [victoria.cafik@araheritage.ca](mailto:victoria.cafik@araheritage.ca) or at **519-212-5172** if you would like to provide a monitor to be present during the Stage 1 archaeological assessment. The site visit has not been scheduled at this time, however, in order to begin the deployment process, we would like to confirm your interest in participating by **March 15th, 2021**.

We look forward to working with your community on this project.

Best Regards,

**Victoria Cafik, Hons. BA**  
**Indigenous Engagement and Accommodation Manager**  
**Business Development Team Member**  
**Heritage Team Member**

219-900 Guelph Street, Kitchener, ON, N2H 5Z6

P 519.212.5172 | F 519.286.0493

E [Victoria.cafik@araheritage.ca](mailto:Victoria.cafik@araheritage.ca)

[www.araheritage.ca](http://www.araheritage.ca)

[@ArchResearch @ARAHeritage](#)

Privileged to work within the treaty lands and traditional territories of the Indigenous peoples of Turtle Island.



---

**From:** Victoria <victoria.cafik@araheritage.ca>  
**Sent:** Tuesday, February 23, 2021 10:49 AM  
**To:** darin.wybenga@mncfn.ca; Megan DeVries  
**Cc:** monica.maika@araheritage.ca; Asma Naseem; Dave Wilhelm; Gemma Charlebois; Katie Wood; Zenova E. Gentles; amy.barnes@araheritage.ca  
**Subject:** ARA Project Invitation - Upper Hidden Valley Sewer and Forcemain Project - MCFN  
**Attachments:** 2020-0220 - Upper Hiddien Valley Sewer and Forcemain - St 1\_CHAR - Invitation to Participate - MCFN.pdf

Dear Megan and Darin,

The proponent has asked us to reach out to invite your community to participate in a Stage 1 archaeological assessment and Cultural Heritage Assessment being undertaken for the Upper Hidden Valley Sewer and Forcemain project in Kitchener, Ontario. Participation for each project could include joining ARA on the site visit, providing Traditional Knowledge and/or report reviews. Please find the formal invitation to participate letter attached.

In order to incorporate Traditional Knowledge into the report, we would appreciate your feedback no later than **April 1, 2021**. Please contact **Victoria Cafik** at [victoria.cafik@araheritage.ca](mailto:victoria.cafik@araheritage.ca) or at **519-212-5172** if you would like to provide a monitor to be present during the Stage 1 archaeological assessment. The site visit has not been scheduled at this time, however, in order to begin the deployment process, we would like to confirm your interest in participating by **March 15th, 2021**.

We look forward to working with your community on this project.

Best Regards,

**Victoria Cafik, Hons. BA**  
**Indigenous Engagement and Accommodation Manager**  
**Business Development Team Member**  
**Heritage Team Member**

219-900 Guelph Street, Kitchener, ON, N2H 5Z6

P 519.212.5172 | F 519.286.0493

E [Victoria.cafik@araheritage.ca](mailto:Victoria.cafik@araheritage.ca)

[www.araheritage.ca](http://www.araheritage.ca)

[@ArchResearch @ARAHeritage](#)

Privileged to work within the treaty lands and traditional territories of the Indigenous peoples of Turtle Island.



48301-100 Upper Hidden Valley Class EA  
Stakeholder Register

Stakeholder Name	Organization	Title	Role in EA	Address	Telephone	Email	Influence High /Low	Correspondance		
Chris Foster Pengally	GRCA					<a href="mailto:cfosterpengally@grandriver.ca">cfosterpengally@grandriver.ca</a>	High	Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
						<a href="mailto:Planning@Grandriver.ca">Planning@Grandriver.ca</a>			Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Mark LaForme	Mississaugas of the Credit First Nations	Director, Department of Consultation and Accommodation (DOCA)				<a href="mailto:Mark.LaForme@mncfn.ca">Mark.LaForme@mncfn.ca</a>	High	Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Fawn Sault,	Mississaugas of the Credit First Nations	Consultation Coordinator, DOCA				<a href="mailto:Fawn.Sault@mncfn.ca">Fawn.Sault@mncfn.ca</a>	High	Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Megan Devries	Mississaugas of the Credit First Nations	Archaeological Operations Supervisor, DOCA				<a href="mailto:Megan.DeVries@mncfn.ca">Megan.DeVries@mncfn.ca</a>	High	Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Tanya Hill-Montour	Six Nations of the Grand River	Archaeology Supervisor, Six Nations Lands & Resources				<a href="mailto:tanyahill-montour@sixnations.ca">tanyahill-montour@sixnations.ca</a>	High	Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Dawn LaForme	Six Nations of the Grand River	Secretary/Receptionist, Six Nations Lands & Resources				<a href="mailto:dlaforme@sixnations.ca">dlaforme@sixnations.ca</a>	High	Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Lonny Bomberry	Six Nations of the Grand River	Director, Six Nations Lands & Resources				<a href="mailto:lonnybomberry@sixnations.ca">lonnybomberry@sixnations.ca</a>	High	Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Wayne Hill	Haudenosaunee Development Institute	Archaeology Supervisor				<a href="mailto:tworowarchaeology@gmail.com">tworowarchaeology@gmail.com</a>	High	Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Todd Williams	Haudenosaunee Development Institute	Director				<a href="mailto:williams.todde@gmail.com">williams.todde@gmail.com</a>	High	Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Maxime Picard	Huron-Wendat Nation	Project Coordinator, Ontario				<a href="mailto:maxime.picard@enhw.gc.ca">maxime.picard@enhw.gc.ca</a>	Low	-Email Notice sent Jan. 6, 2021 -HWN is outside of EA study area. Stakeholder will be emailed reports but will not be involved in the EA process itself	Email Notice of PIC Sent Oct. 12, 2021	
Rob Dobos	Environment Canada	Manager, Ontario Region				<a href="mailto:Rob.Dobos@ec.gc.ca">Rob.Dobos@ec.gc.ca</a>	High	Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	
						<a href="mailto:SAROntario@ontario.ca">SAROntario@ontario.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Amy Shaw	Ministry of Environment, Conservation and Parks	District Manager, Guelph Office				<a href="mailto:amy.shaw@ontario.ca">amy.shaw@ontario.ca</a>	High	Email Notice of Study Commencement sent Jan. 6, 2021	PIC Notice Sent and returned. Person no longer there but was directed to Lisa. Email was sent to lisa	Email Notice of PIC#2 sent January 27, 2022
						<a href="mailto:Lisa.Williamson@ontario.ca">Lisa.Williamson@ontario.ca</a>			Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
						<a href="mailto:eanotification.wcregion@ontario.ca">eanotification.wcregion@ontario.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Lee Orphan		Director South/West Region				<a href="mailto:lee.orphan@ontario.ca">lee.orphan@ontario.ca</a>	High	Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	person retired
EA Coordinator email box						<a href="mailto:eanotification.swregion@ontario.ca">eanotification.swregion@ontario.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Ian Thornton		Resource Operations Supervisor (replacing Tammy as of Nov. 12)				<a href="mailto:ian.thornton@ontario.ca">ian.thornton@ontario.ca</a>	High	Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
General Planning						<a href="mailto:MNRF.Ayl.Planners@ontario.ca">MNRF.Ayl.Planners@ontario.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Katie Wood	City of Kitchener					<a href="mailto:katie.wood@kitchener.ca">katie.wood@kitchener.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Linda Cooper	City of Kitchener					<a href="mailto:Linda.Cooper@kitchener.ca">Linda.Cooper@kitchener.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Laura Anderson	City of Kitchener					<a href="mailto:Laura.anderson@kitchener.ca">Laura.anderson@kitchener.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Mayor Office Admin	City of Kitchener					<a href="mailto:Admin@kitchener.ca">Admin@kitchener.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022

John Gazzola	City of Kitchener	Counsellor Ward 3				<a href="mailto:john.gazzola@kitchener.ca">john.gazzola@kitchener.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Shevaughne Wynter	Hydro One					<a href="mailto:shevaughne.wynter@hydroone.com">shevaughne.wynter@hydroone.com</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Matt Oneil	Grand River Transit; ION					<a href="mailto:moneil@regionofwaterloo.ca">moneil@regionofwaterloo.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Marcos Kroker	Region of Waterloo					<a href="mailto:mkraker@regionofwaterloo.ca">mkraker@regionofwaterloo.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Jason Lane						<a href="mailto:jlane@regionofwaterloo.ca">jlane@regionofwaterloo.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Jennifer Benedict	Canadian Pacific Railway					<a href="mailto:Jennifer_Benedict@cpr.ca">Jennifer_Benedict@cpr.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Jack Carello	Canadian Pacific Railway					<a href="mailto:jack_carello@cpr.ca">jack_carello@cpr.ca</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Guenter Nuessler			Resident	2043 Hidden Valley	519-748-0101	<a href="mailto:gnuessler@bell.net">gnuessler@bell.net</a>		Spoke with on Jan 15. check communication log	Email Notice of PIC Sent Oct. 12, 2021	Email Notice of PIC#2 sent January 27, 2022
Brian Bauman			Resident	2296 Hidden Valley	519-778-0460			Spoke with on Jan 15. check communication log	PIC Notice Mailed Oct. 12	Email Notice of PIC#2 sent January 27, 2022
Janice Diane Nuessler				2043 Hidden Valley Crest Kitchener, ON N2C 2R2					PIC Notice Mailed Oct. 12	Email Notice of PIC#2 sent January 27, 2022
Nesha Sharma and Rakesh Mohan Sharma				2 Canters Close Kitchener, ON N2C 2R3					PIC Notice Mailed Oct. 12	Email Notice of PIC#2 sent January 27, 2022
Robeert Charles Loeb sack and Karen Evenlyn Loeb sack				2055 Hidden Valley Cres Kitchener ,ON N2C 2R2					PIC Notice Mailed Oct. 12	Email Notice of PIC#2 sent January 27, 2022
R. Payette	Resident			668 Hidden Valley		<a href="mailto:rpayette@rogers.com">rpayette@rogers.com</a>		Email Notice of Study Commencement sent Jan. 6, 2021	Aware of PIC but emailed to say cannot attend but want to know of the developments	Email Notice of PIC#2 sent January 27, 2022
Mark Badali	MECP - Southwest Region	REA Coordinator	Coordinator			<a href="mailto:Mark.Badali1@ontario.ca">Mark.Badali1@ontario.ca</a>				
						<a href="mailto:eanotification.wcregion@ontario.ca">eanotification.wcregion@ontario.ca</a>			this updated contact info received after PIC notice was sent out	
						<a href="mailto:Joan.DelvillarCuicas@ontario.ca">Joan.DelvillarCuicas@ontario.ca</a>				
Annemarie Hall	Annmarie Hall Designs					<a href="mailto:annemariehalldesign@gmail.com">annemariehalldesign@gmail.com</a>			Email Notice of PIC#1, sent Oct. 12, 2021	

