Scoped Environmental Impact Study

Proposed Development, Part of Lot 26, Concession 6, 301 Somme Street, Gloucester, Ontario, City of Ottawa

Douglas Rancier

July 27th, 2021

→ The Power of Commitment

GHD
347 Pido Road, Unit 29
Peterborough, Ontario K9J 6X7, Canada
T 1-705-749-3317 | **F** 1-705-749-9248 | **ghd.com**

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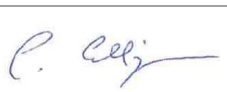
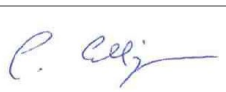
02	Stacey Zwiers	Chris Ellingwood		Chris Ellingwood		July 27th 2021

Executive summary

GHD was retained to complete a scoped Environmental Impact Study (EIS) for a proposed development located at 301 Somme Street, southeast of Rideau Road, described as Part of Lot 26, Concession 6 (from Rideau River Gloucester) in Gloucester, Ontario City of Ottawa. There is an existing roadside ditch that is located directly northwest of the subject property along Rideau Road that is directly connected to Findlay Creek Municipal Drain. As a result, the City of Ottawa and South Nation Conservation Authority (SNCA) requires a scoped EIS as part of the supporting documentation for the approval of the development.

The subject property is generally flat, is it currently a vacant lot comprised of a disturbed open field. There is no watercourse located directly on the subject property. There is an existing roadside ditch along Somme Street that conveys flows to both the ditch along Rideau Road and south into an existing stormwater management facility.

GHD biologists did not identify any significant terrestrial or aquatic species on a national, provincial or regional level within the subject property during the field surveys. From the banks of the roadside ditch northwest of the subject property that runs along Rideau Road and connects to a main watercourse, GHD is recommending a 15m naturally vegetive buffer to protect the form and function of the downstream watercourse. During the construction of the retaining wall there may be some disturbance within the 15m buffer which will be rehabilitated afterwards. No development should be located within this buffer.

The proposed development will not have a significant negative impact on any of the natural heritage features (i.e. watercourses) provided our recommendations are implemented.

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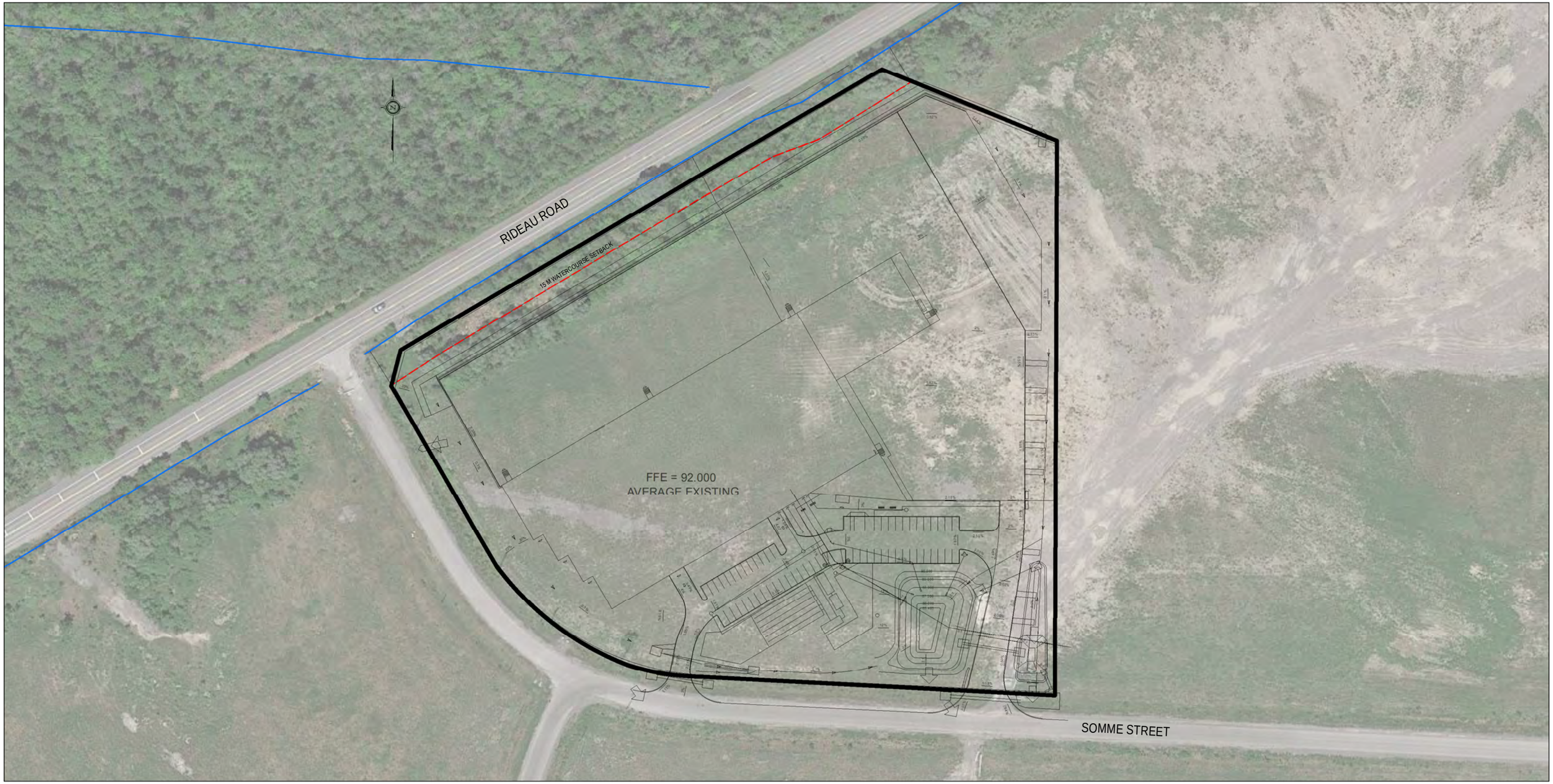
1. Introduction

1.1 Background

GHD Limited was retained by Civitas Group to complete a Scoped Environmental Impact Study (EIS) to fulfill the requirements of the City of Ottawa and South Nation Conservation Authority (SNCA) as part of the supporting documentation of the proposed development. The natural features associated with the site include a roadside ditch north of the property that connects to Findlay Creek east of the property. The report must meet the requirements of the City of Ottawa Official Plan and SNCA policies.

1.2 Location and Study Area

The property is located at 301 Somme Street, southeast of Rideau Road, described as Part of Lot 26, Concession 6 (from Rideau River Gloucester) in Gloucester, Ontario City of Ottawa. The study area includes open disturbed area and a roadside ditch (Figure 1).



LEGEND

Administrative

- Property Limit
- 15 m Drainage Ditch Setback

Hydrology

- Watercourse/Drainage
  Derived from Watercourse. City of Ottawa, 2021.

CITATIONS

- City of Ottawa. Watercourse. geoOttawa Web Application. 2021.
- Civitas Group. Site Plan: New Warehouse & Cross-Dock Facility [2001-A101]. 2021-05-10.
- Imagery obtained via Google, 2021. (Imagery data not verified).

REVISION & WORK HISTORY

REV	BY	DATE	DESCRIPTION	REQUEST
0	W.P.	2021-05-27	Initial map creation.	S.Z.
1	W.P.	2021-07-27	New CAD plan.	S.Z.

DATA DISCLAIMERS

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Map Projection: Transverse Mercator
Horizontal Datum: North American 1983
Grid: NAD 1983 MTM 9

SCALE
1 cm : 14 meters

0 8 16 24 32
Meters

CIVITAS ARCHITECTURE
301 Somme Street
Pt Lots 26, Con 6 from Rideau River
Geographic Township of Gloucester
City of Ottawa
South Nation Conservation Region Authority

SCOPPED ENVIRONMENTAL IMPACT STUDY
STUDY AREA & CONSTRAINTS

Project No. 11227714
Revision No.
Date 7/27/2021

N

FIGURE 1

Document Path: Q:\gis2\GIS\PROJECTS\11227000s\11227714\Layouts\202105_RPT001\11227714_202105_RPT001_GIS001 - Study Area and Constraints.mxd
Date Saved: 7/27/2021 1:36:04 PM

1.3 Study Rationale

The following policies apply to the property and the development planned, based on a review of the natural features on and adjacent to (those within 120 m) the site. The applicable policies have been included below.

- Department of Fisheries and Oceans (DFO)-*Fisheries Act* (2019)
- Provincial Policy Statement (2020)
- City of Ottawa Official Plan (Draft-November 2020)
- South Nation Conservation Authority Regulations and Policies

1.3.1 Federal Legislation

Fisheries Act

The purpose of the Fisheries Act, Fish and Fish Habitat Program is to help conserve and protect fisheries and aquatic ecosystems. Specifically, the fish and fish habitat protection provisions are intended to prevent projects taking place in and around fish habitat from causing the death of fish or the harmful alternation, disruption or destruction of fish habitat. In addition, the Act administers relevant provision of the Species at Risk Act.

1.3.2 Provincial Legislation

Provincial Policy Statement (2020)

The Provincial Policy Statement, 2020 (herein referred to as PPS 2020) was issued under Section 3 of the Planning Act and came into effect May 1, 2020. It replaces the Provincial Policy Statement that was issued April 30, 2014. The PPS 2020 provides overall policy direction on matters of provincial interest related to land use planning and development (Government of Ontario, 2020). It applies province-wide, except in those cases where the PPS 2020 or another provincial plan state otherwise (Government of Ontario, 2020).

The extent of Natural Heritage features found on or adjacent to the study area have been investigated within this EIS (Figure 1) and portions of Sections 2.1.4 to 2.1.8 of the Provincial Policy Statement (2020) apply to this project and thus act as triggers for the preparation of this EIS.

2.1.4 Development and site alterations shall not be permitted in:

a) significant wetlands in Ecoregions 5E, 6E and 7E;

2.1.5 Development and site alteration shall not be permitted in:

b) significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);

c) significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and St. Marys River)

d) significant wildlife habitat;

e) significant areas of natural and scientific interest;

unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

2.1.6 Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements

2.1.7 Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

2.1.8 Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5, and 2.1.6 unless the ecological function of the adjacent lands

has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions

Endangered Species Act (2007)

The Ontario Endangered Species Act (ESA 2007) serves to:

1. To identify species at risk based on the best available scientific information, including information obtained from community knowledge and aboriginal traditional knowledge.
2. To protect species that are at risk and their habitats, and to promote the recovery of species that are at risk.
3. To promote stewardship activities to assist in the protection and recovery of species that are at risk. 2007, c. 6, s. 1.

The ESA clearly defines the five classifications of species status as *extinct, extirpated, endangered, threatened*, or *special concern*, and provides guidelines on the process of species status determination.

Regulations made under this act include: Ontario Regulation 230/08 and 242/08.

Ontario Regulation 230/08 provides the list of Species at Risk (SAR) in Ontario, which is updated regularly. This list was most recently consolidated on June 2, 2017. Species status provided in the list is assessed by an independent body, the Committee on the Status of Species at Risk in Ontario (COSSARO), based on the best-available science and Aboriginal Traditional Knowledge.

General habitat protection is afforded to all species listed as *endangered* or *threatened.* General habitat descriptions are technical, science-based documents that have been developed for some of the species that are most likely to be affected by human activity. Further information including a *Recovery Strategy* or *Management Plan* is required for each listed species, on a timeline dictated by the species status.

Ontario Regulation 242/08 explains possible exemptions to the ESA and details on how the purpose of the ESA is to be carried out.

1.3.3 Local and Other Regulatory Bodies

City of Ottawa Official Plan (Amendments to October 14, 2020)

The subject property is designated as Rural Heavy Industrial Zone (Sections 221 and 222) and Rural Employment Area in Schedule A

The purpose of the RH – Rural Heavy Industrial Zone is to:

1. permit the development of heavy industrial uses in areas mainly designated as General Rural Area, Village and Carp Road Corridor Rural Employment in the Official Plan;
2. accommodate a range of heavy industrial uses and limited service commercial uses at locations which are neither environmentally sensitive nor in close proximity to incompatible land uses; and,
3. regulate development in a manner that respects adjacent land uses and will have a minimal impact on the rural area.
4. Rural Employment Policies
5. The Rural Employment Areas are designated on Schedule A with the intent to reserve the land for rural industrial and ancillary commercial uses.
6. Uses permitted within rural employment areas include:
7. New heavy and light industrial uses, such as steel and concrete fabrication, farm equipment and supply centers, machine and vehicle sales service and repair, construction yards, building products yards, landscape contractors, nurseries;
8. New transportation, warehouse and storage operations; these uses are encouraged to locate on sites in close proximity to Arterial roads and Highway interchanges;

9. Uses that are noxious by virtue of their noise, odour, dust or other emissions or that have potential for impact on air quality or surface water or groundwater, such as salvage or recycling yards, composting or transfer facilities; concrete plants; the treatment of aggregate products; and abattoirs; these uses shall not be located adjacent to a highway unless suitable screening and landscaping are provided;
10. New commercial uses that primarily provide services to employees of the rural business park or the travelling public such as a restaurant, gas station, a retail store up to 300 square metres gross leasable space, or similar uses. A commercial use involving the display and sale of products manufactured or warehoused on the site are permitted provided that the retail floor space does not exceed the greater of, 300 square metres or 25% of the gross floor area of the building.
11. Development will be subject to Site Plan Control and particular attention will be given to the physical design of the building and site including signage, buffering, landscaping and fencing. In particular, the City shall require that suitable screening and landscaping is provided for any new external storage areas for goods, material and equipment that abut a highway or arterial road.
12. All new development must be supportable on individual well and septic systems unless the City agrees to the development of a number of sites on the basis of a small water and wastewater works as described in Section 4.4.2.4.
13. All new development proposed within the Ministry of Transportation's permit control area must address driveway access proximity to the interchange that is in keeping with the Ministry's Access Management Guidelines.

Section 69 - Setback from Watercourses

1. *Subject to subsection (3), despite the provisions of the underlying zone, the minimum setbacks set forth in subsection (2) must be provided to provide a margin of safety from hazards associated with flooding and unstable slopes and to help protect the environmental quality of watercourses and waterbodies.*
2. *Except for flood or erosion control works, or a public bridge or a marine facility, no building or structure, including any part of a sewage system, which does not require plan of subdivision, or site plan control approval, shall be located closer than;*
   a. *30 m to the normal high-water mark of any watercourse or waterbody, or*
   b. *15 m to the top of the bank of any watercourse or waterbody, whichever is the greater.*
3. Development requiring a plan of subdivision or that is subject to site plan control must provide the watercourse or waterbody setbacks set forth in subsection (2) unless, as established through conditions of approval, a different setback is determined to be appropriate in accordance with the criteria set forth in the Official Plan. (By-law 2009-347)

Section 4.7.3, for reduced setbacks Policy 6 and 7

1. Exceptions to the setbacks in policy 2 will be considered by the City in consultation with the Conservation Authority in situations where development is proposed:
2. On existing lots where, due to the historical development in the area, it is unreasonable to demand or impossible to achieve minimum setback distances because of the size or location of the lot, approved or existing use on the lot, or other physical constraint;
3. Adjacent to a minor tributary that serves primarily a surface water function and that may have only an intermittent flow. This provision includes situations where a watershed, subwatershed or environmental management plan exists but does not provide guidance on a minor tributary;
4. Adjacent to an existing top of bank where the regulatory flood line and the geotechnical limit of the hazard lands are within 15 metres from the existing top of bank [OMB decision #1754, May 10, 2006]
5. Where an exception to the setback is requested under Policy 6, an alternate setback will be considered by the City in consultation with the Conservation Authority on the basis of a study that addresses the following criteria: [Amendment #96, February 22, 2012]

6. Slope of the bank and geotechnical considerations related to unstable slopes, as addressed in Council's Slope Stability Guidelines for Development Applications in the City of Ottawa, 2004;
7. Natural vegetation and the ecological function of the setback area;
8. The nature of the abutting water body, including the presence of a flood plain;
9. The need to demonstrate that there will be no negative impacts on adjacent fish habitat. [OMB decision #1754, May 10, 2006]

South Nation Conservation Authority Regulations and Policies

The watercourse adjacent to the subject property is regulated by SNCA and are subject to the Conservation Authorities Act, Ontario Regulation 170/06 *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses* is applicable. Proximity of the subject property to the watercourse feature triggered the need for this EIS.

