

APPENDIX A: NOTICES AND CONSULTATION

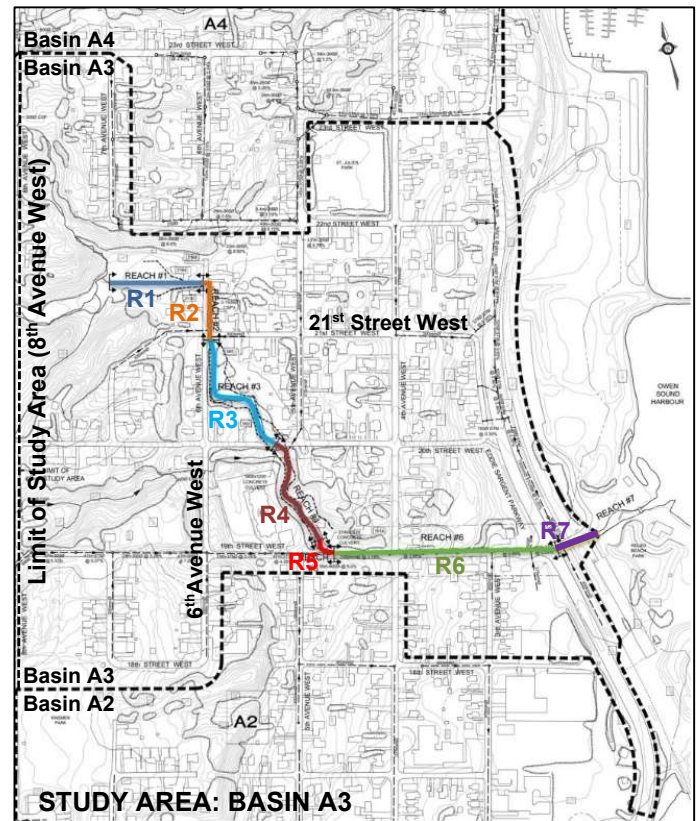
NOTICE OF PROJECT INITIATION AND PUBLIC INFORMATION CENTRE (PIC No.1)

In July 2008, the City of Owen Sound (City) and the Township of Georgian Bluffs completed the 'Brooke Area Stormwater Management Study' which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one of the drainage areas having multiple issues.

The City has initiated a Master Plan study to address the drainage deficiencies identified within the Study Area specific to Brooke Basin A3 (refer to Study Area Map) and to assist in the planning of seven individual projects (or Reaches) toward an appropriate overall drainage strategy. This system wide approach provides for a strategic level of assessment of various options to address better the needs of the overall system and to plan appropriately various drainage undertakings within the Study Area in a comprehensive manner.

The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects for the proposed individual drainage projects.

The Master Plan includes the development and assessment of alternative solutions to address the deficiencies identified within each of the seven Reaches along the outlet route, in a 'top → down' approach, providing a *Recommended Solution* for each Reach. The Master Plan, which identifies several Class EA Schedule 'B' projects within the Study Area, is available on the City's website and at City Hall (808 – 2nd Avenue East) for viewing purposes.



PUBLIC INVOLVEMENT

With the circulation of this *Notice of Project Initiation and Public Information Centre (PIC No.1)* and the Master Plan (Version 1), public, stakeholder, agency and indigenous community comments are invited for incorporation into the planning of this project. Written comments will be received by the Study Team until November 25th, 2022. Contact information is provided below. With the exception of personal information, all comments will become part of the public record. Upon receipt of comments, new information received will be incorporated into the Master Plan, and the assessment of alternatives for each Reach will be updated for approval (or otherwise) by City Council.

City of Owen Sound
Mr. Chris Webb, P.Eng.
808 – 2nd Avenue East
Owen Sound, ON N4K 2H4
cwebb@owensound.ca
Tel: 519-376-4530 (ext. 3300)

GM BluePlan Engineering Limited
Mr. John Slocombe, P.Eng.
1260-2nd Avenue East, Unit 1
Owen Sound, ON N4K 2J3
john.slocombe@gmblueplan.ca
Tel: 519-376-1805

PHASE 2 – PUBLIC INFORMATION CENTRE (PIC)

Public involvement is an important component of this project planning. A Phase 2 PIC has been arranged to review the Master Plan and receive input from the public and is planned to be held:

Date: Tuesday November 8th, 2022

Time: Information session from 4:30 to 5:30 pm, followed by a brief presentation at 5:30 pm (to the Operations Committee)

Location: Owen Sound City Hall (Atrium and Council Chambers – 2nd Floor)
808 - 2nd Avenue East, Owen Sound

This *Notice of Project Initiation and Public Information Centre (PIC No.1)* is advertised in the Owen Sound Sun Times and is also posted on the City's website, where additional information is provided.

This Notice first issued on October 25th, 2022.

All personal information included in a comment or request (i.e., name, address, phone and property location) is collected, under the authority of Section 30 of the Environmental Assessment Act and is maintained for the purpose of creating a record that is available to the general public. As this information is collected for the purpose of a public record, the protection of personal information provided in the Freedom of Information and Protection of Privacy Act (FIPPA) does not apply (s.37). Personal information submitted may become part of a public record that is available to the general public unless it is requested that personal information remain confidential. It is noted that while all comments will become part of the public record, it is GM BluePlan's standard practice to keep personal information confidential, as possible.

CIRCULATION LIST: AGENCIES INDIGENOUS COMMUNITIES
BASIN A3 MASTER PLAN
OWEN SOUND

AGENCY	CONTACT INFORMATION		ADDRESS	INFORMATION SENT											COMMENTS/RESPONSE RECEIVED (DESCRIPTION)	
				DATE SENT or RECEIVED	VIA			DOCUMENT						DESCRIPTION		
					E-mail	Mail	Phone	Notice of Project Initiation & PIC No.1	Master Plan (V1: Oct 2022)	Notice of Project Completion	Master Plan (Version 2-DRAFT)	Master Plan (Version 2)	Other			
MUNICIPAL AGENCIES																
County of Grey	Contact	Randy Scherzer	County of Grey 595 9th Avenue East Owen Sound, ON N4K 3E3	25-Oct-22	S				X	X						
		Planning and Development Department		17-Jan-23	R								X		Comments from the Planning Department and Transportation Services	
	Telephone	(519) 372-0219 (Ext. 1237)		26-May-23	S					X		X				
	E-mail	planning@grey.ca														
	Contact	Pat Hoy														
		Director of Transportation														
	Telephone	(519) 372-0219 (Ext. 1391)														
E-mail	pat.hoy@grey.ca															
City of Owen Sound Planning and Heritage Dept.	Contact	Sabine Robart & Jocelyn Wainwright	City of Owen Sound 808 2nd Avenue East Owen Sound N4K 2H4	11-Jan-23	S					X				X	CHER & MCM	Request for review and comment
	Telephone	519-376-1440													correspondence	
	Fax			3-Mar-23	R									X		Planning and Heritage Comments
	E-mail	srobart@owensound.ca		6-Mar-23	S						X					
		jwainwright@owensound.ca		Apr/May 2023									X			Coordination of review for potential CHVI (culverts)
				26-May-23	S						X		X			
Town of Georgian Bluffs	Contact	Operations Coordinator	Town of Georgian Bluffs 177964 Grey Road 18 R.R.3 Owen Sound N4K 5N5 (Attn. Sulaiman Khan)	25-Oct-22	S				X	X						
	Telephone	(519) 376-2729 (Ext. 304)		26-May-23	S						X		X			
	Fax	(519) 372-1620														
	E-mail	skhan@georgianbluffs.ca														
Grey Sauble Conservation Authority (GSCA)	Contact	Tim Lanthier	Grey Sauble Conservation Authority 237897 Inglis Falls Road, R.R.#4 Owen Sound, ON N4K 5N6	25-Oct-22	S				X	X						
		Chief Administrative Officer		25-Oct-22	R									X		Lidar mapping for the area offered and sent
	Telephone	(519) 376-3076 (Ext. 234)		26-May-23	S						X		X			
	Fax	(519) 371-0437														
	E-mail	t.lanthier@greysauble.on.ca														
	Contact	Mac Plewes														
		Watershed Planner														
	Telephone	(519) 376-3076 (Ext. 230)														
	E-mail	m.plewes@greysauble.on.ca														
Source Water Protection	Contact	Carl Seider, Project Manager	Drinking Water source Protection c/o Grey Sauble Conservation Authority R.R.#4; 237897 Inglis Falls Road Owen Sound, ON N4K 5N6	25-Oct-22	S				X	X				X		Including consultation correspondence
	Telephone	(519) 470-3000 (ext.201)		9-Dec-22	S											Confirmation of Notice receipt request and request for comment.
	Fax	(519) 470-3005														
	E-mail	c.seider@waterprotection.ca		12-Dec-22	R									X	Confirmation	Email confirming applicable SWP policies
	E-mail	mail@waterprotection.ca		26-May-23	S							X		X		

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PROVINCIAL AGENCIES																
Ministry of the Environment, Conservation and Parks Owen Sound Area Office	Contact	Scott Gass	MECP	25-Oct-22	S				X	X						
		Supervisor (Acting)	Owen Sound Area Office	6-Mar-23	S							X				
	Telephone	(519) 373-9853	101 17th Street East, 3rd Floor	26-May-23	S						X		X			
	Fax	(519) 371-2905	Owen Sound, ON N4K 0A5													
	E-mail	john.s.ritchie@ontario.ca	Owen Sound, ON N4K 0A5													
	E-mail	scott.gass@ontario.ca														
Ministry of the Environment, Conservation and Parks Southwestern Region	Contact	Mark Badali, Regional Env. Planner	MECP - Southwest Region	25-Oct-22	S				X	X						Project Information Form included.
		Southwest Region	Environmental Assessment Branch	10-Nov-22	R									X		Comments received
	Telephone	(416) 457-2155	135 St. Clair Avenue W	6-Mar-23	S							X				Draft Master Plan (V2-Draft) for Technical Review
	Fax		Toronto, ON M4V 1P5	7-Mar-23	R									X		Files received, technical review being coordinated.
	Email	mark.badali1@ontario.ca		4-Apr-23	R									X		MECP Comments provided
	Email	eanotification.swregion@ontario.ca		26-May-23	S						X		X	X		Response to MECP comments also provided
Ministry of the Environment, Conservation and Parks Environmental Assessment and Approvals Branch	Contact	Director	MECP	NOC Only												Project Information Form included.
	Telephone	(416) 314-7288	Environmental Approvals Branch	26-May-23	S						X		X			NOC = Notice of Completion Only
	Fax	(416) 314-8452	135 St.Clair Ave W, 1st Floor													
	E-mail	EAASIBgen@ontario.ca	Toronto, ON M4V 1P5													
		mea.notices.eaab@ontario.ca														
Ministry of Natural Resources and Forestry	Contact	Jodi Benvenuti	Ministry on Natural Resources and Forestry	25-Oct-22	S				X	X						
	Telephone	(519) 371-8471	Owen Sound Area Office	26-May-23	S						X		X			
	Fax	(519) 372-3305	1450 7th Avenue East													
		MIDHURSTINFO@ontario.ca														
	E-mail	jodi.benvenuti@ontario.ca	Owen Sound, ON N4K 2Z1													
Ministry of Natural Resources and Forestry	Contact	Ken Mott, District Planner	Ministry on Natural Resources and Forestry	25-Oct-22	S				X	X						Services Grey, Bruce, Simcoe and Dufferin
	Telephone	(705) 725-7546	Midhurst District	26-May-23	S						X		X			
	Fax	(705) 725-7584	2284 Nursery Road													
	E-mail	ken.mott@ontario.ca	Midhurst, ON L9X 1N8													
Ministry of Citizenship & Multiculturalism Heritage Branch Heritage Planning Unit	Contact	Karla Barboza, Team Lead - Heritage	Min. of Citizenship and Multiculturalism	25-Oct-22	S				X	X						
	Telephone	(416) 660-1027	400 University Ave., 5th Floor	16-Dec-22	S									X	Response	Response to comments (letter format)
	Fax		Toronto, ON M7A 2E7	10-Jan-23				Mtg								Discuss next steps/response to comments
	E-mail	karla.barboza@ontario.ca		6-Mar-23	S							X				
Ministry of Citizenship & Multiculturalism Heritage Branch Heritage Planning Unit	Contact	Joseph Harvey, Hertiage Planner	Min. of Citizenship and Multicultrturalism	29-Nov-22	R									X	Comments	Comment regarding the Cultural Heritage reports
	Telephone	(613) 242-3743	400 University Ave., 5th Floor	16-Dec-22	S									X	Response	Response to comments (letter format)
	Fax		Toronto, ON M7A 2E7	10-Jan-23				Mtg								Discuss next steps/response to comments
	E-mail	joseph.harvey@ontario.ca		11-Jan-23	R											Summary of Meeting and Next Steps
				6-Mar-23	S							X				
				3-Apr-23	R									X	MCM Comments	Re. Master Plan (Draft - Version 2)
				6-Apr-23	S									X		Response to MCM comments - proposed revision
				14-Apr-23	R									X		CHER for culverts recommended
				26-May-23	S						X		X	X	Response	ASI retained to determine potential CHVI for culverts.

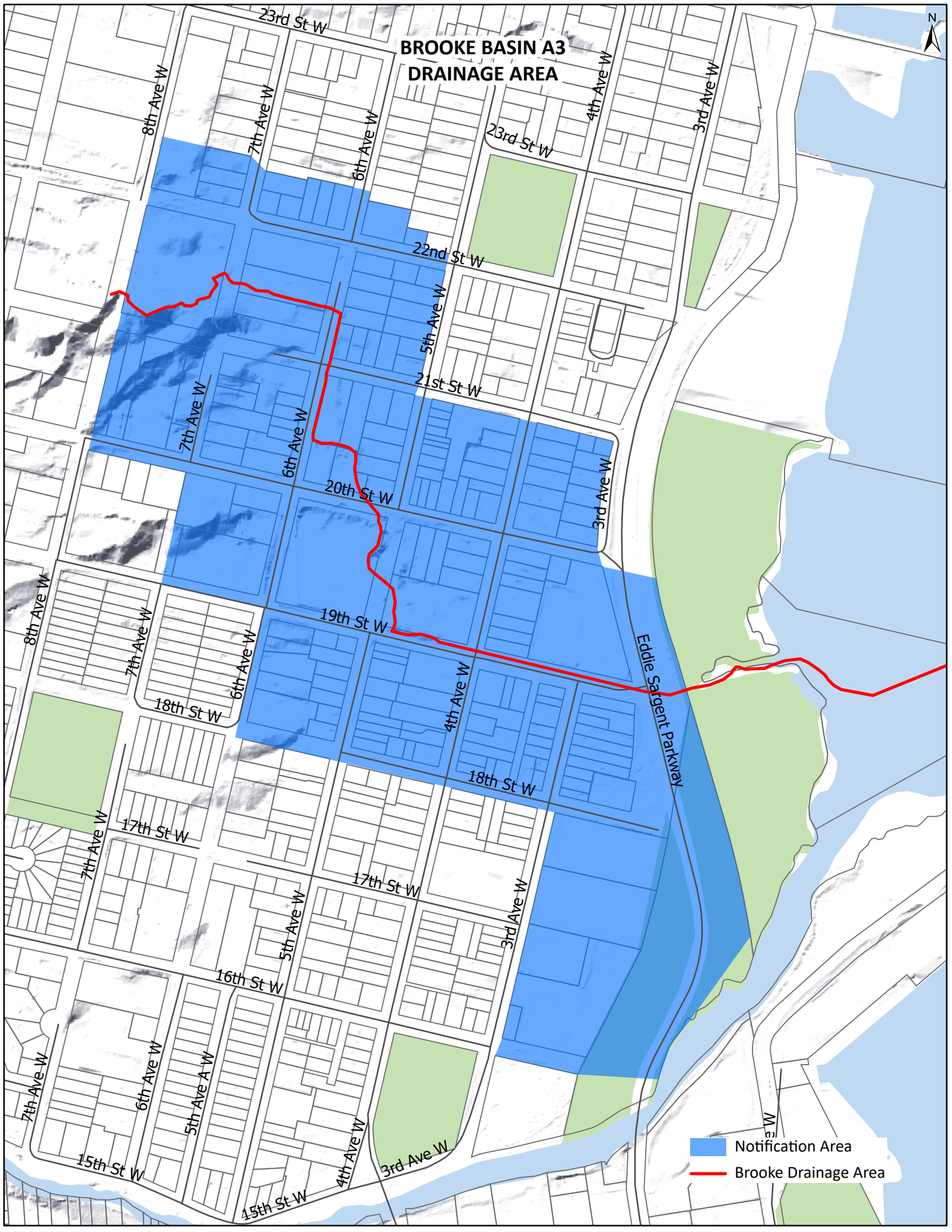
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FEDERAL AGENCIES																
Fisheries and Oceans Canada	Contact	Amanda Conway	Fisheries and Oceans Canada 867Lakeshore Road Burlington, ON L7S 1A1	25-Oct-22	S				X	X						
		Fisheries Protection Biologist														
	Telephone	(905) 336-4588														
	Fax															
	E-mail	Amanda.Conway@dfo-mpo.gc.ca														
Environment and Climate Change Canada	Contact	Environmental Assessment Coordinator	Environment and Climate Change Canada Ontario Region 4905 Dufferin Street Toronto, Ontario M3H 5T4	25-Oct-22	S				X	X						
	Telephone	(416) 739-4734		26-May-23	S						X		X			
	Fax	(416) 739-4776														
	E-mail	ec.ecoactionon.ec@canada.ca														
Indigenous and Northern Affairs Canada	Contact	Environmental Assessment Coordinator	Indigenous and Northern Affairs Ontario Region 25 St Clair Ave East, 8th Floor Toronto, Ontario M4T 1M2	25-Oct-22	S				X	X						
	Telephone	(416) 973-4004		26-May-23	S						X		X			
	Fax	(416) 954-6201														
	E-mail	InfoPubs@aadnc-aandc.gc.ca														
UTILITIES																
Bell Access Network	Contact	Nicolas Kellar	Bell Access Network 870-4th Avenue East Owen Sound, ON N4K 2N7	25-Oct-22	S				X	X						
	Telephone	(519) 371-5450		26-May-23	S						X		X			
	Fax	(519) 376-3563														
	E-mail	nicholas.kellar@bell.ca														
Hydro One Networks Inc.	Contact	Kevin Brackley	Hydro One Networks Inc. 45 Sargeant Drive, Box 6700 Barrie, ON L4N 4V9	25-Oct-22	S				X	X						
	Telephone	(888) 664-9376		26-May-23	S						X		X			
	Fax	(905) 944-3251														
	E-mail	Zone5PlanningDept@HydroOne.com														
	cc.	kevin.brackley@hydroone.com														
	cc.	tammy.scott@hydroone.com														
Union Gas Limited	Contact	Kevin Schimus	Union Gas 603 Krumpf Drive P.O. Box 340 Waterloo, ON N2J 4A4	25-Oct-22	S				X	X						
	Telephone	(519) 377-0214		26-May-23	S						X		X			
	Fax	(519) 376-2591														
	E-mail	kschimus@uniongas.com														
Rogers Cable	Contact	Tony Dominguez	Rogers Cable 1 Sperling Drive Barrie, ON L4M 6B8	25-Oct-22	S				X	X						
	Telephone	(705) 737-4660 ext. 6923		26-May-23	S						X		X			
	Fax	(705) 737-3840														
	E-mail	Tony.Dominguez@rci.rogers.com														

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INDIGENOUS COMMUNITIES - Consultations Completed by the City of Owen Sound (Letters) and E-mail (GMBP)																
Historic Saugeen Metis	Contact	Archie Indoe (President)	Historic Saugeen Metis	25-Oct-22	S	S		X	X							
		George Govier (Consultation Coordinator)	204 High Street	7-Nov-22	R											Acknowledgement of receipt and review
	Telephone	(519) 483-4000	Box 1492	6-Mar-23	S						X					
	Contact	Chris Hatchey	Southampton, ON N0H 2L0	26-May-23	S	S					X		X			
		hsmrlcc@bmts.com														
		hsmasstlrcc@bmts.com														
	E-mail	saugeenmetis@bmts.com														
Saugeen First Nation	Contact	Chief Conrad Ritchie	Saugeen First Nation	25-Oct-22	S	S		X	X							
			Chippewas of Saugeen First Nation No.29	6-Mar-23	S						X					
	Telephone	(519) 797-2781	6493 Highway 21	26-May-23	S	S					X		X			
	Fax	(519) 797-2978	RR#1 Southampton, ON N0H 2L0													
	E-mail	conrad.ritchie@saugeen.org														
Metis Nation of Ontario (MNO) Great Lakes Metis Council Owen Sound Office	Contact	James Wagar	Metis Nation of Ontario	25-Oct-22	S	S		X	X							
		Consultation Assessment Coordinator	Great Lakes Métis Council	6-Mar-23	S							X				
	Telephone	(519) 370-0435	380 – 9 th Street East	26-May-23	S	S					X		X			
	E-mail	jamesw@metisnation.org	Owen Sound, ON N4K 1P1													
	E-mail	consultations@metisnation.org														
Saugeen Ojibway Nation Environmental Office	Contact	Juanita Meekins	Saugeen Ojibway Nation	25-Oct-22	S	S		X	X							
	Telephone	(519) 534-5507 (ext. 226)	Environment Office	6-Mar-23	S							X				
	Fax	(519) 534-5525	25 Maadookii Road	26-May-23	S	S					X		X			
	E-mail	kurt.kivell@saugeenojibwaynation.ca	Neyaashiinigmiing, ON N0H 2T0													
	E-mail	juanita.meekins@saugeenojibwaynation.ca	Neyaashiinigmiing, ON N0H 2T0													
	E-mail	execassist.ri@saugeenojibwaynation.ca														
Chippewas of Nawash Unceded First Nation	Contact	Chief Veronica Smith	Chippewas of Nawash Unceded First Nation	25-Oct-22	S	S		X	X							
		Michael Earl, Senior Administrative Officer	Administration Building	6-Mar-23	S							X				
	Telephone	(519) 534-1689	135 Lakeshore Boulevard	26-May-23	S	S					X		X			
	E-mail	Chief.veronica@nawash.ca	Neyaashiinigmiing, ON N0H 2T0													
	E-mail	sao@nawash.ca														

BROOKE BASIN A3 DRAINAGE AREA



- Notification Area
- Brooke Drainage Area

October 17, 2022

**Re: Master Plan: Brooke Area Basin A3 Outlet
Municipal Class Environmental Assessment
Notice of Project Initiation and Public Information Centre**

Dear Resident,

In July 2008 the City of Owen Sound (City) and the Township of Georgian Bluffs completed the '*Brooke Area Stormwater Management Study*' which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one of the drainage areas having multiple issues.

The City has initiated a Master Plan study to address the drainage deficiencies identified within the Study Area specific to Brooke Basin A3 and to assist in the planning of seven individual projects (or Reaches) toward an appropriate overall drainage strategy. This system-wide approach provides for a strategic level of assessment of various options to better address the needs of the overall system and to plan appropriately various drainage undertakings within the Study Area in a comprehensive manner. The Study Area is shown on the enclosed *Notice of Project Initiation and Public Information Centre*. This Notice is being provided to you as your property has been identified to be within 120 metres of the main drainage corridor of Basin A3.

The Master Plan is available on the City of Owen Sound website and at City Hall (808 – 2nd Avenue East). Comments are invited for incorporation into the planning of this project and will be received by the City until November 25th, 2022.

The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation, and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects for the proposed individual drainage projects.

The Public Information Centre (PIC No.1) will be held on Tuesday, November 8th, 2022, at City Hall (Council Chambers) from 4:30 to 5:30, followed by a formal presentation to the Operations Committee.

Should you have any questions or concerns, please contact the undersigned at cwebb@owensound.ca or 519-376-4440 (ext. 3300).

Yours Truly,



Chris Webb, P.Eng
Manager of Engineering Services

The Office of the Mayor
Ian Boddy
City Hall
808 2nd Avenue East
Owen Sound, ON N4K 2H4



Telephone: 519 376-4440 ext. 1212
Facsimile: 519-376-3579
E-mail: iboddy@owensound.ca
www.owensound.ca

October 17, 2022

Chief Veronica Smith and Michael Earl, Senior Administrative Officer
Chippewas of Nawash Unceded First Nation
Administration Building
135 Lakeshore Boulevard
Neyaashiinigmiing, ON N0H 2T0
sao@nawash.ca

Dear Chief Smith:

Re: Master Plan: Brooke Area Basin A3 Outlet Municipal Class Environmental Assessment
Notice of Project Initiation and Public Information Centre

In July 2008, the City of Owen Sound (City) and the Township of Georgian Bluffs completed the '*Brooke Area Stormwater Management Study*', which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one drainage area with multiple issues.

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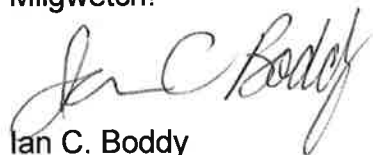
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Committee.

While I am always pleased to speak with you, it may be advantageous to direct any specific questions or concerns to the Manager of Engineering Services, Mr. Chris Webb, at cwebb@owensound.ca or 519-376-4530 (ext.3300).

Miigwetch!

A handwritten signature in black ink, appearing to read "Ian C. Boddy". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Ian C. Boddy
Mayor

c: Members of Council
Tim Simmonds, City Manager

The Office of the Mayor
Ian Boddy
City Hall
808 2nd Avenue East
Owen Sound, ON N4K 2H4



Telephone: 519 376-4440 ext. 1212
Facsimile: 519-376-3579
E-mail: iboddy@owensound.ca
www.owensound.ca

October 17, 2022

Chief Conrad Ritchie
Saugeen First Nation
Chippewas of Saugeen First Nation No.29
6493 Highway 21
RR#1 Southampton, ON N0H 2L0
conrad.ritchie@saugeen.ca

Dear Chief Ritchie:

Re: Master Plan: Brooke Area Basin A3 Outlet Municipal Class Environmental Assessment
Notice of Project Initiation and Public Information Centre

In July 2008, the City of Owen Sound (City) and the Township of Georgian Bluffs completed the 'Brooke Area Stormwater Management Study', which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one drainage area with multiple issues.

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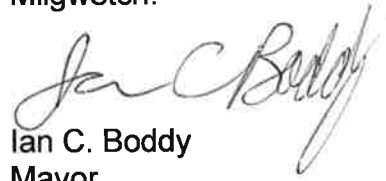
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Miigwetch!

A handwritten signature in dark ink, appearing to read "Ian C. Boddy". The signature is fluid and cursive, with the first name "Ian" and last name "Boddy" clearly distinguishable.

Ian C. Boddy
Mayor

c: Members of Council
Tim Simmonds, City Manager

The Office of the Mayor
Ian Boddy
City Hall
808 2nd Avenue East
Owen Sound, ON N4K 2H4



Telephone: 519 376-4440 ext. 1212
Facsimile: 519-376-3579
E-mail: iboddy@owensound.ca
www.owensound.ca

October 17, 2022

Juanita Meekins
Saugeen Ojibway Nation, Environmental Office
25 Maadookii Subdivision
Neyaashiinigmiing, ON N0H 2T0
juanita.meekins@saugeenojibwaynation.ca; execassist.ri@saugeenojibwaynation.ca

Dear Ms. Meekins:

Re: Master Plan: Brooke Area Basin A3 Outlet Municipal Class Environmental Assessment
Notice of Project Initiation and Public Information Centre

In July 2008, the City of Owen Sound (City) and the Township of Georgian Bluffs completed the 'Brooke Area Stormwater Management Study', which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one drainage area with multiple issues.

The City has initiated a Master Plan study to address the drainage deficiencies identified within the Study Area-specific to Brooke Basin A3 and to assist in planning seven individual projects (or Reaches) toward an appropriate overall drainage strategy. The Study Area is shown on the enclosed *Notice of Project Initiation and Public Information Centre*. This system-wide approach provides for a strategic level of assessment of various options to address the overall system's needs better and to plan appropriately various drainage undertakings within the Study Area in a comprehensive manner.

The Master Plan is available on the City of Owen Sound website and at City Hall (808 – 2nd Avenue East, Owen Sound). Comments are invited for incorporation into the planning of this project and will be received by the City until November 25th, 2022. We will continue to provide correspondence as the project progresses.

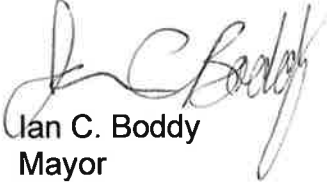
The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects for the proposed individual drainage projects.

The Public Information Centre (PIC No.1) will be held on Tuesday, November 8th, 2022, at City Hall (Council Chambers) from 4:30 to 5:30, followed by a formal presentation to the Operations

Committee.

While I am always pleased to speak with you, it may be advantageous to direct any specific questions or concerns to the Manager of Engineering Services, Mr. Chris Webb, at cwebb@owensound.ca or 519-376-4530 (ext.3300).

Miigwetch!



Ian C. Boddy
Mayor

c: Members of Council
Tim Simmonds, City Manager

The Office of the Mayor
Ian Boddy
City Hall
808 2nd Avenue East
Owen Sound, ON N4K 2H4



Telephone: 519 376-4440 ext. 1212
Facsimile: 519-376-3579
E-mail: iboddy@owensound.ca
www.owensound.ca

October 17, 2022

Métis Nation of Ontario
consultations@metisnation.org
Suite 1100 – 11th Floor
66 Slater Street
Ottawa, ON K1P 5H1

To Whom it May Concern:

Re: Master Plan: Brooke Area Basin A3 Outlet Municipal Class Environmental Assessment
Notice of Project Initiation and Public Information Centre

In July 2008, the City of Owen Sound (City) and the Township of Georgian Bluffs completed the 'Brooke Area Stormwater Management Study', which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one drainage area with multiple issues.

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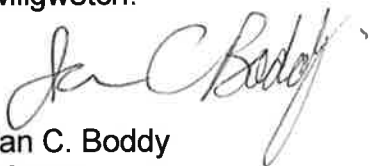
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Miigwetch!

A handwritten signature in dark ink, appearing to read 'Ian C. Boddy', with a stylized flourish at the end.

Ian C. Boddy
Mayor

c: Members of Council
Tim Simmonds, City Manager

The Office of the Mayor
Ian Boddy
City Hall
808 2nd Avenue East
Owen Sound, ON N4K 2H4



Telephone: 519 376-4440 ext. 1212
Facsimile: 519-376-3579
E-mail: iboddy@owensound.ca
www.owensound.ca

October 17, 2022

James Wagar, Consultation Assessment Coordinator
Métis Nation of Ontario - Great Lakes Métis Council
380 – 9th Street East
Owen Sound, ON N4K 1P1
jamesw@metisnation.org; joannem@metisnation.org

Dear Mr. Wagar:

Re: Master Plan: Brooke Area Basin A3 Outlet Municipal Class Environmental Assessment
Notice of Project Initiation and Public Information Centre

In July 2008, the City of Owen Sound (City) and the Township of Georgian Bluffs completed the 'Brooke Area Stormwater Management Study', which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one drainage area with multiple issues.

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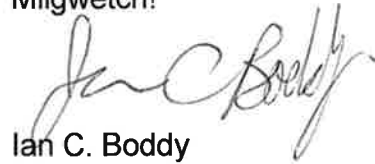
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While I am always pleased to speak with you, it may be advantageous to direct any specific questions or concerns to the Manager of Engineering Services, Mr. Chris Webb, at cwebb@owensound.ca or 519-376-4530 (ext.3300).

Miigwetch!

A handwritten signature in dark ink, appearing to read "Ian C. Boddy". The signature is fluid and cursive, with the first name "Ian" and last name "Boddy" clearly distinguishable.

Ian C. Boddy
Mayor

c: Members of Council
Tim Simmonds, City Manager

The Office of the Mayor
Ian Boddy
City Hall
808 2nd Avenue East
Owen Sound, ON N4K 2H4



Telephone: 519 376-4440 ext. 1212
Facsimile: 519-376-3579
E-mail: iboddy@owensound.ca
www.owensound.ca

October 17, 2022

George Govier, Consultation Coordinator
Historic Saugeen Métis
204 High Street
P.O. Box 1492
Southampton, ON N0H 2L0
hsmasstrcc@bmmts.com; saugeenmetisadmin@bmmts.com

Dear Mr. Govier:

Re: Master Plan: Brooke Area Basin A3 Outlet Municipal Class Environmental Assessment
Notice of Project Initiation and Public Information Centre

In July 2008, the City of Owen Sound (City) and the Township of Georgian Bluffs completed the '*Brooke Area Stormwater Management Study*', which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one drainage area with multiple issues.

The City has initiated a Master Plan study to address the drainage deficiencies identified within the Study Area-specific to Brooke Basin A3 and to assist in planning seven individual projects (or Reaches) toward an appropriate overall drainage strategy. The Study Area is shown on the enclosed *Notice of Project Initiation and Public Information Centre*. This system-wide approach provides for a strategic level of assessment of various options to address the overall system's needs better and to plan appropriately various drainage undertakings within the Study Area in a comprehensive manner.

The Master Plan is available on the City of Owen Sound website and at City Hall (808 – 2nd Avenue East, Owen Sound). Comments are invited for incorporation into the planning of this project and will be received by the City until November 25th, 2022. We will continue to provide correspondence as the project progresses.

The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects for the proposed individual drainage projects.

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Committee.

While I am always pleased to speak with you, it may be advantageous to direct any specific questions or concerns to the Manager of Engineering Services, Mr. Chris Webb, at cwebb@owensound.ca or 519-376-4530 (ext.3300).

Miigwetch!

A handwritten signature in dark ink, appearing to read 'Ian C. Boddy'.

Ian C. Boddy
Mayor

c: Members of Council
Tim Simmonds, City Manager



October 25, 2022

Our File: 216301

Via Email: c.seider@waterprotection.ca

Drinking Water Source Protection
c/o Grey Sauble Conservation Authority
Risk Management Office
237897 Inglis Falls Road, RR#4
Owen Sound, ON N4K 5N6

Attention: Mr. Carl Seider

Re: Source Water Protection Consultation
Master Plan: Brooke Area Basin A3
City of Owen Sound

Dear Carl,

In July 2008, the City of Owen Sound (City) and the Township of Georgian Bluffs completed the 'Brooke Area Stormwater Management Study' which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one of the drainage areas having multiple issues.

The City has initiated a Master Plan study to address the drainage deficiencies identified within the Study Area specific to Brooke Basin A3 and to assist in the planning of seven individual projects (or Reaches) toward an appropriate overall drainage strategy. The Study Area is shown on the attached *Notice of Project Initiation and Public Information Centre*. This system wide approach provides for a strategic level of assessment of various options better to address the needs of the overall system and appropriately to plan various drainage undertakings within the Study Area in a comprehensive manner. The Master Plan is available on the City of Owen Sound website.

The proposed drainage projects will address stormwater management and will include the installation of storm sewer services in some areas and may include watermain and sanitary sewer upgrades, as required. This will result in road works, potentially outside of the existing rights-of-way, including grading and paving, as well as landscaping of adjacent areas. The creation of lands that would include chemical or fuel storage are not included as part of this plan.

Based on our preliminary review, the Study Area is situated within the Grey Sauble Source Protection Area. According to the Saugeen-Grey Sauble-Northern Bruce Peninsula Source Protection Plan, the Study Area is situated within an intake protection zone, with a 2-hour time of travel capture zone (IPZ-2) and a vulnerability score of 4. In addition, the easterly portion of the Study Area is considered to be a highly vulnerable aquifer with a vulnerability score of 6. The Study Area is also within an Events Based Area (EBA) for a fuel spill with a threshold for on-site storage in the range of 25,000L to 50,000L.

We have reviewed the planned project and associated activities in relation to the *Tables for Drinking Water Threats*. Based on the potential scope of the project, it not anticipated that:

- i. Any project activities will be considered a prescribed drinking water threat; or
- ii. Any activities will change or create new vulnerable areas.



As part of the EA process, we are reviewing the project with respect to requirements under the Clean Water Act. At this time, we are requesting confirmation of the above, as well as whether you are aware of any other potential considerations and policies in the Source Protection Plan that may apply to the project.

Should you have any questions, please feel free to contact our office.

Yours truly,

GM BLUEPLAN ENGINEERING LIMITED

Per:

A handwritten signature in blue ink, appearing to read 'Matthew Nelson', with a long, sweeping horizontal line extending to the right.

Matthew Nelson, P.Eng., P.Geo.

AN/md

cc: City of Owen Sound: Chris Webb, via Email – cwebb@owensound.ca
File No. 216301

Drea Nelson - GM BluePlan

From: Drea Nelson - GM BluePlan
Sent: Wednesday, January 11, 2023 10:05 AM
To: srobart@owensound.ca; jwainwright@owensound.ca
Cc: John Slocombe - GM BluePlan; Peter Paquette; 'Chris Webb (cwebb@owensound.ca)'
Subject: 216301 Brooke Basin A3: Cultural Heritage Review
Attachments: 3. CHER_Brooke Basin_Final April 26 2018.pdf; 6. MCM Comments (Nov 29, 2022).pdf; MCM Response to Comments - Basin A3 Master Plan.pdf

Jocelyn and Sabine,

GM BluePlan and Peter Paquette met with the Ministry of Citizenship and Multiculturalism (MCM) yesterday regarding the Brooke Area Basin A3 Master Plan. During the meeting the MCM identified that, although all documentation had been circulated to the City, the documentation had not been directly provided to the City of Owen Sound Planning and Heritage Division for review and comment.

Please find attached the following documentation pertaining to the Cultural Heritage aspects of the Basin A3 project for your review and comment.

- Cultural Heritage Evaluation Report (April 2018) completed by Scarlett Janusas Archaeology Inc.
- MCM Comments regarding the Brooke Area Basin A3 Master Plan dated November 29, 2022
- Response to MCM Comments prepared by GM BluePlan dated December 16th, 2022

It is further noted that during the meeting the MCM identified that the 'Municipal Heritage Bridges Cultural, Heritage and Archaeological Resources Assessment Checklist' (April 2014) had not been completed for the culverts within the Study Area where Schedule B EA processes have been identified. There are five culverts situated within the Study Area. A summary of the Structure ID, general location, approximate year the structure was built and size is provided below.

Structure ID	General Location	Year Built	Dimensions (±)
OS-07	19 th St W, east of 5 th Ave W	1930	2,800 mm x 1,220 mm
OS-08	20 th St W, between 5 th and 6 th Ave W	Not Available	1,800 mm x 1,200 mm
OS-09a	21 st St W, east of 6 th Ave W	1920	2,700 mm x 1,500 mm
OS-9b	Parallel to 6 th Ave W, north of 21 st St W	1971	2 x 1,500 mmø CSP
OS-9c	6 th Ave W, north of 21 st StW	1920	2,700 mm x 1,500 mm

In the Municipal Class EA Manual (2015), a *bridge* is defined as 'a structure that provides a roadway or walkway for the passage of vehicles, pedestrians, cyclists across an obstruction, gap or facility and that is greater than 3 meters in span (CSA-S6-00)'. In other words, any structure having a span of greater than 3 meters that is part of a road which spans a depression or obstacle is considered a bridge, including culverts over 3 meters in diameter/span. Provided that each culvert in the Study Area has a span of less than 3 meters, the 'Municipal Heritage Bridges Cultural Heritage and Archaeological Resources Checklist' does not apply. As such, the culverts within the Study Area are not considered potential Heritage Resources.

Please contact me if you have any questions.

Kind Regards,
Andrea

Andrea Nelson, M.Sc.
Senior Hydrogeologist and

GM BluePlan Engineering Limited
1260-2nd Avenue East | Owen Sound ON N4K 2J3
t: 519.376.1805 ext. 2219 | c: 519.372.4678
andrea.nelson@gmblueplan.ca | www.gmblueplan.ca

Drea Nelson - GM BluePlan

Subject: FW: 216301 City of Owen Sound: Municipal Class EA Master Plan - Updated Version 2 - DRAFT (Basin A3 Drainage Area)

From: Drea Nelson - GM BluePlan

Sent: Monday, March 06, 2023 3:40 PM

To: 'Badali, Mark (MECP)' <mark.badali1@ontario.ca>

Cc: 'Ritchie, John (MECP)' <john.s.ritchie@ontario.ca>; John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Sabine Robart <srobert@owensound.ca>; Harvey, Joseph (MHSTCI) <joseph.harvey@ontario.ca>; Barboza, Karla (MHSTCI) <karla.barboza@ontario.ca>

Subject: RE: 216301 City of Owen Sound: Municipal Class EA Master Plan - Updated Version 2 - DRAFT (Basin A3 Drainage Area)

Mark,

As requested, the Ministry is being provided with a draft copy of the Master Plan report (Version 2) for the Brooke Basin A3 Outlet in the City of Owen Sound, updated to address comments from the public and agencies, prior to the issuing the final Notice of Completion. Please click on the link below to access the file. This link will be valid for 21 days.

[https://sendafile.gmblueplan.ca/uploads/03-06-23_151027_Basin_A3_Master_Plan_\(V2_DRAFT_-_March_6_2023\).zip](https://sendafile.gmblueplan.ca/uploads/03-06-23_151027_Basin_A3_Master_Plan_(V2_DRAFT_-_March_6_2023).zip)

In recognition of comments from the MCM that were addressed within Version 2 of the Master Plan, namely relating to the Cultural Heritage aspects of the project, Master Plan (Version 2 Draft) is also circulated to the MCM, the City of Owen Sound Planning and Heritage Division and Indigenous Communities. We ask that comments be provided by Wednesday April 5th, 2023. This provides for the minimum review period of 30 days to provide comment.

Kind Regards,
Andrea

Andrea Nelson, M.Sc.

Senior Hydrogeologist

GM BluePlan Engineering Limited

1260-2nd Avenue East | Owen Sound ON N4K 2J3

t: 519.376.1805 ext. 2219 | c: 519.372.4678

andrea.nelson@gmblueplan.ca | www.gmblueplan.ca



From: Badali, Mark (MECP) <mark.badali1@ontario.ca>

Sent: Thursday, November 10, 2022 1:43 PM

To: cwebb@owensound.ca

Cc: Ritchie, John (MECP) <john.s.ritchie@ontario.ca>; John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>

Subject: RE: 216301 City of Owen Sound: Municipal Class EA Master Plan - Notice of Project Initiation (Basin A3 Drainage Area)

Good afternoon,

Please find the attached letter of acknowledgement and supporting attachments in response to the Notice of Commencement of the Brooke Area Basin A3 Outlet Master Plan (Approach #2 for

Schedule A/A+ & B projects) being undertaken by the City of Owen Sound under the Municipal Class Environmental Assessment.

Thank you for making the Master Plan (Version 1) available for the ministry's viewing. Subsequent to the below-referenced Public Information Centre and any other further consultation, studies and revisions, please provide the ministry with a draft copy of the Master Plan report prior to the issuing the final Notice of Completion, allowing a minimum of 30 days for the ministry's technical reviewers to provide comments.

Best regards,

Mark Badali ([he/him](#))

Regional Environmental Planner (REP) – Southwest Region
Project Review Unit | Environmental Assessment Branch

Ontario Ministry of the Environment, Conservation and Parks

Mark.Badali1@ontario.ca | (416) 457-2155



From: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>

Sent: October 25, 2022 9:50 AM

To: EA Notices to SWRegion (MECP) <eanotification.swregion@ontario.ca>

Cc: 'Chris Webb' (cwebb@owensound.ca) <cwebb@owensound.ca>; John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>

Subject: 216301 City of Owen Sound: Municipal Class EA Master Plan - Notice of Project Initiation (Basin A3 Drainage Area)

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

Good Morning,

The City of Owen Sound has completed a Master Plan (Version 1) to address drainage deficiencies identified within Brooke Basin A3. The Study Area is shown on the attached Notice. The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects identified. Version 1 of the report discusses the findings, to date. This correspondence is being provided to your agency (i.e. department, ministry, authority or community) as it has been identified to have an area of interest that may be affected by this plan.

The *Notice of Project Initiation and Public Information Centre* is attached and the Master Plan (Version 1), which includes background technical reports, is available for viewing and can be accessed/saved by clicking on the link below. This link will be valid for 21 days.

https://sendafile.gmblueplan.ca/public_uploads/2022-10-25_132856_andrea.nelson.zip

Alternatively, the City of Owen Sound also has the Master Plan posted on their website for viewing purposes.

<https://www.owensound.ca/Modules/News/index.aspx?newsId=83da4f68-93d6-4c0d-98c7-d84783fc81ed>

With the circulation of the *Notice of Project Initiation* and the Master Plan (Version 1), the public, agencies and Indigenous Communities are invited to provide comments. The public comments received, and agency feedback provided, will be incorporated into the review and assessment of the recommendations, for consideration and acceptance (or otherwise) by Council, prior to issuing the *Notice of Completion* for the project process.

Please contact Chris Webb, Manager of Engineering Services, City of Owen Sound at the address listed on the attached Notice, with any questions or comments regarding this project.

Kind Regards,
Andrea Nelson

Andrea Nelson, M.Sc.

Senior Hydrogeologist

GM BluePlan Engineering Limited

1260-2nd Avenue East | Owen Sound ON N4K 2J3

t: 519.376.1805 ext. 2219 | c: 519.372.4678

andrea.nelson@gmblueplan.ca | www.gmblueplan.ca



N O T I C E - This message from GM BluePlan Engineering Limited is intended only for the use of the individual or entity to which it is addressed and may contain information which is privileged, confidential or proprietary. Internet communications cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, arrive late or contain viruses. By communicating with us via e-mail, you accept such risks. When addressed to our clients, any information, drawings, opinions or advice (collectively, "information") contained in this e-mail is subject to the terms and conditions expressed in the governing agreements. Where no such agreement exists, the recipient shall neither rely upon nor disclose to others, such information without our written consent. Unless otherwise agreed, we do not assume any liability with respect to the accuracy or completeness of the information set out in this e-mail. If you have received this message in error, please notify us immediately by return e-mail and delete the message from your computer systems.

Drea Nelson - GM BluePlan

Subject: FW: 216301 City of Owen Sound: Municipal Class EA Master Plan (Basin A3 Drainage Area) [MCM File 0008311] - Response to Comments
Attachments: 216301 Response to MCM and Preliminary Impact Assessment (Revised April 2023).pdf

From: Drea Nelson - GM BluePlan
Sent: Thursday, April 06, 2023 12:10 PM
To: Harvey, Joseph (MCM) <joseph.harvey@ontario.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Sabine Robart <srobart@owensound.ca>; Badali, Mark (MECP) <mark.badali1@ontario.ca>; Barboza, Karla (MCM) <karla.barboza@ontario.ca>; 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>; Peter Paquette <ppaquette@owensound.ca>
Subject: RE: 216301 City of Owen Sound: Municipal Class EA Master Plan (Basin A3 Drainage Area) [MCM File 0008311] - Response to Comments

Joseph,

Please find attached a response to the MCM comments received on April 3, 2023 and a copy of the updated documentation, including the requested checklists. The response to comments has been incorporated into the previous documentation in an effort to ensure that the revisions to the preliminary impact assessment remain under one separate cover. At this time the updates to the documentation are shown in blue text to facilitate your review.

Can you please confirm receipt of this correspondence. If you have any questions, please contact me at 519-372-4678.

Kind Regards,
Andrea

Andrea Nelson, M.Sc.
Senior Hydrogeologist

GM BluePlan Engineering Limited
1260-2nd Avenue East | Owen Sound ON N4K 2J3
t: 519.376.1805 ext. 2219 | c: 519.372.4678
andrea.nelson@gmblueplan.ca | www.gmblueplan.ca



From: Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>
Sent: Monday, April 03, 2023 10:31 AM
To: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Sabine Robart <srobart@owensound.ca>; Badali, Mark (MECP) <Mark.Badali1@ontario.ca>; Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>
Subject: FW: 216301 City of Owen Sound: Municipal Class EA Master Plan - Updated Version 2 - DRAFT (Basin A3 Drainage Area) [MCM File 0008311]

Andrea Nelson,

Please find attached our comments on the revised Master Plan Report prepared for the above referenced undertaking.

Please do not hesitate to contact me with any questions or concerns.

Regards,

Joseph Harvey | Heritage Planner

Citizenship, Inclusion and Heritage Division | Heritage Branch | Heritage Planning Unit

Ministry of Citizenship and Multiculturalism

613.242.3743

Joseph.Harvey@ontario.ca

From: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>

Sent: March 6, 2023 3:40 PM

To: Badali, Mark (MECP) <Mark.Badali1@ontario.ca>

Cc: Ritchie, John (MECP) <John.S.Ritchie@ontario.ca>; John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Sabine Robart <srobart@owensound.ca>; Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>; Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>

Subject: RE: 216301 City of Owen Sound: Municipal Class EA Master Plan - Updated Version 2 - DRAFT (Basin A3 Drainage Area)

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Mark,

As requested, the Ministry is being provided with a draft copy of the Master Plan report (Version 2) for the Brooke Basin A3 Outlet in the City of Owen Sound, updated to address comments from the public and agencies, prior to the issuing the final Notice of Completion. Please click on the link below to access the file. This link will be valid for 21 days.

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Andrea

Andrea Nelson, M.Sc.

Senior Hydrogeologist

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1260-2nd Avenue East | Owen Sound ON N4K 2J3

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andrea.nelson@gmblueplan.ca | www.gmblueplan.ca



From: Badali, Mark (MECP) <mark.badali1@ontario.ca>

Sent: Thursday, November 10, 2022 1:43 PM

To: cwebb@owensound.ca

Cc: Ritchie, John (MECP) <john.s.ritchie@ontario.ca>; John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>;

Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>

Subject: RE: 216301 City of Owen Sound: Municipal Class EA Master Plan - Notice of Project Initiation (Basin A3 Drainage Area)

Good afternoon,

Please find the attached letter of acknowledgement and supporting attachments in response to the Notice of Commencement of the Brooke Area Basin A3 Outlet Master Plan (Approach #2 for Schedule A/A+ & B projects) being undertaken by the City of Owen Sound under the Municipal Class Environmental Assessment.

Thank you for making the Master Plan (Version 1) available for the ministry's viewing. Subsequent to the below-referenced Public Information Centre and any other further consultation, studies and revisions, please provide the ministry with a draft copy of the Master Plan report prior to the issuing the final Notice of Completion, allowing a minimum of 30 days for the ministry's technical reviewers to provide comments.

Best regards,

Mark Badali ([he/him](#))

Regional Environmental Planner (REP) – Southwest Region
Project Review Unit | Environmental Assessment Branch

Ontario Ministry of the Environment, Conservation and Parks

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From: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>

Sent: October 25, 2022 9:50 AM

To: EA Notices to SWRegion (MECP) <eanotification.swregion@ontario.ca>

Cc: 'Chris Webb' (cwebb@owensound.ca) <cwebb@owensound.ca>; John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>

Subject: 216301 City of Owen Sound: Municipal Class EA Master Plan - Notice of Project Initiation (Basin A3 Drainage Area)

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

Good Morning,

The City of Owen Sound has completed a Master Plan (Version 1) to address drainage deficiencies identified within Brooke Basin A3. The Study Area is shown on the attached Notice. The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects identified. Version 1 of the report discusses the findings, to date. This correspondence is being provided to your agency (i.e. department, ministry, authority or community) as it has been identified to have an area of interest that may be affected by this plan.

The *Notice of Project Initiation and Public Information Centre* is attached and the Master Plan (Version 1), which includes background technical reports, is available for viewing and can be accessed/saved by clicking on the link below. This link will be valid for 21 days.

https://sendafile.gmblueplan.ca/public_uploads/2022-10-25_132856_andrea.nelson.zip

Alternatively, the City of Owen Sound also has the Master Plan posted on their website for viewing purposes.
<https://www.owensound.ca/Modules/News/index.aspx?newsId=83da4f68-93d6-4c0d-98c7-d84783fc81ed>

With the circulation of the *Notice of Project Initiation* and the Master Plan (Version 1), the public, agencies and Indigenous Communities are invited to provide comments. The public comments received, and agency feedback provided, will be incorporated into the review and assessment of the recommendations, for consideration and acceptance (or otherwise) by Council, prior to issuing the *Notice of Completion* for the project process.

Please contact Chris Webb, Manager of Engineering Services, City of Owen Sound at the address listed on the attached Notice, with any questions or comments regarding this project.

Kind Regards,
Andrea Nelson

Andrea Nelson, M.Sc.
Senior Hydrogeologist

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December 16, 2022
Revised May 25, 2023
Our File: 216301

Via Email: joseph.harvey@ontario.ca; karla.barboza@ontario.ca

Ministry of Citizenship and Multiculturalism
Heritage Branch
400 University Ave., 5th Floor
Toronto, ON M7A 2E7

Attention: Mr. Joseph Harvey

Re: MCM File No. 0008311
City of Owen Sound
Draft Master Plan Approach 2
Brooke Area Basin A3 Outlet
Response to Comments (Revised)

Dear Joseph Harvey,

As you are aware, the City of Owen Sound has initiated a Master Plan study to address the drainage deficiencies identified within the Study Area specific to Brooke Basin A3 and to assist in the planning of seven individual projects (or Reaches) toward an appropriate overall drainage strategy. Ministry comments pertaining to the Master Plan for Basin A3 (Draft) were received in correspondence dated November 29, 2022, April 3, 2023, and April 14, 2023. Correspondence is provided in Attachment A for ease of reference.

Response to MCM Comments (November 29, 2022)

Comments specific to the Cultural Heritage Evaluation Report (CHER), dated April 2018 and prepared by Scarlett Janusas Archaeology Inc., were provided in a Table that was attached to the Ministry letter dated November 29, 2022. Comments outlined in the MCM Table provided are addressed on a point-by-point basis (referred to as 'Items') in the following Table.

Item	Section	Response to Comment
Master Plan dated October 25, 2022 (Version 1)		
1.	Throughout	The Ministry name has been updated from the Ministry of Heritage, Sport, Tourism, and Culture Industries (MHSTCI) to the Ministry of Citizenship and Multiculturalism (MCM) throughout the Master Plan.
2.	8.1	<p>Section 8.1 addresses the cultural heritage environment.</p> <p><u>Section 8.1.1 Archaeological Resources:</u> As requested, revisions to the Master Plan, based on the MCM comments provided, were made to better align Section 8.1.1 of the Master Plan with the current legislation and terminology.</p> <p><u>Section 8.1.2 Built Heritage Resources and Cultural Heritage Landscape Assessment:</u></p> <ul style="list-style-type: none"> Requested revisions to text within the Master Plan were made to better align Section 8.1.2 of the Master Plan with the current legislation and terminology. An overview of the CHER (April 2018) is provided in this correspondence (below this Table). Based on Comments provided in Item 7, the assessment of potential impacts has been updated to better align with the approach recommended by the MCM (i.e., InfoSheet #5: Heritage Impact Assessments and Conservation Plan). It is proposed that the CHER (April 2018) and this correspondence, which includes a

Item	Section	Response to Comment
		<p>Preliminary Impact Assessment, be included in Appendix E of the Master Plan. Based on the set of Recommended Solutions presented in the Master Plan, it is thought that no further cultural heritage assessments will be needed to support the Master Plan.</p> <ul style="list-style-type: none"> Additional cultural heritage evaluations and heritage impact assessments may be recommended for the undertakings within Reach #6. Known and potential built heritage resources that are identified to fall within the 'vibration zone of influence' may require further assessment. The need for such assessments would be evaluated at the detailed design phase and would be based on the findings of the Geotechnical Investigations that will be completed to support the detailed design. Cultural heritage evaluations would only be recommended for potential built heritage resources identified to better understand the cultural heritage value and interest and the associated level of significance. Heritage impact assessments may be recommended for all known (or confirmed) built heritage resources that are determined to lie within the 'vibration zone of influence'. Accordingly, this commitment has been outlined in Section 20.2 of the Master Plan (i.e., Project Implementation: Mitigations and Commitments) It is recognized that the MCM may have additional comments following the review of the response to MCM comments and updated preliminary impact assessment provided herein.
3.	Assessment of Alternatives (Tables and Text)	As requested, the assessment of alternatives was revisited to incorporate recommendations for the cultural heritage studies completed (e.g., Stage 1AA, CHER and the Preliminary Impact Assessment provided herein). Further, the evaluation of alternative tables (e.g., Tables 10-3, 11-7, 12-2, 13-2 and 16-2) have been updated to more specifically consider impacts to cultural heritage resources. Copies of the updated Tables are enclosed in Attachment B.
4.	Section 20 Mitigations and Commitments	A new section 'Project Implementation: Mitigations and Commitments' (e.g., Section 20.2) was added to the Master Plan. As requested, text addressing compliance with the recommendations of the Stage 1AA report and the cultural heritage studies (e.g., the CHER and the findings presented herein) was added, as per that specified in the MCM comments.
Cultural Heritage Evaluation Report (CHER) (dated April 2018 and prepared by Scarlett Janusas Archaeology Inc.)		
5.	2.0 Assessment Methodology	Municipal and agency consultation is being completed as part of the Environmental Assessment process that is being completed for the Master Plan and associated Schedule B EA's. Consultation efforts, including those completed to date and planned consultations, are described in detail herein (3. Environmental Assessment Process Consultations). A summary table of the consultation efforts completed as part of the Master Plan EA process is enclosed in the Master Plan - Appendix A.
6.	5.0 Identification of Cultural Heritage Resources	<ul style="list-style-type: none"> Section 5.2 Roadscapes: As the roadways reviewed were found to no longer retain any of their original character, as described in this section of the CHER, they were not considered to retain CHVI and inclusion of the evaluation in Appendix B is not considered to be warranted. Section 5.3 Cultural Heritage Landscape identifies the feature (i.e., landscape), the location (i.e., the Study Area) and the heritage status as a potential cultural heritage landscape that was identified via field review/desktop research. This landscape is evaluated in Section 5.3 of the CHER. Based on the findings of the CHER (Section 5.4.3), which state that 'the proposed development project will not negatively impact or further alter the integrity of the landscape, including its viewsheds, and the preliminary impact assessment provided herein, it is thought that no impacts are anticipated, and further review of this potential resource are not warranted. Ultimately, the landscape would remain unchanged. Cultural Heritage Forms (Appendix B) were specifically prepared for all buildings reviewed as part of the assessment, with a detailed evaluation provided in Appendix B, where applicable. For buildings deemed to have known or potential cultural heritage value or interest, a description of the property and its known or potential CHVI was provided in Section 5.1 and a statement was provided in Section 5.4. <p>Within the CHER, built heritage resources are subdivided into two 'categories'. The MCM reviewer has requested clarification of the 'category' description provided in the CHER. Clarification is provided below:</p> <p>Category 1: 'Built Heritage Resources within Study Area Lots' - within the CHER, the 'Study Area' is defined as the watercourse, extending from the top of Reach #1 to the bottom of Reach #6. Where Built Heritage Resources are identified 'within the Study Area Lots', the watercourse extends across part the private property within which the potential built heritage resource lies. However, as</p>

Item	Section	Response to Comment
		specified in the CHER, <i>'the subject buildings are not actually within the confines of the Study Area'</i> (i.e., the watercourse). Category 2: 'Built Heritage Resources Adjacent to the Study Area' – The watercourse does not lie within any part of the property parcels within which the identified built heritage resources are situated.
7.	6.0 Potential Impacts of Undertaking on Cultural Heritage Resources	As requested, an evaluation of anticipated impacts is provided within this correspondence. It is noted that photographs are provided in the CHER and, for built heritage resources, are included on the Cultural Heritage Forms in Appendix B.
8.	7.0 Mitigation Options	GM BluePlan interprets the recurring statement <i>'This is not recommended the built heritage buildings'</i> to be erroneous (i.e., an editorial error). It is our understanding that this was likely intended to state 'This is not recommended for the buildings identified as known or potential built heritage resources'.
9.	New Section Community Engagement	Municipal and agency consultation is being completed as part of the Environmental Assessment process that is being completed for the Master Plan. Consultation efforts, including those completed to date and planned consultations, are described in detail herein (3. Environmental Assessment Process Consultations). A summary table of the consultation efforts completed as part of the Master Plan EA process is enclosed in the Master Plan - Appendix A.
10.	Appendix B	Statements for the resources that meet the criteria and are considered to have CHVI are provided in Section 5.4 of the CHER.

Response to MCM Comments

Culverts

During a meeting with the MCM on January 10th, 2023, it was indicated that the 'Municipal Heritage Bridges Cultural, Heritage and Archaeological Resources Assessment Checklist' (April 2014) had not been completed for the culverts within the Study Area where Schedule B EA processes had been identified. There are five culverts situated within the Study Area. A summary of the Structure ID, general location, approximate year the structure was built, and dimensions is provided below.

Structure ID	General Location	Year Built	Dimensions (±)	Reach (EA Schedule)
OS-07	19 th St W, east of 5 th Ave W	1930	2,740 mm x 1,220 mm	Reach #5 (Schedule B)
OS-08	20 th St W, between 5 th and 6 th Ave W	Not Available	1,800 mm x 1,200 mm	Reach #3 (Culvert to remain)
OS-09a	21 st St W, east of 6 th Ave W	1920	2,700 mm x 1,500 mm	Reach #2 (Schedule B)
OS-9b	Parallel to 6 th Ave W, north of 21 st St W	1971	2 x 1,500 mmØ CSP	Reach #2 (Schedule B)
OS-9c	6 th Ave W, north of 21 st St W	1920	2,700 mm x 1,500 mm	Reach #2 (Schedule B)

In the Municipal Class EA Manual (2015), a bridge is defined as *'a structure that provides a roadway or walkway for the passage of vehicles, pedestrians, cyclists across an obstruction, gap or facility and that is greater than 3 meters in span (CSA-S6-00)'*. In other words, any structure having a span of greater than 3 meters that is part of a road which spans a depression or obstacle is considered a bridge, including culverts over 3 meters in diameter/span. Provided that each culvert in the Study Area has a span of less than 3 meters, the Municipal Engineers Association checklist does not apply. However, as noted in the MCM Comments provided, the MCM checklist *'Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes'* should be completed to help determine whether the culverts are of potential cultural heritage value or interest. Specifically culverts in which replacement is recommended that are within an area (or Reach) subject to a Schedule B EA process.

ASI was retained to determine if the culverts proposed for replacement had the potential for cultural heritage value or interest (CHVI). According to the MCM checklists completed, culvert OS-07 and culvert system OS-9 (i.e., OS-9a, OS-9b and OS-9c) were identified to be of potential cultural heritage value or interest (CHVI) based on their age (i.e., greater than 40 years old). However, based on a background review completed by ASI, including a visual inspection of the culverts (i.e., Structure OS-7 and Culvert System OS-9(a/b/c)) on May 18th, 2023, it was determined that the culverts do not have potential for Cultural Heritage Value or Interest (CHVI). Based on these findings, the completion of a Cultural Heritage Evaluation Report was not recommended. The checklists completed by ASI and a technical memorandum are enclosed in **Attachment C**.

As requested by the reviewer, the completed checklists have been included in the final documentation of the Master Plan by way of this correspondence. In addition, Section 8.1.2 of the Master Plan has been updated to document the conclusions based on the completed checklists.

Archaeological Assessment

As requested, Section 8.1.1 of the Master Plan has been revised to include Section 4.0 and Section 5.0 of the Stage 1 AA Report, word for word, rather than a detailed summary.

1. CULTURAL HERITAGE EVALUATION REPORT

1A. Cultural Heritage Assessment:

The Cultural Heritage Evaluation Report (CHER) included in the Master Plan (Version 1) describes the existing conditions of the Study Area, including (i) the identification of known and potential cultural heritage resources that may be affected by work associated with improvements to the drainage system; (ii) an evaluation of the cultural heritage values of the subject resources and (iii) the identification of the heritage attributes and significance, both in the Cultural Heritage Forms (Appendix B) and in Section 5.4 of the CHER.

Based on MCM comments (Item 2) and comparison to reports prepared for similar projects, it is our understanding that the CHER (April 2018) may be more accurately referred to as a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment.

Based on a review of the CHER, it is our understanding that the report sufficiently addresses the requirements of a Cultural Heritage Report, presenting an inventory of known and potential built heritage resources and cultural heritage landscapes. Consistent with the guidelines, the identification and inventory process involved the following:

- i. Background research and desktop data collection including, but not limited to, mapping and a review of federal, provincial and municipal databases,
- ii. Field review (i.e., site analysis) to confirm the location and condition of known cultural heritage resources identified and to identify potential built heritage resources and cultural heritage landscapes.
- iii. Evaluation of potential cultural heritage value and interest in accordance with O.Reg.9/06 under the Ontario Heritage Act: 'Criteria for Determining Cultural Heritage Value or Interest'.

1B. Preliminary Assessment of Potential Impacts

As recognized by the reviewer's comments (Item 7), the report provides a general understanding the potential impacts of the undertaking on Cultural Heritage Resources. While the report concludes *that 'given the scope of the proposed Brooke Area Basin A3 project it is not anticipated that any of the identified built heritage features, cultural heritage landscape, roadways or viewsheds will be negatively impacted by the development and no mitigation or protective measures are required'*, it is recognized that the impact assessment provided in Section 6.0 of the report may not have sufficiently presented the basis for these findings.

The assessment identified 2 known built heritage resources, 8 potential built heritage resources and a potential cultural heritage landscape. When the locations of the cultural heritage resources identified are compared to the extents of each Reach, potential impacts to built heritage resources are identified for Reach #3 and Reach #6, as demonstrated on the attached Map.

Within the Ministry comments, it is requested that Section 6 include an evaluation of anticipated impacts, including a description of the undertaking and the construction process involved. In addition, the reviewer requests that *'impact assessment information be provided in a table, detailing the heritage resources and potential for direct and indirect impacts (destruction, alteration, shadows, isolation, obstruction, change in land use, as well as a column for discussions)'*. The requested impact assessment for each cultural heritage resource (or resource area – Reach #3 and Reach #6), findings and recommendations are provided herein.

2. PRELIMINARY IMPACT ASSESSMENTS

The impact assessment on cultural heritage resources is based on the impacts defined by InfoSheet #5 'Heritage Impact Assessments and Conservation Plans' (winter 2006) prepared by the MCM. To assess the potential impacts of a proposed project on identified potential or known cultural heritage resources, the identified heritage attributes are considered against the range of possible impacts. Impacts to heritage resources may be direct or indirect, and include:

Direct Impacts:

- i. Destruction of any, or part of any, significant heritage attribute or feature.
- ii. Alteration which means a change in any manner and includes restoration, renovation, repair or disturbance.

Indirect Impacts:

- iii. Shadows created that alter the appearance of a heritage attribute or change the visibility of a natural feature of plantings, such as a garden.
- iv. Isolation of a heritage attribute from its surrounding environment, context, or a significant relationship.
- v. Direct or indirect obstruction of significant views or vistas from, within, or to a built and natural feature.
- vi. A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces.
- vii. Soil disturbance such as a change in grade, or an alteration of the drainage pattern or excavation etc.

Provided that several built heritage resources were identified, as well as a cultural heritage landscape, the potential impacts associated with the recommended solutions are considered. The preliminary overview of potential impacts, when included as part of the Master Plan and associated Schedule B EA project identified, is used to identify where a project alternative may have an impact on an identified heritage attribute, and to outline mitigation measures, which are then considered in the context of the overall EA planning process.

2A. Reach#3: Evaluation of Potential Impacts of the Recommended Solution on Built Heritage Resources

Recommended Solution:

The main component of the Master Plan identified for Reach #3 is to complete gradient improvements and widening of the open channel watercourse between 21st Street West and 20th Street West. The existing culvert across 20th Street East would be maintained. Although this undertaking is subject to additional design development, it is anticipated that the design will include for a revised channel profile within the current alignment, namely improvements to the gradient and banks of the open channel watercourse. More specifically, the relief that exists within the steepest downstream section of Reach #3 would be evenly distributed along its entire length. Additional improvements would include a widening of the cross-sectional geometry to permit a better-defined watercourse and a flood plain with a greater flow area.

Evaluation of Potential Impacts:

As shown on the Map provided, a total of five potential built heritage resources were identified in the vicinity of Reach #3, including Building No.'s 6, 9, 18 19 and 24. These potential built heritage resources (i.e., residential homes) are situated in the range of 20 to 50 meters from the watercourse (i.e., area of the recommended undertakings), at their closest points. Of the 5 property parcels (or lots) that encompass the subject buildings, the watercourse only extends through two properties (in the CHER referred to as '*Built Heritage Resources Within Study Area Lots*'). However, it is noted that where potential built heritage resources are identified within the Study Area Lots, these buildings are not actually within the confines of the Study Area (i.e., the watercourse). The watercourse flows across the northerly property line of Building 6 (i.e., 596 20th St W) and cuts across the southwest corner of the lot associated with Building 9 (i.e., 2006 5th Ave W).

Based on the range of possible impacts outlined in the aforementioned InfoSheet #5, an assessment of the potential impacts of the Recommended Solution for Reach #3 on the potential built heritage resources identified is provided in the following Table 1.

TABLE 1: Reach #3 Impact Assessment – Built Heritage Resources

Potential Impact	Potential Impacts of the Recommended Solution for Reach #3	Impact Potential
Destruction, Removal or Re-location	Buildings will be maintained. As indicated in Section 6.2 of the CHER, direct impacts on the potential built heritage resources are not anticipated.	No
Alteration	Buildings will be maintained. As indicated in Section 6.2 of the CHER, direct impacts on the potential built heritage resources are not anticipated.	No
Shadows	Channel improvements will not result in a significant change in elevation. No shadows will be created.	No
Isolation	The proposed gradient improvements and widening of the open channel watercourse between 21st Street West and 20th Street West will not impact the relationship of the built heritage resources (i.e., residential homes) with the surrounding environment and context.	No
Direct or Indirect Obstruction of Significant Views	No significant impacts to the views are expected. Views from streetscape will not be affected.	No
A Change in Land Use	No Impact. The existing channel alignment will be maintained. Land use will remain the same.	No
Land Disturbance	<p><u>Soil Disturbance:</u></p> <p>The watercourse extends across two of the five lots where potential built heritage resources have been identified, greater than 20 meters from the potential built heritage resources identified. Soil disturbance will not occur in close proximity to the buildings. In addition, the separation distance of greater than 20 meters will provide sufficient buffer to ensure impacts to the built heritage resources are avoided.</p> <p>It is recognized that soil disturbance, associated with improvements to the gradient and banks of the open channel watercourse, will occur. Based on the findings of the Stage 1AA, the watercourse in Reach #3 has been previously dredged. However, the majority of the lands directly adjacent the watercourse remain undeveloped and, as such, retain archaeological potential. The City has committed to completing the Stage 2AA (and any further recommended archaeological assessments) as early as possible during the detailed design and prior to any ground disturbing activities (Master Plan: Section 20.2).</p> <p><u>Vibration:</u> In consideration of the Recommended Solution, which will be limited to works within the open channel watercourse, primarily regrading, the potential for indirect impacts resulting from vibration are considered to be negligible for all potential built heritage resources identified in the vicinity of Reach #3.</p>	No

The Recommended Solution for Reach #3 is not expected to have the potential to result in direct or indirect impacts to the identified potential built heritage resources. Potential impacts to archaeological resources associated with soil disturbance along the banks of the watercourse have already been addressed (i.e., mitigated) through the City's commitment to complete additional archaeological assessment work during the detailed design phase for Reach #3. As direct impacts to the potential built heritage resources are not expected, Cultural Heritage Evaluation Reports for these potential built heritage resources identified are not recommended. Further, based on the assessment of impacts of the undertaking on the built heritage resources proximal to Reach #3, no further heritage assessment work is needed to support the Recommended Solution for Reach #3.

Should future work require an expansion of the Study Area, then a qualified heritage consultant should be retained to complete further review and assessment.

2B. Reach#6: Evaluation of Potential Impacts of the Recommended Solution on Built Heritage Resources

Recommended Solution:

It is anticipated that other existing infrastructure (i.e., sanitary sewer, watermain, road surface) will eventually also require replacement and that extending the service life of the existing storm sewer by rehabilitating the system, via the installation of a new wearing surface (or lining), could provide the City with the opportunity to delay replacement of the system until such a time that the project can be better aligned with other infrastructure needs along this well-travelled road. Rehabilitation of the system is recommended only as a short- to medium-term solution, dependent on the structural integrity of the system. It is anticipated that the existing infrastructure may potentially require replacement in the foreseeable future due to its age. At such a time, it is recommended that the storm sewer system be replaced. Ultimately, the timing for replacement(s) would be subject to condition assessments (i.e., reviews of the structural integrity of the system) and/or other infrastructure needs.

Evaluation of Potential Impacts:

As shown on the Map provided, a total of two known and three potential built heritage resources were identified in the vicinity of Reach #6, including Building No.'s 11 (known), 12, 25 (known), 27 and 29. These built heritage resources (i.e., residential homes or apartments) are situated in the range of 10 to 30 meters from the existing storm sewer system (i.e., area of the proposed undertaking), at their closest points.

Based on the range of possible impacts, an assessment of the potential impacts of the Recommended Solution for Reach #6 on the cultural heritage resources identified is provided in Table 2. It is noted that the focus of the impact assessment provided in Table 2 is for the longer-term recommendation to replace the infrastructure within Reach #6. With respect to the short to medium term Recommended Solution, to rehabilitate the existing storm sewer system on an as-needed basis, no direct or indirect impacts would be expected to occur on the built heritage resources identified.

TABLE 2: Reach #6 Impact Assessment – Built Heritage Resources

Potential Impact	Potential Impacts of the Recommended Solution for Reach #3	Impact Potential
Destruction, Removal or Re-location	Buildings will be maintained. As indicated in Section 6.2 of the CHER, direct impacts on the built heritage resources are not anticipated.	No
Alteration	Buildings will be maintained. As indicated in Section 6.2 of the CHER, direct impacts on the built heritage resources are not anticipated.	No
Shadows	Infrastructure replacement activities will not result in a significant change in elevation. No shadows will be created.	No
Isolation	Isolation typically deals with the relationship between heritage resources and their associated views. Infrastructure replacement activities will occur within the existing right-of-way, along the existing alignment, with the road grade generally remaining the same. As such, the recommended solution to replace the storm sewer system will not result isolation of the built heritage structures identified and will not impact the relationship of the built heritage resources (i.e., buildings) with the surrounding environment and context.	No
Direct or Indirect Obstruction of Significant Views	No impacts to the views are expected. Views from streetscape will not be affected.	No
A Change in Land Use	No Impact. The existing road alignment, within which the storm sewer replacement activities will occur, will be maintained. Land use will remain the same.	No
Land Disturbance	<u>Soil Disturbance:</u> Area previously subject to development disturbance. <u>Vibration:</u> Vibration effects may be experienced where construction activities are expected. Although a detailed design for the replacement of the storm sewer system within this Reach are not available, it is known that construction activities associated with this project may result in potential impacts to nearby built heritage resources. According to a review of reports prepared by others (ASI, 2022), potential vibration impacts are defined as having potential to affect an identified built heritage resource where work is taking place within 50-meters of features on a property. As such, a 50-meter buffer is applied in the absence of a project-specific defined vibration zone of influence based on existing literature and direction provided by the Ministry.	No (Soil Disturbance) Possible (Vibration)

Consistent with the findings presented in Section 6.2 of the CHER, the Recommended Solution for Reach #6 is not expected to have the potential to result in any direct impacts to the identified known or potential built heritage resources. Therefore, Cultural Heritage Evaluation Reports for these built heritage resources proximal to Reach #6 are not recommended.

With respect to indirect impacts, based on existing literature and direction provided by the Ministry, the recommended storm sewer replacement activities within the existing right-of-way may have the potential to result in indirect impacts to the identified known and potential built heritage resources. More specifically, given the proximity of the built heritage resources identified in the vicinity of Reach #6, in the range of 10 to 30 meters, indirect impacts from vibration are possible.

Based on the information available at the time of this assessment, and previous project knowledge, GM BluePlan is of the opinion that vibrations will not likely affect the adjacent properties. As the vibrations will be dependent on the subgrade conditions, identification of any vibration concerns will be identified during the Geotechnical Investigation, which will be completed during the detailed design phase for the project. Should the Geotechnical Investigation identify subgrade conditions which may be sensitive to vibrations, vibration concerns for the adjacent properties would be reassessed at that time. Upon confirmation of the 'vibration zone of influence', a qualified heritage consultant would be retained to complete a Heritage Impact Assessment (HIA) for the buildings within the area of influence. For buildings identified as potential built heritage resources, a Cultural Heritage Evaluation

(CHER) may be recommended to fully understand the cultural heritage value and interest of the resource and the level of its significance to support the HIA.

Although the extent of impacts from vibration is unknown at this time, based on the information presented in InfoSheet #5, mitigation and avoidance measures related to potential vibration effects may include the establishment of buffer zones, site plan controls and other construction planning mechanisms. In addition, a stepwise approach to mitigating potential vibration effects can be implemented, as follows:

1. The development of appropriate construction methodologies in the form of site plan control and site activity monitoring to prevent undue impacts to adjacent built heritage resources identified.
2. If necessary, monitoring for possible construction impacts, specifically vibration, during the construction phase associated with the replacement of the storm-sewers within Reach #6.

Further, should future planning require an expansion of the study area, then a qualified heritage consultant should be retained to confirm (or negate) the impacts of the proposed work on the known and potential built heritage resources.

2C. Cultural Heritage Landscape

As stated in the CHER, *‘although the landscape of the study area has been deemed to have potential cultural heritage value or interest, the proposed improvements to the Basin A3 Outlet will not negatively impact or further alter the integrity of the landscape, including the viewsheds’*. Provided that the set of recommended solutions identified in the Master Plan maintain the existing watercourse within its current alignment, the early settlement themes, settlement patterns and the long-standing relationship between the natural and domestic landscape will not be altered. As such, a Cultural Heritage Evaluation Report to further assess the cultural heritage value and interest of the potential cultural heritage landscape identified and its level of its significance is not recommended.

2D. Summary of Recommendations

Additional cultural heritage evaluations and heritage impact assessments may be recommended for the undertakings within Reach #6. Known and potential built heritage resources that are identified to fall within the ‘vibration zone of influence’ may require further assessment. The need for such assessments would be evaluated at the detailed design phase and would be based on the findings of the Geotechnical Investigations that will be completed to support the detailed design. Cultural heritage evaluations would only be recommended for identified potential built heritage resources to better understand the cultural heritage value and interest and the associated level of significance. Heritage impact assessments may be recommended for all known (or confirmed) built heritage resources that are determined to lie within the ‘vibration zone of influence’. Accordingly, this commitment has been outlined in Section 20.2 of the Master Plan (i.e., Project Implementation: Mitigations and Commitments)

Any recommended technical cultural heritage studies should be completed as early as possible during detailed design prior to the construction of any proposed works completed within Reach #6 as part of this Master Plan.

3. ENVIRONMENTAL ASSESSMENT PROCESS CONSULTATIONS

Community and agency engagement is being completed as part of the Environmental Assessment process that is being completed for the Master Plan. As part of this process, a Notice of Project Initiation was issued on October 25, 2022. The Project Notice was advertised in the Owen Sound Sun Times and was circulated to various agencies and Indigenous Communities. In addition, the project notice was also mailed to property owners within 120 meters of the main drainage corridor. The Notice included information pertaining to how the Master Plan, which included a copy of the CHER, could be viewed (i.e., a link to the report or the City website). Circulation lists summarizing the consultation efforts completed in conjunction with the EA process are provided in Appendix A of

the Master Plan. A final project notice will be issued as part of the Notice of Completion specific to the Master Plan.

To address reviewer comments specific to consultation with indigenous communities and the City of Owen Sound Heritage Committee, it was recommended that the updated Master Plan (i.e., Version 2) be circulated to select agencies and stakeholders (a minimum 30-day review period was provided), as follows:

- Sabine Robart, Manager of Planning and Heritage, City of Owen Sound
- All indigenous communities previously circulated, including SON and HSM
- The Ministry of Citizenship and Multiculturalism
- The Ministry of the Environment, Conservation and Parks (MECP)

The updated Master Plan (Version 2 Draft) was circulated on March 6, 2023, for review and comment. Comments received from the MCM and MECP have been addressed herein and incorporated into the Master Plan (Version 2).

Should you have any questions, please feel free to contact our office.

Yours truly,

GM BLUEPLAN ENGINEERING LIMITED

Per:

A handwritten signature in blue ink that reads 'Andrea Nelson'.

Andrea Nelson, M.Sc.














Senior Hydrogeologist and Environmental Planner

AN/JS

cc: Mark Badali, Environmental Resource Planner and EA Coordinator, MECP
Sabine Robart, City of Owen Sound
Chris Webb, City of Owen Sound
File No. 216301

Built Heritage Resources (and Property Parcels)

Legend

-  CA Boundaries
-  Wet Areas - GSCA
-  Wet Areas - GRCA
-  Water Features
-  Watercourses
-  Floodplains - NVCA
-  Floodplains - GRCA
- Large Scale Roads**
 -  Provincial Highway
 -  County Road
 -  Township Road
 -  Seasonal Road
-  Parcels - Current
-  Grey County Boundary



197 0 98 197 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere
© County of Grey



This map is a user generated static output from an Internet mapping site and is for reference only.
Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

Printed December 13, 2022 THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes

ATTACHMENT A

**Ministry of Citizenship
and Multiculturalism**

Heritage Branch
400 University Ave.
5th Floor
Toronto ON M7A 2E7
Tel.: 613.242.3743

**Ministère des Affaires civiques
et du Multiculturalisme**

Direction du patrimoine
400, av. University
5th étage
Toronto ON M7A 2E7
Tél.: 613.242.3743



November 29, 2022

EMAIL ONLY

John Slocombe, P.Eng.
GM BluePlan Engineering Ltd.
1260-2nd Avenue East, Unit 1
Owen Sound, ON N4K 2J3
john.slocombe@gmblueplan.ca

MCM File : 0008311
Proponent : City of Owen Sound
Subject : Notice of Project Initiation and Public Information Center - Master Plan Approach 2
Project : Master Plan: Brooke Area Basin A3 Outlet
Location : City of Owen Sound, Grey County

Dear John Slocombe:

Thank you for providing us with the Notice of Initiation and making the Master Plan: Brooke Area Basin A3 Outlet (dated October 25, 2022 and prepared by GM BluePlan Engineering) available for our review and comment.

Please note that the responsibility for administration of the *Ontario Heritage Act* and matters related to cultural heritage recently transferred from the Ministry of Tourism, Culture and Sport (MTCS) to the Ministry of Citizenship and Multiculturalism (MCM). Individual staff roles and contact information remain unchanged. Please continue to send any notices, report and/or documentation to both Karla Barboza and myself.

MCM's interest in this master plan relates to it's mandate of conserving Ontario's cultural heritage, which includes archaeological resources, built heritage resources and cultural heritage landscapes.

Master Plan Summary

In July 2008, the City of Owen Sound (City) and the Township of Georgian Bluffs completed the '*Brooke Area Stormwater Management Study*' which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one of the drainage areas having multiple issues.

The City has initiated a Master Plan study to address the drainage deficiencies identified within the Study Area specific to Brooke Basin and to assist in the planning of seven individual projects (or Reaches) toward an appropriate overall drainage strategy. The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects for the proposed individual drainage projects.

Comments

We have reviewed the above referenced Master Plan and have a couple of observations and comments:

- Section 8.1 (Archaeological Assessment) – We can confirm that a Stage 1 archaeological assessment (AA) and report (under Project Information Form (PIF) P027-0331-2018 (included in Appendix E)) has been entered into the Ontario Public Register of Archaeological Reports. The Stage 1 AA recommends that a Stage 2 archaeological assessment be undertaken for portions of the study area.

We recommend that a Stage 2 archaeological assessment and any further recommended archaeological assessments (e.g., Stage 3,4) be undertaken by a licensed archaeologist as early as possible during detailed design and prior to any ground disturbing activities.

Please note archaeological concerns have not been addressed until reports have been entered into the Ontario Public Register of Archaeological Reports where those reports recommend that:

1. the archaeological assessment of the project area is complete and
2. all archaeological sites identified by the assessment are either of no further cultural heritage value or interest (as per Section 48(3) of the *Ontario Heritage Act*) or that mitigation of impacts has been accomplished through excavation or an avoidance and protection strategy.

Approval authorities and proponents typically wait to receive the ministry's review letter for an archaeological assessment report before issuing a decision on the application as it can be used, for example, to document that due diligence has been undertaken.

- Section 8.1.2 (Built Heritage Resource and Cultural Heritage Landscape Assessment) – A Cultural Heritage Evaluation Report (CHER) (dated April, 2018 and prepared by Scarlett Janusas Archaeology Inc.) was undertaken and included as Appendix E. The CHER found that there are no built heritage resources or cultural heritage landscapes within the study area. More detailed comments are in the attached table.

The attached a table includes detailed comments and recommendations to support the documentation of cultural heritage due diligence.

Thank you for consulting MCM on this project. We look forward to reviewing the updated project documentation. Please contact me with any questions or concerns.

Sincerely,

Joseph Harvey
Heritage Planner
joseph.harvey@ontario.ca

Copied to: Chris Webb, City of Owen Sound
Andrea Nelson, Senior Hydrogeologist, GM BluePlan Engineering Limited
Mark Badali, Environmental Resource Planner & EA Coordinator, MECP

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. The Ministry of Citizenship and Multiculturalism (MCM) makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MCM be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with *Ontario Regulation 30/11* the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

Item	Document Section	Given Text	MCM Comments
Master Plan: Brooke Area Basin A3 Outlet (dated October 25, 2022 and prepared by GM BluePlan Engineering)			
1.	Throughout the Documentation	The Ministry of Heritage, Sport, Tourism, and Culture Industries	The ministry name should be revised from 'Ministry of Heritage, Sport, Tourism, and Culture Industries' to the 'Ministry of Citizenship and Multiculturalism (MCM)'.
2.	8.1 (Cultural Environment) p. 10	<p>8.1.1 Archaeological Assessment</p> <p>In consideration of Section 1.3.1 of the 2011 Standards and Guidelines for Consultant Archaeologists (S&G) administered by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), which lists criteria that are indicative of archaeological potential, the study area meets the following criteria indicative of archaeological potential:</p> <p>Water sources (primary, secondary, features indicating past water sources, accessible or inaccessible);</p> <ul style="list-style-type: none"> • Early historic transportation routes; and • Proximity to early settlements. <p>Scarlett Janusas Archaeology Inc. was retained to complete a Stage 1 Archeological Assessment for the area that may be impacted by drainage improvements within Brooke Area Basin A3. A copy of the Report (April 25, 2018) is provided in Appendix E. The assessment was conducted under the S&G. In a letter dated March 11,</p> <p>...</p> <p>8.1.2 Built Heritage Resource and Cultural Heritage Landscape Assessment</p> <p>Scarlett Janusas Archaeology Inc. was retained to conduct a Cultural Heritage Evaluation Report (CHER) for</p>	<p>Section 8.1 address the cultural heritage environment. We recommend the following revisions to align the Master plan section with the current legislation and terminology.</p> <p>8.1 Cultural Environment</p> <p>Cultural heritage resources include archaeological resources, built heritage resources and cultural heritage landscapes.</p> <p>8.1.1 Archaeological Resources</p> <p>In consideration of Section 1.3.1 of the 2011 Standards and Guidelines for Consultant Archaeologists (S&G) administered by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), which lists criteria that are indicative of archaeological potential, the study area meets the following criteria indicative of archaeological potential:</p> <p>Water sources (primary, secondary, features indicating past water sources, accessible or inaccessible);</p> <ul style="list-style-type: none"> • Early historic transportation routes; and • Proximity to early settlements. <p>Scarlett Janusas Archaeology Inc. was retained to complete a Stage 1 Archaeological Assessment (PIF) P027-0331-2018 of the area that may be impacted by drainage improvements within Brooke Area Basin A3. <u>A Stage 1 AA consists of a review of geographic, land use and historical information for the property and the relevant surrounding area, and contacting</u></p>

Item	Document Section	Given Text	MCM Comments
		<p>Brooke Area Basin A3. A copy of the CHER dated April 26, 2018 is included in Appendix E. The assessment encompassed the area along the drainage basin, including the lots adjoining the drainage features, as well as buildings within lots situated adjacent to the drainage basin. ...</p>	<p><u>MCM to find out whether, or not, there are any known archaeological sites on or near the property. Its purpose is to identify areas of archaeological potential and further archaeological assessment (e.g., Stage 2-4) as necessary.</u> A copy of the Report (April 25, 2018) is provided in Appendix E. The assessment was conducted under the S&G. In a letter dated March 11, 2019, MHSTCI (now MCM) confirmed the entry of the Stage 1 Assessment Report into the Ontario Public Register of Archaeological Reports (Appendix E).</p> <p>...</p> <p>[Then include the outcomes and recommendations of the report, as is in the Executive Summary – just copy and paste, don't summarize]</p> <p>A Stage 2 archaeological assessment and any further recommended assessment (e.g., Stage 3 and 4) will be completed as early as possible in the detailed design phase and prior to any ground disturbing activities.</p> <p>8.1.2 Built Heritage Resources and Cultural Heritage Landscapes Assessment</p> <p>A CHER was undertaken on (dated April, 2018 and prepared by Scarlett Janusas Archaeology Inc.). The assessment for this report consisted of data collection, background historic research, review of secondary source material and field review. A total of # (known and potential) cultural heritage landscapes and built heritage resources were identified within or adjacent to project study area.</p>

Item	Document Section	Given Text	MCM Comments
			<p>Cultural Heritage Evaluation Reports were recommended for the # properties that could be directly impacted. All CHERs were undertaken on [date] by [heritage consultant]. The Cultural Heritage Report Existing Conditions and Preliminary Impacts Assessment and CHERs are included in Appendix X.</p> <p>MCM may have additional comments on how due diligence for built heritage resources and cultural heritage landscapes has been addressed once it has reviewed the updated Cultural Heritage Report (See comments below).</p> <p>For Schedule B MCEAs undertaken as part of the master plan, where a known or potential built heritage resource or cultural heritage landscape may be directly and adversely impacted, and where it has not yet been evaluated for Cultural Heritage Value or Interest (CHVI), completion of a Cultural Heritage Evaluation Report (CHER) is required to fully understand its CHVI and level of significance. The CHER must be completed as part of the final EA report. If a potential resource is found to be of CHVI, then a Heritage Impact Assessment (HIA) will need to be undertaken and included in the final Master Plan. Our Ministry's Info Sheet #5: Heritage Impact Assessments and Conservation Plans outlines the scope of HIAs. Please send any CHERs or HIAs to MCM for review and make it available to local organizations or individuals who have expressed interest in review.</p>
3.	9.0 (Alternative Solutions and Assessments) Tables 10-3, 11-7, 12-2, 13,2, and 16-2 p. 15-59	Environment - Cultural Ranking - Net neutral for all alternatives	<p>This evaluation of alternatives should be revisited to incorporate the recommendations from any technical cultural heritage studies undertaken (e.g., Stage 1 AA and revised CHER).</p> <p>Each evaluation of alternatives table should consider impacts to cultural heritage resources. The preferred solution should be established by considering public and review agency input as well as the findings of any technical cultural heritage studies.</p>

Item	Document Section	Given Text	MCM Comments
			<p>We recommend the following revision to better align with the current terminology and our suggested revisions to section 8.1 of the Master Plan.</p> <p>Environment</p> <ul style="list-style-type: none"> - Cultural <p>Subcomponent</p> <ul style="list-style-type: none"> - Impacts to Archaeological Resources - Impacts to Built Heritage Resources and Cultural Heritage Landscapes <p>Ranking</p> <p>— Not neutral for all alternatives</p>
4.	<p>Mitigations and Commitments</p> <p>NEW Section</p>	NA	<p>We recommend including the following text in a new section addressing Mitigations and commitments:</p> <p>Compliance with the recommendations of the Stage 1 archaeological assessment report.</p> <p>A licensed archaeologist should undertake a Stage 2 archaeological assessment and any further recommended archaeological assessments (e.g., Stage 3,4) as early as possible during detailed design and prior to any ground disturbing activities.</p> <p>Where archaeological resources are impacted by EA project work, MCM will be notified by contacting archaeology@ontario.ca. All activities impacting archaeological resources must cease immediately, and a licensed archaeologist is required to carry out an archaeological assessment in accordance with the <i>Ontario Heritage Act</i> and the Standards and Guidelines for Consultant Archaeologists.</p>

Item	Document Section	Given Text	MCM Comments
			<p>If human remains are encountered, all activities must cease immediately, and the local police and coroner must be contacted. In situations where human remains are associated with archaeological resources, MCM should also be notified (at archaeology@ontario.ca) to ensure that the site is not subject to unlicensed alterations which would be a contravention of the <i>Ontario Heritage Act</i>.</p> <p>Any recommended technical cultural heritage studies should be completed as early as possible during detailed design prior to the construction of any proposed works included as part of this Master Plan.</p> <p>[Insert the recommendations and mitigation measures provided by the Cultural Heritage Report – just copy and paste, don't summarize]</p>
Cultural Heritage Evaluation Report (CHER) (dated April, 2018 and prepared by Scarlett Janusas Archaeology Inc.)			
5.	2.0 (Assessment Methodology) p. 10	<p>A field visit was conducted of the Study Area and adjacent properties on February 22, 2018 under sunny skies with a high of -3 degrees C.</p> <p>A photographic record was maintained of the Study Area, the surrounding landscape, and any properties located within, or adjacent to, the Study Area. Three forms were completed on site: 1) photographic log; 2) Canadian Inventory of Historic Building form; and, 3) Inventory for Roadscapes and Cultural Landscapes form. The product of these field notes and field forms assisted in the evaluation process of the cultural and built heritage of the area.</p>	This section should articulate municipal and agency consultation, including consultations with the planning staff and the Owen Sound Heritage Committee.
6.	5.0 (Identification of Built Heritage Resources & Cultural Heritage Landscapes)	<ul style="list-style-type: none"> 5.1 Built Heritage Resources 5.2 Roadscapes 5.3 Cultural Heritage Landscapes 5.4 Summary of Cultural Heritage Values 	<p>MCM recommends the following revisions to section 5.0:</p> <ul style="list-style-type: none"> Section 5.2 (Roadscapes) – Roadscapes should be evaluated as cultural heritage landscapes and included in Appendix B.

Item	Document Section	Given Text	MCM Comments
	p. 41-52	<ul style="list-style-type: none"> 5.4.1 Built Heritage Resources within Lots of the Study Area 5.4.2 Built Heritage Resources in Lots Adjacent to the Study Area 5.4.3 Cultural Heritage Landscape 	<ul style="list-style-type: none"> Section 5.3 – states that the study area is considered a cultural heritage landscape. This resource should be included and evaluated in Appendix B. Section 5.4 (Summary of Cultural Heritage Value) – Please delete the reiteration of Ontario regulation 9/06, it has been discussed in section 2.0 (Methodology) and is redundant. Section 5.4.1 Built Heritage Resources within Lots of the Study Area – MCM would like some clarification as to what information this relates to. If this information is describing the Cultural Heritage Value of identified resources this information should be included in Appendix B and associated with the relevant resource.
7.	6.0 (Potential Impacts of Undertaking on Cultural Heritage Resources) p. 53	<p>6.1 Extent of Development The proponent retained the services of Scarlett Janusas Archaeology Inc. (SJA) to conduct a cultural heritage resource evaluation report for the Brooke Area Basin A3 (Figure 2). A description of the project is presented in Section 1.1.</p> <p>6.2 Impact on Built Heritage The proposed Brooke Area Basin A3 development will not have a direct impact on the built heritage resources located within (or adjacent to) the Study Area.</p> <p>6.3 Impact on Cultural Heritage Landscapes The landscape associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development.</p> <p>6.4 Impact on Current Viewsheds The current viewsheds associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development.</p>	MTCS recommends this section to include an evaluation of anticipated impacts. This should include a description of the undertaking and the construction processes involved. It would be helpful to see impact assessment information in a table, detailing the heritage resources and potential for direct and indirect impacts (destruction, alteration, shadows, isolation, obstruction, change in land use) as well as a column for discussions and a photograph of the property.

Item	Document Section	Given Text	MCM Comments
8.	7.0 (Mitigation Options) p. 54	<p>Mitigation options are based solely on heritage values.</p> <p>The majority of the built heritage (structures) adjacent to the Study Area have been evaluated as having no cultural heritage value and interest. There are no heritage structures located directly within the Study Area.</p> <p>Options for managing the built heritage features can be broad, and include:</p> <ol style="list-style-type: none"> 1. Do Nothing: This is recommended for all of the identified heritage buildings. 2. ... 	<p>Please clarify this recurring statement, "This is not recommended the built heritage buildings."</p>
9.	NEW Section Community engagement	NA	<p>Key components of an environmental assessment and also part of heritage conservation framework include consultation with the public, please clarify whether this has been done as part of this report or it would be done during the environmental assessment process. Community engagement protects the public interest in identifying and protecting cultural heritage resources, while helping to ensure that any concerns are identified and appropriately addressed.</p> <p>The revised report should be submitted for review to groups and individuals that may have an interest in the future of this bridge, e.g. Owen Sound Heritage committee. MCM may have additional comments once the report is revised.</p>
10	Appendix B p. 76		<p>The description of resources meeting the criteria will need to be expanded upon. Details as to why a resource does not meet the criteria will be helpful. Resources that do meet the criteria and are considered to have cultural heritage value will need a statement. For further information on preparing a Statement of Cultural Heritage Value refer to the Ontario Heritage Toolkit.</p>

**Ministry of Citizenship
and Multiculturalism**

Heritage Planning Unit
Heritage Branch
Citizenship, Inclusion and
Heritage Division
5th Flr, 400 University Ave
Tel.: 613.242.3743

**Ministère des Affaires civiques
et du Multiculturalisme**

Unité de la planification relative au
patrimoine
Direction du patrimoine
Division des affaires civiques, de
l'inclusion et du patrimoine
Tél.: 613.242.3743



April 3, 2023

EMAIL ONLY

Andrea Nelson, M.Sc.
GM BluePlan Engineering Ltd.
1260-2nd Avenue East, Unit 1
Owen Sound, ON N4K 2J3
andrea.nelson@gmblueplan.ca

MCM File : 0008311
Proponent : City of Owen Sound
Subject : Draft Master Plan Report - Approach 2
Project : Master Plan: Brooke Area Basin A3 Outlet
Location : City of Owen Sound, Grey County

Dear Andrea Nelson:

Thank you for making the draft copy of the Master Plan Report (Version 2) for the Brooke Basin A3 Outlet (dated March 6, 2023 and prepared by GM BluePlan Engineering) available for our review and comment.

Comments

We provided comments on a previous draft version of the Master plan Report (dated October 25, 2022) and note that many of our comments were addressed in the revised draft Master Plan. However, we have the following comments:

Culverts

Section 8.1.2 (Municipal Heritage Bridges Checklist) (page 19 PDF) of the Master Plan indicates that the culverts were screened out as they have a span under 3 metres. If the Municipal Engineers Association (MEA) bridge checklist (104) is not applicable, then the proponent should complete the [Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes](#) to help determine whether the two culverts are of potential cultural heritage value or interest (CHVI).

If either of the culverts is determined to be of potential CHVI, then the preliminary impact assessment included in the CHER should be revised to include an assessment of impacts for each culvert. If it is unlikely that the culverts are of potential (CHVI), or no impacts are anticipated then the completed checklists should be included as part of the Master Plan final documentation. Section 8.1.2 (Built Heritage Resources and Cultural Heritage Landscape Assessment) should document the conclusion based on the completed checklist.

If the culverts are found to be of CHVI, the evaluation of alternatives (Section 9.0) will need to be revised to reflect the results of the recommended preliminary impact assessment.

Archaeological Assessment

Section 8.1.1 (Archaeological Assessment) – The outcomes and recommendations of the Stage 1 AA report need to be included (copy and paste, don't summarize).

Thank you for the opportunity to review the revised draft Master Plan. We look forward to reviewing the updated project documentation. Please contact me with any questions or concerns.

Sincerely,

Joseph Harvey
Heritage Planner
joseph.harvey@ontario.ca

Copied to: John Slocombe, GM BluePlan
Sabine Robart, City of Owen Sound
Mark Badali, Environmental Resource Planner & EA Coordinator, MECF

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. The Ministry of Citizenship and Multiculturalism (MCM) makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MCM be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act, 2002*, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with *Ontario Regulation 30/11* the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

Drea Nelson - GM BluePlan

Subject: FW: 216301 City of Owen Sound: Municipal Class EA Master Plan (Basin A3 Drainage Area) [MCM File 0008311] - Response to Comments
Attachments: 216301 Response to MCM and Preliminary Impact Assessment (Revised April 2023).pdf

From: Harvey, Joseph (MCM) <joseph.harvey@ontario.ca>
Sent: Friday, April 14, 2023 1:49 PM
To: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Sabine Robart <srobart@owensound.ca>; Badali, Mark (MECP) <mark.badali1@ontario.ca>; Barboza, Karla (MCM) <karla.barboza@ontario.ca>; 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>; Peter Paquette <ppaquette@owensound.ca>
Subject: FW: 216301 City of Owen Sound: Municipal Class EA Master Plan (Basin A3 Drainage Area) [MCM File 0008311] - Response to Comments

Hello Andrea,

Thanks for providing us with the updated documentation.

We continue to recommend that a cultural heritage evaluation is prepared for the culverts as they are of potential cultural heritage value or interest (CHVI). However, if you have consulted with the City of Owen Sound's Planning and Heritage Division and its municipal heritage committee and they have accepted your decision to not evaluate the culverts, this should be documented in the final Master Plan.

If you have not already done so, a copy of the updated preliminary impact assessment should be shared with the City's Planning and Heritage Division and municipal heritage committee for review and comment. Any feedback should be incorporated into the preliminary impact assessment and as well as the final Master Plan.

We look forward to receiving the notice of completion and reviewing the final Master Plan.

Please do not hesitate to reach out if you have any additional questions or concerns.

Thanks,

Joseph Harvey | Heritage Planner
Citizenship, Inclusion and Heritage Division | Heritage Branch | Heritage Planning Unit
Ministry of Citizenship and Multiculturalism
613.242.3743
Joseph.Harvey@ontario.ca

From: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Sent: April 6, 2023 12:10 PM
To: Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Sabine Robart <srobart@owensound.ca>; Badali, Mark (MECP) <Mark.Badali1@ontario.ca>; Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>; 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>; Peter Paquette <ppaquette@owensound.ca>
Subject: RE: 216301 City of Owen Sound: Municipal Class EA Master Plan (Basin A3 Drainage Area) [MCM File 0008311] - Response to Comments

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

Joseph,

Please find attached a response to the MCM comments received on April 3, 2023 and a copy of the updated documentation, including the requested checklists. The response to comments has been incorporated into the previous documentation in an effort to ensure that the revisions to the preliminary impact assessment remain under one separate cover. At this time the updates to the documentation are shown in blue text to facilitate your review.

Can you please confirm receipt of this correspondence. If you have any questions, please contact me at 519-372-4678.

Kind Regards,
Andrea

Andrea Nelson, M.Sc.
Senior Hydrogeologist

GM BluePlan Engineering Limited
1260-2nd Avenue East | Owen Sound ON N4K 2J3
t: 519.376.1805 ext. 2219 | c: 519.372.4678
andrea.nelson@gmblueplan.ca | www.gmblueplan.ca



From: Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>
Sent: Monday, April 03, 2023 10:31 AM
To: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Sabine Robart <srobart@owensound.ca>; Badali, Mark (MECP) <Mark.Badali1@ontario.ca>; Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>
Subject: FW: 216301 City of Owen Sound: Municipal Class EA Master Plan - Updated Version 2 - DRAFT (Basin A3 Drainage Area) [MCM File 0008311]

Andrea Nelson,

Please find attached our comments on the revised Master Plan Report prepared for the above referenced undertaking.

Please do not hesitate to contact me with any questions or concerns.

Regards,

Joseph Harvey | Heritage Planner
Citizenship, Inclusion and Heritage Division | Heritage Branch | Heritage Planning Unit
Ministry of Citizenship and Multiculturalism
613.242.3743
Joseph.Harvey@ontario.ca

From: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Sent: March 6, 2023 3:40 PM
To: Badali, Mark (MECP) <Mark.Badali1@ontario.ca>
Cc: Ritchie, John (MECP) <John.S.Ritchie@ontario.ca>; John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>;

ATTACHMENT B

TABLE 10-3: ASSESSMENT OF STORMWATER MANAGEMENT ALTERNATIVES
REACH #1: Open Channel - East of 8th Avenue West to 6th Avenue West

ENVIRONMENT	ALTERNATIVE 1-1 Do Nothing	ALTERNATIVE 1-2 Increase Open Channel Capacity	ALTERNATIVE 1-3 Diversion of 7th Avenue West Storm Sewer Outlet Flows	ALTERNATIVE 1-4 Construct a SWM Pond
CULTURAL				
1. Impacts to Archaeological Resources	No ground disturbing activities would occur.	Capacity increase would require regrading and/or widening of the existing open channel. Ground disturbing activities would occur in an area where archaeological potential has been identified. Stage 2AA recommended.	No impact. Storm sewer along 7th Street would be constructed in the existing right-of-way where ground disturbing activities have previously occurred.	The construction of a SWM Pond would result in ground disturbing activities within in an area where archaeological potential has been identified. Stage 2AA recommended.
2. Impacts to Cultural Heritage Resources	Net Neutral: No built heritage resources (known or potential) identified within 50 meters.			
Ranking	Favoured		(Previously Addressed)	
SOCIAL				
1. Impacts to Private Property (i.e. flooding, access, land use)	The design of the previously constructed Carney Street SWM Pond is expected to improve drainage conditions for a range of design flows. Therefore no nuisance flooding issues to adjacent properties are anticipated.			
2. Aesthetic Impacts of Drainage Improvements	No impact: maintains existing condition.	Would increase the watercourse area and require significant re-construction efforts. The larger drainage channel would change the overall aesthetics.	No impact: maintains existing condition.	The significant land area required for the pond and construction efforts would impact the existing landscape.
3. Land Acquisition (including easements)	The City may consider the establishment of an easement within this 'natural watercourse', if and when required.	The area required would extend beyond the current watercourse. The City would need to establish an easement for construction and maintenance of the open channel.	Intended to divert flows. Therefore, no land acquisition would be required.	Land acquisition would be required. This may not be supported by the landowners.
Ranking	Favoured		(Previously Addressed)	
NATURAL				
1. Natural Heritage Features & Species at Risk	No impact: maintains existing condition.	Construction required to increase the capacity of the existing drainage system would impact the identified Fish Habitat.	Diversion via storm sewer system would eliminate impacts to existing drainage swale (beyond limit of Reach #1).	Required land area would likely encompass 'significant woodlands'.
2. Storm Water Treatment: Runoff Water Quality	Water quality within the drainage channel can be addressed, as required.	Water quality within the drainage channel could be addressed as part of the design, potentially using the treatment train approach.	Water quality treatment could be addressed as part of the storm sewer system design.	Water quality treatment could be incorporated into the design of a stormwater management pond.
Ranking	Favoured		(Previously Addressed)	
TECHNICAL				
1. Technical Considerations (i.e. Ability to Satisfy Required Capacity)	Subsequent to the completion of the Carney Lane SWM Pond upstream of Reach #1, the channel capacity requirements appear to be sufficient under existing conditions.	Provide that there is a lack of sufficient grade, a considerable land area would be required. Designing a channel to convey additional flows is not considered a viable solution.	A design and plan to divert drainage from the sewer outlet at 7th Avenue West has already been proposed. Construction is pending.	Could be designed to manage stormwater quantity and stormwater quality requirements.
2. Efficacy of Design	Existing natural watercourse sufficiently accommodates the design flows.	Increasing the open channel capacity would require a considerable re-grading effort and/or would be very land-intensive.	A design and plan to divert drainage from the sewer outlet at 7th Avenue West has already been proposed. Construction is pending.	A large storage volume would be required to yield a relatively minor reduction in the required downstream storm drainage infrastructure required to convey the design flow.
3. Ability to Address Identified Drainage Issues	Drainage issues identified have essentially been previously resolved, as follows: A. Carney Lane SWM Pond upstream of Reach #1 has reduced the channel capacity requirements. B. Field investigations noted that the present risk of sedimentation may not be as prevalent as identified in the BASWM Study. C. As per a previous design solution, the storm sewer at 7th Avenue/22nd Street West has been designed to extend southerly to a planned culvert reconstruction on 6th Avenue West. It is recommended that this be implemented concurrently with the Preferred Alternative for Reach #2.			
4. Timing	Maintains existing condition. No further work required.	Establishment of an easement would need to be arranged and administered by the City, adding time (and costs) to the project.	It is recommended that this diversion opportunity be implemented concurrently with the Preferred Alternative for Reach #2.	Pre-purchase of lands by the City required for the Pond would add time (and cost) to the project.
Ranking	Favoured		(Previously Addressed)	
ECONOMIC				
1. Relative Construction Costs	Maintains existing condition	\$\$	\$	\$\$\$
2. Operation & Maintenance	Existing watercourse can generally be considered self-cleaning.	Routine maintenance along the open channel would likely be required.	Flows would be diverted through storm sewer system. Limited operation and maintenance costs.	Stormwater management pond would require routine maintenance for ongoing operations.
Ranking	Favoured		(Previously Addressed)	
OVERALL RANKING	Recommended		(Previously Addressed)	
Relative Ranking of Environments:				
		Favoured and/or Positive Impact	Net Neutral	Least Favoured / Negative Impact

Environmental Assessment Schedule for Recommended Solution: Not Applicable

TABLE 11-7: ASSESSMENT OF STORMWATER MANAGEMENT ALTERNATIVES
REACH #2: Culvert - 6th Avenue West and 21st Street West

ENVIRONMENT	ALTERNATIVE 2-1 Do Nothing	ALTERNATIVE 2-2 Repair Existing System	ALTERNATIVE 2-3A Remove and Replace Existing System
CULTURAL			
1. Impacts to Archaeological Resources	No ground disturbing activities would occur.	Repairs would remain in an area identified to have deep and extensive development disturbance.	Archaeological potential is limited to the west side of the road. Ground disturbing activities will occur on the east side of the road. Construction will not likely impact the areas delineated in the Stage 1AA as areas of archaeological potential.
2. Impacts to Cultural Heritage Resources	Net Neutral: No built heritage resources (known or potential) identified within 50 meters.		
Ranking	Net neutral for all alternatives considered.		
SOCIAL			
1. Impacts to Private Property (i.e. flooding, access, land use)	Eventual structural failure/collapse would eliminate access to five (5) properties to the north of the water crossing.	Access to the properties to the north of the crossing would be maintained. More frequent works and construction efforts would be more interruptive to the nearby landowners.	Access to the properties to the north of the crossing would be maintained, with limited interruption (i.e.construction efforts).
2. Aesthetic Impacts of Drainage Improvements	No impact in the short term. Eventual collapse would significantly impact the landscape.	Would maintain existing condition.	Would maintain existing condition.
3. Land Acquisition (including easements)	Culvert system is situated within existing Right-of-Ways.		
Ranking			Favoured
NATURAL			
1. Natural Heritage Features & Species at Risk	Existing buried culvert, which is considered fish habitat for movement, would be maintained. A structural failure would impact these movements.	Existing buried culvert, which is considered fish habitat for movement, would be maintained. Ongoing repairs and eventual replacement would more frequently impact fish movements.	Replacement would maintain the buried fish habitat in the long-term, with minimal disruption compared to other alternatives.
2. Storm Water Treatment: Runoff Water Quality	Impacts to water quality, including increased sedimentation related to increased flow velocities, are not considered to be directly affected by the culvert system itself.		
Ranking			Favoured
TECHNICAL			
1. Technical Considerations (i.e. Ability to Satisfy Required Capacity)	Currently there is no flow conveyance issue related to Reach #2 of the drainage system. Reach #2 should provide adequate capacity to the next downstream Reach.	Currently there is no flow conveyance issue related to Reach #2 of the drainage system. Reach #2 should provide adequate capacity to the next downstream Reach.	System capacity would be designed to continue to convey the Regional flood flows, which is considered to be the design flow for this system. Reach #2 should provide adequate capacity to the next downstream Reach.
2. Efficacy of Design	Would maintain existing condition. Eventual collapse could negatively impact the entire drainage system	Would maintain existing condition, with culvert system limited to the east side of the 6th Street West. However, the existing system may eventually be impacted by the poor soil conditions (i.e. differential settlement).	System is envisioned as a 2400 x 1500 mm box culvert. This design best addresses the potential effects the poor soil conditions could have on the system.
3. Ability to Address Identified Drainage Issues	Drainage issues identified poor structural integrity under existing conditions. The 'Do Nothing' approach would not address this identified drainage issue.	Drainage issues identified poor structural integrity under existing conditions. Culvert repairs would not sufficiently address this identified drainage issue.	Drainage issues identified poor structural integrity under existing conditions. Replacement of the entire culvert system within Reach #2 would address this problem.
4. Timing	Maintains existing condition. No further work required in the short-term. Emergency work associate with a collapse is not considered preferable (or cost effective).	OSIM Reports indicate replacement should be completed by 2021. Repairs may provide additional time required for design and approvals.	Based on the condition of the inlet culvert, OSIM Reports suggest that the replacement of this culvert system be completed by 2023. Therefore, this would need to be considered a priority project.
Ranking			Favoured
ECONOMIC			
1. Relative Construction Costs	\$	\$\$\$\$	\$\$\$
2. Operation & Maintenance	By definition, the 'Do Nothing' approach would mean costs would be negligible. However, costs associated with eventual structural failure and emergency replacement would be high.	Routine repairs and more frequent maintenance would likely be required. Eventual culvert replacement would need to be considered.	With the complete replacement of the culvert system, the routine operations and maintenance costs will be limited.
Ranking			Favoured
OVERALL RANKING			Recommended
Relative Ranking:	Favoured and/or Positive Impact	Net Neutral	Least Favoured / Negative Impact

TABLE 12-2: ASSESSMENT OF STORMWATER MANAGEMENT ALTERNATIVES
REACH #3: Open Channel / Culvert - 21st Street West to 20th Street West

ENVIRONMENT	ALTERNATIVE 3-2 Channel Improvements along Current Alignment	ALTERNATIVE 3-3 Channel Re-Alignment along Straighter Route	ALTERNATIVE 3-4 Piped Diversion System	ALTERNATIVE 3-6 Flood Protection
CULTURAL				
1. Impacts to Archaeological Resources	Minor soil disturbance would be expected to occur as a result of improvements to the gradient and banks of the open channel watercourse. The watercourse in Reach #3 has been previously dredged, the majority of the lands directly adjacent to this Reach remain undeveloped. Therefore, areas beyond the banks of the watercourse retain archaeological potential. Stage 2AA recommended.	Soil disturbance would be expected to occur should the re-alignment of the open channel watercourse be considered. The majority of the lands directly adjacent to Reach #3 remain undeveloped. Therefore, areas beyond the banks of the watercourse retain archaeological potential. Stage 2AA recommended.	Impacts not likely. Could be installed in the same location as the watercourse where dredging has previously occurred.	No Impact.
2. Impacts to Cultural Heritage Resources	Net Neutral: Based on a review of potential impacts, no direct impacts to built heritage resources will occur. Indirect impacts identified, associated with soil disturbance, will be appropriately addressed and mitigated via the Stage 2AA (Alt 3-2 and 3-3).			
Ranking			Favoured	Favoured
SOCIAL				
1. Impacts to Private Property (i.e. flooding, access, land use)	The surface elevation within the watercourse at the point adjacent to the residence at 585-21 Avenue West is expected to be lowered to a level of about 0.3 m below the basement door elevation.	The surface elevation within the watercourse at the point adjacent to the residence at 585-21 Avenue West is expected to be lowered to a level of about 0.3 m below the basement door elevation.	Minimal flood risk improvements for the residence at 585 21st Avenue West would be achieved.	The implementation of flood protection measures would address drainage issues specific to flooding risk at the private residence. An access agreement would be required.
2. Aesthetic Impacts of Drainage Improvements	Would increase the watercourse area and require a level of re-construction efforts. The larger drainage channel would change the overall aesthetics.	Would increase the watercourse area and require significant re-construction efforts. The larger drainage channel would change the overall aesthetics.	No impact: maintains existing condition within channel.	No impact: maintains existing condition within channel.
3. Land Acquisition (including easements)	The establishment of permanent easements along the open channel of Reach #3 is required to permit maintenance, as necessary. Widening of the channel may require a slightly greater area.	In addition to an easement along the open channel, the re-alignment may require an access across the channel to the balance of the yard, or property acquisition.	The establishment of permanent easements along the open channel of Reach #3 is required to permit maintenance, as necessary.	The establishment of permanent easements along the open channel of Reach #3 is required to permit maintenance, as necessary.
Ranking				Favoured
NATURAL				
1. Natural Heritage Features & Species at Risk	The increased capacity and flow velocity achieved would decrease sedimentation. A reduction in the required drainage clean-out frequency is considered beneficial to fish and snapping turtle habitat.	The increased capacity and flow velocity achieved would decrease sedimentation, reducing the required drainage clean-out frequency. However, the development of a new channel would have a significant impact on fish and snapping turtle habitat.	Maintaining existing conditions would avoid the larger scale construction effort associated with channel profile upgrades, however more frequent routine maintenance would be more disruptive.	Maintaining existing conditions would avoid the larger scale construction effort associated with channel profile upgrades, however more frequent routine maintenance would be more disruptive.
2. Storm Water Treatment: Runoff Water Quality	Long-term water quality treatment provisions could be considered as part of the design development phase.	Long-term water quality treatment provisions could be considered, as appropriate, as part of the design development phase.	Water quality within the drainage channel could be addressed, as required.	Water quality within the drainage channel could be addressed, as required.
Ranking	Favoured			
TECHNICAL				
1. Technical Considerations (i.e. Ability to Satisfy Required Capacity)	Overall capacity of the Reach can be increased to convey the design flow within the main channel portion of the watercourse. Would reduce the backwater effects from the downstream culvert at 20th Street West, reducing the flooding risk.	Overall capacity of the Reach can be increased to convey the design flow within the main channel portion of the watercourse. Would reduce the backwater effects from the downstream culvert at 20th Street West, reducing the flooding risk.	Considered to address backwater effects from culvert at 20th Street West. Minimal flood level improvements would be realized. Sedimentation issues would be maintained, possibly increased, due to reduced flow velocities within existing channel.	No improvements to the drainage system were considered as part of this alternative. However, flooding protection can be implemented in conjunction with another alternative.
2. Efficacy of Design	The required improvements to the flow hydraulics can be achieved within the existing channel. This alternative effects a minimal disruption to the overall system.	Re-aligning the channel would require more considerable construction efforts and/or would be more land-intensive.	Pipe length and required installation depth at the 19th Street and 16th Avenue West intersection is considerable.	Considered a simple and cost effective alternative to address the flooding risk issues in the short-term.
3. Ability to Address Identified Drainage Issues	Drainage issues identified, including flooding risk and sedimentation which reduces channel capacity, are both addressed.	Drainage issues identified, including flooding risk and sedimentation which reduces channel capacity, are both addressed.	Modelling results indicate that the flood line elevation at 585 21st Street West would be lowered, but only to a minor degree. Further, drainage issues associated with sedimentation would not be addressed.	Would address flooding risk. However, drainage issues associated with sedimentation would not be addressed.
4. Timing	Easements would need to be established prior to construction. While this would add time (and cost) to the project, easements are recommended for all alternatives that maintain a drainage channel within private property(ies).	Access agreements and/or pre-purchase of lands by the City required to re-align the channel would add time (and cost) to the project.	Maintains existing condition within drainage channel. Extension of pipe further to the south would need to be completed concurrently with the culvert installation recommended for Reach #2.	Could be implemented at any time. However, timing (and implementation) would be dependent on the negotiations and consent from the homeowners.
Ranking	Favoured (Long-Term)			Favoured (Short-Term)
ECONOMIC				
1. Relative Construction Costs	\$\$\$	\$\$\$\$	\$\$\$\$	\$
2. Operation & Maintenance	Watercourse, as designed and constructed, would be considered self-cleaning.	Watercourse, as designed and constructed, would be considered self-cleaning.	Watercourse would require routine maintenance. Additional operational costs would be associated with the drainage pipe extension.	Watercourse would continue to require routine maintenance to address on-going sedimentation issues.
Ranking	Favoured			Favoured
OVERALL RANKING	Recommended (Long-Term)			Recommended (Short-Term)

Note: Based on technical and/or economic considerations, Alternatives 3-1 and 3-5 were not carried forward into this assessment.

