## **Environmental Study Report**

# HIGHWAY 26 WEST FROM 280 m WEST OF PRINCETON SHORES BOULEVARD TO HARBOUR STREET IMPROVEMENTS

## MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

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Prepared for:

Town of Collingwood

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#### **Executive Summary**

R.J. Burnside & Associates Limited (Burnside) was retained by the Town of Collingwood to complete a Municipal Class Environmental Assessment (EA) to consider solutions to traffic demands that are within the lifecycle of planned rehabilitation work for the area of Highway 26 West from 280 m west of Princeton Shores Boulevard to Harbour Street (**Figure 1**). The area has been identified as being in need of surface rehabilitation and a key area where improvements to the transportation network may be required to improve traffic operation and safety associated with left hand turning movements.

This project is considered as a Schedule C project, as defined in the Municipal Engineering Association Municipal Class EA document (October 2000, as amended 2007 & 2011), approved under the Ontario Environmental Assessment Act. As such, the project planning is completed under the planning and documentation procedures of Phases 1 through 5 of the Municipal Class EA procedure (**Figure 2**).

The following alternative solutions have been proposed. Alternative 1 – Do Nothing. Alternative 2 – Widen the existing road to provide left turn lanes. Alternative 3 – Widen the existing road to provide additional through lanes. Alternative 4 – Provide improvements to facilitate alternative transportation modes and methods. Or some combination of alternatives.

The alternative solutions were evaluated based on natural, social, economic and technical environments and in consultation with the public and agencies. Alternative 2, widening the existing road to provide left turn lanes, was evaluated to be the preferred alternative, combined with Alternative 4, providing improvements to facilitate alternative transportation modes.

Identification and evaluation of design options for the preferred alternative solution included Alternative 1 – Provision of localized exclusive left turn lanes at critical intersections along the full length of the corridor. Alternative 2 – Provision of a continuous left turn lane along part of the corridor and localized left turn lanes along the remainder of the corridor, with a two lane cross section in the transition areas and Alternative 3 – Provision of a continuous left turn lane along all of the corridor in the study area (i.e., three lane cross section).

The impact of the design options were evaluated against an inventory of the natural, social and economic environment including possible mitigating measures. A preferred design alternative was identified following consultation with the public and review agencies. The preferred design alternative for this project is Design Alternative 2 – provision of a continuous left turn lane along part of the corridor and localized left turn lanes along the remainder of the corridor, with a two lane

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cross section in the transition areas. Based on traffic volumes, left-turn lanes are not warranted at all intersections along the corridor that would result in the need for a continuous left turn lane. However, for the parts of the corridor from Waterfalls Lane to Cranberry Trail West, and from Trott Boulevard to Gun Club Road limited spacing between some intersections would not accommodate localized left-turn lanes. A continuous left-turn lane is effective for these portions of the corridor. This alternative addresses the technical objectives of the Problem Statement while minimizing impact to the natural, social and economic environment.

## 1.0 Introduction and Background

#### 1.1 Introduction

R.J. Burnside & Associates Limited (Burnside) was retained by the Town of Collingwood to complete a Municipal Class Environmental Assessment (EA) toconsider solutions to traffic demands that are within the lifecycle of planned rehabilitation work for the area of Highway 26 West from 280 m west of Princeton Shores Boulevard to Harbour Street (**Figure 1**). The area has been identified as being in need of surface rehabilitation and a key area where improvements to the transportation network may be required to improve traffic operation and safety associated with left hand turning movements.

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The Class EAconsiders project specific constraints and the potential impacts on the natural, social, economic and technical environments.

## 1.2 Study Area and Surrounding Property Description

The study area is Highway 26 West, from 280m west of Princeton Shores Boulevard to Harbour Street.

Currently, the land use within and adjacent to the study area consists primarily of commercial, institutional and residential lands. Commercial properties include resort commercial and highway commercial properties. Institutional land uses include Pretty River Academy and a municipal water reservoir located on the south side of Highway 26 West, west of the Cranberry Trail East right-of-way. Residential landsinclude single detached dwellings and condominium developments. A portion of the Silver Creek Wetland Complex is located adjacent to the Highway 26 right-of-way at the west limit of the study area. One (1) watercourse (Cranberry Creek) crosses Highway 26 West within the study area, at a location between Cranberry Trail East and White Street, flowing easterly from Cranberry Lake to the Nottawasaga Bay. A municipal trail is located adjacent to Highway 26 from west of Princeton Shores to east of Pretty River Academy and west of White Street to Harbour Street.

Figure 1 Study Area



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## 2.0 Existing Environment

#### 2.1 Natural Environment

## 2.1.1 Geology, Physiography and Soils

The study area is underlain by sedimentary strata of Middle Ordovician ages consisting of limestone, doloston, shale, arkose, and sandstone bedrock (Ontario Geological Survey, 1991). Physiographic features consist of sand plain with beaches and shorecliffs forming parent material for present day soils (Chapman and Putman, 1984). Based on the Ontario Soils Mapping, the study area is located within an area of sandy loam soil (Soil Research Institute, 1960).

The elevation of the study area is approximately 180 m above sea level (masl) along the length of the study corridor (Simcoe County Interactive Mapping, 2013).

## 2.2.2 Hydrogeology

Based on the topography of the area, regional ground water is inferred to flow northerly toward the Nottawasaga Bay, located to the north of the Site.

Nottawasaga Valley Conservation Authority(NVCA) mapping illustrates the study area is within an area characterized as an area of high aquifer vulnerability. In general, high aquifer vulnerability is characterized by permeable, granular aquifer materials or fractured bedrock near the ground surface in association with a relatively shallow water table (NVCA, 2011). The study area does not include any well head protection areas, however, approximately 300 m to the south of the study area, within the vicinity of Cranberry Lake,lands are identified as an area of significant ground water recharge.

## 2.2.3 Aquatic Environment

The study area is located within the Blue Mountain Subwatershed, comprised of four main creek systems — Silver Creek, Black Ash Creek, Pretty River and Batteaux Creek. Originating on the Niagara Escarpment, the creek systems discharge directly to Georgian Bay, within the Town of Collingwood (NVCA, 2007). The study area does not contain any of the main creek systems but is located between Silver Creek and Black Ash Creek. Cranberry Creek, a tributary of Georgian Bay is located within the study area, crossing Highway 26 West, west of White Street. Cranberry Creek directly connects the Cranberry Marsh with Georgian Bay. The Creek has been highly altered upstream of Highway 26 West. Downstream of Highway 26 West, the creek flows through lowland forest and outlets to a globally rare coastal marsh with the Silver Creek Wetland Complex. There is little baseflow in the system, however it does at least provide seasonal habitat opportunities for warm water baitfish species (NVCA, communication with Dave Featherstone).

Wetland features within the vicinity of the study area include a fragmented series of swamp and low-land forest comprising the Silver Creek Wetland Complex and other unevaluated wetlands (NVCA, 2007).

The Silver Creek Wetland Complex is a provincially significant wetland approximately 327 ha in size. The complex is comprised of several wetlands including the previously separate wetland complexes of Cranberry Marsh, Collingwood Harbour and Silver Creek, which were complexed into one unit in 1995 (NVCA, 2011). The Silver Creek Wetland Complex consists of a mosaic of swamp, marsh and rich fen habitats. The wetland complex functions to support ground water discharge, temperature control, fish spawning habitat and rare vegetation communities (NVCA 2011). Globally rare Great Lakes coastal marsh communities are present along the Georgian Bay shoreline, including a Shrubby Cinquefoil coastal meadow marsh, considered to be provincially rare, located north of Highway 26 West, adjacent to the western end of the study area(NVCA, 2011). In the vicinity of Princeton Shores Boulevard, a variety of mixed, coniferous and thicket swamps are intermixed with upland habitats is present in contrast to the east of the study area, where such features are absent due to urban development (NVCA, 2011). A large cattail marsh at Cranberry Marsh has historically supported area-sensitive marsh birds (NVCA, 2011).

As a Provincially Significant Wetland, the Silver Creek Wetland Complex is afforded protection from development and site alteration under provincial and municipal planning policies.

The functions of all wetlands and watercourses in the study area should be maintained in light of any future development of the area. Opportunities to enhance function should be considered to enhance surface water quality.

#### 2.2.4 Terrestrial Environment

## **Vegetation Communities**

Vegetation communities within the study area areapproximated on an aerial photograph and presented in **Appendix A**. Community characterizations are based on visual observation and information obtained from the Draft Natural Heritage System report for the Town of Collingwood (NVCA, 2011). Community characterization is allocated based on an approximation of the Ecological Land Classification (ELC) framework according to Lee et al. (1998, updated 2008).

In general, the study area consists of a constructed community, comprised of the Highway 26 West right-of-way (CVI\_1). Communities surrounding the study area consist of constructed communities, including residential (CVR),

commercial and institutional (CVC) communities as well as deciduous forest, mixed forest, swamp and marsh (NVCA, 2011). The plant communities are consistent with the study area's proximity to the shores of Georgian Bay and anthropogenic influences.

The vegetation communities identified within the study area were considered widespread and common in Ontario.