1.4 Other Resources Referenced

Prior to field surveys, background information for the study area and surrounding lands from a variety of sources were reviewed to provide context for the setting and sensitivity of the site. Background information sources include:

1.4.1 Data Sources

- Recent Aerial imagery (City of Ottawa, 2019)
- MNRF Land Information Ontario (LIO) database mapping
- Natural Heritage Information Centre (NHIC) Make a Map tool
- Ontario Ministry of Natural Resources Aquatic Resource Area, Fish Species List (OMNR, 2012);
- Department of Fisheries and Oceans (DFO) Aquatic Species at Risk Mapping (DFO, 2019)

1.5 Description of Development

The proposed development includes a large commercial warehouse building, storage and parking areas and cross-dock facility. A stormwater management pond is proposed at the southeastern corner of the property, flows will be directed into the existing ditch along Somme Street (Figure 1 and Appendix B). The only entrance to the facility will be from Somme Street.

1.6 Scope of Report

The City of Ottawa Official Plan (2020) and South Nation Conservation Authority (SNCA) requires the completion of a scoped Environmental Impact Study (EIS) prior to the approval of the proposed development.

The focus of this scoped EIS report is confirm the natural features identified on the property, study the functions and features of the watercourses and make recommendations to prevent impacts on these features by the proposed development. The EIS will describe potential impacts of the development of natural features and identify appropriate buffers and other appropriate mitigation measures to satisfy the City of Ottawa Official Plan and SNCA.

2. Study Methods

2.1 General Approach

Our approach to preparation of the EIS consisted of three distinct phases.

In the first phase GHD collected and reviewed available information on the site including recent air photography, key natural features GIS mapping, wetland mapping, City of Ottawa Official Plan schedules and other correspondence or files available from the City, DFO and SNCA, including GIS database layers and drainage mapping, and fish community list. GHD contacted the City (Matthew Haley) and the conservation authority to confirm the field inventory requirement and GHD workplan.

The second phase included a site visit by our aquatic biologist to confirm the data collected in the literature review, assess the watercourse (mainstem, tributaries and headwater drainage features or drains). Surveys included general watercourse vegetation assessment, aquatic habitat assessments which will include the documentation of any fish observed, surface water quality and presence of overhead cover, substrates, in water cover and invasive species.

The third phase was the preparation of the scoped EIS that includes specific mitigation measures for protecting any sensitive species and other natural features on or adjacent to the study site and recommendations regarding the watercourse, including buffers and setbacks.

2.2 Site Study Methodology

Surveys included fish and fish habitat assessments, general assessment of vegetation communities and determination and identification of the presence of provincially and federally listed significant species including SAR.

2.2.1 Physical Site Characteristics

Site characteristics were assessed during our field visits. These included general documentation of existing disturbances, current usage, age of vegetation cover, access lanes, general topography and soils.

2.2.2 Biophysical Inventory

2.2.2.1 Fish and Aquatic Habitat

Aquatic Habitat Assessment

A general aquatic habitat assessment was conducted using standardized provincial aquatic protocols (OSAP, MTO). Aquatic habitat was quantified and characterized based on local substrate composition, vegetation, flow influence and condition, sediment transport, cover, channel morphology, groundwater indicators, riparian habitat, barrier presence and form, land use and landscape influences, human modifications and unique features.

Due to the scope of the project fish community surveys were not conducted by GHD within the study area. Am existing fish species list was obtained by the Ministry of Natural Resources and Forestry (MNRF).

As the purpose of the Scoped EIS was mainly the watercourse feature, only a general assessment of the existing vegetation was documented by GHD biologist.

3. Survey Results

3.1 Physical Site Characteristics

3.1.1 General

The property was bounded to northwest by Rideau Road and Somme Street to the south. The study area was disturbed open field of a vacant lot surrounded by agricultural fields, open fields and industrial businesses. The site was fairly flat with the exception of a large berm at the northwestern section.

3.2 Biological Inventories

3.2.1 Fish and Aquatic Habitat

3.2.1.1 Introduction and Level of Effort

The fish and aquatic habitat was assessed on April 16th, 2021 within the subject property (Figure 1). Surveys were conducted following the methodologies outlined in Section 2.2.2.1. The level of effort and environmental conditions have been provided in Table 3.1.

It should be noted that on the Ontario Hydrographic Network (OHN) GIS water layer shows a watercourse entering the subject property on the northeastern corner, this has been historically infilled, GHD verified that these features are no longer present within the subject property. Only the existing watercourse features have been illustrated on Figure 1.

Table 3.1 Fish and Aquatic Habitat Surveys – Level of Effort

Survey Date	Survey Type	Weather	Start Time	Effort (person hrs)
April 16th 2021	Aquatic Habitat Assessments	Overcast (80% cloud cover), light rain, Air Temperature 7°C and BWS 0-2	12:30	2 (x1 staff)
*Note: BWS Beaufort wind scale (Government of Canada, 2017).				

3.2.1.2 Aquatic Habitat Assessments

As mentioned above the watercourse that was shown the OHN GIS water layer was not present within the study area (Photo 1). The majority of the subject property has been historically disturbed and graded. A large berm was present at the northwestern section of the property, there was a small wetland pocket just on the other side of the berm adjacent to Rideau Road and the ditch. There was an existing roadside ditch along Somme Street located south of the subject property. The water from the ditch flows in two directions, water is conveyed to the northwest to the ditch along Rideau Rd and south to an existing stormwater management facility located approximately 400m south of the subject property.

The area to the northwest of the subject property was an existing roadside ditch that flows to the northeast and connects to the Findlay Creek Municipal Drain. The roadside ditch was approximately 1.5 to 2 m wide with a water depth that ranged from 0.4 to 0.75m. The substrate composition was comprised of cobble, sand, gravel and silt. The site visit was conducted during the spring freshet; therefore, the ditch was experiencing higher than normal flows. Under normal flow conditions there is evidence that the ditch may be considered intermittent. No fish were observed in the ditch during the time of assessments.

During the early stages of the project, it was thought that the roadside ditch along Rideau Road was referred to as Christie Creek, however through email communication with SNCA and the City of Ottawa it was confirmed that this was not the case and the existing ditch does not have a name (SNCA, 2021; City of Ottawa, 2021).

Photo 1: Photo showing general site conditions of the subject property. Photo facing south (Photo Date: April 16th, 2021).

Photo 2: Photo showing large berm and small wetland pocket at the north western portion of the property. Photo facing southwest (Photo Date: April 16th, 2021).

Photo 3: Photo showing roadside ditch along Rideau Road during freshet flow conditions northwest of the subject property. Photo facing northeast (Photo Date: April 16th, 2021).

Much of the site is disturbed open field (ELC Code: CUM1-1). The vegetation characteristics of the site are typical of areas with high disturbance and historical clearing. This area was dominated by perennial rye grass (*Lolium perenne*), Kentucky blue grass (*Poa pratensis*), Canada goldenrod (*Solidago canadensis*), common burdock (*Arctium minus*), Queen Anne's lace (*Daucus carota*), common dandelion (*Taraxacum officinale*), chicory (*Cichorium intybus*), white clover (*Trifolium repens*), and common mullein (*Verbascum thapsus*). The only tree species identified was balsam poplar (*Populus balsamifera*), located at the base of the berm.

The wetland pocket (ELC Code: MAS2) adjacent to the ditch was dominated by common reed (*Phragmites australis*) and common cattail (*Typha latifolia*). Where this wetland pocket meets the ditch adjacent to Somme Street, a number of tree and shrub species were identified, including; speckled alder (*Alnus incana*), red-osier dogwood (*Cornus stolonifera*), crack willow (*Salix fragilis*), white birch (*Betula papyrifera*), Norway spruce (*Picea abies*), trembling aspen (*Populus tremuloides*) and small willow species (*Salix sp*).

4. Discussion and Analysis

4.1 Fish and Aquatic Habitat

The roadside ditch located directly northwest of the property has the potential to provide indirect fish habitat downstream to Findlay Creek Municipal Drain. Specifically, the habitat provides sources of hydrological and groundwater connections, nutrients, as well as the potential to provide food supply to fish. These attributes are important for the sustainability of the fish community of Findlay Creek Municipal Drain.

Fish habitat in Ontario is managed federally by the Minister of Fisheries and Oceans Canada and therefore, the Fisheries Act applies to the subject lands. No critical habitat for Aquatic Species at Risk (DFO, 2019) or sensitive spawning habitat was identified within the study area (OMNR, 2012).

The existing fish community data Findlay Creek Municipal Drain has been provided in Appendix A to provide context for the downstream fish habitat value and was obtained from the Ontario Ministry of Natural Resources ((OMNR, 2012). General, Findlay Creek Municipal Drain supports fish species that prefer cold, cool and warm water thermal regimes. Cumulatively, game and baitfish species of the families; *Catostomidae, Cyprinidae, Esocidae, Fundulidae, Gasterosteidae, Ictaluridae, Percidae, Salmonidae and Umbridae*. The fish community found in Findlay Creek Municipal Drain are common and widely distributed throughout southern Ontario (Appendix A).

5. Impact Assessment and Recommendations

The following section provides a description of the predicted impacts that may result from the proposed development. It also identifies mitigation measures to be implemented to avoid and/or minimize adverse effects to the natural environment features within or near the project. A summary of the impact assessment and recommendations can be found in Table 5.1.

5.1 Fish and Aquatic Habitat

Typically, a minimum vegetative buffer of 30 m is implemented from the high-water mark of a watercourse. However, the entire northwestern portion of the subject property has already been historically disturbed and the watercourse directly northwest of the subject property is a roadside ditch that has the potential to provide indirect fish habitat downstream to Findlay Creek Municipal Drain which is located northeast of the subject property. Since the subject property is already disturbed it is recommended that trees and shrubs be planted between the development limits and property line to enhance the buffer zone and reduce potential impacts to fish and fish habitat.

Therefore, a 30 m vegetative buffer is not achievable for the proposed development as these areas have already been disturbed. GHD is recommending that the proposed development will be approximately 15 m from the center line of the existing roadside ditch (Figure 1). While no grading shall occur within the 15m buffer, the construction of the development may require temporary disturbance. Any disturbance is to be revegetated and left unmaintained, refer to Appendix C for the tree inventory plan.

As stated in Section 3.2.1 an existing berm was located in the northwestern section of the property. A retaining wall is proposed along this section of the property that will be constructed on top of the berm. The retaining wall will aid in the prevention any disturbed soils from entering the roadside ditch and ultimately into Findlay Creek Municipal Drain. During the construction of the retaining wall there may be some disturbance within the 15m buffer which will be rehabilitated afterwards.

The proposed stormwater management (SWM) pond is located at the southeastern portion of the subject property and will outlet into the existing ditch along Somme Street. The Somme Street ditch flows in two different directions, some

of the water flows northwest along Somme Street until it connects to the Rideau Rd ditch. The distance between these two ditches is over a hundred meters which will allow the water to naturally infiltrate, disperse and dilute, significantly reducing any potential effects before the stormwater ever reaches Findlay Creek Municipal Drain. Some of the stormwater will flow south into an existing SWM pond.

A detailed sediment and erosion control plan must be prepared for all construction activities to ensure disturbed soils are not transported off-site into the negatively impacting aquatic life, fish and fish habitat. To protect Findlay Creek Municipal Drain and to ensure the project complies the policies, recommendations have been provided in Section 7.0 for incorporation into the final site plan.

A low negative impact to fish and fish habitat or the surrounding area are anticipated from the proposed development due to the potential for the stormwater to enter the watercourse. The low negative impacts are anticipated provided the 15 m setback from all fish habitat is respected and the mitigation measures and recommendations are implemented as outlined in this report. Any future redevelopment of the site needs to respect a minimum 15m setback from the ditch. If the site plan changes to include any work near or in-water, which can include stormwater management outfall channels, additional permitting may be required by agency (i.e. DFO, SNCA, MNRF etc.).

6. Policies and Legislative Compliance

The following section describes how the proposed development will be in conformance with the relevant federal, provincial and other regulatory legislation, policies, official plans and OP amendments that are applicable and relevant to the study area and the immediate vicinity.

6.1.1 Federal Legislation

Fisheries Act

The project will comply with the Fisheries Act protective provisions of the Fisheries Act by implementing the *DFO Measures to Protect Fish and Fish Habitat* and avoiding all work in and around water. All project undertaking will: prevent the death of fish, maintain riparian vegetation, carry out work on land only, maintain fish passage, ensuring property sediment control, and preventing entry of deleterious substances in water.

In the future if the site plans changes to include any work near or in-water or if the stormwater pond detail design plan changes to include any additional work within the 15 m buffer they shall comply with the Fisheries Act and be reviewed by a professional biologist, DFO and CA staff.

6.1.2 Provincial Legislation

Provincial Policy Statement (2020)

The subject property does not contain any provincially significant coastal wetlands, provincially significant wetlands, valleylands, ANSIs, significant wildlife habitat and habitat of threatened species. As a result, only Section 2.1.6 and 2.1.8 are applicable.

Section 5.1 (Fish and Aquatic Habitat) of this EIS report contain recommendations, including buffers and mitigation measures that show the proposed development would not a negative impact on those natural heritage features and their ecological functions.

6.1.3 Local and Other Regulatory Bodies

City of Ottawa Official Plan (Amendments to October 14, 2020)

In this EIS report, Section 5.1 (Fish and Aquatic Habitat) describe measures that would permit the proposed development to proceed to reduce potential impacts to fish and fish habitat. Although a 30 m buffer is not achievable as outlined in the City of Ottawa Official Plan. If the 15 m buffer is respected and the mitigation measures and recommendation are implemented correctly there will be no negative impact on the natural heritage or hydrologic feature or their functions.

South Nation Conservation Authority (SNCA) and Ontario Regulation 167/06

In this EIS report, Section 5.1 (Fish and Aquatic Habitat) describe measures that would permit the proposed development to proceed in a manner that complies with SNCA policies and Ontario Regulation 167/06. GHD believes that a reduced buffer of 15 m would not impact the function of the road ditch and ultimately Findlay Creek Municipal Drain provided the mitigation measures and recommendation are implemental correctly (Section 7.0).

7. Summary of Recommendations

1. Trees and shrubs should be planted within the buffer area between the proposed development and the existing chain-link fence to enhance the buffer area. No grading shall occur within the 15m buffer, trees and shrubs shall be planted within the existing vegetation.
2. The construction envelope must be clearly defined and delineated. A line must be staked and clearly marked in the field prior to any construction activities occurring in the study area.
3. Prior to any site preparation activities (grading, placement of fill) erosion and sediment control measures should be installed along the construction envelope to ensure sediment laden runoff does not enter interfere with adjacent water bodies or natural features. The silt fence should be inspected and maintained throughout the construction phase and remain in place until the soils are stabilized and re-vegetated.
4. Client to obtain relevant permits from the City of Ottawa, South Nation Conservation Authority and the Ministry of the Environment, Conservation and Parks.
5. Any vegetation clearing shall occur outside of the breeding bird timing window of April 15th -August 15th (as per Environment and Climate Change Canada regulations).
6. Tree clearing to occur outside of the active bat roosting timing window (mid-May-August 31st)
7. The Project Manager and Contractor are obliged to ensure that all mitigation measures are strictly observed.
8. Enhancement of the buffer areas with plantings or leave buffers to naturally regenerate through a Planting Plan and edge management plan
9. Construction should be undertaken during normal weather conditions, to the extent possible, and the project shall be designated to appropriate specifications to withstand variable weather conditions.
10. No in-water works
11. If the site plans to include any near or in-water work, final development plan shall be reviewed by a professional biologist and the Department of Fisheries and Oceans (DFO) to ensure the project complies with the Fisheries Act.