Relative Ranking of Environments: Favoured and/or Positive Impact Net Neutral Least Favoured / Negative Impact

Environmental Assessment Schedule for Recommended Solution: Schedule B (Alt 3-2) and Not Applicable (Alt 3-6)

TABLE 13-2: ASSESSMENT OF STORMWATER MANAGEMENT ALTERNATIVES
REACH #4: Open Channel - 20th Street West to 19th Street West

ENVIRONMENT	ALTERNATIVE 4-1 Do Nothing	ALTERNATIVE 4-2 Remove Deadfall Trees, as Needed	ALTERNATIVE 4-3 Fully or Partially Piped System along ROWs
CULTURAL			
1. Impacts to Archaeological Resources	No ground disturbing activities would occur.	No ground disturbing activities would occur.	No impact. Storm sewer would be constructed in the existing right-of-way where ground disturbing activities have previously occurred.
2. Impacts to Cultural Heritage Resources	Net Neutral: No built heritage resources (known or potential) identified within 50 meters.		
Ranking	Net neutral for all alternatives considered.		
SOCIAL			
1. Impacts to Private Property (i.e. flooding, access, land use)	Could subject properties within Reach #3 to potential flooding risk.	Would minimize flooding risk to upgradient properties within Reach #3.	Would minimize flooding risk to upgradient properties within Reach #3.
2. Aesthetic Impacts of Drainage Improvements	Would maintain existing conditions.	Would maintain existing condition.	The construction activities within the relatively undisturbed woodland area would significantly impact the existing landscape.
3. Land Acquisition (including easements)	The conveyance of public stormwater flows from private lands and into a combination of municipal and public lands is not favoured. A permanent municipal easement along this Reach could be sought.	The conveyance of public stormwater flows from private lands and into a combination of municipal and public lands is not Favoured. A permanent municipal easement along this Reach could be sought.	Would prevent the conveyance of public stormwater flows from private lands and onto municipal lands to address the liability associated with using the subject Reach as a public drainage system.
Ranking		Favoured	
NATURAL			
1. Natural Heritage Features & Species at Risk	Fish habitat would not be impacted.	Fish habitat would not be impacted.	Would have a significant impact on the confirmed fish habitat and surrounding undisturbed areas.
2. Storm Water Treatment: Runoff Water Quality	No impacts to water quality: Maintains existing condition.	No impacts to water quality: Maintains existing condition.	Would have the potential to impact water quality during construction. Mitigation measures could be evaluated as part of the design phase.
Ranking	Favoured	Favoured	
TECHNICAL			
1. Technical Considerations (i.e. Ability to Satisfy Required Capacity)	The existing geometry of the open channel watercourse is capable of conveying the design flows through the subject Reach.	The existing geometry of the open channel watercourse is capable of conveying the design flows through the subject Reach.	System capacity would be designed to continue to convey sufficient capacity.
2. Efficacy of Design	Would maintain existing condition.	Would maintain existing condition, with minimal maintenance requirements.	Not considered to be a practicle alternative to address potential obstructions within a well established and sufficient watercourse.
3. Abiltity to Address Idenfied Drainage Issues	Drainage issues identified floding risk due to obstructions in the watercourse. The 'Do Nothing' approach would not address this identified drainage issue.	The removal of deadfall trees, on an as needed basis, would sufficiently address potential drainage issues associated with the location of the watercourse in a highly undisturbed and vegetated area.	Drainage issues associated with sedimentation, erosion and/or flooding risks are not evident, therefore the alternative to convey the design flow through Reach #4 via a piped system, in full or in part, is not considered necessary. Potential flooding risk due to obstructions can be simply addressed via ongoing maintenance.
4. Timing	Maintains existing condition. No further work required in the short-term. Emergency work associate with a flooding is not considered preferable (or cost effective).	Can be implemented on an as needed basis - with limited time and effort.	Could be implemented in the longer-term, if deemed appropriate. Would require significant planning as part of the design development phase.
Ranking		Favoured	
ECONOMIC			
1. Relative Construction Costs	Not Applicable	\$	\$\$\$\$
2. Operation & Maintenance	By definition, the 'Do Nothing' approach would mean costs would be negligible. However, the compensation costs for building damage due to flooding could be substantial.	Routine costs associated with the maintenance of the watercourse would be minimal.	With the complete replacement of the culvert system, the routine operations and maintenance costs will be limited.
Ranking		Favoured	
OVERALL RANKING		Recommended	
Relative Ranking:	Favoured and/or Positive Impact	Net Neutral	Least Favoured / Negative Impact

TABLE 16-2: ASSESSMENT OF STORMWATER MANAGEMENT ALTERNATIVES
REACH #7: Outlet System - Eddie Sargent Parkway to Kelso Beach

ENVIRONMENT	ALTERNATIVE 7-2 Backflow Preventers for 3rd Ave W Storm Sewer	ALTERNATIVE 7-3 Construct Better Defined Overland Flow Route	ALTERNATIVE 7-4 Remove and Replace Existing Outlet Pipe	ALTERNATIVE 7-5 Municipal Flood Protection Standards
CULTURAL				
1. Impacts to Archaeological Resources	No impact.	No Impact.	No impact.	No Impact.
2. Impacts to Cultural Heritage Resources	Net Neutral: No built heritage resources (known or potential) identified within 50 meters.			
Ranking	Net neutral for all alternatives considered.			
SOCIAL				
1. Impacts to Private Property (i.e. flooding, access, land use)	While backflow preventers may prevent surcharge from the main storm sewer outlet, flooding from upstream lands from flows within the subcatchment area would still pose a risk to private properties.	Since the 1:100 year flood elevation for the harbour is higher than the catchment grate elevations along the ESP and 3rd Ave W, overland flow routes would already be submerged under high water levels and extreme flow events.	Replacement of the outlet pipe of Reach #7, with an outlet that is as large in cross sectional flow area as possible, and placed at as high an elevation as possible, would best mitigate the effects of flood flows through the Reach (while maintaining existing infrastructure and roadways).	Would ensure that future development is not impacted by potential flood event conditions. However, does not immediately address the flood risks in the short-term.
2. Aesthetic Impacts of Drainage Improvements	No aesthetic impact. Backflow preventers would be installed within the existing storm sewer system.	An additional overland flow route would change the existing aesthetics.	No impact: with the exception of construction efforts, the storm sewer would remain underground, therefore would not impact the overall landscape. Additional, and substantial, consideration would be required to maintain the natural aesthetics of the outfall to the watercourse draining through Kelso Beach Park with this alternative.	No Impact.
3. Land Acquisition (including easements)	Storm Sewer system is located within existing municipal rights-of way.	Overland flow route would likely be developed within existing rights-of-way or on City property (i.e. Kelso Beach Park).	Storm sewer system would be maintained in existing right-of-way.	Would not require land acquisition or the establishment of permanent easements.
Ranking			Favoured	
NATURAL				
1. Natural Heritage Features & Species at Risk	No impact: Maintains existing conditions.	No impact: Overland flow route would likely be directed through a previously disturbed and developed park area.	Replacement would be disruptive to fish habitat in the short-term, but would maintain the buried fish habitat in the long-term.	No impact: Maintains existing conditions.
2. Storm Water Treatment; Runoff Water Quality	No change relative to existing condition. However, 'uncontrolled' flows to the east into the Bay could be of reduced water quality.	Overland flow and discharge directly into the Harbour may contribute a greater concentration of total suspended solids to the Bay.	A reduction in overland flows may improve the overall water quality of the discharges to the Bay.	No change relative to existing condition. However, 'uncontrolled' flows to the east into the Bay could be of reduced water quality.
Ranking	Favoured		Favoured	Favoured
TECHNICAL				
1. Technical Considerations (i.e. Ability to Satisfy Required Capacity)	While backflow preventers may prevent surcharge from the main storm sewer outlet, flooding from upstream lands from flows within the subcatchment area would still pose a risk. The capacity of the existing sytem would remain the same.	Since the 1:100 year flood elevation for the harbour is higher than the catchment grate elevations along the ESP and 3rd Ave W, overland flow routes would already be submerged under high water levels and extreme flow events. Therefore , would not change the capacity of the existing sytem.	Replacement of the outlet pipe of Reach #7, with an outlet that is as large in cross sectional flow area as possible, and placed at as high an elevation as possible, would best mitigate the effects of flood flows through the Reach (while maintaining existing infrastructure and roadways) and provide for additional flow capacity through the system.	The capacity of the existing sytem would remain the same. Flooding risk to existing structures would remain a concern.
2. Efficacy of Design	Typically this preventative measure would require minimal work for the potential prevention of significant flooding.	Providing an alternative route for overland flows would require more considerable construction efforts and/or would be more land-intensive.	The recommended installation of a storm sewer, while maintaining the existing infrastructure and roadways, would best mitigate the effects of flow flood with the least disruption to the community (and cost).	Considered a simple and cost effective alternative to address the flooding risk issues in the long-term.
3. Ability to Address Identified Drainage Issues	Would not address identified drainage issue: While backflow preventers may prevent surcharge from the main storm sewer outlet, the risk of flooding to the private residences along 3rd Avenue West from upstream lands would still be present from flows within the sub-catchment area.	Would not address identified drainage issue: Regardless of a defined overland flow route, the 1:100 year high water level (Lake Huron) would result in flooding of the 3rd Avenue West roadway. Consequently, an appropriate overland flow route cannot be achieved.	Most technically feasible alternative. Best mitigates the effects of flood flows through the Reach.	Preventative measure. Would not address drainage issue identified.
4. Timing	Not Applicable: Not technically feasible.	Not Applicable: Overland flow route can not be achieved.	In the short-term, this alternative best mitigates the drainage issues identified.	In the long-term this alternative provides the best protection against flooding for buildings.
Ranking			Favoured	
ECONOMIC				
1. Relative Construction Costs	\$\$	\$\$	\$\$\$	\$
2. Operation & Maintenance	In general, operations and maintenance costs would be low. However, the compensation costs for building damage due to flooding could be substantial.	In general, operations and maintenance costs would be low. However, the compensation costs for building damage due to flooding could be substantial.	Minimal operations and maintenance costs would be incurred following the installation of a new storm sewer. Further, as this best addresses the conveyance of flows, costs associated with flooding would be reduced.	In general, operations and maintenance costs would be low. The compensation costs for building damage due to flooding could still be substantial. However, with the development of Municipal Flood Protection Standards, these costs would be reduced.
Ranking			Favoured	Favoured
OVERALL RANKING			Recommended (Short-Term)	Recommended (Short-Term)

Note: Based on technical and/or economic considerations, Alternatives 3-1 and 3-5 were not carried forward into this assessment.

Relative Ranking of Environments:

Favoured and/or Positive Impact

Net Neutral

Least Favoured / Negative Impact

Environmental Assessment Schedule for Recommended Solution: Schedule B (Alt 7-4) and Not Applicable (Alt 7-5)

ATTACHMENT C

May 25, 2023

TO: Andrea Nelson, GM BluePlan

FROM: Lindsay Graves, MA CAHP, Archaeological Services Inc

RE: **Basin A3 Drainage Study – Structure OS-7 and Culvert System OS-9,
City of Owen Sound**

ASI File: 23CH-107

In May 2023, Archaeological Services Inc. (ASI) was retained by GM BluePlan to complete the Ministry of Citizenship and Multiculturalism (MCM) form: *Criteria for Evaluating Potential for Built Heritage Resources and Cultural heritage Landscapes – A Checklist for the Non-Specialist* (2016) to determine if Structure OS-07 or Culvert System OS-9 in the City of Owen Sound have potential for cultural heritage value or interest and to recommend if a Cultural Heritage Evaluation Report (CHER) is required. Completion of the checklist for each culvert is in response to MCM comments pertaining to the Draft Brooke Basin A3 Drainage Strategy Master Plan.

A general plan showing the location of each structure is attached to this document (Attachment 1). Each structure is a typical concrete box culvert that was built in the first half of the twentieth century (Plates 1 – 3). A partially-replaced concrete railing is located above the southern outlet for OS-9. The completed checklist for each culvert is attached to this document (Attachment 2). The checklists identify that Structure OS-7 and Culvert System OS-9 both contain a structure that is more than 40 years old. No other criteria in the

checklist were met. According to the checklists, a CHER for each structure is recommended to determine if they have cultural heritage value or interest.

Following a site visit to visually inspect the culverts on May 18, 2023¹, and review of a municipal structural inventory, it is ASI's professional opinion that there is no potential for cultural heritage value or interest and a CHER is not required for Structure OS-7 or Culvert System OS-9. This is based on the following reasoning:

- The concrete box culverts are very common in terms of construction material and culvert type, many were built throughout the twentieth century, and many remain;
- These examples have been altered through repairs and extensions and are not considered to be representative, rare, early or unique based on a review of the structural inventory and on ASI's professional experience;
- The culverts do not exhibit a high degree of craftsmanship or technical achievement, as they are typical in form and construction, and therefore are not likely to be associated with a significant civil engineer or be an example of their best work; and
- They are not located within a recognized cultural heritage landscape.

This technical memorandum, and the attached checklists, should be saved to the project file for documentation. No further work regarding the culverts, from a cultural heritage perspective, is required.

¹ Site visit was attended by City of Owen Sound heritage staff, GM BluePlan and ASI





Plate 1: Structure OS-07, north outlet (ASI, 2023)



Plate 2: Structure OS-09a-c, northwest outlet (ASI, 2023)



Plate 3: Structure OS-09a-c, south outlet (ASI, 2023)

Attachment 1: Location Map



Attachment 2: 2016 Checklists



The **purpose of the checklist** is to determine:

- if a property(ies) or project area:
 - is a recognized heritage property
 - may be of cultural heritage value
- it includes all areas that may be impacted by project activities, including – but not limited to:
 - the main project area
 - temporary storage
 - staging and working areas
 - temporary roads and detours

Processes covered under this checklist, such as:

- *Planning Act*
- *Environmental Assessment Act*
- *Aggregates Resources Act*
- *Ontario Heritage Act* – Standards and Guidelines for Conservation of Provincial Heritage Properties

Cultural Heritage Evaluation Report (CHER)

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a qualified person(s) (see page 5 for definitions) to undertake a cultural heritage evaluation report (CHER).

The CHER will help you:

- identify, evaluate and protect cultural heritage resources on your property or project area
- reduce potential delays and risks to a project

Other checklists

Please use a separate checklist for your project, if:

- you are seeking a Renewable Energy Approval under Ontario Regulation 359/09 – [separate checklist](#)
- your Parent Class EA document has an approved screening criteria (as referenced in Question 1)

Please refer to the Instructions pages for more detailed information and when completing this form.

Project or Property Name
Basin A3 Drainage Study - Structure OS-07

Project or Property Location (upper and lower or single tier municipality)
City of Owen Sound

Proponent Name
GM Blueplan

Proponent Contact Information
Andrea Nelson, 519-3761805 x2219; andrea.nelson@gmblueplan.ca

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

Part A: Screening for known (or recognized) Cultural Heritage Value

	Yes	No
2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, do **not** complete the rest of the checklist.

The proponent, property owner and/or approval authority will:

- summarize the previous evaluation and
- add this checklist to the project file, with the appropriate documents that demonstrate a cultural heritage evaluation was undertaken

The summary and appropriate documentation may be:

- submitted as part of a report requirement
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

	Yes	No
3. Is the property (or project area):		
a. identified, designated or otherwise protected under the <i>Ontario Heritage Act</i> as being of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. a National Historic Site (or part of)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. designated under the <i>Heritage Railway Stations Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. designated under the <i>Heritage Lighthouse Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to any of the above questions, you need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report, if a Statement of Cultural Heritage Value has not previously been prepared or the statement needs to be updated

If a Statement of Cultural Heritage Value has been prepared previously and if alterations or development are proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No, continue to Question 4.

Part B: Screening for Potential Cultural Heritage Value

	Yes	No
4. Does the property (or project area) contain a parcel of land that:		
a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has or is adjacent to a known burial site and/or cemetery?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. is in a Canadian Heritage River watershed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. contains buildings or structures that are 40 or more years old?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part C: Other Considerations

	Yes	No
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):		
a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has a special association with a community, person or historical event?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. contains or is part of a cultural heritage landscape?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to one or more of the above questions (Part B and C), there is potential for cultural heritage resources on the property or within the project area.

You need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report (CHER)

If the property is determined to be of cultural heritage value and alterations or development is proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No to all of the above questions, there is low potential for built heritage or cultural heritage landscape on the property.

The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project file

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g. under the *Environmental Assessment Act*, *Planning Act* processes
- maintained by the property owner, proponent or approval authority

Instructions

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
 - large scale and small scale showing nearby township names for context purposes
- the municipal addresses of all properties within the project area
- the lot(s), concession(s), and parcel number(s) of all properties within a project area

For more information, see the Ministry of Tourism, Culture and Sport's [Ontario Heritage Toolkit](#) or [Standards and Guidelines for Conservation of Provincial Heritage Properties](#).

In this context, the following definitions apply:

- **qualified person(s)** means individuals – professional engineers, architects, archaeologists, etc. – having relevant, recent experience in the conservation of cultural heritage resources.
- **proponent** means a person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

1. Is there a pre-approved screening checklist, methodology or process in place?

An existing checklist, methodology or process may already be in place for identifying potential cultural heritage resources, including:

- one endorsed by a municipality
- an environmental assessment process e.g. screening checklist for municipal bridges
- one that is approved by the Ministry of Tourism, Culture and Sport (MTCS) under the Ontario government's [Standards & Guidelines for Conservation of Provincial Heritage Properties](#) [s.B.2.]

Part A: Screening for known (or recognized) Cultural Heritage Value

2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?

Respond 'yes' to this question, if all of the following are true:

A property can be considered not to be of cultural heritage value if:

- a Cultural Heritage Evaluation Report (CHER) - or equivalent - has been prepared for the property with the advice of a qualified person and it has been determined not to be of cultural heritage value and/or
- the municipal heritage committee has evaluated the property for its cultural heritage value or interest and determined that the property is not of cultural heritage value or interest

A property may need to be re-evaluated, if:

- there is evidence that its heritage attributes may have changed
- new information is available
- the existing Statement of Cultural Heritage Value does not provide the information necessary to manage the property
- the evaluation took place after 2005 and did not use the criteria in Regulations 9/06 and 10/06

Note: Ontario government ministries and public bodies [prescribed under Regulation 157/10] may continue to use their existing evaluation processes, until the evaluation process required under section B.2 of the Standards & Guidelines for Conservation of Provincial Heritage Properties has been developed and approved by MTCS.

To determine if your property or project area has been evaluated, contact:

- the approval authority
- the proponent
- the Ministry of Tourism, Culture and Sport

3a. Is the property (or project area) identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value e.g.:

- i. designated under the *Ontario Heritage Act*
 - individual designation (Part IV)
 - part of a heritage conservation district (Part V)

Individual Designation – Part IV

A property that is designated:

- by a municipal by-law as being of cultural heritage value or interest [s.29 of the *Ontario Heritage Act*]
- by order of the Minister of Tourism, Culture and Sport as being of cultural heritage value or interest of provincial significance [s.34.5]. **Note:** To date, no properties have been designated by the Minister.

Heritage Conservation District – Part V

A property or project area that is located within an area designated by a municipal by-law as a heritage conservation district [s. 41 of the *Ontario Heritage Act*].

For more information on Parts IV and V, contact:

- municipal clerk
 - [Ontario Heritage Trust](#)
 - local land registry office (for a title search)
-

ii. subject of an agreement, covenant or easement entered into under Parts II or IV of the *Ontario Heritage Act*

An agreement, covenant or easement is usually between the owner of a property and a conservation body or level of government. It is usually registered on title.

The primary purpose of the agreement is to:

- preserve, conserve, and maintain a cultural heritage resource
- prevent its destruction, demolition or loss

For more information, contact:

- [Ontario Heritage Trust](#) - for an agreement, covenant or easement [clause 10 (1) (c) of the *Ontario Heritage Act*]
 - municipal clerk – for a property that is the subject of an easement or a covenant [s.37 of the *Ontario Heritage Act*]
 - local land registry office (for a title search)
-

iii. listed on a register of heritage properties maintained by the municipality

Municipal registers are the official lists - or record - of cultural heritage properties identified as being important to the community.

Registers include:

- all properties that are designated under the *Ontario Heritage Act* (Part IV or V)
- properties that have not been formally designated, but have been identified as having cultural heritage value or interest to the community

For more information, contact:

- municipal clerk
 - municipal heritage planning staff
 - municipal heritage committee
-

iv. subject to a notice of:

- intention to designate (under Part IV of the *Ontario Heritage Act*)
- a Heritage Conservation District study area bylaw (under Part V of the *Ontario Heritage Act*)

A property that is subject to a **notice of intention to designate** as a property of cultural heritage value or interest and the notice is in accordance with:

- section 29 of the *Ontario Heritage Act*
- section 34.6 of the *Ontario Heritage Act*. **Note:** To date, the only applicable property is Meldrum Bay Inn, Manitoulin Island. [s.34.6]

An area designated by a municipal by-law made under section 40.1 of the *Ontario Heritage Act* as a **heritage conservation district study area**.

For more information, contact:

- municipal clerk – for a property that is the subject of notice of intention [s. 29 and s. 40.1]
 - [Ontario Heritage Trust](#)
-

- v. included in the Ministry of Tourism, Culture and Sport's list of provincial heritage properties

Provincial heritage properties are properties the Government of Ontario owns or controls that have cultural heritage value or interest.

The Ministry of Tourism, Culture and Sport (MTCS) maintains a list of all provincial heritage properties based on information provided by ministries and prescribed public bodies. As they are identified, MTCS adds properties to the list of provincial heritage properties.

For more information, contact the MTCS Registrar at registrar@ontario.ca.

3b. Is the property (or project area) a National Historic Site (or part of)?

National Historic Sites are properties or districts of national historic significance that are designated by the Federal Minister of the Environment, under the *Canada National Parks Act*, based on the advice of the Historic Sites and Monuments Board of Canada.

For more information, see the [National Historic Sites website](#).

3c. Is the property (or project area) designated under the *Heritage Railway Stations Protection Act*?

The *Heritage Railway Stations Protection Act* protects heritage railway stations that are owned by a railway company under federal jurisdiction. Designated railway stations that pass from federal ownership may continue to have cultural heritage value.

For more information, see the [Directory of Designated Heritage Railway Stations](#).

3d. Is the property (or project area) designated under the *Heritage Lighthouse Protection Act*?

The *Heritage Lighthouse Protection Act* helps preserve historically significant Canadian lighthouses. The Act sets up a public nomination process and includes heritage building conservation standards for lighthouses which are officially designated.

For more information, see the [Heritage Lighthouses of Canada](#) website.

3e. Is the property (or project area) identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office?

The role of the Federal Heritage Buildings Review Office (FHBRO) is to help the federal government protect the heritage buildings it owns. The policy applies to all federal government departments that administer real property, but not to federal Crown Corporations.

For more information, contact the [Federal Heritage Buildings Review Office](#).

See a [directory of all federal heritage designations](#).

3f. Is the property (or project area) located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?

A UNESCO World Heritage Site is a place listed by UNESCO as having outstanding universal value to humanity under the Convention Concerning the Protection of the World Cultural and Natural Heritage. In order to retain the status of a World Heritage Site, each site must maintain its character defining features.

Currently, the Rideau Canal is the only World Heritage Site in Ontario.

For more information, see Parks Canada – [World Heritage Site website](#).

Part B: Screening for potential Cultural Heritage Value

4a. Does the property (or project area) contain a parcel of land that has a municipal, provincial or federal commemorative or interpretive plaque?

Heritage resources are often recognized with formal plaques or markers.

Plaques are prepared by:

- municipalities
- provincial ministries or agencies
- federal ministries or agencies
- local non-government or non-profit organizations

For more information, contact:

- [municipal heritage committees](#) or local heritage organizations – for information on the location of plaques in their community
- Ontario Historical Society's [Heritage directory](#) – for a list of historical societies and heritage organizations
- Ontario Heritage Trust – for a [list of plaques](#) commemorating Ontario's history
- Historic Sites and Monuments Board of Canada – for a [list of plaques](#) commemorating Canada's history

4b. Does the property (or project area) contain a parcel of land that has or is adjacent to a known burial site and/or cemetery?

For more information on known cemeteries and/or burial sites, see:

- Cemeteries Regulations, Ontario Ministry of Consumer Services – for a [database of registered cemeteries](#)
- Ontario Genealogical Society (OGS) – to [locate records of Ontario cemeteries](#), both currently and no longer in existence; cairns, family plots and burial registers
- Canadian County Atlas Digital Project – to [locate early cemeteries](#)

In this context, adjacent means contiguous or as otherwise defined in a municipal official plan.

4c. Does the property (or project area) contain a parcel of land that is in a Canadian Heritage River watershed?

The Canadian Heritage River System is a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage.

Canadian Heritage Rivers must have, and maintain, outstanding natural, cultural and/or recreational values, and a high level of public support.

For more information, contact the [Canadian Heritage River System](#).

If you have questions regarding the boundaries of a watershed, please contact:

- your conservation authority
- municipal staff

4d. Does the property (or project area) contain a parcel of land that contains buildings or structures that are 40 or more years old?

A 40 year 'rule of thumb' is typically used to indicate the potential of a site to be of cultural heritage value. The approximate age of buildings and/or structures may be estimated based on:

- history of the development of the area
- fire insurance maps
- architectural style
- building methods

Property owners may have information on the age of any buildings or structures on their property. The municipality, local land registry office or library may also have background information on the property.

Note: 40+ year old buildings or structure do not necessarily hold cultural heritage value or interest; their age simply indicates a higher potential.

A building or structure can include:

- residential structure
- farm building or outbuilding
- industrial, commercial, or institutional building
- remnant or ruin
- engineering work such as a bridge, canal, dams, etc.

For more information on researching the age of buildings or properties, see the Ontario Heritage Tool Kit Guide [Heritage Property Evaluation](#).

Part C: Other Considerations

5a. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) is considered a landmark in the local community or contains any structures or sites that are important to defining the character of the area?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has potential landmarks or defining structures and sites, for instance:

- buildings or landscape features accessible to the public or readily noticeable and widely known
- complexes of buildings
- monuments
- ruins

5b. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) has a special association with a community, person or historical event?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has a special association with a community, person or event of historic interest, for instance:

- Aboriginal sacred site
- traditional-use area
- battlefield
- birthplace of an individual of importance to the community

5c. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) contains or is part of a cultural heritage landscape?

Landscapes (which may include a combination of archaeological resources, built heritage resources and landscape elements) may be of cultural heritage value or interest to a community.

For example, an Aboriginal trail, historic road or rail corridor may have been established as a key transportation or trade route and may have been important to the early settlement of an area. Parks, designed gardens or unique landforms such as waterfalls, rock faces, caverns, or mounds are areas that may have connections to a particular event, group or belief.

For more information on Questions 5.a., 5.b. and 5.c., contact:

- Elders in Aboriginal Communities or community researchers who may have information on potential cultural heritage resources. Please note that Aboriginal traditional knowledge may be considered sensitive.
- [municipal heritage committees](#) or local heritage organizations
- Ontario Historical Society's "[Heritage Directory](#)" - for a list of historical societies and heritage organizations in the province

An internet search may find helpful resources, including:

- historical maps
- historical walking tours
- municipal heritage management plans
- cultural heritage landscape studies
- municipal cultural plans

Information specific to trails may be obtained through [Ontario Trails](#).

Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes

A Checklist for the Non-Specialist

The **purpose of the checklist** is to determine:

- if a property(ies) or project area:
 - is a recognized heritage property
 - may be of cultural heritage value
- it includes all areas that may be impacted by project activities, including – but not limited to:
 - the main project area
 - temporary storage
 - staging and working areas
 - temporary roads and detours

Processes covered under this checklist, such as:

- *Planning Act*
- *Environmental Assessment Act*
- *Aggregates Resources Act*
- *Ontario Heritage Act* – Standards and Guidelines for Conservation of Provincial Heritage Properties

Cultural Heritage Evaluation Report (CHER)

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a qualified person(s) (see page 5 for definitions) to undertake a cultural heritage evaluation report (CHER).

The CHER will help you:

- identify, evaluate and protect cultural heritage resources on your property or project area
- reduce potential delays and risks to a project

Other checklists

Please use a separate checklist for your project, if:

- you are seeking a Renewable Energy Approval under Ontario Regulation 359/09 – [separate checklist](#)
- your Parent Class EA document has an approved screening criteria (as referenced in Question 1)

Please refer to the Instructions pages for more detailed information and when completing this form.

Project or Property Name
Basin A3 Drainage Study - Structure OS-09a-c

Project or Property Location (upper and lower or single tier municipality)
City of Owen Sound

Proponent Name
GM Blueplan

Proponent Contact Information
Andrea Nelson, 519-3761805 x2219; andrea.nelson@gmblueplan.ca

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

Part A: Screening for known (or recognized) Cultural Heritage Value

	Yes	No
2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, do **not** complete the rest of the checklist.

The proponent, property owner and/or approval authority will:

- summarize the previous evaluation and
- add this checklist to the project file, with the appropriate documents that demonstrate a cultural heritage evaluation was undertaken

The summary and appropriate documentation may be:

- submitted as part of a report requirement
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

	Yes	No
3. Is the property (or project area):		
a. identified, designated or otherwise protected under the <i>Ontario Heritage Act</i> as being of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. a National Historic Site (or part of)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. designated under the <i>Heritage Railway Stations Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. designated under the <i>Heritage Lighthouse Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to any of the above questions, you need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report, if a Statement of Cultural Heritage Value has not previously been prepared or the statement needs to be updated

If a Statement of Cultural Heritage Value has been prepared previously and if alterations or development are proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No, continue to Question 4.

Part B: Screening for Potential Cultural Heritage Value

	Yes	No
4. Does the property (or project area) contain a parcel of land that:		
a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has or is adjacent to a known burial site and/or cemetery?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. is in a Canadian Heritage River watershed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. contains buildings or structures that are 40 or more years old?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part C: Other Considerations

	Yes	No
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):		
a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has a special association with a community, person or historical event?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. contains or is part of a cultural heritage landscape?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to one or more of the above questions (Part B and C), there is potential for cultural heritage resources on the property or within the project area.

You need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report (CHER)

If the property is determined to be of cultural heritage value and alterations or development is proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No to all of the above questions, there is low potential for built heritage or cultural heritage landscape on the property.

The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project file

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g. under the *Environmental Assessment Act*, *Planning Act* processes
- maintained by the property owner, proponent or approval authority

Instructions

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
 - large scale and small scale showing nearby township names for context purposes
- the municipal addresses of all properties within the project area
- the lot(s), concession(s), and parcel number(s) of all properties within a project area

For more information, see the Ministry of Tourism, Culture and Sport's [Ontario Heritage Toolkit](#) or [Standards and Guidelines for Conservation of Provincial Heritage Properties](#).

In this context, the following definitions apply:

- **qualified person(s)** means individuals – professional engineers, architects, archaeologists, etc. – having relevant, recent experience in the conservation of cultural heritage resources.
- **proponent** means a person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

1. Is there a pre-approved screening checklist, methodology or process in place?

An existing checklist, methodology or process may already be in place for identifying potential cultural heritage resources, including:

- one endorsed by a municipality
- an environmental assessment process e.g. screening checklist for municipal bridges
- one that is approved by the Ministry of Tourism, Culture and Sport (MTCS) under the Ontario government's [Standards & Guidelines for Conservation of Provincial Heritage Properties](#) [s.B.2.]

Part A: Screening for known (or recognized) Cultural Heritage Value

2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?

Respond 'yes' to this question, if all of the following are true:

A property can be considered not to be of cultural heritage value if:

- a Cultural Heritage Evaluation Report (CHER) - or equivalent - has been prepared for the property with the advice of a qualified person and it has been determined not to be of cultural heritage value and/or
- the municipal heritage committee has evaluated the property for its cultural heritage value or interest and determined that the property is not of cultural heritage value or interest

A property may need to be re-evaluated, if:

- there is evidence that its heritage attributes may have changed
- new information is available
- the existing Statement of Cultural Heritage Value does not provide the information necessary to manage the property
- the evaluation took place after 2005 and did not use the criteria in Regulations 9/06 and 10/06

Note: Ontario government ministries and public bodies [prescribed under Regulation 157/10] may continue to use their existing evaluation processes, until the evaluation process required under section B.2 of the Standards & Guidelines for Conservation of Provincial Heritage Properties has been developed and approved by MTCS.

To determine if your property or project area has been evaluated, contact:

- the approval authority
- the proponent
- the Ministry of Tourism, Culture and Sport

3a. Is the property (or project area) identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value e.g.:

- i. designated under the *Ontario Heritage Act*
 - individual designation (Part IV)
 - part of a heritage conservation district (Part V)

Individual Designation – Part IV

A property that is designated:

- by a municipal by-law as being of cultural heritage value or interest [s.29 of the *Ontario Heritage Act*]
- by order of the Minister of Tourism, Culture and Sport as being of cultural heritage value or interest of provincial significance [s.34.5]. **Note:** To date, no properties have been designated by the Minister.

Heritage Conservation District – Part V

A property or project area that is located within an area designated by a municipal by-law as a heritage conservation district [s. 41 of the *Ontario Heritage Act*].

For more information on Parts IV and V, contact:

- municipal clerk
 - [Ontario Heritage Trust](#)
 - local land registry office (for a title search)
-

ii. subject of an agreement, covenant or easement entered into under Parts II or IV of the *Ontario Heritage Act*

An agreement, covenant or easement is usually between the owner of a property and a conservation body or level of government. It is usually registered on title.

The primary purpose of the agreement is to:

- preserve, conserve, and maintain a cultural heritage resource
- prevent its destruction, demolition or loss

For more information, contact:

- [Ontario Heritage Trust](#) - for an agreement, covenant or easement [clause 10 (1) (c) of the *Ontario Heritage Act*]
 - municipal clerk – for a property that is the subject of an easement or a covenant [s.37 of the *Ontario Heritage Act*]
 - local land registry office (for a title search)
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iii. listed on a register of heritage properties maintained by the municipality

Municipal registers are the official lists - or record - of cultural heritage properties identified as being important to the community.

Registers include:

- all properties that are designated under the *Ontario Heritage Act* (Part IV or V)
- properties that have not been formally designated, but have been identified as having cultural heritage value or interest to the community

For more information, contact:

- municipal clerk
 - municipal heritage planning staff
 - municipal heritage committee
-

iv. subject to a notice of:

- intention to designate (under Part IV of the *Ontario Heritage Act*)
- a Heritage Conservation District study area bylaw (under Part V of the *Ontario Heritage Act*)

A property that is subject to a **notice of intention to designate** as a property of cultural heritage value or interest and the notice is in accordance with:

- section 29 of the *Ontario Heritage Act*
- section 34.6 of the *Ontario Heritage Act*. **Note:** To date, the only applicable property is Meldrum Bay Inn, Manitoulin Island. [s.34.6]

An area designated by a municipal by-law made under section 40.1 of the *Ontario Heritage Act* as a **heritage conservation district study area**.

For more information, contact:

- municipal clerk – for a property that is the subject of notice of intention [s. 29 and s. 40.1]
 - [Ontario Heritage Trust](#)
-

- v. included in the Ministry of Tourism, Culture and Sport's list of provincial heritage properties

Provincial heritage properties are properties the Government of Ontario owns or controls that have cultural heritage value or interest.

The Ministry of Tourism, Culture and Sport (MTCS) maintains a list of all provincial heritage properties based on information provided by ministries and prescribed public bodies. As they are identified, MTCS adds properties to the list of provincial heritage properties.

For more information, contact the MTCS Registrar at registrar@ontario.ca.

3b. Is the property (or project area) a National Historic Site (or part of)?

National Historic Sites are properties or districts of national historic significance that are designated by the Federal Minister of the Environment, under the *Canada National Parks Act*, based on the advice of the Historic Sites and Monuments Board of Canada.

For more information, see the [National Historic Sites website](#).

3c. Is the property (or project area) designated under the *Heritage Railway Stations Protection Act*?

The *Heritage Railway Stations Protection Act* protects heritage railway stations that are owned by a railway company under federal jurisdiction. Designated railway stations that pass from federal ownership may continue to have cultural heritage value.

For more information, see the [Directory of Designated Heritage Railway Stations](#).

3d. Is the property (or project area) designated under the *Heritage Lighthouse Protection Act*?

The *Heritage Lighthouse Protection Act* helps preserve historically significant Canadian lighthouses. The Act sets up a public nomination process and includes heritage building conservation standards for lighthouses which are officially designated.

For more information, see the [Heritage Lighthouses of Canada](#) website.

3e. Is the property (or project area) identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office?

The role of the Federal Heritage Buildings Review Office (FHBRO) is to help the federal government protect the heritage buildings it owns. The policy applies to all federal government departments that administer real property, but not to federal Crown Corporations.

For more information, contact the [Federal Heritage Buildings Review Office](#).

See a [directory of all federal heritage designations](#).

3f. Is the property (or project area) located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?

A UNESCO World Heritage Site is a place listed by UNESCO as having outstanding universal value to humanity under the Convention Concerning the Protection of the World Cultural and Natural Heritage. In order to retain the status of a World Heritage Site, each site must maintain its character defining features.

Currently, the Rideau Canal is the only World Heritage Site in Ontario.

For more information, see Parks Canada – [World Heritage Site website](#).

Part B: Screening for potential Cultural Heritage Value

4a. Does the property (or project area) contain a parcel of land that has a municipal, provincial or federal commemorative or interpretive plaque?

Heritage resources are often recognized with formal plaques or markers.

Plaques are prepared by:

- municipalities
- provincial ministries or agencies
- federal ministries or agencies
- local non-government or non-profit organizations

For more information, contact:

- [municipal heritage committees](#) or local heritage organizations – for information on the location of plaques in their community
- Ontario Historical Society's [Heritage directory](#) – for a list of historical societies and heritage organizations
- Ontario Heritage Trust – for a [list of plaques](#) commemorating Ontario's history
- Historic Sites and Monuments Board of Canada – for a [list of plaques](#) commemorating Canada's history

4b. Does the property (or project area) contain a parcel of land that has or is adjacent to a known burial site and/or cemetery?

For more information on known cemeteries and/or burial sites, see:

- Cemeteries Regulations, Ontario Ministry of Consumer Services – for a [database of registered cemeteries](#)
- Ontario Genealogical Society (OGS) – to [locate records of Ontario cemeteries](#), both currently and no longer in existence; cairns, family plots and burial registers
- Canadian County Atlas Digital Project – to [locate early cemeteries](#)

In this context, adjacent means contiguous or as otherwise defined in a municipal official plan.

4c. Does the property (or project area) contain a parcel of land that is in a Canadian Heritage River watershed?

The Canadian Heritage River System is a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage.

Canadian Heritage Rivers must have, and maintain, outstanding natural, cultural and/or recreational values, and a high level of public support.

For more information, contact the [Canadian Heritage River System](#).

If you have questions regarding the boundaries of a watershed, please contact:

- your conservation authority
- municipal staff

4d. Does the property (or project area) contain a parcel of land that contains buildings or structures that are 40 or more years old?

A 40 year 'rule of thumb' is typically used to indicate the potential of a site to be of cultural heritage value. The approximate age of buildings and/or structures may be estimated based on:

- history of the development of the area
- fire insurance maps
- architectural style
- building methods

Property owners may have information on the age of any buildings or structures on their property. The municipality, local land registry office or library may also have background information on the property.

Note: 40+ year old buildings or structure do not necessarily hold cultural heritage value or interest; their age simply indicates a higher potential.

A building or structure can include:

- residential structure
- farm building or outbuilding
- industrial, commercial, or institutional building
- remnant or ruin
- engineering work such as a bridge, canal, dams, etc.

For more information on researching the age of buildings or properties, see the Ontario Heritage Tool Kit Guide [Heritage Property Evaluation](#).

Part C: Other Considerations

5a. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) is considered a landmark in the local community or contains any structures or sites that are important to defining the character of the area?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has potential landmarks or defining structures and sites, for instance:

- buildings or landscape features accessible to the public or readily noticeable and widely known
- complexes of buildings
- monuments
- ruins

5b. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) has a special association with a community, person or historical event?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has a special association with a community, person or event of historic interest, for instance:

- Aboriginal sacred site
- traditional-use area
- battlefield
- birthplace of an individual of importance to the community

5c. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) contains or is part of a cultural heritage landscape?

Landscapes (which may include a combination of archaeological resources, built heritage resources and landscape elements) may be of cultural heritage value or interest to a community.

For example, an Aboriginal trail, historic road or rail corridor may have been established as a key transportation or trade route and may have been important to the early settlement of an area. Parks, designed gardens or unique landforms such as waterfalls, rock faces, caverns, or mounds are areas that may have connections to a particular event, group or belief.

For more information on Questions 5.a., 5.b. and 5.c., contact:

- Elders in Aboriginal Communities or community researchers who may have information on potential cultural heritage resources. Please note that Aboriginal traditional knowledge may be considered sensitive.
- [municipal heritage committees](#) or local heritage organizations
- Ontario Historical Society's "[Heritage Directory](#)" - for a list of historical societies and heritage organizations in the province

An internet search may find helpful resources, including:

- historical maps
- historical walking tours
- municipal heritage management plans
- cultural heritage landscape studies
- municipal cultural plans

Information specific to trails may be obtained through [Ontario Trails](#).

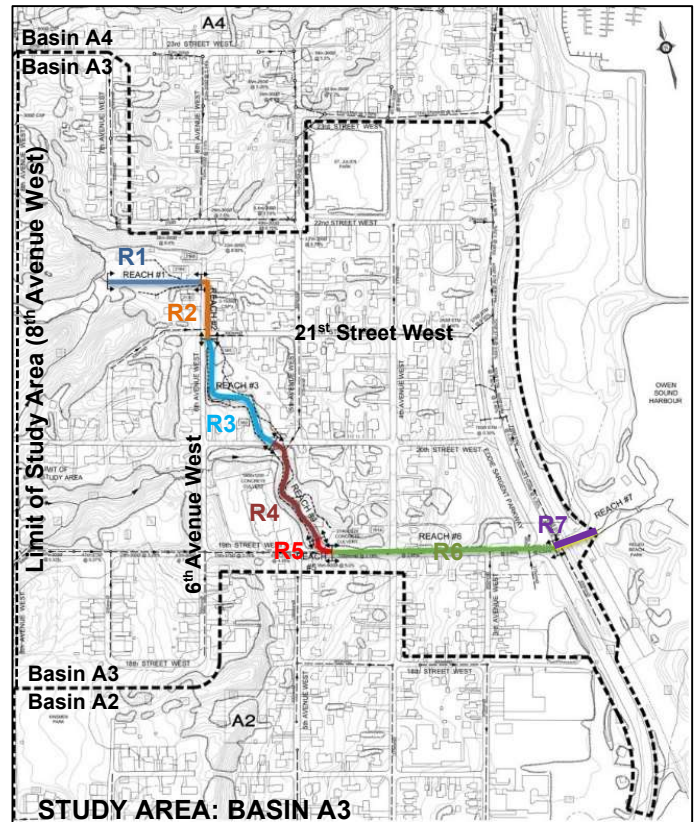
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Documentation of the development and review of the Recommended Solutions, including a summary of the rationale, and the planning and consultation process, is provided in Version 2 of the Master Plan which identifies several Class EA Schedule 'B' projects within the Study Area. The Master Plan is available on the City's website and at City Hall (808 – 2nd Avenue East) for viewing purposes.



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Mr. Chris Webb, P.Eng.
808 – 2nd Avenue East
Owen Sound, ON N4K 2H4
cwebb@owensound.ca
Tel: 519-376-4530 (ext. 3300)

GM BluePlan Engineering Limited
Mr. John Slocombe, P.Eng.
1260-2nd Avenue East, Unit 1
Owen Sound, ON N4K 2J3
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777 Bay Street, College Park, 5th Floor
Toronto, ON M7A 2J3
minister.MECP@ontario.ca

Director, Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, ON M4V 1P5
EABDirector@ontario.ca

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May 26, 2023
Our File: 216301

Via Email: Mark.Badali@ontario.ca

Ministry of the Environment, Parks and Conservation
Environmental Assessment Branch
135 St. Clair Avenue W (1st Floor)
Toronto, ON M4V 1P5

Attention: Mark Badali

Re: Brooke Area Basin A3 Outlet
City of Owen Sound
MCEA Master Plan
Project Review Unit Comments (Draft Report)
Response to MECP Comments

Dear Mark:

Comments pertaining to the draft Master Plan Report (Version 2) for Brooke Area Basin A3 Outlet, provided to the MECP on March 6th, 2023, were issued to GMBP in correspondence dated April 4, 2023. Consistent with the Ministry's understanding, in order to proactively address drainage issues associated with the open watercourses and closed sewer systems in the Brooke Area Basin A3 study area, the City of Owen Sound (the proponent) has determined that the preferred alternatives include maintenance, monitoring, repairs, improvements and replacements for the drainage outlet system. MECP comments are addressed on a point-by-point basis below with reference to those provided within the subject correspondence and are also addressed in the Master Plan, where applicable.

Comment 1: General

Section 9 of the draft Master Plan (March 6, 2023) made reference to the 'Ministry'. As requested, for clarification purposes, this reference has been revised to the '*Ministry of Citizenship and Multiculturalism (formerly the MHSTCI or MTCS)*'.

Comment 2: Class EA Process

In recognition of the recommendations of the Master Plan to complete certain impact assessments subsequent to the completion of the Class EA process, Section 20.2 of the Master Plan has been updated to specify that if the outcomes of any future assessments result in a significant modification to the project (i.e., Stage 2AA and natural environment studies), including impacting the evaluation of alternative solutions or the preferred solution, then a Class EA addendum may be required through the Municipal Class EA process.

Comment 3: Agency Consultation

Comments pertaining to the Master Plan (March 6, 2023 – Draft) were received from the Ministry of Citizenship and Multiculturalism (MCM) in correspondence dated April 3, 2023 and April 14, 2023. The MCM recommended that a cultural heritage evaluation be completed for several culverts to determine if they were of potential cultural heritage value or interest (CHVI) and that the associated consultations with the City of Owen Sound's Planning and Heritage Division be documented in the final Master Plan.

ASI was retained to determine if the culverts proposed for replacement had the potential for cultural heritage value or interest (CHVI). According to the MCM checklists completed (i.e., 'Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes'), culvert OS-07 and culvert system OS-9 (i.e., OS-9a, OS-9b and OS-9c) were identified to be of potential cultural heritage value or interest (CHVI) based on their age (i.e., greater than 40 years old). However, based on a background review completed by ASI, including a visual inspection of the culverts (i.e., Structure OS-7 and Culvert System OS-9(a/b/c)) on May 18th, 2023, it was determined that the culverts do not have potential for Cultural Heritage Value or Interest (CHVI). Based on these findings, the completion of a Cultural Heritage Evaluation Report was not recommended. The checklists completed by ASI and a technical memorandum are enclosed in Appendix E of the Master Plan.

Comment 4: Indigenous Consultation

The reviewer suggests that *'the proponent should continue to engage with all communities that have been engaged to date to ensure that they are aware of the Stage 2 Archaeological Assessment that will be required and, further to that, provided the opportunity to participate in that process'*. As previously recognized in Section 20.2 of the Master Plan, *'the City has committed to consulting with SON to provide an opportunity to have a SON field liaison present during the Stage 2AA field investigations. Depending on the findings of the archaeological assessment(s), additional consultation with Indigenous Communities may be required'*.

Comment 5: Air Quality and Odour

Section 8.2 of the Master Plan has been revised to address potential negative impacts related to air quality and odour, including the MECP recommendation to encourage the use of non-chloride dust suppressants during construction.

Comment 6: Noise

Section 8.2 of the Master Plan has been revised to address potential negative impacts from related to noise and includes the identification of mitigating measures.

Comment 7: Species at Risk

With respect to Species at Risk, the NHFA Report documented the confirmed presence of three butternut trees (endangered species) and one adult snapping turtle (species of special concern). The butternut trees were reported to have been observed at the far extent of 7th Ave West, approximately 100 meters south of Reach #1 at their closest point to the drainage channel. However, the Master Plan recommends maintaining existing conditions within Reach #1. Beyond Reach #1, the drainage channel is separated by a distance of greater than 120 meters (i.e., the remainder of the drainage channel is not within 'adjacent lands' as defined in the Owen Sound Official Plan). As such, while butternut trees were observed in the adjacent lands, any proposed works within Reach #2 to Reach #7 will not trigger a formal review under the Endangered Species Act.

A snapping turtle sighting was report at the northern extent of Reach #3, south of 21st Street West. At this time, the snapping turtle remains listed under the ESA as a species of special concern and, as such, is not regulated under the Ontario ESA. It is recommended that, at the early planning stages for Reach #3 (and for works within 'adjacent lands'), the SAR designation of the snapping turtle be confirmed. In the event that the snapping turtle listing changes to threatened or endangered, a formal review under the ESA by the MECP SAR Division would be required to support the proposed works in this area.

Section 8.3.1 and 20.2 have been updated to clarify the presence and location of observed SAR species along the drainage channel and within the adjacent lands.

Comment 8: Species at Risk

It is recognized that the MECP now has responsibility of Ontario's Species at Risk program. References made to the MNRF in the Master Plan, specific to SAR, have been revised to the MECP.

I trust this is sufficient for your use at this time. Please do not hesitate to contact me if you have any questions.

Yours truly,

GM BLUEPLAN ENGINEERING LIMITED

Per:

A handwritten signature in blue ink that reads 'Andrea Nelson'.

Andrea Nelson, M.Sc.

AN/mr

cc: City of Owen Sound: Chris Webb – cwebb@owensound.ca
File No. 216301

May 26, 2023

Re: Master Plan: Brooke Area Basin A3 Outlet
Municipal Class Environmental Assessment
Notice of Project Completion

Dear Resident,

In July 2008 the City of Owen Sound (City) and the Township of Georgian Bluffs completed the '*Brooke Area Stormwater Management Study*' which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one of the drainage areas having multiple issues.

The City has completed a Master Plan study to address the drainage deficiencies identified within the Study Area specific to Brooke Basin A3 and to assist in the planning of seven individual projects (or Reaches) toward an appropriate overall drainage strategy. This system wide approach provides for a strategic level of assessment of various options to address better the needs of the overall system and to plan various drainage undertakings within the Study Area in a comprehensive manner. The Study Area is shown on the enclosed *Notice of Project Completion*. This Notice is being provided to you as your property has been identified to be within 120 metres of the main drainage corridor of Basin A3.

The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects for the proposed individual drainage projects.

The Master Plan is available on the City of Owen Sound website and at City Hall (808 – 2nd Avenue East). This Notice initiates the 30-calendar day comment period. Interested persons may provide written comment to our project team until June 25, 2023. All comments should be sent directly to the undersigned.

Should you have any questions or concerns, please contact the undersigned at cwebb@owensound.ca or 519-376-4530 (ext.3300).

Yours Truly,

Chris Webb

Chris Webb, P.Eng
Manager of Engineering Services

NOTICE OF PROJECT COMPLETION

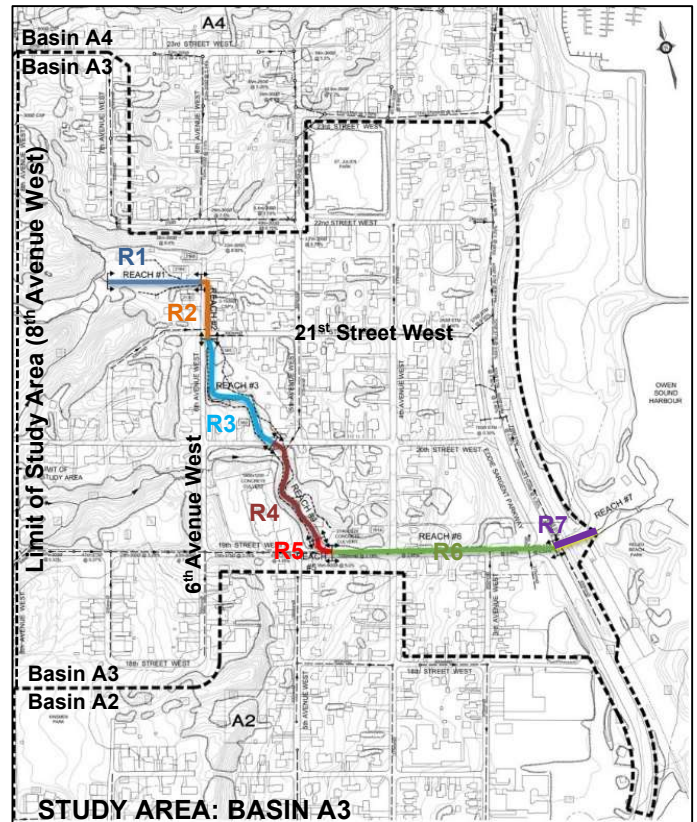
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The Office of the Mayor
Ian Boddy
City Hall
808 2nd Avenue East
Owen Sound, ON N4K 2H4



Telephone: 519 376-4440 ext. 1212
Facsimile: 519-376-3579
E-mail: iboddy@owensound.ca
www.owensound.ca

May 26, 2023

Karen Heisler
Saugeen Ojibway Nation, Environmental Office
25 Maadookii Subdivision
Neyaashiinigmiing, ON N0H 2T0
kurt.kivell@saugeenojibwaynation.ca

Dear Ms. Heisler:

Re: Master Plan: Brooke Area Basin A3 Outlet
Municipal Class Environmental Assessment
Notice of Project Completion

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Miigwetch!

Ian C. Boddy
Mayor

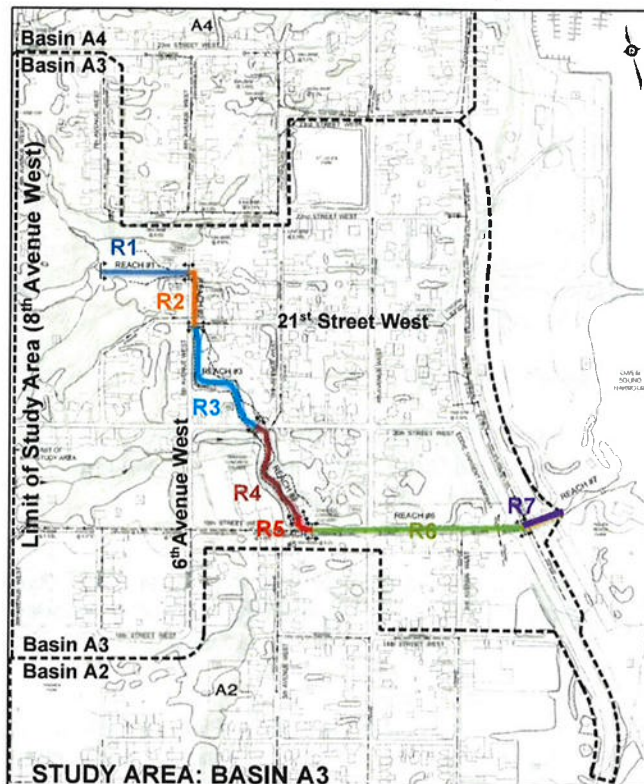
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Facsimile: 519-376-3579
E-mail: iboddy@owensound.ca
www.owensound.ca

May 26, 2023

Chief Veronica Smith
Chippewas of Nawash Unceded First Nation
Administration Building
135 Lakeshore Boulevard
Neyaashiinigmiing, ON N0H 2T0
sao@nawash.ca

Dear Chief Smith:

Re: Master Plan: Brooke Area Basin A3 Outlet
Municipal Class Environmental Assessment
Notice of Project Completion

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Mayor

NOTICE OF PROJECT COMPLETION

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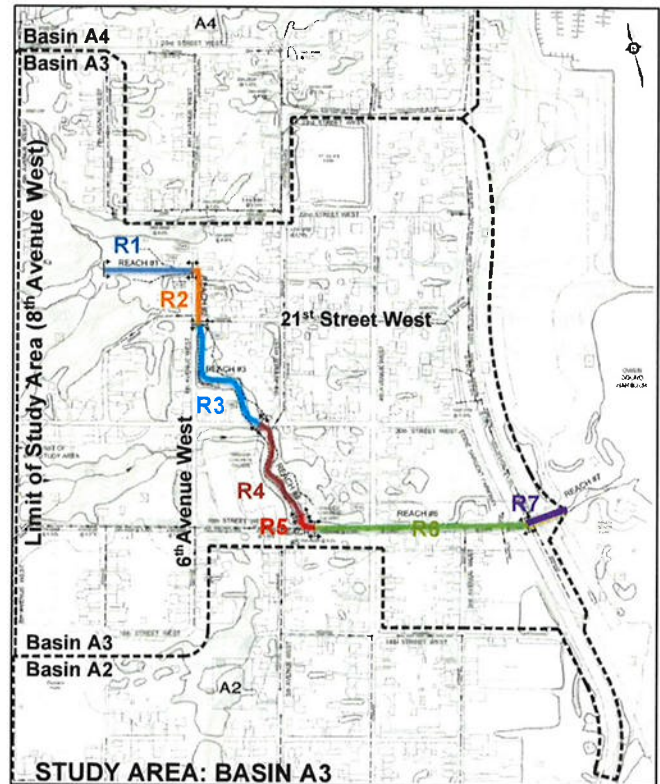
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City of Owen Sound
Mr. Chris Webb, P.Eng.
808 – 2nd Avenue East
Owen Sound, ON N4K 2H4
cwebb@owensound.ca
Tel: 519-376-4530 (ext. 3300)

GM BluePlan Engineering Limited
Mr. John Slocombe, P.Eng.
1260-2nd Avenue East, Unit 1
Owen Sound, ON N4K 2J3
john.slocombe@gmblueplan.ca
Tel: 519-376-1805



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The Office of the Mayor
Ian Boddy
City Hall
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Owen Sound, ON N4K 2H4



Telephone: 519 376-4440 ext. 1212
Facsimile: 519-376-3579
E-mail: iboddy@owensound.ca
www.owensound.ca

May 26, 2023

Chief Conrad Ritchie
Chippewas of Saugeen First Nation No.29
6493 Highway 21
RR#1 Southampton, ON N0H 2L0
Conrad.ritchie@saugeen.ca

Dear Chief Ritchie:

Re: Master Plan: Brooke Area Basin A3 Outlet
Municipal Class Environmental Assessment
Notice of Project Completion

In July 2008 the City of Owen Sound (City) and the Township of Georgian Bluffs completed the '*Brooke Area Stormwater Management Study*' which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one of the drainage areas having multiple issues.

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Miigwetch!

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Ian C. Boddy
Mayor

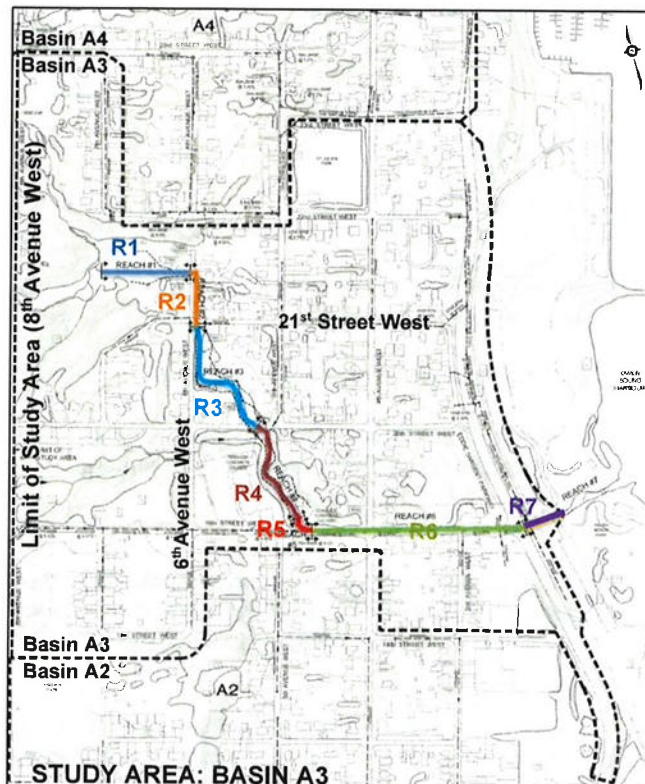
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May 26, 2023

Métis Nation of Ontario
Suite 1100 – 11th Floor
66 Slater Street
Ottawa, ON K1P 5H1
consultation@metisnation.org

To Whom it May Concern:

Re: Master Plan: Brooke Area Basin A3 Outlet
Municipal Class Environmental Assessment
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Ian C. Boddy
Mayor

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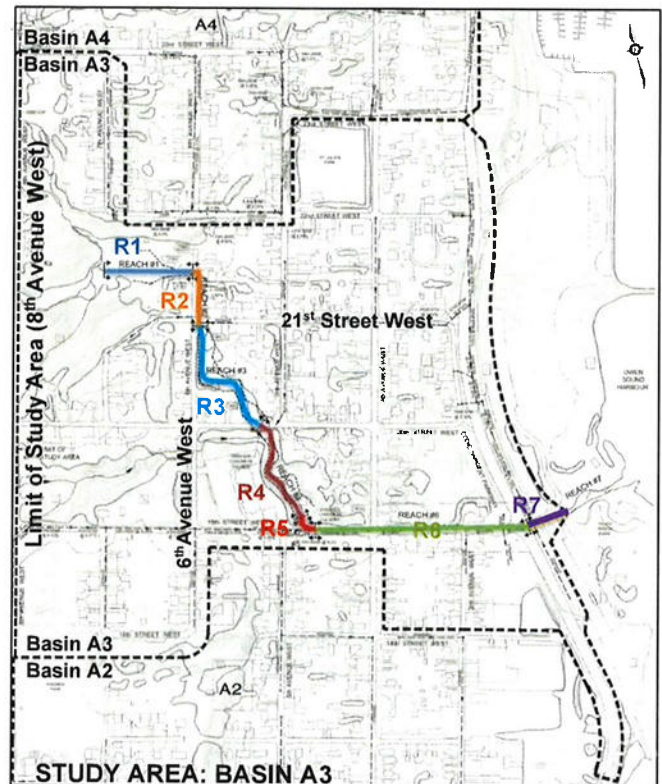
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www.owensound.ca

May 26, 2023

Archie Indoe, President
Historic Saugeen Metis
204 High Street
PO Box 1492
SOUTHAMPTON, ON N0H 2L0

Dear Mr. Indoe:

Re: Master Plan: Brooke Area Basin A3 Outlet
Municipal Class Environmental Assessment
Notice of Project Completion

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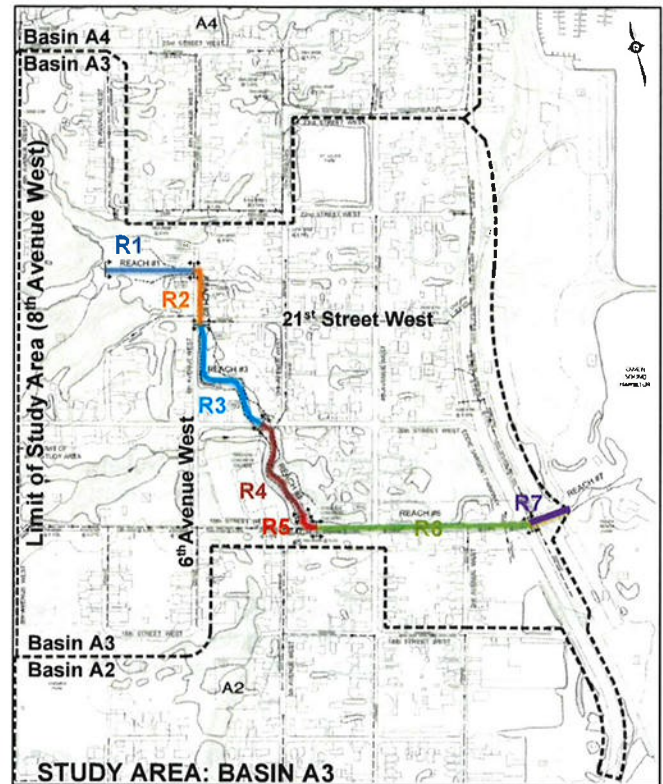
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May 26, 2023

Jesse Fieldwebster, Environmental, Climate Change Manager
Métis Nation of Ontario
845 King St#10,
Midland, ON L4R 0B7
hsmrcc@bmts.com

Dear Mr. Fieldwebster:

Re: Master Plan: Brooke Area Basin A3 Outlet
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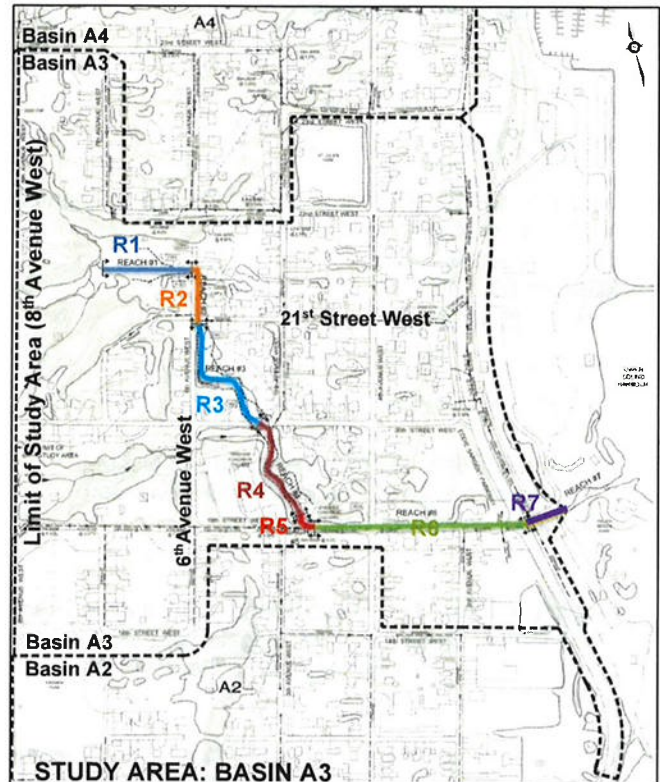
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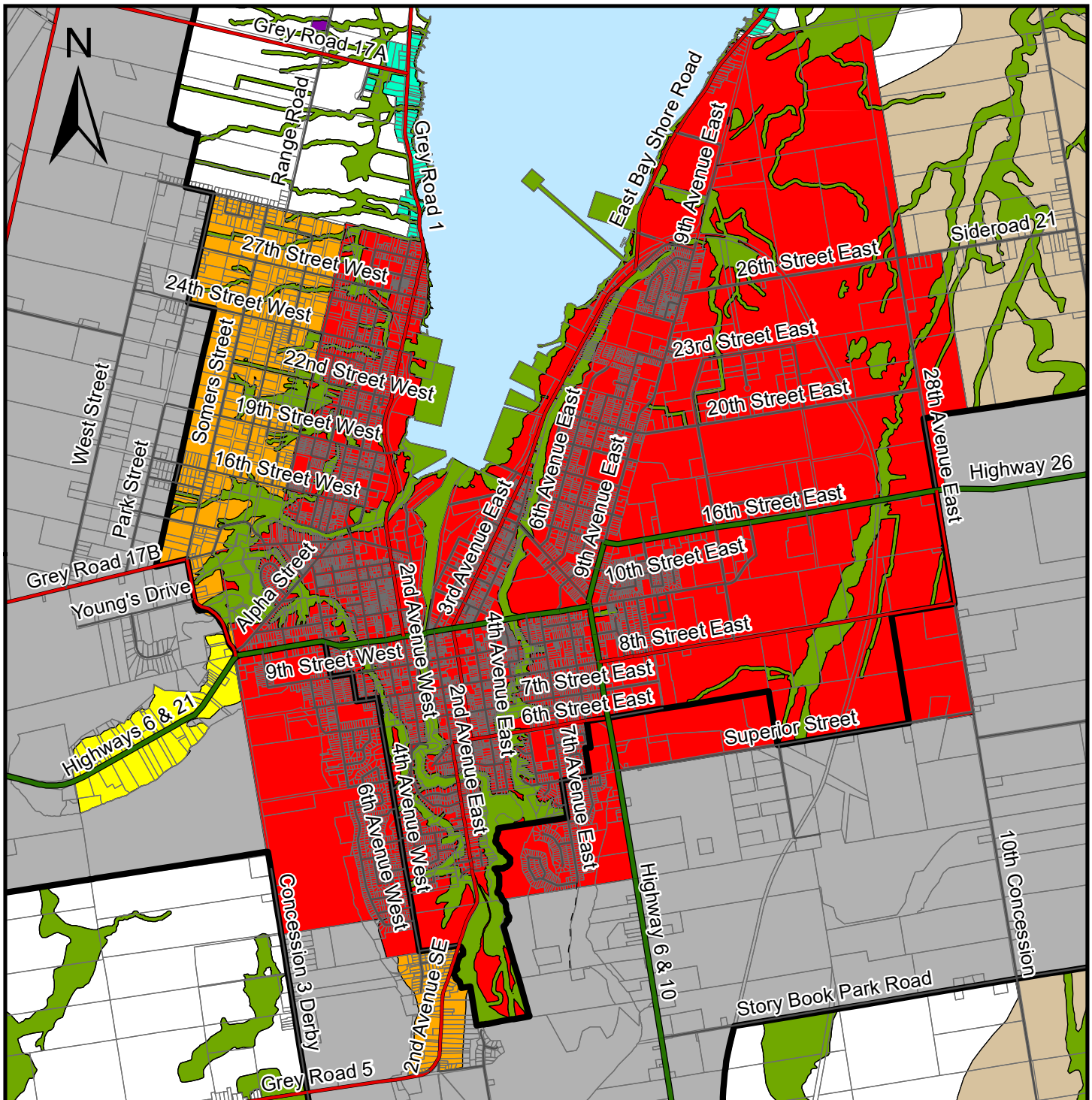
This *Notice of Project Completion* is advertised in the Owen Sound Sun Times and is also posted on the City's website, where additional information is provided.

This Notice first issued on May 26th, 2023.

All personal information included in a comment or request (i.e., name, address, phone and property location) is collected, under the authority of Section

30 of the Environmental Assessment Act and is maintained for the purpose of creating a record that is available to the general public. As this information is collected for the purpose of a public record, the protection of personal information provided in the Freedom of Information and Protection of Privacy Act (FIPPA) does not apply (s.37). Personal information submitted may become part of a public record that is available to the general public unless it is requested that personal information remain confidential. It is noted that while all comments will become part of the public record, it is GM BluePlan's standard practice to keep personal information confidential, as possible.

APPENDIX B: PLANNING INFORMATION



LEGEND

- | | |
|---------------------------|---|
| Provincial Highway | Sunset Strip Area |
| County Road | Industrial Business Park |
| Local Road | Space Extensive Industrial and Commercial |
| Seasonal Road | Niagara Escarpment Plan Boundary ** |
| Agricultural | Niagara Escarpment Development Control Area |
| Special Agricultural | Escarpment Natural Area |
| Rural | Escarpment Recreation Area |
| Primary Settlement Area | Hazard Lands |
| Secondary Settlement Area | Provincially Significant Wetlands |
| Inland Lakes & Shoreline | |
| Recreational Resort Area | |

** certain settlement areas within the Niagara Escarpment Plan Boundary may be subject to Development Control.

THE COUNTY OF GREY OFFICIAL PLAN

SECONDARY SCHEDULE Land Use Types

MAP 1h

OWEN SOUND BROOKE - CREAMERY HILL

SCALE 1:43 000

INTERACTIVE MAP: geo.grey.ca
DOWNLOAD PDF: grey.ca/planning-development

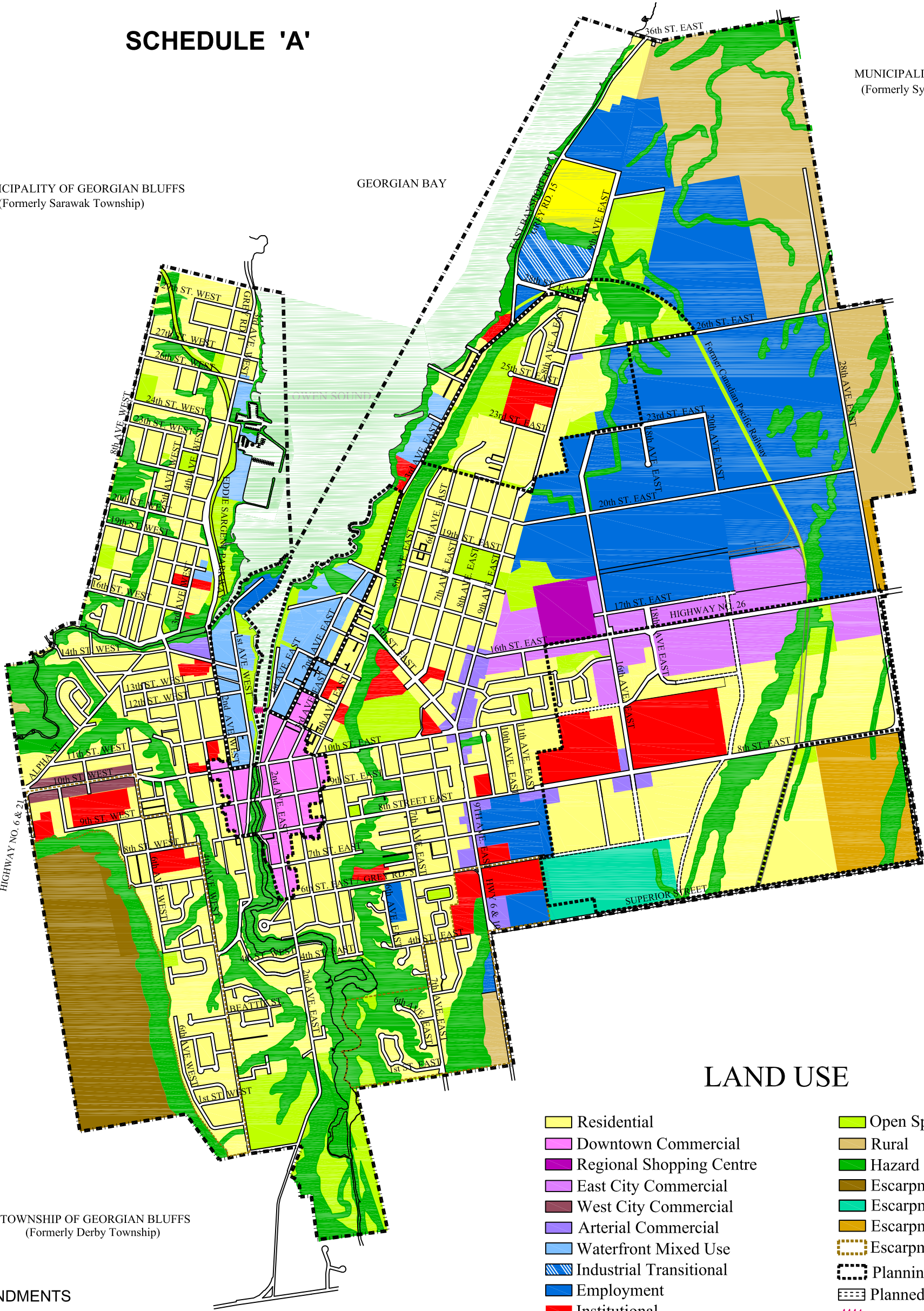
GR_OP_SecSched_Map1hOwen SoundX11.mxd

SCHEDULE 'A'

MUNICIPALITY OF MEAFORD
(Formerly Sydenham Township)

MUNICIPALITY OF GEORGIAN BLUFFS
(Formerly Sarawak Township)

GEORGIAN BAY

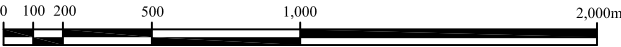


LAND USE

- | | |
|--------------------------|--------------------------------|
| Residential | Open Space |
| Downtown Commercial | Rural |
| Regional Shopping Centre | Hazard Lands |
| East City Commercial | Escarpment Natural |
| West City Commercial | Escarpment Protection |
| Arterial Commercial | Escarpment Rural |
| Waterfront Mixed Use | Escarpment Urban |
| Industrial Transitional | Planning Area Boundary |
| Employment | Planned Road |
| Institutional | Future Bridge Alignment Option |

AMENDMENTS

- OPA #1 By-law #2007-039
- OPA #2 By-law #2007-141
- OPA #3 By-law #2007-143
- OPA #4 By-law #2017-112
- OPA #5 - By-law #2014-073
- OPA #7 - By-Law #2017-005



CITY OF OWEN SOUND OFFICIAL PLAN

APPENDIX C:
BASIN A3 SWM STUDY (JULY 2008)

**BROOKE AREA STORMWATER
MANAGEMENT STUDY
CITY OF OWEN SOUND
TOWNSHIP OF GEORGIAN BLUFFS
FINAL REPORT**

**GAMSBY AND MANNEROW LIMITED
CONSULTING PROFESSIONAL ENGINEERS
GUELPH – KITCHENER – LISTOWEL – OWEN SOUND**

July, 2008
Our File: M-1586

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**BROOKE AREA STORMWATER MANAGEMENT STUDY
CITY OF OWEN SOUND
TOWNSHIP OF GEORGIAN BLUFFS
FINAL REPORT
July, 2008
Our File: M-1586**

1.0 BACKGROUND

1.1 INTRODUCTION

Gamsby & Mannerow Limited (G&M) was retained by the Township of Georgian Bluffs and the City of Owen Sound to undertake a Stormwater Management Study for the Townplot of Brooke. The scope of this study encompasses Stormwater Management analysis and planning within the Brooke area of the Township of Georgian Bluffs and the City of Owen Sound, as outlined in Figure 1, and on Drawing No. M-1586-1.

This submission describes the planning and review process, documents the engineering analyses and presents recommendations for implementation of the study findings. These recommendations are presented throughout this report and are recapitulated in Section 4.0.

1.2 STUDY PURPOSE

The purpose of the Study is to protect life and property from the effects of stormwater flooding by developing an appropriate drainage solution for each drainage basin within the study area, which is acceptable to both municipalities.

1.3 STUDY OBJECTIVE

The objective of the Brooke Area Stormwater Management Study is to present alternative drainage solutions and related costs to each municipality and, ultimately, to establish a recommended solution for each drainage area, with an implementation schedule, to the mutual satisfaction of the two participating municipalities.

1.4 STUDY AREA AND BACKGROUND

The study area and existing conditions are illustrated on Drawing No. M-1586-2.

In 1990, the former Township of Sarawak commissioned G&M to prepare a Stormwater Management Study (SWM), as supporting documentation for the Township Official Plan review, and is included in Appendix "E". As part of that Study, a Development Feasibility Study was

also prepared, which focussed on the Townplot of Brooke area within the Township of Sarawak, including drainage patterns.

The Stormwater Management Study delineated thirty-four (34) drainage areas within the Township of Sarawak, seven (7) of which relate to the Townplot of Brooke area and the subject Study Area, and are identified as catchment areas (basins) A1 to A7 on the attached Figure 2. Sub-basin areas are also delineated within each municipality, numbers representing sub-basins within the Townplot of Brooke (i.e. A3-1, A3-2, etc.), and lower-case letters representing sub-basins within the City of Owen Sound (i.e. A4a, A4b, etc.). Townplot of Brooke sub-basins often drain across the Owen Sound City limits at multiple locations which may confluence within one Owen Sound sub-basin.

1.4.1 Georgian Bluffs, Townplot of Brooke Drainage System

The following summarizes our understanding of the Georgian Bluffs, Townplot of Brooke drainage system.

Basin A1 outlets to the Pottawatomi River within the Townplot of Brooke and does not impact on City of Owen Sound storm sewer infrastructure.

Basin A2 has two (2) sub-basin areas. Sub-basin A2-1 drains across the municipal boundary and outlets to the Pottawatomi River through sub-basin A2a. Contribution from sub-basin A2a is considered to be negligible due to the close proximity of its outlet to the municipal boundary. A smaller sub-basin (Basin A2-2) outlets to a City storm sewer on 7th Ave W (A2b), between 15th St W and 16th St W (Hunters Run subdivision).

Basin A3 has six (6) ravine outlets from Georgian Bluffs into the City, at 19th St W, a location between 19th St W and 20th St W, 20th St W, 21st St W, 22nd St W, and 23rd St W. A study by G&M in 1992 of Basin A3 investigated design flows and three alternative stormwater management pond locations along the major drainage route, which outlets into the City at 21st St W.

Basin A4 has a main outlet (A4-2) to the City's 24th St W storm sewer, with a secondary, high flow spill outlet south-easterly from the SWM pond, combining with sub-basin A4-1, to a ravine between 23rd St W and 24th St W. A review of G&M archive files relating to this area indicates that the Township "purchased" 30 ft³/s (0.85 m³/s) capacity within the City's 24th St W storm sewer, with greater flows to be diverted into the "Fromager" stormwater management pond, south of Keppel Sarawak school. A design report, prepared by Ainley and Associates Limited in August, 1994, indicates how ultimate development flows to the Fromager pond are controlled to existing (1990) flow rates. The 1994 Final Design Report and Schedule "B" EA Report are included for reference in Appendix "E".

Basin A5 discharges from Georgian Bluffs at six (6) locations. Sub-basins A5-1 to A5-6 discharge from Georgian Bluffs via a 750 mm Ø CSP at 26th St W, 450 mm Ø CP between 26th St W and 27th St W, 450 mm Ø CSP at 27th St W, 300 mm Ø CSP at 27th St W, open channel flow at 28th St W, and open channel flow at 29th St W, respectively.

Basin A6 discharges to a ravine along the 30th St W right-of-way. Basin A7 also discharges via a ravine north of the City limit across Grey Road 1 to Owen Sound Bay. Within Basins A5, A6 and A7 were noted a variety of drainage complaints and potential for spills between the Basins. A review by G&M in 1992 included eight alternative drainage schemes for managing drainage within these three Basins.

1.4.2 City of Owen Sound Drainage System

The following summarizes our understanding of the City of Owen Sound drainage system.

The drainage areas, which outlet from Georgian Bluffs into the City of Owen Sound, discharge to Owen Sound Bay at four (4) major storm sewer outlets, at 19th St W (Kelso Beach – Basin A3), 24th St W (Yacht Club Basin – sub-basin A4a), 27th St W (sub-basin A5a), and 30th St W (Basin A6). Additional outlets exist at 8th Ave W (to the Pottawatomi River – sub-basin A2a), 7th Ave W (to the Pottawatomi River – sub-basin A2b), 24th St W (sub-basin A4b), 26th St W (drains local runoff), 28th St W (sub-basin A5b) and 29th St W (sub-basin A5c). These additional outlets, with the exception of sub-basins A2a and A2b, drain predominantly local area runoff within the City.

Drainage designs were prepared by G&M for the City of Owen Sound for outlets at 19th St W (Kelso Beach – Basin A3), 24th St W (Yacht Club – Basin A4), 27th St W (Basin A5) and 29th St W. The 30th St W outlet remains as an open channel to a culvert across Grey Road 1.

In 2003, following a joint meeting between Township and City officials regarding a drainage complaint in the 6th Ave W area, G&M prepared MIDUSS flow models on behalf of the City for the 24th St W storm sewer system within the City, with a view to re-routing discharge from the 7th Ave W storm sewer to the 22nd St W storm sewer, which connects to the 24th St W outlet. This project was not implemented due to the apparent need to investigate broader drainage issues in the area. More recent investigations were conducted by G&M, on behalf of the City, for the 19th St W – Kelso Beach storm sewer, including the recently constructed 8th Ave W / 19th St W storm sewer, 6th Ave W drainage course review and Kelso Beach outfall review.

1.5 PHYSIOGRAPHY

The Sydenham River descends Inglis Falls just south of the City limits, and flows northward through the central business district to the inner harbour of Owen Sound Bay. A series of crescent-shaped bluff and plateau features rise from the bay water level. The lower plateau represents the former glacial Lake Nipissing wave-cut terrace. The upper plateau represents the former glacial Lake Algonquin wave-cut terrace. The upper-most rise in the series was confined by the Niagara Escarpment.

The steep gradients of the rises and the relatively flat plateaus create unique challenges for establishing traditional gravity draining sewer systems. For example, despite the significant relief, large stormwater management ponds are often required to moderate peak runoff from development to maintain manageable storm sewer sizes downstream across the flatter plateau areas.

The Niagara Escarpment forms the westerly limit of the Study Area. The Brooke area of Sarawak is located predominantly on the upper plateau, or Algonquin terrace. The Nippissing Rise runs approximately along the boarder between the two municipalities, while the Nippissing terrace is located primarily within the City of Owen Sound.

1.6 OFFICIAL PLANS

The Grey County Official Plan includes the Township of Georgian Bluffs. The westerly half (approximately) portion of the Study Area is included in the Niagara Escarpment Planning area. The easterly half is designated as Hamlet. The Official Plan prepared for the Township of Sarawak in 1992 remains as the controlling document for development planning within the Study Area. The Township of Georgian Bluffs Comprehensive Zoning By-Law No. 6-2003, as amended January, 2007, designates the easterly half as R1 – General Residential zoning, with some EP – Environmental Protection zoning along the watercourses. Minor areas of I – Institutional and M1 – General Industrial zoning are also included within the area.

The Owen Sound Official Plan indicates that lands within the study area are predominantly residential, with small areas of hazard land, open space, and waterfront mixed use (small commercial).

1.7 DEVELOPMENT POTENTIAL

1.7.1 Georgian Bluffs

The background reports, which led to the development of the Township of Sarawak Official Plan, 1992, included the following:

- Development Feasibility Study, Townplot of Brooke, Township of Sarawak, May, 1990.
- Stormwater Management Study, Township of Sarawak, September, 1990.
- Background Report to the Official Plan for the Township of Sarawak, June, 1991.

These reports considered a variety of development scenarios, including one which would rely on the provision of municipal water and sewer servicing. The provision of municipal water and sewer servicing would allow development density to approach 5 units per acre, which is significantly greater than the development density achievable based on individual, private wells and sewage systems. The Official Plan (1992) restricts the density of development until such time as municipal water and sewer servicing is available. The development scenario advanced since that time does not include municipal water or sewer servicing and, for the purposes of this report, no extension of municipal servicing throughout the Brooke area of Georgian Bluffs is contemplated.

Generally, the lands within the Niagara Escarpment Planning area may be developed on 5 acre (2.0 ha) lots. Lands within the Hamlet designation may be developed on 0.5 acre (0.2 ha – R1c), 1.5 acre (0.6 ha – R1b), or 2.47 acre (1.0 ha – R1a) lots, with no municipal water or sewer services (depending on the ability of local soil conditions to support an on-site sewage system), or 0.4 acre (0.15 ha) lots where municipal water service, extended from the City of Owen Sound, currently exists. These areas are delineated in the Municipal Zoning By-law No. 6-2003, as

amended January, 2007, and is provided as Figure No. 4 for reference. Developable lot areas are delineated on Drawing No. M-1586-3.

The Stormwater Management Study utilizes the following criteria and assumptions in establishing existing and ultimate development runoff scenarios:

1. The density of development throughout the Township will be no greater than that illustrated on G&M Drawing No. M-1586-3, which reflects the Municipality Zoning By-law.
2. There will not be extensive industrial or commercial development.
3. Impervious areas consist of road surfaces, roof-tops and driveways.
4. Lawns and agricultural lands are considered as pasture land.
5. Runoff within Georgian Bluffs will continue to be controlled through open ditch drainage. No underground storm sewer network is contemplated.
6. The population growth rate within the Townplot of Brooke will continue at 2% per year, which will achieve an ultimate development condition within the 20-year planning horizon.

The Brooke area is an original Townplot. As such, the road and lot fabric is already surveyed and created. Therefore, development of these lots occurs on an individual basis and not through a plan of subdivision process. The result, with respect to stormwater management, is that there is little opportunity for Georgian Bluffs to have a developer construct a single facility to manage stormwater runoff on an area-wide basis.

1.7.2 Owen Sound

Aside from some small commercial and residential land uses, the lands within the Owen Sound portion of the Study Area are developed, predominantly with residential land use. For the purposes of this report, it is assumed that the City portion of the Study Area is already fully developed.

1.8 DRAINAGE CONSIDERATIONS

A watercourse is defined generally as a stream of water, which flows along a defined channel, with bed and banks, for a sufficient time to give it substantial existence. This may include streams that dry up periodically. Watercourses within the Study Area may be subject to Riparian Rights. These rights include the right to drain lands that abut the watercourse into the natural stream, with ditches and drains, even though it results in an increase in the volume or rate of flow. Riparian property owners are entitled to receive water flowing in its natural state (both quantity and quality) and, thereto, are required to accept the natural state of flowing water, even if flooding conditions occur.

Surface water not flowing in a natural watercourse has no right of drainage. An owner of lower land may, at his or her own choice, either allow the water from higher land to flow over it, or by dams or banks keep such water off his or her property. No owner has the right to collect such surface water by ditches or drains and discharge it on lands of another. He or she has the responsibility to take this water to a sufficient outlet, i.e., a natural watercourse or a drain constructed under The Drainage Act. For a municipality this means that, once water is collected in ditches or storm sewers, they cannot discharge it onto another property and should take responsibility to ensure the water is taken to a sufficient outlet.

The drainage basins delineated on G&M Drawing No M-1586-1 are based on historical documentation and current field reviews. In many instances, roadside ditches in the table lands area within Georgian Bluffs do not provide a clear drainage divide and high flows may spill from one drainage basin to the next. We recommend that clear separation of drainage be established by installing berms within the ditches at the locations where drainage divides between basins exist. In this manner, stormwater flows may be managed on a more consistent basis.

Allowable flows from Georgian Bluffs into the City of Owen Sound can be based on the greater of the pre-development design flow, or the capacity of existing storm sewer infrastructure within the City. Where the capacity of the existing City storm sewer system is inadequate, and no suitable overland flow route is available, the available options include providing SWM ponding areas to regulate flows, or increasing storm sewer capacity.

Georgian Bluffs has recently introduced the practice of requiring on-site stormwater management controls for developing lots within the Brooke area. Theoretically, this practice could control ultimate development peak flows downstream at existing condition flow rates. However, considering that the modelled ultimate development flows are not significantly greater than existing flow rates, and that private systems may not be sufficiently reliable, we have not included the effects of these private systems in our ultimate development flow calculations, or in our considerations for drainage infrastructure planning.

Design flows are considered as the calculated peak of runoff due to a statistical rainfall event, based on recorded rainfall events. In an un-controlled drainage system, the peak of runoff occurs only for a relatively short duration. In a controlled drainage system (i.e. a stormwater management pond) a volume of the runoff water is temporarily held back and released at a “lower than peak rate” for an extended period of time.

Generally, road crossing culverts and storm sewer systems are designed to convey the 1:5 year design flow with no surcharging. These systems may convey more than the 1:5 year design flow under surcharged conditions. Overland flow routes convey flows in excess of the drainage system capacity.

The Grey Sauble Conservation Authority (GSCA) has mapped regulated areas along watercourses and sloped areas within the Study Area. The municipality should take ownership of these hazard lands as development proposals are advanced.

There is a claim by Native Peoples on the lands of un-opened road allowances within the Georgian Bluffs portion of the Brooke area. Recent rulings by the Province dictate that Natives are to be consulted regarding any proposals to utilize lands under these claims.

1.9 THE CLASS ENVIRONMENTAL ASSESSMENT PROCESS

The key principles of successful environmental planning under the EA Act include the following:

- Consultation with affected parties early in and throughout the process, such that the planning process is a cooperative venture.

- Consideration of a reasonable range of alternatives.
- Identification and consideration of the effects of each alternative on all aspects of the environment.
- Systematic evaluation of alternatives in terms of their advantages and disadvantages.
- Provision of clear and complete documentation of the planning process.

The “environment” to be considered generally includes the natural, social, cultural, built and economic environments. The Municipal Engineers Association has prepared a “parent” Class EA for municipal projects, which outlines a generic process for municipal projects to fulfill the requirements of the EA Act. This document was amended in 2007 to include Schedule A+ projects (pre-approved with the public to be advised) and Municipal Transit Projects. A flowchart, illustrating the process, is provided as Figure No. 3. It is presumed that the projects discussed herein would be either Schedule “A”, “A+”, or “B” activities under the Municipal Class EA.

This report is intended to provide sufficient documentation to fulfill the requirements of the first two Phases of the Municipal Class Environmental Assessment process, although specific projects may require a further degree of public and review agency consultation prior to implementation.

2.0 RAINFALL AND SNOWMELT

Surface water management is often referred to as stormwater management, although the design practices also are reflective of runoff from snowmelt. Since snowmelt flows are difficult to predict, surface water management plans are based on calculated runoff from statistical rainfall events. The Atmospheric Environment Service records rainfall data at the City’s Water Pollution Control Plant (WPCP).

2.1 RAINFALL

Rainfall data are collected at the City of Owen Sound WPCP, with statistical analyses prepared by the Atmospheric Environment Service, for the years 1965 to 1990. A copy of the statistical rainfall data is included in Appendix “A”. The statistical data were entered into the MIDUSS computer modelling software to generate coefficients for the Chicago – type rainfall distribution patterns. Computer model output is located in Appendix “A”, and is summarized in the following Table 2-1.

Table 2-1 – Chicago Rainfall Distribution Coefficients

MIDUSS Coefficients	1:2-Year	1:5-Year	1:10-Year	1:25-Year	1:50-Year	1:100-Year
A	786.171	1129.529	1340.877	1648.994	1912.945	2117.123
B	6.530	7.382	7.570	8.074	8.567	8.610
C	0.822	0.840	0.846	0.855	0.863	0.864
R	0.375	0.375	0.375	0.375	0.375	0.375
Imax (mm/hr)	77.251	101.133	116.940	136.784	151.473	166.328
PTOT (mm)	36.810	47.462	54.358	63.313	69.976	76.527

The Regional storm for the study area is the Timmins Regional storm. This rainfall event has characteristics as outlined in Appendix “A”.

2.2 SNOWMELT

Runoff events due to snowmelt are difficult to quantify due to a high degree of variability in a number of natural conditions such as temperature, rainfall, amount of snow, density of snow, permeability of soils (frozen or saturated), etc. Therefore, statistical rainfall events are used to approximate the runoff due to snowmelt. This approximation is achieved by comparing streamflow records for spring runoff conditions, with dry weather conditions for a monitored watershed.

Historical streamflow records are compiled by Environment Canada, Inland Waters Directorate, Water Resources Branch, Water Survey of Canada, in the Historical Streamflow Summary, Ontario, 1990. The data is compiled for the Sydenham River near Owen Sound (Station No. 02FB007), with an upstream catchment area of 181 km². A table of Annual Extremes of Discharge for the Sydenham River, copied from the Historical Streamflow Summary, is included in Appendix “B”.

The data correlated between the years 1915 and 1990 indicate a maximum instantaneous discharge rate of 59.5 m³/s on April 19th, 1975 (no record is available prior to 1959), and a maximum daily discharge of 67.7 m³/s on April 12th, 1947. The minimum daily discharge on record is 0.028 m³/s, measured on July 17th, 1952.

The MIDUSS computer model was used to model runoff due to rainfall from the same 181 km² catchment area. Results are included in Appendix “B”, and are summarized in the following Table 2-2.

Table 2-2 – Peak Runoff Rates due to Rainfall in Sydenham River

	1:2-Year	1:5-Year	1:10-Year	1:25-Year	1:50-Year	1:100-Year	Regional
Peak Flow (m ³ /s)	12.140	27.856	41.526	63.613	83.336	104.555	382.557

Therefore, as a comparison, runoff due to snowmelt is approximately equivalent to the runoff due to a 1:25 year return rainfall event. Surface water management planning for this Brooke Area Stormwater Management Study includes runoff events due to a 1:100 year rainfall event, and a regional storm event (Timmins Regional storm), which is considered to also provide a sufficient degree of consideration for snow melt events.

3.0 DRAINAGE AREAS

The following sections include a description of existing conditions within each drainage area. Modelled design flows for pre-development, existing and ultimate development conditions are presented on Drawing Nos. M-1586-4 to 6, with capacity restrictions noted in bold type. Drawing No. M-1586-3 illustrates the remaining lots on which development may occur within

the Township, which was used in determining ultimate development conditions. Existing and potential drainage problems are identified and discussions regarding various alternative solutions to the drainage problems are presented. For the purposes of a Municipal Class Environmental Assessment, the “Do Nothing” option is also considered. Cost estimates are provided for various recommended solutions. The cost estimates include construction costs plus 15% for contingencies and 15% for engineering design and construction inspection. Land costs, legal costs, permit fees and additional investigative study costs (i.e. environmental impact study, geotechnical investigation, environmental assessment etc.) are not included. Recommended solutions are illustrated on Drawing Nos. M-1586-7 to 9, along with the resultant design flows on Drawing Nos. M-1586-10 to 12.

Recommendations are accompanied by a High, Medium or Low priority. A High priority correlates to a proposed implementation schedule of between 0 and 5 years, Medium between 5 and 10 years, and Low for 10 years and beyond.

Culvert capacities, denoted within this report and on G&M Drawings Nos. M-1586-4 to 6 and M-1586-10 to 12, were calculated based on a headwater/diameter ratio of 1.0, unless otherwise stated. In some instances, surcharge conditions may result in temporary ponding upstream where the ‘top of bank’ elevations permit. Culvert capacity design charts are provided in Appendix “C”.

MIDUSS computer model output is provided in Appendix “D”.

3.1 BASIN A1

3.1.1 Preamble

Drainage Basin A1 covers 13.8 ha, which discharges easterly on 14th St W to the Pottawatomi River, outside of the City of Owen Sound limits. Currently, a 450 mm Ø CSP conveys flows down the bluff to the river. The outlet is located where 14th Street West crosses the Pottawatomi River. Inlets to the sewer often become plugged with leaves and flows can spill overland along the roadway to the river. Roadside ditches are not well defined and nuisance flooding can occur. Increases in runoff due to anticipated development within Basin A1 is expected to be negligible, due to the large area of hazard land within the Basin, and only four potentially developable lots.

3.1.2 Design Flows

Due to the small catchment area, the 450 mm Ø CSP outlet pipe is considered to be the only key infrastructure within the Basin.

- 450 mm Ø CSP (14th St W) – Capacity of about 0.46 m³/s (most critical location), capable of conveying the 1:10 year flow.

3.1.3 Recommendations

We recommend that drainage improvements be incorporated into any road improvements planned for 14th St W. These improvements are summarized in the following:

Table 3-1 – Basin A1 Recommended Improvements

Description	Cost	Priority
Replace existing catchbasin grates on 14 th St W with bird cage style inlet grates, or other appropriate inlet to reduce plugging potential, to allow leaves to inlet to the sewer, rather than collecting and plugging at the inlet.	\$5,000	High
Reconstruct 14 th St W (350 m), including replacing the existing 450 mm Ø CSP with a larger diameter storm sewer (600 mm Ø), with a sufficient number of inlets, to improve flow hydraulics, increase capacity and facilitate maintenance, and improving roadside ditches to drain road granulars, direct surface flows to appropriate inlets, and reduce nuisance flooding.	\$385,000	Low

These works are Schedule A activities under the Municipal Class EA and, therefore, no further review of alternatives is warranted.

3.2 BASIN A2

3.2.1 Preamble

Drainage Basin A2 drains 123.8 ha and primarily discharges via a ravine system and outlets to the Pottawatomie River within the City of Owen Sound, approximately 25 m east of the City limits. There are reports of some nuisance flooding problems within the developed portions of this Basin, which may be attributed to poor lot grading and/or poorly defined private drainage routes.

The increase in runoff due to future development is relatively minor, due to the large area of hazards lands within the Basin. The twenty-two potentially developable lots would have some impact on downstream flow velocities and, therefore, channel protection measures are proposed.

3.2.2 Design Flows

The following components are considered to be key infrastructure within the Basin and are presented from upstream to downstream.

- (2) 450 mm Ø CSP (Park St) – Capacity of about 0.3 m³/s, capable of conveying the 1:2 year flow. Possible roadway overtopping conditions exist for the 1:5 year flow and greater.
- 900 mm Ø CSP (14th St W) – Capacity of about 0.9 m³/s, capable of conveying the 1:10 year flow.
- 1500 x 900 CSP (Somers St) – Capacity of about 1.65 m³/s, capable of conveying the 1:10 year flow.
- 450 mm Ø CSP (16th St W, between Carney St and Somers St) – Capacity of about 0.15 m³/s, insufficient to convey the 1:2 year flow.
- 450 mm Ø Inlet and Outlet (Basin A2b) – Sufficient capacity exists for all modelled storm events and development conditions.

3.2.3 Recommendations

A smaller sub-basin (Basin A2-2) drains via a ravine system to a City storm sewer in the Hunters Run subdivision (7th Ave W). The storm sewer has sufficient capacity to convey the 1:100 year and Regional storm flows. Previous flooding, due to leaves blocking the inlet, has been corrected by City forces, however, a well defined overland flow route should be constructed to the street in the event that future plugging at the inlet occurs.

We recommend that the main outlet channel be walked with staff of the GSCA to target specific areas in need of erosion protection and to determine appropriate protection measures. In the following cost estimate, stone rip rap erosion protection is assumed to be provided at critical locations within the ravine and at the outlet to the river. Based on the foregoing, the recommendations for improvements within Basin A2 are presented in Table 3-2.

Table 3-2 – Basin A2 Recommended Improvements

Description	Cost	Priority
Remove and replace existing (2) 450 mm Ø CSP (Park St, between 13 th St W and 14 th St W) with (2) 600 mm Ø CSP	\$15,000	Medium
Create an overland flow route from the existing ditch inlet catchbasin to 7 th Ave W in the Hunters Run subdivision.	\$6,500	Low
Place stone rip rap protection at critical locations within the ravine system and at the outlet to the Pottawatomie River.	\$6,500	Low
Remove and replace existing 450 mm Ø CSP (16 th St W, between Somers St and Carney St) with (2) 600 mm Ø CSP	\$15,000	Medium

These works are Schedule A activities under the Municipal Class EA and, therefore, no further review of alternatives is warranted.

3.3 BASIN A3

3.3.1 Preamble

Drainage Basin A3 covers 103.5 ha of land within Georgian Bluffs, and 44.1 ha within the City of Owen Sound. The Georgian Bluffs portion includes six smaller sub-catchment areas, which outlet across 8th Ave W (Albert Street) and eventually confluence within the City, and outlet via a 1500 mm Ø CSP on 19th St W, through Kelso Beach Park to Owen Sound Bay.

Following receipt of a drainage complaint in the Basin A3 area of 6th Ave W, in July, 2003, the City of Owen Sound retained G&M to review the potential implications of diverting flows from the 7th Ave W storm sewer, which currently discharge down the bluff within A3, to the 22nd St W storm sewer system in Basin A4, which connects with the 24th St W outlet. That review identified that capacity may be available within the Basin A4 storm sewer system, but the effect of diverting this flow on flows within Basin A3 would be minimal. The project was not implemented due to the apparent need to investigate broader drainage issues within the area, which precipitated this study.

3.3.2 Boundary Conditions

The capacities of the outlets, at the boundary between Georgian Bluffs and Owen Sound, from the six sub-basin areas within Drainage Basin A3 are summarized in the following Table 3-3.

Table 3-3 – A3 Boundary Condition Outlet Capacities

	A3-1	A3-2	A3-3	A3-4	A3-5	A3-6
Outlet Size	600Ø	300Ø	600Ø	Open Channel	800Ø	300Ø
Outlet Capacity (m ³ /s)	0.971	0.06	0.32	-	0.65	0.06

3.3.3 Outlet Conditions

Sub-basins A3-1 and A3-2 combine east of 8th Ave W (Albert Street) and flow via an open channel to 6th Ave W. A 600 Ø CSP culvert directs flow across 6th Ave W to an open channel along the south side of 20th St W. The capacity of this culvert is about 0.32 m³/s. The channel combines with flows from the other four upstream sub-basin areas at 5th Ave W.

Sub-basins A3-3 to A3-6 all combine just east of 7th Ave W, and drain along an open channel between two private residences to the inlet to a 2700 x 1500 box inlet to a twin 1500 mm Ø CSP storm sewer on 6th Ave W. Nuisance flooding has been reported in the area of the two private residences. The box section has an inlet capacity of about 6.8 m³/s. The storm sewer system has a capacity of about 6.2 m³/s. The storm sewer directs flow to an open channel south of 21st St W. The dwelling at the south east corner of 6th Ave W and 21st St W has a walk-out basement door facing the open channel. A significant portion of the drainage course between 20th St W and 21st St W is on private property and siltation has caused ponding, reduced capacity and nuisance flooding. A 3200 x 1000 box culvert conveys flows across 20th St W to the confluence with flows from A3-1 and A3-2, at 5th Ave W. An open channel then conveys the combined flows south-easterly to a 2740 x 1220 box inlet at 19th St W, where additional flows from within the City combine and flow easterly on 19th St W to the outlet at Kelso Beach.

The outlet portion of this storm sewer system, from the Eddie Sargent Parkway through Kelso Beach Park to the Bay, is a 1500 Ø CSP at 0.2% grade, with a capacity of about 1.712 m³/s. This is not adequate to convey a 1:2 year flow under existing conditions. It is assumed that, as the water level rises, storage is achieved within the ditches and low-lying areas along each side of the Parkway, and overland spill occurs through the Park to the Bay. The City reports that nuisance flooding occurs in this area and, therefore, flow controls upstream should ensure that existing flooding conditions do not worsen.

3.3.4 Design Flows

The following components are considered to be key infrastructure within the Basin and are presented from upstream to downstream.

- (2) 1050 x 800 mm CSPA (Somers St and 19th St W) – The culverts provide a combined capacity of about 1.7 m³/s, capable of conveying the 1:100 year flow.
- 1200 mm Ø CSP (Carney Street, north of 20th St W) – Capacity of about 1.8 m³/s, capable of conveying the 1:100 year flow.
- 800 mm Ø CSP (8th Ave W and 22nd St W) – Capacity of about 0.65 m³/s, capable of conveying all design storm flows.

- 2700 x 1500 mm box culvert (and (2) 1500 mm Ø CSP) (6th Ave W, between 21st St W and 22nd St W) – Limiting capacity of about 6.2 m³/s, capable of conveying all design storm flows.
- 3200 x 1000 mm box culvert (21st St W, between 5th Ave W and 6th Ave W) – Capacity of about 4.48 m³/s, capable of conveying the 1:100 year flow.
- 600 mm Ø CSP (6th Ave W, between 19th St W and 20th St W) – Capacity of about 0.32 m³/s, capable of conveying the 1:2 year flow.
- 2740 x 1220 mm box culvert (29th St W, between 4th Ave W and 5th Ave W) – Capacity of about 5.069 m³/s, capable of conveying the 1:50 year flow.
- 1500 mm Ø (Outlet to Owen Sound Bay) – Capacity of about 1.712 m³/s, insufficient to convey all design storms modelled.

3.3.5 Definition of Problem(s)

The following problems have been identified within Basin A3.

- Runoff from Georgian Bluffs carries eroded materials from the ravine systems east of Carney Street to a common watercourse about 7th Ave W. The flat channel gradient within this watercourse, downstream to 20th St W, reduces flow velocity and causes sedimentation to occur, which leads to reduced channel capacity and nuisance flooding on the surrounding residential properties.
- The 1500 mm Ø outlet to this system, through Kelso Beach Park, has insufficient capacity to convey the 1:2 year design flow under existing conditions. Nuisance flooding conditions at the outlet should not worsen under ultimate development conditions.

The “Do Nothing” alternative would not address the problem(s) identified and, therefore, alternative solutions to the identified problem(s) are investigated in the following sections.

3.3.6 Review of Alternative Solutions

In February, 1992, G&M prepared a report entitled “Detention Pond Alternatives, Drainage Area A-3”, for the former Township of Sarawak, and is provided in Appendix “E” for reference. That report reviewed runoff hydrographs resulting from the 1:5 year and 1:100 year return storms, under existing development, 20-year development and ultimate development conditions, to determine the volume of surface water detention, and approximate land area required. The report concluded that, in order to reduce the overall peak flow from Basin A3 to existing (1990) conditions, a storage volume of about 5100 m³ would be necessary for the 20-year development condition, and about 10400 m³ would be necessary for the ultimate development condition. Three optional detention pond scenarios were considered, with the recommended option being the construction of a stormwater detention pond west of Carney Street, between 20th St W and 22nd St W.

We note that under natural conditions, watercourses can erode, transport and deposit a sediment load. The level of development within Basin A3 in Georgian Bluffs has contributed to increased activity of these mechanisms, the degree of which is difficult to accurately quantify and, thus difficult to allocate shared maintenance and construction costs appropriately. Therefore, an alternative which provides a clear separation of responsibilities is considered to be more favourable than one which does not.

A summary discussion for the three optional SWM pond scenarios is presented in the following Sections 3.3.6.1 to 3.3.6.3. Additional alternative solutions are discussed in Sections 3.3.6.4 to 3.3.6.5. A decision framework is presented in Section 3.3.6.6, which directs a recommended solution.

3.3.6.1 Alternative 1 – Option 1 – SWM Pond West of Carney Street

The Carney Street location, located west of Carney Street between 20th St W and 21st St W, is predominantly within an existing ravine feature, which would need to be enhanced to accommodate the required storage volume. There are no known natural, cultural, or built environmental constraints at this location.

Potential social environment considerations include the following:

- The lands are privately owned. The Township would need to acquire sufficient lands through negotiated easement or purchase, or expropriation,
- The lands are located in a highly visible and residential area. The Township would need to consider aesthetics and public safety in the design of a SWM ponding facility, and
- Sediment removal and water quality protection / enhancement features could be designed into this facility.
- The outlet to the system at Kelso Beach would need to be upgraded to achieve a 1:5 year flow capacity.

Economic environment considerations include land acquisition costs, construction costs and annual maintenance costs.

3.3.6.2 Alternative 1 – Option 2 – SWM Pond West of 8th Ave W (Albert Street)

The 8th Ave W (Albert Street) location is predominantly within an existing ravine feature, which would need to be enhanced to accommodate the required storage volumes. There are no known natural, cultural or built environmental constraints at this location, although the construction of a large berm, or dam would be required to achieve the storage volumes required.

Potential social environment considerations include the need for the Township to acquire sufficient lands through negotiated easement or purchase, or expropriation. The aesthetics of the facility may not be as important, since it would not be located in a highly visible area. Sediment removal and water quality protection / enhancement features could be designed into this facility. This facility would require the construction of a dam and the use of an un-opened road allowance. The outlet to the system at Kelso Beach would need to be upgraded to achieve a 1:5 year flow capacity.

Economic environment considerations include land acquisition costs, construction costs and annual maintenance costs.

3.3.6.3 Alternative 1 – Option 3 – Combined SWM Facilities

This alternative considers the construction of smaller SWM ponds at each of the Carney Street and 8th Ave W (Albert Street) locations. Construction could be staged to coincide with the need based on development.

Considerations regarding natural, social, cultural and built environments are the same as previously discussed. However, since this alternative would involve land acquisition, construction and maintenance at two locations, the implementation costs would be compounded. The outlet to the system at Kelso Beach would need to be upgraded to achieve a 1:5 year flow capacity.

3.3.6.4 Alternative 2 – Modify or Upgrade City Storm Sewer System

There are no known natural, social, or cultural environmental considerations.

Other than the outlet through Kelso Beach, the City storm sewer system has adequate capacity to convey the 1:5 year pre-development flows from the Township lands within Basin A3. No upgrades would be required, other than to support development within the Township. Therefore, costs would be solely at the expense of the Township.

The estimated construction cost to modify or upgrade the City storm sewer system would be in excess of \$1M and, therefore, this option is not considered further.

3.3.6.5 Alternative 3 – Modify Existing Channel and Upgrade Outlet

This option considers the potential to improve the existing channel capacity between 20th St W and 21st St W, and to upgrade the outlet storm sewer capacity at Kelso Beach Park.

The channel modifications would include removing accumulated sediments and broadening the channel width to provide 1:100 year design flow capacity, and providing a low flow channel. The required channel section would be about 11 metres wide, which would not fit well within the available land area between the existing 6th Ave W road and the adjacent house at 21st St W. Although the GSCA has verbally agreed to the concept of permitting sediment removal from this channel reach for routine maintenance purposes, we expect the extent of work considered under this option would be considered a Harmful Alteration Disturbance or Destruction (HADD) to fish habitat, and would not likely be permitted.

The area from the storm sewer outlet to the Bay was reviewed by G&M in July, 2005. The area is considered by the GSCA to be fish habitat, and any dredging or re-aligning of the channel, downstream from the storm sewer outlet, would be a HADD. Relatively minor aesthetic improvements and erosion control measures were planned at that time, which had the support of the GSCA. The estimated cost of these improvements is \$25,000.

To achieve a 1:5 year outlet capacity the existing 1500 mm Ø CSP storm sewer should be replaced with a 1500 mm Ø CP storm sewer at an estimated cost of \$100,000.

3.3.6.6 Decision Framework

The following Table 3-4 provides a decision making framework for the review of the alternatives discussed for Basin A3. Each alternative is ranked preferentially, within each environmental consideration, with a score of 1 for least desirable and 6 for most desirable. The highest scoring identifies the recommended alternative.

Table 3-4 – Basin A3 Decision Framework

Description	Environmental Considerations					
	Natural	Social	Cultural	Built	Economic	Total
Do Nothing	1	1	6	1	6	15
(1.1) SWM Pond west of Carney Street	6	6	3	6	5	26
(1.2) SWM Pond West of Albert Street	5	4	2	5	4	20
(1.3) Combined SWM Facilities	2	3	1	4	2	12
(2) Upgrade City Storm Sewer System	4	2	4	2	1	13
(3) Modify Ex. Channel and Upgrade Outlet	3	5	5	3	3	19

Based on the above results, construction of a SWM pond west of Carney Street emerges as the recommended solution.

3.3.7 Recommendations

Based on the foregoing, recommendations are made for improvements to the Drainage Basin A3 system in the following Table 3-5.

Table 3-5 – Basin A3 Recommended Improvements

Description	Cost	Priority
Acquire property or easements over watercourses west of Carney Street, which convey municipal drainage.	-	High
Acquire land immediately upstream from Carney Street for purposes of stormwater management.	-	High
Construct a 10,000 m ³ stormwater management pond upstream from Carney Street, or modify existing channel profiles to store 10,000 m ³ to reduce downstream peak flows and erosion.	\$250,000	High
Acquire property or easement over the channel west of 6 th Ave W.	-	High
Provide rip rap erosion protection at the intersection of channels west of 6 th Ave W.	\$6,500	High
Remove existing sediments from channel west of 6 th Ave W.	\$10,000	High
1) Replace ex. box culvert structures at 6 th Ave W and at 21 st St W. 2) Reconstruct 6 th Ave W., North of 21 st St W (full services) 3) Place additional box sections between road crossings (North of 21 st St W) * *Consider restoring natural channel section. Additional land may be required, or the road may be shifted.	1) \$120,000 2) \$350,000 3) \$160,000	High
Acquire an easement over the channel upstream from 20 th St W to 21 st St W, between 5 th Ave W and 6 th Ave W.	-	High
Remove existing sediments from channel upstream from 20 th St W.	\$15,000	High

Redirect 7 th Ave W storm sewer between 22 nd St W and 23 rd St W easterly on 22 nd St W and connect to existing storm sewer within Basin A4. To be completed when 7 th Ave W is scheduled for full road replacement. (approx. 60m)	\$150,000	Low
Remove and replace existing 600 mm Ø CSP (6 th Ave W, between 19 th St W and 20 th St W) with larger 750 mm Ø PE.	\$6,500	Medium
Construct minor improvements to outfall area within Kelso Beach Park, as outlined in G&M Drawing No. C-6460-1.	\$25,000	Medium
Improve Kelso Beach outlet to achieve 1:5 year flow capacity.	\$100,000	Low

Implementation of the stormwater management pond recommended as part of this alternative would be a Schedule B activity under the Municipal Class EA, which would require a Notice of Project Initiation, Public Review and a Notice of Completion.

3.4 BASIN A4

3.4.1 Preamble

Drainage Basin A4 covers 98.1 ha of land within Georgian Bluffs, and 29.5 ha within the City of Owen Sound. The Georgian Bluffs portion includes two sub-basin areas. The smaller, southerly area (A4-1) outlets to a ravine feature within the City of Owen Sound. The larger, northerly area (A4-2) outlets along the southerly ditch of 24th St W Street to a storm water management pond at the south west corner of the intersection with 8th Ave W (Albert Street), and includes Keppel Sarawak School.

At the corner of West Street and 24th St W, two (2) 450 mm Ø culverts convey flow across West Street. The culverts are about the same elevation. It appears that the northerly culvert was intended to direct local runoff westerly across West Street, to the southerly 450 mm Ø culvert, which drains easterly in the south ditch on 24th St W to the Fromager SWM pond, within Basin A4. It appears that the northerly ditch on 24th St W, just east of West St, was recently lowered to re-direct this flow easterly in the north ditch, and into Basin A5. The effect is the diversion of drainage from about 24 ha from A4 to A5.

An outlet control structure is in place to limit the discharge from the SWM pond at 30 ft³/s (0.85 m³/s), to the City storm sewer on 24th St W. A secondary outlet, or overflow, exits the SWM pond at the south east corner and drains down a ravine to 4th Ave W, south of 24th St W. This flow, and other flows from other City storm sewers, confluence at 24th St W and 3rd Ave W, and outlet via a 1200 mm Ø CP on 24th St W, through the yacht club to Owen Sound Bay.

3.4.2 Boundary Conditions

Flooding issues at the intersection of 24th St W and 8th Ave W are recorded in G&M files as dating back to 1974. In 1979, to alleviate flooding problems, the City of Owen Sound and the Township of Sarawak agreed to cost share the construction of a storm sewer along 24th St W from 8th Ave W to Owen Sound Bay. In that agreement, the Township secured 30 ft³/s (0.85 m³/s) capacity within the storm sewer system. A berm along the south side of the southerly ditch, west of 8th Ave W, was intended to divert flows in excess of 30 cfs into the Fromager Pond.

In 1985, the Grey Sauble Conservation Authority engaged Henderson, Paddon & Associates Ltd. (HPA) to review the existing drainage system within the area, and to assess system capacities based on land use planning from the Grey Owen Sound Official Plan, North Grey Secondary Plan, June 1980. The final report concluded “that the existing stormwater system in the area of 24th St W and 8th Ave W and downstream provides a satisfactory level of protection for the public and private property and that no remedial works are required.” Design flows calculated by HPA, to the intersection of 24th St W and 8th Ave W, were 0.89 m³/s and 3.55 m³/s, for the 1:5 year and 1:100 year storms, respectively.

In 1991 G&M prepared a Master Drainage Study for the Township of Sarawak, as part of the preparation of a new Official Plan. Updated design flows were prepared for existing and future development conditions, based on updated land use planning at that time. Design flows calculated by G&M, to the intersection of 24th St W and 8th Ave W, were 1.77 m³/s and 3.73 m³/s, for the 1:5 year and 1:100 year storms, respectively, under ultimate development conditions.

In 1994, the Township of Sarawak engaged Ainley and Associates Limited to update the design and approvals for the SWM pond to accommodate the expected ultimate development condition. Stormwater runoff from sub-basin A4-1, up to the 1:5 year flow condition, was to be routed easterly beyond the pond to maintain base flows within the existing ravine in the City of Owen Sound. Flows exceeding the 1:5 year design flow in A4-1 are designed to spill into the SWM pond. An orifice control plate was placed on the inlet to the Owen Sound 24th St W storm sewer system to limit flows to a maximum 0.85 m³/s. The design provides that flows exceeding the capacity of the orifice will backup and store within the pond. The pond was designed to overflow south-easterly to the existing ravine for the 1:10 year design flow and beyond, under ultimate development conditions, such that the combined flows entering the two Owen Sound drainage systems would not exceed existing (1990) flow rates.

3.4.3 Outlet Conditions

The outlet from the Fromager Pond to the City’s 24th St W storm sewer is controlled by a steel plate over the outlet pipe from the manhole on the north west corner of the intersection of 24th St W and 8th Ave W. The outlet to this system is a 1200 mm Ø CP on 24th St W, through the yacht club to Owen Sound Bay. The capacity of this outlet is 4.932 m³/s at 1.6% grade.

A secondary system by-passes the Fromager pond and drains south-easterly to a 600 mm Ø CSP culvert across 8th Ave W, then down through a ravine to the rear of lots fronting onto 4th Ave W. Flow enters a 900 mm Ø storm sewer on the west side of 4th Ave W, between 23rd St W and 24th St W, across 4th Ave W, then across private properties to 3rd Ave W. We recommend that, as funding permits, this storm sewer be re-routed along 4th Ave W, southerly to 23rd St W, then easterly on 23rd St W to 3rd Ave W, then northerly to reconnect at the same location. Alternatively, an easement should be acquired to facilitate maintenance of the existing storm sewer.

3.4.4 Design Flows

The following components are considered to be key infrastructure within the Basin and are presented from upstream to downstream.

- 450 mm Ø CSP (south of West St and 24th St W intersection) – Capacity of about 0.15 m³/s, capable of conveying the 1:5 year flow.
- 1200 mm Ø CSP (Park St and 24th St W) – Capacity of about 1.8 m³/s, capable of conveying the 1:100 year flow.
- 900 mm Ø CSP (Park St and 24th St W) – Capacity of about 0.9 m³/s, capable of conveying the 1:100 year flow.
- 1600 x 1200 mm CSPA (Somers St and 24th St W) – Capacity of about 2.3 m³/s, capable of conveying the 1:100 year flow.
- 1450 x 900 mm CSPA (Finden St and 24th St W) – Capacity of about 1.500 m³/s, capable of conveying the 1:25 year flow.
- 825 mm Ø CSP (inlet to City of Owen Sound Storm Sewer at 8th Ave W and 24th St W) – Capacity of about 0.850 m³/s, capable of conveying all design storms due to excess flows backing up into the SWM pond.
- 900 mm Ø (4th Ave W, between 23rd St W and 24th St W) – Capacity of about 1.835 m³/s, capable of conveying the 1:100 year flow. This system drains overflows from the Fromager Pond.
- 1200 mm Ø CP (outlet to Owen Sound Bay) – Capacity of about 4.932 m³/s, capable of conveying the 1:100 year flow.

3.4.5 Definition of Problem(s)

We are not aware of any current flooding problem, which would require further assessment at this time. A review of alternative solutions is, therefore, not warranted.

3.4.6 Recommendations

Based on the foregoing, the recommendations for drainage improvements within Basin A4 are provided in the following Table 3-6.

Table 3-6 – Basin A4 Recommended Improvements

Description	Cost	Priority
Remove the northerly 450 mm Ø culvert at the intersection of West Street and 24 th St W, and replace the southerly 450 mm Ø culvert with a 600 mm Ø culvert, to prevent the diversion of flows into A5.	\$15,000	High
Place stone rip rap protection at critical locations within ditch between top of bluff to Park Street. (Consider future storm sewer)	\$10,000	High
Replace the existing 600 mm Ø culvert across 8 th Ave W (between 23 rd St W and 24 th St W) with a 900 mm Ø culvert, to reduce overland flow events and protect adjacent dwellings.	\$32,500	Low
Replace existing 450 mm Ø storm sewer on 3 rd Ave W (between 23 rd St W and 24 th St W) with 900 mm Ø storm sewer (approx. 150m).	\$500,000	Medium
Re-route the 900 mm Ø storm sewer, which currently crosses private property, along 4 th Ave W and 23 rd St W. (approx. 250m)	\$820,000	Low
Provide a stormwater treatment unit on the southerly storm sewer, upstream from the outlet to the yacht club.(All urban area flows)	\$75,000	Low

These recommendations are Schedule A activities under the Municipal Class EA.

3.5 BASIN A5

3.5.1 Preamble

Drainage Basin A5 covers 102.1 ha of land within Georgian Bluffs, and 32.3 ha within the City of Owen Sound. The Georgian Bluffs portion includes six (6) smaller sub-basin areas, which outlet across 8th Ave W (Albert Street). A-5-1 to A-5-3 confluence within the City at the intersection of 6th Ave W and 27th St W, where a 1350 mm Ø concrete pipe inlets to the 1050 mm Ø CSP storm sewer on 27th St W to Owen Sound Bay. Under high flow conditions, a 450 mm Ø CSP on Finden Street at Maitland Street allows spill to occur from A5-3 to Drainage Basin A6.

Sub-basins A5-4 to A5-6 drain via a series of culverts and ravines across 8th Ave W (Albert Street) to the former CN Rail line. Three culverts convey flow across the rail line to the storm sewer system of an apartment building complex and, ultimately, to a 900 mm Ø CSP storm sewer on 28th St W.

A 450 mm Ø CSP storm sewer on 29th St W provides for local drainage within the City (sub-basin A5c), between 6th Ave W and Owen Sound Bay.

3.5.2 Boundary Conditions

Six (6) sub-basin areas drain 102.1 ha of land, which comprises Drainage Area A5 within Georgian Bluffs:

- A5-1 drains 3.5 ha of land from north of Keppel Sarawak School to a 750 mm Ø CSP inlet to the 750 mm Ø storm sewer on 26th St W. This storm sewer outlets to the north side of 26th St W at 7th Ave W. Flows from this storm sewer traverse a wide ravine to a 1350 mm Ø concrete pipe inlet to the 27th St W storm sewer.
- A5-2 drains 14.7 ha of land to two (2) 600 mm Ø CSP culverts located between 26th St W and 27th St W. Flow from these culverts converge into one 450 mm Ø concrete pipe on the east side of 8th Ave W. This pipe outlets to a ravine behind houses which front onto the east side of 8th Ave W. Flow then traverses the ravine to the 1350 mm Ø concrete pipe inlet to the 27th St W storm sewer.
- A5-3 drains 78.5 ha of land along the south side of Maitland Street to a 600 mm Ø CSP inlet to the 450 mm Ø CSP storm sewer west of the former CN Rail line on 27th St W. The 450 mm Ø CSP storm sewer discharges via a 600 mm Ø CP immediately upstream of the 1350 mm Ø concrete pipe inlet to the 27th St W storm sewer. At the intersection of Finden Street and 27th St W, a 600 mm Ø CSP culvert conveys flow easterly across Finden Street toward the outlet. Additionally, a 450 mm Ø CSP culvert spills some flow to Drainage Area A6 across 27th St W to the westerly roadside ditch on Finden Street. The 450 mm Ø culvert is elevated about 100 mm above the ditch bottom, and spill at this location only occurs under heavy runoff conditions.
- A5-4 to A5-6 drain 5.5 ha of land across 8th Ave W to the former CN Rail line via a 300 mm Ø CSP immediately north of 27th St W and two open channels between 28th St W and 29th St W. Flow eventually enters the 28th St W storm sewer system.

The capacities of the outlets, at the boundary between Georgian Bluffs and Owen Sound, from the six (6) sub-basin areas within Drainage Basin A5 are summarized in the following Table 3-7.

Table 3-7 – A5 Boundary Condition Outlet Capacities

	A5-1	A5-2	A5-3	A5-4	A5-5	A5-6
Outlet Size	750Ø	450Ø	600Ø	300Ø	Open Channel	Open Channel
Outlet Capacity (m ³ /s)	0.55	0.15	0.32	0.06	-	-

A smaller area within Drainage Basin A5 (Basin A5c, in the City of Owen Sound) drains to the 29th St W storm sewer system and outlets via a 450 mm Ø CSP.

3.5.3 Outlet Conditions

The outlet capacities of the existing storm sewers within the City are summarized in the following Table 3-8.

Table 3-8 – A5 Outlet Conditions

	27 th St W	28 th St W	29 th St W
Outlet Size (mm)	1200 Ø	1200 Ø	450 Ø
Outlet Grade (%)	6.0	5.7	5.8
Outlet Capacity (m ³ /s)	5.17	5.06	0.69

3.5.4 Design Flows

- 450 mm Ø CSP (north of West St and 24th St W intersection) – Capacity of about 0.15 m³/s, capable of conveying the 1:5 year flow.
- 1050 x 800 mm CSP (Somers St and 27th St W) – Capacity of about 0.85 m³/s, capable of conveying the 1:25 year flow.
- 450 mm Ø CSP (Finden St and 26th St W) – Capacity of about 0.15 m³/s, capable of conveying the 1:2 year flow.
- 600 mm Ø CSP (Finden St and 27th St W) – Capacity of about 0.32 m³/s, capable of conveying the 1:2 year flow.
- 750 mm Ø CSP (8th Ave W and 26th St W) – Capacity of about 0.55 m³/s, capable of conveying flow from all modelled return storm conditions.
- 450 mm Ø CP (8th Ave W, between 26th St W and 27th St W) – Capacity of about 0.15 m³/s, insufficient of conveying all design flows.
- 1350 mm Ø CP (27th St W and the former CN Rail line) – Capacity of about 2.4 m³/s, capable of conveying the 1:50 year flow.
- 1050 mm Ø CSP (27th St W, between 4th Ave W and 5th Ave W) – Capacity of about 1.4 m³/s, capable of conveying the 1:5 year flow.
- 1200 mm Ø CP (former CN Rail line, between 26th St W and 27th St W) – Capacity of about 1.8 m³/s, capable of conveying flow from all modelled return storm conditions.
- 1200 mm Ø CSP (27th St W outlet to Owen Sound Bay) – Capacity of about 5.173 m³/s, capable of conveying flow from all modelled return storm conditions.
- 1400 mm Ø CP (CN Rail between 28th St W and 29th St W) – Capacity of about 2.6 m³/s, capable of conveying flow from all modelled return storm conditions.