Ashrubby cinquefoil coastal meadow marshis identified in the Collingwood Natural Heritage System report as globally significant (NVCA 2011). The marsh is located adjacent to the north of the study area at the west end of the Highway 26 West study corridor, in proximity to Princeton Shores Boulevard and associated with the Silver Creek Provincially Significant Wetland.

## Wildlife and Wildlife Habitat (Terrestrial and Aquatic)

The habitat of the study area is considered to be relatively limited and representing an urban environment consisting of landscaped areas with some trees and asphalt and gravel surfaces. Cranberry Creek crosses the Highway 26 West right-of-way near White's Road. According to information obtained from the NVCA, Cranberry Creek provides seasonal habitat opportunities for warm water baitfish species (NVCA, communication with Dave Featherstone).

Habitat within the study area was observed to be suitable for breeding birds, generalist mammal species and fish.

Habitat within the greater area generally consists of woodland, wetland, and shoreline areas. The most significant habitat in the general area is likely associated with the Silver Creek wetland complex and shoreline areas which could function to support fish, amphibians, reptile, bird and waterfowl stopover, staging and nesting areas (NVCA, 2011).

The Ontario Breeding Bird Atlas (OBBA) was reviewed for records of breeding birds observed within 1 km of the study area. A total of 171 species were identified (OBBA square 17NK52). A list of bird species recorded for the Ontario Breeding Bird Atlas for square is available in **Appendix A**. The number of species identified according to each provincial rarity ranking is provided in **Table 2.1**below.

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Table 2.1

Provincial Ranking	Description of Ranking	Number of Bird Species with Ranking
S2B	Imperiled—Due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation.  Breeding accidental.	2
S3B	Vulnerable—Due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.  Breeding accidental.	4
S3B, S3N	Vulnerable—Due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.  Breeding accidental or non-breeding accidental.	1
S4	Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.	17
S4B	Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.  Breeding accidental.	59
S4B, S4N	Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.  Breeding accidental or non-breeding	3

	accidental.	
S4B, S5N	Apparently Secure to Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors, or Common, widespread, and abundant in the nation or state/province.  Breeding accidental or non-breeding accidental.	2
S5	Secure—Common, widespread, and abundant in the nation or state/province.	20
S5B	Secure—Common, widespread, and abundant in the nation or state/province.  Breeding accidental.	46
S5B, S5N	Secure—Common, widespread, and abundant in the nation or state/province.  Breeding accidental or non-breeding accidental.	5
S5B, SZN	Secure—Common, widespread, and abundant in the nation or state/province.  Breeding accidental or non-breeding migrants/vagrants.	1
SHB	Possibly Extirpated (Historical)—The NH or SH rank is reserved for species for which some effort has been made to relocate occurrences.	1
SNA	Unranked—Nation or state/province conservation status not yet assessed.	5

Species ranked as provincially rare species (S-ranks 1-3) are described in greater detail in the Designated SpeciesSection of this report. In addition, 78 species are considered to be forest area-sensitive, 23 are considered to be marsh/water area sensitive species and 24 are considered to be open country area sensitive species requiring large habitat tracts in which to breed. These species require large tracts of habitat to avoid predation and effects from edge habitat. Several bird species were identified within the OBBA as locally significant (county level) because they are considered Priority Landbird Species

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of Regional Concern due to population declines in Southern Ontario, south of the Canadian Shield, or they are considered area sensitive, requiring large tracts of habitat to fulfill life cycle requirements, such as area-sensitive forest species that typically require 10 to 260 hectares (ha) of suitable forest habitat for breeding (MNR, 2000) and area-sensitive grassland species typically require at least 50 ha of grassland habitat for breeding (MNR, 2000).

The study area provides limited habitat for breeding birds in landscaped areas. The study area does not provide habitat for area-sensitive species. Habitat for forest area sensitive species may be found in the greater area surrounding the study area, associated with the Silver Creek Wetland complex.

Threatened and Endangered species under Ontario's *Endangered Species Act*were noted within the OBBA record. These species are discussed in further detail in the Designated Species Section of this report.

## **Designated Species**

A 2013 review of the NHIC database identified six records of rare flora and fauna located within 1 km of the study area.

Table 2.2

	Ontario	Provincial	Federal
Species	S-Rank	Status	Status
Northern Long-eared Bat	S3-Vulnerable	-	-
(Myotisseptentrionalis)			
Eastern Ribbon Snake	S3-Vulnerable	Special	Special
(Thamnophissauritus),		Concern	Concern
Massassauga Rattlesnake	S3-Vulnerable	Threatened	Threatened
(Sistruruscatenatus)			
Stiff Yellow Flax	S3-Vulnerable	-	-
(Linum medium)			
Melaneliasubargentifera, a	S3-Vulnerable	-	-
lichen			
Butternut	S3-Vulnerable	Endangered	Endangered
(Juglanscinerea)			

Correspondence with the NVCA has indicated that Milk Snake (Lampropeltistriangulum), a species of special concern, has been confirmed in the general area surrounding the study area (NVCA review comments December 12, 2013).

Of the designated species identified, habitat in the general area may be suitable for the Stiff Yellow Flax which can be found in anthropogenic meadows and fields (go botany, accessed October 2, 2013, retrieved from

https://gobotany.newenglandwild.org/ species/linum/medium/) and Butternut, which usually grows alone or in small groups in deciduous forests, preferring moist, well-drained soil. It is often found along streams or well-drained gravel sites in sunny openings and near forest edges (Ministry of Natural Resources, accessed October 2, 2013, Butternut, retrieved from:

http://www.mnr.gov.on.ca/stdprodconsume/groups/lr/@mnr/@species/documents/document/stdprod\_070895.pdf).

Correspondence with the NVCA has indicated that Butternut are generally absent downslope of the Nipissing Ridge, located to the south of the Site (NVCA review comments December 12, 2013).

Marsh and swamp areas adjacent to the study area may provide suitable habitat for Eastern Ribbon Snake and Massassauga Rattlesnake (Ministry of Natural Resources, accessed October 2, 2013 retrieved from http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR\_SAR\_ESTRN\_RBBNSNK\_EN.html and Royal Ontario Museum, accessed October 2, 2013 retrieved from: http://www.rom.on.ca/ontario/risk.php?doc\_type=fact&id=101).

Correspondence with the NVCA has indicated the Massassauga Rattlesnake is considered extripated from the Collingwood area and the Nottawasaga Valley Watershed (NVCA review comments December 12, 2013).

The OBBA records identified 13 designated species observed within 1km of the study area. Based on the preferred habitat of those species, and the habitat represented in the study area, the following species have the potential to be present within the study area:

Table 2.3 Federally and Provincially Ranked Species at Risk

Species	Provincial	Federal	General Habitat
	Status(OESA)	StatusSARA	
Golden-winged Warbler (Vermivorachrysoptera)	SC	THR	early successional habitat; shrubby, grassy abandoned fields with small deciduous trees bordered by low woodland and wooded swamps; alder bogs; deciduous, damp woods; shrubbery clearing in deciduous woods with saplings and grasses; brier-woodland edges; requires >10 ha of habitat
Chimney Swift (Chaeturapelagica)	THR	THR	commonly found in urban areas near buildings; nests in hollow trees, crevices of rock cliffs, chimneys; highly gregarious; feeds over open water

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Species at risk were not observed in the study area or immediately surrounding area during a site visit of August 9, 2013.

Only those species listed as Threatened or Endangered receive legal protection under Ontario's Endangered Species Act and the federal Species at Risk Act. Species listed as Special Concern under these acts do not receive legal protection under these acts, however, they may receive protection from some agencies, such as provincial and national parks.

The Massassaugahas also been designated as a Specially Protected Reptile under the Ontario Fish and Wildlife Conservation Act, which prohibits the killing, capturing injuring, harassment and trapping of specially protected species.

A review of the Conservation Ontario / Department of Fisheries and Oceans, Fish Species at Risk (SAR) and Ministry of Natural Resources, Biodiversity explorer was completed for aquatic species. No fish or mussel Species AtRisk has been noted for the study area.

## 2.3 Socio-Economic and Cultural Environment

## 2.3.1 Land Use and Development

## **Provincial Policy Statement**

The Provincial Policy Statement (PPS) was issued under Section 3 of the *Planning Act*. The PPS came into effect on March 1, 1996, and was revised on March 1, 2005. Section 3 of the *Planning Act* requires that decisions affecting matters "shall be consistent with" policy statements issued under that Act.

The PPS includes policies on development and land use patterns, resources, and public health and safety. This ESR will address Policy 2.1, which addresses the protection and management of natural heritage resources.

Natural heritage features identified on the property that may be protected by the PPS include:

- Significant Habitat of Endangered or Threatened Species;
- Fish habitat;
- Significant woodlands; and,
- Significant Wildlife Habitat.

Development and site alteration are not permitted within the significant habitat of Endangered or Threatened species except in accordance with authorizations under the *Endangered Species Act*. Development may be permitted in, and adjacent to, significant woodlands and significant wildlife habitat provided that

there will be no negative impacts on the features and functions for which the area was identified. Development and site alteration within fish habitat must conform to provincial and federal requirements.

