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Heaveners Bridge No. 000294 Improvements County of Simcoe Municipal Class Environmental Assessment (Schedule B) Project File Report

Prepared By:

R.J. Burnside & Associates Limited
3 Ronell Crescent Collingwood ON L9Y 4J6

Prepared for:

County of Simcoe

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File No: MCG145600

Executive Summary

R.J. Burnside & Associated Limited (Burnside) was retained by the County of Simcoe to undertake a Schedule B Municipal Class Environmental Assessment for improvements to the Heaveners Bridge (No. 000294), which carries Switch Road over the Black River in the Township of Ramara. The existing single lane 40.54 m span steel through truss has been identified as being deficient with respect to load capacity, physical condition, road geometry, bridge cross-section and barrier protection.

In order to address the problem, a number of alternative solutions have been identified and evaluated, including:

- Do Nothing: taking no action in addressing the problem.
- Rehabilitation (vehicular/pedestrian): taking all necessary steps to rehabilitate the bridge to restore it to a structurally safe condition.
- Replacement: taking all necessary steps to construct a new bridge.

A review of land uses adjacent to the study area was completed. Improvements made to public infrastructure, such as the proposed improvements to this crossing, are consistent with permitted uses of the land use designations. A review of the natural environment found that no designated site or species are located directly within the study area. The existing bridge structure has not been designated as a heritage structure by either of the County of Simcoe or Ramara Township and no local residents voiced an interest in preserving the structure.

The alternatives were evaluated using the following criteria: natural environment, social/cultural environment, public safety, financial factors and technical factors. The preferred solution was found to be the replacement of the structure. This alternative addresses the need for a restored bridge crossing, eliminates the risks associated with the age of the existing bridge, provides an extended life expectancy and represents a long term solution to the problem. Any potential disturbance to the existing environments will be minimal, given readily implemented and industry standard mitigation measures.

A Notice of Study Commencement was sent to relevant review agencies and adjacent land owners and published for the general public in the Gravenhurst Banner (June 24 and 30, 2009) and Orillia Today (June 25, and July 2, 2009). Comments were received from three land owners and two First Nations. Formal comments were provided by the Ministry of Tourism and Culture (MTC), the Ministry of Environment (MOE) and Transport Canada (TC). MOE provided comments on issues relating to ecosystem protection and restoration, surface water, groundwater, dust and noise, servicing and facilities, waste materials and spills, mitigation and monitoring, planning and policy, the

Class EA process, and consultation with Aboriginal Peoples. MTC requested additional studies and information on the potential heritage features of the bridge and study area. TC provided confirmation that the waters of the Black River are navigable and therefore an application for approval would be required. This report is responsive to each of the landowners, First Nations, TC, MTC and MOE comments.

The Notice of Completion for this Municipal Class EA will be prepared and published as described above. The Notice will also be mailed to all agencies and stakeholders that had expressed an interest in the project. If concerns arise regarding this project which cannot be resolved in discussion with the County of Simcoe, a person or party may request that the Minister of 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 Notice.

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1.0 Introduction and Background

1.1 Introduction/Background

The County of Simcoe is considering improvements to the site of the Heaveners Bridge (No. 000294) located on Switch Road, 1.85 km west of County Road 169, southeast of Washago, in the Township of Ramara (Figure 1.1).

Bridge No. 000294 is a single lane, steel through truss bridge. The existing 40.5 m span structure has a driving platform width of approximately 3.9 m between barriers and an overall structure width of 5.0 m. The existing truss has several deteriorating and undersized components that have resulted in a triple load posting of 12/19/29 tonnes, as established in 2002. The load limit is expected to be reduced as deterioration continues over time and this will be unacceptable to the County, the Township of Rama and local residents. In addition, the existing bridge cross-section geometry and horizontal alignment does not conform to current County or accepted municipal standards.

1.2 Problem/Opportunity Statement

The problem/opportunity statement was prepared in consultation with the County of Simcoe:

"The County of Simcoe has identified the need to improve the Heaveners Bridge (No.000294), which crosses over the Black River. The existing bridge is considered to be deficient with respect to load capacity, physical condition, road and bridge geometry and barrier protection."

1.3 Description of the Preferred Alternative

The preferred solution is to replace the bridge with a completely new bridge structure on the existing road allowance. A new bridge would be designed to the minimum municipal standard acceptable and would be in accordance with the requirements of the Canadian Highway Bridge Design Code and various Ministry of Transportation standards and manuals. The proposed bridge provides for an improved geometric configuration that provides a full two lane cross section to meet the requirements of a two lane local roadway. The proposed structure is a two span 47.25 m span, concrete slab-on-pre-stressed concrete box girder structure. The structure will provide a 9.5 m driving platform and an overall structure width of 10.59 m. The proposed structure will have a central pier in the middle of the Black River which minimizes the structural depth of the girders and reduces the road profile and impact on the local environment. The proposed west abutment will be shifted several metres behind the existing abutment to open up the waterway and have the river flow more naturally through the bridge site.

The new bridge will be constructed using traditional bridge construction methods including: temporary cofferdams to construct the central pier and the abutment foundations, the use of concrete abutments and wingwalls, and the use of concrete prestressed girders and a concrete deck superstructure. The contractor selected for the work will be required to place a temporary cofferdam in the middle of the Black River to isolate the work area for the central pier.

A barge may be used to position a prefabricated cofferdam in the location of the central pier. The steel sheet piling will then be driven into the thin layer of silty material along the riverbed. Alternately, the central pier may be accessed using clean stone (rip rap) within a sheet pile enclosure. Once the pier is placed, the excess stone will be removed.

The proposed works also includes approximately 360 m of paving and 150 m of full depth road reconstruction as well as the associated grading and ditching required to properly drain the site of surface runoff.

The bridge replacement will involved the following work:

- Removal of the existing structure and foundations;
- Construction of new abutments and wingwalls;
- Construction of a central pier;
- Construction of a new superstructure (slab-on-girder);
- Construction of new road approaches to match the new bridge cross section and taper to existing road width (roadwork is limited to bridge approaches only); and,
- Provision of code conforming barriers on the structure and guiderail systems on the approaches to comply with Ministry of Transportation Roadside Safety Manual.

The new bridge will be wider to accommodate two lanes of traffic to meet the minimum municipal standard for a roadway with this traffic volume.

1.4 Municipal Class EA Planning Process

The planning of municipal infrastructure projects or activities is subject to the *Environmental Assessment Act*, R.S.O. 1990, and requires the proponent to complete an Environmental Assessment. The Municipal Class 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 environmental impacts and the choice of effective mitigation measures.

A flow chart, Figure 1.2, prepared by the MEA, shows the Class EA procedure. There are three categories of assessment within the Municipal Class EA procedure dependent on the complexity and potential for environmental impact (Schedule A and A+ – negligible impacts, Schedule B – modest impacts, Schedule C – significant impacts).

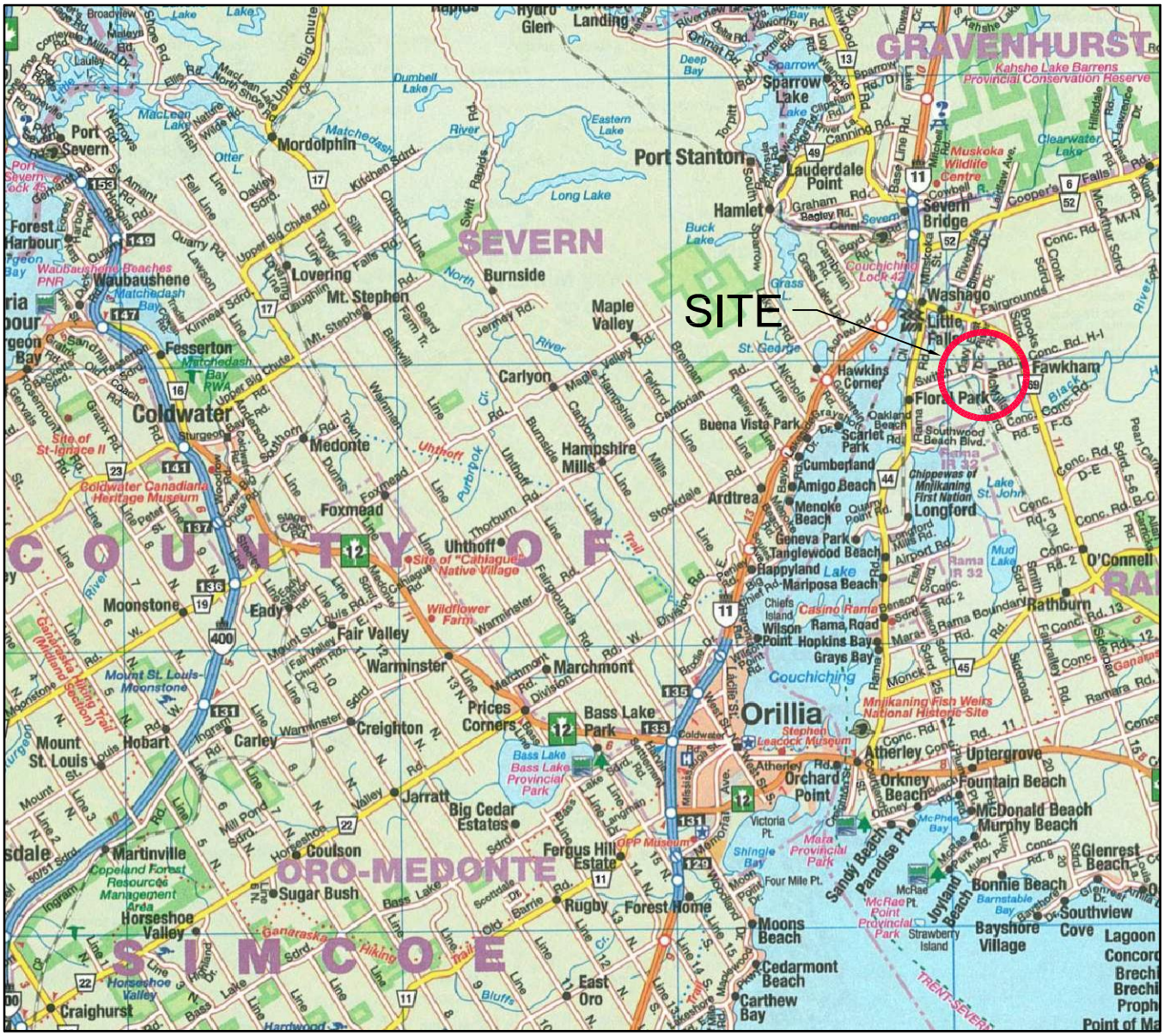
The Municipal Class EA also provides an opportunity for any member of the public or agency to request the Minister of the Environment to order a Municipal Class EA project to become subject to an Individual Environmental Assessment. This is known as a Part II Order request and is made in certain circumstances where concerns are unresolved during the Municipal Class EA planning process.

Reconstruction or alteration of a structure or the grading adjacent to it, when the structure is over 40 years old, where the proposed work will alter the basic structural system, overall configuration or appearance of the structure is considered to be a Schedule B Activity in accordance with the Municipal Engineering Association Municipal Class EA document (October 2000, as amended 2007). Schedule B projects generally include improvements and minor extensions to existing facilities. The project has the potential for some adverse, yet mitigable, environmental impacts and requires the completion of only Phases 1 and 2 of the Municipal Class EA procedure (Figure 1.2). Public consultation is required at two stages under a Schedule B project. At the completion of Phase 2, if there are no outstanding concerns, then the County may proceed to implementation.

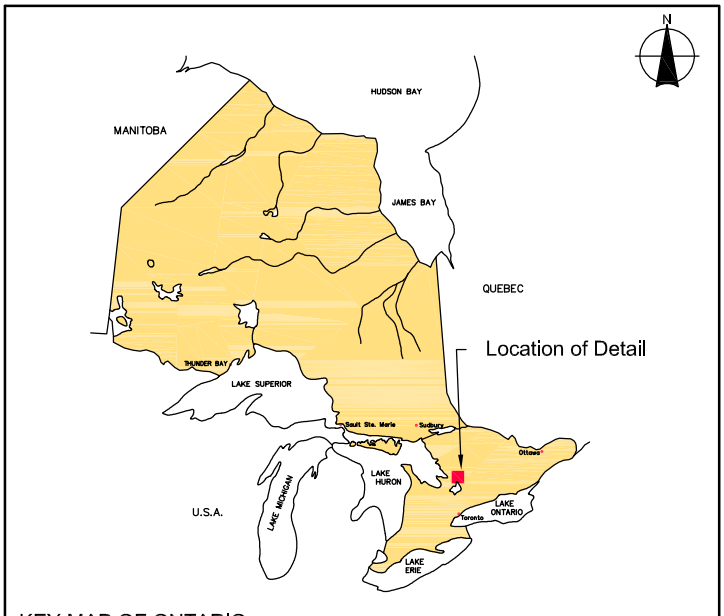
1.5 The Project File Report

In accordance with the Municipal Class EA process for a Schedule B project, this Project File Report identifies the following:

- Alternative solutions to the proposed project;
- The existing technical, natural, social and economic environment;
- Potential impacts of the alternative solutions on the existing environment and appropriate mitigation measures;
- An evaluation of the alternatives;
- The consultation process undertaken throughout the project; and,
- Selection of the preferred alternative.



Map Reference:
Map Art Publishing
Ontario Road Atlas



KEY MAP OF ONTARIO

FIGURE 1.1 - SITE LOCATION MAP

COUNTY OF SIMCOE
HEAVENER'S BRIDGE

SCHEDULE B EA PROJECT FILE REPORT

June 2010
Project Number: MCG145600

Prepared by: C. Dickie Verified by: T. Raburn

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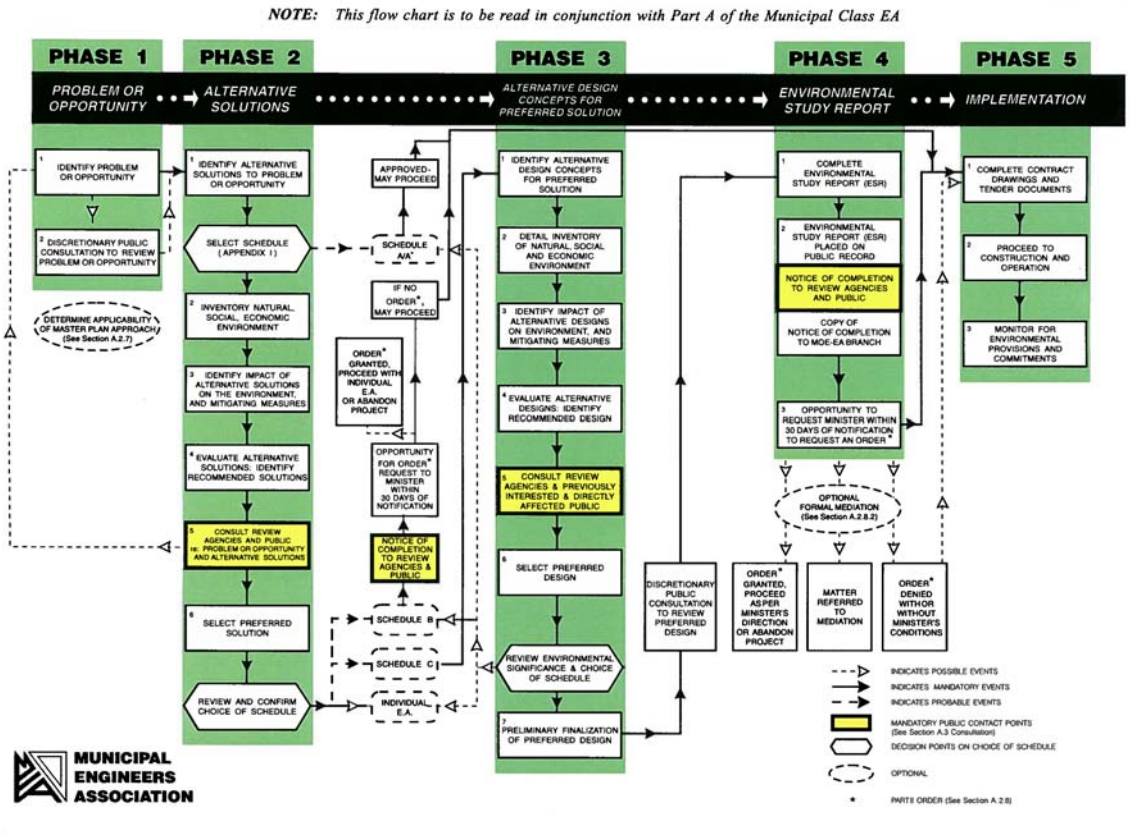
Figure 1.2 Municipal Class EA Process
(Source: MEA, 2000, as amended 2007)



2.0 Alternative Solutions

In order to address the problem/opportunity statement identified in Section 1.2, the following alternative solutions have been proposed, these alternatives have been evaluated in Section 5.0.

2.1 Do Nothing

This is a mandatory alternative for consideration under the Municipal Class EA and serves as a reference point for comparing other alternative solutions. The "Do Nothing" alternative means to take no action in addressing the problem statement and effectively represents the ultimate abandonment of the structure and the closure of Switch Road over the Black River.

2.2 Repair/Rehabilitation

Vehicular

This alternative would involve taking all necessary steps to rehabilitate the structure to restore it to a structurally safe condition for vehicular use. These steps would include seeking input and permission or approval from the Department of Fisheries and Oceans (DFO) and Transport Canada Marine (TCM). Rehabilitation can remedy most, but not all, of the identified deficiencies.

Pedestrian

The rehabilitation as a pedestrian bridge can be considered an option due to the site surroundings. No roadway alignment or barrier wall safety issues will be considered as part of this alternative.

2.3 Replacement

This alternative would involve taking all necessary steps to construct a new bridge over the Black River. There steps would include seeking input and permission or approval from the DFO and TCM.

3.0 Description of Existing Structural Conditions

Heaveners Bridge is an existing single lane, steel through truss bridge with an existing load restriction. The existing 40.5 m structure has a driving platform width of approximately 3.9 m between barriers and an overall structure width of 5.0 m. The existing truss has several deteriorating components that have resulted in a triple load posting of 12/19/29 tonnes which was established in 2002. In addition, the existing bridge cross-section geometry and road alignment does not conform to current County or municipal standards. The bridge recently required emergency repairs to enable it to remain open to traffic. Continued deterioration of components is expected. These deficiencies can be corrected by the replacement of the structure.

In its present condition the structure can be said to be deficient with respect to the following:

Load Capacity

The structure is currently posted at 12/19/29 tonnes. Recently (2010) the bridge required emergency repairs to remain in service. If the deterioration is allowed to continue, further load restrictions and the eventual closure of the bridge can be expected in the future. Closure of this roadway would not be acceptable to the Township or County due to the volume of traffic which currently uses this route to travel between County Road 44 and Highway 169.

Geometry

The existing bridge geometry and the desirable minimum standards are shown in the following table. The minimum standards are based on the Geometric Design Standards for the Township of Ramara who have jurisdiction over the road.

Table 3.1 Heaveners Bridge Geometric Design and Standards

Geometry	Existing Structure	Minimum Standard	Deficient
Lane Width	3.0	3.5	Yes
Number of Lanes	1	2	Yes
Side Clearance	<0.5	1.25	Yes

Structure Barrier System

There is no effective barrier system over the structure. There is a concrete curb and two horizontal steel tube rails which does not comply with the current code requirements for the safety of road users. The site requires a Performance Level 1 barrier system.

Approach Guide Rail

There is a limited amount of guiderail on all structure approaches. The guiderail is not adequately anchored to the bridge and end treatments do not comply with the relevant Ontario Provincial Standards.

Physical Condition

In its current condition, the structure has the following deficiencies:

- Medium to isolated severe corrosion of steel floor beams, stringers, panel points and various steel truss members;
- Disintegration of all elements of the fascia, substructure and soffit (including the recent need for emergency repair);
- Deterioration of the deck;
- Asphalt deterioration of approaches; and,
- Disintegration of concrete curbs.

A copy of the Bi-annual Inspection Report is provided in **Appendix A1**.

4.0 Description of the Existing Natural and Socio-Economic Environment

A desktop review of information on the natural environment of the study area was completed. Descriptions of the various components of the natural environment were determined based on aerial photography and are provided in the following sections.

4.1 Land Use

4.1.1 Provincial Policy Statement

The 2005 Provincial Policy Statement (PPS) states that municipal projects should be directed to existing settlement areas, create stronger and improved communities, and have little to no impact on the natural features of the area. In general projects should have consideration for future needs to ensure the benefits of the project are far-reaching. Section 1.6 of the PPS contains specific guidance on Infrastructure and Public Service Facilities:

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.

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.

4.1.2 Official Plans

County of Simcoe

According to the County of Simcoe Official Plan (2000), the lands adjacent to the Heaveners Bridge are designated as Greenlands. This designation is associated with the woodlots located south and west of the bridge.

Township of Ramara

According to Schedule C of the Township of Ramara Official Plan (2003), the Black River is designated as Core Areas and Corridors. Lands south of the river are designated as Supportive and Complementary Areas and Corridors. Sections 5.2.3.7 and 5.2.3.8 of the Official Plan state that development or site alternation for the purposes

of roads infrastructure is permitted in these designations provided the work is approved under the provisions of federal, provincial and municipal statutes and regulations.

The replacement of the Heaveners Bridge impacts the current and existing designated road allowance. As such these Improvements made to public infrastructure are consistent with permitted uses of the adjacent land use designations.

4.2 Terrestrial Environment

4.2.1 Designated Sites

The County of Simcoe prepared a Natural Heritage Study (Gartner Lee Ltd., 1996). According to the study and Schedule 5.4 of the County of Simcoe Official Plan, the study area lies within the Lake St. John/Mud Lake (CP2) portion of the Carden Plain natural heritage unit. The CP2 unit is described as providing the ecological and hydrological functions identified in **Table 4.1.**

Table 4.1 Ecological and Hydrological Functions Provided by the CP2 Unit

Functions		WL3 Unit
Terrain Functions	Recharge	-
	Discharge	X
	Flood Storage	X
	Conveyance	X
Vegetation Functions	Erosion Protection	-
	Temperature Control	X
	Water Quality Enhancement	X
	Aquatic Habitat	X
	Terrestrial Habitat	X
Attributes	Coldwater Habitat	-
	Warmwater Habitat	X
	Fish Spawning	X
	Deer Concentrations	-
	Waterfowl Concentrations	-
	Prov. Rare Animals	X
	Prov. Rare Plants	X
	Uncommon Vegetation	X
Linkage	Large Core Areas	-
	Number of Links	3
	Aquatic	X
	Riparian/lowland	X
	Upland	-
	Narrow Link in Agriculture	-
	Linkage Beyond Simcoe	-
	Restoration Opportunity	-
Status Designations	Provincial ANSI	-
	Regional ANSI	-
	Site of Interest	1
	ESA	-
	PSW	5
	Local Sig. Wetland	-
	Prov. Park/Cons. Area	-

There are no provincially significant wetlands, Areas of Natural and Scientific Interest ("ANSI") or Environmentally Significant Areas ("ESA") in the vicinity of the study area.

4.2.2 Vegetation Communities

The project location is situated within the Lake Simcoe-Rideau Site Region which occupies the northern portion of Southern Ontario. This Region is also called the Great

Lakes-St. Lawrence Forest Region. The area is characterized by mixed forests of white pine, red pine, eastern hemlock, sugar maple, red maple, yellow birch, red oak, basswood and white elm. Other wide-ranging species include eastern white cedar, largetooth aspen, beech, white oak, butternut and white ash (Lee et. al, 1998).

A review of the Natural Heritage Information Centre ("NHIC") database identified no provincially rare vegetation communities within the study area, or in the vicinity of the study area.

4.2.3 Wildlife and Wildlife Habitat

The Ontario Breeding Bird Atlas ("OBBA") was reviewed for records of birds breeding in the vicinity of the study area. The results of this review are provided in **Appendix A2**. 1014 species were identified (OBBA square 17PK35). The number of species identified according to each provincial rarity ranking is provided in **Table 4.2** below.

Table 4.2 Provincial Ranking of Bird Species

Provincial Ranking	Description of Ranking	Number of Bird Species with Ranking
S2S3	Imperiled/Vulnerable	1
S3	Vulnerable	-
S4	Apparently Secure	22
S4S5	Secure-Apparently Secure	2
S5	Common and demonstrably secure in the province	85
SE	Exotic or not a native component of Ontario's flora	4

The S2S3-ranked species is described further in Section 4.2.4, below.

Thirty-one species identified in OBBA records are considered to be area-sensitive, requiring large habitat tracts in which to breed. Vast forested lands surround the study area providing habitat for area-sensitive forest birds. Lake Couchiching and a number of other smaller lakes and marshes to the west provide open water habitat for area-sensitive waterfowl and marsh birds. The study area itself is disturbed by the existing roadway and bridge. Switch Road at Heaveners Bridge is lined with a number of rural residential properties with open fields, agricultural operations and small woodlots. Habitat at the bridge and its immediate vicinity is more suitable for forest edge species and species suited to agricultural landscapes. Habitats for area-sensitive species are not present at the bridge or its immediate vicinity.

4.2.4 Designated Species

A review of the Natural Heritage Information Centre ("NHIC") database did not identify any records of rare or designated species.