- 1000 x 1000 mm box culvert (CN Rail between 28th St W and 29th St W) – Capacity of about 1.4 m³/s, capable of conveying flow from all modelled return storm conditions.
- 375 mm Ø CSP (Inlet to 28th St W storm sewer, west of 6th Ave W and 29th St W) – Capacity of about 0.198 m³/s, capable of conveying the 1:2 year flow.
- 1200 mm Ø CSP (28th St W outlet to Owen Sound Bay) – Capacity of about 5.055 m³/s, capable of conveying flow from all modelled return storm conditions.

3.5.5 Recommendations

Based on the foregoing, the recommendations for drainage improvements within Basin A5 are made in the following Table 3-9.

Table 3-9 – Basin A5 Recommended Improvements

Description	Cost	Priority
Eliminate the spill from A5 to A6 at Finden Street and 27 th St W.	\$5,000	Medium
Remove and replace existing 450 mm Ø CSP (Finden St and 26 th St W) with a 600 mm Ø CSP.	\$15,000	Medium
Remove and replace existing 400 mm Ø CSP (Park St, between 24 th St W and 25 th St W) with a 600 mm Ø CSP.	\$6,500	Medium
Remove and replace existing 600 mm Ø CSP (currently beginning to undercut downstream bank) (Finden St and 27 th St W) and replace with larger 900 mm Ø.	\$15,000	Medium
Georgian Bluffs should acquire easement or ownership over the watercourse west of 8 th Ave W.	-	Medium
Intercept flows on W side of 8 th Ave W, from south of 26 th St W (A5-1), at 26 th St W (A5-2) and north of 26 th St W (A5-3) and construct 600 mm Ø and 900 mm Ø storm sewers to direct these flows northerly to 27 th St W. Provide for drainage from the north west corner of 8 th Ave W and 27 th St W (A5-4) southerly to the 27 th St W storm sewer (Remove existing 300 mm Ø CSP crossing 8 th Ave W). (150 m incl. one lane of road)	\$250,000	Medium
Reconstruct the 27 th St W storm sewer from 8 th Ave W to the Rail Trail, with a 900 mm Ø storm sewer. Continue to discharge to ravine, then outlet to existing 1050 mm Ø storm sewer (200m incl. full road)	\$500,000	Medium
Eliminate the 750 mm Ø culvert across the Rail Trail, north of 27 th St W and direct flows southerly to the proposed drainage enhancement at the north west corner of the Rail Trail and 27 th St W. Provide for drainage from the north west corner of the Rail Trail and 27 th St W to the 27 th St W storm sewer.	\$10,000	Medium
Remove and replace existing 375 mm Ø CSP (Inlet to 28 th St W storm sewer, west of 6 th Ave W and 29 th St W) with a larger 450 mm Ø pipe.	\$25,000	Medium
Construct a new 26 th St W storm sewer from 8 th Ave W to 3 rd Ave W and connect to existing (2) 450 mm Ø outlet which currently drains local runoff on 26 th St W from 3 rd Ave W to Owen Sound Bay.	\$650,000	Low
Eliminate the storm sewers across private property.	-	Low

These recommendations are Schedule A activities under the Municipal Class EA. The diversion of flows on 8th Ave W, away from the ravine system may affect Riparian property owners, who should be consulted in advance of this project implementation.

3.6 BASIN A6

3.6.1 Preamble

Drainage Basin A6 covers 38.2 ha of land within Georgian Bluffs, and 7.8 ha within the City of Owen Sound. The Georgian Bluffs portion includes a single catchment area, which outlets across 8th Ave W (Albert Street) via a ravine system, which drains through a 1000 x 1000 mm concrete box culvert under the former CN Railway line to an open channel along the 30th St W road allowance to Grey Road 1, where a 1830 x 1120 mm CSPA culvert outlets flow across Grey Road 1 to Owen Sound Bay. Under high flow conditions, a 450 mm Ø CSP on Finden Street at Maitland Street allows spill to occur from A5-3 to Drainage Area A6.

3.6.2 Boundary Conditions

Flow across the boundary between Georgian Bluffs and the City is via an open channel, at the Rail Trail

3.6.3 Outlet Conditions

The capacity of the existing 1830 x 1120 mm CSPA outlet culvert across Grey Road 1 is 2.60 m³/s.

3.6.4 Design Flows

- (2) 600 mm Ø CSP (Somers St and 28th St W) – Capacity of about 0.64 m³/s, capable of conveying the 1:100 year flow.
- 900 mm Ø CSP (Finden St and 29th St W) – Capacity of about 0.9 m³/s, capable of conveying the 1:100 year flow.
- 550 mm Ø CSP (Finden St and 29th St W) – Capacity of about 0.25 m³/s, capable of conveying the 1:10 year flow.
- 1000 x 1000 mm box culvert (former CN Rail line, between 29th St W and 20th St W) – Capacity of about 1.4 m³/s, capable of conveying the 1:50 year flow.
- 1830 x 1120 mm CSPA (Basin A6 outlet to Owen Sound Bay) – Capacity of about 2.6 m³/s, capable of conveying the 1:100 year flow.

3.6.5 Definition of Problem(s)

Erosion of the steeper sections of the A6 watercourse, especially within the reach which spans from the Rail Trail easterly to Grey Road 1, has been accelerated due to development and by channelization of flow within the upper reaches. Left unchecked, these conditions will continue to deteriorate as development progresses and runoff increases.

3.6.6 Review of Alternatives

In February, 1992, G&M undertook a review of drainage options within Drainage Basin A6. Eight alternative drainage schemes were investigated to determine their effectiveness in

preventing further degradation of the outlet channel. Three of the schemes were deemed to warrant further consideration:

- i) Construction of a storm sewer from the Rail Trail to Owen Sound Bay,
- ii) Construction of an erosion resistant channel, lined with rip rap and filter fabric, from the Rail Trail to Owen Sound Bay, and
- iii) Construction of a stepped ponding system.

That report identified an enclosed storm sewer as the preferred solution. A copy of that report is provided as Appendix “E”. Considering that 30th St W is the boundary road between Georgian Bluffs and Owen Sound, and that almost all water generated comes from Georgian Bluffs, the construction of a lined channel on the Georgian Bluffs side of the right of way would be more cost effective and maintain consistency of ownership.

3.6.7 Recommendations

Based on the foregoing the following Table 3-10 makes recommendations for drainage improvements within Basin A6.

Table 3-10 – Basin A6 Recommended Improvements

Description	Cost	Priority
Replace existing collapsed (2)600 mm Ø concrete pipes downstream of Finden St and 29 th St W intersection.	\$10,000	High
Georgian Bluffs should acquire easement or ownership over the watercourse west of Grey Road 1.	-	Medium
The reach below the Rail Trail should be lined with rip rap over filter cloth. Consideration should be given to re-aligning the watercourse in this area to accommodate the possible construction of 30 th St W.	\$215,000	Medium
The 4 th Ave W storm sewer should be re-routed to flow southerly to the 29 th St W storm sewer outlet, to ensure a clear separation of responsibility for this watercourse.	\$225,000	Low

These recommendations are Schedule A, or A+ activities under the Municipal Class EA. Schedule A+ activities require public advisement prior to project implementation.

3.7 BASIN A7

3.7.1 Preamble

Drainage Basin A7 covers 45.5 ha of land within Georgian Bluffs, and does not drain through the City of Owen Sound. Basin A7 includes a single catchment area, which drains through a 1000 x 600 mm concrete box culvert under the former CN Railway line to an open channel north of the City limits to Grey Road 1, where a 1090 x 690 mm CSPA culvert outlets flow across Grey Road 1 to Owen Sound Bay. The outlet capacity of the 1090 x 690 mm CSPA is 0.75 m³/s, however the culvert can convey 1.40 m³/s at Hw/D=1.7 (970mm depth of water at the inlet).

3.7.2 Design Flows

- 900 mm Ø PE (Carney St and 30th St W) – Capacity of about 0.9 m³/s, capable of conveying the 1:100 year flow.
- 400 mm Ø CSP (Gale St (Range Rd) and 30th St W) – Capacity of about 0.12 m³/s, insufficient of conveying the 1:2 year flow.
- 1000 x 600 mm box culvert (former CN Rail line, north of 30th St W) – Capacity of about 0.65 m³/s, capable of conveying the 1:2 year flow. Sufficient head exists at this location to allow a capacity of about 2.8 m³/s, capable of conveying all design storm flows.
- 1090 x 690 mm CSPA (Basin A7 outlet to Owen Sound Bay) – Capacity of about 0.75 m³/s, capable of conveying the 1:2 year flow. A headwater/diameter ratio of 1.7 provides a capacity of about 1.40 m³/s, capable of conveying the 1:10 year flow.

3.7.3 Recommendations

Based on the foregoing recommendations are made for drainage improvements within Basin A7 in the following Table 3-11.

Table 3-11 – Basin A7 Recommended Improvements

Description	Cost	Priority
Remove and replace existing 400 mm Ø CSP (north of 30 th St W at Gale St (Range Rd)) with larger 750 mm Ø pipe.	\$7,500	High
Georgian Bluffs should acquire easement or ownership over the watercourse west of Grey Road 1.	-	Medium
The reach below the Rail Trail should be lined with rip rap over filter cloth.	\$275,000	Low

These recommendations are Schedule A, or A+ activities under the Municipal Class EA. Schedule A+ activities require public advisement prior to project implementation.

4.0 SUMMARY OF RECOMMENDATIONS

Recommendations provided above have been consolidated into more convenient tables below for each municipality based on priority sequence. Coinciding projects have been ‘linked’ via reference number.

Table 4-1 – Township of Georgian Bluffs – High Priority (0-5 Years)

Ref#	Description	Cost	Priority
-	A1 – Replace existing catchbasin grates on 14 th St W with bird cage style inlet grates, or other appropriate inlet to reduce plugging potential, to allow leaves to inlet to the sewer, rather than collecting and plugging at the inlet.	\$5,000	High
-	A3 – Acquire property or easements over watercourses west of Carney Street, which convey municipal drainage.	-	High
-	A3 – Acquire land immediately upstream from Carney Street for purposes of stormwater management.	-	High

-	A3 – Construct a 10,000 m ³ stormwater management pond upstream from Carney Street, or modify existing channel profiles to store 10,000 m ³ to reduce downstream peak flows and erosion.	\$250,000	High
-	A4 – Remove the northerly 450 mm Ø culvert at the intersection of West Street and 24 th St W, and replace the southerly 450 mm Ø culvert with a 600 mm Ø culvert, to prevent the diversion of flows into A5.	\$15,000	High
-	A4 – Place stone rip rap protection at critical locations within ditch between top of bluff to Park Street. (Consider future storm sewer)	\$10,000	High
-	A6 – Replace existing collapsed (2) 600 mm Ø concrete pipes downstream of Finden St and 29 th St W intersection.	\$10,000	High
-	A7 – Remove and replace existing 400 mm Ø CSP (north of 30 th St W at Gale St (Range Rd)) with larger 750 mm Ø pipe.	\$7,500	High
Total		\$297,500	0-5 Yrs.

Table 4-2 – Township of Georgian Bluffs – Medium Priority (5-10 Years)

Ref#	Description	Cost	Priority
-	A2 – Remove and replace existing (2) 450 mm Ø CSP (Park St, between 13 th St W and 14 th St W) with (2) 600 mm Ø CSP	\$15,000	Medium
-	A2 – Remove and replace existing 450 mm Ø CSP (16 th St W, between Somers St and Carney St) with (2) 600 mm Ø CSP	\$15,000	Medium
-	A5 – Eliminate the spill from A5 to A6 at Finden Street and 27 th St W.	\$5,000	Medium
-	A5 – Remove and replace existing 450 mm Ø CSP (Finden St and 26 th St W) with a 600 mm Ø CSP.	\$15,000	Medium
-	A5 – Remove and replace existing 400 mm Ø CSP (Park St, between 24 th St W and 25 th St W) with a 600 mm Ø CSP.	\$6,500	Medium
-	A5 – Remove and replace existing 600 mm Ø CSP (currently beginning to undercut downstream bank) (Finden St and 27 th St W) and replace with larger 900 mm Ø.	\$15,000	Medium
-	A5 – Georgian Bluffs should acquire easement or ownership over the watercourse west of 8 th Ave W.	-	Medium
1	A5 – Intercept flows on W side of 8 th Ave W, from south of 26 th St W (A5-1), at 26 th St W (A5-2) and north of 26 th St W (A5-3) and construct 600 mm Ø and 900 mm Ø storm sewers to direct these flows northerly to 27 th St W. Provide for drainage from the north west corner of 8 th Ave W and 27 th St W (A5-4) southerly to the 27 th St W storm sewer (Remove existing 300 mm Ø CSP crossing 8 th Ave W). (150 m incl. one lane of road)	\$250,000	Medium
-	A6 – Georgian Bluffs should acquire easement or ownership over the watercourse west of Grey Road 1.	-	Medium

-	A6 – The reach below the Rail Trail should be lined with rip rap over filter cloth. Consideration should be given to re-aligning the watercourse in this area to accommodate the possible construction of 30 th St W.	\$215,000	Medium
-	A7 – Georgian Bluffs should acquire easement or ownership over the watercourse west of Grey Road 1.	-	Medium
	Total	\$536,500	5-10 Yrs.

Table 4-3 – Township of Georgian Bluffs – Low Priority (10+ Years)

Ref#	Description	Cost	Priority
-	A1 – Reconstruct 14 th St W (350 m), including replacing the existing 450 mm Ø CSP with a larger diameter storm sewer (600 mm Ø), with a sufficient number of inlets, to improve flow hydraulics, increase capacity and facilitate maintenance, and improving roadside ditches to drain road granulars, direct surface flows to appropriate inlets, and reduce nuisance flooding.	\$385,000	Low
-	A2 – Place stone rip rap protection at critical locations within the ravine system and at the outlet to the Pottawatomi River.	\$6,500	Low
-	A4 – Replace the existing 600 mm Ø culvert across 8 th Ave W (between 23 rd St W and 24 th St W) with a 900 mm Ø culvert, to reduce overland flow events and protect adjacent dwellings.	\$32,500	Low
-	A7 – The reach below the Rail Trail should be lined with rip rap over filter cloth.	\$275,000	Low
	Total	\$699,000	10+ Yrs.

Table 4-4 – City of Owen Sound – High Priority (0-5 Years)

Ref#	Description	Cost	Priority
-	A3 – Acquire property or easement over the channel west of 6 th Ave W.	-	High
-	A3 – Provide rip rap erosion protection at the intersection of channels west of 6 th Ave W.	\$6,500	High
-	A3 – Remove existing sediments from channel west of 6 th Ave W.	\$10,000	High
-	A3 – 1) Replace ex. Box culvert structures at 6 th Ave W and at 21 st St W. 2) Reconstruct 6 th Ave W., North of 21 st St W (full services) 3) Place additional box sections between road crossings (North of 21 st St W)* *Consider restoring natural channel section. Additional land may be required, or the road may be shifted.	1) \$120,000 2) \$350,000 3) \$160,000	High
-	A3 – Acquire an easement over the channel upstream from 20 th St W to 21 st St W, between 5 th Ave W and 6 th Ave W.	-	High

-	A3 – Remove existing sediments from channel upstream from 20 th St W.	\$15,000	High
	Total	\$661,500	0-5 Yrs.

Table 4-5 – City of Owen Sound – Medium Priority (5-10 Years)

Ref#	Description	Cost	Priority
-	A3 – Remove and replace existing 600 mm Ø CSP (6 th Ave W, between 19 th St W and 20 th St W) with larger 750 mm Ø PE.	\$6,500	Medium
-	A3 – Construct minor improvements to outfall area within Kelso Beach Park, as outlined in G&M Drawing No. C-6460-1.	\$25,000	Medium
-	A4 – Replace existing 450 mm Ø storm sewer on 3 rd Ave W (between 23 rd St W and 24 th St W) with 900 mm Ø storm sewer (approx. 150m).	\$500,000	Medium
1	A5 – Reconstruct the 27 th St W storm sewer from 8 th Ave W to the Rail Trail, with a 900 mm Ø storm sewer. Continue to discharge to ravine, then outlet to existing 1050 mm Ø storm sewer (200m incl. full road)	\$500,000	Medium
1	A5 – Eliminate the 750 mm Ø culvert across the Rail Trail, north of 27 th St W and direct flows southerly to the proposed drainage enhancement at the north west corner of the Rail Trail and 27 th St W. Provide for drainage from the north west corner of the Rail Trail and 27 th St W to the 27 th St W storm sewer.	\$10,000	Medium
-	A5 – Remove and replace existing 375 mm Ø CSP (Inlet to 28 th St W storm sewer, west of 6 th Ave W and 29 th St W) with a larger 450 mm Ø pipe.	\$25,000	Medium
	Total	\$1,066,500	5-10 Yrs.

Table 4-6 – City of Owen Sound – Low Priority (10+ Years)

Ref#	Description	Cost	Priority
-	A2 – Create an overland flow route from the existing ditch inlet catchbasin to 7 th Ave W in the Hunters Run subdivision.	\$6,500	Low
-	A3 – Redirect 7 th Ave W storm sewer between 22 nd St W and 23 rd St W easterly on 22 nd St W and connect to existing storm sewer within Basin A4. To be completed when 7 th Ave W is scheduled for full road replacement. (approx. 60m)	\$150,000	Low
-	A3 – Improve Kelso Beach outlet to achieve 1:5 year flow capacity.	\$100,000	Low
-	A4 – Re-route the 900 mm Ø storm sewer, which currently crosses private property, along 4 th Ave W and 23 rd St W. (approx. 250m)	\$820,000	Low
-	A4 – Provide a stormwater treatment unit on the southerly storm sewer, upstream from the outlet to the yacht club.(All urban area flows)	\$75,000	Low

-	A5 – Construct a new 26 th St W storm sewer from 8 th Ave W to 3 rd Ave W and connect to existing (2) 450 mm Ø outlet which currently drains local runoff on 26 th St W from 3 rd Ave W to Owen Sound Bay.	\$650,000	Low
-	A5 – Eliminate the storm sewers across private property.	-	Low
-	A6 – The 4 th Ave W storm sewer should be re-routed to flow southerly to the 29 th St W storm sewer outlet, to ensure a clear separation of responsibility for this watercourse.	\$225,000	Low
	Total	\$2,026,500	10+ Yrs.

5.0 PUBLIC COMMENTS

A public meeting was held on June 23, 2008 from 6:00 pm to 8:00 pm at the Keppel Sarawak Elementary School to update the public on the study findings, allow for public comment, and to answer specific questions related to individual properties or the study area as a whole. A sign-in sheet was provided and is included in Appendix “F”. Comment sheets and meeting minutes containing comment’s received verbally at the public meeting are included for reference in Appendix “F”.

The following is a summary of public comments received.

Public Meeting Verbal Comments

- A resident on 21st St W, just east of 6th Ave W inquired if something could be done to clean the channel abutting their and their neighbours property as this past spring’s flooding came close to flooding his neighbours house. The neighbour also spoke indicating that they have lost many mature trees due to the nuisance flooding, and two sheds and some contents have been damaged due to the high water on their property. The neighbour also inquired about who will clean up the dead trees and if they will be replaced.
- A resident of the area noted that in 1992 Sarawak completed a similar study, and that no action had been taken. The resident suggested that something be done now so that another 20 years does not pass by without implementing recommended solutions.
- A property owner in the area noted that the 21st St W channel has filled in over the years and has ‘moved’ as well.
- Another resident inquired regarding the stormwater retention pond proposed and if there are any other options under consideration.
- An inquiry was made regarding how many years until action will take place on the study’s recommended solutions, and if the A3 channel would be maintained in the mean time.
- A resident inquired if there could be another public meeting in six months to provide an update to the process; this was supported by various residents in attendance.
- A resident on 24th St W between West Street and Park Street noted that ditches on the south side of 24th St W are eroded and that driveways and front yards are at risk for future erosion/washouts. Upstream improvements could result in a greater volume of water flowing through this ditch, and may result in increased erosion/washout potential.

Public Meeting Comment Sheets, Faxes, and E-Mails

- Another public meeting in six months should be held.
- Objection to the removal of (2)600Ø CP culverts with no replacement culverts proposed just east of Finden Street and 29th St W as this is a right of way to allow public access along 29th St W to private property.
- Clean out channel west of 6th Ave W at 21st St W or place SWM facility at this location rather than at Carney Street. A SWM facility at this location is not cost effective and may need to be filled in (due to drownings, smell, etc).
- Provide flooding relief as it happens, clean culverts twice a year, and maintain roads over culverts.
- A writer noted that driveway washout conditions occurred within the vicinity of 27th St W and 8th Ave W.
- It would be nice to have something done to correct some of the areas that need help so badly.
- Disagree with the proposed removal of (2)600Ø CP culverts downstream of Finden Street and 29th St W. Culverts should have been maintained to prevent failure. Culverts should be replaced and maintained in the future.
- Severe flooding in backyard (21st St W and 6th Ave W) has resulted in the loss of 45 to 50 mature trees. Major damage to two storage sheds due to flooding and from a dead tree falling on one. Over time, water levels from rainstorms continually get closer to basement door. Dead trees should be removed and replaced, and the damaged sheds repaired or replaced.
- Location of watercourse west of Finden Street at 26th St W should be on 26th St W road allowance. Hazard land designation on Drawings No. 3 is a surprise.

Field Investigation Public Comments

- A resident adjacent to the Pottawatomi River on 14th Street West (Basin A1) noted that the storm sewer inlets were insufficient to collect runoff from Basin A1 Southeast toward the Pottawatomi River. The resident explained that runoff frequently flows over his property to the Pottawatomi River due primarily to clogging of the catch basin inlets.
- A resident in Georgian Bluffs noted that many ditches within the study area have been ditched lower than the outletting culvert, creating many unsightly ponding areas within roadside ditches.

These comments have been provided to assist the Township of Georgian Bluffs and the City of Owen Sound in their decision making processes for the noted recommendations this report has provided.

All of which is respectfully submitted.

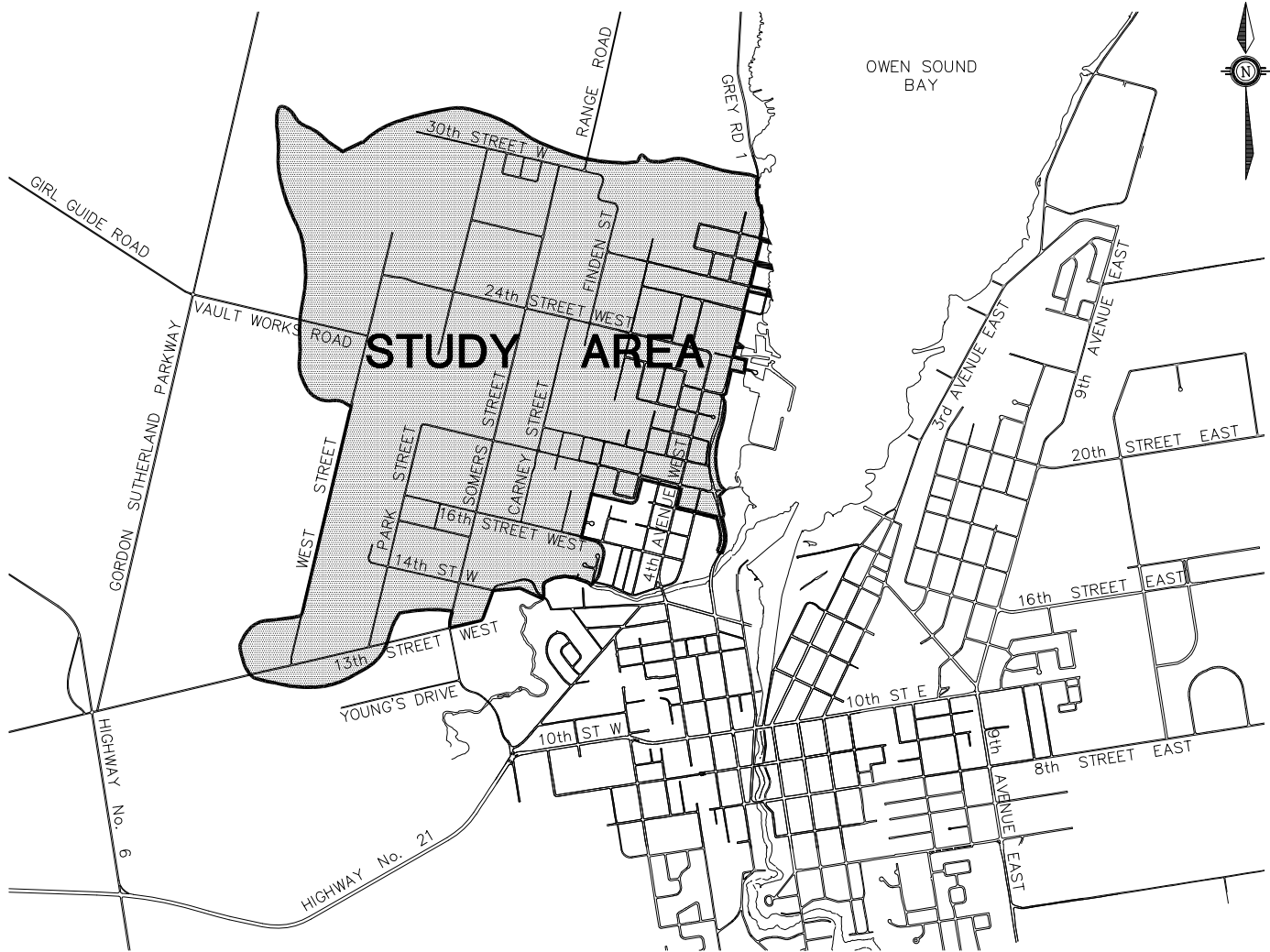
GAMSBY AND MANNEROW LIMITED

Per:

David Reid, E.I.T.

John Slocombe, P.Eng.
Principal

M-1586
Twp. of Georgian Bluffs
& City of Owen Sound



SCALE = 1: 40,000

JULY 2008

**GENERAL
STUDY AREA**

**BROOKE AREA
STORMWATER
MANAGEMENT STUDY**

Figure No. 1



Gamsby and Mannerow
ENGINEERS

M-1586
Twp. of Georgian Bluffs
& City of Owen Sound



LEGEND

- MAJOR DRAINAGE DIVIDE
- MINOR DRAINAGE DIVIDE
- ZONING LINE FOR NEC PROTECTION AREA
- A7** MAJOR DRAINAGE BASIN
- A5-1 MINOR DRAINAGE BASIN (GEORGIAN BLUFFS)
- A5b MINOR DRAINAGE BASIN (CITY OF OWEN SOUND)
- G.S.C.A. REGULATED AREA
- WATER COURSE

SCALE = 1:12,500
JULY 2008

DRAINAGE BASINS

BROOKE AREA
STORMWATER
MANAGEMENT STUDY

Figure No. 2



EXHIBIT A.2

MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

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

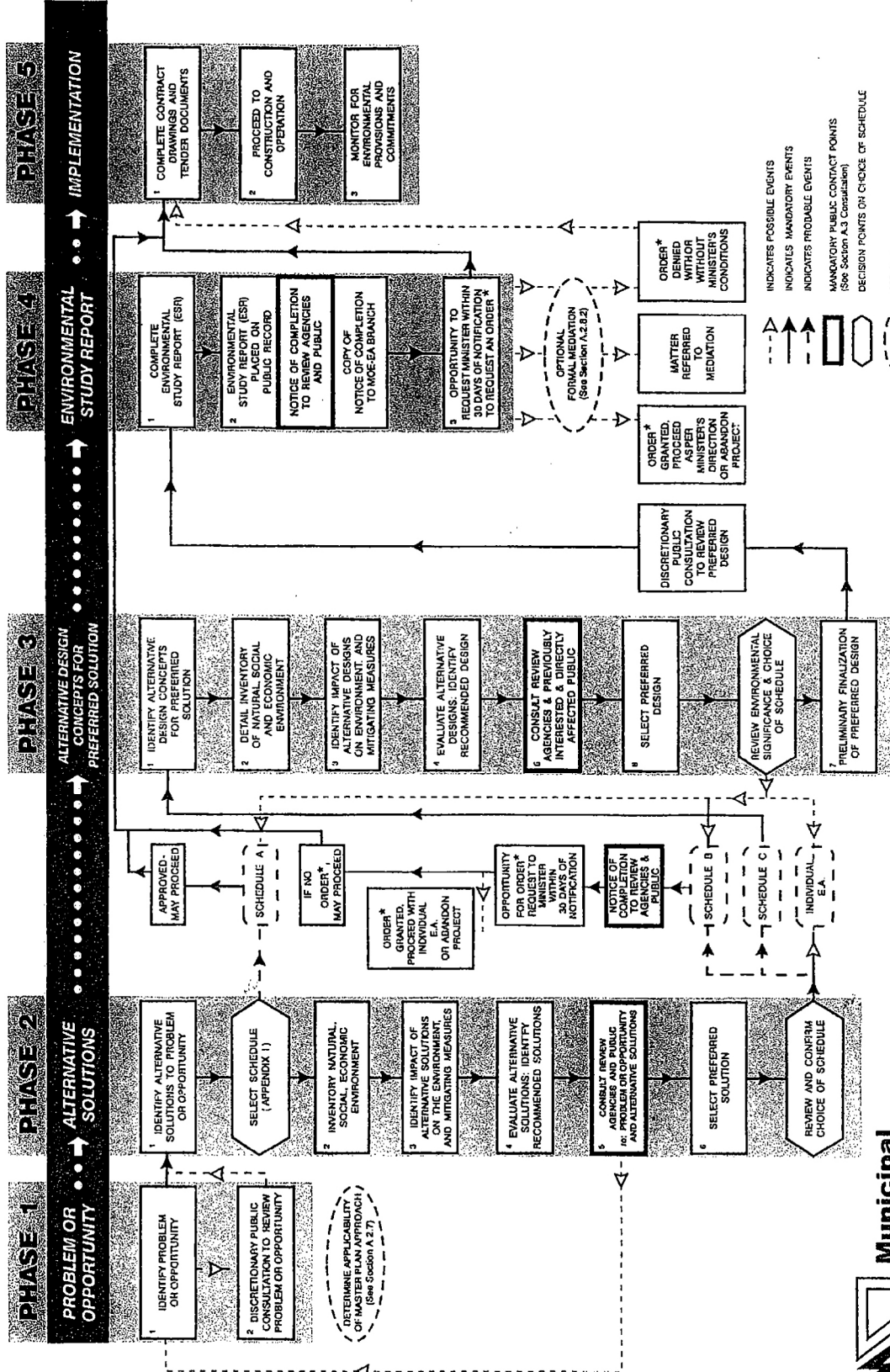
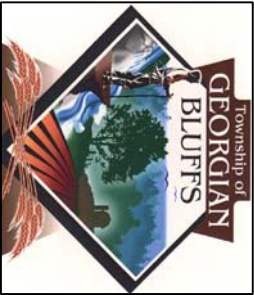


Figure No. 3



SCHEDULE A MAP 20








By-Law No. 6-2003 as amended
by By-law No. 44-2003 as amended
by By-law No. ____-2006

Date Passed _____

Mayor _____

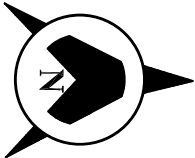
Deputy-Clerk _____

ZONES

- A1** General Rural
- A2** Restricted Rural
- R1** General Residential
- R2** Inland Lake and Shoreline Residential
- R3** Low Density Residential
- R4** Medium Density Residential
- R5** Medium-High Density Residential
- R6** Mobile Home Park
- C1** General Commercial
- C2** Rural Commercial
- C3** Tent and Trailer Campground
- C4** Space Extensive Commercial
- M1** General Industrial
- M2** Extractive Industrial
- I** Institutional
- OS** Open Space
- EP** Environmental Protection
- PD** Planned Development
-  Niagara Escarpment Development Control
-  Wetland
-  Hamlet
- 1** Zone Exception (may be numerical or alphabetical notation)
- h** Holding Provision
-  Municipal Road
-  County Road or Provincial Highway
-  Other Right of Way or Road Allowance
-  Waterway

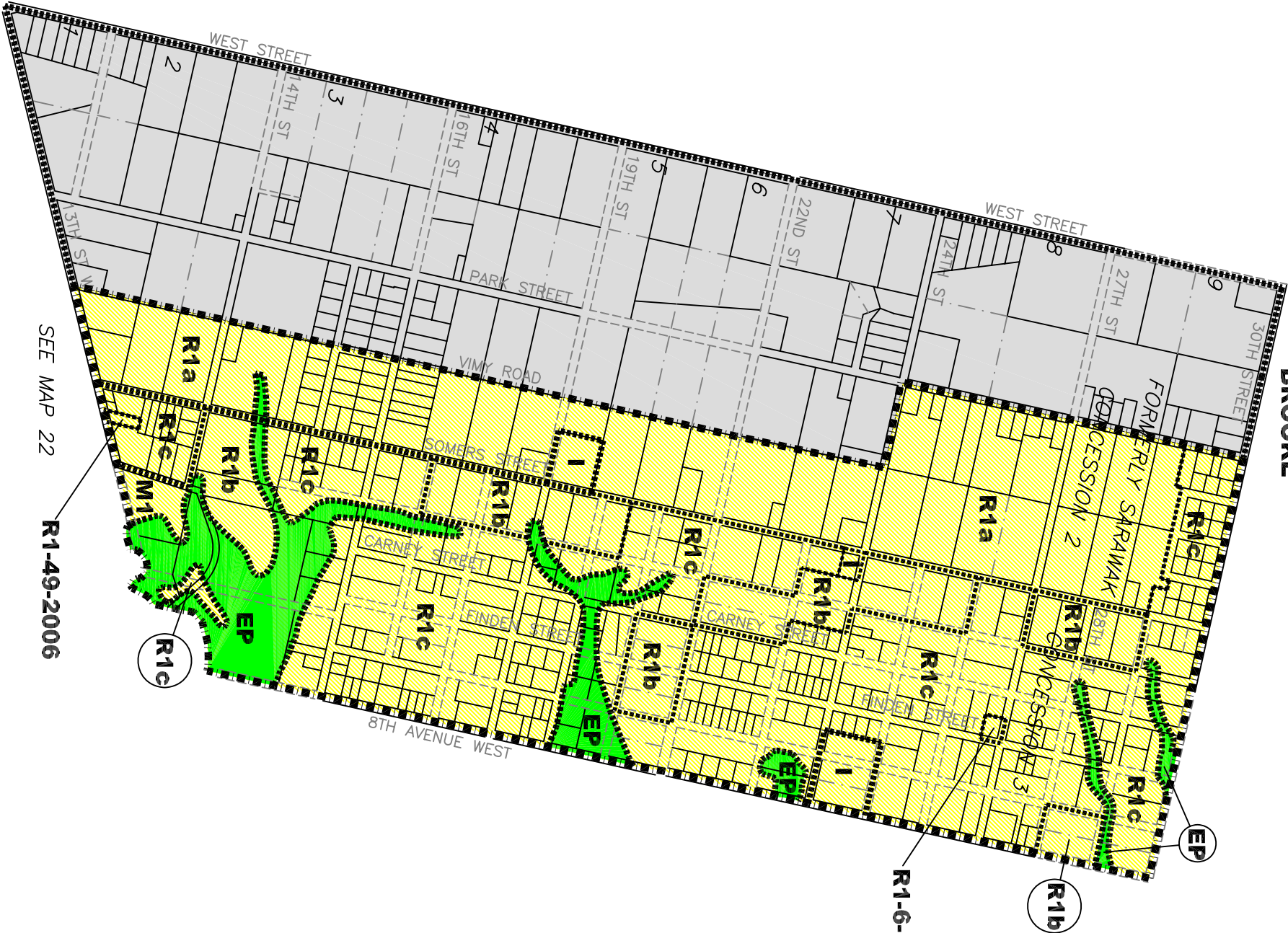


JANUARY 22 2003 – CUESTA PLANNING
AS AMENDED JANUARY 2007



CITY OF OWEN SOUND

SEE MAP 11
BROOKE



Amending the R1 zone
for lands within the
Townplot of Brooke to
R1a, R1b or R1c

**BROOKE AREA STORMWATER MANAGEMENT STUDY
CITY OF OWEN SOUND
TOWNSHIP OF GEORGIAN BLUFFS
FINAL REPORT**

FIGURES

- Figure No. 1 – General Study Area
 - Figure No. 2 – Drainage Areas
 - Figure No. 3 – Class EA Process
 - Figure No. 4 – Georgian Bluffs Municipal Zoning By-law
No. 6-2003, as amended January, 2007
-

**BROOKE AREA STORMWATER MANAGEMENT STUDY
CITY OF OWEN SOUND
TOWNSHIP OF GEORGIAN BLUFFS
FINAL REPORT – CD**

FIGURES

Figure No. 1 – General Study Area
Figure No. 2 – Drainage Areas
Figure No. 3 – Class EA Process
Figure No. 4 – Georgian Bluffs Municipal Zoning By-law No. 6-2003, as amended January, 2007

DRAWINGS

Drawing No. 1 – General Plan
Drawing No. 2 – Drainage Areas – Existing Conditions
Drawing No. 3 – Development Plan
Drawing No. 4 – Drainage Areas A1 & A2 – Existing Design Flows
Drawing No. 5 – Drainage Areas A3 & A4 – Existing Design Flows
Drawing No. 6 – Drainage Areas A5, A6 & A7 – Existing Design Flows
Drawing No. 7 – Drainage Areas A1 & A2 – Proposed Capital Works
Drawing No. 8 – Drainage Areas A3 & A4 – Proposed Capital Works
Drawing No. 9 – Drainage Areas A5, A6 & A7 – Proposed Capital Works
Drawing No. 10 – Drainage Areas A1 & A2 – Proposed Capital Works Design Flows
Drawing No. 11 – Drainage Areas A3 & A4 – Proposed Capital Works Design Flows
Drawing No. 12 – Drainage Areas A5, A6 & A7 – Proposed Capital Works Design Flows

APPENDIX “A”

Statistical Rainfall Data (IDF)
MIDUSS Results - Chicago Rainfall Parameters
Timmins Regional Storm Characteristics

APPENDIX “B”

Sydenham River Table of Annual Extremes of Discharge
MIDUSS Results for Sydenham River Peak Flows

APPENDIX “C”

Culvert Capacity Design Charts

APPENDIX “D”

MIDUSS Computer Model Output

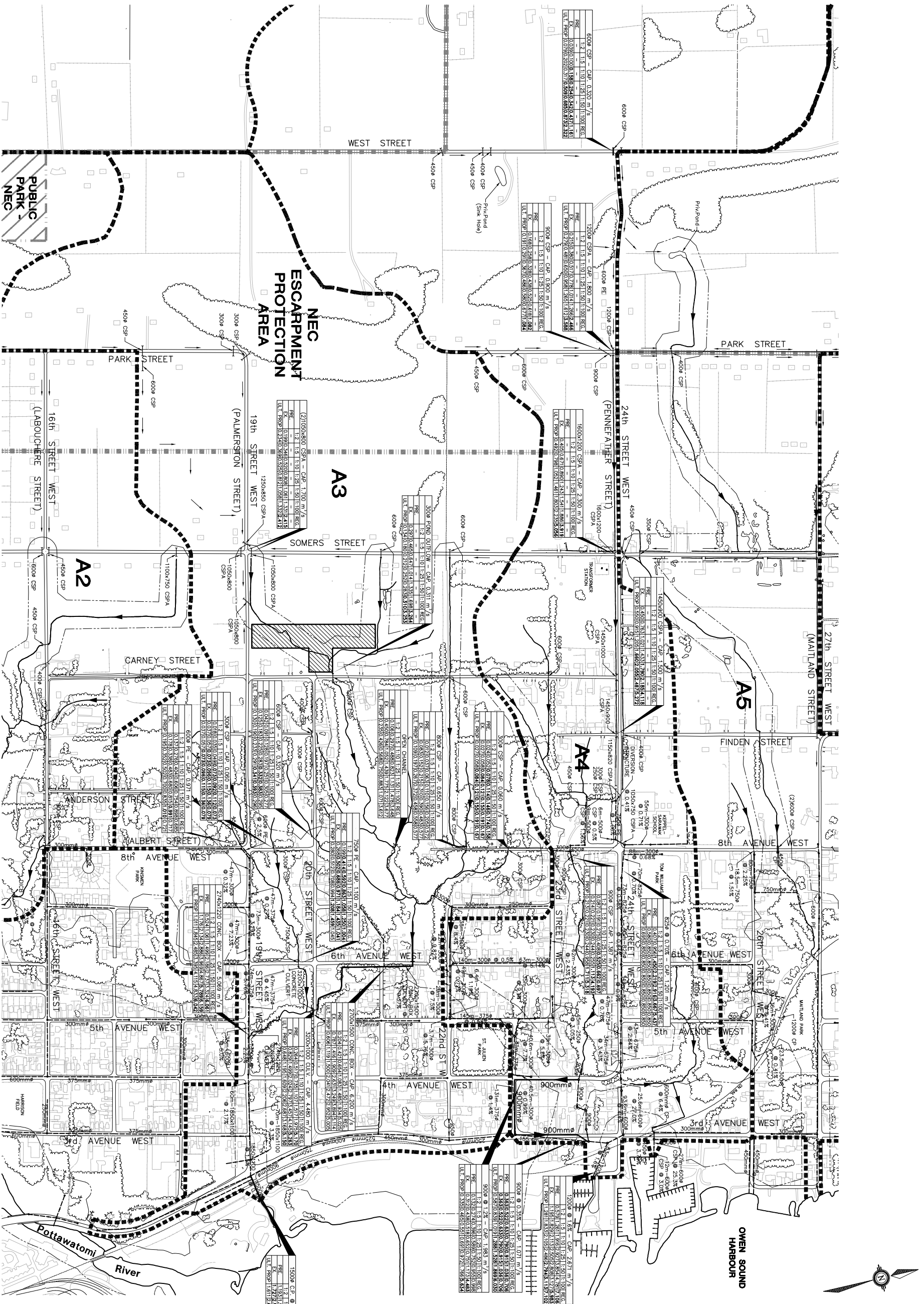
APPENDIX “E”

30th Street West Drainage Study – Drainage Area A6 – G&M, February, 1992
Detention Pond Alternatives – Drainage Area A3 – G&M, February, 1992
Stormwater Management Study – Township of Sarawak – G&M, September, 1990
24th Street SWM Project Final Design Report – Ainley and Associates Ltd., August, 1994
24th Street SWM Project EA Report Schedule ‘B’ – Ainley and Associates Ltd., June, 1994

APPENDIX “F”

Public Meeting Sign-In Sheets
Public Meeting Comment Sheets
Public Meeting Minutes – June 23, 2008

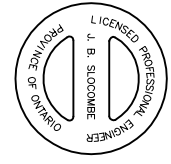
(attach CD here)



- LEGEND**
- MAJOR DRAINAGE DIVIDE
 - ZONING LINE FOR NEC PROTECTION AREA
 - MAJOR DRAINAGE BASIN
 - G.S.C.A. REGULATED AREA
 - WATER COURSE
 - FLOW DIRECTION



THE POSITION OF POLE LINES, CONDUITS, MAINDRAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. THE EXACT LOCATIONS, THE CONTRACTOR SHALL INQUIRE CAREFULLY OF THE EXISTING RECORDS AND ALL LIABILITY FOR ANY DAMAGE TO THEM.



4 JULY 21/08	ISSUED FOR FINAL REPORT	D.L.R.
3 APR 10/08	ISSUED FOR FINAL DRAFT REPORT	D.L.R.
2 MAR 6/08	ISSUED FOR 90% COMPLETED REPORT	D.L.R.
1 JAN 11/08	UPDATED CULVERT & FLOW INFO	D.L.R.
NO. DATE	REVISION DESCRIPTION	CHKD



BROOKLYN AREA STORMWATER MANAGEMENT STUDY
TWP. OF GEORGIAN BLUFFS & CITY OF OWEN SOUND
DRAINAGE AREAS A3 & A4
PROPOSED CAPITAL WORKS
DESIGN FLOWS

DESIGNED BY :	PROJECT NO. :	DRAWING NO. :
J.B.S.	W-1586	11
DATE :	SCALE :	
SEPT. 2007	1:4000	

November 2, 2015
Our File: C-2876

Via Email: hmorrison@georgianbluffs.on.ca

Township of Georgian Bluffs
R.R. #3
177964 Grey Road 18
Owen Sound, ON N4K 5N6

Attn: Ms. Holly Morrison

Re: Carney Street SWM Facility
Drainage Basin A-3
As-Built Conditions

Dear Holly:

The purpose of this letter is to address two issues related to the recent construction of the Carney Street Stormwater Management (SWM) Facility:

- i) Verification that the as-built SWM Facility will function as intended in the Brooke Area Stormwater Management (BASWM) Study, and;
- ii) Resolution of the Municipally zoned Environmental Protection area and the Grey Sauble Conservation Authority Regulated Area on 5 properties within the local area.

The Carney Street SWM Facility, located west of Carney Street between 20th Street West and 21st Street West, was constructed as a result of recommendations made in the BASWM Study conducted by Gamsby and Mannerow Limited in July, 2008 (our file: M-1586). The purpose of the study was to examine the effects of stormwater flooding of several drainage basins within the City of Owen Sound and the Municipality of Georgian Bluffs, and to present alternative drainage solutions to the mutual satisfaction of both municipalities.

As part of the BASWM Study, the construction of the Carney Street SWM Facility was proposed to attenuate peak flow rates within Basin A-3, to minimize the effects of stormwater flooding downstream, and ultimately, to reduce peak flow rates discharging into Owen Sound Bay. The study provided peak flow rates for Basin A-3 under existing and proposed drainage patterns for pre-development, existing and ultimate development conditions, for various design storm events.

i) Verification of Operation

Upon completion the Carney Street SWM Facility, a topographic survey of the site was conducted on September 24, 2015. With the use of this survey, the existing SWM Facility was modelled in the MIDUSS computer program in conjunction with the previous drainage models created for the BASWM Study. The modelling was used to compare planned peak flow rates to as-built peak flow rates at three locations downstream from the Carney Street SWM Facility;

- A. At the SWM Pond outlet at Carney Street;
- B. At 6th Avenue West, and;
- C. At Owen Sound Bay.

The peak flow rates from Basin A-3 are compared in Table 1 for the following conditions, under existing and ultimate conditions.

Table 1: Peak Flow Rates Results at Various Locations Within Drainage Basin A-3

Location	Return Storm Frequency (yr)	Peak Flow Rates as Reported in the BASWM Study				Ultimate Development – As-Built Conditions with existing SWM Facility (m ³ /s)
		Pre-Development Conditions (m ³ /s)	Existing Development – Pre-SWM Facility Conditions (m ³ /s)	Ultimate Development – Pre-SWM Facility Conditions (m ³ /s)	Ultimate Development – Proposed Conditions with SWM Facility per BA SWM Study (m ³ /s)	
At Carney Street	5	-	0.465	1.698	0.180	0.267
	100	-	0.523	1.706	0.310	0.580
At 6 th Avenue West	5	0.421	1.416	1.522	1.119	1.131
	100	1.934	3.894	4.088	2.952	2.984
At Owen Sound Bay	5	1.961	2.920	3.034	2.645	2.649
	100	5.507	8.038	8.249	7.244	7.270

As shown in Table 1, with the construction of the Carney Street SWM Facility in its as-built state, the expected peak flow rates downstream under ultimate development conditions are approximately equal to those previously proposed in the BASWM Study. Ultimately, the Carney Street SWM Facility in its as-built state is expected to function as intended in the BASWM Study.

In general, the recently constructed SWM Facility is expected to achieve its objective in attenuating peak flow rates within Basin A-3, reduce the effects of stormwater flooding downstream, and ultimately, reduce the peak flow rates discharging through Owen Sound.

ii) EP Zoning and Regulated Area Boundaries

A second issue, which the construction of the Carney Street SWM Facility intended to address, is a resolution to the Municipal Zoning and GSCA Regulated Area boundaries in the subject area.

The current Zoning Map 20 delineates an EP – Environmental Protection Zone within a R1c – General Residential Zone. It is assumed that the zoning boundary was intended to follow the ravine feature which existed at that time but the EP zone includes the locations of existing residences west of Carney Street. The construction of the Carney Street SWM Pond (outlined in red on the attached map) was intended to permit an appropriate re-zoning of the affected properties; keeping the EP zone within the limits of the SWM Pond and permitting the developed portions of the properties to be re-zoned to R1.

Similarly, the Grey Sauble Conservation Authority Map 66 delineates a Regulated Area which includes developed portions of the subject properties. The GSCA Regulated Area may include setbacks from the Environmental Protection Zoning but, should still be re-evaluated based on the recent construction.

Justification for the proposed adjustments to the Zoning Area boundaries is provided on the enclosed Figure Nos. 1 and 2. Based on our topographic survey and modelling of as built conditions for the Carney Street SWM Pond, we have verified the following:

- 1:100 year HWL – 208.25m
- Regulatory Flood HWL – 208.50m
- High Flow Spill HWL (low point on Carney Street) – 209.26m
- Minimum grade at adjacent dwellings. – 209.41m (SW corner 164 Carney – F/F 210.38)
- Minimum Finished Floor at adjacent dwellings – 210.17m

We propose that the EP zone be re-delineated to follow the contour of the Regulatory Flood HWL (208.50m), as delineated on Figure 1.

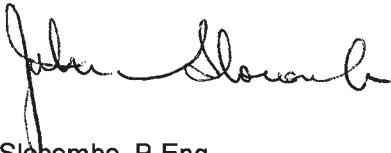
We propose that the GSCA Regulated Area be re-delineated to follow the contour of the High Flow Spill HWL (209.26m), including the low point area of Carney Street.

We expect that the Township will advance the appropriate planning processes based on this submission but if we can provide additional assistance, please contact the writer.

Yours truly,

GM BLUEPLAN ENGINEERING LIMITED

Per:

A handwritten signature in black ink, appearing to read 'John Slodcombe'.

J. B. Slodcombe, P.Eng.
ACW/mz
Encl.

cc: File No. C-2876



SCHEDULE A MAP 20

By-Law No. 6-2003 as amended
by By-law No. 44-2003 as amended
by By-law No. ---2006

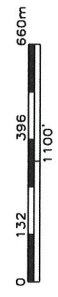
Date Passed July 9, 2003

Mayor Larry J. Miller

Deputy-Clerk Bruce Hoffman

ZONES

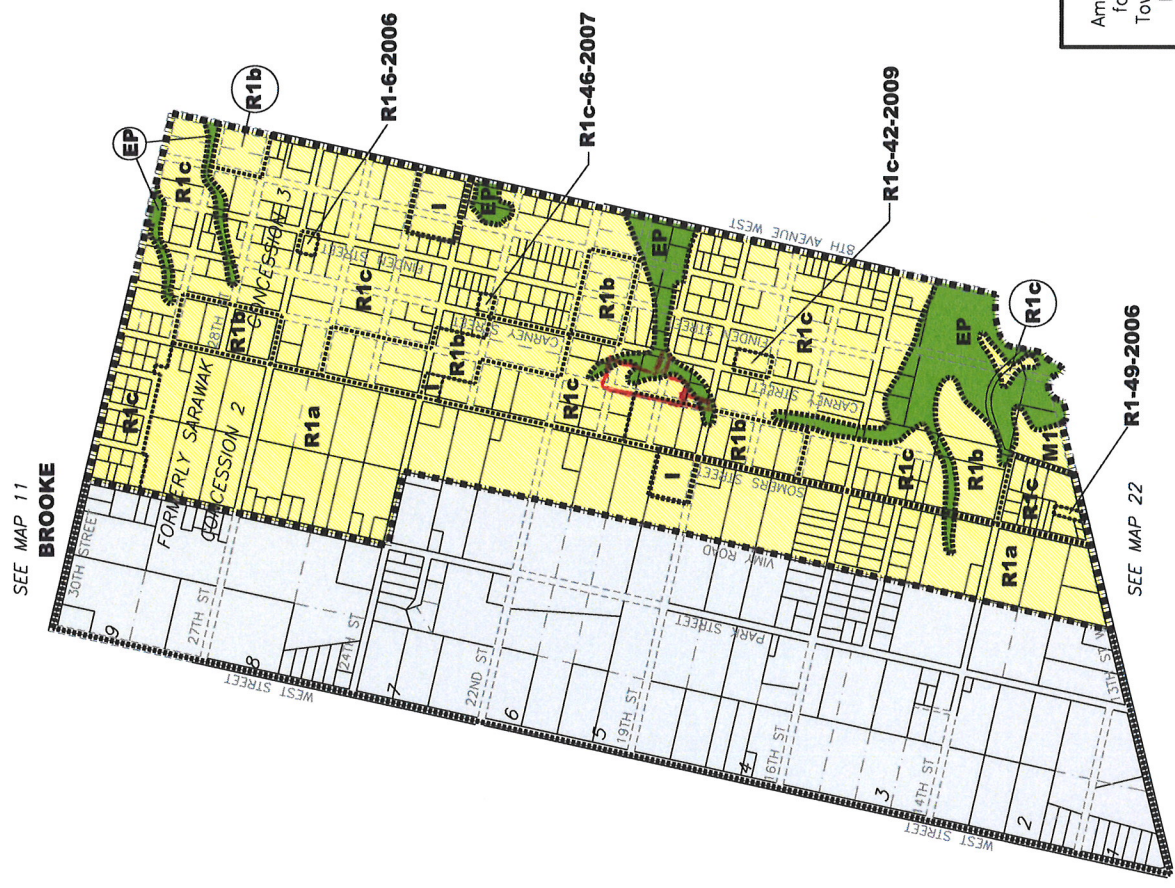
- A1** General Rural
- A2** Restricted Rural
- R1** General Residential
- R2** Inland Lake and Shoreline Residential
- R3** Low Density Residential
- R4** Medium Density Residential
- R5** Medium-High Density Residential
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- C4** Space Extensive Commercial
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- M2** Extractive Industrial
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- OS** Open Space
- EP** Environmental Protection
- PD** Planned Development
- Niagara Escarpment Development Control
- Wetland
- Hamlet
- 1 Zone Exception (may be numerical or alphabetical notation)
- Holding Provision
- h Municipal Road
- County Road or Provincial Highway
- Other Right of Way or Road Allowance
- Waterway



JANUARY 22 2003 - CUESTA PLANNING
AMENDED AUGUST 2010



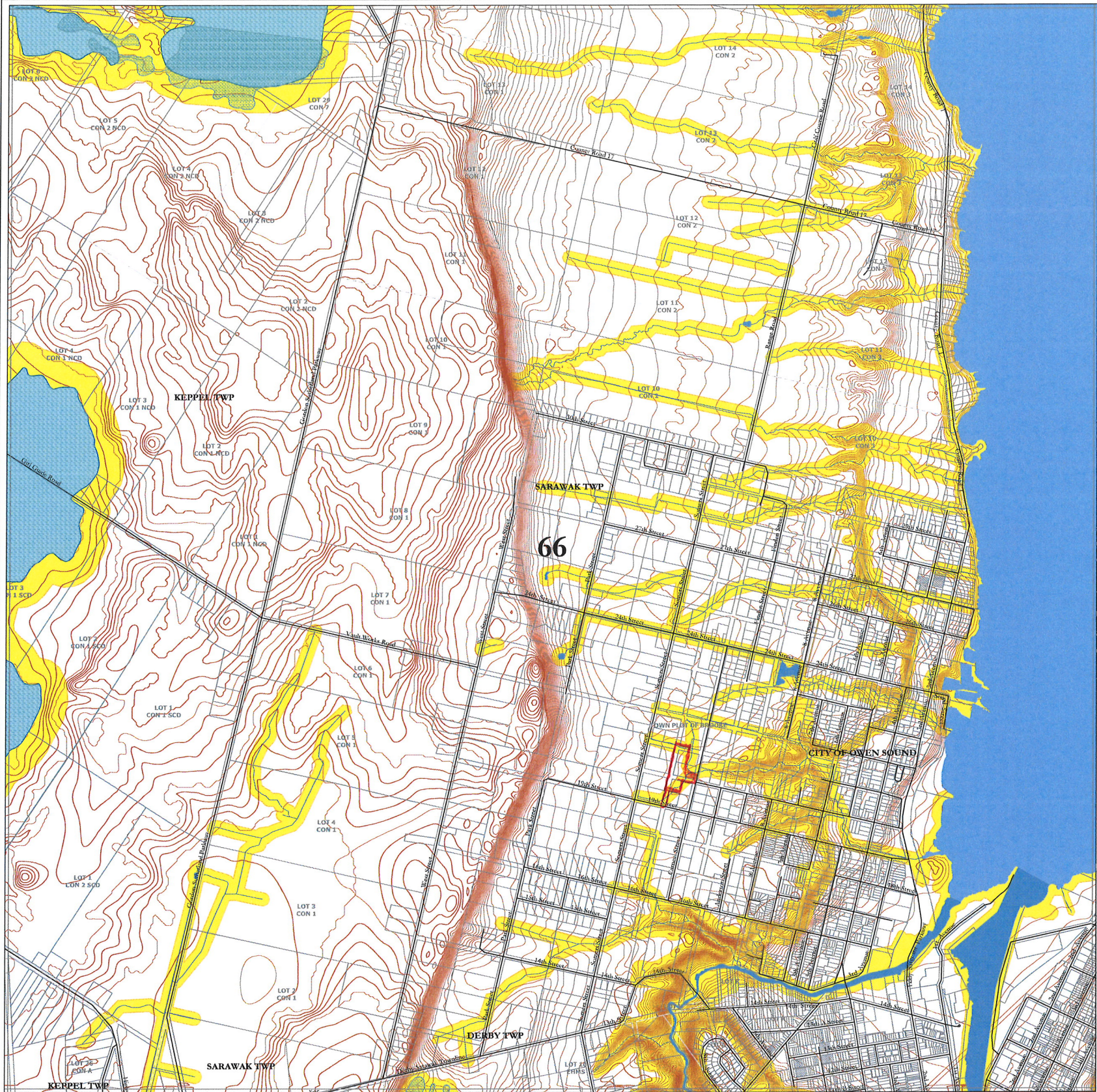
CITY OF OWEN SOUND



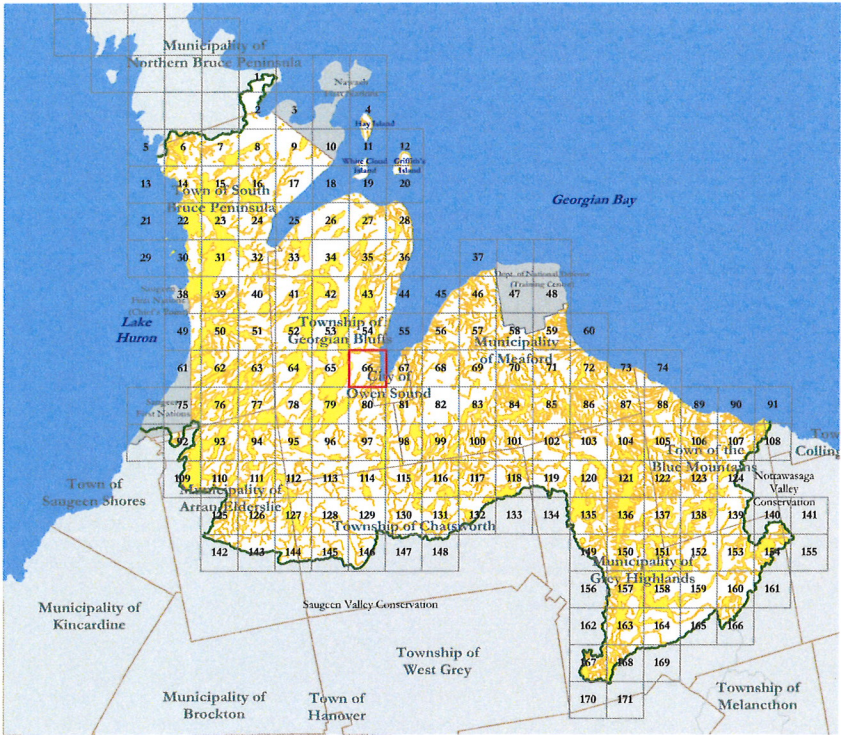
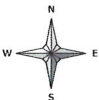
Amending the R1 zone
for lands within the
Townplot of Brooke to
R1a, R1b or R1c

SEE MAP 11
BROOKE

SEE MAP 22



REGULATION FOR DEVELOPMENT, INTERFERENCE WITH WETLANDS,
AND ALTERATIONS TO SHORELINES AND WATERCOURSES.
ONTARIO REGULATION 151/06



	Streams/Rivers		Non-Authority Jurisdiction		Wetland Area		Assessment Parcel Boundaries
	1m Contours		Other CA Jurisdiction		Evaluated Wetlands		Township Boundaries
	Ontario Road Network		Lake		Low/Concession Boundaries		Municipal Boundaries
	Sheet (Tile) Boundary		Waterbody		Grey Sauble Boundary		Regulated Areas

THE REGULATION LIMIT IS A COMPILATION OF VARIOUS INFORMATION SOURCES. EXISTING FLOODPLAIN MAPPING AND SHORELINE HAZARD MAPPING WERE PREVIOUSLY PREPARED FOR GSCA BY ENGINEERING CONSULTANTS. EROSION HAZARDS & APPROXIMATED FLOODPLAINS WERE DETERMINED BY GSCA STAFF AND ASSIGNED AN ADDITIONAL ALLOWANCE OF 15 METRES. PROVINCIAL & LOCALLY SIGNIFICANT WETLAND (PSW/LSW) DELINEATIONS WERE PROVIDED BY THE MINISTRY OF NATURAL RESOURCES. ALL OTHER WETLANDS WERE MAPPED FROM ORIGINAL OBM MAPS. PROVINCIAL & LOCALLY SIGNIFICANT WETLANDS WERE ASSIGNED AN ALLOWANCE OF 120 METRES AND ALL OTHER WETLANDS WERE ASSIGNED AN ALLOWANCE OF 30 METRES.

FOR MORE INFORMATION CONTACT GREY SAUBLE CONSERVATION AUTHORITY (519-376-3076).

Ontario Regulation 151/06

Approved May 8th, 2006

Revisions May 2007 to May 2008

Revision Number <i>(See Attached Table for Revision Log - ON Regulation 151/06 Revision Table)</i>		
66-083007-1	66-043008-5	66-050508-4
66-121707-1	66-043008-6	66-050508-5
66-121707-2	66-050508-1	66-050508-6
66-121707-3	66-050508-2	66-050708-1
66-121807-1	66-050508-3	66-050708-2
66-121807-2	66-043008-1	66-051208-1
66-043008-1	66-043008-2	66-051208-2
66-121707-2	66-043008-3	66-043008-4
66-043008-2	66-043008-6	66-051508-1

Checked By:

DH

Approved By:

DH

Plot Date:

May, 2008

Mapping By:

GD

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This map has been compiled from various sources, and is for information purposes only.
The Grey Sauble Conservation Authority is not responsible for, and cannot guarantee, the accuracy of the information contained within the map. Regulation lines were created by Grey Sauble Conservation using 1 metre contours interpolated from the Provincial (10 metre) Digital Elevation Model Versions 1 & 2 at 1:50,000 scale mapping.

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Projection: Universal Transverse Mercator
Datum: North American Datum 83

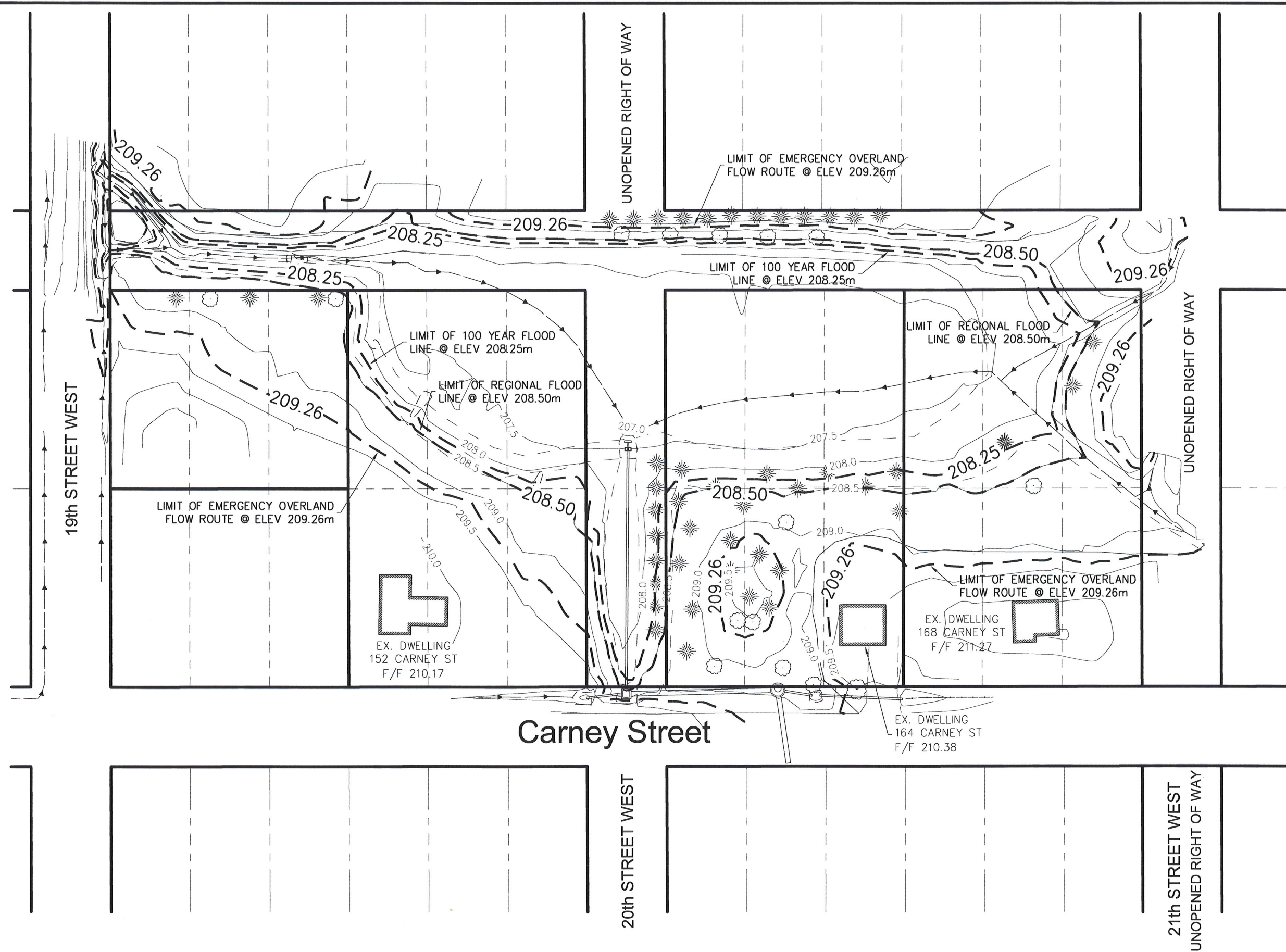
Sheet Number

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Of

171

FILE: \\os-2k8\users_private\etwining\Documents\Drawings\C2876\figE1.dwg LAYOUT: fig 1
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C-2876
Basin A-3 Drainage Study
Township of Georgian Bluffs



LEGEND

SCALE = 1:1,000
OCTOBER 2015

Carney Street Pond
As Recorded
Flood Line Mapping
Overall Plan View
Figure No. 1



C-2876
Basin A-3 Drainage Study
Township of Georgian Bluffs

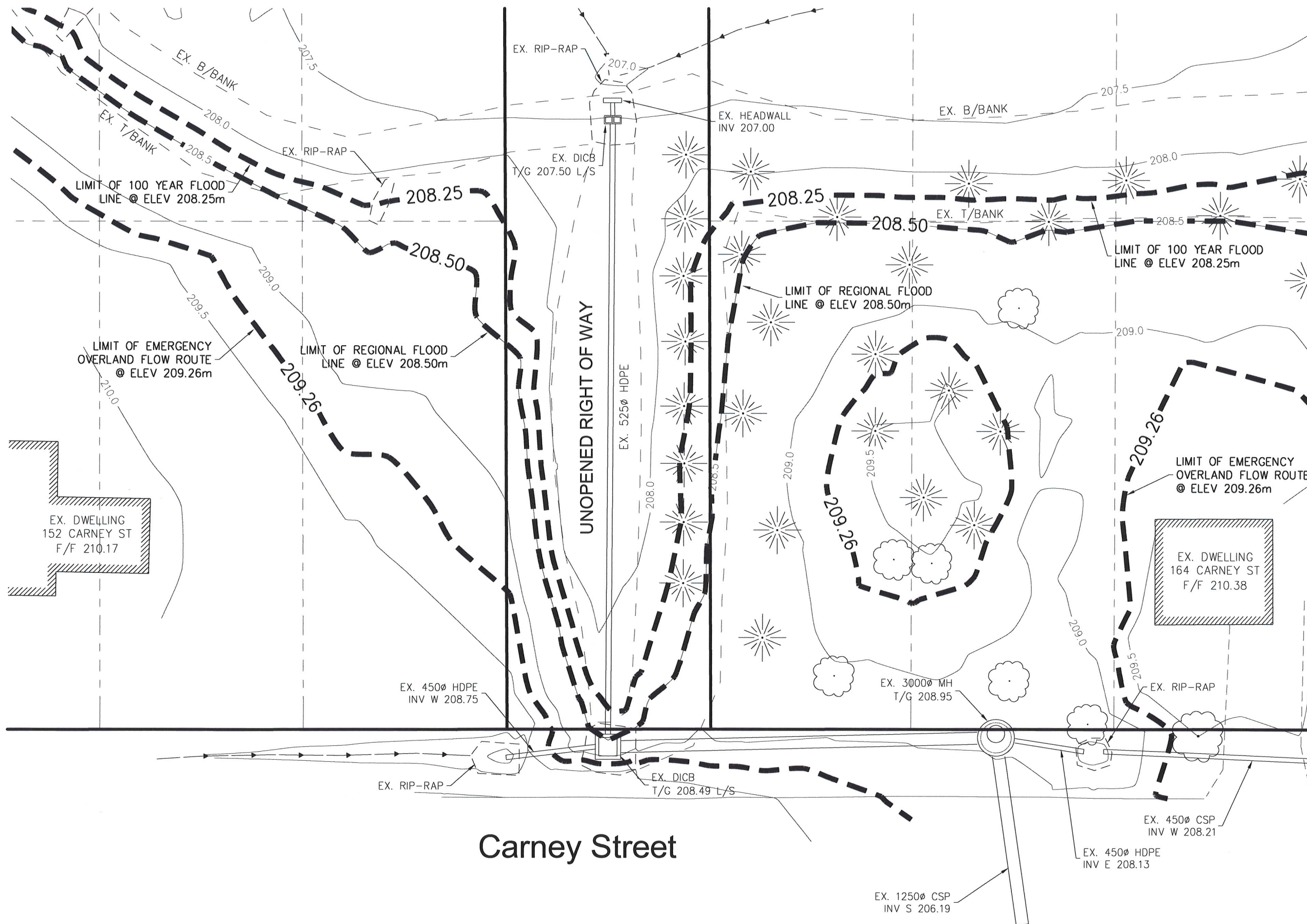


LEGEND

SCALE = 1:400
OCTOBER 2015

Carney Street Pond
As Recorded
Flood Line Mapping
Outlet Details
Figure No. 2

Carney Street



APPENDIX D:
FLOODLINE STUDY MAPPING INFORMATION

**FLOODLINE MAPPING STUDY
REACH #1 TO REACH #5**

River Sta	W.S. Elev (m)										
	Existing Twin 1500 mm dia. CSP			New Twin 1200 mm dia. PP				New Twin 1500 mm dia. PP			
	A	B	B - A	C	C - A	D	D - A	E	E - A	F	F - A
(m)	Phase 1	Phase 2	Diff.	Phase 1	Diff.	Phase 2	Diff.	Phase 1	Diff.	Phase 2	Diff.
501.5	189.43	189.43	0.00	189.43	0.00	189.43	0.00	189.43	0.00	189.43	0.00
482.5	189.30	189.30	0.00	189.32	0.02	189.32	0.02	189.30	0.00	189.30	0.00
464	189.26	189.26	0.00	189.29	0.03	189.28	0.02	189.26	0.00	189.26	0.00
441.5	189.16	189.16	0.00	189.21	0.05	189.20	0.04	189.16	0.00	189.16	0.00
433	189.02	189.01	-0.01	189.12	0.10	189.12	0.10	188.95	-0.07	188.95	-0.07
425	189.01	189.00	-0.01	189.11	0.10	189.11	0.10	188.86	-0.15	188.86	-0.15
6th Ave W/ 21st St W Culvert											
345	188.47	188.20	-0.27	188.47	0.00	188.20	-0.27	188.47	0.00	188.20	-0.27
336.5	188.29	187.96	-0.33	188.29	0.00	187.96	-0.33	188.29	0.00	187.96	-0.33
316	188.20	187.91	-0.29	188.20	0.00	187.91	-0.29	188.20	0.00	187.91	-0.29
295.5	188.17	187.89	-0.28	188.17	0.00	187.89	-0.28	188.17	0.00	187.89	-0.28
275	188.16	187.88	-0.28	188.16	0.00	187.88	-0.28	188.16	0.00	187.88	-0.28
261	188.15	187.87	-0.28	188.15	0.00	187.87	-0.28	188.15	0.00	187.87	-0.28
240.5	188.14	187.87	-0.27	188.14	0.00	187.87	-0.27	188.14	0.00	187.87	-0.27
221.5	188.12	187.87	-0.25	188.12	0.00	187.87	-0.25	188.12	0.00	187.87	-0.25
201.5	187.89	187.86	-0.03	187.89	0.00	187.86	-0.03	187.89	0.00	187.86	-0.03
181.5	187.85	187.86	0.01	187.85	0.00	187.86	0.01	187.85	0.00	187.86	0.01
173	187.64	187.64	0.00	187.64	0.00	187.64	0.00	187.64	0.00	187.64	0.00
20th St W Culvert											
136	186.60	186.60	0.00	186.60	0.00	186.60	0.00	186.60	0.00	186.60	0.00
124	186.36	186.36	0.00	186.36	0.00	186.36	0.00	186.36	0.00	186.36	0.00
92	186.01	186.01	0.00	186.01	0.00	186.01	0.00	186.01	0.00	186.01	0.00
81	185.77	185.77	0.00	185.77	0.00	185.77	0.00	185.77	0.00	185.77	0.00
67	185.04	185.04	0.00	185.04	0.00	185.04	0.00	185.04	0.00	185.04	0.00
59	185.06	185.06	0.00	185.06	0.00	185.06	0.00	185.06	0.00	185.06	0.00
32	185.05	185.05	0.00	185.05	0.00	185.05	0.00	185.05	0.00	185.05	0.00
0	185.05	185.05	0.00	185.05	0.00	185.05	0.00	185.05	0.00	185.05	0.00
19th St W Culvert											

Direction of Flow

- A Existing ditch (Phase 1 considered to be completed 2008)
- B Re-graded ditch (Phase 2)
- C Existing ditch w/ new twin 1200 mm dia. PP pipes
- D Re-graded ditch w/ new twin 1200 mm dia. PP pipes
- E Existing ditch w/ new twin 1500 mm dia. PP pipes
- F Re-graded ditch w/ new twin 1500 mm dia. PP pipes

- W.S. Elv. Increase (undesirable)
- No Change
- W.S. Elv. Decrease (desirable)

- B-A Change from ex. WS Elv due to re-graded ditch (ex. twin CSP pipes remain)
- C-A Change from ex. WS Elv due to new twin 1200 mm dia. PP culverts and existing ditch maintained
- D-A Change from ex. WS Elv due to new twin 1200 mm dia. PP culverts and re-graded ditch
- E-A Change from ex. WS Elv due to new twin 1500 mm dia. PP culverts and existing ditch maintained
- F-A Change from ex. WS Elv due to new twin 1500 mm dia. PP culverts and re-graded ditch

1:150000 Scale Map of the City of Owen Sound, Ontario, Canada. This map is a reproduction of the original map and is not a substitute for the original map. The original map is available for purchase from the City of Owen Sound. The City of Owen Sound is not responsible for any errors or omissions in this map. The City of Owen Sound is not responsible for any damages or losses resulting from the use of this map. The City of Owen Sound is not responsible for any claims or liabilities resulting from the use of this map. The City of Owen Sound is not responsible for any claims or liabilities resulting from the use of this map.



KEY PLAN
NOT TO SCALE

LEGEND:

- G.S.C.A. REGULATED AREA
- WATER COURSE
- FLOW DIRECTION
- [585] HOUSE NUMBER

BENCH MARKS:

THE POSITION OF POLE LINES, CONCRETE, WATERWAY, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED.

BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE TO THEM.

DRAFT

NO.	DATE	REVISION DESCRIPTION	CHND

BluePlan
ENGINEERING

OWEN SOUND | LONDON | KITCHENER | HAMILTON | GTA
1260 - 2ND AVENUE EAST, UNIT 1, OWEN SOUND, ON N4Y 2Z3
TEL: 519-375-1962 www.blueplan.ca

BROOKE AREA BASIN A3 OUTLET

MASTER PLAN

CITY OF OWEN SOUND

FLOOD LINE MAPPING

DRAWN BY K.B.	APPROVED BY J.B.S.	PROJECT NO. 216301	DRAWING NO. 2
DESIGNED BY A.W.	DATE APRIL 2017	SCALE 1:750	

APPENDIX E: CULTURAL ENVIRONMENT: BACKGROUND INFORMATION

**STAGE 1 ARCHAEOLOGICAL ASSESSMENT FOR
BROOKE AREA BASIN A3, LOTS 129, 131, 133, 135, 137, 139
EAST AMELIA STREET, 130 WEST EDWARD STREET, 135, 137,
139 EAST EDWARD STREET, 136, 138, 140 WEST MARKET
STREET, PT LOT 139 EAST MARKET STREET AND LOTS 130,
132, 134, 136, 138, 140 WEST SOUND STREET, TOWN PLOT OF
BROOKE, GEOGRAPHIC TOWNSHIP OF SARAWAK, CITY OF
OWEN SOUND, GREY COUNTY, ONTARIO
ORIGINAL REPORT**

Prepared for:

GM BluePlan Engineering Limited
and
Ontario Ministry of Tourism, Culture and Sport

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PIF #: P027-0331-2018

April 25, 2018

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Executive Summary

The proponent retained the services of Scarlett Janusas Archaeology Inc. (SJA) to conduct a Stage 1 archaeological resource assessment for the area that will be impacted by the Brooke Area Basin A3. The Study Area consists of an area five metres on either side of an existing storm water drainage system. There are no existing structures or ruins within the Study Area boundaries. The Study Area is located on part of historic Lots 129, 131, 133, 137, 139 East Amelia Street, 130 West Edward Street, 135, 137, 139 East Edward Street, 136, 138, 140 West Market Street, part Lot 139 East Market Street and Lots 130, 132, 134, 136, 138, 140 West Sound Street, Town Plot of Brooke, Sarawak Township, City of Owen Sound, Grey County, Ontario.

The archaeological assessment was triggered by the City of Owen Sound wishing to complete a comprehensive review of the Study Area to assist with planning.

Background research indicated that there are no registered archaeological sites within one kilometer of the Study Area nor any known archaeological assessments within 50 metres of the Study Area. There are two provincial plaques which relate to the Study Area relating to the founding of Owen Sound, and the establishment of the Newash Indian village.

The soils of the Study Area are identified as the Elderslie. Field observations noted that the topography of the project area ranges from 180 to 190 metre above sea level (asl).

The Stage 1 archaeological assessment of the Study Area, consisting of a property inspection and background research, was conducted under license P027 (Scarlett Janusas, PIF#: P027-0331-2018). The property inspection was conducted on March 28th, 2018 under good assessment weather conditions.

Based upon the background research of past and present conditions, and the property visit, the following is recommended:

- A Stage 2 archaeological assessment is recommended for approximately 56% of the Study Area (areas of archaeological potential), more specifically: 1) the west side of Reach 1 should be the subject of Stage 2 archaeological assessment if there is any proposed development, excluding routine maintenance of the existing culvert; 2) the west side of Reach 2 exhibit potential and will require Stage 2 archaeological assessment if this area is to be developed; 3) the water course in Reach 3 has been dredged several times, although the majority of the area on either side of the course has remained undeveloped. Should any development be proposed in this area, Stage 2 archaeological assessment is recommended. 4) Reach 4 is a mix of areas of both archaeological potential and no potential. Those areas of archaeological potential are recommended for Stage 2 archaeological assessment should

development be proposed within Reach 4. 5) There is no potential for Reach 5, and no further archaeological assessment is required in the area of Reach 5. 6) There is no archaeological potential for Reach 6 and no further archaeological assessment is recommended within the Reach 6 area.

- Compliance legislation must be adhered to in the event of discovery of deeply buried cultural material or features

As per Section 2.1.2 Standards 1, 2, and 5-9 of the MTCS 2011 Standards and Guidelines, it is recommended that areas of archaeological potential as identified on Map 15 be subject to a Stage 2 archaeological assessment. Based on the current condition of the land, the area cannot be ploughed. Stage 2 archaeological assessment should be conducted using a test pitting methodology conducted in five metre intervals across the areas of archaeological potential. Each test pit should be at least 30 cm in diameter and excavated a minimum of five cm into subsoil and examined for stratigraphy, cultural features, or evidence of fill. All soil shall be screened through mesh no greater than six mm, all artifacts should be collected according to their associated test pit, and all test pits backfilled unless instructed not to by the landowner/proponent. If test pits are found to be positive (artifacts or cultural features), test pitting should be intensified around the positive test pits with eight additional test pits excavated at 2.5 metre intervals around the positive test pit. If there are sufficient positive test pits located to recommend a Stage 3 archaeological assessment (and sufficient materials), no additional intensification is required. If there is some question as to whether the positive test pit(s) is sufficient for a recommendations of Stage 3 assessment, a minimum of one – one metre square test unit must be excavated over the positive test pit. All recovered archaeological materials shall be bagged and tagged according to provenience.

This archaeological assessment has been conducted under the 2011 Standards and Guidelines for Consultant Archaeologists (Ministry of Tourism, Culture and Sport 2011).

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**STAGE 1 ARCHAEOLOGICAL ASSESSMENT FOR BROOKE
AREA BASIN A3, LOTS 129, 131, 133, 135, 137, 139 EAST
AMELIA STREET, 130 WEST EDWARD STREET, 135, 137, 139
EAST EDWARD STREET, 136, 138, 140 WEST MARKET STREET,
PT LOT 139 EAST MARKET STREET AND LOTS 130, 132, 134,
136, 138, 140 WEST SOUND STREET, TOWN PLOT OF BROOKE,
GEOGRAPHIC TOWNSHIP OF SARAWAK, CITY OF OWEN
SOUND, GREY COUNTY, ONTARIO**

1.0 PROJECT CONTEXT

1.1 Development Context

The proponent retained the services of Scarlett Janusas Archaeology Inc. (SJA) to conduct a Stage 1 archaeological resource assessment for the area that will be impacted by the Brooke Area Basin A3 (Maps 1 - 4). The following is a description provided by the proponent (personal communication, Andrea Nelson January 11, 2018):

“In July, 2008, GM BluePlan Engineering Limited (GMBP), on behalf of the City of Owen Sound (City) and the Township of Georgian Bluffs (Township), completed a “Brooke Area Stormwater Management Study” (BAWSM Study), which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one of these drainage areas.

Brooke Area Basin A3 is generally bounded by West Street in the west, 23rd Street West in the north, the Eddie Sargent Parkway (ESP; Grey Road 1) in the east, and the 17th Street West and 18th Street West rights-of-way (ROW) in the south. The specific Study Area includes the outlet portion of the drainage system of Basin A3, which is located entirely within the City’s boundaries; east of 8th Avenue West to the outlet at Kelso Beach.

The BASWM Study identified various deficiencies with drainage infrastructure within the City. The City has chosen to investigate in greater detail, by following a Master Plan approach, the outlet system for Brooke Area Basin A3 with the Study Area broken down into the following component reaches:

- i) Reach #1 – Open Channel – East of 8th Avenue West to 6th Avenue West*
- ii) Reach #2 – Culvert – 6th Avenue West and 21st Street West*
- iii) Reach #3 – Open Channel / Culvert – 21st Street West to 20th Street West*
- iv) Reach #4 – Open Channel – 20th Street West to 19th Street West*
- v) Reach #5 – Culvert Inlet System – 19th Street West near 5th Avenue West*
- vi) Reach #6 – Storm Sewer System – 19th Street West, from Inlet System to ESP*

vii) Reach #7 – Outlet System – ESP to Kelso Beach”

The Stage 1 archaeological assessment is being completed only for Reaches 1 through 6.

The archaeological assessment was triggered by the City of Owen Sound wishing to complete a comprehensive review of the Study Area to assist with planning.

Permission to access the property and to conduct all activities associated with the Stage 1 archaeological assessment was provided by the proponent. The Study Area is a five metre (m) zone on either side of an existing storm water drainage system. There are no existing structures within the Study Area boundaries. The Study Area occupies parts of historic Lots 129, 131, 133, 137, 139 East Amelia Street, 130 West Edward Street, 135, 137, 139 East Edward Street, 136, 138, 140 West Market Street, part Lot 139 East Market Street and Lots 130, 132, 134, 136, 138, 140 West Sound Street, Town Plot of Brooke, Sarawak Township, City of Owen Sound, Grey County, Ontario. The Study Area is 8,350m² in size.

This Stage 1 archaeological assessment has been conducted under the 2011 Standards and Guidelines for Consultant Archaeologists (Ministry of Tourism, Culture and Sport 2011).

1.2 Historical Context

1.2.1 Current Environment

The Study Area encompasses a five metre area on either side of an existing storm water drainage system. There are no existing structures within the Study Area boundaries. The elevation of the terrain ranges from 180 m above sea level (asl) gradually rising to a height reaching 190 m asl.

1.2.2 Prehistory of Study Area

The Paleo period, 9500 – 8000 B.C., represents the first human populations in Ontario. These people subsisted largely on caribou and small mammals and fish. They were nomadic in nature, traveling large areas, but generally following glacial strandlines. Sites from this period are represented solely by lithic assemblages. There are no registered early or late Paleo Indian sites located on or in the vicinity of the Study Area.

The Archaic period spans a large time period from 7000 to 1000 B.C. Raw materials used by these nomadic people became much more diverse, and they remained hunters and gatherers. There are no registered archaeological sites identified as Early, Middle or Late Archaic periods located near the Study Area.

The Woodland periods span from 1000 B.C. to 1650 A.D. The introduction of

ceramics marks the differentiation between the Woodland and Archaic periods. The Ministry of Tourism, Culture and Sport has indicated there are no registered archaeological sites of the Woodland period within one kilometre of the Study Area.

1.2.3 Indigenous Historic Period

The Chippewas of Saugeen First Nation and the Chippewas of Nawash First Nation share the same traditional territories in southwestern Ontario. They were a part of the ancient Three Fires Confederacy of Ojibway, Odawa, and Pottawatomi. Prior to 1650, these groups inhabited the lands bordering on Lake Huron. Around 1650 conflict with the Iroquois forced them to move westwards. After the defeat of the Iroquois, some of the Ojibway settled in the Saugeen Territory. The Ojibwa retained all territories won during the battles with the Iroquois until they surrendered them to the Crown more than a century later.

Throughout the 18th century the Saugeen Territory was inhabited by several generations of Ojibway whose immediate territory was threatened neither by war nor by European settlers. Some of these Ojibwa were the Wahbadicks, the Newashes, the Wahwahnoses, and the Metegwob who fished, trapped and hunted along the many rivers, streams and lakes of their lands (Schmalz 1991:2-9). It should also be noted that there were many “foreign” Indians from the United States that settled within the territory as well.

The Saugeen Ojibway Nation (SON) traditional territories cover the watersheds bounded by the Maitland River and the Nottawasaga River (east of Collingwood on Georgian Bay). The area includes all the Bruce Peninsula (which was once known as the Saugeen Peninsula), all of Grey and Bruce Counties, and parts of Huron, Dufferin, Wellington and Simcoe Counties.

To accommodate British and European immigration, officers of the Crown began their quest to secure Aboriginal lands toward the end of the 18th century. Large portions of the Mississauga Tract along the northern shores of Lake Ontario had been obtained in 1792, and the bulk of the Huron Tract including present day Grey County in 1825. On August 9, 1836, after negotiations on Manitoulin Island between the chiefs of the Saugeen Ojibway and the Government of Upper Canada led by Sir Francis Bond Head, the Crown gained title to approximately 1.5 million acres (607,028.5 hectares) of Indigenous land along the shores of Lake Huron (Schmalz 1977:233). The “Saugeen Tract Agreement” as it was called, was registered as Crown Treaty #45 ½ and included all of present day Grey County (Maps 5 - 8). This area was surrendered to the Crown through Crown Treaty # 72 dated October 12, 1854. Both treaties allowed for the presence of five reservations on the Peninsula, including: Saugeen, Chief’s Point, Colpoy’s Bay (Oxenden), Newash and Cape Croker (Davidson 1972:13).

The following is an excerpt from Smith’s 1865-66 Directory of the County of Grey:

“Brooke is a village in the township of Sarawak,... formerly called Newash, and was a village inhabited by Ojibway and Pottawatamie Indians, chiefly the former.

In 1837, beyond which we have no connected account of anything around Owen’s Sound, Newash, the Ojibway Chief, was living alone, with this family, where Brooke now stands. He had lived there all his life and his father and grandfather before him. Newash is now a man in extreme old age, living at Cape Croker...

In 1840, when preparations were first made for the settlement [Euro-Canadian] of Sydenham town and township, and country around, a few Ojibways and Pottawatamies had settled beside Newash. The Indian village had a pretty appearance. It was a fine dry sandy side; small clearings were made, and the forest around presented majestic elms and basswoods, with a sprinkling of hemlock and cedar, interspersing the invariable maple and beech...

Newash, Saco, Cahpenais, and Wahbatick were the principal men of the tribe. The place became known as Newash’s Village, or “Newash”...

In October, 1842, a number of workmen, who had been sent by the Government to put up houses for the Newash band, arrived at “Sydenham”. Six log houses were put up that fall; others, log and frame were put up afterward. There were 16 in all; most of these are still standing. The Government also had 100 or 150 acres cleared for them; and made them a present of several yoke of oxen and cows... In 1855 the writer was informed by an intelligent and educated member of the Band, that late Charles Keeshick that the Indian population of Newash was exactly 105.

Early in 1857, the Indians surrendered Newash and the Reserve which now constitutes the township of Sarawak,... and removed to Cape Croker... in June 1858”.

Map 9 illustrates the Newash “Indian” village, and a church near Owen Sound Harbour. This village was located to the north of the entrance to the Potawatamie River, and is north of the Study Area.

The Newash (now known as Nawash) reservation remained until the “Peter Jones Treaty” of 1857. The following is an excerpt from the *History of Cape Croker* (CNED 1980:5) and describes events leading up to the signing of the treaty:

“John Telfur, a land agent and surveyor Charles Rankin P. L., came to Nawash, October 1840, they informed the Indians that the land upon which they now resided was to be surrendered and sold for their benefit. This was followed by the signing of the “Peter Jones Treaty”.

One surprising feature noted in the treaty was that it was signed at Toronto on February 9th 1857. How the Red delegation reached that city in the middle winter,

with the nearest railway connection then at Collingwood is not known to this writer. It appears strange too that Chief Nawash who was the acknowledged leader of the band, had apparently no part in the transaction. It is possible that the chief by that time was too aged or infirm to travel far. He is known to have agreed to the transfer and to have later taken part in the migration.

In the spring of 1857 soon after the treaty was signed, Lord Burgh who had followed Oliphant as superintendent of Indian Affairs, organized the survey of the Nawash lands. The village was laid out in town lots and given the name of "Town of Brookeholm" in honour of Burg's kinsman Major Brooke of Sarawak. The neighbouring lands were surveyed into the townships of Sarawak and Keppel."

Hamilton's 1862 map shows the general location of the former village (Map 10).

1.2.4 Historic Métis

The Historic Saugeen Métis are descendants of the Métis who traded at Saugeen. Pierre Piché was considered this first Métis in the area, trading in about 1816. The Ojibwa invited Piché to share the resources within the Saugeen territory, but also required him to "share" in the protection of these same resources and the environment for mutual benefit.

"In 1816-1818, Wampum, strings of bead, was presented to Piché as a tangible reminder, an enduring record, of the historic diplomatic exchange, and the words spoken between the Ojibwe and Métis, that formed their peaceful and sharing relationship in the Saugeen territory"

(<http://www.saugeenmetis.com/main.php?page=heritage>).

The Historic Saugeen Métis are descended from unions between European traders and Indigenous women. The Lake Huron watershed Métis lived, fished, hunted, trapped and harvested the lands and waters of the Bruce Peninsula, the Lake Huron proper shoreline and its watershed. These are considered the traditional Métis territory.

The contemporary Métis community extends for 275 km on the Lake Huron shoreline from Tobermory to south of Goderich, and includes the counties of Bruce, Grey and Huron.

1.2.5 Euro-Canadian Historic Period

The County of Grey was created by lands negotiated in the Treaty of 1818 and contained 1,592,000 acres (644,259.54 hectares). The price of the first treaty was "for the yearly payment for ever of twelve hundred pounds currency in goods at Montreal prices" (Marsh 1931). Due to the expansion of settlers in the new County of Grey, it too was expanded with the Sauking Treaty signed in 1836 (Marsh 1931).

The “sound of water” now known as “Owen Sound” was not officially surveyed until 1815. It has been postulated that Samuel de Champlain, as well as many early fur traders, mapped the shoreline. In 1815 Captain William Fitzwilliam Owen arrived to officially survey the region. Captain Owen changed the original name of Mer Douce (meaning ‘Sweetwater Sea’), given to the large bay by Champlain, to Manitoulin Lake (Thomas 2015). It was not until 1825 that the modern name of Georgian Bay was given to the area in honour of King George III. The earliest record showing when the name “Owen Sound” was first used is in Lieutenant Bayfield’s survey of 1819, in honour of Captain William Fitzwilliam Owen (Thomas 2015).

The Township of Sarawak is nestled between the townships of Sydenham, Keppel and Derby in the County of Grey. The land was originally owned by the Nawash Indigenous tribe and was occupied as a reserve until the Jones Treaty of 1857. It is a known fact that the reserve land was the desired land to start the town plot of Sydenham, which would later be called Owen Sound. The land was not surveyed and assigned lots and concessions until after the Jones Treaty was signed in 1857.

For almost 25 years the Sarawak Reserve (Map 8) remained alongside the growing township of Sydenham. In the spring of 1857, after the Jones Treaty was signed, the land was surveyed and the town plot of Brooke established. The former Indigenous village was laid out in town lots and given the name of “Town of Brookeholm, now the Town of Brooke. The part of Brooke townplot, east of Albert Street, was annexed to Owen Sound by the Province in February, 1909.

The town plot of Brooke was named after Lord Burgh’s kinsmen James Brooke in honour of his exploits in Sarawak (Marsh 1931). The Nawash did not want to leave their land, and were forced to move to Cape Croker once the Jones Treaty had been signed. The, then, local Indian Affairs Department did not allow the Indigenous people to build saw or grist mills, sell their timber to white men; or even trade with their European neighbours. This likely caused monetary issues for the reserve, forcing them to sell their lands. There was much contestation at the auction for Sarawak lands. The Indigenous people attempted to purchase back their land but were denied, and the neighbours who had good relationships with the Nawash did not wish to occupy or purchase the land upon seeing this “treatment” (Marsh 1931, Davidson 1972, Croft 2011). As a result of these problems, the initial Euro-Canadian settlement of Brooke was very slow.

Specific Lot History

The Land Registry Index and Canadian/Ontario Census records were used to obtain the specific lot histories (Map 11 shows lots in 1862). The Collectors/Assessment Rolls for the Township of Sarawak were destroyed by fire (Davidson 1972:321-322; Noble, personal correspondence, 2018). Appendix A details the land abstract records for each municipal address in the Study Area.

#550 19th Street West (Lots 129, 131, 133, 135, 137, 139 East Amelia Street and Lots 130, 132, 134, 136, 138, 140 West Edward Street, Town Plot of Brooke, Sarawak Township)

According to the 'Abstract Land Index' Lots 129, 131, 133, 135, 137, and 139 East Amelia Street and Lots 130, 132, 134, 136, 138 and 140 West Edward Street, Town Plot of Brooke, were sold as a single property (1.75 acres / 0.71 hectares). The Crown patent was issued to William J. Graham on July 7, 1888. William J. Graham is listed in the 1881 census as an Inland Revenue Collector, married to Louisa M. Graham and father to a Louisa, William, Henrietta and Harold Graham. It is unclear on the historical maps whether or not a structure was built by William J. Graham, however he was the sole owner of the collective lots until at least 1932.

In 1932 the property was willed to his daughter Henrietta S. Blade. She retained the lands until 1946, when she granted them to her brother Harold F. Graham. Harold Graham sold the land to Marricou Development in 1976 and since 1986 the lands have been under the ownership of Regency Towers Owen Sound. Although the trustees of the land have changed, Regency Towers remains the owner with Trustees coming and going since 1976.

#1914 4th Avenue West (Lots 135, 137, 139 East Edward Street and Lots 136, 138, 140 West Market Street, Town plot of Brooke, Sarawak Township)

According to the 'Abstract Land Index', Lots 135, 137, and 139 East Edward Street and Lots 136, 138, and 140 West Market Street, Town plot of Brooke (1.5 acres / 0.61 hectares) were purchased, as a single block, by William J. Graham from the Crown on July 6, 1888. He remained the sole owner until March 26, 1932 when he and his wife sold the 1.5 acre (0.61 hectare) property to Maria L. Wiselands who owned the land from 1932 until 1945. On February 24, 1945, she sold the property to Jean S. Walpole for \$3,300.00. On March 6, 1952, Walpole granted the property to Norman R. Walpole and his wife. They remained the sole owners until the May 1966 when they sold it to Morley D.B. Atton for \$12,200.00. On October 11, 1990 it was willed to Dorothy M. Atton, who was also the executor of his will.

#1909 4th Avenue West (Part Lot 139 East Market Street, Town Plot of Brooke, Sarawak Township)

The Patent for Part Lot 139 East Market Street, Town Plot of Brooke, was issued to James Douglas (0.25 acres / 0.10 hectares) on May 21, 1886. James Douglas, according to the 1881 census, was a tailor born in Scotland, married to Ellen Douglas and father to James, John, Ellen, Robert, Bella, Anne, Lizzie and William. He held the land until August 27, 1886 when he sold it to Alexander Brass for \$440.00. Alexander Brass retained the property until his passing.

On January 17, 1945 the Mayor and Treasurer of the Corporation of the City of Owen Sound purchased the property for \$1,104.63, due to unpaid taxes. A second Tax Deed was issued June 10, 1946 for the same amount. It appears that the land remained unoccupied until March 19, 1973, when a Deed was issued by Central M. Housing Corporation to Franklin G. Graham and Frances Graham. They paid \$4,000.00 for the property. On March 28, 1973, the Grahams deeded the land to The Director, Veteran's Land Act for \$2.00.

The land was severed on October 8, 1975 when the Minister of Revenue passed a certificate to the estate of Franklin G. Graham for the north part of the lot, some 22 feet (6.71 meters) for a right-of-way.

#280 19th Street (Lots 130, 132, 134, 136, 138 and 140 West Sound Street, Town plot of Brooke, Sarawak Township)

The Crown Patent for Lots 130, 132, 134, and 136, West Sound Street, Town plot of Brooke, were issued to William F. Wolfe on September 18, 1885. The 1881 Census records indicate that William F. Wolfe was a dry goods merchant born in Germany and married to Mary Ann. He and his wife owned the property until July 3, 1901 when they sold each lot to William Graham for \$1,475.00. William Graham sold the land later that same year to the Owen Sound Planning Company Limited for \$12,750.00.

On June 9, 1919 the Owen Sound Planning Company Ltd. sold the lands to the Dominion Oil Company. They retained ownership of the lands until October 15, 1927 when they declared bankruptcy. On December 10th of that same year the land was listed for sale under "Agent for Sale" Norman L. Martin (Trustee for Dominion Oil Ltd.). It was sold to Walter G. Scott in the amount of \$37,000.00. On November 21, 1928 a grant was issued by Norman L. Martin (Trustee of Dominion Oil) to Dominion Oils Company Ltd. Inc. for part 1.75 acres (0.40 hectares) tax asset copy \$2,000.00 and right-of-ways for Lots 134, 136 and Part Lot 130 (approved by the inspector). The Dominion Oils Company Ltd. Inc. owned the lots until April 1, 1959 when Reliance Petroleum Limited sold the land to Supertest Petroleum Corporation Limited. Supertest Petroleum owned the land until February 13, 1968 when John F. McArthur purchased the lots for \$3,100.00 each. John F. McArthur sold the lots to Noxa Investments Limited on December 12, 1975. In September of 1984 Noxa Investments mortgaged the property through the Toronto Dominion Bank for \$200,000.00. The last transaction within the Land Registry Index was for a grant issued on April 29, 1985 by John F. McArthur to Noxa Investments Limited for "Part and Other Lands".

The Crown Patent for Lots 138 and 140 West Sound Street, Town of Brooke was granted to James Douglas on May 21, 1886. Douglas sold the lots to Alexander Brass on August 27, 1886 who retained the lots until his passing.

On January 17, 1945 the Mayor and Treasurer of the Corporation of the City of Owen Sound purchased the property for \$1,104.63, due to unpaid taxes. A second Tax Deed was issued June 10, 1946 for the same amount. On February 28, 1949 the Corporation of the City of Owen Sound sold the land to McManus Petroleum Limited for \$200.00. That same day McManus Petroleum Limited granted all the lands to Reliance Petroleum Limited. Reliance Petroleum held the lands for 10 years and on April 1, 1959 sold them to Supertest Petroleum. Supertest Petroleum owned the land until February 13, 1968 when John F. McArthur purchased them for \$3,100.00 per lot. John F. McArthur later sold the lands to Noxa Investments Limited on December 12, 1975. On the September 20, 1984 Noxa Investments mortgaged the property through the Toronto Dominion Bank for \$200,000.00 (Part and other lands). The last transaction was a grant issued on April 29, 1985 from John F. McArthur to Noxa Investments Limited for "Part and Other Lands".

#596 20th Street West (Part Lots 123, 125 and 127 East Amelia Street, Town Plot of Brooke, Sarawak Township)

According to the 'Abstract Land Index', William F. Wolfe was issued the patent by the Crown on July 23, 1878, for all three acres (1.21 hectares) of Lots 123, 125 and 127 and other lands. No purchase price was noted. William Wolfe was a dry goods merchant born in Germany and married to Mary Ann. On May 11, 1898 William Wolfe and his wife sold these lands to Walter J. Hemming for \$400.00. Walter Hemming and his wife sold the land to George W. Gurnett for \$500 on October 18, 1910. George Gurnett and his wife later granted the lots to John Mitchell for \$300.00 on August 11, 1914. John Mitchell and his wife granted the land to John Burke for \$280.00 on December 15, 1923. John Burke then granted the land to Joseph and Harold Eldred for \$400 on July 4, 1929. A quit claim was issued between Joseph Eldred and his wife to Harold Eldred for \$200.00 on December 5, 1929. Harold Eldred and his wife later deeded the northwest part of Lot 123, and the west part of Lot 121 to Beverly R. Howey on May 4, 1970, for \$800.00. Harold Eldred and his wife also deeded the northeast part of Lot 123, and the east part of Lot 121 to William G. Davis and his wife Margaret on May 4, 1970 as joint tenants, for \$500.00.

Harold Eldred and his wife deeded their portion of Lots 123, 125 and 127 to William and Shirley Kivell, as Part 2 of registered plan 16R-412 on May 1, 1974, for \$1.00. On February 13, 1987, Beverly Howey granted the northwest part of Lot 123 and other lands to herself and Ruth Howey as joint tenants. No purchase price was provided. William and Shirley Kivell granted Part 2 of registered plan 16R-412 for Lots 123, 125 and 127 to James R. Comeau and his wife JoAnne as joint tenants on May 15, 1987. No purchase price was provided. William and JoAnne Comeau then mortgaged Part 2 of registered plan 16R-412 and other lands to National Trust Co. for \$71,000.00 on October 30, 1987. Beverly and Ruth Howey charged the Confederation Trust Company \$111,500 for the northwest part of Lot 123 and other lands on August 2, 1990. Beverly and Ruth Howey charged Neil McDonald \$55,000.00 for the same on March 30, 1992. James and Marie Comeau charged

the National Trust Co. \$40,000.00 for Part 2 of registered plan 16R-412 for Lots 123, 125 and 127 on September 25, 1992. Later, Beverly and Ruth Howey charged Norman McKibbin \$28,000.00 for the northwest part of Lot 123 and other lands on June 17, 1993.

Beverly and Ruth Howey mortgaged their property on Lot 123 with themselves and Edward S. Howey for \$2.00 on December 22, 1993. Beverly, Ruth and Edward Howey later charged Neil S. McDonald \$86,500.00 for the same lands on December 22, 1993. The Confederation Trust Co. assigned the mortgage for the northwest part of Lot 123 and other lands to the Toronto Dominion Bank on February 3, 1995. The Toronto Dominion Bank then transferred the same property to Michael William and Eyselein L.J. Moore on February 3, 1995 for \$114,000. Michael William and Eyselein Moore then charged the northwest part of the lot and other lands to CIBC Mortgage Corp. for \$65,000.00 on the same day.

#2006 5th Ave West (Part Lot 128 West Edward Street, Town Plot of Brooke, Sarawak Township)

Lot 128 East Edward Street, Town Plot of Brooke, was owned by William Wolfe who was issued the patent by the Crown on January 23, 1878, for the entirety of the lot (0.25 acres / 0.10 hectares). William F. Wolfe was a dry goods merchant born in Germany and married a Mary Ann. He and his wife held the Lot until May 11, 1898 when they sold it to Walter J. Hemming for \$400.00. Walter Hemming and his wife sold off the east part of the lot (99 feet / 30.17 m) to Henry Miller on July 19, 1909 for \$52.00. On October 18, 1910, Walter Hemming and his wife sold the remaining land to George Gurnett for \$500.00. Henry Miller sold his east 99 feet (30.17 m) to Stanley Raven on December 26, 1911 for \$385.00. On August 11, 1914 George Gurnett and his wife further divided the lot by granting 66 feet (20.12 m) by 66 feet (20.12 m) to John Mitchell for \$300.00. Stanley Raven sold his part of the land for \$1,450.00 to Bessie Lusitenburg on March 19, 1920. A John Burke bought John Mitchell's portion of the land for \$280.00 on December 15, 1923. John Burke held that land for six years before selling it to Joseph and Harold Eldred at the cost of \$400.00 on January 4, 1929. A quit claim was issued between Joseph Eldred and wife to Harold Eldred for \$200.00 on December 5, 1929. On November 24, 1964, Annie McMann and Walter Waltenburg (executors of the estate of Elizabeth Breen) sold the land to Melville and Lorraine Waltenburg for \$5,500.00. It is unclear at what point Elizabeth Breen became a land holder of this particular parcel. On April 13, 1970 Adam Pubske (Admin. of Lorraine Waltenburg) with Emma Carleton, William Tovelofeski and Edith Klagis of the public institute deeded the land to Melbourne and Dorothy Bauman. Harold Eldred and his wife sold their land to William and Shirley Kivell as Part 3 of registered plan 16R-412 on May 1, 1974. No purchase price was provided. William and Shirley Kivell granted the land of Part 3 16R-4112 to James and JoAnne Comeau on May 15, 1987. James and JoAnne Comeau mortgaged their property with National Trust Co. for \$71, 000.00 on October 30, 1987. On September 25, 1992, James and JoAnne charged National Trust Co. for an additional \$40,000.00.

#560 20th Street West (Part Lot 123 Amelia Street East; Lot 125 and 127 East Amelia Street; Part Lot 128 West Edward Street, Town Plot of Brooke, Sarawak Township)

Part Lot 128 West Edward Street was discussed above, but it is part of the municipal address, 560 20th Street West. Lots 123, 125 and 127 East Amelia Street were all purchased by William F. Wolfe from the Crown on July 23, 1878. The lands total 0.75 acres (0.30 hectares). William F. Wolfe and his wife sold all three lots to Walter Hemming for \$400.00 on May 11, 1898. Walter Hemming and his wife held the lands over a decade before selling them all to George Gurnett for \$500.00 on October 18, 1910. On August 11, 1914, George Gurnett and his wife sold the lands to John Mitchell for \$300.00. John Mitchell sold the lands to John Burke for \$280.00, on December 15, 1923. John Burke held the land for six years before selling it to Joseph and Harold Eldred at the cost of \$400.00 on January 4, 1929. A quit claim was issued between Joseph Eldred and his wife to Harold Eldred for \$200.00 on December 5, 1929. Harold Eldred and his wife sold their land to William and Shirley Kivell as Part 3 of registered plan 16R-412 on May 1, 1974, no price given. William and Shirley Kivell granted the land of Part 3 16R-4112 to James and JoAnne Comeau on May 15, 1987. James and JoAnne Comeau mortgaged the property with National Trust Co. for \$71, 000.00 on October 30, 1987. On September 25, 1992 James and JoAnne charged National Trust Co. for an additional \$40,000.00.

#2020 5th Avenue West (Lot 126 West Edward Street, Town Plot of Brooke, Sarawak Township)

Lot 126 West Edward Street, Town Plot of Brooke, was owned by William F. Wolfe, patent, (0.25 acres / 0.10 hectares) on January 23, 1878. William Wolfe and his wife sold the land to Walter Hemming on May 11, 1898, for \$400.00. Walter Hemming and his wife sold the land to George Gurnett for \$500.00 on October 18, 1910. Gurnett then split the lot into two parts, selling the south half (33 feet by 165 feet / 10.06 m by 50.29 m) to Percy Minard for \$175.00 on June 15, 1915, and the north half to Harry Peel for \$594.00 on April 16, 1916. On May 2, 1921, Harry Peel and his wife sold the north half of the lot to Percy Minard for \$340.00. Percy Minard later sold the land to Allan George for \$687.00 on November 20, 1923. A Tax Deed was issued on February 23, by the Mayor and Treasurer to the Corporation of the City of Owen Sound for \$7,852.00. After this the land lay stagnant for 12 years when it was sold by John and Olive Brittain to William Bowman. The Land was sold after William Bowman's death by his executors Emma and Anne Bowman to Robert and Carol St. Jacques for \$1,300.00 on April 15, 1964. Robert and Carol St. Jacques deeded the land to Grey Bruce Development Limited for \$1,500.00 on April 10, 1967. On January 9, 1968, Grey Bruce Development limited sold the land to Stark-Janecek Limited for \$2,000.00 who held the land until 1971. On May 1, 1971 Stark-Janecek sold the land to Richard and Ethel Brown for \$200.00 as joint

tenants. Richard and Ethel deeded the land to Peter and Charlotte Sorbara for \$2.00 on May 1, 1978. Two years later, on March 26, 1980, Charlotte Sorbara sold the land to John and Connie Matheson for \$10.00. John and Connie Matheson changed the land title to be listed under Connie Matheson on December 21, 1984 and on June 3, 1985 Connie Matheson sold the land to Douglas and Nancy Bishop. No purchase price was provided.

#563 21st Street West (Part Lot 121 East Amelia Street and Lot 123 East Amelia Street, Town Plot of Brooke, Sarawak Township)

Lot 123 East Amelia Town plot of Brooke was included in the previous section, as it is also part of 2020 5th Avenue West. Lot 121 East Amelia Street, Town Plot of Brooke, follows the same land sales as Lots 123, 125 and 127 East Amelia Street until 1970. On May 4, 1970, Harold Eldred and his wife sold the northwest part of the lot to Beverley Howey for \$800.00. On the same day Harold Eldred and his wife also sold the northeast part of the lot to William G. Davis and Margaret Davis for \$500.00. Beverley Howey granted the land to include his wife Ruth Howey as owner of the northwest part of the lot on February 13, 1987. Beverley and Ruth Howey charged the land to the Confederation Trust Company for \$111,500.00 on August 2, 1990, as well as to Neil McDonald for \$55,000.00 on March 30, 1992, and a third time to Norman McKibbin for \$28,000.00 on June 17, 1993. A fourth charge on the land was made on December 22, 1993, to Neil McDonald for \$86,500.00 as well as a transfer in land title to include Edward Stewart on the deed. On February 3, 1995 the charge to Confederation Trust Company was assigned to the Toronto Dominion Bank. The Toronto Dominion Bank transferred the land to Michael and Lisa Eyselein for \$114,000.00 on February 3, 1995, who then mortgaged the land through CIBC for \$65,000.00 on the same day.

#585 21st Street West (Part Lot 117 East Amelia Street; Lots 119, 121 and 123 East Amelia Street, Town Plot of Brooke, Sarawak Township)

Lots 121 and 123 East Amelia Street have been discussed above under 563 21st Street West. Lots 117 and 119 East Amelia Street, Town Plot of Brooke, were patented by the Crown to William Frederick Wolfe on January 23, 1878. The lots (0.50 acres / 0.20 hectares) were sold to Walter J. Hemming for \$400.00 each on May 11, 1898. Walter Hemming and his wife sold the lots to William Pedwell for \$600.00 on August 27, 1904. William and Annie Pedwell then transferred the land to Alfred Green in trust in 1917. Alfred Green sold it the land to Henry Still for \$3,300.00 on August 7, 1917, on behalf of William and Annie Pedwell. A grant was issued on the lands between Wilfrid J. Abell, John S. Wilson, E. Henry Abell, Harold Abell, Henry B. Abell, Reginald Abell, and Ola Wilson, to give the land to Ola Wilson on April 18, 1939. Ola Wilson then sold the land to Robert and Rosina Menzies for \$2,150.00 on June 15, 1942. Robert and Rosina Menzies sold a 105

foot by 132 foot (32.00 m by 40.23 m) parcel of the land to Beverley Howey on May 14, 1964, for \$2,000.00. Five years later Robert and Rosina Menzies sold the remaining part of the lot (60 feet by 132 feet / 18.09 m by 40.23 m) to William and Margaret Davies for \$3,600.00 on May 28, 1969. Beverley Howey granted the land to include his wife Ruth Howey as owner of the northwest part of the lot on February 13, 1987. Beverley and Ruth Howey charged the land to the Confederation Trust Company for \$111,500.00 on August 2, 1990, as well as to Neil McDonald for \$55,000.00, on March 30, 1992, and a third time to Norman McKibbin for \$28,000.00 on June 17, 1993. A fourth charge on the land was made on December 22, 1993 to Neil McDonald for \$86,500.00, as well as a transfer in land title to include Edward Stewart on the deed. On February 3, 1995, the charge to Confederation Trust Company was assigned to the Toronto Dominion Bank. The Toronto Dominion Bank transferred the land to Michael and Lisa Eyselein for \$114,000.00 on February 3, 1995, who then mortgaged the land through CIBC for \$65,000.00 on the same day.

#590 21st Street West (Part Lot 113 and 115 East Amelia Street, Town Plot of Brooke, Sarawak Township)

Lots 113 and 115 East Amelia Street, Town Plot of Brooke, were sold to George Hindman by the Crown on March 28, 1887 for \$144.00. The lots (0.50 acres / 0.20 hectares each) were sold that same year by George Hindman and his wife to Charles Barnhart for \$200.00 on December 24, 1888. Charles Barnhart and his wife then sold the same lands to Robert Gambion for \$1,500.00 on August 24, 1901. Robert Gambion and his wife split the land into two parts and sold both parts to John Worne on April 9, 1904, for \$100.00 (west half) and \$1,400.00 for the remaining lands. On September 19, 1904 John Worne and his wife sold the land to Lucy Kerr for \$1,435.00. A Mary J., executor of Lucy Kerr's estate sold the land on November 7, 1942, to Edward and Josephine Ard for \$2,000.00. Josephine Ard sold the land to Homer and Edith Hurlbut for \$5,000.00 on March 22, 1950. A discharge of mortgage was also entered on June 9, 1956 between Josephine Ard and Homer and Edith Hurlbut for the west part (115 feet / 35.05 m). Homer and Edith Hurlbut later sold the west part to William and Margaret Eden for \$100.00, on May 28, 1956. William and Margaret Eden sold a smaller parcel of the west part (55 feet / 16.76 m) to Murray George Cook for \$100.00 on March 10, 1958. Homer and Edith Hurlbut sold their land to Kenneth and Gwendolyn Morris for \$8,500.00 on July 16, 1964. Murray Cook then sold his land to Glen and Lillian Woods for \$8,800.00 on January 18, 1965. Glen and Lillian Woods sold their land to George McLeod for \$14,000.00 on July 6, 1966. Kenneth and Gwendolyn sell their portion of the land to David and Victoria Burke as joint tenants on August 17, 1972. No purchase price was provided. On September 7, 1976, David and Victoria Burke sold the land to Sandra Peters for \$2.00. Four years later on March 19, 1980, Sandra Peters deeded the land to William and Gwendolyn Summers. The following year William and Gwendolyn Summers deeded the lands to Leonard and Mari-An Edwards on May 20, 1981. Leonard and Mari-An Edwards sold their land to Paul

and Bonnie Turcott on May 25, 1983. After this (mechanism unknown) a Ruby Showell was in control of the lands from February 28, 1991, and later sold them to John and Dana Eyeselein for \$72,750.00. John and Dana Eyeselein mortgaged their land through CIBC on September 18, 1992 for \$58,000.00.

#2164 6th Ave West (Lot 109 East Cocks Street, 110 West Amelia Street, Part lot 112 West Amelia Street and Part Lot 111 East Cocks Street, Town Plot of Brooke, Sarawak Township)

Lots 109 and 111 East Cocks Street, and Lots 110 and 112 West Amelia Street, Town Plot of Brooke, were purchased from Walter Wilson and his wife by Nicholas Horton for \$400.00 on June 3, 1881. Nicholas Horton and his wife mortgaged their properties under Walter Wilson for \$300.00 on the same day. On August 27, 1881, the Crown issued the patent for the lands to Walter Wilson for the four lots in their entirety (1 acre / 0.40 hectares). Walter Wilson then discharged the mortgage to Nicholas Horton on December 15, 1886. Three years later Nicholas Horton sold the land to Grey and Bruce Canning Company for \$700.00, on August 17, 1889. The Grey Bruce Canning Company sold the land to William Hickey for \$500.00 on August 29, 1901. William Hickey then sold the land to the Owen Sound Brick Company for \$400.00 on September 22, 1906. The Owen Sound Brick Company remained the sole land owner for 15 years and sold their land to John Connolly on January 10, 1921 for \$400.00. On July 7, 1950, Austin M. Scully, William P. Telford Jr., Ex. of James Connolly, Ethel Spindle, Della Skaal, Edward Purcell and his wife. Maude Law and Mary Shell, Marguerite Q. Swarts, Beatrice Willoughby, Fred McNichol, Margaret Reynolds, Laura MacKinnon, Joseph P. Wilson, George Wilson and his wife, Gertrude Keating sold the land to Matilda Ornsby for \$1,800.00. Clarence Ornsby and William Rathwell (Admin of Matilda Ornsby estate) later sold the land to Frank Schill for \$3,000.00 on June 21, 1961. On March 13, 1972, Frank placed his wife, Irene, on the title. Irene Schill then sold the land to Evert Johanson on December 4, 1990, for \$136,000.00.

#2133 6th Avenue West (Lot 111 Amelia Street East, Town Plot of Brooke, Sarawak Township)

Lots 113 and 115 East Amelia Street, Town Plot of Brooke, were sold to George Hindman by the Crown on March 28, 1887, for \$144.00. The lots (0.25 acres / 0.20 hectares) were sold that same year by George Hindman and his wife to Charles Barnhart for \$200.00 on December 24, 1888. Charles Barnhart and his wife then sold the land to Robert Gambion for \$1,500.00 on August 24, 1901. Robert Gambion and his wife sold the same to William Mitchell on September 10, 1907. No purchase price was provided. William Mitchell and his wife later sold the land to Frederick Leslie on August 31, 1911. No purchase price was provided. Frederick Leslie and his wife granted the land to Annie Lewis on April 30, 1923 at

no cost. Annie Lewis granted the land to Viola Lewis on September 4, 1937. Viola Lewis then sold the land to Benjamin and Vera Herbison for \$300.00 on November 10, 1942. Benjamin and Vera granted the land to Margaret Gordon on July 17, 1947. On June 20, 1963, the Victoria & Grey Trust Company, administrators of Margaret Gordon's estate, sold the land to Kenneth and Hilda Smith for \$1,025.00. Kenneth and Hilda Smith deeded the land to Elsie McInnes on November 19, 1964. Elsie McInnes then deeded the land to Morris Howell on March 22, 1971. Morris Howell and his wife sold the land to Kenneth and Gwendolyn Morris for \$22,900.00 on August 4, 1972. Kenneth and Gwendolyn granted the land to Frederick and Helen Davenport on August 2, 1983. Frederick and Helen Davenport later granted the land to Bryan and Lisa McKay on June 1, 1984. Bryan and Lisa McKay transferred the land to Frederic Standing for \$150,000.00 on October 26, 1990. Frederick Standing then transferred the land to Kenneth Gardner for \$97,500.00, on August 12, 1994. Lastly, Kenneth Gardner mortgaged the land with CIBC for \$89,943.75 on August 12, 1994.

1.2.6 Plaques or Monuments

There are nine Ontario Heritage Trust historic plaques located in the City of Owen Sound (Map 12), but two are relevant to the Study Area.

The Newash Indian Village 1842 plaque is situated on the corner of 4th Ave West and 21st Street West. It reads as follows:

"Following the Indian treaty of 1836, a Reserve along the western shore of Owen Sound was set aside for the Band headed by Chief Newash. In 1842, the Indian village of Newash, established here previous to the founding of the adjacent community of Sydenham (now Owen Sound), was rebuilt by the government. It contained fourteen log houses, a school and a barn. Wesleyan Methodist missionaries ministered to the Indians, and in 1845 a frame chapel, the predecessor of the present church, was completed. In 1857 the Reserve, containing some 4,450 ha, was ceded to the government and most of the Indians moved to Cape Croker".

The Founding of Owen Sound

"In November, 1840, a townplot in Sydenham Township was surveyed as the terminus of the Garafraxa-Owen's Sound Road. John Telfer, government agent, completed his house by November 21 and a shelter for settlers by the following spring. Four private buildings were finished by July 1842. "Sydenham" by 1846 contained a sawmill and grist-mill and about 150 people. A post office opened in 1847 was named "Owen's Sound" after the settlement along the Garafraxa Road from Arthur north. "Sydenham" grew as land and water communication improved and in 1852 became the seat of Grey County. The community of "Sydenham" was incorporated as the Town of Owen Sound in 1857 with a population of almost 2000".

1.2.7 Cemeteries

There is one known cemetery that existed close to, but outside, the Study Area in the former Town Plot of Brooke (Map 9). The burial ground was the first official cemetery in Brooke and was established by the government in c.1850. The cemetery, no longer extant, was located west of 5th Avenue (on the hill) between 22nd and 23rd Streets. Although a number of early Euro-Canadian settlers had been buried there, it consisted primarily of Aboriginal graves (Croft 2011:157).

In 1895-96, Charles Lethbridge planned to open a brickyard in the location of the graveyard and during its development workers encountered some of the burials. In 1898 a public notice was issued advising people who had relatives buried there to remove them to Greenwood Cemetery (opened in 1858) on the outskirts of town (Croft 2011:203). By c.1903, approximately 20 burials had been reinterred at the new Greenwood Cemetery, however there were a “considerable number” of burials that had remained untouched while relatives arranged for their removal (ibid: 239), suggesting that there may still be individuals buried in this location. However, the former cemetery, is removed some distance from the Study Area and is not considered a concern.

1.2.8 Determination of Archaeological Potential

As per the Ministry of Tourism, Culture and Sports’ Standards and Guidelines (2011: Section 1.3.1, Standard 1), there are a number of variables that are evaluated when determining archaeological potential. These include:

- presence of previously identified archaeological sites,
- water sources (primary, secondary, features indicating past water sources, accessible or inaccessible shoreline),
- elevated topography,
- pockets of sandy soil in heavy soil or rocky ground,
- distinctive land formations,
- resource areas (food or medicinal plants, scarce raw materials, early Euro-Canadian industry),
- non-Aboriginal settlement (monuments, cemeteries),
- areas of early Euro-Canadian settlement;
- early historic transportation routes;
- listed or designated heritage property;
- and properties with archaeological potential as identified by local histories or informants.

1.2.9 Rationale for Stage 1 Fieldwork Strategy

A property visit was deemed important to verifying archival data, and confirming areas of low archaeological potential.

A property visit of the Study Area confirmed its archaeological potential. Additional areas of low archaeological potential were also confirmed through the systematic property visit (pedestrian transects along length of Study Area).

1.3 Archaeological Context

1.3.1 Previously Known Archaeological Resources/Assessments

There are no known archaeological sites registered within a one kilometer radius of the Study Area (MTCS 2018) nor known archaeological resource assessments within 50 metres.

1.3.2 Current Environment – Existing Features

The Study Area consists of a five metre area on either side of an existing storm water drainage system. There are no existing structures or ruins within the Study Area boundaries.