**Info from Katie Woods for PIC email:**

City staff/representatives that may be answering questions during the PIC include:

- [City's Engineering: Katie Wood, katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)
- [City's Transportation: Lou Slijepcevic, Lou.Slijepcevic@kitchener.ca](mailto:Lou.Slijepcevic@kitchener.ca)
- [City's Heritage: Victoria Grohn, Victoria.Grohn@kitchener.ca](mailto:Victoria.Grohn@kitchener.ca)
- [City's Environmental Planning: Barbara Steiner, Barbara.Steiner@kitchener.ca](mailto:Barbara.Steiner@kitchener.ca)
- [City's Planning: Andrew Pinnell, Andrew.Pinnell@kitchener.ca](mailto:Andrew.Pinnell@kitchener.ca)
- [City's Planning/Land Use Project: Richard Kelly-Ruetz, Richard.Kelly-Ruetz@kitchener.ca](mailto:Richard.Kelly-Ruetz@kitchener.ca)
- [GRCA: Chris Foster Pangelly, cfosterpengelly@grandriver.ca](mailto:cfosterpengelly@grandriver.ca)
- ARA (Archaeological/Heritage): Allison Featherstone
- MTE: Gemma Charlebois, Dave Wilhelm

[Councillor John Gazzola, John.Gazzola@kitchener.ca](mailto:John.Gazzola@kitchener.ca)

681 Hidden Valley Road Kitchener Ontario |

**15 May 2022**

Dave Wilhelm  
MTE Consultants  
520 Bingemans Centre Drive  
Kitchener, Ontario

Richard Kelly-Ruetz  
Project Manager Hidden Valley Secondary Plan  
City of Kitchener Planning Department  
200 King Street West  
Kitchener, Ontario

**Dear Dave and Richard,**

Dave, thank you for your response to our letter from February 11<sup>th</sup>. We truly appreciate the work that you and your team have done to secure some answers from the Region regarding sanitary servicing for our parcel on Hidden Valley Road.

We are generally encouraged by the information you have described from the Region regarding septic. It is our understanding from your letter (Item #1 & 2), that the Region will support and approve a septic solution based on the results of the Draft EA with the provision for a hydrogeological study that supports septic. Are you able to secure a letter in writing from the Region that confirms this information, and let us know who our contact would be at the Region to continue this discussion?

You also mentioned that the City cannot add a 'septic option' into the EA due to 'documents not being completed' - does this refer to the hydrogeological study? Or does this relate to the forthcoming Secondary Plan? Richard, when does the City anticipate that this

plan will be completed? Will potential development and/or severances on our parcels be delayed and subject to the approval of the Draft Secondary Plan?

Dave, in your Response #5A & 5B, you indicate that the City has no short-term plans or funding to bring City water to this section of Hidden Valley Road. Per your response, if road upgrades or water services extensions are required for a small estate residential neighborhood on our parcel, it is the future Developer's responsibility to do so. Does this mean the street would have to be updated to current City widths and roadway standards for water lines to be installed? Road widening on the Hidden Valley 'eastside' is not currently the direction that Richard is outlining in the Draft Secondary Plan for the 'Heritage Corridor'.

Only our two parcels have the 'City-owned' 3m wide 'severance/ROW' to allow for future road widening. How can water services be brought to our property when all the surrounding parcels are privately owned with their property lines extending right up to the current street edge and no ROW? In addition, a City waterline extension from the closest neighborhood with City water, would likely mean the waterline would cross at least one creek and potentially, a GRCA easement on our property. Given the challenges of crossing creeks that have been identified in the Draft EA, this would be an expensive and potentially multi-year process - for which a potential large subdivision of a hundred homes might make sense - but for 4-8 lots is not feasible. Given this reality, is there any way Engineering & Planning can continue the dialogue with the Region to secure the same provision for private wells as you were able to negotiate for septic? Otherwise, we are back in the same position we were before the EA and our property becomes challenging to develop per the Official Plan due to Engineering and Planning that is not consistent with the Official Plan.

While we are encouraged by the information on the septic, we are still looking for the City's continued support on obtaining a more feasible plan to bring water to our site or providing for a private well option. We believe strongly that water is part of a servicing study, and although you suggest it is outside the current EA scope, it is a servicing issue that negatively impacts the ability to sell our parcel and/or allow for thoughtful development consistent with the Draft Secondary Plan and Official Plan which allow for Estate Residential Development.

We remain positive and encouraged by the progress that the City has made with the Region on the allowance for septic in the last 3 months. As we are only proposing 4-8 estate residential lots on our ten acres, we are hopeful that City Engineering, Planning and the Region will collaborate and also support an allowance for private wells in the 'Heritage Corridor'.

Many thanks for your consideration and continued collaboration.

Sincerely,

---

**From:** Katie Wood <Katie.Wood@kitchener.ca>  
**Sent:** Thursday, January 14, 2021 11:36 AM  
**To:** Gemma Charlebois  
**Subject:** RE: Hidden Valley Area

He said the tree removal and new trails were at this intersection. I believe it is private property most likely, not in the ROW. He couldn't be more specific. He just had a few question about what the EA will be for and how it will affect him.



Sincerely,

**Katie Wood, C.E.T.**

Project Manager | Development Engineering | City of Kitchener  
519-741-2200 ext. 7135 | TTY 1-866-969-9994 | [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)



---

**From:** Gemma Charlebois  
**Sent:** Thursday, January 14, 2021 11:32 AM  
**To:** Katie Wood  
**Cc:** Asma Naseem ; Zenova E. Gentles  
**Subject:** [EXTERNAL] RE: Hidden Valley Area

Katie,

Do you know where he was referring to? On the City ROW? On private property? Was he concerned about something as it relates to the EA?

Thanks.

Gemma

---

**Gemma Charlebois, M.A.Sc., P.Eng. | Design Engineer  
MTE Consultants Inc.**

T: 519-743-6500 x1227 | [GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)  
520 Bingemans Centre Drive, Kitchener, Ontario N2B 3X9  
[www.mte85.com](http://www.mte85.com) | [Twitter](#) | [LinkedIn](#) | [Instagram](#) | [Facebook](#)

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---

**From:** Katie Wood <[Katie.Wood@kitchener.ca](mailto:Katie.Wood@kitchener.ca)>  
**Sent:** Wednesday, January 13, 2021 2:19 PM  
**To:** Gemma Charlebois <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>  
**Subject:** Hidden Valley Area

Hey Gemma,

I was talking to a resident this morning about the EA and he brought up a lot of tree removal happening at the south intersection of Wabanaki and Hidden Valley. I said I would ask you to see if you knew anything about it. Apparently there are new ATV trails being constructed in that area also.

Sincerely,

**Katie Wood, C.E.T.**

Project Manager | Development Engineering | City of Kitchener  
519-741-2200 ext. 7135 | TTY 1-866-969-9994 | [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)



---

**From:** Dave Wilhelm  
**Sent:** Thursday, January 28, 2021 3:45 PM  
**To:** Asma Naseem  
**Cc:** Zenova E. Gentles; Gemma Charlebois  
**Subject:** FW: Hidden Valley Study

For file....Thanks

---

**Client First | Right Solution | Work Together** Dave Wilhelm, P.Eng.  
*Manager, Water/Wastewater*  
Kitchener x1225

---

**From:** [REDACTED]  
**Sent:** Wednesday, January 27, 2021 6:10 PM  
**To:** Dave Wilhelm  
**Subject:** Re: Hidden Valley Study

Hi Dave,

212 River Birch.

Thanks,  
Ben

Get [Outlook for iOS](#)

---

**From:** Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>  
**Sent:** Wednesday, January 27, 2021 5:34:42 PM  
**To:**  
**Subject:** RE: Hidden Valley Study

Hi  
Thanks for the interest in this project. Do you mind providing your full name and house address?  
Thanks Dave

---

**Dave Wilhelm, P.Eng. | Manager, Water/Wastewater**  
**MTE Consultants Inc.**  
T: 519-743-6500 x1225 | [dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)  
520 Bingham Centre Drive, Kitchener, Ontario N2B 3X9  
[www.mte85.com](http://www.mte85.com) | [Twitter](#) | [LinkedIn](#) | [Instagram](#) | [Facebook](#)

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---

**From:**  
**Sent:** Wednesday, January 27, 2021 1:22 PM  
**To:** Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>  
**Subject:** Hidden Valley Study

Hi Dave,

Please add me to the email list for updates on this study (as recommended by Heather Harte). Thanks so much!

---

**From:** Katie Wood <Katie.Wood@kitchener.ca>  
**Sent:** Thursday, January 14, 2021 12:21 PM  
**To:** Asma Naseem; Gemma Charlebois  
**Subject:** RE: Hidden Valley Area

The person I was talking to yesterday was 2296 Hidden Valley Cres -

I was also contacted by ( ) at 2043 Hidden Valley -

Both pretty much wondering how the EA will affect them and if they will be made to connect to a sanitary sewer if one is provided.

Sincerely,

**Katie Wood, C.E.T.**

Project Manager | Development Engineering | City of Kitchener  
519-741-2200 ext. 7135 | TTY 1-866-969-9994 | [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)



---

**From:** Asma Naseem  
**Sent:** Thursday, January 14, 2021 12:14 PM  
**To:** Gemma Charlebois ; Katie Wood  
**Subject:** [EXTERNAL] RE: Hidden Valley Area

Hi Katie,

Can you send the residents contact information? We'll add him to our Residents Log so we ensure he is sent all future correspondence on this EA.