The definition of development under the PPS does not include "activities that create or maintain infrastructure authorized under an environmental assessment process" As such, solutions for road improvements evaluated under the Municipal Class Environmental Assessment are not considered to be development activities and therefore, are permitted.

Section 1.6 of the PPS contains specific guidance on Infrastructure and Public Service Facilities:

- 1.6.1 Infrastructure and public services facilities shall be provided in a coordinated, efficient and cost-effective manner to accommodate projected needs.
  - Planning for infrastructure and public service facilities shall be integrated with planning for growth so that these are available to meet current and projected needs.
- 1.6.2 The use of existing infrastructure and public service facilities should be optimized wherever feasible, before consideration is given to developing new infrastructure and public services facilities.

The proposed road rehabilitation will be undertaken with the goal of balancing environmental protection while providing cost-effective infrastructure, in accordance with Sections 2.1 and 1.6 of PPS.

#### Greenbelt

The Greenbelt Act sets out to protect environmentally sensitive and agricultural land in the Golden Horseshoe from urban development and sprawl. The study area is not located within Ontario's Greenbelt.

#### Places to Grow

Places to Grow is the initiative to plan for growth in Ontario in a way that supports economic prosperity and achieves a high quality of life. The first growth plan under the Places to Grow Act was released on June 16, 2006 and is for the Greater Golden Horseshoe, the horseshoe-like area that wraps around western Lake Ontario. The study areais located within the Greater Golden Horseshoe, within the County of Simcoe Growth Plan Area. The Growth Plan for the Greater Golden Horseshoe guides decisions on how land is developed, resources are managed, and public dollars are invested. The Growth Plan outlines a series of tests and criteria to ensure growth of the urban envelope occurs when and where

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applicable and include planning for infrastructure and the natural environment. The improvements to Highway 26 West is considered to be consistent with the Places to Grow initiative.

## Simcoe County Official Plan

According to Schedule 5.1 of the County of Simcoe Official Plan (2000), the lands in the central and western portion of the study area are designated as Greenlands. Schedule 5.2.2, Evaluated Wetlands, identifies the presence of a Provincially Significant Wetland within the vicinity of the study area. The area within the vicinity of the study area is identified as the Collingwood Shores (WL1) Natural Heritage Unit on Schedule 5.4, Natural Heritage System. Schedule 5.5, County Road System identified Highway 26 West as a provincial highway.

The Greenlands designation includes wetlands, ANSI's, significant woodlands, significant wildlife habitat, significant valley lands, fish habitat, environmentally sensitive areas (ESAs), major lake, river and creek systems, and Niagara Escarpment natural Areas.

Section 3.7.5 of the County Official Plan notes that development and/or site alteration is not permitted within provincially significant wetlands and the habitat of threatened or endangered species. New uses proposed adjacent to these areas are not permitted unless it can be demonstrated that they do not negatively impact the natural features and associated ecological functions.

Development is defined in the County Official Plan as the creation of a new lot, a change in land use, or the construction of buildings and structures, requiring approval under the Planning Act; but does not include activities that create or maintain infrastructure authorized under an environmental assessment process, or works subject to the Drainage Act. As such, solutions for road improvements are not considered to be development activities and therefore, are permitted within the Greenland designation.

## Town of Collingwood Official Plan

Schedule A of the Town of Collingwood Official Plan designates the majority of the land within the vicinity of the study area as Residential, with a portion of the eastern end of the study area and a portion of the western end of the study area designated as highway commercial and resort commercial. In addition, a portion of the lands at the western end of the study area are designated as recreational and environmental protection; Category 1 Wetlands, as further defined on Schedule B. Schedule D, Transportation Plan, identified Highway 26 West as an arterial road. Schedule D1 identifies an existing and future pedestrian trail along the Highway 26 West corridor within the study area. A trunk sanitary sewer and trunk water main are illustrated along Highway 26 West within the study area as

well as an elevated water storage facility located on the south side of Highway 26 West (Schedule E1).

## Nottawasaga Valley Conservation Authority Regulation 172/06

In the Nottawasaga River watershed, the Nottawasaga Valley Conservation Authority (NVCA) regulates hazard lands through the Development, Interference with Wetlands and Alteration to Shorelines and Watercourse Regulation (Ontario Regulation 172/06).

The regulation includes hazards related to floodplains, slopes, erosion-prone sites and wetlands. The NVCA has developed specific policies to implement the regulation. These policies prohibit new development, such as lot creation and major redevelopment, within identified hazard lands and their adjacent lands. Within the study area, several such areas, including watercourse, floodplains and wetlands, have been identified. Among other activities, a permit is required under the regulationfor the straightening, changing or diverting or interfering with the existing channel of a river, creek, stream or watercourse or changing or interfering with a wetland.

## **Archaeological Resources**

A Stage 1 Archaeological Assessment of the study area lands was conducted by Amick Consultants Limited in December 2012 and a report detailing their findings is included in **Appendix A**. The purpose of this review was to identify and describe areas of archaeological potential requiring additional archaeological research.

The study concluded that the study area was identified as an area of low archaeological potential. As a result, a Stage 2 archaeological assessment was not recommended.

#### 2.3.2 Socio-economic Features

This section profiles the socio-economic characteristics of the Town of Collingwood data provided in Statistics Canada's Population Census of 2001, 2006 and, where available, 2011. Statistics Canada conducts the Census once every five years.

## **Demographics**

The population and employment rate of the Town is shown in **Table 2.4**. At the time of the 2011 census 19,241 people lived in the Town. Between 2006 and 2011, the Town's population increased by 11.3% while the populations of Ontario and the County of Simcoe both increased by 5.7%.

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Table 2.4 Population & Employment Rate in the Township, 1996-2011

	Popula	ation	Employı	ment Rate
Census Year	Total Population	Change in Population (between census periods)	Employment Rate	Unemployment Rate
2001	16,039	2.8 %**	58.8 %**	5.7 %**
2006	17,290	7.8 %	57.3 %	6.6 %
2011*	19,241*	11.3 %*	N/A	N/A

#### Source:

- 1. Statistics Canada, Population Profile of Canada (2006).
- 2. \*Statistics Canada data for 2011 Census.
- 3. \*\*Statistics Canada data for 2001 Census.

## **Dwellings**

The 2011 Census data indicates the population density per square kilometer is 575, compared with 14.1 for Ontario, with a total land area of 33.46 square kilometers for the Town. Between 2006 and 2011, the total number of private dwellings for the Town increased by 12.9 %, compared to Ontario's average increase of 6.3 %.

## **Mode of Transportation to Work**

2006 Census data indicates that 86 % of workers drive to work (as either the driver or the passenger), differing slightly from the 79 % of Ontarian's who choose the same mode of transportation.

Reference:

Statistics Canada. 2012. *Census Profile*. 2011 Census.Statistics Canada Catalogue. Ottawa. <a href="http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E">http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E</a> (accessed October 2, 2013).

#### 2.4 Technical Environment

## 2.4.1 Existing Road Network

The transportation system servicing the primary and broader study area includesHighway 26 West as an existing arterial road, adjacent roads as local roads and a proposed future collector road south of Highway 26 West from Cranberry Trail East to Cranberry Trail West / Brier Road, as shown on Schedule D of the Town of Collingwood Official Plan, in **Appendix B**. These designations reflect the hierarchy within a road network, where each road class has the primary functions: arterial roads for traffic movement, collector roads for traffic movement and land access, and local roads for land access. In the study area, Highway 26

is a two lane arterial road, with a rural (open ditch) cross section. Highway 26 West functions to provide a Highway Connecting Link, under the jurisdiction of the Town of Collingwood, for through traffic travelling to the broader area as well as providingaccess to abutting development (existing and proposed), including the provision of six existing localized left turn lanes. In the study area, the posted speeds along Highway 26 are as follows:

- 50 km/h to just north of Harbour Street;
- 60 km/h from just north of Harbour Street to just west of Silver Glen Boulevard; and
- 70 km/h from just west of Silver Glen Boulevard to just east of County Road 21 (Osler Bluff Road), where the speed decreases again to 60 km/h.

Presently, peak direction traffic on Highway 26 West is approximately 800 to 900 vehicles per hour (vph) in summer peak traffic. Considering typical lane capacity is 1000 to 1200 vph, reserve capacity is available to accommodate future development within the study area. Furthermore, localized improvements that will increase capacity at intersections will also improve the overall operation of the corridor.

It should also be noted that there is potential for diversion of traffic to other corridors (existing or proposed) that may reduce volumes in the study area over the longer term. Previous transportation studies have identified the need to plan for a by-pass around critical corridors in Collingwood. MTO currently has a planning study underway that considers the feasibility and benefits of an extension of the Collingwood by-pass westerly from Collingwood to beyond Thornbury. Consideration of the implications of this bypass is considered to be longer term, and hence is beyond the time frame that is applicable to the improvements considered in this present study (i.e., 15 years).

Traffic controls along the Highway 26 West corridor within the study area include signalization at Harbour Street and Waterfalls Lane. All other intersections have stop controls on the minor road approaches.