1.3.3 Physiography, Bedrock and Topography

The underlying bedrock of the area is the Queenston formation (Chapman and Putnam 1973:4-5).

The Study Area lies in the physiographic region known as the Bruce Peninsula. The Bruce Peninsula region is part of the Niagara Escarpment and is generally a zone of scour. The greater part of the Bruce Peninsula has very shallow soils with much bare rock exposed. The surface of the rock is more irregular than the limestones in other parts of eastern and central Ontario. The dip of the rock strata is towards the west; the surface gradually rises from the water's edge on the Lake Huron side towards the escarpments on or near the Georgian Bay shore. The highest bluffs on the Georgian Bay side are well over 200 feet (60.96 m) in height (Putnam and Chapman 1973: 267-268).

The elevation of the terrain within the Study Area ranges from 180 to 190 meters above sea level (Map 2).

1.3.4 Prehistoric Shorelines

According to Goldthwait (1910), the shoreline of Glacial Lake Nipissing sits at an elevation of 190 to 192 metres. The Study Area has an elevation range of 180 to 190 metres, which indicates that the areas of higher elevation have the potential of sitting on the shoreline of prehistoric Lake Nipissing, although some of the Study Area would have been submerged at the time.

1.3.5 Soils

The soils of the Study Area are identified as the Elderslie group. They are described as a grey-brown Podzolic silty clay loam. They are comprised of lacustrine materials and have imperfect drainage, are essentially stone free, and have a topography of very gently to gently sloping (Agriculture Canada 1981).

1.3.6 Drainage

The Study Area is located approximately 180 metres to the west of Georgian Bay and approximately 478 metres north-northeast of the Pottawatomie River. The Study Area consists of part of a drainage basin. The 1862 map (Map 11) of the Town of Brooke indicates tributaries running through the Study Area, in some instances approximating the current route of the current drainage. It would appear that while some of the original route of the tributary exists, other parts of it have been modified to accommodate housing, roads, drainage issues, etc.

1.3.7 Vegetation

The vegetation within the Study Area consists of low brush and tall grasses with sections of mature deciduous and coniferous trees.

1.3.8 Dates of Fieldwork

The Stage 1 archaeological assessment (property inspection) was conducted on March 28th, 2018, under sunny skies and a high of 7 degrees Celsius.

As per the Ministry of Tourism, Culture and Sports' Standards and Guidelines (2011 Section 2.1, Standard 3) the fieldwork was conducted under the appropriate lighting and weather conditions.

1.3.9 Unusual Physical Features Affecting Fieldwork

There were no unusual physical features affecting fieldwork.

2.0 FIELD METHODOLOGY

2.1 Stage 1 (Background Research)

As part of the background research, an examination of the following was conducted:

- the Archaeological Site Registration Database (maintained by the Ontario Ministry of Tourism, Culture and Sport) was examined for the presence of known archaeological sites in the project area and within a radius of one kilometer of the project area;
- reports of previous archaeological fieldwork within a radius of 50 m around the property;
- topographic maps at 1:10 000 (recent and historical) or the most detailed map available;
- historic settlement maps such as the historic atlases;
- available archaeological management/master plans or archaeological potential mapping;
- commemorative plaques or monuments; and,
- any other avenues that assist in determining archaeological potential were examined.

The Study Area, based on archival documentation, is considered to exhibit archaeological potential (Map 14). The indices of potential include the proximity of early historic transportation roadways (Map 11 of Town of Brooke has roads); an early established Reserve and then Euro-Canadian settlement area; the presence of a waterway (altered to some degree); the nearby glacial Lake Nipissing shoreline; and the relatively undisturbed nature of the Study Area.

2.2 Stage 1 (Property Inspection)

Map 4 presents the concept plan for the Study Area, and Map 13 illustrates the images taken during the Stage 1 property visit (Images 1 - 29). Each of the six reaches (Figure 4) was subject to property inspection. The property inspection was conducted on March 28th, under cool temperatures, but according to the specified requirements under the Standards and Guidelines for Consulting Archaeologists.

A drive-by of the area (large) was conducted in conjunction with access to the property at areas where viewing from the roadside/sidewalks was possible. Photographic documentation was made of field observations.

Property inspection confirmed that approximately 56% of the Study Area still retains archaeological potential, while the other 44% was considered to have low or no archaeological potential based on slopes in excess of 20 degrees and/or deep and extensive development disturbance (Map 14). These areas are

deemed to have low archaeological potential, as per the Standards and Guidelines for Consulting Archaeologists (MTCS 2011). Approximately 20% of the Study Area consists of slopes in excess of 20 degrees, and approximately 24% have been subject to deep and extensive development disturbance in the form of roadway and buried utilities. The remaining 56% of the Study Area was confirmed, through the property visit, to exhibit archaeological potential (Map 14).

3.0 RESULTS

3.1 Stage 1 Archaeological Assessment

The Study Area, based on archival documentation, is considered to exhibit archaeological potential. The indices of potential include the proximity of early historic transportation roadways (Map 11 Town of Brooke has roads); an early established Reserve and then Euro-Canadian settlement area; the presence of a waterway (altered and reroute to some degree); the nearby glacial Lake Nipissing shoreline; and the relatively undisturbed nature of the Study Area.

Property inspection confirmed that approximately 56% of the Study Area still retains archaeological potential, while the other 44% was considered to have low or no archaeological potential based on slopes in excess of 20 degrees and/or deep and extensive development disturbance (Map 14). Reach 1 (located west of 6th Avenue West and north of 21st Street West, and crossing over 6th Avenue West – refer to Map 4) had been subject to previous development in the form of two 1500 mm culverts and large utility services on the east side of the culvert (John Slocombe, GM BluePlan 2018). The west side of the culvert retains archaeological potential. Reach 2 (located along the east side of 6th Avenue West, north of 21st Street West – refer to Map 4) includes the municipal sewer and water main under 6th Avenue West plus 2 – 1500 mm storm sewer culverts under the east boulevard, which has resulted in significant disturbance. The east side of the waterway retains archaeological potential. Reach 3 (located on the east side of 6th Avenue West, south of 21st Street West and extending diagonally from west to east to north of 20th Street West, and west of 5th Avenue West –refer to Map 4) includes the watercourse which has been dredged several times (ibid) as there is sediment build up in this area which blocks the flow. The majority of this Reach has remained undeveloped and retains archaeological potential. Reach 4 (located between 20th and 19th Street West, and east of 6th Avenue West and west of 4th Avenue West – Map 4) has concrete culvert and utilities disturbance at the north end of the reach, and towards the south, have areas that have slopes in excess of 20 degrees, identifying both of these as areas of low archaeological potential. The remaining area has not been identified for any possible development, other than the removal of deadfall from the watercourse (ibid). Reach 5 (located on the north part of 19th Street West) is disturbed through utility and roadway development. Reach 6 continues along 19th Street West heading eastward, and is also the subject of development disturbance.

Map 4 presents the concept plan for the Study Area. Map 13 illustrates the images taken during the Stage 1 archaeological assessment (Images 1 - 29).

3.2 Inventory of Documentary Records Made In Field

Documents made in the field include:

- Daily record log and field notes – 1 two-sided page

- Photograph log – 1 two-sided page
- Digital photographs – 29 colour images
- Field map showing location and orientation of photos taken – 1 page

4.0 ANALYSIS AND CONCLUSIONS

4.1 Determination of Archaeological Potential

The Stage 1 archival/desktop study determined that the Study Area exhibits archaeological potential (Map 14) based on its proximity to early historic transportation routes (roadway system in early Brooke); an area of both Indigenous and early Euro-Canadian settlement; and the presence of the glacial Lake Nipissing shoreline in the region.

Property inspection confirmed that approximately 56% of the Study Area still retains archaeological potential, while the other 44% was considered to have low or no archaeological potential based on slopes in excess of 20 degrees and/or deep and extensive development disturbance (Map 14).

Therefore, based on Section 1.3, Standard 1 of the MTCS 2011 Standards and Guidelines, a Stage 2 archaeological assessment is recommended for the areas of archaeological potential (56%) within the Study Area (Map 15), if there is any proposed development for these areas.

5.0 RECOMMENDATIONS

Based upon the background research of past and present conditions, and the property visit, the following is recommended:

- A Stage 2 archaeological assessment is recommended for approximately 56% of the Study Area (areas of archaeological potential), more specifically: 1) the west side of Reach 1 should be the subject of Stage 2 archaeological assessment if there is any proposed development, excluding routine maintenance of the existing culvert; 2) the west side of Reach 2 exhibit potential and will require Stage 2 archaeological assessment if this area is to be developed; 3) the water course in Reach 3 has been dredged several times, although the majority of the area on either side of the course has remained undeveloped. Should any development be proposed in this area, Stage 2 archaeological assessment is recommended. 4) Reach 4 is a mix of areas of both archaeological potential and no potential. Those areas of archaeological potential are recommended for Stage 2 archaeological assessment should development be proposed within Reach 4. 5) There is no potential for Reach 5, and no further archaeological assessment is required in the area of Reach 5. 6) There is no archaeological potential for Reach 6 and no further archaeological assessment is recommended within the Reach 6 area.
- Compliance legislation must be adhered to in the event of discovery of deeply buried cultural material or features

As per Section 2.1.2 Standards 1, 2, and 5-9 of the MTCS 2011 Standards and Guidelines, it is recommended that areas of archaeological potential as identified on Map 15 be subject to a Stage 2 archaeological assessment. Based on the current condition of the land, the area cannot be ploughed. Stage 2 archaeological assessment should be conducted using a test pitting methodology conducted in five metre intervals across the areas of archaeological potential. Each test pit should be at least 30 cm in diameter and excavated a minimum of five cm into subsoil and examined for stratigraphy, cultural features, or evidence of fill. All soil shall be screened through mesh no greater than six mm, all artifacts should be collected according to their associated test pit, and all test pits backfilled unless instructed not to by the landowner/proponent. If test pits are found to be positive (artifacts or cultural features), test pitting should be intensified around the positive test pits with eight additional test pits excavated at 2.5 metre intervals around the positive test pit. If there are sufficient positive test pits located to recommend a Stage 3 archaeological assessment (and sufficient materials), no additional intensification is required. If there is some question as to whether the positive test pit(s) is sufficient for a recommendations of Stage 3 assessment, a minimum of one – one metre square test unit must be excavated over the positive test pit. All recovered archaeological materials shall be bagged and tagged according to provenience.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

According to the MTCS 2011 Standards and Guidelines (Section 7.5.9) the following must be stated within this report:

This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

Should previously undocumented archaeological resources be discovered, they may be an archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the *Ontario Heritage Act*.

The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license.

7.0 BIBLIOGRAPHY AND SOURCES

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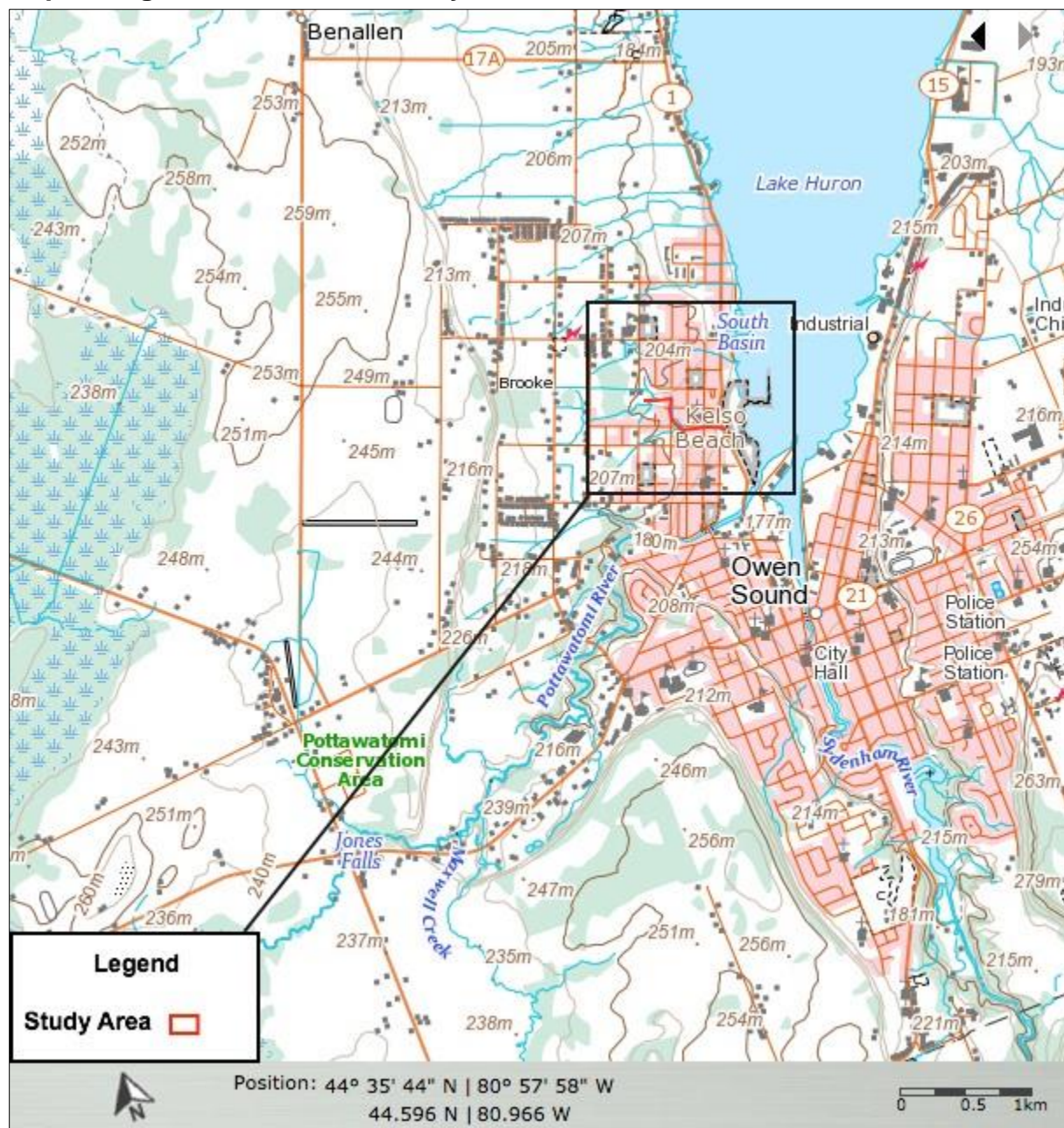
Additional Sources:

1. The Atlas of Canada, Map of the Area of the 9 August 1836 Treaty
<http://atlas.gc.ca/sites/english/maps/historical/indiantreaties/historicaltreaties>
2. Natural Resources Canada
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Grey County Books: 104, 111, 112, 115, 116, 119
5. Personal Correspondence: Andrea Nelson, GM BluePlan Engineering.
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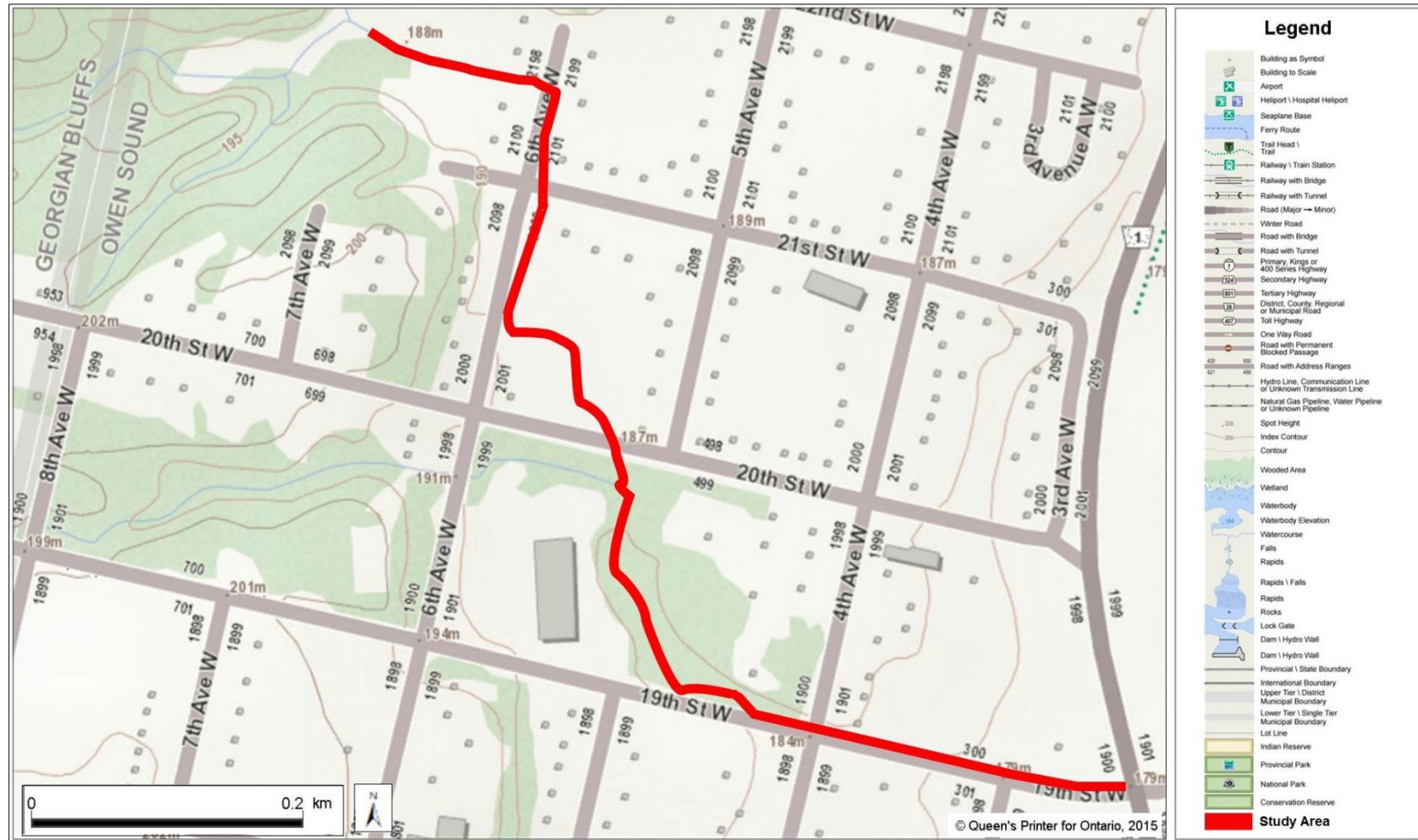
6. Personal Correspondence: Karen Noble, Archivist at Grey Roots Museum and Archives. Verbal communication January 18th, 2018

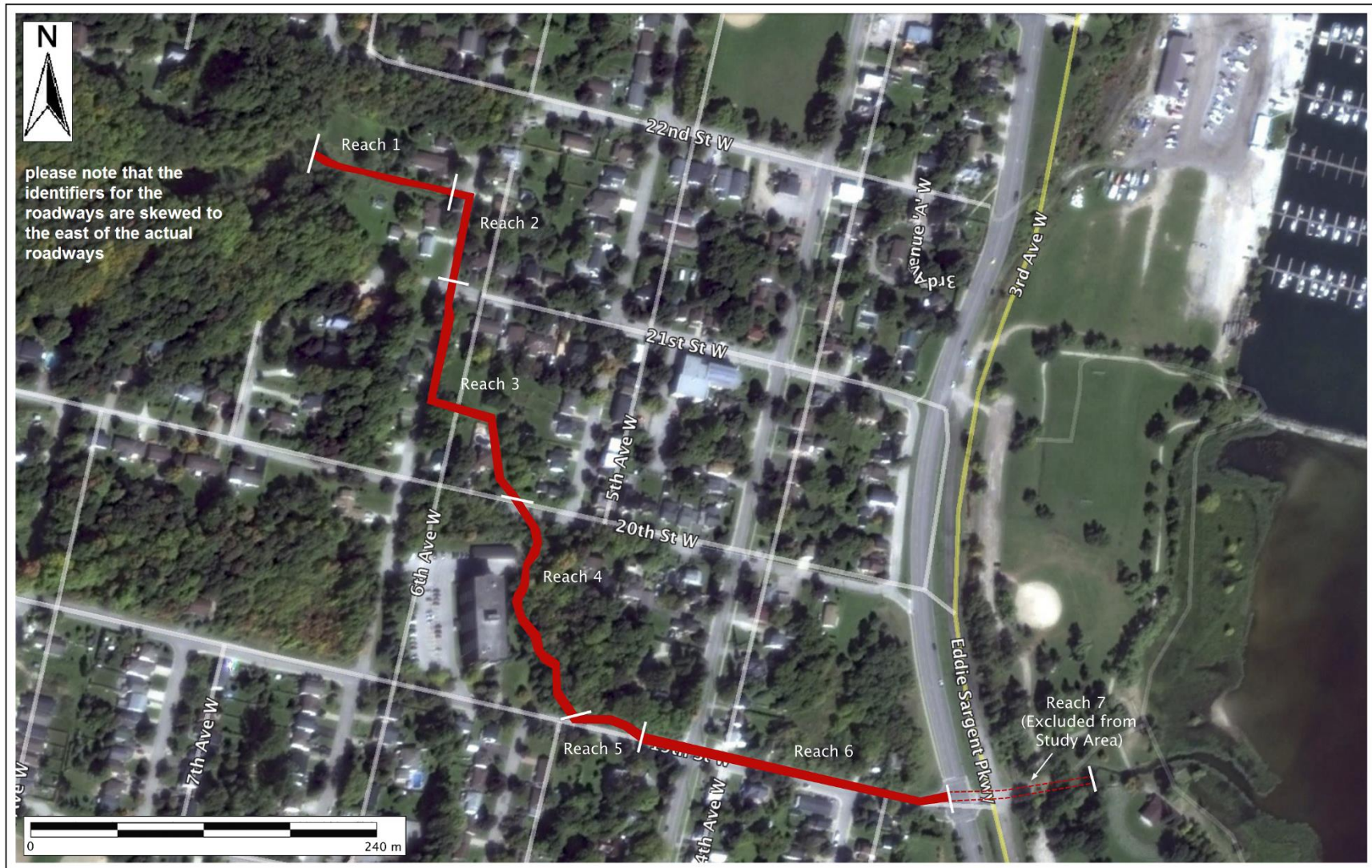
8.0 MAPS

Map 1: Regional Location of Study Area

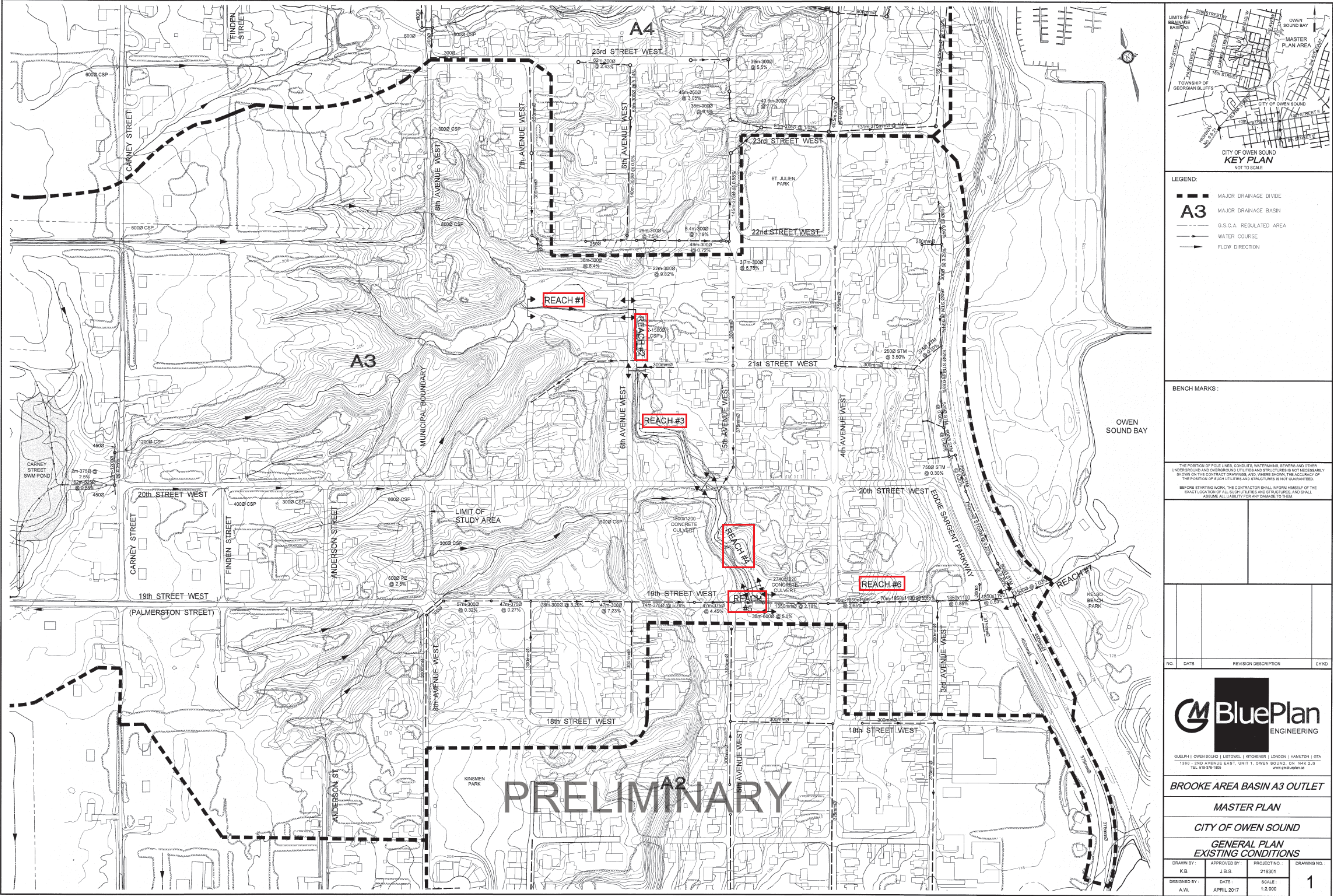


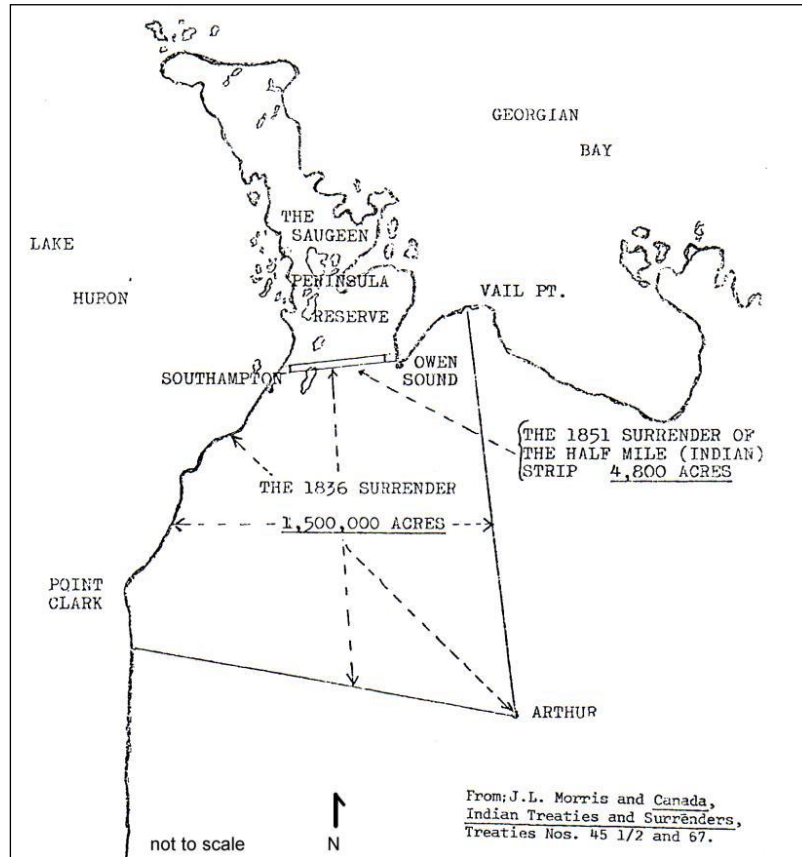
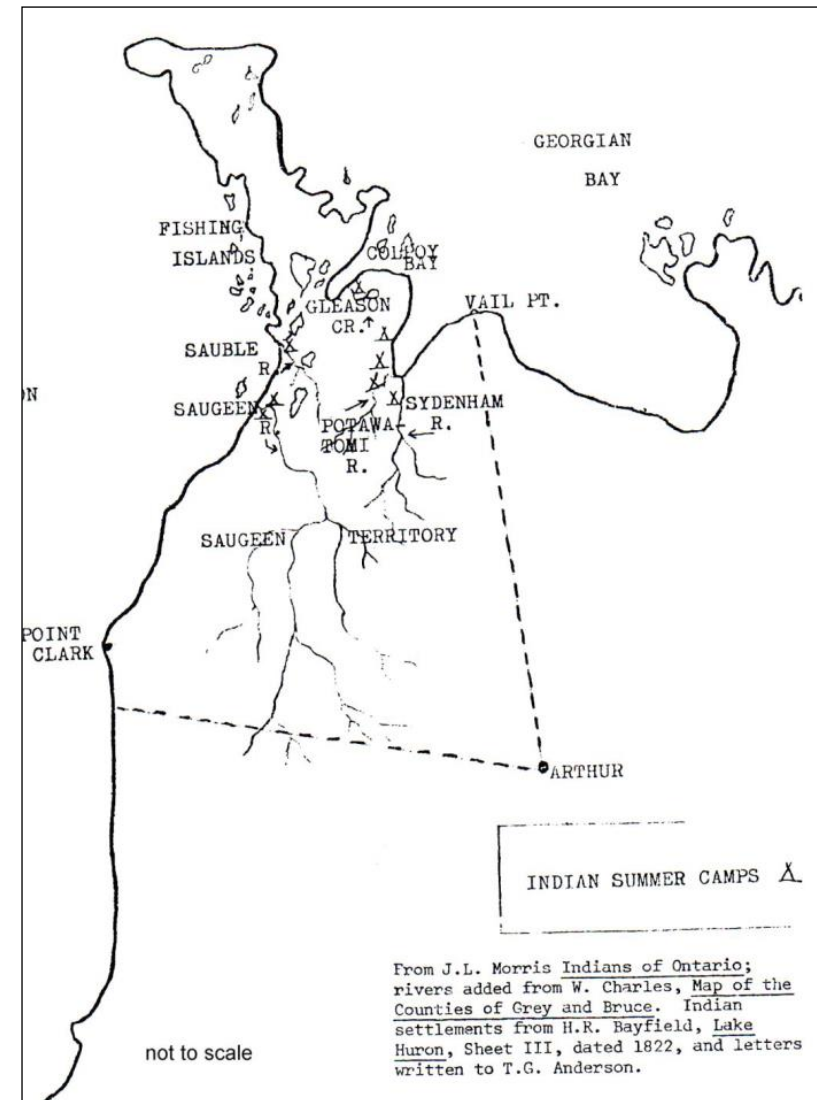
Map 2: Topographic Map of Study Area



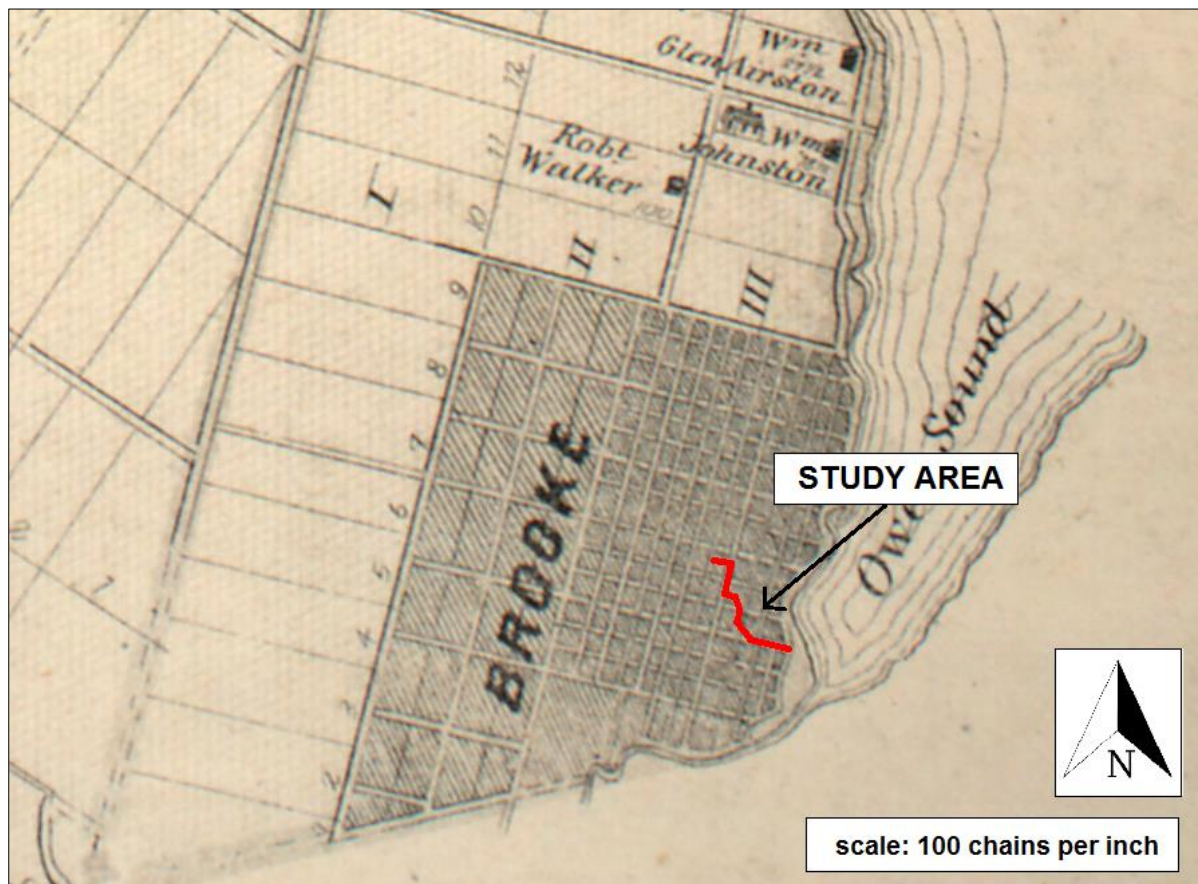
Map 3: Aerial Map of Study Area

Map4: Concept Plan

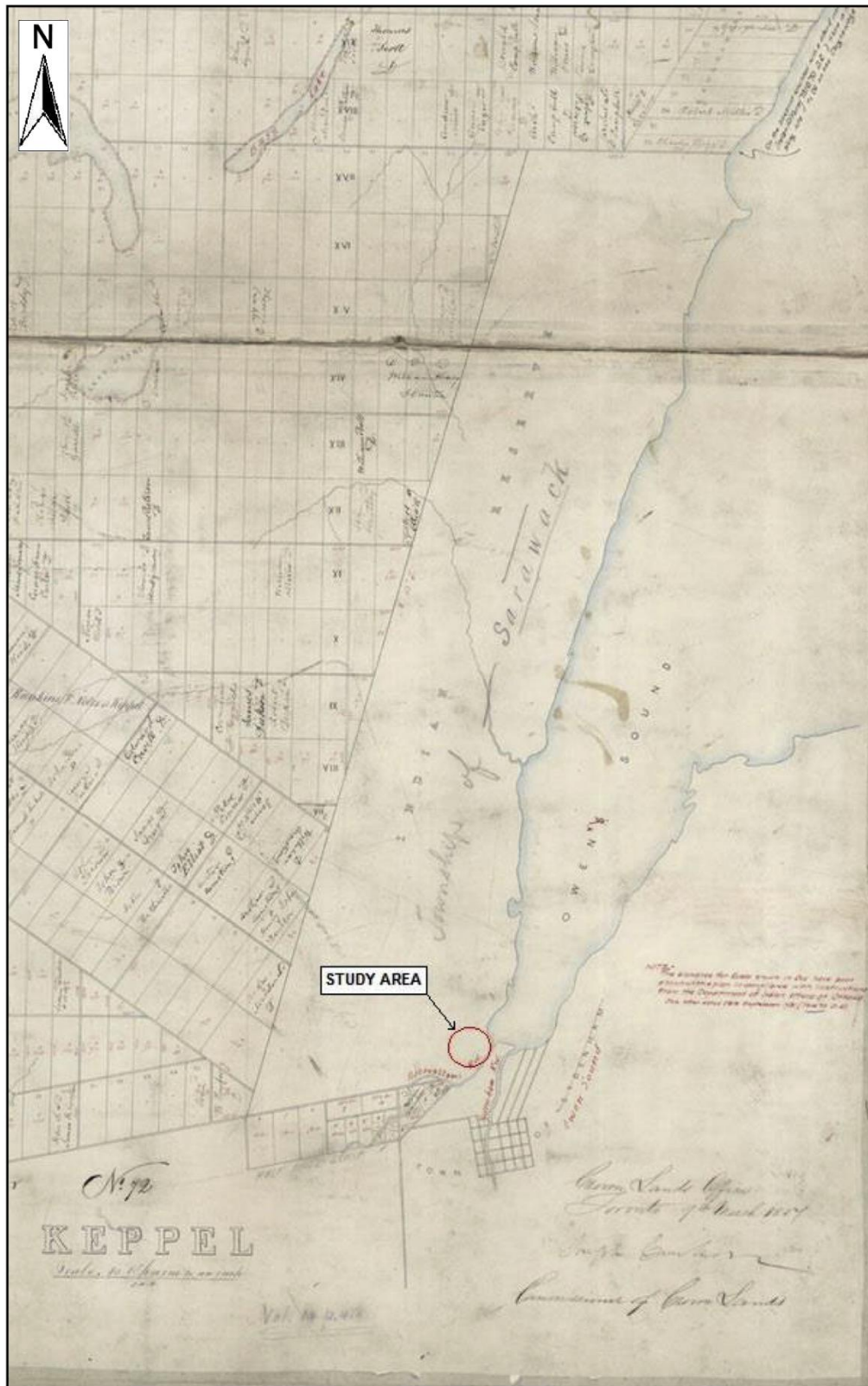


Map 5: 1836 Surrender (Schmalz 1977:233)**Map 6: Saugeen Lands Before Surrender (Schmalz 1977)**

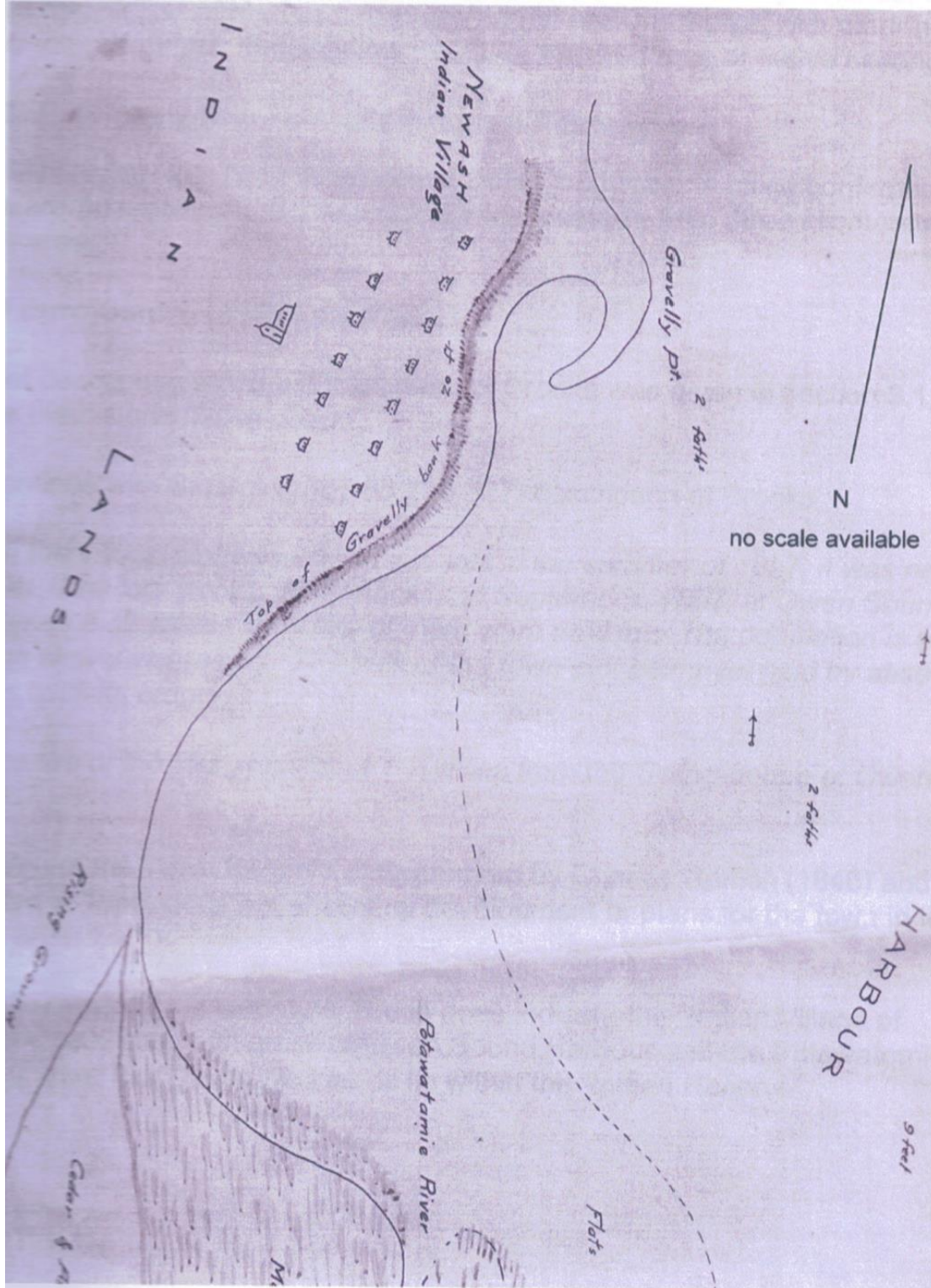
Map 7: 1880 Historic Atlas Map (H. Belden & Co.)



Map 8: 1854 Map of Keppel Township showing Sarawak as Reserve (Grey Roots Archives) (no scale provided)



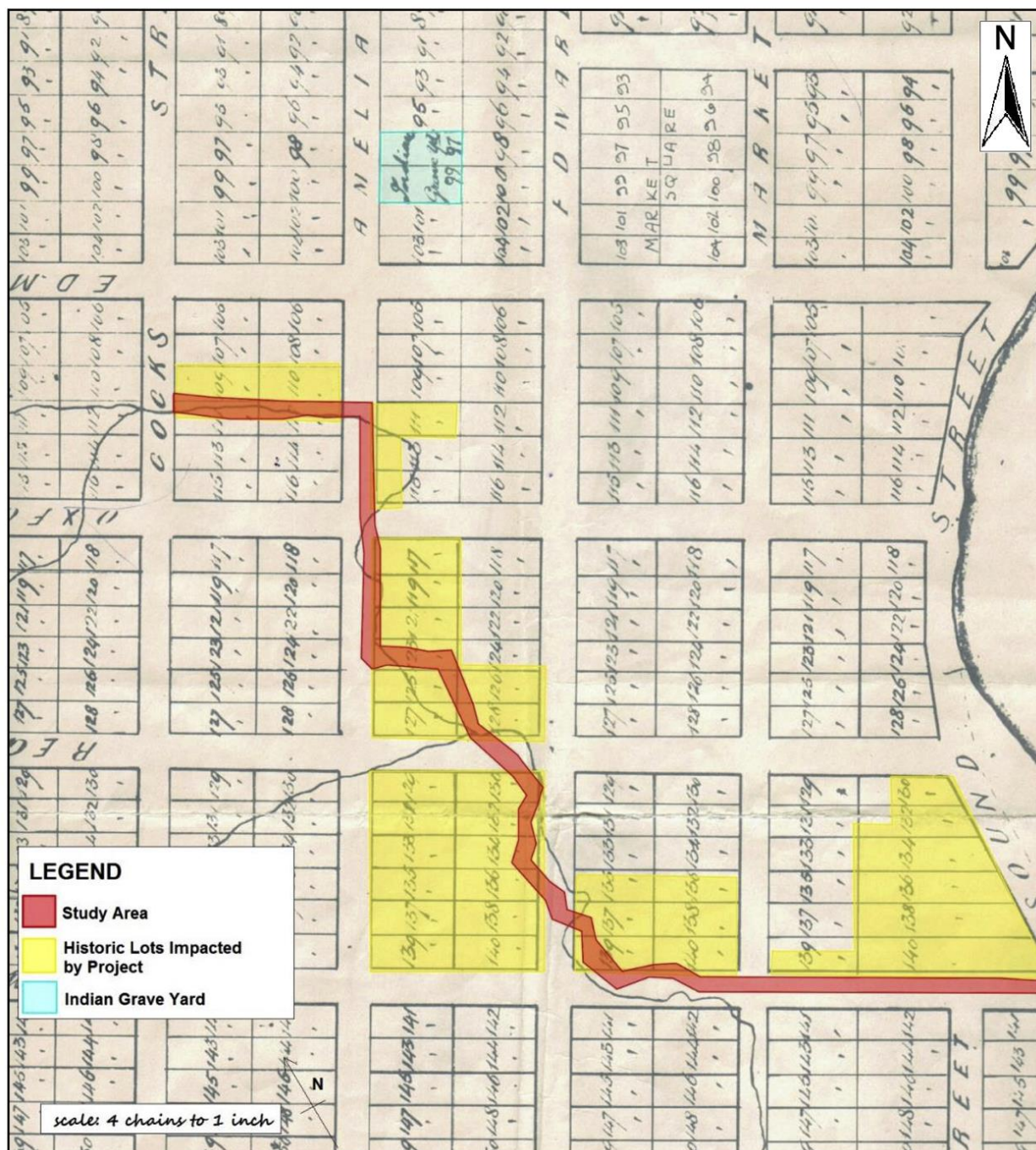
Map 9: Section of Plan of Sydenham Town Plot (Charles Rankin Feb. 1846). No scale available.



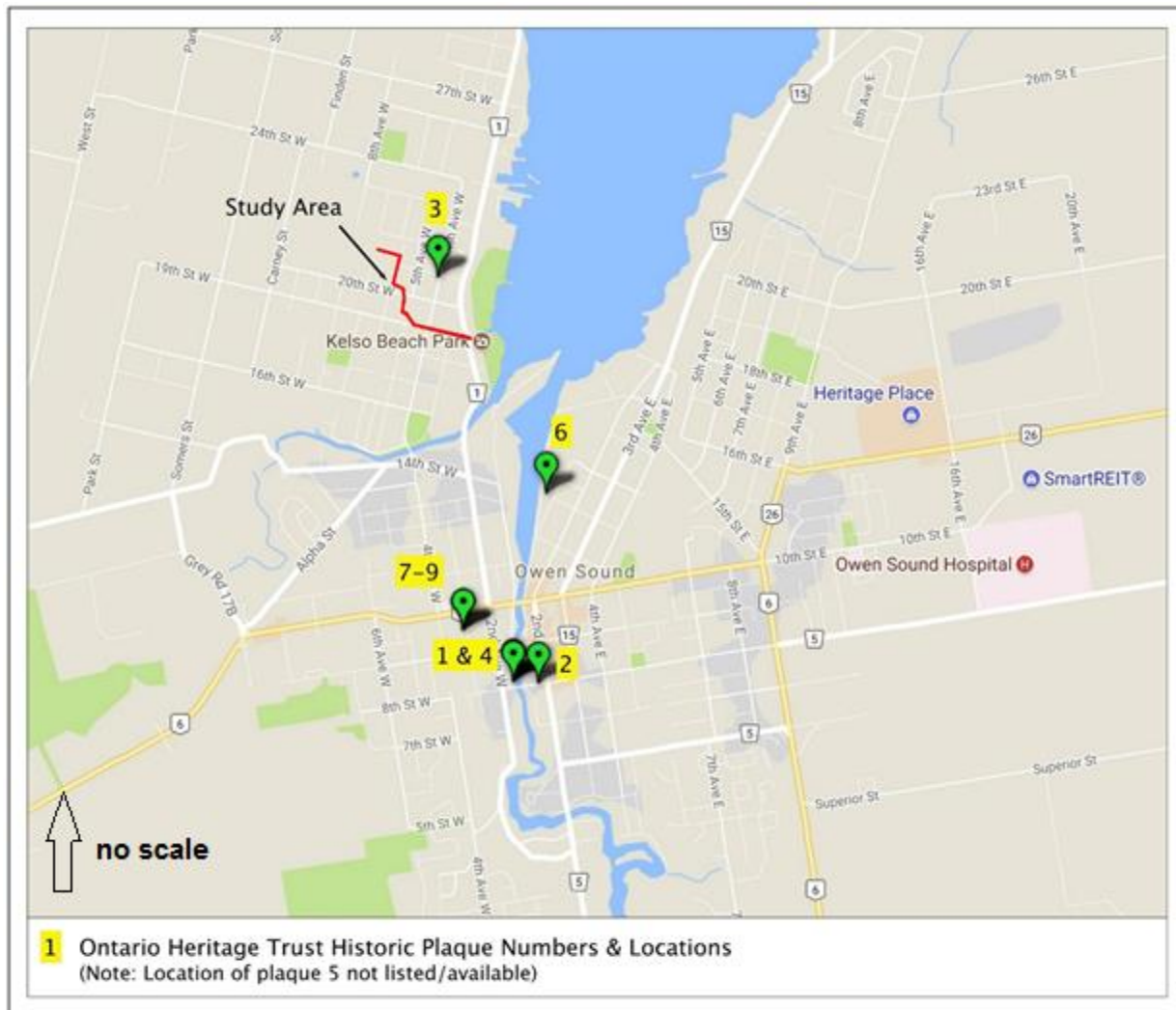
Map 10: 1862 Map Section Showing “Indian” Village (Hamilton 1857)



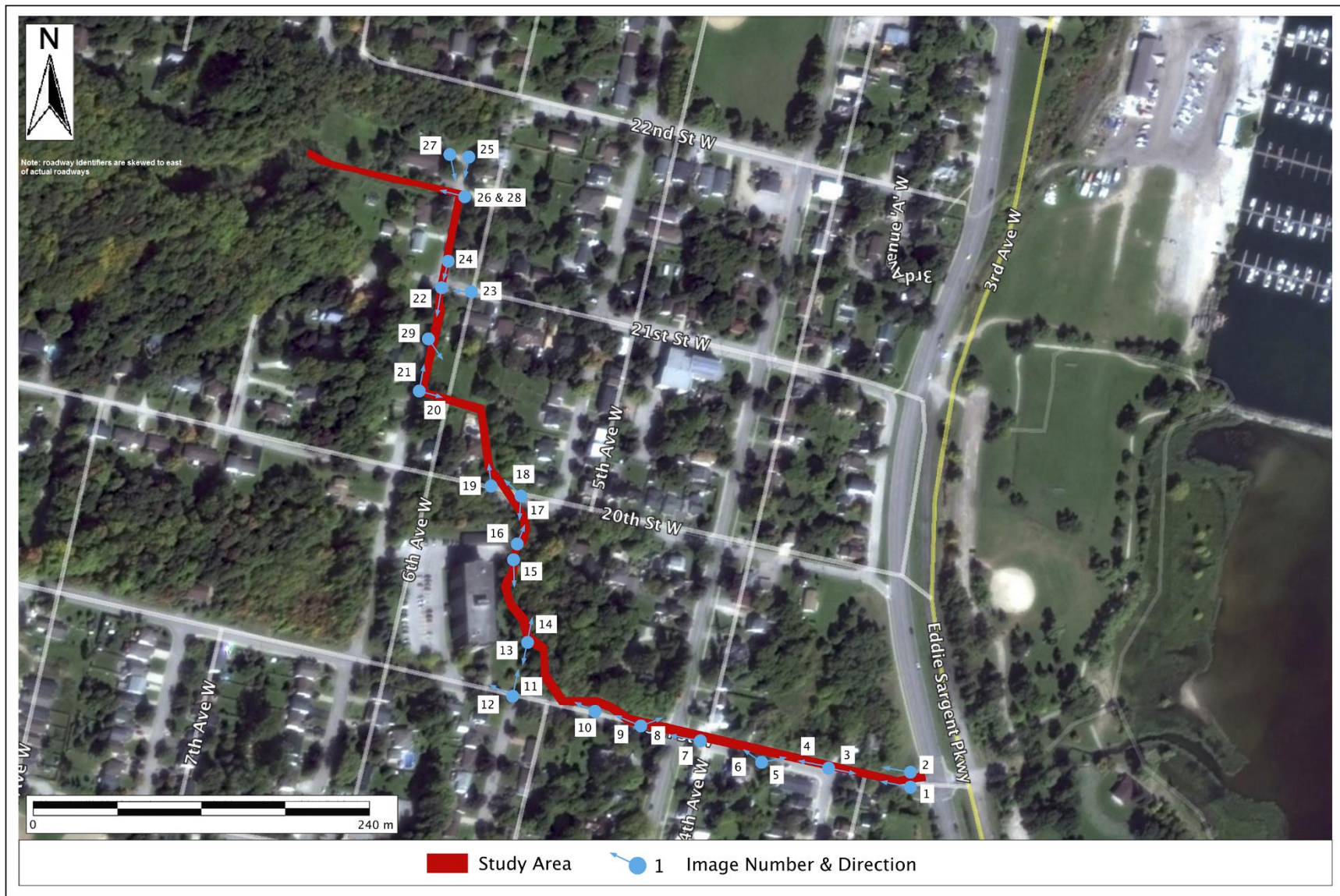
Map 11: 1862 Town Plot of Brooke

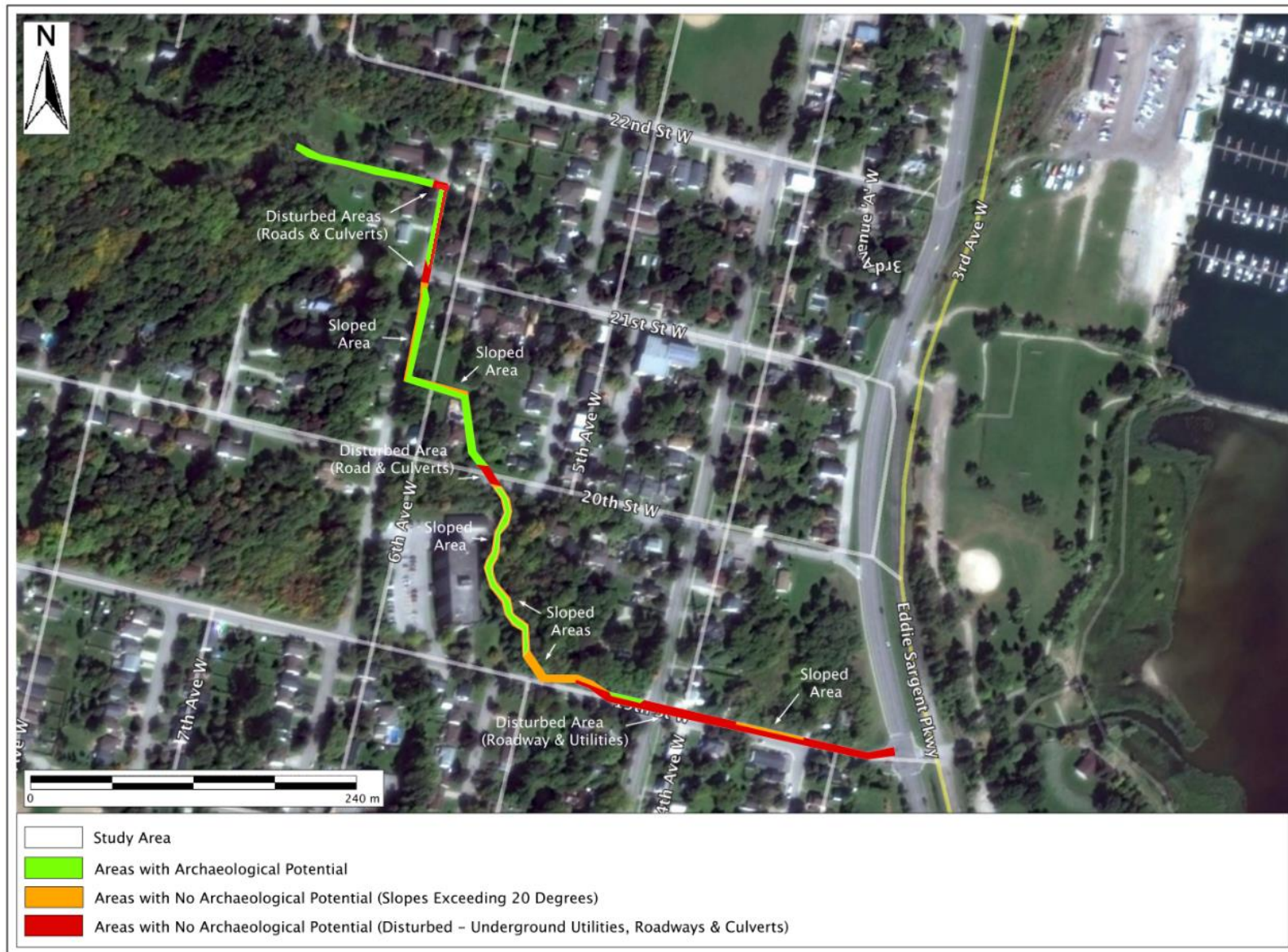


Map 12: Locations of Historic Plaques in Owen Sound



Map 13: Location and Direction of Images



Map 14: Archaeological Potential

Map 15: Recommended Stage 2 Assessment Methodology

9.0 IMAGES

Image 1: Study Area – South End of 280 19th St. W. (Facing W)



Image 4: Study Area – South End of 280 19th St. W. (Facing W)



Image 2: Study Area – South End of 280 19th St. W. (Facing W)



Image 5: Study Area – South End of 280 19th St. W. (Facing NE)



Image 3: Study Area – South End of 280 19th St. W. (Facing E)



Image 6: Study Area – South End of 1909 4th Ave. W. (Facing NW)



Image 7: Study Area - South End of 1914 4th Ave. W. (Facing W)



Image 10: Study Area - South End of 1914 4th Ave. W. (Facing W)



Image 8: Study Area – SE Corner of 1914 4th Ave. W. (Facing E)



Image 11: Study Area - SE End of 550 19th St. W. (Facing N)



Image 9: Study Area - South End of 1914 4th Ave. W. (Facing W)



Image 12: Study Area - SE End of 550 19th St. W. (Facing W)



**Image 13: Study Area Between 550
19th St. W. and 1914 4th Ave. W.
(Facing S)**



**Image 14: Study Area Between 550
19th St. W. and 1914 4th Ave. W.
(Facing N)**



**Image 15: Study Area Between 550
19th St. W. and 1914 4th Ave. W.
(Facing S)**



**Image 16: Study Area - NE End of 550
19th St. W. (Facing N)**



**Image 17: Study Area - NE End of 550
19th St. W. (Facing S)**



**Image 18: Study Area - South End of
2006 5th Ave. W. (Facing W)**



Image 19: Study Area - SW End of 2006 5th Ave. W. (Facing N)



Image 22: Study Area – West Side of 585 21st St. W. (Facing S)



Image 20: Study Area - South End of 585 21st St. W. (Facing E)



Image 23: Study Area – Culvert at NW Corner of 585 21st St. W. (Facing W)



Image 21: Study Area – West Side of 585 21st St. W. (Facing N)



Image 24: Study Area – West Side of 585 21st St. W. (Facing S)



Image 25: Study Area – From 6th Ave. W. Dead-End (Facing S)



Image 28: Study Area - East End of 2164 6th Ave. W. (Facing W)



Image 26: Study Area - East End of 2164 6th Ave. W. (Facing W)



Image 29: Study Area – SW End of 585 21st St. W. (Facing SE)



Image 27: Study Area - East End of 2164 6th Ave. W. (Facing SE)



10.0 APPENDICES

Appendix A: Land Abstract

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
Lot 110 Amelia Street West					
425	B&S	3 June 1881	Walter Wilson and Wife	Nicholas P Horton	All \$400 and Other lands
426	Mort	3 June 1881	Nicholas P Horton and wife	Walter Wilson	All \$300 and Other Lands
	Patent	27 Aug 1881	The Crown	Walter Wilson	All
584	DM	15 Dec 1886	Beothin Wilson (?)	Nicholas P Horton	
1053	B&S	17 Aug 1889	Nicholas P Horton and wife	Grey and Bruce Canning Company	\$700
2301	Deed	29 Aug 1901	Grey and Bruce Canning Company	William Hickey	\$500
25670	Grant	5 Jan 1920	William Hickey	John Connolly	\$1000
66049R	Certificate	2 May 1951	Treasurer of Ontario	John M Connolly	
45679	Grant	7 July 1950	Austin m Scully, William P Telford Jr, Ex of James Connolly, Ethel Spindle, Della Skaal, Edward Purcell and wife. Maude Law and Mary Shell, Marguerite Q Swarts, Beatrice Willoughby, Fred McNichol, Margaret Reynolds, Laura MacKinnon, Joseph P Wilson, George Wilson and wife, Gertrude Keating	Matilda Ornsby	\$1800 and prems.
69221	Certificate	28 Feb 1961	Treasurer of Ontario	Matilda Ornsby (Estate)	

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
70686	Grant	21 June 1961	Clarence Ornsby, William Rathwell Admin of Matilda Ornsby	Frank Schill	\$3000
119318	Consent	2 Mar 1961	Department of National Revenue	Matilda Ornsby (Estate)	
121383	Certificate	8 Mar 1971	Treasurer of Ontario	Margaret Wilson (estate)	
121384	Certificate	8 Mar 1971	Treasurer of Ontario	Helen Wilson (Estate)	
128329	Deed	13 Mar 1972	Frank Schill	Frank Schill, Irene P Schill	\$2 joint tenants
297880	Deposit	26 Nov 1990			As in 128329
298197	Transfer	04 Dec 1990	Irene Pheobe Schihl (estate)	Evert Emmanuel Johanson	\$136, 000.00 as in 128329
334034	Transfer	05 Aug 1993	Evert Emmanuel Johanson	Karin Evis Mussen, Peter Brian Mussen as JT	\$2.00 As in NO 298197 & OL By his attorney- Karin Mussen Power of Attorney No. 334033
Lot 112 West Amelia Street					
425	B&S	3 June 1881	Walter Wilson and Wife	Nicholas P Horton	\$400. All and Other lands
426	Mort	3 June 1881	Nicholas P Horton and wife	Walter Wilson	\$300. All and Other Lands
	Patent	27 Aug 1881	The Crown	Walter Wilson	All & OL.
584	DM	15 Dec 1886	Beothin Wilson (?)	Nicholas P Horton	All & OL.
1053	B&S	17 Aug 1889	Nicholas P Horton and wife	Grey and Bruce Canning Company	\$700. All & OL.
2301	Deed	29 Aug 1901	Grey and Bruce Canning Company	William Hickey	\$500. All & OL.
3118	B&S	22 Sept 1906	William Hickey	Owen Sound Brick CO	\$400. All & OL.
26756	Grant	10 Jan 1921	Owen Sound Brick Co.	John Connolly	\$400. All & OL.

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
66049R	Certificate	2 May 1951	Treasurer of Ontario	John M Connolly	All & OL.
45679	Grant	7 July 1950	Austin m Scully, William P Telford Jr, Ex of James Connolly, Ethel Spindle, Della Skaal, Edward Purcell and wife. Maude Law and Mary Shell, Marguerite Q Swarts, Beatrice Willoughby, Fred McNichol, Margaret Reynolds, Laura MacKinnon, Joseph P Wilson, George Wilson and wife, Gertrude Keating	Matilda Ornsby	\$1,800 and prems. All & OL.
69221	Certificate	28 Feb 1961	Treasurer of Ontario	Matilda Ornsby (Estate)	All & OL.
70686	Grant	21 June 1961	Clarence Orsnby, William Rathwell Admin of Matilda Ornsby	Frank Schill	\$3,000. All & OL.
119317	Deed	8 Oct 1970	Frank Schill and wife	Douglas A Kellough, Ruth J Kellough	\$4,600. S pt 80 x 330 ft and other lands included, joint tenants, C of A consents
119318	Consent	2 Mar 1961	Department of National Revenue	Matilda Ornsby (Estate)	All & OL.
121383	Certificate	8 Mar 1971	Treasurer of Ontario	Margaret Wilson (estate)	All & OL.
121384	Certificate	8 Mar 1971	Treasurer of Ontario	Helen Wilson (Estate)	All & OL.
128329	Deed	13 March 1972	Frank Schill	Frank Schill, Irene P Schill	\$2. N pt. joint tenants
297880	Deposit	26 Nov 1990			As in 128329
298197	Transfer	04 Dec 1990	Irene Phoebe Schihl (estate)	Evert Emmanuel Johanson	\$136,000. as in 128329

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
334034	Transfer	05 Aug 1993	Evert Emmanuel Johanson	Karin Evris Mussen, Peter Brian Mussen as JT	\$2.00 As in No. 298197 & OL. By his attorney- Karin Mussen Power of Attorney No. 334033
109 Cocks Street East					
425	B&S	3 June 1881	Walter Wilson and Wife	Nicholas P Horton	All \$400 and Other lands
426	Mort	3 June 1881	Nicholas P Horton and wife	Walter Wilson	All \$300 and Other Lands
	Patent	27 Aug 1881	The Crown	Walter Wilson	All
584	DM	15 Dec 1886	Beothin Wilson (?)	Nicholas P Horton	
1053	B&S	17 Aug 1889	Nicholas P Horton and wife	Grey and Bruce Canning Company	\$700
2301	Deed	29 Aug 1901	Grey and Bruce Canning Company	William Hickey	\$500
3118	B&S	22 Sept 1906	William Hickey	Owen Sound Brick CO	\$400
26786	Grant	10 Jan 1921	Owen Sound Brick Co.	John Connolly	\$400
66049R	Certificate	2 May 1951	Treasurer of Ontario	John M Connolly	
45679	Grant	7 July 1950	Austin m Scully, William P Telford Jr, Ex of James Connolly, Ethel Spindle, Della Skaal, Edward Purcell and wife. Maude Law and Mary Shell, Marguerite Q Swarts, Beatrice Willoughby, Fred McNichol, Margaret Reynolds, Laura MacKinnon, Joseph P Wilson, George Wilson and wife, Gertrude Keating	Matilda Ornsby	\$1800 and prems.

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
69221	Certificate	28 Feb 1961	Treasurer of Ontario	Matilda Ornsby (Estate)	
70686	Grant	21 June 1961	Clarence Orsnby, William Rathwell Admin of Matilda Ornsby	Frank Schill	\$3000
119318	Consent	2 Mar 1961	Department of National Revenue	Matilda Ornsby (Estate)	
121383	Certificate	8 Mar 1971	Treasurer of Ontario	Margaret Wilson (estate)	
121384	Certificate	8 Mar 1971	Treasurer of Ontario	Helen Wilson (Estate)	
128329	Deed	13 Mar 1972	Frank Schill	Frank Schill, Irene P Schill	\$2 joint tenants
297880	Deposit	26 Nov 1990			As in 128329
298197	Transfer	04 Dec 1990	Irene Pheobe Schihl (estate)	Evert Emmanuel Johanson	\$136, 000.00 as in 128329
334034	Transfer	05 Aug 1993	Evert Emmanuel Johanson	Karin Evris Mussen, Peter Brian Mussen as JT	\$2.00 As in NO 298197 & OL By his attorney- Karin Mussen Power of Attorney No. 334033
Lot 111 Cocks Street East					
425	B&S	3 June 1881	Walter Wilson and Wife	Nicholas P Horton	All \$400 and Other lands
426	Mort	3 June 1881	Nicholas P Horton and wife	Walter Wilson	All \$300 and Other Lands
	Patent	27 Aug 1881	The Crown	Walter Wilson	All & OL.
584	DM	15 Dec 1886	Bertha Wilson (?)	Nicholas P Horton	All & OL.
1053	B&S	17 Aug 1889	Nicholas P Horton and wife	Grey and Bruce Canning Company	\$700. All & OL.
2301	Deed	29 Aug 1901	Grey and Bruce Canning Company	William Hickey	\$500. All & OL.
3118	B&S	22 Sept 1906	William Hickey	Owen Sound Brick CO	\$400. All & OL.

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
26786	Grant	10 Jan 1921	Owen Sound Brick Co.	John Connolly	\$400. All & OL.
66049R	Certificate	2 May 1951	Treasurer of Ontario	John M Connolly	All & OL.
45679	Grant	7 July 1950	Austin m Scully, William P Telford Jr, Ex of James Connolly, Ethel Spindle, Della Skaal, Edward Purcell and wife. Maude Law and Mary Shell, Marguerite Q Swarts, Beatrice Willoughby, Fred McNichol, Margaret Reynolds, Laura MacKinnon, Joseph P Wilson, George Wilson and wife, Gertrude Keating	Matilda Ornsby	\$1800 and prems. All & OL.
69221	Certificate	28 Feb 1961	Treasurer of Ontario	Matilda Ornsby (Estate)	All & OL.
70686	Grant	21 June 1961	Clarence Orsnby, William Rathwell Admin of Matilda Ornsby	Frank Schill	\$3000. All & OL.
119317	Deed	8 Oct 1970	Frank Schill and wife	Douglas A Kellough, Ruth J Kellough	S pt 80 X 330 ft \$4600 and other lands included, joint tenants, C of A consents
119318	Consent	2 Mar 1961	Department of National Revenue	Matilda Ornsby (Estate)	All & OL.
121383	Certificate	8 Mar 1971	Treasurer of Ontario	Margaret Wilson (estate)	All & OL.
121384	Certificate	8 Mar 1971	Treasurer of Ontario	Helen Wilson (Estate)	All & OL.
128329	Deed	13 Mar 1972	Frank Schill	Frank Schill, Irene P Schill	North part. \$2 joint tenants
297880	Deposit	26 Nov 1990			As in 128329
298197	Transfer	04 Dec 1990	Irene Phoebe Schihl (estate)	Evert Emmanuel Johanson	\$136, 000.00 as in 128329

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
334034	Transfer	05 Aug 1993	Evert Emmanuel Johanson	Karin Evris Mussen, Peter Brian Mussen	\$2.00. Joint Tenants. As in No. 298197 & OL By his attorney-Karin Mussen Power of Attorney No. 334033
111 East Amelia Street					
	Patent	28 Mar 1857	The Crown	George Hindman	All and Other Lands
1935	Copy Patent	28 Mar 1857	The Crown	George Hindman	\$144 and other lands
1936	B&S	24 Dec 1888	George Hindman and wife	Charles E Barnhart	\$200 and other lands
2293	B&S	24 Aug 1901	Charles E Barnhart	Robert S Gambion	\$1500 and other lands
3272	B&S	10 Sept 1907	Robert S Gambion and wife	William Mitchell	\$125
20855	B&S	31 Aug 1911	William Mitchell and wife	Frederick Leslie	\$300
31754	Grant	30 April 1923	Frederick Leslie and wife	Annie Lewis	\$325
34837	Grant	4 Sept 1937	Annie Lewis	Viola B Lewis	\$200
37132	Grant	10 Nov 1942	Viola B Lewis	Benjamin and Vera Herbison	\$300 as joint tenants
40926	Grant	17 July 1947	Benjamin and Vera Herbison	Margaret Gordon	\$1,375
72424	Certificate	9 November 1961	Treasurer of Ontario	Margaret Gordon (Estate)	
74757	Grant	20 June 1963	Victoria & Grey Trust Co Admin of Margaret Gordon	Kenneth E Smith, Hilda L Smith	\$1025 as joint tenants
85582	Deed	19 Nov 1964	Kenneth E Smith, Hilda L Smith	Elsie McInnes	\$1,100
121147	Deed	22 Mar 1971	Elsie McInnes	Morris G Howell	\$2,500

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
121207	Consent	9 Nov 1961	Department of National Revenue	Margaret Gordon Estate	
131964	Deed	4 Aug 1972	Morris G Howell and wife	Kenneth R Morris, Gwendolyn A Morris	\$22,900.00 Joint tenants
219552	Grant	02 Aug 1983	Kenneth R Morris, Gwendolyn A Morris	Frederick R Davenport, Helen M Davenport as JT	\$2 &c All
226172	Grant	01 June 1984	Frederick R Davenport, Helen M Davenport	Bryan W McKay, Lisa M McKay as JT	All and Other Lands
296880	Transfer	26 Oct 1990	Bryan W McKay, Lisa M McKay	Frederic Charles Standing	\$150, 000.00 All
348118	Transfer	12 Aug 1994	Frederic Charles Standing	Kenneth Bruce Gardner	\$97, 500.00 All Re: Planning Act Statements
348119	Charge	12 Aug 1994	Kenneth Bruce Gardner	CIBC Mortgage Corporation	\$89, 943.75 As in No. 296880
Lot 113 East Amelia Street					
	Patent	28th Mar 1887	The Crown	George Hindman	All and Other Lands
1935	Certificate of Patent	28th Mar 1887	The Crown	George Hindman	All \$144 And Other Lands
1936	B&S	24 Dec 1888	George Hindman and wife	Charles E Barnhart	\$200 and Other Lands
2293	B&S	24 Aug 1901	Charles E Barnhart and wife	Robert S Gampion	All \$1500 and Other Lands
2659	B&S	9 April 1904	Robert Gampion and wife	John Worne	W 1/2 \$100
2666	B&S	9 April 1904	Robert Gampion and wife	John Worne	All \$1400 and Other Lands
2753	B&S	19 Sept 1904	John Worne and wife	Lucy A Kerr	All \$1435
37687	Grant	7 Nov 1942	Mary J (?????) ex. Of Lucy Kerr	Edward J Ard and Josephine Ard	All \$2000 as join tenants and Other Lands. Treasurer Consents
43624	Grant	22 Mar 1950	Josephine Ard	Home D Hurlbut Edith Hurlbut	All \$5000 and Lot 115 Joint tenants, Treasurer Consents

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
51916	Re DM	9 June 1956	Josephine Ard	Home D Hurlbut Edith Hurlbut	W pt. 115 feet \$1 and w pt. Lot 115
51917	Grant	28 May 1956	Homer D Hurlbut and Edith Hurlbut	William Eden, Margaret Eden	W pt. 115 feet \$100 and w pt. Lot 115 as joint tenants
56930	Grant	10 March 1958	William Eden, Margaret Eden	Murray George Cook	W pt 55 ft. \$150 and W pt. Lot 115
84237	Deed	16 July 1964	Homer D Hurlbut and Edith Hurlbut	Kenneth R Morris and Gwendolyn Morris	\$8500 do joint tenants
86417	Deed	18 Jan 1965	Murray G Cook and wife	Glen Woods, Lillian Woods	\$8800 Planning Board Consents
93561	Deed	6 July 1966	Glen Woods, Lillian Woods	George A McLeod, Kathleen N McCleod	\$14,000 and W pt Lot 115 Joint Tenants
124525	Notice of Lien	20 Aug 1971	Ruby K Showell	Corp City of Owen Sound	pt. 60 Feet and pt. Lot 115 west and adj. E 50 feet.
131939	Deed	17 Aug 1972	Kenneth R Morris, Gwendolyn Morris	David E Burke, Victoria L Burke	do joint tenants
166154	Deed	7 Sept 1976	David E Burke, Victoria L Burke	Sandra Peters	\$2 All Less west prt 115 ft and pt Lot 115
196305	Deed	19 Mar 1980	Sandra Peters, Larry Peters consents	William D Summers, Gwendolyn O Summers as joint tenants	\$2 All Less west pt 115 ft and pt Lot 115
204262	Deed	20 May 1981	William D Summers, Gwendolyn O Summers	Leonard W Edwards, Mari-An Edwards as joint tenants	\$2 All Less west pt 115 ft and pt Lot 115
217820	Deed	25 May 1983	Leonard W Edwards, Mari-An Edwards	Paul L Turcott, Bonnie R Turcott as J.T.	\$2 As in 204262
300725	Transfer	28 Feb 1991	Ruby K Showell	John Hermann Eyeselein, Dana Lee Cheer as JT	\$72, 750. As in 56930
302037	Discharge	21 April 1991	Treasurer of Ontario		No. 124525
321581	Charge	18 Sept 1992	John Hermann Eyeselein, Dana Lee Eyeselein	CIBC Mortgage Corp	\$58, 000. As in No. 300725 & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
Lot 115 East Amelia Street					
	Patent	28 Mar 1887	The Crown	George Hindman	All and Other Lands
1935	Certificate of Patent	28 Mar 1887	The Crown	George Hindman	All \$144 And Other Lands
1936	B&S	24 Dec 1888	George Hindman and wife	Charles E Barnhart	All \$200 And Other Lands
2293	B&S	24 Aug 1901	Charles E Barnhart and wife	Robert S Gampion	All \$1500 and Other Lands
2659	B&S	9 April 1904	Robert Gampion and wife	John Worne	W 1/2 \$100
2666	B&S	7 April 1904	Robert Gampion and wife	John Worne	All \$1400 and Other Lands
2753	B&S	19 Sept 1904	John Worne and wife	Lucy A Kerr	All \$1435
37687	Grant	7 Nov 1942	Mary J (?????) ex. Of Lucy Kerr	Edward J Ard and Josephine Ard	All \$2000 as join tenants and Other Lands. Treasurer Consents
43624	Grant	22 Mar 1950	Josephine Ard	Home D Hurlbut Edith Hurlbut	All \$5000 and Lot 115 Joint tenants, Treasurer Consents
56930	Grant	16 Oct 1957	William Eden, Margaret Eden	Ruby K Showell	pt. 60 feet \$6500 and part Lot 113 W adj. E 50 ft. sub to m
58169	Grant	10 Mar 1958	William Eden, Margaret Eden	Murray George Cook	W part. 55 feet \$150 W pt Lot 113
84237	Deed	16 July 1964	Homer D Hurlbut and Edith Hurlbut	Kenneth R Morris and Gwendolyn Morris	\$8500 do do joint tenants
86417	Deed	18 Jan 1965	Murray G Cook and wife	Glen Woods, Lillian Woods	\$8800 Planning Board Consents
93561	Deed	6 July 1966	Glen Woods, Lillian Woods	George A McCleod, Kathleen N McCleod	\$14,000 and W pt Lot 115 Joint Tenants
124525	Notice of Lien	20 Aug 1971	Ruby K Showell	Corp City of Owen Sound	part. 60 Feet and pt. Lot 115 west and adj. E 50 feet.
131939	Deed	17 Aug 1972	Kenneth R Morris, Gwendolyn Morris	David E Burke, Victoria L Burke	\$10 do do joint tenants
166154	Deed	7 Sept 1976	David E Burke, Victoria L Burke	Sandra Peters	\$2 All Less west pt 115 ft and pt Lot 113

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
196305	Deed	19 Mar 1980	Sandra Peters, Larry Peters consents	William D Summers, Gwendolyn O Summers as joint tenants	\$2 All Less west pt 115 ft and pt Lot 113
204262	Deed	20 May 1981	William D Summers, Gwendolyn O Summers	Leonard W Edwards, Mari-An Edwards as joint tenants	\$2 do do
217820	Deed	25 May 1983	Leonard W Edwards, Mari-An Edwards	Paul L Turcott, Bonnie R Turcott as J.T.	\$2 As in 204262
300725	Transfer	28 Feb 1991	Ruby K Showell	John Hermann Eyeselein, Dana Lee Cheer as JT	\$72, 750 As in 56930
302037	Discharge	22 April 1991	Treasurer of Ontario		No. 124525
321581	Charge	18 Sept 1992	John Hermann Eyeselein, Dana Lee Eyeselein	CIBC Mortgage Corp	\$58,000.00 As in No. 300725
Lot 117 Amelia Street East					
	Patent	23 Jan 1878	The Crown	William Frederick Wolfe	All 3 with Other Lands
1929	B&S	11 May 1898	William F Wolfe and wife	Walter J Hemming	\$400 and Other Lands
2746	B&S	27 Aug 1904	Walter J Hemming and wife	William Pedwell	\$600 and Other Lands
24041	Assignment	16 Oct 1916	William Pedwell	Alfred D Green Trustee	for (?)
24470	R of D	28 Oct 1917	Annie Pedwell	Alfred D Green Trustee	(illegible) and Other Lands
24471	B&S	7 Aug 1917	Alfred D Green Trust of William Pedwell (Trustee) Bank of Hamilton	Henry Still	\$3300 and Other Lands
35494	Grant	18 April 1939	Wilfrid J Abell John (?) S Wilson, E Henry Abell, Harold Abell, Henry B Abell, Reginald Abell, Ola Wilson	Ola Wilson	\$1

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
35576	L.C.D	7 June 1939	Wilfrid J Abell, Henry B Abell, Harold Abell Reginald Abell	Ola Wilson	\$1
36807	Grant	15 June 1942	Ola Wilson	Robert Menzies, Rosina Menzies	\$2150 as joint tenants
83231	Deed	14 May 1964	Robert W Menzies, Rosina J Menzies	Beverley R Howey	Pt 105 X 132 feet \$2000 and Part Lot 119
110636	Deed	28 May 1969	Robert W Menzies, Rosina J Menzies	William S Davies, Margaret C Davies	E pt 60 X 132 feet \$3600 joint tenants
See Deposit No. 110637 deposited 17th July 1969 re Wilson					
249628	Grant	13 Feb 1987	Beverley Howey	Beverley R Howey, Ruth Howey as JT	W. Part & OL
293829	Charge	02 Aug 1990	Beverley Howey, Ruth Howey	Confederation Trust Company 1088434	\$111, 500.00 As in 249628 & OL
313927	Charge	30 Mar 1992	Beverley Howey, Ruth Howey	Neil MacDonald	\$55,000.0 As In NO. 249628 & OL
332067	Charge	17 June 1993	Beverley Howey, Ruth Howey	Norman McKibbon	\$28,000.00 as in No. 249628
339714	Transfer	22 Dec 1993	Beverley Howey, Ruth Howey	Beverley Howey, Ruth Howey, Edward Howey	\$2.00 As in no. 249628 & OL
39715	Charge	22 Dec 1993	Beverley Howey, Ruth Howey, Edward Howey	Neil MacDonald	\$86, 500.00 As in NO. 249628 & OL
354341	Assignment	03 Feb 1995	Confederation Trust Co.	The Toronto Dominion Bank	Re: 293829 & OL
354342	Deposit	03 Feb 1995	See deposit NO 354342		Pt. & OL
354343	Transfer	03 Feb 1995	The Toronto Dominion Bank	Michael William Eyselein, Lisa Jayne Moore JT	\$114, 000. As in No. 249628 & OL
354344	Charge	03 Feb 1995	Michael William Eyselein, Lisa Jayne Moore	CIBC Mortgage Corp	\$65, 000. As in No. 339714
Lot 119 East Amelia Street					

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
	Patent	23 Jan 1878	The Crown	William Frederick Wolfe	All and Other Lands
1929	B&S	11 May 1898	William Frederick Wolfe	Walter J Hemming	\$400 and Other Lands
2746	B&S	27 Aug 1904	Walter J Hemming and wife	William Pedwell	\$600 and Other Lands
24041	Assignment	14 Oct 1916	William Pedwell	Alfred D Green Trustee	\$1 and prems for conditions benefit and other lands
24470	W of Lts	28 Oct 1917	Annie Pedwell	Alfred D Green Trustee	\$1 and prems and other lands
24471	B&S	7 Aug 1917	Alfred D Green Trust of William Pedwell (Trustee) Bank of Hamilton	Henry Still	\$3300
35494	Grant	18 April 1939	Wilfrid J Abell John (?) S Wilson, E Henry Abell, Harold Abell, Henry B Abell, Reginald Abell, Ola Wilson	Ola Wilson	\$1 Treasurer Consents
35576	L.C.D	7 June 1939	Wilfrid J Abell, Henry B Abell, Harold Abell Reginald Abell	Ola Wilson	\$1
83231	Deed	14 May 1964	Robert W Menzies, Rosina J Menzies	Beverley R Howey	Pt 105 X 132 feet \$2000 and Part Lot 119
110636	Deed	28 May 1969	Robert W Menzies, Rosina J Menzies	William S Davies, Margaret C Davies	E pt 60 X 132 feet \$3600 joint tenants
See Deposit No. 110637 deposited 17th July 1969 re Wilson					
249628	Grant	13 Feb 1987	Beverley Howey	Beverley R Howey, Ruth Howey as JT	W. Part & OL
293829	Charge	02 Aug 1990	Beverley Howey, Ruth Howey	Confederation Trust Company 1088434	\$111, 500.00 As in 249628 & OL
313927	Charge	30 Mar 1992	Beverley Howey, Ruth Howey	Neil MacDonald	\$55,000.0 As In NO. 249628 & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
332067	Charge	17 June 1993	Beverley Howey, Ruth Howey	Norman McKibbon	\$28,000.00 as in No. 249628
339714	Transfer	22 Dec 1993	Beverley Howey, Ruth Howey	Beverley Howey, Ruth Howey, Edward Howey	\$2.00 As in no. 249628 & OL
39715	Charge	22 Dec 1993	Beverley Howey, Ruth Howey, Edward Howey	Neil MacDonald	\$86, 500.00 As in NO. 249628 & OL
354341	Assignment	03 Feb 1995	Confederation Trust Co.	The Toronto Dominion Bank	Re: 293829 & OL
354342	Deposit	03 Feb 1995	See deposit NO 354342		Pt. & OL
354343	Transfer	03 Feb 1995	The Toronto Dominion Bank	Michael William Eyselein, Lisa Jayne Moore JT	\$114, 000. As in No. 249628 & OL
354344	Charge	03 Feb 1995	Michael William Eyselein, Lisa Jayne Moore	CIBC Mortgage Corp	\$65, 000. As in No. 339714
Lot 121 East Amelia Street					
	Patent	23 January 1878	The Crown	William Frederick Wolfe	All and Other Lands
1929	B&S	11 May 1898	William Frederick Wolfe	Walter J Hemming	\$400 and Other Lands
19810	B&S	18 Oct 1910	Walter J Hemming and wife	George W Gurnett	\$500 and Other Lands
25059	Grant	11 Aug 1914	George W Gurnett & wife	John Mitchell	\$300 " " "
28851	Grant	15 Dec 1923	John Mitchell & wife	John Burke	\$280 " " "
32118	Grant	4 July 1929	John Burke	Joseph William Eldred, Harold G Eldred	\$400 " " "
32121	Q.C.	5 Dec 1929	Joseph William Eldred and wife	Harold G Eldred	\$200 " " "
116098	Deed	4 May 1970	Harold G Eldred & wife	Beverly R Howey	NW pt \$800 and W pt. Lot 121
116099	Deed	4 May 1970	Harold G Eldred & wife	William G Davis Margaret Davis	NE pt. \$500 & E pt. Lot 121 Joint tenants

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
249628	Grant	13 Feb 1987	Beverley R Howey	Beverley R Howey Ruth Howey as JT	N.W. Part & OL
293829	Charge	02 Aug 1990	Beverley R Howey Ruth Howey	Confederation Trust Company 1088434	\$111, 500. As in 249628 & OL
313927	Charge	30 Mar 1992	Beverley R Howey Ruth Howey	Neil McDonald	\$55, 000. As in No. 249628 & OL
332067	Charge	17 June 1993	Beverley R Howey Ruth Howey	Norman McKibbon	\$28, 000.00 As in No. 249628
339714	Transfer	22 Dec 1993	Beverley Robert Howey Ruth Howey	Beverley Robert Howey Isabele Ruth Howey Edward Stewart Howey	\$2.00 As in No. 249628 & OL
339715	Charge	22 Dec 1993	Beverley Robert Howey Isabele Ruth Howey Edward Stewart Howey	Neil Sinclair MacDonald	\$86, 500. As in No. 249628 & OL
354341	Assignment	03 Feb 1995	Confederation Trust Co	The Toronto Dominion Bank	Re: 293829 & OL
354342	Deposit			See Deposit No 354342	Pt. & OL
354343	Transfer	03 Feb 1995	The Toronto Dominion Bank	Michael William Eyselein Lisa Jayne Moore JT	114, 000. As in No. 249628 & OL
354344	Charge	03 Feb 1995	Michael William Eyselein Lisa Jayne Moore	CIBC Mortgage Corp.	\$65, 000. As in No. 339714 & OL
	Patent	23 July 1878	The Crown	William Wolfe	All 3 Acres With Other Lands
1929	B&S	11 May 1898	William F Wolfe and wife	Walter J Hemming	\$400 " " "
19810	B&S	18 Oct 1910	Walter J Hemming and wife	George W Gurnett	\$500 " " "
25059	Grant	11 Aug 1914	George W Gurnett & wife	John Mitchell	\$300 " " "
28851	Grant	15 Dec 1923	John Mitchell & wife	John Burke	\$280 " " "

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
32118	Grant	4 July 1929	John Burke	Joseph William Eldred, Harold G Eldred	\$400 " " "
32121	Q.C.	5 Dec 1929	Joseph William Eldred and wife	Harold G Eldred	\$200 " " "
116098	Deed	4 May 1970	Harold G Eldred & wife	Beverly R Howey	NW pt \$800 and W pt. Lot 121
116099	Deed	4 May 1970	Harold G Eldred & wife	William G Davis Margaret Davis	NE pt. \$500 & E pt. Lot 121 Joint tenants
See Deposit 16R-412 deposited 9 May 1974	Reference Plan & Other Lands				
147180	Deed	1 May 1974	Harold G Eldred and wife	William C Kivell Shirley A Kivell	Pt 2 16R-412 \$1 And other lands incld. And other land C od A consent Lien Clearance attached, joint tenants
249628	Grant	13 Feb 1987	Beverley R Howey	Beverley R Howey Ruth Howey as JT	N.W. Part & OL
252228	Grant	15 May 1987	William C Kivell Shirley A Kivell	James Robert Comeau JoAnne Marier Comeau as JT	Part 2 16R-412 & OL
258031	Mort	30 Oct 1987	James Robert Comeau JoAnne Marie Comeau	National Trust Co.	\$71,000. Part 2 16R-412 & OL
293829	Charge	02 Aug 1990	Beverley R Howey Ruth Howey	Confederation Trust Company 1088434	\$111, 500. As in 249628 & OL
313927	Charge	30 Mar 1992	Beverley R Howey Ruth Howey	Neil McDonald	\$55, 000. As in No. 249628 & OL
321901	Charge	25 Sept 1992	James Robert Comeau JoAnne Marie Comeau	National Trust Co.	\$40, 000.00 Part 2 16R-412 & OL
332067	Charge	17 June 1993	Beverley R Howey Ruth Howey	Norman McKibbon	\$28, 000.00 As in No. 249628
339714	Transfer	22 Dec 1993	Beverley Robert Howey Ruth Howey	Beverley Robert Howey Isabele Ruth Howey Edward Stewart Howey	\$2.00 As in No. 249628 & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
339715	Charge	22 Dec 1993	Beverley Robert Howey Isabele Ruth Howey Edward Stewart Howey	Neil Sinclair MacDonald	\$86, 500. As in No. 249628 & OL
354341	Assignment	03 Feb 1995	Confederation Trust Co	The Toronto Dominion Bank	Re: 293829 & OL
354342	Deposit			See Deposit No 354342	Pt. & OL
354343	Transfer	03 Feb 1995	The Toronto Dominion Bank	Michael William Eyselein Lisa Jayne Moore JT	114, 000. As in No. 249628 & OL
354344	Charge	03 Feb 1995	Michael William Eyselein Lisa Jayne Moore	CIBC Mortgage Corp.	\$65, 000. As in No. 339714 & OL
Lot 123 East Amelia Street					
Patent	23 July 1878	The Crown	William Fred Wolfe	All 3 Acres with Other Lands	
1929	B&S	11 May 1898	William F Wolfe and wife	Walter J Hemming	\$400 " " "
19810	B&S	18 Oct 1910	Walter J Hemming and wife	George W Gurnett	\$500 " " "
25059	Grant	11 Aug 1914	George W Gurnett & wife	John Mitchell	\$300 " " "
28851	Grant	15 Dec 1923	John Mitchell & wife	John Burke	\$280 " " "
32118	Grant	4 July 1929	John Burke	Joseph William Eldred, Harold G Eldred	\$400 " " "
32121	Q.C.	5 Dec 1929	Joseph William Eldred and wife	Harold G Eldred	\$200 " " "
116098	Deed	4 May 1970	Harold G Eldred & wife	Beverly R Howey	NW pt \$800 and W pt. Lot 121
116099	Deed	4 May 1970	Harold G Eldred & wife	William G Davis Margaret Davis	NE pt. \$500 & E pt. Lot 121 Joint tenants
See Deposit 16R-412 deposited 9 May 1974	Reference Plan & Other Lands				

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
147180	Deed	1 May 1974	Harold G Eldred and wife	William C Kivell Shirley A Kivell	Pt 2 16R-412 \$1 And other lands incld. And other land C od A consent Lien Clearance attached, joint tenants
249628	Grant	13 Feb 1987	Beverley R Howey	Beverley R Howey Ruth Howey as JT	N.W. Part & OL
252228	Grant	15 May 1987	William C Kivell Shirley A Kivell	James Robert Comeau JoAnne Marier Comeau as JT	Part 2 16R-412 & OL
258031	Mort	30 Oct 1987	James Robert Comeau JoAnne Marie Comeau	National Trust Co.	\$71,000. Part 2 16R-412 & OL
293829	Charge	02 Aug 1990	Beverley R Howey Ruth Howey	Confederation Trust Company 1088434	\$111,500. As in 249628 & OL
313927	Charge	30 Mar 1992	Beverley R Howey Ruth Howey	Neil McDonald	\$55, 000. As in No. 249628 & OL
321901	Charge	25 Sept 1992	James Robert Comeau JoAnne Marie Comeau	National Trust Co.	\$40, 000.00 Part 2 16R-412 & OL
332067	Charge	17 June 1993	Beverley R Howey Ruth Howey	Norman McKibbon	\$28, 000.00 As in No. 249628
339714	Transfer	22 Dec 1993	Beverley Robert Howey Ruth Howey	Beverley Robert Howey Isabele Ruth Howey Edward Stewart Howey	\$2.00 As in No. 249628 & OL
339715	Charge	22 Dec 1993	Beverley Robert Howey Isabele Ruth Howey Edward Stewart Howey	Neil Sinclair MacDonald	\$86, 500. As in No. 249628 & OL
354341	Assignment	03 Feb 1995	Confederation Trust Co	The Toronto Dominion Bank	Re: 293829 & OL
354342	Deposit			See Deposit No 354342	Pt. & OL
354343	Transfer	03 Feb 1995	The Toronto Dominion Bank	Michael William Eyselein Lisa Jayne Moore JT	\$114,000. As in No. 249628 & OL
354344	Charge	03 Feb 1995	Michael William Eyselein Lisa Jayne Moore	CIBC Mortgage Corp.	\$65,000. As in No. 339714 & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
Lot 125 East Amelia Street					
	Patent	23 July 1878	The Crown	William Fred Wolfe	All 3 Acres with Other Lands
1929	B&S	11 May 1898	William F Wolfe and wife	Walter J Hemming	\$400 " " "
19810	B&S	18 Oct 1910	Walter J Hemming and wife	George W Gurnett	\$500 " " "
25059	Grant	11 Aug 1914	George W Gurnett & wife	John Mitchell	\$300 " " "
28851	Grant	15 Dec 1923	John Mitchell & wife	John Burke	\$280 " " "
32118	Grant	4 July 1929	John Burke	Joseph William Eldred, Harold G Eldred	\$400 " " "
32121	Q.C.	5 Dec 1929	Joseph William Eldred and wife	Harold G Eldred	\$200 " " "
See Deposit 16R-412 deposited 9 May 1974	Reference Plan & Other Lands				
147180	Deed	1 May 1974	Harold G Eldred and wife	William C Kivell Shirley A Kivell	Pt 2 16R-412 \$1 And other lands incld. And other land C od A consent Lien Clearance attached, joint tenants
252228	Grant	15 May 1987	William C Kivell Shirley A Kivell	James Robert Comeau JoAnne Marier Comeau as JT	Part 2 16R-412 & OL
258031	Mort	30 Oct 1987	James Robert Comeau JoAnne Marie Comeau	National Trust Co.	\$71,000. Part 2 16R-412 & OL
321901	Charge	25 Sept 1992	James Robert Comeau JoAnne Marie Comeau	National Trust Co.	\$40, 000.00 Part 2 16R-412 & OL
Lot 127 East Amelia Street					
	Patent	23 July 1878	The Crown	William Fred Wolfe	All 3 Acres with Other Lands
1929	B&S	11 May 1898	William F Wolfe and wife	Walter J Hemming	\$400 " " "

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
19810	B&S	18 Oct 1910	Walter J Hemming and wife	George W Gurnett	\$500 " " "
25059	Grant	11 Aug 1914	George W Gurnett & wife	John Mitchell	\$300 " " "
28851	Grant	15 Dec 1923	John Mitchell & wife	John Burke	\$280 " " "
32118	Grant	4 July 1929	John Burke	Joseph William Eldred, Harold G Eldred	\$400 " " "
32121	Q.C.	5 Dec 1929	Joseph William Eldred and wife	Harold G Eldred	\$200 " " "
See Deposit 16R-412 deposited 9 May 1974					
	Reference Plan & Other Lands				
147180	Deed	1 May 1974	Harold G Eldred and wife	William C Kivell Shirley A Kivell	Pt 2 16R-412 \$1 And other lands incld. And other land C od A consent Lien Clearance attached, joint tenants
252228	Grant	15 May 1987	William C Kivell Shirley A Kivell	James Robert Comeau JoAnne Marier Comeau as JT	Part 2 16R-412 & OL
258031	Mort	30 Oct 1987	James Robert Comeau JoAnne Marie Comeau	National Trust Co.	\$71,000. Part 2 16R-412 & OL
321901	Charge	25 Sept 1992	James Robert Comeau JoAnne Marie Comeau	National Trust Co.	\$40, 000.00 Part 2 16R-412 & OL
Lot 129 East Amelia Street					
	Patent	9 July 1888	The Crown	William J Graham	All & Other Lands
35669R	Will	26-Mar-32	William J Graham	Henrietta S. Blade	All & Other Lands
40329R	Certificate	22-Apr-32	Treasurer of Ontario	William J Graham Estate	All & Other Lands
39928	Grant	28-May-46	Henrietta S. Blade	Harold F Graham	\$1/acre & Other Lands
162674	Deed	11-Mar-76	Harold F. Graham & wife	Marricou Developments Ltd.	\$10 All & Other Lands Lien Clearance
174055	Deed	13-Aug-77	Marricou Developments Ltd.	Gilbert Grise in Trust (?)	\$2 All & Other Lands Lien Clearance

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
175366	Deposit	03-Oct-77		Harold F Graham	All & Other Lands
211948	Assignment of Rentals	30-Jul-82	Gilbert Grise In Trust	Credit Foncier	All & OL
212765	Agreement	20-Sep-82	Maurice Gartenberg	Credit Foncier	\$1. &c 174059 postponed to 173227, 211943 & 211948
213143	Notice	03-Oct-82	Canadian Imperial Bank of Commerce		All & OL Security Interest
213365	Agt. Post M.	20-Oct-82	Maurice Gartenberg	Societe Generale (Canada)	\$1 & prems 174059 postponed to 213338
213758	Assignment of Spaces	08-Nov-82	Robert Masters, In Trust	Societe Generale (Canada)	\$1 All & OL
219370	Agreement	27-Jul-83	Societe Generale (Canada)	Credit Foncier	\$1 & prems. 174057 postponed to 211948
228982	Grant	01-Oct-84	Gilbert Grise, In Trust	Guido Van Den Daele, In Trust	All & OL
233552	Assgnt of Rent	31-May-85	Guido Van Den Daele	The National Victoria & Grey Trust Co.	All & OL
242550	Grant	02-Jun-86	Guido Van Den Daele	Regency Towers (Owen Sound) Ltd.	All & OL
242553	Assignment of Leases & Rents	02-Jun-86	Regency Towers (Owen Sound) Ltd.	National Trust Co.	All & OL
243140	Re: Assgnt of Leases	25-Jun-86	Societe General (Canada)	Gilbert Grise	All & OL
243767	Re: A of Rentals	14-Jul-86	Credit Foncier	Gilbert Grise, In Trust	All & OL
244463	Re: A of Rents	06-Aug-86	National Trust Co.	Guido Van Den Daele	All & OL
429815	Charge	05-Dec-00	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$1, 650, 000.00 All & OL
518624	Charge	09-Mar-06	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$500, 00.00 All & OL
520893	Reassignment of Leases	27-Apr-06	National Trust Company	Regency towers (Owen Sound) Ltd.	Re: 242551, 242553 & 307323 & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
Lot 131 East Amelia Street					
35669R	Patent	7 July 1888	The Crown	William Graham	All & Other Lands
40329R	Will	26-Mar-35	William J Graham	Henrietta S Blade	All & Other Lands
39928	Certificate	22-Apr-37	Treasurer of Ontario	William J Graham Estate	All & Other Lands
162674	Grant	25-May-46	Henrietta S Blade	Harold F Graham	\$1 acre All & Other Lands
174055	Deed	11-Mar-76	Harold F Graham and Wife	Marricou Developments Ltd.	\$10 All & Other Lands Lien Clearance
175366	Deed	13-Aug-77	Marricou Developments Ltd.	Gilbert Grise, In Trust, to use	\$2 All & OL Lien Clearance
211948	Deposit	03-Oct-77		Harold F Graham	All and OL
212765	Assignment of Rentals	30-Jul-82	Gilbert Grise, In Trust	Credit Foncier	All & OL
213143	Agreement	20-Sep-82	Maurice Gartenberg	Credit Foncier	\$1. &c. 174059 postponed to 173227, 211943 & 211948
213365	Notice	08-Oct-82	Canadian Imperial Bank of Commerce		All & OL Security Interest
213258	Agt. Post. M	20-Oct-82	Maurice Gartenberg	Societe Generale (Canada)	\$1. & prems. 174059 postponed to 213338
219370	Assignment of Leases	08-Nov-82	Robert Masters. In Trust	Societe Generale (Canada)	\$1 All & OL
228982	Agreement	27-Jul-83	Societe Generale (Canada)	Credit Foncier	\$1. & prems. 174057 postponed to 211948
233552	Grant	01-Oct-84	Gilbert Grise, In Trust	Guido Van Den Daele In Trust	All & OL
242550	Assgnt of Rent	31-May-83	Guido Van Den Daele	The National Victoria and Grey Trust Co.	All & OL
242553	Grant	02-Jun-86	Guido Van Den Daele	Regency Towers (Owen Sound) Ltd.	All & OL
243140	Assgnt of Leases & Rents	02-Jun-86	Regency Towers (Owen Sound) Ltd.	National Trust Co.	All & OL
243767	Re: Assgnt of Leases	25-Jun-86	Societe Generale (Canada)	Gilbert Grise	All & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
244463	Re: A of Rentals	14-Jul-86	Credit Foncier	Gilbert Grise	All & OL
429815	Re A of Rents	06-Aug-86	National Trust Co.	Guido Van Den Daele	All & OL
518624	Charge	05-Dec-00	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$1, 650, 000.00 All & OL
520893	Charge	09-Mar-06	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$500,000.00 All & OL
	Reassignment of Leases	27-Apr-06	National Trust Company	Regency Towers (Owen Sound) Ltd.	Re: 242551, 242553 & 307323
Lot 133 East Amelia Street					
	Patent	9 July 1888	The Crown	William Graham	All & Other Lands
35669R	Will	26-Feb-31	William J Graham	Henrietta S Blade	All & Other Lands
40325R	Certificate	22-Apr-32	Treasurer of Ontario	William J Graham estate	All & Other Lands
39928	Grant	28-May-46	Henrietta S Blade	Harold F Graham	\$1 acre All & Other Lands
162674	Deed	11-Mar-76	Harold F Graham and Wife	Marricou Developments Ltd.	\$10 All & Other Lands Lien Clearance
174055	Deed	13-Aug-77	Marricou Developments Ltd.	Gilbert Grise In Trust to Uses	\$2 All & Other Lands
175366	Deposit	03-Oct-77		Harold F Graham	All & Other Lands
211948	Assignment of Rentals	30-Jul-82	Gilbert Grise, in Trust	Credit Foncier	All & OL
212765	Agreement	20-Sep-82	Maurice Gartenberg	Credit Foncier	\$1. &c. 17059 postponed to 173227, 211943 & 211948
213143	Notice	08-Oct-82	Canadian Imperial Bank of Commerce		All & OL Security Deposit
213365	Agt. Post. M	20-Oct-82	Maurice Gartenberg	Societe Generale (Canada)	\$1. & prems. 174059 postponed to 213338
213158	Assignment of Leases	03-Nov-82	Robert masters in Trust	Societe Generale	\$1 All & OL
219370	Agreement	27-Jul-83	Societe Generale (Canada)	Credit Foncier	\$1. & prems. 174057 postponed to 211948
228982	Grant	01-Oct-84	Gilbert Grise, In Trust	Guido Van Den Daele, In Trust	All & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
233552	Assgnt of Rent	31-May-85	Guido Van Den Daele	The National Victoria & Grey trust Co.	All & OL
242550	Grant	02-Jun-86	Guido Van Den Daele	Regency Towers (Owen Sound) Ltd.	All & OL
242553	Assgnt of Leases & Rents	02-Jun-86	Regency Towers (Owen Sound) Ltd.	National Trust Co.	All & OL
243140	Re: Assgnt of Leases	25-Jun-86	Societe Generale (Canada)	Gilbert Grise	All & OL
243767	Re: A of Rentals	14-Jul-86	Credit Foncier	Gilbert Grise In Trust	All & OL
244463	Re A of Rents	06-Aug-86	National Trust Co	Guido Van Den Daele	All & OL
429815	Charge	05-Dec-00	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$1, 650. 000.00 All & OL
518624	Charge	09-Mar-06	Regency towers (Owen Sound) Ltd.	Bank of Montreal	\$500, 000.00 All & OL
520893	Reassignment of Leases	27-Apr-06	National Trust Company	Regency Towers (Owen Sound) Ltd.	Re: 242551, 242553 & 307323
Lot 135 East Amelia Street					
	Patent	7 July 1888	The Crown	William Graham	All & other Lands
35669R	Will	26-Mar-32	William J Graham	Henrietta S. Blade	All & Other Lands
40325R	Certificate	22-Apr-38	Treasurer of Ontario	Re William Graham Estate	All & Other Lands
39928	Grant	28-May-46	Henrietta S Blade	Harold F Graham	\$1 acre All & Other Lands
162674	Deed	11-Mar-76	Harold F. Graham & wife	Marricou Developments Ltd.	\$10 All & other Lands Lien Clearance
174055	Deed	13-Aug-77	Marricou Developments Ltd.	Gilbert Grise, in Trust to uses	\$2 All & Other Lands
175366	Deposit	03-Oct-77		Harold F Graham	All & Other Lands
211948	Assignment of rentals	30-Jul-82	Gilbert Grise in Trust	Credit Foncier	All & OL
212765	Agreement	20-Sep-82	Maurice Gartenberg	Credit Foncier	\$1. &c. 174059 postponed to 173227, 211943 & 211948

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
213143	Notice	08-Oct-82	Canadian Imperial Bank of Commerce		All & OL Security Interest
213365	Agt. Post. M.	20-Oct-82	Maurice Gartenberg	Societe Generale (Canada)	\$1. & prems 174059 postponed to 213338
213758	Assignment of Leases	08-Nov-82	Robert Masters In Trust	Societe Generale (Canada)	\$1 All & OL
219370	Agreement	27-Jul-83	Societe Generale (Canada)	Credit Foncier	\$1. & prems. 174057 postponed to 211948
228982	Grant	01-Oct-84	Gilbert Grise In Trust	Guido Van Den Daele In Trust	All & OL
233552	Assgnt. of Rent	31-May-85	Guido Van Den Daele	The National Victoria & Grey Trust Co.	All & OL
242550	Grant	02-Jun-86	Guido Van Den Daele	Regency Towers (Owen Sound) Ltd.	All & OL
242553	Assgnt of Leases and Rents	02-Jun-86	Regency Towers (Owen Sound) Ltd.	National Trust Co.	All & OL
243140	Re: Assgnt of Leases	25-Jun-86	Societe Generale (Canada)	Gilbert Grise	All & OL
243767	Re: A of Rentals	14-Jul-86	Credit Foncier	Gilbert Grise, in Trust	All & OL
244463	Re A of Rents	06-Aug-86	National Trust Co.	Guido Van Den Daele	All & OL
429815	Charge	05-Dec-00	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$1, 650, 000. 00 All & OL
518624	Charge	09-Mar-06	Regency towers (Owen Sound) Ltd.	Bank of Montreal	\$500,000.00 All & OL
520893	Reassignment of Leases	27-Apr-06	National Trust Co.	Regency towers (Owen Sound) Ltd.	Re: 242551, 242553 & 307323
Lot 137 East Amelia Street					
	Patent	7 July 1888	Crown	William J Graham	All & other Lands
35669R	Will	26-Mar-32	William J Graham	Henrietta Blade	All & Other Lands
40325R	Certificate	22-Apr-32	Treasurer of Ontario	Re Williams J Graham Estate	All & Other Lands
39928	Grant	28-May-46	Henrietta Blade	Harold F Graham	\$1 acre All & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
162674	Deed	11-Mar-76	Harold F. Graham & wife	Marricou Developments Ltd.	\$10 All & Other Lands Lien Clearance
174055	Deed	13-Aug-77	Marricou Developments Ltd.	Gilbert Grise In trust to Uses	\$2 All & Other Lands Lien Clearance
175366	Deposit	03-Oct-77		Harold F Graham	All & Other Lands
211948	Assignment of Rentals	30-Jul-82	Gilbert Grise in Trust	Credit Foncier	All & OL
212765	Agreement	20-Sep-82	Maurice Gartenberg	Credit Foncier	\$1. &c. 174059 postponed to 173227, 211943 & 211948
213143	Notice	08-Oct-82	Canadian Imperial Bank of Commerce		All & OL Security Deposit
213365	Agt. Post. M.	20-Oct-82	Maurice Gartenberg	Societe Generale (Canada)	\$1 All & OL
213138	Assignment of Leases	08-Nov-82	Robert Masters In Trust	Societe Generale (Canada)	\$1 All & OL
219370	Agreement	27-Jul-83	Societe Generale (Canada)	Credit Foncier	\$1. & prems. 174057 postponed to 211948
228982	Grant	01-Oct-84	Gilbert Grise In Trust	Guido Van Den Daele In Trust	All & OL
233552	Assgnt of Rent	31-May-85	Guido Van Den Daele	The National Victoria and Grey Trust Co.	All & OL
242550	Grant	02-Jun-86	Guido Van Den Daele	Regency Towers (Owen Sound) Ltd.	All & OL
242553	Assgnt of Leases and Rents	02-Jun-86	Regency Towers (Owen Sound) Ltd.	National Trust Co.	All & OL
243140	Re: Assgnt of Leases	25-Jun-86	Societe Generale (Canada)	Gilbert Grise	All & OL
243767	Re: A of Rentals	14-Jul-86	Credit Foncier	Gilbert Grise, In Trust	All & OL
244463	Re A of Rents	06-Aug-86	National Trust Co	Guido Van Den Daele	All & OL
429815	Charge	05-Dec-00	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$1, 650, 000.00 All & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
518624	Charge	09-Mar-06	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$500,000.00 All & OL
520893	Reassignment of Leases	27-Apr-06	National Trust Company	Regency Towers (Owen Sound) Ltd.	Re: 242551, 242553 & 3073238
Lot 139 East Amelia Street					
	Patent	7 July 1888	The Crown	William J Graham	All & Other Lands
25669R	Will	26-Mar-32	William J Graham	Henrietta Blade	All & Other Lands
40329R	Certificate	22-Apr-32	Treasurer of Ontario	Re William J Graham Estate	All & Other Lands
34928	Grant	29-May-46	Henrietta S Blade	Harold F Graham	\$1 acre All & Other Lands
162674	Deed	11-Mar-76	Harold F Graham	Marricou Developments Ltd.	\$10 All & Other Lands Lien Clearance
174055	Deed	13-Aug-77	Marricou Developments Ltd.	Gilbert Grise In Trust to Uses	\$2 All & Other Lands Lien Clearance
211948	Assignment of Rentals	30-Jul-82	Gilbert Grise In Trust	Credit Foncier	All & OL
212765	Agreement	20-Sep-82	Maurice Gartenberg	Credit Foncier	\$1. &c. 174059 postponed to 173227, 211943 & 211948
213143	Notice	03-Oct-82	Canadian Imperial Bank of Commerce		All & OL Security Deposit
213365	Agt. Post M.	20-Oct-82	Maurice Gartenberg	Societe Generale (Canada)	\$1. &prems. 174059 postponed to 213338
213758	Assignment of Leases	08-Nov-82	Robert Masters In Trust	Societe General (Canada)	\$1 All & OL
219370	Agreement	27-Jul-83	Societe Generale (Canada)	Credit Foncier	\$1. & Prems. 174057 postponed to 211948
228982	Grant	01-Oct-84	Gilbert Grise In Trust	Guido Van Den Daele In Trust	All & OL
233552	Assgnt of Rent	31-May-86	Guido Van Den Daele	The National Victoria and Grey Trust Co.	All & OL
242550	Grant	02-Jun-86	Guido Van Den Daele	Regency Towers (Owen Sound) Ltd.	All & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
242553	Assgnt of Leases and Rents	02-Jun-86	Regency Towers (Owen Sound) Ltd.	National Trust Co.	All & OL
243140	Re: Assgnt of Leases	25-Jun-86	Societe Generale (Canada)	Gilbert Grise	All & OL
243767	Re: A of Rentals	14-Jul-86	Credit Foncier	Gilbert Grise, In Trust	All & OL
244463	Re A of Rentals	06-Aug-86	National Trust Co.	Guido Van Den Daele	All & OL
429815	Charge	05-Dec-00	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$1,650,000. 00 All & OL
518624	Charge	09-Mar-06	Regency Towers (Owen Sound Ltd.)	Bank of Montreal	\$500,000.00 All & OL
520893	Reassignment of Leases	27-Apr-06	National Trust Co	Regency Towers (Owen Sound) Ltd.	Re: 242551, 242553 & 307323
Lot 135 East Edward Street					
	Patent	6 July 1888	The Crown	William J Graham	All & Other Lands
35669R	Will	26-Mar-32	William J Graham	Maria L Wiselands	All & Other Lands
40329R	Certificate	22-Apr-32	Treasurer of Ontario	Re William J Graham Estate	All & Other Lands
38410	Grant	24-Feb-45	A. Creighton Bradford Admin of Maria Wiselands and Johnathan S. Weslan et Wife	Jean S Walpole	\$3300. Prems All & OL Treasurer Record
45751	Grant	06-Mar-52	Jean S Walpole	Norman R Walpole	\$1 acre All & OL
92386	Deed	04-May-66	Norman R Walpole & wife	Morley D. B. Atton	\$12,200 All & OL
296292	Transfer	11-Oct-90	Estate of Morley Dwight Brice Atton, Dorothy Margaret Atton Executrix	Dorothy Margaret Atton	\$1 As in 92386 & OL
	Patent	6 July 1888	The Crown	William J Graham	All & Other Lands
35669R	Will	26-Mar-32	William J Graham	Maria L Wiselands	All & Other Lands
40329R	Certificate	22-Apr-32	Treasurer of Ontario	Re William J Graham Estate	All & Other Lands

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
38410	Grant	24-Feb-45	A. Creighton Bradford Admin of Maria Wiselands and Johnathan S. Weslan et Wife	Jean S Walpole	\$3300. Prems All & OL Treasurer Record
45751	Grant	06-Mar-52	Jean S Walpole	Norman R Walpole	\$1 acre All & OL
92386	Deed	04-May-66	Norman R Walpole & wife	Morley D. B. Atton	\$12,200 All & OL
296292	Transfer	11-Oct-90	Estate of Morley Dwight Brice Atton, Dorothy Margaret Atton Executrix	Dorothy Margaret Atton	\$1 As in 92386 & OL
	Patent	2 March 1888	The Crown	William J Graham	All & Other Lands
35669R	Will	26-Mar-32	William J Graham	Maria L Wiselands	All & OL
40325R	Certificate	22-Apr-32	Treasurer of Ontario	Re William J Graham estate	All & OL
38410	Grant	24-Feb-45	A. Creighton Bradford Admin of Maria Wiselands and Johnathan S. Weslan et Wife	Jean S Walpole	\$3300. Prems All & OL Treasurer Record
45751	Grant	06-Mar-52	Jean S Walpole	Norman R Walpole	\$1 acre All & OL
92386	Deed	04-May-66	Norman R Walpole & wife	Morley D. B. Atton	\$12,200 All & OL
296292	Transfer	11-Oct-90	Estate of Morley Dwight Brice Atton, Dorothy Margaret Atton Executrix	Dorothy Margaret Atton	\$1 As in 92386 & OL
Lot 137 East Edward Street					
	Patent	2 March 1888	The Crown	William J Graham	All & Other Lands
35669R	Will	26 Mar 1932	William J Graham	Maria L Wiselands	All & OL
40325R	Certificate	22 April 1932	Treasurer of Ontario	Re William J Graham estate	All & OL
38410	Grant	24 Feb 1945	A. Creighton Bradford Admin of Maria Wiselands and Johnathan S. Weslan et Wife	Jean S Walpole	\$3300. Prems All & OL Treasurer Record
45751	Grant	6 Mar 1952	Jean S Walpole	Norman R Walpole	\$1 acre All & OL
92386	Deed	4 May 1966	Norman R Walpole & wife	Morley D. B. Atton	\$12,200 All & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
296292	Transfer	11 Oct 1990	Estate of Morley Dwight Brice Atton, Dorothy Margaret Atton Executrix	Dorothy Margaret Atton	\$1 As in 92386 &OL
Lot 139 East Edward Street					
	Patent	2 March 1888	The Crown	William J Graham	All & Other Lands
35669R	Will	26-Mar-32	William J Graham	Maria L Wiselands	All & OL
40325R	Certificate	22-Apr-32	Treasurer of Ontario	Re William J Graham estate	All & OL
38410	Grant	24-Feb-45	A. Creighton Bradford Admin of Maria Wiselands and Johnathan S. Weslan et Wife	Jean S Walpole	\$3300. Prems All & OL Treasurer Record
45751	Grant	06-Mar-52	Jean S Walpole	Norman R Walpole	\$1 acre All & OL
92386	Deed	04-May-66	Norman R Walpole & wife	Morley D. B. Atton	\$12,200 All & OL
296292	Transfer	11-Oct-90	Estate of Morley Dwight Brice Atton, Dorothy Margaret Atton Executrix	Dorothy Margaret Atton	\$1 As in 92386 &OL
Lot 126 Edward Street West					
	Patent	23 Jan 1878	The Crown	William Frederick Wolfe	All 3 and Other lands
1929	B&S	11 May 1898	William F Wolfe and wife	Walter J Hemming	\$400 " " "
19810	B&S	18 Oct 1910	Walter J Hemming and wife	George W Gurnett	\$500 " " "
23703	B&S	12 June 1915	George W Gurnett & wife	Percy Minard	S 1/2 33 X 165 feet \$175
27044	Grant	16 April 1916	George W Gurnett & wife	Harry Peel	N 1/2 \$594
27045	Grant	2 May 1921	Harry Peel and wife	Percy Minard	N 1/2 \$340
28836	Grant	20 Nov 1923	Percy Minard and wife	Allan George	All \$687
35777	Tax Deed	23 Feb 1940	Mayor and Treasurer	Corp City of Owen Sound	\$7852.00

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
41531	Declaration	30 Jan 1948	James A Milne Treasurer Re: No 35777		And other lands, Declaration (?) re no. 35777
46494	Grant	13 Sept 1952	John A Brittain, Olive Brittain	William E Bowman	\$325
64141	Certificate	21 Sept 1959	Treasurer of Ontario	William E Bowman (estate)	
82822	Grant	15 April 1964	Anne M Bowman, Emma A Bowman Exec. Of William E Bowman	Robert St. Jacques, Carol St. Jacques	\$1300, joint tenants
98007	Deed	10 April 1967	Robert St. Jacques, Carols St. Jacques	Grey Bruce Developments Ltd	\$1500
101804	Deed	9 Jan 1968	Grey Bruce Development Ltd.	Stark-Janecek Ltd.	\$2000
123495	Deed	25 June 1971	Stark- Janecek Ltd.	Richard R Brown, Ethel A E Brown	\$200 joint tenants
180675	Deed	1 May 1978	Richard R Brown, Ethel A E Brown	Peter M Sorbara, Charlotte A Sorbara as JT	\$2 All
196114	Estate Tax Consent	26 Mar 1980	Deputy Minister of National Revenue	re Estate of William E Bowman	All
196178	Deed	14 Mar 1980	Charlotte A Sorbara	John D Matheson, Connie D Hewitt as JT	\$10
230615	Grant	21 Dec 1984	John D Matheson, Connie D Matheson (formerly Hewitt)	Connie D Matheson	All
233602	Grant	03 June 1985	Connie D Matheson	Douglas J Bishop, Nancy A Bishop JT	All
Lot 128 West Edward Street					
	Patent	23 Jan 1878	The Crown	William Fred Wolfe	All 3 & Other Lands
1929	B&S	11 May 1898	William F Wolfe and wife	Walter Hemming	\$400 & Other Lands
3456	B&S	19 July 1909	Walter J Hemming and wife	Henry Miller	E pt. 99 ft. \$52

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
19810	B&S	18 Oct 1910	Walter J Hemming and wife	George W Gurnett	All Less E 99 ft. \$500 and other Lands
21155	B&S	26 Dec 1911	Henry Miller and wife	Stanley E Raven	E pt 99 ft. in depth \$385
25059	Grant	11 Aug 1914	George W Gurnett and wife	John Mitchell	Pt 66 X 66 feet \$300 and Other lands 99 ft. W for M.C.L (?)
25856	Grant	19 Mar 1920	Stanley E Raven	Bessie Lusltenburg	" " " \$1450
28851	Grant	15 Dec 1923	John Mitchell and Wife	John Burke	Part 66 X 66 feet \$280 99 ft w (?) and other lands
32118	Grant	4 Jan 1929	John Burke	Joseph William Eldred Harold G Eldred	" " " \$400 do. Do. Do.
32121	Q.C.	5 Dec 1929	Joseph William Eldred and wife	Harold G Eldred	" " " \$200 do. Do. Do
81976	Certificate	13 Feb 1964	Treasurer of Ontario	Elizabeth B Breen (Estate)	E Pt 99 Ft (?)
82422	Grant	24 Nov 1964	Annie McMann William A Waltenburgh Exec of Elizabeth B Breen (?)	Melville H Waltenburgh Lorraine H Waltenburgh	" " " \$5500 Joint tenants
86944	M of M	31 July 1964	Wellington Credit Corp Ltd.	York trust and Savings Corp	" " " \$2531
106739	Certificate	28 Nov 1968	Treasurer of Ontario	Melville H Waltenburgh (estate)	" " "
114333	Consent	26 Nov 1967	Dept. of National Revenue	Lorraine H Waltenburgh (Estate)	" " " "
115445	Certificate	27 Nov 1970	Dept of National Revenue	Melville H Waltenburgh (Estate)	" " " "
116032	Certificate	11 May 1970	Treasurer of Ontario	Lorraine H Waltenburgh (Estate)	" " " "
118552	Deed	13 April 1970	Adam E Publuske Admin of Lorraine Waltenburgh Admin and Sustirare (?) Emma Carleton William Tovelofekis	Melbourne J Bauman Dorothy J Bauman	" " " \$1 Joint Tenants

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
(?) Edith Klagis by the public Institute					
See Deposit 16R-412 deposited 9 May 1974	Reference Plan & Other Lands				
147180	Deed	1 May 1974	Harold G Eldred and Wife	William C Kivell Shirley A Kivell	Pt 3 16R-412 & Other Lands C of A consent joint tenants Lien clearance attached
252228	Grant	15 May 1987	William C Kivell Shirley A Kivell	James Robert Comeau JoAnne Marie Comeau as JT	Part 3 16R-412 & OL
258031	Mort	30 Oct 1987	James Robert Comeau JoAnne Marie Comeau	National Trust Co.	\$71,000. Part 3 16R-412 & OL
304846	Deposit	19 July 1991			Re: No. 118552
321901	Charge	25 Sept 1992	James Robert Comeau JoAnne Marie Comeau	National Trust Co.	\$40, 000.00 Part 3 16R-412 & OL
Lot 130 West Edward Street					
	Patent	7 July 1888	Crown	William J Graham	All & other Lands
35669R	Will	26-Mar-32	William J Graham	Henrietta Blade	All & Other Lands
40325R	Certificate	22-Apr-32	Treasurer of Ontario	Re Williams J Graham Estate	All & Other Lands
39928	Grant	28-May-46	Henrietta Blade	Harold F Graham	\$1 acre All & OL
162674	Deed	11-Mar-76	Harold F. Graham & wife	Marricou Developments Ltd.	\$10 All & Other Lands Lien Clearance
174055	Deed	13-Aug-77	Marricou Developments Ltd.	Gilbert Grise In trust to Uses	\$2 All & Other Lands Lien Clearance
175366	Deposit	03-Oct-77		Harold F Graham	All & Other Lands
211948	Assignment of Rentals	30-Jul-82	Gilbert Grise in Trust	Credit Foncier	All & OL
212765	Agreement	20-Sep-82	Maurice Gartenberg	Credit Foncier	\$1. &c. 174059 postponed to 173227, 211943 & 211948
213143	Notice	08-Oct-82	Canadian Imperial Bank of Commerce		All & OL Security Deposit