7.1 Sediment and Erosion Control

1. The sediment and erosion control (SEC) plan will be review by a professional biologist.
2. Compost organic sock or equivalent will be installed and maintained along development envelope boundary as a perimeter control. Perimeter controls help prevent the transportation of sediments off-site into the watercourse and lake. This line should be surveyed and staked in the field prior to any site preparation activities.
3. Grading of the site and removal or addition of fill will be restricted to the area outside of shoreline buffers. Functioning sediment control measures must be in place prior to and during the construction phase and remain in place until all bare or exposed soils have become stabilized.
4. Track pads, concrete wash stations, refueling stations, and stockpile locations should be identified on the SEC plan and isolated using sediment control materials.
5. All sediment and erosion control products will be selected for the site based on the manufacturer's product specifications. Biodegradable products should be selected. Product installation and maintenance will follow the manufactures guidelines.
6. Sediment control measures shall be installed prior to the commencement of work and shall be maintained throughout the project to prevent the entry/outward flow of sediment into a waterbody.
7. All sediment and erosion control measures shall be inspected daily during the construction phase and periodically thereafter to ensure they are functioning properly, maintained, and upgraded as required.

8. In the event that sediment and erosion control measures are not functioning, the construction supervisor shall order the work to be stopped. No further work shall be carried out until the construction methods and/or the sediment control plan is adjusted to address the sediment/erosion problem(s).
9. The Project Manager/Contractor shall not allow any deleterious substances as defined in the Canadian Fisheries Act (such as silt), caused by the work, to enter or re-enter the watercourse or lake.
10. Disturbed soils will be immediately stabilized and re-vegetation with native species suitable for the site.
11. All construction materials will be removed from site upon project completion.

7.2 Operation of Machinery

1. Check heavy equipment, machinery and tools prior to entering the work site to ensure they are clean, free of leaks, invasive species and noxious weeds.
2. All heavy equipment, machinery, and tools required for the work will be regularly inspected and maintained to avoid leakage of fuels and liquids, and will be stored in a manner that prevents any deleterious substance from entering the soil, or nearby any waterbody.
3. All heavy equipment, machinery, and tools used or maintained for the purpose of this project will be operated in a manner that prevents any deleterious substance from entering soil, or nearby any waterbody.
4. Vehicle and equipment refuelling and/or maintenance shall be conducted within a defined staging area 30 m from any waterbody. If 30 m is not achievable a portable spill containment berm may be used. Portable spill containment berms can be rented by companies such as Wise Environmental Solution Inc (W.I.S.E, 2017).
5. Machinery will not enter any waterbody.

7.3 Concrete Leachate

1. Concrete leachate is alkaline and highly toxic to fish and aquatic life. Measures will be taken to prevent any incidence of concrete or concrete leachate from entering any waterbody.
2. Ensure that all works involving the use of concrete, cement, mortars, and other Portland cement or lime-containing construction materials (concrete) will **not** deposit, directly or indirectly, sediments, debris, concrete, concrete fines, wash or contact water into any waterbody.
3. All concrete, sealants or other compounds used for this project shall be utilized according to the appropriate Product Technical Data Sheet, stating guidelines and methods for proper use, and provided by the manufacturer of the product.

7.4 Fish Protection (DFO measures to protect fish and fish habitat)

1. No work in to avoid killing fish by means other than fishing. No development within a 15 m buffer, with the exception of the rip rap feature. The buffer will maintain riparian vegetation between areas of land activity and the high watermark of the watercourses.
2. No use of explosives in or near water.
3. Respect MNRF fish timing windows to protect fish.
4. Should work conditions change such that it is possible that fish or fish habitat may potentially be negatively impacted, all works shall cease until the problem has been corrected or authorization has been obtained from the appropriate authorities.
5. Maintain riparian vegetation around wetland.
6. Carry out all works and activities by avoiding all work in or near water. No placement of fill or the temporary or permanent structures below the high-water mark.

7. No disturbance of bank material or building structures in the area than may result in erosion or scouring.
8. Prevent soil compaction using mats and pads.
9. The Project Manager/Contractor shall not allow any deleterious substances as defined in the Canadian Fisheries Act (such as silt), caused by the work, to enter or re-enter the watercourse or lake. See Sediment and Erosion Control.

7.5 Contaminant and Spill Management

1. A spill management plan will be developed for future development. The plan will provide direction for implementation actions immediately in the event of a sediment release or spill of a deleterious substance.
2. An emergency spill kit shall be kept on site and employed immediately should a spill occur. In the case of a spill, the Ontario Spill Action Center shall be notified immediately at 1-800-268-6060; all provincial and federal regulations shall be adhered to.
3. Refueling and maintenance of equipment shall be conducted off slopes and away from water bodies on impermeable pads to allow full containment of spills at a recommended distance of a minimum of 30 m from the shoreline. If 30 m is not achievable a portable spill containment berm may be used.
4. Materials classified as potential contaminants (e.g., paint, primers, gas, oil, degreasers, grout, or other chemicals) will be used a minimum of 30 m from the watercourse. If 30 m is not achievable a portable spill containment berm should be used.

8. Conclusion

This scoped Environmental Impact Study has been prepared to address potential environmental issues associated with an application to develop a property located 301 Somme Street, southwest of Rideau Road and north of Somme Street, described as Part of Lot 26, Concession 6 (from Rideau River Gloucester) in Gloucester, Ontario City of Ottawa. The study area includes open disturbed area and a roadside ditch. Within this area, GHD staff confirmed the boundaries on key natural features (e.g., watercourse), confirmed their ecological functions, and have recommended appropriate mitigation measures, including buffers (setbacks) to prevent impacts on natural features from the proposed development.

The proposed development will not result in a significant negative impact on identified natural heritage features or their functions *provided* the 15 m buffer is respected, and the mitigation measures described in Sections 5 and 7 are implemented. These recommendations have been made to address potential impacts to natural features (identified watercourse) and/or their functions during the site preparation, construction and post-construction period.

9. References

COSEWIC. 2020. *Canadian Species at Risk, October 2020.* Committee on the Status of Endangered Wildlife in Canada. Accessed on the World Wide Web at: https://species-registry.canada.ca/index-en.html#/documents/3198

COSSARO. 2018. *Species at Risk in Ontario (SARO)*, May 2018. Ontario Ministry of Natural Resources Committee on the Status of Species at Risk in Ontario. Retrieved from http://cossaroagency.ca/species/

City of Ottawa. (2021, May 5). email communication with City of Ottawa re: 301 Somme St-Watercourse Clarification. Ontario, Canada.

DFO. (2019, 09 09). *Aquatic Species at Risk Maps*. Retrieved from Government of Canada, Fisheries and Oceans Canada: http://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html

Eakins, R. J. (2019, May 15). *Ontario Freshwater Fishes Life History Database*. Retrieved from http://ontariofishes.ca/home.htm

Government of Canada. (2017, 11). *Beaufort Wind Scale Table.* Retrieved from Environment and Climate Change Canada: https://www.ec.gc.ca/meteo-weather/default.asp?lang=En&n=80C039A3-1

OMNR. (2012). *Aquatic Resource Area Survey.* Peterborough, Ontario: Land Information, Ontario Ministry of Natural Resources.

SNCA. (2021, May 03). email communication with SNCA re: 301 Somme St-Watercourse Clarification. Ontario, Canada.

W.I.S.E. (2017). *Wise Environmental Solutions Inc*. Retrieved from http://wiseenv.com/

Appendix A

Fish Species List for Findlay Creek Municipal Drain

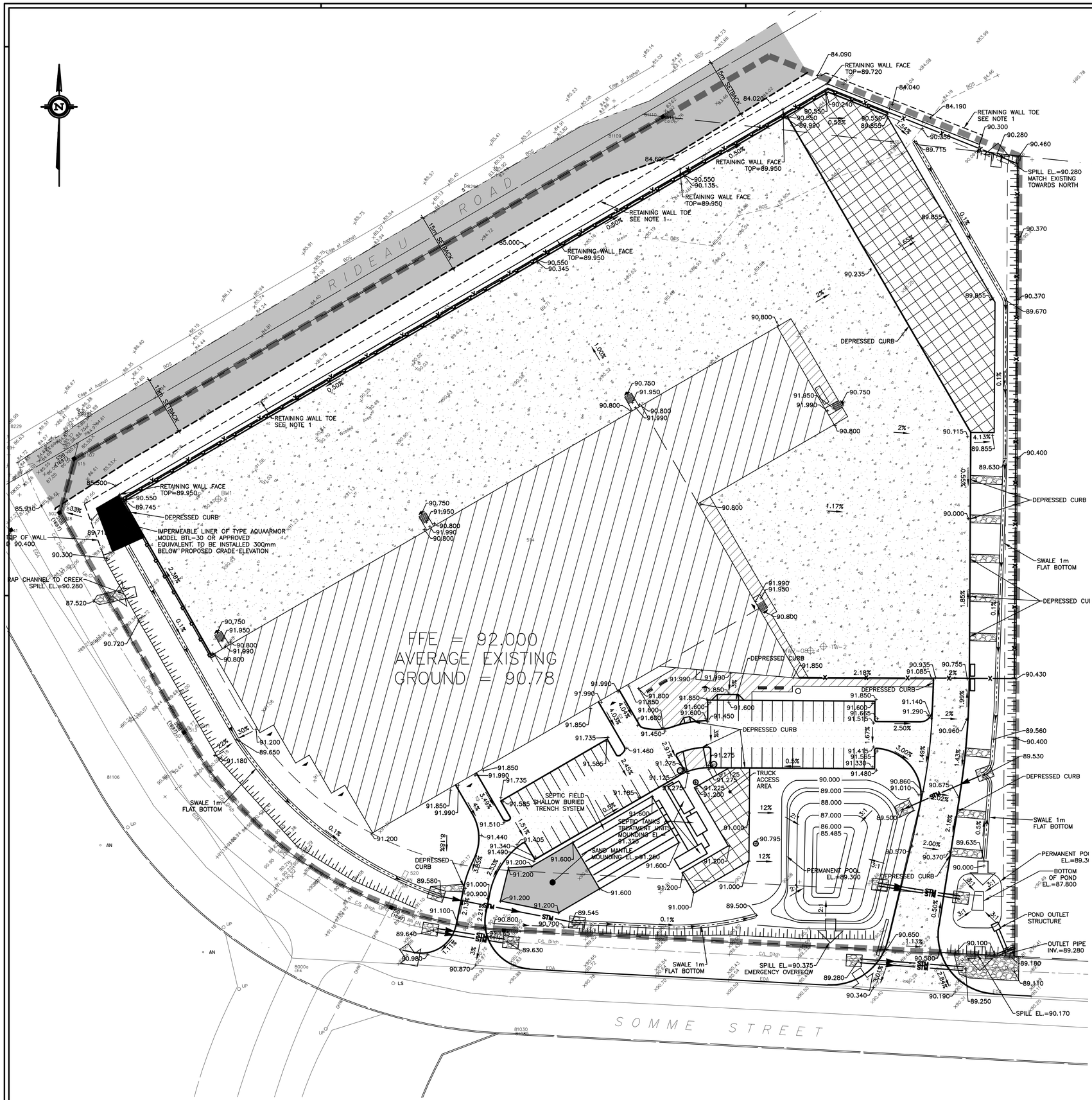
Appendix A Fish Species for Findlay Creek Municipal Drain

Family	Common Name	Scientific Name	Thermal Regime	Spawning Season
Catostomidae	White Sucker	*Catostomus commersonii*	Coolwater	Spring (April-June)
Cyprinidae	Blacknose Shiner	*Notropis heterolepis*	Coolwater	Summer (June-July)
	Bluntnose Minnow	*Pimephales notatus*	Warmwater	Summer (June-August)
	Brassy Minnow	*Hybognathus hankinsoni*	Coolwater	Spring-Summer (May-July)
	Common Shiner	*Luxilus cornutus*	Coolwater	Spring (May-June)
	Creek Chub	*Semotilus atromaculatus*	Coolwater	Spring (May-June)
	Fathead Minnow	*Pimephales promelas*	Warmwater	Spring (May-August)
	Golden Shiner	*Notemigonus crysoleucas*	Coolwater	Summer (June-August)
	Longnose Dace	*Rhinichthys cataractae*	Coolwater	Spring-summer (May-July)
	Northern Redbelly Dace	*Chrosomus eos*	Coolwater	Spring-summer (May-July)
Esocidae	Northern Pike	*Esox lucius*	Coolwater	Spring (March-May)
Fundulidae	Banded Killifish	*Fundulus diaphanus*	Coolwater	Summer (June-August)
Gasterosteidae	Brook Stickleback	*Culaea inconstans*	Coolwater	Spring-summer (May-July)
Ictaluridae	Brown Bullhead	*Ameiurus nebulosus*	Warmwater	Spring (May-June)
	Yellow Bullhead	*Ameiurus natalis*	Warmwater	Spring (May-June)
Percidae	Johnny Darter	*Etheostoma nigrum*	Coolwater	Spring (May-June)
	Johnny Darter/Tesselated Darter	*E. nigrum/E. olmstedi*	Coolwater	Spring (May-June)
Salmonidae	Brook Trout	*Salvelinus fontinalis*	Coldwater	Fall (September-November)
	Brown Trout	*Salmo trutta*	Coldwater	Fall (October-November)
Umbridae	Central Mudminnow	*Umbra limi*	Coolwater	Spring (April-May)

Note: Fish species listed under OMNR 2012 obtained from the Aquatic Resource Area Survey (OMNR, 2012) .Fish species spawning season obtained from the *Ontario Freshwater Fishes Life History Database* (Eakins, 2019).

Appendix B

Site Plan (2021)



EXISTING | LEGEND | PROPOSED

- WATERMAIN
- SANITARY SEWER
- STORM SEWER
- DRAIN
- GAS LINE (APPROX. LOC.)
- UNDERGROUND TELEPHONE (APPROX. LOC.)
- UNDERGROUND CABLE (APPROX. LOC.)
- FENCE
- UNDERGROUND ELECTRICITY (APPROX. LOC.)
- OVERHEAD WIRES
- LOT LINE
- RIGHT-OF-WAY LIMITS
- EASEMENT
- WORK LIMITS AREA
- TOP OF SLOPE
- DITCH CENTER
- BOTTOM OF SLOPE
- WOOD AREA
- GRADE CROSSING
- FLAGPOLE
- CATCHBASIN
- MANHOLE/CATCHBASIN
- MANHOLE
- FIRE HYDRANT
- VALVE
- REDUCER
- TEE
- VALVE CHAMBER
- PRIVATE UTILITIES (WATERMAIN)
- EXTERIOR WATER FAUCET
- SLUICEWAY
- NATURAL GAS VALVE
- SIGN
- STOP SIGN
- TRAFFIC LIGHT
- ELECTRICITY POLE
- TELEPHONE POLE
- ELECT.-TEL.-STREET LIGHT POLE
- ELECT.-TEL.-TRANSFORMER POLE
- PRIVATE STREET LIGHT
- ELECTICITY MANHOLE
- TELEPHONE MANHOLE
- SURVEY STATION
- ELEVATION + 99.000
- DRAINAGE DIRECTION
- SAMPLING LOCATION
- OVERLAND FLOW
- ROLLED CONCRETE (SEE DETAIL 203)
- HEAVY DUTY PAVEMENT (SEE DETAIL 202)
- CONCRETE SIDEWALK (SEE DETAIL SC2)
- GRANULAR PAD (SEE DETAIL 202)
- RIP RAP (SEE DETAIL OPSD 810.010)

NOTES
1. TOE OF RETAINING WALL SHOWN AT WIDEST LOCATION. EXACT LOCATION VARIES WITH HEIGHT OF WALL.

0 5 10 20 30 40 50

NOTE OF CAUTION

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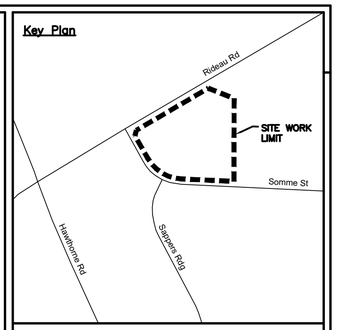
THE CONTRACTOR WILL HAVE THE RESPONSIBILITY AND THE OBLIGATION TO VALIDATE, BY EXPLORATORY EXCAVATION, THE SIZE OF THE PUBLIC UTILITIES UNDERGROUND SERVICES AND TO WARN THE ENGINEER OF ANY CONFLICT WITH THE PROJECTED WORK.