Existing lane configurations and traffic controls along the corridor are summarized in the following table:

#### Table 2.5

Critical Intersection	Lane Configuration and Traffic Controls
Harbour Street	Existing signal
Keith Avenue	Existing westbound lanes (2, i.e., a through lane and a through/left turn lane).  Existing stop control on minor road approach.
Trott Boulevard	Existing right-turn taper Existing stop control on minor road approach.
White Street	Existing stop control on minor road approach.
Cranberry Trail East / Gun Club Road	Existing eastbound and westbound left turn lanes; Existing eastbound and westbound right turn tapers; Existing stop control on minor road approaches.
Waterfalls Lane/Future Development Access	Existing eastbound left turn lane; Existing westbound right turn lane; Existing signalization
Dockside Drive	Existing westbound right turn taper; Existing stop control on minor road approach.
Vacation Inn Drive	Existing westbound left turn lane; Existing eastbound right turn taper; Existing stop control on minor road approach.
Princeton Shores Boulevard	Existing westbound right turn taper; Existing stop control on minor road approach.

There are 17 private accesses to Highway 26 West along the south side of the corridor and 6 private accesses along the north side of the corridor, between Harbour Street and Cranberry Trail West. These equate to 5.86 accesses per km on the south side and 2.07 accesses per km on the north side of the highway. There are also 11 existing, or proposed, public road intersections along this section of the corridor, with spacing of between 100 m and 505 m.

## 2.4.2 Existing Drainage

Drainage within the study area is accommodated via outlet ditches that have shallow slopes and are well vegetated, resulting in low flow velocities. The adjacent wetland areas outside of the study area provide natural attenuation of the hydrograph and provide additional nutrient uptake upstream of Georgian Bay.

A potential spill condition may exist within the study area for flood waters from the adjacent waterway (Black Ash Creek to the east and Silver Creek to the west of the project limits) into the Highway 26 West right-of-way. There are existing flooding concerns upstream (south) of Highway 26 West at 11493 Highway 26.

## 2.4.3 Existing Transit

The study area is presently serviced via the Crosstown Route of the Colltrans transit system. In the study area this bus route provides hourly service from about 6:30 a.m. to 8:30 p.m. (weekdays), 7:30 a.m. to 5:30 p.m. (Saturdays) and 9:30 a.m. to 4:30 p.m. (Sundays). Westbound bus stops are located at Harbour Street, Trott Boulevard, Waterfalls Lane and Dockside Drive, with eastbound bus stops located along Cranberry Trail West, at Vacation Inn Drive, Pretty River Academy and along Dawson Drive. The bus route presently has a western terminus at Cranberry Trail West.

## 2.4.4 Existing Active Transportation

Part of Schedule D1 (Trail System) of the Town's Official Plan identifies an existing pedestrian trail on the south side of Highway 26 West, east of Princeton Shores Boulevard to east of Cranberry Trail West. Planned multi-use trails are illustrated along both sides of Highway 26, between Cranberry Trail East and Cranberry Trail West. In addition, trails are planned to continue along the south side of the highway to the east and west of this section. There are also trails that travel through the adjacent developments, to connect to the Georgian Trail and other trails in the area. Part of this trail system has been constructed.

The Town's Active Transportation Plan (ATP) identifies the recreation trail along Highway 26 as having the potential to function as an active transportation route. It is noted that Highway 26 is not presently identified as being a bike route in the present ATP.

## 2.0 Municipal Class EA Planning Process

The planning of major public sector projects or activities that have the potential for significant environmental effect is subject to an Environmental Assessment as required by Ontario's *Environmental Assessment Act*, R.S.O. 1990.

The Municipal Class Environmental Assessment (EA) process was developed by the Municipal Engineers Association ("MEA"), in consultation with the Ministry of the Environment ("MOE"), as an alternative method to Individual Environmental Assessments for recurring municipal projects that were similar in nature, usually limited in scale and with a predictable range of environmental impacts, which were responsive to mitigating measures. The Municipal Class EA solicits input and approval from regulatory agencies, the municipality and the public at the local level. This process leads to an evaluation of the alternatives in view of the significance of the environmental effects, including the ecological, cultural, economic and social impact of a project, and the choice of effective mitigation measures.

A flow chart (**Figure 2**) prepared by the MEA, shows the Municipal Class EA procedure. There are three categories of assessment within the Municipal Class EA procedure dependent on the complexity of the project and the potential for environmental impact; Schedule A and A+, Schedule B and Schedule C.

#### Schedule A and A+-Pre-approved Activities

Schedule A and A+ projects are considered to be straightforward activities where environmental impacts are anticipated to be minimal. These projects are preapproved and the proponent may proceed without following the procedures set out in any other part of the Municipal Class EA. Schedule A+ projects provide for notification of the project activities to the public. The method in which the public is advised is determined by the proponent. The public is given an opportunity to comment to the proponent on the project, however, there is no provision to appeal to the MOE for review of the project (Part II order).

#### Schedule B-Subject to the Screening Process

Schedule B projects are considered to be more complex projects where some adverse environmental impacts are anticipated. Schedule B projects are approved following completion of Phase 1 and 2 of the Municipal EA planning process which includes developing a problem or opportunity statement and evaluating alternative solutions. Schedule B projects include mandatory consultation with the public and review agencies. The EA process for a Schedule B concludes with submission of a Notice of Completion to the public and review agencies and documentation of the planning process in a Project File report, made available for review for 30 calendar days.

The 30 day review period provides an opportunity for any member of the public or agency to request the Minister of the Environment to review the project and order a Municipal Class EA project to become subject to an Individual Environmental Assessment. This is known as a Part II Order (or "bump-up") request and is made in circumstances where concerns are unresolved during the Municipal Class EA planning process.

#### Schedule C

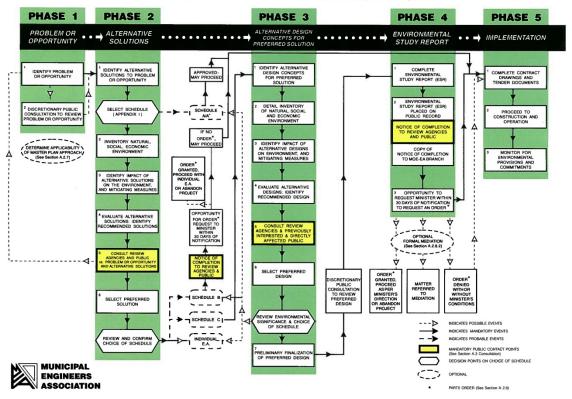
Schedule C projects are considered to be complex projects where significant adverse environmental impacts are possible. Schedule C projects are subject to the full EA planning and documentation process outlined in phases 1 to 5. Schedule C projects include mandatory consultation with the public and review agencies. The EA process for a Schedule C concludes with submission of a Notice of Completion to the public and review agencies and documentation of the planning process in an Environmental Study Report, made available for review for 30 calendar days.

The 30 day review period provides an opportunity for any member of the public or agency to request the Minister of the Environment to review the project and order a Municipal Class EA project to become subject to an Individual Environmental Assessment. This is known as a Part II Order (or "bump-up") request and is made in circumstances where concerns are unresolved during the Municipal Class EA planning process.

## Figure 2 Municipal Class EA Process

(Source: MEA, 2000, as amended 2007)

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA



## 3.1 Determination of the Class EA Project Schedule

This project is being planned as a Schedule C project as defined in the Municipal Engineers Association Class EA document (October 2000, as amended 2007 & 2011). The majority of the design elements of the project fall within the A or A<sup>+</sup> Schedules (5 - resurfacing, 12 - localized operational improvements, 19-reconstruction for the same purpose, use and capacity), however the overlapping of existing left turn lanes and proposed left turn lanes will result in a continuous left turn lane for a portion of the project, which could be considered a Schedule C activity. The proponent has determined that the Schedule C process (Phases 1 through 5) should be followed for this project.

## 3.2 Phase 1 – Municipal Class EA – Needs Assessment and Problem Definition

In Phase 1 of the Municipal Class EA process, the objective is to identify the problem or opportunity that the Class EA process is meant to resolve or take advantage. The Town of Collingwood has identified a need to provide improvements to traffic operation and safety associated with left hand turning movements, within the lifecycle of scheduled road improvements.

## 3.2.1 Problem / Opportunity Statement

The problem / opportunity statement was prepared in consultation with the Town of Collingwood:

"The Town of Collingwood ("Town") has identified Highway 26 West from 280 m west of Princeton Shores Boulevard to Harbour Street as an area in need of road surface rehabilitation and an area where improvements to the transportation network may be required to improve traffic operation and safety associated with left hand turning movements."

In addition, the accommodation of alternative modes of transportation will be considered.

## 3.3 Phase 2 – Identification and Evaluation of Alternative Solutions to the Problem

Phase 2 of the Municipal Class EA process requires that the proponent (Town of Collingwood) identify and evaluate alternative solutions to the problem / opportunity statement, assessing the impact of the solutions on the general condition of the natural, social and economic environment including possible mitigating measures. For projects that are relatively straightforward, a preliminary recommended solution is identified at this stage. At the conclusion of

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Phase 2, the appropriate EA planning Schedule is confirmed. It is in this phase that the first mandatory consultation with review agencies and the public is initiated. For Schedule B activities, the second mandatory consultation with review agencies and the public is complete at the end of Phase 2 with the conclusion of the EA process and the selection of a preferred alternative solution. (Details of the consultation activities for this project are provided in Section 7).