The OBBA database, described above, identified two records of interest. The Trumpeter swan, *Cygnus buccinators,* an S2S3-ranked species was observed. The species is considered rare in Ontario. It was nearly exterminated in the 1800s as a result of over-hunting but populations have since risen to stable levels. It is now threatened by hybridization with the European Mute swan, a species exotic to Ontario. The Trumpeter swan is not protected under federal or provincial species at risk legislation.

Red-shouldered hawk, *Buteo lineatus*, was also observed in the OBBA square covering the study area. The Red-shouldered hawk is not a provincially designated species. However, it is a Schedule 3 Special Concern species under the federal *Species At Risk Act*. Its Schedule 3 classification means that it is not awarded full protection under the Act. Red-shouldered hawks require a minimum of 10 ha of dense mature forest to nest and prefer more than 100 ha of interior forest habitat which is present in the region surrounding the study area.

4.3 Aquatic Environment

Heaveners Bridge crosses the Black River immediately upstream of its confluence with St. John Creek, which flows north from Lake St. John.

According to records from the Ministry of Natural Resources ("MNR"), the Black River is classified as a cool water system. However, MNR staff (Brent Shirley, email correspondence, December 7, 2009) noted that the fish community present is more indicative of a warmwater fish community. MNR fish records from the Black River in the vicinity of the bridge are listed in Table 4.3. Records include a variety of sportfish and baitfish. The river was stocked with 2,600 Brook Trout in 1968. Surveys undertaken in 1991 did not identify the species and it may no longer be present. All species listed are ranked S5, common and demonstrably secure in the province, with the exception of Muskellunge which is ranked S4, Apparently Secure. The record of this species dates to 1975 and has not been confirmed.

Table 4.3 Fish Records in the Black River, Ramara Township

Fish Species	Scientific Name	Collected	Source	External Reference
S- Northern Pike	*Esox lucius*	1991	Survey	(SCR, 1991)
S- Smallmouth Bass	*Micropterus dolomieu*	1991	Survey	(SCR, 1991)
S- Yellow Perch	*Perca flavescens*	1991	Survey	(SCR, 1991)

Fish Species	Scientific Name	Collected	Source	External Reference
S- Rock Bass	*Ambloplites rupestris*	1991	Survey	(SCR, 1991)
S- Muskellunge	*Esox masquinongy*	1975	Angler	Not Confirmed
S- Brook Trout	*Salvelinus fontinalis*	1968	Stocked	(SRBR, 1968)
S- Pumpkinseed	*Lepomis gibbosus*	1991	Survey	(SCR, 1991)
B- Emerald Shiner	*Notropis atherinoides*	1991	Survey	(SCR, 1991)
B- Golden Shiner	*Notemigonus crysoleucas*	1991	Survey	(SCR, 1991)
B- Bluntnose Minnow	*Pimephales notatus*	1991	Survey	(SCR, 1991)
B- Johnny Darter	*Etheostoma nigrum*	1991	Survey	(SCR, 1991)
B- White Sucker	*Catostomus commersonii*	1991	Survey	(SCR, 1991)
B- Common Shiner	*Luxilus cornutus*	1991	Survey	(SCR, 1991)
B- Northern Redbelly Dace	*Phoxinus eos*	1991	Survey	(SCR, 1991)

S- Sportfish; B- Baitfish.
Source: MNR, 2009. (SRBR, 1968)- Stocking Records for Black River, 1968; (BRSS, 1975) - Black River Stream Survey, Armstrong & Houre, 1975; (SCR, 1991)- Scientific Collection Records, 1991.

4.4 Archaeology and Cultural Heritage

A Cultural Heritage Evaluation of the Heaveners Bridge was completed in August 2009. A copy of this evaluation is included in **Appendix A3**. The results of the evaluation indicated that the Heaveners Bridge was not considered to be a provincially significant structure.

The determination was made based on the Ontario Heritage Bridge Guidelines for Provincially Owned Bridges (2008). It is acknowledged that Heaveners Bridge is a County owned bridge, not a provincially owned bridge and to that end, the evaluation also included consideration using the Ministry of Culture's Ontario Heritage Bridge Program (1991) criteria. The OHBP criteria has a scoring system but no threshold or evaluation limits. The same can be said for Ontario Regulation 9/06 which has a series of subjective criteria and no measure of objective evaluation.

As such, to consider the Heritage Value of the structure from a local perspective, the local Municipality was consulted along with the residents. There were no comments provided by the general public to demonstrate any desire to preserve the existing bridge. The residents living in closest proximity of the bridge expressed more concern about the safety of the single lane bridge than a desire to save the structure.

Township of Ramara staff were asked if they wanted to reuse the bridge, salvage its parts, or store for future use, and they indicated they had no need or desire to keep the bridge.

As a result of the evaluation and consultations it was determined that there was no local interest in preserving the existing Heaveners Bridge.

With respect to an archaeological investigation, no formal investigation was completed. The existing bridge is founded on rock, as will the proposed structure. The local landscape is dotted with rock outcrops and surface protrusions of rock, and the Cultural Heritage Evaluation included a description of site as having approximately 1 m of sand over bedrock.

In 2004, Simcoe County undertook a Schedule C Class EA for the nearby County Road 44. An archaeological investigation completed at that time determined that there were no archaeological sites with 3 km of County Road 44, which includes the Heaveners Bridge area.

Further, the report indicated that due to typical areas of exposed bare rock with no soil deposition (similar to Heaveners Bridge location) they conclude that no further archaeological study would be productive.

As a result of these issues, there was a determination that an archaeological investigation would not be useful or needed. In the unlikely event that any relics or artifacts are uncovered while excavating for the proposed bridges there are protocols established under the Ontario Provincial Standards for any construction activity completed under the contracts.

4.5 Socio-economic Features

This section profiles the socio-economic characteristics of the Township of Ramara data provided in Statistics Canada's Population Census of 2001 and 2006. Statistics Canada conducts the Census once every five years.

Demographics

The population and employment rate of the Township of Ramara is shown in **Table 4.4**. At the time of the 2006 census 9,427 people lived in the Township of Ramara. Between 2001 and 2006, the population of the Township increased by 9.4% while the population of Ontario had increased by 6.6%.

Table 4.4 Population & Employment Rate in the Township of Ramara, 1996-2006

Population			Employment Rate	
Census Year	Total Population	Change in Population (between census periods)	Employment Rate	Unemployment Rate
1996	7,812	N/A	N/A	N/A
2001	8,615	10.3%	55.3%	4.9%
2006	9,427	9.4%	57.8%	4.8%

Source: Statistics Canada, Population Profile of Canada (2006) and (2001).

4.5.1 Economic Development

As shown in Table 4.5, business services, construction, manufacturing and other services employ more than half of the people in Township, and represent the greatest source of jobs for residents of the Township. The percentage of people employed in the agricultural industry is higher than for Ontario as a whole. This value is expected for this rural based township.

Table 4.5 Employment by Industrial Sector in the Township of Ramara, 2006

Industrial Sector	Township of Ramara (% of total)	Ontario (% of Total)
Agriculture and other resource-based industries	220 (4.6%)	190,000 (2.9%)
Construction	530 (11.1%)	384,775 (5.9%)
Manufacturing	540 (11.3%)	899,670 (13.9%)
Wholesale trade	150 (3.1%)	307,465 (4.7%)
Retail trade	530 (11.1%)	720,235 (11.1%)
Finance and real estate	150 (3.1%)	442,610 (6.8%)
Health care and social services	385 (8.1%)	611,740 (9.4%)
Educational services	320 (3.7%)	433,485 (6.7%)

Industrial Sector	Township of Ramara (% of total)	Ontario (% of Total)
Business services	580(12.2%)	1,274,345 (19.7%)
Other services	1370 (28.6%)	1,209,390 (18.7%)
Total - Experienced labour force over 15 years of age	4785	6,473,730

Source: Statistics Canada, Population Profile of Canada (2006).

4.5.2 Dwellings

Approximately 39.2% of the dwellings in the Township of Ramara were constructed between 1986 and 2006. This value is slightly higher than the provincial average for the same period. The average value of dwellings in the Township of Ramara in 2006 was $284,024. This figure is slightly lower than the value of dwellings in Ontario ($297,479) in the same year. Census data demonstrate that there has been growth higher than the provincial average in the Township between 2001 and 2006.

FIGURE 4.1

COUNTY OF SIMCOE
HEAVENER'S BRIDGE
SCHEDULE B EA PROJECT FILE REPORT

NATURAL ENVIRONMENT

LEGEND

- APPROXIMATE STUDY SITE
- NATURAL HERITAGE UNIT (COUNTY OF SIMCOE)
- NATURAL AREA - CORE AREAS AND CORRIDORS (TOWNSHIP OF RAMARA)
- NATURAL AREA - SUPPORTIVE AND COMPLIMENTARY AREAS AND CORRIDORS (TOWNSHIP OF RAMARA)

Sources:
Google Earth Pro, Image Date: May 2005
County of Simcoe, Schedule 5.4, Natural Heritage System
Township of Ramara, Schedule C, Natural Area Framework

N

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Metres

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June, 2010
Project Number: MCG145600

Projection: UTM Zone 17
Datum: NAD83

Prepared by: C. Dickie

Verified by: T. Radburn

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Plot Time: Jan 12, 2011 - 3:39pm

5.0 Evaluation of Alternatives and Selection of the Preferred Solution

5.1 Description of Alternatives

This section identifies the alternatives that were considered as a part of this Schedule B Municipal Class EA. The alternatives were evaluated using the following criteria: natural environment, social/cultural environment, financial factors and technical factors. The evaluation of each of the alternatives using the identified criteria is presented in Table 5.1.

5.1.1 Do Nothing

The “Do Nothing” alternative means to take no action in addressing the problem statement. This alternative leaves all conditions as they are and allows deterioration to continue unabated resulting in potential decreases in safety and ultimate closure and/or failure of the structure. The County of Simcoe is responsible to its citizens to provide a road network that is safe, efficient, and which operates at an acceptable level of service. This alternative would not address the problem statement and was therefore not pursued as a viable alternative.

5.1.2 Repair/Rehabilitation (Vehicular/Pedestrian)

This alternative would involve taking all necessary steps to repair/rehabilitate the bridge to restore it to a structurally safe although load restricted condition. The rehabilitated structure would be required to meet as many of the bridge code requirements and minimum standards as possible, however a rehabilitated structure would still have critical identified defects, most notably, inadequate platform width and continued operation as a single load path structure. A load limit may be required for the rehabilitated bridge based on the condition of remaining components and the strength and capacity of components and abutments. Vehicle loads prescribed in the Canadian Highway Bridge Design Code are substantially higher than the load which the structure was designed for. As a result, it is probable that the majority of the structure components would have to be replaced rather than strengthened. This would amount to the reconstruction with a single load path structure, which is not encouraged in Ontario.

While this alternative addresses the need for a restored bridge crossing, there is a risk due to the age of the bridge, that even with rehabilitation, this alternative will still have a limited life expectancy and will not provide a long-term solution to the problem. As a rehabilitation program cannot address all of the identified defects it not considered to be the preferred solution alternative.

Additionally, consideration was given to retaining the bridge for pedestrian or cyclist use only. This would eliminate switch road as a vital link between County Road 44 and Highway 169, and would be seen as detrimental to local residents. Further, to retain the existing bridge for pedestrians or cyclists and maintain the road network would require the construction of a second bridge structure. There is however, only limited room within the designated road allowance to fit this in geometrically. Adjacent lands are cottage/residential private properties unavailable for use.

5.1.3 Replace Existing Bridge with New Bridge

This alternative would involve taking all necessary steps to construct a new bridge at this location over the Black River. Construction of the new bridge will involve the widening of this crossing from a single lane to two lanes to meet the minimum municipal standard for this roadway. Specific details of the proposed crossing have been presented to the relevant federal agencies (TCM and DFO) and found to be acceptable from both navigational and fish habitat perspectives. This alternative will address the need for an improved bridge crossing at this location. The replacement of the structure would allow the County to bring the site to current standards in all respects including safety, geometry, road grades, bridge and road drainage, hydraulic capacity and load capacity. In effect, a new bridge will provide a long-term solution to the problem.

5.2 Preferred Solution

Having considered the alternatives, the preferred alternative has been determined to be bridge replacement. While this may be the most expensive alternative, it addresses fully the need for a long-term solution to address the problem statement.

While the consideration of the type of structure proposed to replace the bridge may be beyond the scope of a class B activity, the most effective solution will include the placement of a pier in the Black River.

The proposed structures central pier has been proposed to minimize the structural depth of the girders. This will have the affect of reducing the required road profile increase while maintaining the existing soffit elevations. This reduces the environmental footprint of the project and eliminates the need to acquire any private property. The proposed west abutment will also be shifted several metres behind the existing abutment to open up the waterway and have the river flow naturally through the bridge site.

The existing east abutment will be removed entirely from the work area so it does not interfere with the proposed structure. However the west abutment will be constructed well beyond the existing foundation and as such the existing abutment will be cut off approximately 300 mm below the river bed. Temporary cofferdams will be used to

protect and isolate the work areas from the Black River. A work platform/tarp will be placed below the existing superstructure to prevent debris from entering the waterway while removing the deck. Once the deck has been removed it is anticipated that the contractor will use a crane to lift the existing truss off of the abutments.

The new bridge will be constructed using traditional bridge construction methods including temporary cofferdams to construct the pier and shallow foundations, the use of concrete abutments and wingwalls, concrete prestressed girders and a concrete deck superstructure. The contractor will be required to place a temporary cofferdam in the middle of the Black River to isolate the work area for the central pier. A barge will likely be used to position a prefabricated cofferdam in the location of the central pier. The steel sheet piling will then be driven into the thin layer of silty material along the riverbed.

The proposed project also includes approximately 360 m of paving and 220 m of full depth road reconstruction to widen the road locally to suit the bridge, as well as the grading and ditching required to properly drain the site of surface runoff.

During construction, typical sediment and erosion control details will be implemented and maintained. These include rock check dams at all ditch outlets. Straw bale flow checks along the ditchlines, silt fencing along the perimeter of the work area and along the river edges.

With the implementation of mitigation measures discussed in Section 6.0, the bridge replacement will have limited impacts on the natural and socio-economic environments. A positive impact on the social-economic and business environments can be expected with the removal of the existing narrow and load restricted structure and construction of a new structure with no restrictions on the movement of goods and materials.

Table 5.1 Evaluation of Alternatives

CRITERIA FOR EVALUATING ALTERNATIVES	Do Nothing	Repair Existing Bridge (Vehicular)	Repair Existing Bridge (Pedestrian)	Replace Existing Bridge with New Bridge
A Natural Environment *Rating:*	**Most Preferred**	**Partially Preferred**	**Partially Preferred**	**Partially Preferred**
1 Water Quality and Quantity	Minimal impact provided that erosion/sediment and spill controls are in place during removal to safeguard water quality.	Minimal impact provided that erosion/sediment and spill controls are in place during removal to safeguard water quality.	Minimal impact provided that erosion/sediment and spill controls are in place during removal to safeguard water quality.	Minimal impact provided that erosion/sediment controls and spill controls are in place during construction to safeguard water quality.
2 Public Lands	Any repairs that may take place within, or on, the river bed may require a permit from the MNR under the *Public Lands Act*.	Any repairs that may take place within, or on, the river bed may require a permit from the MNR under the *Public Lands Act*.	Any repairs that may take place within, or on, the river bed may require a permit from the MNR under the *Public Lands Act*.	Construction that may occur within, or on, the river bed may be subject to MNR permitting under the *Public Lands Act*.
3 Aquatic Habitat	Potential impacts on aquatic habitat dependant upon repair activities. In-water works may be required.	Potential impacts on aquatic habitat dependant upon repair activities. In-water works may be required.	Potential impacts on aquatic habitat dependant upon repair activities. In-water works may be required.	Potential impact over existing conditions depending on replacement structure. In-water works would be required. Loss of a small portion of fish habitat will occur as a result of the installation of a new centre pier. Design would need to be in accordance with Best Practices and permitting requirements of approval/permit agencies. Letter of Advice received from DFO.
4 Designated Features	All works will occur within the existing ROW. No impacts to adjacent Greenlands are anticipated.	All works will occur within the existing ROW. No impacts to adjacent Greenlands are anticipated.	All works will occur within the existing ROW. No impacts to adjacent Greenlands are anticipated.	Bridge widening will result in the minor loss of some vegetation within County and Township designated Greenlands. No provincially designated features are located in the study area. The federally rare (Schedule 3) Red-shouldered hawk has some limited potential to be located in the vicinity of the bridge area.
5 Terrestrial Habitat	Minimal impact over existing conditions as repair activities would occur within footprint of existing structure.	Minimal impact over existing conditions as repair activities would occur within footprint of existing structure.	Minimal impact over existing conditions as repair activities would occur within footprint of existing structure.	Bridge widening will result in the minor loss of some vegetation within County and Township designated Greenlands. Vegetation removal will be minimal in a disturbed area that currently provides marginal edge habitat.

CRITERIA FOR EVALUATING ALTERNATIVES		Do Nothing	Repair Existing Bridge (Vehicular)	Repair Existing Bridge (Pedestrian)	Replace Existing Bridge with New Bridge
B	**Socio-economic/Cultural Environment** *Rating:*	**Least Preferred**	**Partially Preferred**	**Partially Preferred**	**Partially Preferred**
1	Conformity to Local Planning Provisions	Conforms.	Conforms.	Does not conform to Township of Ramara Official Plan policy to provide for the efficient and safe movement of local traffic and visitor traffic within the Township.	Conforms.
2	Property Impacts (loss of farmland, loss of access to farmland, disruption of tile drainage,	No impact over existing conditions.	No impact over existing conditions as the work would occur within the footprint of the existing road allowance.	No impact over existing conditions as the work would occur within the footprint of the existing road allowance.	No farmland will be lost as a result of this work.
3	Heritage Resources (archaeological features, built heritage, and cultural heritage landscapes)	No impact over existing conditions.	No impact over existing conditions.	No impact over existing conditions.	The structure is not designated as a heritage structure under the *Heritage Act*. A Stage 1 Archaeological Assessment was conducted. No local interest in preserving/retaining the structure by local residents, general public or local municipality.
4	Nuisance Impacts (noise, traffic, aesthetics, disruption during construction)	Load restrictions limit the vehicular traffic that may use this road. Aesthetics of bridge will deteriorate over time.	Temporary noise impacts associated with rehabilitation works. No inconvenience to local residents as operation of bridge would be restored. Some disruption to traffic during construction.	Temporary noise impacts associated with rehabilitation works. No inconvenience to local residents as operation of bridge would be restored. Some disruption to traffic during construction.	Temporary noise impacts associated with construction of new bridge. No inconvenience to local residents as operation of bridge would be restored. Some disruption to traffic during construction.
5	Land Acquisition	No impact over existing conditions.	No impact over existing conditions as activities would occur limited to the existing right-of-way.	No impact over existing conditions as activities would occur limited to the existing right-of-way.	No private property lands required.
C	**Financial Factors** *Rating:*	**Partially Preferred**	**Partially Preferred**	**Partially Preferred**	**Least Preferred**
1	Estimated Capita and O & M Costs and Total Estimated Cost (25 year planning horizon)	Moderate expense (associated with O & M activities)	Moderate expense; Operation and maintenance activities will still be required.	Moderate expense; Operation and maintenance activities will still be required.	High expense

D Technical Factors *Rating:*	**Least Preferred**	**Partially Preferred**	**Partially Preferred**	**Most Preferred**
1 Bridge Access & Safety	Load restrictions are in place due to deterioration of the original structure, although further restriction and closure is imminent without improvement of the structure. One lane bridge represents potential traffic conflicts and limits transport of good and farm machinery.	Can address some of the identified deficiencies, however a rehabilitated structure would still have critical identified defects, most notably, and inadequate platform width. May require a load limit based on the condition of the remaining components. One lane bridge represents potential traffic conflicts and limits transport of good and farm machinery.	Improved public safety, minimum maintenance, This would result in access impacts.	Improved safety as new bridge will meet minimum standard municipal standards for two-lane structures. No load or width restrictions for foreseeable future.
2 Service Life	Deterioration of the structure will continue until the resulting in a closure.	Structure will have a limited life expectancy due to the condition of the components that cannot be repaired and may require a load limit based on the condition of the remaining components. Service life expectancy to next rehabilitation is approximately 10-15 years.	Structure will have a limited life expectancy due to the condition of the components that cannot be repaired and may require a load limit based on the condition of the remaining components. Service life expectancy to next rehabilitation is approximately 10-15 years.	Life expectancy is extended, will meet the Canadian Highway Bridge Design Code (CHBDC) 75-year durability requirement.
3 Maintenance Requirements	Will require ongoing monitoring of structure until point of failure.	Ongoing inspection of deficiencies will be required. Will have to be more proactive to maintain the structure to maximize service life.	Ongoing inspection of deficiencies will be required. Will have to be more proactive to maintain the structure to maximize service life.	Minimum maintenance needs.
4 Hydraulic Performance	No opportunity for improved hydraulic performance.	No opportunity for improved hydraulic performance as no change to bridge size.	No opportunity for improved hydraulic performance as no change to bridge size.	Improved hydraulics including a reduced risk of blockage and flooding.
RECOMMENDED SOLUTION	Not preferred	Not Preferred	Not Preferred	Most preferred

Understanding the Rating System:

Most preferred; fully responds to, and/or has fewest impacts in, evaluation

↑

Least preferred; largely does not respond to, and/or has potential for unacceptable impacts in, evaluation criterion

6.0 Impacts and Mitigation

The following measures should be implemented in order to mitigate negative impacts of the proposed project on the environmental features of the study area. All design and construction reports and plans will be based on a best management approach that centre on the prevention of impacts, protection of the existing environment and opportunities for rehabilitation and enhancement of the impacted areas.

6.1.1 Surface Water/Hydrology & Soils and Sedimentation

Effect

A. Potential for sediments to enter watercourse as a result of the following project activities;

- Site clearing
- Stockpiling
- Excavation
- Construction

B. Potential for localized water quality impacts as a result of spills.

Mitigation

A. The footprint of disturbed area will be minimized as much as possible.

An erosion and sediment control plan will be developed. Implementation of the erosion and sediment control measures will conform to recognized standard specifications such as Ontario Provincial Standards Specification (OPSS).

Any stockpiled material will be stored at a safe distance (at least 30m) from the waterway to ensure that no deleterious substances enter the water.

Sediment and erosion control measures (silt curtains, silt fence) will be installed and will be maintained during the work phase and until the site has been stabilized. Control measures will be inspected daily to ensure they are functioning and are maintained as required. If control measures are not functioning properly, no further work will occur until the problem is resolved.

Any temporary mitigation measures will be installed prior to the commencement of any site clearing, grubbing, excavation, filling or grading works and will be maintained on a regular basis, prior to and after runoff events.

B. All equipment fuelling and maintenance will be done at a safe distance (at least 30 m) from the water to ensure that no deleterious substances enter the waterway.

The contractor will be required to develop spill prevention and contingency plans for construction and operational phases of the project. Personnel will be trained in how to apply the plans and the plans will be reviewed to strengthen their effectiveness and ensure continuous improvement. Spills will be immediately contained and cleaned up in accordance with provincial regulatory requirements and the contingency plan. A hydrocarbon spill response kit will be on site at all times during the work. Spills will be reported to the Ontario Spills Action Center at 1-800-268-6060.

If applicable, MOE's Stormwater Management Planning and Design Manual (2003) will be referenced during detailed design.

All waste generated during construction must be disposed of in accordance with MOE requirements.

The above mitigation measure will be implemented for any construction activity and will be identified and implemented in order to secure relevant agency permits (e.g. DFO, TCM). The DFO has already reviewed the proposed plans and have determined that the work does not constitute a Harmful Alteration Disruption or Destruction (HADD) of fish habitat. A letter of advice has been received.

6.1.2 Groundwater

Effect

A. Potential for localized groundwater quality impacts as a result of spills. The proposed project does not involve the taking of groundwater. No discharge is anticipated during construction activities.

Mitigation

A. Refuelling of equipment and fuel storage should be conducted in designated areas with spill protection.

6.1.3 Fish and Fish Habitat

Effect

A. The proposed replacement bridge design includes a centre pier in the Black River which has the potential to negatively impact fish and fish habitat.

Mitigation

A. A Letter of Advice (DFO, October 12, 2010) (**Appendix B4**) has been issued by the DFO which indicates that the proposed bridge replacement is unlikely to result in impacts to fish and fish habitat (No HADD anticipated) if the following mitigation measures are applied:

- Coffer dams will be installed to ensure the abutment work is conducted in the dry;
- In-water works will be required to socket the center pier into the bedrock. A coffer dam will be installed to isolate this work area;
- No in-water work should occur from April 1 to June 30 of any year to protect local fish populations during their spawning and nursery periods;
- 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 substances (e.g. petroleum products, silt etc.) from entering the water;
- Sediment and erosion control measures should be implemented prior to work and maintained during the work phase, to prevent entry of sediment into the water;
- Any natural woody material or boulders that need to be moved should be returned to its pre-construction location and configuration;
- Materials to be used for the project should not be taken from the shoreline or below the high water level of any waterbody;
- Fish should be removed from the work area prior to de-watering and released alive immediately downstream;
- Flow dissipaters and/or filter bags, or equivalent, should be placed at water discharge points to prevent erosion and sediment release; and
- Silt of debris that has accumulated around the temporary cofferdams should be removed prior to their withdrawal.