Key Plan



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CIVITAS GROUP
ARCHITECTURE & LANDSCAPE ARCHITECTURE

consultant

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northpoint

professional stamp

project title

SOMME STREET, OTTAWA, ONTARIO FASTFRATE FACILITY

drawing title

GRADE CONTROL AND DRAINAGE PLAN

date	MARCH 08, 2021	job. no.	A001083
scale	1 : 500		
drawn	D.CANN	drawing no.	C006
approved	J.SAUVÉ		
plot date	1/13/2021 3:31:05 PM		

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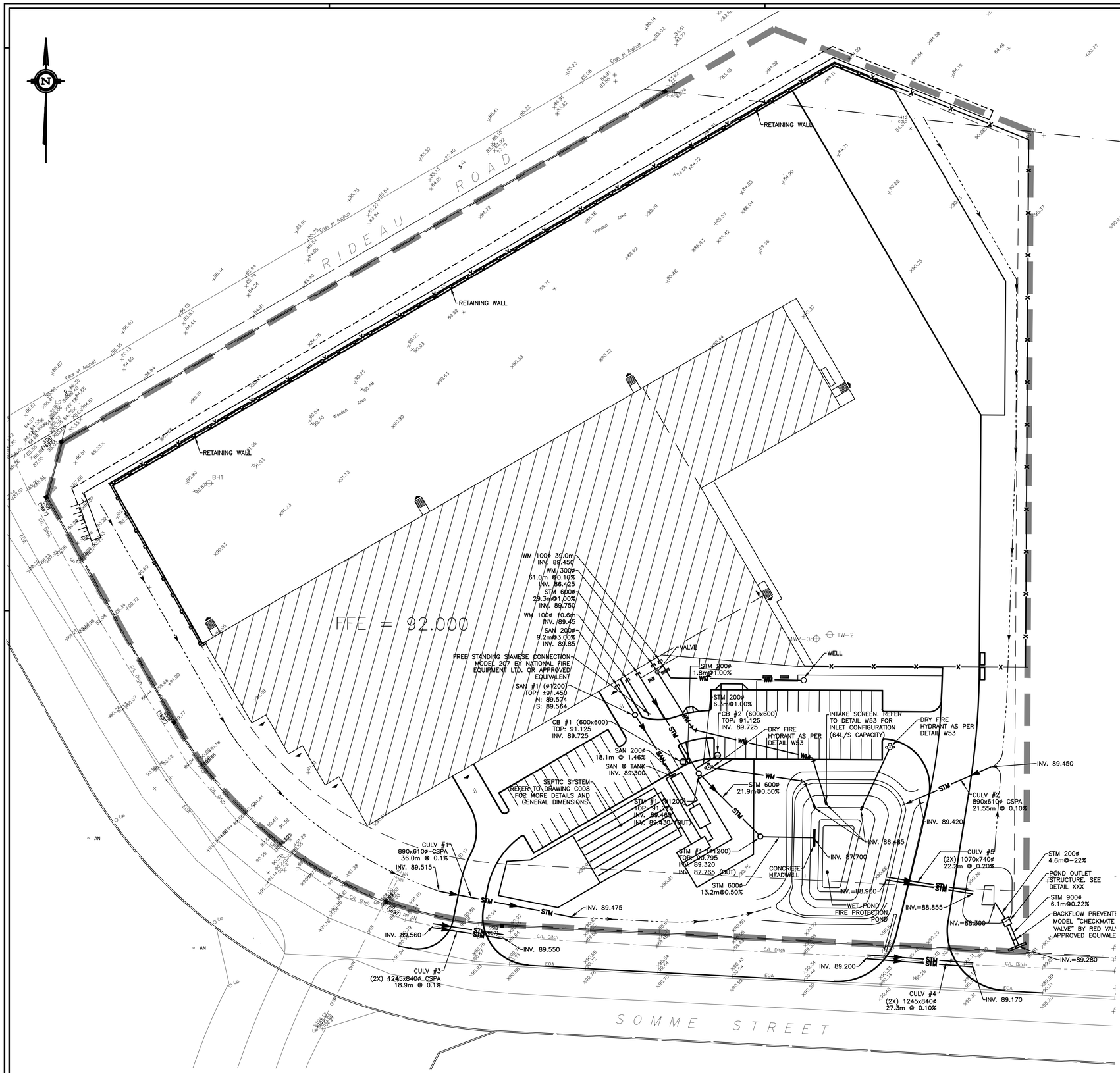

EXISTING LEGEND PROPOSED

EXISTING		PROPOSED
A	WATERMAIN	WM
S	SANITARY SEWER	SAN
P	STORM SEWER	STM
D	DRAIN	D
G	GAS LINE (APPROX. LOC.)	
T	UNDERGROUND TELEPHONE (APPROX. LOC.)	
CA	UNDERGROUND CABLE (APPROX. LOC.)	
X—X	FENCE	
E	UNDERGROUND ELECTRICITY (APPROX. LOC.)	
	OVERHEAD WIRES	
	LOT LINE	
	RIGHT-OF-WAY LIMITS	
	EASEMENT	
	WORK LIMITS AREA	
	TOP OF SLOPE	
	DITCH CENTER	
	BOTTOM OF SLOPE	
	WOOD AREA	
	GRADE CROSSING	
	FLAGPOLE	
	CATCHBASIN	
	MANHOLE/CATCHBASIN	
	MANHOLE	
	FIRE HYDRANT	
	VALVE	
	REDUCER	
	TEE	
	VALVE CHAMBER	
	PRIVATE UTILITIES (WATERMAIN)	
	EXTERIOR WATER FAUCET	
	SLUICEWAY	
	NATURAL GAS VALVE	
	SIGN	
	STOP SIGN	
	TRAFFIC LIGHT	
	ELECTRICITY POLE	
	TELEPHONE POLE	
	ELECT.–TEL.–STREET LIGHT POLE	
	ELECT.–TEL.–TRANSFORMER POLE	
	PRIVATE STREET LIGHT	
	ELECTICITY MANHOLE	
	TELEPHONE MANHOLE	
	SURVEY STATION	
	ELEVATION	+ 99.000
	DRAINAGE DIRECTION	
	OVERLAND FLOW	

0 5 10 20 30 40 50

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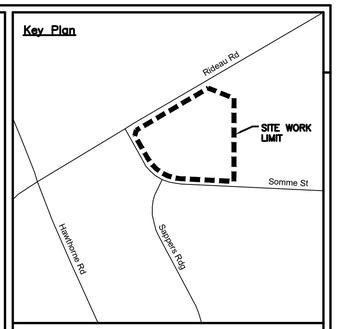
Key Plan



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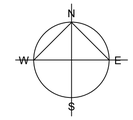

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drawing title

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approved	J.SAUVÉ		
plot date	1/13/2021 3:31:05 PM		

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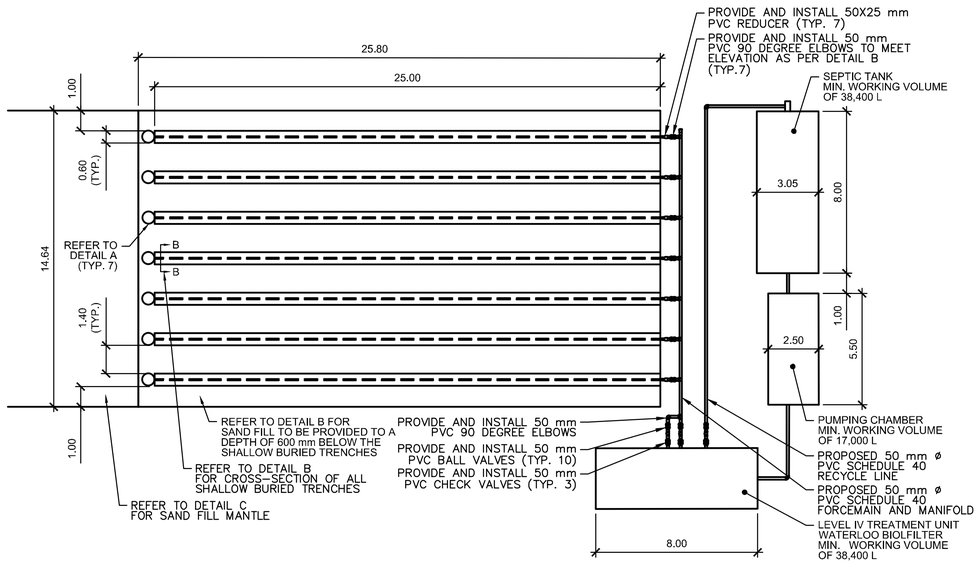

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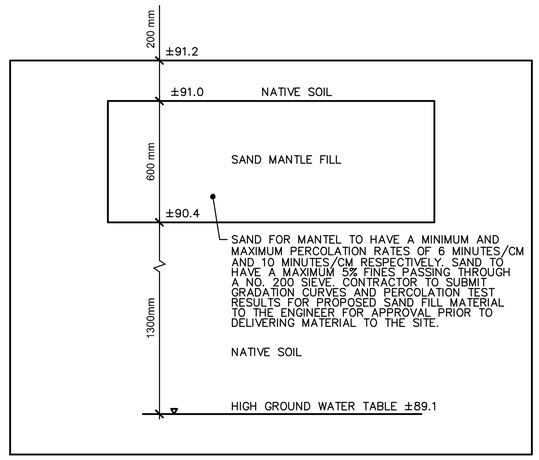

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SAND MANTLE DETAIL

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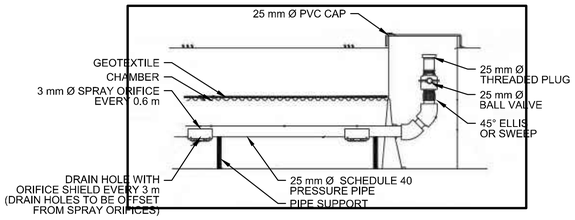

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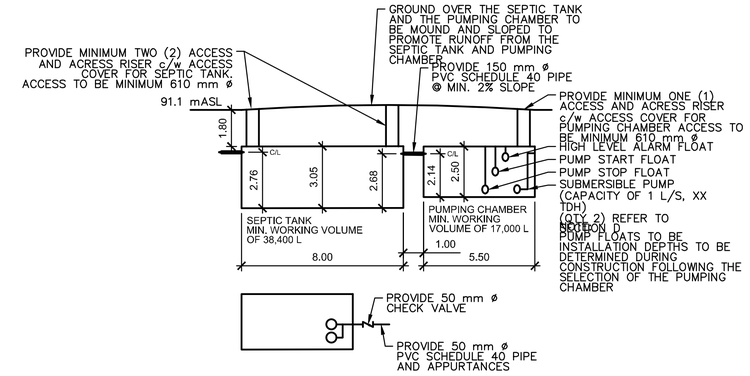


D

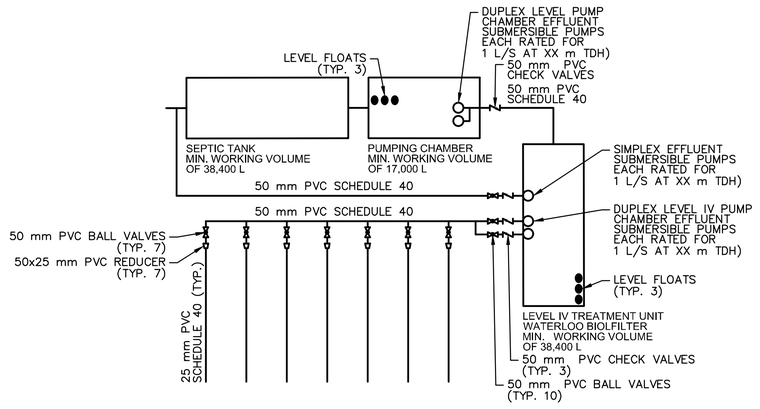
PLAN VIEW OF PUMPING CHAMBER PUMPS AND DISCHARGE PIPE

SCALE: N.T.S.

B

SHALLOW BURIED TRENCH DETAIL

SCALE: N.T.S.



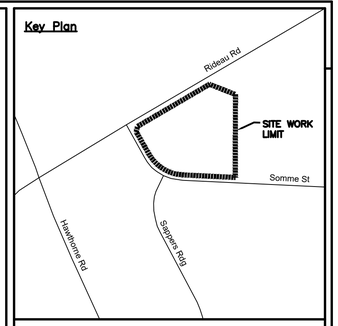
PROCESS FLOW SCHEMATIC

SCALE: N.T.S.

CLASS 4 SEPTIC SYSTEM NOTES

1. THE SEPTIC SYSTEM AND ALL APPURTENANCES SHALL ADHERE TO ONTARIO BUILDING CODE (OBC) PART 8.
2. THE DAILY DESIGN FLOW IS 12,800 L/DAY. THE SEPTIC TANK AND LEVEL IV TREATMENT UNIT TANK SHALL HAVE A MINIMUM WORKING VOLUME OF 38,400 L (THREE TIMES THE DAILY DESIGN FLOW).
3. THE SEPTIC SYSTEM TANK, PUMPING CHAMBER, AND LEVEL IV TREATMENT UNIT SHOWN ON THE DRAWINGS ARE APPROXIMATE SIZES. CONTRACTOR TO SUBMIT CUTSHEETS OF PROPOSED SEPTIC SYSTEM TANK, PUMPING CHAMBER, AND LEVEL IV TREATMENT TANK TO ENGINEER. ENGINEER TO APPROVE TANKS PRIOR TO THE CONTRACTOR ORDERING THE TANKS.
4. PROPOSED CHANGES TO SEPTIC SYSTEM DESIGN BY CONTRACTOR TO BE APPROVED BY THE ENGINEER.
5. SANITARY FLOWS FROM THE WAREHOUSE BY GRAVITY TO THE SEPTIC TANK. THE EFFLUENT FROM THE SEPTIC TANK TO THE PUMPING CHAMBER IS GRAVITY DRIVEN.
6. THE SEPTIC, PUMPING CHAMBER, AND LEVEL IV TREATMENT UNIT TO BE WRAPPED IN MEL-ROL (OR APPROVED EQUAL) ON THE TOP, BOTTOM AND SIDES.
7. THE LEVEL IV TREATMENT UNIT TO BE PROVIDED BY WATERLOO BIOFILTER.
8. THE LEVEL IV TREATMENT SYSTEM TO BE DESIGNED FOR THE FOLLOWING EFFLUENT OBJECTIVES: CBOD5 = 10 MG/L AND TSS = 10 MG/L.
9. THE SIMPLEX PUMP IN THE LEVEL IV TREATMENT UNIT RECIRCULATES A PORTION OF THE EFFLUENT TO THE INLET OF THE SEPTIC TANK.
10. THE PUMP TANK EFFLUENT TO BE DOSED TO THE WATERLOO BIOFILTER BASKET, HOUSING TWO BASKETS FILLED WITH BIOFILTER MEDIUM. THE PUMP TANK EFFLUENT TO BE EVENLY DISTRIBUTED OVER THE SURFACE OF THE MEDIUM. A PASSIVE CHARCOAL VENTING TO BE PROVIDED.
11. ALL PUMPS TO BE RAN BY WATERLOO SMART PANEL(S). THE WATERLOO SMART PANEL SHALL PROVIDE REMOTE MONITORING, CONTROL, AND DATALOGGING OVER A STABLE WIRELESS CELLULAR NETWORK.
12. PROVIDE ACCESS FROM GRADE TO SEPTIC TANK EFFLUENT FILTER AS PER THE OBC.
13. PROVIDE SEPTIC TANK EFFLUENT FILTER PER OBC REQUIREMENTS DESIGNED FOR A MINIMUM CAPACITY OF 25,000 L/DAY.
14. ALL TANKS TO BE DESIGNED FOR A MINIMUM OF 2M OF BURIAL OVERTOP OF THE TANK.