Asma

---

**Asma Naseem, P.Eng., PMP | Project Manager**  
**MTE Consultants Inc.**  
T: 519-743-6500 x1362 | [ANaseem@mte85.com](mailto:ANaseem@mte85.com)

---

**From:** Gemma Charlebois <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>  
**Sent:** Thursday, January 14, 2021 11:48 AM  
**To:** 'Katie Wood' <[Katie.Wood@kitchener.ca](mailto:Katie.Wood@kitchener.ca)>  
**Cc:** Asma Naseem <[ANaseem@mte85.com](mailto:ANaseem@mte85.com)>  
**Subject:** RE: Hidden Valley Area

Katie,

Sounds like it would be best just to reiterate the notice of commencement since we can't really comment on unrelated works on private property, but that if he wanted to be copied on future correspondence we would be sure to send him emails.

Gemma

---

**Client First | Right Solution | Work Together**

Gemma Charlebois, M.A.Sc., P.Eng.

*Design Engineer*

Kitchener x1227

---

**From:** Katie Wood <[Katie.Wood@kitchener.ca](mailto:Katie.Wood@kitchener.ca)>

**Sent:** Thursday, January 14, 2021 11:36 AM

**To:** Gemma Charlebois <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>

**Subject:** RE: Hidden Valley Area

He said the tree removal and new trails were at this intersection. I believe it is private property most likely, not in the ROW. He couldn't be more specific. He just had a few question about what the EA will be for and how it will affect him.



Sincerely,

**Katie Wood, C.E.T.**

Project Manager | Development Engineering | City of Kitchener

519-741-2200 ext. 7135 | TTY 1-866-969-9994 | [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)



---

**From:** Gemma Charlebois <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>

**Sent:** Thursday, January 14, 2021 11:32 AM

**To:** Katie Wood <[Katie.Wood@kitchener.ca](mailto:Katie.Wood@kitchener.ca)>

Cc: Asma Naseem <[ANaseem@mte85.com](mailto:ANaseem@mte85.com)>; Zenova E. Gentles <[ZGentles@mte85.com](mailto:ZGentles@mte85.com)>

Subject: [EXTERNAL] RE: Hidden Valley Area

Katie,

Do you know where he was referring to? On the City ROW? On private property? Was he concerned about something as it relates to the EA?

Thanks.

Gemma

---

**Gemma Charlebois, M.A.Sc., P.Eng. | Design Engineer**

**MTE Consultants Inc.**

T: 519-743-6500 x1227 | [GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)

520 Bingemans Centre Drive, Kitchener, Ontario N2B 3X9

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---

**From:** Katie Wood <[Katie.Wood@kitchener.ca](mailto:Katie.Wood@kitchener.ca)>

**Sent:** Wednesday, January 13, 2021 2:19 PM

**To:** Gemma Charlebois <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>

**Subject:** Hidden Valley Area

Hey Gemma,

I was talking to a resident this morning about the EA and he brought up a lot of tree removal happening at the south intersection of Wabanaki and Hidden Valley. I said I would ask you to see if you knew anything about it. Apparently there are new ATV trails being constructed in that area also.

Sincerely,

**Katie Wood, C.E.T.**

Project Manager | Development Engineering | City of Kitchener

519-741-2200 ext. 7135 | TTY 1-866-969-9994 | [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)



---

**From:** Dave Wilhelm  
**Sent:** Thursday, January 28, 2021 3:53 PM  
**To:** Asma Naseem  
**Cc:** Gemma Charlebois; Zenova E. Gentles  
**Subject:** FW: Hidden Valley MCEA Kitchener

For file....Thanks

---

**Client First | Right Solution | Work Together** Dave Wilhelm, P.Eng.  
*Manager, Water/Wastewater*  
Kitchener x1225

---

**From**  
**Sent:** Thursday, January 28, 2021 3:52 PM  
**To:** Dave Wilhelm  
**Cc:**  
**Subject:** Re: Hidden Valley MCEA Kitchener

Hi Dave  
We actually don't have an address but we are on the east and west sides of 280 Hidden Valley road.  
Hope that helps.  
K

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---

**From:** Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>  
**Sent:** Thursday, January 28, 2021, 3:44 p.m.  
**To:**  
**Cc:**  
**Subject:** RE: Hidden Valley MCEA Kitchener

Thanks for the call and email  
Please let me know the street address of your property.  
Thanks, Dave

---

**Dave Wilhelm, P.Eng. | Manager, Water/Wastewater**  
**MTE Consultants Inc.**  
T: 519-743-6500 x1225 | [dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)  
520 Bingemans Centre Drive, Kitchener, Ontario N2B 3X9  
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---

**From**

**Sent:** Wednesday, January 27, 2021 8:08 PM

**To:** Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>

**Cc:**

**Subject:** Hidden Valley MCEA Kitchener

Hi Dave

Thank you for returning my call and clarifying some of your project goals and timing.

We understand that the city is looking to maximise the density at the north end of Hidden Valley as per the new Master plan (June 2019)

The servicing and development of this area will compliment the Regions LRT ridership goals as well as support Fairway road commercial zone with the expanded mixed use opportunities.

We all understand the shortage of residential housing in the area as well and having this project brought online as soon as possible will support those servicing requirements.

Look forward to your report and progress by the City of Kitchener

Best Regards

K

Property owner Hidden Valley (since 1993)

---

**From:**  
**Sent:** Thursday, January 28, 2021 5:40 AM  
**To:** Dave Wilhelm  
**Cc:**  
**Subject:** Re: Municipal services in Hidden Valley

Thanks, Dave

Jake

**BENJAMINS REALTY**  
INC.

**Jake Benjamins**

Broker of Record

**Mobile:** (519) 496-1370

**Email:** [jake@benjaminsrealty.com](mailto:jake@benjaminsrealty.com)

**Office:** 26 River Valley Dr.  
Kitchener, N2C 2V6 (side entrance)

**Bus:** (519) 575-9092

**Fax:** (519) 489-2842

**[www.BenjaminsRealty.com](http://www.BenjaminsRealty.com)**

On Wed, Jan 27, 2021 at 5:37 PM Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)> wrote:

Hi Jake

Thanks for your interest in this Study. We will put you on the mailing list and provide updates as the Study proceeds.

Regards, Dave

---

Dave Wilhelm, P.Eng. | Manager, Water/Wastewater

**MTE Consultants Inc.**

T: 519-743-6500 x1225 | [dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)

520 Bingham Centre Drive, Kitchener, Ontario N2B 3X9

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**From:**

**Sent:** Wednesday, January 27, 2021 12:20 PM

**To:** Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>

**Cc:**

**Subject:** Municipal services in Hidden Valley

Good morning Dave

It was good to connect last week.

I've been talking with my neighbour [redacted] ; she always has a keen interest in everything Hidden Valley. She shared your email address.

Please keep me in the loop regarding developments for municipal services in Hidden Valley.

Jake

**BENJAMINS REALTY**  
INC.

Broker of Record

**Mobile**

**Email:**

**Office:** 26 River Valley Dr.

Kitchener, N2C 2V6 (side entrance)

---

**From:** Dave Wilhelm  
**Sent:** Monday, February 1, 2021 9:46 AM  
**To:** Asma Naseem  
**Cc:** Gemma Charlebois; Zenova E. Gentles  
**Subject:** FW: 74 Canters Close

[For file....Dave](#)

---

**Client First | Right Solution | Work Together** Dave Wilhelm, P.Eng.  
*Manager, Water/Wastewater*  
Kitchener x1225

---

**From:**   
**Sent:** Friday, January 29, 2021 4:14 PM  
**To:** Dave Wilhelm  
**Subject:** RE: 74 Canters Close

Thank you Dave,

I am good and now understand the process.

We are on septic much like the remaining houses in Hidden Valley as there was no sewer servicing when we built the house. As you probably know, the neighbourhood before coming into Hidden Valley does have a pump station and that neighbourhood is serviced by city sewers. I am not sure of their experience, pros/cons and what can go wrong with the pump station and consequences, odours or environmental impact etc.... This is the first house I have lived in where we are on septic but it is working well for us, we service it regularly and we have had no issues since 2006 when we had the house build and moved in.

I will wait to see and evaluate the recommendations of the study.

Have a great weekend!

---

**From:** Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>

**Sent:** January-29-21 2:47 PM

**To**

**Subject:** RE: 74 Canters Close

Currently we are informing the residents, landowners, government agencies and other affected parties (stakeholders) that a Class EA sanitary servicing study is in progress for the Upper Hidden Valley area.

After we compile the initial feedback we receive; consider design issues; and complete studies we will identify a list of sanitary servicing alternatives. At that point we will hold a virtual, pre-recorded meeting to inform the stakeholders of the alternatives that are being considered and request feedback.

Based on that feedback and the results of various studies, we will evaluate the alternatives and select the Preferred Alternative which the City can move forward with. The Preferred Alternative will be summarized in a report which will be posted for public review. There will be an appeal process available at that time. Pending no appeals, the City will implement the Preferred Alternative.

We have your name on the mailing list so we will notify you via email of the timing for the virtual, online meeting.

Please let me know if you have any questions or have anything you'd like us to consider at this time. Thanks again for your interest in the study....Dave

---

**Dave Wilhelm, P.Eng. | Manager, Water/Wastewater  
MTE Consultants Inc.**

T: 519-743-6500 x1225 | [dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)

---

**From:**

**Sent:** Thursday, January 28, 2021 5:49 PM

**To:** Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>

**Subject:** RE: 74 Canters Close

Thank you Dave,

I did receive your letter and I am not sure as to what the next steps would be in your study or what input/questions you would have of the residents.

Thanks

---

**From:** Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>  
**Sent:** January-28-21 4:25 PM  
**To:**  
**Subject:** RE: 74 Canters Close

Thank you for your interest in this study Mike.  
Dave

---

**Dave Wilhelm, P.Eng. | Manager, Water/Wastewater  
MTE Consultants Inc.**

T: 519-743-6500 x1225 | [dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)  
520 Bingemans Centre Drive, Kitchener, Ontario N2B 3X9  
[www.mte85.com](http://www.mte85.com) | [Twitter](#) | [LinkedIn](#) | [Instagram](#) | [Facebook](#)

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---

**From:**  
**Sent:** Thursday, January 28, 2021 4:15 PM  
**To:** Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>  
**Subject:** 74 Canters Close

Our address is above and the best way to reach me is email or my mobile number below.