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
213365	Agt. Post. M.	20-Oct-82	Maurice Gartenberg	Societe Generale (Canada)	\$1 All & OL
213138	Assignment of Leases	08-Nov-82	Robert Masters In Trust	Societe Generale (Canada)	\$1 All & OL
219370	Agreement	27-Jul-83	Societe Generale (Canada)	Credit Foncier	\$1. & prems. 174057 postponed to 211948
228982	Grant	01-Oct-84	Gilbert Grise In Trust	Guido Van Den Daele In Trust	All & OL
233552	Assgnt of Rent	31-May-85	Guido Van Den Daele	The National Victoria and Grey Trust Co.	All & OL
242550	Grant	02-Jun-86	Guido Van Den Daele	Regency Towers (Owen Sound) Ltd.	All & OL
242553	Assgnt of Leases and Rents	02-Jun-86	Regency Towers (Owen Sound) Ltd.	National Trust Co.	All & OL
243140	Re: Assgnt of Leases	25-Jun-86	Societe Generale (Canada)	Gilbert Grise	All & OL
243767	Re: A of Rentals	14-Jul-86	Credit Foncier	Gilbert Grise, In Trust	All & OL
244463	Re A of Rents	06-Aug-86	National Trust Co	Guido Van Den Daele	All & OL
429815	Charge	05-Dec-00	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$1, 650, 000.00 All & OL
518624	Charge	09-Mar-06	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$500,000.00 All & OL
520893	Reassignment of Leases	27-Apr-06	National Trust Company	Regency Towers (Owen Sound) Ltd.	Re: 242551, 242553 & 3073238
Lot 132 West Edward Street					
	Patent	7 July 1888	Crown	William J Graham	All & other Lands
35669R	Will	26-Mar-32	William J Graham	Henrietta Blade	All & Other Lands
40325R	Certificate	22-Apr-32	Treasurer of Ontario	Re Williams J Graham Estate	All & Other Lands
39928	Grant	28-May-46	Henrietta Blade	Harold F Graham	\$1 acre All & OL
162674	Deed	11-Mar-76	Harold F. Graham & wife	Marricou Developments Ltd.	\$10 All & Other Lands Lien Clearance

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
174055	Deed	13-Aug-77	Marricou Developments Ltd.	Gilbert Grise In trust to Uses	\$2 All & Other Lands Lien Clearance
175366	Deposit	03-Oct-77		Harold F Graham	All & Other Lands
211948	Assignment of Rentals	30-Jul-82	Gilbert Grise in Trust	Credit Foncier	All & OL
212765	Agreement	20-Sep-82	Maurice Gartenberg	Credit Foncier	\$1. &c. 174059 postponed to 173227, 211943 & 211948
213143	Notice	08-Oct-82	Canadian Imperial Bank of Commerce		All & OL Security Deposit
213365	Agt. Post. M.	20-Oct-82	Maurice Gartenberg	Societe Generale (Canada)	\$1 All & OL
213138	Assignment of Leases	08-Nov-82	Robert Masters In Trust	Societe Generale (Canada)	\$1 All & OL
219370	Agreement	27-Jul-83	Societe Generale (Canada)	Credit Foncier	\$1. & prems. 174057 postponed to 211948
228982	Grant	01-Oct-84	Gilbert Grise In Trust	Guido Van Den Daele In Trust	All & OL
233552	Assgnt of Rent	31-May-85	Guido Van Den Daele	The National Victoria and Grey Trust Co.	All & OL
242550	Grant	02-Jun-86	Guido Van Den Daele	Regency Towers (Owen Sound) Ltd.	All & OL
242553	Assgnt of Leases and Rents	02-Jun-86	Regency Towers (Owen Sound) Ltd.	National Trust Co.	All & OL
243140	Re: Assgnt of Leases	25-Jun-86	Societe Generale (Canada)	Gilbert Grise	All & OL
243767	Re: A of Rentals	14-Jul-86	Credit Foncier	Gilbert Grise, In Trust	All & OL
244463	Re A of Rents	06-Aug-86	National Trust Co	Guido Van Den Daele	All & OL
429815	Charge	05-Dec-00	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$1, 650, 000.00 All & OL
518624	Charge	09-Mar-06	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$500,000.00 All & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
520893	Reassignment of Leases	27-Apr-06	National Trust Company	Regency Towers (Owen Sound) Ltd.	Re: 242551, 242553 & 3073238
Lot 134 West Edward Street					
	Patent	7 July 1888	Crown	William J Graham	All & other Lands
35669R	Will	26-Mar-32	William J Graham	Henrietta Blade	All & Other Lands
40325R	Certificate	22-Apr-32	Treasurer of Ontario	Re Williams J Graham Estate	All & Other Lands
39928	Grant	28-May-46	Henrietta Blade	Harold F Graham	\$1 acre All & OL
162674	Deed	11-Mar-76	Harold F. Graham & wife	Marricou Developments Ltd.	\$10 All & Other Lands Lien Clearance
174055	Deed	13-Aug-77	Marricou Developments Ltd.	Gilbert Grise In trust to Uses	\$2 All & Other Lands Lien Clearance
175366	Deposit	03-Oct-77		Harold F Graham	All & Other Lands
211948	Assignment of Rentals	30-Jul-82	Gilbert Grise in Trust	Credit Foncier	All & OL
212765	Agreement	20-Sep-82	Maurice Gartenberg	Credit Foncier	\$1. &c. 174059 postponed to 173227, 211943 & 211948
213143	Notice	08-Oct-82	Canadian Imperial Bank of Commerce		All & OL Security Deposit
213365	Agt. Post. M.	20-Oct-82	Maurice Gartenberg	Societe Generale (Canada)	\$1 All & OL
213138	Assignment of Leases	08-Nov-82	Robert Masters In Trust	Societe Generale (Canada)	\$1 All & OL
219370	Agreement	27-Jul-83	Societe Generale (Canada)	Credit Foncier	\$1. & prems. 174057 postponed to 211948
228982	Grant	01-Oct-84	Gilbert Grise In Trust	Guido Van Den Daele In Trust	All & OL
233552	Assgnt of Rent	31-May-85	Guido Van Den Daele	The National Victoria and Grey Trust Co.	All & OL
242550	Grant	02-Jun-86	Guido Van Den Daele	Regency Towers (Owen Sound) Ltd.	All & OL
242553	Assgnt of Leases and Rents	02-Jun-86	Regency Towers (Owen Sound) Ltd.	National Trust Co.	All & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
243140	Re: Assgnt of Leases	25-Jun-86	Societe Generale (Canada)	Gilbert Grise	All & OL
243767	Re: A of Rentals	14-Jul-86	Credit Foncier	Gilbert Grise, In Trust	All & OL
244463	Re A of Rents	06-Aug-86	National Trust Co	Guido Van Den Daele	All & OL
429815	Charge	05-Dec-00	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$1, 650, 000.00 All & OL
518624	Charge	09-Mar-06	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$500,000.00 All & OL
520893	Reassignment of Leases	27-Apr-06	National Trust Company	Regency Towers (Owen Sound) Ltd.	Re: 242551, 242553 & 3073238
Lot 136 West Edward Street					
	Patent	7 July 1888	Crown	William J Graham	All & other Lands
35669R	Will	26-Mar-32	William J Graham	Henrietta Blade	All & Other Lands
40325R	Certificate	22-Apr-32	Treasurer of Ontario	Re Williams J Graham Estate	All & Other Lands
39928	Grant	28-May-46	Henrietta Blade	Harold F Graham	\$1 acre All & OL
162674	Deed	11-Mar-76	Harold F. Graham & wife	Marricou Developments Ltd.	\$10 All & Other Lands Lien Clearance
174055	Deed	13-Aug-77	Marricou Developments Ltd.	Gilbert Grise In trust to Uses	\$2 All & Other Lands Lien Clearance
175366	Deposit	03-Oct-77		Harold F Graham	All & Other Lands
211948	Assignment of Rentals	30-Jul-82	Gilbert Grise in Trust	Credit Foncier	All & OL
212765	Agreement	20-Sep-82	Maurice Gartenberg	Credit Foncier	\$1. &c. 174059 postponed to 173227, 211943 & 211948
213143	Notice	08-Oct-82	Canadian Imperial Bank of Commerce		All & OL Security Deposit
213365	Agt. Post. M.	20-Oct-82	Maurice Gartenberg	Societe Generale (Canada)	\$1 All & OL
213138	Assignment of Leases	08-Nov-82	Robert Masters In Trust	Societe Generale (Canada)	\$1 All & OL
219370	Agreement	27-Jul-83	Societe Generale (Canada)	Credit Foncier	\$1. & prems. 174057 postponed to 211948

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
228982	Grant	01-Oct-84	Gilbert Grise In Trust	Guido Van Den Daele In Trust	All & OL
233552	Assgnt of Rent	31-May-85	Guido Van Den Daele	The National Victoria and Grey Trust Co.	All & OL
242550	Grant	02-Jun-86	Guido Van Den Daele	Regency Towers (Owen Sound) Ltd.	All & OL
242553	Assgnt of Leases and Rents	02-Jun-86	Regency Towers (Owen Sound) Ltd.	National Trust Co.	All & OL
243140	Re: Assgnt of Leases	25-Jun-86	Societe Generale (Canada)	Gilbert Grise	All & OL
243767	Re: A of Rentals	14-Jul-86	Credit Foncier	Gilbert Grise, In Trust	All & OL
244463	Re A of Rents	06-Aug-86	National Trust Co	Guido Van Den Daele	All & OL
429815	Charge	05-Dec-00	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$1, 650, 000.00 All & OL
518624	Charge	09-Mar-06	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$500,000.00 All & OL
520893	Reassignment of Leases	27-Apr-06	National Trust Company	Regency Towers (Owen Sound) Ltd.	Re: 242551, 242553 & 3073238
Lot 138 West Edward Street					
	Patent	7 July 1888	Crown	William J Graham	All & other Lands
35669R	Will	26-Mar-32	William J Graham	Henrietta Blade	All & Other Lands
40325R	Certificate	22-Apr-32	Treasurer of Ontario	Re Williams J Graham Estate	All & Other Lands
39928	Grant	28-May-46	Henrietta Blade	Harold F Graham	\$1 acre All & OL
162674	Deed	11-Mar-76	Harold F. Graham & wife	Marricou Developments Ltd.	\$10 All & Other Lands Lien Clearance
174055	Deed	13-Aug-77	Marricou Developments Ltd.	Gilbert Grise In trust to Uses	\$2 All & Other Lands Lien Clearance
175366	Deposit	03-Oct-77		Harold F Graham	All & Other Lands
211948	Assignment of Rentals	30-Jul-82	Gilbert Grise in Trust	Credit Foncier	All & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
212765	Agreement	20-Sep-82	Maurice Gartenberg	Credit Foncier	\$1. &c. 174059 postponed to 173227, 211943 & 211948
213143	Notice	08-Oct-82	Canadian Imperial Bank of Commerce		All & OL Security Deposit
213365	Agt. Post. M.	20-Oct-82	Maurice Gartenberg	Societe Generale (Canada)	\$1 All & OL
213138	Assignment of Leases	08-Nov-82	Robert Masters In Trust	Societe Generale (Canada)	\$1 All & OL
219370	Agreement	27-Jul-83	Societe Generale (Canada)	Credit Foncier	\$1. & prems. 174057 postponed to 211948
228982	Grant	01-Oct-84	Gilbert Grise In Trust	Guido Van Den Daele In Trust	All & OL
233552	Assgnt of Rent	31-May-85	Guido Van Den Daele	The National Victoria and Grey Trust Co.	All & OL
242550	Grant	02-Jun-86	Guido Van Den Daele	Regency Towers (Owen Sound) Ltd.	All & OL
242553	Assgnt of Leases and Rents	02-Jun-86	Regency Towers (Owen Sound) Ltd.	National Trust Co.	All & OL
243140	Re: Assgnt of Leases	25-Jun-86	Societe Generale (Canada)	Gilbert Grise	All & OL
243767	Re: A of Rentals	14-Jul-86	Credit Foncier	Gilbert Grise, In Trust	All & OL
244463	Re A of Rents	06-Aug-86	National Trust Co	Guido Van Den Daele	All & OL
429815	Charge	05-Dec-00	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$1, 650, 000.00 All & OL
518624	Charge	09-Mar-06	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$500,000.00 All & OL
520893	Reassignment of Leases	27-Apr-06	National Trust Company	Regency Towers (Owen Sound) Ltd.	Re: 242551, 242553 & 3073238
140 West Edward Street					
	Patent	7 July 1888	Crown	William J Graham	All & other Lands
35669R	Will	26-Mar-32	William J Graham	Henrietta Blade	All & Other Lands

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
40325R	Certificate	22-Apr-32	Treasurer of Ontario	Re Williams J Graham Estate	All & Other Lands
39928	Grant	28-May-46	Henrietta Blade	Harold F Graham	\$1 acre All & OL
162674	Deed	11-Mar-76	Harold F. Graham & wife	Marricou Developments Ltd.	\$10 All & Other Lands Lien Clearance
174055	Deed	13-Aug-77	Marricou Developments Ltd.	Gilbert Grise In trust to Uses	\$2 All & Other Lands Lien Clearance
175366	Deposit	03-Oct-77		Harold F Graham	All & Other Lands
211948	Assignment of Rentals	30-Jul-82	Gilbert Grise in Trust	Credit Foncier	All & OL
212765	Agreement	20-Sep-82	Maurice Gartenberg	Credit Foncier	\$1. &c. 174059 postponed to 173227, 211943 & 211948
213143	Notice	08-Oct-82	Canadian Imperial Bank of Commerce		All & OL Security Deposit
213365	Agt. Post. M.	20-Oct-82	Maurice Gartenberg	Societe Generale (Canada)	\$1 All & OL
213138	Assignment of Leases	08-Nov-82	Robert Masters In Trust	Societe Generale (Canada)	\$1 All & OL
219370	Agreement	27-Jul-83	Societe Generale (Canada)	Credit Foncier	\$1. & prems. 174057 postponed to 211948
228982	Grant	01-Oct-84	Gilbert Grise In Trust	Guido Van Den Daele In Trust	All & OL
233552	Assgnt of Rent	31-May-85	Guido Van Den Daele	The National Victoria and Grey Trust Co.	All & OL
242550	Grant	02-Jun-86	Guido Van Den Daele	Regency Towers (Owen Sound) Ltd.	All & OL
242553	Assgnt of Leases and Rents	02-Jun-86	Regency Towers (Owen Sound) Ltd.	National Trust Co.	All & OL
243140	Re: Assgnt of Leases	25-Jun-86	Societe Generale (Canada)	Gilbert Grise	All & OL
243767	Re: A of Rentals	14-Jul-86	Credit Foncier	Gilbert Grise, In Trust	All & OL
244463	Re A of Rents	06-Aug-86	National Trust Co	Guido Van Den Daele	All & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
429815	Charge	05-Dec-00	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$1, 650, 000.00 All & OL
518624	Charge	09-Mar-06	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$500,000.00 All & OL
520893	Reassignment of Leases	27-Apr-06	National Trust Company	Regency Towers (Owen Sound) Ltd.	Re: 242551, 242553 & 3073238
Lot 139 East Market Street					
	Patent	7 July 1888	Crown	William J Graham	All & other Lands
35669R	Will	26-Mar-32	William J Graham	Henrietta Blade	All & Other Lands
40325R	Certificate	22-Apr-32	Treasurer of Ontario	Re Williams J Graham Estate	All & Other Lands
39928	Grant	28-May-46	Henrietta Blade	Harold F Graham	\$1 acre All & OL
162674	Deed	11-Mar-76	Harold F. Graham & wife	Marricou Developments Ltd.	\$10 All & Other Lands Lien Clearance
174055	Deed	13-Aug-77	Marricou Developments Ltd.	Gilbert Grise In trust to Uses	\$2 All & Other Lands Lien Clearance
175366	Deposit	03-Oct-77		Harold F Graham	All & Other Lands
211948	Assignment of Rentals	30-Jul-82	Gilbert Grise in Trust	Credit Foncier	All & OL
212765	Agreement	20-Sep-82	Maurice Gartenberg	Credit Foncier	\$1. &c. 174059 postponed to 173227, 211943 & 211948
213143	Notice	08-Oct-82	Canadian Imperial Bank of Commerce		All & OL Security Deposit
213365	Agt. Post. M.	20-Oct-82	Maurice Gartenberg	Societe Generale (Canada)	\$1 All & OL
213138	Assignment of Leases	08-Nov-82	Robert Masters In Trust	Societe Generale (Canada)	\$1 All & OL
219370	Agreement	27-Jul-83	Societe Generale (Canada)	Credit Foncier	\$1. & prems. 174057 postponed to 211948
228982	Grant	01-Oct-84	Gilbert Grise In Trust	Guido Van Den Daele In Trust	All & OL
233552	Assgnt of Rent	31-May-85	Guido Van Den Daele	The National Victoria and Grey Trust Co.	All & OL

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
242550	Grant	02-Jun-86	Guido Van Den Daele	Regency Towers (Owen Sound) Ltd.	All & OL
242553	Assgnt of Leases and Rents	02-Jun-86	Regency Towers (Owen Sound) Ltd.	National Trust Co.	All & OL
243140	Re: Assgnt of Leases	25-Jun-86	Societe Generale (Canada)	Gilbert Grise	All & OL
243767	Re: A of Rentals	14-Jul-86	Credit Foncier	Gilbert Grise, In Trust	All & OL
244463	Re A of Rents	06-Aug-86	National Trust Co	Guido Van Den Daele	All & OL
429815	Charge	05-Dec-00	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$1, 650, 000.00 All & OL
518624	Charge	09-Mar-06	Regency Towers (Owen Sound) Ltd.	Bank of Montreal	\$500,000.00 All & OL
520893	Reassignment of Leases	27-Apr-06	National Trust Company	Regency Towers (Owen Sound) Ltd.	Re: 242551, 242553 & 3073238
Lot 136 West Market Street					
	Patent	21 May 1886	The Crown	James Douglas	All & Other Lands
685	B & S	27 Aug 1886	James Douglas and wife	Alexander Brass	\$470 & All Other Lands
38299	Tax Deed	17-Jan-45	Mayor and Treasurer	Corp City of Owen Sound	\$1104.63 & all Other Lands
39278	Tax Deed	10-Jun-46	Mayor and Treasurer	Corp City of Owen Sound	\$1104.63 & all Other Lands
39428	Grant	04-Oct-45	Corp City of Owen Sound	Hi Majesty King George VI	\$1 & c “ “ “
72336	Grant	09-Nov-61	Central M & Housing Corp	Willis H Karrow	S part 44 feet \$4575
137396	Deed	19-Mar-73	Central Mortgage and Housing Corporation	Franklin G Graham Frances S. J. Graham (?)	\$4000 do, do Joint Tenants and Other Lands
137421	Deed	28-Mar-73	Franklin G Graham, Frances S. J Graham	Director Veterans Land Act	\$2 do, do plan attached

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
158640	Certificate	08-Oct-75	Minister of Revenue	Re Estate of Franklin G Graham	N pt 22 ft and Other Lands and Rt of way
Lot 138 West Market Street					
	Patent	6 July 1888	The Crown	William J Graham	All & Other Lands
35669R	Will	26-Mar-32	William J Graham	Maria L Wiselands	All & Other Lands
40329R	Certificate	22-Apr-32	Treasurer of Ontario	Re William J Graham Estate	All & Other Lands
38410	Grant	24-Feb-45	A. Creighton Bradford Admin of Maria Wiselands and Johnathan S. Weslan et Wife	Jean S Walpole	\$3300. Prems All & OL Treasurer Record
45751	Grant	06-Mar-52	Jean S Walpole	Norman R Walpole	\$1 acre All & OL
92386	Deed	04-May-66	Norman R Walpole & wife	Morley D. B. Atton	\$12,200 All & OL
296292	Transfer	11-Oct-90	Estate of Morley Dwight Brice Atton, Dorothy Margaret Atton Executrix	Dorothy Margaret Atton	\$1 As in 92386 & OL
Lot 140 West Market Street					
	Patent	6 July 1888	The Crown	William J Graham	All & Other Lands
35669R	Will	26-Mar-32	William J Graham	Maria L Wiselands	All & Other Lands
40329R	Certificate	22-Apr-32	Treasurer of Ontario	Re William J Graham Estate	All & Other Lands
38410	Grant	24-Feb-45	A. Creighton Bradford Admin of Maria Wiselands and Johnathan S. Weslan et Wife	Jean S Walpole	\$3300. Prems All & OL Treasurer Record
45751	Grant	06-Mar-52	Jean S Walpole	Norman R Walpole	\$1 acre All & OL
92386	Deed	04-May-66	Norman R Walpole & wife	Morley D. B. Atton	\$12,200 All & OL
296292	Transfer	11-Oct-90	Estate of Morley Dwight Brice Atton, Dorothy Margaret Atton Executrix	Dorothy Margaret Atton	\$1 As in 92386 & OL
Lot 130 West Sound Street					
	Patent	18 Sept 1885	The Crown	William F Wolfe	All & Other Lands
2189	B & S	03-Jul-01	William F Wolfe and Wife	William S, D Graham	All \$1475 & Other Lands
2307	B & S	12-Sep-01	William S F Graham and With	Owen Sound Planning Co Ltd	\$12750 And other Lands

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
19195	B & S	01-Jul-09	Owen Sound Planning Co Ltd.	William S G Graham	Part 33 X 90 Feet \$1 Pt Lot 132 (?)
25288	Grant	09-Jun-19	Owen Sound Planning Co Ltd.	Dominion Oil Co Ltd.	Right of Way on 12 ft. \$1 and Lot 132
12 Bankruptcy Department	Receiving Order	15-Oct-27	Dominion Oil Ltd. Visitor	Norman L Martin Trustee	" do
31129	Agent for Sale	10-Dec-27	Norman L Martin Trustee of Dominion Oil Ltd	Walter G Scott	\$37,000 do do do
31616	Grant	21-Nov-28	Norman L Martin Trustee of Dominion Oil Ltd.	Dominion Oil Co Ltd Corp. 1928	Pt 1 1/3 acres \$2 & c. Right of way, Lots 136, 134 and Pt 132 Approved by inspectors
63209	Grant	01-Apr-59	Reliance Petroleum Ltd.	Supertest Petroleum Corporation Limited	All \$1. C Less W. pt. 33 X 99 and Right of way- & Other Lands
102407	Deed	13-Feb-68	Supertest Petroleum Corporation limited	John F McArthur	All \$3100 Do Do To Do (?)
147062	Certificate	15-May-74	Treasurer of Ontario	William A D Graham (Estate)	W pt 33 X 99 feet & pt Lot 132
149488	Consent	27-Aug-74	Department of National Revenue	William A D Graham (Estate)	W pt 33 X 99 feet & pt Lot 132
149560	Q. G.	19-Aug-74	John F McArthur	Richard McArthur, Lynda McArthur	Pt 12 X 99 Feet \$1 G of A. Certificate Joint tenants
149561	Certificate	27-Aug-74	Treasurer of Ontario	William A. D. Graham (estate)	Pt. 33 X 99 feet and Part lot 132
149562	Deed	20-Aug-74	Edward D Graham and wife	Richard McArthur and Lynda McArthur	Do do Joint Tenants (illegible)
160093	Deed	12-Dec-75	John F McArthur	Noxa Investments Ltd.	E pt & Other Lands Lien Clearance plan attached
181478	Q.G.	29-May-78	John F McArthur	Richard McArthur Lynda McArthur as joint tenants	\$1 Pt. 12 X 99 ft., 21 ft E of N of (?) and pt. Lot 132 incld.
181500	Deed	12-May-78	Richard McArthur Lynda McArthur	David M Gray Heather R Gray as joint tenants	\$2 W pt. 75 X 99 ft. and pt. Lot 132 incld.

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
181501	M	12-May-78	David M Gray Heather R Gray	Victoria and Grey Trust Company	\$32,380 do
211600	Deed	15-Jul-82	David M Gray Heather R Gray	Douglas F Waller Ruby I Waller as J.T.	\$10.& c as in No. 181500
228653	Mort	20-Sep-84	Noxa Investments Ltd.	The Toronto- Dominion Bank	\$200,000. E Part & OL
232808	Grant	29-Apr-85	John F McArthur	Noxa Investments Ltd.	E pt. & OL with R of W
25310	Grant	06-Aug-85	Noxa Investments Ltd.	632063 Ontario Ltd.	E. Part & OL
Lot 132 West Sound Street					
	Patent	18 Sept 1885	The Crown	William F Wolfe	All & Other Lands
2189	B & S	03-Jul-01	William F Wolfe and Wife	William S, D Graham	All \$1475 & Other Lands
2307	B & S	12-Sep-01	William S F Graham and Wife	Owen Sound Planning Co Ltd	\$12750 And other Lands
25288	Grant	09-Jun-19	Owen Sound Planning Co Ltd.	Dominion Oil Co Ltd.	\$1 pt. 33 X 99 for right of way & Other Lands (illegible)
31129	Agent for Sale	10-Dec-27	Norman L Martin Trustee of Dominion Oil Ltd.	Walter G Scott	\$37,000.00 do do do
31616	Grant	21-Nov-28	Norman L Martin Trustee of Dominion Oil Ltd.	Dominion Oils Co Ltd Incorp 1928	Pt 1 1/3 acres \$2 &c tax asset copy \$2000 & right of way Lots 136, 132, and pt. 130 approved by Inspector
63209	Grant	01-Apr-59	Reliance Petroleum Ltd.	Supertest Petroleum Corporation Limited	All \$1 &c & Other Lands
102407	Deed	13-Feb-68	Supertest Petroleum Corporation limited	John F McArthur	\$3100 do do
160093	Deed	12-Dec-75	John F McArthur	Noxa Investments Ltd.	\$2 pt. All & Other lands Lien Clearance Plan Attached
228653	Mort	20-Sep-84	Noxa Investments Ltd.	The Toronto- Dominion Bank	\$200,000 Part and OL
232808	Grant	29-Apr-85	John F McArthur	Noxa Investments Ltd.	Part and OL with R of W
	Patent	18 Sept 1885	The Crown	William F Wolfe	All & Other Lands

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
2189	B & S	03-Jul-01	William F Wolfe and Wife	William S, D Graham	All \$1475 & Other Lands
2307	B & S	12-Sep-01	William S F Graham and With	Owen Sound Planning Co Ltd	\$12750 And other Lands
25288	Grant	09-Jun-19	Owen Sound Planning Co Ltd.	Dominion Oil Co Ltd.	\$1 & (illegible)
12 Bankruptcy	Receiving Order	15-Oct-27	Dominion Oil Ltd (Debtor)	Norman L Martin (Trustee)	Do do do
31129	Agent for Sale	10-Dec-27	Norman L Martin Trustee of Dominion Oil Ltd.	Walter G Scott	\$37,000.00 do do do
31616	Grant	21-Nov-28	Norman L Martin Trustee of Dominion Oil Ltd.	Dominion Oils Co Ltd Incorp 1928	Pt 1 1/3 acres \$2 &c tax asset copy \$2000 & right of way Lots 134, and pt. 130 approved by Inspector
63209	Grant	01-Apr-59	Reliance Petroleum Ltd.	Supertest Petroleum Corporation Limited	All \$1 &c & Other Lands
102407	Deed	13-Feb-68	Supertest Petroleum Corporation limited	John F McArthur	\$3100 do do
160093	Deed	12-Dec-75	John F McArthur	Noxa Investments Ltd.	\$2 pt. & Other lands Lien Clearance Plan Attached
228653	Mort	20-Sep-84	Noxa Investments Ltd.	The Toronto- Dominion Bank	\$200,000 Part and OL
232808	Grant	29-Apr-85	John F McArthur	Noxa Investments Ltd.	Part and OL with R of W
235310	Grant	06-Aug-85	Noxa Investments Ltd.	632063 Ontario Ltd.	W 33 feet & OL
Lot 134 West Sound Street					
	Patent	21 May 1886	The Crown	James Douglas	All & Other Lands
685	B & S	27 Aug 1886	James Douglas and Wife	Alexander Brass	All \$470 & Other Lands
38299	Tax Deed	17-Jan-45	Mayor and Treasurer	Corp of City Owen Sound	All \$1104.63 & Other Lands
39278	Tax Deed	10-Jan-46	Mayor and Treasurer	Corp Of City Owen Sound	All \$1104.63 & Other lands confirming No. 38299
39978	Grant	28-Feb-49	Corp of City Owen Sound	McManus Petroleum Ltd	All \$200 & Lot 140

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
43073	Grant	28-Feb-49	McManus Petroleum Ltd	Reliance Petroleum Ltd	All \$1.& c & other lands
63209	Grant	01-Apr-59	Reliance Petroleum Ltd	Supertest Petroleum Corporation Limited	All \$1.c & Other Lands
102407	Deed	13-Feb-68	Supertest Petroleum Corporation Limited	John F McArthur	W pt. 33 feet \$3100 & Other lands
151008	Deed	15-Apr-74	B.P. Canada Ltd formerly Supertest Petroleum Corporation Limited	William P McArthur In Trust	E pt. \$1 do do do Lien Clearance
160094	Deed	12-Dec-75	William P McArthur & wife	Noxa Investments Limited	\$2 All & Other Lands, Lien Clearance
228653	Mort	20-Sep-84	Noxa Investments Ltd.	The Toronto Dominion Bank	\$200,0 All & OL
232808	Grant	29-Apr-85	John F McArthur	Noxa Investments Ltd.	W part 33 feet & OL
235310	Grant	06-Aug-85	Noxa Investments Ltd.	632063 Ontario Ltd.	W 33 feet & OL
Lot 136 West Sound Street					
	Patent	18 Sept 1885	The Crown	William F Wolfe	All & Other Lands
2189	B & S	03-Jul-01	William F Wolfe and Wife	William S, D Graham	All \$1475 & Other Lands
2307	B & S	12-Sep-01	William S F Graham and With	Owen Sound Planning Co Ltd	\$12750 And other Lands
25288	Grant	09-Jun-19	Owen Sound Planning Co Ltd.	Dominion Oil Co Ltd.	\$1 & (illegible)
12 Bankruptcy	Receiving Order	15-Oct-27	Dominion Oil Ltd (Debtor)	Norman L Martin (Trustee)	Do do do
31129	Agent for Sale	10-Dec-27	Norman L Martin Trustee of Dominion Oil Ltd.	Walter G Scott	\$37,000.00 do do do
31616	Grant	21-Nov-28	Norman L Martin Trustee of Dominion Oil Ltd.	Dominion Oils Co Ltd Incorp 1928	Pt 1 1/3 acres \$2 & c tax asset copy \$2000 & right of way Lots 134, and pt. 130 approved by Inspector
63209	Grant	01-Apr-59	Reliance Petroleum Ltd.	Supertest Petroleum Corporation Limited	All \$1 & c & Other Lands
102407	Deed	13-Feb-68	Supertest Petroleum Corporation limited	John F McArthur	\$3100 do do

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
160093	Deed	12-Dec-75	John F McArthur	Noxa Investments Ltd.	\$2 pt. & Other lands Lien Clearance Plan Attached
228653	Mort	20-Sep-84	Noxa Investments Ltd.	The Toronto- Dominion Bank	\$200,000 Part and OL
232808	Grant	29-Apr-85	John F McArthur	Noxa Investments Ltd.	Part and OL with R of W
235310	Grant	06-Aug-85	Noxa Investments Ltd.	632063 Ontario Ltd.	Part & OL
Lot 138 West Sound Street					
	Patent	21 May 1886	The Crown	James Douglas	All & Other Lands
685	B & S	27 Aug 1886	James Douglas and Wife	Alexander Brass	All \$470 & Other Lands
38299	Tax Deed	17-Jan-45	Mayor and Treasurer	Corp of City Owen Sound	All \$1104.63 & Other Lands
39278	Tax Deed	10-Jan-46	Mayor and Treasurer	Corp Of City Owen Sound	All \$1104.63 & Other lands confirming No. 38299
39978	Grant	28-Feb-49	Corp of City Owen Sound	McManus Petroleum Ltd	All \$200 & Lot 140
43073	Grant	28-Feb-49	McManus Petroleum Ltd	Reliance Petroleum Ltd	All \$1.& c & other lands
63209	Grant	01-Apr-59	Reliance Petroleum Ltd	Supertest Petroleum Corporation Limited	All \$1.c & Other Lands
102407	Deed	13-Feb-68	Supertest Petroleum Corporation Limited	John F McArthur	W pt. 33 feet \$3100 & Other lands
151008	Deed	15-Apr-74	B.P. Canada Ltd formerly Supertest Petroleum Corporation Limited	William P McArthur In Trust	E pt. \$1 do do do Lien Clearance
160094	Deed	12-Dec-75	William P McArthur & wife	Noxa Investments Limited	\$2 All & Other Lands, Lien Clearance
228653	Mort	20-Sep-84	Noxa Investments Ltd.	The Toronto Dominion Bank	\$200,0 All & OL
232808	Grant	29-Apr-85	John F McArthur	Noxa Investments Ltd.	W part 33 feet & OL
235310	Grant	06-Aug-85	Noxa Investments Ltd.	632063 Ontario Ltd.	W 33 feet & OL
Lot 140 West Sound Street					

Instr. No	Instr. Type	Date	Grantor	Grantee	Comments
	Patent	21 May 1886	The Crown	James Douglas	All & Other Lands
685	B & S	27 Aug 1886	James Douglas and Wife	Alexander Brass	All \$470 & Other Lands
38299	Tax Deed	17-Jan-45	Mayor and Treasurer	Corp of City Owen Sound	All \$1104.63 & Other Lands
39278	Tax Deed	10-Jan-46	Mayor and Treasurer	Corp Of City Owen Sound	All \$1104.63 & Other lands confirming No. 38299
39978	Grant	28-Feb-49	Corp of City Owen Sound	McManus Petroleum Ltd	All \$200 & Lot 138
43073	Grant	28-Feb-49	McManus Petroleum Ltd	Reliance Petroleum Ltd	All \$1. & c & other lands
63209	Grant	01-Apr-59	Reliance Petroleum Ltd	Supertest Petroleum Corporation Limited	All \$1.c & Other Lands
102407	Deed	13-Feb-68	Supertest Petroleum Corporation Limited	John F McArthur	W pt. 33 feet \$3100 & Other lands
151008	Deed	15-Apr-74	B.P. Canada Ltd formerly Supertest Petroleum Corporation Limited	William P McArthur In Trust	E pt. \$1 do do do Lien Clearance
228653	Mort	20-Sep-84	Noxa Investments Ltd.	The Toronto Dominion Bank	\$200,0 All & OL
235310	Grant	06-Aug-85	Noxa Investments Ltd.	632063 Ontario Ltd.	W 33 feet & OL

Ministry of Tourism, Culture and Sport

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Mar 11, 2019

Scarlett Janusas (P027)
 Scarlett Janusas Archaeology Inc.
 PO BOX none Tobermory ON N0H 2R0

RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "STAGE 1 ARCHAEOLOGICAL ASSESSMENT FOR BROOKE AREA BASIN A3, LOTS 129, 131, 133, 135, 137, 139 EAST AMELIA STREET, 130 WEST EDWARD STREET, 135, 137, 139 EAST EDWARD STREET, 136, 138, 140 WEST MARKET STREET, PT LOT 139 EAST MARKET STREET AND LOTS 130, 132, 134, 136, 138, 140 WEST SOUND STREET, TOWN PLOT OF BROOKE, GEOGRAPHIC TOWNSHIP OF SARAWAK, CITY OF OWEN SOUND, GREY COUNTY, ONTARIO ORIGINAL REPORT ", Dated Feb 25, 2019, Filed with MTCS Toronto Office on Mar 11, 2019, MTCS Project Information Form Number P027-0331-2018, MTCS File Number 0008311

Dear Ms. Janusas:

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18.¹ This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 Standards and Guidelines for Consultant Archaeologists set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.

The report documents the assessment of the study area as depicted in Map 15: Recommended Stage 2 Assessment Methodology and Maps 16 through 19: Recommended Stage 2 Assessment Methodology for Reaches 1, 2, 3, 4, 5 and 6 of the above titled report and recommends the following:

Based upon the background research of past and present conditions, and the property visit, the following is recommended:

- A Stage 2 archaeological assessment is recommended for approximately 56% of the Study Area (areas of archaeological potential), more specifically: 1) the west side of Reach 1 should be the subject of Stage 2 archaeological assessment if there is any proposed development, excluding routine maintenance of the existing culvert; 2) the west side of Reach 2 exhibit potential and will require Stage 2 archaeological assessment if this area is to be developed; 3) the water course in Reach 3 has been dredged several times, although the majority of the area on either side of the course has remained undeveloped. Should any

development be proposed in this area, Stage 2 archaeological assessment is recommended. 4) Reach 4 is a mix of areas of both archaeological potential and no potential. Those areas of archaeological potential are recommended for Stage 2 archaeological assessment should development be proposed within Reach 4. 5) There is no potential for Reach 5, and no further archaeological assessment is required in the area of Reach 5. 6) There is no archaeological potential for Reach 6 and no further archaeological assessment is recommended within the Reach 6 area.

•Compliance legislation must be adhered to in the event of discovery of deeply buried cultural material or features

As per Section 2.1.2 Standards 1, 2, and 5-9 of the MTCS 2011 Standards and Guidelines, it is recommended that areas of archaeological potential as identified on Map 15 be subject to a Stage 2 archaeological assessment. Based on the current condition of the land, the area cannot be ploughed. Stage 2 archaeological assessment should be conducted using a test pitting methodology conducted in five metre intervals across the areas of archaeological potential. Each test pit should be at least 30 cm in diameter and excavated a minimum of five cm into subsoil and examined for stratigraphy, cultural features, or evidence of fill. All soil shall be screened through mesh no greater than six mm, all artifacts should be collected according to their associated test pit, and all test pits backfilled unless instructed not to by the landowner/proponent. If test pits are found to be positive (artifacts or cultural features), test pitting should be intensified around the positive test pits with eight additional test pits excavated at 2.5 metre intervals around the positive test pit. If there are sufficient positive test pits located to recommend a Stage 3 archaeological assessment (and sufficient materials), no additional intensification is required. If there is some question as to whether the positive test pit(s) is sufficient for a recommendations of Stage 3 assessment, a minimum of one – one metre square test unit must be excavated over the positive test pit. All recovered archaeological materials shall be bagged and tagged according to provenience.

This archaeological assessment has been conducted under the 2011 Standards and Guidelines for Consultant Archaeologists (Ministry of Tourism, Culture and Sport 2011).

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

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

Sincerely,

Sarah Roe
Archaeology Review Officer

cc. Archaeology Licensing Officer
Peter Paquette, City of Owen Sound
Chris Webb, Engineering Services, City of Owen Sound

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

CULTURAL HERITAGE EVALUATION REPORT: BROOKE AREA BASIN A3



Prepared for:

**GM BluePlan Engineering Limited (GMBP)
City of Owen Sound**

Prepared by:

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April 26, 2018
SJAI ©

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CULTURAL HERITAGE EVALUATION REPORT: BROOKE AREA BASIN A3

1.0 INTRODUCTION

1.1 Project Description

The proponent retained the services of Scarlett Janusas Archaeology Inc. (SJA) to conduct a cultural heritage resource evaluation report for Brooke Area Basin A3 (Figure 1). The following is a description of the project (personal communication, Andrea Nelson 11/01/2018):

“In July, 2008, GM BluePlan Engineering Limited (GMBP), on behalf of the City of Owen Sound (City) and the Township of Georgian Bluffs (Township), completed a “Brooke Area Stormwater Management Study” (BAWSM Study), which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one of these drainage areas.

Brooke Area Basin A3 is generally bounded by West Street in the west, 23rd Street West in the north, the Eddie Sargent Parkway (ESP; Grey Road 1) in the east, and the 17th Street West and 18th Street West rights-of-way (ROW) in the south. The specific Study Area includes the outlet portion of the drainage system of Basin A3, which is located entirely within the City’s boundaries; east of 8th Avenue West to the outlet at Kelso Beach.

The BASWM Study identified various deficiencies with drainage infrastructure within the City. The City has chosen to investigate in greater detail, by following a Master Plan approach, the outlet system for Brooke Area Basin A3 with the Study Area broken down into the following component reaches:

- i) Reach #1 – Open Channel – East of 8th Avenue West to 6th Avenue West*
- ii) Reach #2 – Culvert – 6th Avenue West and 21st Street West*
- iii) Reach #3 – Open Channel / Culvert – 21st Street West to 20th Street West*
- iv) Reach #4 – Open Channel – 20th Street West to 19th Street West*
- v) Reach #5 – Culvert Inlet System – 19th Street West near 5th Avenue West*
- vi) Reach #6 – Storm Sewer System – 19th Street West, from Inlet System to ESP*
- vii) Reach #7 – Outlet System – ESP to Kelso Beach”*

This specific project applies only to Reaches 1 through 6, as illustrated in Figure 2.



Figure 1: Regional Location of Study Area (Toporama 2017)

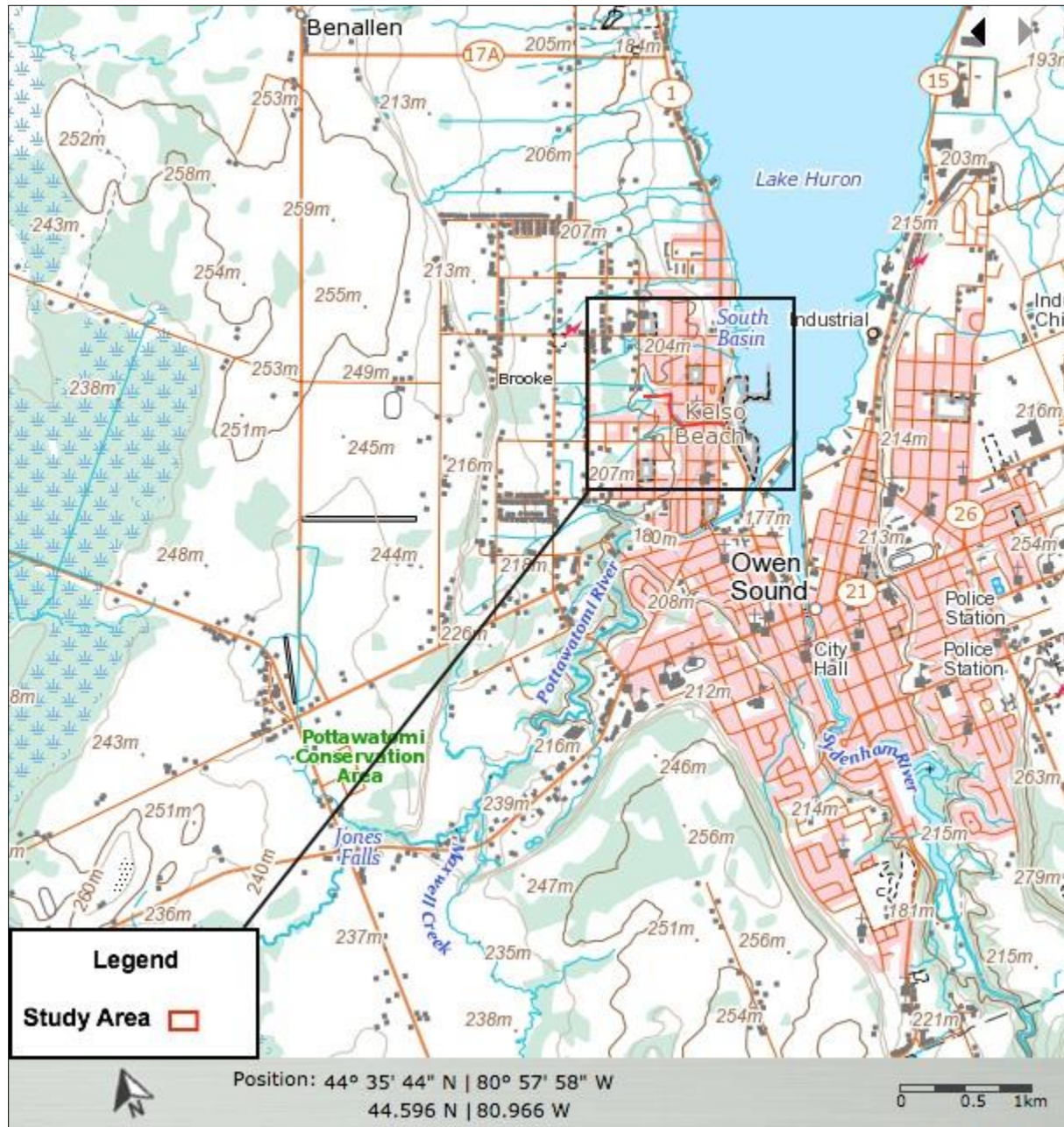


Figure 2: Development Map Showing the Brooke A3 Basin

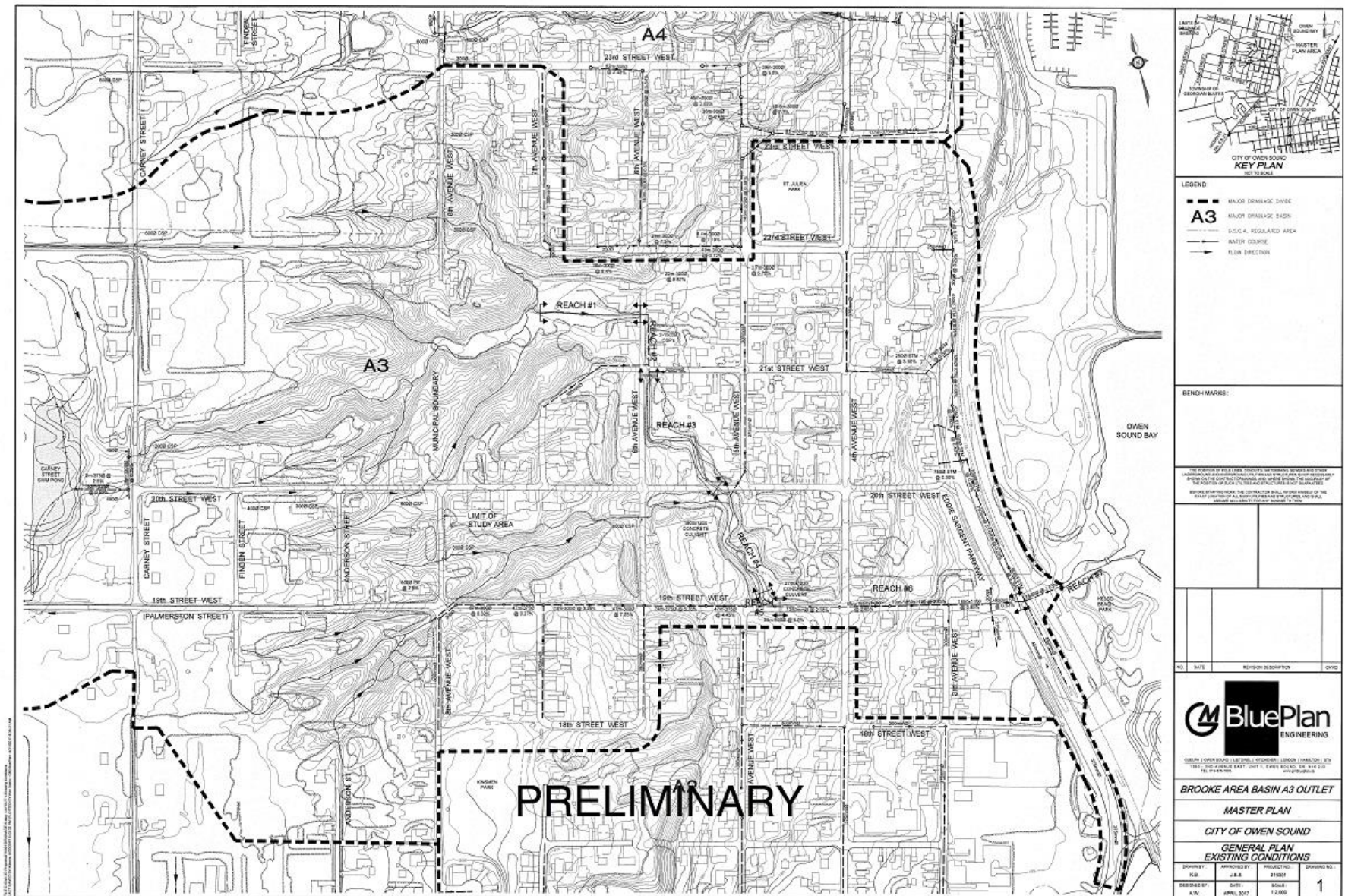
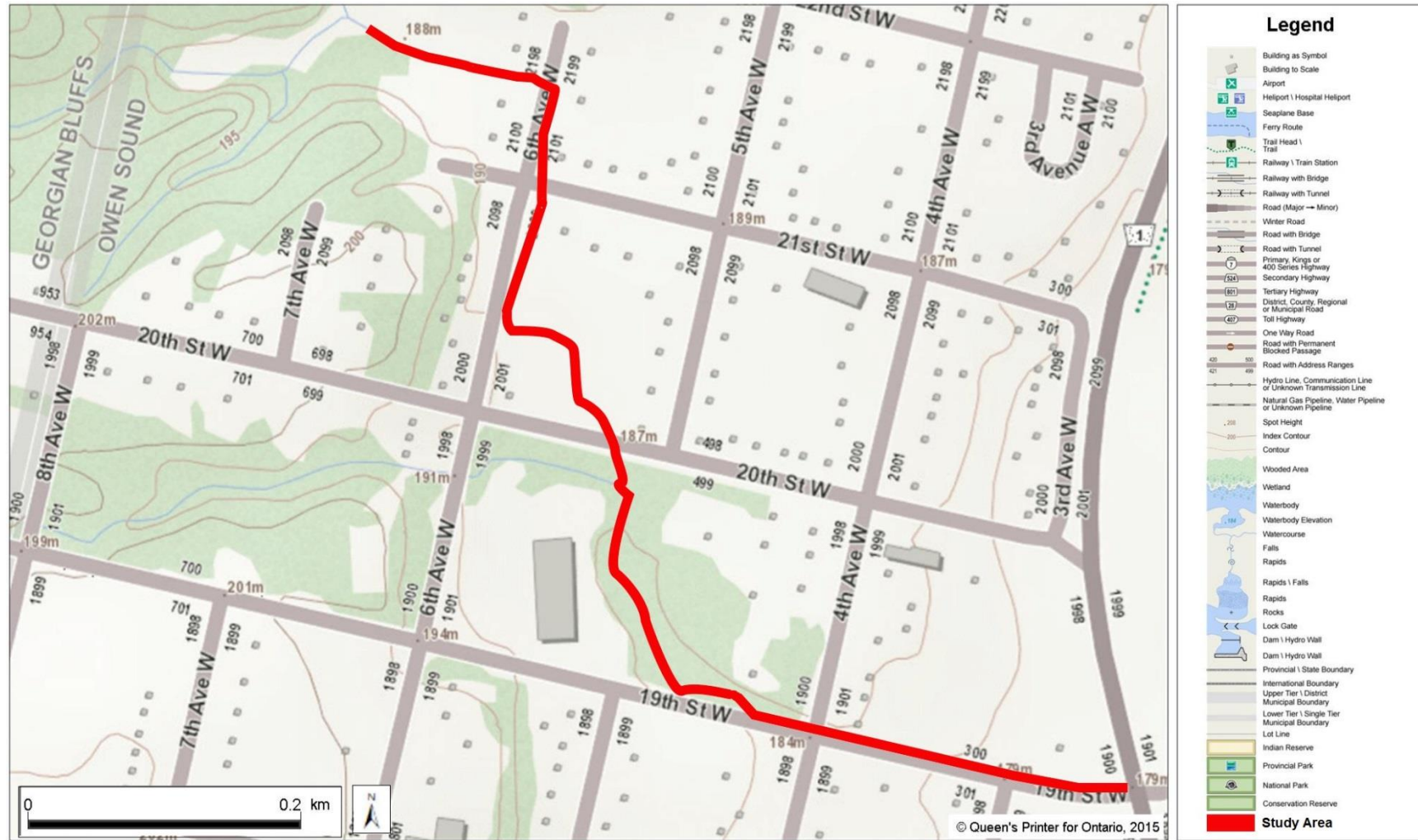


Figure 3: Topographic Map of Study Area



1.2 Built Heritage and Cultural Heritage Landscape Planning Tools

1.2.1 Provincial Interests in Planning for Cultural Heritage

Ontario Regulation 09/06 was used to determine cultural heritage value or interest (*Ontario Heritage Act* 1974). This section of the act sets out criteria that would be used to designate a structure under Section 29 of the Act. The following criteria are considered for this purpose:

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

The *Planning Act* is the legislative framework for land use planning. One of the objectives of the Act is to identify matters of provincial interest in both provincial and municipal planning decisions. Section 2 of the *Planning Act* identified matters of provincial interest, including the conservation of significant features of architectural, cultural, historical, archaeological and/or scientific interest. Municipalities are tasked with regarding these matters of provincial interest as part of their duties under the *Planning Act*.

The Ontario Heritage Trust provides the Heritage Toolkit as a resource to provincial interests.



1.2.2 Provincial Policy Statement

The 2014 Provincial Policy Statement (PPS) provides “*policy direction on matters of provincial interest related to land use planning and development*”. The PPS is issued under Section 3 of the *Planning Act*. It became effective April 30th, 2014.

“In respect of the exercise of any authority that affects a planning matter, Section 3 of the Planning Act requires that decisions affecting planning matters “shall be consistent with” policy statements issued under the Act” (Ministry of Municipal Affairs and Housing 2014:1).

Section 2.6, (2.6.1 to 2.6.5) states (ibid: 29):

- “2.6.1 Significant built heritage resources and significant cultural heritage landscapes shall be conserved.*
- 2.6.2 Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archeological potential unless significant archaeological resources have been conserved.*
- 2.6.3 Planning authorities shall not permit development and site alteration on adjacent lands to protected heritage property except where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected property will be conserved.*
- 2.6.4 Planning authorities should consider and promote archaeological management plans and cultural plans in conserving cultural and archaeological resources.*
- 2.6.5 Planning authorities shall consider the interests of Aboriginal communities in conserving cultural heritage and archaeological resources.”*

The 2014 PPS defines built heritage as (ibid: 38):

“a building, structure, monument, installation or any manufactured remnant that contributes to a property’s cultural heritage value or interest identified by a community, including an Aboriginal community. Built heritage resources are generally located on property that has been designated under Parts IV or V of the Ontario Heritage Act, or included on local, provincial and/or federal registers”.

The 2014 PPS defines cultural heritage landscapes as (ibid: 40):

“a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Aboriginal community. The area may involve features such as structures, spaces, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Examples may include, but are not limited to, heritage conservation districts named under the Ontario Heritage Act, villages, parks, gardens, battlefields, main streets and neighbourhoods, cemeteries, trailways, viewsheds, natural areas and industrial complexes of heritage significance; and areas



recognized by federal or international designation authorities (e.g. a National Historic Site or District designation or a UNESCO World Heritage Site)."

The 2014 PPS defines significance with regard to cultural heritage and archaeology, as (ibid: 49):

"...resources that have been determined to have cultural heritage value or interest for the important contribution they make to our understanding of the history of a place, an event, or a people."

Additional definitions are in the Provincial Policy Statement (PPS 2014).

1.2.3 Ministry of Tourism, Culture and Sport

The *Ontario Heritage Act* is administered by the Ministry of Tourism, Culture and Sport, and reviews heritage matters identified in environmental assessments. Part IV, Section 29 of the *Act*, address properties with cultural value or interest. A property can be designated thereby providing protection for heritage resources from inappropriate modification or demolition. Part IV, Section 27 (1.2) of the *Act* allows a municipality to list a property as having cultural value or interest, but the latter does not afford the property protection other than to identify the property as having cultural heritage value or interest.

Regulation 9/06 of the *Act* provides the framework for the determination of cultural heritage value or interest. For example, if the bridge is determined to have cultural heritage value or interest, the municipality can either designate the structure or list it.

In addition, the Province can choose to designate a structure if it deems it to be of provincial significance.

1.2.4 Municipal Class Environmental Assessments (MCEA)

The Ministry of Environment (MOE) implements the *Ontario Environmental Assessment Act*. Part 1, Section 1 (1) of the *Act* states:

"environment" means...(c) the social, economic and cultural conditions that influence the life of humans or a community, (d) any building, structure, machine or other device or thing made by humans".

The Municipal Class Environmental Assessment (MCEA) outlines a procedure whereby municipalities can comply with the requirements of the *Environmental Assessment Act*. It identifies potential positive and negative effects of projects such as road improvements, facility expansions or to facilitate a new service. The process includes an extensive evaluation of impacts on the natural and social environment. The Municipal Class EA applies to municipal infrastructure projects including roads, water and



wastewater projects. Since projects undertaken by municipalities can vary in their environmental impact, such projects are classified in terms of schedules.

- Schedule A generally includes normal or emergency operational and maintenance activities where the environmental effects of these activities are usually minimal, and therefore these projects are pre-approved.
- Schedule B generally includes improvements and minor expansions to existing facilities where there is the potential for some adverse environmental impacts and therefore, the municipality is required to proceed through a screening process including consultation with those who may be affected.
- Schedule C generally includes the construction of new facilities and major expansions to existing facilities, and these projects proceed through a five phased environmental assessment planning process.

The Class EA planning process is broken down into five phases:

- Phase 1: Identify the problem or opportunity.
- Phase 2: Identify alternative solutions.
- Phase 3: Examine alternative design concepts for the preferred solution.
- Phase 4: Prepare Environmental Study Report (ESR).
- Phase 5: Implementation (contract drawings and documents, construction and operation).

1.2.5 County of Grey Official Plan

The County of Grey's Official Plan has been amended in 1997, 1998, 1999, 2000 and most recently in 2012 (Grey County 2013).

Municipal Official Plans allow for the implementation of the *Provincial Policy Statement* (Section 2.2) under the *Municipal Act*.

Section 3 of the County of Grey Official Plan deals with the conservation of historic resources in the County.

"The County of Grey has a rich and diverse cultural heritage, which includes sites of archaeological value; buildings and structural remains of historical, architectural and contextual value; and rural, village and urban districts or landscapes of historic and scenic interests. The County recognizes the importance of its cultural heritage resources and in managing them in a responsible manner which perpetuates their use and benefit to the community."

Specifically, Section 3(2) states:



“Local municipalities will identify cultural heritage resources by establishing and maintaining a register of properties situated in the municipality that are of cultural heritage value or interest. Local municipalities will include on their register, all properties designated under Part IV, V or VI of the Heritage Act and including but not limited to:

- (a) properties that have heritage conservation easements or covenants registered against title*
- (b) cultural heritage resources of interest to the County*
- (c) cultural heritage resources identified in provincial or federal inventories*
- (d) additional cultural heritage resources that the council of the local municipalities believe to be of cultural heritage value or interest*
- (e) areas of archaeological potential and archaeological and historical resources identified by the Province”*

1.2.5 City of Owen Sound Study

At this current time, the project is not part of a Municipal Class EA, but rather the City of Owen Sound is conducting due diligence by having a cultural heritage assessment evaluation conducted in advance of any infrastructure upgrading for the area.



2.0 ASSESSMENT METHODOLOGY

A field visit was conducted of the Study Area and adjacent properties on February 22, 2018 under sunny skies with a high of -3 degrees C.

A photographic record was maintained of the Study Area, the surrounding landscape, and any properties located within, or adjacent to, the Study Area. Three forms were completed on site: 1) photographic log; 2) Canadian Inventory of Historic Building form; and, 3) Inventory for Roadscapes and Cultural Landscapes form. The product of these field notes and field forms assisted in the evaluation process of the cultural and built heritage of the area.

If a property is to be designated under Section 29 of the *Ontario Heritage Act*, it must have cultural heritage value or interest as presented in Table 1 below.

Table 1: Criteria Identifying Cultural Heritage Value or Interest

Criteria	Description
Design or Physical Value	Is a rare, unique, representative or early example of a style, type, expression, material or construction method
	Displays a high degree of craftsmanship or artistic merit
	Demonstrates a high degree of technical or scientific achievement.
Historical or Associative Value	Has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community
	Yields, or has the potential to yield, information that contributes to an understanding of a community or culture
	Demonstrates or reflects the work of an architect, artist, builder, designer or theorist who is significant to a community
Contextual Value	Is important in defining, maintaining, or supporting the character of an area
	Is physically, functionally, visually or historically linked to its surroundings
	Is a landmark



3.0 HISTORIC BACKGROUND

3.1 Township History

The following is from the Stage 1 archaeological assessment report prepared by Scarlett Janusas Archaeology Inc. (2018), who conducted the archaeological assessment for the Brooke Basin A3 under project information number P027-0331-2018.

“The Chippewas of Saugeen First Nation and the Chippewas of Nawash First Nation share the same traditional territories in southwestern Ontario. They were a part of the ancient Three Fires Confederacy of Ojibway, Odawa, and Pottawatomi. Prior to 1650, these groups inhabited the lands bordering on Lake Huron. Around 1650 conflict with the Iroquois forced them to move westward. After the defeat of the Iroquois, some of the Ojibway settled in the Saugeen Territory. The Ojibwa retained all territories won during the battles with the Iroquois until they surrendered them to the Crown more than a century later.

Throughout the 18th century the Saugeen Territory was inhabited by several generations of Ojibway whose immediate territory was threatened neither by war nor by European settlers. Some of these Ojibwa were the Wahbadicks, the Newashes, the Wahwahnoses, and the Metegwob who fished, trapped and hunted along the many rivers, streams and lakes of their lands (Schmalz 1991:2-9). It should also be noted that there were many “foreign” Indians from the United States that settled within the territory as well.

The Saugeen Ojibway Nation (SON) traditional territories cover the watersheds bounded by the Maitland River and the Nottawasaga River (east of Collingwood on Georgian Bay). The area includes all the Bruce Peninsula (which was once known as the Saugeen Peninsula), all of Grey and Bruce Counties, and parts of Huron, Dufferin, Wellington and Simcoe Counties.

To accommodate British and European immigration, officers of the Crown began their quest to secure Aboriginal lands toward the end of the 18th century. Large portions of the Mississauga Tract along the northern shores of Lake Ontario had been obtained in 1792, and the bulk of the Huron Tract including present day Grey County in 1825. On August 9, 1836, after negotiations on Manitoulin Island between the chiefs of the Saugeen Ojibway and the Government of Upper Canada led by Sir Francis Bond Head, the Crown gained title to approximately 1.5 million acres (607,028.5 hectares) of Indigenous land along the shores of Lake Huron (Schmalz 1977:233). The “Saugeen Tract Agreement” as it was called, was registered as Crown Treaty #45 ½ and included all of present day Grey County (Maps 5 - 8). That was surrendered to the Crown through Crown Treaty # 72 dated October 12, 1854. Both treaties allowed for the presence of five reservations on the Peninsula, including: Saugeen, Chief’s Point, Colpoy’s Bay (Oxenden), Newash and Cape Croker (Davidson 1972:13).



The Newash (now known as Nawash) reservation remained until the “Peter Jones Treaty” of 1857. The following is an excerpt from the History of Cape Croker (Self Published 1980: 5) and explains the events leading up to the signing of the treaty:

‘John Telfur, a land agent and surveyor Charles Rankin P. L., came to Nawash, October 1840, they informed the Indians that the land upon which they now resided was to be surrendered and sold for their benefit. This was followed by the signing of the “Peter Jones Treaty”.

One surprising feature noted in the treaty was that it was signed at Toronto on February 9th 1857. How the Red delegation reached that city in the middle winter, with the nearest railway connection then at Collingwood is not known to this writer. It appears strange too that Chief Nawash who was the acknowledged leader of the band, had apparently no part in the transaction. It is possible that the chief by that time was too aged or infirm to travel far. He is known to have agreed to the transfer and to have later taken part in the migration.

In the spring of 1857 soon after the treaty was signed, Lord Burgh who had followed Oliphant as superintendent of Indian Affairs, organized the survey of the Nawash lands. The village was laid out in town lots and given the name of “Town of Brookeholm” in honour of Burg’s kinsman Major Brooke of Sarawak. The neighbouring lands were surveyed into the townships of Sarawak and Keppel.”

...

“The County of Grey was created by lands negotiated in the Treaty of 1818 and contained one million five hundred and ninety two thousand acres (644,259.54 hectares). The price of the first treaty was “for the yearly payment for ever of twelve hundred pounds currency in goods at Montreal prices” (Marsh 1931). Due to the expansion of settlers in the new County of Grey, it too was expanded with the Sauking Treaty signed in 1836 (Marsh 1931).

The “sound of water” now known as “Owen Sound” was not officially surveyed until 1815. It has been postulated that Samuel de Champlain as well as many early fur traders mapped out the shoreline, however they did not venture into the shoals to create an accurate depiction of the area. Therefore, it was in 1815 that Captain William Fitzwilliam Owen arrived to officially survey the region. Captain Owen changed the original name of Mer Douce (meaning ‘Sweetwater Sea’), given to the large bay by Champlain, to Manitoulin Lake (Thomas 2015). It wasn’t until 1825 that the modern name of Georgian Bay was given to the area in honour of King George III. The earliest record showing when the name “Owen Sound” was first used is in Lieutenant Bayfield’s survey of 1819, in honour of Captain William Fitzwilliam Owen (Thomas 2015).

The township of Sarawak is nestled between the townships of Sydenham, Keppel and Derby in the County of Grey. The land was originally owned by the Nawash Native tribe and was occupied as a reserve until the Jones Treaty of 1857. It is a known fact that the

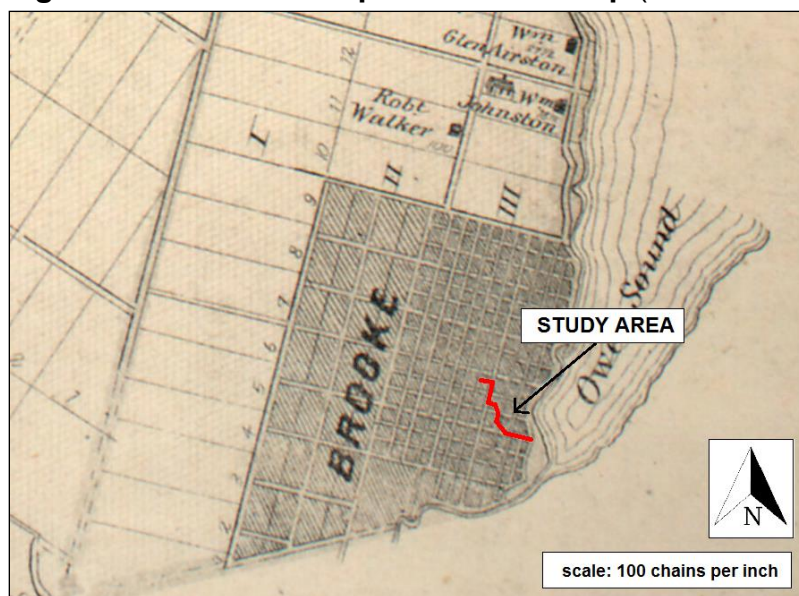


reserve land was the desired land to start the townplot of Sydenham, which would later be called Owen Sound. Due to the land already being occupied, it was not surveyed and assigned lots and concessions until after the Jones Treaty was signed in 1857.”

3.1.1 The Town of Brooke

For almost twenty-five years the Sarawak Reserve remained alongside the growing Township of Sydenham. In the spring of 1857, after the Jones Treaty was signed the land was surveyed and the town plot of Brooke was established. The Town plot of Brooke was named after Lord Burgh’s kinsmen James Brooke in honour of his exploits in Sarawak, which is fitting as it lies in Sarawak Township (Marsh 1931). The Jones Treaty was a tumultuous exchange of land. The Nawash did not want to leave their land and were forced to move to Cape Croker once the treaty had been signed. Underhanded treatment of the Nawash by the local Indian Affairs Department included not allowing the Natives to build saw or grist mills, sell their timbers to white men; or even trade with their European neighbours. This likely caused monetary issues for the reserve, forcing them to sell their lands. There was much contestation at the auction for Sarawak lands. The Natives who attempted to purchase back their land legally were denied, and the neighbours who had good relationships with the Nawash did not wish to occupy or purchase the land upon seeing this (Marsh 1931, Davidson 1972, Croft 2011). Because of this the Town of Brooke was very slow to start.

Figure 4: 1880 Township of Sarawak Map (Belden & Co)



3.2 Specific Lot History

The Land Registry Index, and Canadian/Ontario Census records were used for the specific lot histories, as the Collectors/Assessment Rolls for the Township of Sarawak were destroyed during fires (Davidson 1972:321-322; and personal correspondence, Archivist Karen Noble, Grey Roots Archives).

3.2.1 Study Area Lots

1. #2164 6th Ave West (Lot 109 East Cocks Street, 110 West Amelia Street, Part Lot 112 West Amelia Street and Part Lot 111 East Cocks Street, Town Plot of Brooke, Sarawak Township)

Lots 109 and 111 East Cocks Street, and Lots 110 and 112 West Amelia Street, Town Plot of Brooke, were purchased from Walter Wilson and his wife by Nicholas Horton for \$400.00 on June 3, 1881. Nicholas Horton and his wife mortgaged their properties under Walter Wilson for \$300.00 on the same day. On August 27, 1881, the Crown issued the patent for the lands to Walter Wilson for the four lots in their entirety (1 acre / 0.40 hectares). Walter Wilson then discharged the mortgage to Nicholas Horton on December 15, 1886. Three years later, on August 17, 1889, Nicholas Horton sold the land to Grey and Bruce Canning Company for \$700.00. The Grey Bruce Canning Company sold the land to William Hickey for \$500.00 on August 29, 1901. William Hickey then sold the land to the Owen Sound Brick Company for \$400.00 on September 22, 1906. The Owen Sound Brick Company remained the sole land owner for 15 years and sold their land to John Connolly on January 10, 1921 for \$400.00. On July 7, 1950, Austin M. Scully, William P. Telford Jr., Ex. of James Connolly, Ethel Spindle, Della Skaal, Edward Purcell and his wife. Maude Law and Mary Shell, Marguerite Q. Swarts, Beatrice Willoughby, Fred McNichol, Margaret Reynolds, Laura MacKinnon, Joseph P. Wilson, George Wilson and his wife, Gertrude Keating sold the land to Matilda Ornsby for \$1,800.00. Clarence Ornsby and William Rathwell (Admin. of Matilda Ornsby estate) later sold the land to Frank Schill for \$3,000.00 on June 21, 1961. On March 13, 1972, Frank placed his wife, Irene, on the title. Irene Schill then sold the land to Evert Johanson on December 4, 1990, for \$136,000.00.

2. #2133 6th Avenue West (Lot 111 Amelia Street East, Town Plot of Brooke, Sarawak Township)

Lots 113 and 115 East Amelia Street, Town Plot of Brooke, were sold to George Hindman by the Crown on March 28, 1887, for \$144.00. The lots (both 0.25 acres / 0.20 hectares in size) were sold that same year by George Hindman and his wife to Charles Barnhart for \$200.00 on December 24, 1888. Charles Barnhart and his wife then sold the land to Robert Gambion for \$1,500.00 on August 24, 1901. Robert Gambion and his wife sold the same land to William Mitchell on September 10, 1907, no price given. William Mitchell and his wife later sold the land to Frederick Leslie on August 31, 1911, again no price is given. Frederick Leslie and his wife granted the land to Annie Lewis on April 30, 1923 at no cost. Annie Lewis granted the land to Viola Lewis on September 4,



1937 at no charge as well. Viola Lewis then sold the land to Benjamin and Vera Herbison for \$300.00, on November 10, 1942. Benjamin and Vera granted the land to Margaret Gordon at no cost on July 17, 1947. On June 20, 1963, Victoria & Grey Trust Company, administrators of Margaret Gordon's estate, sold the land to Kenneth and Hilda Smith for \$1,025.00. Kenneth and Hilda Smith deeded the land to Elsie McInnes at no cost on November 19, 1964. Elsie McInnes then deeded the land to Morris Howell for no charge on March 22, 1971. Morris Howell and his wife sold the land to Kenneth and Gwendolyn Morris for \$22,900.00 on August 4, 1972. Kenneth and Gwendolyn granted the land to Frederick and Helen Davenport for no charge on August 2, 1983. Frederick and Helen Davenport later granted the land to Bryan and Lisa McKay on June 1, 1984, no price listed. Bryan and Lisa McKay transferred the land to Frederic Standing for \$150,000.00 on October 26, 1990. Frederic Standing then transferred the land to Kenneth Gardner for \$97,500.00, on August 12, 1994. Lastly, Kenneth Gardner mortgaged the land with CIBC for \$89,943.75 on August 12, 1994.

3. #590 21st Street West (Part Lot 113 and 115 East Amelia Street, Town Plot of Brooke, Sarawak Township)

Lots 113 and 115 East Amelia Street, Town Plot of Brooke, were sold to George Hindman by the Crown on March 28, 1887 for \$144.00. The lots (0.50 acres / 0.20 hectares each) were sold that same year by George Hindman and his wife to Charles Barnhart for \$200.00 on December 24, 1888. Charles Barnhart and his wife then sold the same lands to Robert Gambion for \$1,500.00 on August 24, 1901. Robert Gambion and his wife split the land into two parts and sold both parts to John Worne on April 9, 1904, for \$100 (west half) and \$1,400 for the remaining lands. On September 19, 1904 John Worne and his wife sold the land to Lucy Kerr for \$1,435.00. A Mary J., executor of Lucy Kerr's estate sold the land on November 7, 1942, to Edward and Josephine Ard for \$2,000.00. Josephine Ard sold the land to Homer and Edith Hurlbut for \$5,000.00 on March 22, 1950. A discharge of mortgage was also entered between Josephine Ard and Homer and Edith Hurlbut; it was entered on June 9, 1956 for the west part (115 feet / 35.05 m). Homer and Edith Hurlbut later sold the west part to William and Margaret Eden for \$100.00, on May 28, 1956. William and Margaret Eden sold a smaller parcel of the west part (55 feet / 16.76 m) to Murray George Cook for \$100.00 on March 10, 1958. Homer and Edith Hurlbut sold their land to Kenneth and Gwendolyn Morris for \$8,500.00 on July 16, 1964. Murray Cook then sold his land to Glen and Lillian Woods for \$8,800.00 on January 18, 1965. Glen and Lillian Woods sold their land to George McLeod for \$14,000.00 on July 6, 1966. Kenneth and Gwendolyn sold their portion of the land to David and Victoria Burke as joint tenants on August 17, 1972, no price given. On September 7, 1976, David and Victoria Burke sold the land to Sandra Peters for \$2.00. Four years later on March 19, 1980, Sandra Peters deeded the land to William and Gwendolyn Summers. The following year William and Gwendolyn Summers deeded the lands to Leonard and Mari-An Edwards on May 20, 1981. Leonard and Mari-An Edwards sold their land to Paul and Bonnie Turcott on May 25, 1983. After this it is unclear how, but a Ruby Showell was in control of the lands by February 28, 1991, and later sold them to John and Dana Eyeselein for \$72,750.00. John and Dana Eyeselein mortgaged their land through CIBC on September 18, 1992 for \$58,000.00.



4. #585 21st Street West (Part Lot 117 East Amelia Street; Lots 119, 121 and 123 East Amelia Street, Town Plot of Brooke, Sarawak Township)

Lots 121 and 123 East Amelia Street have been discussed above. Lots 117 and 119 East Amelia Street, Town Plot of Brooke, were patented by the Crown to William Frederick Wolfe on January 23, 1878. The lots (0.50 acres / 0.20 hectares) were sold to Walter J. Hemming for \$400.00 each on May 11, 1898. Walter Hemming and his wife sold the lots to William Pedwell for \$600.00 on August 27, 1904. William and Annie Pedwell then transferred the land to Alfred Green in trust in 1917. Through his access to the land Alfred Green sold it to Henry Still for \$3,300.00 on August 7, 1917, on behalf of William and Annie Pedwell. A grant was issued on the lands between Wilfrid J. Abell, John S. Wilson, E. Henry Abell, Harold Abell, Henry B. Abell, Reginald Abell, and Ola Wilson, to give the land to Ola Wilson on April 18, 1939. Ola Wilson then sold the land to Robert and Rosina Menzies for \$2,150.00 on June 15, 1942. Robert and Rosina Menzies sold a 105 foot by 132 foot (32.00 m by 40.23 m) parcel of the land to Beverley Howey on May 14, 1964, for \$2,000.00. Five years later Robert and Rosina Menzies sold the remaining part of the lot (60 feet by 132 feet / 18.09 m by 40.23 m) to William and Margaret Davies for \$3,600.00 on May 28, 1969. Beverley Howey granted the land to include his wife Ruth Howey as owner of the northwest part of the lot on February 13, 1987. Beverley and Ruth Howey charged the land to Confederation Trust Company for \$111,500.00 on August 2, 1990, as well as to Neil McDonald for \$55,000.00, on March 30, 1992, and a third time to Norman McKibbon for \$28,000.00 on June 17, 1993. A fourth charge on the land was made on December 22, 1993 to Neil McDonald for \$86,500.00, as well as a transfer in land title to include Edward Stewart on the deed. On February 3, 1995, the charge to Confederation Trust Company was assigned to the Toronto Dominion Bank. The Toronto Dominion Bank transferred the land to Michael and Lisa Eyselein for \$114,000.00 on February 3, 1995, who then mortgaged the land through CIBC for \$65,000.00 on the same day.

5. #563 21st Street West (Part Lot 121 East Amelia Street and Lot 123 East Amelia Street, Town Plot of Brooke, Sarawak Township)

Lot 123 East Amelia Town Plot of Brooke was discussed above. Lot 121 East Amelia Street, Town Plot of Brooke, follows the same land sales as Lots 123, 125 and 127 East Amelia Street until 1970. On May 4, 1970, Harold Eldred and his wife sold the northwest part of the lot to Beverley Howey for \$800.00. On the same day Harold Eldred and his wife also sold the northeast part of the lot to William G. Davis and Margaret Davis for \$500.00. Beverley Howey granted the land to include his wife Ruth Howey as owner of the northwest part of the lot on February 13, 1987. Beverley and Ruth Howey charged the land to Confederation Trust Company for \$111,500.00 on August 2, 1990, as well as to Neil McDonald for \$55,000.00, on March 30, 1992, and a third time to Norman McKibbon for \$28,000.00 on June 17, 1993. A fourth charge on the land was made on December 22, 1993, to Neil McDonald for \$86,500.00 as well as a transfer in land title to include Edward Stewart on the deed. On February 3, 1995 the charge to Confederation Trust Company was assigned to the Toronto Dominion Bank. The Toronto



Dominion Bank transferred the land to Michael and Lisa Eyselein for \$114,000.00 on February 3, 1995, who then mortgaged the land through CIBC for \$65,000.00 on the same day.

6. #596 20th Street West (Part Lots 123, 125 and 127 East Amelia Street, Town Plot of Brooke, Sarawak Township)

According to the 'Abstract Land Index', William F. Wolfe was issued the patent by the Crown on July 23, 1878, for all three acres (1.21 hectares) of Lots 123, 125 and 127 and other lands, Town Plot of Brooke, no price given. William Wolfe was a dry goods merchant born in Germany and married to Mary Ann. On May 11, 1898 William Wolfe and his wife sold these lands to Walter J. Hemming for \$400. Walter Hemming and his wife sold the land to George W. Gurnett for \$500.00 on October 18, 1910. George Gurnett and his wife later granted the lots to John Mitchell for \$300.00 on August 11, 1914. John Mitchell and his wife granted the land to John Burke for \$280.00 on December 15, 1923. John Burke then granted the land to Joseph and Harold Eldred for \$400.00 on July 4, 1929. A quit claim was issued between Joseph Eldred and his wife to Harold Eldred for \$200.00 on December 5, 1929. Harold Eldred and his wife later deeded the northwest part of Lot 123, and the west part of Lot 121 to Beverly R. Howey on May 4, 1970, for \$800.00. Harold Eldred and his wife also deeded the northeast part of Lot 123, and the east part of Lot 121 to William G. Davis and his wife Margaret on May 4, 1970 as joint tenants, for \$500.00.

Harold Eldred and his wife deeded their portion of Lots 123, 125 and 127 to William and Shirley Kivell, as Part 2 of registered plan 16R-412 on May 1, 1974, for \$1.00. On February 13, 1987, Beverly Howey granted the northwest part of Lot 123 and other lands to herself and Ruth Howey as joint tenants, no price given. William and Shirley Kivell granted Part 2 of registered plan 16R-412 for Lots 123, 125 and 127 to James R. Comeau and his wife JoAnne as joint tenants on May 15, 1987, no price given. William and JoAnne Comeau then mortgaged Part 2 of registered plan 16R-412 and other lands to National Trust Co. for \$71,000.00 on October 30, 1987. Beverly and Ruth Howey charged the Confederation Trust Company \$111,500.00 for the northwest part of Lot 123 and other lands on August 2, 1990. Beverly and Ruth Howey charged Neil McDonald \$55,000.00 for the same lands on March 30, 1992. James and Marie Comeau charged the National Trust Co. \$40,000.00 for Part 2 of registered plan 16R-412 for Lots 123, 125 and 127 on September 25, 1992. Later, Beverly and Ruth Howey charged Norman McKibbin \$28,000.00 for the northwest part of Lot 123 and other lands on June 17, 1993.

Beverly and Ruth Howey then mortgaged their property on Lot 123 with themselves and Edward S. Howey for \$2.00 on December 22, 1993. Beverly, Ruth and Edward Howey later charged Neil S. McDonald \$86,500.00 for the same lands on December 22, 1993. The Confederation Trust Co. assigned the mortgage for the northwest part of Lot 123 and other lands to the Toronto Dominion Bank on February 3, 1995. The Toronto Dominion Bank then transferred the same property to Michael William and Eyselein L. J. Moore on February 3, 1995 for \$114,000.00. Michael William and Eyselein Moore then



charged the northwest part of the lot and other lands to CIBC Mortgage Corp. for \$65,000.00 on the same day.

7. #560 20th Street West (Part Lot 123 Amelia Street East; Lot 125 and 127 East Amelia Street; Part Lot 128 West Edward Street, Town Plot of Brooke, Sarawak Township)

Part Lot 123, and Lots 125 and 127 East Amelia Street, Town Plot of Brooke, will be discussed in this section, as Lot 128 West Edward Street was discussed above. Lots 123, 125 and 127 East Amelia Street were all purchased by William F. Wolfe from the Crown on July 23, 1878. The lands total 0.75 acres (0.30 hectares). William F. Wolfe and his wife sold all three lots to Walter Hemming for \$400.00 on May 11, 1898. Walter Hemming and his wife held the lands for over a decade before selling them all to George Gurnett for \$500.00, on October 18, 1910. On August 11, 1914, George Gurnett and his wife sold the lands to John Mitchell for \$300.00. John Mitchell sold the lands to John Burke for \$280.00, on December 15, 1923. John Burke held the land for six years before selling it to Joseph and Harold Eldred at the cost of \$400.00 on January 4, 1929. A quit claim was issued between Joseph Eldred and his wife to Harold Eldred for \$200.00 on December 5, 1929. Harold Eldred and his wife sold their land to William and Shirley Kivell as Part 3 of registered plan 16R-412 on May 1, 1974, no price given. William and Shirley Kivell granted the land of Part 3 16R-4112 to James and JoAnne Comeau on May 15, 1987. James and JoAnne Comeau mortgaged their property with National Trust Co. for \$71, 000.00 on October 30, 1987. On September 25, 1992 James and JoAnne charged National Trust Co. for an additional \$40,000.00.

8. #2020 5th Avenue West (Lot 126 West Edward Street, Town Plot of Brooke, Sarawak Township)

Lot 126 West Edward Street, Town Plot of Brooke, was given to William F. Wolfe by the Crown in its entirety (0.25 acres / 0.10 hectares) on January 23, 1878. William Wolfe and his wife sold the land to Walter Hemming on May 11, 1898, for \$400.00. Walter Hemming and his wife sold the land to George Gurnett for \$500.00 on October 18, 1910. Gurnett then split the lot into two parts, selling the south half (33 feet by 165 feet / 10.06 m by 50.29 m) to Percy Minard for \$175.00 on June 15, 1915, and the north half to Harry Peel for \$594.00 on April 16, 1916. On May 2, 1921, Harry Peel and his wife sold the north half of the lot to Percy Minard for \$340.00. Percy Minard later sold the land to Allan George for \$687.00 on November 20, 1923. A Tax Deed was issued on February 23, by the Mayor and Treasurer to the Corporation of the City of Owen Sound for \$7,852.00. After this the land lay stagnant for 12 years when it was sold by John and Olive Brittain to William Bowman. The Land was sold after William Bowman's death by his executors Emma and Anne Bowman to Robert and Carol St. Jacques for \$1,300.00 on April 15, 1964. Robert and Carol St. Jacques deeded the land to Grey Bruce Development Limited for \$1,500.00 on April 10, 1967. On January 9, 1968, Grey Bruce Development Limited sold the land to Stark-Janecek Limited for \$2,000.00 who held the land until 1971. On May 1, 1971, Stark-Janecek sold the land to Richard and Ethel Brown for \$200.00 as joint tenants. Richard and Ethel deeded the land to Peter and



Charlotte Sorbara for \$2.00 on May 1, 1978. Two years later, on March 26, 1980, Charlotte Sorbara sold the land to John and Connie Matheson for \$10.00. John and Connie Matheson changed the land title to be listed under Connie Matheson on December 21, 1984, and on June 3, 1985 Connie Matheson sold the land to Douglas and Nancy Bishop, no price was given.

9. #2006 5th Ave West (Part Lot 128 West Edward Street, Town Plot of Brooke, Sarawak Township)

Lot 128 East Edward Street, Town Plot of Brooke belonged to William Wolfe who was issued the patent by the Crown on January 23, 1878, for the entirety of the lot (0.25 acres / 0.10 hectares). William F. Wolfe was a dry goods merchant born in Germany and married a Mary Ann. He and his wife held the Lot until May 11, 1898 when they sold it to Walter J. Hemming for \$400.00. Walter Hemming and his wife sold off the east part of the lot (99 feet / 30.17 m) to Henry Miller on July 19, 1909 for \$52.00. On October 18, 1910, Walter Hemming and his wife sold the remaining land to George Gurnett for \$500.00. Henry Miller sold his east 99 feet (30.17 m) to Stanley Raven on December 26, 1911, for \$385.00. On August 11, 1914 George Gurnett and his wife further divided the lot by granting 66 feet (20.12 m) by 66 feet (20.12 m) to John Mitchell for \$300.00. Stanley Raven sold his part of the land for \$1,450.00 to Bessie Lusitenburg on March 19, 1920. A John Burke bought John Mitchell's portion of the land for \$280.00 on December 15, 1923. John Burke held that land for six years before selling it to Joseph and Harold Eldred at the cost of \$400.00 on January 4, 1929. A quit claim was issued between Joseph Eldred and his wife to Harold Eldred for \$200.00 on December 5, 1929. On November 24, 1964, Annie McMann and Walter Waltenburg (executors of the estate of Elizabeth Breen) sold the land to Melville and Lorraine Waltenburg for \$5,500.00. It is unclear through the Land Abstracts at what point Elizabeth Breen became a land holder to this particular parcel. On April 13, 1970 Adam Publske (Admin. of Lorraine Waltenburg) with Emma Carleton, William Tovelofeski and Edith Klagis of the public institute deeded the land to Melbourne and Dorothy Bauman. Harold Eldred and his wife sold their land to William and Shirley Kivell as Part 3 of registered plan 16R-412 on May 1, 1974, no price given. William and Shirley Kivell granted the land of Part 3 16R-412 to James and JoAnne Comeau on May 15, 1987. James and JoAnne Comeau mortgaged their property with National Trust Co. for \$71,000.00 on October 30, 1987. On September 25, 1992, James and JoAnne charged National Trust Co. for an additional \$40,000.00.

10. #550 19th Street West (Lots 129, 131, 133, 135, 137, 139 East Amelia Street and Lots 130, 132, 134, 136, 138, 140 West Edward Street, Town Plot of Brooke, Sarawak Township)

According to the 'Abstract Land Index' Lots 129, 131, 133, 135, 137, and 139 East Amelia Street and Lots 130, 132, 134, 136, 138 and 140 West Edward Street, Town Plot of Brooke, were sold as a single property (1.75 acres / 0.71 hectares). The Crown patent was issued to William J. Graham on July 7, 1888. In the 1881 census records William J. Graham is listed as an Inland Revenue Collector, married to Louisa M.



Graham and father to a Louisa, William, Henrietta and Harold Graham. It is unclear on the historical maps whether or not a structure was built by William J. Graham, however he was the sole owner until at least 1932.

In 1932, the property was willed to his daughter Henrietta S. Blade. She retained the lands until 1946, when she granted them to her brother Harold F. Graham. Harold Graham sold the land to Marricou Development in 1976 and since 1986 the lands have been under the ownership of Regency Towers Owen Sound. Although the trustees of the land have changed, Regency Towers remains the owner with Trustees coming and going since 1976.

11. #1914 4th Avenue West (Lots 135, 137, 139 East Edward Street and Lots 136, 138, 140 West Market Street, Town Plot of Brooke, Sarawak Township)

According to the 'Abstract Land Index', Lots 135, 137, and 139 East Edward Street and Lots 136, 138, and 140 West Market Street, Town Plot of Brooke (1.5 acres / 0.61 hectares) were purchased, as a single block, by William J. Graham from the Crown on July 6, 1888, no price given. He remained the sole owner until March 26, 1932 when he and his wife sold the 1.5 acre (0.61 hectare) property to Maria L. Wiselands. From 1932 to 1945 Maria L. Wiselands owned the land. On February 24, 1945 she sold the property to Jean S. Walpole for \$3,300.00. On March 6, 1952, Ms. Walpole granted the property to Norman R. Walpole and his wife. They remained the sole owners until the May 1966 when they sold it to Morley D.B. Atton for \$12,200.00. On October 11, 1990 it was willed to Dorothy M. Atton, who was also the executor of his will.

12. #1909 4th Avenue West (Part Lot 139 East Market Street, Town Plot of Brooke, Sarawak Township)

The patent for Part Lot 139 East Market Street, Town Plot of Brooke, was issued to James Douglas (0.25 acres / 0.10 hectares) on May 21, 1886. According to the 1881 Census James Douglas was a tailor born in Scotland, married to Ellen Douglas and father to James, John, Ellen, Robert, Bella, Anne, Lizzie and William. He held the land until August 27, 1886 when he sold it to Alexander Brass for \$440.00. Alexander Brass retained the property until his passing.

On January 17, 1945 the Mayor and Treasurer of the Corporation of the City of Owen Sound purchased the property for \$1,104.63, due to unpaid taxes. A second Tax Deed was issued June 10, 1946 for the same amount. It would seem that the land remained unoccupied until March 19, 1973, when a Deed was issued by Central M. Housing Corporation to Franklin G. Graham and Frances Graham who paid \$4,000.00 for the property. On March 28, 1973, the Grahams deeded the land to The Director, Veteran's Land Act for \$2.00.

The land was severed on October 8, 1975 when the Minister of Revenue passed a certificate to the estate of Franklin G. Graham for the north part of the lot, some 22 feet (6.71 meters) for a right-of-way.



13. #280 19th Street (Lots 130, 132, 134, 136, 138 and 140 West Sound Street, Town Plot of Brooke, Sarawak Township)

The Crown patent for Lots 130, 132, 134, and 136, West Sound Street, Town Plot of Brooke, were issued to William F. Wolfe on September 18, 1885. According to Census records William F. Wolfe was a dry goods merchant born in Germany and married to Mary Ann. He and his wife owned the property until July 3, 1901 when they sold each lot to William Graham for \$1,475.00. William Graham sold the land later that same year to the Owen Sound Planning Company Limited for \$12,750.00.

On June 9, 1919 the Owen Sound Planning Company Ltd. sold the lands to the Dominion Oil Company. They retained ownership of the lands until October 15, 1927 when they declared bankruptcy. On December 10th of that same year the land was listed for sale under "Agent for Sale" Norman L. Martin (Trustee for Dominion Oil Ltd.). It was sold to Walter G. Scott in the amount of \$37,000.00. On November 21, 1928 a grant was issued by Norman L. Martin (Trustee of Dominion Oil) to the Dominion Oils Company Ltd. Inc. for part 1.75 acres (0.40 hectares) tax asset copy \$2,000 and right-of-ways for Lots 134, 136 and Part Lot 130 (approved by the inspector). The Dominion Oils Company Ltd. Inc. owned the lots until April 1, 1959 when Reliance Petroleum Limited sold the land to Supertest Petroleum Corporation Limited. Supertest Petroleum owned the land until February 13, 1968 when John F. McArthur purchased them for \$3,100.00 per lot. John F. McArthur sold the lots to Noxa Investments Limited on December 12, 1975. In September of 1984 Noxa Investments Ltd. mortgaged the property through the Toronto Dominion Bank for \$200,000.00. The last transaction within the Land Registry Index was for a grant issued on April 29, 1985 by John F. McArthur to Noxa Investments Ltd., for part and other lands.

The Crown patent for Lots 138 and 140 West Sound Street, Town of Brooke was granted to James Douglas on May 21, 1886. Douglas then sold the lots to Alexander Brass on August 27, 1886, no price given. Alexander Brass retained the lots until his passing.

On January 17, 1945, the Mayor and Treasurer of the Corporation of the City of Owen Sound purchased the property for \$1,104.63, due to unpaid taxes. A second Tax Deed was issued on June 10, 1946 for the same amount. On February 28, 1949 the Corporation of the City of Owen Sound sold the land to McManus Petroleum Limited for \$200.00. That same day McManus Petroleum Ltd. granted all the lands to Reliance Petroleum Limited. Reliance Petroleum Ltd. held the lands for ten years and on April 1, 1959 sold them to Supertest Petroleum. Supertest Petroleum owned the land until February 13, 1968 when John F. McArthur purchased them for \$3,100.00 per lot. John F. McArthur later sold the lands to Noxa Investments Limited on December 12, 1975. On the September 20, 1984 Noxa Investments Ltd. mortgaged the property through the Toronto Dominion Bank for \$200,000 (part and other lands). The last transaction was a grant issued on April 29, 1985 from John F. McArthur to Noxa Investments Ltd. for part and other lands.



3.2.2 Adjacent Lots

14. #2195 8th Avenue West (Lots 106, 108, 110, 112, 114, 116 West Cocks Street, and Lots 105, 107, 109, 111, 113, 115 East Albert Street, Town Plot of Brooke, Sarawak Township)

According to the Land Abstracts, Walter Wilson and his wife sold these lands to Nicholas P. Horton for \$400.00, on June 3, 1881. On the same day Nicholas P. Horton and his wife mortgaged the same lands to Walter Wilson for \$300.00. Walter Wilson was then issued the patent by the Crown on August 29, 1878, for all of the lots, no price given. On December 15, 1886, Bertha Wilson mortgaged these lots to Nicholas P. Horton, no price given. Nicholas P. Horton and his wife later sold the lands to James A. Hicks for \$400.00 on July 25, 1902. All of Lot 105 Albert Street (and other lands) was then deeded by Mary C. Riddell and John S. Mitchell Brownlee (Executors of the estate of [illegible]...Riddell) to Ernest Breen for \$600.00 on March 14, 1924. Following this transaction, all of the lots were granted to Harry F. Watson, by James A. Hicks and his wife, for \$2,500.00.

On March 31, 1948, Lot 105 Albert Street (and other lands) was granted by Gordon Breen, Administer of Ernest Breen, Willison Breen, Gordon Breen and Stanley Breen, to Margaret R. Breen for \$1.00 and premiums with the Treasurers' consent. A quit claim was applied to these lands by Annie M. Cole (executor of James Cole and Margaret M. Breen), to Margaret M. Breen on August 17, 1948 for \$1.00. On October 29, 1951, Harry F. Watson then granted all of the lands for Lots 106, 108, 110, 112, 114, and 116 Cocks Street West, and Lots 105, 107, 109, 111, 113, and 115 Albert Street East, to The Director of The Veterans' Land Act for \$3,500.00. Finally, on November 25, 1981, all of these lands were deeded to Percy A. Straight for \$1.00 by The Director of The Veterans' Land Act.

15. #2130 6th Avenue West (Part Lots 111 and 113 East Cocks Street, and Part Lots 112 and 114 West Amelia Street, Town Plot of Brooke, Sarawak Township)

Part Lots 111 and 113 East Cocks Street, and Part Lots 112 and 114 West Amelia Street, Town Plot of Brooke, were purchased from Walter Wilson and his wife by Nicholas P. Horton for \$400.00 on June 3, 1881. Nicholas Horton and his wife mortgaged these properties under Walter Wilson for \$300.00 on the same day. On August 27, 1881, the Crown issued the patent for the lands to Walter Wilson for the four lots. Bertha Wilson then discharged the mortgage for the lands to Nicholas Horton on December 15, 1886. Three years later Nicholas Horton sold the land to the Grey Bruce Canning Company for \$700.00, on August 17, 1889. The Grey Bruce Canning Company then sold the land to William Hickey for \$500.00 on August 29, 1901. William Hickey then sold the land to the Owen Sound Brick Company for \$400.00 on September 22, 1906. The Owen Sound Brick Company remained the sole land owner for 15 years and sold their land to John Connolly on January 10, 1921 for \$400.00. On July 7, 1950, Austin M. Scully, William P. Telford Jr., Executors of James Connolly, Ethel Spindle, Della Skaal, Edward Purcell and his wife. Maude Law and Mary Shell, Marguerite Q.



Swarts, Beatrice Willoughby, Fred McNichol, Margaret Reynolds, Laura MacKinnon, Joseph P. Wilson, George Wilson and his wife, Gertrude Keating sold the land to Matilda Ornsby for \$1,800.00.

Clarence Ornsby and William Rathwell (Admin. of Matilda Ornsby estate) later sold the north parts of Lots 114 West Amelia Street and 113 East Cocks Street, as well as the south portions of 112 West Amelia Street and 111 East Cocks Street and other lands, to Frank Schill for \$3,000.00, on June 21, 1961. These lands were then deeded by Frank Schill and his wife to Douglas A. Kellough and Ruth J. Kellough for \$4,600.00 as joint tenants on October 8, 1970.

16. #2110 6th Avenue West (Part Lot 113 and Lot 115 East Cocks Street and Part Lot 114 and Lot 116 West Amelia Street, Town Plot of Brooke, Sarawak Township)

Part Lot 113 and Lot 115 East Cocks Street and Part Lot 114 and Lot 116 West Amelia Street, Town Plot of Brooke, were purchased from Walter Wilson and his wife by Nicholas P. Horton for \$400.00 on June 3, 1881. Nicholas Horton and his wife mortgaged these properties under Walter Wilson for \$300.00 on the same day. On August 27, 1881, the Crown issued the patent for the lands to Walter Wilson for the four lots. Bertha Wilson then discharged the mortgage for the lands to Nicholas Horton on December 15, 1886. Three years later Nicholas Horton sold the land to the Grey Bruce Canning Company for \$700.00, on August 17, 1889. Lot 113, 115 and 114 were sold by The Grey Bruce Canning Company to William Hickey for \$500.00 on August 29, 1901. He held onto Lot 116 West Amelia Street though until January 5, 1920 when he sold it to John Connolly, no price given. Hickey sold the other three lots to the Owen Sound Brick Company for \$400.00 on September 22, 1906. The Owen Sound Brick Company remained the sole land owner for 15 years before selling their land to John Connolly on January 10, 1921 for \$400.00. On July 7, 1950, Austin M. Scully, William P. Telford Jr., Executors of James Connolly, Ethel Spindle, Della Skaal, Edward Purcell and his wife, Maude Law and Mary Shell, Marguerite Q. Swarts, Beatrice Willoughby, Fred McNichol, Margaret Reynolds, Laura MacKinnon, Joseph P. Wilson, George Wilson and his wife, Gertrude Keating sold all four lots and 'other lands' to Matilda Ornsby for \$1,800.00. On June 28 1956, Matilda Ornsby sold the south part of Lots 113 and 114, as well as Lots 115 and 116 to James and Doreen White. On March 29, 1957 the Whites sold this parcel of lots to Charles and Shirley Thornley.

17. #2163 6th Avenue West (Lot 109 East Amelia Street, Town Plot of Brooke, Sarawak Township)

The Crown patent for Lot 109 East Amelia Street, Town Plot of Brooke, was issued to George Hindman on March 28, 1857. On December 24, 1888 he sold the lot and 'other lands' to Charles E. Barnhart for \$200.00. Charles Barnhart retained the property until August 24, 1901 when he sold it to Robert S. Campion for \$1,500.00. Campion then sold the lots to John Throne in 1905. John Throne and his wife sold the properties to John C. Vance in April of 1909. John C. Vance died sometime prior to December 11, 1924, though his property did not get transferred until 1927, when Isabella Cameron



received the lot. In 1934, Isabella Cameron sold the lot to John M. Noble for \$500.00. John Nobel retained the lot until 1942, when Mary E. Lee paid \$1,200.00 for the property. On June 25, 1951, Mary E. Lee granted the property to Charles and Bertha Leonard, though a 'banker's lien' which was put on the property as it was not paid in full. The Leonard's then proceeded to take a mortgage out on the property from Mary E. Lee. There seems to have been some issues surrounding this sale as the property appears to have been returned to the estate of Mary E. Lee after the Supreme Court of Ontario got involved with the property in 1954. It was not until 1978 that the executors of Mary E. Lee's will were able to transfer the property. The property was deeded to Elsie L. McInnis for \$2.00. On July 8, 1980, Elsie L. McInnis sold the properties to Robert and Victoria Boeckner (as joint tenants) for \$23,000.00. Two years later they transferred the deed to Mary MacPherson and Kevin Schawrtz for \$2.00. Kevin Schwartz granted the property back to Mary MacPherson on January 4, 1984. On May 2, 1986, Mary MacPherson granted the property to Leslie Wood and Joy Doy, who the following year granted it to Michael and Ruth Nash (as joint tenants). They owned the property for the following ten years before selling it to Sandra Boyd and Norris Chegahno for \$105,000.00. In 2003, Chegahno and Boyd took out a mortgage on the property for \$87,138.00. The following year they took out another mortgage on the property with Citifinancial Canada Inc.

18. #2040 5th Avenue West (Lot 124 West Edward Street, Town Plot of Brooke, Sarawak Township)

Lot 124 West Edward Street, Town Plot of Brooke, was part of a parcel of lots that were patented by the Crown to William Frederick Wolfe on January 23, 1878. William F. Wolfe sold the lots (among others) to Walter J. Hemming for \$400.00 on May 11, 1898. Walter Hemming and his wife sold the lots to George W. Gurnett for \$500.00 in October of 1910. Six years later in April of 1916, George Gurnett and his wife sold the property to Harry Peel for a profit of \$94.00. On May 2, 1921, Harry Peel sold the property to Percy Minard who two years later sold the property to Allan George. A tax deed was issued on February 23, 1940 by the Corporation of the City of Owen Sound. The City only held the property for six years, when they sold it to John and Olive Brittain on September 18, 1946. The Brittain's sold the lot to Albert and Victoria Hurst for \$5,700.00, on May 25, 1954. Four years later the Hurst's sold the lot to Thomas and Amelia Grundy. In May of 1961, after Thomas Grundy's death, Amelia sold the property to Hans and Marga Woelein.

19. #2090 6th Avenue West (Part Lots 117, 119 East Cocks Street and Part Lots 118, 120 and 122 West Amelia Street, Town Plot of Brooke, Sarawak Township)

The Crown patent for Lots 117 and 119 East Cocks Street, Town Plot of Brooke, was issued to Richard Staples on February 25, 1889, along with Lots 118, 120 and 122 West Amelia Street. These lots were part of a larger parcel of land issued to Richard Staples that included Lots 124 and 126, West Amelia Street, among others.



Lots 117 and 119 appear to have been purchased by Richard Staples prior to being sold on December 1, 1885 (# 928) to Andrew White. White then sold the lots back to Richard Staples on March 13, 1889. Richard and his wife sold the parcel of lots in July 1892 to Thomas W. Hamlin for \$3,000.00. On December 19, 1902, Thomas Hamlin sold Lots 117, 118, 120, 122, and the north part of Lot 119, to Thomas J. Ross for \$4,000.00. On December 28, 1925, Thomas Ross sold the lots to James L. Burrows. Edith M. Burrows then deeded these five lots to herself and Marjorie Burrows on September 4, 1964, as joint tenants. After the death of Edith Burrows (sometime prior to 1968) the property came under the sole ownership of Marjorie A. Madill (formerly Burrows). The four lots underwent subdivision under Registered Plans 16R-490 (Lots 117 and 119) and 16R-590 (Lots 120 and 122) sometime during the 1970s, while Lot 118 remained in its entirety. Marjorie sold Part 1 of 16R-490 to the City of Owen Sound on October 1, 1974. Part of 2 16R-490 she transferred over to herself and Thomas Madill (as joint tenants) on August 28, 1979. That same day she transferred the western portion of Lots 120 and 122 West Amelia Street (Less Pt. 2 16R-590) to herself and Thomas. She also deeded Lot 118 to herself and Thomas. On August 8, 2000, they sold Part 2 of 16R-490 as well as Lot 120 and Lot 122 less Parts 1 and 2 of 16R-590, and Lot 118 to Velma and Ronald Smart for \$54,666.67. The following year on August 13, 2001, Velma and Ronald Smart took out a mortgage on the property for \$50,000.00.

20. #2064 6th Avenue West (Part Lot 120 and Part Lot 122 West Amelia Street; RP 16R590 Part 2, Town Plot of Brooke, Sarawak Township)

The Crown patent to Lots 120 and 122 West Amelia Street, Town Plot of Brooke, was issued to Richard Staples on February 26, 1889. The lots were part of a larger parcel of lots issued to Richard Staples that included Lots 118, 124 and 126 West Amelia Street, among others. Richard and his wife sold the parcel of lots in July 1892 to Thomas W. Hamlin for \$3,000.00. On December 19, 1902, Thomas Hamlin sold the lots to Thomas J. Ross for \$4000.00. On December 28, 1925, Thomas Ross sold the lots to James L. Burrows. Edith M. Burrows later deeded the two lots to herself and Marjorie Burrows on September 4, 1964, as joint tenants. After the death of Edith Burrows (sometime prior to 1968) the property came under the sole ownership of Marjorie A. Madill (formerly Burrows). By 1975, the two lots had been subdivided into three parts. Parts 1 and 2 were part of RP 16R-590, while the third part of the parcel included the western half of the two lots which became part of #2090 6th Avenue West. Marjorie Madill (formerly Burrows) sold Part 2 to Isabel McKinnon, who later transferred the property to Gary and Bonnie Buck on December 4, 1975, for \$2.00. The Bucks deeded the property to Douglas and Betty Lou Carter for \$2.00 on September 19, 1978. Three years later on May 19, 1981, the Carters transferred the property to Burton and Laura Fisher for \$2.00. In 1988, the Fishers took out a mortgage from the National Trust Co. on the two lots for \$31,000.00.



21. #2044 6th Avenue West (Southwest Part Lot 122 West Amelia Street; RP 16R590 Part 1, Town Plot of Brooke, Sarawak Township)

The Crown patent to Lot 122 West Amelia Street, Town Plot of Brooke, was issued to Richard Staples on February 26, 1889. The lot was part of a larger parcel of lands issued to Richard Staples that included Lots 118, 120, 124, and 126 West Amelia Street among others. Richard and his wife sold the parcel of lots in July 1892 to Thomas W. Hamlin for \$3,000.00. On December 19, 1902, Thomas Hamlin sold the same lots to Thomas J. Ross for \$4,000.00. On December 28, 1925, Thomas Ross then sold the lots to James L. Burrows. Edith M. Burrows then deeded the lots (including Lot 120) to herself and Marjorie Burrows on September 4, 1964, as joint tenants. After the death of Edith Burrows (sometime prior to 1968) the property came under the sole ownership of Marjorie A. Madill (formerly Burrows). By 1975, the two lots had been subdivided into three parts. Parts 1 and 2 were part of RP 16R-590, while the third part of the parcel included the western half of the two lots which became part of #2090 6th Avenue West. Part 1 which became #2044 6th Avenue west was sold by Marjorie Madill to James McKinnon. In 1976, James McKinnon transferred the deed for Part 1 to Richard and Margaret Cole (as joint tenants) for \$2.00. They retained the property until 1992 when on October 1st the property was transferred to the sole ownership of Margaret Cole. The following June, in 1993, Margaret Cole sold the property to Jacques Rosaire and Joseph Mallette for \$84,800.00. Three years later, on July 31, 1996, they sold the property to Elgin and Enid Cameron for \$85,000.00. The estate of Elgin Cameron sold the property to John Cameron on August 24, 2005, who took out a mortgage on the property for \$118,000.00, from the Bank of Nova Scotia.

22. #2024 6th Avenue West (North Part Lot 124 West Amelia Street, Town Plot of Brooke, Sarawak Township)

The Crown patent to Lot 124 West Amelia Street, Town Plot of Brooke, was issued to Richard Staples on February 26, 1889. The lot was part of a larger parcel of lands issued to Richard Staples that included Lots 118, 120, 124 and 126 West Amelia Street among others. Richard and his wife sold the parcel of lots in July 1892 to Thomas W. Hamlin for \$3,000.00. On December 19, 1902, Thomas Hamlin sold the lots to Thomas J. Ross for \$4,000.00. On December 28, 1925, Thomas Ross sold the same lots to James L. Burrows. Edith M. Burrows later granted Lot 126 to James A. White for \$65.00 on August 13, 1946. She then sold Lot 124 to James and Edna Burrows in 1949. Lot 124 remained whole until the 1960s when the lot was subdivided into two portions. James and Edna Burrows sold the north half of the lot to Thomas and Ruth Taylor for \$900.00. The Taylor's further subdivided the north part of the lot, and in July of 1970 sold the northeast portion (33 x 100 feet / 10.06 x 30.48 m) to George and Lilian Jefferson for \$3,500.00. The Jefferson's sold the northeast portion of the lots to Nancy L. Abela on July 7, 1971, for \$4,250.00. In 1972, Nancy Abela sold the northeast portion of the lot to Michael B. Brown and Marion Brown for \$10,500.00. Two years later, on January 18, 1974, the parcel was deeded to Alfred J. Moyer for \$2.00. In 1991, the estate of Alfred James Moyer transferred the lot to James Alfred Moyer for \$1.00. He then sold the property to Peter Bell in 1995 for \$12,000.00. On June 30, 2003, Peter



Bell transferred ownership of the northeast portion of Lot 124 to the Grey-Bruce Habitat for Humanity for \$1.00.

23. #2020 6th Avenue West (South Part Lot 124 and Part Lot 126 West Amelia Street RP 16R3491 Part 2 & 3, Town Plot of Brooke, Sarawak Township)

The Crown patents to Lots 124 and 126 West Amelia Street, Town Plot of Brooke, were issued to Richard Staples on February 26, 1889. The lots were part of a larger parcel of land issued to Richard Staples that included Lots 118, 120, and 122 West Amelia Street among others. Richard and his wife later sold the parcel of lots in July 1892 to Thomas W. Hamlin for \$3,000.00. On December 19, 1902, Thomas Hamlin sold the lots to Thomas J. Ross for \$4,000.00. On December 28, 1925, Thomas Ross sold the lots to James L. Burrows. Edith M. Burrows then granted Lot 126 to James A. White for \$65.00 on August 13, 1946. She then sold Lot 124 to James and Edna Burrows in 1949. Lot 124 remained whole until the 1960s when the lot was divided into four portions. The southeast portion of the lot, which is part of the present #2020 6th Avenue West parcel, was sold by Edna Burrows to Velma Smart and James E. Burrows on October 2, 1969. The east half of Lot 124 (33 x 100 feet / 10.06 x 30.48 m) was deeded to Smart Glass Services as part of a lien clearance on July 14, 1975, after the death of James E. Burrows. They sold the lands to Reginald Moore on June 29, 1976. Reginald Moore then transferred the deed to Margaret M. O'Leary for \$2.00 on November 12, 1980. It appears that two mortgages were taken out by Margaret, the first to Reginald Moore and the second to Beavery Sally Credit Union Ltd. By December 1982, the property returned to Reginald Moore, likely due to an unpaid mortgage. In July of 1987, Moore granted the property to Catherin Lois Morrison, who then granted it to Mary Joan Garvie that December.

Lot 126 followed a different trajectory of sales than Lot 124 after Edith Burrows sold it in 1946 to James A. White. In June 1965, James A. White and his wife sold the lot to William J. Mitchel for \$90.00. Thomas J. Mitchell, the administrator of William J. Mitchell's will, granted the property to Sarah Anne Robins for \$2,100.00 plus premiums in 1955. On May 8, 1957, Sarah Robbins granted the property to William and Eveline Gray for \$2,000.00. In 1965, the Gray's sold the property to Duke and Florence Mills. They held onto the property for the next twenty years before selling in to Vernon and Donna Ferguson on November 25, 1985. Two years later, the Ferguson's sold the property to Mary and Ervin Garvie.

After the Garvie's purchased both sections of what would become #2020 6th Avenue West not long before Registered Plan 16-3491 was issued. These two lots were split into three parts. Part 1 became #2016 6th Avenue West, while Parts 2 and 3 became #2020 6th Avenue West. Parts 2 and 3 were later sold by Mary Joan Garvie to Michael Charles Nash on August 28, 1989 for \$38,000.00. Nash then transferred the property to Grant and Patricia Olmstead for \$110,000.00 in November of 1989. On September 29, 1995, the Olmsted's sold Parts 2 and 3 to Thomas Hill and Tammy McNabb for \$88,000.00. Hill and McNabb took out a mortgage on the property that same day. Three years later in 1998, Thomas Hill transferred the property to Tammy McNabb (nee Hill)



under sole ownership. She then sold the property to Roger and Shirley McNabb for \$78,000.00, on May 18, 2001.

24. #2016 6th Avenue West (Part Lot 126 West Amelia Street RP 16R3491 Part 1, Town Plot of Brooke, Sarawak Township)

The Crown patent to Lot 126 West Amelia Street, Town Plot of Brooke, was issued to Richard Staples on February 26, 1889. The lot was part of a larger parcel of lands issued to Richard Staples that included Lots 118, 120, 122 and 124 West Amelia Street among others. Richard and his wife sold the parcel of lots in July 1892 to Thomas W. Hamlin for \$3,000.00. On December 19, 1902, Thomas Hamlin sold the same lots to Thomas Ross for \$4,000.00. On December 28, 1925, Thomas Ross sold the lots to James L. Burrows. Edith M. Burrows later granted the lots to James A. White for \$65.00 on August 13, 1946. In June of the following year, James A. White and his wife sold the lot to William J. Mitchel for \$90.00. Thomas J. Mitchell, the administrator of William J. Mitchell's will, granted the property to Sarah Anne Robins for \$2,100.00 plus premiums in 1955. On May 8, 1957, Sarah Robbins granted the property to William and Eveline Gray for \$2,000.00. In 1965, the Gray's sold the property to Duke and Florence Mills, who held the property for the next twenty years before selling it to Vernon and Donna Ferguson on November 25, 1985. Two years later the Ferguson's sold the property to Mary and Ervin Garvie. On August 22, 1988, a Registered Plan was issued (16R-3491). Mary and Ervin Garvie retained Part 1 under Plan 16R-3491 until Feb 1, 1993. They then sold it to Bradley D. Brown and Krista S. Kraemer for \$63,000.00. Krista and Bradley Brown then transferred Part 1 to Eric and Marlene Henry in December of 2002 for \$56,000.00. That same year the Henry's took out a mortgage with the Royal Bank of Canada for \$20,728.00.

25. #1895 5th Avenue West (Part Lot 141 East Edward Street) (Vacant lot on the corner of 5th Avenue West and 19th Street West, Town Plot of Brooke, Sarawak Township)

The Crown patent for Lot 141 (and three other lots within the Study Area), Town Plot of Brooke, was issued to Robert Crawford on July 21, 1885. Robert Crawford sold the parcel of lots to James C. Stephens in August of 1885 (#647). Stephens then sold this parcel in November of 1885 to Frances M. Robinson. On August 25, 1886, Frances and William Robinson sold Lot 141 and other lands to George F. Plain for \$500.00. He had taken out a mortgage on the property two years prior (in 1884). In 1892, the property returned to William Robinson in an "R of E of R". In 1893, William Robinson sold this lot and "other lands" to the Bank of Hamilton. The following year the bank sold the property to Jacob D. Speers. On July 29, 1894, Jacob D. Speers and his wife sold the parcel of lots to Alice J. Hemming for \$1,050.00. These lands remained in her possession until the death of her husband sometime prior to 1917. After the death of her husband Alice deeded the lots to Jean A. Wilcox for \$3,650.00, in March of 1917. Jean A. Wilcox then granted the lands to Thomas Levine on February 17, 1921. Thomas and his wife later sold the property to Samuel Marshall in 1925 for \$7,000.00. Samuel Marshall and his wife then granted the property to Jess, Annie and Lillie Witherspoon (as joint tenants) in



1932. In 1959, Lillie Witherspoon sold the west 120 feet (36.58 m) of Lot 142 East Market Street and part of Lot 141 to Keith and Joyce Galbraith. Two orders were filed by the County Court of the County of Grey against the estate of Lillie J. Witherspoon in 1970 for “all and other lands”. In 1970, the remaining portion of Lot 141 and ‘other lands’ were deeded to Lloyd Brannick from the estate of Lillie Witherspoon for \$10.00. Lloyd and his wife sold the lands to the Director of the Veterans Land Act for \$240.00 in August of 1971. The portion of Lot 141 East Edward Street seems to have been split from the adjacent lots at this time into its own parcel (Reference Plan 16R-1443). The east half of the lot became part of parcel that contained the original Lots of 140 and 142 West Market Street, while the south half of the lot became its own parcel. Part 1 (16R-1443), was sold by the Smith’s to Harvey E. McCurdy in May 1985. In 1994, Harvey E. McCurdy sold Parts 1, 2, and 3 to Gordon and Patricia Breen (as joint tenants).

26. #1880 4th Avenue West (East Part Lot 141 and 143 East Edward Street and Lot 142 and Part Lot 144 West Market Street, Town Plot of Brooke, Sarawak Township)

The Crown patent for Lots 141 and 143 East Edward Street and Lots 140 and 142 West Market Street, Town Plot of Brooke, were issued to Robert Crawford on July 21, 1885. Between August 1885 and 1886, Crawford and his wife sold the lots to James C. Stephens. Which had been sold by Stephens to Frances M. Robinson in November of 1885. Frances and William Robinson then sold the lots to George F. Pain for \$500.00. George F. Pain took out a number of different mortgages, to different mortgagees over the next three years. In 1882, an “R of E of R” was issued between George F. Pain and William Robinson, and Robinson regained ownership of the properties. In 1893, William Robinson sold these lots to The Bank of Hamilton. The following year the bank sold the property to Jacob D. Speers. On July 29, 1894, Jacob D. Speers and his wife sold the parcel of lots to Alice J. Hemming for \$1,050.00. Alice and her husband Walter then severed and sold the south “4 feet” (1.22 m) of Lot 144 to Richard J. Layton in 1906. The land remained within her possession until the death of her husband when she sold the remaining property to Jean A. Wilcox for \$3,650.00 in March of 1917. Jean A. Wilcox later granted the lands to Thomas Levine on February 17, 1921. Thomas and his wife sold the property to Samuel Marshall in 1925 for \$7,000.00. Samuel Marshall and his wife then granted the property to Jess, Annie and Lillie Witherspoon (as joint tenants) in 1932. The western portions of both Lots 141 and 143 East Edward Street were sold to Keith and Joyce Galbraith in 1959. Two orders were filed by the County Court of the County of Grey against Lillie J. Witherspoon in 1970 for “all and other lands”. In 1970, the property was deeded to Lloyd Brannick from the estate of Lillie Witherspoon for \$10.00, which likely included the portions of the four lots making up #1880 4th Avenue West. Lloyd and his wife sold the lands to the Director of the Veterans Land Act for \$200.00 in August of 1971. In 1988, the Director of the Veterans’ Land Act granted the property back to Lloyd Brannick and his wife as joint tenants. In April of the same year they granted the lands to the Grey Bruce Community Health Corporation. The property remains in the hands of the Grey Bruce Community Health Corporation, although the mortgagees have changed from the Maritime Life Assurance Co. to The Toronto Dominion Bank.



27. #1889 4th Avenue West (Plan 96 Lot 8, 9 and 10 East Market Street, Town Plot of Brooke, Sarawak Township)

There are no Crown patents issued for the Plan 96 lots within the Land Registry documents. According to the original Town Plot of Brooke, Plan 96 consists of a parcel of lots that include Lots 141-151 (odd numbers only) of East Market Street, and Lots 142-150 (even numbers only) of West Simpson Street. The Plan was registered by Jacob D. Speers on November 23, 1889. The first of the three lots that make up #1889 4th Avenue West, was sold by J.D. Speers to William Keefer for \$200.00 in 1889. It consisted of Lot 10 and 'other lands'. J.D. Speers then sold Lot 9 to Peter Ballard on November 12, 1892, for \$26.00 and then Lot 8 and 'other lands' to Eliza Harvey on July 27, 1895 for \$120.00. Peter Ballard and his wife sold Lot 9 to Richard McMillan for \$12.00 in September of 1897, who then sold the property to Sarah A. Gilder. Sarah also gained ownership of Lot 10 in July 1903 when Keefer sold that property to her. Sarah and her husband, John, retained ownership of the both Lots 9 and 10 until Feb 2, 1903, when they sold both lots (and other lands) to Duncan M. McKinnon for \$850.00. In 1913, the land was sold to James Howey. On November 24, 1941, Edward S. Howey, the son of James Howey, granted the two lots to himself for \$1.00 plus premiums. Five years later, in September of 1946, Edward S. Howey and his wife granted the lots and 'other lands' to Frederick W. Thornley for \$900.00. In 1956, Frederick W. Thornley granted the land to Frances Stovell for \$1.00. Both Lots 9 and 10 were then sold to James and Leona Johnston (as joint tenants) in 1960 for \$6,500.00. Eight years later, on October 9, 1968, James and Leona Johnston sold the two lots to Frederick and Dianne Pearce for \$9,500.00. A mortgage was taken out by the Pearce's with the Investors Group Trust Co. Ltd., for \$64,000.00. The deed for all of the lots was then transferred to Dianne Pearce in April 2002.

Lot 8 East Market Street was sold to Eliza Harvey by Jacob Speers in 1895. She then sold the land to Robert Harvey for \$1.00 plus premiums, in July 1906. A gap of over 70 years exists before the next entry in the Land Registry. This is a By-law (No. 1980-31) which was issued by the City of Owen Sound on February 1, 1985. It authorized a deed of Conveyance of Part 1 for RP 16R-1650 and 'other lands'. On February 13, 1985, The City of Owen Sound grants the Property of Frederic and Dianne Pearce (as joint tenants). A mortgage was taken out by the Pearce's with the Investors Group Trust Co. Ltd. for \$64,000.00. The deed for all the lots was then transferred to Dianne Pearce in April 2002.

28. #377 19th Street West (Plan 96 West Parts Lot 8, 9 and 10 West Price Street, Town Plot of Brooke, Sarawak Township)

There are no Crown patents issued for Plan 96 lots within the Land Registry documents. According to the original Town Plot of Brooke, Plan 96 consists of a parcel of lots that includes Lots 141-151 (odd numbers only) of East Market Street, and Lots 142-150 (even numbers only) of West Simpson Street. The Plan was registered by Jacob D. Speers on November 23, 1889. Lot 8 West Price Street and 'other lands' was sold to Eliza Harvey by Jacob Speers on February 1, 1895. She then sold the land to William Harvey for \$1,200.00, in February of 1906. A gap of over 70 years exists before the next



entry in the Land Registry. This is a By-law (No. 1980-31) which was issued by the City of Owen Sound on February 1, 1985. It authorized a deed of Conveyance of Parts 2 and 3 16R-1650 and 'other lands'. On July 8, 1985, the City of Owen Sound then sold Part 2 to Lorne and Jean Benyon (as joint tenants). They later sold the property (in 1991) to Nancy P. Cruickshank for \$71,000.00. Nancy then sold the property to Harold A. Lendon in May 1993. On November 5, 1998 Harold Lendon transferred the deed to joint ownership with Mary C. L. Hawkins.