Key Plan



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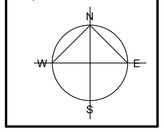

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project title

SOMME STREET, OTTAWA, ONTARIO FASTFRATE FACILITY

drawing title

SEPTIC SYSTEM CONFIGURATION AND SECTIONS

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drawn	D.CANN	drawing no.	C008
approved	J.SAUVÉ		
plot date	1/13/2021 3:31:05 PM		

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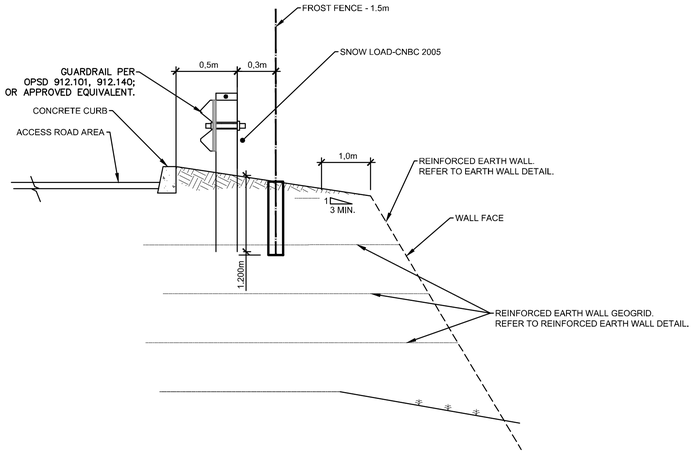
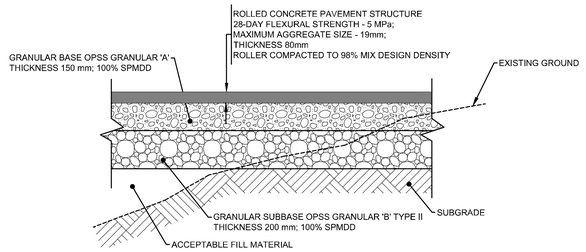


NOTES:

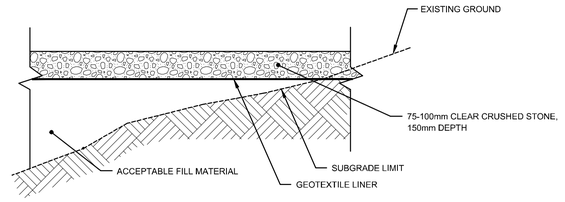
– INSTALLATION OF GUARDRAIL AND FENCE POSTS BY AUGERING STRICTLY PROHIBITED.

138 TYPICAL SECTION - BARRIER AND FENCE AT RETAINING WALL

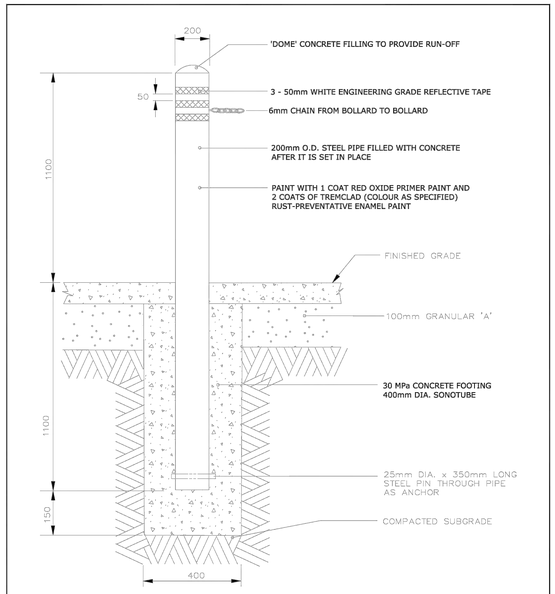
AUCUNE / NTS



203 TYPICAL SECTION - GRANULAR FOUNDATION AND CONCRETE PAVEMENT (HEAVY DUTY)



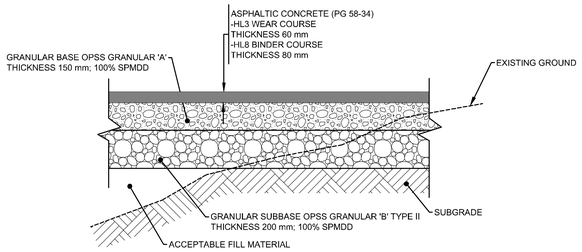
212 TYPICAL SECTION - TEMPORARY CONSTRUCTION ENTRANCE



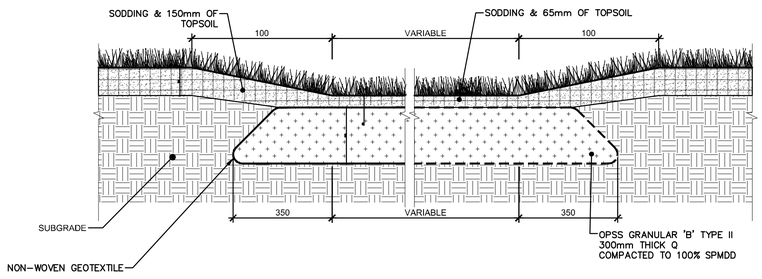
NOTES:

1. ALL MEASUREMENTS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED

Ottawa	TITLE: 200mm DIAMETER STEEL BOLLARD INSTALLATION FOR ROAD CLOSURE	DATE: MAY 2001 REV: JAN 2015 DWG No: F4

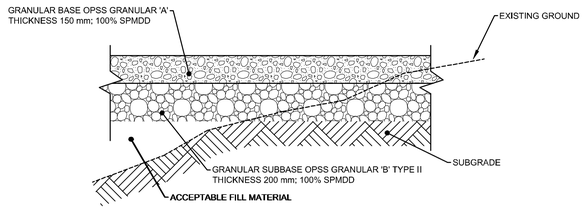


202 TYPICAL SECTION - GRANULAR FOUNDATION AND ASPHALT PAVEMENT (HEAVY DUTY)



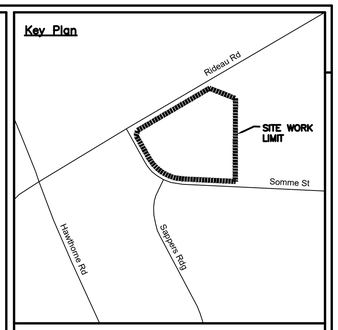
215 TRUCK / MAINTENANCE ACCESS AREA

AUCUNE / NTS



202A TYPICAL SECTION - GRANULAR PAD

Key Plan



no.	date	revision/issue	by
1	JULY 23, 2021	ISSUED FOR SITE PLAN REVIEW	

CIVITAS GROUP
ARCHITECTURE & LANDSCAPE ARCHITECTURE

consultant

CIMA+

northpoint

professional stamp

project title

SOMME STREET, OTTAWA, ONTARIO FASTFRATE FACILITY

drawing title

DETAILS

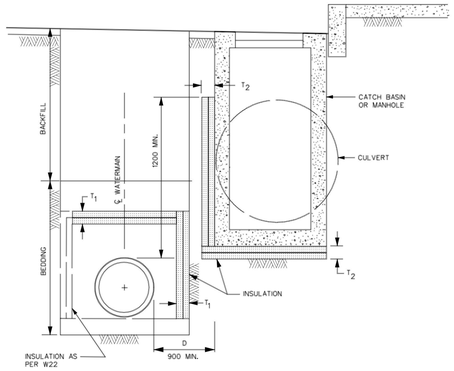
date	MARCH 08, 2021
scale	NONE
drawn	D.CANN
approved	J.SAUVÉ
plot date	1/13/2021 3:31:05 PM

job. no. **A001083**

drawing no. **C009**

1. DO NOT SCALE FROM THIS DRAWING
2. CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES
3. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE FOLLOWING DRAWINGS: STRUCTURAL, MECHANICAL, ELECTRICAL

INSULATION REFERENCE TABLE	
D DISTANCE FROM C.B. OR M.H. WALL	T REQUIRED INSULATION THICKNESS $T=T_1+T_2$
2400 - 1800 mm.	50 mm
1800 - 1500 mm.	75 mm
1500 - 1200 mm.	100 mm
1200 - 900 mm.	125 mm

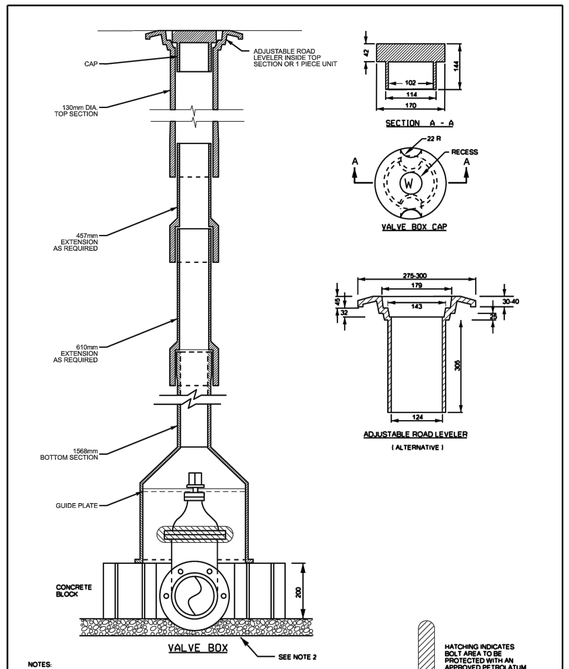


NOTES

FOR WATERMAINS & SERVICES IN PROXIMITY TO CATCHBASINS MAINTENANCE HOLES, CULVERTS ETC.

1. INSULATION SHALL EXTEND 1000 mm EACH WAY FROM THE ENDS OF THE STRUCTURE, PARALLELLED TO THE WATERMAIN.
2. STAGGER JOINTS OF MULTIPLE SHEETS.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
4. INSULATION CAN BE AT EITHER LOCATION OR BOTH.

Ottawa	THERMAL INSULATION OF WATER-MAINS AT OPEN STRUCTURES	DATE: MAY 2001 REV. DATE: FEB 2004 DWG. No.: W23



NOTES:

FOR AUXILIARY, SERVICES AND ISOLATION VALVES.

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. FOR 200 AND 250mm VALVES, ADD BEDDING BELOW THE CONCRETE BLOCKS AS REQUIRED TO RAISE BELL HIGH ENOUGH TO PREVENT CONTACT WITH THE VALVE BONNET.

Ottawa	VALVE BOX ASSEMBLY	DATE: MAY 2001 REV. DATE: MARCH 2019 DWG. No.: W24

1. SOIL DESCRIPTION: VERY FINE SANDS, SANDY CLAYS, CLAYS.
SOILS WITH TYPICAL BEARING STRENGTH OF 100 TO 199 KPa

PIPE DIAMETER	DIMENSION NOTED ON W25.3			
	A	B	C	D
102	250	250	200	200
152	400	400	250	300
203	550	550	300	450
254	650	650	400	500
305	800	800	450	650
406	1050	1050	600	850

2. SOIL DESCRIPTION: SILTY SAND GRAVELS OR CLAYEY SAND GRAVEL MIXTURES, MODERATE AMOUNT OF FINES.
SOILS WITH TYPICAL BEARING STRENGTH OF 200 TO 299 KPa

PIPE DIAMETER	DIMENSION NOTED ON W25.3			
	A	B	C	D
102	200	200	150	150
152	250	250	200	200
203	350	350	250	270
254	450	450	300	350
305	500	500	350	400
406	750	750	400	600

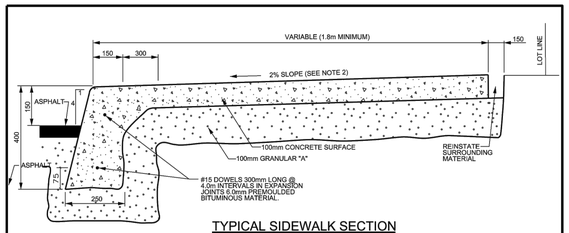
3. SOIL DESCRIPTION: SANDS, GRAVELS AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.
SOILS WITH TYPICAL BEARING STRENGTH OF 300 KPa AND OVER

PIPE DIAMETER	DIMENSION NOTED ON W25.3			
	A	B	C	D
102	150	150	150	150
152	200	200	200	200
203	300	300	200	230
254	400	400	250	270
305	450	450	300	300
406	650	650	350	450

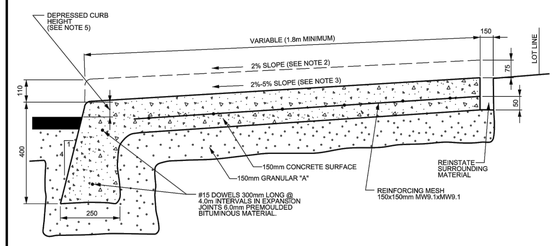
NOTES:

1. THE ABOVE THRUST BLOCK DIMENSIONS MEET OR EXCEED THE WATERMAIN DESIGN CRITERIA FOR FUTURE ALTERATIONS AUTHORIZED UNDER A DRINKING WATER WORKS PERMIT.
2. THE ASSUMPTIONS MADE FOR THE ABOVE CALCULATIONS ARE AS FOLLOWS:
   a) MAXIMUM OPERATING PRESSURE OF 100 psi,
   b) MAXIMUM SURGE PRESSURE WITH A FLOW VELOCITY CHANGE OF 0.6 m/s OF 115 psi (115 psi FOR CLASS 52 DI AND FOR PVC MAX. SURGE IS 35 psi)
3. THE TABLES APPLY TO BOTH DUCTILE IRON AND PVC. WHERE ONE LENGTH EXCEEDED THE OTHER THE LONGER LENGTH WAS USED.
4. DIMENSIONS MAY BE ADJUSTED SO LONG AS THE BEARING SURFACE AREA OF THE THRUST BLOCK IS NOT REDUCED.
4. TO BE USED IN CONJUNCTION WITH W25.3.

Ottawa	THRUST BLOCK DIMENSION TABLES FOR PVC AND DI PIPE 400mm AND UNDER	DATE: MAY 2001 REV. DATE: MARCH 2011 DWG. No.: W25.4



TYPICAL SIDEWALK SECTION



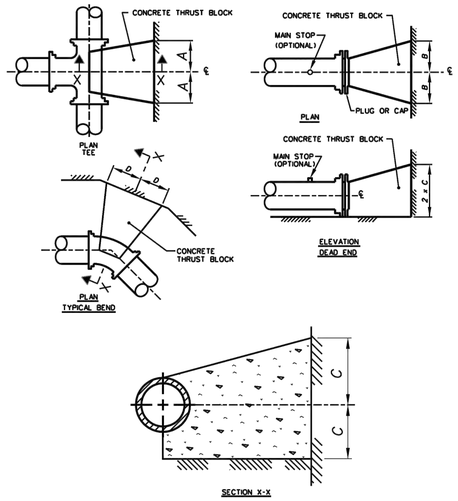
SECTION AT PRIVATE ENTRANCE AND PEDESTRIAN RAMPS

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. THE MAXIMUM SLOPE IS NOT TO EXCEED 2%.
3. FOR CURB RAMPS, SLOPE OF 2% TO 5%, MAXIMUM 8%.
4. EXPANSION AND DUMMY JOINTS AS PER SC5.
5. DEPRESSED CURB HEIGHT - FOR PEDESTRIAN CURB RAMPS 0 TO 6 mm AND FOR PRIVATE ENTRANCES 0 TO 25mm.

N.T.S.

Ottawa	MONOLITHIC CONCRETE CURB AND SIDEWALK	DATE: MAY 2001 REV. DATE: MARCH 2016 DWG. No.: SC2

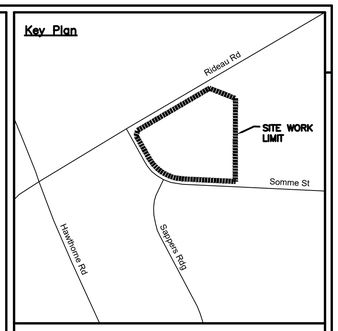


NOTES:

1. CONCRETE SHALL BE PLACED TO WITHIN 50mm OF FACE OF THE BELL.
2. BOND BREAKER TO BE USED BETWEEN CONCRETE AND FITTINGS.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.
4. REFER TO W25.4 FOR ADDITIONAL REQUIREMENTS.
5. THRUST BLOCKS SHALL BE 20 MPa CONCRETE AND AS SHOWN ON ABOVE DRAWINGS UNLESS OTHERWISE DIRECTED BY THE CONTRACT ADMINISTRATOR. THE BLOCK SHALL BE CENTERED ON THE THRUST FORCE AND SHALL ALSO PARTIALLY CRADLE THE FITTING TO DISTRIBUTE THE FORCE. THE SIDES OF THE BLOCK SHALL BE 80mm FROM THE JOINT ON EITHER SIDE OF THE BEND OR TEE.
6. THE CONCRETE WHERE POSSIBLE SHALL BE PLACED AGAINST UNDISTURBED SOIL AT THE BOTTOM AND SIDE OF THE TRENCH. WHERE IT IS NOT POSSIBLE, THE FILL BETWEEN THE BEARING SURFACE AND THE UNDISTURBED SOIL MUST BE COMPACTED IN ACCORDANCE WITH D-D29.
7. EXCEPT FOR THE ADDITION OF WATER, CONCRETE FOR THRUST BLOCKS SHALL COME PREMIXED FROM CONCRETE SUPPLIER, AS 'READY MIX' FROM A CONCRETE TRUCK. ON-SITE MIXING OF CEMENT, SAND AND AGGREGATE ETC. BY THE CONTRACTOR, FOR THE PURPOSE OF MAKING CONCRETE THRUST BLOCKS/ ANCHORS WILL NOT BE ACCEPTED.