6.1.4 Vegetation, Wildlife/Habitat

Effect

A. Loss of vegetation/Habitat loss. The project is proposed to primarily occupy the footprint of the existing structure where limited vegetation/habitat exists. However, where the bridge is widened, minor loss of vegetation is anticipated. This is expected to consist of a number of residential/landscape trees and minor clearing of low brush and shrubs, along a disturbed edge of a wooded area. Much of the adjacent landscape is exposed bedrock where there will be no vegetation loss.

B. The red-shouldered hawk, a federally listed species of Special Concern (Schedule 3) may be present in the wooded areas to the north of the bridge. The hawk is an area-sensitive species, preferring to breed in interior forest habitat. It is unlikely to

inhabit the forest edge areas and residentially landscaped area where minor clearing will take place.

Mitigation

A. Minimize disturbance to existing vegetation. Disturbed areas will be stabilized and re-vegetated upon project completion and restored to a pre-disturbed state. Arrangements have been made with local land owners to replace any trees with new trees to provide privacy screening and habitat. Topsoil will be stockpiled separately and used for restoration to facilitate natural regeneration of native species.

B. Vegetation removal along the edge of the woodland will be limited to shrubs and low brush. If any large trees must be removed, clearing should take place outside of the breeding bird season (May 15 to July 31). If removal is required during this period, the area should be surveyed by an ornithologist prior to the clearing to confirm that no nesting birds, including red-shouldered hawk are present.

6.1.5 Noise/Vibration/Air Quality

Effect

A. Temporary nuisance noise during construction activities. Increased dust in air from construction activities.

Mitigation

A. Noise control measures, such as restricted hours of operation, the use of appropriate machinery/mufflers, will be implemented where required. Vehicles/machinery and equipment will 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 non-chloride based compound to protect water quality.

6.1.6 Human Health and Safety

Effect

A. Potential safety hazard from construction activities, heavy equipment and increased traffic.

Mitigation

A. The contactor will be required to implement a Health and Safety Plan (OHSA 1990).

6.1.7 Archaeology

Effect

a) Potential for impact on archaeological resources during construction of new bridge. This potential is extremely small as the majority of the site and local lands consist of exposed rock and or previously disturbed road base over rock.

Mitigation

a) General construction contacts will include protocols to deal with the nominal potential of encountering archaeological finds. In the event that artifacts or remains are found during construction, MTCL and Ontario Provincial Police (OPP) will be contacted. Construction will not continue until clearance has been provided by MTCL and/or the OPP.

7.0 Follow-up Commitments

The completion of the Municipal Class EA Process does not mean that a project can proceed directly. There are details, beyond the scope of a Schedule B undertaking that must be expanded upon by the County, before the project can proceed.

7.1 Permits and Approvals

The County will be required to secure all necessary permits and/or authorizations required for the project. The following is a list of the permits that will be potentially required for this project.

- Approval from TCM pursuant to the *Navigable Waters Protection Act* (Note: this approval requires completion of an Environmental Screening under the *Canadian Environmental Assessment Act* on the basis of the final detailed design).
- This process is currently underway with approval expected by March 2011.

Note that a Letter of Advice from the DFO indicating that the proposed work does not constitute a potential risk to fish habitat was received on October 12, 2010.

7.2 Monitoring

The following monitoring requirements will be in place and carried out throughout the duration of the project. The monitoring period will extend from just before mobilization by the contractor and ending one year following completion of the works.

- Preconstruction photographs, records and contact with existing residents will be made.
- A review of the storm water management controls to ensure that they are operating properly.
- Erosion and sedimentation controls will be inspected weekly and following rainfalls greater than 15 mm. Controls requiring repair or replacement will be addressed immediately.
- Traffic management conditions are to be assessed on a daily basis and adjustments made as necessary to ensure safe vehicle operation on the detour around the site
- 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 DFO or TCM as conditions of their 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. Records will be permanent.

8.0 Public Consultation

8.1 Public Consultation Process

Public consultation is a key component of the Municipal Class EA process. Agencies, which may have been interested in the proposed project, received a Notice of Study Commencement. These agencies were asked to comment on the following: their required level of involvement in this Class EA study, how this Class EA study might affect their mandated areas of responsibility, and how their concerns or comments could be addressed. The following departments/agencies received the commencement notice:

- Environment Canada;
- Department of Fisheries and Oceans;
- Transport Canada;
- Indian and Northern Affairs Canada;
- Ministry of Aboriginal Affairs;
- Ministry of Culture;
- Ministry of Environment – Central Region,
- Ministry of Natural Resources – Midhurst District;
- Township of Ramara;
- Union of Ontario Indians;
- Chippewas of Rama First Nation;
- Alderville First Nation;
- Beausoleil First Nation;
- Chippewas of Georgina Island;
- Curve Lake First Nation;
- Hiawatha First Nation;
- Mississaugas of Scugog Island First Nation; and,
- Moose Deer Point First Nation.

*A complete list of agency and stakeholder contacts is provided in **Appendix B1**.*

The Notice of Study Commencement (NOC) (**Appendix B3**) was placed in the Gravenhurst Banner (June 28 and June 30, 2009) and Orillia Today (June 25 and July 2, 2009). This notice provided a brief introduction to the study and encouraged interested individuals to contact the Project Team directly for more information. The NOC was also sent to all property owners within the study area. The NOC letter to agencies and the newspaper advertisement are provided in **Appendices B2 and B3**.

8.2 Summary of Issues and Resolutions

Three comments were received from landowners as a result of the Notice of Commencement regarding the Heaveners Bridge No. 000294. Comments and responses are summarized in **Table 8.1**.

Table 8.1 Summary of Landowner Comments

ID Code	Comment	Response
A	Feels that a two lane, bridge is reasonable for this location.	Comment noted.
B	Would like to be included on the mailing list and requested a copy of the parameters of the study.	Added to mailing list and will receive Notice of Completion.
C	Own property beside bridge. Concern about any changes to the property, access etc. Concern about trespassing during and after construction. Do not want to see public water access for boats adjacent to their property.	Agreement has been made to provide privacy screening trees and to prevent trespassing.

Copies of landowner comments are provided in **Appendix B4**.

Formal comments were received from the Ministry of Aboriginal Affairs and Indian and Northern Affairs Canada. Both letters confirmed the First Nations with a potential interest in the project. All First Nations identified were contacted. Responses were received as follows:

- Alderville First Nation. Correspondence indicated that the project was likely to have minimal impact to their First Nation rights. They would like to be contacted of any archaeological findings or environmental impacts, should any be identified.
- Beausoleil First Nation. Correspondence indicated that the Notice of Commencement had been forwarded to the band's solicitor. No further correspondence has been received.

Formal comments were provided by the Ministry of Environment (MOE), Ministry of Tourism and Culture (MTC) and Transport Canada (TC). MOE provided comments on issues relating to ecosystem protection and restoration, surface water, groundwater, dust and noise, waste materials and spills, mitigation and monitoring, planning and policy, the Class EA process, and consultation with Aboriginal Peoples. This report is responsive to MOE comments. TC provided confirmation that the waters of the Black River are navigable and therefore an application for approval would be required. The process is ongoing. MTC requested studies and information on the potential archaeological and heritage features of the bridge and study area. These concerns

have been addressed with relevant reports in the Appendix. Correspondence from agencies is provided in **Appendix B4**.

8.3 Notice of Completion

The Notice of Completion for this Municipal Class EA will be prepared and published in the Orillia Today and Gravenhurst Banner. The Notice will also be mailed to all agencies and stakeholders that had expressed an interest in the project.

If concerns arise regarding this project which cannot be resolved in discussion with the County of Simcoe, a person or party may request that the Minister of 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 Notice.

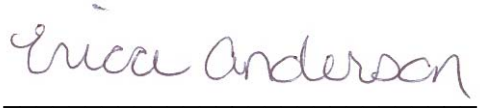
If the Minister does not receive Part II orders regarding this project, then the project will continue forward to detailed design, approvals processes, and implementation of the preferred design.

Written by:

Signature  Date January 12, 2011

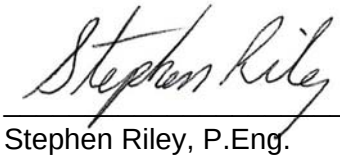
Tricia Radburn, M.Sc (Pl), MCIP, RPP
Environmental Planner
R.J. Burnside & Associates Limited

Reviewed by:

Signature  Date January 12, 2011

Erica Anderson, B.Sc (Env)
Environmental Assessment Specialist
R.J. Burnside & Associates Limited

Approved by:

Signature  Date January 12, 2011

Stephen Riley, P.Eng.
Project Manager
R.J. Burnside & Associates Limited

BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix A
Background Review

BURNSIDE

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Appendix A1

Bi-annual Inspection Report

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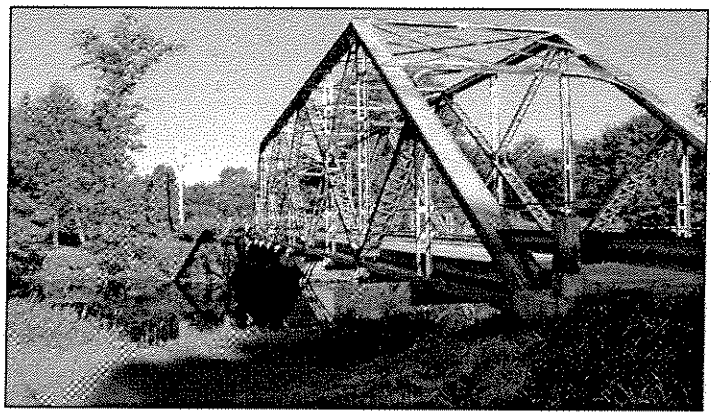
General Information for Structure 000294

Elevation:



Bridge Name:	HEAVENERS BRIDGE
Location:	Switch Road, Ramara 1.85 km West of County Road 169
UTM Coordinates:	633878E4953956N
Year Built:	1915
Year Rehabilitated:	1979
Bridge Type:	Reinforced Concrete Deck on Conventional Steel Girders
Crosses:	Black River
Direction of Traffic:	WE
Number of Lanes:	1
Number of Approaches:	2
Number of Spans:	1
Number of Barriers:	2
Number of Curbs:	2
Number of Decks:	1
Number of Bearing Groups:	2
Number of Transverse Joints:	2
Number of Abutments:	2
Abutment Configuration:	Closed
Number of Slopes:	1
Watercourse:	Yes
Inspector:	Ron Robinson
Date of Survey:	7/13/2006 3:20:20 PM

Physical Testing

Corrosion Potential Results and Core Logs: No

Dimensional Data

Asphalt Thickness (in metres):	0
Deck Thickness (in metres):	0.2
Number of lanes:	2
Maximum Bridge Clearance (in metres):	5.8
Overall deck width (in metres):	3.96
Overall travel width (in metres):	3.66
Overall bridge length 1 (in metres):	45.42
Overall bridge length 2 (in metres):	45.42
Overhang width (in metres):	0
Span 1 length (in metres):	40.54
Inspector Comments:	No Comments

Enter Comments Here:

Add Comments

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Pre-emptive Treatments for Structure: 000294 i
Year 2010

FOR EACH TREATMENT CODE ANY OR ALL OF THE FOLLOWING TREATMENTS MAY APPLY:

Type	Code	Treatment	Price
d1preem	td_cp001	Apply MCI and sealer to exposed conc. deck and redirect deck drains as necessary	$17,211.07
c1preem	tc_cp001	Apply protect. sys. to sidewalk	$427.14
c2preem	tc_cp001	Apply protect. sys. to sidewalk	$427.14
a1preem	ta_cp001	Ap ply protection system to concrete abutment	$1,237.78
a2preem	ta_cp001	Ap ply protection system to concrete abutment	$553.43
e1preem	te__p002	Place filter cloth and crushed stone over eroded areas	$250.00
u1preem	tu_cp001	Pad approach	$250.00
u2preem	tu_cp001	Pad approach	$250.00
k1preem	tk_cp001	Remove loose conc. and apply protect. sys. on type A, B, C or D decks	$15,439.56
		Mobilization:	$3,579.61
		Traffic Control:	$8,501.53
		Total:	**$48,127.25**

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Rehabilitative Treatments for Structure: 00029 in Year 2011

General Info | Treatments | Treatment Details | Structure Report | Photographs | Rehabilitation History | Home
Budget Scenarios | Summary Sheets | Custom Reports | Tools

FOR EACH TREATMENT CODE ANY OR ALL OF THE FOLLOWING TREATMENTS MAY APPLY:

Type	Code	Treatment	Price
d1rehab	td_cr011	Patch exposed deck and apply MCI	$12,00
g1rehab	tg_sr008	Apply % re-coat and repair as necessary	$431,99
b1rehab	tb_cx007	Replace type C, D, E or F with type B (PL2) without deck replacement	$26,70
b2rehab	tb_cx007	Replace type C, D, E or F with type B (PL2) without deck replacement	$26,70
c1rehab	tc_cr001	Patch curb and apply protect. sys.	$79
c2rehab	tc_cr001	Patch curb and apply protect. sys.	$50
z2rehab	tz__x002	Replace bearings wo/ deck replacement and provide temporary support	$27,50
a1rehab	ta_cr003	Jacket conc. abut. wo/ deck replacement, inject. bearing seat repair and apply protect. sys.	$45,41
a2rehab	ta_cr003	Jacket conc. abut. wo/ deck replacement, inject. bearing seat repair and apply protect. sys.	$38,25
e1rehab	te__r005	Repair slope protection	$25
u1rehab	tu_cr001	Install approach slab and pave	$8,22
u2rehab	tu_cr001	Install approach slab and pave	$8,22
k1rehab	tk_cr001	Carry out underside repair on type A, B, C or D decks, injected bearing seat repair and apply protect. sys.	$22,32
		Mobilization:	$64,88
		Traffic Control:	$34,20
		Total:	**$747,98!**

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engineered management systems inc.
bridgeTMS

Structure Report

SITE NUMBER	000294
STRUCTURE NAME	HEAVENERS BRIDGE
LOCATION	Switch Road, Ramara, 1.85 km West of County Road 169
JURISDICTION	Simcoe
DATE OF INSPECTION	7/13/2006 3:20:20 PM
INSPECTOR	Ron Robinson

EXISTING CONDITIONS

GENERAL INFORMATION

This single span structure, built in 1915, is comprised of a reinforced concrete deck on conventional steel girders, with closed abutments. The last major rehabilitation of this structure was undertaken in 1979. The structure carries 1 lane of east west traffic on Switch Road, Ramara over the Black River. The deck length is 41.15m and the overall bridge length is 45.42m. The deck has an exposed surface and 2 steel post and steel panel barriers. There are a total of 2 transverse joints on the structure comprised of 2 abutment joints. The span is supported by 1 girder.

The structure is considered to be structurally and/or functionally inadequate and beyond economic rehabilitation. The bridge is not designated as a heritage structure. The waterway is considered navigable.

Posting a load limit for this structure is not acceptable to the authority having jurisdiction.
The following load limits have been posted for this structure:
Ontario Highway Bridge Evaluation loads, Level 1 - 12 tonnes
Ontario Highway Bridge Evaluation loads, Level 2 - 19 tonnes
Ontario Highway Bridge Evaluation loads, Level 3 - 29 tonnes

The existing soil conditions are good.

APPROACH 1

There is no approach slab present. The approach settlement is moderate. The length of the guiderails are 5m or greater. There is no asphalt deterioration on the approach. The estimated remaining service life is 11 years.

APPROACH 2

There is no approach slab present. The approach settlement is moderate. The length of the guiderails are 5m or greater. The extent of asphalt deterioration on the approach is local and the severity of the asphalt deterioration is light. The estimated remaining service life is 11 years.

BARRIER 1

The barrier type is steel post and steel panel or lattice. There is no pedestrian barrier on this side. $10m^2$ of the slope protection requires repairs. The estimated remaining service life is 11 years.

BARRIER 2

The barrier type is steel post and steel panel or lattice. There is no pedestrian barrier on this side. 20m^2 of the slope protection requires repairs. The estimated remaining service life is 11 years.

CURB 1

The minimum width of the curb is 0.2m and the height above the wearing surface is 0.15m. The average concrete cover to reinforcing steel is 35mm. The curb reinforcing is not epoxy coated. The total area of curb surface requiring conrete repairs is 10%. The estimated remaining service life is 5 years.

CURB 2

The minimum width of the curb is 0.2m and the height above the wearing surface is 0.15m. The average concrete cover to reinforcing steel is 10mm. The curb reinforcing is not epoxy coated. The total area of curb surface requiring conrete repairs is 2%. The estimated remaining service life is 11 years.

DECK 1

The length of the deck is 41.15m. The deck thickness is 0.2m with an exposed surface and the deck cross-fall is 2%. Of the existing deck drains, 12 are exhibiting detrimental discharge below structure and require re-directing. Based on a visual assessment of the deck, there is no alkali aggregate reaction in the concrete. The average compressive strength of the concrete is greater than 35 Mpa and the air void distribution is marginal. The deck reinforcing is not epoxy coated. The extent of concrete cracking is intermittent, the severity of the cracking is medium. The area of the deck's surface requiring concrete repairs is 3% of the horizontal surface. Cathodic protection is not a consideration for this site. The inspection of the bearing seat area indicates that there are no bearing contact surfaces require repairs. The estimated remaining service life is 10 years.

TRANSVERSE JOINT 1

The length of the transverse joint is 3.96m and it is in fair condition. The general detailing, construction and material of the joint is acceptable. The joint provides adequate clearance for movement of the structure. The evidence suggests that the joint is not leaking and is not susceptible to leakage over the next 5 years. The seal can not easily be replaced. The complete elimination of the expansion joint is feasible. The estimated remaining service life is 12 years.

TRANSVERSE JOINT 2

The length of the transverse joint is 3.96m and it is in fair condition. The general detailing, construction and material of the joint is acceptable. The joint provides adequate clearance for movement of the structure. The evidence suggests that the joint is not leaking and is not susceptible to leakage over the next 5 years. The seal can not easily be replaced. The complete elimination of the expansion joint is not feasible. The estimated remaining service life is 12 years.

SUPPORT 1

The deck support consists of 1 conventional steel girder and conforms to the Ontario Highway Bridge Design Code. The area of the support's surface requiring repairs is 2% of the vertical surface and 2% of the underside surface. Standard recoating of the support system is not acceptable and the area of required re-coat is 60%. The inspection did not reveal the presence of any significant fatigue cracking in the support however 10 bearing contact surfaces require repairs. No shear connectors are present. The estimated remaining service life is 10 years.

BEARING GROUP 1

The bearing group is in good condition and does not require restoration. The bearing group shows no evidence of overloading and provides a full range of movement for the structure. Realignment is not required. The estimated remaining service life is 11 years.

BEARING GROUP 2

The bearing group is in poor condition and requires replacement. The bearing group shows evidence of overloading and/or does not provide a full range of movement for the structure. Realignment is not required. The estimated remaining service life is 10 years.

ABUTMENT 1

The abutment is constructed of concrete and requires minor modification to meet the Ontario Highway Bridge Design Code. Based on a visual assessment of the abutment, there is no alkali aggregate reaction in the concrete.

The average compressive strength of the concrete is in the range between 25 Mpa and 35 Mpa. The air void distribution is unsatisfactory. The abutment reinforcing is not epoxy coated. Approximately 25% of the abutment's vertical surface requires repairs and approximately 10% of the wingwall's vertical surface requires repairs. There are no cracks in the abutment requiring repairs. The inspection of the bearing seat area indicates that 3 bearing contact surfaces require repairs. The estimated remaining service life is 5 years.

ABUTMENT 2

The abutment is constructed of concrete and requires minor modification to meet the Ontario Highway Bridge Design Code. Based on a visual assessment of the abutment, there is no alkali aggregate reaction in the concrete. The average compressive strength of the concrete is in the range between 25 Mpa and 35 Mpa. The air void distribution is unsatisfactory. The abutment reinforcing is not epoxy coated. Approximately 80% of the abutment's vertical surface requires repairs and approximately 40% of the wingwall's vertical surface requires repairs. There are no cracks in the abutment requiring repairs. The inspection of the bearing seat area indicates that 3 bearing contact surfaces require repairs. The estimated remaining service life is 1 year.

SLOPE 1

The slope is not stable and not adequately protected. The problem is not only related to erosion from the watercourse. Installation / reinstallation of slope protection is not necessary, however $10m^2$ of the slope protection requires repairs. Re-direction of the run-off is not necessary. The estimated remaining service life is 8 years.

WATERCOURSE

The watercourse is stable. The average length of impact of the watercourse embankments is 10.75m. There is no evidence of significant erosion of the banks and no repairs are required. There is no evidence of any unanticipated flow exposure. There is no significant aggradation of the watercourse. The estimated remaining service life is 15 years.

INSPECTOR'S COMMENTS

No Comments

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Photographs for Structure: 000294

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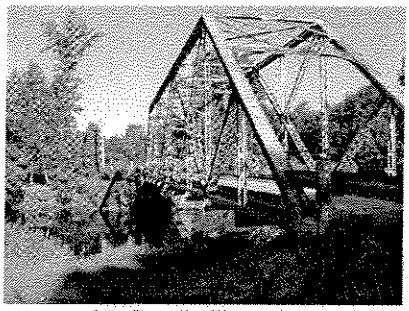
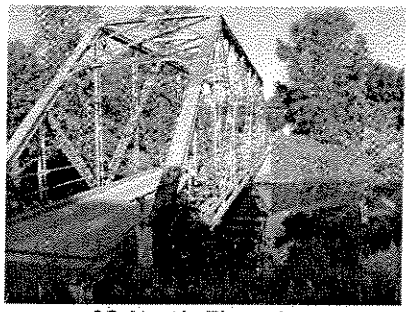
Budget Scenarios | Summary Sheets | Custom Reports | Tools

Approaches | Spans | Barriers | Curbs | Decks | Bearings | Transverse Joints | Abutments | Slopes | Watercourse |


01 South Elevation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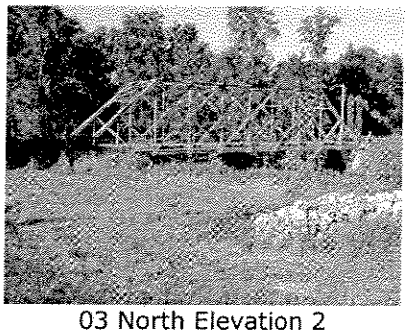
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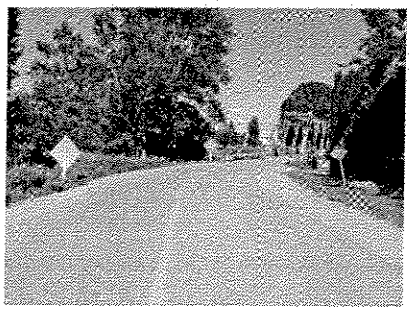
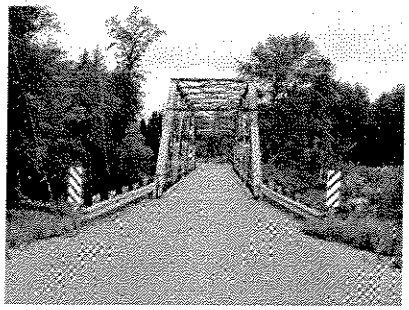
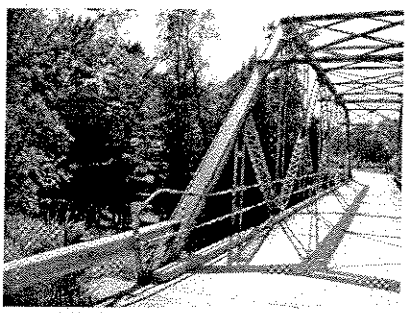
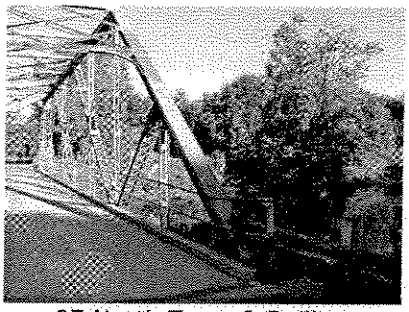
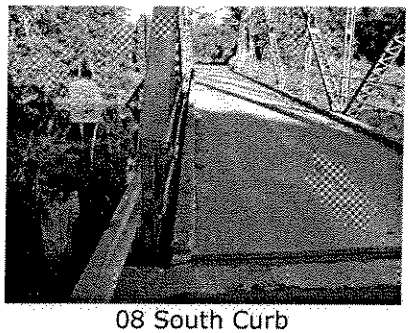
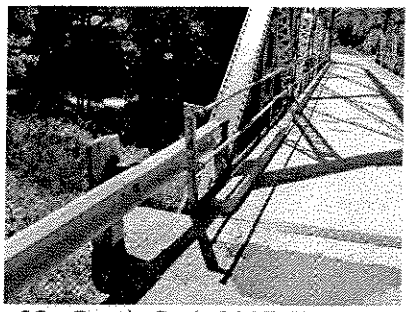