Lot 9 West Price Avenue was sold by Jacob D. Speers to Thomas Johnson on September 29, 1890 for \$100.00. On April 2, 1891, Thomas Johnson and his wife sold the lot to Francis G. Woolwich who then sold the property to James Hicks in June of that year for \$350.00. On July 17, 1894, James Hicks sold the property to Andrew McMillian, who five years later, in February 1899, sold the west part of the lot and 'other lands' to Sarah A. Gilder. Lot 10 West Price Street was sold by Jacob D. Speers to William Keefer along with Lot 10 East Market Street on November 21, 1889. Prior to this time the lot had been sold by Speers to Elijah E. Scott in October of 1891, along with Lot 9. Elijah filed a quit claim on the lot in July of 1903, giving over title of the property to William Keefer. Keefer sold Lot 10 to Sarah A. Gilder in July of 1903. Sarah Gilder and her husband sold the two lots to Duncan McKinnon in 1903. In 1913, McKinnon sold the lot and 'other lands' to James Howey. On November 24, 1941 Edward S. Howey, the son of James Howey, granted the two lots to himself for \$1.00 plus premiums. On June 24, 1943, Edward S. Howey and his wife granted the lots and 'other lands' to Anne Mitchell for \$1.00. Two quit claims were filed against the property by the Howeys', and by Harold E. Johnston and his wife in 1950. On September 12, 1950, Anne Mitchell sold the western 31.59 feet (9.63 m) on the southern limit (#44386) and the western 33.1 feet (10.09 m) on the northern limit, and part of Lot 9 to Nelson and Florence Osborne. The following year, in 1951, they sold the portion of land noted in #44386 to Edna LeClare. In 1952, Edna LeClare sold her sections of Lots 8 and 9 to Arthur and Mary Thompson. In 1954, the Thompson's sold their portion (#44386) and part of Lot 10 to Verdon and Dorothy Gibson. That December the Gibson's granted the lots to Donald and Joyce Eagles. Donald and Joyce Eagles then sold their portions of Lots 9 and 10 to Ivan Boyle for \$4,000.00 in August of 1955. In 1957, Ivan and his wife sold the property to Beatrice Billings, and in 1975, Beatrice Billings deeded the property to Douglas and Helen Carson for \$2.00. Four years later, in 1979, the Carson's deeded the property to Robert and Jean Beynon, who sold the property in 1991 to Nancy P. Cruickshank for \$71,000.00. Nancy later sold the property to Harold A. Lendon in May 1993. On November 5, 1998, Harold Lendon transferred the deed to joint ownership with Mary C. L. Hawkins.

29. #375 19th Street West (Plan 96 East Parts Lot 8, 9 and 10 West Price Street/ RP 16R-1650 Part 3, Town Plot of Brooke, Sarawak Township)

Lot 8 West Price Street, Town Plot of Brooke, and 'other lands' were sold to Eliza Harvey by Jacob Speers on February 1, 1895. She then sold the land to William Harvey for \$1,200.00 in February of 1906. A gap of over 70 years exists before the next entry in the Land Registry. This is a By-law (No. 1980-31) which was issued by the City of Owen



Sound on February 1, 1985. It authorized a deed of Conveyance of Parts 2 (west) and 3 (east) RP 16R-1650 and 'other lands'. On July 2, 1987, the City of Owen Sound sold Part 3 to Beatrice Duncan.

Lot 9 West Price Avenue was sold by Jacob D. Speers to Thomas Johnson on September 29, 1890 for \$100.00. On April 2, 1891, Thomas Johnson and his wife sold the lot to Francis G. Woolwich who then sold the property to James Hicks in June of that year for \$350.00. On July 17, 1894, James Hicks sold the property to Andrew McMillian, who five years later in February 1899, sold the west part of the lot and 'other lands' to Sarah A. Gilder.

Lot 10 West Price Street was sold by Jacob D. Speers to William Keefer along with Lot 10 East Market Street on November 21, 1889. Prior to this the lot had been sold by Speers to Elijah E. Scott in October of 1891, along with Lot 9. Elijah filed a quit claim on the lot in July of 1903, giving over title of the property to William Keefer. Keefer then sold Lot 10 to Sarah A. Gilder in July of 1903. Sarah Gilder and her husband later sold the two lots to Duncan McKinnon in 1903. In 1913, McKinnon sold the lot and 'other lands' to James Howey. On November 24, 1941, Edward S. Howey, the son of James Howey, granted the two lots to himself for \$1.00 plus premiums. On June 24, 1943, Edward S. Howey and his wife granted the lots and 'other lands' to Anne Mitchell for \$1.00. Two quit claims were filed against the property by the Howeys', and by Harold E. Johnston and his wife in 1950. Anne Mitchell then sold the east part of the lot to Donald and Beatrice Duncan on March 6, 1964 for \$3,060.00.

In 1995 Beatrice Duncan transferred Part 3 of Lot 8 as well as the eastern portions of Lots 9 and 10 to Mark and Tammy Feltis (as joint tenants) at a price of \$65,000.00. Three years later, in August of 1998, the Feltis' sold the property to Robby Gole and Kimberly Dobbs (as joint tenants). This parcel was then sold to Roxanne Dobbs for \$94,000.00 on August 26, 2005. That same day Roxanne Dobbs took out a mortgage on the property with the Scotia Mortgage Corporation.

30. #1898 3rd Avenue West (Plan 96 Lot 10 West Simpson Street, Town Plot of Brooke, Sarawak Township)

There are no Crown patents issued for Plan 96 lots within the Land Registry documents. According to the original Town Plot of Brooke, Plan 96 consists of a parcel of lots that includes Lots 141-151 (odd numbers only) of East Market Street, and Lots 142-150 (even numbers only) of West Simpson Street. The Plan was registered by Jacob D. Speers on November 23, 1889. Lot 10 West Simpson Street was later sold by Jacob D. Speers to Elizabeth E. Scott for \$1.00 on June 8, 1894. Elizabeth took out a mortgage on the property in June of 1894 and seems to have been unable to pay it off as in 1899 the property was owned by John M. Kilbourn. On June 25, 1918, John Kilbourn granted the property to The Kilbourn Co., and in 1932 the Kilbourn Co. granted it to the Kilbourn Co. Ltd., and then again in February of 1946, to The Kilbourn Realty Co. Ltd. On June 7, 1947, they sold the property to Marcella Hansler for \$100.00. The following year, in December 1948, Marcella Hansler sold the property to Cecil and James England for



\$750.00. In 1954, Cecil and James England and their wives sold the property to William and Muriel Henderson for \$800.00. In 1971, they deeded the property to Garry MacLean for \$10,000.00. Garry MacLean retained the property until May 11, 2001, at which time he transferred it to Eldon and Linda McMillan for \$60,000.00.

31. #1893 3rd Avenue West (Plan 97 Lot 10 & 11 [Originally Lot 141 East Simpson Street], Town Plot of Brooke, Sarawak Township)

There is no Crown patent issued for these lots within the Land Registry Index. The two lots were sold by Jacob D. Speers and his wife to Thomas F. Johnson in 1891 and are part of Subdivision Plan 97. Plan 97 is comprised of Lots 141-151 (odd numbers only) on Simpson Street East. All together (including Lot 9) these lands were sold for the price of \$375.00. William E. Todd later sold the lots to Peter E. McDonald and his wife for \$575.00 on September 6, 1901. How he received the properties is not indicated within the registry. There appears to have been some legal issues with this lot as a quit claim was filed in November of 1927, by the Grey & Bruce T.S. Co., to William E. Todd. John A. McDonald, the administrator of Peter McDonald et ux., sold the lots to James P. Harvey in April of 1926 for \$600.00. In 1941, a Grant was issued from Edward S. Harvey, Ellen Johnston and E. Joyce Harvey to James P. Harvey for “\$1.00 & *prems & other lands, Treasurer Consent*”. Ten years later, E.S Harvey, S.J. Harvey et ux., sold the lands (including Lot 11) to Felix Eggiman for \$1,000.00. On January 6, 1984, the Estate of Felix Eggiman granted the property to William R. Leonard who then sold the property to Wyeburne R. Nicholls and Shirley Prowse (as joint tenants). The following year they sold the property to Robert E. Prowse and Marta L. Prowse (as joint tenants). In May of 1987, Robert and Marta Prowse granted the lands to Bessie Myrtle Binns. On June 29, 1988 she sold the property to Kathryn Holness and Gregory Amer (also as joint tenants). They took out a mortgage on the property in May of 2004 for \$81,500.00 (#484914).

32. #100 19th Street West (Water Front OPP, Lot 118-157 West Ragland Street) – KELSO BEACH

The area of Kelso Beach, which pertains to lands found adjacent to the Study Area, was purchased in two different transactions. The first was a Patent issued by the Crown on June 21, 1894 to the Grand Trunk Rail Company, for 37 acres (14.97 hectares) at the cost of \$400.00. On September 25, 1896 the Grand Trunk Rail Company sold 7 acres (2.83 hectares) of the land to James G. Boyd for \$1.00. James Boyd and his wife later sold the 7 acres (2.83 hectares) to John Harrison for \$850.00 on the October 6, 1897. John Harrison and his wife used their 7 acres (2.83 hectares) to start Harrison and Sons Co. Limited on March 30, 1899. On October 28, 1950, John Harrison and Sons Co. Limited was acquired by the Grey Bruce S. Company and the land was granted to the Corporation of the City of Owen Sound for \$250,000.00. The City of Owen Sound sold 120 feet (36.58 m) north and 73.14 feet (22.29 m) south to Georg Clark Construction, who then sold the land to the Bell Telephone Company of Canada. The remaining lot was held by the Grand Trunk Rail Company, called the Canadian National Railway Co.



by the 1960s, until 1972 when it was parcelled off and sold to the City of Owen Sound as part of registered plan 16R-5760. It was labelled as Part 3 of the plan.

The second portion of the Kelso Beach lands had a patent issued by the Crown to John Harrison on July 27, 1900 for 2 ½ acres (1.01 hectares), at the cost of \$72.48. John Harrison also used this portion of land for his company, John Harrison and Sons Co. Limited. On March 10, 1949, part of the land was granted to Liddell String Ltd. For \$300.00. The John Harrison and Sons Co. Limited sold their remaining parcel to the Corporation of the City of Owen Sound on October 28, 1950, for \$2,500.00. The portion of the land owned by Liddell String Ltd. had a vesting order placed on it by Ivor Wagner and the Supreme Court of Ontario for a default on the mortgage payments between Liddell String Ltd. and the DuPont Company of Canada. The vesting order was settled and the lands were given to Ivor Wagner. This occurred between the years 1954 and 1956. Ivor Wagner and his wife then sold their parcel to Arthur Harrison for \$22,000.00 on July 26, 1959. A registered plan was placed on the entire property on December 14, 1990, titled plan 16R-4724. The lands then began to be parcelled off with others in registered plans 16R- 4724, Sections 1 through 11. The owner of the lands exchanged hands many times between 1990 and 2006. The main shareholders of the lands were the City of Owen Sound and the Owen Sound Branch 6 Legion.

Today Kelso Beach is a built-up recreational area. The Master Plan for Kelso Beach provides a brief background as to how the park developed, however, those involved with the establishment of the park were not the owners of the land but rather worked for the City of Owen Sound and the Owen Sound Legion Branch number 6. The following is taken from the masterplan (NALAL 2010:3):

“The shores of the bay have been filled over the years to make the land more usable for shipping and industrial purposes (e.g. wharfs, grain elevators) and to create Kelso Beach Park. The ‘clean up’ of the waterfront to create a beach was reportedly initiated and organized by Henry Kelso, a municipal employee at the time. For many years Kelso Beach Park was a flat, low and fairly open park, notoriously wet (soggy) with a small sandy beach, washrooms/change rooms and a picnic shelter.

In 1976, the Summerfolk Music and Crafts Festival was first held at Kelso Beach. The music festival was the catalyst for the redevelopment of the park in 1982-83. Designed by landscape architects Gotfryd and Findlay and constructed by Harold Sutherland Construction, the new design included parking, a large amphitheatre, playing fields, plantings, playgrounds and walkways.”

33. #485 20th Street West (Part Lots 129, 131, 133 East Edward Street; RP 16R2551 Part 1, Town Plot of Brooke, Sarawak Township)

The Crown patent for these three lots was issued to William J. Graham in July of 1888. The lands remained in his possession until his death sometime prior to March of 1932. He willed the properties to William A. D. Graham. After William A. D. Graham’s death (prior to May of 1972), the property was deeded from Edward D. Graham to the Director



of the Veterans Land Act for \$1.00. In 1982, the Director of the Veterans Land Act deeded the properties to Kathleen D. Graham for \$1.00. On the same day, Ms. Graham sold the lands to Norman and Amber Gibbons (as joint tenants) for \$2.00. On April 12, 1985, Parts 1 and 2 (all lands) and other lands, became part of the Registered Plan (16R-2551). Joint tenants, Amber and Norman Gibbons, then granted Part 1 of the lots to Amber Gibbons in the spring of 1985. Amber M. Gibbons later sold Part 1 to Renaud and Laurie Francoeur in April of 1986. In June of 1989, another registered plan was issued for Part 2 of 16R-2551 (16R-3842) and other lands. Renaud and Laurie Francoeur took out a mortgage on Part 1 (#485 20th Street West) from Canada Trustco Mortgage Co. for \$95,000.00 on May 6, 1994.



4.0 ARCHAEOLOGICAL ASSESSMENT

A Stage 1 archaeological assessment was conducted by Scarlett Janusas Archaeology Inc. (P027-0331-2018) in 2018. The results determined that archaeological potential exists for both “Native and Euro-Canadian” archaeological resources in the Study Area. This assessment included a recommendation for a Stage 2 archaeological assessment of all areas deemed to retain archaeological potential.

There are no registered archaeological sites located within one kilometre of the Study Area (MTCS PastPortal 2018). The soils of the area are Elderslie Silty Clay Loam., There is a single plaque located within 1 km of the Study Area. It is dedicated to “The Newash Indian Village 1842”. The Study Area consists of a man-made storm water drainage ditch that may have followed a natural tributary, however, it is unknown whether it was originally associated with one of the natural creeks or rivers of the area. The elevation of the terrain within the Study Area ranges from 180 to 190 metres above sea level, and gradually slopes down to the shores of Kelso Beach.

The Stage 2 archaeological assessment has yet to be completed. Recommendations of the Stage 1 archaeological assessment are:

- A Stage 2 archaeological assessment is recommended for approximately 56% of the Study Area (areas of archaeological potential), more specifically: 1) the west side of Reach 1 should be the subject of Stage 2 archaeological assessment if there is any proposed development, excluding routine maintenance of the existing culvert; 2) the west side of Reach 2 exhibit potential and will require Stage 2 archaeological assessment if this area is to be developed; 3) the water course in Reach 3 has been dredged several times, although the majority of the area on either side of the course has remained undeveloped. Should any development be proposed in this area, Stage 2 archaeological assessment is recommended. 4) Reach 4 is a mix of areas of both archaeological potential and no potential. Those areas of archaeological potential are recommended for Stage 2 archaeological assessment should development be proposed within Reach 4. 5) There is no potential for Reach 5, and no further archaeological assessment is required in the area of Reach 5. 6) There is no archaeological potential for Reach 6 and no further archaeological assessment is recommended within the Reach 6 area.
- Compliance legislation must be adhered to in the event of discovery of deeply buried cultural material or features

As per Section 2.1.2 Standards 1, 2, and 5-9 of the MTCS 2011 Standards and Guidelines, it is recommended that areas of archaeological potential as identified on Map 15 be subject to a Stage 2 archaeological assessment. Based on the current condition of the land, the area cannot be ploughed. Stage 2 archaeological assessment should be conducted using a test pitting methodology conducted in five metre intervals across the areas of archaeological potential. Each test pit should be at least 30 cm in diameter and excavated a minimum of five cm into subsoil and examined for stratigraphy, cultural features, or evidence of fill. All soil shall be screened through mesh no greater than six



mm, all artifacts should be collected according to their associated test pit, and all test pits backfilled unless instructed not to by the landowner/proponent. If test pits are found to be positive (artifacts or cultural features), test pitting should be intensified around the positive test pits with eight additional test pits excavated at 2.5 metre intervals around the positive test pit. If there are sufficient positive test pits located to recommend a Stage 3 archaeological assessment (and sufficient materials), no additional intensification is required. If there is some question as to whether the positive test pit(s) is sufficient for a recommendations of Stage 3 assessment, a minimum of one – one metre square test unit must be excavated over the positive test pit. All recovered archaeological materials shall be bagged and tagged according to provenience.

Figures 6 and 7 illustrate the areas recommended for Stage 2 archaeological assessment.



Figure 6: Archaeological Potential of Study Area



Figure 7: Recommended Areas Requiring Stage 2 Assessment



Table 2: Structures Located Adjacent to Study Area

Street Address	Lot # (In Figure 8)		Structure #	CHVI
Study Area Lots				
2164 6 th Ave. W.	1		1	No
2133 6 th Ave. W.	2		2	No
590 21 st St. W.	3		3	No
585 21 st St. W.	4		4	No
563 21 st St. W.	5		5	No
596 20 th St. W.	6		6	Yes
560 20 th St. W.	7		7	No
2020 5 th Ave. W.	8		8	No
2006 5 th Ave. W.	9		9	Yes
550 19 th St. W.	10		10	No
1914 4 th Ave. W.	11		11	Yes
1909 4 th Ave. W.	12		12	Yes
280 19 th St. W.	13		13	No
Lots Adjacent to Study Area				
2195 8 th Ave. W.	14		14	No
2130 6 th Ave. W.	15		15	No
2110 6 th Ave. W.	16		16	No
2163 6 th Ave. W.	17		17	No
2040 5 th Ave. W.	18		18	Yes
2090 6 th Ave. W.	19		19	Yes
2064 6 th Ave. W.	20		20	No
2044 6 th Ave. W.	21		21	No
2024 6 th Ave. W.	22		22	No
2020 6 th Ave. W.	23		23	No
2016 6 th Ave. W.	24		24	Yes
1895 5 th Ave. W.	25		Vacant Lot	Yes
1880 4 th Ave. W.	26		25	No
1889 4 th Ave. W.	27		26	Yes
377 19 th St. W.	28		27	No
375 19 th St. W.	29		27	Yes
1898 3 rd Ave. W.	30		28	No
1893 3 rd Ave. W.	31		29	No
100 19 th St. W.	32		Park Related Buildings	No
485 20 th St. W.	33		30	No



Building 9

Building 9 (Image 64) is located at 2006 5th Ave. W. with the main façade facing east toward the street. The overall visual aspect of Building 9 presents a two storey building with a distinctive rectangular-shaped floor plan and red brick façades. The main façade of the Building (eastern elevation) includes one small window on one side of an off-set doorway. The main façade of the Building has a front-facing gable with a steeply pitched roof. There is a small, one-storey addition with aluminum siding on the western elevation and a modern front porch enclosure at the main eastern entrance. This is a typical Vernacular Homestead Style house that dates to the 1890-1930 period (Carter and Oberst 2008:5).

Building 11

Building 11 (Images 16, 18) is located at 1914 4th Ave. W. with the main façade facing east toward the street. The overall visual aspect of Building 11 presents a two storey building with a distinctive L-shaped floor plan and yellow brick façades. The main façade of the Building (eastern elevation) includes a verandah at the main entrance which is off-set to one side. This elevation is two bays wide with two upper and two lower sash windows, one of which is a bay style window. There is a modern one storey wood paneled addition on the western elevation of the building. This is a typical Late Victorian Style house that dates to the 1840-1900 period (OASG 2009:15). This Building is listed on the City of Owen Sound Heritage Register List.

Building 12

Building 12 (Image 14) is located at 1909 4th Ave. W. with the main façade facing west toward the street. The overall visual aspect of Building 12 presents a one storey building with a distinctive square-shaped floor plan and clapboard façades. The main façade of the house (western elevation) includes one small window on one side of the central doorway. The roof is steeply pitched, has shallow eaves and no dormers. There is a small addition on the eastern elevation and a modern detached garage at the rear of the building. This is a typical Victory Style house that dates to the 1940-1960 period (OASG 2009:25).

Built Heritage Resources Adjacent to Study Area

The following describes the six buildings on lots adjacent to the Study Area that were deemed to have cultural heritage value or interest.

Building 18

Building 18 (Image 66) is located at 2040 5th Ave. W. with the main façade facing east toward the street. The overall visual aspect of Building 18 presents a one storey building



with a distinctive square-shaped floor plan and façades with aluminum siding. The main façade of the house (eastern elevation) includes one small window on either side of a central doorway. The main façade includes both aluminum siding and decorative brick work. The roof is steeply pitched, has shallow eaves and no dormers. There is a small, modern attached car-port on one side and a detached one-car garage and tool shed (both modern) at the rear of the building. This is a typical Victory Style house that dates to the 1940-1960 period (OASG 2009:25).

Building 19

Building 19 (Images 41 – 43) is located at 2090 6th Ave. W. with the main façade facing east toward the street. The overall visual aspect of Building 19 presents a 1 ½ storey building with a distinctive T-shaped floor plan and façades of red brick. The main façade of the house (eastern elevation) includes one small window on either side of a central doorway. The roof is medium pitched from front-to-back with a steeply pitched central front dormer. There is a large, modern aluminum sided addition on the western elevation, and a detached two-car garage at the rear of the building. This is a typical Gothic Revival Style house that dates from 1750 to 1900 (www.Ontarioarchitecture.com).

Building 24

Building 24 (Image 35) is located at 2016 6th Ave. W. with the main façade facing east toward the street. The overall visual aspect of Building 24 presents a one storey building with a distinctive square-shaped floor plan and clapboard façades. The main façade of the house (eastern elevation) includes one small sash window on either side of a central doorway (now covered by an enclosed porch). The roof is steeply pitched, has shallow eaves and no dormers. There is a small, modern addition on the western elevation of the building. This is a typical Victory Style house that dates to the 1940-1960 period (OASG 2009:25).

Building 25

Building 25 (Images 15, 17, 19 and 72) is located at 1880 4th Ave. W. with the main façade facing east toward the street. The overall visual aspect of Building 25 presents a 2 ½ storey building with irregular, multiple surfaces (floor plan) and red brick façades. The main façade of the house (eastern elevation) includes a wrap-around verandah at the main entrance which is off-set to one side. This elevation includes a tower that is off-set opposite the main entryway. The roof has a steep pitch with multiple rooflines and gables. There is also a large modern two storey red brick addition on the northern and western elevations of the building, and a small covered sitting area and tool shed (both modern) on the northern side of the house. This is a typical Queen Ann Revival Style house that dates to the 1870-1910 period (OASG 2009:12). This house is listed on the City of Owen Sound Heritage Register List.



Building 27

Building 27 (Image 11) is located at 375 and 377 19th St. W. with the main façade facing north toward the street. The overall visual aspect of Building 27 presents a 1 ½ storey building with a distinctive rectangular-shaped floor plan and façades of red brick. The main façade of the house (northern elevation) includes one small window on either side of a central doorway. The original doorway has been modified and there are now two separate side-by-side entrances. The roof is medium pitched from front-to-back with a steeply pitched central front dormer. This is a typical Ontario Cottage Style house that dates from c. 1830-present (OASG 2009:47).

Building 29

Building 29 (Image 9) is located at 1893 3rd Ave. W. with the main façade facing west toward the street. The overall visual aspect of Building 29 presents a two storey building with a distinctive rectangular-shaped floor plan and red brick façades. The main façade of the house (western elevation) includes one large window on one side of an off-set doorway. The main façade of the house is two bays wide and has a front-facing gable with a steeply pitched roof. There is a small, one-storey addition with aluminum siding on the eastern elevation. This is a typical Vernacular Homestead Style house that dates to the 1890-1930 period (Carter and Oberst 2008:5).

5.2 Roadscapes

There are nine roadways immediately abutting the Study Area and adjacent lots, including: 2nd Ave. W., 3rd Ave. W., 4th Ave. W., 5th Ave. W., 6th Ave. W., 8th Ave. W., 19th St. W., 20th St. W., and 21st St. W.

2nd Avenue West

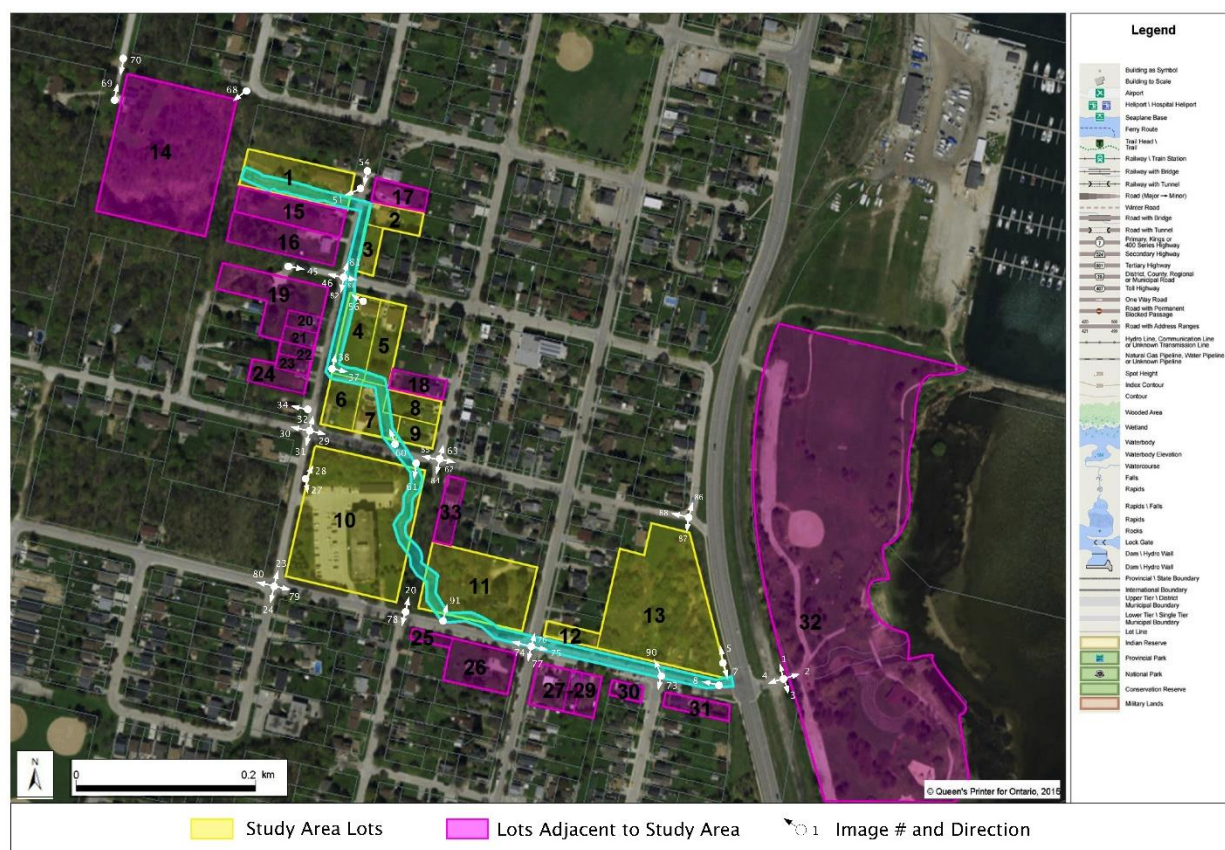
2nd Avenue West is a paved, four lane thoroughfare with concrete curbs, grass verges, sidewalks and moderately deep ditches on either side of the street. Each side of the road also includes utilities (hydro/telephone and streetlight poles, and storm sewer drains). 2nd Avenue West is the former “Sound Street” in the historic Town Plot of Brooke.

3rd Avenue West

3rd Avenue West is a paved, two lane road with concrete curbs and sidewalks on either side of the street. There are utilities along both sides of the road. On the western side of the road are hydro, telephone and streetlight poles, while on the eastern side of the street are storm sewer drains. 3rd Avenue West is the former “Simpson Street” in the historic Town Plot of Brooke.



Figure 10: Study Area and Adjacent Roadscapes Image Map



4th Avenue West

4th Avenue West is a paved, two lane road with concrete curbs and sidewalks on either side of the street. The east side of the road also has a grass verge between the curb and sidewalk. There are utilities along both sides of the road, including hydro, telephone and streetlight poles, as well as storm sewer drains. 4th Avenue West is the former “Market Street” in the historic Town Plot of Brooke.

5th Avenue West

5th Avenue West is a paved, two lane road with concrete curbs on either side of the street. The east side also has a sidewalk and utilities along the roadway, including hydro, telephone and streetlight poles, as well as storm sewer drains. 5th Avenue West is the former “Edward Street” in the historic Town Plot of Brooke.



6th Avenue West

6th Avenue West is a paved, two lane road that lacks concrete curbs and sidewalks on both sides of the street. The east side of the road has a narrow gravel shoulder approximately one metre wide, while on the west side are manicured lawns and utilities including hydro, telephone and streetlight poles, as well as storm sewer drains. 6th Avenue West is the former “Amelia Street” in the historic Town Plot of Brooke.

8th Avenue West

8th Avenue West is a paved, two lane road with grass shoulders on either side of the street. There are utilities along both sides of the road, including hydro, telephone and streetlight poles. 8th Avenue West is the former “Albert Street” in the historic Town Plot of Brooke.

19th Street West

19th Street West is a paved, two lane road with concrete curbs on either side of the street. The south side of the road also has a sidewalk. On the north side of the street there are utilities including hydro, telephone and streetlight poles, as well as sewer drains. 19th Street West is the former “Palmerston Street” in the historic Town Plot of Brooke.

20th Street West

20th Street West is a paved, two lane road that lacks concrete curbs or sidewalks on either side of the street. The south side of the road has utilities including hydro, telephone and streetlight poles. 20th Street West is the former “Regent Street” in the historic Town Plot of Brooke.

21st Street West

21st Street West is a paved, two lane road with a concrete curb and sidewalk on the south side of the street. The south side of the road has utilities including hydro, telephone and streetlight poles, as well as sewer drains and a water main (fire hydrant). On the north side of the street are manicured lawns. 21st Street West is the former “Oxford Street” in the historic Town Plot of Brooke.

Although these roadways represent early transportation routes for the area (as part of the original Town Plot of Brooke), they no longer retain any of their original character and do not have any heritage value, interest or merit.

5.3 Cultural Heritage Landscapes

Cultural heritage landscapes are clusters of related heritage structures, lands, vegetation, archaeological resources and other heritage resources, and include agricultural



landscapes, industrial landscapes, cemetery landscapes, sacred landscapes as well as heritage conservation districts.

“While any landscape upon which humankind has left their imprint is a cultural landscape, only those cultural landscapes that have a deep connection with the history of the jurisdiction can be identified as cultural heritage landscape. To be considered significant from a heritage perspective it must be demonstrated...that ... [the property] meets one or more of the following criteria:

- A. Is associated with events that made significant contributions in the broad patterns of area history; i.e. strong association with central themes.
- B. Is closely associated with the lives of individuals and/or families who are considered significant to the history of the area.
- C. Embodies the distinctive characteristics of a particular settlement pattern or lifeway whether derived from ethnic background, imposed by the landscape, was the practice of a specific historic period or a combination of the above.
- D. Manifests a particularly close and harmonious long-standing relationship between the natural and domestic landscape.
- E. Has yielded or is likely to yield information important to prehistory or history.
- F. Is strongly associated with the cultural and/or spiritual traditions of First Nations or any other ethnic and/or religious group”

(https://www.caledon.ca/en/live/resources/Cultural_Heritage_Landscapes_Inventory_Report-Section5.pdf)

With respect to the criteria listed above (A – F), the landscape of the Study Area meets criteria A, C, D and possibly F:

- A) The landscape has a strong association with an early settlement theme.
- B) Is not associated with the lives of individuals and/or families who are considered significant to the history of the area.
- C) The Study Area lands are reflective of the early settlement patterning and the original Town Plot of Brooke.
- D) The Study Area has a particularly close and harmonious long-standing relationship between the natural and domestic landscape as the roadways are associated with the original Town Plot of Brooke.
- E) The Stage 2 archaeological assessment is outstanding, and,
- F) Has no known strong association with cultural/or spiritual traditions of Indigenous communities or any other ethnic and/or religious group.

Based on the above, the Study Area is identified as a cultural heritage landscape.

5.4 Summary of Cultural Heritage Values

The evaluation of the cultural heritage values for each building within and adjacent to the Study Area employed the following three criteria. The results are presented below.



1. Design Value or Physical Value: i) is a rare, unique, representative or early example of a style, type, expression, material or construction method; ii) displays a high degree of craftsmanship or artistic merit; or, iii) demonstrates a high degree of technical or scientific achievement.
2. Property has Historical Value or Associative Value: i) has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community; ii) yields, or has the potential to yield, information that contributes to an understanding of a community or culture; iii) demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.
3. Property has contextual value: i) is important in defining, maintaining or supporting the character of an area; ii) is physically, functionally, visually or historically linked to its surroundings; iii) is a landmark.

5.4.1 Built Heritage Resources within Lots of the Study Area

Building 6

Building 6 is a typical Victory Style home that dates to the 1940-1960 period. This property has design or physical value because it is a representative example of an Ontarian wartime house style. It has no known historical or associative value. Building 6 has contextual value as it is historically linked to its surroundings.

Building 9

Building 9 is a typical Vernacular Homestead Style house that dates to the 1890-1930 period. This property has design or physical value as it is a representative example of an early Ontarian house style. The architectural style was built well after the settlement of Brooke, therefore has no historical or associative value vis-à-vis the establishment of Brooke. Building 9 has no contextual value.

Building 11

Building 11 is a typical Late Victorian Style house that dates to the 1840-1900 period. This house is listed on the City of Owen Sound Heritage Register List due to its historic and associative value to the local community. The property has design or physical value because it is a representative example of an early Ontarian house style. It has historical or associative value because it has direct associations with an historic event (the original development of the Town of Brooke) as well as contextual value as it is historically linked to its surroundings.

Building 12

As with Building 6, Building 12 is a typical Victory Style home that dates to the 1940-1960 period. This property has design or physical value because it is a representative example of an Ontarian wartime house style. It has no historical or associative value. Building 12 also has no contextual value.



5.4.2 Built Heritage Resources in Lots Adjacent to the Study Area

Building 18

Building 18 is a typical Victory Style house that dates to the 1940-1960 period. This property has design or physical value because it is a representative example of an Ontarian wartime house style. It has no historical or associative value or contextual values.

Building 19

Building 19 a typical Gothic Revival Style house that dates from 1790 to 1900. There is no decorative bargeboard, which is a usual characteristic of this type of house, but it may have been removed. This property has design or physical value because it is a representative example of an early Ontarian house style. It has historical or associative value because it has direct associations with an historic event (the original development of the Town of Brooke). Building 19 has contextual value as it is historically linked to its surroundings.

Building 24

Building 24 is a typical Victory Style house that dates to the 1940-1960 period. This property has design or physical value because it is a representative example of an Ontarian wartime house style. It has no historical or associative value nor contextual value.

Building 25

Building 25 is a typical Queen Ann Revival Style house that dates to the 1870-1910 period. This house is listed on the City of Owen Sound Heritage Register List attributed to its historic and associative value to the local community. This property has design or physical value because it is a representative example of an early Ontarian house style, and has historical or associative value because it has direct associations with an historic event (the original development of the Town of Brooke). Finally, Building 25 has contextual value as it is historically linked to its surroundings.

Building 27

Building 27 is a typical Gothic Revival Style home that dates from 1790 to 1900 (www.ontarioarchitecture.com). This property has design or physical value because it is a representative example of an early Ontarian house style. It has historical or associative value because it has direct associations with an historic event (the original development of the Town of Brooke). Building 27 has contextual value as it is historically linked to its surroundings.



Building 29

Building 29 is a typical Vernacular Homestead Style house that dates to the 1890-1930 period. This property has design or physical value because it is a representative example of an early Ontarian house style. The house has historical or associative value as it has association with the settlement of Brooke. It has contextual value as it is historically linked to its surroundings.

5.4.3 Cultural Heritage Landscape

The Study Area is determined to be a cultural heritage landscape (refer to Section 5.3 of this report). Although the landscape of the Study Area has been deemed to have cultural heritage value or interest, the proposed development project will not negatively impact or further alter the integrity of the landscape, including its viewsheds.



6.0 POTENTIAL IMPACTS OF UNDERTAKING ON CULTURAL HERITAGE RESOURCES

6.1 Extent of Development

The proponent retained the services of Scarlett Janusas Archaeology Inc. (SJA) to conduct a cultural heritage resource evaluation report for the Brooke Area Basin A3 (Figure 2). A description of the project is presented in Section 1.1.

6.2 Impact on Built Heritage

The proposed Brooke Area Basin A3 development will not have a direct impact on the built heritage resources located within (or adjacent to) the Study Area.

6.3 Impact on Cultural Heritage Landscapes

The landscape associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development.

6.4 Impact on Current Viewsheds

The current viewsheds associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development.



7.0 MITIGATION OPTIONS

Mitigation options are based solely on heritage values.

The majority of the built heritage (structures) adjacent to the Study Area have been evaluated as having no cultural heritage value and interest. There are no heritage structures located directly within the Study Area.

Options for managing the built heritage features can be broad, and include:

1. **Do Nothing:** This is recommended for all of the identified heritage buildings.
2. **Test:** Prior to any restoration, testing of the integrity of the buildings should be conducted to determine restoration requirements or if the value of restoration is outweighed by the lack of structural integrity. This is not recommended the built heritage buildings.
3. **Comprehensive architectural drawings:** should be conducted for all of the built heritage features as a permanent record of the building. This is not recommended the built heritage buildings.
4. **Restoration in situ:** This is not recommended the built heritage buildings.
5. **Restoration and remove buildings to a different location:** This is not recommended the built heritage buildings.
6. **Adaptive reuse:** can be an alternative to removal of the buildings. This is not recommended the built heritage buildings.
7. **Reuse of buildings materials:** This is not recommended the built heritage buildings.
8. **Provide buildings for reuse/restoration to Habitat for Humanity or other equivalent programs:** This is not recommended the built heritage buildings.
9. **Signage recognition:** Plaques and/or signs that provide a succinct description of the date, style, architect/builder, wherever possible. This is not recommended the built heritage buildings.
10. **Demolish:** Demolishment of any heritage building must be the last alternative visited in considering alternative, mitigative or conservation methods. This is not recommended the built heritage buildings.

In closing, given the scope of the proposed Brooke Area Basin A3 project it is not anticipated that any of the identified built heritage features, cultural heritage



landscape, roadways or viewsheds will be negatively impacted by the development and no mitigation or protective measures are required.



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9.0 IMAGES

Image 1: Adjacent to Study Area – Kelso Beach Entrance (Facing N)



Image 2: Adjacent to Study Area – Kelso Beach Entrance (Facing E)



Image 3: Adjacent to Study Area – Kelso Beach Entrance (Facing S)



Image 4: Adjacent to Study Area – Kelso Beach Entrance (Facing W)



Image 5: Study Area – 2nd Ave. W. from SE Side of Lot 13 (Facing N)



Image 6: Study Area – SE End of Lot 13 (Facing NW)



Image 7: Study Area – 2nd Ave. W. from SE End of Lot 13 (Facing S)



Image 10: Adjacent to Study Area – Lot 30 and Building 28 (Facing W)



Image 8: Study Area – 19th St. W. from SE End of Lot 13 (Facing W)



Image 11: Adjacent to Study Area – Lots 28 & 29 and Building 27 (Facing S)



Image 9: Adjacent to Study Area – Lot 31 and Building 29 (Facing E)



Image 12: Study Area – Lot 12 Outbuilding (Facing N)



Image 13: Adjacent to Study Area - Lot 27 and Building 26 (Facing E)



Image 16: Study Area – Lot 11 and Building 11 (Facing W)



Image 14: Study Area – Lot 12 and Building 12 (Facing E)



Image 17: Adjacent to Study Area – Lot 26 and Building 25 (Facing SW)



Image 15: Adjacent to Study Area – Lot 26 and Building 25 (Facing W)



Image 18: Study Area – Lot 11 and Building 11 (Facing N)



Image 19: Adjacent to Study Area – Lot 26 and Building 25 (Facing SE)



Image 22: Study Area – Lot 10 and Building 10 Apartments (Facing NW)



Image 20: Study Area – Creek Between Lots 10 and 11 (Facing N)



Image 23: Adjacent to Study Area – 6th Ave. W. from 19th St. W. (Facing N)



Image 21: Adjacent to Study Area – Vacant Lot 25 (Facing E)



Image 24: Outside Study Area – 6th Ave. W. from 19th St. W. (Facing S)



Image 25: Study Area – Drive Shed at NE End of Lot 10 (Facing NE)



Image 28: Study Area – Creek at NW End of Lot 10 (Facing NE)



Image 26: Study Area – Lot 10 and Building 10 Apartments (Facing SE)



Image 29: Study Area – 20th St. W. from 6th Ave. W. (Facing E)



Image 27: Study Area – Culvert at NW End of Lot 10 (Facing SE)



Image 30: Outside Study Area – 20th St. W. from 6th Ave. W. (Facing W)



Image 31: Outside Study Area – 6th Ave. W. from 20th St. W. (Facing S)



Image 32: Study Area – 6th Ave. W. from 20th St. W. (Facing N)



Image 33: Study Area – Lot 6 and Building 6 (Facing N)



Image 34: Outside Study Area – View of Lot West of Lot 6 (Facing W)



Image 35: Adjacent to Study Area – Lot 24 and Building 24 (Facing W)



Image 36: Adjacent to Study Area – Lot 23 and Building 23 (Facing W)



Image 37: Study Area – Creek at SW End of Lot 4 (Facing E)



Image 38: Study Area – Creek at SW End of Lot 4 (Facing N)



Image 39: Adjacent to Study Area – Lot 21 and Building 21 (Facing W)



Image 40: Adjacent to Study Area – Lot 20 and Building 20 (Facing W)



Image 41: Adjacent to Study Area – Lot 19 and Building 19 (Facing W)



Image 42: Adjacent to Study Area – Lot 19 and Building 19 (Facing S)



**Image 43: Adjacent to Study Area –
Lot 19/Building 19 Garage (Facing
SW)**



**Image 44: Adjacent to Study Area –
SW End of Lot 16 (Facing N)**



**Image 45: Adjacent to Study Area –
21st St. W. from Dead-End (Facing E)**



**Image 46: Adjacent to Study Area –
21st St. W. Dead-End (Facing W)**



**Image 47: Adjacent to Study Area –
Lot 16 and Building 16 (Facing W)**



**Image 48: Adjacent to Study Area –
Lot 15 and Building 15 (Facing W)**



Image 49: Adjacent to Study Area - Lot 16 Building & Garage (Facing SW)



Image 52: Study Area – Lot 2 and Building 2 (Facing E)



Image 50: Study Area - Lot 1 and Building 1 (Facing W)



Image 53: Adjacent to Study Area – Lot 17 and Building 17 (Facing E)



Image 51: Study Area – Creek Between Lots 15 and 1 (Facing SW)



Image 54: Study Area – 6th Ave. W. from Dead-End (Facing S)



Image 55: Study Area – Lot 3 and Building 3 (Facing N)



Image 58: Study Area – Lot 5 and Building 5 (Facing S)



Image 56: Study Area – Culvert at NW Corner of Lot 4 (Facing NW)



Image 59: Study Area – Lot 7 and Building 7 (Facing N)



Image 57: Study Area – Lot 4 and Building 4 (Facing S)



Image 60: Study Area – Creek Between Lots 7 and 9 (Facing NW)



Image 61: Study Area – Creek at NE Corner of Lot 10 (Facing S)



Image 64: Study Area – Lot 9 and Building 9 (Facing W)



Image 62: Adjacent to Study Area – 20th St. W. from 5th Ave. W. (Facing E)



Image 65: Study Area – Lot 8 and Building 8 (Facing W)



Image 63: Study Area – 5th Ave. W. from 20th St. W. (Facing N)



Image 66: Adjacent to Study Area – Lot 18 and Building 18 (Facing W)



**Image 67: Adjacent to Study Area -
Lot 22 / Building 22 on Right (Facing
W)**



**Image 70: Adjacent to Study Area –
8th Ave. W. from NW End of Lot 14
(Facing S)**



**Image 68: Adjacent to Study Area –
NE End of Lot 14 (Facing SW)**



**Image 71: Adjacent to Study Area –
Lot 33 and Building 30 (Facing S)**



**Image 69: Adjacent to Study Area –
8th Ave. W. from NW End of Lot 14
(Facing N)**



**Image 72: Adjacent to Study Area –
Building 25 from Lot 25 (Facing E)**



**Image 73: Adjacent to Study Area –
3rd Ave. W. from 19th St. W. (Facing S)**



**Image 76: Study Area – 4th Ave. W.
from 19th St. W. (Facing N)**



**Image 74: Study Area – 19th St. W.
from 4th Ave. W. (Facing W)**



**Image 77: Adjacent to Study Area –
4th Ave. W. from 19th St. W. (Facing S)**



**Image 75: Study Area - 19th St. W.
from 4th Ave. W. (Facing E)**



**Image 78: Adjacent to Study Area –
5th Ave. W. from 19th St. W. (Facing S)**



**Image 79: Study Area – 19th St. W.
from 6th Ave. W. (Facing E)**



**Image 82: Study Area – 6th Ave. W.
from 21st St. W. (Facing S)**



**Image 80: Outside Study Area – 19th
St. W. from 6th Ave. W. (Facing W)**



**Image 83: Study Area – 21st St. W.
from 6th Ave. W. (Facing E)**



**Image 81: Study Area – 6th Ave. W.
from 21st St. W. (Facing N)**



**Image 84: Study Area – 5th Ave. W.
Between Lots 33 and 10 (Facing S)**



**Image 85: Study Area – 20th St. W.
from 5th Ave. W. (Facing W)**



**Image 86: Outside Study Area – 3rd
Ave. W. from 20th St. W. (Facing N)**



**Image 87: Study Area – Lot 13 and
Building 13 from 3rd Ave. W. (Facing
S)**



**Image 88: Outside Study Area – 20th
St. W. from 3rd Ave. W. (Facing W)**



**Image 89: Adjacent to Study Area –
Lot 14 and Building 14 (Facing SE)**



**Image 90: Study Area – Lot 13 from
19th St. W. (Facing N)**




**Image 91: Study Area – SW End of
Lot 11 (Facing N)**




10.0 APPENDICES

Appendix A: Cemetery Search


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MINISTRY OF GOVERNMENT AND CONSUMER SERVICES



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[Data last updated on Feb 1, 2018 at 10:26 hours]

Search Results

Your search result on Street Number: **100**, Street Name: **19 Street West**, County/District: **GREY, COUNTY OF**, Municipality: **OWEN SOUND**, requested on Feb 1, 2018 returns **0** record. Please verify your search criteria or [click here for search tips](#).

[\[MAIN SEARCH SCREEN\]](#) | [\[NEW SEARCH\]](#)

#	Street Address	Cemetery Y(es) /N(o)
1	2164 6 Ave W	N
2	2133 6TH AVE W	N
3	590 21ST ST W	N
4	585 21ST ST W	N
5	563 21ST ST W	N
6	596 20TH ST W	N
7	560 20TH ST W	N
8	2020 5TH AVE W	N
9	2006 5 th AVE W	N
10	550 19TH ST W	N
11	1914 4TH AVE W	N
12	1909 4TH AVE W	N
13	280 19TH ST W	N
14	2195 8th Ave West	N
15	2168 6TH AVE W	N
16	2130 6TH AVE W	N
17	2110 6TH AVE W	N
18	2163 6TH AVE W	N
19	Lot 10, Edward Street West (No address)	N
20	2140 5TH AVE W	N
21	570 21ST ST W	N
22	554 21ST ST W	N
23	520 21ST ST W	N
24	535 21ST ST W	N
25	513 21ST ST W	N




26	2060 5TH AVE W	N
27	2040 5TH AVE W	N
28	2090 6TH AVE W	N
29	2064 6TH AVE W	N
30	2044 6TH AVE W	N
31	2024 6TH AVE W	N
32	2020 6TH AVE W	N
33	2016 6TH AVE W	N
34	2006 6TH AVE W	N
35	1996 6TH AVE W	N
36	Part Lot 132, Lot 134 Amelia Street West (No address)	N
37	Lot 136, 138 & 140 Amelia Street West; Lot 135,137,139 Cocks Street East (No address)	N
38	1896 6TH AVE W	N
39	1895 6TH AVE W	N
40	525 19TH ST WEST	N
41	1896 5TH AVE W	N
42	1895 5th Ave West	N
43	1880 4TH AVE W	N
44	1889 4TH AVE W	N
45	377 19TH ST W	N
46	375 19TH ST W	N
47	1898 3RD AVE W	N
48	1893 3RD AVE W	N
49	100 19th Street West	N
50	2004 3RD AVE W	N
51	325 20TH ST W	N
52	1985 4TH AVE W	N
53	1969 4TH AVE W	N
54	1965 4TH AVE W	N
55	1921 4TH AVE W	N
56	1913 4TH AVE W	N
57	1962 4TH AVE W	N
58	465 20TH ST W	N
59	475 20TH ST W	N
60	485 20TH ST W	N
61	492 20TH ST W	N
62	2031 5TH AVE W	N
63	2039 5TH AVE W	N



Appendix B: Field – Built Feature Records

Built Features Located within Lots of the Study Area

CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 1		
Municipal Address: 2164 6th Ave. W.		
Associated Dates: 20th Century (Unknown)		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: One story brick house with attached two-car garage. One story siding-covered addition at rear.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06: <i>Design or Physical Value:</i> <i>Historical or Associative Value:</i> <i>Contextual Value:</i>		
Identified Heritage Attributes:		
Identification of CHVI: no		
Completed By: (Name) P. Demarte		
Date Completed: February 22, 2018		




CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 3		
Municipal Address: 590 21st St. W.		
Associated Dates: 20th Century (Unknown)		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: One story house covered with aluminum siding, attached one-car garage and addition at rear.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:		
Design or Physical Value:		
Historical or Associative Value:		
Contextual Value:		
Identified Heritage Attributes:		
Identification of CHVI: No		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		



CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 5		
Municipal Address: 563 21st St. W.		
Associated Dates: 20th Century (Unknown)		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: One story brick house with attached one-car garage at rear.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:		
Design or Physical Value:		
Historical or Associative Value:		
Contextual Value:		
Identified Heritage Attributes:		
Identification of CHVI: No		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		



CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 6		
Municipal Address: 596 20th St. W.		
Associated Dates: 20th Century, 1940–1960		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: One story Victory Style house with a small addition at rear, and detached one-car garage (modern). The main facade of the house is clapboard and includes one small sash window on either side of a central doorway. The roof is steeply pitched, has shallow eaves and no dormers.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06: <i>Design or Physical Value:</i> One story Victory Style clapboard house with one small sash window on either side of a central doorway. The roof is steeply pitched, has shallow eaves and no dormers. Typical Victory Style house. <i>Historical or Associative Value:</i> <i>Contextual Value:</i> The house is historically linked to its surroundings as it is a Victory house and reflects local development during the war time era.		
Identified Heritage Attributes: Simple one story clapboard house with one small sash window on either side of a central doorway. The roof is steeply pitched, has shallow eaves and no dormers. Typical Victory Style house.		
Identification of CHVI: Yes		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		



CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 7		
Municipal Address: 560 20th St. W.		
Associated Dates: 20th Century (Unknown)		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: Two story brick house with attached two-car garage.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:		
Design or Physical Value:		
Historical or Associative Value:		
Contextual Value:		
Identified Heritage Attributes:		
Identification of CHVI: No		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		




CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 8		
Municipal Address: 2020 5th Ave. W.		
Associated Dates: 20th Century (Unknown)		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description:		
One storey house with attached two-car garage addition. The main facade of the house includes aluminum siding and has one window on either side of a central doorway, one of which is larger than the other.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:		
Design or Physical Value:		
Historical or Associative Value:		
Contextual Value:		
Identified Heritage Attributes:		
Identification of CHVI: No		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		




CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 9		
Municipal Address: 2006 5th Ave. W.		
Associated Dates: Early 20th Century, 1890–1930		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: Two story brick Vernacular Homestead Style house with enclosed porch and addition at rear. Rear addition is one storey and covered with aluminum siding. The main facade has a front-facing gable with a steep roof. It is two bays wide, with an entrance to one side. The two upper sash windows are small, while the main floor window is enlarged for display.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06: <i>Design or Physical Value:</i> Typical two story brick Vernacular Homestead Style house with enclosed porch and addition at rear. The main facade has a front-facing gable with a steep roof. It is two bays wide, with an entrance to one side. The two upper sash windows are small, while the main floor window is enlarged for display.		
<i>Historical or Associative Value:</i>		
<i>Contextual Value:</i>		
Identified Heritage Attributes: Typical two story brick Vernacular Homestead Style house. The main facade has a front-facing gable with a steep roof. It is two bays wide, with an entrance to one side. The two upper sash windows are small, while the main floor window is enlarged for display.		
Identification of CHVI: Yes		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		



CULTURAL HERITAGE FORM	
Built Heritage Resource Name: Building 10	
Municipal Address: 550 19th St. W.	
Associated Dates: 20th Century (Unknown)	
Township: Former Sarawak Township, Town of Brooke	
County/Regional Municipality: County of Grey, City of Owen Sound	
Resource Type: Housing Complex	
Description:	Landmark (Y/N?): N
Six story brick apartment building with detached drive shed at rear.	
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:	
Design or Physical Value:	
Historical or Associative Value:	
Contextual Value:	
Identified Heritage Attributes:	
Identification of CHVI: No	
Completed By: (Name) P. Demarte	
Date Completed: February 22, 2018	



CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 11		
Municipal Address: 1914 4th Ave. W.		
Associated Dates: Late 19th Century, 1840–1900		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: Two storey Late Victorian Style yellow brick house with one-storey rear wood paneled addition. The plan is L-shaped and includes a veranda at the main entrance, which is off-set to one side. The main facade is two bays wide with two upper and two lower sash windows with the main entrance off to one side.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06: <i>Design or Physical Value:</i> Typical Late Victorian Style home. The house is listed on the City of Owen Sound Heritage Register List.		
<i>Historical or Associative Value:</i> The house is listed on the City of Owen Sound Heritage Register List. Associated with early settlement of Brooke.		
<i>Contextual Value:</i> Typical Late Victorian Style home. The house is listed on the City of Owen Sound Heritage Register List.		
Identified Heritage Attributes: Typical Late Victorian Style home. The house is listed on the City of Owen Sound Heritage Register List.		
Identification of CHVI: Yes		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		



CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 12		
Municipal Address: 1909 4th Ave. W.		
Associated Dates: 20th Century, 1940–1960		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: One story Victory Style house with a small addition at rear, and detached one-car garage (modern). The main facade of the house is clapboard and includes one small sash window on one side of a central doorway. The roof is steeply pitched, has shallow eaves and no dormers.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06: <i>Design or Physical Value:</i> One story Victory Style clapboard house with one small sash window on one side of a central doorway. The roof is steeply pitched, has shallow eaves and no dormers. Typical Victory Style house. <i>Historical or Associative Value:</i> <i>Contextual Value:</i>		
Identified Heritage Attributes: Simple one story clapboard house with one small sash window on one side of a central doorway. The roof is steeply pitched, has shallow eaves and no dormers. Typical Victory Style house.		
Identification of CHVI: Yes		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		




CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 13		
Municipal Address: 280 19th St. W.		
Associated Dates: 20th Century (Unknown)		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: One-and-a-half story house with sheet metal siding. Abandoned.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:		
Design or Physical Value:		
Historical or Associative Value:		
Contextual Value:		
Identified Heritage Attributes:		
Identification of CHVI: No		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		



CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 14		
Municipal Address: 2195 8th Ave. W.		
Associated Dates: 20th Century (Unknown)		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description:		
One-and-a-half story wood house with detached one-car garage. Board and batten.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:		
Design or Physical Value:		
Historical or Associative Value:		
Contextual Value:		
Identified Heritage Attributes:		
Identification of CHVI: No		
Completed By: (Name)	P. Demarte	
Date Completed:	February 22, 2018	



Built Features Located Adjacent to the Study Area

CULTURAL HERITAGE FORM	
Built Heritage Resource Name: Building 15	
Municipal Address: 2130 6th Ave. W.	
Associated Dates: 20th Century (Unknown)	
Township: Former Sarawak Township, Town of Brooke	
County/Regional Municipality: County of Grey, City of Owen Sound	
Resource Type: House	
Description: One story brick house with attached car-port addition. Bungalow.	
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:	
Design or Physical Value:	
Historical or Associative Value:	
Contextual Value:	
Identified Heritage Attributes:	
Identification of CHVI: No	
Completed By: P. Demarte (Name)	
Date Completed: February 22, 2018	



CULTURAL HERITAGE FORM	
Built Heritage Resource Name: Building 16	
Municipal Address: 2110 6th Ave. W.	
Associated Dates: 20th Century (Unknown)	
Township: Former Sarawak Township, Town of Brooke	
County/Regional Municipality: County of Grey, City of Owen Sound	
Resource Type: House	Landmark (Y/N?): N
Description:	
One story house with aluminum siding. Small prefabricated metal tool shed and one-car garage at rear. Basement.	
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:	
<i>Design or Physical Value:</i>	
<i>Historical or Associative Value:</i>	
<i>Contextual Value:</i>	
Identified Heritage Attributes:	
Identification of CHVI: No	
Completed By: P. Demarte (Name)	
Date Completed: February 22, 2018	




CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 17		
Municipal Address: 2163 6th Ave. W.		
Associated Dates: 20th Century (Unknown)		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: Two storey brick house with large two storey addition (with aluminum siding) at rear. Gambrel shaped roof, return eaves.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:		
Design or Physical Value:		
Historical or Associative Value:		
Contextual Value:		
Identified Heritage Attributes:		
Identification of CHVI: No		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		




CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 18		
Municipal Address: 2040 6th Ave. W.		
Associated Dates: 20th Century, 1940–1960		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: One story Victory Style house with a modern car-port addition at rear, and small detached tool shed and garage at rear. The main facade of the house is clapboard and includes decorative brick work on one side of the main entrance. There is one small sash window on either side of a central doorway. The roof is steeply pitched, has shallow eaves and no dormers.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06: <i>Design or Physical Value:</i> One story Victory Style clapboard house with one small sash window on either side of a central doorway. The roof is steeply pitched, has shallow eaves and no dormers. Typical Victory Style house. <i>Historical or Associative Value:</i> <i>Contextual Value:</i>		
Identified Heritage Attributes: Simple one story clapboard house with one small sash window on either side of a central doorway. The roof is steeply pitched, has shallow eaves and no dormers. Typical Victory Style house.		
Identification of CHVI: Yes		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		



CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 19		
Municipal Address: 2090 6th Ave. W.		
Associated Dates: c. 1830–Present		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: One-and-a-half storey Gothic Revival brick house with modern one storey rear addition (aluminum siding). The house has a simple T-shaped plan with a medium pitched front to back roof and steeply pitched central front dormer. The main facade includes a central front door with one sash window on either side. There is a detached two-car garage (modern) at rear.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06: <i>Design or Physical Value:</i> One-and-a-half storey Gothic Revival brick house. The house has a simple T-shaped plan with a medium pitched front to back roof and steeply pitched central front dormer. Absence of bargeboard. <i>Historical or Associative Value:</i> It has historical or associative value because it has direct associations with an historic event (the original development of the Town of Brooke). <i>Contextual Value:</i> historically linked to its surroundings.		
Identified Heritage Attributes: One-and-a-half storey Gothic Revival brick house. The house has a simple T-shaped plan with a medium pitched front to back roof and steeply pitched central front dormer. House style dates from 1790 to 1900.		
Identification of CHVI: Yes		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		



CULTURAL HERITAGE FORM	
Built Heritage Resource Name: Building 20	
Municipal Address: 2064 6th Ave. W.	
Associated Dates: 1950 - 2003	
Township: Former Sarawak Township, Town of Brooke	
County/Regional Municipality: County of Grey, City of Owen Sound	
Resource Type: House	
Description:	Landmark (Y/N?): N
One storey brick house with attached one-car garage. Raised Bungalow.	
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:	
<i>Design or Physical Value:</i>	
<i>Historical or Associative Value:</i>	
<i>Contextual Value:</i>	
Identified Heritage Attributes:	
Identification of CHVI: No	
Completed By: P. Demarte (Name)	
Date Completed: February 22, 2018	




CULTURAL HERITAGE FORM	
Built Heritage Resource Name: Building 21	
Municipal Address: 2044 6th Ave. W.	
Associated Dates: 1950- 2003	
Township: Former Sarawak Township, Town of Brooke	
County/Regional Municipality: County of Grey, City of Owen Sound	
Resource Type: House	Landmark (Y/N?): N
Description: One storey brick house with attached one-car garage Raised bungalow.	
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06: <i>Design or Physical Value:</i> <i>Historical or Associative Value:</i> <i>Contextual Value:</i>	
Identified Heritage Attributes:	
Identification of CHVI: No	
Completed By: P. Demarte (Name)	
Date Completed: February 22, 2018	



CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 22		
Municipal Address: 2024 6th Ave. W.		
Associated Dates: 20th Century (Unknown)		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description:	Two storey house with attached one-car garage Vinyl siding.	
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:		
Design or Physical Value:		
Historical or Associative Value:		
Contextual Value:		
Identified Heritage Attributes:		
Identification of CHVI: No		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		




CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 23		
Municipal Address: 2020 6th Ave. W.		
Associated Dates: 20th Century (Unknown)		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: Two storey house with aluminum or vinyl siding.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:		
<i>Design or Physical Value:</i> 		
<i>Historical or Associative Value:</i> 		
<i>Contextual Value:</i> 		
Identified Heritage Attributes:		
Identification of CHVI: No		
Completed By: (Name)	P. Demarte	
Date Completed:	February 22, 2018	




CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 24		
Municipal Address: 2016 6th Ave. W.		
Associated Dates: 20th Century, 1940–1960		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House		Landmark (Y/N?): N
Description: One story Victory Style house with a small addition at rear (modern). The main facade of the house is clapboard and includes one small sash window on either side of a central doorway (now covered with a modern enclosed front porch addition). The roof is steeply pitched, has shallow eaves and no dormers.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06: <i>Design or Physical Value:</i> One story Victory Style clapboard house with one small sash window on either side of a central doorway. The roof is steeply pitched, has shallow eaves and no dormers. Typical Victory Style house. <i>Historical or Associative Value:</i> <i>Contextual Value:</i>		
Identified Heritage Attributes: Simple one story clapboard house with one small sash window on either side of a central doorway. The roof is steeply pitched, has shallow eaves and no dormers. Typical Victory Style house.		
Identification of CHVI: Yes		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		




CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 25		
Municipal Address: 1880 4th Ave. W.		
Associated Dates: Late 19th Century, 1870–1910		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: Two-and-a-half storey Queen Ann Revival Style brick house with attached two storey rear addition. Small, detached modern covered sitting area and tool shed at rear. The main facade of the house includes a large wrap-around verandah and a tower off-set to one side.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06: <i>Design or Physical Value:</i> Typical Queen Ann Revival Style home. The house is listed on the City of Owen Sound Heritage Register List.		
<i>Historical or Associative Value:</i> Typical Queen Ann Revival Style home. The house is listed on the City of Owen Sound Heritage Register List. unknown		
<i>Contextual Value:</i> Typical Queen Ann Revival Style home. The house is listed on the City of Owen Sound Heritage Register List. unknown		
Identified Heritage Attributes: Typical two-and-a-half storey Queen Ann Revival Style brick house. The main facade of the house includes a large wrap-around verandah and a tower off-set to one side.		
Identification of CHVI: Yes		
Completed By: (Name)	P. Demarte	
Date Completed:	February 22, 2018	



CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 26		
Municipal Address: 1889 4th Ave. W.		
Associated Dates: 20th Century (Unknown)		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description:		
Two storey house with attached side addition and small tool shed. car-port addition. Brick lower floor exterior and stucco upper floor.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:		
<i>Design or Physical Value:</i>		
<i>Historical or Associative Value:</i>		
<i>Contextual Value:</i>		
Identified Heritage Attributes:		
Identification of CHVI: No		
Completed By: (Name)	P. Demarte	
Date Completed:	February 22, 2018	

CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 27		
Municipal Address: 375 & 377 19th St. W.		
Associated Dates: 1790-1900		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: One-and-a-half storey Gothic Revival brick house. The house has a simple rectangular plan with a medium pitched front to back roof and steeply pitched central front dormer. The main facade of the house includes two central front doors (modified from original single entryway), with one sash window on either side.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06: <i>Design or Physical Value:</i> One-and-a-half storey Gothic Revival : brick house. The house has a simple rectangular plan with a medium pitched front to back roof and steeply pitched central front dormer. There is no decorative barge board. House has been converted to a duplex but once had a central door. <i>Historical or Associative Value:</i> It has historical or associative value because it has direct associations with an historic event (the original development of the Town of Brooke) <i>Contextual Value:</i> Building 27 has contextual value as it is historically linked to its surroundings.		
Identified Heritage Attributes: One-and-a-half storey Gothic Revival brick house. The house has a simple rectangular plan with a medium pitched front to back roof and steeply pitched central front dormer.		
Identification of CHVI: Yes		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		

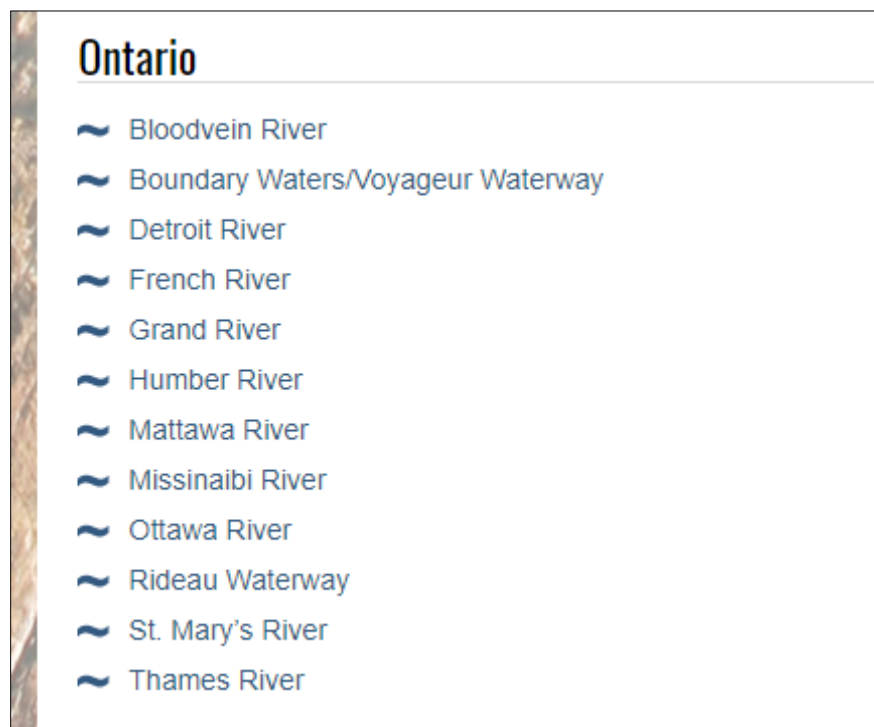


CULTURAL HERITAGE FORM		
Built Heritage Resource Name: Building 29		
Municipal Address: 1893 3rd Ave. W.		
Associated Dates: Early 20th Century, 1890–1930		
Township: Former Sarawak Township, Town of Brooke		
County/Regional Municipality: County of Grey, City of Owen Sound		
Resource Type: House	Landmark (Y/N?): N	
Description: Two storey brick Vernacular Homestead Style house with addition at rear. Rear addition is one storey and covered with aluminum siding. The main facade has a front-facing gable with a steep roof. It is two bays wide, with an entrance to one side. The two upper sash windows are small, while the main floor window is enlarged.		
Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06: <i>Design or Physical Value:</i> Typical two story brick Vernacular Homestead Style house. The main facade has a front-facing gable with a steep roof. It is two bays wide, with an entrance to one side. The two upper sash windows are small, while the main floor window is enlarged. <i>Historical or Associative Value:</i> This property has design or physical value because it is a representative example of an early Ontarian house style. <i>Contextual Value:</i> It has contextual value as it is historically linked to its surroundings.		
Identified Heritage Attributes: Typical two story brick Vernacular Homestead Style house. The main facade has a front-facing gable with a steep roof. It is two bays wide, with an entrance to one side. The two upper sash windows are small, while the main floor window is enlarged.		
Identification of CHVI: Yes		
Completed By: P. Demarte (Name)		
Date Completed: February 22, 2018		



Appendix C: Heritage Rivers

The following rivers are Canadian Heritage Rivers in Ontario (<http://chrs.ca/the-rivers/>). The Pottawatomi and Sydenham Rivers are not on the list. This list was accessed on January 31, 2018.



Appendix D: National Historic Sites

The following are National Historic Sites in Southern Ontario (<http://www.soto.on.ca/national-historic-sites-of-southern-ontario/>). None of them are located within or adjacent to the Study Area. The list was accessed January 31, 2018.


National Historic Sites

- ▶ Bell Homestead
- ▶ Fort George
- ▶ Fort Malden
- ▶ HMCS Haida
- ▶ Navy Island
- ▶ Point Clark Lighthouse
- ▶ Queenston Heights
- ▶ Southwold Earthworks
- ▶ Trent-Severn Waterway
- ▶ Woodside



Appendix E: Federal Heritage Buildings

A search was made for Federal heritage buildings using the key words "Owen Sound". Five results were found. The website, <http://www.pc.gc.ca/apps/dfhd/result>, was accessed February 1, 2018.



The screenshot shows the Parks Canada website's search results for "Owen Sound". The header includes the Parks Canada logo and the "Canada" wordmark. The navigation bar has links for Home and Contact Us. The breadcrumb trail reads: Home > Directory of Federal Heritage Designations > Search the Register > Search Results.

On the left is a sidebar menu titled "Directory of Federal Heritage Designations" with the following links: Search the Directory, About the Directory, Directory Statistics, Recent Designations, Historic Sites and Monuments Board of Canada, Federal Heritage Buildings Review Office, Historic Railway Stations Protection Act, Heritage Lighthouses Program, and Glossary.

The main content area displays "Found 5 Results" and a "Results Per Page:" selector set to 10 (options: 10, 25, 50, 100). The results are listed as follows:

- Canadian Pacific Railway Station (HRS)**
Owen Sound, Ontario
- Survey of the Great Lakes National Historic Event (NHE)**
Owen Sound, Ontario
Lake Ontario and Georgian Bay 1814-16, lakes Huron, Erie and Superior 1817-25
- Bishop, Air Marshal William Avery National Historic Person (NHP)**
Owen Sound, Ontario
World War I flying ace, awarded Victoria Cross
- Billy Bishop Boyhood Home National Historic Site of Canada (NHS)**
Owen Sound, Ontario
Only surviving property in Canada strongly associated with the renowned First World War flying ace
- Thomson, Tom National Historic Person (NHP)**
Canoe Lake, Algonquin Provincial Park, Ontario
Artist, influenced the formation of the Group of Seven



Appendix F: Municipally Designated Sites

A search was conducted of The City of Owen Sound's website. There were two addresses that lie within or adjacent to the Study Area. The first is 1914 4th Avenue West, which occupies part of a lot that the drainage basin runs through, while the second is 1880 4th Avenue West which lies on an adjacent lot.

The search was conducted on February 1, 2018.

(<https://www.owensound.ca/en/exploring/heritage-conservation.aspx>)

Heritage Register List

An inventory of Owen Sound's heritage properties was started in 1977 by the City's Local Architectural Conservation Advisory Committee (LACAC). This inventory had 96 properties. In June of 2004, City staff began updating the inventory and our online register began. In 2006, the Heritage Register was updated to include 30 more properties. Today there are over 130 properties on the Register.

A "*" indicates that the property is designated under Part IV of the [Ontario Heritage Act](#).

Listed Below are the designated properties for the West Side of the City of Owen Sound. Highlighted in blue are the two properties that occupy adjacent lots to the Study Area or occupy part of a lot of the Study Area, but neither is located directly within the Study Area.

1. 815 1st Ave W - Queen's Park*
2. 824 1st Ave W - Public Library*
3. 900 1st Ave W - Christian Science Society*
4. 940 1st Ave W - Kennedy Home
5. 972 1st Ave W
6. 996 1st Ave W - Charles Rankin Home
7. 1064 1st Ave W - Cobert Foundry
8. 1165 1st Ave W - CNR Station
9. 405 2nd Ave W - Legate Home
10. 606 2nd Ave W - Wilcox/Bowman Home*
11. 665 2nd Ave W - Christie Home
12. 680 2nd Ave W - W.G. McLauchlan Home
13. 712 2nd Ave W - Scott/Manley Home
14. 745 2nd Ave W - Pettigrew/Urquhart Home
15. 756 2nd Ave W
16. 767 2nd Ave W - Webster/Case Home
17. 785, 789, 791, 795 2nd Ave W - Kennedy Terrace
18. 903 2nd Ave W - Wilkinson House*
19. 935 2nd Ave W - Wright Home
20. 949 2nd Ave W
21. 1010 2nd Ave W - John Meir Home
22. 2nd Ave and 14th Street W - Harrison Mill



23. 323 3rd Ave W - Sheldon Place
24. 805 3rd Ave W - John Miller Home
25. 927 3rd Ave W - Harrison Home
26. 932 3rd Ave W - U.S. Consulate*
27. 948 3rd Ave W - Billy Bishop Home*
28. 331 4th Ave W - Sheldon Place Gatehouse
29. 461 4th Ave W - Art Moore Home
30. 681 4th Ave W - Creasor Home
31. 727 4th Ave W - Eaglesnest
32. 759 4th Ave W - George Snider Home/Fairview
33. 1050 4th Ave W - F.W. Harrison House*
34. 1178 4th Ave W - Tannahill Funeral Home
35. 1735 4th Ave W - Victoria School
36. 1880 4th Ave W – located on adjacent lot
37. 1914 4th Ave W – located on affected lot
38. 867 4th Ave 'A' W - Fleming House
39. 2545 5th Ave W - Eddie Sargent House
40. 1140 6th Ave W - Michael Forhan Home
41. 190 1st St SW - Greenwood Cemetery Buildings
42. 180 4th St W
43. 197 8th St W - Kennedy Terrace
44. 215-217 8th St W - Atkins Residence*
45. 284 9th St W - Lemon Home
46. 187 10th St W - Pollock Home
47. 219 10th St W - Notter Home
48. 285 10th St W - Park Apartments
49. 310 10th St W - Central Westside United Church*
50. 245 11th St W - British Methodist Episcopal Church*
51. 500 16th St W

A search of the County of Grey's list of historic properties or sites or plaques was also conducted (<https://www.visitgrey.ca/unique-grey/historical-sites>). There were no sites or plaque located within the Study Area. "The Newash Indian Village Heritage Plaque" is located within 1 km of the Study Area.

- Agnes Campbell MacPhail 1890-1954 Heritage Plaque
- Beautiful Joe Park
- Bishop House: Museum, Archives and National Historic Site
- Charles Rankin Heritage Plaque
- Craigleith Heritage Depot
- Craigleith Shale Oilworks 1859 Heritage Plaque
- Daniel Knechtel Heritage Plaque
- David William Currie, V.C., Heritage Plaque
- Meaford Hall Arts & Cultural Centre
- Meaford Museum
- Neustadt Springs Brewery



- Silent Valley
- The Blue Mountains Public Library, L.E Shore branch
- The Durham Road Heritage Plaque
- The Founding of Durham Heritage Plaque
- The Founding of Meaford Heritage Plaque
- The Founding of Owen Sound Heritage Plaque
- The Garafraxa Road Heritage Plaque
- The Loss of the Jane Miller Heritage Plaque
- The Newash Indian Village Heritage Plaque
- The Old Mail Road Heritage Plaque
- The Right Honourable Sir Lyman Poore Duff Heritage Plaque
- The Sinking of the Mary Ward Heritage Plaque
- The Toronto, Grey and Bruce Railway Heritage Plaque
- The Toronto-Sydenham Road Heritage Plaque
- Thomas William Holmes, V.C., Heritage Plaque
- Tommy Burns Heritage Plaque
- Tom Thomson Heritage Plaque
- Welbeck Shingle Mill
- William Avery Bishop, V.C. Heritage Plaque



Appendix G: Partial CV of Scarlett Janusas

SCARLETT JANUSAS ARCHAEOLOGY INC.

269 Cameron Lake Road Tobermory, Ontario N0H 2R0

Phone 519-596-8243 cell 519-374-1119

jscarlett@amtelecom.net

www.actionarchaeology.ca

COMPANY PROFILE

Scarlett Janusas Archaeology Inc. (SJA) is a consulting firm with area representatives in Owen Sound, Kingston, the Greater Toronto Area, Hamilton, London, Peterborough, Niagara-on-the-Lake, and Tobermory, Ontario. We conduct archaeological work **anywhere** in the province of Ontario, on land and underwater. Our experience has taken us to Thunder Bay in the north, Pembroke and Ottawa in the east, Amherstburg in the east; and Niagara on the Lake in the south, and all points in between. Our work has included partnerships and engagement with many First Nation and Métis groups across the province.

Staff and associates include:

- Ms. Scarlett Janusas, President of the company, and an experienced underwater and land based archaeologist, with experience in both prehistoric and historic archaeology, and over 39 years' experience.
- Ms. Susan Bazely, Senior Archaeologist and Education Coordinator, with 33 years' experience;
- Mr. John Grenville, Cultural Heritage Specialist, over 35 years' experience;
- Dr. Thomas Arnold, Senior Archaeologist and surveyor, 37 years' experience
- Mr. James Bandow, Senior Archaeologist, 33 years' experience
- Ms. Chelsea Robert; Field Director/Archaeologist; lab supervisor; 10 years' experience;
- Mr. Pete Demarte, Field Director/Archaeologist, 9 years' experience
- Ms. Gina Martin, historian, land conveyancer and genealogist with over 30 years' experience;
- Mr. Patrick Folkes, a recognized marine and land historian with over 40 years research experience;
- Mr. Douglas Sweiger, a material culture specialist in small arms and military history with over 25 years' experience;
- Mr. David Gilchrist, a marine archaeologist and teaching specialist with over 30 years' experience;
- Dr. Kimberly Monk, marine archaeologist and education expert;
- Mr. Jim Garrington, Shark Marine Technologies for geophysical projects.

Our vast experience allows us to offer our clients a multitude of services including both land and underwater archaeology, and prehistoric and historic archaeology. The company has licensed archaeologists under the requirements of the Ontario Heritage Act and is able to conduct Stage 1 (background research), Stage 2 (preliminary field assessment), Stage 3 (definitive field assessment) and Stage 4 (complete site mitigation) for all archaeological projects. In addition, we have the resources to offer our clients follow-up services such as development of interpretative displays, hands-on education, and educational course development.

SCARLETT E. JANUSAS

269 Cameron Lake Road, Tobermory, Ontario N0H 2R0 www.actionarchaeology.ca
Phone 519-596-8243 cell 519-374-1119 jscarlett@amtelecom.net

EDUCATION

B.A., Anthropology/Archaeology, U/ of Western Ontario, London
M.A., Anthropology/Archaeology, Trent University, Peterborough
National Museum of Canada, Ottawa, Ontario
Basic Museum Management Certificate

University of Waterloo, Waterloo, Ontario
Courses towards a Certificate in Environmental Assessment
Submerged Worlds and Marine Archaeology, U of Southampton

AFFILIATIONS

ONTARIO MARINE HERITAGE COMMITTEE
ONTARIO ARCHAEOLOGICAL SOCIETY
SOCIETY FOR HISTORICAL ARCHAEOLOGY
ASSOCIATION OF PROFESSIONAL ARCHAEOLOGISTS
(V.P. 2005-09) (PRES. 2009-13) (PAST PRESIDENT 2013-15)
COUNCIL FOR NORTHEASTERN HISTORIC ARCHAEOLOGY
CHAIR OF TOBERMORY HYPERBARIC FACILITY
BOARD (2017-2019)

Experience:

2013 to date **SCARLETT JANUSAS ARCHAEOLOGY INC.**

President – Responsible for conducting cultural impact assessment and site mitigation and development of cultural resource management plans for clients in Ontario as part of the Ontario Heritage Act, the Planning Act, the Aggregates Act and as part of environmental impact assessment both on land and underwater. Compliance with the Ministry of Labour Regulations for work conducted underwater. Responsible for day to day management of above mentioned firm. Responsible for varied crew sizes, ranging from 1 to 60 persons depending on project needs. Experience includes writing proposals and schedules, administration, co-ordination of projects and crew, data collection and analysis, photography, graphics, report writing and preparation, invoicing, payroll, accounting, and compliance mitigation.

2002 -2013 **SCARLETT JANUSAS ARCHAEOLOGICAL AND HERITAGE CONSULTING AND EDUCATION**

President – Responsible for conducting cultural impact assessment and site mitigation and development of cultural resource management plans for clients in Ontario as part of the Ontario Heritage Act, the Planning Act, the Aggregates Act and as part of environmental impact assessment both on land and underwater. Compliance with the Ministry of Labour Regulations for work conducted underwater. Responsible for day to day management of above mentioned firm. Responsible for varied crew sizes, ranging from 1 to 30 persons depending on project



needs. Experience includes writing proposals and schedules, administration, co-ordination of projects and crew, data collection and analysis, photography, graphics, report writing and preparation, invoicing, payroll, accounting, and compliance mitigation.

2009, 2010

THIS LAND ARCHAEOLOGY

FIELD DIRECTOR/ASSOCIATE – STAGE 2, 3 AND 4 PROJECTS IN GREATER TORONTO AREA, RICHMOND HILL, AURORA, BOND HEAD, BRAMPTON, BRANTFORD, INNISFIL, BRADFORD, VAUGHAN, OSHAWA.

1995 to 2002 **MAYER HERITAGE CONSULTANTS**

Consulting Archaeologist – Responsible for conducting cultural impact assessment and site mitigation and development of cultural resource management plans for clients in Ontario as part of the Ontario Heritage Act, the Planning Act, and as part of environmental impact assessment both on land and underwater. Responsible for varied crew sizes, ranging from 1 to 16 persons, depending on project needs. Responsibilities include writing proposals, schedules, co-ordination of projects and crew, data collection and analysis, photography, graphics, and report writing and preparation.

1993 to 1995 **GOLDER ASSOCIATES LIMITED**

Senior Archaeologist – Responsible for eastern Canada, development of an archaeology section, preparation of proposals, field and laboratory work, preparation of reports, marketing and budgeting. Associate in environmental assessment projects.

1993 to 2002 **ONTARIO MARINE HERITAGE COMMITTEE**

Co-Principal in the Submerged Prehistoric Shoreline Study in Georgian Bay in cooperation with the Ontario Marine Heritage Committee, Parks Canada, Fathom Five National Marine Park and the Geological Survey of Canada. The study focused on the geological history of previously exposed watercourses and the archaeological potential of the former exposed areas for archaeological sites dating to the Paleo and Archaic periods of southwestern Ontario. The technical portion of the project includes the use of side scan sonar, GPS, depth sounders, navy submersibles, remote videos, SCUBA, and computers.

1991 to 2001 **ONTARIO MARINE HERITAGE COMMITTEE**

Chairperson – Responsibilities include scheduling, organization of workshops and meetings, administrative duties, chairing meetings and providing archaeological input into proposed and active projects.

1986 to 1993 **REGIONAL MUNICIPALITY OF WATERLOO**

Regional Archaeologist – Responsibilities included 1) the provision of expert advice on archaeological matters to municipalities, developers, planning, engineering and archaeological consultants regarding archaeological potential of the Region, and Planning and Development policy pertaining to heritage resource management; 2) undertaking research and special studies to support Regional decisions on archaeologically related matters; 3) acted as an archaeological consultant for the Region; 4) acted as the liaison between the Province of Ontario and the Municipality; 5) developed policy for the effective management of archaeological resources; 6) acted as an information source for private, business and public sectors on matters of archaeology; 7) initiated and conducted special projects a) the creation of a permanent Archaeology Division for the Regional Municipality of Waterloo b) researched, developed and published the **first** Archaeological Master Plan in the Province of Ontario c) invited participant for the Federal Environmental Assessment Review Office Environmental Assessment and Heritage National Workshop, Ottawa; d) staff liaison for the Regional Official Policies Plan Heritage Advisory Committee (1991-1993); e) acquired the loan of the prehistoric and historic Lissos collection and conducted analysis of the collection f) organized and supervised the collection and analysis of urban historic archaeological potential data for urban centres in the



Regional Municipality of Waterloo g) member of the Regional Official Policies Plan Management Team h) Regional courses in field archaeology i) volunteer program j) designation of an Aboriginal cemetery for remains located during development and k) field school at the Waterloo County Jail for primary grade students.

1984 to 1997 **SCARLETT JANUSAS AND ASSOCIATES INC.**

President of Archaeological Consulting Firm– Created firm in response to development pressures on archaeological resources. Services provided by the firm included background research studies, archaeological resource assessments, cultural impact studies, interpretative design projects, resource evaluation and interpretation models, extant artifact collection documentation, analysis and interpretation, archaeological excavation and monitoring, cultural resource management, historic research to locate environmental hazards, historic interpretation of properties (genealogy of historic properties). Scarlett Janusas and Associates Inc. was a Canadian heritage and archaeological consulting firm specializing in archaeological resource assessment, cultural impact studies, cultural resource management and interpretative studies for land and underwater heritage resources.

1992 to 1995 **MAYER HERITAGE CONSULTANTS INC.**

Marine Heritage Associate – Responsibilities included management of all marine heritage projects.

1990 **ONTARIO MARINE HERITAGE COMMITTEE**

Co-principal for the archaeological documentation of the HMS NEWASH.

1990 **ONTARIO HERITAGE FOUNDATION**

Principal Conservator – Responsible for the restoration of ceramic class from Inge Va, Perth County, Ontario.

1989 **CANADIAN PARKS SERVICE**

Volunteer – Mapping of the shipwreck the MINCH in Fathom Five National Marine Park.

1988 **SCARLETT JANUSAS AND ASSOCIATES INC.**

Principal Investigator – Responsible for the underwater survey of Ste. Marie II, Christian Island and for research for the marine history of the Christian Islands for the Christian Island Archaeological Master Plan.

1987 **MAYER, PIHL, POULTON AND ASSOCIATES**

Principal Investigator – Responsible for conducting the TransCanada Kirkwell Pipeline Survey.

1987 **SCARLETT JANUSAS AND ASSOCIATES INC.**

Principal Investigator – Responsible for the preliminary investigations of a scuttled ship located in the excavation of the Dome Stadium.

1986 **MAYER, PIHL, POULTON AND ASSOCIATES**

a) Field Assistant – Responsible for the Union Gas pipeline heritage assessment in Ancaster/Hamilton area, housing development.

b) Field Assistant – excavation of the Pengelly site near Mississauga, a Middle Woodland village.

c) Field Assistant – several housing subdivision heritage resource assessments in the cities of Kitchener and Waterloo.

1986 **EMPRESS OF IRELAND HISTORICAL SOCIETY**



Archaeological Consultant – Providing archaeological advice to the Society.

1986 ONTARIO MARINE HERITAGE COMMITTEE

Archaeological Assistant – Responsible for the preliminary mapping and excavation of an unidentified mid-19th century ship located in Lake Erie at a depth of 70'.

1986 SCARLETT JANUSAS AND ASSOCIATES

Principal – Responsible for investigation of a proposed dock area at Historic Naval and Military Establishments. Underwater archaeological survey.

1985 TORONTO HISTORICAL BOARD

Senior Archaeologist – Developed a study report recommending a City Archaeology Policy and implementation guidelines. Two excavations were also conducted at the MacKenzie House and St. James Cathedral. Impact assessment of Toronto Island historic midden.

1984-1987 MAYER, PIHL, POULTON AND ASSOCIATES

Consulting Archaeologist – Conducting impact assessments and site mitigation on such projects as Union Gas Pipeline impact assessment in Ancaster/Hamilton area, subdivision in Niagara Region, excavation of the Pengelly site near Mississauga, subdivision assessment in Kitchener, excavation of 19th century mill (Elmdale Mill) in Ajax, and archaeological assessment along Moira River, Belleville.

1984 CANADIAN PARKS SERVICE

a) Archaeologist – Responsible for conducting an archaeological resource evaluation of Point Pelee National Park and the development of the Point Pelee National Park Cultural Resource Management Plan. Also conducted two field campaigns to Central Grenadier Island in St. Lawrence Islands National Park. Acted as co-leader in the presentation of a special seminar at Point Pelee National Park to inform staff of progress of the Archaeological Resource Management Plan and to aid in establishing and interpretation exhibition of the prehistory of man at the Park.

b) Marine Archaeologist (GT-2), Marine Heritage Unit – Red Bay project, Labrador. Responsible for the excavation of a 16th century Spanish Basque whaling ship locating in approximately 40' of water including mapping and recording. Experience with airlifts, dry suits and hot water suits.

1983 FATHOM FIVE PROVINCIAL PARK

Docent – Aided visiting divers in orientation to the Park, its rules and regulations, and provided information of shipwrecks of the area.

1983 to 1986 ONTARIO UNDERWATER COUNCIL

Vice-President of Marine Conservation – Responsible for providing initiative for the certifying agencies to include an underwater archaeological component in their teaching programs. Developed a slide show on underwater archaeology. Established the Marine Heritage Trust Fund. Hosted and organized numerous underwater archaeological seminars and workshops including Thunder Bay and Toronto.

1983 MINISTRY OF CITIZENSHIP AND CULTURE

Archaeologist – Assisted in various underwater archaeological projects across the province including Port Abino and Niagara-on-the-Lake.

1983 ONTARIO MARINE HERITAGE COMMITTEE

Consultant – Provided advice on submerged resource survey of waters off the Penetanguishene Naval and Military Establishments.



1983 **SAVE ONTARIO SHIPWRECKS**

Consultant – Provided advice on the recording and survey of an 18th century wharf at Navy Hall.

1983 **ONTARIO HERITAGE FOUNDATION**

Originator, Designer, Producer and Promoter – slide and cassette show on underwater archaeology, lecture material for various diving agencies in Ontario on marine conservation. Grant.

1983 **ONTARIO UNDERWATER COUNCIL**

a) Program Chairperson – 3rd Annual Underwater Archaeological Seminar.

b) Originator and Developer – Ontario Underwater Council Heritage Trust Fund.

c) OUC Representative – Provided input for the National Marine Parks Policy.

1983 to 1991 **MAYER, POULTON AND ASSOCIATES**

Marine Heritage Associate – Provide advice on all marine projects.

1983 **MUSEUM OF INDIAN ARCHAEOLOGY**

Assistant Archaeologist – GO TRAIN (Ministry of Transportation and Communication) survey conducted near Oshawa, Ontario.

Field Director – Crawford Lake site, a Middle Woodland village for the Halton Region Conservation Authority. Supervision of a crew of 8 in the excavation and recording of a longhouse and test trenches.

Field Assistant – archaeological resource assessment of the McGrath Site, Middlesex County.

1982 **MUSEUM OF INDIAN ARCHAEOLOGY**

Assistant Field Director – Willcock site, Byron, Ontario. Responsible for the supervision of the excavation of an undisturbed prehistoric (circa 1250 A.D.) site, and the preliminary conservation and cataloguing of artifacts.

Field Director – Crawford Lake site, Halton Region Conservation Authority. Responsible for the excavation of a longhouse and the survey and excavation of a conservation roadway.

Assistant Field Director and Acting Director – Crawford Lake Village site, Halton Region Conservation Authority. Responsible for the excavation of the prehistoric Middleport village, preliminary conservation, cataloguing and flotation.

Assistant Photographer and Designer – Responsibilities included preparation of plates for publication, developing film and PMT production.

Principal Investigator – preliminary underwater archaeological survey of Crawford Lake, Halton Region.

Archaeological Assistant – archaeological resource assessment, City of London.

1981 **MUSEUM OF INDIAN ARCHAEOLOGY**

Assistant Contract Archaeologist – Responsible for conducting archaeological resource assessments on properties scheduled for development.

Contract Archaeologist – responsible for conducting archaeological resource assessment on properties scheduled for development.

Research Associate

1981-1983 **SELF-EMPLOYED**

Principal Investigator – Preliminary underwater survey of the Kettle Point chert outcrops off Kettle Point, Lambton County (part of Master's thesis).

1981 to 1982 **SELF-EMPLOYED**

Principal Investigator – Kettle Point Chert project. Kettle Point chert samples were collected and used in a petrological study and spatial and temporal distribution analysis. Methods of investigation included thin section analysis, x-ray fluorescence, neutron activation analysis and isotopic composition analysis. Master's thesis.

1980 **MUSEUM OF INDIAN ARCHAEOLOGY**



Lab analyst – Conducted the preliminary conservation and cataloguing of the 19th century Van Egmond house materials (Seaforth, Ontario).

Assistant Field Director – prehistoric Neutral Lawson village site, London. Responsible for directing excavation, public relations and technical assistance.

Field Director – Archaic site was subject of salvage excavation utilizing waterscreens and heavy machinery.

Field Assistant – excavation of the 19th century Van Egmond House.

Assistant Field Director – multi-component site of Squaw Island in St. Lawrence Islands National park. In association with the Archaeological Survey of Canada, National Museum of Man.

1979 to 1980 **MUSEUM OF INDIAN ARCHAEOLOGY**

Research Assistant – Analysis of the Draper site castellations employing SPSS, using the DEC10 and PDP11 systems. Completed an edit of the Draper rim sherd file.

1979 **MUSEUM OF INDIAN ARCHAEOLOGY**

Research Associate.

Field Director – Upper Thames Conservation Authority. Conducted an intensive field survey of the prehistoric and historic resources in the Glengowan Dam project area and analyzed materials.

Project Director – Upper Thames Conservation Authority. Conducted a preliminary assessment of the prehistoric and historic cultural resources of the Glengowan Dam Project area.

Field Director – excavation of a Glen Meyer village located in Longwoods Conservation Area and acted as public relations liaison.

Volunteer – Fathom Five Provincial Park, Tobermory, Ontario. Mapping of the 19th century shipwreck, WETMORE.

1978 **MUSEUM OF INDIAN ARCHAEOLOGY**

Research Assistant – Researching reference material for the Museum gallery, including such topics as trade networks, ceremonial goods, settlement patterns, burial practices, and artifact types and interpretation.

1977 **MUSEUM OF INDIAN ARCHAEOLOGY**

Curatorial Assistant – Inventory and preliminary analysis of the complete Wilfred Jury collection.

Archaeological Assistant – Survey of the New Toronto International Airport proposed location, Pickering. Project objectives included locating archaeological resources and preparing a site inventory. Also conducted preliminary conservation and cataloguing of recovered materials.

Research Assistant – analysis of material recovered from the New Toronto International Airport Survey.



SCARLETT E. JANUSAS

PROJECT RELATED EXPERIENCE – CULTURAL HERITAGE ASSESSMENT

DG Group **Caledon East**
Cultural Heritage impact assessment of farm, Airport Road, subdivision (2017).

County of Bruce **Paisley**
Cultural Heritage Impact Assessment of Bridge 11, Pratt Through Truss (2017)

County of Bruce **Riversdale**
Cultural Heritage Assessment of Bridge 0002 – Pony Truss (2017)

County of Grey **Orchardville**

Arcadis Canada Inc. **Thunder Bay**
Cultural Heritage Evaluation of Proposed Boulevard Lake Dan Rehabilitation.

Angil Development Group **Brantford**
Heritage Impact Assessment, Block Bounded by Wellington Street, West Street, Darling Street and Bridge Street, City of Brantford (2016)

Block 59, Vaughan **Vaughan**
Cultural Heritage Impact Assessment of Block 59 in City of Vaughan.
Industrial/commercial block development (2014).

Bracebridge Power Generation **Parry Sound**
Cultural Heritage Impact Assessment of Cascade Street Power Generation Station (2014)

East Durham Wind Farm **Grey County**
Cultural Heritage Assessment for proposed Wind Farm.

Gotham/Conestogo Wind Farm **Perth and Region of Waterloo**
Cultural Heritage Assessment for proposed Wind Farm. Invenergy LLC

NextEra Co. **Middlesex**
Self-Assessment Bornish and parts of Adelaide Wind Farm (2012)

AREA Architects
2008 Cultural Heritage Assessment of former Ontario Bedding Company, Waterloo, Ontario.



AREA Architects

2009 Cultural Heritage Assessment of Hergott Cider Mill and Property, Waterloo, Ontario.

METRUS Development Inc.

2010 Cultural Heritage Impact Assessment of Two Properties in City of Brampton, Ontario.

METRUS Development Inc.

2010 Cultural Heritage Impact Assessment of Four Properties in City of Brampton, Ontario.

Penn Energy

2010 Cultural Heritage Assessment of Stewart South and Stewart North properties, Northumberland County.

Helimax

2010 Cultural Heritage Assessment of Capreol Solar Farm, Sudbury District.

Helimax

2010 Cultural Heritage Assessment of Glenarm Solar Farm, Kawartha Lakes.

GL Garrad Hassan**Sophiasburg, Prince Edward County**

Stage 1 Archaeological Assessment Sunny Shores Solar Facility (2012).

Schneider Power

2010 Cultural Heritage Assessment of Trout Creek Wind farm, Parry Sound.

GL-Garrad Hassan**Bruce County**

Heritage Screening Skyway 127 Wind Energy Inc. Bruce County (2011)

Dillon Consulting Ltd**Mono Township, Ontario**

Self- Assessment Dufferin Wind Farm 69 KV Transmission Line (2011)

Dillon Consulting Ltd**Amaranth Township, Ontario**

Self-Assessment Dufferin Wind Farm 230 KV Transmission Line (2011)

Dillon Consulting Ltd**Amaranth Township, Ontario**

Stage 1 Archaeological Assessment Dufferin Wind Farm – Additional Lands (2011)

Dillon Consulting Ltd.**Melancthon Township, Ontario**

Stage 2 Archaeological Assessment Dufferin Wind Farm Alternate #5 Turbine (2011)

Dufferin Wind Power Inc. and Dillon Consulting Ltd.**Melancthon Township**

Self-Assessment Protected Properties, Archaeological and Heritage Resources Dufferin Wind Power Project (2011)



Dufferin Wind Power Inc. and Dillon Consulting Ltd. **Melancthon Township**
Self-Assessment Protected Properties, Archaeological and Heritage Resources Dufferin
Wind Project proposed 69KV transmission line and POI (2012)

Melancthon and Amaranth Townships, Ontario
Cultural Heritage Assessment Proposed 230 KV Transmission Line Dufferin Wind Farm
(2012)

Dillon Consulting Ltd. **Melancthon Township, Ontario**
Stage 1 Arch. Ass. Dufferin Wind Farm 69 JV Transmission Line (2012)

Dillon Consulting Ltd. **Melancthon Township, Ontario**
Cultural Heritage Assessment Proposed Dufferin Wind Farm (Including proposed 230
KV and 69 KV Transmission Line) (2012)

Dillon Consulting Ltd. **Melancthon Township, Ontario**
Cultural Heritage Assessment and Stage 1&2 PRIVATE EASEMENT Proposed 230 KV
Transmission Line Dufferin Wind Farm (2012)

Dufferin County, Ontario
Stage 2 Arch. Ass. Dufferin Wind Farm Layout Modifications (2012)

Canadian Solar Solutions Inc. & Dillon Consulting Ltd. **Temiskaming, Ontario**
Self-Assessment Protected Properties, Archaeological & Heritage Resources and Stage
1 Archaeological Assessment Liskeard 1, 3, & 4 Solar Farms (2011)

Capreol, Ontario
Cultural Heritage Assessment for proposed Highlight Solar Project (2011)

SkyPower Limited **Durham, Ontario**
Cultural Heritage Assessment Proposed Discovery light Solar Farm (2012)

SkyPower Limited **Durham, Ontario**
Self – Assessment Protected Properties, Arch. & Heritage Resources (2012)

SkyPower Limited **Durham, Ontario**
Self – Assessment Protected, Arch. & Heritage Resources - ILLUMINATIONLIGHT LP
Solar Power Project (2012)

Sky Power Limited
Self- Assessment Protected Properties, Archaeological & Heritage Resources Fotolight
LP Solar Power Project 2011)



SkyPower Limited **Dundas County, Ontario**
 Self-Assessment Protected Properties and Stage 1&2, Archaeological and Heritage
 Resources Mighty LP Solar Power Project (2012)

SkyPower Limited **Dundas County, Ontario**
 Self-Assessment Protected Properties and Stage 1&2, Archaeological and Heritage
 Resources CityLights LP Solar Power Project

SkyPower Limited **York County, Ontario**
 Cultural Heritage Assessment, Self-Assessment, and Stage 1&2 Proposed Goldlight
 Solar Farm (2012)

SkyPower Limited **York County, Ontario**
 Protected Properties, Archaeological and Heritage Resources Good Light LP Solar
 Power Project (2012)

SkyPower Limited **York County, Ontario**
 Cultural Heritage Assessment, Self -Assessment, and Stage 1&2 Proposed Earthlight
 Solar Farm (2012)

SkyPower Limited **York County, Ontario**
 Cultural Heritage Assessment, Self -Assessment, and Stage 1&2 Proposed Goldlight
 Solar Farm (2012) and CHIA

SkyPower Limited **York County, Ontario**
 Cultural Heritage Assessment, Self -Assessment, and Stage 1&2 Proposed Beam Light
 Solar Farm (2012)

SkyPower Limited **Simcoe County, Ontario**
 Self-Assessment, Cultural Heritage Assessment, and Stage 1&2 Archaeological
 Assessment for proposed Raylight Solar Farm, formerly Aria solar farm (2012).

Waste Management of Canada Corp. **Ottawa, Ontario**
 Environmental Assessment for a New Landfill Footprint at the West Carleton
 Environmental Centre Final – Cultural Heritage Detailed Impact Assessment (2012)



May 25, 2023

TO: Andrea Nelson, GM BluePlan

FROM: Lindsay Graves, MA CAHP, Archaeological Services Inc

RE: **Basin A3 Drainage Study – Structure OS-7 and Culvert System OS-9,
City of Owen Sound**

ASI File: 23CH-107

In May 2023, Archaeological Services Inc. (ASI) was retained by GM BluePlan to complete the Ministry of Citizenship and Multiculturalism (MCM) form: *Criteria for Evaluating Potential for Built Heritage Resources and Cultural heritage Landscapes – A Checklist for the Non-Specialist* (2016) to determine if Structure OS-07 or Culvert System OS-9 in the City of Owen Sound have potential for cultural heritage value or interest and to recommend if a Cultural Heritage Evaluation Report (CHER) is required. Completion of the checklist for each culvert is in response to MCM comments pertaining to the Draft Brooke Basin A3 Drainage Strategy Master Plan.

A general plan showing the location of each structure is attached to this document (Attachment 1). Each structure is a typical concrete box culvert that was built in the first half of the twentieth century (Plates 1 – 3). A partially-replaced concrete railing is located above the southern outlet for OS-9. The completed checklist for each culvert is attached to this document (Attachment 2). The checklists identify that Structure OS-7 and Culvert System OS-9 both contain a structure that is more than 40 years old. No other criteria in the

checklist were met. According to the checklists, a CHER for each structure is recommended to determine if they have cultural heritage value or interest.

Following a site visit to visually inspect the culverts on May 18, 2023¹, and review of a municipal structural inventory, it is ASI's professional opinion that there is no potential for cultural heritage value or interest and a CHER is not required for Structure OS-7 or Culvert System OS-9. This is based on the following reasoning:

- The concrete box culverts are very common in terms of construction material and culvert type, many were built throughout the twentieth century, and many remain;
- These examples have been altered through repairs and extensions and are not considered to be representative, rare, early or unique based on a review of the structural inventory and on ASI's professional experience;
- The culverts do not exhibit a high degree of craftsmanship or technical achievement, as they are typical in form and construction, and therefore are not likely to be associated with a significant civil engineer or be an example of their best work; and
- They are not located within a recognized cultural heritage landscape.

This technical memorandum, and the attached checklists, should be saved to the project file for documentation. No further work regarding the culverts, from a cultural heritage perspective, is required.

¹ Site visit was attended by City of Owen Sound heritage staff, GM BluePlan and ASI





Plate 1: Structure OS-07, north outlet (ASI, 2023)



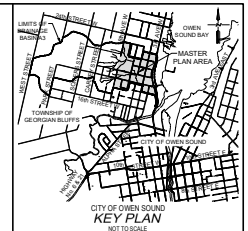
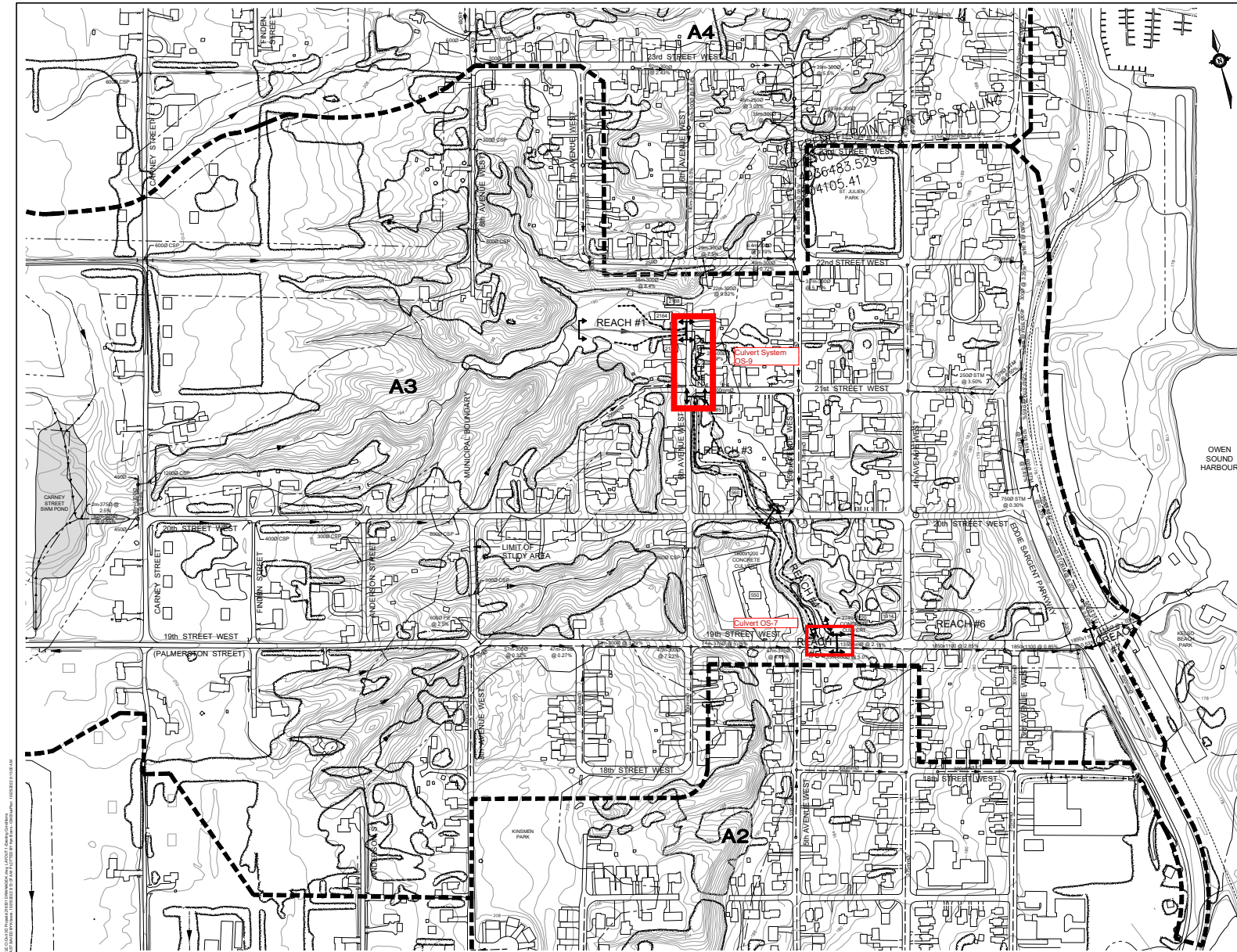
Plate 2: Structure OS-09a-c, northwest outlet (ASI, 2023)



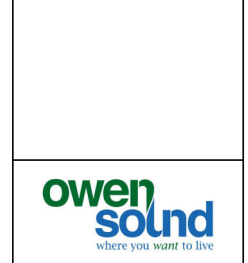
Plate 3: Structure OS-09a-c, south outlet (ASI, 2023)

Attachment 1: Location Map





- LEGEND:
- MAJOR DRAINAGE DIVIDE
 - MAJOR DRAINAGE BASIN
 - G.S.C.A. REGULATED AREA
 - WATER COURSE
 - FLOW DIRECTION
 - PARCEL ID, CIVIC NUMBER



THE POSITION OF POLY LINES, CONDUITS, WATERWAYS, SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES AND STRUCTURES IS NOT GUARANTEED BY THIS PLAN. THE USER SHALL OBTAIN ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES AND INDUSTRY BEFORE ANY CONSTRUCTION OR OTHER WORK IS UNDERTAKEN. THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXISTING CONDITIONS OF THE PROJECT AND SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE TO THEM.

DRAFT

NO.	DATE	REVISION/DESCRIPTION	CHNG



BROOKE AREA BASIN A3 OUTLET
MASTER PLAN
CITY OF OWEN SOUND
GENERAL PLAN
EXISTING CONDITIONS

DRAWN BY K.B.	APPROVED BY J.B.S.	PROJECT NO. 216301	DRAWING NO. 1
DESIGNED BY A.W.	DATE APRIL 2017	SCALE 1:2,000	

Attachment 2: 2016 Checklists



The **purpose of the checklist** is to determine:

- if a property(ies) or project area:
 - is a recognized heritage property
 - may be of cultural heritage value
- it includes all areas that may be impacted by project activities, including – but not limited to:
 - the main project area
 - temporary storage
 - staging and working areas
 - temporary roads and detours

Processes covered under this checklist, such as:

- *Planning Act*
- *Environmental Assessment Act*
- *Aggregates Resources Act*
- *Ontario Heritage Act* – Standards and Guidelines for Conservation of Provincial Heritage Properties

Cultural Heritage Evaluation Report (CHER)

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a qualified person(s) (see page 5 for definitions) to undertake a cultural heritage evaluation report (CHER).

The CHER will help you:

- identify, evaluate and protect cultural heritage resources on your property or project area
- reduce potential delays and risks to a project

Other checklists

Please use a separate checklist for your project, if:

- you are seeking a Renewable Energy Approval under Ontario Regulation 359/09 – [separate checklist](#)
- your Parent Class EA document has an approved screening criteria (as referenced in Question 1)

Please refer to the Instructions pages for more detailed information and when completing this form.

Project or Property Name
Basin A3 Drainage Study - Structure OS-07

Project or Property Location (upper and lower or single tier municipality)
City of Owen Sound

Proponent Name
GM Blueplan

Proponent Contact Information
Andrea Nelson, 519-3761805 x2219; andrea.nelson@gmblueplan.ca

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

Part A: Screening for known (or recognized) Cultural Heritage Value

	Yes	No
2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, do **not** complete the rest of the checklist.

The proponent, property owner and/or approval authority will:

- summarize the previous evaluation and
- add this checklist to the project file, with the appropriate documents that demonstrate a cultural heritage evaluation was undertaken

The summary and appropriate documentation may be:

- submitted as part of a report requirement
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

	Yes	No
3. Is the property (or project area):		
a. identified, designated or otherwise protected under the <i>Ontario Heritage Act</i> as being of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. a National Historic Site (or part of)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. designated under the <i>Heritage Railway Stations Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. designated under the <i>Heritage Lighthouse Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to any of the above questions, you need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report, if a Statement of Cultural Heritage Value has not previously been prepared or the statement needs to be updated

If a Statement of Cultural Heritage Value has been prepared previously and if alterations or development are proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No, continue to Question 4.

Part B: Screening for Potential Cultural Heritage Value

	Yes	No
4. Does the property (or project area) contain a parcel of land that:		
a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has or is adjacent to a known burial site and/or cemetery?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. is in a Canadian Heritage River watershed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. contains buildings or structures that are 40 or more years old?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part C: Other Considerations

	Yes	No
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):		
a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has a special association with a community, person or historical event?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. contains or is part of a cultural heritage landscape?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to one or more of the above questions (Part B and C), there is potential for cultural heritage resources on the property or within the project area.

You need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report (CHER)

If the property is determined to be of cultural heritage value and alterations or development is proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No to all of the above questions, there is low potential for built heritage or cultural heritage landscape on the property.

The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project file

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g. under the *Environmental Assessment Act*, *Planning Act* processes
- maintained by the property owner, proponent or approval authority

Instructions

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
 - large scale and small scale showing nearby township names for context purposes
- the municipal addresses of all properties within the project area
- the lot(s), concession(s), and parcel number(s) of all properties within a project area

For more information, see the Ministry of Tourism, Culture and Sport's [Ontario Heritage Toolkit](#) or [Standards and Guidelines for Conservation of Provincial Heritage Properties](#).

In this context, the following definitions apply:

- **qualified person(s)** means individuals – professional engineers, architects, archaeologists, etc. – having relevant, recent experience in the conservation of cultural heritage resources.
- **proponent** means a person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

1. Is there a pre-approved screening checklist, methodology or process in place?

An existing checklist, methodology or process may already be in place for identifying potential cultural heritage resources, including:

- one endorsed by a municipality
- an environmental assessment process e.g. screening checklist for municipal bridges
- one that is approved by the Ministry of Tourism, Culture and Sport (MTCS) under the Ontario government's [Standards & Guidelines for Conservation of Provincial Heritage Properties](#) [s.B.2.]

Part A: Screening for known (or recognized) Cultural Heritage Value

2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?

Respond 'yes' to this question, if all of the following are true:

A property can be considered not to be of cultural heritage value if:

- a Cultural Heritage Evaluation Report (CHER) - or equivalent - has been prepared for the property with the advice of a qualified person and it has been determined not to be of cultural heritage value and/or
- the municipal heritage committee has evaluated the property for its cultural heritage value or interest and determined that the property is not of cultural heritage value or interest

A property may need to be re-evaluated, if:

- there is evidence that its heritage attributes may have changed
- new information is available
- the existing Statement of Cultural Heritage Value does not provide the information necessary to manage the property
- the evaluation took place after 2005 and did not use the criteria in Regulations 9/06 and 10/06

Note: Ontario government ministries and public bodies [prescribed under Regulation 157/10] may continue to use their existing evaluation processes, until the evaluation process required under section B.2 of the Standards & Guidelines for Conservation of Provincial Heritage Properties has been developed and approved by MTCS.

To determine if your property or project area has been evaluated, contact:

- the approval authority
- the proponent
- the Ministry of Tourism, Culture and Sport

3a. Is the property (or project area) identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value e.g.:

- i. designated under the *Ontario Heritage Act*
 - individual designation (Part IV)
 - part of a heritage conservation district (Part V)

Individual Designation – Part IV

A property that is designated:

- by a municipal by-law as being of cultural heritage value or interest [s.29 of the *Ontario Heritage Act*]
- by order of the Minister of Tourism, Culture and Sport as being of cultural heritage value or interest of provincial significance [s.34.5]. **Note:** To date, no properties have been designated by the Minister.

Heritage Conservation District – Part V

A property or project area that is located within an area designated by a municipal by-law as a heritage conservation district [s. 41 of the *Ontario Heritage Act*].

For more information on Parts IV and V, contact:

- municipal clerk
 - [Ontario Heritage Trust](#)
 - local land registry office (for a title search)
-

ii. subject of an agreement, covenant or easement entered into under Parts II or IV of the *Ontario Heritage Act*

An agreement, covenant or easement is usually between the owner of a property and a conservation body or level of government. It is usually registered on title.

The primary purpose of the agreement is to:

- preserve, conserve, and maintain a cultural heritage resource
- prevent its destruction, demolition or loss

For more information, contact:

- [Ontario Heritage Trust](#) - for an agreement, covenant or easement [clause 10 (1) (c) of the *Ontario Heritage Act*]
 - municipal clerk – for a property that is the subject of an easement or a covenant [s.37 of the *Ontario Heritage Act*]
 - local land registry office (for a title search)
-

iii. listed on a register of heritage properties maintained by the municipality

Municipal registers are the official lists - or record - of cultural heritage properties identified as being important to the community.

Registers include:

- all properties that are designated under the *Ontario Heritage Act* (Part IV or V)
- properties that have not been formally designated, but have been identified as having cultural heritage value or interest to the community

For more information, contact:

- municipal clerk
 - municipal heritage planning staff
 - municipal heritage committee
-

iv. subject to a notice of:

- intention to designate (under Part IV of the *Ontario Heritage Act*)
- a Heritage Conservation District study area bylaw (under Part V of the *Ontario Heritage Act*)

A property that is subject to a **notice of intention to designate** as a property of cultural heritage value or interest and the notice is in accordance with:

- section 29 of the *Ontario Heritage Act*
- section 34.6 of the *Ontario Heritage Act*. **Note:** To date, the only applicable property is Meldrum Bay Inn, Manitoulin Island. [s.34.6]

An area designated by a municipal by-law made under section 40.1 of the *Ontario Heritage Act* as a **heritage conservation district study area**.

For more information, contact:

- municipal clerk – for a property that is the subject of notice of intention [s. 29 and s. 40.1]
 - [Ontario Heritage Trust](#)
-

- v. included in the Ministry of Tourism, Culture and Sport's list of provincial heritage properties

Provincial heritage properties are properties the Government of Ontario owns or controls that have cultural heritage value or interest.

The Ministry of Tourism, Culture and Sport (MTCS) maintains a list of all provincial heritage properties based on information provided by ministries and prescribed public bodies. As they are identified, MTCS adds properties to the list of provincial heritage properties.

For more information, contact the MTCS Registrar at registrar@ontario.ca.

3b. Is the property (or project area) a National Historic Site (or part of)?

National Historic Sites are properties or districts of national historic significance that are designated by the Federal Minister of the Environment, under the *Canada National Parks Act*, based on the advice of the Historic Sites and Monuments Board of Canada.

For more information, see the [National Historic Sites website](#).

3c. Is the property (or project area) designated under the *Heritage Railway Stations Protection Act*?

The *Heritage Railway Stations Protection Act* protects heritage railway stations that are owned by a railway company under federal jurisdiction. Designated railway stations that pass from federal ownership may continue to have cultural heritage value.

For more information, see the [Directory of Designated Heritage Railway Stations](#).

3d. Is the property (or project area) designated under the *Heritage Lighthouse Protection Act*?

The *Heritage Lighthouse Protection Act* helps preserve historically significant Canadian lighthouses. The Act sets up a public nomination process and includes heritage building conservation standards for lighthouses which are officially designated.

For more information, see the [Heritage Lighthouses of Canada](#) website.

3e. Is the property (or project area) identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office?

The role of the Federal Heritage Buildings Review Office (FHBRO) is to help the federal government protect the heritage buildings it owns. The policy applies to all federal government departments that administer real property, but not to federal Crown Corporations.

For more information, contact the [Federal Heritage Buildings Review Office](#).

See a [directory of all federal heritage designations](#).

3f. Is the property (or project area) located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?

A UNESCO World Heritage Site is a place listed by UNESCO as having outstanding universal value to humanity under the Convention Concerning the Protection of the World Cultural and Natural Heritage. In order to retain the status of a World Heritage Site, each site must maintain its character defining features.

Currently, the Rideau Canal is the only World Heritage Site in Ontario.

For more information, see Parks Canada – [World Heritage Site website](#).

Part B: Screening for potential Cultural Heritage Value

4a. Does the property (or project area) contain a parcel of land that has a municipal, provincial or federal commemorative or interpretive plaque?

Heritage resources are often recognized with formal plaques or markers.

Plaques are prepared by:

- municipalities
- provincial ministries or agencies
- federal ministries or agencies
- local non-government or non-profit organizations

For more information, contact:

- [municipal heritage committees](#) or local heritage organizations – for information on the location of plaques in their community
- Ontario Historical Society's [Heritage directory](#) – for a list of historical societies and heritage organizations
- Ontario Heritage Trust – for a [list of plaques](#) commemorating Ontario's history
- Historic Sites and Monuments Board of Canada – for a [list of plaques](#) commemorating Canada's history

4b. Does the property (or project area) contain a parcel of land that has or is adjacent to a known burial site and/or cemetery?

For more information on known cemeteries and/or burial sites, see:

- Cemeteries Regulations, Ontario Ministry of Consumer Services – for a [database of registered cemeteries](#)
- Ontario Genealogical Society (OGS) – to [locate records of Ontario cemeteries](#), both currently and no longer in existence; cairns, family plots and burial registers
- Canadian County Atlas Digital Project – to [locate early cemeteries](#)

In this context, adjacent means contiguous or as otherwise defined in a municipal official plan.

4c. Does the property (or project area) contain a parcel of land that is in a Canadian Heritage River watershed?

The Canadian Heritage River System is a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage.

Canadian Heritage Rivers must have, and maintain, outstanding natural, cultural and/or recreational values, and a high level of public support.

For more information, contact the [Canadian Heritage River System](#).

If you have questions regarding the boundaries of a watershed, please contact:

- your conservation authority
- municipal staff

4d. Does the property (or project area) contain a parcel of land that contains buildings or structures that are 40 or more years old?

A 40 year 'rule of thumb' is typically used to indicate the potential of a site to be of cultural heritage value. The approximate age of buildings and/or structures may be estimated based on:

- history of the development of the area
- fire insurance maps
- architectural style
- building methods

Property owners may have information on the age of any buildings or structures on their property. The municipality, local land registry office or library may also have background information on the property.

Note: 40+ year old buildings or structure do not necessarily hold cultural heritage value or interest; their age simply indicates a higher potential.

A building or structure can include:

- residential structure
- farm building or outbuilding
- industrial, commercial, or institutional building
- remnant or ruin
- engineering work such as a bridge, canal, dams, etc.

For more information on researching the age of buildings or properties, see the Ontario Heritage Tool Kit Guide [Heritage Property Evaluation](#).

Part C: Other Considerations

5a. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) is considered a landmark in the local community or contains any structures or sites that are important to defining the character of the area?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has potential landmarks or defining structures and sites, for instance:

- buildings or landscape features accessible to the public or readily noticeable and widely known
- complexes of buildings
- monuments
- ruins

5b. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) has a special association with a community, person or historical event?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has a special association with a community, person or event of historic interest, for instance:

- Aboriginal sacred site
- traditional-use area
- battlefield
- birthplace of an individual of importance to the community

5c. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) contains or is part of a cultural heritage landscape?

Landscapes (which may include a combination of archaeological resources, built heritage resources and landscape elements) may be of cultural heritage value or interest to a community.

For example, an Aboriginal trail, historic road or rail corridor may have been established as a key transportation or trade route and may have been important to the early settlement of an area. Parks, designed gardens or unique landforms such as waterfalls, rock faces, caverns, or mounds are areas that may have connections to a particular event, group or belief.

For more information on Questions 5.a., 5.b. and 5.c., contact:

- Elders in Aboriginal Communities or community researchers who may have information on potential cultural heritage resources. Please note that Aboriginal traditional knowledge may be considered sensitive.
- [municipal heritage committees](#) or local heritage organizations
- Ontario Historical Society's "[Heritage Directory](#)" - for a list of historical societies and heritage organizations in the province

An internet search may find helpful resources, including:

- historical maps
- historical walking tours
- municipal heritage management plans
- cultural heritage landscape studies
- municipal cultural plans

Information specific to trails may be obtained through [Ontario Trails](#).

The **purpose of the checklist** is to determine:

- if a property(ies) or project area:
 - is a recognized heritage property
 - may be of cultural heritage value
- it includes all areas that may be impacted by project activities, including – but not limited to:
 - the main project area
 - temporary storage
 - staging and working areas
 - temporary roads and detours

Processes covered under this checklist, such as:

- *Planning Act*
- *Environmental Assessment Act*
- *Aggregates Resources Act*
- *Ontario Heritage Act* – Standards and Guidelines for Conservation of Provincial Heritage Properties

Cultural Heritage Evaluation Report (CHER)

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a qualified person(s) (see page 5 for definitions) to undertake a cultural heritage evaluation report (CHER).

The CHER will help you:

- identify, evaluate and protect cultural heritage resources on your property or project area
- reduce potential delays and risks to a project

Other checklists

Please use a separate checklist for your project, if:

- you are seeking a Renewable Energy Approval under Ontario Regulation 359/09 – [separate checklist](#)
- your Parent Class EA document has an approved screening criteria (as referenced in Question 1)

Please refer to the Instructions pages for more detailed information and when completing this form.