Thank you

---

**From:** Dave Wilhelm  
**Sent:** Wednesday, January 27, 2021 4:50 PM  
**To:**  
**Cc:** Gemma Charlebois; Zenova E. Gentles  
**Subject:** FW: Hidden Valley Study Updates

[For file....Thanks](#)

---

**Client First | Right Solution | Work Together** Dave Wilhelm, P.Eng.  
*Manager, Water/Wastewater*  
Kitchener x1225

**From:**  
**Sent:** Wednesday, January 27, 2021 3:55 PM  
**To** ; ; Dave Wilhelm  
**Subject:** Hidden Valley Study Updates

Good Afternoon,

Please add both our email address ( is cc'd on this email) to your contact list for the Hidden Valley water/wastewater study updates.

We reside at 2036 Hidden Valley Crescent.

Thank you,

---

**From:** Dave Wilhelm  
**Sent:** Wednesday, January 27, 2021 4:47 PM  
**To:**  
**Cc:** Gemma Charlebois; Zenova E. Gentles  
**Subject:** FW: Hidden Valley pump station study

For file....Thanks

Client First | Right Solution | Work Together Dave Wilhelm, P.Eng.  
Manager, Water/Wastewater  
Kitchener x1225

-----Original Message-----

**From:**  
**Sent:** Wednesday, January 27, 2021 3:42 PM  
**To:** Dave Wilhelm <dwilhelm@mte85.com>  
**Subject:** Hidden Valley pump station study

> Good afternoon Dave - thank you so much for returning my call and answering my questions. I would greatly appreciate it if you could please add me to the email list with updates on the study.

>

> Thanks so much,

> 50 River Valley Drive  
> Kitchener

---

**From:** Dave Wilhelm  
**Sent:** Thursday, February 4, 2021 12:39 PM  
**To:** /  
**Cc:** Zenova E. Gentles; Gemma Charlebois  
**Subject:** FW: Hidden Valley Road EA Study & Sanitary Pump/services Study  
**Attachments:** HiddenValleySewerStudyProposal 2.pdf

[For file....Dave](#)

---

**Client First | Right Solution | Work Together** Dave Wilhelm, P.Eng.  
*Manager, Water/Wastewater*  
Kitchener x1225

---

**From:**  
**Sent:** Thursday, February 4, 2021 12:33 PM  
**To:** Dave Wilhelm  
**Cc:** Katie.wood@kitchener.ca  
**Subject:** Hidden Valley Road EA Study & Sanitary Pump/services Study

Hello Dave and Katie,

My family owns 681 and 691 Hidden Valley Road and we are third generation Hidden Valley Road residents.

We received your letter from January 6th and are interested speaking with you to discuss the study you have proposed, its scope and anticipated completion date.

We currently have the 681 Hidden Valley Road property listed for sale and have done some schematic planning and development studies with MHBC to determine an estimated property value and prepare some options for future lot development using a Condo Plan format with a narrow internal cul-de-sac and 5-6 one acre lots. This plan is preliminary, and we do not intend to prepare any severances or development plans on our own. We anticipate that a Developer will purchase the land in the near future and process the necessary plans and studies through the City and Regional agencies.

We worked extensively with Brandon Sloan at the City in our initial pre-meetings and City feedback sessions, and he felt confident that our proposal was something that City Planning could work with as a concept for development. Our current understanding is that each lot could have its own septic and potential for a well or City water services given the Estate Residential zoning and proposed minimum one acre lot size. We understand that since our property is identified on the Masterplan for 'Hidden Valley Heritage Corridor', there is currently no plan to widen the street and bring City services to our property, and as such, wells and septic are our only current option. We are excited to learn that the City is preparing these servicing studies, and expect that the City will include plans to bring services to our property, or allow septic and wells as part of the current study.

Please let us know if we can set up a phone call or zoom meeting. And we would like to be included in all future correspondence regarding the studies.

Our family has seen all the development in our Hidden Valley community over the last 30 years, and have supported the thoughtful estate residential planning. We are looking forward to working with the City to coordinate services to our parcel and the potential to sell our property for development using similar standards as have already been approved by the City and Region for other parcels in the Hidden Valley Community.

We look forward to hearing from you.

Regards,

---

**From:** Dave Wilhelm  
**Sent:** Wednesday, January 27, 2021 8:41 AM  
**To:** Gemma Charlebois  
**Cc:** ; Zenova E. Gentles  
**Subject:** FW: MTE File No. C48301-100

For file....Thanks

---

**Client First | Right Solution | Work Together** Dave Wilhelm, P.Eng.  
*Manager, Water/Wastewater*  
Kitchener x1225

**From:**  
**Sent:** Tuesday, January 26, 2021 5:44 PM  
**To:** Dave Wilhelm  
**Cc:** katie.wood@kitchener.ca  
**Subject:** Re: MTE File No. C48301-100

Hi Dave, I am a resident of 86 Canters Close Kitchener.

Sunny

On Tue., Jan. 26, 2021, 5:41 p.m. Dave Wilhelm, <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)> wrote:

Thanks for your email ! It's important that we receive feedback like this. Do you mind providing your house address so we can keep track of your request?

Thanks again, Dave

---

**Dave Wilhelm, P.Eng. | Manager, Water/Wastewater**  
**MTE Consultants Inc.**  
T: 519-743-6500 x1225 | [dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)  
520 Bingemans Centre Drive, Kitchener, Ontario N2B 3X9  
[www.mte85.com](http://www.mte85.com) | [Twitter](#) | [LinkedIn](#) | [Instagram](#) | [Facebook](#)

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**From:**

**Sent:** Tuesday, January 26, 2021 3:17 PM

**To:** Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>

**Cc:** [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)

**Subject:** Re: MTE File No. C48301-100

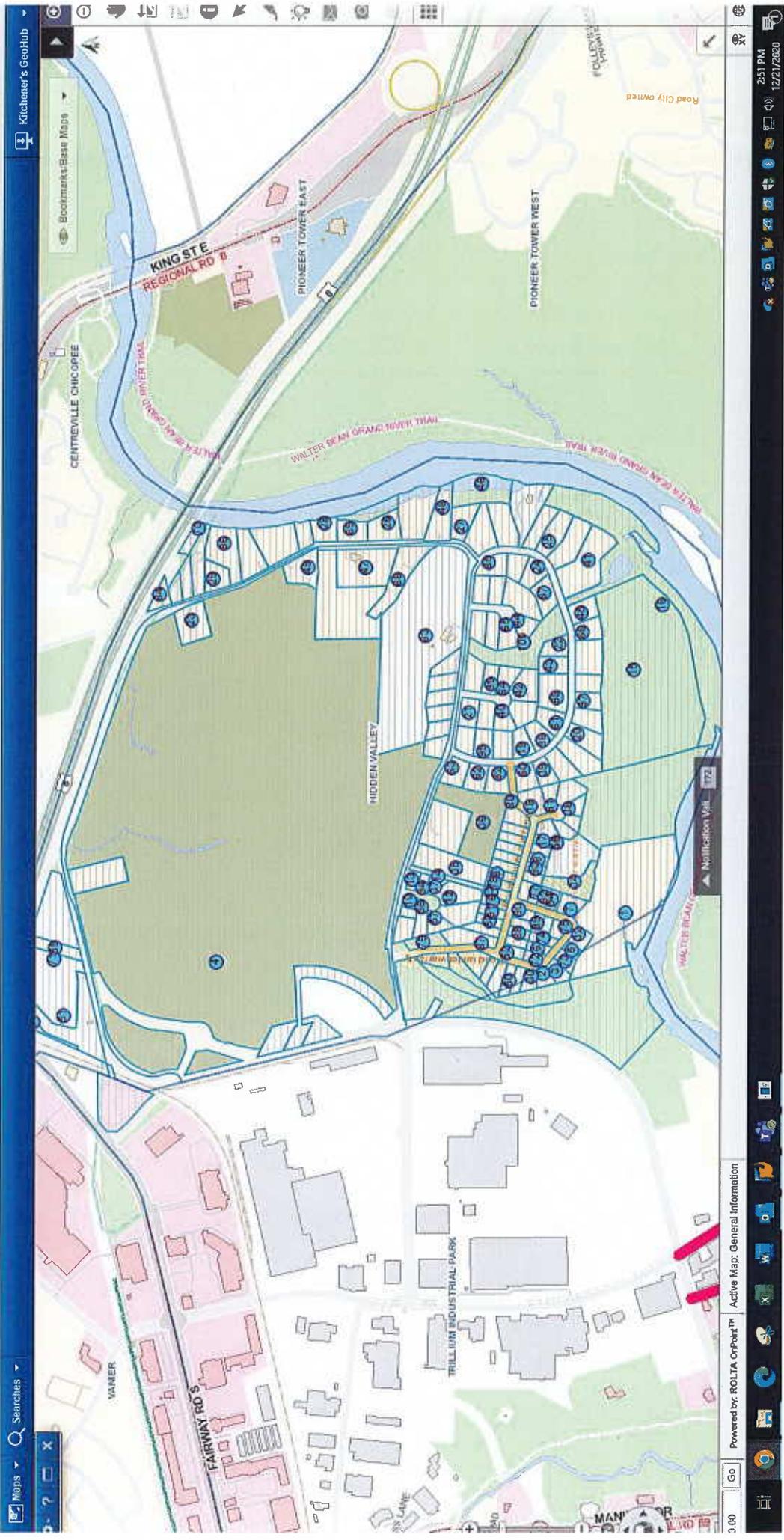
Hi Dave,

My name is \_\_\_\_\_ and received a letter couple of weeks ago regards to Hidden valley Sanitary Pumping station study (refer to subject file number).

I am a resident of Hidden Valley neighborhood and very excited to hear that city of Kitchener is undertaking this study to include all the houses in the Hidden Valley area and connect to city wastewater & sewer system and hence eliminating the need for septic tank for each individual house. I am looking forward to having my house connected to the city wastewater/sewer systems.

Please keep me included in the communication process and if you can share some timelines that would be much appreciated.

thanks,





## Laura Anderson

---

**From:** Katie Wood  
**Sent:** Friday, December 18, 2020 8:53 AM  
**To:** Laura Anderson  
**Subject:** Hidden Valley EA - Contact info  
**Attachments:** CONFIDENTIAL\_HV\_draft\_landuse\_parcellIDs.pdf

Hey Laura,

Could you help me get mailing addresses for the residents/property owners within the boundary of our EA study area? I have attached a map for reference. Let me know how I can help.

Sincerely,

*Katie Wood*, C.E.T.