04 West Approach

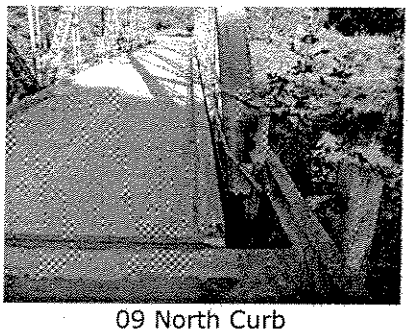

05 East Approach 2003


06 South Truss & Railing


07 North Truss & Railing

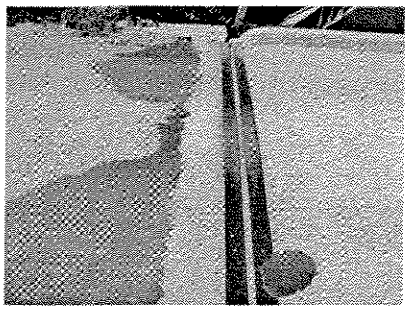

08 South Curb


08a South Curb 2005 Showing Disintegration

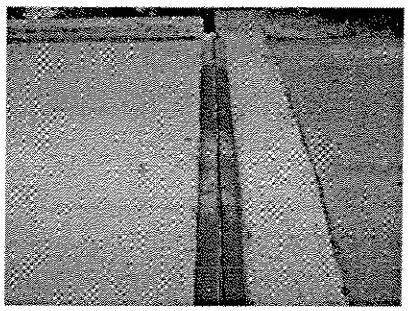

09 North Curb


10 Deck

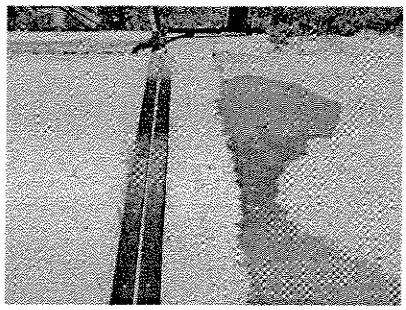

11 West Joint



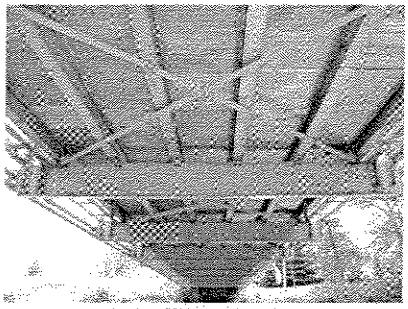
11a West Joint 2005



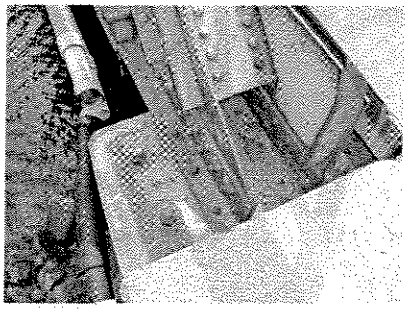
12 East Joint



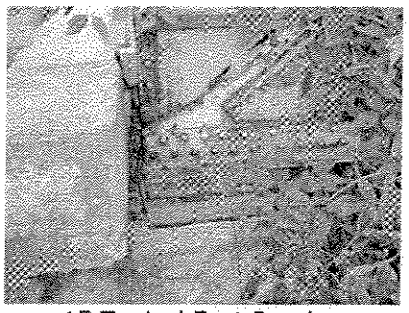
12a East Joint 2005



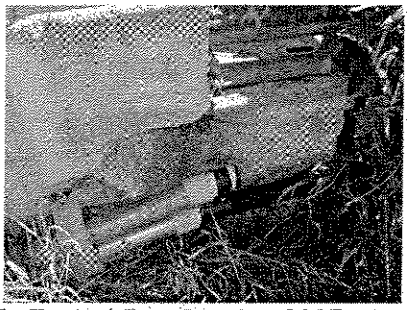
13 Soffit & Girders



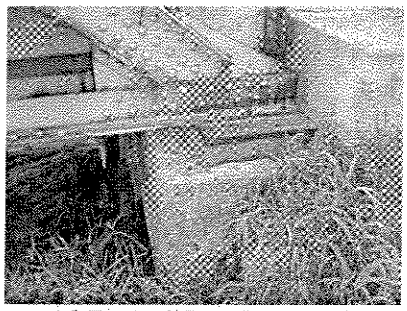
14 Typical West Bearing



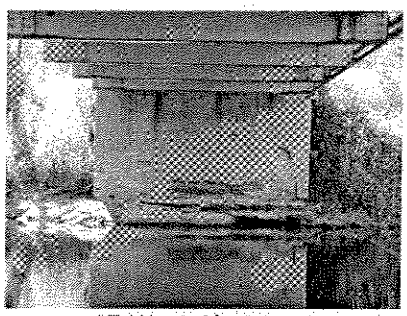
15 Typical East Bearing



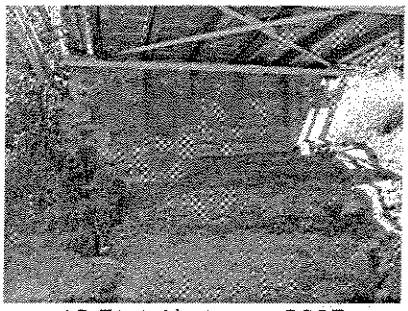
15a Typical East Bearing 2005 - Note Disintegration



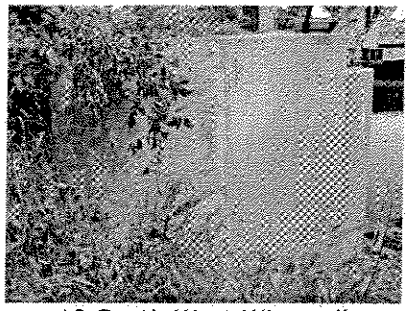
16 Typical East Bearing 2



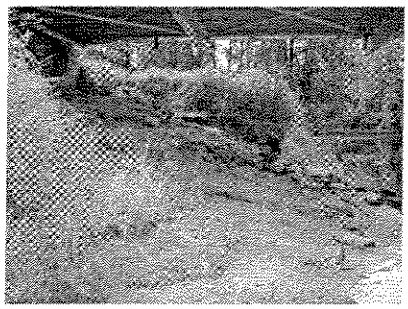
17 West Abutment



18 East Abutment 2005



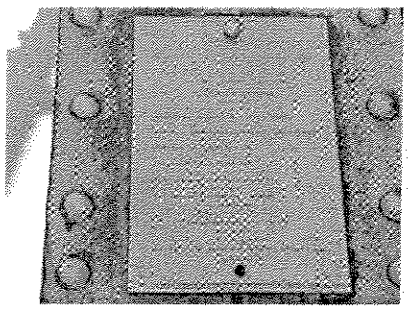
19 South West Wingwall



20 East Slope

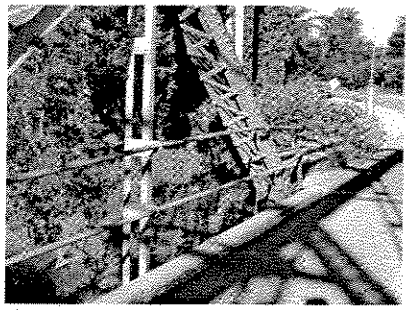
21 Looking South (Upstream)

22 Looking North (Downstream)

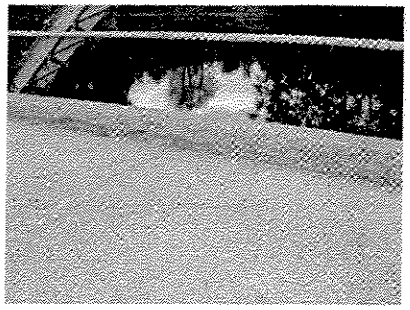


23 Plaque

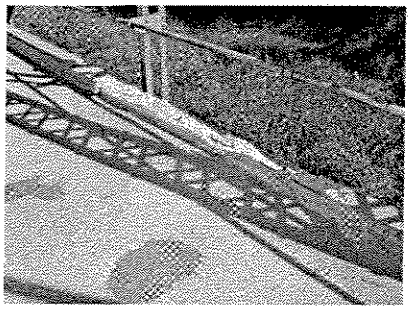
24 Load Restriction Post 2004



25 Broken Railing At South West



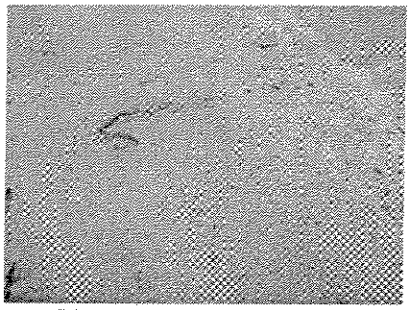
26 Disintegration On South West Curb 2003



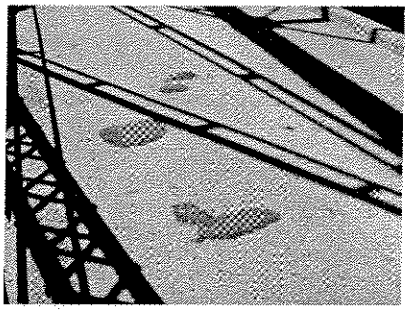
27 Severe Curb Disintegration at South East 2005

28 Typical Transversal Deck Cracking 2004

29 Light Scaling At West Deck

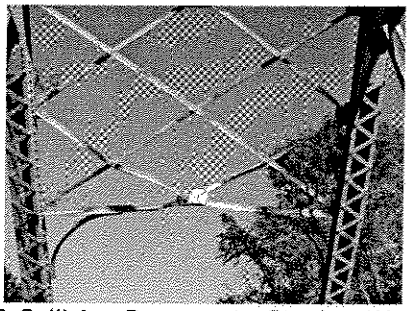


30 Pothole On East Deck

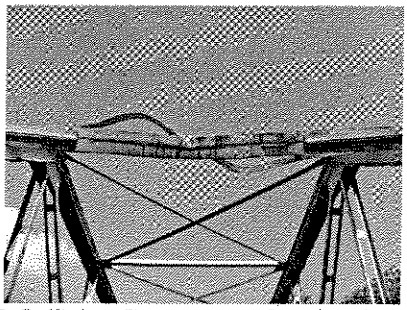


30A Pothole On East Deck 2005

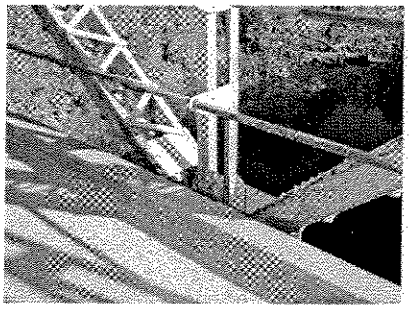
30B Pothole On East Deck 2006



32 Collision Damage to Steel at West End Truss



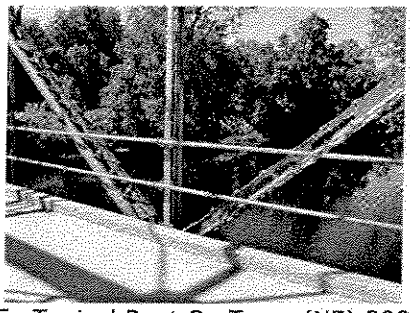
33 Collision Damage to Steel at West End Truss 2



34 Typical Rusting on Truss (NW)

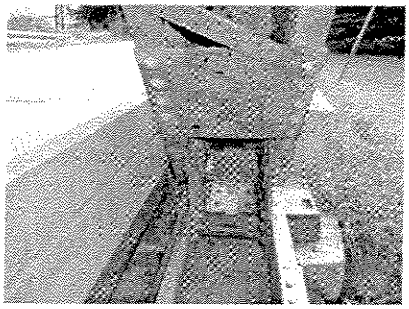
34a Typical Rusting on Truss (NW)

35 Typical Rust On Truss (NE)

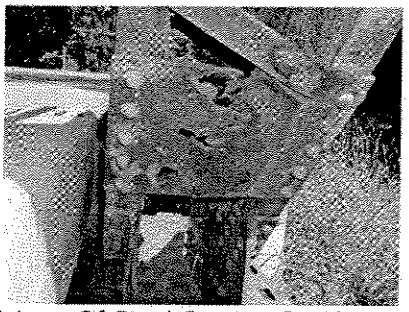


35a Typical Rust On Truss (NE) 2005

2005

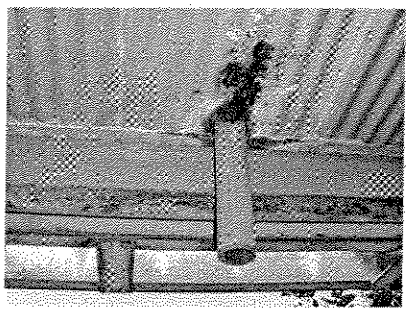


36 Loss Of Steel Section On Plate At S E (Not Common)

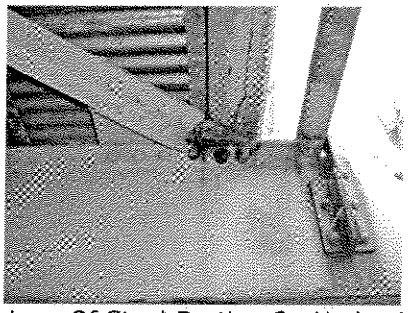


36A Loss Of Steel Section On Plate At S E (Not Common) 2005

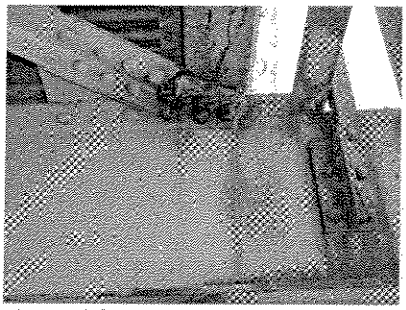
36B Loss Of Steel Section On Plate At S E (Not Common) 2006



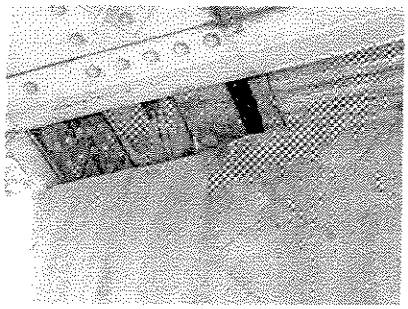
37 Rusting At New Deck Drains (NE) 2005



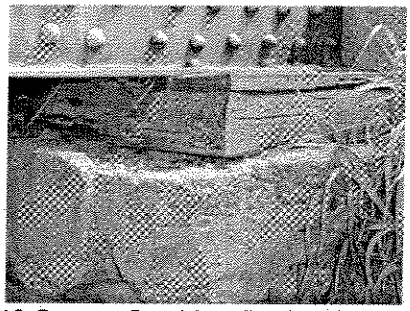
38 Loss Of Steel Section On Underside Members (NE)



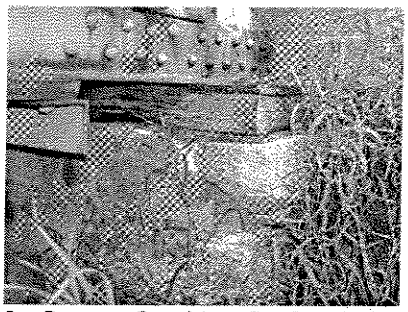
38a Loss Of Steel Section On Underside Members (NE) 2005



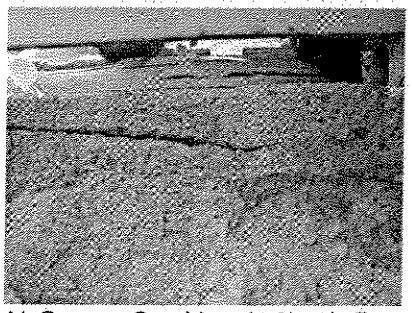
39 Rusting At South West Bearing



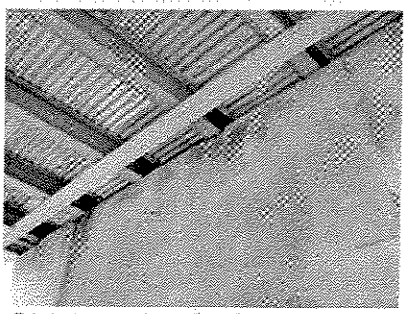
40 Severe Cracking On South East Bearing



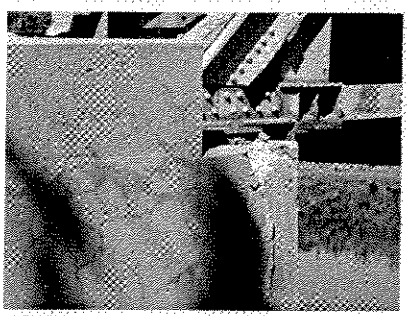
40a Severe Cracking On South East Bearing 2004



41 Severe Cracking At North East Bearing



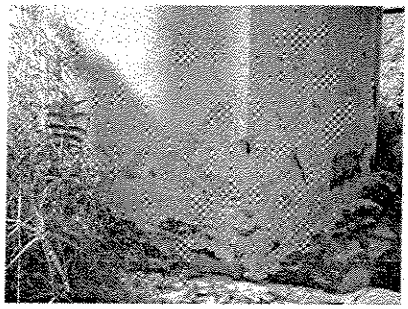
42 Disintegration On Stringer Bearing Ledge At West Abutment



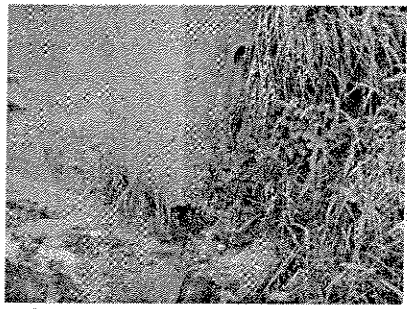
43 Disintegration On South West Abutment Bearing 2005

44 Disintegration At South West Abutment

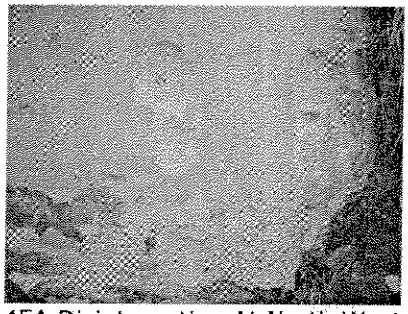
44a Disintegration At South West Abutment 2003



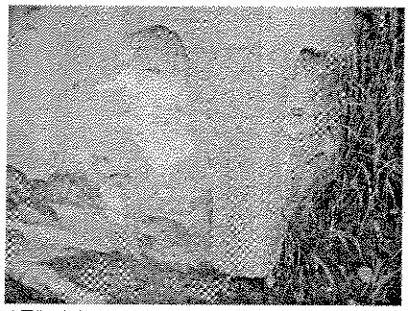
44b Disintegration At South West Abutment 2005



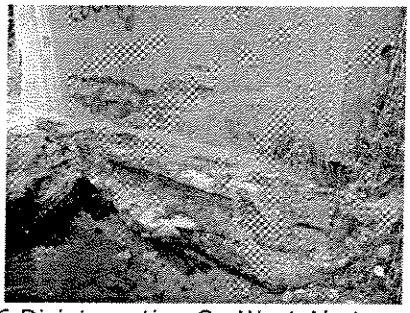
45 Disintegration At North West Abutment



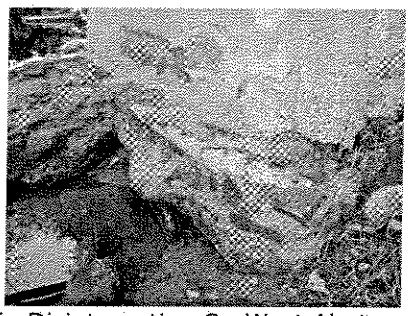
45A Disintegration At North West Abutment 2005



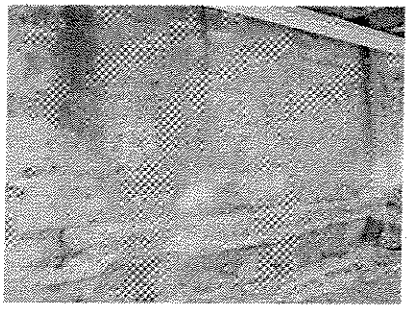
45B Disintegration At North West Abutment 2006



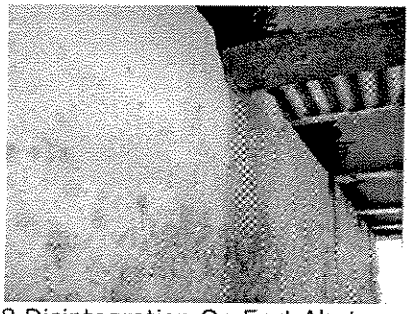
46 Disintegration On West Abutment



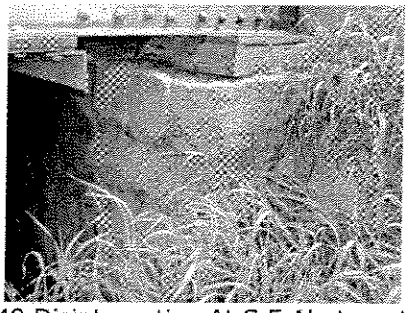
46a Disintegration On West Abutment Footing 2005



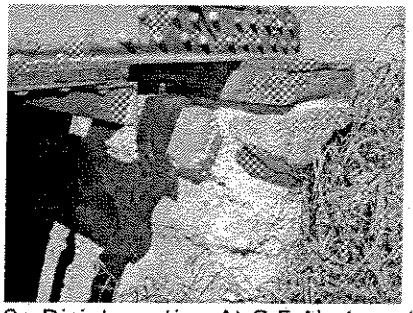
47 Disintegration On East Abutment



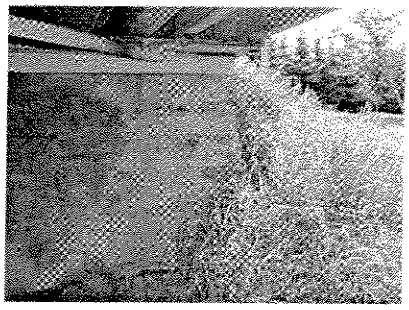
48 Disintegration On East Abutment Bearing Ledge

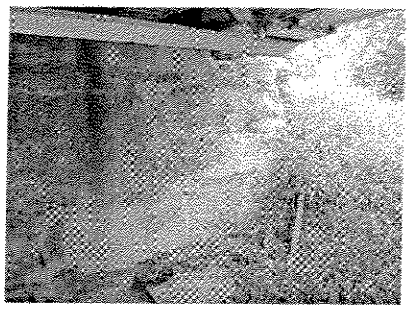


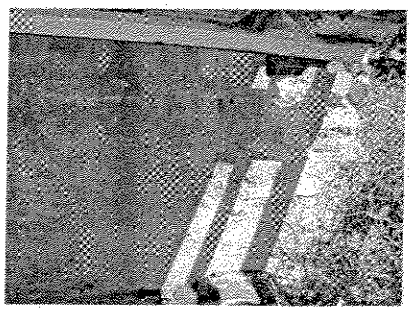
49 Disintegration At S E Abutment Bearing



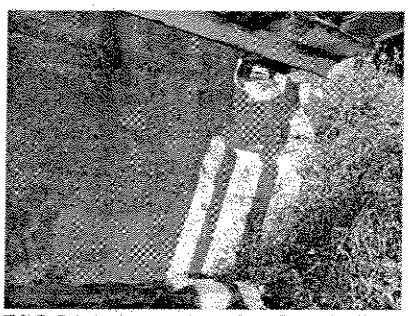
49a Disintegration At S E Abutment Bearing 2005



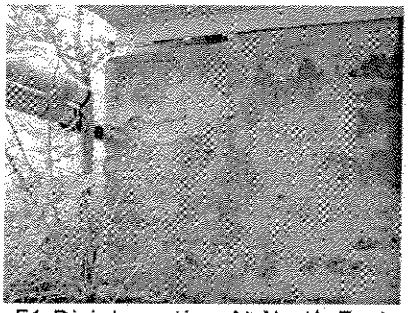




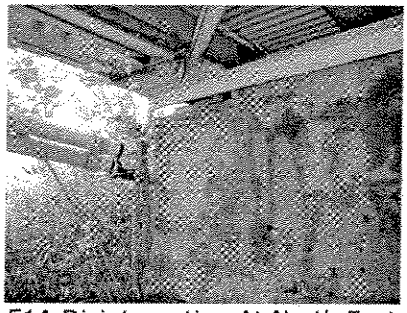
50 Disintegration On South East Abutment Bearing



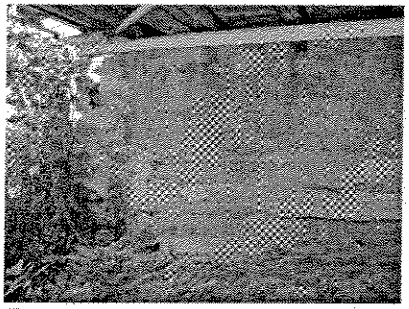
50A Disintegration On South East Abutment Bearing 2003



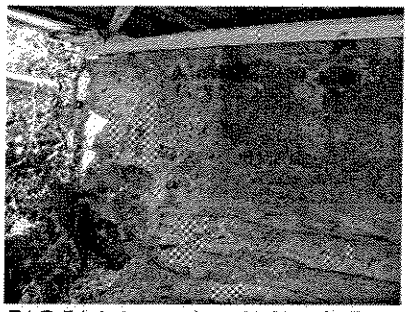
50B Disintegration On South East Abutment Bearing 2005