Ottawa	CONCRETE THRUST BLOCKS FOR PVC AND DI PIPE 400mm AND UNDER	DATE: MAY 2001 REV. DATE: MARCH 2016 DWG. No.: W25.3

Key Plan



no.	date	revision/issue	by
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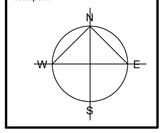


professional stamp

project title

SOMME STREET, OTTAWA, ONTARIO FASTFRATE FACILITY

drawing title

DETAILS

date	MARCH 08, 2021	job. no.	A001083
scale	NONE		
drawn	D.CANN	drawing no.	C010
approved	J.SAUVÉ		
plot date	1/13/2021 3:31:05 PM		

1. DO NOT SCALE FROM THIS DRAWING
2. CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES
3. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE FOLLOWING DRAWINGS: STRUCTURAL, MECHANICAL, ELECTRICAL

TABLE OF RESTRAINED LENGTHS FOR DI AND PVC WATERMAIN PIPE IN STANDARD GRANULAR 'A' EMBEDMENT IN SOILS OF BEARING CAPACITY OF 100 KPa AND OVER

REDUCERS	LARGER DIAMETER SIDE (TO BE RESTRAINED)					
SMALLER DIAMETER (UNRESTRAINED)	100mm	150mm	200mm	250mm	300mm	400mm
100mm	N/A	3	6	8	10	14
150mm	N/A	N/A	4	6	9	13
200mm	N/A	N/A	N/A	3	6	11
250mm	N/A	N/A	N/A	N/A	4	9
300mm	N/A	N/A	N/A	N/A	N/A	7
400mm	N/A	N/A	N/A	N/A	N/A	N/A

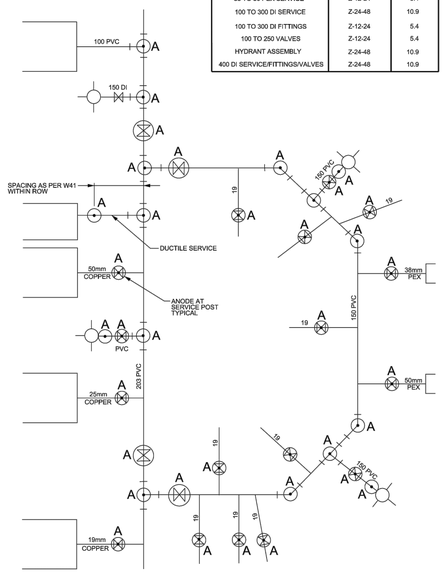
	PIPE DIAMETER					
	100mm	150mm	200mm	250mm	300mm	400mm
DEAD ENDS, CAPS, PLUGS, VALVES						
BEFORE CAPS AND EITHER SIDE OF VALVES - L	5	6	9	10	12	16
VERTICAL BENDS						
LENGTH HIGH SIDE - LHS	3	4	5	6	7	9
LENGTH LOW SIDE - LLS	1.5	2	2.5	3	3.5	4.5
TEES						
LENGTH ALONG THE BRANCH - L	1	1	1	1	1	1
LENGTH ALONG THE RUN - Lr	3	3	3	3	3	3
HORIZONTAL BENDS						
11.25, 22.5, AND 45 DEGREE BENDS	1	1.5	1.5	2	2	2.5

NOTES:

1. THE ABOVE RESTRAINED LENGTHS MEET OR EXCEED THE WATERMAIN DESIGN CRITERIA FOR FUTURE ALTERATIONS AUTHORIZED UNDER A DRINKING WATER WORKS PERMIT.
2. THE ASSUMPTIONS MADE FOR THE ABOVE CALCULATIONS ARE AS FOLLOWS:
   a) MAXIMUM OPERATING PRESSURE OF 100 psi.
   b) MAXIMUM SURGE PRESSURE WITH A FLOW VELOCITY CHANGE OF 0.6 m/s OF 115 psi (115 psi FOR CLASS 52 DI AND FOR PVC MAX. SURGE IS 35 psi)
3. FOR SOFTWARE CALCULATIONS A TEST PRESSURE OF 150 psi AND A SAFETY FACTOR OF 1.5 WAS USED WHICH RESULTS IN 225 psi MAXIMUM PRESSURE.
4. TYPE 5 TRENCH BEDDING.
5. DEPTH TO BURY 2.4 METRES EXCEPT FOR VERTICAL BENDS WHERE THE HIGH SIDE IS AT 1.8 METRES.
6. EMBEDMENT MATERIAL GRANULAR 'A' WITH CHARACTERISTICS OF ASTM D2487 GP.
7. GP SOILS ARE DESCRIBED AS POORLY GRADED GRAVEL AND SAND-GRAVEL MIXES WITH LITTLE OR NO FINES.
8. (Lr) MUST BE OF SOLID PIPE WITHOUT JOINTS, FITTINGS, ETC.
9. THE TABLES APPLY TO BOTH DUCTILE IRON AND PVC. WHERE ONE LENGTH EXCEEDED THE OTHER THE LONGER LENGTH WAS USED.
10. RESTRAINED LENGTHS ARE IN METRES.

Ottawa	TABLES OF RESTRAINED LENGTHS FOR PVC AND DI PIPE 400mm AND UNDER	DATE:	MAY 2001
		REV. DATE:	MARCH 2011
		DWG. No.:	W25.6

SIZE (mm)	ANODE TYPE	WEIGHT (Kg)
19 TO 50 COPPER SERVICE	Z-12-24	5.4
38 TO 50 PEX SERVICE	Z-12-24	5.4
100 TO 300 DI SERVICE	Z-24-48	10.9
100 TO 300 DI FITTINGS	Z-12-24	5.4
100 TO 250 VALVES	Z-12-24	5.4
HYDRANT ASSEMBLY	Z-24-48	10.9
400 DI SERVICE/FITTINGS/VALVES	Z-24-48	10.9

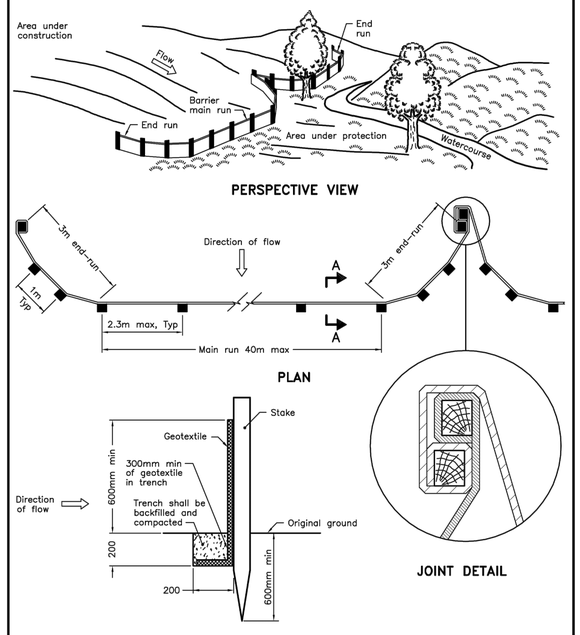


NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

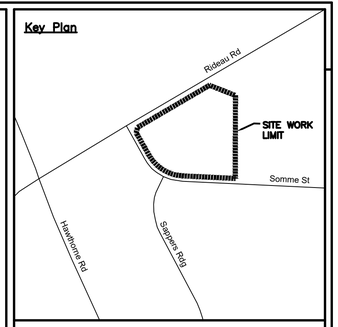
N.T.S.

Ottawa	TYPICAL ANODE INSTALLATION PVC WATERMAIN	DATE:	MAY 2001
		REV. DATE:	MARCH 2014
		DWG. No.:	W42



NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING		Nov 2015	Rev 2
LIGHT–DUTY SILT FENCE BARRIER		OPSD 219.110	



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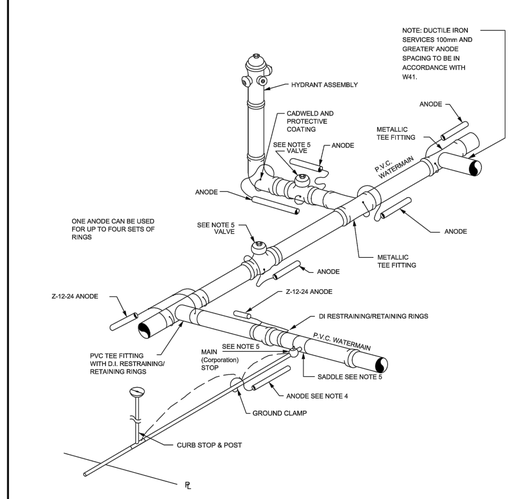
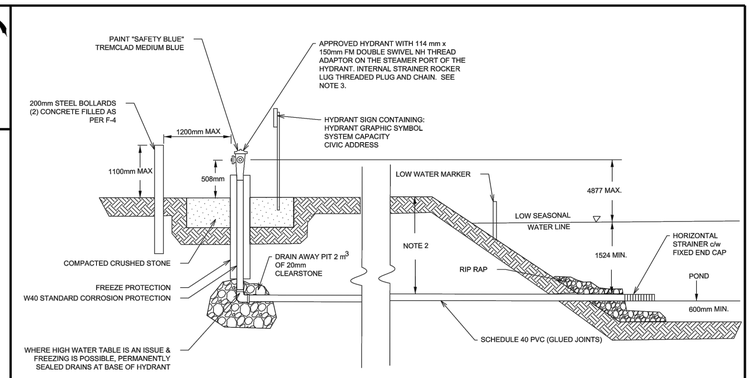


NOTES:

1. ANODE CONNECTING WIRE TO BE LOOPED AROUND PIPES / FITTINGS AND KNOTTED.
2. PROTECTIVE COATING TO BE APPLIED TO ALL CADWELDS.
3. ANODE TYPE & SPACING AS PER W42.
4. CONNECT ANODE TO COPPER SERVICES USING A GROUND CLAMP AND FOR PEX SERVICES CONNECT ANODE TO TRACER WIRE TERMINALS ON BOTH MAIN AND CURB STOPS.
5. PROTECT AUXILIARY VALVES, ISOLATION VALVES, SADDLES AND MAIN STOPS WITH A PETROLATUM WAX TAPE COATING SYSTEM. FOR PEX SERVICES ALSO WAX TAPE CURB STOP UP TO THE BASE OF THE TEE HEAD.
6. ALL DIMENSIONS ARE IN MILLIMETERS.

N.T.S.

Ottawa	CATHODIC PROTECTION FOR PVC WATERMAIN SYSTEMS	DATE:	MAY 2001
		REV. DATE:	MARCH 2013
		DWG. No.:	W40



NOTES:

1. THESE ARE TYPICAL SPECIFICATIONS. LOCAL CONDITIONS MAY REQUIRE DEVIATION. ANY DEVIATION MUST BE APPROVED BY CONTRACT ADMINISTRATOR.
2. PIPING TO BE INSTALLED AT POSITIVE GRADE WITH NO HIGH OR LOW POINTS BETWEEN HYDRANT BASE AND INTAKE.
3. ALTERNATE SCHEDULE 40 STEEL PIPE WITH 90° ELBOW AND COULING AT TOP OF RISER PREFERRED WHERE RISK OF FREEZING IS NOT A THREAT.
4. PROVIDE CORROSION AND THRUST RESTRAINT AS PER THE STANDARD.

N.T.S.

Ottawa	DRY HYDRANT INSTALLATION - SURFACE WATER SOURCE	DATE:	MARCH 2016
		REV. DATE:	
		DWG. No.:	W53

consultant

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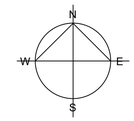

professional stamp

project title

SOMME STREET, OTTAWA, ONTARIO FASTFRATE FACILITY

drawing title

DETAILS

date	MARCH 08, 2021	job. no.	A001083
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approved	J.SAUVÉ		
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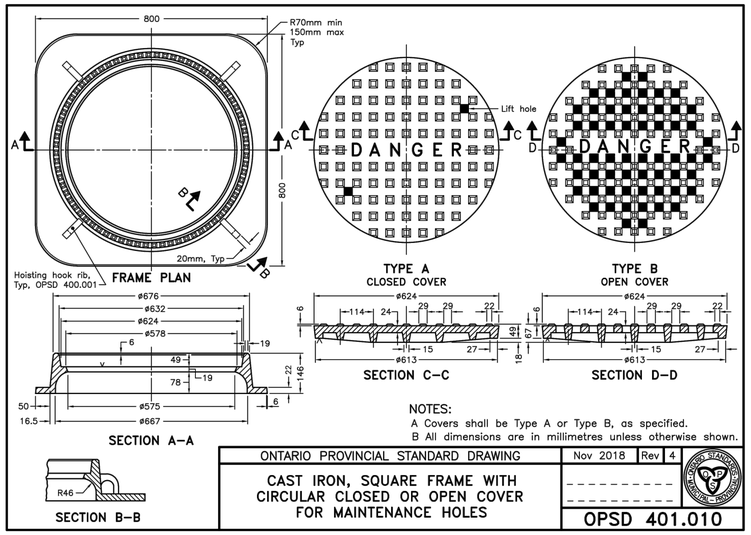
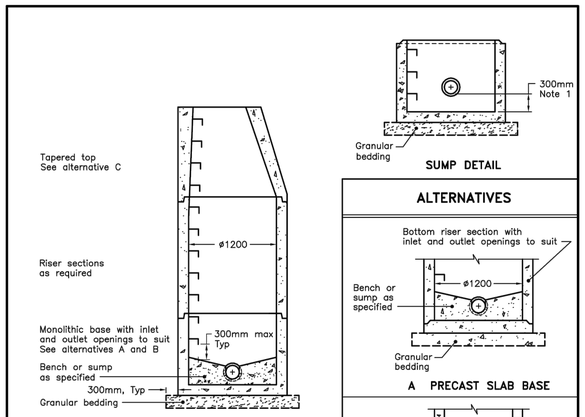


NOTES:
A Covers shall be Type A or Type B, as specified.
B All dimensions are in millimetres unless otherwise shown.

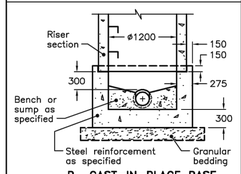
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2018	Rev 4
CAST IRON, SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES		OPSD 401.010



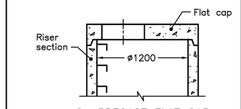
NOTES:
1 The sump is measured from the lowest invert.
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
B Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
C Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020.
D Pipe support according to OPSD 708.020.
E For benching and pipe opening details, see OPSD 701.021.
F For adjustment unit and frame installation, see OPSD 704.010.
G All dimensions are nominal.
H All dimensions are in millimetres unless otherwise shown.