Project Manager | Development Engineering | City of Kitchener  
519-741-2200 ext. 7135 | TTY 1-866-969-9994 | [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)



---

**From:** monica.maika@araheritage.ca  
**Sent:** Thursday, January 7, 2021 9:26 AM  
**To:** 'Maxime Picard'  
**Cc:** Asma Naseem; Zenova E. Gentles; Gemma Charlebois; 'Victoria'  
**Subject:** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Good morning Maxime,

Hope you are doing well in this New Year. ARA has been contracted to complete a Stage 1 archaeological assessment as part of the project. We received project mapping this week, and will be sending an invitation to participate to the HWN. No fieldwork will occur until ground conditions meet MHSTCI standards, so we are likely a couple months away from any site visits that will occur.

We will provide more information regarding the archaeology as soon as we are able.

Thank you for your interest in the archaeological portion of the project and we look forward to working with you again.

Regards,

Monica

---

**From:** Maxime Picard  
**Sent:** January 7, 2021 9:14 AM  
**To:** monica.maika@araheritage.ca  
**Cc:** Asma Naseem ; Zenova E. Gentles ; Gemma Charlebois  
**Subject:** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Good morning Monica,

Can you please let us know where you are with the archaeological studies of this project ?

Thanks and best regards,

Maxime

---

**From:** Gemma Charlebois  
**Sent:** Thursday, January 7, 2021 8:56 AM  
**To:** 'Maxime Picard'  
**Cc:** monica.maika@ar heritage.ca; Asma Naseem; Zenova E. Gentles  
**Subject:** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Maxime,  
Archeological studies are planned as part of the EA. Monica Maika with ARA (cc'd) is the archeologist for this project. Please direct any questions to her and cc MTE.  
Thanks.  
Gemma

---

**Client First | Right Solution | Work Together** Gemma Charlebois, M.A.Sc., P.Eng.  
*Design Engineer*  
Kitchener x1227

---

**From:** Maxime Picard  
**Sent:** January 7, 2021 8:16 AM  
**To:** Zenova E. Gentles ; cfosterpengelly@grandriver.ca; Planning@Grandriver.ca; Mark.LaForme@mncfn.ca; Fawn.Sault@mncfn.ca; Megan.DeVries@mncfn.ca; tanyahill-montour@sixnations.ca; dlaforme@sixnations.ca; lonnybomberry@sixnations.ca; tworowarchaeology@gmail.com; williams.todde@gmail.com; Rob.Dobos@ec.gc.ca; SAROntario@ontario.ca; amy.shaw@ontario.ca; SAROntario@ontario.ca; lee.orphan@ontario.ca; Crystal.Lafrance@ontario.ca; eanotification.swregion@ontario.ca; tammy.verhaeghe@ontario.ca; ian.thornton@ontario.ca; jennifer.harvard@ontario.ca; MNRF.Ayl.Planners@ontario.ca; katie.wood@kitchener.ca; Linda.Cooper@kitchener.ca; Laura.anderson@kitchener.ca; Admin@kitchener.ca; john.gazzola@kitchener.ca; shevaughne.wynter@hydroone.com; moneil@regionofwaterloo.ca; mkroker@regionofwaterloo.ca; Jlane@regionofwaterloo.ca; Jennifer\_Benedict@cpr.ca; jack\_carello@cpr.ca  
**Cc:** Gemma Charlebois ; Dave Wilhelm ; katie.wood@kitchener.ca  
**Subject:** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Good morning Zenova,

This is to acknowledge reception of you email and notice on the Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA.

Could you please clarify if any archaeological studies are anticipated as part of this EA process ?

Thanks and best regards,

Maxime Picard



## NATION HURONNE-WENDAT Bureau du Nionwentsïo

**Maxime Picard, B. Sc. A.**

Coordonnateur de projets - Ontario

255, Place Chef Michel-Laveau

Wendake (Qc) G0A 4V0

Téléphone : 418-843-3767 # 2105

Courriel : maxime.picard@cnhw.qc.ca



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**De :** Zenova E. Gentles [<mailto:ZGentles@mte85.com>]

**Envoyé :** 6 janvier 2021 16:52

**À :** 'cfosterpengelly@grandriver.ca' <[cfosterpengelly@grandriver.ca](mailto:cfosterpengelly@grandriver.ca)>; 'Planning@Grandriver.ca' <[Planning@Grandriver.ca](mailto:Planning@Grandriver.ca)>; 'Mark.LaForme@mncfn.ca' <[Mark.LaForme@mncfn.ca](mailto:Mark.LaForme@mncfn.ca)>; 'Fawn.Sault@mncfn.ca' <[Fawn.Sault@mncfn.ca](mailto:Fawn.Sault@mncfn.ca)>; 'Megan.DeVries@mncfn.ca' <[Megan.DeVries@mncfn.ca](mailto:Megan.DeVries@mncfn.ca)>; 'tanyahill-montour@sixnations.ca' <[tanyahill-montour@sixnations.ca](mailto:tanyahill-montour@sixnations.ca)>; 'dlaforme@sixnations.ca' <[dlaforme@sixnations.ca](mailto:dlaforme@sixnations.ca)>; 'lonnybomberry@sixnations.ca' <[lonnybomberry@sixnations.ca](mailto:lonnybomberry@sixnations.ca)>; 'tworowarchaeology@gmail.com' <[tworowarchaeology@gmail.com](mailto:tworowarchaeology@gmail.com)>; 'williams.todde@gmail.com' <[williams.todde@gmail.com](mailto:williams.todde@gmail.com)>; 'maxime.picard@cnhw.qc.ca' <[maxime.picard@cnhw.qc.ca](mailto:maxime.picard@cnhw.qc.ca)>; 'Rob.Dobos@ec.gc.ca' <[Rob.Dobos@ec.gc.ca](mailto:Rob.Dobos@ec.gc.ca)>; 'SAROntario@ontario.ca' <[SAROntario@ontario.ca](mailto:SAROntario@ontario.ca)>; 'amy.shaw@ontario.ca' <[amy.shaw@ontario.ca](mailto:amy.shaw@ontario.ca)>; 'SAROntario@ontario.ca' <[SAROntario@ontario.ca](mailto:SAROntario@ontario.ca)>; 'lee.orphan@ontario.ca' <[lee.orphan@ontario.ca](mailto:lee.orphan@ontario.ca)>; 'Crystal.Lafrance@ontario.ca' <[Crystal.Lafrance@ontario.ca](mailto:Crystal.Lafrance@ontario.ca)>; 'eanotification.swregion@ontario.ca' <[eanotification.swregion@ontario.ca](mailto:eanotification.swregion@ontario.ca)>; 'tammy.verhaeghe@ontario.ca' <[tammy.verhaeghe@ontario.ca](mailto:tammy.verhaeghe@ontario.ca)>; 'ian.thornton@ontario.ca' <[ian.thornton@ontario.ca](mailto:ian.thornton@ontario.ca)>; 'jennifer.harvard@ontario.ca' <[jennifer.harvard@ontario.ca](mailto:jennifer.harvard@ontario.ca)>; 'MNRF.Ayl.Planners@ontario.ca' <[MNRF.Ayl.Planners@ontario.ca](mailto:MNRF.Ayl.Planners@ontario.ca)>; 'katie.wood@kitchener.ca' <[katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)>; 'Linda.Cooper@kitchener.ca' <[Linda.Cooper@kitchener.ca](mailto:Linda.Cooper@kitchener.ca)>; 'Laura.anderson@kitchener.ca' <[Laura.anderson@kitchener.ca](mailto:Laura.anderson@kitchener.ca)>; 'Admin@kitchener.ca' <[Admin@kitchener.ca](mailto:Admin@kitchener.ca)>; 'john.gazzola@kitchener.ca' <[john.gazzola@kitchener.ca](mailto:john.gazzola@kitchener.ca)>; 'shevaughne.wynter@hydroone.com' <[shevaughne.wynter@hydroone.com](mailto:shevaughne.wynter@hydroone.com)>; 'moneil@regionofwaterloo.ca' <[moneil@regionofwaterloo.ca](mailto:moneil@regionofwaterloo.ca)>; 'mkroker@regionofwaterloo.ca' <[mkroker@regionofwaterloo.ca](mailto:mkroker@regionofwaterloo.ca)>; 'Jlane@regionofwaterloo.ca' <[Jlane@regionofwaterloo.ca](mailto:Jlane@regionofwaterloo.ca)>; 'Jennifer\_Benedict@cpr.ca' <[Jennifer\\_Benedict@cpr.ca](mailto:Jennifer_Benedict@cpr.ca)>; 'jack\_carello@cpr.ca' <[jack\\_carello@cpr.ca](mailto:jack_carello@cpr.ca)>

**Cc :** Gemma Charlebois <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>; Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>;

'katie.wood@kitchener.ca' <[katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)>

**Objet :** 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Good afternoon:

Please find attached a digital copy of Notice of Commencement informing you of the Upper Hidden Valley Sanitary Pumping Station and Forcemain Class EA.

This study is being carried out in accordance with the requirements of the Environmental Assessment Act, as a Schedule B Municipal Class Environmental Assessment. All notices related to this project can be found on the City of Kitchener's website at the following link: <https://www.kitchener.ca/en/city-services/environmental-assessments.aspx>

The purpose of the current study is to define a sanitary servicing solution that will support responsible development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan (June 2019). The servicing solution will include identifying a sanitary pumping station location and forcemain alignment.

We would welcome the opportunity to meet with you to discuss this study should you wish to do so. Please feel free to call or email me using the contact details below should you require additional information. We look forward to hearing from you.

Regards,

---

**Zenova Gentles, B.Sc | Administrative Assistant**  
**MTE Consultants Inc.**

T: 519-743-6500 x1359 | [ZGentles@mte85.com](mailto:ZGentles@mte85.com)

520 Bingham Centre Drive, Kitchener, Ontario N2B 3X9

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Courriel : maxime.picard@cnhw.qc.ca



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**De :** Gemma Charlebois [<mailto:GCharlebois@mte85.com>]

**Envoyé :** 7 janvier 2021 08:56

**À :** 'Maxime Picard' <[maxime.picard@cnhw.qc.ca](mailto:maxime.picard@cnhw.qc.ca)>

**Cc :** [monica.maika@araheritage.ca](mailto:monica.maika@araheritage.ca); Asma Naseem <[ANaseem@mte85.com](mailto:ANaseem@mte85.com)>; Zenova E. Gentles <[ZGentles@mte85.com](mailto:ZGentles@mte85.com)>

**Objet :** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Maxime,

Archeological studies are planned as part of the EA. Monica Maika with ARA (cc'd) is the archeologist for this project. Please direct any questions to her and cc MTE.