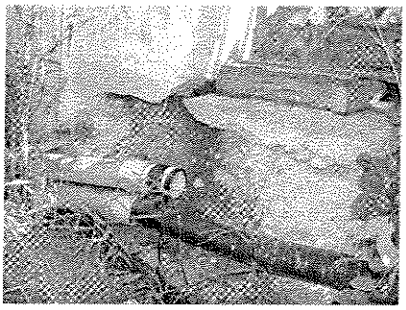
50C Disintegration On South East Abutment Bearing 2006



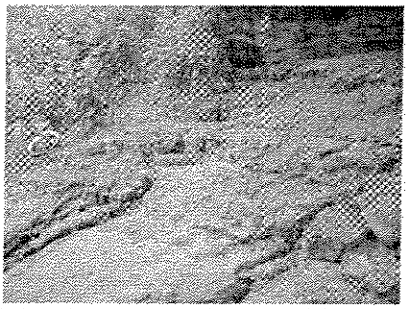
51 Disintegration At North East Abutment Bearing



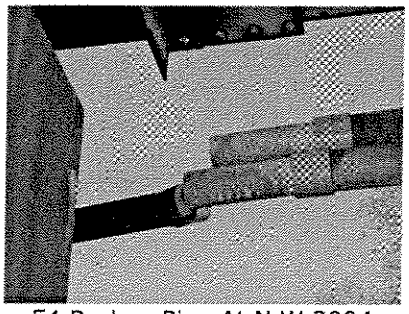
51A Disintegration At North East Abutment Bearing 2004



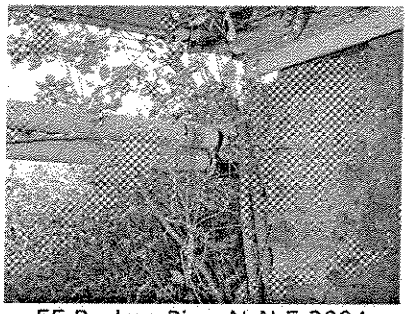
51B Disintegration At North East Abutment Bearing 2005



51C Disintegration At North East Abutment Bearing 2006



52 Disintegration At North East Abutment Bearing 2 2006



53 Erosion On North East Slope 2003

54 Broken Pipe At N W 2004

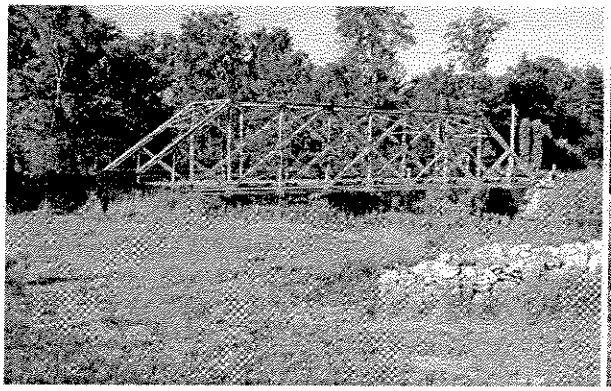
55 Broken Pipe At N E 2004

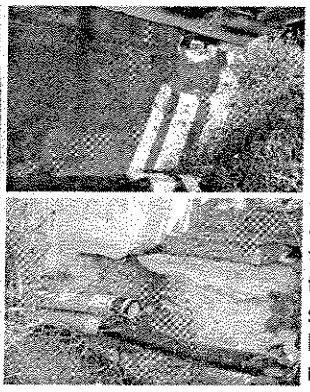
56 Snapped Delineator Post at N W 2006

- BACK TO TOP -

engineered management systems inc.
bridgeTMS

Summary Sheet for Bridge 000294: HEAVENERS BRIDGE





HEAVENERS BRIDGE:
This bridge, on Switch Road, Ramara, 1.85 Km West of County Road 169 is a 1 span structure crossing the Black River . The bridge, built in 1915, is constructed of Reinforced Concrete Deck on Conventional Steel Girders. The superstructure is articulated and accomodates movement through 2 deck joints. The major concerns at this site are rusting of truss members and severe disintegration at abutment bearing ledges - this disintegration has advanced materially in the past few years.

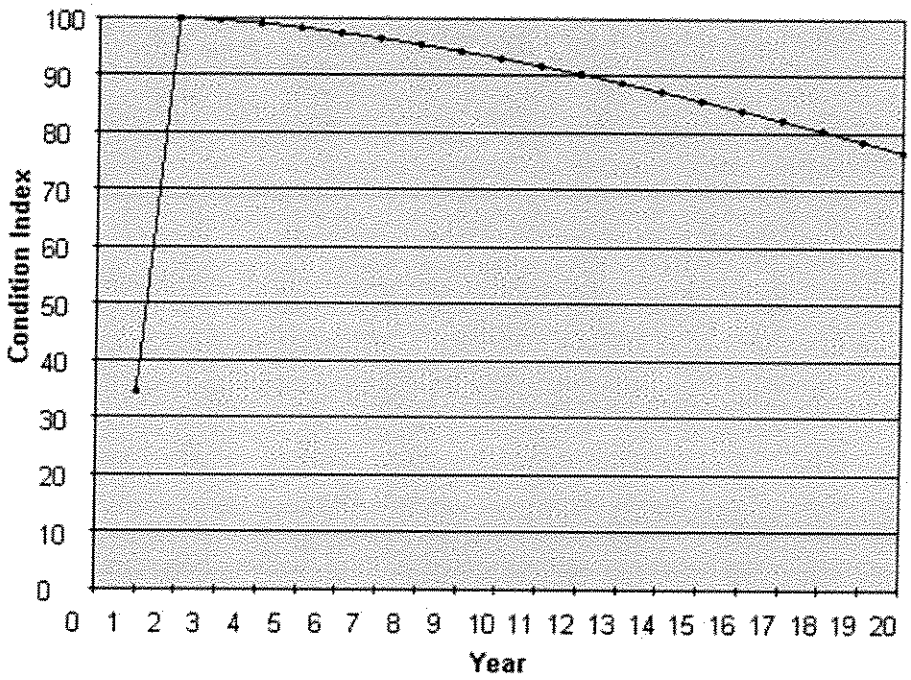
Estimated Minimum RSLs

Deck-Top	10	Abutments	* 1
Deck-Underside	12	Bearings	10
Retaining Wall	N/A	Slopes	8
Barriers	11	Piers	N/A
Approaches	11	Watercourse	15
Joints	12	Girders	10
Longitudinal Joints	N/A	Culverts	N/A
Sidewalks/curbs	5	Trails	N/A

Project Level Costs

Year	Pre-emptive	Rehabilitative
2007	$47,877.25	$745,528.89
2008	**$47,877.25**	**$746,156.02**
2009	$47,877.25	$746,783.14
2010	$47,877.25	$747,410.27
2011	$47,877.25	$747,985.25
2012	$47,877.25	$748,617.07
2013	$47,877.25	$749,259.45
2014	$47,877.25	$749,901.83
2015	$47,877.25	$750,544.21
2016	$47,877.25	$751,186.59
2017	$47,877.25	$751,828.97

Condition Index Profile:



AADT:	520	**Original Asset Value:**	$784,868.68	**Min. RSL:**	1
$AADT_{10}$:	625	**Condition Index:**	35		

BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix A2
Natural Heritage Review Results
(OBBA)

WILDLIFE MASTER SPECIES LIST FOR ONTARIO								
Wildlife Survey Conducted by: Ontario Breeding Bird Atlas Square 17PK35								
COMMON NAME	***SCIENTIFIC NAME***	***SRANK***	***NRANK***	***COSSARO***	***COSEWIC***	***AREA***	***Area Sensiti***	***COMMENTS***
BIRDS	***114***							
Common Loon	*Gavia immer*	S4B,SZN	N5B,N5N	NAR	NAR		Yes	
Great Blue Heron	*Ardea herodias*	S5B,SZN	N5B,NZN					
American Bittern	*Botaurus lentiginosus*	S4B,SZN	N4B,N3?N				Yes	
Green Heron	*Butorides virescens*	S4B,SZN	N4B,NZN					
Turkey Vulture	*Cathartes aura*	S4B,SZN	N4N5B, NZN					
Wood Duck	*Aix sponsa*	S5B,SZN	NZN,N5B					
Mallard	*Anas platyrhynchos*	S5B,SZN	N5B,N5N					
American Black Duck	*Anas rubripes*	S5B,SZN	N4B,N?N					
Canada Goose	*Branta canadensis*	S5B,SZN	N5B,N5N					
Trumpeter Swan	*Cygnus buccinator*	S2S3	N1N2B,N4N	NAR	NAR			
Hooded Merganser	*Lophodytes cucullatus*	S5B,SZN	N5B,N5N					
Common Merganser	*Mergus merganser*	S5B,SZN	N5B,N5N			<200 m to water	Yes	
Osprey	*Pandion haliaetus*	S4B,SZN	N5B,NZN					
Sharp-shinned Hawk	*Accipiter striatus*	S5B,SZN	N5B,N5N	NAR	NAR	> 30 ha	Yes	
Red-tailed Hawk	*Buteo jamaicensis*	S5B,SZN	N5B,N5N	NAR	NAR			
Red-shouldered Hawk	*Buteo lineatus*	S4B,SZN	N4N5B,NZN		SC	> 100 ha	Yes	
Broad-winged Hawk	*Buteo platypterus*	S5B,SZN	N5B,NZN			>100 ha	Yes	
Merlin	*Falco columbarius*	S4B,SZN	N4N5N,N5B	NAR	NAR			
American Kestrel	*Falco sparverius*	S5B,SZN	N5B,N5N					
Ruffed Grouse	*Bonasa umbellus*	S5	N5					
Virginia Rail	*Rallus limicola*	S4B,SZN	N5B,N?N					
Killdeer	*Charadrius vociferus*	S5B,SZN	N5B,NZN					
Spotted Sandpiper	*Actitis macularia*	S5B,SZN	N5B,NZN					
Upland Sandpiper	*Bartramia longicauda*	S4B,SZN	N5B			25 - 50 ha	Yes	
Common Snipe	*Gallinago gallinago*	S5B,SZN	N5B,NZN					
American Woodcock	*Scolopax minor*	S5B,SZN	N5B,NZN					
Common Tern	*Sterna hirundo*	S4B,SZN	N5B,NZN	NAR	NAR			
Rock Dove	*Columba livia*	SE	NE					
Mourning Dove	*Zenaida macroura*	S5B,SZN	N5					
Black-billed Cuckoo	*Coccyzus erythropthalmus*	S4B,SZN	N5B					
Great Horned Owl	*Bubo virginianus*	S5	N5					
Whip-poor-will	*Caprimulgus vociferus*	S4B,SZN	N5B,NZN			> 100 ha	Yes	
Chimney Swift	*Chaetura pelagica*	S5B,SZN	N5B					
Common Nighthawk	*Chordeiles minor*	S4B,SZN	N5B					
Ruby-throated Hummingbird	*Archilochus colubris*	S5B,SZN	N5B					
Belted Kingfisher	*Ceryle alcyon*	S5B,SZN	N5B,N5N					
Northern Flicker	*Colaptes auratus*	S5B,SZN	N5B,N?N					
Pileated Woodpecker	*Dryocopus pileatus*	S4S5	N5			40 - 260 ha	Yes	
Downy Woodpecker	*Picoides pubescens*	S5	N5					
Hairy Woodpecker	*Picoides villosus*	S5	N5			4 - 8 ha	Yes	
Yellow-bellied Sapsucker	*Sphyrapicus varius*	S5B,SZN	N5B			2 - 5 ha	Yes	
Eastern Wood-pewee	*Contopus virens*	S5B,SZN	N5B					
Alder Flycatcher	*Empidonax alnorum*	S5B,SZN	N5B					
Least Flycatcher	*Empidonax minimus*	S5B,SZN	N5B			> 100 ha	Yes	
Great Crested Flycatcher	*Myiarchus crinitus*	S5B,SZN	N5B					
Eastern Phoebe	*Sayornis phoebe*	S5B,SZN	N5B					
Eastern Kingbird	*Tyrannus tyrannus*	S5B,SZN	N5B					
Yellow-throated Vireo	*Vireo flavifrons*	S4B,SZN	N4B			> 30 ha	Yes	
Warbling Vireo	*Vireo gilvus*	S5B,SZN	N5B					
Red-eyed Vireo	*Vireo olivaceus*	S5B,SZN	N5B					
American Crow	*Corvus brachyrhynchos*	S5B,SZN	N5B,N5N					
Common Raven	*Corvus corax*	S5	N5					
Blue Jay	*Cyanocitta cristata*	S5	N5B,N5N					
Barn Swallow	*Hirundo rustica*	S5B,SZN	N5B					
Cliff Swallow	*Petrochelidon pyrrhonota*	S5B,SZN	N5B					
Bank Swallow	*Riparia riparia*	S5B,SZN	N5B					

WILDLIFE MASTER SPECIES LIST FOR ONTARIO								
Wildlife Survey Conducted by: Ontario Breeding Bird Atlas Square 17PK35								
COMMON NAME	**SCIENTIFIC NAME**	**SRANK**	**NRANK**	**COSSARO**	**COSEWIC**	**AREA**	**Area Sensiti**	**COMMENTS**
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	S5B,SZN	N5B					
Tree Swallow	*Tachycineta bicolor*	S5B,SZN	N5B					
Black-capped Chickadee	*Poecile atricapillus*	S5	N5					
Red-breasted Nuthatch	*Sitta canadensis*	S5B,SZN	N5			> 10 ha	Yes	
White-breasted Nuthatch	*Sitta carolinensis*	S5	N5			> 10 ha	Yes	
House Wren	*Troglodytes aedon*	S5B,SZN	N5B					
Winter Wren	*Troglodytes troglodytes*	S5B,SZN	N5			> 30 ha	Yes	
European Starling	*Sturnus vulgaris*	SE	NE					
Veery	*Catharus fuscescens*	S4B,SZN	N5B			> 10 ha	Yes	
Hermit Thrush	*Catharus guttatus*	S5B,SZN	N5B,NZN				Yes	
Wood Thrush	*Hylocichla mustelina*	S5B,SZN	N5B					
Eastern Bluebird	*Sialia sialis*	S4S5B,SZN	N5B,NZN	NAR	NAR			
American Robin	*Turdus migratorius*	S5B,SZN	N5B,N?N					
Gray Catbird	*Dumetella carolinensis*	S5B,SZN	N5B					
Northern Mockingbird	*Mimus polyglottos*	S4B,SZN	N3N4					
Brown Thrasher	*Toxostoma rufum*	S5B,SZN	N5B					
Cedar Waxwing	*Bombycilla cedrorum*	S5B,SZN	N5					
Yellow Warbler	*Dendroica petechia*	S5B,SZN	N5B					
Chestnut-sided Warbler	*Dendroica pensylvanica*	S5B,SZN	N5B					
Magnolia Warbler	*Dendroica magnolia*	S5B,SZN	N5B			30 ha	Yes	
Black-throated Blue Warbler	*Dendroica caerulescens*	S5B,SZN	N5B			> 100 ha	Yes	
Yellow-rumped Warbler	*Dendroica coronata*	S5B,SZN	N5B,NZN					
Blackburnian Warbler	*Dendroica fusca*	S5B,SZN	N5B			50 ha	Yes	
Pine Warbler	*Dendroica pinus*	S5B,SZN	N5B			15 - 30 ha	Yes	
Black-throated Green Warbler	*Dendroica virens*	S5B,SZN	N5B			30 ha	Yes	
Common Yellowthroat	*Geothlypis trichas*	S5B,SZN	N5B					
Black-and-white Warbler	*Mniotilta varia*	S5B,SZN	N5B			> 100 ha	Yes	
Mourning Warbler	*Oporornis philadelphia*	S5B,SZN	N5B					
Ovenbird	*Seiurus aurocapillus*	S5B,SZN	N5B			> 70 ha	Yes	
Northern Waterthrush	*Seiurus noveboracensis*	S5B,SZN	N5B					
American Redstart	*Setophaga ruticilla*	S5B,SZN	N5B			> 100 ha	Yes	
Golden-winged Warbler	*Vermivora chrysoptera*	S4B,SZN	N4B					
Blue-winged Warbler	*Vermivora pinus*	S4B,SZN	N4B					
Nashville Warbler	*Vermivora ruficapilla*	S5B,SZN	N5B					
Canada Warbler	*Wilsonia canadensis*	S5B,SZN	N5B			> 30 ha	Yes	
House Sparrow	*Passer domesticus*	SE	NE5					
Scarlet Tanager	*Piranga olivacea*	S5B,SZN	N5B			> 20 ha	Yes	
Swamp Sparrow	*Melospiza georgiana*	S5B,SZN	N5B,NZN					
Song Sparrow	*Melospiza melodia*	S5B,SZN	N5					
Savannah Sparrow	*Passerculus sandwichensis*	S5B,SZN	N5B,NZN			> 50 ha	Yes	
Eastern Towhee	*Pipilo erythrophthalmus*	S4B,SZN	N4B,NZN					
Vesper Sparrow	*Pooecetes gramineus*	S4B,SZN	N5B					
Clay-coloured Sparrow	*Spizella pallida*	S4B,SZN	N5B					
Chipping Sparrow	*Spizella passerina*	S5B,SZN	N5B					
Field Sparrow	*Spizella pusilla*	S5B,SZN	N5B					
White-throated Sparrow	*Zonotrichia albicollis*	S5B,SZN	N5B,NZN					
Northern Cardinal	*Cardinalis cardinalis*	S5	N5					
Indigo Bunting	*Passerina cyanea*	S5B,SZN	N5B					
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	S5B,SZN	N5B					
Red-winged Blackbird	*Agelaius phoeniceus*	S5B,SZN	N5B,NZN					
Bobolink	*Dolichonyx oryzivorus*	S4B,SZN	N5B			> 50 ha	Yes	
Baltimore Oriole	*Icterus galbula*	S5B,SZN	N5B,NZN					
Brown-headed Cowbird	*Molothrus ater*	S5B,SZN	N5B,NZN					
Common Grackle	*Quiscalus quiscula*	S5B,SZN	N5B,NZN					
Eastern Meadowlark	*Sturnella magna*	S5B,SZN	N5B			> 10 ha	Yes	
American Goldfinch	*Carduelis tristis*	S5B,SZN	N5B,N5N					
House Finch	*Carpodacus mexicanus*	SE	N5					

WILDLIFE MASTER SPECIES LIST FOR ONTARIO								
Wildlife Survey Conducted by: Ontario Breeding Bird Atlas Square 17PK35								
COMMON NAME	***SCIENTIFIC NAME***	***SRANK***	***NRANK***	***COSSARO***	***COSEWIC***	***AREA***	***Area Sensiti***	***COMMENTS***
Purple Finch	*Carpodacus purpureus*	S5B,SZN	N5B,N5N					

Rank Definitions

SRANK	
SX	**Presumed Extirpated**—Species or community is believed to be extirpated from the nation or state/province.
SH	**Possibly Extirpated (Historical)**—The NH or SH rank is reserved for species for which some effort has been made to relocate occurrences.
S1	**Critically Imperiled**—Extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation.
S2	**Imperiled**—Due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation.
S3	**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.
S4	**Apparently Secure**—Uncommon but not rare; some cause for long-term concern due to declines or other factors.
S5	**Secure**—Common, widespread, and abundant in the nation or state/province.
SNR	**Unranked**—Nation or state/province conservation status not yet assessed.
SU	**Unrankable**—Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
SNA	**Not Applicable**—A conservation status rank is not applicable because the species is not a suitable target for conservation activities.
S#S#	**Range Rank**—Used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).
C	**Captive/Cultivated;** existing in the province only in a cultivated state; introduced population not yet fully established and self-sustaining.
S?	**Not Ranked Yet;** or if following a ranking, Rank Uncertain (e.g. S3?). S? species have not had a rank assigned.
SA	**Accidental;** of accidental or casual occurrence in the province; far outside its normal range; some species may occasionally breed in the province.
SAB	**Breeding accidental.**
SAN	**Non-breeding accidental.**
SE	**Exotic;** not believed to be a native component of Ontario's flora.
SR	**Reported for Ontario,** but without persuasive documentation which would provide a basis for either accepting or rejecting the report.
SRF	**Reported falsely from Ontario.**
SX	**Apparently extirpated from Ontario,** with little likelihood of rediscovery. Typically not seen in the province for many decades, despite searches at known historic sites.
SZ	Applies to long distance migrants, winter vagrants, and eruptive species, too transitory in their occurrence(s) to be reliably mapped; most are non-breeders, however, some may occasionally breed.
SZB	**Breeding migrants/vagrants.**
SZN	**Non-breeding migrants/vagrants.**

	COSSARO
END	**Endangered**. Any native species that is at risk of extinction or extirpation throughout all or a significant portion of its Ontario range if the limiting factors are not reversed. Protected under the Endangered Species Act.
EXP	**Extirpated**. Any native species no longer existing in the wild in Ontario, but existing elsewhere in the wild.
EXT	**Extinct**. Any species formerly native to Ontario that no longer exists.
IND	**Indeterminate**. Any native species for which there is insufficient scientific information on which to base a status recommendation.
NIAC	**Not In Any COSSARO Category**. Any native species evaluated by COSSARO which does not currently meet criteria for assignment to a provincial risk category.
THR	**Threatened**. Any native species that is at risk of becoming endangered throughout all or a significant portion of its Ontario range if the limiting factors are not reversed.
VUL	**Vulnerable**. Any native species that, on the basis of the best available scientific evidence, is a species of special concern in Ontario, but is not a threatened or endangered species.

	COSEWIC
END	**Endangered**. A species facing imminent extirpation or extinction throughout its range.
EXP	**Extirpated**. A species no longer existing in the wild in Canada, but occurring elsewhere in the wild.
EXT	**Extinct**. A species that no longer exists.
IND	**Indeterminate**. A species for which there is insufficient information to support a status designation.
NAR	**Not At Risk**. A species that has been evaluated and found to be not at risk.
SC	**Special Concern**. A species of special concern particularly sensitive to human activities or natural events. Does not include an extirpated, endangered or threatened species.
THR	**Threatened**. A species likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix A3

Cultural Heritage Evaluation

Report on the 2009
Cultural Heritage Evaluation of
Heaveners Bridge Replacement over the Black River on Switch Road,
Township of Ramara, County of Simcoe

Submitted to

The Ontario Ministry of Culture

&

R.J. Burnside & Associates Limited
Georgian Bay Office
3 Ronell Crescent,
Collingwood, Ontario
L9Y 4J6
Tel: (705) 446 – 0515 **Fax:** (705) 446 - 2399

Prepared by

AMICK Consultants Limited
Lakelands District
Michael B. Henry CD BA, Managing Partner
380 Talbot Street, P.O. Box 29, Port McNicoll, ON L0K 1R0
Tel: (705) 534-1546 Fax: (705) 534-7855
www.amick.ca

Archaeological Consulting License # P058
Corporate Project # 29381-P

August 8, 2009

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Project Personnel

Heritage Consultant	Michael Henry
Report Preparation	Michael Henry
Draughting	Phil Rice
Photography	Michael Henry

Executive Summary

This report describes the results of the 2009 Cultural Heritage Evaluation and Heritage Impact Study of Heaveners Bridge located on Switch Road, 1.85km west of County Road 169 over the Black River, Township of Ramara, County of Simcoe, conducted by AMICK Consultants Limited. This investigation was undertaken as part of an Environmental Assessment process with respect to proposed improvements along the road allowance of Switch Road, Township of Ramara, County of Simcoe. All work was conducted in conformity with the Ontario Heritage Act (RSO 2005). In addition, the Ontario Heritage Bridge Guidelines for Provincially Owned Bridges (MTO 2008) and the Ontario Heritage Bridge Program (MCL 1991) were employed as guides to the conduct and findings of this research.

Heaveners Bridge is over 40 years old and the Ontario Ministry of Culture (MCL) considers that Heaveners Bridge may have cultural heritage value given its characteristics. Therefore, a heritage impact assessment report prepared by a qualified heritage consultant is required for this project. This report has been prepared to address this requirement. The proponent is advised that they should file this report with the MCL for the purpose of review by MCL Heritage Planning Staff. AMICK Consultants Limited was engaged by the proponent to undertake this study on June 11, 2009.

As a result of this study, it has been determined that the existing Heaveners Bridge crossing the Black River at Switch Road is not a provincially significant heritage feature based on the evaluation criteria of both the OHBP and the OHBG. Although this structure is not considered to be significant according to the criteria set forth in the OHBP or the OHGB, it is nonetheless a heritage feature which is a non-renewable and irreplaceable historic structure. Consideration should be given to either (a) dismantling and rebuilding this bridge elsewhere in an adaptive re-use or to (b) salvaging the superstructure of the existing bridge and widening it by replacement of the connecting members between the two sides to be fitted onto the new bridge at this location. This would preserve the appearance and a significant portion of the visible elements of the original structure. It is further suggested that a second plaque be affixed to the superstructure which details the date and the improvements made to this crossing.

1.0 INTRODUCTION

This report describes the results of the 2009 Cultural Heritage Evaluation and Heritage Impact Assessment of Heaveners Bridge Replacement over the Black River, within the road allowance of Switch Road, Township of Ramara, County of Simcoe, conducted by AMICK Consultants Limited. This investigation was undertaken as part of an Environmental Assessment process with respect to proposed improvements along the road allowance of Switch Road, Township of Ramara, County of Simcoe. All work was conducted in conformity with the Ontario Heritage Act (RSO 2005). In addition, the Ontario Heritage Bridge Guidelines for Provincially Owned Bridges (MTO 2008) and the Ontario Heritage Bridge Program (MCL 1991) were employed as guides to the conduct and findings of this research.