In order to address the problem / opportunity statement identified in Section 3.2.1, the following alternative solutions have been proposed.

## Alternative 1 – Do Nothing

This alternative is to leave the existing conditions as they are. The "Do Nothing" alternative would have the Town of Collingwood undertake the planned rehabilitation and development project efforts but take no action in addressing solutions to traffic operations and safety associated with left hand turn movements.

Consideration of this alternative is mandatory under the Municipal Class EA planning framework. This alternative would have no impact, direct or indirect, on the natural environment, and minimal financial impact. This alternative impacts social considerations as improvements to safety associated with existing use of the corridor and planned growth of the development would not occur.

This alternative does not address the problem statement objectives of improving traffic operation within the study area.

## Alternative 2 - Widen the existing road to provide left turn lanes.

This alternative includes the introduction of exclusive left turn lanes at intersections, where they do not presently exist. The left turn lanes may be localized or may be extended as two-way left turn lanes between intersections, depending on traffic requirements and physical constraints.

## Alternative 3 – Widen the existing road to provide additional through lanes.

This alternative includes the introduction of an additional through lane in each direction. Left turn movements would be facilitated from the inside through lane, which would act as a joint left / through lane.

## Alternative 4 – Provide improvements to facilitate alternative transportation modes and methods.

This alternative considers the introduction of transportation modes or methods that will assist in reducing vehicular traffic demands. Such Transportation

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Demand Management measures may include improving the pedestrian and cyclist linkages or extending transit in the study area.

Or some combination of alternatives

## 3.3.1 Evaluation of Alternative Planning Solutions

The alternative solutions were evaluated based on natural, social, economic and technical environments. **Table 3.1** provides details of the evaluation

#### 3.3.2 Preferred Alternative Solution

Based on the evaluation of alternative solutions, the recommended alternative consists of widening the existing road to provide left turn lanes (Alternative 2) combined with providing improvements to facilitate alternative transportation modes (Alternative 4).

Table 3.1

Criteria for Evaluating	Alternative Solutions					
Alternatives	Do Nothing	Widen the existing road to provide additional left turn lane(s)	Widen the existing road to provide additional through lanes	Provide improvements to facilitate alternative transportation modes or methods		
A. Natural Environment						
Flood Plain Lands	No impact over existing conditions.	The location of work required for road may be within the regulated limit  Construction within the regulated limit requires a permit from NVCA.	The location of work required for road widening may be within the regulated limit Construction within the regulated limit requires a permit from NVCA.	The location of work required for alternative modes of transportation may be within the regulated limit. Construction within the regulated limit requires a permit from NVCA.		
Terrestrial Habitat/Species	No impact over existing conditions.	Road widening may require lands outside of the existing right-of-way in select areas.     Possible impact to mowed grass and woodland vegetation, unevaluated wetlands and provincially significant wetlands.	Road widening may require the most lands outside of the existing right-of-way in select areas.     Possible impact to mowed grass and woodland vegetation, unevaluated wetlands and provincially significant wetlands.	Impact associated with alternative transportation modes constructed outside of the right-of-way. Possible impact to mowed grass and woodland vegetation, unevaluated wetlands and provincially significant wetlands.		
Aquatic Habitat/Species	No impact over existing conditions.	Potential direct impact to watercourse and fish habitat west of White Street due to possible extension of box culvert at crossing Potential indirect impacts to surface water features in the larger area are mitigated through construction best practices.	Potential direct impact to watercourse and fish habitat west of White Street due to possible extension of box culvert at crossing Potential indirect impacts to surface water features in the larger area are mitigated through construction best practices.	Potential indirect impacts to surface water features in the larger area are mitigated through construction best practices.		
SECTION RATING	Most preferred	Partially preferred	Least preferred	Partially preferred		

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Criteria for Evaluating	Alternative Solutions					
Alternatives	Do Nothing	Widen the existing road to provide additional left turn lane(s)	Widen the existing road to provide additional through lanes	Provide improvements to facilitate alternative transportation modes and methods		
B. Social/ Cultural Environme	nt					
Conformity to Municipal Land Use, Policies and Planning	Does not meet     current or future     growth within the     Town.	•yes	•yes	•yes		
Heritage Resources (archaeological features, built heritage, and cultural heritage landscapes)	No impact over existing conditions.	<ul> <li>Potential impact if widened beyond the road right-of-way</li> </ul>	<ul> <li>Potential impact if widened beyond the road right- of-way</li> </ul>	<ul> <li>Potential impact if widened beyond the road right- of-way</li> </ul>		
Nuisance Impacts (noise, traffic, aesthetics, disruption during construction)	No impact over existing conditions.	Temporary noise and air quality impacts during construction.	Temporary noise and air quality impacts during construction.	Temporary noise and air quality impacts during construction		
Opportunities to Enhance Community	• None	Somewhat limited	• Limited	• High		
Land Requirements	No impact over existing conditions.	Private land may be required to accommodate road widening in select areas.	<ul> <li>Private land may be required to accommodate road widening in select areas.</li> </ul>	<ul> <li>Private land may be required to accommodate road widening in select areas.</li> </ul>		
SECTION RATING	Least preferred	Partially preferred	Partially preferred	Most preferred		

Criteria for Evaluating	Alternative Solutions					
Alternatives	Do Nothing	Widen the existing road to provide additional left turn lane(s)	Widen the existing road to provide additional through lanes	Provide improvements to facilitate alternative transportation modes and methods		
C. Financial Factors						
Estimated Capital Costs	No impact over existing conditions.	Capital costs for installation of 1 additional lane. Capital costs to acquire private property outside of the right-of-way. Costs to acquire private property may be mitigated through dedication from adjacent development in some areas.	<ul> <li>Capital costs for installation of 2 additional lanes.</li> <li>Capital costs to acquire private property outside of the right-of-way.</li> <li>Costs to acquire private property may be mitigated through dedication from adjacent development in some areas.</li> </ul>	Capital cost for construction of system and connection to existing system (eg. Trails, bus bays).  Capital costs to acquire private property outside of the right-ofway.  Costs to acquire private property may be mitigated through dedication from adjacent development in some areas.		
Estimated Operation and Maintenance Cost	No impact over existing conditions.	Moderate operating costs (operations, maintenance).	Moderate operating costs (operations, maintenance).	Moderate operating costs     (eg. Seasonal     maintenance of trails,     extension of bus     routes etc.).		
SECTION RATING	Most Preferred	Partially preferred	Least preferred	Partially preferred		

Criteria for Evaluating	Alternative Solutions			
Alternatives	Do Nothing	Widen the existing road to provide additional left turn lane(s)	Widen the existing road to provide additional through lanes	Provide improvements to facilitate alternative transportation modes and methods
D. Technical Environment				
Accommodates existing level of service and future traffic demand/growth	Does not accommodate existing and future traffic mobility	Improves traffic mobility through the corridor     May require localized widening of the existing right-of-way, to accommodate one additional lane or topographical constraints. Alternatively an urban (curbed) cross section may be considered.	Improves traffic mobility through the corridor  May require localized widening of the existing right-of-way, to accommodate two additional lanes or topographical constraints. Alternatively an urban (curbed) cross section may be considered.	May partially accommodate existing and future traffic mobility by reducing the number of auto trips in the study area     May require widening of the existing right-of-way, to accommodate existing, or proposed, pedestrian trails or cyclist facilities.
Addresses technical safety concerns/strategies	Does not accommodate existing property access requirements	Accommodates access to property through improved egress from the side streets within the study area. Fully addresses operational and safety concerns with left turn movements along the corridor and meets MTO recommendations for exclusive left turn lanes at intersections.	Accommodates access to property through improved egress from the side streets within the study area, however, does not fully address operational and safety concerns with left turn movements along the corridor and MTO recommendations for exclusive left turn lanes at intersections.	Does not significantly improve technical safety concerns     Design of alternative transportation accommodation will need to be considered to maintain safety and ensure operational impacts are minimized.
SECTION RATING	Least preferred	Most preferred	Partially preferred	Partially preferred
Addresses Problem statement	No	Yes	No	Partially
OVERALL RATING	Not preferred	Preferred	Not preferred	Forms part of recommended solution

#### 3.3.3 Confirmation of the Class EA Project Schedule

At the conclusion of Phase 2, the appropriate EA planning Schedule is confirmed.In consideration of the overlap of left turn lanes resulting in a continuous centre turn lane for a portion of the study corridor as well as the estimated costs to complete the improvements, the Town of Collingwood has proceeded with the Environmental Assessment of the project within the context of a Schedule C undertaking. As such, the project planning is completed under the documentation and procedures of Phases 1 through 5 of the Municipal Class EA procedure (**Figure 2**).