Thanks.

Gemma

---

**Gemma Charlebois, M.A.Sc., P.Eng. | Design Engineer**  
**MTE Consultants Inc.**

T: 519-743-6500 x1227 | [GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)

---

**From:** Maxime Picard <[maxime.picard@cnhw.qc.ca](mailto:maxime.picard@cnhw.qc.ca)>

**Sent:** January 7, 2021 8:16 AM

**To:** Zenova E. Gentles <[ZGentles@mte85.com](mailto:ZGentles@mte85.com)>; [cfosterpengelly@grandriver.ca](mailto:cfosterpengelly@grandriver.ca); [Planning@Grandriver.ca](mailto:Planning@Grandriver.ca); [Mark.LaForme@mncfn.ca](mailto:Mark.LaForme@mncfn.ca); [Fawn.Sault@mncfn.ca](mailto:Fawn.Sault@mncfn.ca); [Megan.DeVries@mncfn.ca](mailto:Megan.DeVries@mncfn.ca); [tanyahill-montour@sixnations.ca](mailto:tanyahill-montour@sixnations.ca); [dlaforme@sixnations.ca](mailto:dlaforme@sixnations.ca); [lonnybomberry@sixnations.ca](mailto:lonnybomberry@sixnations.ca); [tworowarchaeology@gmail.com](mailto:tworowarchaeology@gmail.com); [williams.todde@gmail.com](mailto:williams.todde@gmail.com); [Rob.Dobos@ec.gc.ca](mailto:Rob.Dobos@ec.gc.ca); [SAROntario@ontario.ca](mailto:SAROntario@ontario.ca); [amy.shaw@ontario.ca](mailto:amy.shaw@ontario.ca); [SAROntario@ontario.ca](mailto:SAROntario@ontario.ca); [lee.orphan@ontario.ca](mailto:lee.orphan@ontario.ca); [Crystal.Lafrance@ontario.ca](mailto:Crystal.Lafrance@ontario.ca); [eanotification.swregion@ontario.ca](mailto:eanotification.swregion@ontario.ca); [tammy.verhaeghe@ontario.ca](mailto:tammy.verhaeghe@ontario.ca); [ian.thornton@ontario.ca](mailto:ian.thornton@ontario.ca); [jennifer.harvard@ontario.ca](mailto:jennifer.harvard@ontario.ca); [MNR.F.Ayl.Planners@ontario.ca](mailto:MNR.F.Ayl.Planners@ontario.ca); [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca); [Linda.Cooper@kitchener.ca](mailto:Linda.Cooper@kitchener.ca); [Laura.anderson@kitchener.ca](mailto:Laura.anderson@kitchener.ca); [Admin@kitchener.ca](mailto:Admin@kitchener.ca); [john.gazzola@kitchener.ca](mailto:john.gazzola@kitchener.ca); [shevaughne.wynter@hydroone.com](mailto:shevaughne.wynter@hydroone.com); [moneil@regionofwaterloo.ca](mailto:moneil@regionofwaterloo.ca); [mkroker@regionofwaterloo.ca](mailto:mkroker@regionofwaterloo.ca);

[Jlane@regionofwaterloo.ca](mailto:Jlane@regionofwaterloo.ca); [Jennifer\\_Benedict@cpr.ca](mailto:Jennifer_Benedict@cpr.ca); [jack\\_carello@cpr.ca](mailto:jack_carello@cpr.ca)

**Cc:** Gemma Charlebois <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>; Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>; [katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)

**Subject:** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Good morning Zenova,

This is to acknowledge reception of your email and notice on the Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA.

Could you please clarify if any archaeological studies are anticipated as part of this EA process ?

Thanks and best regards,

Maxime Picard



**NATION HURONNE-WENDAT**  
**Bureau du Nionwentsïo**

**Maxime Picard, B. Sc. A.**  
Coordonnateur de projets - Ontario

255, Place Chef Michel-Laveau  
Wendake (Qc) G0A 4V0  
Téléphone : 418-843-3767 # 2105  
Courriel : [maxime.picard@cnhw.qc.ca](mailto:maxime.picard@cnhw.qc.ca)



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**De :** Zenova E. Gentles [<mailto:ZGentles@mte85.com>]

**Envoyé :** 6 janvier 2021 16:52

**À :** 'cfosterpengelly@grandriver.ca' <[cfosterpengelly@grandriver.ca](mailto:cfosterpengelly@grandriver.ca)>; 'Planning@Grandriver.ca' <[Planning@Grandriver.ca](mailto:Planning@Grandriver.ca)>; 'Mark.LaForme@mncfn.ca' <[Mark.LaForme@mncfn.ca](mailto:Mark.LaForme@mncfn.ca)>; 'Fawn.Sault@mncfn.ca' <[Fawn.Sault@mncfn.ca](mailto:Fawn.Sault@mncfn.ca)>; 'Megan.DeVries@mncfn.ca' <[Megan.DeVries@mncfn.ca](mailto:Megan.DeVries@mncfn.ca)>; 'tanyahill-montour@sixnations.ca' <[tanyahill-montour@sixnations.ca](mailto:tanyahill-montour@sixnations.ca)>; 'dlaforme@sixnations.ca' <[dlaforme@sixnations.ca](mailto:dlaforme@sixnations.ca)>; 'lonnybomberry@sixnations.ca' <[lonnybomberry@sixnations.ca](mailto:lonnybomberry@sixnations.ca)>; 'tworowarchaeology@gmail.com' <[tworowarchaeology@gmail.com](mailto:tworowarchaeology@gmail.com)>; 'williams.todde@gmail.com' <[williams.todde@gmail.com](mailto:williams.todde@gmail.com)>; 'maxime.picard@cnhw.qc.ca' <[maxime.picard@cnhw.qc.ca](mailto:maxime.picard@cnhw.qc.ca)>; 'Rob.Dobos@ec.gc.ca' <[Rob.Dobos@ec.gc.ca](mailto:Rob.Dobos@ec.gc.ca)>; 'SAROntario@ontario.ca' <[SAROntario@ontario.ca](mailto:SAROntario@ontario.ca)>; 'amy.shaw@ontario.ca' <[amy.shaw@ontario.ca](mailto:amy.shaw@ontario.ca)>;

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<[eanotification.swregion@ontario.ca](mailto:eanotification.swregion@ontario.ca)>; 'tammy.verhaeghe@ontario.ca' <[tammy.verhaeghe@ontario.ca](mailto:tammy.verhaeghe@ontario.ca)>;  
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'Laura.anderson@kitchener.ca' <[Laura.anderson@kitchener.ca](mailto:Laura.anderson@kitchener.ca)>; 'Admin@kitchener.ca' <[Admin@kitchener.ca](mailto:Admin@kitchener.ca)>;  
'john.gazzola@kitchener.ca' <[john.gazzola@kitchener.ca](mailto:john.gazzola@kitchener.ca)>; 'shevaughne.wynter@hydroone.com'  
<[shevaughne.wynter@hydroone.com](mailto:shevaughne.wynter@hydroone.com)>; 'moneil@regionofwaterloo.ca' <[moneil@regionofwaterloo.ca](mailto:moneil@regionofwaterloo.ca)>;  
'mkroker@regionofwaterloo.ca' <[mkroker@regionofwaterloo.ca](mailto:mkroker@regionofwaterloo.ca)>; 'Jlane@regionofwaterloo.ca'  
<[Jlane@regionofwaterloo.ca](mailto:Jlane@regionofwaterloo.ca)>; 'Jennifer\_Benedict@cpr.ca' <[Jennifer\\_Benedict@cpr.ca](mailto:Jennifer_Benedict@cpr.ca)>; 'jack\_carello@cpr.ca'  
<[jack\\_carello@cpr.ca](mailto:jack_carello@cpr.ca)>  
**Cc :** Gemma Charlebois <[GCharlebois@mte85.com](mailto:GCharlebois@mte85.com)>; Dave Wilhelm <[dwilhelm@mte85.com](mailto:dwilhelm@mte85.com)>;  
'katie.wood@kitchener.ca' <[katie.wood@kitchener.ca](mailto:katie.wood@kitchener.ca)>  
**Objet :** 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Good afternoon:

Please find attached a digital copy of Notice of Commencement informing you of the Upper Hidden Valley Sanitary Pumping Station and Forcemain Class EA.

This study is being carried out in accordance with the requirements of the Environmental Assessment Act, as a Schedule B Municipal Class Environmental Assessment. All notices related to this project can be found on the City of Kitchener's website at the following link: <https://www.kitchener.ca/en/city-services/environmental-assessments.aspx>

The purpose of the current study is to define a sanitary servicing solution that will support responsible development in the Hidden Valley area, as outlined in the Hidden Valley Land Use Master Plan (June 2019). The servicing solution will include identifying a sanitary pumping station location and forcemain alignment.

We would welcome the opportunity to meet with you to discuss this study should you wish to do so. Please feel free to call or email me using the contact details below should you require additional information. We look forward to hearing from you.

Regards,

---

**Zenova Gentles, B.Sc | Administrative Assistant**

**MTE Consultants Inc.**

T: 519-743-6500 x1359 | [ZGentles@mte85.com](mailto:ZGentles@mte85.com)

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**From:** Maxime Picard <maxime.picard@cnhw.qc.ca>  
**Sent:** Thursday, January 7, 2021 8:16 AM  
**To:** Zenova E. Gentles; cfosterpengelly@grandriver.ca; Planning@Grandriver.ca; Mark.LaForme@mncfn.ca; Fawn.Sault@mncfn.ca; Megan.DeVries@mncfn.ca; tanyahill-montour@sixnations.ca; dlaforme@sixnations.ca; lonnybomberry@sixnations.ca; tworowarchaeology@gmail.com; williams.todde@gmail.com; Rob.Dobos@ec.gc.ca; SAROntario@ontario.ca; amy.shaw@ontario.ca; SAROntario@ontario.ca; lee.orphan@ontario.ca; Crystal.Lafrance@ontario.ca; eanotification.swregion@ontario.ca; tammy.verhaeghe@ontario.ca; ian.thornton@ontario.ca; jennifer.harvard@ontario.ca; MNRF.Ayl.Planners@ontario.ca; katie.wood@kitchener.ca; Linda.Cooper@kitchener.ca; Laura.anderson@kitchener.ca; Admin@kitchener.ca; john.gazzola@kitchener.ca; shevaughne.wynter@hydroone.com; moneil@regionofwaterloo.ca; mkroker@regionofwaterloo.ca; Jlane@regionofwaterloo.ca; Jennifer\_Benedict@cpr.ca; jack\_carelo@cpr.ca  
**Cc:** Gemma Charlebois; Dave Wilhelm; katie.wood@kitchener.ca  
**Subject:** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Good morning Zenova,

This is to acknowledge reception of you email and notice on the Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA.