At the January 2002 meeting of Simcoe County Council, the County Engineer received approval to hire R.J. Burnside and Associates to carry out a structural analysis of the Heaveners Bridge, as there was a concern about the load carrying capacity of the structures. The report outlining the results of the analysis recommended that the maximum allowable gross vehicle weight crossing over this structure shall not exceed a triple posted limit of 12, 19 and 29 tonnes. The triple posting identifies the maximum gross vehicle weight for a single vehicle, a combination of two vehicles and a combination of three vehicles permitted on the bridge. A by-law was subsequently enacted authorizing the posting of these load limits. However, the bridge has continued to show signs of degradation and a determination has been made to improve the crossing of Black River at this location.

AMICK Consultants Limited was engaged by the proponent to undertake this study on June 11, 2009. All records, documentation, field notes, and photographs related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ministry of Culture on behalf of the government and citizens of Ontario.

2.0 LOCATION AND DESCRIPTION

This report describes the results of the 2009 Cultural Heritage Study of Heaveners Bridge which carries Switch Road over the Black River 1.85km west of County Road 169 and 2.30km east of County Road 44 within the Township of Ramara, County of Simcoe. Davy Drive intersects with Switch Road approximately 50m west of the bridge. The location of Heaveners Bridge is illustrated in Figure 1 of this report. Heaveners Bridge located on Switch Road, 1.85km west of County Road 169 over the Black River, Township of Ramara, County of Simcoe.

At the point of crossing the banks of the Black River are sand overlying bedrock approximately 1 metre below the surface of the natural grade. The Black River channel is oriented in a roughly north-south orientation at the location of the bridge. Existing

residential structures with associated outbuildings are situated in close proximity to the southwest, southeast and northeast. A woodlot is situated to the northwest.

The existing bridge is a single span riveted steel through truss structure which carries Switch Road over the Black River. The existing structure is not listed on the Ontario Heritage Bridge List nor has it been designated under the Ontario Heritage Act.

The structure has been identified as being deficient with respect to structural capacity, geometry, physical condition and roadside safety. **R.J. Burnside & Associates Limited** undertook a structural inspection of Heaveners Bridge in 2002. Heaveners Bridge is a single-lane, riveted steel through truss structure on conventional closed abutments. There are no wing walls to add stability to the raised road allowance. The structure was constructed in 1915 and has an overall length of 30.0 m. The travel width is 4.5 m between barriers and the overall structure width is 6.0 m. The structural trusses that carry the load of the structure form the side walls of the bridge. Although rails are present, they are 2 inch tubular steel rails affixed to the trusses which provide minimum impact protection, if any, given modern vehicle weights and speeds. This configuration classifies the structure as a single load path structure which means that if the trusses were significantly damaged, it could result in total bridge failure. Single load path structures are not encouraged in Ontario for this reason. There are no approach guide rails present at this site. The structure has been identified as being deficient with respect to structural capacity, geometry, physical condition and roadside safety.

3.0 CULTURAL HERITAGE EVALUATION

Heaveners Bridge meets the Ministry of Culture (MCL) Heritage Landscape Checklist (see Appendix 2) criteria to mandate a heritage impact assessment (i.e. over 40 years old, MCL considers that the Heaveners Bridge may have cultural heritage value given its characteristics. Therefore, a heritage impact assessment report prepared by a qualified heritage consultant **is required** for this project. This report has been prepared to address this requirement. The proponent is advised that they should file this report with the MCL for the purpose of review by MCL Heritage Planning Staff.

In evaluating Heaveners Bridge, the Ontario Heritage Bridge Guidelines for Provincially Owned Bridges (OHGB) published by the Ontario Ministry of Transportation (MTO 2008) and the Ontario Heritage Bridge Program published by the Ontario Ministry of Culture and Communications (now the Ministry of Culture – MCL 1991) have both been used. Section 3.3 of this report considers Heaveners Bridge under the evaluation criteria set forth in the OHBG (MTO 2008) and Section 3.4 Considers Heaveners Bridge under the evaluation criteria set forth in the OHBP (MCL 1991). The evaluation criteria differ markedly between these two documents. Both documents were prepared in a collaborative project undertaken by MTO and MCL staff. While the more recent document states that it supersedes the earlier OHBP (MTO 2008: 5), it is also designed for provincially owned bridges. It is our understanding that a separate OHBG is under development for municipally owned bridges. In the interim, we have been advised

by MCL that bridges not owned by the province are to be evaluated in accordance with the OHBP (MCL 1991). This results in inconsistent evaluation criteria which should be measuring heritage features in accordance with the inherent merits of any structure under consideration, not according to ownership. We have evaluated Heaveners Bridge under both regimes which produce somewhat divergent results.

3.1 Overview of Ontario Bridge Construction History

The history of settlement in Ontario is inextricably tied to the history or the development of overland transportation. As David Cuming notes in his Discovering Heritage Bridges on Ontario Roads (n.d.: 31), "Ontario with its myriad of rivers, creeks, streams and lakes has resulted in a substantial number of minor barriers to communication". As a result, bridges have always formed a significant component of overland transportation and communication routes. The first major roads in Ontario followed settlement by the United Empire Loyalists after the American War of Independence. These early roads were built for strategic military purposes but soon attracted settlement along theses routes. Subsequent road construction, whether built by government agencies or private concerns also served to attract settlement and initial settlement promoted construction of further roadways as settlement moved inland from the Great lakes and the initial transportation corridors (Cuming n.d.: 32).

Bridges were a necessity from the earliest days of road construction. The earliest bridges consisted of nothing more than two parallel logs stretching from one bank to the other with logs overlying these at a right angle. These bridges could be easily and quickly replaced as they rotted or should they be swept away by flood waters or ice flows (Cuming n.d.: 32). Bridges needed to cover larger spans were constructed by early settlers based on principles employed in the construction of early houses and barns. Truss systems used in the framing of structures were employed. Two such standard bridge types emerged fairly early on: The King Truss Bridge and the Queen Truss Bridge. The King Truss was built by setting a vertical beam supported by two inclined beams midway along a horizontal beam. The King Truss Bridge could span a gap of up to sixty (60) feet. The Queen truss system was employed for wider spans. This bridge was constructed with two vertical beams supported by one inclined beam for each and joined by a horizontal top beam. The Queen Truss Bridge could span a gap of up to one hundred and twenty (120) feet (Cuming n.d.: 35).

In the years between 1841 and 1849, the Department of Public Works spent $1,300,564 on roads in Canada West, including the construction of forty-three major bridges at a total cost of $206, 928. A full third of these bridges were timber-built Queen Truss bridges. During this same period numerous bridge designs were patented in the United States under fierce competition to increase the length and strength of bridges. As a result, bridge construction in North America began a period of transition from wood to metal structures (Cuming n.d.: 36).

Many road bridge designs that evolved were based on principles derived from railroad construction. Other designs that had a major impact on bridge engineering evolved independently. The Whipple Truss was first built in 1841. This new design consisted of a totally metal bowstring arch bridge. The arch of the bridge and the vertical supporting members were manufactured of cast iron while the diagonal bracing used wrought iron. The typical bridge built in the middle of the 19th century in the United States was entirely made of wrought iron (Cuming n.d.: 37). In Ontario the timber bridge dominated the landscape in rural areas from 1780-1880 and persisted into the early twentieth century. Wrought iron bridges were built in areas with higher population densities such as the thriving market towns of Brantford, Peterborough, London and Paris. These communities all had wrought iron bridges that were constructed during the 1870s (Cuming n.d.: 38).

Metal bridges were sold in separate components produced in factories and shipped to the location of construction and assembled on site. Bridge components were ordered through catalogues. To simplify construction, the first metal bridges were assembled using "pin connections", which were essentially threaded bolts that obviated the need for specialists or specialized equipment such as rivets required. Construction of such bridges could be completed with unskilled local labour in two to three weeks. These bridges were ideally suited to bridge construction in small communities or rural contexts (Cuming n.d.: 38).

Beginning in the 1880s designers began to replace wrought iron elements in bridges with steel. This marked the beginning of a transition from wrought iron to steel bridges (Cuming n.d.: 41). Several factors contributed to the rapid development and proliferation of steel bridges at the beginning of the twentieth century. Portable pneumatic tools allowed for the use of rivets on even rural sites of bridge construction and pin connections rapidly disappeared. Rivets allowed for longer and sturdier construction. New production methods made steel as cheap as wrought iron. The concurrent developments in heavier vehicle and agricultural machinery required bridges capable of taking heavier loads which made construction of timber bridges impractical even in rural areas. "Through truss" style construction was employed over larger spans or in locations where traffic loads were heavy. Steel bridges were erected in quantity throughout Ontario following 1900 (Cuming n.d.: 42). The improvement in highway and bridge construction was particularly notable following the end of the First World War with massive increases in automobile traffic and the development of heavy construction machinery. (Cuming n.d.: 51-53).

Experimentation with reinforced concrete bridge construction began in the 1880s in France followed by the United States. The first concrete arch bridge was constructed in Ontario in 1905 and was comprised of mass concrete. The first steel reinforced bridge was constructed in 1906. The appeal of reinforced concrete as a construction technology stemmed from its great strength, length of use and low maintenance requirements compared to steel or iron which required regular painting and rust removal (Cuming n.d.: 44). The strength of a reinforced tied concrete arch above the deck was early recognized

as a design suitable for almost any location, particularly in crossings with low banks where arched construction below the deck was unsuitable (Cuming n.d.: 47). By 1914 it was clear that concrete would dominate the construction of bridges for the foreseeable future (Cuming n.d.: 49). Concrete bridge construction of two types, the tied arch and the concrete beam, boomed in the 1920s (Cuming n.d.: 51).

Beginning in the 1930s a new innovation in bridge design challenged more traditional arched designs. The rigid frame reinforced concrete bridge employed a shallow arch below the deck and could be easily widened to accommodate demands of growing traffic pressures. This was a major advantage over earlier bridge designs such as the tied arch for which such an alteration was impossible (Cuming n.d.: 52).

Through truss construction, of which Heaverners Bridge is representative, was built over larger spans or in locations where traffic loads were heavy (Cuming n.d.: 43). Steel bridges were erected in quantity throughout Ontario following 1900 (Cuming n.d.: 42). The improvement in highway and bridge construction was particularly notable following the end of the First World War with massive increases in automobile traffic and the development of heavy construction machinery. By the 1930s however, reinforced concrete construction was beginning to supplant steel bridge construction for speed of construction, durability and strength (Cuming n.d.: 51-53).

Based upon consideration of the above historic trends, Heaveners Bridge appears to date to the period of roughly 1920-1930. This bridge rests on poured concrete abutments most probably built in the early twentieth century. The fact that the bridge is riveted likewise points to this period. The rural context suggests that the erection of this steel bridge was likely in response to the need for a relatively inexpensive structure to span a relatively wide channel and to carry increasingly heavier loads due to the rise in popularity of automobile transportation and mechanical farm implements. Heaveners Bridge also has a plaque mounted at the southwest corner of the superstructure which indicates that this bridge was erected in 1915 by the Ontario Bridge Company Limited from Toronto.

3.2 Heritage Legislative Requirements

Within the Province of Ontario there are a number of legislative requirements which necessitate the consideration of potential heritage features during the planning process.

1. The provincial interest in cultural heritage and the conservation of heritage resources is articulated in the Ontario Heritage Act (RSO 2005). This legislation provides the legislative framework for the conservation of Ontario's heritage. The Ontario Heritage Act is administered by the Ontario Ministry of Culture.
2. Heritage resource conservation is also identified as a provincial interest within the Provincial Policy Statement (2007)

3. Heritage resource conservation is also identified as a provincial interest within the Planning Act (RSO 1990a)
4. Heritage resource conservation is also identified as a provincial interest within the Environmental Assessment Act (RSO 1990b). This legislation considers cultural and built components to be integral elements of the environment. The impact of proposed undertakings to cultural heritage resources must be addressed as part of the standard environmental assessment process in the Province of Ontario.
5. The Public Transportation and Highway Improvement Act (RSO 1990c) and Ontario Regulation 104/97 addresses the design, construction and maintenance of bridges.

In partnership with other provinces, territories and the federal government, Ontario is also a participant in the Historic Places Initiative which is a national program to encourage heritage conservation across Canada.

3.3 Ontario Heritage Bridge Guidelines Evaluation Criteria

In evaluating Heaveners Bridge, the Ontario Heritage Bridge Guidelines for Provincially Owned Bridges (OHGB) published by the Ontario Ministry of Transportation (MTO 2008) and the Ontario Heritage Bridge Program published by the Ontario Ministry of Culture and Communications (now the Ministry of Culture – MCL 1991) have both been used. The purpose of the OHBG is articulated on Page 5 of the document as follows:

1. *Establishing a process for their identification, evaluation and listing at an early stage of the planning process,*
2. *Identifying conservation options to be considered when planning for any rehabilitation, widening or replacement that may be required,*
3. *Identifying the methods and principles for defining heritage values and assessing project alternatives in the Environmental Assessment Process, and*
4. *Ensuring the management of heritage bridges conforms to the provisions of the Ontario Heritage Act (OHA), the Environmental Assessment Act and its regulations, as well as Ontario Regulation 104/97.*

Within the Introduction to the MTO OHBG the rationale for the protection and preservation of heritage bridges is described as follows:

> *"Bridges are an important part of our engineering and architectural heritage. Perhaps more than any other type of structure built by man, they exhibit major historical change and innovation in the development and use of materials, in design, and in construction methods. They can be viewed as important elements and make a positive contribution to their surroundings. In some cases, they are*

> *rare survivors of an important bridge type or are revered because of their age, historical associations or other publicly perceived values."* (MTO 2008: 5-6)

In addition to the above, we would add that apart from a visible monument to the past, bridges have an important additional distinction. As part of historic overland transportation routes, bridges represent substantial evidence that is clearly historic in its character. Many roadways, although following historic routes, do not preserve evidence of this fact in and of themselves. The surrounding landscapes provide the visual cues to this heritage in the form of old tree rows, fence lines, heritage farm complexes, and old houses. Bridges stand in a distinct class from most heritage landscape features as elements that invite the public to participate in that history. Driving, cycling or walking across a heritage bridge evokes the past by sharing the same structure enabling the passage over physical obstacles that was employed by our predecessors. Bridges with evidently old superstructure above the deck are particularly evocative of the past to users travelling over a bridge. It is known that people often choose indirect routes of travel to enjoy the experience of travelling over old bridges, particularly in areas where there are clusters of surviving bridges seen to be of a historic character or quality. With this consideration in mind, the preservation of heritage bridges function as an attraction which serves to divert traffic and reduce loads on more commonly travelled routes by providing travellers with route selection criteria appealing to diverse interests.

The complete Ministry of Transportation (MTO) OHBG Evaluation Criteria chart is included within this report as Appendix 1. The MTO OHBG Evaluation Criteria are designed to evaluate the structure with particular reference to provincial significance as it is designed to be employed in consideration of provincially owned bridges. Bridges which score an aggregate of 60 points or more are eligible to be included within the Ontario Heritage Bridge List. However, it must be borne in mind that although any given bridge may not score high enough to be considered for eligibility on the Ontario Heritage Bridge List, the bridge may yet be of great significance within a particular region or to a local community. With this caveat in mind, Table 1 below presents the criteria and scoring of Heaveners Bridge under the MTO OHBG.

Table 1 MTO OHBG Evaluation Criteria and Scoring Heaveners Bridge

Criteria	Details	Score	Comments
Design/ Physical Value			
Functional Design	Common	0/20	Steel truss bridges were once common features of rural Ontario but, highly susceptible to corrosion. There are 10 or more within the immediately surrounding Townships, and many more within Simcoe County.
Visual Appeal	*Good*	*12/20*	*The bridge is well proportioned and has retained its original form and elements.*
Materials	Very Good	8/10	The riveted construction method employed on this bridge is relatively rare within a rural context.
Contextual Value			
Landmark	*Fair*	*3/15*	*This bridge is not situated along a major route of travel however, it is a familiar heritage feature in the area.*
Character Contribution	Good	6/10	This rural bridge form was once typical of Ontario's agricultural community
Historic/ Associative Value			
Designer/ Builder	*Good*	*9/15*	*The bridge is a typical steel bridge built of mass produced elements built by the Ontario Bridge Company Limited, a major builder of steel bridges throughout Ontario.*
Associative	Good	6 /10	The bridge is emblematic of a rural community roadway at the beginning of the 20th century. It also marks the growing affluence of the area following initial settlement and the advent of automobile travel.
TOTAL SCORE		**44/100**	

Discussion

The scoring is divided into three sections: Design/Physical Value; Contextual Value; and Historic/Associative Value. To achieve a minimum score of 60, a bridge under evaluation will have to score points within all three categories. A bridge with a score over 60 points is considered to be a significant cultural heritage resource and worthy of inclusion within the Ontario Heritage Bridge List. In order to appreciate the

scoring system and the results obtained for Heaveners Bridge, readers should refer to Appendix 1.

The score of Heaveners Bridge according to the MTO OHBG Criteria as of the date of compiling this report is 44 which is 16 points below the minimum score for recommendation to be added to the Ontario Heritage Bridge List. Accordingly, this bridge is not considered to merit inclusion within the Ontario Heritage Bridge List **based on evaluation criteria employed for provincially owned bridges**. Currently, the Ministry of Culture (MCL) is developing Ontario Heritage Bridge Guidelines for Municipally owned bridges. The criteria and scoring developed to evaluate bridges on a provincial scale does not mean that a specific bridge is not a significant local feature.

3.4 Ontario Heritage Bridge Program Evaluation Criteria

Prior to the development of the above evaluation method designed specifically for provincially owned bridges, the Ontario Ministry of Culture and Communications (now the Ministry of Culture-MCL) published the Ontario Heritage Bridge Program (OHBP) in 1991. Presently, the Ministry of Culture is working to develop guidelines tailored to municipally owned bridges. The Ministry of Culture recommends that the OHBP criteria be used in the interim to evaluate municipal structures. This results in an inconsistent evaluation and review process determined by ownership and not by the heritage attributes of any structure under consideration.

In evaluating Heaveners Bridge, the Ontario Heritage Bridge Program (OHBP) published by the Ontario Ministry of Culture (MCL 1991) has been used as a supplementary evaluation to augment and balance the evaluation conducted using the OHBG. The principles of the OHBP are articulated on Page 2 of the document as follows:

> *"One of the objectives of the Heritage Bridge Program is to make carefully considered and consistent decisions in allocating scarce funds for the conservation of heritage road bridges. The Ministry of Transportation and the Ministry of Culture and Communications have sought to avoid an ad hoc approach to conservation funding by identifying heritage road bridges in a systematic and comprehensive fashion, in advance of proposed undertakings which may affect a road bridge."* (MCL 1991: 2)

On page 3 of the OHBP the evaluation of potential heritage bridges is discussed:

> *"Evaluation of any physical object, policy or plan is an objective exercise that determines quality. It is an accepted idea in most areas of sound planning and decision making. The examination of road bridges from a heritage perspective is no different than in principle from evaluating not only other heritage structures but also other physical objects.*

> *"A prerequisite for determining quality, and subsequent comparison with other like objects being evaluated, is establishing standards of measurement-criteria."* (MCL 1991: 2)

The evaluation criteria and scoring rationale of the OHBP are reproduced as Appendix 2 of this report. Although the basis of determining scores under various criteria are established, the OHBP provides no direction as to what the requisite aggregate score might be to determine if any bridge under review is deemed to have heritage significance and/or interest.

Table 2 MCL OHBP Evaluation Criteria and Scoring Heaveners Bridge

Criteria	Score	Comments
A. Documentation		
1. Builder	*4/6*	*The Ontario Bridge Company Limited of Toronto is a well known builder of a large number of steel truss bridges throughout Ontario*
2. Age	*8/14*	*A plaque affixed to the bridge dates construction to 1915.*
B. Technology		
3. Material	0/4	Steel construction was the most common material employed in the early 20th century.
4. Design/Style	0/16	Steel truss construction was once the most common built form. Although many have been replaced there are many examples still in use.
5. Prototype	0/10	This bridge is a typical steel through truss bridge built in the middle of its period of dominance.
6. Structural Integrity	10/10	This bridge consists entirely of as-built original components and material apart from the deck surface pavement.
C. Bridge Aesthetics & Environment		
7. Visual Appeal	10/12	The steel through truss design has widespread appeal as a clean, graceful and elegant design without ostentatious ornamentation.
8. Integrity	4/4	This bridge is situated in its original location.
9. Landmark	0/6	Public consultation resulted in no concern with the proposed replacement of this bridge.
10. Gateway	0/4	This bridge does not demarcate the limits of any geographic space, nor is it situated on a major route of travel.
11. Character Contribution	4/4	A bridge of clearly historical antiquity serves to enhance the rural heritage of the locality.
D. Historical		
12. Historical Association	10/10	This bridge is associated with influential builders, with the introduction of the automotive era in Canada's transportation history, and with a traditional river crossing point.
TOTAL SCORE	**50/100**	

Discussion

The scoring is divided into four sections: "Documentation", "Technology", "Bridge Aesthetics & Environment", and "Historical". The OHBP does not specify a general score that a bridge under consideration must achieve. When the Heritage Bridge List was initially compiled agreement on the score that a bridge was to achieve was reached following evaluation. This would seem to suggest that although objective criteria were created for the evaluation of bridges, the interpretation of scores was not generally applied but was considered on a case-by-case or ad hoc basis.

For the purposes of the present study, we assume that as the potential score has remained the same, with some modifications in the criteria and relative weighting of those criteria, bridges that score an aggregate of 60 points or more using the OHBP would be considered to merit inclusion on the Heritage Bridge List.

The score of Heaveners Bridge according to the MCL OHBP Criteria as of the date of compiling this report is 50 which is 10 points below the minimum score for recommendation to be added to the Ontario Heritage Bridge List. Accordingly, this bridge is **not** considered to merit inclusion within the Ontario Heritage Bridge List.

4.0 HERITAGE IMPACT ASSESSMENT

The evaluation of Heaveners Bridge employing two separate evaluation criteria currently in wide usage across Ontario has resulted in somewhat divergent results. The MTO OHBG has resulted in an evaluation score (44/100) that indicates this bridge **is not** a significant heritage feature. The MCL OHBP has also resulted in an evaluation score (50/100) that indicates this bridge **is not** a significant heritage feature.

The County Council has discussed the potential heritage value of the bridge at staff and council levels and has determined that the replacement of the bridge remains a priority for them. The County of Simcoe has had no indication of any local groups or residents having an interest in preserving this heritage feature.

5.0 CONCLUSIONS & RECOMMENDATIONS

Heaveners Bridge is over 40 years old and in accordance with the Ontario Ministry of Culture (MCL) policy (see Appendix 3), may have cultural heritage value given its characteristics. Therefore, a heritage impact assessment report prepared by a qualified heritage consultant is required for this project. This report has been prepared to address this requirement. The proponent is advised that they should file this report with the MCL for the purpose of review by MCL Heritage Planning Staff.

The score of Heaveners Bridge according to the MTO OHBG Criteria as of the date of compiling this report is 44 which is 16 points below the minimum score for recommendation to be added to the Ontario Heritage Bridge List. Accordingly, this bridge is not considered to merit inclusion within the Ontario Heritage Bridge List **based on evaluation criteria employed for provincially owned bridges**. The score of Heaveners Bridge according to the MCL OHBP Criteria as of the date of compiling this report is 50 which is 10 points below the minimum score for recommendation to be added to the Ontario Heritage Bridge List. Accordingly, this bridge is **not** considered to merit inclusion within the Ontario Heritage Bridge List. Currently, the Ministry of Culture (MCL) is developing Ontario Heritage Bridge Guidelines for Municipally owned bridges. The criteria and scoring developed to evaluate bridges on a provincial scale does not mean that a specific bridge is not a significant local feature.

Heritage features, such as historic bridges are non-renewable resources. Although Heaveners Bridge may not be considered a provincially significant heritage bridge, it does remain a tangible historical feature which is easily recognized as such. Some consideration should be given to retaining this structure in some form.

Given the design characteristics of the bridge and the manner of construction, it can be dismantled and rebuilt. If a pedestrian crossing, multiple use trail, or light vehicle crossing could make use of this bridge, this would be ideal. It is recommended that this bridge be dismantled and re-used. If a suitable use and/or location is not currently available, it is recommended that the bridge be dismantled and the components retained for future use as a community enhancement feature. Alternatively, the superstructure should be retained and incorporated into the design of the new structure. Consideration should be given to salvaging the superstructure of the existing bridge and widening it by replacement of the connecting members between the trusses to be fitted onto the replacement bridge. This would preserve the appearance and a significant portion of the visible elements of the original structure. It is further suggested that a second plaque be affixed to the superstructure which details the date and the improvements made to this crossing, including reference to the original bridge elements incorporated into the new structure.