Project or Property Name
Basin A3 Drainage Study - Structure OS-09a-c

Project or Property Location (upper and lower or single tier municipality)
City of Owen Sound

Proponent Name
GM Blueplan

Proponent Contact Information
Andrea Nelson, 519-3761805 x2219; andrea.nelson@gmblueplan.ca

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

Part A: Screening for known (or recognized) Cultural Heritage Value

	Yes	No
2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, do **not** complete the rest of the checklist.

The proponent, property owner and/or approval authority will:

- summarize the previous evaluation and
- add this checklist to the project file, with the appropriate documents that demonstrate a cultural heritage evaluation was undertaken

The summary and appropriate documentation may be:

- submitted as part of a report requirement
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

	Yes	No
3. Is the property (or project area):		
a. identified, designated or otherwise protected under the <i>Ontario Heritage Act</i> as being of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. a National Historic Site (or part of)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. designated under the <i>Heritage Railway Stations Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. designated under the <i>Heritage Lighthouse Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to any of the above questions, you need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report, if a Statement of Cultural Heritage Value has not previously been prepared or the statement needs to be updated

If a Statement of Cultural Heritage Value has been prepared previously and if alterations or development are proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No, continue to Question 4.

Part B: Screening for Potential Cultural Heritage Value

	Yes	No
4. Does the property (or project area) contain a parcel of land that:		
a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has or is adjacent to a known burial site and/or cemetery?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. is in a Canadian Heritage River watershed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. contains buildings or structures that are 40 or more years old?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part C: Other Considerations

	Yes	No
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):		
a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has a special association with a community, person or historical event?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. contains or is part of a cultural heritage landscape?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to one or more of the above questions (Part B and C), there is potential for cultural heritage resources on the property or within the project area.

You need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report (CHER)

If the property is determined to be of cultural heritage value and alterations or development is proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No to all of the above questions, there is low potential for built heritage or cultural heritage landscape on the property.

The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project file

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g. under the *Environmental Assessment Act*, *Planning Act* processes
- maintained by the property owner, proponent or approval authority

Instructions

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
 - large scale and small scale showing nearby township names for context purposes
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In this context, the following definitions apply:

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An existing checklist, methodology or process may already be in place for identifying potential cultural heritage resources, including:

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- an environmental assessment process e.g. screening checklist for municipal bridges
- one that is approved by the Ministry of Tourism, Culture and Sport (MTCS) under the Ontario government's [Standards & Guidelines for Conservation of Provincial Heritage Properties](#) [s.B.2.]

Part A: Screening for known (or recognized) Cultural Heritage Value

2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?

Respond 'yes' to this question, if all of the following are true:

A property can be considered not to be of cultural heritage value if:

- a Cultural Heritage Evaluation Report (CHER) - or equivalent - has been prepared for the property with the advice of a qualified person and it has been determined not to be of cultural heritage value and/or
- the municipal heritage committee has evaluated the property for its cultural heritage value or interest and determined that the property is not of cultural heritage value or interest

A property may need to be re-evaluated, if:

- there is evidence that its heritage attributes may have changed
- new information is available
- the existing Statement of Cultural Heritage Value does not provide the information necessary to manage the property
- the evaluation took place after 2005 and did not use the criteria in Regulations 9/06 and 10/06

Note: Ontario government ministries and public bodies [prescribed under Regulation 157/10] may continue to use their existing evaluation processes, until the evaluation process required under section B.2 of the Standards & Guidelines for Conservation of Provincial Heritage Properties has been developed and approved by MTCS.

To determine if your property or project area has been evaluated, contact:

- the approval authority
- the proponent
- the Ministry of Tourism, Culture and Sport

3a. Is the property (or project area) identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value e.g.:

- i. designated under the *Ontario Heritage Act*
 - individual designation (Part IV)
 - part of a heritage conservation district (Part V)

Individual Designation – Part IV

A property that is designated:

- by a municipal by-law as being of cultural heritage value or interest [s.29 of the *Ontario Heritage Act*]
- by order of the Minister of Tourism, Culture and Sport as being of cultural heritage value or interest of provincial significance [s.34.5]. **Note:** To date, no properties have been designated by the Minister.

Heritage Conservation District – Part V

A property or project area that is located within an area designated by a municipal by-law as a heritage conservation district [s. 41 of the *Ontario Heritage Act*].

For more information on Parts IV and V, contact:

- municipal clerk
 - [Ontario Heritage Trust](#)
 - local land registry office (for a title search)
-

ii. subject of an agreement, covenant or easement entered into under Parts II or IV of the *Ontario Heritage Act*

An agreement, covenant or easement is usually between the owner of a property and a conservation body or level of government. It is usually registered on title.

The primary purpose of the agreement is to:

- preserve, conserve, and maintain a cultural heritage resource
- prevent its destruction, demolition or loss

For more information, contact:

- [Ontario Heritage Trust](#) - for an agreement, covenant or easement [clause 10 (1) (c) of the *Ontario Heritage Act*]
 - municipal clerk – for a property that is the subject of an easement or a covenant [s.37 of the *Ontario Heritage Act*]
 - local land registry office (for a title search)
-

iii. listed on a register of heritage properties maintained by the municipality

Municipal registers are the official lists - or record - of cultural heritage properties identified as being important to the community.

Registers include:

- all properties that are designated under the *Ontario Heritage Act* (Part IV or V)
- properties that have not been formally designated, but have been identified as having cultural heritage value or interest to the community

For more information, contact:

- municipal clerk
 - municipal heritage planning staff
 - municipal heritage committee
-

iv. subject to a notice of:

- intention to designate (under Part IV of the *Ontario Heritage Act*)
- a Heritage Conservation District study area bylaw (under Part V of the *Ontario Heritage Act*)

A property that is subject to a **notice of intention to designate** as a property of cultural heritage value or interest and the notice is in accordance with:

- section 29 of the *Ontario Heritage Act*
- section 34.6 of the *Ontario Heritage Act*. **Note:** To date, the only applicable property is Meldrum Bay Inn, Manitoulin Island. [s.34.6]

An area designated by a municipal by-law made under section 40.1 of the *Ontario Heritage Act* as a **heritage conservation district study area**.

For more information, contact:

- municipal clerk – for a property that is the subject of notice of intention [s. 29 and s. 40.1]
 - [Ontario Heritage Trust](#)
-

- v. included in the Ministry of Tourism, Culture and Sport's list of provincial heritage properties

Provincial heritage properties are properties the Government of Ontario owns or controls that have cultural heritage value or interest.

The Ministry of Tourism, Culture and Sport (MTCS) maintains a list of all provincial heritage properties based on information provided by ministries and prescribed public bodies. As they are identified, MTCS adds properties to the list of provincial heritage properties.

For more information, contact the MTCS Registrar at registrar@ontario.ca.

3b. Is the property (or project area) a National Historic Site (or part of)?

National Historic Sites are properties or districts of national historic significance that are designated by the Federal Minister of the Environment, under the *Canada National Parks Act*, based on the advice of the Historic Sites and Monuments Board of Canada.

For more information, see the [National Historic Sites website](#).

3c. Is the property (or project area) designated under the *Heritage Railway Stations Protection Act*?

The *Heritage Railway Stations Protection Act* protects heritage railway stations that are owned by a railway company under federal jurisdiction. Designated railway stations that pass from federal ownership may continue to have cultural heritage value.

For more information, see the [Directory of Designated Heritage Railway Stations](#).

3d. Is the property (or project area) designated under the *Heritage Lighthouse Protection Act*?

The *Heritage Lighthouse Protection Act* helps preserve historically significant Canadian lighthouses. The Act sets up a public nomination process and includes heritage building conservation standards for lighthouses which are officially designated.

For more information, see the [Heritage Lighthouses of Canada](#) website.

3e. Is the property (or project area) identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office?

The role of the Federal Heritage Buildings Review Office (FHBRO) is to help the federal government protect the heritage buildings it owns. The policy applies to all federal government departments that administer real property, but not to federal Crown Corporations.

For more information, contact the [Federal Heritage Buildings Review Office](#).

See a [directory of all federal heritage designations](#).

3f. Is the property (or project area) located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?

A UNESCO World Heritage Site is a place listed by UNESCO as having outstanding universal value to humanity under the Convention Concerning the Protection of the World Cultural and Natural Heritage. In order to retain the status of a World Heritage Site, each site must maintain its character defining features.

Currently, the Rideau Canal is the only World Heritage Site in Ontario.

For more information, see Parks Canada – [World Heritage Site website](#).

Part B: Screening for potential Cultural Heritage Value

4a. Does the property (or project area) contain a parcel of land that has a municipal, provincial or federal commemorative or interpretive plaque?

Heritage resources are often recognized with formal plaques or markers.

Plaques are prepared by:

- municipalities
- provincial ministries or agencies
- federal ministries or agencies
- local non-government or non-profit organizations

For more information, contact:

- [municipal heritage committees](#) or local heritage organizations – for information on the location of plaques in their community
- Ontario Historical Society's [Heritage directory](#) – for a list of historical societies and heritage organizations
- Ontario Heritage Trust – for a [list of plaques](#) commemorating Ontario's history
- Historic Sites and Monuments Board of Canada – for a [list of plaques](#) commemorating Canada's history

4b. Does the property (or project area) contain a parcel of land that has or is adjacent to a known burial site and/or cemetery?

For more information on known cemeteries and/or burial sites, see:

- Cemeteries Regulations, Ontario Ministry of Consumer Services – for a [database of registered cemeteries](#)
- Ontario Genealogical Society (OGS) – to [locate records of Ontario cemeteries](#), both currently and no longer in existence; cairns, family plots and burial registers
- Canadian County Atlas Digital Project – to [locate early cemeteries](#)

In this context, adjacent means contiguous or as otherwise defined in a municipal official plan.

4c. Does the property (or project area) contain a parcel of land that is in a Canadian Heritage River watershed?

The Canadian Heritage River System is a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage.

Canadian Heritage Rivers must have, and maintain, outstanding natural, cultural and/or recreational values, and a high level of public support.

For more information, contact the [Canadian Heritage River System](#).

If you have questions regarding the boundaries of a watershed, please contact:

- your conservation authority
- municipal staff

4d. Does the property (or project area) contain a parcel of land that contains buildings or structures that are 40 or more years old?

A 40 year 'rule of thumb' is typically used to indicate the potential of a site to be of cultural heritage value. The approximate age of buildings and/or structures may be estimated based on:

- history of the development of the area
- fire insurance maps
- architectural style
- building methods

Property owners may have information on the age of any buildings or structures on their property. The municipality, local land registry office or library may also have background information on the property.

Note: 40+ year old buildings or structure do not necessarily hold cultural heritage value or interest; their age simply indicates a higher potential.

A building or structure can include:

- residential structure
- farm building or outbuilding
- industrial, commercial, or institutional building
- remnant or ruin
- engineering work such as a bridge, canal, dams, etc.

For more information on researching the age of buildings or properties, see the Ontario Heritage Tool Kit Guide [Heritage Property Evaluation](#).

Part C: Other Considerations

5a. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) is considered a landmark in the local community or contains any structures or sites that are important to defining the character of the area?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has potential landmarks or defining structures and sites, for instance:

- buildings or landscape features accessible to the public or readily noticeable and widely known
- complexes of buildings
- monuments
- ruins

5b. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) has a special association with a community, person or historical event?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has a special association with a community, person or event of historic interest, for instance:

- Aboriginal sacred site
- traditional-use area
- battlefield
- birthplace of an individual of importance to the community

5c. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) contains or is part of a cultural heritage landscape?

Landscapes (which may include a combination of archaeological resources, built heritage resources and landscape elements) may be of cultural heritage value or interest to a community.

For example, an Aboriginal trail, historic road or rail corridor may have been established as a key transportation or trade route and may have been important to the early settlement of an area. Parks, designed gardens or unique landforms such as waterfalls, rock faces, caverns, or mounds are areas that may have connections to a particular event, group or belief.

For more information on Questions 5.a., 5.b. and 5.c., contact:

- Elders in Aboriginal Communities or community researchers who may have information on potential cultural heritage resources. Please note that Aboriginal traditional knowledge may be considered sensitive.
- [municipal heritage committees](#) or local heritage organizations
- Ontario Historical Society's "[Heritage Directory](#)" - for a list of historical societies and heritage organizations in the province

An internet search may find helpful resources, including:

- historical maps
- historical walking tours
- municipal heritage management plans
- cultural heritage landscape studies
- municipal cultural plans

Information specific to trails may be obtained through [Ontario Trails](#).

December 16, 2022
Revised May 25, 2023
Our File: 216301

Via Email: joseph.harvey@ontario.ca; karla.barboza@ontario.ca

Ministry of Citizenship and Multiculturalism
Heritage Branch
400 University Ave., 5th Floor
Toronto, ON M7A 2E7

Attention: Mr. Joseph Harvey

Re: MCM File No. 0008311
City of Owen Sound
Draft Master Plan Approach 2
Brooke Area Basin A3 Outlet
Response to Comments (Revised)

Dear Joseph Harvey,

As you are aware, the City of Owen Sound has initiated a Master Plan study to address the drainage deficiencies identified within the Study Area specific to Brooke Basin A3 and to assist in the planning of seven individual projects (or Reaches) toward an appropriate overall drainage strategy. Ministry comments pertaining to the Master Plan for Basin A3 (Draft) were received in correspondence dated November 29, 2022, April 3, 2023, and April 14, 2023. Correspondence is provided in Attachment A for ease of reference.

Response to MCM Comments (November 29, 2022)

Comments specific to the Cultural Heritage Evaluation Report (CHER), dated April 2018 and prepared by Scarlett Janusas Archaeology Inc., were provided in a Table that was attached to the Ministry letter dated November 29, 2022. Comments outlined in the MCM Table provided are addressed on a point-by-point basis (referred to as 'Items') in the following Table.

Item	Section	Response to Comment
Master Plan dated October 25, 2022 (Version 1)		
1.	Throughout	The Ministry name has been updated from the Ministry of Heritage, Sport, Tourism, and Culture Industries (MHSTCI) to the Ministry of Citizenship and Multiculturalism (MCM) throughout the Master Plan.
2.	8.1	<p>Section 8.1 addresses the cultural heritage environment.</p> <p><u>Section 8.1.1 Archaeological Resources:</u> As requested, revisions to the Master Plan, based on the MCM comments provided, were made to better align Section 8.1.1 of the Master Plan with the current legislation and terminology.</p> <p><u>Section 8.1.2 Built Heritage Resources and Cultural Heritage Landscape Assessment:</u></p> <ul style="list-style-type: none"> Requested revisions to text within the Master Plan were made to better align Section 8.1.2 of the Master Plan with the current legislation and terminology. An overview of the CHER (April 2018) is provided in this correspondence (below this Table). Based on Comments provided in Item 7, the assessment of potential impacts has been updated to better align with the approach recommended by the MCM (i.e., InfoSheet #5: Heritage Impact Assessments and Conservation Plan). It is proposed that the CHER (April 2018) and this correspondence, which includes a

Item	Section	Response to Comment
		<p>Preliminary Impact Assessment, be included in Appendix E of the Master Plan. Based on the set of Recommended Solutions presented in the Master Plan, it is thought that no further cultural heritage assessments will be needed to support the Master Plan.</p> <ul style="list-style-type: none"> Additional cultural heritage evaluations and heritage impact assessments may be recommended for the undertakings within Reach #6. Known and potential built heritage resources that are identified to fall within the 'vibration zone of influence' may require further assessment. The need for such assessments would be evaluated at the detailed design phase and would be based on the findings of the Geotechnical Investigations that will be completed to support the detailed design. Cultural heritage evaluations would only be recommended for <u>potential</u> built heritage resources identified to better understand the cultural heritage value and interest and the associated level of significance. Heritage impact assessments may be recommended for all known (or confirmed) built heritage resources that are determined to lie within the 'vibration zone of influence'. Accordingly, this commitment has been outlined in Section 20.2 of the Master Plan (i.e., Project Implementation: Mitigations and Commitments) It is recognized that the MCM may have additional comments following the review of the response to MCM comments and updated preliminary impact assessment provided herein.
3.	Assessment of Alternatives (Tables and Text)	As requested, the assessment of alternatives was revisited to incorporate recommendations for the cultural heritage studies completed (e.g., Stage 1AA, CHER and the Preliminary Impact Assessment provided herein). Further, the evaluation of alternative tables (e.g., Tables 10-3, 11-7, 12-2, 13-2 and 16-2) have been updated to more specifically consider impacts to cultural heritage resources. Copies of the updated Tables are enclosed in Attachment B.
4.	Section 20 Mitigations and Commitments	A new section 'Project Implementation: Mitigations and Commitments' (e.g., Section 20.2) was added to the Master Plan. As requested, text addressing compliance with the recommendations of the Stage 1AA report and the cultural heritage studies (e.g., the CHER and the findings presented herein) was added, as per that specified in the MCM comments.
Cultural Heritage Evaluation Report (CHER) (dated April 2018 and prepared by Scarlett Janusas Archaeology Inc.)		
5.	2.0 Assessment Methodology	Municipal and agency consultation is being completed as part of the Environmental Assessment process that is being completed for the Master Plan and associated Schedule B EA's. Consultation efforts, including those completed to date and planned consultations, are described in detail herein (3. Environmental Assessment Process Consultations). A summary table of the consultation efforts completed as part of the Master Plan EA process is enclosed in the Master Plan - Appendix A.
6.	5.0 Identification of Cultural Heritage Resources	<ul style="list-style-type: none"> Section 5.2 Roadscapes: As the roadways reviewed were found to no longer retain any of their original character, as described in this section of the CHER, they were not considered to retain CHVI and inclusion of the evaluation in Appendix B is not considered to be warranted. Section 5.3 Cultural Heritage Landscape identifies the feature (i.e., landscape), the location (i.e., the Study Area) and the heritage status as a potential cultural heritage landscape that was identified via field review/desktop research. This landscape is evaluated in Section 5.3 of the CHER. Based on the findings of the CHER (Section 5.4.3), which state that 'the proposed development project will not negatively impact or further alter the integrity of the landscape, including its viewsheds, and the preliminary impact assessment provided herein, it is thought that no impacts are anticipated, and further review of this potential resource are not warranted. Ultimately, the landscape would remain unchanged. Cultural Heritage Forms (Appendix B) were specifically prepared for all buildings reviewed as part of the assessment, with a detailed evaluation provided in Appendix B, where applicable. For buildings deemed to have known or potential cultural heritage value or interest, a description of the property and its known or potential CHVI was provided in Section 5.1 and a statement was provided in Section 5.4. <p>Within the CHER, built heritage resources are subdivided into two 'categories'. The MCM reviewer has requested clarification of the 'category' description provided in the CHER. Clarification is provided below:</p> <p>Category 1: 'Built Heritage Resources within Study Area Lots' - within the CHER, the 'Study Area' is defined as the watercourse, extending from the top of Reach #1 to the bottom of Reach #6. Where Built Heritage Resources are identified 'within the Study Area Lots', <u>the watercourse extends across part the private property within which the potential built heritage resource lies. However, as</u></p>

Item	Section	Response to Comment
		specified in the CHER, <i>'the subject buildings are not actually within the confines of the Study Area'</i> (i.e., the watercourse). Category 2: 'Built Heritage Resources Adjacent to the Study Area' – The watercourse does not lie within any part of the property parcels within which the identified built heritage resources are situated.
7.	6.0 Potential Impacts of Undertaking on Cultural Heritage Resources	As requested, an evaluation of anticipated impacts is provided within this correspondence. It is noted that photographs are provided in the CHER and, for built heritage resources, are included on the Cultural Heritage Forms in Appendix B.
8.	7.0 Mitigation Options	GM BluePlan interprets the recurring statement <i>'This is not recommended the built heritage buildings'</i> to be erroneous (i.e., an editorial error). It is our understanding that this was likely intended to state 'This is not recommended for the buildings identified as known or potential built heritage resources'.
9.	New Section Community Engagement	Municipal and agency consultation is being completed as part of the Environmental Assessment process that is being completed for the Master Plan. Consultation efforts, including those completed to date and planned consultations, are described in detail herein (3. Environmental Assessment Process Consultations). A summary table of the consultation efforts completed as part of the Master Plan EA process is enclosed in the Master Plan - Appendix A.
10.	Appendix B	Statements for the resources that meet the criteria and are considered to have CHVI are provided in Section 5.4 of the CHER.

Response to MCM Comments

Culverts

During a meeting with the MCM on January 10th, 2023, it was indicated that the 'Municipal Heritage Bridges Cultural, Heritage and Archaeological Resources Assessment Checklist' (April 2014) had not been completed for the culverts within the Study Area where Schedule B EA processes had been identified. There are five culverts situated within the Study Area. A summary of the Structure ID, general location, approximate year the structure was built, and dimensions is provided below.

Structure ID	General Location	Year Built	Dimensions (±)	Reach (EA Schedule)
OS-07	19 th St W, east of 5 th Ave W	1930	2,740 mm x 1,220 mm	Reach #5 (Schedule B)
OS-08	20 th St W, between 5 th and 6 th Ave W	Not Available	1,800 mm x 1,200 mm	Reach #3 (Culvert to remain)
OS-09a	21 st St W, east of 6 th Ave W	1920	2,700 mm x 1,500 mm	Reach #2 (Schedule B)
OS-9b	Parallel to 6 th Ave W, north of 21 st St W	1971	2 x 1,500 mmØ CSP	Reach #2 (Schedule B)
OS-9c	6 th Ave W, north of 21 st St W	1920	2,700 mm x 1,500 mm	Reach #2 (Schedule B)

In the Municipal Class EA Manual (2015), a bridge is defined as *'a structure that provides a roadway or walkway for the passage of vehicles, pedestrians, cyclists across an obstruction, gap or facility and that is greater than 3 meters in span (CSA-S6-00)'*. In other words, any structure having a span of greater than 3 meters that is part of a road which spans a depression or obstacle is considered a bridge, including culverts over 3 meters in diameter/span. Provided that each culvert in the Study Area has a span of less than 3 meters, the Municipal Engineers Association checklist does not apply. However, as noted in the MCM Comments provided, the MCM checklist *'Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes'* should be completed to help determine whether the culverts are of potential cultural heritage value or interest. Specifically culverts in which replacement is recommended that are within an area (or Reach) subject to a Schedule B EA process.

ASI was retained to determine if the culverts proposed for replacement had the potential for cultural heritage value or interest (CHVI). According to the MCM checklists completed, culvert OS-07 and culvert system OS-9 (i.e., OS-9a, OS-9b and OS-9c) were identified to be of potential cultural heritage value or interest (CHVI) based on their age (i.e., greater than 40 years old). However, based on a background review completed by ASI, including a visual inspection of the culverts (i.e., Structure OS-7 and Culvert System OS-9(a/b/c)) on May 18th, 2023, it was determined that the culverts do not have potential for Cultural Heritage Value or Interest (CHVI). Based on these findings, the completion of a Cultural Heritage Evaluation Report was not recommended. The checklists completed by ASI and a technical memorandum are enclosed in **Attachment C**.

As requested by the reviewer, the completed checklists have been included in the final documentation of the Master Plan by way of this correspondence. In addition, Section 8.1.2 of the Master Plan has been updated to document the conclusions based on the completed checklists.

Archaeological Assessment

As requested, Section 8.1.1 of the Master Plan has been revised to include Section 4.0 and Section 5.0 of the Stage 1 AA Report, word for word, rather than a detailed summary.

1. CULTURAL HERITAGE EVALUATION REPORT

1A. Cultural Heritage Assessment:

The Cultural Heritage Evaluation Report (CHER) included in the Master Plan (Version 1) describes the existing conditions of the Study Area, including (i) the identification of known and potential cultural heritage resources that may be affected by work associated with improvements to the drainage system; (ii) an evaluation of the cultural heritage values of the subject resources and (iii) the identification of the heritage attributes and significance, both in the Cultural Heritage Forms (Appendix B) and in Section 5.4 of the CHER.

Based on MCM comments (Item 2) and comparison to reports prepared for similar projects, it is our understanding that the CHER (April 2018) may be more accurately referred to as a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment.

Based on a review of the CHER, it is our understanding that the report sufficiently addresses the requirements of a Cultural Heritage Report, presenting an inventory of known and potential built heritage resources and cultural heritage landscapes. Consistent with the guidelines, the identification and inventory process involved the following:

- i. Background research and desktop data collection including, but not limited to, mapping and a review of federal, provincial and municipal databases,
- ii. Field review (i.e., site analysis) to confirm the location and condition of known cultural heritage resources identified and to identify potential built heritage resources and cultural heritage landscapes.
- iii. Evaluation of potential cultural heritage value and interest in accordance with O.Reg.9/06 under the Ontario Heritage Act: 'Criteria for Determining Cultural Heritage Value or Interest'.

1B. Preliminary Assessment of Potential Impacts

As recognized by the reviewer's comments (Item 7), the report provides a general understanding the potential impacts of the undertaking on Cultural Heritage Resources. While the report concludes *that 'given the scope of the proposed Brooke Area Basin A3 project it is not anticipated that any of the identified built heritage features, cultural heritage landscape, roadways or viewsheds will be negatively impacted by the development and no mitigation or protective measures are required'*, it is recognized that the impact assessment provided in Section 6.0 of the report may not have sufficiently presented the basis for these findings.

The assessment identified 2 known built heritage resources, 8 potential built heritage resources and a potential cultural heritage landscape. When the locations of the cultural heritage resources identified are compared to the extents of each Reach, potential impacts to built heritage resources are identified for Reach #3 and Reach #6, as demonstrated on the attached Map.

Within the Ministry comments, it is requested that Section 6 include an evaluation of anticipated impacts, including a description of the undertaking and the construction process involved. In addition, the reviewer requests that *'impact assessment information be provided in a table, detailing the heritage resources and potential for direct and indirect impacts (destruction, alteration, shadows, isolation, obstruction, change in land use, as well as a column for discussions)'*. The requested impact assessment for each cultural heritage resource (or resource area – Reach #3 and Reach #6), findings and recommendations are provided herein.

2. PRELIMINARY IMPACT ASSESSMENTS

The impact assessment on cultural heritage resources is based on the impacts defined by InfoSheet #5 'Heritage Impact Assessments and Conservation Plans' (winter 2006) prepared by the MCM. To assess the potential impacts of a proposed project on identified potential or known cultural heritage resources, the identified heritage attributes are considered against the range of possible impacts. Impacts to heritage resources may be direct or indirect, and include:

Direct Impacts:

- i. Destruction of any, or part of any, significant heritage attribute or feature.
- ii. Alteration which means a change in any manner and includes restoration, renovation, repair or disturbance.

Indirect Impacts:

- iii. Shadows created that alter the appearance of a heritage attribute or change the visibility of a natural feature of plantings, such as a garden.
- iv. Isolation of a heritage attribute from its surrounding environment, context, or a significant relationship.
- v. Direct or indirect obstruction of significant views or vistas from, within, or to a built and natural feature.
- vi. A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces.
- vii. Soil disturbance such as a change in grade, or an alteration of the drainage pattern or excavation etc.

Provided that several built heritage resources were identified, as well as a cultural heritage landscape, the potential impacts associated with the recommended solutions are considered. The preliminary overview of potential impacts, when included as part of the Master Plan and associated Schedule B EA project identified, is used to identify where a project alternative may have an impact on an identified heritage attribute, and to outline mitigation measures, which are then considered in the context of the overall EA planning process.

2A. Reach#3: Evaluation of Potential Impacts of the Recommended Solution on Built Heritage Resources

Recommended Solution:

The main component of the Master Plan identified for Reach #3 is to complete gradient improvements and widening of the open channel watercourse between 21st Street West and 20th Street West. The existing culvert across 20th Street East would be maintained. Although this undertaking is subject to additional design development, it is anticipated that the design will include for a revised channel profile within the current alignment, namely improvements to the gradient and banks of the open channel watercourse. More specifically, the relief that exists within the steepest downstream section of Reach #3 would be evenly distributed along its entire length. Additional improvements would include a widening of the cross-sectional geometry to permit a better-defined watercourse and a flood plain with a greater flow area.

Evaluation of Potential Impacts:

As shown on the Map provided, a total of five potential built heritage resources were identified in the vicinity of Reach #3, including Building No.'s 6, 9, 18 19 and 24. These potential built heritage resources (i.e., residential homes) are situated in the range of 20 to 50 meters from the watercourse (i.e., area of the recommended undertakings), at their closest points. Of the 5 property parcels (or lots) that encompass the subject buildings, the watercourse only extends through two properties (in the CHER referred to as '*Built Heritage Resources Within Study Area Lots*'). However, it is noted that where potential built heritage resources are identified within the Study Area Lots, these buildings are not actually within the confines of the Study Area (i.e., the watercourse). The watercourse flows across the northerly property line of Building 6 (i.e., 596 20th St W) and cuts across the southwest corner of the lot associated with Building 9 (i.e., 2006 5th Ave W).

Based on the range of possible impacts outlined in the aforementioned InfoSheet #5, an assessment of the potential impacts of the Recommended Solution for Reach #3 on the potential built heritage resources identified is provided in the following Table 1.

TABLE 1: Reach #3 Impact Assessment – Built Heritage Resources

Potential Impact	Potential Impacts of the Recommended Solution for Reach #3	Impact Potential
Destruction, Removal or Re-location	Buildings will be maintained. As indicated in Section 6.2 of the CHER, direct impacts on the potential built heritage resources are not anticipated.	No
Alteration	Buildings will be maintained. As indicated in Section 6.2 of the CHER, direct impacts on the potential built heritage resources are not anticipated.	No
Shadows	Channel improvements will not result in a significant change in elevation. No shadows will be created.	No
Isolation	The proposed gradient improvements and widening of the open channel watercourse between 21st Street West and 20th Street West will not impact the relationship of the built heritage resources (i.e., residential homes) with the surrounding environment and context.	No
Direct or Indirect Obstruction of Significant Views	No significant impacts to the views are expected. Views from streetscape will not be affected.	No
A Change in Land Use	No Impact. The existing channel alignment will be maintained. Land use will remain the same.	No
Land Disturbance	<p><u>Soil Disturbance:</u> The watercourse extends across two of the five lots where potential built heritage resources have been identified, greater than 20 meters from the potential built heritage resources identified. Soil disturbance will not occur in close proximity to the buildings. In addition, the separation distance of greater than 20 meters will provide sufficient buffer to ensure impacts to the built heritage resources are avoided.</p> <p>It is recognized that soil disturbance, associated with improvements to the gradient and banks of the open channel watercourse, will occur. Based on the findings of the Stage 1AA, the watercourse in Reach #3 has been previously dredged. However, the majority of the lands directly adjacent the watercourse remain undeveloped and, as such, retain archaeological potential. The City has committed to completing the Stage 2AA (and any further recommended archaeological assessments) as early as possible during the detailed design and prior to any ground disturbing activities (Master Plan: Section 20.2).</p> <p><u>Vibration:</u> In consideration of the Recommended Solution, which will be limited to works within the open channel watercourse, primarily regrading, the potential for indirect impacts resulting from vibration are considered to be negligible for all potential built heritage resources identified in the vicinity of Reach #3.</p>	No

The Recommended Solution for Reach #3 is not expected to have the potential to result in direct or indirect impacts to the identified potential built heritage resources. Potential impacts to archaeological resources associated with soil disturbance along the banks of the watercourse have already been addressed (i.e., mitigated) through the City's commitment to complete additional archaeological assessment work during the detailed design phase for Reach #3. As direct impacts to the potential built heritage resources are not expected, Cultural Heritage Evaluation Reports for these potential built heritage resources identified are not recommended. Further, based on the assessment of impacts of the undertaking on the built heritage resources proximal to Reach #3, no further heritage assessment work is needed to support the Recommended Solution for Reach #3.

Should future work require an expansion of the Study Area, then a qualified heritage consultant should be retained to complete further review and assessment.

2B. Reach#6: Evaluation of Potential Impacts of the Recommended Solution on Built Heritage Resources

Recommended Solution:

It is anticipated that other existing infrastructure (i.e., sanitary sewer, watermain, road surface) will eventually also require replacement and that extending the service life of the existing storm sewer by rehabilitating the system, via the installation of a new wearing surface (or lining), could provide the City with the opportunity to delay replacement of the system until such a time that the project can be better aligned with other infrastructure needs along this well-travelled road. Rehabilitation of the system is recommended only as a short- to medium-term solution, dependent on the structural integrity of the system. It is anticipated that the existing infrastructure may potentially require replacement in the foreseeable future due to its age. At such a time, it is recommended that the storm sewer system be replaced. Ultimately, the timing for replacement(s) would be subject to condition assessments (i.e., reviews of the structural integrity of the system) and/or other infrastructure needs.

Evaluation of Potential Impacts:

As shown on the Map provided, a total of two known and three potential built heritage resources were identified in the vicinity of Reach #6, including Building No.'s 11 (known), 12, 25 (known), 27 and 29. These built heritage resources (i.e., residential homes or apartments) are situated in the range of 10 to 30 meters from the existing storm sewer system (i.e., area of the proposed undertaking), at their closest points.

Based on the range of possible impacts, an assessment of the potential impacts of the Recommended Solution for Reach #6 on the cultural heritage resources identified is provided in Table 2. It is noted that the focus of the impact assessment provided in Table 2 is for the longer-term recommendation to replace the infrastructure within Reach #6. With respect to the short to medium term Recommended Solution, to rehabilitate the existing storm sewer system on an as-needed basis, no direct or indirect impacts would be expected to occur on the built heritage resources identified.

TABLE 2: Reach #6 Impact Assessment – Built Heritage Resources

Potential Impact	Potential Impacts of the Recommended Solution for Reach #3	Impact Potential
Destruction, Removal or Re-location	Buildings will be maintained. As indicated in Section 6.2 of the CHER, direct impacts on the built heritage resources are not anticipated.	No
Alteration	Buildings will be maintained. As indicated in Section 6.2 of the CHER, direct impacts on the built heritage resources are not anticipated.	No
Shadows	Infrastructure replacement activities will not result in a significant change in elevation. No shadows will be created.	No
Isolation	Isolation typically deals with the relationship between heritage resources and their associated views. Infrastructure replacement activities will occur within the existing right-of-way, along the existing alignment, with the road grade generally remaining the same. As such, the recommended solution to replace the storm sewer system will not result isolation of the built heritage structures identified and will not impact the relationship of the built heritage resources (i.e., buildings) with the surrounding environment and context.	No
Direct or Indirect Obstruction of Significant Views	No impacts to the views are expected. Views from streetscape will not be affected.	No
A Change in Land Use	No Impact. The existing road alignment, within which the storm sewer replacement activities will occur, will be maintained. Land use will remain the same.	No
Land Disturbance	<u>Soil Disturbance:</u> Area previously subject to development disturbance. <u>Vibration:</u> Vibration effects may be experienced where construction activities are expected. Although a detailed design for the replacement of the storm sewer system within this Reach are not available, it is known that construction activities associated with this project may result in potential impacts to nearby built heritage resources. According to a review of reports prepared by others (ASI, 2022), potential vibration impacts are defined as having potential to affect an identified built heritage resource where work is taking place within 50-meters of features on a property. As such, a 50-meter buffer is applied in the absence of a project-specific defined vibration zone of influence based on existing literature and direction provided by the Ministry.	No (Soil Disturbance) Possible (Vibration)

Consistent with the findings presented in Section 6.2 of the CHER, the Recommended Solution for Reach #6 is not expected to have the potential to result in any direct impacts to the identified known or potential built heritage resources. Therefore, Cultural Heritage Evaluation Reports for these built heritage resources proximal to Reach #6 are not recommended.

With respect to indirect impacts, based on existing literature and direction provided by the Ministry, the recommended storm sewer replacement activities within the existing right-of-way may have the potential to result in indirect impacts to the identified known and potential built heritage resources. More specifically, given the proximity of the built heritage resources identified in the vicinity of Reach #6, in the range of 10 to 30 meters, indirect impacts from vibration are possible.

Based on the information available at the time of this assessment, and previous project knowledge, GM BluePlan is of the opinion that vibrations will not likely affect the adjacent properties. As the vibrations will be dependent on the subgrade conditions, identification of any vibration concerns will be identified during the Geotechnical Investigation, which will be completed during the detailed design phase for the project. Should the Geotechnical Investigation identify subgrade conditions which may be sensitive to vibrations, vibration concerns for the adjacent properties would be reassessed at that time. Upon confirmation of the 'vibration zone of influence', a qualified heritage consultant would be retained to complete a Heritage Impact Assessment (HIA) for the buildings within the area of influence. For buildings identified as potential built heritage resources, a Cultural Heritage Evaluation

(CHER) may be recommended to fully understand the cultural heritage value and interest of the resource and the level of its significance to support the HIA.

Although the extent of impacts from vibration is unknown at this time, based on the information presented in InfoSheet #5, mitigation and avoidance measures related to potential vibration effects may include the establishment of buffer zones, site plan controls and other construction planning mechanisms. In addition, a stepwise approach to mitigating potential vibration effects can be implemented, as follows:

1. The development of appropriate construction methodologies in the form of site plan control and site activity monitoring to prevent undue impacts to adjacent built heritage resources identified.
2. If necessary, monitoring for possible construction impacts, specifically vibration, during the construction phase associated with the replacement of the storm-sewers within Reach #6.

Further, should future planning require an expansion of the study area, then a qualified heritage consultant should be retained to confirm (or negate) the impacts of the proposed work on the known and potential built heritage resources.

2C. Cultural Heritage Landscape

As stated in the CHER, *'although the landscape of the study area has been deemed to have potential cultural heritage value or interest, the proposed improvements to the Basin A3 Outlet will not negatively impact or further alter the integrity of the landscape, including the viewsheds'*. Provided that the set of recommended solutions identified in the Master Plan maintain the existing watercourse within its current alignment, the early settlement themes, settlement patterns and the long-standing relationship between the natural and domestic landscape will not be altered. As such, a Cultural Heritage Evaluation Report to further assess the cultural heritage value and interest of the potential cultural heritage landscape identified and its level of its significance is not recommended.

2D. Summary of Recommendations

Additional cultural heritage evaluations and heritage impact assessments may be recommended for the undertakings within Reach #6. Known and potential built heritage resources that are identified to fall within the 'vibration zone of influence' may require further assessment. The need for such assessments would be evaluated at the detailed design phase and would be based on the findings of the Geotechnical Investigations that will be completed to support the detailed design. Cultural heritage evaluations would only be recommended for identified potential built heritage resources to better understand the cultural heritage value and interest and the associated level of significance. Heritage impact assessments may be recommended for all known (or confirmed) built heritage resources that are determined to lie within the 'vibration zone of influence'. Accordingly, this commitment has been outlined in Section 20.2 of the Master Plan (i.e., Project Implementation: Mitigations and Commitments)

Any recommended technical cultural heritage studies should be completed as early as possible during detailed design prior to the construction of any proposed works completed within Reach #6 as part of this Master Plan.

3. ENVIRONMENTAL ASSESSMENT PROCESS CONSULTATIONS

Community and agency engagement is being completed as part of the Environmental Assessment process that is being completed for the Master Plan. As part of this process, a Notice of Project Initiation was issued on October 25, 2022. The Project Notice was advertised in the Owen Sound Sun Times and was circulated to various agencies and Indigenous Communities. In addition, the project notice was also mailed to property owners within 120 meters of the main drainage corridor. The Notice included information pertaining to how the Master Plan, which included a copy of the CHER, could be viewed (i.e., a link to the report or the City website). Circulation lists summarizing the consultation efforts completed in conjunction with the EA process are provided in Appendix A of

the Master Plan. A final project notice will be issued as part of the Notice of Completion specific to the Master Plan.

To address reviewer comments specific to consultation with indigenous communities and the City of Owen Sound Heritage Committee, it was recommended that the updated Master Plan (i.e., Version 2) be circulated to select agencies and stakeholders (a minimum 30-day review period was provided), as follows:

- Sabine Robart, Manager of Planning and Heritage, City of Owen Sound
- All indigenous communities previously circulated, including SON and HSM
- The Ministry of Citizenship and Multiculturalism
- The Ministry of the Environment, Conservation and Parks (MECP)

The updated Master Plan (Version 2 Draft) was circulated on March 6, 2023, for review and comment. Comments received from the MCM and MECP have been addressed herein and incorporated into the Master Plan (Version 2).

Should you have any questions, please feel free to contact our office.

Yours truly,

GM BLUEPLAN ENGINEERING LIMITED

Per:

A handwritten signature in blue ink that reads 'Andrea Nelson'.

Andrea Nelson, M.Sc.














Senior Hydrogeologist and Environmental Planner

AN/JS

cc: Mark Badali, Environmental Resource Planner and EA Coordinator, MECP
Sabine Robart, City of Owen Sound
Chris Webb, City of Owen Sound
File No. 216301

Built Heritage Resources (and Property Parcels)

Legend

-  CA Boundaries
-  Wet Areas - GSCA
-  Wet Areas - GRCA
-  Water Features
-  Watercourses
-  Floodplains - NVCA
-  Floodplains - GRCA
- Large Scale Roads**
 -  Provincial Highway
 -  County Road
 -  Township Road
 -  Seasonal Road
-  Parcels - Current
-  Grey County Boundary



197 0 98 197 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere
© County of Grey



This map is a user generated static output from an Internet mapping site and is for reference only.
Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

Printed December 13, 2022 THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes

ATTACHMENT A

**Ministry of Citizenship
and Multiculturalism**

Heritage Branch
400 University Ave.
5th Floor
Toronto ON M7A 2E7
Tel.: 613.242.3743

**Ministère des Affaires civiques
et du Multiculturalisme**

Direction du patrimoine
400, av. University
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Tél.: 613.242.3743



November 29, 2022

EMAIL ONLY

John Slocombe, P.Eng.
GM BluePlan Engineering Ltd.
1260-2nd Avenue East, Unit 1
Owen Sound, ON N4K 2J3
john.slocombe@gmblueplan.ca

MCM File : 0008311
Proponent : City of Owen Sound
Subject : Notice of Project Initiation and Public Information Center - Master Plan Approach 2
Project : Master Plan: Brooke Area Basin A3 Outlet
Location : City of Owen Sound, Grey County

Dear John Slocombe:

Thank you for providing us with the Notice of Initiation and making the Master Plan: Brooke Area Basin A3 Outlet (dated October 25, 2022 and prepared by GM BluePlan Engineering) available for our review and comment.

Please note that the responsibility for administration of the *Ontario Heritage Act* and matters related to cultural heritage recently transferred from the Ministry of Tourism, Culture and Sport (MTCS) to the Ministry of Citizenship and Multiculturalism (MCM). Individual staff roles and contact information remain unchanged. Please continue to send any notices, report and/or documentation to both Karla Barboza and myself.

MCM's interest in this master plan relates to it's mandate of conserving Ontario's cultural heritage, which includes archaeological resources, built heritage resources and cultural heritage landscapes.

Master Plan Summary

In July 2008, the City of Owen Sound (City) and the Township of Georgian Bluffs completed the '*Brooke Area Stormwater Management Study*' which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one of the drainage areas having multiple issues.

The City has initiated a Master Plan study to address the drainage deficiencies identified within the Study Area specific to Brooke Basin and to assist in the planning of seven individual projects (or Reaches) toward an appropriate overall drainage strategy. The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects for the proposed individual drainage projects.

Comments

We have reviewed the above referenced Master Plan and have a couple of observations and comments:

- Section 8.1 (Archaeological Assessment) – We can confirm that a Stage 1 archaeological assessment (AA) and report (under Project Information Form (PIF) P027-0331-2018 (included in Appendix E)) has been entered into the Ontario Public Register of Archaeological Reports. The Stage 1 AA recommends that a Stage 2 archaeological assessment be undertaken for portions of the study area.

We recommend that a Stage 2 archaeological assessment and any further recommended archaeological assessments (e.g., Stage 3,4) be undertaken by a licensed archaeologist as early as possible during detailed design and prior to any ground disturbing activities.

Please note archaeological concerns have not been addressed until reports have been entered into the Ontario Public Register of Archaeological Reports where those reports recommend that:

1. the archaeological assessment of the project area is complete and
2. all archaeological sites identified by the assessment are either of no further cultural heritage value or interest (as per Section 48(3) of the *Ontario Heritage Act*) or that mitigation of impacts has been accomplished through excavation or an avoidance and protection strategy.

Approval authorities and proponents typically wait to receive the ministry's review letter for an archaeological assessment report before issuing a decision on the application as it can be used, for example, to document that due diligence has been undertaken.

- Section 8.1.2 (Built Heritage Resource and Cultural Heritage Landscape Assessment) – A Cultural Heritage Evaluation Report (CHER) (dated April, 2018 and prepared by Scarlett Janusas Archaeology Inc.) was undertaken and included as Appendix E. The CHER found that there are no built heritage resources or cultural heritage landscapes within the study area. More detailed comments are in the attached table.

The attached a table includes detailed comments and recommendations to support the documentation of cultural heritage due diligence.

Thank you for consulting MCM on this project. We look forward to reviewing the updated project documentation. Please contact me with any questions or concerns.

Sincerely,

Joseph Harvey
Heritage Planner
joseph.harvey@ontario.ca

Copied to: Chris Webb, City of Owen Sound
Andrea Nelson, Senior Hydrogeologist, GM BluePlan Engineering Limited
Mark Badali, Environmental Resource Planner & EA Coordinator, MECP

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. The Ministry of Citizenship and Multiculturalism (MCM) makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MCM be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with *Ontario Regulation 30/11* the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

Item	Document Section	Given Text	MCM Comments
Master Plan: Brooke Area Basin A3 Outlet (dated October 25, 2022 and prepared by GM BluePlan Engineering)			
1.	Throughout the Documentation	The Ministry of Heritage, Sport, Tourism, and Culture Industries	The ministry name should be revised from 'Ministry of Heritage, Sport, Tourism, and Culture Industries' to the 'Ministry of Citizenship and Multiculturalism (MCM)'.
2.	8.1 (Cultural Environment) p. 10	<p>8.1.1 Archaeological Assessment</p> <p>In consideration of Section 1.3.1 of the 2011 Standards and Guidelines for Consultant Archaeologists (S&G) administered by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), which lists criteria that are indicative of archaeological potential, the study area meets the following criteria indicative of archaeological potential:</p> <p>Water sources (primary, secondary, features indicating past water sources, accessible or inaccessible);</p> <ul style="list-style-type: none"> • Early historic transportation routes; and • Proximity to early settlements. <p>Scarlett Janusas Archaeology Inc. was retained to complete a Stage 1 Archeological Assessment for the area that may be impacted by drainage improvements within Brooke Area Basin A3. A copy of the Report (April 25, 2018) is provided in Appendix E. The assessment was conducted under the S&G. In a letter dated March 11,</p> <p>...</p> <p>8.1.2 Built Heritage Resource and Cultural Heritage Landscape Assessment</p> <p>Scarlett Janusas Archaeology Inc. was retained to conduct a Cultural Heritage Evaluation Report (CHER) for</p>	<p>Section 8.1 address the cultural heritage environment. We recommend the following revisions to align the Master plan section with the current legislation and terminology.</p> <p>8.1 Cultural Environment</p> <p>Cultural heritage resources include archaeological resources, built heritage resources and cultural heritage landscapes.</p> <p>8.1.1 Archaeological Resources</p> <p>In consideration of Section 1.3.1 of the 2011 Standards and Guidelines for Consultant Archaeologists (S&G) administered by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), which lists criteria that are indicative of archaeological potential, the study area meets the following criteria indicative of archaeological potential:</p> <p>Water sources (primary, secondary, features indicating past water sources, accessible or inaccessible);</p> <ul style="list-style-type: none"> • Early historic transportation routes; and • Proximity to early settlements. <p>Scarlett Janusas Archaeology Inc. was retained to complete a Stage 1 Archaeological Assessment (PIF) P027-0331-2018 of the area that may be impacted by drainage improvements within Brooke Area Basin A3. <u>A Stage 1 AA consists of a review of geographic, land use and historical information for the property and the relevant surrounding area, and contacting</u></p>

Item	Document Section	Given Text	MCM Comments
		<p>Brooke Area Basin A3. A copy of the CHER dated April 26, 2018 is included in Appendix E. The assessment encompassed the area along the drainage basin, including the lots adjoining the drainage features, as well as buildings within lots situated adjacent to the drainage basin. ...</p>	<p><u>MCM to find out whether, or not, there are any known archaeological sites on or near the property. Its purpose is to identify areas of archaeological potential and further archaeological assessment (e.g., Stage 2-4) as necessary.</u> A copy of the Report (April 25, 2018) is provided in Appendix E. The assessment was conducted under the S&G. In a letter dated March 11, 2019, MHSTCI (now MCM) confirmed the entry of the Stage 1 Assessment Report into the Ontario Public Register of Archaeological Reports (Appendix E).</p> <p>...</p> <p>[Then include the outcomes and recommendations of the report, as is in the Executive Summary – just copy and paste, don't summarize]</p> <p>A Stage 2 archaeological assessment and any further recommended assessment (e.g., Stage 3 and 4) will be completed as early as possible in the detailed design phase and prior to any ground disturbing activities.</p> <p>8.1.2 Built Heritage Resources and Cultural Heritage Landscapes Assessment</p> <p>A CHER was undertaken on (dated April, 2018 and prepared by Scarlett Janusas Archaeology Inc.). The assessment for this report consisted of data collection, background historic research, review of secondary source material and field review. A total of # (known and potential) cultural heritage landscapes and built heritage resources were identified within or adjacent to project study area.</p>

Item	Document Section	Given Text	MCM Comments
			<p>Cultural Heritage Evaluation Reports were recommended for the # properties that could be directly impacted. All CHERs were undertaken on [date] by [heritage consultant]. The Cultural Heritage Report Existing Conditions and Preliminary Impacts Assessment and CHERs are included in Appendix X.</p> <p>MCM may have additional comments on how due diligence for built heritage resources and cultural heritage landscapes has been addressed once it has reviewed the updated Cultural Heritage Report (See comments below).</p> <p>For Schedule B MCEAs undertaken as part of the master plan, where a known or potential built heritage resource or cultural heritage landscape may be directly and adversely impacted, and where it has not yet been evaluated for Cultural Heritage Value or Interest (CHVI), completion of a Cultural Heritage Evaluation Report (CHER) is required to fully understand its CHVI and level of significance. The CHER must be completed as part of the final EA report. If a potential resource is found to be of CHVI, then a Heritage Impact Assessment (HIA) will need to be undertaken and included in the final Master Plan. Our Ministry's Info Sheet #5: Heritage Impact Assessments and Conservation Plans outlines the scope of HIAs. Please send any CHERs or HIAs to MCM for review and make it available to local organizations or individuals who have expressed interest in review.</p>
3.	9.0 (Alternative Solutions and Assessments) Tables 10-3, 11-7, 12-2, 13,2, and 16-2 p. 15-59	Environment - Cultural Ranking - Net neutral for all alternatives	<p>This evaluation of alternatives should be revisited to incorporate the recommendations from any technical cultural heritage studies undertaken (e.g., Stage 1 AA and revised CHER).</p> <p>Each evaluation of alternatives table should consider impacts to cultural heritage resources. The preferred solution should be established by considering public and review agency input as well as the findings of any technical cultural heritage studies.</p>

Item	Document Section	Given Text	MCM Comments
			<p>We recommend the following revision to better align with the current terminology and our suggested revisions to section 8.1 of the Master Plan.</p> <p>Environment</p> <ul style="list-style-type: none"> - Cultural <p>Subcomponent</p> <ul style="list-style-type: none"> - Impacts to Archaeological Resources - Impacts to Built Heritage Resources and Cultural Heritage Landscapes <p>Ranking</p> <p>—— Not neutral for all alternatives</p>
4.	<p>Mitigations and Commitments</p> <p>NEW Section</p>	NA	<p>We recommend including the following text in a new section addressing Mitigations and commitments:</p> <p>Compliance with the recommendations of the Stage 1 archaeological assessment report.</p> <p>A licensed archaeologist should undertake a Stage 2 archaeological assessment and any further recommended archaeological assessments (e.g., Stage 3,4) as early as possible during detailed design and prior to any ground disturbing activities.</p> <p>Where archaeological resources are impacted by EA project work, MCM will be notified by contacting archaeology@ontario.ca. All activities impacting archaeological resources must cease immediately, and a licensed archaeologist is required to carry out an archaeological assessment in accordance with the <i>Ontario Heritage Act</i> and the Standards and Guidelines for Consultant Archaeologists.</p>

Item	Document Section	Given Text	MCM Comments
			<p>If human remains are encountered, all activities must cease immediately, and the local police and coroner must be contacted. In situations where human remains are associated with archaeological resources, MCM should also be notified (at archaeology@ontario.ca) to ensure that the site is not subject to unlicensed alterations which would be a contravention of the <i>Ontario Heritage Act</i>.</p> <p>Any recommended technical cultural heritage studies should be completed as early as possible during detailed design prior to the construction of any proposed works included as part of this Master Plan.</p> <p>[Insert the recommendations and mitigation measures provided by the Cultural Heritage Report – just copy and paste, don't summarize]</p>
Cultural Heritage Evaluation Report (CHER) (dated April, 2018 and prepared by Scarlett Janusas Archaeology Inc.)			
5.	2.0 (Assessment Methodology) p. 10	<p>A field visit was conducted of the Study Area and adjacent properties on February 22, 2018 under sunny skies with a high of -3 degrees C.</p> <p>A photographic record was maintained of the Study Area, the surrounding landscape, and any properties located within, or adjacent to, the Study Area. Three forms were completed on site: 1) photographic log; 2) Canadian Inventory of Historic Building form; and, 3) Inventory for Roadscapes and Cultural Landscapes form. The product of these field notes and field forms assisted in the evaluation process of the cultural and built heritage of the area.</p>	This section should articulate municipal and agency consultation, including consultations with the planning staff and the Owen Sound Heritage Committee.
6.	5.0 (Identification of Built Heritage Resources & Cultural Heritage Landscapes)	<ul style="list-style-type: none"> 5.1 Built Heritage Resources 5.2 Roadscapes 5.3 Cultural Heritage Landscapes 5.4 Summary of Cultural Heritage Values 	<p>MCM recommends the following revisions to section 5.0:</p> <ul style="list-style-type: none"> Section 5.2 (Roadscapes) – Roadscapes should be evaluated as cultural heritage landscapes and included in Appendix B.

Item	Document Section	Given Text	MCM Comments
	p. 41-52	<ul style="list-style-type: none"> 5.4.1 Built Heritage Resources within Lots of the Study Area 5.4.2 Built Heritage Resources in Lots Adjacent to the Study Area 5.4.3 Cultural Heritage Landscape 	<ul style="list-style-type: none"> Section 5.3 – states that the study area is considered a cultural heritage landscape. This resource should be included and evaluated in Appendix B. Section 5.4 (Summary of Cultural Heritage Value) – Please delete the reiteration of Ontario regulation 9/06, it has been discussed in section 2.0 (Methodology) and is redundant. Section 5.4.1 Built Heritage Resources within Lots of the Study Area – MCM would like some clarification as to what information this relates to. If this information is describing the Cultural Heritage Value of identified resources this information should be included in Appendix B and associated with the relevant resource.
7.	6.0 (Potential Impacts of Undertaking on Cultural Heritage Resources) p. 53	<p>6.1 Extent of Development The proponent retained the services of Scarlett Janusas Archaeology Inc. (SJA) to conduct a cultural heritage resource evaluation report for the Brooke Area Basin A3 (Figure 2). A description of the project is presented in Section 1.1.</p> <p>6.2 Impact on Built Heritage The proposed Brooke Area Basin A3 development will not have a direct impact on the built heritage resources located within (or adjacent to) the Study Area.</p> <p>6.3 Impact on Cultural Heritage Landscapes The landscape associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development.</p> <p>6.4 Impact on Current Viewsheds The current viewsheds associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development.</p>	MTCS recommends this section to include an evaluation of anticipated impacts. This should include a description of the undertaking and the construction processes involved. It would be helpful to see impact assessment information in a table, detailing the heritage resources and potential for direct and indirect impacts (destruction, alteration, shadows, isolation, obstruction, change in land use) as well as a column for discussions and a photograph of the property.

Item	Document Section	Given Text	MCM Comments
8.	7.0 (Mitigation Options) p. 54	<p>Mitigation options are based solely on heritage values.</p> <p>The majority of the built heritage (structures) adjacent to the Study Area have been evaluated as having no cultural heritage value and interest. There are no heritage structures located directly within the Study Area.</p> <p>Options for managing the built heritage features can be broad, and include:</p> <ol style="list-style-type: none"> 1. Do Nothing: This is recommended for all of the identified heritage buildings. 2. ... 	<p>Please clarify this recurring statement, "This is not recommended the built heritage buildings."</p>
9.	NEW Section Community engagement	NA	<p>Key components of an environmental assessment and also part of heritage conservation framework include consultation with the public, please clarify whether this has been done as part of this report or it would be done during the environmental assessment process. Community engagement protects the public interest in identifying and protecting cultural heritage resources, while helping to ensure that any concerns are identified and appropriately addressed.</p> <p>The revised report should be submitted for review to groups and individuals that may have an interest in the future of this bridge, e.g. Owen Sound Heritage committee. MCM may have additional comments once the report is revised.</p>
10	Appendix B p. 76		<p>The description of resources meeting the criteria will need to be expanded upon. Details as to why a resource does not meet the criteria will be helpful. Resources that do meet the criteria and are considered to have cultural heritage value will need a statement. For further information on preparing a Statement of Cultural Heritage Value refer to the Ontario Heritage Toolkit.</p>

**Ministry of Citizenship
and Multiculturalism**

Heritage Planning Unit
Heritage Branch
Citizenship, Inclusion and
Heritage Division
5th Flr, 400 University Ave
Tel.: 613.242.3743

**Ministère des Affaires civiques
et du Multiculturalisme**

Unité de la planification relative au
patrimoine
Direction du patrimoine
Division des affaires civiques, de
l'inclusion et du patrimoine
Tél.: 613.242.3743



April 3, 2023

EMAIL ONLY

Andrea Nelson, M.Sc.
GM BluePlan Engineering Ltd.
1260-2nd Avenue East, Unit 1
Owen Sound, ON N4K 2J3
andrea.nelson@gmblueplan.ca

MCM File : 0008311
Proponent : City of Owen Sound
Subject : Draft Master Plan Report - Approach 2
Project : Master Plan: Brooke Area Basin A3 Outlet
Location : City of Owen Sound, Grey County

Dear Andrea Nelson:

Thank you for making the draft copy of the Master Plan Report (Version 2) for the Brooke Basin A3 Outlet (dated March 6, 2023 and prepared by GM BluePlan Engineering) available for our review and comment.

Comments

We provided comments on a previous draft version of the Master plan Report (dated October 25, 2022) and note that many of our comments were addressed in the revised draft Master Plan. However, we have the following comments:

Culverts

Section 8.1.2 (Municipal Heritage Bridges Checklist) (page 19 PDF) of the Master Plan indicates that the culverts were screened out as they have a span under 3 metres. If the Municipal Engineers Association (MEA) bridge checklist (104) is not applicable, then the proponent should complete the [Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes](#) to help determine whether the two culverts are of potential cultural heritage value or interest (CHVI).

If either of the culverts is determined to be of potential CHVI, then the preliminary impact assessment included in the CHER should be revised to include an assessment of impacts for each culvert. If it is unlikely that the culverts are of potential (CHVI), or no impacts are anticipated then the completed checklists should be included as part of the Master Plan final documentation. Section 8.1.2 (Built Heritage Resources and Cultural Heritage Landscape Assessment) should document the conclusion based on the completed checklist.

If the culverts are found to be of CHVI, the evaluation of alternatives (Section 9.0) will need to be revised to reflect the results of the recommended preliminary impact assessment.

Archaeological Assessment

Section 8.1.1 (Archaeological Assessment) – The outcomes and recommendations of the Stage 1 AA report need to be included (copy and paste, don't summarize).

Thank you for the opportunity to review the revised draft Master Plan. We look forward to reviewing the updated project documentation. Please contact me with any questions or concerns.

Sincerely,

Joseph Harvey
Heritage Planner
joseph.harvey@ontario.ca

Copied to: John Slocombe, GM BluePlan
Sabine Robart, City of Owen Sound
Mark Badali, Environmental Resource Planner & EA Coordinator, MECP

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. The Ministry of Citizenship and Multiculturalism (MCM) makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MCM be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act, 2002*, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with *Ontario Regulation 30/11* the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

Drea Nelson - GM BluePlan

Subject: FW: 216301 City of Owen Sound: Municipal Class EA Master Plan (Basin A3 Drainage Area) [MCM File 0008311] - Response to Comments
Attachments: 216301 Response to MCM and Preliminary Impact Assessment (Revised April 2023).pdf

From: Harvey, Joseph (MCM) <joseph.harvey@ontario.ca>
Sent: Friday, April 14, 2023 1:49 PM
To: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Sabine Robart <srobart@owensound.ca>; Badali, Mark (MECP) <mark.badali1@ontario.ca>; Barboza, Karla (MCM) <karla.barboza@ontario.ca>; 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>; Peter Paquette <ppaquette@owensound.ca>
Subject: FW: 216301 City of Owen Sound: Municipal Class EA Master Plan (Basin A3 Drainage Area) [MCM File 0008311] - Response to Comments

Hello Andrea,

Thanks for providing us with the updated documentation.

We continue to recommend that a cultural heritage evaluation is prepared for the culverts as they are of potential cultural heritage value or interest (CHVI). However, if you have consulted with the City of Owen Sound's Planning and Heritage Division and its municipal heritage committee and they have accepted your decision to not evaluate the culverts, this should be documented in the final Master Plan.

If you have not already done so, a copy of the updated preliminary impact assessment should be shared with the City's Planning and Heritage Division and municipal heritage committee for review and comment. Any feedback should be incorporated into the preliminary impact assessment and as well as the final Master Plan.

We look forward to receiving the notice of completion and reviewing the final Master Plan.

Please do not hesitate to reach out if you have any additional questions or concerns.

Thanks,

Joseph Harvey | Heritage Planner
Citizenship, Inclusion and Heritage Division | Heritage Branch | Heritage Planning Unit
Ministry of Citizenship and Multiculturalism
613.242.3743
Joseph.Harvey@ontario.ca

From: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Sent: April 6, 2023 12:10 PM
To: Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Sabine Robart <srobart@owensound.ca>; Badali, Mark (MECP) <Mark.Badali1@ontario.ca>; Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>; 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>; Peter Paquette <ppaquette@owensound.ca>
Subject: RE: 216301 City of Owen Sound: Municipal Class EA Master Plan (Basin A3 Drainage Area) [MCM File 0008311] - Response to Comments

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

Joseph,

Please find attached a response to the MCM comments received on April 3, 2023 and a copy of the updated documentation, including the requested checklists. The response to comments has been incorporated into the previous documentation in an effort to ensure that the revisions to the preliminary impact assessment remain under one separate cover. At this time the updates to the documentation are shown in blue text to facilitate your review.

Can you please confirm receipt of this correspondence. If you have any questions, please contact me at 519-372-4678.

Kind Regards,
Andrea

Andrea Nelson, M.Sc.
Senior Hydrogeologist

GM BluePlan Engineering Limited
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From: Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>
Sent: Monday, April 03, 2023 10:31 AM
To: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Sabine Robart <srobart@owensound.ca>; Badali, Mark (MECP) <Mark.Badali1@ontario.ca>; Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>
Subject: FW: 216301 City of Owen Sound: Municipal Class EA Master Plan - Updated Version 2 - DRAFT (Basin A3 Drainage Area) [MCM File 0008311]

Andrea Nelson,

Please find attached our comments on the revised Master Plan Report prepared for the above referenced undertaking.

Please do not hesitate to contact me with any questions or concerns.

Regards,

Joseph Harvey | Heritage Planner
Citizenship, Inclusion and Heritage Division | Heritage Branch | Heritage Planning Unit
Ministry of Citizenship and Multiculturalism
613.242.3743
Joseph.Harvey@ontario.ca

From: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Sent: March 6, 2023 3:40 PM
To: Badali, Mark (MECP) <Mark.Badali1@ontario.ca>
Cc: Ritchie, John (MECP) <John.S.Ritchie@ontario.ca>; John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>;

ATTACHMENT B

TABLE 10-3: ASSESSMENT OF STORMWATER MANAGEMENT ALTERNATIVES
REACH #1: Open Channel - East of 8th Avenue West to 6th Avenue West

ENVIRONMENT	ALTERNATIVE 1-1 Do Nothing	ALTERNATIVE 1-2 Increase Open Channel Capacity	ALTERNATIVE 1-3 Diversion of 7th Avenue West Storm Sewer Outlet Flows	ALTERNATIVE 1-4 Construct a SWM Pond
CULTURAL				
1. Impacts to Archaeological Resources	No ground disturbing activities would occur.	Capacity increase would require regrading and/or widening of the existing open channel. Ground disturbing activities would occur in an area where archaeological potential has been identified. Stage 2AA recommended.	No impact. Storm sewer along 7th Street would be constructed in the existing right-of-way where ground disturbing activities have previously occurred.	The construction of a SWM Pond would result in ground disturbing activities within in an area where archaeological potential has been identified. Stage 2AA recommended.
2. Impacts to Cultural Heritage Resources	Net Neutral: No built heritage resources (known or potential) identified within 50 meters.			
Ranking	Favoured		(Previously Addressed)	
SOCIAL				
1. Impacts to Private Property (i.e. flooding, access, land use)	The design of the previously constructed Carney Street SWM Pond is expected to improve drainage conditions for a range of design flows. Therefore no nuisance flooding issues to adjacent properties are anticipated.			
2. Aesthetic Impacts of Drainage Improvements	No impact: maintains existing condition.	Would increase the watercourse area and require significant re-construction efforts. The larger drainage channel would change the overall aesthetics.	No impact: maintains existing condition.	The significant land area required for the pond and construction efforts would impact the existing landscape.
3. Land Acquisition (including easements)	The City may consider the establishment of an easement within this 'natural watercourse', if and when required.	The area required would extend beyond the current watercourse. The City would need to establish an easement for construction and maintenance of the open channel.	Intended to divert flows. Therefore, no land acquisition would be required.	Land acquisition would be required. This may not be supported by the landowners.
Ranking	Favoured		(Previously Addressed)	
NATURAL				
1. Natural Heritage Features & Species at Risk	No impact: maintains existing condition.	Construction required to increase the capacity of the existing drainage system would impact the identified Fish Habitat.	Diversion via storm sewer system would eliminate impacts to existing drainage swale (beyond limit of Reach #1).	Required land area would likely encompass 'significant woodlands'.
2. Storm Water Treatment: Runoff Water Quality	Water quality within the drainage channel can be addressed, as required.	Water quality within the drainage channel could be addressed as part of the design, potentially using the treatment train approach.	Water quality treatment could be addressed as part of the storm sewer system design.	Water quality treatment could be incorporated into the design of a stormwater management pond.
Ranking	Favoured		(Previously Addressed)	
TECHNICAL				
1. Technical Considerations (i.e. Ability to Satisfy Required Capacity)	Subsequent to the completion of the Carney Lane SWM Pond upstream of Reach #1, the channel capacity requirements appear to be sufficient under existing conditions.	Provide that there is a lack of sufficient grade, a considerable land area would be required. Designing a channel to convey additional flows is not considered a viable solution.	A design and plan to divert drainage from the sewer outlet at 7th Avenue West has already been proposed. Construction is pending.	Could be designed to manage stormwater quantity and stormwater quality requirements.
2. Efficacy of Design	Existing natural watercourse sufficiently accommodates the design flows.	Increasing the open channel capacity would require a considerable re-grading effort and/or would be very land-intensive.	A design and plan to divert drainage from the sewer outlet at 7th Avenue West has already been proposed. Construction is pending.	A large storage volume would be required to yield a relatively minor reduction in the required downstream storm drainage infrastructure required to convey the design flow.
3. Ability to Address Identified Drainage Issues	Drainage issues identified have essentially been previously resolved, as follows: A. Carney Lane SWM Pond upstream of Reach #1 has reduced the channel capacity requirements. B. Field investigations noted that the present risk of sedimentation may not be as prevalent as identified in the BASWM Study. C. As per a previous design solution, the storm sewer at 7th Avenue/22nd Street West has been designed to extend southerly to a planned culvert reconstruction on 6th Avenue West. It is recommended that this be implemented concurrently with the Preferred Alternative for Reach #2.			
4. Timing	Maintains existing condition. No further work required.	Establishment of an easement would need to be arranged and administered by the City, adding time (and costs) to the project.	It is recommended that this diversion opportunity be implemented concurrently with the Preferred Alternative for Reach #2.	Pre-purchase of lands by the City required for the Pond would add time (and cost) to the project.
Ranking	Favoured		(Previously Addressed)	
ECONOMIC				
1. Relative Construction Costs	Maintains existing condition	\$\$	\$	\$\$\$
2. Operation & Maintenance	Existing watercourse can generally be considered self-cleaning.	Routine maintenance along the open channel would likely be required.	Flows would be diverted through storm sewer system. Limited operation and maintenance costs.	Stormwater management pond would require routine maintenance for ongoing operations.
Ranking	Favoured		(Previously Addressed)	
OVERALL RANKING	Recommended		(Previously Addressed)	
Relative Ranking of Environments:				
		Favoured and/or Positive Impact	Net Neutral	Least Favoured / Negative Impact

Environmental Assessment Schedule for Recommended Solution: Not Applicable

TABLE 11-7: ASSESSMENT OF STORMWATER MANAGEMENT ALTERNATIVES
REACH #2: Culvert - 6th Avenue West and 21st Street West

ENVIRONMENT	ALTERNATIVE 2-1 Do Nothing	ALTERNATIVE 2-2 Repair Existing System	ALTERNATIVE 2-3A Remove and Replace Existing System
CULTURAL			
1. Impacts to Archaeological Resources	No ground disturbing activities would occur.	Repairs would remain in an area identified to have deep and extensive development disturbance.	Archaeological potential is limited to the west side of the road. Ground disturbing activities will occur on the east side of the road. Construction will not likely impact the areas delineated in the Stage 1AA as areas of archaeological potential.
2. Impacts to Cultural Heritage Resources	Net Neutral: No built heritage resources (known or potential) identified within 50 meters.		
Ranking	Net neutral for all alternatives considered.		
SOCIAL			
1. Impacts to Private Property (i.e. flooding, access, land use)	Eventual structural failure/collapse would eliminate access to five (5) properties to the north of the water crossing.	Access to the properties to the north of the crossing would be maintained. More frequent works and construction efforts would be more interruptive to the nearby landowners.	Access to the properties to the north of the crossing would be maintained, with limited interruption (i.e.construction efforts).
2. Aesthetic Impacts of Drainage Improvements	No impact in the short term. Eventual collapse would significantly impact the landscape.	Would maintain existing condition.	Would maintain existing condition.
3. Land Acquisition (including easements)	Culvert system is situated within existing Right-of-Ways.		
Ranking			Favoured
NATURAL			
1. Natural Heritage Features & Species at Risk	Existing buried culvert, which is considered fish habitat for movement, would be maintained. A structural failure would impact these movements.	Existing buried culvert, which is considered fish habitat for movement, would be maintained. Ongoing repairs and eventual replacement would more frequently impact fish movements.	Replacement would maintain the buried fish habitat in the long-term, with minimal disruption compared to other alternatives.
2. Storm Water Treatment: Runoff Water Quality	Impacts to water quality, including increased sedimentation related to increased flow velocities, are not considered to be directly affected by the culvert system itself.		
Ranking			Favoured
TECHNICAL			
1. Technical Considerations (i.e. Ability to Satisfy Required Capacity)	Currently there is no flow conveyance issue related to Reach #2 of the drainage system. Reach #2 should provide adequate capacity to the next downstream Reach.	Currently there is no flow conveyance issue related to Reach #2 of the drainage system. Reach #2 should provide adequate capacity to the next downstream Reach.	System capacity would be designed to continue to convey the Regional flood flows, which is considered to be the design flow for this system. Reach #2 should provide adequate capacity to the next downstream Reach.
2. Efficacy of Design	Would maintain existing condition. Eventual collapse could negatively impact the entire drainage system	Would maintain existing condition, with culvert system limited to the east side of the 6th Street West. However, the existing system may eventually be impacted by the poor soil conditions (i.e. differential settlement).	System is envisioned as a 2400 x 1500 mm box culvert. This design best addresses the potential effects the poor soil conditions could have on the system.
3. Ability to Address Identified Drainage Issues	Drainage issues identified poor structural integrity under existing conditions. The 'Do Nothing' approach would not address this identified drainage issue.	Drainage issues identified poor structural integrity under existing conditions. Culvert repairs would not sufficiently address this identified drainage issue.	Drainage issues identified poor structural integrity under existing conditions. Replacement of the entire culvert system within Reach #2 would address this problem.
4. Timing	Maintains existing condition. No further work required in the short-term. Emergency work associate with a collapse is not considered preferable (or cost effective).	OSIM Reports indicate replacement should be completed by 2021. Repairs may provide additional time required for design and approvals.	Based on the condition of the inlet culvert, OSIM Reports suggest that the replacement of this culvert system be completed by 2023. Therefore, this would need to be considered a priority project.
Ranking			Favoured
ECONOMIC			
1. Relative Construction Costs	\$	\$\$\$\$	\$\$\$
2. Operation & Maintenance	By definition, the 'Do Nothing' approach would mean costs would be negligible. However, costs associated with eventual structural failure and emergency replacement would be high.	Routine repairs and more frequent maintenance would likely be required. Eventual culvert replacement would need to be considered.	With the complete replacement of the culvert system, the routine operations and maintenance costs will be limited.
Ranking			Favoured
OVERALL RANKING			Recommended
Relative Ranking:	Favoured and/or Positive Impact	Net Neutral	Least Favoured / Negative Impact

TABLE 12-2: ASSESSMENT OF STORMWATER MANAGEMENT ALTERNATIVES
REACH #3: Open Channel / Culvert - 21st Street West to 20th Street West

ENVIRONMENT	ALTERNATIVE 3-2 Channel Improvements along Current Alignment	ALTERNATIVE 3-3 Channel Re-Alignment along Straighter Route	ALTERNATIVE 3-4 Piped Diversion System	ALTERNATIVE 3-6 Flood Protection
CULTURAL				
1. Impacts to Archaeological Resources	Minor soil disturbance would be expected to occur as a result of improvements to the gradient and banks of the open channel watercourse. The watercourse in Reach #3 has been previously dredged, the majority of the lands directly adjacent to this Reach remain undeveloped. Therefore, areas beyond the banks of the watercourse retain archaeological potential. Stage 2AA recommended.	Soil disturbance would be expected to occur should the re-alignment of the open channel watercourse be considered. The majority of the lands directly adjacent to Reach #3 remain undeveloped. Therefore, areas beyond the banks of the watercourse retain archaeological potential. Stage 2AA recommended.	Impacts not likely. Could be installed in the same location as the watercourse where dredging has previously occurred.	No Impact.
2. Impacts to Cultural Heritage Resources	Net Neutral: Based on a review of potential impacts, no direct impacts to built heritage resources will occur. Indirect impacts identified, associated with soil disturbance, will be appropriately addressed and mitigated via the Stage 2AA (Alt 3-2 and 3-3).			
Ranking			Favoured	Favoured
SOCIAL				
1. Impacts to Private Property (i.e. flooding, access, land use)	The surface elevation within the watercourse at the point adjacent to the residence at 585-21 Avenue West is expected to be lowered to a level of about 0.3 m below the basement door elevation.	The surface elevation within the watercourse at the point adjacent to the residence at 585-21 Avenue West is expected to be lowered to a level of about 0.3 m below the basement door elevation.	Minimal flood risk improvements for the residence at 585 21st Avenue West would be achieved.	The implementation of flood protection measures would address drainage issues specific to flooding risk at the private residence. An access agreement would be required.
2. Aesthetic Impacts of Drainage Improvements	Would increase the watercourse area and require a level of re-construction efforts. The larger drainage channel would change the overall aesthetics.	Would increase the watercourse area and require significant re-construction efforts. The larger drainage channel would change the overall aesthetics.	No impact: maintains existing condition within channel.	No impact: maintains existing condition within channel.
3. Land Acquisition (including easements)	The establishment of permanent easements along the open channel of Reach #3 is required to permit maintenance, as necessary. Widening of the channel may require a slightly greater area.	In addition to an easement along the open channel, the re-alignment may require an access across the channel to the balance of the yard, or property acquisition.	The establishment of permanent easements along the open channel of Reach #3 is required to permit maintenance, as necessary.	The establishment of permanent easements along the open channel of Reach #3 is required to permit maintenance, as necessary.
Ranking				Favoured
NATURAL				
1. Natural Heritage Features & Species at Risk	The increased capacity and flow velocity achieved would decrease sedimentation. A reduction in the required drainage clean-out frequency is considered beneficial to fish and snapping turtle habitat.	The increased capacity and flow velocity achieved would decrease sedimentation, reducing the required drainage clean-out frequency. However, the development of a new channel would have a significant impact on fish and snapping turtle habitat.	Maintaining existing conditions would avoid the larger scale construction effort associated with channel profile upgrades, however more frequent routine maintenance would be more disruptive.	Maintaining existing conditions would avoid the larger scale construction effort associated with channel profile upgrades, however more frequent routine maintenance would be more disruptive.
2. Storm Water Treatment: Runoff Water Quality	Long-term water quality treatment provisions could be considered as part of the design development phase.	Long-term water quality treatment provisions could be considered, as appropriate, as part of the design development phase.	Water quality within the drainage channel could be addressed, as required.	Water quality within the drainage channel could be addressed, as required.
Ranking	Favoured			
TECHNICAL				
1. Technical Considerations (i.e. Ability to Satisfy Required Capacity)	Overall capacity of the Reach can be increased to convey the design flow within the main channel portion of the watercourse. Would reduce the backwater effects from the downstream culvert at 20th Street West, reducing the flooding risk.	Overall capacity of the Reach can be increased to convey the design flow within the main channel portion of the watercourse. Would reduce the backwater effects from the downstream culvert at 20th Street West, reducing the flooding risk.	Considered to address backwater effects from culvert at 20th Street West. Minimal flood level improvements would be realized. Sedimentation issues would be maintained, possibly increased, due to reduced flow velocities within existing channel.	No improvements to the drainage system were considered as part of this alternative. However, flooding protection can be implemented in conjunction with another alternative.
2. Efficacy of Design	The required improvements to the flow hydraulics can be achieved within the existing channel. This alternative effects a minimal disruption to the overall system.	Re-aligning the channel would require more considerable construction efforts and/or would be more land-intensive.	Pipe length and required installation depth at the 19th Street and 16th Avenue West intersection is considerable.	Considered a simple and cost effective alternative to address the flooding risk issues in the short-term.
3. Ability to Address Identified Drainage Issues	Drainage issues identified, including flooding risk and sedimentation which reduces channel capacity, are both addressed.	Drainage issues identified, including flooding risk and sedimentation which reduces channel capacity, are both addressed.	Modelling results indicate that the flood line elevation at 585 21st Street West would be lowered, but only to a minor degree. Further, drainage issues associated with sedimentation would not be addressed.	Would address flooding risk. However, drainage issues associated with sedimentation would not be addressed.
4. Timing	Easements would need to be established prior to construction. While this would add time (and cost) to the project, easements are recommended for all alternatives that maintain a drainage channel within private property(ies).	Access agreements and/or pre-purchase of lands by the City required to re-align the channel would add time (and cost) to the project.	Maintains existing condition within drainage channel. Extension of pipe further to the south would need to be completed concurrently with the culvert installation recommended for Reach #2.	Could be implemented at any time. However, timing (and implementation) would be dependent on the negotiations and consent from the homeowners.
Ranking	Favoured (Long-Term)			Favoured (Short-Term)
ECONOMIC				
1. Relative Construction Costs	\$\$\$	\$\$\$\$	\$\$\$\$	\$
2. Operation & Maintenance	Watercourse, as designed and constructed, would be considered self-cleaning.	Watercourse, as designed and constructed, would be considered self-cleaning.	Watercourse would require routine maintenance. Additional operational costs would be associated with the drainage pipe extension.	Watercourse would continue to require routine maintenance to address on-going sedimentation issues.
Ranking	Favoured			Favoured
OVERALL RANKING	Recommended (Long-Term)			Recommended (Short-Term)

Note: Based on technical and/or economic considerations, Alternatives 3-1 and 3-5 were not carried forward into this assessment.

Relative Ranking of Environments: Favoured and/or Positive Impact Net Neutral Least Favoured / Negative Impact

Environmental Assessment Schedule for Recommended Solution: Schedule B (Alt 3-2) and Not Applicable (Alt 3-6)

TABLE 13-2: ASSESSMENT OF STORMWATER MANAGEMENT ALTERNATIVES
REACH #4: Open Channel - 20th Street West to 19th Street West

ENVIRONMENT	ALTERNATIVE 4-1 Do Nothing	ALTERNATIVE 4-2 Remove Deadfall Trees, as Needed	ALTERNATIVE 4-3 Fully or Partially Piped System along ROWs
CULTURAL			
1. Impacts to Archaeological Resources	No ground disturbing activities would occur.	No ground disturbing activities would occur.	No impact. Storm sewer would be constructed in the existing right-of-way where ground disturbing activities have previously occurred.
2. Impacts to Cultural Heritage Resources	Net Neutral: No built heritage resources (known or potential) identified within 50 meters.		
Ranking	Net neutral for all alternatives considered.		
SOCIAL			
1. Impacts to Private Property (i.e. flooding, access, land use)	Could subject properties within Reach #3 to potential flooding risk.	Would minimize flooding risk to upgradient properties within Reach #3.	Would minimize flooding risk to upgradient properties within Reach #3.
2. Aesthetic Impacts of Drainage Improvements	Would maintain existing conditions.	Would maintain existing condition.	The construction activities within the relatively undisturbed woodland area would significantly impact the existing landscape.
3. Land Acquisition (including easements)	The conveyance of public stormwater flows from private lands and into a combination of municipal and public lands is not favoured. A permanent municipal easement along this Reach could be sought.	The conveyance of public stormwater flows from private lands and into a combination of municipal and public lands is not Favoured. A permanent municipal easement along this Reach could be sought.	Would prevent the conveyance of public stormwater flows from private lands and onto municipal lands to address the liability associated with using the subject Reach as a public drainage system.
Ranking		Favoured	
NATURAL			
1. Natural Heritage Features & Species at Risk	Fish habitat would not be impacted.	Fish habitat would not be impacted.	Would have a significant impact on the confirmed fish habitat and surrounding undisturbed areas.
2. Storm Water Treatment: Runoff Water Quality	No impacts to water quality: Maintains existing condition.	No impacts to water quality: Maintains existing condition.	Would have the potential to impact water quality during construction. Mitigation measures could be evaluated as part of the design phase.
Ranking	Favoured	Favoured	
TECHNICAL			
1. Technical Considerations (i.e. Ability to Satisfy Required Capacity)	The existing geometry of the open channel watercourse is capable of conveying the design flows through the subject Reach.	The existing geometry of the open channel watercourse is capable of conveying the design flows through the subject Reach.	System capacity would be designed to continue to convey sufficient capacity.
2. Efficacy of Design	Would maintain existing condition.	Would maintain existing condition, with minimal maintenance requirements.	Not considered to be a practicle alternative to address potential obstructions within a well established and sufficient watercourse.
3. Abiltity to Address Idenfied Drainage Issues	Drainage issues identified floding risk due to obstructions in the watercourse. The 'Do Nothing' approach would not address this identified drainage issue.	The removal of deadfall trees, on an as needed basis, would sufficiently address potential drainage issues associated with the location of the watercourse in a highly undisturbed and vegetated area.	Drainage issues associated with sedimentation, erosion and/or flooding risks are not evident, therefore the alternative to convey the design flow through Reach #4 via a piped system, in full or in part, is not considered necessary. Potential flooding risk due to obstructions can be simply addressed via ongoing maintenance.
4. Timing	Maintains existing condition. No further work required in the short-term. Emergency work associate with a flooding is not considered preferable (or cost effective).	Can be implemented on an as needed basis - with limited time and effort.	Could be implemented in the longer-term, if deemed appropriate. Would require significant planning as part of the design development phase.
Ranking		Favoured	
ECONOMIC			
1. Relative Construction Costs	Not Applicable	\$	\$\$\$\$
2. Operation & Maintenance	By definition, the 'Do Nothing' approach would mean costs would be negligible. However, the compensation costs for building damage due to flooding could be substantial.	Routine costs associated with the maintenance of the watercourse would be minimal.	With the complete replacement of the culvert system, the routine operations and maintenance costs will be limited.
Ranking		Favoured	
OVERALL RANKING		Recommended	
Relative Ranking:	Favoured and/or Positive Impact	Net Neutral	Least Favoured / Negative Impact

TABLE 16-2: ASSESSMENT OF STORMWATER MANAGEMENT ALTERNATIVES
REACH #7: Outlet System - Eddie Sargent Parkway to Kelso Beach

ENVIRONMENT	ALTERNATIVE 7-2 Backflow Preventers for 3rd Ave W Storm Sewer	ALTERNATIVE 7-3 Construct Better Defined Overland Flow Route	ALTERNATIVE 7-4 Remove and Replace Existing Outlet Pipe	ALTERNATIVE 7-5 Municipal Flood Protection Standards
CULTURAL				
1. Impacts to Archaeological Resources	No impact.	No Impact.	No impact.	No Impact.
2. Impacts to Cultural Heritage Resources	Net Neutral: No built heritage resources (known or potential) identified within 50 meters.			
Ranking	Net neutral for all alternatives considered.			
SOCIAL				
1. Impacts to Private Property (i.e. flooding, access, land use)	While backflow preventers may prevent surcharge from the main storm sewer outlet, flooding from upstream lands from flows within the subcatchment area would still pose a risk to private properties.	Since the 1:100 year flood elevation for the harbour is higher than the catchment grate elevations along the ESP and 3rd Ave W, overland flow routes would already be submerged under high water levels and extreme flow events.	Replacement of the outlet pipe of Reach #7, with an outlet that is as large in cross sectional flow area as possible, and placed at as high an elevation as possible, would best mitigate the effects of flood flows through the Reach (while maintaining existing infrastructure and roadways).	Would ensure that future development is not impacted by potential flood event conditions. However, does not immediately address the flood risks in the short-term.
2. Aesthetic Impacts of Drainage Improvements	No aesthetic impact. Backflow preventers would be installed within the existing storm sewer system.	An additional overland flow route would change the existing aesthetics.	No impact: with the exception of construction efforts, the storm sewer would remain underground, therefore would not impact the overall landscape. Additional, and substantial, consideration would be required to maintain the natural aesthetics of the outfall to the watercourse draining through Kelso Beach Park with this alternative.	No Impact.
3. Land Acquisition (including easements)	Storm Sewer system is located within existing municipal rights-of way.	Overland flow route would likely be developed within existing rights-of-way or on City property (i.e. Kelso Beach Park).	Storm sewer system would be maintained in existing right-of-way.	Would not require land acquisition or the establishment of permanent easements.
Ranking			Favoured	
NATURAL				
1. Natural Heritage Features & Species at Risk	No impact: Maintains existing conditions.	No impact: Overland flow route would likely be directed through a previously disturbed and developed park area.	Replacement would be disruptive to fish habitat in the short-term, but would maintain the buried fish habitat in the long-term.	No impact: Maintains existing conditions.
2. Storm Water Treatment; Runoff Water Quality	No change relative to existing condition. However, 'uncontrolled' flows to the east into the Bay could be of reduced water quality.	Overland flow and discharge directly into the Harbour may contribute a greater concentration of total suspended solids to the Bay.	A reduction in overland flows may improve the overall water quality of the discharges to the Bay.	No change relative to existing condition. However, 'uncontrolled' flows to the east into the Bay could be of reduced water quality.
Ranking	Favoured		Favoured	Favoured
TECHNICAL				
1. Technical Considerations (i.e. Ability to Satisfy Required Capacity)	While backflow preventers may prevent surcharge from the main storm sewer outlet, flooding from upstream lands from flows within the subcatchment area would still pose a risk. The capacity of the existing sytem would remain the same.	Since the 1:100 year flood elevation for the harbour is higher than the catchment grate elevations along the ESP and 3rd Ave W, overland flow routes would already be submerged under high water levels and extreme flow events. Therefore , would not change the capacity of the existing sytem.	Replacement of the outlet pipe of Reach #7, with an outlet that is as large in cross sectional flow area as possible, and placed at as high an elevation as possible, would best mitigate the effects of flood flows through the Reach (while maintaining existing infrastructure and roadways) and provide for additional flow capacity through the system.	The capacity of the existing sytem would remain the same. Flooding risk to existing structures would remain a concern.
2. Efficacy of Design	Typically this preventative measure would require minimal work for the potential prevention of significant flooding.	Providing an alternative route for overland flows would require more considerable construction efforts and/or would be more land-intensive.	The recommended installation of a storm sewer, while maintaining the existing infrastructure and roadways, would best mitigate the effects of flow flood with the least disruption to the community (and cost).	Considered a simple and cost effective alternative to address the flooding risk issues in the long-term.
3. Ability to Address Identified Drainage Issues	Would not address identified drainage issue: While backflow preventers may prevent surcharge from the main storm sewer outlet, the risk of flooding to the private residences along 3rd Avenue West from upstream lands would still be present from flows within the sub-catchment area.	Would not address identified drainage issue: Regardless of a defined overland flow route, the 1:100 year high water level (Lake Huron) would result in flooding of the 3rd Avenue West roadway. Consequently, an appropriate overland flow route cannot be achieved.	Most technically feasible alternative. Best mitigates the effects of flood flows through the Reach.	Preventative measure. Would not address drainage issue identified.
4. Timing	Not Applicable: Not technically feasible.	Not Applicable: Overland flow route can not be achieved.	In the short-term, this alternative best mitigates the drainage issues identified.	In the long-term this alternative provides the best protection against flooding for buildings.
Ranking			Favoured	
ECONOMIC				
1. Relative Construction Costs	\$\$	\$\$	\$\$\$	\$
2. Operation & Maintenance	In general, operations and maintenance costs would be low. However, the compensation costs for building damage due to flooding could be substantial.	In general, operations and maintenance costs would be low. However, the compensation costs for building damage due to flooding could be substantial.	Minimal operations and maintenance costs would be incurred following the installation of a new storm sewer. Further, as this best addresses the conveyance of flows, costs associated with flooding would be reduced.	In general, operations and maintenance costs would be low. The compensation costs for building damage due to flooding could still be substantial. However, with the development of Municipal Flood Protection Standards, these costs would be reduced.
Ranking			Favoured	Favoured
OVERALL RANKING			Recommended (Short-Term)	Recommended (Short-Term)

Note: Based on technical and/or economic considerations, Alternatives 3-1 and 3-5 were not carried forward into this assessment.

Relative Ranking of Environments:

Favoured and/or Positive Impact

Net Neutral

Least Favoured / Negative Impact

Environmental Assessment Schedule for Recommended Solution: Schedule B (Alt 7-4) and Not Applicable (Alt 7-5)

ATTACHMENT C

May 25, 2023

TO: Andrea Nelson, GM BluePlan

FROM: Lindsay Graves, MA CAHP, Archaeological Services Inc

RE: **Basin A3 Drainage Study – Structure OS-7 and Culvert System OS-9,
City of Owen Sound**

ASI File: 23CH-107

In May 2023, Archaeological Services Inc. (ASI) was retained by GM BluePlan to complete the Ministry of Citizenship and Multiculturalism (MCM) form: *Criteria for Evaluating Potential for Built Heritage Resources and Cultural heritage Landscapes – A Checklist for the Non-Specialist* (2016) to determine if Structure OS-07 or Culvert System OS-9 in the City of Owen Sound have potential for cultural heritage value or interest and to recommend if a Cultural Heritage Evaluation Report (CHER) is required. Completion of the checklist for each culvert is in response to MCM comments pertaining to the Draft Brooke Basin A3 Drainage Strategy Master Plan.

A general plan showing the location of each structure is attached to this document (Attachment 1). Each structure is a typical concrete box culvert that was built in the first half of the twentieth century (Plates 1 – 3). A partially-replaced concrete railing is located above the southern outlet for OS-9. The completed checklist for each culvert is attached to this document (Attachment 2). The checklists identify that Structure OS-7 and Culvert System OS-9 both contain a structure that is more than 40 years old. No other criteria in the

checklist were met. According to the checklists, a CHER for each structure is recommended to determine if they have cultural heritage value or interest.

Following a site visit to visually inspect the culverts on May 18, 2023¹, and review of a municipal structural inventory, it is ASI's professional opinion that there is no potential for cultural heritage value or interest and a CHER is not required for Structure OS-7 or Culvert System OS-9. This is based on the following reasoning:

- The concrete box culverts are very common in terms of construction material and culvert type, many were built throughout the twentieth century, and many remain;
- These examples have been altered through repairs and extensions and are not considered to be representative, rare, early or unique based on a review of the structural inventory and on ASI's professional experience;
- The culverts do not exhibit a high degree of craftsmanship or technical achievement, as they are typical in form and construction, and therefore are not likely to be associated with a significant civil engineer or be an example of their best work; and
- They are not located within a recognized cultural heritage landscape.

This technical memorandum, and the attached checklists, should be saved to the project file for documentation. No further work regarding the culverts, from a cultural heritage perspective, is required.

¹ Site visit was attended by City of Owen Sound heritage staff, GM BluePlan and ASI





Plate 1: Structure OS-07, north outlet (ASI, 2023)



Plate 2: Structure OS-09a-c, northwest outlet (ASI, 2023)



Plate 3: Structure OS-09a-c, south outlet (ASI, 2023)

Attachment 1: Location Map



Attachment 2: 2016 Checklists



The **purpose of the checklist** is to determine:

- if a property(ies) or project area:
 - is a recognized heritage property
 - may be of cultural heritage value
- it includes all areas that may be impacted by project activities, including – but not limited to:
 - the main project area
 - temporary storage
 - staging and working areas
 - temporary roads and detours

Processes covered under this checklist, such as:

- *Planning Act*
- *Environmental Assessment Act*
- *Aggregates Resources Act*
- *Ontario Heritage Act* – Standards and Guidelines for Conservation of Provincial Heritage Properties

Cultural Heritage Evaluation Report (CHER)

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a qualified person(s) (see page 5 for definitions) to undertake a cultural heritage evaluation report (CHER).

The CHER will help you:

- identify, evaluate and protect cultural heritage resources on your property or project area
- reduce potential delays and risks to a project

Other checklists

Please use a separate checklist for your project, if:

- you are seeking a Renewable Energy Approval under Ontario Regulation 359/09 – [separate checklist](#)
- your Parent Class EA document has an approved screening criteria (as referenced in Question 1)

Please refer to the Instructions pages for more detailed information and when completing this form.

Project or Property Name
Basin A3 Drainage Study - Structure OS-07

Project or Property Location (upper and lower or single tier municipality)
City of Owen Sound

Proponent Name
GM Blueplan

Proponent Contact Information
Andrea Nelson, 519-3761805 x2219; andrea.nelson@gmblueplan.ca

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

Part A: Screening for known (or recognized) Cultural Heritage Value

	Yes	No
2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, do **not** complete the rest of the checklist.

The proponent, property owner and/or approval authority will:

- summarize the previous evaluation and
- add this checklist to the project file, with the appropriate documents that demonstrate a cultural heritage evaluation was undertaken

The summary and appropriate documentation may be:

- submitted as part of a report requirement
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

	Yes	No
3. Is the property (or project area):		
a. identified, designated or otherwise protected under the <i>Ontario Heritage Act</i> as being of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. a National Historic Site (or part of)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. designated under the <i>Heritage Railway Stations Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. designated under the <i>Heritage Lighthouse Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to any of the above questions, you need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report, if a Statement of Cultural Heritage Value has not previously been prepared or the statement needs to be updated

If a Statement of Cultural Heritage Value has been prepared previously and if alterations or development are proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No, continue to Question 4.

Part B: Screening for Potential Cultural Heritage Value

	Yes	No
4. Does the property (or project area) contain a parcel of land that:		
a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has or is adjacent to a known burial site and/or cemetery?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. is in a Canadian Heritage River watershed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. contains buildings or structures that are 40 or more years old?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part C: Other Considerations

	Yes	No
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):		
a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has a special association with a community, person or historical event?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. contains or is part of a cultural heritage landscape?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to one or more of the above questions (Part B and C), there is potential for cultural heritage resources on the property or within the project area.

You need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report (CHER)

If the property is determined to be of cultural heritage value and alterations or development is proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No to all of the above questions, there is low potential for built heritage or cultural heritage landscape on the property.

The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project file

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g. under the *Environmental Assessment Act*, *Planning Act* processes
- maintained by the property owner, proponent or approval authority

Instructions

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
 - large scale and small scale showing nearby township names for context purposes
- the municipal addresses of all properties within the project area
- the lot(s), concession(s), and parcel number(s) of all properties within a project area

For more information, see the Ministry of Tourism, Culture and Sport's [Ontario Heritage Toolkit](#) or [Standards and Guidelines for Conservation of Provincial Heritage Properties](#).

In this context, the following definitions apply:

- **qualified person(s)** means individuals – professional engineers, architects, archaeologists, etc. – having relevant, recent experience in the conservation of cultural heritage resources.
- **proponent** means a person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

1. Is there a pre-approved screening checklist, methodology or process in place?

An existing checklist, methodology or process may already be in place for identifying potential cultural heritage resources, including:

- one endorsed by a municipality
- an environmental assessment process e.g. screening checklist for municipal bridges
- one that is approved by the Ministry of Tourism, Culture and Sport (MTCS) under the Ontario government's [Standards & Guidelines for Conservation of Provincial Heritage Properties](#) [s.B.2.]

Part A: Screening for known (or recognized) Cultural Heritage Value

2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?

Respond 'yes' to this question, if all of the following are true:

A property can be considered not to be of cultural heritage value if:

- a Cultural Heritage Evaluation Report (CHER) - or equivalent - has been prepared for the property with the advice of a qualified person and it has been determined not to be of cultural heritage value and/or
- the municipal heritage committee has evaluated the property for its cultural heritage value or interest and determined that the property is not of cultural heritage value or interest

A property may need to be re-evaluated, if:

- there is evidence that its heritage attributes may have changed
- new information is available
- the existing Statement of Cultural Heritage Value does not provide the information necessary to manage the property
- the evaluation took place after 2005 and did not use the criteria in Regulations 9/06 and 10/06

Note: Ontario government ministries and public bodies [prescribed under Regulation 157/10] may continue to use their existing evaluation processes, until the evaluation process required under section B.2 of the Standards & Guidelines for Conservation of Provincial Heritage Properties has been developed and approved by MTCS.

To determine if your property or project area has been evaluated, contact:

- the approval authority
- the proponent
- the Ministry of Tourism, Culture and Sport

3a. Is the property (or project area) identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value e.g.:

- i. designated under the *Ontario Heritage Act*
 - individual designation (Part IV)
 - part of a heritage conservation district (Part V)

Individual Designation – Part IV

A property that is designated:

- by a municipal by-law as being of cultural heritage value or interest [s.29 of the *Ontario Heritage Act*]
- by order of the Minister of Tourism, Culture and Sport as being of cultural heritage value or interest of provincial significance [s.34.5]. **Note:** To date, no properties have been designated by the Minister.

Heritage Conservation District – Part V

A property or project area that is located within an area designated by a municipal by-law as a heritage conservation district [s. 41 of the *Ontario Heritage Act*].

For more information on Parts IV and V, contact:

- municipal clerk
 - [Ontario Heritage Trust](#)
 - local land registry office (for a title search)
-

ii. subject of an agreement, covenant or easement entered into under Parts II or IV of the *Ontario Heritage Act*

An agreement, covenant or easement is usually between the owner of a property and a conservation body or level of government. It is usually registered on title.

The primary purpose of the agreement is to:

- preserve, conserve, and maintain a cultural heritage resource
- prevent its destruction, demolition or loss

For more information, contact:

- [Ontario Heritage Trust](#) - for an agreement, covenant or easement [clause 10 (1) (c) of the *Ontario Heritage Act*]
 - municipal clerk – for a property that is the subject of an easement or a covenant [s.37 of the *Ontario Heritage Act*]
 - local land registry office (for a title search)
-

iii. listed on a register of heritage properties maintained by the municipality

Municipal registers are the official lists - or record - of cultural heritage properties identified as being important to the community.

Registers include:

- all properties that are designated under the *Ontario Heritage Act* (Part IV or V)
- properties that have not been formally designated, but have been identified as having cultural heritage value or interest to the community

For more information, contact:

- municipal clerk
 - municipal heritage planning staff
 - municipal heritage committee
-

iv. subject to a notice of:

- intention to designate (under Part IV of the *Ontario Heritage Act*)
- a Heritage Conservation District study area bylaw (under Part V of the *Ontario Heritage Act*)

A property that is subject to a **notice of intention to designate** as a property of cultural heritage value or interest and the notice is in accordance with:

- section 29 of the *Ontario Heritage Act*
- section 34.6 of the *Ontario Heritage Act*. **Note:** To date, the only applicable property is Meldrum Bay Inn, Manitoulin Island. [s.34.6]

An area designated by a municipal by-law made under section 40.1 of the *Ontario Heritage Act* as a **heritage conservation district study area**.

For more information, contact:

- municipal clerk – for a property that is the subject of notice of intention [s. 29 and s. 40.1]
 - [Ontario Heritage Trust](#)
-

- v. included in the Ministry of Tourism, Culture and Sport's list of provincial heritage properties

Provincial heritage properties are properties the Government of Ontario owns or controls that have cultural heritage value or interest.

The Ministry of Tourism, Culture and Sport (MTCS) maintains a list of all provincial heritage properties based on information provided by ministries and prescribed public bodies. As they are identified, MTCS adds properties to the list of provincial heritage properties.

For more information, contact the MTCS Registrar at registrar@ontario.ca.

3b. Is the property (or project area) a National Historic Site (or part of)?

National Historic Sites are properties or districts of national historic significance that are designated by the Federal Minister of the Environment, under the *Canada National Parks Act*, based on the advice of the Historic Sites and Monuments Board of Canada.

For more information, see the [National Historic Sites website](#).

3c. Is the property (or project area) designated under the *Heritage Railway Stations Protection Act*?

The *Heritage Railway Stations Protection Act* protects heritage railway stations that are owned by a railway company under federal jurisdiction. Designated railway stations that pass from federal ownership may continue to have cultural heritage value.

For more information, see the [Directory of Designated Heritage Railway Stations](#).

3d. Is the property (or project area) designated under the *Heritage Lighthouse Protection Act*?

The *Heritage Lighthouse Protection Act* helps preserve historically significant Canadian lighthouses. The Act sets up a public nomination process and includes heritage building conservation standards for lighthouses which are officially designated.

For more information, see the [Heritage Lighthouses of Canada](#) website.

3e. Is the property (or project area) identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office?

The role of the Federal Heritage Buildings Review Office (FHBRO) is to help the federal government protect the heritage buildings it owns. The policy applies to all federal government departments that administer real property, but not to federal Crown Corporations.

For more information, contact the [Federal Heritage Buildings Review Office](#).

See a [directory of all federal heritage designations](#).

3f. Is the property (or project area) located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?

A UNESCO World Heritage Site is a place listed by UNESCO as having outstanding universal value to humanity under the Convention Concerning the Protection of the World Cultural and Natural Heritage. In order to retain the status of a World Heritage Site, each site must maintain its character defining features.

Currently, the Rideau Canal is the only World Heritage Site in Ontario.

For more information, see Parks Canada – [World Heritage Site website](#).

Part B: Screening for potential Cultural Heritage Value

4a. Does the property (or project area) contain a parcel of land that has a municipal, provincial or federal commemorative or interpretive plaque?

Heritage resources are often recognized with formal plaques or markers.

Plaques are prepared by:

- municipalities
- provincial ministries or agencies
- federal ministries or agencies
- local non-government or non-profit organizations

For more information, contact:

- [municipal heritage committees](#) or local heritage organizations – for information on the location of plaques in their community
- Ontario Historical Society's [Heritage directory](#) – for a list of historical societies and heritage organizations
- Ontario Heritage Trust – for a [list of plaques](#) commemorating Ontario's history
- Historic Sites and Monuments Board of Canada – for a [list of plaques](#) commemorating Canada's history

4b. Does the property (or project area) contain a parcel of land that has or is adjacent to a known burial site and/or cemetery?

For more information on known cemeteries and/or burial sites, see:

- Cemeteries Regulations, Ontario Ministry of Consumer Services – for a [database of registered cemeteries](#)
- Ontario Genealogical Society (OGS) – to [locate records of Ontario cemeteries](#), both currently and no longer in existence; cairns, family plots and burial registers
- Canadian County Atlas Digital Project – to [locate early cemeteries](#)

In this context, adjacent means contiguous or as otherwise defined in a municipal official plan.

4c. Does the property (or project area) contain a parcel of land that is in a Canadian Heritage River watershed?

The Canadian Heritage River System is a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage.

Canadian Heritage Rivers must have, and maintain, outstanding natural, cultural and/or recreational values, and a high level of public support.

For more information, contact the [Canadian Heritage River System](#).

If you have questions regarding the boundaries of a watershed, please contact:

- your conservation authority
- municipal staff

4d. Does the property (or project area) contain a parcel of land that contains buildings or structures that are 40 or more years old?

A 40 year 'rule of thumb' is typically used to indicate the potential of a site to be of cultural heritage value. The approximate age of buildings and/or structures may be estimated based on:

- history of the development of the area
- fire insurance maps
- architectural style
- building methods

Property owners may have information on the age of any buildings or structures on their property. The municipality, local land registry office or library may also have background information on the property.

Note: 40+ year old buildings or structure do not necessarily hold cultural heritage value or interest; their age simply indicates a higher potential.

A building or structure can include:

- residential structure
- farm building or outbuilding
- industrial, commercial, or institutional building
- remnant or ruin
- engineering work such as a bridge, canal, dams, etc.

For more information on researching the age of buildings or properties, see the Ontario Heritage Tool Kit Guide [Heritage Property Evaluation](#).

Part C: Other Considerations

5a. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) is considered a landmark in the local community or contains any structures or sites that are important to defining the character of the area?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has potential landmarks or defining structures and sites, for instance:

- buildings or landscape features accessible to the public or readily noticeable and widely known
- complexes of buildings
- monuments
- ruins

5b. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) has a special association with a community, person or historical event?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has a special association with a community, person or event of historic interest, for instance:

- Aboriginal sacred site
- traditional-use area
- battlefield
- birthplace of an individual of importance to the community

5c. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) contains or is part of a cultural heritage landscape?

Landscapes (which may include a combination of archaeological resources, built heritage resources and landscape elements) may be of cultural heritage value or interest to a community.

For example, an Aboriginal trail, historic road or rail corridor may have been established as a key transportation or trade route and may have been important to the early settlement of an area. Parks, designed gardens or unique landforms such as waterfalls, rock faces, caverns, or mounds are areas that may have connections to a particular event, group or belief.

For more information on Questions 5.a., 5.b. and 5.c., contact:

- Elders in Aboriginal Communities or community researchers who may have information on potential cultural heritage resources. Please note that Aboriginal traditional knowledge may be considered sensitive.
- [municipal heritage committees](#) or local heritage organizations
- Ontario Historical Society's "[Heritage Directory](#)" - for a list of historical societies and heritage organizations in the province

An internet search may find helpful resources, including:

- historical maps
- historical walking tours
- municipal heritage management plans
- cultural heritage landscape studies
- municipal cultural plans

Information specific to trails may be obtained through [Ontario Trails](#).

The **purpose of the checklist** is to determine:

- if a property(ies) or project area:
 - is a recognized heritage property
 - may be of cultural heritage value
- it includes all areas that may be impacted by project activities, including – but not limited to:
 - the main project area
 - temporary storage
 - staging and working areas
 - temporary roads and detours

Processes covered under this checklist, such as:

- *Planning Act*
- *Environmental Assessment Act*
- *Aggregates Resources Act*
- *Ontario Heritage Act* – Standards and Guidelines for Conservation of Provincial Heritage Properties

Cultural Heritage Evaluation Report (CHER)

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a qualified person(s) (see page 5 for definitions) to undertake a cultural heritage evaluation report (CHER).

The CHER will help you:

- identify, evaluate and protect cultural heritage resources on your property or project area
- reduce potential delays and risks to a project

Other checklists

Please use a separate checklist for your project, if:

- you are seeking a Renewable Energy Approval under Ontario Regulation 359/09 – [separate checklist](#)
- your Parent Class EA document has an approved screening criteria (as referenced in Question 1)

Please refer to the Instructions pages for more detailed information and when completing this form.

Project or Property Name
Basin A3 Drainage Study - Structure OS-09a-c

Project or Property Location (upper and lower or single tier municipality)
City of Owen Sound

Proponent Name
GM Blueplan

Proponent Contact Information
Andrea Nelson, 519-3761805 x2219; andrea.nelson@gmblueplan.ca

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

Part A: Screening for known (or recognized) Cultural Heritage Value

	Yes	No
2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes, do **not** complete the rest of the checklist.

The proponent, property owner and/or approval authority will:

- summarize the previous evaluation and
- add this checklist to the project file, with the appropriate documents that demonstrate a cultural heritage evaluation was undertaken

The summary and appropriate documentation may be:

- submitted as part of a report requirement
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

	Yes	No
3. Is the property (or project area):		
a. identified, designated or otherwise protected under the <i>Ontario Heritage Act</i> as being of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. a National Historic Site (or part of)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. designated under the <i>Heritage Railway Stations Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. designated under the <i>Heritage Lighthouse Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to any of the above questions, you need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report, if a Statement of Cultural Heritage Value has not previously been prepared or the statement needs to be updated

If a Statement of Cultural Heritage Value has been prepared previously and if alterations or development are proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No, continue to Question 4.

Part B: Screening for Potential Cultural Heritage Value

	Yes	No
4. Does the property (or project area) contain a parcel of land that:		
a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has or is adjacent to a known burial site and/or cemetery?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. is in a Canadian Heritage River watershed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. contains buildings or structures that are 40 or more years old?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part C: Other Considerations

	Yes	No
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):		
a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has a special association with a community, person or historical event?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. contains or is part of a cultural heritage landscape?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to one or more of the above questions (Part B and C), there is potential for cultural heritage resources on the property or within the project area.

You need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report (CHER)

If the property is determined to be of cultural heritage value and alterations or development is proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No to all of the above questions, there is low potential for built heritage or cultural heritage landscape on the property.

The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project file

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g. under the *Environmental Assessment Act*, *Planning Act* processes
- maintained by the property owner, proponent or approval authority

Instructions

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
 - large scale and small scale showing nearby township names for context purposes
- the municipal addresses of all properties within the project area
- the lot(s), concession(s), and parcel number(s) of all properties within a project area

For more information, see the Ministry of Tourism, Culture and Sport's [Ontario Heritage Toolkit](#) or [Standards and Guidelines for Conservation of Provincial Heritage Properties](#).

In this context, the following definitions apply:

- **qualified person(s)** means individuals – professional engineers, architects, archaeologists, etc. – having relevant, recent experience in the conservation of cultural heritage resources.
- **proponent** means a person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

1. Is there a pre-approved screening checklist, methodology or process in place?

An existing checklist, methodology or process may already be in place for identifying potential cultural heritage resources, including:

- one endorsed by a municipality
- an environmental assessment process e.g. screening checklist for municipal bridges
- one that is approved by the Ministry of Tourism, Culture and Sport (MTCS) under the Ontario government's [Standards & Guidelines for Conservation of Provincial Heritage Properties](#) [s.B.2.]

Part A: Screening for known (or recognized) Cultural Heritage Value

2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?

Respond 'yes' to this question, if all of the following are true:

A property can be considered not to be of cultural heritage value if:

- a Cultural Heritage Evaluation Report (CHER) - or equivalent - has been prepared for the property with the advice of a qualified person and it has been determined not to be of cultural heritage value and/or
- the municipal heritage committee has evaluated the property for its cultural heritage value or interest and determined that the property is not of cultural heritage value or interest

A property may need to be re-evaluated, if:

- there is evidence that its heritage attributes may have changed
- new information is available
- the existing Statement of Cultural Heritage Value does not provide the information necessary to manage the property
- the evaluation took place after 2005 and did not use the criteria in Regulations 9/06 and 10/06

Note: Ontario government ministries and public bodies [prescribed under Regulation 157/10] may continue to use their existing evaluation processes, until the evaluation process required under section B.2 of the Standards & Guidelines for Conservation of Provincial Heritage Properties has been developed and approved by MTCS.

To determine if your property or project area has been evaluated, contact:

- the approval authority
- the proponent
- the Ministry of Tourism, Culture and Sport

3a. Is the property (or project area) identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value e.g.:

- i. designated under the *Ontario Heritage Act*
 - individual designation (Part IV)
 - part of a heritage conservation district (Part V)

Individual Designation – Part IV

A property that is designated:

- by a municipal by-law as being of cultural heritage value or interest [s.29 of the *Ontario Heritage Act*]
- by order of the Minister of Tourism, Culture and Sport as being of cultural heritage value or interest of provincial significance [s.34.5]. **Note:** To date, no properties have been designated by the Minister.

Heritage Conservation District – Part V

A property or project area that is located within an area designated by a municipal by-law as a heritage conservation district [s. 41 of the *Ontario Heritage Act*].

For more information on Parts IV and V, contact:

- municipal clerk
 - [Ontario Heritage Trust](#)
 - local land registry office (for a title search)
-

ii. subject of an agreement, covenant or easement entered into under Parts II or IV of the *Ontario Heritage Act*

An agreement, covenant or easement is usually between the owner of a property and a conservation body or level of government. It is usually registered on title.

The primary purpose of the agreement is to:

- preserve, conserve, and maintain a cultural heritage resource
- prevent its destruction, demolition or loss

For more information, contact:

- [Ontario Heritage Trust](#) - for an agreement, covenant or easement [clause 10 (1) (c) of the *Ontario Heritage Act*]
 - municipal clerk – for a property that is the subject of an easement or a covenant [s.37 of the *Ontario Heritage Act*]
 - local land registry office (for a title search)
-

iii. listed on a register of heritage properties maintained by the municipality

Municipal registers are the official lists - or record - of cultural heritage properties identified as being important to the community.

Registers include:

- all properties that are designated under the *Ontario Heritage Act* (Part IV or V)
- properties that have not been formally designated, but have been identified as having cultural heritage value or interest to the community

For more information, contact:

- municipal clerk
 - municipal heritage planning staff
 - municipal heritage committee
-

iv. subject to a notice of:

- intention to designate (under Part IV of the *Ontario Heritage Act*)
- a Heritage Conservation District study area bylaw (under Part V of the *Ontario Heritage Act*)

A property that is subject to a **notice of intention to designate** as a property of cultural heritage value or interest and the notice is in accordance with:

- section 29 of the *Ontario Heritage Act*
- section 34.6 of the *Ontario Heritage Act*. **Note:** To date, the only applicable property is Meldrum Bay Inn, Manitoulin Island. [s.34.6]

An area designated by a municipal by-law made under section 40.1 of the *Ontario Heritage Act* as a **heritage conservation district study area**.

For more information, contact:

- municipal clerk – for a property that is the subject of notice of intention [s. 29 and s. 40.1]
 - [Ontario Heritage Trust](#)
-

- v. included in the Ministry of Tourism, Culture and Sport's list of provincial heritage properties

Provincial heritage properties are properties the Government of Ontario owns or controls that have cultural heritage value or interest.

The Ministry of Tourism, Culture and Sport (MTCS) maintains a list of all provincial heritage properties based on information provided by ministries and prescribed public bodies. As they are identified, MTCS adds properties to the list of provincial heritage properties.

For more information, contact the MTCS Registrar at registrar@ontario.ca.

3b. Is the property (or project area) a National Historic Site (or part of)?

National Historic Sites are properties or districts of national historic significance that are designated by the Federal Minister of the Environment, under the *Canada National Parks Act*, based on the advice of the Historic Sites and Monuments Board of Canada.

For more information, see the [National Historic Sites website](#).

3c. Is the property (or project area) designated under the *Heritage Railway Stations Protection Act*?

The *Heritage Railway Stations Protection Act* protects heritage railway stations that are owned by a railway company under federal jurisdiction. Designated railway stations that pass from federal ownership may continue to have cultural heritage value.

For more information, see the [Directory of Designated Heritage Railway Stations](#).

3d. Is the property (or project area) designated under the *Heritage Lighthouse Protection Act*?

The *Heritage Lighthouse Protection Act* helps preserve historically significant Canadian lighthouses. The Act sets up a public nomination process and includes heritage building conservation standards for lighthouses which are officially designated.

For more information, see the [Heritage Lighthouses of Canada](#) website.

3e. Is the property (or project area) identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office?

The role of the Federal Heritage Buildings Review Office (FHBRO) is to help the federal government protect the heritage buildings it owns. The policy applies to all federal government departments that administer real property, but not to federal Crown Corporations.

For more information, contact the [Federal Heritage Buildings Review Office](#).

See a [directory of all federal heritage designations](#).

3f. Is the property (or project area) located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?

A UNESCO World Heritage Site is a place listed by UNESCO as having outstanding universal value to humanity under the Convention Concerning the Protection of the World Cultural and Natural Heritage. In order to retain the status of a World Heritage Site, each site must maintain its character defining features.

Currently, the Rideau Canal is the only World Heritage Site in Ontario.

For more information, see Parks Canada – [World Heritage Site website](#).

Part B: Screening for potential Cultural Heritage Value

4a. Does the property (or project area) contain a parcel of land that has a municipal, provincial or federal commemorative or interpretive plaque?

Heritage resources are often recognized with formal plaques or markers.

Plaques are prepared by:

- municipalities
- provincial ministries or agencies
- federal ministries or agencies
- local non-government or non-profit organizations

For more information, contact:

- [municipal heritage committees](#) or local heritage organizations – for information on the location of plaques in their community
- Ontario Historical Society's [Heritage directory](#) – for a list of historical societies and heritage organizations
- Ontario Heritage Trust – for a [list of plaques](#) commemorating Ontario's history
- Historic Sites and Monuments Board of Canada – for a [list of plaques](#) commemorating Canada's history

4b. Does the property (or project area) contain a parcel of land that has or is adjacent to a known burial site and/or cemetery?

For more information on known cemeteries and/or burial sites, see:

- Cemeteries Regulations, Ontario Ministry of Consumer Services – for a [database of registered cemeteries](#)
- Ontario Genealogical Society (OGS) – to [locate records of Ontario cemeteries](#), both currently and no longer in existence; cairns, family plots and burial registers
- Canadian County Atlas Digital Project – to [locate early cemeteries](#)

In this context, adjacent means contiguous or as otherwise defined in a municipal official plan.

4c. Does the property (or project area) contain a parcel of land that is in a Canadian Heritage River watershed?

The Canadian Heritage River System is a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage.

Canadian Heritage Rivers must have, and maintain, outstanding natural, cultural and/or recreational values, and a high level of public support.

For more information, contact the [Canadian Heritage River System](#).

If you have questions regarding the boundaries of a watershed, please contact:

- your conservation authority
- municipal staff

4d. Does the property (or project area) contain a parcel of land that contains buildings or structures that are 40 or more years old?

A 40 year 'rule of thumb' is typically used to indicate the potential of a site to be of cultural heritage value. The approximate age of buildings and/or structures may be estimated based on:

- history of the development of the area
- fire insurance maps
- architectural style
- building methods

Property owners may have information on the age of any buildings or structures on their property. The municipality, local land registry office or library may also have background information on the property.

Note: 40+ year old buildings or structure do not necessarily hold cultural heritage value or interest; their age simply indicates a higher potential.

A building or structure can include:

- residential structure
- farm building or outbuilding
- industrial, commercial, or institutional building
- remnant or ruin
- engineering work such as a bridge, canal, dams, etc.

For more information on researching the age of buildings or properties, see the Ontario Heritage Tool Kit Guide [Heritage Property Evaluation](#).

Part C: Other Considerations

5a. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) is considered a landmark in the local community or contains any structures or sites that are important to defining the character of the area?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has potential landmarks or defining structures and sites, for instance:

- buildings or landscape features accessible to the public or readily noticeable and widely known
- complexes of buildings
- monuments
- ruins

5b. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) has a special association with a community, person or historical event?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has a special association with a community, person or event of historic interest, for instance:

- Aboriginal sacred site
- traditional-use area
- battlefield
- birthplace of an individual of importance to the community

5c. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) contains or is part of a cultural heritage landscape?

Landscapes (which may include a combination of archaeological resources, built heritage resources and landscape elements) may be of cultural heritage value or interest to a community.

For example, an Aboriginal trail, historic road or rail corridor may have been established as a key transportation or trade route and may have been important to the early settlement of an area. Parks, designed gardens or unique landforms such as waterfalls, rock faces, caverns, or mounds are areas that may have connections to a particular event, group or belief.

For more information on Questions 5.a., 5.b. and 5.c., contact:

- Elders in Aboriginal Communities or community researchers who may have information on potential cultural heritage resources. Please note that Aboriginal traditional knowledge may be considered sensitive.
- [municipal heritage committees](#) or local heritage organizations
- Ontario Historical Society's "[Heritage Directory](#)" - for a list of historical societies and heritage organizations in the province

An internet search may find helpful resources, including:

- historical maps
- historical walking tours
- municipal heritage management plans
- cultural heritage landscape studies
- municipal cultural plans

Information specific to trails may be obtained through [Ontario Trails](#).

Memorandum

To: GM BluePlan
Director, Public Works & Engineering Services Division
Director, Community Services

From: Sabine Robart, M.SC. (PL), MCIP, RPP, Manager of Planning & Heritage

Date: March 3, 2023
Updated May 25, 2023

File: Master Plan: Brooke Area Basin A3 Outlet

Subject: Planning & Heritage comments

The City's Official Plan (2021) provides that the City may undertake Class Environmental Assessments or other master plan studies for water and sanitary servicing and stormwater management.

Section 5.2.4 Stormwater Management requires that the City may develop or require submission of master drainage plans for all major drainage systems in response to new development or prior to major capital expenditures. The design of stormwater management facilities shall also be in accordance with any Ministry design manuals, approved City standards, subwatershed management plans or other approved master plans.

Planning staff would note that, where possible, natural features should be incorporated into master drainage plans and individual stormwater management plans for areas of new development and redevelopment. This may include preserving the existing physical watercourse configuration and at-source stormwater management techniques. (Section 5.2.4.11)

Cultural Heritage

The City's OP notes that cultural heritage resources are built or natural features which may have design or physical value, associative or historic value and/or contextual value. Cultural heritage resources provide social, economic, environmental and educational value that contribute to the City's identity and character.

Section 7.1.2.6 requires that all new development and public works shall have regard for significant built heritage resources identified on the City's Heritage Register. As well the City will protect and conserve built heritage resources in accordance with cultural resource management best practices, including, but not limited to, the Standards and Guidelines for the Conservation of Historic Places in Canada, as amended from time to time, and the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) eight guiding principles in the conservation of built heritage properties (Section 7.1.2.7).

Development and site alterations may be permitted on adjacent lands to protected heritage properties where the proposed development and site alteration has been evaluated, and it has been demonstrated through the preparation of a heritage impact assessment by a qualified person that the heritage attributes of the protected heritage property will be conserved. Mitigation measures and/or alternative development approaches may be required in order to conserve the heritage attributes of the protected heritage property affected by the adjacent development or site alteration (Section 7.1.3.7).

The Cultural Heritage Evaluation Report (CHER) identified known and potential built heritage resources located within lots of the study area and in lots adjacent to the study area and the CHER determined the study area to be a potential 'cultural heritage landscape'. The built heritage resources include eight (8) non-listed and two (2) listed (Building 11 & 25) buildings. There are no designated Heritage buildings/structures within the study area itself (i.e., within the drainage system of Basin A3).

The CHER opined that:

- The proposed Brooke Area Basin A3 development will not have a direct impact on the built heritage resources located within (or adjacent to) the Study Area;
- The landscape associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development;
- The current viewsheds associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development; and,
- Given the scope of the proposed Brooke Area Basin A3 project it is not anticipated that any of the identified known and potential built heritage features, cultural heritage landscape, roadways or viewsheds will be negatively impacted by the development and no mitigation or protective measures are required.

The Ministry of Citizenship and Multiculturalism reviewed the CHER and requested that *'impact assessment information be provided in a table, detailing the heritage resources and potential for direct and indirect impacts'*. GM Blue Plan provided an assessment of potential direct and indirect impacts which included an impact assessment for each cultural heritage resource (or resource area), findings and recommendations.

Specifically, GM BluePlan recommends that:

- When the locations of the built heritage resources identified in the CHER are compared to the extents of each Reach, potential impacts are identified for Reach #3 and Reach #6;
- The Recommended Solution for Reach #3, which is to complete gradient improvements and widening of the open channel watercourse, is not expected to have the potential to result in direct or indirect impacts to the identified potential built heritage resources.
- The need for further assessments within Reach #6 is to be evaluated at the detailed design phase and will be based on the findings of the Geotechnical Investigations that will be completed to support the detailed design;
- Additional cultural heritage evaluations and heritage impact assessments may be recommended for the undertakings within Reach #6 if the known and potential built heritage resources are identified to fall within the 'vibration zone of influence';
- For built heritage resources identified to lie within the 'vibration zone of influence', cultural heritage evaluations would only be recommended for identified potential built heritage resources to better understand the cultural heritage value and interest and the associated level of significance. Heritage impact assessments may be recommended for all known (or confirmed) built heritage resources;
- The GM BluePlan assessment recommends that technical cultural heritage studies should be completed as early as possible during detailed design prior to the construction of any proposed works completed within Reach #6.
- Should future work require an expansion of the Study Area, then a qualified heritage consultant should be retained to complete further review and assessment.