## 3.4 Phase 3 – Identification and Evaluation of Alternative Designs for Preferred Solution

Phase 3 of the Municipal Class EA process is the identification and evaluation of design options for the preferred alternative solution identified in Phase 2. The impact of the design options are evaluated against an inventory of the natural, social and economic environment including possible mitigating measures, leading to a preliminary identification of a preferred design. It is also in this phase that the second mandatory consultation with review agencies and the public is initiated. (Details of the consultation activities for this project are provided in Section 7).

The first step in Phase 3 involves the identification of various design alternatives for the preferred alternative. Based on the preferred option, three alternative designs are considered for providing left turn lanes along the corridor, including:

Alternative No. 1 – Provision of localized exclusive left turn lanes at critical intersections along the full length of the corridor.

Alternative No. 2 – Provision of a continuous left turn lane along part of the corridor and localized left turn lanes along the remainder of the corridor, with a two lane cross section in the transition areas.

Alternative No. 3 – Provision of a continuous left turn lane along all of the corridor in the study area (i.e., three lane cross section).

## 3.4.2 Preferred Alternative Design

The preferred alternative design solution for this project is **Alternative No. 2**. This alternative addresses the technical objectives of the Problem Statement while minimizing impact to the natural, social, economic environment.

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## 4.0 Impacts

#### 4.1 Technical Environment

From a technical perspective, left turn lanes are not warranted at all intersections along the corridor, based on traffic volumes. However, for the parts of the corridor from Waterfalls Lane to Cranberry Trail West, and from Trott Boulevard to Gun Club Road limited spacing between some intersections would not accommodate localized left-turn lanes. A continuous left turn lane is effective for these portions of the corridor. The proposed design solutions for individual intersections are presented on **Table 4.1.** 

The traffic forecasts and operational analysis contained in Technical Memorandum #1 (**Appendix B**) for Highway 26 West indicate that the highway will function adequately as a two-lane arterial road assuming full development of the surrounding lands through the 2028 horizon period. Localized improvements, including signalization, left-turn lanes and right-turn tapers, are recommended at intersections in the study area to maintain the adequacy of traffic operations in this area.

Based on the limited scope of improvement, as well as the constraints on downstream conveyance, the stormwater management will rely in the existing quality controls provided in the grassed swales downstream of the road. Typical slopes in the ditches do not exceed 0.5% and are usually on the order of 0.1% to 0.3%. Flow velocities are not expected to exceed 0.5 m/s.

Due to the relatively minor addition of asphalt area, and the reduced shoulder widths, it is assumed that quantity control will not be required for this project. A quantity control pond is not recommended for the highway, as Highway 26 is located at the downstream end of the catchment. If a stormwater management pond were incorporated into the design, it is likely that attenuation of road runoff may result in an overall increase in peak flows downstream. This is due to lining up the peaks of the road hydrograph and the external catchment hydrograph.

The very flat landscape indicates that active storage in a potential pond option would potentially result in a backwater condition upstream. This is not recommended, as it increases the upstream flood risk.

The proposed road improvements will maintain the existing conveyance of stormwater across Highway 26.

Road crossing culvert replacement is only anticipated where existing culverts are found to be in poor condition. Replacement culverts may be designed to satisfy MTO Directive B-100 criteria (pass the 25-year storm), and will achieve conveyance equal to or better

than existing conditions as a minimum criteria. There are no anticipated changes to road crest elevations over culverts or at road sag points. As such, there are no expected increases in flood elevations upstream of the road crossing culverts.

## 4.2 Cultural Environment

From a community perspective, existing and proposed multi-use trails are intended to accommodate both pedestrian and cyclist traffic, with the addition of fully paved shoulders providing benefit for road cyclists and designed with consideration of future bike lane linkages.

The design alternative will accommodate existing trails along the corridor, and existing, or proposed, bus stop facilities at Trott Boulevard, Gun Club Road, Waterfalls Lane, Dockside Drive, Future Anchorage Access, Vacation Inn Drive and Pretty River Academy. Right-turn tapers, in addition to left turn lanes, will provide for a deceleration area, or refuge, for bus stops, minimizing their impacts on through traffic.

The addition of left-turn lanes and right-turn tapers will add spatial constraints for accommodating new trails within the existing right-of-way as well as increase the width of road crossings for pedestrians. A connecting trail is proposed on the south side of Highway 26, from a point about 55 m to the east of Cranberry Trail East to a point about 720 m to the west of Cranberry Trail East (east property limit of Pretty River Academy property) subject to property acquisition, development, drainage and signal improvements as well as the availability of budget.

It is recommended that a multi-use trail on the north side of Highway 26, between Waterfalls Lane and Princeton Shores continue to be included in the long term planning in this area, with future implementation to be coordinated with potential development projects and budget constraints.

Impacts to built heritage and cultural landscape heritage features, if present on adjacent lands, are not anticipated at this time, as the construction of the preferred design alternative is to be limited to surface rehabilitation and is to be completed within the existing right-of-way with no requirement for land acquisition.

The addition of left turn lanes and right-turn tapers may slightly increase noise levels from existing conditions as the widening of the road surface brings the vehicles approximately 2 m closer to adjacent properties and noise receptors. The improvements may improve traffic flow which may allow traffic to travel through the corridor at the maximum speed permitted, however, the noise associated with vehicles stopping and accelerating will decrease with the addition of left turn lanes and right-turn tapers.

A noise impact assessment was performed using the STAMSON computer program as indicated in MTO Environmental Guide for Noise in Table 6.1. The parameters discussed below are the inputs to the model.

The impact is higher at closer receptors so the closest receptor in the relevant section of road was located using aerial photographs. The closest receptor is 21 m from the centre of the road on the north side of the road just north west of the intersection of Highway 26 and Trott Boulevard. The next closest receptor was 30 m from the centre of the road. This closest building was selected as the receptor of interest. All other receptors will experience less noise than the selected receptor.

Impact is higher when the traffic speed is faster. The highest speed limit throughout the relevant section of road is 70 km/h so this value was used despite that fact that this speed limit applies to a different section of the road than the section where the receptor is located. The speed limit at the receptor is 60 km/h.

Since the traffic prediction report did not provide a break down on the number of medium and heavy trucks, the model guidance standard values of 10% and 5% respectively were used. The maximum number of vph in 2013 is 1,720 vph so the distribution of vehicles is 1,462 passenger vehicles, 172 medium trucks, and 86 heavy trucks. The 1,720 vph is the highest traffic estimate in a single hour over the entire relevant section of road. The predicted traffic at the receptor is less and so the impact would actually be less than predicted.

The closest building is a single story building so the model guidance indicates a receiver height of 1.5 m is appropriate.

The model guidance indicates that a single segment can be used when the road is 4 lanes across or less. As a result, expanding the road from 2 lanes to 3 lanes will not show any increase as a result of the proposed widening; however, to be conservative, the model was run assuming that the entire road moved closer by 2 m. A more accurate simulation would have been for half of the traffic to move closer while the other half moved farther away. Moving the entire road closer will provide an over estimate of the road noise increase.

Using the above data, the predicted noise level at the closest building is 57.02 dBA. Moving the entire road closer by 2 m increases the estimate to 57.99 dBA.

Further, using the 2028 traffic prediction of 2,430 vph, the predicted noise level at the closest building is 58.51 dBA. Moving the entire road closer by 2 m increases the estimate to 59.50 dBA.

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Therefore, very conservative estimates indicate that the increase in noise caused by adding a centre turn lane throughout the entire relevant section of road will be less than 1 dBA and the noise level will not exceed the 65 dBA threshold for mitigation prior to 2028. Further, the increase in traffic over the next 15 years will increase the road noise by less than 1.5 dBA.

## 4.3 Natural Environment

The natural environment impacts are minimized as the transportation improvements of the preferred design alternative, are to be completed within the existing road ROW where natural environmental features are limited and cultural landscaped and maintained grassed areas exist. Intended transportation improvements are limited to the addition of right turn tapers in some locations, localized addition of two way left turn lanes and paving of the gravel shoulders of Highway 26 West and are not anticipated to directly impact any potential habitat of breeding birds, generalist mammal species and fish or species at risk. Species at risk were not observed in the study area or immediately surrounding area during a site visit of August 9, 2013.

Lands beyond the study area, including; areas of significant ground water recharge (approximately 300 m to the south of the study area); rare vegetation communities; wetland features including a fragmented series of swamp and low-land forest comprising the Silver Creek Wetland Complex and other unevaluated wetlands, are not anticipated to be directly impacted.

The risk to wildlife crossing Highway 26 W is not anticipated to rise beyond the present risk, as the volume or frequency of traffic at any given point in the study corridor is not anticipated to increase as a result of the improvements. Information obtained from the NVCA has not indicated a particular issue of wildlife road mortality for a given species within the study corridor and notes thatthe proposed widening is unlikely to impact species (beyond existing highway impacts), if present, since north-south habitat connectivity is minimal due to development on either / both sides of the study area. However, habitat opportunities of the lands adjacent to the study area are likely to support designated wildlife species, among others.

Indirect impact to natural heritage features in excess of current conditions is anticipated to be limited to drainage where the impacts to watercourse crossings and associated habitat are anticipated to be minimized with existing drainage design features.