6.0 REFERENCES CITED

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Appendix B

Public Consultation Program

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Appendix B1

Agency Contact List

Heaveners Bridge - Agency Contact List
Township of Ramara
Project No. MCG 14560

Agency/Organization	Title	First Name	Last Name	Position	Address	Contact Information	Notes
A. Provincial Government Agencies							
Ministry of Environment – Environmental Assessment and Approvals Branch	Mr.	D. Jeffrey	Dea	Project Officer – EA Project Coordination Section	2 St. Clair Avenue West, 14th Floor Toronto, ON M4V 1L5	Tel: 416-314-7213 Tel : 800-461-6290 Fax: (416) 314-8452 E-Mail: MEA.NOTICES.EAAB@ontario.ca	**E-mail Notice of Completion only.**
Ministry of Environment –Central Region	Ms.	Dorothy	Moszynski	Environmental Resource Coordinator/Environmental Assessment Coordinator	Place Nouveau 9th Floor 5775 Yonge St. Toronto, ON M2M 4J1	Tel: 416-326-5745 Fax: E-mail: Dorothy.moszynski@ontario.ca	**E-mail Notice of Completion only.**
Ministry of Natural Resources - Midhurst District	Ms.	Kathryn	Woeller	District Planner	2284 Nursery Road Midhurst, ON L0L 1X0	Tel: (705) 725-7546 Fax: (705) 725-7584 E-mail: Kathryn.Woeller@ontario.ca	
Ministry of Culture	Mr.	Winston	Wong	Planner/Archaeologist	400 University Avenue, 4th Floor Toronto, ON M7A 2R9	Tel: (416) 314-7147 Fax: (416) 314-7175 E-mail: Winston.L.Wong@ontario.ca	
Ministry of Culture	Mr.	Tom	Chrzan	Manager, Central Region	180 Dundas Street West, Suite 502 Toronto, ON M7A 2R9	T: (416) 314-6682 F: (416) 314-2024 tom.chrzan@ontario.ca	
B. Federal Government Agencies							
Environment Canada	Ms.	Sheila	Allan	Senior Environmental Assessment Officer Ontario Region	867 Lakeshore Road Burlington, ON L7R 4AR	Tel: (905) 336-4948 Fax: (905) 336-8901 E-mail: sheila.allan@ec.gc.ca	
Transport Canada – Ontario Region	Ms.	Ingrid	Epp	Environmental Assistant	4900 Yonge St. North York, ON M2N 6A5	Tel: (416) 952-3379 Fax: E-mail: ingrid.epp@tc.gc.ca	
Fisheries and Oceans Canada – Southern Ontario District Office	Ms.	Jennifer	Wright	Regional Environmental Assessment Analyst	3027 Harvester Road, Unit 304 Burlington, ON L7R 4K3	Tel: (905) 639-6378 Fax: (905) 639-3549	
C. Municipal Agencies							
Township of Ramara	Ms.	Janice	McKinnon	Clerk	2297 Highway 12 PO Box 130 Brechin, ON L0K 1B0	Tel: (705) 484 5374 Fax: (705) 484-0441 E-mail: jmckinnon@township.ramara.on.ca	
County of Simcoe	Ms.	Dorothy	Smout	Executive Assistant to the CAO and Warden	1110 Highway 26 Midhurst, ON L0L 1X0	Tel: (705) 726-9300 x1257 Fax: E-mail: Dorothy.Smout@simcoe.ca	
D. Aboriginal Agencies							
Ministry of Aboriginal Affairs - Policy and Relationships Branch	Mr.	Alan	Kary	Deputy Director	720 Bay Street, 4th Floor Toronto, ON M5G 2K1	Fax: (416) 326-4017 E-mail: Alan.Kary@ontario.ca	
Ministry of Aboriginal Affairs - Aboriginal and Ministry Relationships Branch	Ms.	Pam	Wheaton	Director	160 Bloor Street East, 9th Floor Toronto ON M7A 2E6	Tel: 416-326-4053 Fax: 416-326-4017 E-mail: Pam.Wheaton@Ontario.ca	
Ministry of Aboriginal Affairs - Aboriginal and Ministry Relationships Branch	Mr.	Martin	Rukavina	Advisor	160 Bloor Street East, 9th Floor Toronto, ON M7A 2E6		
Ministry of Aboriginal Affairs - Aboriginal and Ministry	Mr.	Francois	Lachance	Senior Policy Advisor	160 Bloor Street East, 9th Floor	Phone: 416-326-4754 Fax: 416-326-4017	

Relationships Branch					Toronto, ON M7A 2E6	E-mail: francois.lachance@ontario.ca	
Indian and Northern Affairs Canada - Environment Unit				Environmental Assessment Coordination	25 St. Clair Avenue East, 8th Floor Toronto, ON M4T 1M2	E-mail: EACoordination_ON@inac-ainc.gc.ca	
Indian and Northern Affairs Canada - Specific Claims Branch	Mr.	Don	Boswell	Senior Claims Analyst	10 Wellington Street, Room 1310 Gatineau, QC K1A 0H4	Tel: (819) 953-1940 Fax: (819) 997-9873 E-mail: bowselld@inac.gc.ca	
Indian and Northern Affairs Canada - Comprehensive Claims Branch Assessment and Historical Research Directorate	Ms.	Nicole	Cheechoo	Claims Assessment Officer	10 Wellington Street, Room 1310 Gatineau, QC K1A 0H4	Tel : 819-997-3499 Fax : 819-994-0273	
Indian and Northern Affairs Canada - Litigation Management and Resolution Branch	Mr.	Marc-André	Millaire	Litigation Team Leader	10 Wellington Street Gatineau, QC K1A 0H4	Tel: (819) 994-1947	
Union of Ontario Indians	Mr.	Allan	Dokis	Director - Intergovernmental Affairs	Nippissing First Nation, PO Box 611 North Bay, ON P1B 8J8	Tel: (705) 654-4661	
Chippewas of Rama First Nation	Chief	Sharon	Stinson Henry		5884 Rama Road, Suite 200 Rama, ON L0K 1T0	Tel: (705) 325-3611 Fax : (705) 325-0879 E-mail: annettes@ramafirstnation.ca chief@ramafirstnation.ca	
Alderville First Nation	Chief	James	Marsden		11696 2nd Line Rd. PO Box 46 Alderville, ON K0K 2X0	Tel: (905) 352-2011 Fax : (905) 352-3242 E-mail:	
Beausoleil First Nation	Chief	Rodney	Monague Jr.		1 Ogema Street Christian Island, ON L0K 1C0	Tel: (705) 247-2051 Fax : (705) 247-2239 E-mail: council@chimnissing.ca	
Chippewas of Georgina Island	Ms.	Janice	Taylor	Band Manager	RR #2, Box N-13 Sutton West, ON L0E 1R0	Tel: (705) 437-1337 Fax : (705) 437-4597 E-mail:	
Curve Lake First Nation	Chief	Keith	Knott		22 Winookeeda Rd. Curve Lake, ON K0L 1R0	Tel: (705) 657-8045 Fax : (705) 657-8708 E-mail:	
Hiawatha First Nation	Chief	Laurie	Carr		123 Paudash St. Hiawatha, ON	Tel: (705) 295-4421 Fax : E-mail: info@hiawathafn.ca	
Mississaugas of Scugog Island First Nation	Chief	Tracy	Gauthier		Administration Building 22521 Island Road Port Perry, ON L9L 1B6	Tel: (905) 985-3337 Fax : (905) 985-8828 E-mail:	
Moose Deer Point First Nation	Chief	Barron	King		PO Box 119 3719 Twelve Mile Bay Rd. Mactier, ON P0C 1H0	Tel: (705) 375-5209 Fax : (705-375-0532 E-mail: chief@moosedeerpoint.com	
E. Other Agencies							
N/A							

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Appendix B2
Notice of Commencement Letter to Agencies

R.J. Burnside & Associates Limited 292 Speedvale Avenue West Unit 7 Guelph ON N1H 1C4 Canada
telephone (519) 823-4995 **fax** (519) 836-5477 **web** www.rjburnside.com

November 6, 2009

«AgencyOrganization»
«Address»

Attention: **«Title» «First_Name» «Last_Name»**
«Position»

Re: **Notice of Study Commencement**
Heaveners Bridge No. 000294 Improvements
Class Environmental Assessment Study
File No: MCG 14560

Dear «Title» «Last_Name»,

The County of Simcoe has initiated a Class Environmental Assessment for the replacement/repair of Bridge No. 000294 located on Switch Road, 1.85 km west of County Road 169 over the Black River (see attached Notice for study area location). The existing single lane 40.54 m span steel through truss has been identified as being deficient with respect to physical condition, road geometry, hydraulic capacity and barrier protection. The study is being carried out in accordance with the planning and design process for Schedule 'B' projects as outlined in the Municipal Class Environmental Assessment (October 2000, as amended in 2007).

A key component of the study will be consultation with interested stakeholders (public and agencies). Input and comments received from public and agencies will be incorporated into the planning and design of this project. Upon completion of the study, a Project File Report (PFR) will be prepared for public review and comment. Subject to comments received and the receipt of necessary approvals, the County of Simcoe intends to proceed with the planning, design and construction of this project.

At this stage of the process, R.J. Burnside & Associates Limited (Burnside) is requesting that your agency provide or coordinate comments on the proposed project. Burnside is seeking information on:

- Policies, positions or guidelines implemented or administered by your agency that may affect implementation of the construction and operational phases of the project;
- Background information that is pertinent to the compilation of an environmental inventory of the general area of study;

- Any preliminary comments or concerns that your agency has on the proposed projects; and,
- Other projects proposed within or near the general area of study.

It is essential to the success of this project that the concerns of your agency, and other stakeholders, are identified early in the planning process, such that the appropriate environmental protection measures are incorporated into the overall project design. Your input and questions are encouraged. To provide the study team with your comments or for further information please contact the undersigned.

Please indicate to us your interest in providing input to this project by responding to this letter. All interested stakeholders will be kept up-to-date on project status by means of future mailings, or inclusion in project meeting, as deemed appropriate.

Your participation in this EA study is much appreciated.

Sincerely,

R. J. Burnside & Associates Limited

Tricia Radburn, B.Sc. (Env)
Environmental Planner
519-823-4995 x479
Tricia.Radburn@rjburnside.com
Enc.

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Appendix B3

Notice of Commencement Ad

County of Simcoe
Transportation and Engineering
1110 Highway 26,
Midhurst, Ontario L0L 1X0

Main Line (705) 726 9300
Toll Free 1 866 893 9300
Fax (705) 727 7984
simcoe.ca

TRANSPORTATION AND ENGINEERING

NOTICE

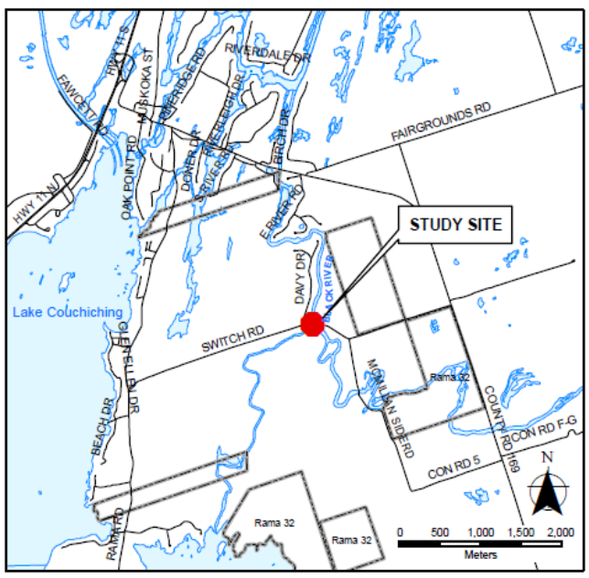
STUDY COMMENCEMENT
HEAVENERS BRIDGE NO. 000294 IMPROVEMENTS
CLASS ENVIRONMENTAL ASSESSMENT STUDY

The Study
The County of Simcoe has initiated a Class Environmental Assessment for improvements to the site of the bridge located on Switch Road, 1.85km west of County Road 169 over the Black River, see map. The existing single lane, 40.54m span steel through truss has been identified as being deficient with respect to physical condition, road geometry, hydraulic capacity and barrier protection. After a preliminary review of alternatives to repair, replace or abandon the structure, the County of Simcoe has concluded that the preliminary preferred solution to remedy structural deficiencies is replacement of the bridge.

The Process
This notice signals the commencement of the Class Environmental Assessment. The study is being carried out in accordance with the planning and design process for Schedule 'B' projects as outlined in the *Municipal Class Environmental Assessment* (October 2000, as amended in 2007) document.

Comments Invited
Public input and comments are invited, for incorporation into the planning and design of this project. Subject to comments received and the receipt of necessary approvals, the County of Simcoe intends to proceed with the planning, design and construction of this project.

Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record. This Notice first issued on July 24, 2009.



The map above shows the approximate location of the study area.

If you have any questions or comments regarding the study, or wish to be added to the study mailing list, please contact either of the following project team members:

County of Simcoe
Mr. Jim Hunter, P. Eng.
1110 Highway #26
Midhurst, ON L0L 1X0
Tel: 705 726-9300
Fax: 705 726-3991
E-mail: Jim.Hunter@simcoe.ca

R. J. Burnside & Associates Limited
Mr. Stephen Riley, P. Eng.
Project Manager
3 Ronell Crescent
Collingwood, ON L9Y 4J6
Tel: 1-888 240 4508
Fax: 705 446 2399
E-mail: Steve.Riley@rjburnside.com

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Appendix B4

Agency and Stakeholder Comments

Transport Canada
Marine

Transports Canada
Maritime

~~VS~~
MCG 14560
(ADEPT & FILE)

DATE RECEIVED
JUL 29 2008
R.J. BURNSIDE & ASSOCIATES
GEORGIAN BAY OFFICE

100 South Front Street
Sarnia, Ontario
N7T 2M4

Your file Votre référence

Our file Notre référence
8200-08-6315

July 21, 2008

County of Simcoe
c/o R.J. Burnside & Associates Ltd.
3 Ronell Crescent
Collingwood, ON L9Y 4J6

Attention: Vic. W. Segula, CET

Dear Sir

RE: Navigability Request, Black River, Heaveners Bridge, Switch Road, 1.85 Km west of County Road 169, Sounth of Washago, County of Simcoe, Province of Ontario

Receipt is acknowledged of your correspondence dated June 18, 2008 in connection with the above noted work.

Following a review of our records, please be advised that the waters of Black River at the above location are **navigable**. Consequently, an application for approval is required.

Transport Canada's review of the proposal will be made under the Navigable Waters Protection Act. Enclosed is an Application Guide which will assist you in making an application under the Navigable Waters Protection Act.

Should you have any questions, please contact the undersigned at (519) .

Yours truly,

A/ Kelly Thompson
Navigable Waters Protection
Transport Canada
KT/kab

Encl.

Canada

Class Environmental Assessment for the Heaveners Bridge No. 000294 Improvements (File No. MCG 14560).
Cifuentes, Alejandro (MCL)
to:
tricia.radburn
12/01/2009 10:21 AM
Cc:
jim.hunter, steve.riley
Show Details

Dear Ms. Radburn,

Thank you for your letter with respect to the Class Environmental Assessment for the Heaveners Bridge No. 000294 Improvements (File No. MCG 14560). From your letter, it is my understanding that the project is at an early stage within the Class EA process, however I would like to flag some important information that may or may not apply to this specific project:

As part of the Class Environmental Assessment process, the Ministry of Culture has an interest in the conservation of cultural heritage resources including:

- Archaeological resources;
- Built heritage resources; and
- Cultural heritage landscapes.

The Provincial Policy Statement, 2005 issued under the authority of the Planning Act defines "conserved" as "the identification, protection, use and/or management of cultural heritage and archaeological resources in such a way that their heritage values, attributes and integrity are retained. This may be addressed through a conservation plan or heritage impact assessment."

Archaeology:

The site in question has archaeological potential for the following reasons:

- **within 300 meters of a primary water source (lakeshore, river, large creek)**

An archaeological assessment that conforms to the Ministry of Culture's *Standards and Guidelines for Consultant Archaeologists* is therefore required. Please refer to the Attachment for more information.

Built Heritage / Cultural Heritage Landscapes:

If the building/structure in question / site in question contains buildings/structures over 40 years old, a Heritage Impact Assessment should be undertaken. The Assessment should include the following:

1. Historical research, site analysis and evaluation
2. Identification of the significance and heritage attributes of the property
3. Description of the proposed development / site alteration
4. Measurement of impacts
5. Consideration of alternatives, mitigation and conservation methods
6. Implementation and monitoring schedules
7. Summary statement and conservation recommendations

For more information, refer to Ministry of Culture *InfoSheet #5: Heritage Impact Assessments and Conservation Plans* in the Ontario Heritage Tool Kit at
http://www.culture.gov.on.ca/english/heritage/Toolkit/Heritage_PPS_infoSheet.pdf

The Heritage Impact Assessment should be sent to the local municipality and its Municipal Heritage Committee for their review and information as part of the Environmental Assessment process.

Please do not hesitate to contact me if you have any questions.

Best regards,

Alejandro Cifuentes
A/Heritage Planner
Ministry of Culture
Programs and Services Branch - Culture Services Unit
400 University Avenue, 4th Floor
Toronto, Ontario M7A 2R9
T 416-314-7159
F 416-212-1802
Alejandro.Cifuentes@ontario.ca

SPIC
MCG 14560

Transport Canada **Transports Canada**
Marine **Maritime**

Navigable Waters Protection Program
Programme de protection des eaux navigables
100 Front Street South
Sarnia, Ontario N7T 2M4

Your File Votre référence
MCG 14560
Our File Notre référence
8200-2009-400086 (8200-08-6315)

December 9, 2010

County of Simcoe
C/o R. J. Burnside and Associates Limited
3 Ronell Crescent
Collingwood, ON L9Y 4J6

Attention: Stephen Riley, P. Eng.

Dear Sir:

Re.: Application under the *Navigable Waters Protection Act* by R. J. Burnside and Associates Limited on behalf of County of Simcoe for Approval of the Bridge, located at Approximately 44° 43' 35.30" N – 079° 18' 32.70" W, Heaveners Bridge, Switch Road, Lot 17, Concession 7, South of Washago, Township of Ramara, Black River, County of Simcoe, in the Province of Ontario

Reference is made to your application under the *Navigable Waters Protection Act* (R.S.C. 1985, c. N-22), as amended by Part 7 of the *Budget Implementation Act*, 2009, S.C. 2009, c. 2, for approval of the above-referenced work.

We have reviewed your application in relation to the above-referenced work, including the plan(s), two copies of which are returned herewith.

Pursuant to subsection 9(4) of the *Navigable Waters Protection Act,* you are required to:

- Deposit one copy in the local Land Registry/Titles Office closest to the location of your works, and return the second copy to this office bearing the Registrar's Certificate and signature or deposit number;
- Proceed with publication of the necessary advertising in the legal section of the Orillia Packet Times and the Gravenhurst Banner newspapers in, or as close as possible, to the place where the work is to be constructed, using the attached example. The ad is required to appear in only one edition of each publication;
- Complete the attached Statutory Declaration as proof of advertising and return it to this office. Please ensure that line 16 is signed by a Commissioner for Oaths, Lawyer, Notary Public or other qualified official.

.../2

Canada

Upon receipt of the above, we will be in a position to continue with the processing of your application. In the meantime, no work is to be undertaken below the high water mark until such time as a decision has been made in regard to your application.

If these requirements are not met within 90 days it will be assumed the project has been cancelled, no work is in the waterway and our file will be closed. In the future, should you wish to move forward with your project, it will be necessary to contact this office by telephone at (866) 821-6631 or by facsimile transmission at (519) 383-1989 or by e-mail at NWPontario-PENontario@tc.gc.ca as there will be a requirement to re-apply for approval under the *Navigable Waters Protection Act*.

Sincerely,

Kelly Thompson
Navigable Waters Protection Officer
Navigable Waters Protection Program
Marine Safety
Transport Canada
Ontario

KT/km

Enclosure

Canada

RE: Class Environmental Assessment for the Heaveners Bridge No. 000294 Improvements (File No. MCG 14560).
Cifuentes, Alejandro (MCL)
to:
Steve Riley
12/01/2009 11:52 AM
Cc:
jim.hunter, tricia.radburn, Julie.Scruton
Show Details

Hello Steve,

Thanks for the prompt response regarding these two bridge projects.

It is great to hear that a Heritage Consultant is already engaged in the study of a Heritage Impact Assessment report for these two bridge projects. This will ensure that several intervention/mitigation options, each of which seeks to minimize impacts on cultural and heritage resources are assessed properly.

In terms of the archaeological portion I think it is better to separate the two studies and provide you with reasons as to why a Stage 1 archaeological assessment is required for both bridge projects.

Heaveners Bridge No. 000294 Improvements (File No. MCG 14560).

As you are aware, this site is located within 300 m of a water source (Black River), that alone would automatically trigger an archaeological assessment under any circumstance. Further, it is my understanding that the County of Simcoe has concluded that the preliminary preferred solution to remedy structural deficiencies is the replacement of the bridge. A replacement of any structure will involve the use of heavy machinery and heavy equipment in the area. It could also result in the creation of secondary/temporary construction roads for the heavy equipment to move around etc. this will create disturbance to the soil (bedrock in this case) and this can damage any archaeological resource potentially located in the site. Also, this area has been known to have aboriginal presence and two archaeological sites are located within 4km of the study area, which again reinforces the need to conduct an archaeological assessment.

I had a discussion with one of our archaeologists here at the office and he informed me that the safest way to go about with this project is to conduct a Stage I archaeological assessment. This assessment will basically involve a background/historical research in order to determine the potential for finding archaeological sites on the property/study area. If the archaeologist determines that the site does indeed have potential for archaeological sites some fieldwork will be then conducted in a Stage II archaeological assessment. We feel again, that this is the safest way to go about with this project as it will guarantee that we are conserving Ontario's cultural heritage resources.

Vigo Bridge No. 000211 Improvements (File No. MCG17073)

For this site, the potential for finding archaeological resources is even greater. The site is again located within 300 m of a river, 200 m within a marsh land, and there are 4 archaeological sites surrounding the study area. The watercourse associated with this bridge is associated with archaeological findings as there are more than 15 archaeological sites located along the edge of this river.

It is therefore required that an archaeological assessment is also undertaken for this project.

I understand your concerns regarding the need for an archaeological assessment, but that is something that must be done prior to any ground disturbance. Here at the Ministry we are concerned about Ontario's heritage and cultural resources and it is within our best interest to conserve and protect these resources the best way we can. That is why we have developed a very specific set of criteria that allows us to determine when a project needs archaeological or heritage related studies that way we do not take chances.

Thanks for your time Steve, I hope this clarifies our decision to stand by our initial judgement and require an archaeological assessment for these two bridge projects.

If you have any concerns or questions regarding this email please contact this office at the numbers provided.

Best regards,
Alejandro Cifuentes
A/Heritage Planner
Ministry of Culture
Programs and Services Branch - Culture Services Unit
400 University Avenue, 4th Floor
Toronto, Ontario M7A 2R9
T 416-314-7159
F 416-212-1802
Alejandro.Cifuentes@ontario.ca

From: Steve Riley [mailto:Steve.Riley@rjburnside.com]
Sent: December 1, 2009 10:41 AM
To: Cifuentes, Alejandro (MCL)
Cc: jim.hunter@simcoe.ca; tricia.radburn@rjburnside.com; Julie.Scruton@simcoe.ca
Subject: Re: Class Environmental Assessment for the Heaveners Bridge No. 000294 Improvements (File No. MCG 14560).

Alejandro,

Thank you for your input in connection with the above noted Heaveners Bridge project.

The County has engaged the services of a Heritage Consultant to conduct a Heritage Impact Assessment for the structure and a copy of this report will be provided to your office once completed.

With respect to an archeological investigation, we would respectfully note that while we agree that the site meets the criteria with respect to proximity to a watercourse, the bridge itself is founded on bedrock, as would any proposed structure improvement.
This is typical of this area, and any disruption to the bedrock, would be kept to a minimum due to cost implications. In effect, good foundation materials are available close to the surface.
Due to the prevalence of rock in the area, and specifically at the bridge location, an archeological investigation will not be prepared.

We trust this will be an acceptable approach at this location.

Stephen Riley, P.Eng.
R. J. Burnside & Associates Limited
Georgian Bay Office
3 Ronell Crescent,
Collingwood, Ontario
L9Y 4J6
Phone 705 - 446 - 0515
Cell 705 - 446 - 5568
Fax 705 - 446 - 2399

From:	"Cifuentes, Alejandro (MCL)" <Alejandro.Cifuentes@ontario.ca>
To:	<tricia.radburn@rjburnside.com>
Cc:	<jim.hunter@simcoe.ca>, <steve.riley@rjburnside.com>
Date:	12/01/2009 10:21 AM
Subject:	Class Environmental Assessment for the Heaveners Bridge No. 000294 Improvements (File No. MCG 14560).

Dear Ms. Radburn,

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4. Measurement of impacts
5. Consideration of alternatives, mitigation and conservation methods
6. Implementation and monitoring schedules
7. Summary statement and conservation recommendations

For more information, refer to Ministry of Culture *InfoSheet #5: Heritage Impact Assessments and Conservation Plans* in the Ontario Heritage Tool Kit at
http://www.culture.gov.on.ca/english/heritage/Toolkit/Heritage_PPS_infoSheet.pdf

The Heritage Impact Assessment should be sent to the local municipality and its Municipal Heritage Committee for their review and information as part of the Environmental Assessment process.

Please do not hesitate to contact me if you have any questions.