ALTERNATIVES

A PRECAST SLAB BASE

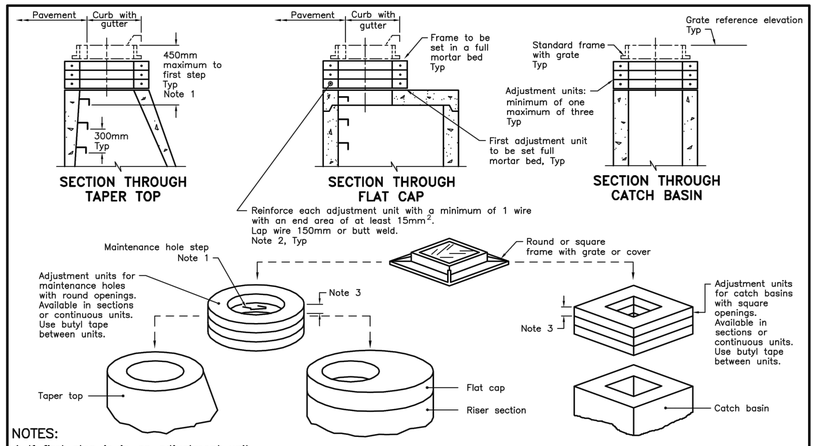


B CAST-IN-PLACE BASE



C PRECAST FLAT CAP

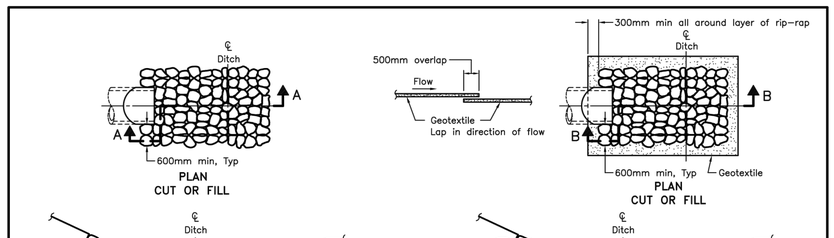
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 5
PRECAST CONCRETE MAINTENANCE HOLE 1200mm DIAMETER		OPSD 701.010



NOTES:
1 If first step is in an adjustment unit, the adjustment unit shall be of the type manufactured with a step in place.
2 Centre reinforcing in adjustment unit ±10mm.
3 Round and square adjustment units are available in sizes of 50, 75, 100, 150, and 300mm.

A Adjustment units shall not extend beyond the outside edge of the structure.
B All dimensions are in millimetres unless otherwise shown.

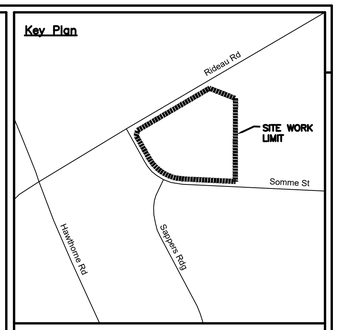
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 3
PRECAST CONCRETE ADJUSTMENT UNITS FOR MAINTENANCE HOLES, CATCH BASINS, AND VALVE CHAMBERS		OPSD 704.010



NOTES:
1 The thickness of the rip–rap layer shall be at least 1.5 times the rip–rap mean diameter.
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2018	Rev 3
GENERAL RIP–RAP LAYOUT FOR SEWER AND CULVERT OUTLETS		OPSD 810.010

Key Plan



no.	date	revision/issue	by
1	JULY 23, 2021	ISSUED FOR SITE PLAN REVIEW	

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northpoint

professional stamp

project title
SOMME STREET, OTTAWA, ONTARIO FASTFRATE FACILITY

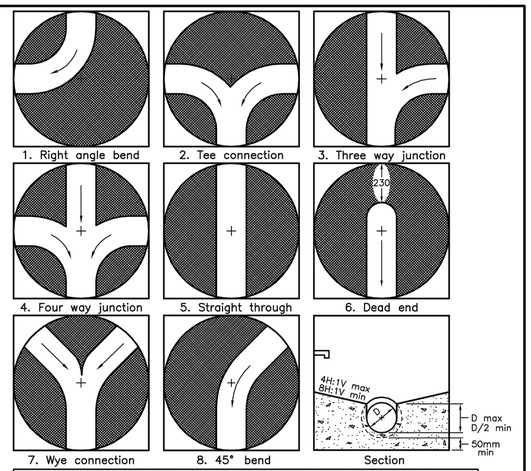
drawing title
DETAILS

date	MARCH 08, 2021
scale	NONE
drawn	D.CANN
approved	J.SAUVÉ
plot date	1/13/2021 3:31:05 PM

job. no. **A001083**

drawing no. **C012**

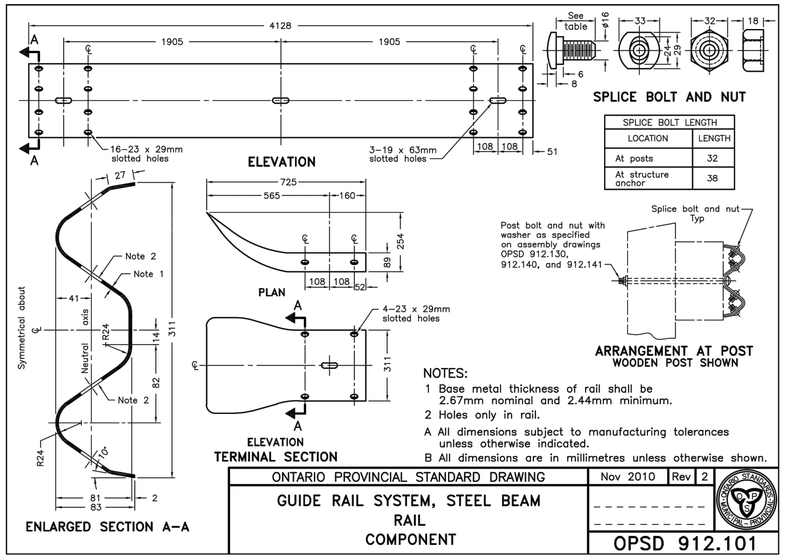
1. DO NOT SCALE FROM THIS DRAWING
2. CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES
3. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE FOLLOWING DRAWINGS: STRUCTURAL, MECHANICAL, ELECTRICAL



MAXIMUM SIZE HOLE IN THE WALL IN PRECAST RISER SECTIONS					
Maintenance Hole Diameter	No. 1–4	No. 5 and 6	No. 8	No.7	
				Inlet Hole	Outlet Hole
1200	700	860	780	700	860
1500	860	1220	960	860	1170
1800	1220	1485	1220	1220	1485
2400	1485	2020	1760	1485	2020
3000	1930	2450	2300	1930	2450
3600	2470	3085	2730	2470	3085

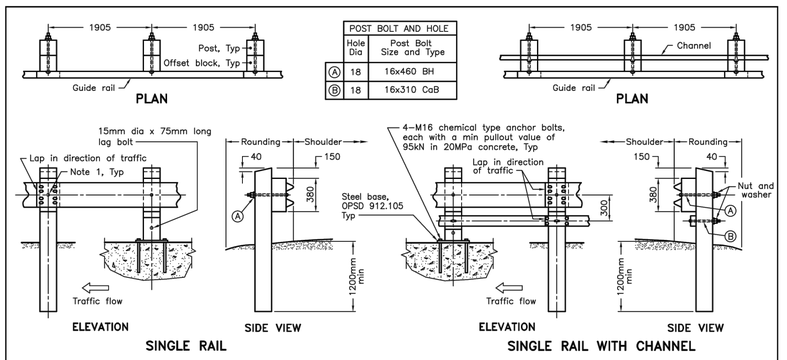
NOTES:
1 Slopes shall be maintained from the outlet hole opening for top of benching.
A Concrete for benching shall be 30MPa.
B When benching is hand–finished, it shall be given wood float finish, channel shall be given steel trowel finish.
C Benching slope and height shall be as specified.
D When specified, maintenance holes that are 1200mm in diameter with a uniform channel for 200 or 250mm pipe may be prebenched at the manufacturer with standardized benching slope and channel orientation.
E All dimensions are nominal.
F All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 4
MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES		
	OPSD 701.021	



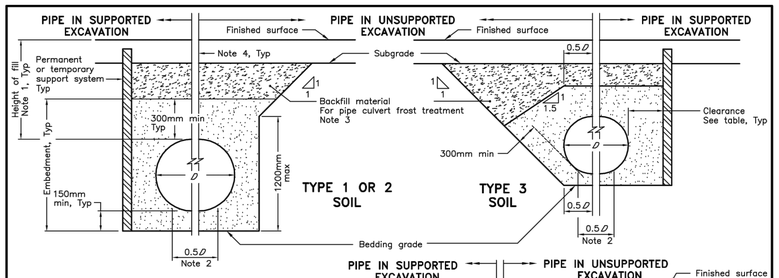
NOTES:
1 Base metal thickness of rail shall be 2.67mm nominal and 2.44mm minimum.
2 Holes only in rail.
A All dimensions subject to manufacturing tolerances unless otherwise indicated.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2010	Rev 2
GUIDE RAIL SYSTEM, STEEL BEAM RAIL COMPONENT		
	OPSD 912.101	



NOTES:
1 Washer shall not be installed at front face of rail. One bolt located at centre of steel beam guide rail.
A Wooden posts and offset blocks shall be 190x190mm. Tops to have 25mm chamfer.
B Steel beam guide rail mounting heights shall be as specified.
C This OPSD to be read in conjunction with OPSD 912.101 and 912.102.
D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2010	Rev 2
GUIDE RAIL SYSTEM, STEEL BEAM WOODEN POST ASSEMBLY INSTALLATION – SINGLE RAIL		
	OPSD 912.140	



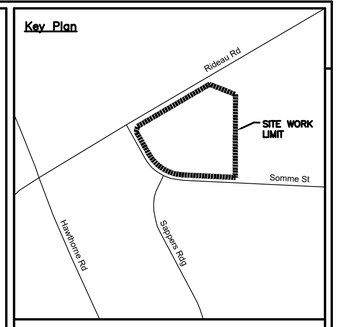
LEGEND:
Ø – Inside diameter

NOTES:
1 Height of fill is measured from the finished surface to top of pipe.
2 The pipe bed shall be compacted and shaped to receive the bottom of the pipe.
3 Pipe culvert frost treatment shall be according to OPSD 803.030 and 803.031.
4 Condition of excavation is symmetrical about centreline of pipe.
A Granular material placed in the haunch area shall be compacted prior to placing and compacting the remainder of the embedment material.
B Soil types as defined in the Occupational Health and Safety Act and Regulations for Construction Projects.
C All dimensions are in metres unless otherwise shown.

CLEARANCE TABLE	
Pipe Inside Diameter mm	Clearance mm
900 or less	300
Over 900	500

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 3
FLEXIBLE PIPE EMBEDMENT AND BACKFILL EARTH EXCAVATION		
	OPSD 802.010	

Key Plan



no.	date	revision/issue	by
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DETAILS

date	MARCH 08, 2021
scale	NONE
drawn	D.CANN
approved	J.SAUVÉ
plot date	1/13/2021 3:31:05 PM

job. no. **A001083**
drawing no. **C013**

1. DO NOT SCALE FROM THIS DRAWING
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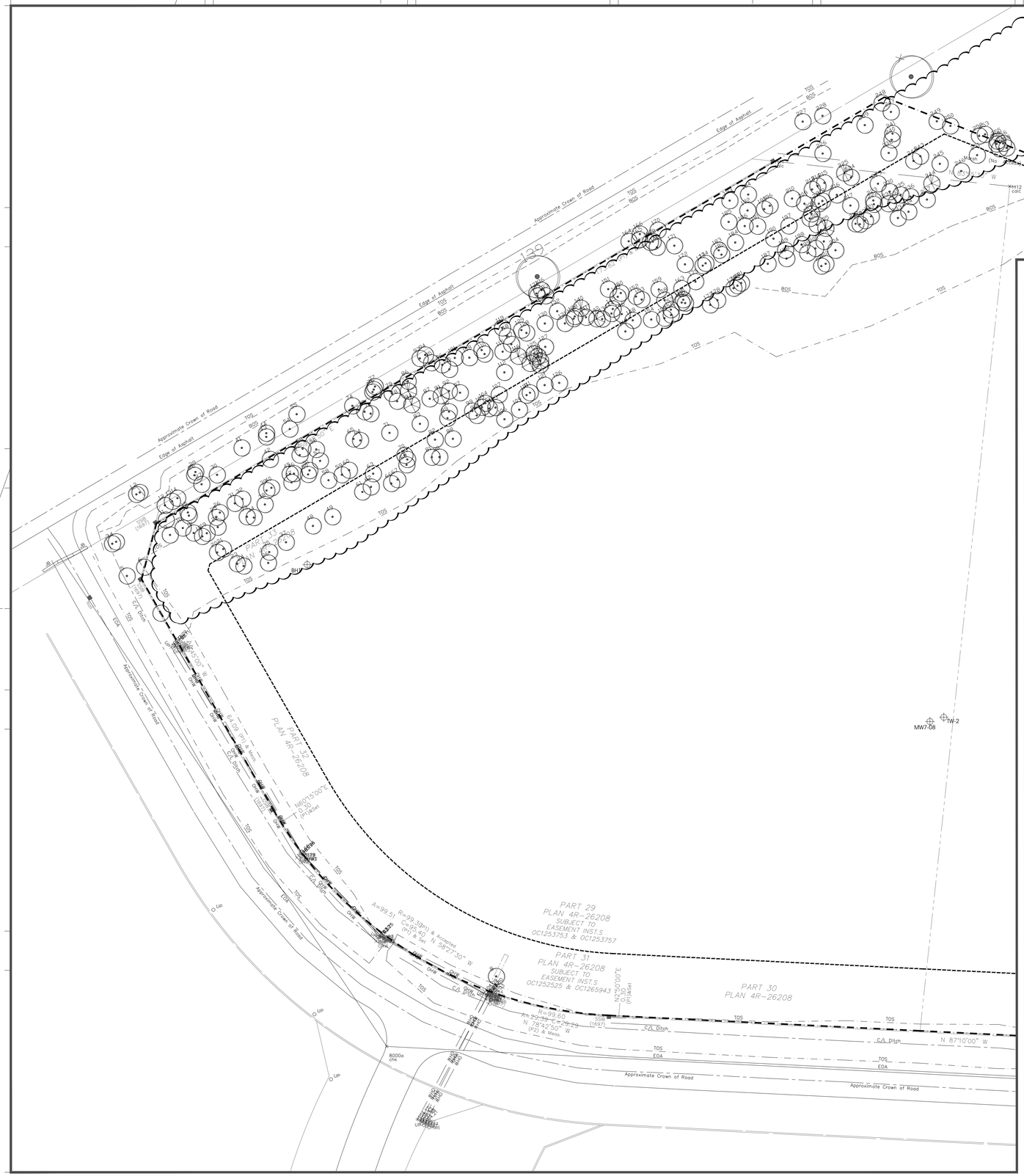
Appendix C

Fastfrate Tree Inventory (2021)



1 / L100 EXISTING CONDITIONS - TREE INVENTORY PLAN
1:500

DRAWING LEGEND

- PROPERTY LINE
- SETBACK LINES
- FIRE ROUTE
- TOP OF SLOPE (TOS)
- BOTTOM OF SLOPE (BOS)
- BOREHOLE
- GAS PIPELINE POLE
- LIGHT STANDARD
- SIGNAGE
- UTILITY POLE
- TEST WELL LOCATIONS
- OHW OVERHEAD WIRE
- CONCRETE JERSEY BARRIER
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE

LEGEND SYMBOLS ARE TYPICAL AND MAY NOT ALL APPLY TO THIS SPECIFIC PROJECT.