Could you please clarify if any archaeological studies are anticipated as part of this EA process ?

Thanks and best regards,

Maxime Picard



## NATION HURONNE-WENDAT Bureau du Nionwentsïo

**Maxime Picard, B. Sc. A.**

Coordonnateur de projets - Ontario

255, Place Chef Michel-Laveau

Wendake (Qc) G0A 4V0

Téléphone : 418-843-3767 # 2105

Courriel : maxime.picard@cnhw.qc.ca



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Think to the environment*

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**De :** Zenova E. Gentles [mailto:ZGentles@mte85.com]

**Envoyé :** 6 janvier 2021 16:52

**À :** 'cfosterpengelly@grandriver.ca' ; 'Planning@Grandriver.ca' ; 'Mark.LaForme@mncfn.ca' ; 'Fawn.Sault@mncfn.ca' ; 'Megan.DeVries@mncfn.ca' ; 'tanyahill-montour@sixnations.ca' ; 'dlaforme@sixnations.ca' ; 'lonnybomberry@sixnations.ca' ; 'tworowarchaeology@gmail.com' ; 'williams.todde@gmail.com' ; 'maxime.picard@cnhw.qc.ca' ; 'Rob.Dobos@ec.gc.ca' ; 'SAROntario@ontario.ca' ; 'amy.shaw@ontario.ca' ; 'SAROntario@ontario.ca' ; 'lee.orphan@ontario.ca' ; 'Crystal.Lafrance@ontario.ca' ; 'eanotification.swregion@ontario.ca' ; 'tammy.verhaeghe@ontario.ca' ; 'ian.thornton@ontario.ca' ; 'jennifer.harvard@ontario.ca' ; 'MNRF.Ayl.Planners@ontario.ca' ; 'katie.wood@kitchener.ca' ; 'Linda.Cooper@kitchener.ca' ; 'Laura.anderson@kitchener.ca' ; 'Admin@kitchener.ca' ; 'john.gazzola@kitchener.ca' ; 'shevaughne.wynter@hydroone.com' ; 'moneil@regionofwaterloo.ca' ; 'mkroker@regionofwaterloo.ca' ; 'Jlane@regionofwaterloo.ca' ; 'Jennifer\_Benedict@cpr.ca' ; 'jack\_carello@cpr.ca'

**Cc :** Gemma Charlebois ; Dave Wilhelm ; 'katie.wood@kitchener.ca'

**Objet :** 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Good afternoon:

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Regards,

---

**Zenova Gentles, B.Sc | Administrative Assistant**  
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**From:** Tanya Hill-Montour <tanyahill-montour@sixnations.ca>  
**Sent:** Thursday, January 7, 2021 9:05 AM  
**To:** Zenova E. Gentles; 'cfosterpengelly@grandriver.ca'; 'Planning@Grandriver.ca'; Dawn LaForme; Lonny Bomberry; 'SAROntario@ontario.ca'; 'amy.shaw@ontario.ca'; 'SAROntario@ontario.ca'; 'lee.orphan@ontario.ca'; 'Crystal.Lafrance@ontario.ca'; 'eanotification.swregion@ontario.ca'; 'tammy.verhaeghe@ontario.ca'; Robin Linn; 'ian.thornton@ontario.ca'; 'jennifer.harvard@ontario.ca'; 'MNRFAyl.Planners@ontario.ca'; 'katie.wood@kitchener.ca'; 'Linda.Cooper@kitchener.ca'; 'Laura.anderson@kitchener.ca'; 'Admin@kitchener.ca'; 'john.gazzola@kitchener.ca'; 'shevaughne.wynter@hydroone.com'; 'moneil@regionofwaterloo.ca'; 'mkroker@regionofwaterloo.ca'; 'Jlane@regionofwaterloo.ca'; 'Jennifer\_Benedict@cpr.ca'; 'jack\_carello@cpr.ca'  
**Cc:** Gemma Charlebois; Dave Wilhelm; 'katie.wood@kitchener.ca'  
**Subject:** RE: 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

Good morning Zenova,

Acknowledging that I have received this email. I have forwarded the notification email to our Six Nations of the Grand River Elected Council Consultation and Accommodation (CAP) team to set up a introduction meeting and discussion of the project.

Kind Regards,

**Tanya Hill-Montour** BA (Hons)  
Archaeology Supervisor  
Six Nations Lands & Resources  
(519) 753-0665

---

**From:** Zenova E. Gentles [mailto:ZGentles@mte85.com]  
**Sent:** January 6, 2021 4:52 PM  
**To:** 'cfosterpengelly@grandriver.ca'; 'Planning@Grandriver.ca'; 'Mark.LaForme@mncfn.ca'; 'Fawn.Sault@mncfn.ca'; 'Megan.DeVries@mncfn.ca'; Tanya Hill-Montour; Dawn LaForme; Lonny Bomberry; 'tworowarchaeology@gmail.com'; 'williams.todde@gmail.com'; 'maxime.picard@cnhw.qc.ca'; 'Rob.Dobos@ec.gc.ca'; 'SAROntario@ontario.ca'; 'amy.shaw@ontario.ca'; 'SAROntario@ontario.ca'; 'lee.orphan@ontario.ca'; 'Crystal.Lafrance@ontario.ca'; 'eanotification.swregion@ontario.ca'; 'tammy.verhaeghe@ontario.ca'; 'ian.thornton@ontario.ca'; 'jennifer.harvard@ontario.ca'; 'MNRFAyl.Planners@ontario.ca'; 'katie.wood@kitchener.ca'; 'Linda.Cooper@kitchener.ca'; 'Laura.anderson@kitchener.ca'; 'Admin@kitchener.ca'; 'john.gazzola@kitchener.ca'; 'shevaughne.wynter@hydroone.com'; 'moneil@regionofwaterloo.ca'; 'mkroker@regionofwaterloo.ca'; 'Jlane@regionofwaterloo.ca'; 'Jennifer\_Benedict@cpr.ca'; 'jack\_carello@cpr.ca'  
**Cc:** Gemma Charlebois; Dave Wilhelm; 'katie.wood@kitchener.ca'  
**Subject:** 48301-100 Upper Hidden Valley Sanitary Pumping Station and Forcemain Environmental Class EA

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Regards,

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**Zenova Gentles, B.Sc | Administrative Assistant**

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# Appendix G

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## Proposed Alternatives Evaluation

**UPPER HIDDEN VALLEY SANITARY PUMPING STATION AND FORCEMAIN  
PROPOSED ALTERNATIVE EVALUATION MATRIX AND PRELIMINARY EVALUATION – January 2022**

Criteria	Description	Option 1	Option 2	Option 2a	Option 3	Option 3a	Option 4
	General Description of Alternative	Do Nothing	Install Sanitary Pumping Station at Location A	Install Sanitary Pumping Station at Location A	Install Sanitary Pumping Station at Location B	Install Sanitary Pumping Station at Location B with part of service area to drain by gravity	Install Sanitary Pumping Station at Location C
<b>Natural Environment</b>	<p>How do the alternatives compare with respect to effects on vegetation, water quality, wildlife and aquatic habitat, wetlands, terrestrial resources, woodlands, species at risk?                      Note: LRT and River Rd Extension construction will alter landscape from current conditions.</p>		<p>Removal of some vegetation, including: hedgerow, Cultural Thicket and Coniferous Forest.</p> <p>No impacts to wetlands or aquatic habitat. Within 15m of PSW limits.</p> <p>No impacts to confirmed significant wildlife habitat.</p> <p>Within 10m of regulated JESA SAR habitat.</p> <p>Within 30m of Butternut.</p>	<p>Removal of some vegetation, including: hedgerow, Cultural Thicket and Coniferous Forest.</p> <p>No impacts to wetlands or aquatic habitat. Within 15m of PSW limits.</p> <p>No impacts to confirmed significant wildlife habitat.</p> <p>Within 10m of regulated JESA SAR habitat.</p> <p>Within 30m of Butternut records.</p>	<p>Removal of some vegetation, including: Cultural Thicket, Cultural Woodland and Deciduous Forest.</p> <p>Within 5m of Hofstetter Creek and PSW.</p> <p>Forcemain crossing of North Creek.</p> <p>Removal of some area identified significant wildlife habitat (deer wintering area).</p> <p>Removal of areas identified as regulated JESA SAR habitat</p> <p>Forcemain within 17m of Butternut.</p>	<p>Removal of some vegetation, including: Cultural Thicket, Cultural Woodland and Deciduous Forest.</p> <p>Within 5m of Hofstetter Creek and PSW.</p> <p>Forcemain crossing of North Creek.</p> <p>Removal of some area identified significant wildlife habitat (deer wintering area).</p> <p>Removal of areas identified as regulated JESA SAR habitat.</p> <p>Forcemain within 17m of Butternut.</p>	<p>Removal of some previously disturbed, cultural vegetation including: Cultural Meadow, Thicket and Woodland.</p> <p>No impacts to wetlands or aquatic habitat.</p> <p>No impacts to confirmed significant wildlife habitat on site. However, may impact local deer movement between ESPA's.</p> <p>Within 10m of regulated JESA SAR habitat.</p> <p>Within 40m of Butternut.</p> <p>Potential removal of sand dropseed (Regionally Significant).</p>

**UPPER HIDDEN VALLEY SANITARY PUMPING STATION AND FORCEMAIN  
PROPOSED ALTERNATIVE EVALUATION MATRIX AND PRELIMINARY EVALUATION – January 2022**