Portions of the study area are regulated by the NVCA pursuant to Ontario Regulation 172/06, subsequently permit approval is required from NVCA prior to commencing development in a regulated area.

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Proposed trail connections would require a portion of the ROW to be widened by ~4 m and the extension of a culvert crossing of a watercourse. A loss of general habitat for terrestrial and bird species as the result of the removal of vegetation (trees) and possible direct impact to aquatic habitat as a result of a culvert extension is anticipated with trail construction.

#### 4.4 Financial Environment

Among the alternatives evaluated, the preliminary preferred design solution represents the least expensive option that addresses the problem statement.

Funding for the project under the Provincial Connecting Link Funding program has been terminated. It is not known at this time whetheralternative provincial funding will be made available for this project.

Table 4.1

Critical Intersection	Lane Configuration and Traffic Controls	Considerations	Proposed Design Solution
Harbour Street	Existing signal	A potential need has been identified for a future westboundleft turn lane at	Maintain existing westbound double lane
		Harbour Street over the longer term to meet traffic needs.	with rehabilitation of asphalt for short and
		Left turn lane at Harbour Street may be coordinated with full reconstruction in this	mid-term.
		area (including curb replacement), once warranted.	Future westboundleft turn lane
Keith Avenue	Existing westbound lanes (2, i.e., a	A westbound left turn lane is warranted.	Warranted westbound left turn lane to be
	through lane and a through/left turn	The provision of an eastbound right turn taper will minimize maintenance impacts	coordinated with improvements to Harbour
	lane).	on the gravel shoulders that may result from the right turn movements, provide	St. intersection.
	Existing stop control on minor road	for some deceleration for right turn movements, minimizing their impacts on	Maintain existing westbound double lane
	approach.	through traffic, provide for a deceleration area, or refuge, for bus stops,	with rehabilitation of asphalt for short and
		minimizing their impacts on through traffic.	mid term.
			Add right-turn taper
Trott Boulevard	Existing right-turn taper	An eastbound left turn lane is warranted	Addition of an eastbound left turn lane
	Existing stop control on minor road		Continuous left-turn lane is proposed
	approach.		
White Street	Existing stop control on minor road	Provision of a westbound right turn taper will minimize maintenance impacts,	Addition of a westbound right turn taper
	approach.	improve traffic flow and safety, provide opportunity for bus stop.	Continuous left-turn lane is proposed
Cranberry Trail East /	Existing eastbound and westbound	Existing left turn lanes are sufficient to meet future traffic requirements.	Future Signalization, maintain lane
Gun Club Road	left turn lanes;		configuration
	Existing eastbound and westbound		
	right turn tapers;		
	Existing stop control on minor road		
	approaches.		

Critical Intersection	Lane Configuration and Traffic Controls	Considerations	Proposed Design Solution
Waterfalls Lane/Future Development Access	Existing eastbound left turn lane; Existing westbound right turn lane; Existing signalization	The taper for a future westbound left turn lane can be developed without overlapping with the taper for the existing eastbound left turn lane at Gun Club Road.  The existing eastbound left turn lane already transitions into a continuous left turn lane to the west of the intersection.  At Waterfalls Lane the westbound right turn volumes are forecast to exceed the MTO standards and therefore the existing right turn lane at that location is proposed to be retained.	Future warranted westbound left turn lane; Future eastbound right-turn taper (if development to the south proceeds and a south leg of the intersection is constructed)
Possible Future Condominium Access – Approximately Sta. 1+630	Assumed stop control on minor road approach	No plan is presently available for this development. This access may also provide an alternative access for the existing Whisperwoods condominium (i.e., presently using joint access at Vacation Inn Drive).	Continuous left-turn lane is proposed due to limited distance between intersections and overlap of left turn lane development between intersections
Dockside Drive	Existing westbound right turn taper; Existing stop control on minor road approaches.	turning movements and through traffic mobility.  The short distance (165 m) between Dockside Drive and the Pretty River	Continuous left-turn lane is proposed due to limited distance between intersections and overlap of left turn lane development between intersections

Critical Intersection	Lane Configuration and Traffic Controls	Considerations	Proposed Design Solution
Future Anchorage Development Access	Future stop control on minor road approach.	An eastbound left turn lane is warranted to service future development. The short distance between the Anchorage Access and Dockside justifies a continuous left turn lane in this area for continuity.	Continuous left-turn lane is proposed due to limited distance between intersections and overlap of left turn lane development between intersections Future westbound right-turn taper
Vacation Inn Drive	Existing westbound left turn lane; Existing eastbound right turn taper; Existing stop control on minor road approach.	The tapers for the westbound left turn lane at Vacation Inn Drive and the eastbound left lane at the Anchorage Development Access (proposed) will overlap. Therefore a continuous left turn lane is justified in this area.	Continuous left-turn lane is proposed due to limited distance between intersections and overlap of left turn lane development between intersections
Princeton Shores Boulevard	Existing westbound right turn taper; Existing stop control on minor road approach.	Consider implementing an eastbound left turn lane to improve safety for turning movements and through traffic mobility.  The tapers for the westbound left turn lane at Cranberry Trail West and the eastbound left turn lane at Princeton Shores Boulevard will overlap. Therefore a continuous left turn lane is justified in this area.  The short distance between the intersections at Princeton Shores Boulevard and at Vacation Inn Drive justifies a continuous left turn lane in this area for continuity.	Continuous left-turn lane is proposed due to limited distance between intersections and overlap of left turn lane development between intersections

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# 5.0 Mitigation

# 5.1 Natural Heritage

# Terrestrial and Aquatic Habitat and Floodplain Lands

#### **Impact**

- Potential indirect impact to seasonal aquatic habitat for warm water baitfish species as a result of increased storm water conveyance due to improvements and additional impervious areas on Highway 26 West.
- Potential spill conditions and flooding of property.
- Potential downstream water quality impairments during construction (sediment loading; fuels and lubricants from machinery).
- Potential indirect impact to wildlife species present on adjacent lands as a result of road mortality.
- Potential indirect impact to adjacent vegetation / habitat as a result of construction activities.
- Potential loss of vegetation / habitat due to proposed future trail construction.

#### **Mitigation**

- Indirect impact to watercourse crossings and associated habitat are anticipated to be
  minimized with existing drainage design features. The roadside ditches will satisfy the
  velocity criteria provided in the MOE Stormwater Management Planning and Design
  Manual (2003) for enhanced grassed swales. The placement of check dams in the
  ditches (as per a typical enhanced swale design) is not necessary to achieve the low
  flow velocities required for quiescent settling of sediment. Therefore, due to existing
  capacity concerns these will not be included in the design.
- Existing culvert outlets will be enhanced through the addition of rip rap plunge pools to catch litter and larger sediment, and to control erosion.
- The proposed design will make use of existing crossing culverts or will use replacement culverts with capacity equal to or better than the existing condition.
- The functions of all wetlands and watercourses in the study area should be maintained in light of any future development of the area.
- Sediment and erosion control measures (such as silt fence barriers, turbidity curtains etc.) will be installed and maintained in accordance with recognized provincial standards during the work phase and until the site has been stabilized.
- All materials and equipment used for the purpose of site preparation and project completion should be operated and stored in a manner that prevents any deleterious substance (e.g., petroleum products, silt, etc.) from entering the water.
- Minimize disturbance to existing vegetation. Disturbed areas will be stabilized and re-vegetated upon project completion and restored, where possible, to a pre-

- disturbed stateusing 100% native, non-invasive seed mix, or as recommended by NVCA.
- Where regrading is proposed, design concepts should consider opportunities to remove isolated colonies of invasive Phragmites from roadside ditches, if present. Removal of isolated invasive Phragmites colonies are to including appropriate disposal methods designed to limit the recolonization of the species. Consideration of posting wildlife crossing signs / awareness signs may be completed during the detailed design phase of the project and in consultation with the NVCA. The posting of signs may require a permit from the Ministry of Transportation (to be confirmed) and possibly evidence that there is an issue of wildlife road mortality.
- Mitigation strategies to limit the impact to vegetation features should be considered during detailed design of the proposed trails and in coordination with development plans proposed for the adjacent lands.
- Mitigation strategies to limit impact to watercourses should be considered in consultation with the NVCA and Department of Fisheries and Oceans (DFO), as regulation requires

## 5.2 Cultural Environment

# Culture and Heritage Resources (Archaeological Features, Built Heritage, and Cultural Heritage Landscapes)

#### **Impact**

- Addition of left-turn lanes and right-turn tapers will add spatial constraints for accommodating new trails within the existing right-of-way as well as increase the width of road crossings for pedestrians.
- Potential to expose items of archaeological interest.

#### Mitigation

- Multi-use trails should continue to be included in the long term planning in this area
  in coordination with nearby development projects. Future trail development will be
  constrained by budget, drainage and signal improvements, ROW widening and
  evaluation of potential impacts to natural features and built and landscape heritage
  features.
- The archaeological study work completed for the Highway 26 West study area recommended that the study area be clear of further archaeological concern.
- Should archaeology artifacts be identified during operations, all activity in the vicinity
  of the recovery will be suspended and a Ministry of Culture Archaeologist will be
  contacted.
- Should human remains be identified during construction, all works in the vicinity of the discovery will be suspended immediately. Notification will be made to the Ministry of Culture, Registrar of the Cemeteries Regulation Unit of the Ministry of

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Consumer and Commercial Relations and the Ontario Provincial Police or local police, who will conduct a site investigation.