Tree Inventory

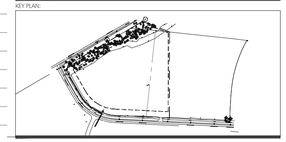
Tree #	Scientific Name	Common Name	DBH cm/ HT m	Condition
1	*Salix sp.*	Willow	10cm	Good
2	*Salix sp.*	Willow	10cm	Good
3	*Salix sp.*	Willow	14cm	Good
4	*Salix sp.*	Willow	10cm	Good
5	*Salix sp.*	Willow (multi-stem)	14cm, 10cm, 10cm, 12cm	Good
6	*Salix sp.*	Willow	14cm	Good
7	*Salix sp.*	Willow (multi-stem)	25cm, 15cm	Good
8	*Gleditsia triacanthos*	Honey locust	10cm	Fair
9	*Salix sp.*	Willow	10cm	Good
10	*Salix sp.*	Willow (multi-stem)	13cm, 15cm, 10cm	Good
11	*Salix sp.*	Willow (multi-stem)	30cm, 20cm	Good
12	*Salix sp.*	Willow (multi-stem)	28cm, 18cm, 14cm	Good
13	*Betula papyrifera*	White Birch	11cm	Fair
14	*Salix sp.*	Willow (multi-stem)	15cm, 15cm, 18cm, 13cm	Dead
15	*Elm or ash*		13cm	Dead
16	*Elm or ash*		13cm	Fair
17	*Salix sp.*	Willow	19cm	Good
18	*Salix sp.*	Willow	25cm	Good
19	*Salix sp.*	Willow	25cm	Good
20	*Poplar*	Aspen (multi-stem)	15cm, 8cm	Fair
21	*Poplar*	Aspen (multi-stem)	25cm, 20cm	Fair
22	*Salix sp.*	Willow	23cm	Good
23	*Rhus typhina*	Staghorn Sumac	15cm	Good
24	*Manitoba or ash*	(multi-stem)	17cm, 10cm	Good
25	*Salix sp.*	Willow	14cm	Good
26	*Salix sp.*	Willow	28cm	Good
27	*Ash?*		13cm	Dead
28	*Fraxinus sp.*	Ash	10cm	Dead
29	*Betula papyrifera*	White Birch	10cm	Good
30	*Salix sp.*	Willow	20cm	Good
31	*Salix sp.*	Willow	25cm	Poor
32	*Salix sp.*	Willow	20cm	Good
33	*Salix sp.*	Willow (multi-stem)	25cm, 28cm	Fair
34	*Manitoba or ash*		13cm	
35	*Salix sp.*	Willow	25cm	Good
36	*Populus*	Poplar	10cm	Good
37	*Populus*	Poplar	19cm	Good
38	*Elm?*		18cm	Good
39	*Salix sp.*	Willow (multi-stem)	28cm, 13cm	Good
40	*Salix sp.*	Willow	25cm	Good
41	*Fraxinus sp.*	Ash	10cm	Dead
42	*Salix sp.*	Willow (multi-stem)	10cm, 10cm, 18cm	Good
43	*Fraxinus sp.*	Ash	10cm	Good
44	*Fraxinus sp.*	Ash	10cm	Dead
45	*Salix sp.*	Willow	30cm	Good
46			15cm	Dead
47		Multi-stem	23cm, 25cm, 18cm, 20cm	Good
48	*Populus deltoides*	Eastern Cottonwood	20cm	Good
49	*Acer negundo*	Manitoba Maple	17cm	Good
50	*Salix sp.*	Willow (multi-stem)	18cm, 23cm	Good
51	*Salix sp.*	Willow	30cm	Good
52	*Fraxinus sp.*	Ash	13cm	Good
53	*Salix sp.*	Willow	14cm	Good
54	*Fraxinus sp.*	Ash	38cm	Dead
55	*Betula papyrifera*	White Birch	10cm	Good
56	*Salix sp.*	Willow	18cm	Good
57	*Salix sp.*	Willow	18cm	Good
58	*Salix sp.*	Willow	23cm	Good
59		Multi-stem	28cm, 20cm, 20cm	Good
60	*Salix sp.*	Willow	20cm	Good
61	*Salix sp.*	Willow	10cm	Good
62	*Salix sp.*	Willow	23cm	Good
63	*Salix sp.*	Willow	23cm	Good
64	*Salix sp.*	Willow	13cm	Good
65	*Salix sp.*	Willow	18cm	Good
66	*Salix sp.*	Willow	25cm	Good
67		Multi-stem	8cm, 30cm, 18cm, 13cm	Good
68	*Salix sp.*	Willow	30cm	Good
69	*Salix sp.*	Willow (multi-stem)	30cm, 20cm, 13cm	Fair
70	*Salix sp.*	Willow	15cm	Fair
71	*Salix sp.*	Willow	10cm	Fair
72	*Fraxinus sp.*	Ash	41cm	Dead
73	*Betula papyrifera*	White Birch	18cm	Good
74	*Betula papyrifera*	White Birch	15cm	Good
75	*Betula papyrifera*	White Birch	15cm	Good
76	*Betula papyrifera*	White Birch	13cm	Good
77	*Betula papyrifera*	White Birch	13cm	Good
78	*Betula papyrifera*	White Birch (multi-stem)	13cm, 13cm	Good
79	*Betula papyrifera*	White Birch	18cm	Good
80	*Acer negundo*	Manitoba Maple	13cm	Good
81	*Salix sp.*	Willow (multi-stem)	13cm, 8cm	Good
82	*Salix sp.*	Willow	46cm	Good
83	*Fraxinus sp.*	Ash	10cm	Dead
84	*Thuja occidentalis*	Eastern White Cedar	15cm	Dead
85	*Thuja occidentalis*	Eastern White Cedar	15cm	Good
86	*Betula papyrifera*	White Birch	15cm	Good
87	*Fraxinus sp.*	Ash	13cm	Dead
88	*Salix sp.*	Willow (multi-stem)	28cm, 23cm, 23cm, 25cm, 20cm	Good
89	*Fraxinus sp.*	Ash	10cm	Dead
90	*Fraxinus sp.*	Ash	15cm	Dead
91	*Picea glauca*	White Spruce	15cm	Good
92	*Fraxinus sp.*	Ash	43cm	Dead
93	*Populus tremuloides*	Trembling Aspen	13cm	Good
94	*Populus tremuloides*	Trembling Aspen	13cm	Good
95	*Ulmus sp.*	Elm	10cm	
96	*Corpinus caroliniana*	American Hornbeam	Under 10cm	
97	*Fraxinus sp.*	Ash	18cm	Good
98	*Populus tremuloides*	Trembling Aspen	13cm	Good
99	*Salix sp.*	Willow	15cm	Good
100	*Populus tremuloides*	Trembling Aspen	18cm	Good
101	*Betula papyrifera*	White Birch	28cm	Dead
102				Dead
103	*Fraxinus sp.*	Ash	10cm	Dead
104	*Populus tremuloides*	Trembling Aspen (multi-stem)	15cm, 7cm	Good
105	*Populus tremuloides*	Trembling Aspen	10cm	Good
106	*Acer negundo*	Manitoba Maple (multi-stem)	10cm, 10cm	Dead
107	*Betula papyrifera*	White Birch	10cm	Good
108	*Fraxinus sp.*	Ash	18cm	Dead
109	*Acer negundo*	Manitoba Maple	10cm	Good
110	*Acer negundo*	Manitoba Maple	10cm	Good
111	*Acer negundo*	Manitoba Maple	10cm	Good
112			15cm	Dead
113	*Populus tremuloides*	Trembling Aspen	18cm	Good
114	*Populus sp.*	Poplar	10cm	Good
115	*Fraxinus sp.*	Ash	13cm	Dead
116	*Thuja occidentalis*	Eastern White Cedar	13cm	Good
117	*Tilia americana*	Basswood	13cm	Good
118	*Tilia americana*	Basswood	10cm	Good
119	*Corpinus caroliniana*	American Hornbeam	Under 10cm	Good
120	*Picea sp.*	Spruce	28cm	Good
121	*Acer saccharum*	Sugar Maple (multi-stem)	25cm, 15cm	Poor
122	*Picea sp.*	Spruce	23cm	Good
123	*Populus sp.*	Poplar	13cm	Good
124	*Thuja occidentalis*	Eastern White Cedar	23cm	Dead
125	*Populus sp.*	Poplar	18cm	Good
126			28cm	Dead
127	*Fraxinus sp.*	Ash	10cm	Good
128	*Fraxinus sp.*	Ash	10cm	Dead
129	*Fraxinus sp.*	Ash	18cm	Dead
130	*Fraxinus sp.*	Ash	20cm	Dead
131	*Tilia americana*	Basswood	28cm	Dead
132		Hawthorn	10cm	Good
133	*Tilia americana*	Basswood	28cm, 25cm, 15cm	Good
134	*Fraxinus sp.*	Ash	18cm	Dead
135	*Fraxinus sp.*	Ash	15cm	Dead
136	*Populus tremuloides*	Trembling Aspen (multi-stem)	10cm, 18cm	Dead
137	*Populus tremuloides*	Trembling Aspen (multi-stem)		Dead
138	*Populus tremuloides*	Trembling Aspen (multi-stem)		Dead
139	*Salix sp.*	Willow	102cm	Good
140	*Thuja occidentalis*	Eastern White Cedar	23cm	Dead
141	*Acer saccharum*	Sugar Maple	25cm	Good
142	*Thuja occidentalis*	Eastern White Cedar	25cm	Poor
143		Ash or elm	30cm	Good
144	*Populus sp.*	Poplar	13cm	Good
145	*Populus sp.*	Poplar	10cm	Good
146	*Populus sp.*	Poplar	17cm	Good
147	*Populus sp.*	Poplar	10cm	Good
148	*Populus sp.*	Poplar	20cm	Good
149	*Populus sp.*	Poplar	10cm	Good
150	*Populus sp.*	Poplar	20cm	Good
151	*Betula papyrifera*	White Birch	20cm	Good
152		American beech	10cm	Good
153	*Acer saccharum*	Sugar Maple	15cm	Good
154		Poplar or Basswood	10cm	Good
155	*Populus sp.*	Poplar	10cm	Good
156	*Acer saccharum*	Sugar Maple	10cm	Good
157	*Populus sp.*	Poplar	10cm	Good
158	*Tilia americana*	Basswood	17cm	Good
159	*Tilia americana*	Basswood (multi-stem)	10cm, 14cm	Good
160		Ash? Tilia? Poplar?	13cm	Good
161	*Acer saccharum*	Sugar Maple	10cm	Good
162	*Acer saccharum*	Sugar Maple	10cm	Good
163	*Fraxinus sp.*	Ash	10cm	Good
164		Elm?	10cm	Good
165	*Tilia americana*	Basswood	10cm	Good
166			15cm	Good
167			10cm	Good
168			15cm	Good
169			20cm	Dead
170			13cm	Dead
171			13cm	Dead
172	*Tilia americana*	Basswood	10cm	Good
173	*Tilia americana*	Basswood	23cm	Good
174	*Tilia americana*	Basswood	10cm	Good
175	*Tilia americana*	Basswood (multi-stem)	10cm, 15cm	Good
176				Dead
177	*Tilia americana*	Basswood	20cm	Dead
178	*Tilia americana*	Basswood	13cm	Dead
179	*Acer saccharum*	Sugar Maple	18cm	Dead
180	*Acer saccharum*	Sugar Maple	33cm	Poor
181	*Carpinus caroliniana*	American Hornbeam	11cm	Good
182	*Tilia americana*	Basswood	10cm	Good
183	*Tilia americana*	Basswood	10cm	Good
184	*Tilia americana*	Basswood	13cm	Good
185	*Tilia americana*	Basswood	13cm	Good
186	*Tilia americana*	Basswood	10cm	Good
187				Dead
188			10cm, 7cm, 4cm	Dead
189	*Tilia americana*	Basswood	10cm	Good
190		Multi-stem	10cm, 10cm, 10cm	Dead
191	*Tilia americana*	Basswood	10cm	Good
192	*Carpinus caroliniana*	American Hornbeam	10cm	Poor
193	*Populus tremuloides*	Trembling aspen	13cm	Good
194	*Fraxinus sp.*	Ash (multi-stem)	13cm, 10cm, 15cm, 10cm, 13cm, 13cm, 10cm	Fair
195	*Tilia americana*	Basswood	10cm	Good
196	*Tilia americana*	Basswood	15cm	Good
197	*Tilia americana*	Basswood	13cm	Good
198	*Fraxinus sp.*	Ash	22cm	Dead
199	*Tilia americana*	Basswood	13cm	Good
200	*Carpinus caroliniana*	American Hornbeam	10cm	Good
201	*Salix sp.*	Willow	13cm	Good
202	*Salix sp.*	Willow	15cm	Good
203	*Acer saccharum*	Sugar Maple	20cm	Poor
204	*Carpinus caroliniana*	American Hornbeam	10cm	Dead
205	*Picea sp.*	Spruce	41cm	Poor
206	*Fraxinus sp.*	Ash	10cm	Poor
207	*Fraxinus sp.*	Ash	13cm	Good
208	*Acer saccharum*	Sugar Maple	13cm	Poor
209	*Tilia americana*	Basswood	15cm	Good
210	*Tilia americana*	Basswood	10cm	Good
211	*Tilia americana*	Basswood	13cm	Good
212	*Tilia americana*	Basswood	10cm	Good
213	*Populus tremuloides*	Trembling aspen	13cm	Good
214		Multi-stem	13cm, 10cm, 25cm, 20cm	Dead
215	*Tilia americana*	Basswood	18cm	Dead
216	*Tilia americana*	Basswood	13cm	Good
217			15cm, 10cm	Dead
218	*Tilia americana*	Basswood (multi-stem)	15cm, 10cm, 9cm, 13cm, 8cm	Good
219	*Tilia americana*	Basswood	20cm	Good
220	*Tilia americana*	Basswood (multi-stem)	13cm, 20cm	Good
221	*Tilia americana*	Basswood	15cm	Poor
222	*Acer rubrum*	Red maple	17cm	Good
223	*Acer rubrum*	Red maple	15cm	Good
224	*Tilia americana*	Basswood	15cm	Good
225	*Picea sp.*	Spruce	13cm	Good
226	*Fraxinus sp.*	Ash (multi-stem)	10cm, 10cm, 10cm, 10cm	Fair
227	*Ulmus sp.*	Elm	10cm	Dead
228	*Fraxinus sp.*	Ash		Dead
229	*Tilia americana*	Basswood	10cm	Good
230	*Tilia americana*	Basswood	10cm	Good
231			10cm	Dead
232	*Betula alleghaniensis*	Yellow Birch	9cm	Good
233			10cm	Dead
234	*Tilia americana*	Basswood	10cm	Good
235	*Tilia americana*	Basswood	13cm	Good
236	*Betula alleghaniensis*	Yellow Birch	8cm	Good
237	*Tilia americana*	Basswood	13cm	Poor
238	*Tilia americana*	Basswood (multi-stem)	18cm, 18cm	Dead
239	*Fraxinus sp.*	Ash	13cm	Dead
240	*Tilia americana*	Basswood	10cm	Good
241	*Alnus incana ssp. rugosa*	Speckled alder (multi-stem)	10cm, 10cm, 10cm	Good
242	*Tilia americana*	Basswood	13cm	Good
243	*Fraxinus sp.*	Ash	10cm	Dead
244	*Picea sp.*	Spruce	30cm	Dead
245	*Carpinus caroliniana*	American Hornbeam	15cm, 13cm, 10cm	Dead
246	*Carpinus caroliniana*	American Hornbeam	10cm	Fair
247	*Fraxinus sp.*	Ash	13cm	Fair
248	*Fraxinus sp.*	Ash	10cm	Dead
249	*Ulmus sp.*	Elm	20cm	Dead
250	*Tilia americana*	Basswood	10cm	Good
251			20cm	Dead
252	*Ulmus sp.*	Elm	18cm	Dead
253	*Ulmus sp.*	Elm	18cm	Dead
254	*Ulmus sp.*	Elm	13cm	Dead
255	*Ulmus sp.*	Elm	10cm	Dead
256	*Ulmus sp.*	Elm	13cm	Dead
257	*Ulmus sp.*	Elm	10cm	Dead
258	*Ulmus sp.*	Elm	13cm	Dead

CLIENT LOGO:

FASTFRATE

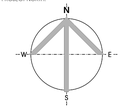
CBRE

KEY PLAN:



TRUE NORTH:

PROJECT NORTH:



PRELIMINARY
NOT FOR CONSTRUCTION

RECORD OF REVISIONS:

NUMBER	REVISION	DATE (MM/DD/YY)
6		
5		
4		
3		
2		
1		

ISSUE:

PROFESSIONAL STAMP:

PROFESSIONAL STAMP:

CIVITAS ARCHITECTURE INC.
14 CHAMBERLAIN AVENUE, SUITE 101
OTTAWA, ON
CANADA K1S 1V9
T: 613.742.7482
WWW.CIVITAS-INC.CA

CONSULTANT LOGO:

PROJECT TITLE:

FASTFRATE OTTAWA WAREHOUSE FACILITY

SAPPERS RIDGE
OTTAWA, ONTARIO

DRAWING TITLE:

EXISTING TREE INVENTORY

DRAWN BY: JT
DATE: 2021-06-29
REVIEWED BY: D.RANCIER
APPROVED BY: D.RANCIER
PRINT DATE: 6/30/2021 3:19 PM
ISSUED DATE: 2021-06-29
CLIENT PROJECT #: -

DRAWING NUMBER: **L100**
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PROJECT #: **2001**

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