Criteria	Description	Option 1	Option 2	Option 2a	Option 3	Option 3a	Option 4
	General Description of Alternative	Do Nothing	Install Sanitary Pumping Station at Location A	Install Sanitary Pumping Station at Location A	Install Sanitary Pumping Station at Location B	Install Sanitary Pumping Station at Location B with part of service area to drain by gravity	Install Sanitary Pumping Station at Location C
	What are the induced impacts of each location? (i.e. How is the environment in other areas affected by change to the environment at this location) e.g. wildlife migration, increased predation.		Induced impacts are considered low likelihood as the site is used largely as active agricultural land.  Some potential evidence of deer foraging on remnant crops.  There is some potential to impact passive animal movement through agricultural lands.		Increased edge effects to the FOD community and JESA SAR habitat are likely.  Given proximity to headwater of Hofstetter Creek and the Hidden Valley PSW, direct hydrological connection to the Grand River corridor, indirect impacts to wetland and aquatic habitat have potential to occur.		Consideration for deer movement corridors may be required for this site given the identified Deer Yarding Habitat and available connections through the landscape, as well as prior observations of movement (LGL 2014).
	What is the impact of spills or overflows for each alternative? e.g. proximity to watercourses, wetlands, effect of topography		This option is 120m from nearest watercourse (North Creek), and 20 m from Hidden Valley PSW	This option is 120m from nearest watercourse (North Creek), and 20 m from Hidden Valley PSW	This option is closest to a watercourse and wetland, Hofstetter Creek headwater and Hidden Valley PSW is at 5m	This option is closest to a watercourse and wetland, Hofstetter Creek headwater and Hidden Valley PSW is at 5m	This option is 120m from nearest watercourse (West Creek), and 120 m from PSW.
	Note: The effect of LRT and River Road extension construction should be considered in evaluation of the Options.						
	A culvert will be installed at Hoffstetter Creek and Hidden Valley North Creek as part of River Road extension.				Forcemain crossing of North Creek, assumed to be under new culvert.	Forcemain crossing of North Creek, assumed to be under new culvert.	
<b>Total Score</b>							

**UPPER HIDDEN VALLEY SANITARY PUMPING STATION AND FORCEMAIN  
PROPOSED ALTERNATIVE EVALUATION MATRIX AND PRELIMINARY EVALUATION – January 2022**

Criteria	Description	Option 1	Option 2	Option 2a	Option 3	Option 3a	Option 4
	General Description of Alternative	Do Nothing	Install Sanitary Pumping Station at Location A	Install Sanitary Pumping Station at Location A	Install Sanitary Pumping Station at Location B	Install Sanitary Pumping Station at Location B with part of service area to drain by gravity	Install Sanitary Pumping Station at Location C
<b>Social Environment</b>	What impacts will the alternative have on the local community (e.g. noise, odour, traffic / parking, recreational facilities, trails, etc.)?		Residential neighbourhood is potentially sensitive to noise and odour impacts.	Residential neighbourhood is potentially sensitive to noise and odour impacts.	Minimal impact to society in general.	Minimal impact to society in general.	Less sensitive to potential noise, traffic and odour impacts.
	What are the anticipated impacts during construction (including forcemain install)?		Minimal construction impacts due. Forcemain and sewers to be installed at same time as road/subdivision construction.	Minimal construction impacts due. Forcemain and sewers to be installed at same time as road/subdivision construction.	Increased construction requirements due to longer forcemain.	Increased construction requirements due to longer forcemain.	Shortest forcemain.
	How will the pumping station contribute/detract from the community aesthetic?		Stations are designed to fit into neighbourhood but will not contribute to residential aesthetic.	Stations are designed to fit into neighbourhood but will not contribute to residential aesthetic.	Minimal aesthetic impact	Minimal aesthetic impact	Minimal aesthetic impact
<b>Total Score</b>							
<b>Heritage / Cultural Impacts</b>	What are the potential impacts upon the heritage significance of the heritage structures or landscapes and the potential disturbance of archaeological resources as identified in the Stage 1 Archeological Assessment?		Stage 2 pedestrian survey required	Stage 2 pedestrian survey required	Stage 2 test pit survey required*	Stage 2 test pit survey required*	Stage 2 combination survey required
	What are the potential impacts upon the heritage significance of the heritage structures or landscapes and the potential disturbance of and Cultural Heritage Assessment Report?		Disturbance of Hidden Valley Road due to sewer and forcemain construction	Disturbance of Hidden Valley Road due to sewer and forcemain construction	Disturbance of Hidden Valley Road due to sewer and forcemain construction  Disturbance of portion of Hidden Valley Road, Heritage Corridor for sewer construction	Disturbance of Hidden Valley Road due to sewer and forcemain construction  Disturbance of portion of Hidden Valley Road, Heritage Corridor for sewer construction	Disturbance of Hidden Valley Road due to sewer and forcemain construction
<b>Total Score</b>							

**UPPER HIDDEN VALLEY SANITARY PUMPING STATION AND FORCEMAIN  
PROPOSED ALTERNATIVE EVALUATION MATRIX AND PRELIMINARY EVALUATION – January 2022**

Criteria	Description	Option 1	Option 2	Option 2a	Option 3	Option 3a	Option 4
	General Description of Alternative	Do Nothing	Install Sanitary Pumping Station at Location A	Install Sanitary Pumping Station at Location A	Install Sanitary Pumping Station at Location B	Install Sanitary Pumping Station at Location B with part of service area to drain by gravity	Install Sanitary Pumping Station at Location C
<b>City Operations</b>	How do the alternatives compare with respect to the operation of the pump station (safety, emergency response, site access / parking, truck turning and access)	Does not meet operational requirements.	Residential areas are acceptable. Good vehicle access must be provided.	Residential areas are acceptable. Good vehicle access must be provided.	Traffic concerns due to frontage onto arterial road.	Traffic concerns due to frontage onto arterial road.	Commercial areas are acceptable. Traffic and access can be difficult.
<b>Total Score</b>							
<b>Technical</b>	How do the alternatives compare with respect to technical feasibility of construction and operation?	Does not meet technical objectives.	Deep gravity sewer to cross west creek	No deep gravity sewer to cross west creek	Deep gravity sewer to cross west creek Crosses Hofstetter creek Wetland proximity	No deep gravity sewer to cross west creek Crosses Hofstetter creek Wetland proximity	Deep gravity sewer to cross west creek Lands in vicinity have capability to flow by gravity to River Birch SPS or Wabanaki trunk sewer
	Are there concerns regarding slope stability of forcemain, flow re-routing*, regulatory / agency approval, groundwater table, surface drainage, location in floodplain, length of forcemain  *flow re-routing refers to ability to by-pass pump around the pump station or to pump to tanker trucks in an emergency.	Does not meet technical objectives	Length of trunk sewers: 1604 m Length of forcemain: 1086 m  Deep trunk sewer required.	Length of trunk sewers: 1199 m Length of forcemain: 1086 m  Minimal collection system.	Length of trunk sewers: 2525 m Length of forcemain: 1664 m  Extended collection system as well as multiple air release and drain chambers on forcemain. Deep trunk sewer required.	Length of trunk sewers: 2054 m Length of forcemain: 1664 m  Extended collection system as well as multiple air release and drain chambers on forcemain.	Length of trunk sewers: 1573 m Length of forcemain: 220 m  This option does not increase the serviceability of the adjacent lands. No technical advantage to this solution.
<b>Total Score</b>			<b>3</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>0</b>
<b>Servicing Potential</b>	How much of the developable lands, in accordance with the City's Land Use Master Plan can be serviced?						
	Consider serviceability of lands NOT including 2a, 2b, and 2c in Master Plan.	None	24.6 ha	22.7 ha (includes 5.9 ha by gravity)	24.6 ha	22.7 ha (includes 5.9 ha by gravity)	24.6 ha
	Consider serviceability of lands INCLUDING 2a, 2b, and 2c in Master Plan.		25.4 ha	23.5 ha	32.9 ha	30.9 ha	25.4 ha
<b>Total Score</b>			<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>2</b>

**UPPER HIDDEN VALLEY SANITARY PUMPING STATION AND FORCEMAIN  
PROPOSED ALTERNATIVE EVALUATION MATRIX AND PRELIMINARY EVALUATION – January 2022**

Criteria	Description	Option 1	Option 2	Option 2a	Option 3	Option 3a	Option 4
	General Description of Alternative	Do Nothing	Install Sanitary Pumping Station at Location A	Install Sanitary Pumping Station at Location A	Install Sanitary Pumping Station at Location B	Install Sanitary Pumping Station at Location B with part of service area to drain by gravity	Install Sanitary Pumping Station at Location C
<b>Costs</b>	How do the alternatives compare with respect to anticipated capital costs?	Nil	\$20.0 Million	\$17.5 Million	\$24.0 Million	\$21.4 Million	\$18.5 Million
<b>Total Score</b>			1	4	0	2	3
	<b>TOTAL SCORE</b>						
	<b>RANK</b>						

**Legend Score**

	Very high risk of adverse impact. Nearly infeasible.
	High risk of adverse impact. Undesirable.
	Risk of adverse impact. Numerous mitigation measures required.
	Low risk of adverse impact. Feasible and desirable solution.
	Lowest risk of adverse impact. Best solution.

Alternative Solutions Evaluation Matrix Scoring  
Upper Hidden Valley Sanitary Pump Station (SPS) and Forcemain EA

Evaluation Categories	Alternative Solutions					
	1	2	2a	3	3a	4
	Do Nothing	Install SPS at Location A	Install SPS at Location A with part of service area to drain by gravity	Install SPS at Location B	Install SPS at Location B with part of service area to drain by gravity	Install SPS at Location C
Natural Environment	1	2	3	1	1	3
Social Environment	1	2	2	3	4	3
Heritage/Cultural Impacts	1	3	3	2	2	3
City Operations	0	3	3	2	2	3
Technical	0	3	4	1	2	1
Servicing Potential	0	3	2	4	3	2
Costs	0	1	4	0	2	3
<b>Total</b>	<b>3</b>	<b>17</b>	<b>21</b>	<b>12</b>	<b>15</b>	<b>18</b>

**Scoring**

- 0 Nearly Infeasible. Very high risk.
- 1 Undesirable. High risk
- 2 Multiple mitigation measures required. Several risks
- 3 Feasible and desirable. Lower risk.
- 4 Lowest risk.