Best regards,

Alejandro Cifuentes
A/Heritage Planner
Ministry of Culture
Programs and Services Branch - Culture Services Unit
400 University Avenue, 4th Floor
Toronto, Ontario M7A 2R9
T 416-314-7159
F 416-212-1802
Alejandro.Cifuentes@ontario.ca

[attachment "Built & Cultural Heritage Checklist.doc" deleted by Steve Riley/RJB] [attachment "Municipal Class EA, Heaveners Bridge No000294, Simcoe County.pdf" deleted by Steve Riley/RJB]

File MCG 14560 Heaveners Bridge

[redacted]

to:
Tricia.Radburn
10/22/2009 02:56 PM
Show Details

Hello T. Radburn

Just a comment in response to your study commencement notice (dated Oct. 20) for Heaveners Bridge.
A two lane, 8 m wide bridge is reasonable for this location in my opinion.

[redacted]

Resident - [redacted] Switch Road - Heavener's Bridge No. 000294 Improvements.

DEDIC Vit -FOSSIL to: 'Tricia.Radburn@rjburnside.com' 11/16/2009 10:12 AM

Cc: [redacted]

History: This message has been forwarded.

Tricia,

Thank you for the notice I did receive in my mail and the invitation to reply to it. Yes, my wife and I are very much interested what is going to happen with this project.

[redacted] we believe we will be directly affected by this project irregardless of the scope of it. We do value our property, the privacy and the tranquility of our property lay out. We believe that should there be any changes introduced to our property due to Heavener's Bridge Improvements we should be kept informed and properly notified. Any changes to our access introduced by the project should be clarified before and resolved before they will take place.

Also we are not interested having any public access on our property or adjacent to our property for boats. [redacted] We do not welcome any strangers to wonder on our property at will just because there is construction going on. That is before, during and after the project completion. For any access to our property you are welcome to contact us and make proper arrangement for access when needed.

I was looking at the county site to see the details and the magnitude of full scope of this project. I cold not find any detail information. Should there be any information available we will be glad to know where to access it. That way we may be able to establish proper dialog in timely fashion.

Thank you again for your letter.

Looking forward hearing from you soon.

[redacted]

P.S.: E mail access:

[redacted]

Fw: Heaveners Bridge No. 000294 Improvements Study
Steve Riley
to:
Tricia Radburn
08/11/2009 11:17 AM
Show Details

Please ad Mr. [redacted] to the list.

SPR

From: "Hunter, Jim" [Jim.Hunter@simcoe.ca]
Sent: 08/11/2009 11:07 AM AST
To: Steve Riley
Subject: FW: Heaveners Bridge No. 000294 Improvements Study

Steve,

Please add [redacted] to the mailing list.

Jim

From: [redacted]
Sent: Monday, August 10, 2009 5:02 PM
To: Hunter, Jim
Subject: Heaveners Bridge No. 000294 Improvements Study

Dear Mr. Hunter

I would like to be included in the mailing list for the above-noted Environmental Study.

Can I get a copy of the parameters of the study?

Please send me the info by email if possible.

Thanks and Best Regards

[redacted]

Black River Fishery Information

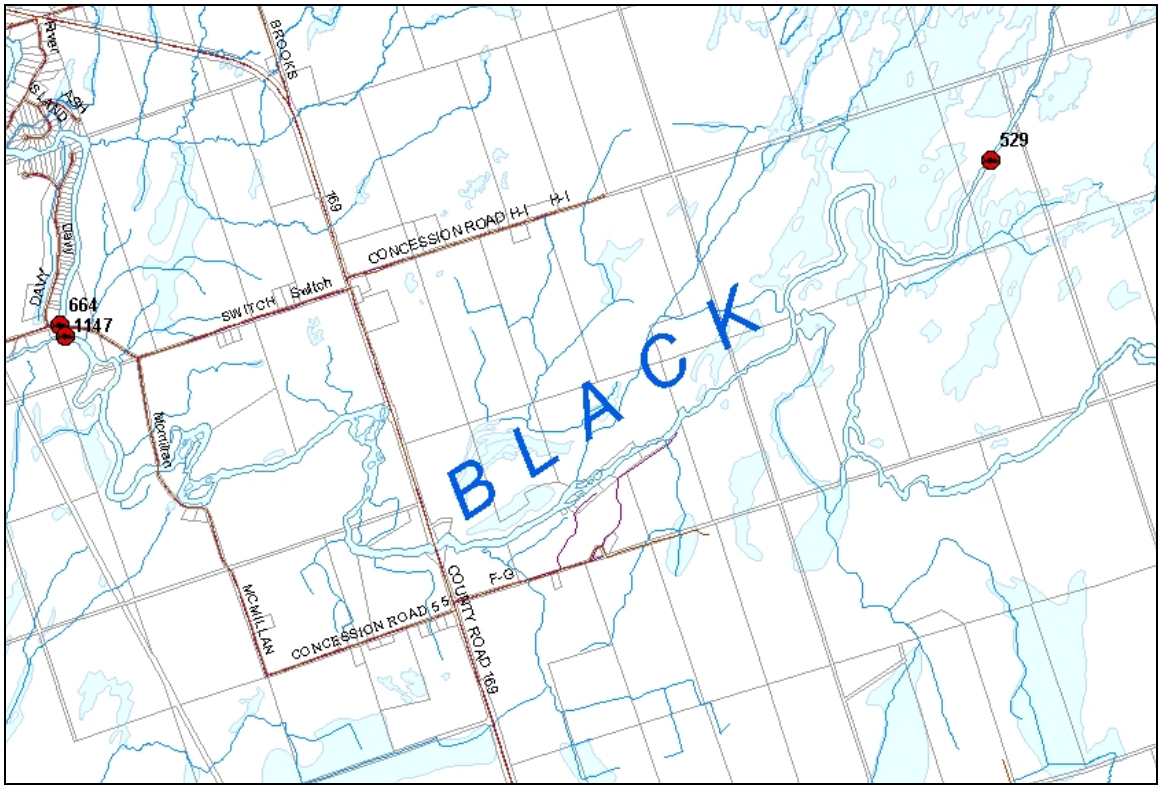
ARA Surveys: 0180-BLA & 0181-BLA
Location: Simcoe County (Ramara twp)
Thermal Regime: Cool Water (Tributary of the Severn River)
ARA Type: Flowing (River-like)
Last Updated: **December 7th, 2009**

Fish Species	Collected	Source	External Reference
S- Northern Pike	1991	Survey	(SCR, 1991)
S- Smallmouth Bass	1991	Survey	(SCR, 1991)
S- Yellow Perch	1991	Survey	(SCR, 1991)
S- Rock Bass	1991	Survey	(SCR, 1991)
S- Muskellunge	1975	Angler	Not Confirmed
S- Brook Trout	1968	Stocked	(SRBR, 1968)
S- Pumpkinseed	1991	Survey	(SCR, 1991)
B- Emerald Shiner	1991	Survey	(SCR, 1991)
B- Golden Shiner	1991	Survey	(SCR, 1991)
B- Bluntnose Minnow	1991	Survey	(SCR, 1991)
B- Johnny Darter	1991	Survey	(SCR, 1991)
B- White Sucker	1991	Survey	(SCR, 1991)
B- Common Shiner	1991	Survey	(SCR, 1991)
B- Northern Redbelly Dace	1991	Survey	(SCR, 1991)

Legend

B- Baitfish
S- Sportfish

Scientific Collection on the Black River- Hwy 169 area



Site:	664
Waterbody:	Black River
Date:	May 17th, 1991
Fish Species:	northern pike, emerald shiner, white sucker, pumpkinseed, golden shiner, common shiner, bluntnose minnow, northern redbelly dace rock bass, smallmouth bass

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Site:	1147
Waterbody:	Black River
Date:	May 18th, 1991
Fish Species:	white sucker, rock bass, smallmouth bass, johnny darter, golden shiner, common shiner, bluntnose minnow, northern redbelly dace

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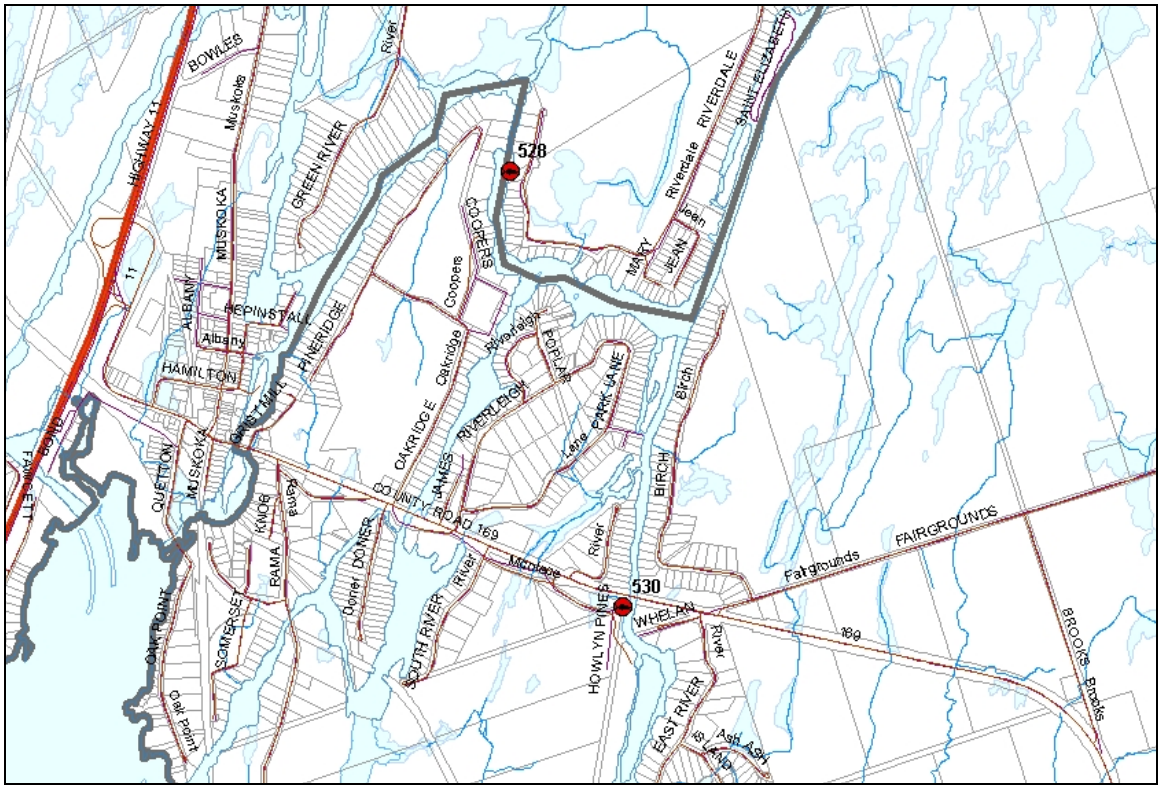
Site:	529
Waterbody:	Black River
Date:	August 13th, 1975
Fish Species:	smallmouth bass, rock bass, pumpkinseed

Scientific Collection on the Black River- Washago area



Site: 528
Waterbody: Black River
Date: August 16th, 1975
Fish Species: rock bass, smallmouth bass, yellow perch

Site: 530
Waterbody: Black River
Date: August 13th, 1975
Fish Species: smallmouth bass, rock bass

Stocking Information

1968 – 2,600 Brook Trout (yearling)

References:

(SRBR, 1968)- Stocking Records for Black River, 1968

(BRSS, 1975)- Black River Stream Survey, Armstrong & Houre, 1975

(SCR, 1991)- Scientific Collection Records, 1991.

Black River Fishery Information
Shirley, Brent (MNR)
to:
Tricia.Radburn
12/07/2009 02:53 PM
Cc:
"Cull, Greg (MNR)"
Show Details

History: This message has been replied to.

Hi Tricia,

Attached is the fishery data for the Black River, adjacent to your study area. Judging from the fish sampled in that reach it appears to be a warmwater fish species community. If you have any questions please feel free to contact me at anytime.

Best Regards,

Brent Shirley
Fish and Wildlife Technician
Midhurst District- Huronia Area

Ministry of Natural Resources
Midhurst District Office
2284 Nursery Road
Midhurst, ON
L0L 1X0
705 725-7541- Phone
705 725-7584- Fax

brent.shirley@ontario.ca
ontario.ca/bearwise

SPR

Indian and Northern Affairs Canada / Affaires indiennes et du Nord Canada

NOV 0 2 2009

R.J. BURNSIDE & ASSOCIATES
GEORGIAN BAY OFFICE

October 26, 2009

Your file / Votre référence

Our file / Notre référence
5010-4-1
CIDM # 295704

Stephen Riley
R.J. Burnside & Associates Limited
3 Ronell Crescent
Collingwood, Ontario
L9Y 4J6

Attention: Stephen Riley

RE: Notice of Study Commencement
Heaveners Bridge No. 000294 Improvements
Class Environmental Assessment Study

Thank you for your correspondence regarding the above mentioned projects. Indian and Northern Affairs Canada will not be providing a review of the proposed project; however, it is important to contact all potentially interested First Nation communities directly to invite them to participate in this review.

To assist with identifying First Nations and other Aboriginal groups within the vicinity of a specific proposed project, INAC Ontario Region - Environment can provide the following information sources:

- The Chiefs of Ontario website (http://www.chiefs-of-ontario.org) provides a directory of contact information for all First Nations and Chiefs, as well as a map of the locations of all Ontario First Nations.

- Natural Resources Canada produced provincial maps, showing all First Nation reserve lands, are available for purchase at: http://cccm.nrcan.gc.ca/english/canada_lands_index_e.asp

- Natural Resources Canada's online *Historical Indian Treaties* map, showing historical First Nation treaties across Canada, is available at: http://atlas.nrcan.gc.ca/site/english/maps/historical/indiantreaties/historicaltreaties

- A search by place name at the Canadian Geographical Names database (http://geonames.nrcan.gc.ca/search/search_e.php) will generate a map which shows any nearby Indian reserve lands in grey.

- The Métis Nation of Ontario (http://www.metisnation.org/) may be able to provide information regarding Métis interests with respect to a particular project.

- The Ontario Federation of Indian Friendship Centres website provides a list of all friendship centres in Ontario, at: http://www.ofifc.org/Centres/OfficeList.asp?Region='ON'

For any enquiries regarding land claims in within the project area, please contact Lynn Bernard, Director General of the Comprehensive Claims Branch at (819) 994-7521; Ralph Brant, Director General of Specific Claims Branch at (819) 994-2323 and Franklin Roy, Director General of Litigation Management and Resolution Branch at (819) 997-3582.

Also, please review the *Environmental Assessment and Federal Coordination Standards* document included with this letter for the revised policy and standards associated with both provincial and federal environmental assessments.

Sincerely,

April Desmoulin
Environment Unit
Indian and Northern Affairs Canada
100 Anemki Drive, Suite 101
Thunder Bay, ON.
P7J 1A5

Canada

ALDERVILLE FIRST NATION
P.O. Box 46
11696 Second Line
Roseneath, Ontario K0K 2X0

December 16, 2009

R. J. Burnside & Associates Limited
292 Speedvale Avenue West,
Unit 7,
Guelph ON N1H 1C4

Att: Ms. Tricia Radburn, B. Sc. (Env), Environmental Planner

Re: Heaveners Bridge No. 000294 Improvements Class EA Study

Dear Ms. Radburn,

Thank you for your consultation request to Alderville First Nation regarding the **Heaveners Bridge No. 000294 Improvements Class EA Study** which is located within our Traditional Territories. We appreciate the fact that Ministry of Transportation recognizes the importance of First Nations Consultation and that your office is conforming to the requirements within the Duty to Consult Process.

As per the Alderville First Nation Consultation Protocol, this project is deemed a level 3, having minimal potential to impact our First Nations' rights, therefore, please keep Alderville apprised of any archaeological findings, and/or environmental impacts should any occur. I can be contacted at the mailing address above or electronically via email, at the email address below.

I would also suggest your contacting the other Williams Treaty First Nations for their input, if you haven't already done so.

In good faith and respect,

Shelley Gray
Consultation Coordinator,
Alderville First Nation

sgray@aldervillefirstnation.ca
Tele: (905) 352-3402
Fax: (905) 352-3242

Beausoleil First Nation
One O-Gema Street
Christian Island, ON
L0K 1C0
705-247-2051 Fax: 705-247-2239 Email: acopegog@chimnissing.ca

December 7, 2009

R.J. Burnside & Associates Limited
292 Speedvale Avenue West, Unit 7
Guelph, Ontario
N1H 1C4

Attention: Tricia Radburn, B.Sc. (Env), Environmental Planner

RE: Notice of Study Commencement
Heaveners Bridge No. 000294 Improvements
Class Environmental Assessment Study
File No. MCG 14560

This to acknowledge receipt of your letter dated November 6, 2009, received on November 12, 2009.

A copy of your letter has been forwarded to Karry Sandy, Barrister/Solicitor, and Coordinator for the Williams Treaty First Nations for further review and response directly to you. Ms. Sandy's address is 8 Creswick Court, Barrie, ON, L4M 2J7 and her telephone number is (705) 792-5087.

We appreciate your taking the time to share this important information with us.

Sincerely

J. Copegog-Marsden

Jennifer Copegog
Lands Manager
Beausoleil First Nation

Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada

www.inac.gc.ca
www.ainc.gc.ca

Your file - Votre référence
30 OCT. 2009
Our file - Notre référence

Tricia Radburn
Environmental Planner
R.J. Burnside & Associates Limited
292 Speedvale Avenue West, Unit 7
GUELPH, ONTARIO N1H 1C4

Dear Ms. Radburn:

Re: Notice of Study Commencement Heaveners Bridge No. 000294 Improvements Class Environmental Assessment Study File no: MCG 14560

I am writing in response to your letter of October 20, 2009 addressed to Marc-André Millaire inquiring about any claims that may affect the subject property. I regret that we were unable to respond earlier.

We can advise that our inventory includes active litigation cases in the vicinity of this property. They are entitled: *Alderville Indian Band, Beausoleil Indian Band, Chippewas of Georgina Island Indian Band, Chippewas of Rama Indian Band, Curve Lake Indian Band, Hiawatha Indian Band, Mississaugas of Scugog Indian Band v. HTMQ and Ontario (Third Party), Federal Court of Canada, filed in Montreal, Court file reference # T-195-92,* and;

Moose Deer Point First Nation, Chief Edward Williams suing on his own behalf and on behalf of the members of Moose Deer Point First Nation v. Her Majesty the Queen in Right of Ontario, Superior Court of Justice File #01-CV-220612CM.

I am unable to comment with respect to the possible effect of these claims as the cases have not yet been adjudicated and any statement regarding the outcome of the litigation would be speculative at this point. It is recommended that you consult legal counsel as to the effect these actions could have on the lands you are concerned with.

.../2

If you are interested in further details about the claims, copies of the pleadings can be obtained from the Court for a fee; please contact the appropriate Court Registry Office and make reference to the court file numbers listed above.

We cannot make any comments regarding claims filed under other departmental policies. For information on any claims you should also contact Don Boswell of the Specific Claims Branch at (819) 953-1940 to inquire about any Specific Claims. To inquire about any current Comprehensive Claims, please contact Nicole Cheechoo of Treaty and Aboriginal Government Central Operations at (819) 997-3499.

If you have any further questions please do not hesitate to contact me at (819) 994-1947.

Sincerely,

Marc-André Millaire
Litigation Team Leader
Eastern Litigation Directorate
Litigation Management and Resolution Branch

Transport Canada / Transports Canada

Programs and Pickering Lands Branch
Environment and Engineering (PHE)
4900 Yonge Street, 4th Floor
Toronto, Ontario M2N 6A5

December 14, 2010

Your file *Votre référence*
MCG 14560

Our file *Notre référence*
NWP 8200-08-6315
NEATS 19240

Dear Matthew Brooks:

Subject: Approval required under paragraph 5(3) of the *Navigable Waters Protection Act*

We wish to inform you that the work described in your *Navigable Waters Protection Act* (*NWPA*) Application will require an approval under paragraph 5(3) of the *NWPA*.

It is our understanding that your proposal consists of:

- *Replacement of existing truss bridge with a full two lane, two span bridge.*

as outlined in the following plans:

- *NWPA Request for Project Review*

Transport Canada (TC) has determined that an environmental assessment (EA) of your proposal will be required pursuant to the *Canadian Environmental Assessment Act* (CEAA) before deciding whether or not to issue an approval. Transport Canada requests that the preparation of this EA be completed by RJ Burnside & Associates on behalf of the County of Simcoe to ensure the timely and efficient delivery of the Act.

To expedite future correspondence or inquiries, please refer to the following EA title and EA file numbers when you contact us.

EA File No.:	**19240**
EA Title:	**Heaveners Bridge Replacement, Black River, Switch Road, Township of Ramara, County of Simcoe**

In addition, please notify us of any potential funding that you may be receiving under the Building Canada Plan as soon as possible.

IMPORTANT NOTE: Information provided by you to Transport Canada, related to the Environmental Assessment for this project will be part of the Canadian Environment Assessment Registry and will be made available to members of the public, if requested. A package with additional information about these requirements is also attached. Please ensure that you review and understand these requirements. Please be aware that release of documents to the public may be part of the CEAA process. Should you provide any documents that contain confidential or sensitive information that you believe could be protected from release to the public, please contact the undersigned to obtain an Exclusion Form. This Form can be used to identify the information to be considered for exclusion from the Canadian Environment Assessment Registry and the rationale for the exclusion.

Should you have any questions or comments, please contact me directly.

Yours truly,

Haya Finan
Environmental Officer
P: (416) 952-0486
F: (416) 952-0514
haya.finan@tc.gc.ca

Attachment(s): CEAA Registry Requirements and Release of Documents

Fisheries and Oceans Canada | Pêches et Océans Canada

102-501 Towerhill Rd.
Peterborough, ON
K9H 7S3

Your file *Votre référence*

October 12, 2010

Our file *Notre référence*
10-HCAA-CA4-01796

County of Simcoe
c/o R.J. Burnside & Associates Ltd
3 Ronell Crescent
Collingwood, Ontario
L9Y 4J6

via e-mail

Attention: Matthew Brooks
Dear Mr. Brooks:

Subject: Proposal not likely to result in impacts to fish and fish habitat provided that additional mitigation measures are applied.

Fisheries and Oceans Canada - Fish Habitat Management Program (DFO) received the proposal on June 10, 2010. Please refer to the file number and title below:

DFO File No.: **10-HCAA-CA4-01796**
Title: **Bridge Replacement, Black River, Township of Ramara**

The proposal has been reviewed to determine whether it is likely to result in impacts to fish and fish habitat which are prohibited by the habitat protection provisions of the *Fisheries Act* or those prohibitions of the *Species at Risk Act* that apply to aquatic species.*

Our review consisted of:

- Letter – County of Simcoe Heaveners Bridge Replacement, prepared by R.J. Burnside & Associates Ltd, received June 10, 2010.
- Drawings - County of Simcoe, Heaveners Bridge Replacement, Contract No. MCG 14560
  - 1 – Plan and Profile
  - 2 – Plan and Profile – Intersection
  - 3 – General Arrangement
  - 4 – Erosion and Sediment Control Plan
  - 5 – Erosion and Sediment Control Details
- Updated Drawing 3 – General Arrangement, prepared by R.J. Burnside A Associates Ltd, received August 31, 2010.

*Those sections most relevant to the review of development proposals include 20, 22, 32 and 35 of the *Fisheries Act* and sections 32, 33 and 58 of the *Species at Risk Act*. For more information please visit www.dfo-mpo.gc.ca.

We understand that the proponent plans to:

- Replace the Heaveners Bridge with a two span structure with a centre pier.
- Coffer dams will be installed to ensure the abutment work is conducted in the dry.
- In-water works will be required to socket the centre pier into the bedrock. A coffer dam will be installed to isolate this work area.

To reduce potential impacts to fish and fish habitat we are recommending the following mitigation measures be included into the proposed plans:

- No in-water work should occur from April 1 to June 30 of any year to protect local fish populations during their spawning and nursery periods.
- 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.
- Sediment and erosion control measures should be implemented prior to work and maintained during the work phase, to prevent entry of sediment into the water.
- Any natural woody material or boulders that need to be moved should be returned to its pre-construction location and configuration.
- Materials to be used for the project should not be taken from the shoreline or below the high water level of any waterbody.
- Fish should be removed from the work area prior to de-watering and released alive immediately downstream.
- Flow dissipaters and/or filter bags, or equivalent, should be placed at water discharge points to prevent erosion and sediment release.
- Silt or debris that has accumulated around the temporary cofferdams should be removed prior to their withdrawal.

Provided that the additional mitigation measures described above are incorporated into the proposed plans, DFO has concluded that the proposal is not likely to result in impacts to fish and fish habitat.

The proponent will not need to obtain a formal approval from DFO in order to proceed with the proposal.

Please ensure that this office is notified at least 10 days before starting the work. A copy of this letter should be kept on site while the work is in progress.

If the plans have changed or if the description of the proposal is incomplete the proponent should contact this office to determine if the advice in this letter still applies.

Please be advised that any impacts to fish and fish habitat which result from a failure to implement the proposal as described or incorporate the additional mitigation measures included in this letter could lead to corrective action such as enforcement.

.../3

If you have any questions please contact the undersigned at (705) 750-4054, by fax at (705) 750-4016, or by email at Jane.Tymoshuk@dfo-mpo.gc.ca.

Yours sincerely,

Jane Tymoshuk
Fish Habitat Biologist