# Nuisance Impacts (Noise, Traffic, Aesthetics, Disruption During Construction)

#### **Impact**

- Possible increase in traffic noise resulting from improvements.
- Temporary noise and air quality impacts during construction.

#### **Mitigation**

- Evaluation of the potential increase in noise due to the proposed improvements indicates that the increase (if any) will be less than 1.0 dBA and does not require mitigation measures.
- Noise control measures, such as restricted hours of operation, the use of appropriate machinery / mufflers, will be implemented during construction where required.
- Vehicles / machinery and equipment should be in good repair, equipped with emission controls, as applicable, and operated within regulatory requirements.
- If required, dust control measures may include the wetting of surfaces using a nonchloride based compound to protect water quality.

# **Human Health and Safety**

#### **Impact**

- Potential safety hazard from construction activities, heavy equipment and increased traffic.
- Potential safety hazard from operations (chemical usage and storage).

#### Mitigation

 The contactor will be required to implement a Health and Safety Plan as per OHSA standards.

# 6.0 Permits and Approvals

Permits and Approvals required for this project may include, but are not limited to the following:

- A letter will be issued by the Ministry of Culture upon review of the archaeological assessment of the Site and satisfaction that there are no further concerns with regard to the alteration of archaeological sites by the proposed development;
- Approval from the conservation authority for work within a regulated area; and
- As per the current Fisheries Act (amended Nov 25, 2013) completion of the DFO Self-Assessmentto determine if DFO review is required for any work in or near waterbodies with potential to cause serious harm to fish and/or the implementation of measures to avoid harm, as outlined by DFO.

# 7.0 Monitoring

- Erosion and sedimentation controls will be inspected weekly and following rainfalls greater than 15 mm. Controls requiring repair or replacement will be addressed immediately.
- The boundaries of the construction will be inspected weekly to ensure all works and materials are kept within the assigned limits of the project.
- One week following site restoration, review all seeding and sodding and landscaping to check for washouts or areas requiring remediation.
- During the contractor's maintenance period, all new vegetation and natural restoration must continue to be watered and monitored.
- At the end of the warranty period, inspection and documentation of site restoration measures will be completed to identify restoration success and remedy deficiencies.
- Any other monitoring that may be set by NVCA, DFO or others as conditions of any required permits, approvals and authorization.

These monitoring activities should be carried out by on-site personnel and may take the form of photographs, inspection records, diary notes or correspondence.

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# 8.0 Phase 4 – Environmental Study Report

The Environmental Study Report ("ESR") documents the activities of the EA process.

The intent of this ESR is to:

- Describe the project and its purpose;
- Outline the public consultation process;
- Identify and evaluate alternative solutions;
- Evaluate and identify the environmental effects associated with alternatives;
- Select a preferred alternative based on clear, publicly vetted criteria, and
- Recommend how the selected project is to be implemented, including mitigating measures for identified effects and commitments to monitoring procedures.

The ESR is subject to public and agency review. The ESRwill be placed on the Public Record for a 30-day (minimum) review period, in accordance with the approved Class EA procedures. Notice of Completion for the Municipal Class EA will be placed in the local newspaper and mailed to those individuals who have expressed an interest in the project throughout the planning phases.

# 9.0 Phase 5 – Implementation

The implementation of the project proceeds with the completion of the contract drawings and tender documents, the contract award and subsequent construction and operation, including monitoring for environmental provisions and commitments as outlined in the ESR.

Upon submission and approval of the ESR, and provided there are no Part II Order (or "bump-up") requests associated with a Class EA project, the project is considered "approved" under the EA Act. In this case, the project can proceed to finalize detailed design and construction provided that all other applicable approvals and permits have been secured.

If there are any comments or concerns that cannot be resolved through discussion with the Town, a stakeholder may request that the Minister of Environment consider a Part II Order. If granted, the project approval process will require an Individual Environmental Assessment. Requests must be forwarded to the Minister of Environment, as well as the Town of Collingwood.

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## 10.0 Consultation

#### 10.1 Contact List

The specific agencies and departments of the federal, provincial and municipal governments, aboriginal and stakeholder groups that were consulted during the Class EA are presented in the Agency and Stakeholder contact list **Appendix C**.

#### 10.2 Consultation Points

A fundamental requirement of the Municipal Class EA is that proponents of infrastructure projects conduct public, agency and First Nations consultation. This is to ensure that any party with an interest in a proposed project be provided the opportunity to become involved and provide input into the proponent's decision-making before a project is finalized. A summary of the consultation program undertaken by the Town of Collingwood is provided below. Full details of all the notices, letters, PIC presentations and public comment sheets that formed the public and agency consultation program for this project are presented in **Appendix C** of this report.

For a Schedule 'C' project in the Municipal Class EA process, there are three mandatory public notices that must be given. The project consultation included three public notices as follows:

#### 10.2.1 Notice of Commencement

The project was initiated with a Notice of Commencement and Notice and Public Consultation Centre published in the Collingwood Enterprise Bulletin April 19, 2013; April 26 2013; and May 3, 2013 as well as mailed to agencies and stakeholders. The Notice of Commencement provided background to the project and the alternative solutions being considered to address the problem statement. The notice informed the public of the opportunity to provide input to the project through a Public Information Centre as well as the opportunity to submit comments or questions about the project to the Town and its consultant representative.

Comments received as a result of the Notice of Commencement generally noted requests to be removed or retained on the contact list, or acknowledgement that the agency had no concerns with the project. Chippewas of Rama (Mnjikaning) recommended that the Coordinator for Williams Treaty First Nations, Ms. Karry Sandy-McKenzie, be added to the circulation list for future correspondence, and she was subsequently added. The Nottawasaga Valley Conservation Authority suggested that the EA list and describe natural heritage

features and constraints within the study area, examine opportunities for quality and quantity control measures to treat stormwater runoff in accordance with Ministry of Environment and NVCA guidelines. The MOE volunteered a summary of the MEA process.

## 10.2.2 Public Information Centres (PIC)

Two PICs were conducted for the project. The PICs were arranged as a "drop-in" style session where representatives from the study team were available to answer questions and discuss the project with interested members of the public. Attendees were greeted upon arrival, were encouraged to sign the registration sheet, and were provided with a comment form to provide comments on any aspect of the project.

The Notice for PIC #1 was published in the Collingwood Enterprise Bulletin on April 19, 26 2013 and May 3, 2013 and mailed as part of the Notice of Commencement issued and conducted on May 8, 2013 from 4:00 to7:00 p.m. The Notice for PIC #2 was published in the same paper in on August 23, 2013 and August 30, 2013 and mailed to agencies and stakeholders. The PIC#2 was conducted on September 11, 2013 from 4:00 to 7:00 p.m.

A total of 11 people attended the PIC #1 excluding the project team members. There were 18 people that attended PIC#2. A total of fourteen (14) comment forms were received from stakeholders during the comment period for the PICs. Common issues noted within the comments relate to:

- Access to existing properties;
- Access to future development properties;
- Increase impact to adjacent properties from increase traffic noise;
- Maintaining existing trails and safety and creating new links to existing trails (bike lanes);
- Speeding; and
- Location of additional lanes to improve flow of traffic.

Stakeholder input received during the course of the project was considered in the evaluation of the various design options. Key issues identified by stakeholders are discussed in the applicable section of the ESR and / or provided specific responses, recorded in the PIC Summary Reports in **Appendix C**.

Written by:

Deanna De Forest, B.Sc. Environmental Scientist

## 10.2.3 Notice of Completion

A Notice of Completion will be published in the Collingwood Enterprise newspaper and mailed to stakeholders and Agencies. As per the requirements of the Municipal Class EA, this ESRis available for public review and comment for a period of 30 calendar days following the publication of the Notice of Completion.

The Notice of Completion will provide members of the public with the dates, times and locations where the Environmental Study Report (ESR) can be reviewed, and names and addresses of people to whom they can send their comments. Interested persons should provide written comment to the municipality within 30 calendar days from the date of the Notice of Completion. If concerns arise regarding this project which cannot be resolved in discussion with the Town of Collingwood, a person or party may request that the Minister of the Environment make an Order for the project to comply with Part II of the Environmental Assessment Act (referred to as a Part II Order), which addresses individual environmental Assessments. Requests must be received by the Minister within 30 calendar days of the first publication of the Notice of Completion.

Signature	Distance.	Date <u>April 2014</u>
Reviewed by :		
Ron Kerr, P.Eng. Project Manager	0 1	
Signature	Kan Gen	Date April 2014

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## References

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Nottawasaga Valley Conservation Authority, Blue Mountain Subwatershed Report Card, 2007

Nottawasaga Valley Conservation Authority, Town of Collingwood Natural Heritage System, 2011