Planning & Heritage staff concur with the proposed process at the detailed design phase. Staff recommend that the Planning & Heritage division be involved in the detailed design phase once the results from the Geotechnical Investigation are available and the requirement for further heritage evaluation and assessments be evaluated in consultation with Planning & Heritage staff.

In response to comments from Ministry of Citizenship and Multiculturalism (MCM), Archaeological Services Inc was retained to determine if culverts proposed for replacement, that is Structure OS-7 and Culvert system OS9a/b/c, have the potential for cultural heritage value or interest (CHVI). ASI notes that it is ASI's professional opinion that there is no potential for cultural heritage value or interest and a CHER is not required for Structure OS-7 or Culvert System OS-9. Planning & Heritage staff accept the findings of the ASI review as per the May 25, 2023 technical memorandum from ASI.

Archaeological Resources

Section 7.1.1.3 of the Official Plan requires that the City shall engage with Indigenous Communities and consider their interests when identifying, protecting and managing cultural heritage and archeological resources.

Section 7.1.6 Archaeological Resources of the City's Official Plan notes:

7.1.6.1 The City will encourage the conservation of archaeological resources as may be identified by the City, the Province, or other group and agency, and will continue to enforce municipal and provincial legislation with respect to lands containing archaeological resources or areas of archaeological potential and/or the discovery of items of archeological or historic interest on a property.

7.1.6.2 Development and site alteration shall only be permitted on lands containing archaeological resources or areas of archaeological potential if the significant archaeological resources have been conserved by removal and documentation, or by preservation on site. Where significant archaeological resources must be preserved on site, only development and site alteration that maintains the heritage integrity of the site may be permitted.

7.1.6.3 The City may require studies, such as an Archaeological Assessment Report, prepared by a qualified person, to identify and protect archaeological resources from destruction or alteration through development or public works operations.

7.1.6.4 The City will encourage consultation with Indigenous Communities in areas identified with significant archaeological potential both before and during the archaeological assessment process.

7.1.6.5 All archaeological assessment reports must be provided to the Province, as per the Standards and Guidelines for Consultant Archaeologists, as amended from time to time, and to the City for information purposes. All correspondence from the MHSTCI on their review/acceptance of any archaeological assessment will be provided to the City.

Scarlett Janusas Archaeology Inc completed a Stage 1 Archaeological Assessment of the area that may be impacted by drainage improvements within Brooke Area Basin A3. The Ministry of Citizenship and Multiculturalism has confirmed the entry of the Stage 1 Assessment Report into the Ontario Public Register of Archaeological Reports.

The Stage 1AA report recommended that a Stage 2AA is recommended for approximately 56% of the Study area (areas of archaeological potential), more specifically:

1. The west side of Reach 1 should be the subject of Stage 2AA if there is any proposed development, excluding routine maintenance of the existing culvert.
2. The west side of Reach 2 exhibits potential and will require Stage 2AA if this area is to be developed.
3. The water course in Reach 3 has been dredged several times, although the majority of the area on either side of the course has remained undeveloped. Should any development be proposed in this area, Stage 2AA is recommended.
4. Reach 4 is a mix of areas of both archaeological potential and no potential. Those areas of archaeological potential are recommended for Stage 2AA should development be proposed within Reach 4.
5. There is no potential for Reach 5 and no further archaeological assessment is required in the area of Reach 5.
6. There is no archaeological potential for Reach 6 and no further archaeological assessment is recommended within the Reach 6 area.

The draft Master Plan notes that a Stage 2 archaeological assessment and any further recommended assessment (e.g., Stage 3 and Stage 4) will be completed as early as possible in the detailed design phase and prior to any ground disturbing activities in areas identified to have not been previously disturbed.

For those projects where a Stage 2 assessment is recommended, Planning & Heritage staff recommend that the qualified professional undertaking the assessment contact the [Saugeen Ojibway Nation Environment Office](#) as an acknowledgement that the subject lands are located within the Traditional Territory of the Anishinabek Nation: The People of the Three Fires known as Ojibway, Odawa, and Pottawatomi Nations and to ensure [SON's Archaeological Standards](#) are addressed in the assessment.

Planning & Heritage staff strongly recommend that a framework for meaningful consultation and accommodation with SON be developed regarding the work required as part of the Master Plan. At minimum, a SON liaison person will require to be present during any field work/excavation.

Hazard Lands (Section 3.13)

The City OP states that the Hazard Lands designation is intended primarily for the preservation and conservation of lands in their natural state. Lands designated Hazard Lands are lands having qualities that, in combination with their location, present a risk to human safety, potential for property damage, or have physical limitations to development. Hazard Lands within the City include those lands that are susceptible to flooding, wave uprush, erosion or slope instability and in many cases are characterized by steep slopes, organic soils or poor drainage.

Permitted uses in the Hazard Land designation in those buildings or structures necessary for flood or erosion control, and conservation purposes and related private access (Section 3.13.1.1 a). Section 6.1.5 requires that where significant development is proposed adjacent to Hazard Lands, Open Space or any significant natural heritage feature, the City shall require the preparation of an Environmental Impact Study in accordance with the provisions of this section and in consultation with the Grey Sauble Conservation Authority.

A 'Natural Heritage Feature Analysis' (NHFA) was completed for the subject portion of Part of Brooke Area Basin A3, by Aquatic and Wildlife Services (AWS) Environmental Consulting Inc., in April 2019 which identified the following Natural Heritage Features within the General Study Area of within 120 m adjacent lands to the focused water course features:

- i. Habitat for Species-At-Risk (SAR) Species:
 - a. Confirmed presence for Butternut
 - b. Candidate suitable habitat for bats, barn swallow, gypsy cuckoo bumble bee and rusty patched bumble bee.
- ii. Fish Habitat: Confirmed fish habitat present for warm-water resident population of common Cyprinidae Family (minnows, dace) species.
- iii. Significant Woodlands: Confirmed forest stands of significant woodlands within the western portion of the NHFA Study Area (Polygon No.'s 1 and 2 on Figure 4).
- iv. Significant Wildlife Habitat (SWH):
 - a. Confirmed presence of snapping turtle
 - b. Candidate for bat maternity colonies, specialized habitat and flora species of conservation concern.

The NHFA concluded that 'with confirmed SAR and candidate other SAR habitat along with the confirmed Fish Habitat, Significant Woodland and Significant

Wildlife Habitat within the general study area, site alterations will require further natural heritage impact assessment review. Such works shall be required to demonstrate compliance with the Endangered Species Act 2007, Fisheries Act and applicable Official Plan policies with survey works focused on site alteration impact zones with possible species or habitat related mitigation measures required'.

Additional natural environment study may be required to support individual projects within the Study Area. The Master Plan notes that the need for additional investigations and/or site-specific mitigation strategies would be assessed and developed at the planning and design stage for a given project, as appropriate.

Planning & Heritage staff note that as a result of recent provincial legislation changes Grey Sauble Conservation is no longer able to comment on Natural Heritage matters. As such, previous peer review services provided by the GSCA will not be available at the detailed design stage of individual projects. The City and County Planning division are working on accessing qualified consultants and/or staff to provide peer review services for Natural Heritage matters. Planning & Heritage staff recommend that Planning & Heritage staff be involved in the detailed design phase to facilitate the peer review services available at that time.

APPENDIX F: NATURAL ENVIRONMENT: BACKGROUND INFORMATION



237897 Inglis Falls Road, R.R.#4, Owen Sound, ON N4K 5N6
Telephone: 519.376.3076 Fax: 519.371.0437
www.greysauble.on.ca

September 14, 2016

Mr. Sean Potter
City of Owen Sound
Engineering Services Division
1900 20th Street East
Owen Sound ON
N4K 2H4

Dear Mr. Potter:

RE: Pre-Consultation Review of Upgrades to Basin A-3
Applicant: City of Owen Sound
City of Owen Sound
Our File: P12229

Subject Proposal

It is our understanding that the City of Owen Sound is in the initial phase of considering upgrades and/or alterations to watercourse basin A-3 in the Town Plot of Brooke, and is seeking preliminary input from the Grey Sauble Conservation Authority (GSCA) prior to seeking project quotes. It is further our understanding that any of the potential changes would occur at and downstream of the culvert(s) within the 2100 block of 6th Avenue West. The purpose of the proposed changes is to alleviate ongoing issues within this system associated with periodic flooding and sedimentation.

GSCA Regulations

This watercourse system is regulated under Ontario Regulation 151/06: Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses. As such, a permit or permits will be required from the GSCA prior to undertaking any alterations or development within the regulated areas.

Recommendations

From a general perspective, GSCA has no objection to the City undertaking upgrades to this system. We recommend that we are consulted throughout the planning process to ensure that what is being proposed is consistent with our policies for development and alterations. Although we do not have a specific sizing criteria that we would require for the system, the general essence of our policy direction is to not make situations worse than they currently are. Therefore, those portions of the system that can currently convey a regional storm event must continue to do so. However, those portions at the Kelso Beach outlet that currently struggle with 2-year storm event will not be required to be upgraded to handle regional flows.

We will require that any changes to the system are supported by appropriate engineered design.

1 of 2



Watershed Municipalities
Arran-Elderslie, Chatsworth, Georgian Bluffs, Grey Highlands
Meaford, Owen Sound, South Bruce Peninsula, Blue Mountains

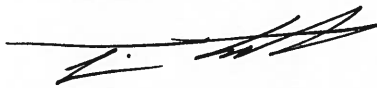
Mr. Sean Potter, Engineering Services Division, City of Owen Sound
Pre-Consultation Review of Upgrades to Basin A-3
City of Owen Sound
September 14, 2016
Our File No. P12229

We do encourage the City to provide whatever additional relief is feasible through this system to protect the existing built environment without undue damage to the existing natural environment.

Depending on the specific nature of the proposed works, approvals may also be required from Fisheries and Oceans Canada and/or the Ontario Ministry of Natural Resources and Forestry and/or the Ontario Ministry of the Environment and Climate Change.

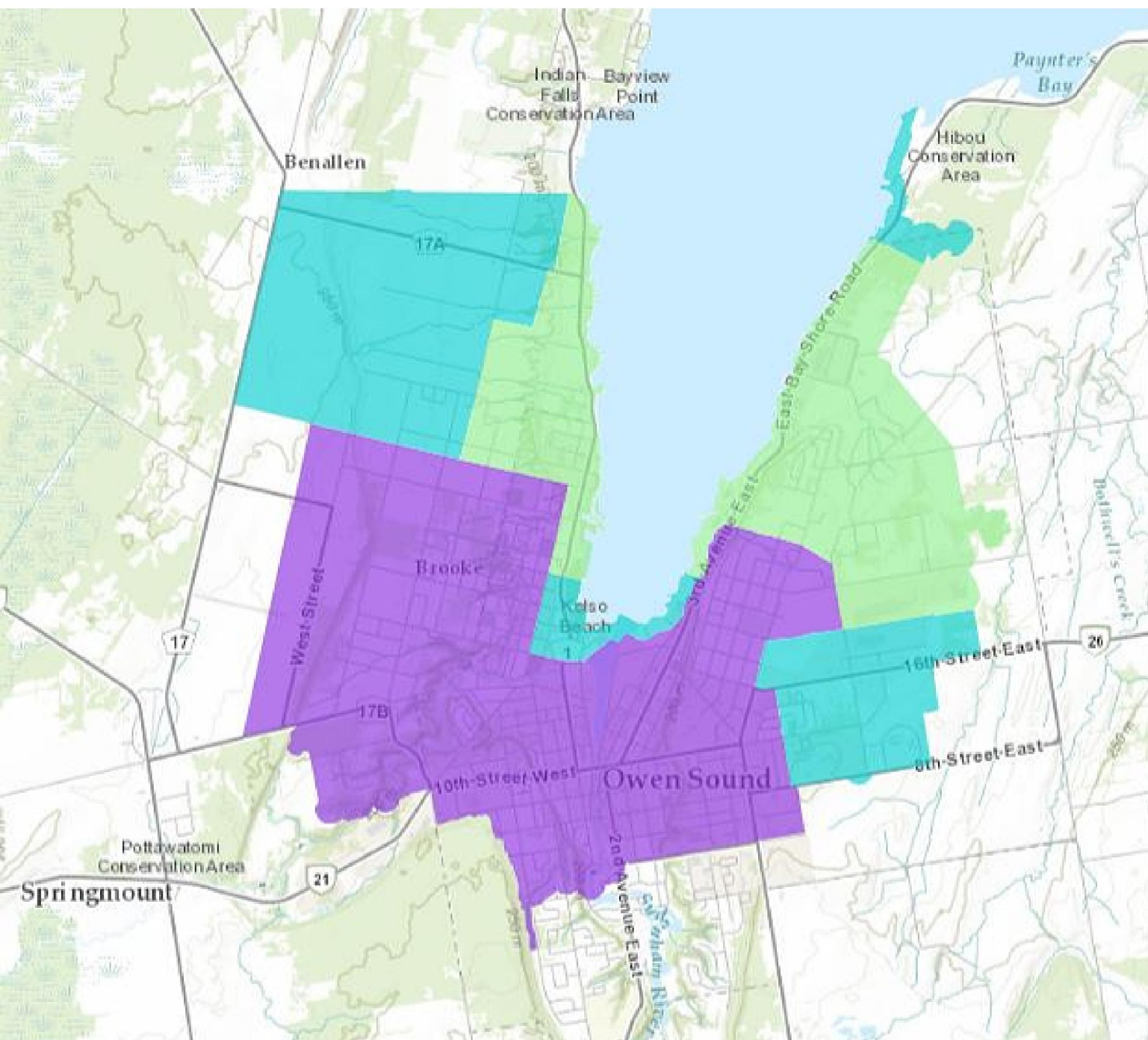
If any questions should arise, please contact our office.

Regards,



Tim Lanthier
Watershed Planner

cc via email: Mr. Dick Hibma, Authority Director, City of Owen Sound
Ms. Marion Koepke, Authority Director, City of Owen Sound



Legend

EBA Policy Component

- See Component Type in pop-up (B)
- See Component Type in pop-up (G)
- See Component Type in pop-up (P)
- See Component Type in pop-up (R)

NATURAL HERITAGE FEATURE ANALYSIS

PREPARED FOR

**GM Blue Plan Engineering and
The City of Owen Sound**

Part Brooke Area Basin A3

**Watercourses between 8th Avenue West to
Kelso Beach Park, and
19th Street West to 22nd Street West
City of Owen Sound
County of Grey**

PREPARED BY

AWS

ENVIRONMENTAL CONSULTING INC.

operating as Aquatic and Wildlife Services

**Phone: (519) 372-2303, Fax: (519) 372-1990, Email: aws@gbtel.ca
JOHN MORTON, R. R. # 1, Shallow Lake, Ontario, N0H 2K0**

April, 2019

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1 Introduction

AWS Environmental Consulting Inc. (AWS) was retained by GM BluePlan to assist them with a Natural Heritage Feature Analysis, a process to completing a Master Plan for a drainage area in the City of Owen Sound known as the Brooke Area Basin A3. The scope of work was focused within the downstream area of Basin A3, with seven watercourse Reaches-of-Concern noted for potential future site alteration works. The watercourse and riparian habitat within this focused study area is referred to within this report as the 'General Study Area', delineated on Figure 1 and 2.

Due to extensive private lands along these watercourse features, field investigations of natural heritage features were only undertaken at all water crossing locations, road-side observations, accessible lands (permitted access or un-opened road allowances) and through air photo interpretation. Feature analysis for this Stage 1 included on-site review of the watercourses during the high flow (spring run-off season) period and base flow (summer season) periods. No detailed fish community works, intensive vascular plant or fauna inventory works has been undertaken through the Stage 1 process.

This technical report shall address the seven Natural Heritage Features, as defined by the Provincial Policy Statement 2.1, with a review of available federal, provincial and municipal literature (reports, data files, feature maps etc.) currently available, augmented with Stage 1 field observations/findings for the General Study Area.

2 Study Works

2.1 Background Review

A literature review and data search was conducted to aid in the identification of Natural Heritage Features and to search for historical occurrence records for flora and fauna species of conservation concern within 2 km of the Study Lands. Typically the search coverage area is 5km's from the study area however, given this is an 'urban' setting, the search coverage area was reduced to reflect the lack of undisturbed natural environment or off-site linkage functions in the Study Area. This background review was utilized to augment field findings.

- 2012 Grey County Official Plan and schedule mapping, Draft January 2017 schedules for the County of Grey Natural Heritage Study (Green in Grey)
- 2012 City of Owen Sound Official Plan, Schedules and Zoning
- 2019 Natural Heritage Information Center (NHIC) database of the Ontario Ministry of Natural Resources and Forestry (OMNRF) on the Land Information Ontario website for significant flora and fauna records.

2.2 Field Study Methodology

Field survey works focused on water crossing locations and key reaches of the watercourses as mapped on Figure 7. Fish Habitat and fish community survey work was through visual observations only, at each field survey point locations within water course.

2.3 Field Survey Dates

Table 1: Field Survey Dates and Focus of Works

Date	Survey Time & Duration	Weather Conditions (at start time)	Survey Focus
April 26, 2018	1000-1130 For 1.5 hrs	Wind Speed = 6-11 km/hr Air Temp.= 8° C Precipitation = 0 Cloud Cover = 25%	Hydrology- high flow period
Sept. 6, 2017	1300-1500 For 2.0 hrs	Wind Speed = 6-11 km/hr Air Temp. = 20.0° C Precipitation = 0 Cloud Cover = 65%	Hydrology- base flow period, General Flora & Fauna

Total field survey work provided 3.5 hours of search /survey coverage during the late spring peak run-off period and summer base or low flow period.

3 Vegetation Community Characterization

Woodland communities within the General study area have been delineated as three polygons on Figure 8 and defined within Table 2 based on the 'Ecological Land Classification (ELC) for Southern Ontario, First Approximation' system.

Table 2: Woodland Communities Types - ELC Codes

Polygon Number	ELC Code	Type	Description	Provincial Ranking
1	FOD5-6	Dry-Fresh Sugar Maple-Basswood Deciduous Forest	Mature aged forest stand with closed upper canopy. Patchy mixed groundcover at 30%	S5
2	FOD6-5	Fresh-Moist Sugar Maple-Hardwood Deciduous Forest	Mature aged forest stand with semi-closed upper canopy. Dense groundcover mix at 65%	S5
3	FOD7-4	Fresh-Moist Ash Lowland Deciduous Forest	Mid-Mature aged forest stand with closed upper canopy. Patchy mixed groundcover at 50%, abundant fallen woody debris	S5

All noted ELC community types are commonly found throughout Southern Ontario, with no significant status or unique forest stand composition.

4 Field Investigations Findings

A summary review of observations at the 'Field Review Points', as mapped on Figure 7 are provided below for both high-flow and base-flow conditions.

Point 1

- Waters accessible from migratory Owen Sound Bay fish, upstream to point 2 during high flow and base flow periods.
- Highly disturbed recreational park lands. Bottom substrate primarily silt/sand with a few scattered cobble sized rocks.
- Fish Habitat confirmed.

Point 2

- Metal grating bolted to outlet of buried culvert pipe. In-stream barrier to larger fish species
- From point 2 upstream to point 3, waters are within a buried pipe

Point 3

- Metal grating bolted to inlet of buried culvert pipe. Trash rack functions
- Upstream the watercourse exhibited a stable banks, bottom substrate was an equal mix of silt/sand, gravel, detritus and woody debris. Permanent flows with summer water thermal regime of 'water-water' conditions.
- Fish Habitat confirmed.

Point 4

- Watercourse exhibited stable banks; bottom substrate was an equal mix of silt/sand, detritus, woody debris and gravel. Forested lands along both banks but extensive 'garbage'. Permanent flows with summer water thermal regime of 'water-water' conditions.
- Observed 2-3 dozen Cyprinidae Family fish species (minnows) during both spring and summer seasons
- Fish Habitat confirmed.

Point 5

- Watercourse exhibited stable banks; bottom substrate was a mix of gravel, sand, cobble, woody debris and gravel. Forested lands along both banks but extensive 'garbage'. Permanent flows with summer water thermal regime of 'water-water' conditions.
- Fish Habitat confirmed.

Point 6

- Watercourse exhibited stable banks with channelization evident. Bottom substrate was a mix of gravel and sand. Banks with lawn grasses with scattered trees. Permanent flows with summer water thermal regime of 'water-water' conditions.
- Observed 5 to 7 Cyprinidae Family fish species present during both spring and summer seasons.
- Fish Habitat confirmed.

Point 7

- Watercourse exhibited stable banks with channelization evident but overland 'yard' flooding also evident. Bottom substrate was primarily silt and sand. Banks with lawn- grasses with scattered trees. Permanent flows with summer water thermal regime of 'water-water' conditions.
- Fish Habitat confirmed.

Point 8

- Water crossing site with channelization evident. Bottom substrate was primarily silt and sand. Banks with lawn- grasses with scattered trees. Permanent flows with summer water thermal regime of 'water-water' conditions.
- One adult snapping turtle observed during the low flow period.
- Upstream to point 9 watercourse is within a buried pipe.

Point 9

- Metal grating bolted to inlet of buried culvert pipe. Trash rack functions
- Upstream, channel exhibited stable banks with evidence of past overland 'yard' flooding
- Bottom substrate was an equal mix of silt/sand, detritus and gravel.
- Permanent watercourse with flows during the summer season.
- Observed 9-12 Cyprinidae Family fish species present during both spring and summer seasons.
- Fish Habitat confirmed.

Point 10

- Recent bank erosion control works done. Outlet from culvert crossing perched, preventing fish passage.
- Upstream of culvert inlet, channel was poured concrete with slope, fish passage barrier
- No flows observed during the summer low flow period, evidence of run-off after significant precipitation events.
- Banks with a few scattered shrubs and lawn-grasses, portions of watercourse near dwelling within a buried pipe.
- No direct Fish Habitat

Point 11

- Good flows observed during the spring run-off but channel was dry during base flow conditions, Intermittent flows.
- Both banks with mature forest cover.
- No direct Fish Habitat.

Point 12

- Seasonal spring run-off only, intermittent flows.
- Channel not well defined with erosion, abundant woody debris.
- No direct Fish Habitat

Point 13

- Flows observed during spring and base flow periods, permanent water course.
- Channel well defined and stable though steep gradient within a ravine feature. Both banks forested
- Channel substrate primarily cobble rock and woody debris
- No direct Fish Habitat.

Point 14

- No surface water flow evident, catch-basin from road run-off to buried pipe downstream to point 9.
- Observed three Butternut Trees along woodland edge at end of road.
- No direct Fish Habitat.

Point 15

- Permanent flows, though only a 'trickle' observed during base flow summer season.
- Observed 4-7 Cyprinidae Family fish species present during both spring and summer seasons.
- Stable channel within a forested environment.
- Bottom substrate an equal mix of gravel, sand and cobble sized rock.
- Fish Habitat confirmed.

Significant Feature Analysis

5 Habitat of Endangered and Threatened Species

Species are considered Endangered or Threatened based on: the provincial Species At Risk (SAR) list of the Ontario Ministry of Natural Resources and Forestry (OMNRF); the federal Species at Risk Act (SARA) and listings of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). As input to this work and in conjunction with field investigations, a literature search for historic records of endangered and threatened species was undertaken of the Natural Heritage Information Centre (NHIC) database and in the published resources of the OMNRF for the surrounding landscape extending 2 km (urban lands) from the General Study Area, provided under Appendix 1.

Through this background literature review, one historical record of a threatened species was noted: Eastern Meadowlark.

A review of provincial habitat requirements and on-site habitat assessment for Eastern Meadowlark is provided below:

- Provincial habitat description states: *Eastern Meadowlarks breed primarily in moderately tall grasslands, such as pastures and hayfields, but are also found in alfalfa fields, weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields, or other open areas. Small trees, shrubs or fence posts are used as elevated song perches. Typically require open grassy areas > 10 ha in size.*

- Preliminary On-Site habitat investigations: No open country grassland meadow habitat suitable for nesting and/or rearing habitat was identified within 120m to the General Study Area.
- No negative impacts to supporting habitat for Eastern Meadowlark from hydrology related development or site alterations within this general Study Area.

Additionally the OMNRF documentation of historical records section states:

Absence of information for a specific location does not mean there are no natural areas, provincially tracked species, plant communities or wildlife concentration areas at that location. It means that on the date the MNR created the dataset there was no information for that location. These data are not a substitute for site visits.

As such, preliminary habitat investigations along accessible portions of the riparian watercourses within the General Study Area were undertaken for candidate flora and fauna currently listed under the Endangered Species Act, Species at Risk Act, or designated by COSEWIC.

Field observations or assessment findings are provided below:

- Confirmed three **Butternut Trees** (Endangered species) as shown on Figure 8, near hydrology point 14 (see Figure 7), candidate habitat throughout woodland Polygon 1 and 2.
- Candidate nesting/rearing habitat for **Barn Swallows** (Threatened species) within existing water crossing structures on 20th Street West (point 5-6) and 21st Street West (point 8). Note, Barn swallows have been documented to nest under bridge structures and/or in large diameter culverts.
- Candidate SAR woodland habitat for **Bats** (Northern Myotis & Little Brown Myotis) and bat maternity roosting habitat within all three woodland Polygons within 25m to the watercourses.
- Candidate SAR habitat for **Gypsy Cuckoo Bumble Bee and Rusty-patched Bumble Bee** (both Endangered species) along the watercourse features.
- No identifiable habitat or historical records for any SAR fish or mussel species within the General Study Area watercourses.

6 Significant Valleylands

Grey County has mapped Significant Valleylands through its 'Green in Grey Natural Heritage Study'. Excerpt mapping is provided on Figure 4 which shows **no** significant valleyland feature within the General Study Area.

7 Significant Woodlands

Grey County has mapped significant woodlands through its 'Green in Grey Natural Heritage Study'. Excerpt mapping is provided on Figure 4 which **confirms** that woodland polygon number 1 and 2 as delineated on Figure 8 represent the significant woodland features within the General Study Area.

8 Significant Areas of Natural and Scientific Interest (A.N.S.I.)

A review of Provincially Significant ANSI's was undertaken from OMNRF and Land Information Ontario web site mapping provided on Figure No. 3. This provincial mapping demonstrates that **no** significant ANSI features, either earth science or life science, occur within the General Study Area.

9 Significant Wetlands

A review of Provincially Significant Wetlands (PSW) was undertaken from OMNRF and Land Information Ontario web site mapping provided on Figure No. 3. The provincial mapping demonstrates that **no** evaluated significant wetland features occur within the General Study Area.

10 Significant Wildlife Habitat

Currently, there is no mapping within the Grey County Official Plan to identify Significant Wildlife Habitat (SWH) due to its complexity and to the sub-components that require on-site survey work. Some historical OMNRF inventory and wildlife assessments within Grey County have been checked to locate any previously determined confirmed SWH to be known within the General Study Area.

The Province of Ontario is currently implementing a supplement report dated January 2015 "Significant Wildlife Habitat Eco-regional Criteria Schedules", to the original October 2000 Significant Wildlife Habitat Technical Guide (SWHTG), OMNRF technical document. This supplement Ecoregion Criteria Schedules provides a listing of criteria and threshold levels to determine candidate and/or confirmed presence of significant wildlife habitat within Ecoregion 6 (General Study Lands).

A preliminary review of the primary 6 sub-components to wildlife habitat has been provided below.

10.1 Seasonal Concentration Areas of Animals

- No suitable significant habitat for waterfowl, shorebirds, raptors, colonial birds, Landbird migratory stopover, migratory butterfly stopover, deer winter habitat, bat hibernacula, turtle wintering areas or reptile hibernacula's.
- Candidate habitat within the three woodland polygons for bat maternity colonies

10.2 Rare Vegetation Communities

- Confirmed that no rare vegetation communities present within the General Study Area.

10.3 Specialized Habitat for Wildlife

- No suitable significant habitat for Waterfowl nesting, Bald Eagle or Osprey habitat, Amphibian wetland breeding habitat
- Suitable candidate habitat for woodland Raptor nesting in woodland polygon 1 and 2, Turtle nesting, groundwater upwellings (seeps), Amphibian woodland breeding habitat in polygon 1 and 2 and Area-Sensitive woodland bird habitat within polygon 1.

10.4 Habitat for Species of Conservation Concern

- No suitable significant habitat for Marsh breeding birds, Open Country bird breeding habitat, Shrub/Early successional bird breeding habitat and Terrestrial Crayfish
- Suitable candidate habitat for Flora & Fauna having a 'Special Concern' or provincially 'Rare' status
- Confirmed presence of one adult Snapping Turtle at field point 8 and habitat area shown on Figure 8.

10.5 Animal Movement Corridors

- No seasonal deer movement corridors
- Candidate amphibian movement corridors along watercourse features.

10.6 Exceptions for Ecoregion 6E

- Confirmed that no suitable habitat is present within the General Study Area for 'mast' producing lands for black bear foraging or open country habitat for Sharp-tailed Grouse breeding.

11 Fish Habitat

Within the study watercourses, fish and Fish Habitat has been confirmed and delineated on Figure 8 for common species of the Cyprinidae Family (minnows). Thermal monitoring at field points 3 and 8 plus the noted aquatic community species all reflect a warm-water thermal regime for this watercourse. With the noted grate barriers at field points 2 and 3, no upstream migration for game fish species would be anticipated from the receiving waters of Owen Sound Bay.

12 Significant Feature Analysis Summary

Through the significant feature analysis, the following Natural Heritage features have been identified within the General Study Area, or within the 120m adjacent lands to the focused watercourse features.

- i. Habitat for SAR Species
 - a. Confirmed presence for Butternut.
 - b. Candidate suitable habitat for: Bats, Barn Swallow, Gypsy Cuckoo Bumble Bee, Rusty-patched Bumble Bee.
- ii. Fish Habitat
 - a. Confirmed Fish Habitat present for warm-water resident population of common Cyprinidae Family (minnows, dace) species.
- iii. Significant Woodland
 - a. Confirmed forested stand of polygon number 1 and 2 are significant woodlands.
- iv. Significant Wildlife Habitat (SWH)
 - a. Confirmed presence for Snapping Turtle.
 - b. Candidate for Bat maternity colonies, Specialized Habitat, Flora Species of conservation concern.

13 Conclusions

This natural heritage feature analysis has confirmed that any water crossing or watercourse site alterations within the General Study Area would be in compliance with the Provincial Policy Statement sections 2.1.4 (significant wetlands), 2.1.5.a (Canadian Shield significant wetlands), 2.1.5.c (significant valleylands) and 2.1.5.e (significant ANSI's).

Similarly any water crossing or watercourse site alterations within the General Study Area would be in compliance with the Grey County Official Plan policies 2.8.3 (provincially significant wetlands), 2.8.6.1 (significant valleylands), 2.8.6.3 (ANSI's) and 2.8.6.6 (other wetlands).

With confirmed Species-At-Risk and candidate other Species-At-Risk habitat along with confirmed Fish Habitat, Significant Woodland and Significant Wildlife Habitat within the General Study Area, site alterations will require further natural heritage impact assessment review. Such works shall be required to demonstrate compliance with the Endangered Species Act 2007, Fisheries Act and applicable Official Plan policies with survey works focused on site alteration impact zones with possible species or habitat related mitigation measures required.

Respectfully Submitted,



John Morton, President
AWS Environmental Consulting Inc.

14 References

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15 Figures

Figure 1.....	General Study Area Location
Figure 2.....	Study Watercourses & Riparian Zones
Figure 3.....	Provincial Natural Heritage Features
Figure 4.....	Grey County Official Plan-Appendix B Natural Heritage Constraints
Figure 5.....	Conservation Authority Regulatory Lands
Figure 6.....	City of Owen Sound, Hazard Zone Mapping
Figure 7.....	Watercourse Field Review Points & Reached of Concern
Figure 8.....	Natural Heritage Features

Figure No. 1: General Study Area

- Base map source: Grey County web site, general features

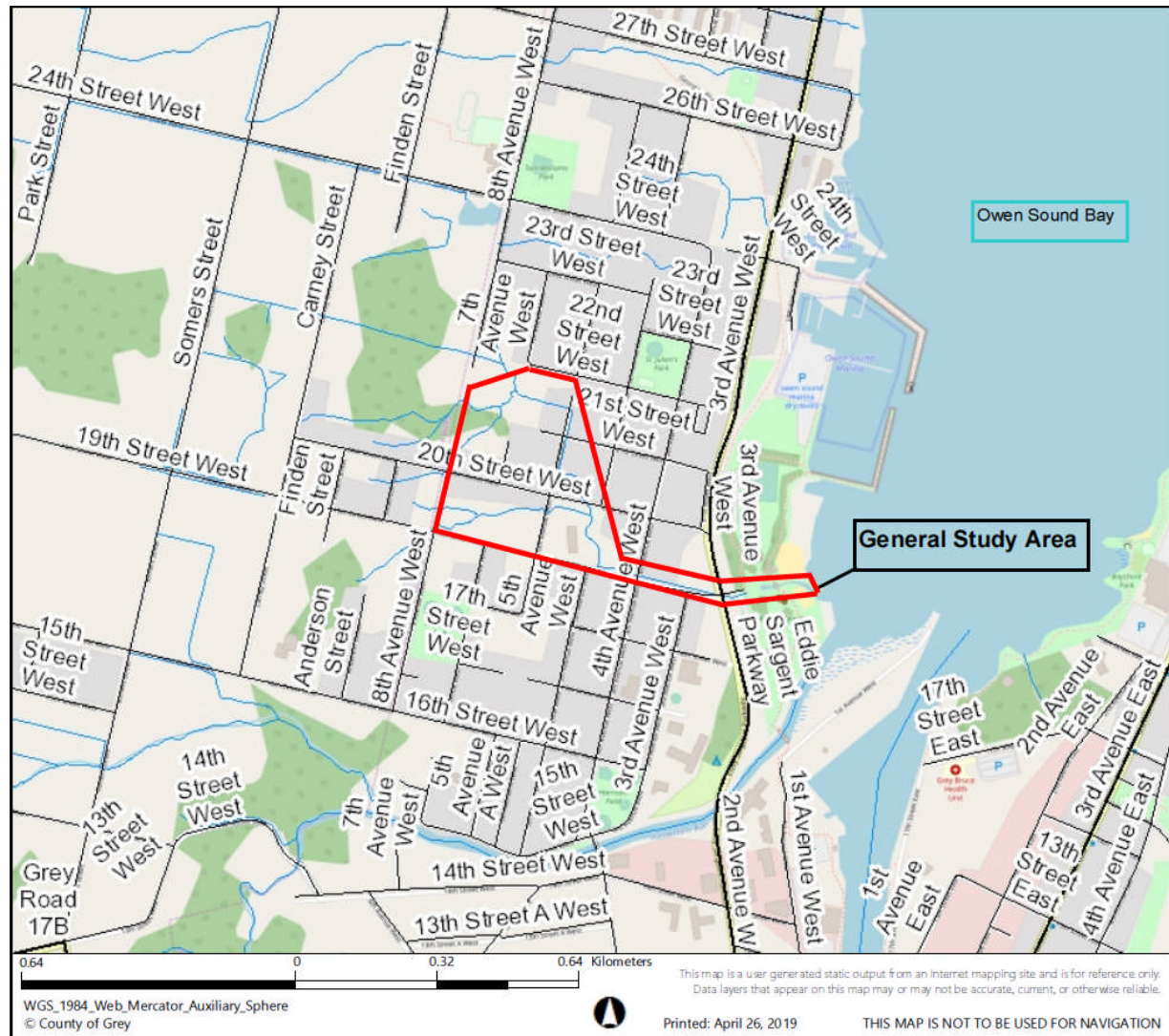
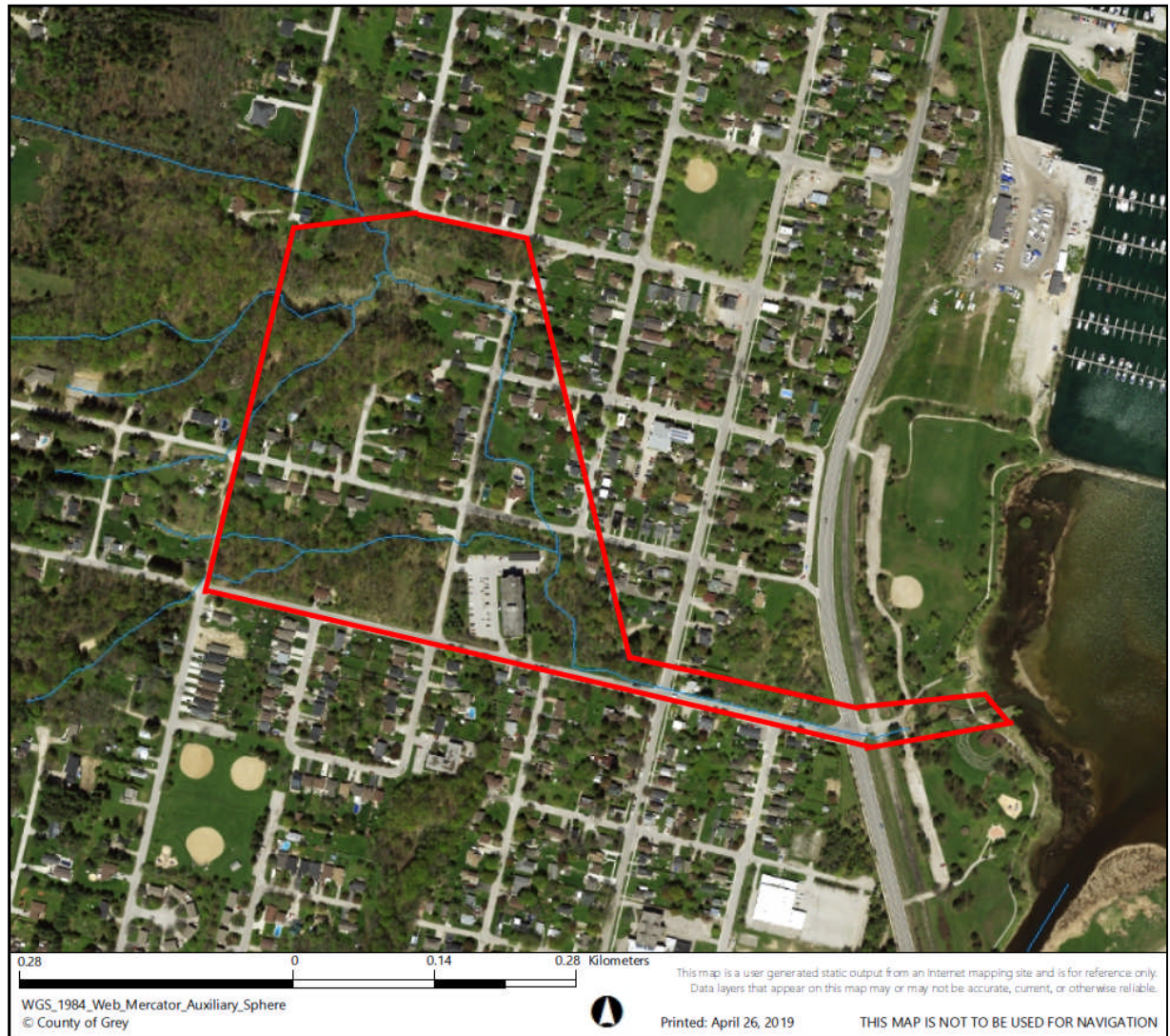
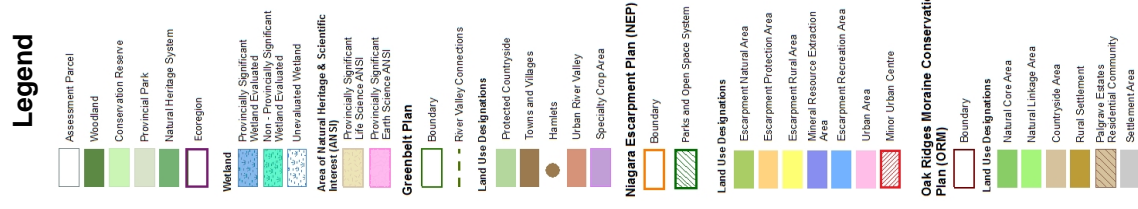


Figure No. 2: Study Watercourses & Riparian Zones

- Base map source: Grey County web site, 2015 aerial imagery with watercourses



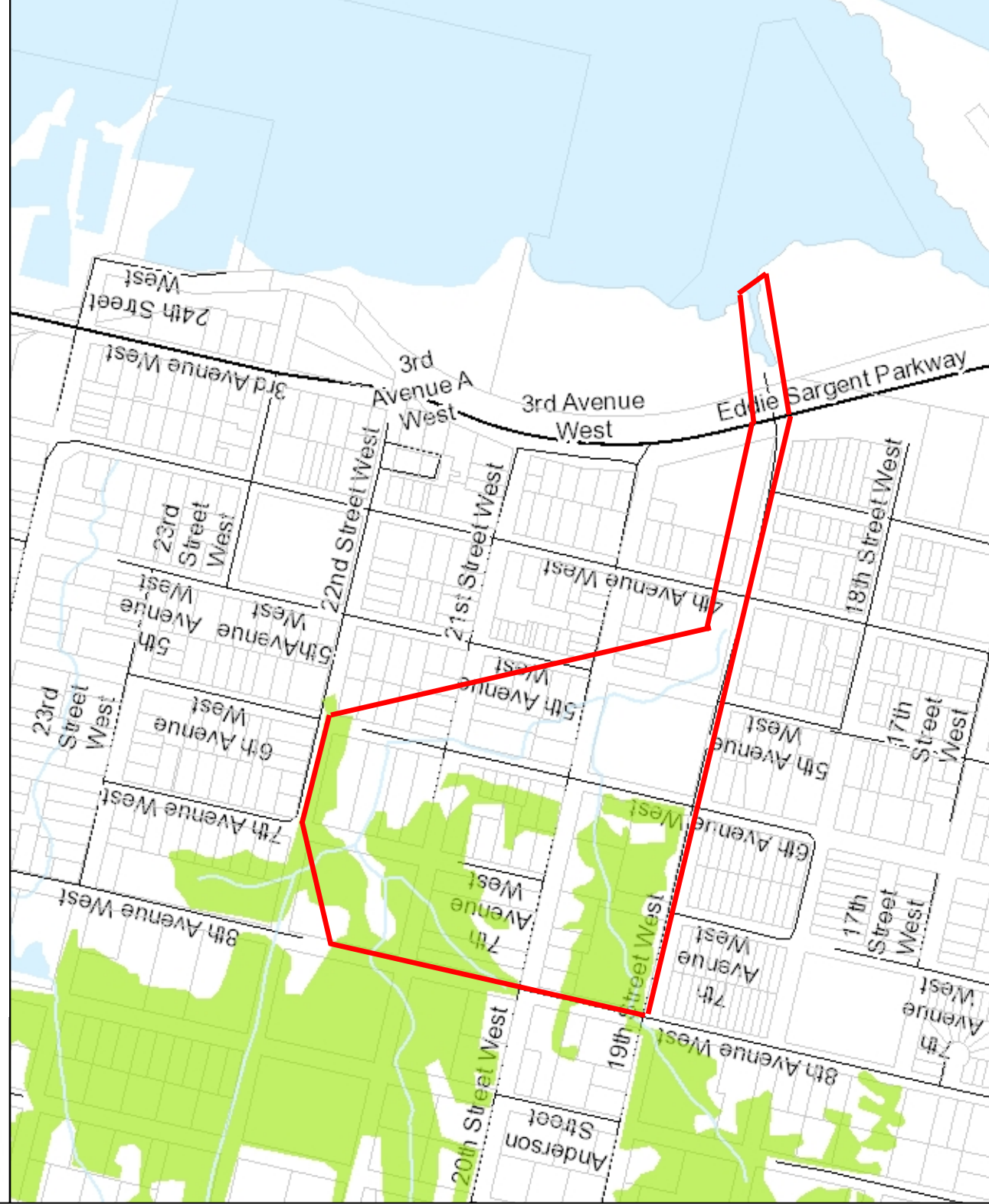


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Figure No. 4: Grey County Draft Official Plan, Appendix B Natural Heritage Constraints



Legend

- ANSI
- ANSI, Earth Life Science
- ANSI, Earth Science
- ANSI, Life Science
- Streams
- Lakes and Rivers
- Other Wetlands
- Significant Valleylands
- Significant Woodlands
- Parcels
- Large Scale Roads
- Provincial Highway
- County Road
- Township Road
- Seasonal Road
- General Study Area of Watercourses & Riparian Zones

Notes

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

WGS_1984_Web_Mercator_Auxiliary_Sphere
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Printed: April 26, 2019

THIS MAP IS NOT TO BE USED FOR NAVIGATION

0.32 Kilometers



Part of Brook Area Basin A3
City of Owen Sound

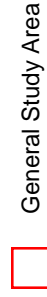
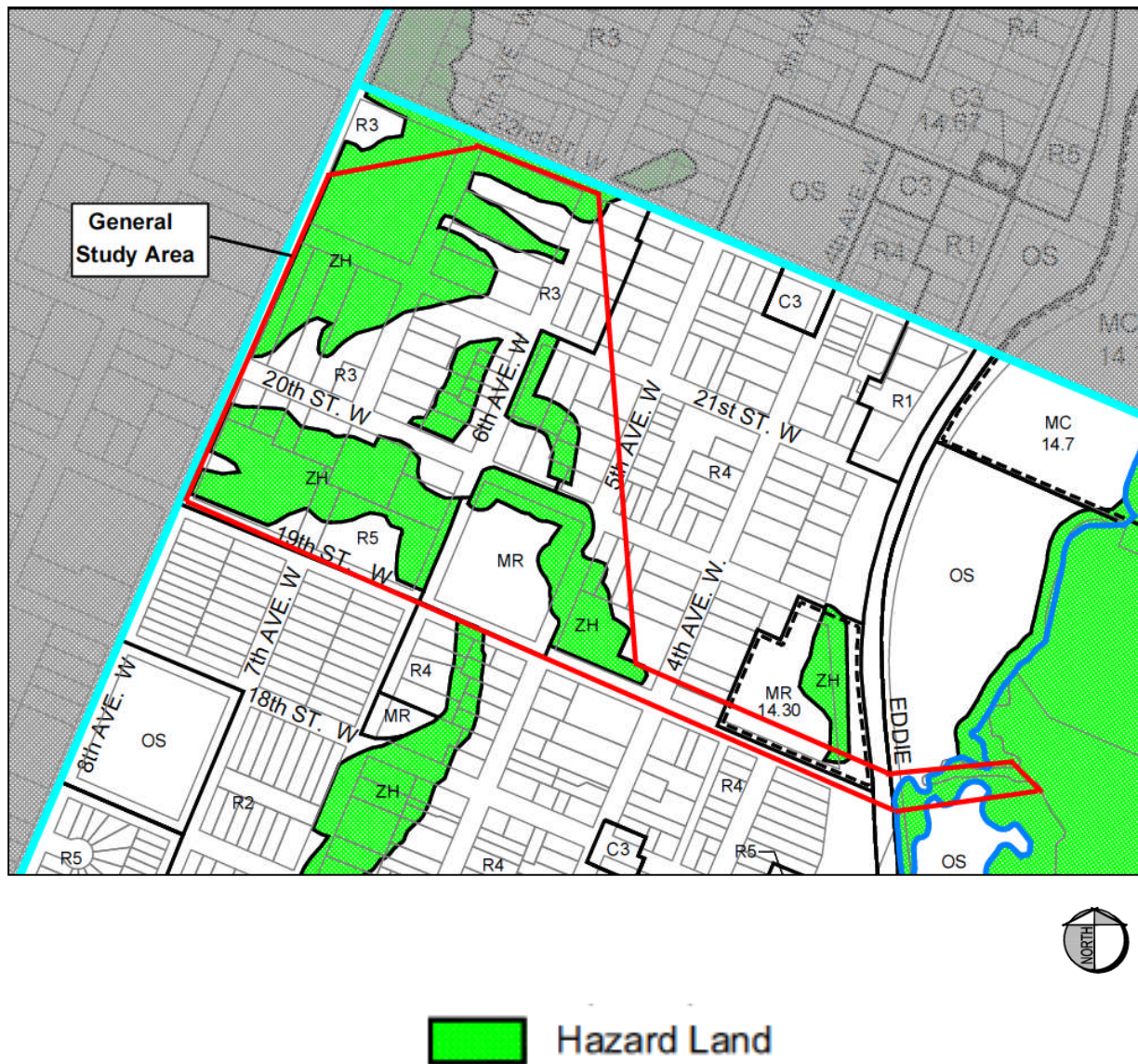


Figure No. 6: City of Owen Sound, Hazard Mapping

- Base map source: City of Owen Sound Zoning By-Law Schedule "A", map 2



- Base Map Source: GM BluePlan Engineering, Brooke Area Basin A3, with 'Key Reaches of Concern'

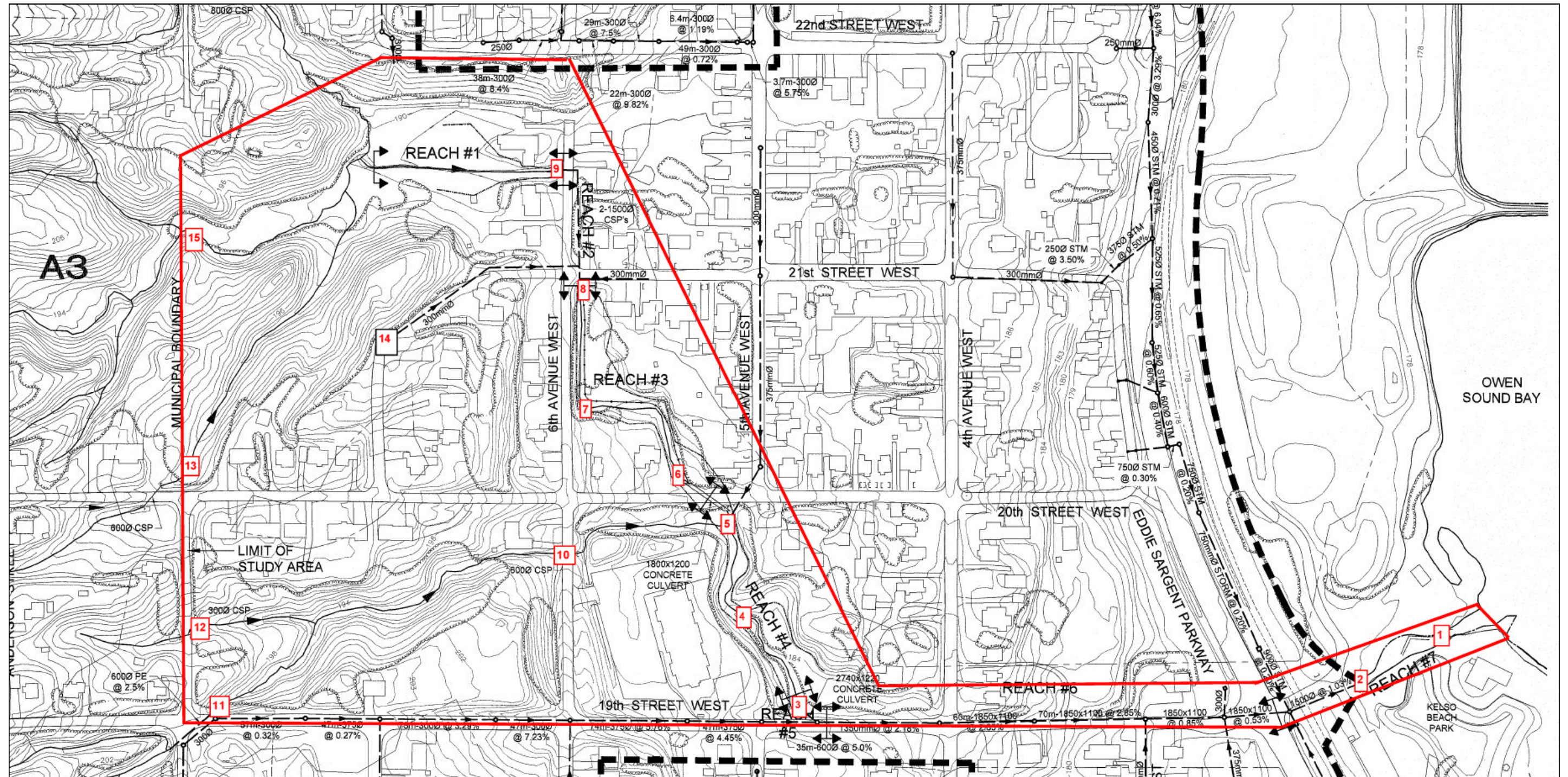
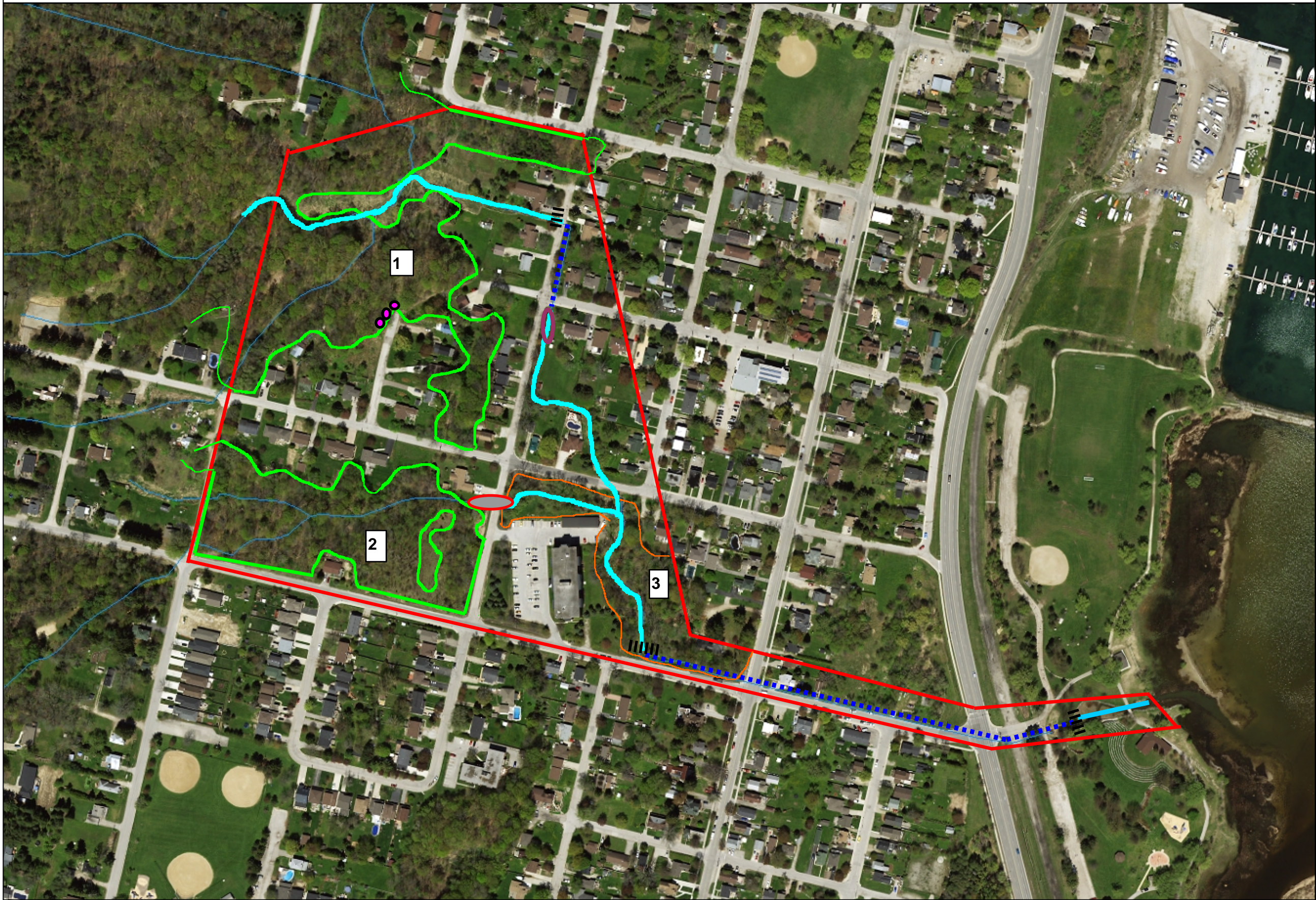


Figure No. 7: Watercourse Field Review Points

Figure No. 8: Natural Heritage Features



Legend

- Watercourses
- General Study Area
- Significant Woodlands : Polygon 1 & 2
- Woodland: Polygon 3
- Butternut: ESA Flora
- Snapping Turtle Sighting: Special Concern Species
- Open Waters, Confirmed Fish Habitat
- Buried Pipe Waters, Fish Habitat for Movement
- Grate Barrier: Prevention of Upstream Large Fish Movement
- Other Fish Barriers

Remaining watercourse sections do not directly support Fish Habitat but do provide indirect functions to downstream Fish Habitat

Notes

Part Brooke Area Basin A3
City of Owen Sound



APPENDIX 1

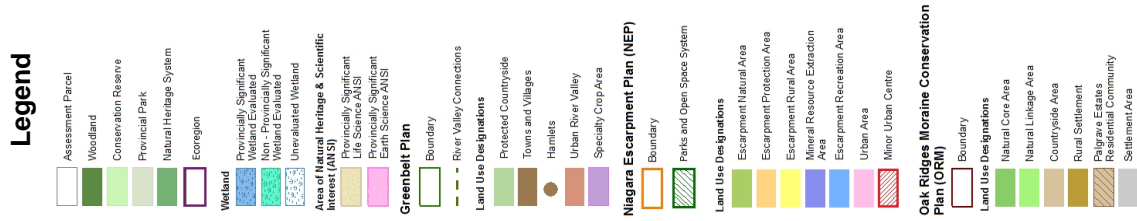
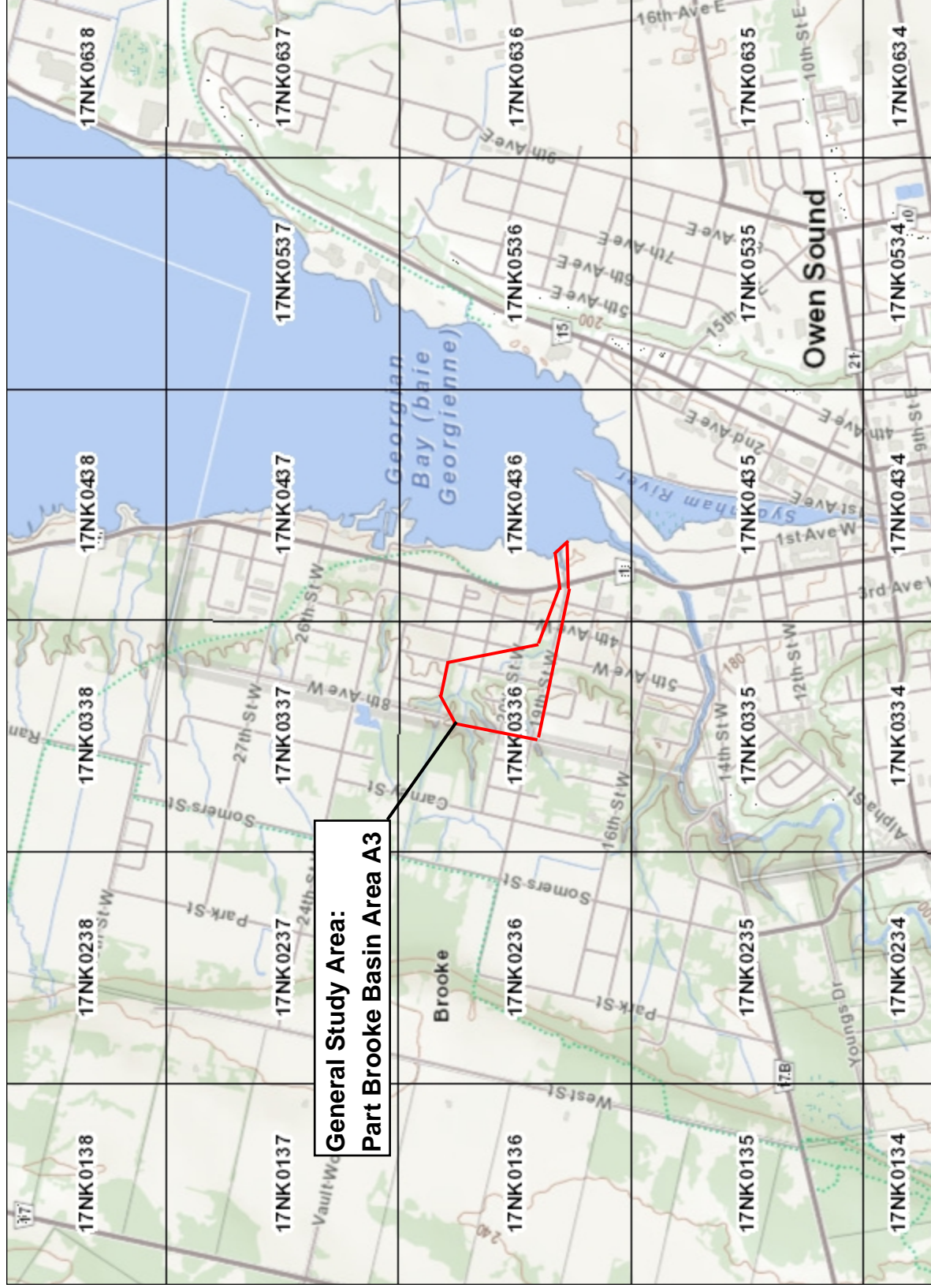
- Historical Records Search for Significant Flora and Fauna within 2 km of the Study Lands



Ministry of Natural Resources and Forestry
Make-a-Map: Natural Heritage Areas

Historical Records Search, Coverage Area Extending 2 km's from General

Notes: City of Owen Sound
Part Brook Area Basin A3



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City of Owen Sound, Part Brooke Area Basin A3

Ontario Ministry of Natural Resources and Forestry – NHIC historical records search for Significant Flora and Fauna within 2 km of the Study Area

Source:

OMNRF – Natural Heritage Information Center records in the Land Information Ontario on-line databases, with historical records for five species for the search coverage area.

Eastern Meadowlark (*Sturnella magna*)

- Provincial Ranking = S4, Provincial Status = Threatened
- Last recorded in the search area 2004

Eastern Wood-pewee (*Cotopus virens*)

- Provincial Ranking = S4, Provincial Status = Special Concern
- Last recorded in the search area pre 1984

Snapping Turtle (*Chelydra serpentina*)

- Provincial Ranking = S3, Provincial Status = Special Concern
- Last recorded in the search area 2008

Northern Brook Lamprey (*Ichthyomyzon fossor*)

- Provincial Ranking = S3, Provincial Status = Special Concern
- Last recorded in the search area 1947

Hart's-tongue Fern (*Asplenium scolopendrium*)

- Provincial Ranking = S3, Provincial Status = Rare
- Last recorded in the search area pre 1998

APPENDIX 2

- Site Photographs, 2018



Photo No. 1A: Water crossing site 1, high flow period



Photo No. 1B Water crossing site 1, base flow period



Photo No. 2A: Water crossing site X, high flow period



Photo No. 2B Water crossing site X, base flow period



Photo No. 3A: Water crossing site 3, high flow period



Photo No. 3B Water crossing site 3, base flow period



Photo No. 4A: Watercourse site 4, high flow period



Photo No. 4B Watercourse site 4, base flow period



Photo No. 5A: Water crossing site 5, high flow period



Photo No. 5B Water crossing site 5, base flow period



Photo No. 6A: Water crossing site 6, high flow period



Photo No. 6B Water crossing site 6, base flow period



Photo No. 7A: Watercourse site 7, high flow period



Photo No. 7B Watercourse site 7, base flow period



Photo No. 8A: Water crossing site 8, high flow period



Photo No. 8B Water crossing site 8, base flow period



Photo No. 9A: Water crossing site 9, high flow period



Photo No. 9B Water crossing site 9, base flow period



Photo No. 10A: Water crossing site 10, high flow period



Photo No. 10B Water crossing site 10, base flow period



Photo No. 11A: Water crossing site 11, high flow period



Photo No. 11B Water crossing site 11, base flow period



Photo No. 12A: Water crossing site 12, high flow period



Photo No. 12B Water crossing site 12, base flow period



Photo No. 13A: Water crossing site 13, high flow period



Photo No. 13B: Water crossing site 13, base flow period



Photo No. 14A: Catch Basin, high flow period



Photo No. 14B: 1 of 3 Butternut Tree at point 14, Canker



Photo No. 15A: Watercourse site 15, high flow period

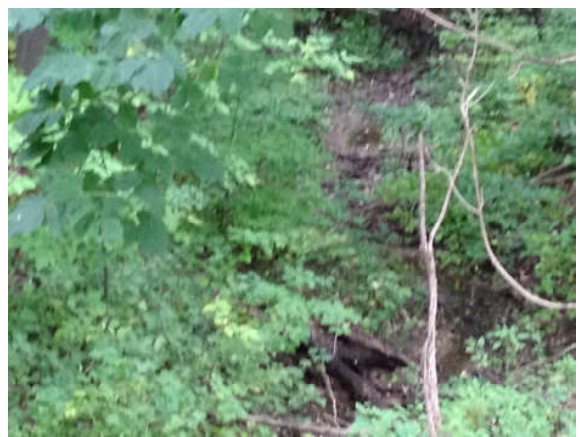


Photo No. 15B: Watercourse site 15, base flow period



Photo 16: Grate at crossing site 3



Photo 17: Grate at crossing site 9



Photo 18: Perched culvert outlet at site 10, Fish Barrier



Photo 19, Upstream of culvert, concrete then buried pipe



Photo 20: Sections of watercourse with gravel/cobble substrate



Photo 21: Section of watercourse with silt substrate

APPENDIX 3

- AWS Qualifications & EIS Experience



AWS Environmental Consulting Inc.
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C.V. Summary: John D. Morton

Education

- 1985: Graduate Sault College, Forestry Technician
- 1986: Honors Graduate Sault College, Fish & Wildlife Technologist
- 15 years training and experience with Ontario Ministry of Natural Resources as a contract & full time employee for Natural Heritage Programs and Biology/Ecology

Work Experience Summary

- 1997 to Present: Sole Proprietorship of **Aquatic and Wildlife Services**, specializing in Natural Heritage
Studies and Development Impact Assessments:
 - Over 250 Natural Heritage and Natural Environment Impact Study Reports for Land Use development proposals throughout Southwestern and Central Ontario in accordance to Legislation and Regulation for Federal and Provincial Agencies, Government and Niagara Escarpment Plan Policies and Conservation Authority Regulatory Lands.
 - Impact assessment technical reports ranging from: Single Residential Lot creations to Plan of Subdivisions for 100+ Lots, and Aggregate applications ranging from 5ha Wayside Gravel Pits to 120 ha Quarry Operations for both above and below groundwater table.
 - Design and Monitoring technical reports for Marina Development, , Water Crossings, Recreational Pond designs, Fish & Wildlife Habitat Restoration Plans and Managed Forest Plans.
 - Species At Risk Surveys for flora and fauna with study areas encompassing 20ha to 7000ha
 - Ontario Municipal Board expert witness testimony on Natural Heritage Features, Ecology, Development Impacts and Mitigation Techniques.
- 1986 to 1997 : Resource Technician with the Ontario Ministry of Natural Resources, responsibilities included:
 - Backfill positions for Owen Sound Area Office District Biologist (Fisheries and Wildlife), and District Fish & Wildlife Management Officer.
 - Review and commenting on Provincial interests through Planning Review for development proposals.
 - Deputy Conservation Officer with completion of 5-week Enforcement Training Program, Provincial Offenses charges, court evidence presentation and convictions.
 - Fish & Wildlife Population and Habitat surveys and Rehabilitation Designs.

- Midhurst District Administrator and Program Coordinator of Wetlands and CFWIP Programs with annual budgeting and auditing roles.
- Fisheries Research Technician and Fish Culture Technician, Chatsworth Fish Culture Station.
- 1982 to 1986 : Contract Resource Technician With Ontario Ministry of Natural Resources, Grey-Sauble and Saugeen Conservation Authorities, responsibilities included:
 - Wetland Inventory Technician, Fish and Wildlife Population and Habitat Surveys.

Project Related Experience Summary

- Fauna population and habitat surveys:
 - Salmonid biomass surveys through seining and Electrofishing.
 - Stream/Watershed surveys for habitat quality/conditions, fish passage/barriers, water quality assessment including Benthic Macro Invertebrate sampling.
 - Genetic research survey work on Chinook Salmon, Saugeen Muskellunge, Backcross Lake Trout.
 - Inland Lake surveys for water quality, thermal regimes, fisheries qualitative assessments through seining, trap netting, creel survey.
 - Stream/River/Lake Fisheries habitat enhancement and rehabilitation Plans.
 - Wintering Deer Yard mapping, quality assessment, carrying capacity calculations, herd health monitoring and natural reproduction rates.
 - Genetic research work on Bruce Peninsula Eastern Massassagua Rattlesnake and Black Bears including radio telemetry.
 - Breeding Bird surveys including waterfowl nesting surveys and natural recruitment success, Bald Eagle monitoring and banding, mapping of Owen Sound area significant production/staging areas.
 - Amphibian qualitative assessment within sensitive environments and monitoring population trends for wetland habitat conditions.
 - Species At Risk Surveys with habitat mapping and Ecological Land Classification community mapping for Copeland Forest, Shallow Lake Wetland, Meaford National Defense Training Centre, Grey County Pretty River Forest Tract and Oliphant Fens
- Flora species and habitat surveys:
 - Provincially Certified Wetland evaluator to Book 2 and 3 standards, with over 150 wetland evaluations and desktop upgrades completed. Wetland Evaluation instructor to former book 2 standards with successful training of 30+ candidates.
 - Southern Ontario Ecological Land Classification- Vegetation Community Mapping for sensitive and/or rare habitat types including fens, bogs, natural beaches, and alvars plus common woodland community types.
 - Botanical qualitative inventory works including identification, mapping of species of conservation concern with status levels and habitat types/condition assessments.
 - Tree marking for sustainable harvesting and rotational management of fuel wood and/or saw logs.
 - Native tree and shrub nursery operation with annual seedling production and retail sales of deciduous and conifer seedlings and saplings.

Certification & Training Courses:

- Provincially Certified Wetland Evaluator to Book 2 and Book 3 Standards
- Provincial Class 1 Electrofishing Certification
- Provincial workshop training for Natural Heritage Environmental Impact Studies, Natural Hazard Studies and Non-Renewable (Aggregates) Impact Studies
- Level '1' OMNR Law Enforcement training
- Advanced Fish Habitat training and Habitat Impact Assessment
- Fluvial Geomorphology Workshop
- Stream Bioengineering Restoration training
- Cyprinidae Identification Workshop
- Wetland Restoration Techniques Training
- Provincial Managed Forest Tax Incentive Plan Approver
- Species-At-Risk Ontario Mussel Identification
- Bruce Peninsula Eastern Massassagua Rattlesnake Habitat Identification Training through Radio Telemetry work with Parks Canada
- Ecological Land Classification System for Southern Ontario
- Provincial Tree Making Course
- WHMIS
- Ontario Courts Evidence Collection and Presentation Training
- Department of Fisheries and Oceans South Georgian Bay Fish Habitat Issues Workshop
- Provincial Butternut Health Assessor
- Biotechnical Slope Stabilization Workshop.

Recipient of Provincial -OMNR Award for Fish Habitat Restoration Works & Stewardship

Natural Heritage Environmental Impact Studies and Experience 1997-2018

Residential Subdivisions & Commercial Development

Grey County (17)		Bruce County (29)	
Andpet 16th Ave Comm Deve.-Owen Sound Loucks Subdivision- Chatsworth Langer Subdivision-Shallow Lake Boulter Subdivision- Keppel Hilton Head Subdivision- Meaford Oak Meadows Subdivision-Meaford Mannerow Estates- Owen Sound Georgian Shores Subdivision-Sarawak Sutacriti Park Phase III- Sarawak Debrincat Subdivision- Holland Ferraro Subdivision- McCullough Lake Andpet Bothwells Corner Comm.- Owen Sound HSC Alvanley Comm. Cement Plant-Keppel MacKinnon-Smart Subdivision-Francis Lake Saugeen Cedar Heights-Hanover Sunvale Homes-Durham Barry's Construction-Kilsyth		Lakeside Woods Subdivision-Saugeen Weatherhead Development- Eastnor Maple Ridge Development-Amabel Good Acres Development-Eastnor Brown Subdivision- Kincardine Sundance Estates- Bruce Walker Estates Phase II-Amabel Mystic Cove Subdivision-Kincardine Black Subdivision-Kincardine Mary Rose Subdivision-Saugeen Gray Mildmay Development- Carrick Lake Huron Escape-Bruce MacKenzie Development-Saugeen Harkins Harbour Development- Lindsay Karen Investment Ltd-Port Elgin Dent Dubdivision-Mildmay Barry's Construction- Blue Water Shores	
		Pegasus Trails-Saugeen Lorne Beach Development- Kincardine Mulholland Division St-Southampton Chippewa Golf & Country Club-Saugeen Leslie Subdivision-Saugeen McMillan Subdivision-Saugen Peacock's Meats and Groceries Inc-Tobermory John Webster-Southampton John Innes-Southampton Moravian Subdivision-Southampton Barry's Construction-Walkerton Innes Subdivision-Southampton Wellington County (2) Murphy Subdivision - Mount Forest South Saugeen Development-Mount Forest Perth County (1) Maitland River Estates - Listowel	

Infrastructure Projects & Industrial Development

Bruce County (17)		Grey County (20)	
Barrow Bay North Shore Road Bruce Road 21-Stoney Creek Bruce Road 25 Kincardine-Park Street Bruce Road 9 Bruce Road 12 Southampton Sanitary Sewers Arran Landfill Expansion Calhoun Drain Bruce County Line Road Upgrades Otter Creek-Dam Removal McClure's Bridge Silver Creek Bridges-Walkerton Saugeen Shores 10th Line Drain Mildmay Elora Street Dam Removal South Bruce Carrick-Normanby Meux Cr Bridge Mildmay Adam Street Dam Removal		Owen Sound 7th Street Drain Highway 4 Hanover-Stream Crossing Owen Sound 6th Ave Stream Course Sarawak Carney Street SWM Southgate- Camp Creek Crossing Owen Sound 9th St. Bridge Owen Sound 10th St. Extension Grey County Line Greir Creek Bridge Chatsworth- Sewage Upgrade Southgate-Stream Realignment Mill Creek Crossing Dipple Drain West Grey-Traverston Creek Realignment Owen Sound-Sydenham River Stabilization Minnihill Creek Fish Habitat Improvements	
		Town of Hanover Business Park Viking-Cives Ltd - Mount Forest Sydenham Heights-Owen Sound Servicing Georgian Bluffs-Inglis Falls Road Huron County (2) Wingham Force main Goderich Pier Stabilization Wellington County (2) Town of Minto-Coon Creek 5-Year Monitoring Town of Minto-Palmerston Industrial Park	

Natural Heritage Environmental Impact Studies and Experience 1997-2018

Recreational and Energy Land Use Development

Grey County (31)			Simcoe County (3)
<p>Monterra Plateau Stream Realignment Devils Glen Ski Hill Expansion Morris Wetland Creation Rocky Saugeen Campground Expansion Sobiski Property Shoreline Stabilization Pesnail Property Shoreline Stabilization Carmicheal Pond Cleanout Overton Pond Design Beaver River Bank Stabilization Andrews Pond Design Hrodzicki Storage Building Klages Tree Retention Plan Cedar Run Horse Park Expansion Osler Bluff Shi Club-Storage Building Osler Bluff Ski Club-Water Reservoir Blue Mount. Orchard Run Ski Hill Expansion Walters Falls Hydro Facility Proposal Blue Mount Resort-Roller Blue Mount. Resort Stream Monitoring AndPet Commercial Development East West Exchange Retreat Camp Lahman Comm. Development Blue Mount. Resort SWMP Outlet Monitoring Lee Pond Design Morrison Marina Meaford-Cemetery Creek Realignment Goodyear-Effluent Monitoring Miller Group Ltd, -Owen Sound Indus. Park Parker-Nature Retreat Resort Bayou Cable Park Inc.-Thornbury Georgian Escapes Ltd- Retreat</p>	<p>Blue Heron Parking Lot Home Hardware-Sauble Beach Mystic Cove Stream Realignment Casey Property-Bank Stabilization Wells Trucking-Mildmay MacKenzie Marina Dredging Pike Bay Marina Dredging Chesley Lake Cottagers Assoc. Dredging Miller Property Shoreline Dredging Hood Property Shoreline Dredging Smith Com. Expansion LEED Tree Retention Plan Mildmay-Hamel's Pond and Elora Street Dam</p>		<p>Hamilton Brothers Ltd.-Stream Restoration Devils Glen Stream Realignment Devils Glen Club House Expansion Robitaille Wind Farm-Cedar Point</p> <p>Dufferin County (2)</p> <p>Bowman Comm. Development Cedar Highlands Ski Club</p> <p>Wellington County (1)</p> <p>White's Creek Restoration</p> <p>Manitoulin Island (2)</p> <p>Manitoulin Streams Association Municipality Official Plan</p>

Natural Heritage Environmental Impact Studies and Experience 1997-2018

Lot Severances & Building Envelopes

Grey County (95) and NEC		
Zaferis Building Envelope Clancy- 20th Street Building Envelope Emmerson Building Envelope Shantz Building Envelope Fligg Building Envelope Todd Severance Underwood Building Envelope Klages Severances Beacock Building Envelope McNeil Building Envelope Gilbert Severances Dillman Severance Thom Severances DiFranco Severances Farnenhorst Building Envelope Biesinger Severances Love Building Envelope Braun Severances Legge Building Envelope Wilcox Building Envelope HSC Clavering Severances Holmes Building Envelope Brulette Severances Philipp Severances Sheppard Severance Pfaff Building Envelope Wilmer Severances Doherty Building Envelope Menaul Severance McNabb Building Envelope Toombs Building Envelope McGowan Building Envelope Lobban Severance	Hughes Building Envelope Wilson Building Envelope Smith Severance Currie Building Envelope Valette Building Envelope Robinson Severance Taylor Building Envelope Lowe Building Envelope Donavon Building Envelope Lupia Building Envelope Zeggil Severances McNeil Severance Byers Building Envelope Gilmour Building Envelope Martindill Severance Peach Severance Ryan Severance J. Martin Building Envelope Shrek Building Envelope James Severance Maxwell Severance Harris Severance R. Martin Building Envelope Philipp Building Envelope Bauman Building Envelope Berg Building Envelope Shrek Severance Yoder Severance Hollingshead Severance McKay Building Envelope Molner Severance Detzier Severance Baragar Building Envelope	Wiley Severance Davies Severance Stewart Severances Irwin Building Envelope Valent Building Envelope Barfoot Building Envelope Voisin Building Envelope Colborne Building Envelope Tengler Building Envelope Langeraap Building Envelope Wattie Building Envelope Hall Severance Hrodzicki Building Envelope Nicholls Dwelling Expansion NEC-Caframo Tree Preservation Plan Elliott Building Envelope Spaleta Building Envelope Haslam Severance Bethune Severance O'Sullivan Building Envelope McGlynn Building Envelope Edgar Lot Severances Moore Building Envelope Dr. Bond Lot Severance Craig Building Envelope Godwin Building Envelope Weber Envelope Vaue Stream Prod. Severances

Natural Heritage Environmental Impact Studies and Experience 1997-2018

Lot Severances & Building Envelopes continued		Species At Risk and Biological Surveys
Bruce County (42) and NEC		Bruce County (13)
Lee Building Envelopes	Hamilton Severances-Saugeen	Rankin River-Sky Lake SAR Study
Hall Building Envelope	Miramichi Shores-Copway St, Saugeen	Rankin River-Boat Lake SAR Study
Vespasiano Severance	Barclay Site Development-Saugeen	Rankin River-Isaac Lake SAR Study
Matheson Severances	Collins Severance- Kincardine	Beatty Saugeen River-Thermal
Seeman Severance	NEC - Weiss Tree Preservation Plan	Grey/Bruce Wetland Evaluation Upgrades
P. MacDonald Severances	Town of Saugeen Shores Building Envelope	Spring Creek Fish Habitat
Arcaro Building Envelope	Bennett Severance	Saugeen River-Muskellunge Habitat
Goetz Severances	Voison-Southampton	Beatty Saugeen River-Smolt Passage
Chippewa Golf Course Severances	Robinson Family-Southampton	Chesley Lake Angling Winter Creel
S. MacDonald Severances	Rudell-Fishing Islands	Peninsula Black Bear Radio Tag-Dens
Zepf Severances	Kempton Building Envelope	Peninsula Winter Yard Deer Browse
Porto Severance	Sauble Christian Fellowship-Parking Lot Exp.	Denny's Dam Fishway Monitoring
B. Elliot Severances	Lampport Building Envelope	Saugeen Shores-Significant Woodland Study
Royal Homes-Kincardine	Southampton-Division Street	
Ferguson Point Severances		Grey County (3)
CAW-Saugeen Beach Severances		Shallow Lake SAR Study
Siekierski Building Envelope		Meaford National Defence Base SAR Study
Murray Severance		Pretty River Valley County Forest SAR Study
Walker Severances	Huron County (2)	
Janssen Building Envelope	Wingham Golf Course Severances	
Knight Building Envelope	Kraemer Building Envelope	Simcoe County (1)
Thorn Severance	Simcoe County (2)	Copeland Forest SAR Study
Kramer Building Envelope	Wilbert Severances	
Smith Severances	Alliance Homes Building Envelopes	Region of Peel (1)
D. Elliot Severance	Dufferin County (1)	Rattray Marsh SAR Study
O'Conner Severances	Preist Severance	
McLay Severances	Wellington County (2)	
Burley Building Envelope	Town of Erin-Weber Building Envelope	
	Town of Erin-Langen Severance	

Natural Environment Impact Assessment Reports for Aggregate Applications

Southern & Central Ontario: 100+ Technical Reports for Pits and Quarries, above and below waterable
with successful representation at Ontario Municipal Board Hearing, Niagara Escarpment Hearings,
County and Municipal Council Presentation and Legal Court Proceedings

APPENDIX G: TECHNICAL ENVIRONMENT: BACKGROUND INFORMATION



19th Street West at 5th Avenue Culvert

Structure: 07

Bridge Condition Index (BCI):

57

Additional Investigations

Detailed Deck Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Non-Destructive Delamination Survey of Asphalt Covered Deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Substructure Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Coating Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Timber Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Post-Tension Strand Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Underwater Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Fatigue Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Seismic Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Structure Evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring of Deformations, Settlements & Movements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring of Crack Widths	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0

<u>Priority</u>			<u>Estimated Cost</u>
None	Normal	Urgent	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Total Additional Investigations Cost			\$0

Recommended Work

<u>Element</u>	<u>Repair / Rehab</u>	<u>Status</u>	<u>Cost</u>
Accessories - Signs	Replace missing hazard signs.	Urgent	\$500
Approaches - Barriers	Install end treatments to bring the barriers up to code.	1-5 Years	\$12,500
Approaches - Wearing Surface	Resurface approaches.	1-5 Years	\$5,500
Barriers - Posts	Replace rotten post.	1-5 Years	\$750
Culverts - Barrels	Remove and replace all poor concrete in original south section.	1-5 Years	\$36,500
Decks - Wearing Surface	Resurface roadway.	1-5 Years	\$2,500
Embankments & Streams - Streams and Waterways	Remove sediment and debris.	1-5 Years	\$3,000
Sub-Total Recommended Work Cost			\$61,250
Sub-Total Associated Work Cost			\$2,500
Contingencies 10.00%			\$6,000
Engineering 20.00%			\$13,000
Total Recommended & Associated Work Cost			\$82,750

Maintenance Needs

Summary Action Report

Inspection Date:5/9/2022

Bridge Condition Value (BCI)57

Next Biennial Inspection:5/9/2024

Performance Deficiencies

Maintenance Needs

Repair/Rehabilitation

Element Group	Element Name	Repair/Rehabilitation	Priority	Est. Cost
Accessories	Signs	Replace missing hazard signs.	Urgent	\$500
Approaches	Barriers	Install end treatments to bring the barriers up to code.	1-5 Years	\$12,500
Approaches	Wearing Surface	Resurface approaches.	1-5 Years	\$5,500
Barriers	Posts	Replace rotten post.	1-5 Years	\$750
Culverts	Barrels	Remove and replace all poor concrete in original south section.	1-5 Years	\$36,500
Decks	Wearing Surface	Resurface roadway.	1-5 Years	\$2,500
Embankments & Strea	Streams and Waterways	Remove sediment and debris.	1-5 Years	\$3,000
Total Repair/Rehabilitation Cost				\$61,250
Total Associated Work Cost				\$21,500
Total Cost				\$82,750

Overall Comments

Structure is in overall good condition. Wearing surface and approaches should be resurfaced and all poor concrete should be removed and replaced. Sediment and debris should be removed from bottom of culvert. The structure currently outlets into a cistern at the south end of the structure. The cistern structure is showing significant signs of deterioration which may warrant a more detailed review as part of a review of the underground infrastructure,

Additional Investigations

\$0.00

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 07

Structure Name 19th Street West at 5th Avenue Culvert

Structure ID: OS-07

Inventory Data:

Structure Name	19th Street West at 5th Avenue Culvert		
Main Hwy/Road #		On <input type="checkbox"/> Under <input type="checkbox"/>	Crossing Type: Nav Water <input type="checkbox"/> Non Nav Water <input checked="" type="checkbox"/>
Hwy/Road Name	19th Street	Rail <input type="checkbox"/> Road <input checked="" type="checkbox"/> Ped <input type="checkbox"/> Other <input type="checkbox"/>	
Structure Location			
Latitude (decimal degrees)		Longitude (decimal degrees)	
Owner(s)	City of Owen Sound	Heritage:	Not Cons <input type="checkbox"/> Cons Not/App <input type="checkbox"/> List/Not Desig <input type="checkbox"/>
Region	Southwestern	Designation:	Desig Not List <input type="checkbox"/> Desig List <input type="checkbox"/>
District	Owen Sound	Road Class:	Freeway <input type="checkbox"/> Arterial <input type="checkbox"/> Collector <input type="checkbox"/> Local <input checked="" type="checkbox"/>
Old County	Grey	No. of Lanes	2 Posted Speed 40 (km/h)
Geographic Twp	Sarawak - 402	AADT	100 Trucks 0 (%)
Structure Type	Cast-in-place Open Footing		
Total Deck Length	3.34 (m)		
Overall Str Width	16 (m)		
Total Deck Area	53.44 (sq m)	Min. Vertical Clearance	(m)
Roadway Width	8	Special Routes:	Transit <input type="checkbox"/> Truck <input type="checkbox"/> School <input checked="" type="checkbox"/> Bicycle <input type="checkbox"/>
Skew Angle	(deg)	Detour Length	(km)
No. of Spans	2	Direction of Structure	East/West
Span Lengths	2.74 (m)	Fill on Structure	(m)

Historical Data:

Year Built	1930	Year of Last Rehab	
Last OSIM Inspection	6/17/2020	Last Evaluation	
Last Enhanced OSIM Inspection		Current Load Limit	(tonnes)
Enhanced Access Equipment (ladder, boat, lift, etc)		Load Limit By Law	
		By Law expiry Date	
Last Condition Survey		Last underwater Inspection	

Rehabilitation History:

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 07

Structure Name 19th Street West at 5th Avenue Culvert

Structure ID: OS-07

Field Inspection Information:

Date of Inspection: 05/09/2022
(mm/dd/yyyy)

Inspection Type: OSIM

Inspector: Zak Stewart, P.Eng.

Others in Party: David DeBoer, E.I.T.

Equipment Used: Tape measure, digital camera

Weather: Sunny

Temperature °C: 28

Additional Investigations Required:

	Priority			Estimated Cost
	None	Normal	Urgent	
Detailed Deck Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Non-destructive Delam. Survey of Asphalt-Covered Deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Concrete Substructure Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Coating Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Timber Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Post-Tensioned Strand Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Underwater Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Fatigue Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Seismic Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Structure Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring Deformations, Settlements, Movements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring Crack Widths	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Total Cost:				\$0

Investigation Notes:

Overall Structure Notes:

Overall Comments: Structure is in overall good condition. Wearing surface and approaches should be resurfaced and all poor concrete should be removed and replaced. Sediment and debris should be removed from bottom of culvert. The structure currently outlets into a cistern at the south end of the structure. The cistern structure is showing significant signs of deterioration which may warrant a more detailed review as part of a review of the underground infrastructure,

Recommended Work: Minor Rehab

Next Inspection: 05/09/2024

Recommended Work Time: 1-5yr

Suspected Performance Deficiencies

- 00 None
- 01 Load carrying capacity
- 02 Excessive deformations (deflections & rotations)
- 03 Continuing settlement
- 04 Continuing movements
- 05 Seized bearings

- 06 Bearing not uniformly loaded/unstable
- 07 Jammed expansion joint
- 08 Pedestrian/vehicular hazard
- 09 Rough riding surface
- 10 Surface ponding
- 11 Deck drainage

- 12 Slippery surface
- 13 Flooding/channel blockage
- 14 Undermining of foundation
- 15 Unstable embankments
- 16 Other

Maintenance Needs

- 01 Lift & Swing Bridge Maintenance
- 02 Bridge Cleaning
- 03 Bridge Handrail Maintenance
- 04 Painting Steel Bridge Structures
- 05 Bridge Deck Joint Repair
- 06 Bridge Bearing Maintenance

- 07 Repair to Structural Steel
- 08 Repair to Bridge Concrete
- 09 Repair to Bridge Timber
- 10 Bailey Bridges - Maintenance
- 11 Animal/Pest Control
- 12 Bridge Surface Repair

- 13 Erosion Control at Bridges
- 14 Concrete Sealing
- 15 Rout and Seal
- 16 Bridge Deck Drainage
- 17 Scaling (Loose Concrete or ACR Steel)
- 18 Other

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 07

Structure Name 19th Street West at 5th Avenue Culvert

Structure ID: OS-07

Element Data:

Element Group:	Accessories	Length:	0.00
Element Name:	Signs	Width:	0.00
Location:	Each Quadrant	Height:	0.00
Material:	Steel	Count:	4.0
Element Type:	-	Total Quantity:	4.0
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	0.0	0.0	4.0	

Comments: Hazard markers missing on all four quadrants.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	Urgent	Maint. Desc.:			
Work Details:	Replace missing hazard signs.				

Element Group:	Approaches	Length:	10.10
Element Name:	Barriers	Width:	0.00
Location:	North corners	Height:	0.00
Material:	Steel	Count:	2.0
Element Type:	-	Total Quantity:	20.2
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:	None		

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	m	0.0	18.2	2.0	0.0	

Comments: Steel rail with wood post in good condition. Light corrosion throughout. Barrier ends are not up to code, energy attenuators are required. One post with moderate rot.

Recommended Work:	Rehab	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Install end treatments to bring the barriers up to code.				

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 07

Structure Name 19th Street West at 5th Avenue Culvert

Structure ID: OS-07

Element Group:	Approaches	Length:	5.00
Element Name:	Wearing Surface	Width:	8.00
Location:	Each End	Height:	0.00
Material:	Asphalt	Count:	2.0
Element Type:	-	Total Quantity:	80.0
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:	None		

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	0.0	0.0	80.0	

Comments: Severe alligator cracking along north and south sides, wide longitudinal crack along centreline of road.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Resurface approaches.				

Element Group:	Barriers	Length:	0.20
Element Name:	Posts	Width:	0.20
Location:	North Side	Height:	6.90
Material:	Wood	Count:	3.0
Element Type:	Wood Post	Total Quantity:	3.0
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	2.0	1.0	0.0	

Comments: In overall good conditon, single post with moderate rot

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Replace rotten post.				

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 07

Structure Name 19th Street West at 5th Avenue Culvert

Structure ID: OS-07

Element Group:	Barriers	Length:	1.90
Element Name:	Railing Systems	Width:	0.00
Location:	North Side	Height:	0.00
Material:	Steel	Count:	2.0
Element Type:	Steel Flex Beam on Wood Post	Total Quantity:	3.8
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	m	0.0	3.8	0.0	0.0	

Comments: In overall good condition.

Recommended Work:		Maint. Needs:		Maint. Priority:	
Recommended Timing:	None	Maint. Desc.:			
Work Details:					

Element Group:	Culverts	Length:	2.74
Element Name:	Barrels	Width:	16.00
Location:		Height:	1.22
Material:	Precast Concrete	Count:	1.0
Element Type:	Box (Closed Bottom)	Total Quantity:	94.4
Environment:	Moderate	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:	None		

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	47.2	23.6	23.6	

Comments: Cannot see original south section from north end, but appears to be deteriorating more than north section. North section is newer and appears to be in overall good condition. Limited inspection due to gate blocking access. Quantities are based off of previous inspections.

Recommended Work:	Rehab	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Remove and replace all poor concrete in original south section.				

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 07

Structure Name 19th Street West at 5th Avenue Culvert

Structure ID: OS-07

Element Group:	Culverts	Length:	0.00
Element Name:	Inlet Components	Width:	0.00
Location:	North End	Height:	0.00
Material:	Precast Concrete	Count:	1.0
Element Type:		Total Quantity:	1.0
Environment:	Moderate	Limited Inspection	<input type="checkbox"/>
Protection System:	None		

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	0.0	1.0	0.0	

Comments: Grate over upstream end of structure has deformed vertical bars. Some grate anchors have pulled out from the concrete. In overall fair condition.

Recommended Work:		Maint. Needs:		Maint. Priority:	
Recommended Timing:	None	Maint. Desc.:			
Work Details:					

Element Group:	Decks	Length:	3.70
Element Name:	Deck Top	Width:	16.00
Location:		Height:	0.00
Material:	Cast-in-Place Concrete	Count:	1.0
Element Type:	Cast-in-place Concrete on Supports	Total Quantity:	59.2
Environment:	Benign	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	59.2	0.0	0.0	

Comments: Not visible, but appears stable.

Recommended Work:		Maint. Needs:		Maint. Priority:	
Recommended Timing:	None	Maint. Desc.:			
Work Details:					

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 07

Structure Name 19th Street West at 5th Avenue Culvert

Structure ID: OS-07

Element Group:	Decks	Length:	3.70
Element Name:	Wearing Surface	Width:	8.00
Location:		Height:	0.00
Material:	Asphalt	Count:	1.0
Element Type:	-	Total Quantity:	29.6
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:	None		
Condition Data:	Units:	Exc.	Good:
	sq.m.	0.0	0.0
		Fair:	Poor:
		0.0	29.6
Comments:	Severe alligator cracking with settlement at edges of pavement. 0.5m2 pothole		
Recommended Work:	Replace	Maint. Needs:	Maint. Priority:
Recommended Timing:	1-5 Years	Maint. Desc.:	
Work Details:	Resurface roadway.		

Element Group:	Embankments & Streams	Length:	0.00
Element Name:	Embankments	Width:	0.00
Location:	Each Corner	Height:	0.00
Material:	Vegetation	Count:	2.0
Element Type:	-	Total Quantity:	2.0
Environment:	Moderate	Limited Inspection	<input type="checkbox"/>
Protection System:			
Condition Data:	Units:	Exc.	Good:
	Each	0.0	1.0
		Fair:	Poor:
		1.0	0.0
Comments:	Heavily vegetated with minor erosion on north banks.		
Recommended Work:		Maint. Needs:	Maint. Priority:
Recommended Timing:	None	Maint. Desc.:	
Work Details:			

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 07

Structure Name 19th Street West at 5th Avenue Culvert

Structure ID: OS-07

Element Group:	Embankments & Streams	Length:	0.00
Element Name:	Streams and Waterways	Width:	0.00
Location:		Height:	0.00
Material:		Count:	1.0
Element Type:	-	Total Quantity:	1.0
Environment:	Moderate	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	0.0	0.0	1.0	

Comments: Sediment and debris accumulation within bottom of structure is restricting flow.

Recommended Work:	Rehab	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Remove sediment and debris.				

Element Group:	Foundations	Length:	0.00
Element Name:	Foundation (below ground level)	Width:	0.00
Location:	Each End	Height:	0.00
Material:	Cast-in-Place Concrete	Count:	1.0
Element Type:	Spread	Total Quantity:	1.0
Environment:	Moderate	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:	None		

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	1.0	0.0	0.0	

Comments: Not visible but structure appears stable.

Recommended Work:		Maint. Needs:		Maint. Priority:	
Recommended Timing:	None	Maint. Desc.:			
Work Details:					

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 07

Structure Name 19th Street West at 5th Avenue Culvert

Structure ID: OS-07

Repair / Rehabilitation Required

Element Group	Element	Repair / Rehabilitation	Priority	Const Cost
Accessories	Signs	Replace missing hazard signs.	Urgent	\$500
Approaches	Barriers	Install end treatments to bring the barriers up to code.	1-5 Years	\$12,500
Approaches	Wearing Surface	Resurface approaches.	1-5 Years	\$5,500
Barriers	Posts	Replace rotten post.	1-5 Years	\$750
Culverts	Barrels	Remove and replace all poor concrete in original south section.	1-5 Years	\$36,500
Decks	Wearing Surface	Resurface roadway.	1-5 Years	\$2,500
Embankments & Streams	Streams and Waterways	Remove sediment and debris.	1-5 Years	\$3,000

Total Repair/Rehabilitation Cost \$61,250

Associated Work

	Comments	Estimated Cost
Approaches		\$0
Detours		\$0
Traffic Control	<i>Partial road closure may be required.</i>	\$2,500
Utilities		\$0
Right-of-Way		\$0
Environmental Study		\$0
Other	<i>none</i>	\$0

Contingencies	10.00%	\$6,000
Engineering	20.00%	\$13,000

Total Associated Work Cost \$21,500

Total Repair / Rehabilitation Cost \$61,250

Total Cost \$82,750

Justification

The recommended repairs are intended to extend the useful life cycle of the structure and maintain pedestrian and motorist safety.

Inspection Photos



View of structure facing southwest.



View of structure facing west.



View of soffit.



View of barrier post rot.



View of gate anchor being pulled from concrete.



View of wearing surface alligator cracking.



View of wearing surface potholes.



20th Street West at 5th Avenue Culvert

Structure: 08

Bridge Condition Index (BCI):

74

Additional Investigations

Detailed Deck Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Non-Destructive Delamination Survey of Asphalt Covered Deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Substructure Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Coating Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Timber Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Post-Tension Strand Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Underwater Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Fatigue Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Seismic Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Structure Evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring of Deformations, Settlements & Movements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring of Crack Widths	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0

<u>Priority</u>			<u>Estimated Cost</u>
None	Normal	Urgent	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Total Additional Investigations Cost			\$0

Recommended Work

<u>Element</u>	<u>Repair / Rehab</u>	<u>Status</u>	<u>Cost</u>
Approaches - Wearing Surface	Resurface and repair granular base during major road works.	6-10 Years	\$2,500
Sub-Total Recommended Work Cost			\$2,500
Sub-Total Associated Work Cost			\$2,500
Contingencies 10.00%			\$0
Engineering 20.00%			\$1,000
Total Recommended & Associated Work Cost			\$6,000

Maintenance Needs

Ontario Structure Inspection Manual - Inspection Form		MTO Site Number:	08
Structure Name	20th Street West at 5th Avenue Culvert	Structure ID:	OS-08

Summary Action Report

Inspection Date:

5/9/2022

Bridge Condition Value (BCI)

74

Next Biennial Inspection:

5/9/2024

Performance Deficiencies

Maintenance Needs

Repair/Rehabilitation

Element Group	Element Name	Repair/Rehabilitation	Priority	Est. Cost
Approaches	Wearing Surface	Resurface and repair granular base during major road works.	6-10 Years	\$2,500
Total Repair/Rehabilitation Cost				\$2,500
Total Associated Work Cost				\$3,500
Total Cost				\$6,000

Overall Comments

In overall good condition. Approaches should be resurfaced.

Additional Investigations

\$0.00

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 08

Structure Name 20th Street West at 5th Avenue Culvert

Structure ID: OS-08

Inventory Data:

Structure Name	20th Street West at 5th Avenue Culvert		
Main Hwy/Road #		On <input type="checkbox"/> Under <input type="checkbox"/>	Crossing Type: Nav Water <input type="checkbox"/> Non Nav Water <input checked="" type="checkbox"/>
Hwy/Road Name	20th Street West	Rail <input type="checkbox"/> Road <input checked="" type="checkbox"/> Ped <input type="checkbox"/> Other <input type="checkbox"/>	
Structure Location			
Latitude (decimal degrees)		Longitude (decimal degrees)	
Owner(s)	City of Owen Sound	Heritage:	Not Cons <input type="checkbox"/> Cons Not/App <input type="checkbox"/> List/Not Desig <input type="checkbox"/>
Region	Southwestern	Designation:	Desig Not List <input type="checkbox"/> Desig List <input type="checkbox"/>
District	Owen Sound	Road Class:	Freeway <input type="checkbox"/> Arterial <input type="checkbox"/> Collector <input type="checkbox"/> Local <input checked="" type="checkbox"/>
Old County	Grey	No. of Lanes	2 Posted Speed 50 (km/h)
Geographic Twp	Sarawak - 402	AADT	500 Trucks 0 (%)
Structure Type	Cast-in-place (open footing) culvert		
Total Deck Length	2.4 (m)		
Overall Str Width	30 (m)		
Total Deck Area	72 (sq m)	Min. Vertical Clearance	(m)
Roadway Width	6.4	Special Routes:	Transit <input type="checkbox"/> Truck <input type="checkbox"/> School <input type="checkbox"/> Bicycle <input type="checkbox"/>
Skew Angle	(deg)	Detour Length	(km)
No. of Spans	1	Direction of Structure	East/West
Span Lengths	1.8 (m)	Fill on Structure	(m)

Historical Data:

Year Built	1994	Year of Last Rehab	
Last OSIM Inspection	6/17/2020	Last Evaluation	
Last Enhanced OSIM Inspection		Current Load Limit	(tonnes)
Enhanced Access Equipment (ladder, boat, lift, etc)		Load Limit By Law	
		By Law expiry Date	
Last Condition Survey		Last underwater Inspection	

Rehabilitation History:

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 08

Structure Name 20th Street West at 5th Avenue Culvert

Structure ID: OS-08

Field Inspection Information:

Date of Inspection: 05/09/2022
(mm/dd/yyyy)

Inspection Type: OSIM

Inspector: Zak Stewart, P.Eng.

Others in Party: David DeBoer, E.I.T.

Equipment Used: Tape measure, digital camera, chain

Weather: Sunny

Temperature °C: 27

Additional Investigations Required:

	Priority			Estimated Cost
	None	Normal	Urgent	
Detailed Deck Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Non-destructive Delam. Survey of Asphalt-Covered Deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Concrete Substructure Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Coating Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Timber Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Post-Tensioned Strand Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Underwater Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Fatigue Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Seismic Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Structure Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring Deformations, Settlements, Movements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring Crack Widths	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Total Cost:				\$0

Investigation Notes:

Overall Structure Notes:

Overall Comments: In overall good condition. Approaches should be resurfaced.

Recommended Work: Minor Rehab

Next Inspection: 05/09/2024

Recommended Work Time: 6-10yr

Suspected Performance Deficiencies

- 00 None
- 01 Load carrying capacity
- 02 Excessive deformations (deflections & rotations)
- 03 Continuing settlement
- 04 Continuing movements
- 05 Seized bearings

- 06 Bearing not uniformly loaded/unstable
- 07 Jammed expansion joint
- 08 Pedestrian/vehicular hazard
- 09 Rough riding surface
- 10 Surface ponding
- 11 Deck drainage

- 12 Slippery surface
- 13 Flooding/channel blockage
- 14 Undermining of foundation
- 15 Unstable embankments
- 16 Other

Maintenance Needs

- 01 Lift & Swing Bridge Maintenance
- 02 Bridge Cleaning
- 03 Bridge Handrail Maintenance
- 04 Painting Steel Bridge Structures
- 05 Bridge Deck Joint Repair
- 06 Bridge Bearing Maintenance

- 07 Repair to Structural Steel
- 08 Repair to Bridge Concrete
- 09 Repair to Bridge Timber
- 10 Bailey Bridges - Maintenance
- 11 Animal/Pest Control
- 12 Bridge Surface Repair

- 13 Erosion Control at Bridges
- 14 Concrete Sealing
- 15 Rout and Seal
- 16 Bridge Deck Drainage
- 17 Scaling (Loose Concrete or ACR Steel)
- 18 Other

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 08

Structure Name 20th Street West at 5th Avenue Culvert

Structure ID: OS-08

Element Data:

Element Group:	Approaches	Length:	5.00
Element Name:	Wearing Surface	Width:	6.40
Location:	Each End	Height:	0.00
Material:	Asphalt	Count:	2.0
Element Type:	-	Total Quantity:	64.0
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:	None		

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	29.0	29.3	0.8	5.0	

Comments: New asphalt over portion of west wearing surface in excellent condition. 4m of cracking along north edge. Eastern wearing surface in good overall condition with 3m of medium cracking along edges.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	6-10 Years	Maint. Desc.:			
Work Details:	Resurface and repair granular base during major road works.				

Element Group:	Culverts	Length:	1.80
Element Name:	Barrels	Width:	30.00
Location:		Height:	1.20
Material:	Reinforced Concrete	Count:	1.0
Element Type:	Frames - Rigid (3-Sided)	Total Quantity:	58.3
Environment:	Moderate	Limited Inspection	<input type="checkbox"/>
Protection System:	None		

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	57.3	0.0	1.0	

Comments: 1 m2 of honeycombing. In overall good condition.

Recommended Work:		Maint. Needs:		Maint. Priority:	
Recommended Timing:	None	Maint. Desc.:			
Work Details:					

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 08

Structure Name 20th Street West at 5th Avenue Culvert

Structure ID: OS-08

Element Group:	Culverts	Length:	0.00
Element Name:	Inlet Components	Width:	3.60
Location:	North end	Height:	1.00
Material:	Reinforced Concrete	Count:	1.0
Element Type:	-	Total Quantity:	3.6
Environment:	Moderate	Limited Inspection	<input type="checkbox"/>
Protection System:	None		
Condition Data:	Units: Exc. Good: Fair: Poor:	Performance Deficiencies:	
	sq.m. 0.0 3.6 0.0 0.0		
Comments:	Minor honeycombing. In overall good condition.		
Recommended Work:		Maint. Needs:	Maint. Priority:
Recommended Timing:	None	Maint. Desc.:	
Work Details:			

Element Group:	Culverts	Length:	0.00
Element Name:	Outlet Components	Width:	3.60
Location:	South End	Height:	0.00
Material:	Reinforced Concrete	Count:	1.0
Element Type:	-	Total Quantity:	3.6
Environment:	Moderate	Limited Inspection	<input type="checkbox"/>
Protection System:	None		
Condition Data:	Units: Exc. Good: Fair: Poor:	Performance Deficiencies:	
	sq.m. 0.0 3.6 0.0 0.0		
Comments:	Hairline cracks in cold joints at haunches. Minor honeycombing. In overall good condition		
Recommended Work:		Maint. Needs:	Maint. Priority:
Recommended Timing:	None	Maint. Desc.:	
Work Details:			

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 08

Structure Name 20th Street West at 5th Avenue Culvert

Structure ID: OS-08

Element Group:	Decks	Length:	2.40
Element Name:	Deck Top	Width:	30.00
Location:		Height:	0.00
Material:	Reinforced Concrete	Count:	1.0
Element Type:	Cast-in-place Concrete on Supports	Total Quantity:	72.0
Environment:	Moderate	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	72.0	0.0	0.0	

Comments: Exposed concrete at each end in good condition.

Recommended Work:		Maint. Needs:		Maint. Priority:	
Recommended Timing:	None	Maint. Desc.:			
Work Details:					

Element Group:	Decks	Length:	3.60
Element Name:	Wearing Surface	Width:	6.40
Location:		Height:	0.00
Material:	Asphalt	Count:	1.0
Element Type:	-	Total Quantity:	23.0
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:	None		

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	23.0	0.0	0.0	

Comments: Minor cracking along edges. In overall good condition.

Recommended Work:		Maint. Needs:		Maint. Priority:	
Recommended Timing:	None	Maint. Desc.:			
Work Details:					

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 08

Structure Name 20th Street West at 5th Avenue Culvert

Structure ID: OS-08

Element Group:	Embankments & Streams					Length:	0.00
Element Name:	Embankments					Width:	0.00
Location:	Each corner					Height:	0.00
Material:	Vegetation					Count:	4.0
Element Type:	-					Total Quantity:	4.0
Environment:	Moderate					Limited Inspection	<input type="checkbox"/>
Protection System:	None						
Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:	
	Each	0.0	4.0	0.0	0.0		
Comments:	In overall good condition						
Recommended Work:			Maint. Needs:			Maint. Priority:	
Recommended Timing:	None		Maint. Desc.:				
Work Details:							

Element Group:	Embankments & Streams					Length:	0.00
Element Name:	Streams and Waterways					Width:	0.00
Location:						Height:	0.00
Material:						Count:	1.0
Element Type:	-					Total Quantity:	1.0
Environment:	Moderate					Limited Inspection	<input type="checkbox"/>
Protection System:	None						
Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:	
	Each	0.0	1.0	0.0	0.0		
Comments:	Moderate vegetation at outlet. In overall good condition.						
Recommended Work:			Maint. Needs:			Maint. Priority:	
Recommended Timing:	None		Maint. Desc.:				
Work Details:							

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 08

Structure Name 20th Street West at 5th Avenue Culvert

Structure ID: OS-08

Element Group:	Foundations	Length:	0.00
Element Name:	Foundation (below ground level)	Width:	0.00
Location:	Each End	Height:	0.00
Material:	Concrete	Count:	1.0
Element Type:	-	Total Quantity:	1.0
Environment:	Moderate	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:	None		

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	1.0	0.0	0.0	

Comments: Not visible but structure appears stable.

Recommended Work:		Maint. Needs:		Maint. Priority:	
Recommended Timing:	None	Maint. Desc.:			
Work Details:					

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 08

Structure Name 20th Street West at 5th Avenue Culvert

Structure ID: OS-08

Repair / Rehabilitation Required

Element Group	Element	Repair / Rehabilitation	Priority	Const Cost
Approaches	Wearing Surface	Resurface and repair granular base during major road works.	6-10 Years	\$2,500

Total Repair/Rehabilitation Cost \$2,500

Associated Work

	Comments	Estimated Cost
Approaches		\$0
Detours		\$0
Traffic Control		\$2,500
Utilities		\$0
Right-of-Way		\$0
Environmental Study		\$0
Other	none	\$0

Contingencies	10.00%	\$0
Engineering	20.00%	\$1,000
Total Associated Work Cost		\$3,500
Total Repair / Rehabilitation Cost		\$2,500
Total Cost		\$6,000

Justification

Recommended repairs are intended to maintain motorist safety.

Inspection Photos



View of structure facing south.



View of structure facing west.



View of barrel.



Minor honeycombing on abutment wall.



View of asphalt cracking along northwest approach.



View of alligator cracking near southwest.



View of alligator cracking.



21st Street West and 6th Avenue Culvert

Structure: 09a

Bridge Condition Index (BCI):

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Additional Investigations

	Priority			<u>Estimated Cost</u>
	None	Normal	Urgent	
Detailed Deck Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Non-Destructive Delamination Survey of Asphalt Covered Deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Substructure Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Coating Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Timber Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Post-Tension Strand Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Underwater Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Fatigue Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Seismic Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Structure Evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring of Deformations, Settlements & Movements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring of Crack Widths	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Total Additional Investigations Cost				\$0

Recommended Work

<u>Element</u>	<u>Repair / Rehab</u>	<u>Status</u>	<u>Cost</u>
Abutments - Abutment Walls	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$80,000
Abutments - Wingwalls	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$10,000
Approaches - Wearing Surface	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$117,000
Barriers - Posts	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$10,000
Barriers - Railing Systems	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$10,000
Decks - Soffit - Inside Boxes	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$80,000
Decks - Wearing Surface	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$25,000
Embankments & Streams - Streams and Waterways	Reslope stream bed 9a in conjunction with 9b and 9c.	1-5 Years	\$5,000
Foundations - Foundation (below ground level)	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$180,000
Sidewalks/Curbs - Curbs	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$15,000
Sub-Total Recommended Work Cost			\$532,000
Sub-Total Associated Work Cost			\$450,000
Contingencies 10.00%			\$98,000
Engineering 15.00%			\$147,000
Total Recommended & Associated Work Cost			\$1,227,000

Maintenance Needs

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09a

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09a

Summary Action Report

Inspection Date: 9/8/2022

Bridge Condition Value (BCI) 37

Next Biennial Inspection: 9/8/2024

Performance Deficiencies

Maintenance Needs

Repair/Rehabilitation

Element Group	Element Name	Repair/Rehabilitation	Priority	Est. Cost
Abutments	Abutment Walls	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$80,000
Abutments	Wingwalls	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$10,000
Approaches	Wearing Surface	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$117,000
Barriers	Posts	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$10,000
Barriers	Railing Systems	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$10,000
Decks	Soffit - Inside Boxes	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$80,000
Decks	Wearing Surface	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$25,000
Embankments & Strea	Streams and Waterways	Reslope stream bed 9a in conjunction with 9b and 9c.	1-5 Years	\$5,000
Foundations	Foundation (below ground level)	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$180,000
Sidewalks/Curbs	Curbs	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$15,000
Total Repair/Rehabilitation Cost				\$532,000
Total Associated Work Cost				\$695,000
Total Cost				\$1,227,000

Overall Comments

The structure is in overall poor condition with several elements requiring major rehabilitation. It is our understanding that the City intends to replace structure 9c in the near future. Given the condition of the structure we recommend it be replaced entirely in conjunction with structure 9c and 9b.

Additional Investigations

\$0.00

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09a

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09a

Inventory Data:

Structure Name	21st Street West and 6th Avenue Culvert		
Main Hwy/Road #		On <input type="checkbox"/> Under <input type="checkbox"/>	Crossing Type: Nav Water <input type="checkbox"/> Non Nav Water <input checked="" type="checkbox"/>
Hwy/Road Name	21st Street	Rail <input type="checkbox"/> Road <input checked="" type="checkbox"/> Ped <input type="checkbox"/> Other <input type="checkbox"/>	
Structure Location			
Latitude (decimal degrees)		Longitude (decimal degrees)	
Owner(s)	City of Owen Sound	Heritage:	Not Cons <input type="checkbox"/> Cons Not/App <input type="checkbox"/> List/Not Desig <input type="checkbox"/>
Region	Southwestern	Designation:	Desig Not List <input type="checkbox"/> Desig List <input type="checkbox"/>
District	Owen Sound	Road Class:	Freeway <input type="checkbox"/> Arterial <input type="checkbox"/> Collector <input type="checkbox"/> Local <input checked="" type="checkbox"/>
Old County	Grey	No. of Lanes	2 Posted Speed 40 (km/h)
Geographic Twp	Sarawak - 402	AADT	Trucks (%)
Structure Type	Open Footing CIP Culvert		
Total Deck Length	3.3 (m)		
Overall Str Width	16 (m)		
Total Deck Area	52.8 (sq m)	Min. Vertical Clearance	(m)
Roadway Width	7.8	Special Routes:	Transit <input checked="" type="checkbox"/> Truck <input checked="" type="checkbox"/> School <input checked="" type="checkbox"/> Bicycle <input checked="" type="checkbox"/>
Skew Angle	(deg)	Detour Length	(km)
No. of Spans	1	Direction of Structure	East/West
Span Lengths	2.7 (m)	Fill on Structure	(m)

Historical Data:

Year Built	1920	Year of Last Rehab	
Last OSIM Inspection	6/17/2020	Last Evaluation	
Last Enhanced OSIM Inspection		Current Load Limit	(tonnes)
Enhanced Access Equipment (ladder, boat, lift, etc)		Load Limit By Law	
		By Law expiry Date	
Last Condition Survey		Last underwater Inspection	

Rehabilitation History:

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09a

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09a

Field Inspection Information:

Date of Inspection: 09/08/2022 Inspection Type: OSIM
 Inspector: Zak Stewart, P.Eng.
 Others in Party: David DeBoer, E.I.T.
 Equipment Used: Measuring tape, digital camera, hammer
 Weather: Sunny
 Temperature °C: 22

Additional Investigations Required:

	Priority			Estimated Cost
	None	Normal	Urgent	
Detailed Deck Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Non-destructive Delam. Survey of Asphalt-Covered Deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Concrete Substructure Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Coating Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Timber Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Post-Tensioned Strand Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Underwater Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Fatigue Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Seismic Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Structure Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring Deformations, Settlements, Movements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring Crack Widths	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Total Cost:				\$0

Investigation Notes:

Overall Structure Notes:

Overall Comments: The structure is in overall poor condition with several elements requiring major rehabilitation. It is our understanding that the City intends to replace structure 9c in the near future. Given the condition of the structure we recommend it be replaced entirely in conjunction with structure 9c and 9b.

Recommended Work: Replace

Next Inspection: 09/08/2024 Recommended Work Time: 1-5yr

Suspected Performance Deficiencies

00 None
 01 Load carrying capacity
 02 Excessive deformations (deflections & rotations)
 03 Continuing settlement
 04 Continuing movements
 05 Seized bearings

06 Bearing not uniformly loaded/unstable
 07 Jammed expansion joint
 08 Pedestrian/vehicular hazard
 09 Rough riding surface
 10 Surface ponding
 11 Deck drainage

12 Slippery surface
 13 Flooding/channel blockage
 14 Undermining of foundation
 15 Unstable embankments
 16 Other

Maintenance Needs

01 Lift & Swing Bridge Maintenance
 02 Bridge Cleaning
 03 Bridge Handrail Maintenance
 04 Painting Steel Bridge Structures
 05 Bridge Deck Joint Repair
 06 Bridge Bearing Maintenance

07 Repair to Structural Steel
 08 Repair to Bridge Concrete
 09 Repair to Bridge Timber
 10 Bailey Bridges - Maintenance
 11 Animal/Pest Control
 12 Bridge Surface Repair

13 Erosion Control at Bridges
 14 Concrete Sealing
 15 Rout and Seal
 16 Bridge Deck Drainage
 17 Scaling (Loose Concrete or ACR Steel)
 18 Other

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09a

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09a

Element Data:

Element Group:	Abutments	Length:	16.00
Element Name:	Abutment Walls	Width:	0.00
Location:	Each Side	Height:	1.10
Material:	Reinforced Concrete	Count:	2.0
Element Type:	Integral	Total Quantity:	35.2
Environment:	Moderate	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	0.0	31.7	3.5	

Comments: 1 m2 spall on west abutment, 6m north of opening. 8m long narrow crack on west abutment. West abutment is undermined at southern end. 1.2m narrow vertical crack at west wingwall joint. 2.2m medium vertical crack on both abutments connected by soffit. 1.5 m2 of delamination throughout. Moderate scour at the waterline on the east abutment.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Replace structure 9a in conjunction with 9b and 9c.				

Element Group:	Abutments	Length:	2.30
Element Name:	Wingwalls	Width:	0.00
Location:	South End	Height:	2.30
Material:	Reinforced Concrete	Count:	2.0
Element Type:	Reinforced Concrete	Total Quantity:	10.6
Environment:	Moderate	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	8.4	1.0	1.3	

Comments: 4m narrow crack on southwest wingwall. 0.5 m2 of map cracking on southeast wingwall. 0.25 m2 of minor delamination, 0.5 m2 spalling on front side at base and 0.25 m2 spall on backside of southwest wingwall. Southeast wingwall 0.25m2 delamination and 0.5 m2 map cracking.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Replace structure 9a in conjunction with 9b and 9c.				

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09a

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09a

Element Group:	Approaches	Length:	5.00
Element Name:	Wearing Surface	Width:	7.80
Location:		Height:	0.00
Material:	Asphalt	Count:	2.0
Element Type:	-	Total Quantity:	78.0
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	0.0	0.0	78.0	

Comments: Map cracking and rutting throughout.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Replace structure 9a in conjunction with 9b and 9c.				

Element Group:	Barriers	Length:	0.25
Element Name:	Posts	Width:	0.25
Location:	South End	Height:	0.90
Material:	Reinforced Concrete	Count:	4.0
Element Type:	Concrete	Total Quantity:	4.0
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	0.0	0.0	4.0	

Comments: All posts have narrow cracks and light spalling throughout. 0.3 m2 of moderate delamination on east post with 0.1m2 of spalling with exposed rebar. Minor delamination on both centre posts.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Replace structure 9a in conjunction with 9b and 9c.				

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09a

Structure Name: 21st Street West and 6th Avenue Culvert

Structure ID: OS-09a

Element Group:	Barriers	Length:	2.20
Element Name:	Railing Systems	Width:	0.00
Location:	South End	Height:	0.00
Material:	Reinforced Concrete	Count:	3.0
Element Type:	Concrete Post and Bars	Total Quantity:	6.6
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	m	0.0	0.0	0.0	6.6	

Comments: Eastern barrier replaced with painted steel, the remaining sections are concrete in fair condition. Non code compliant.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Replace structure 9a in conjunction with 9b and 9c.				

Element Group:	Decks	Length:	2.70
Element Name:	Soffit - Inside Boxes	Width:	16.90
Location:		Height:	0.00
Material:	Reinforced Concrete	Count:	1.0
Element Type:	-	Total Quantity:	45.6
Environment:	Moderate	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	26.1	10.0	9.5	

Comments: 7 m2 spalling with exposed corroded rebar. 2.5 m2 of delamination's. Two 4m long medium crack connecting abutment wall cracks.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Replace structure 9a in conjunction with 9b and 9c.				

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09a

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09a

Element Group:	Decks	Length:	6.00
Element Name:	Wearing Surface	Width:	7.80
Location:		Height:	0.00
Material:	Asphalt	Count:	1.0
Element Type:	-	Total Quantity:	46.8
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	0.0	0.0	46.8	

Comments: Map cracking throughout with rutting and pot holes.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Replace structure 9a in conjunction with 9b and 9c.				

Element Group:	Embankments & Streams	Length:	0.00
Element Name:	Embankments	Width:	0.00
Location:	South End	Height:	0.00
Material:	Soil	Count:	2.0
Element Type:	-	Total Quantity:	2.0
Environment:	Moderate	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	2.0	0.0	0.0	

Comments: Overall in good condition with minor erosion behind Southwest wingwall.

Recommended Work:		Maint. Needs:		Maint. Priority:	
Recommended Timing:	None	Maint. Desc.:			
Work Details:					

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09a

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09a

Element Group:	Embankments & Streams	Length:	0.00
Element Name:	Streams and Waterways	Width:	0.00
Location:		Height:	0.00
Material:		Count:	1.0
Element Type:	-	Total Quantity:	1.0
Environment:	Benign	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	0.0	0.0	1.0	

Comments: Severe sediment and debris accumulation is restricting flow.

Recommended Work:	Rehab	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Reslope stream bed 9a in conjunction with 9b and 9c.				

Element Group:	Foundations	Length:	0.00
Element Name:	Foundation (below ground level)	Width:	0.00
Location:	Each End	Height:	0.00
Material:	Reinforced Concrete	Count:	2.0
Element Type:	Spread	Total Quantity:	2.0
Environment:	Moderate	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	1.0	0.0	0.0	

Comments: Not visible, but appears stable.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Replace structure 9a in conjunction with 9b and 9c.				

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09a

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09a

Element Group:	Sidewalks/Curbs	Length:	8.50
Element Name:	Curbs	Width:	0.30
Location:	North Side	Height:	0.30
Material:	Cast-in-Place Concrete	Count:	1.0
Element Type:	-	Total Quantity:	5.1
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	4.1	0.5	0.5	

Comments: Spalling on northwest curb. Scour along road edge.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Replace structure 9a in conjunction with 9b and 9c.				

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09a

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09a

Repair / Rehabilitation Required

Element Group	Element	Repair / Rehabilitation	Priority	Const Cost
Abutments	Abutment Walls	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$80,000
Abutments	Wingwalls	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$10,000
Approaches	Wearing Surface	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$117,000
Barriers	Posts	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$10,000
Barriers	Railing Systems	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$10,000
Decks	Soffit - Inside Boxes	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$80,000
Decks	Wearing Surface	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$25,000
Embankments & Streams	Streams and Waterways	Reslope stream bed 9a in conjunction with 9b and 9c.	1-5 Years	\$5,000
Foundations	Foundation (below ground level)	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$180,000
Sidewalks/Curbs	Curbs	Replace structure 9a in conjunction with 9b and 9c.	1-5 Years	\$15,000

Total Repair/Rehabilitation Cost \$532,000

Associated Work

	Comments	Estimated Cost
Approaches		\$0
Detours		\$0
Traffic Control		\$23,000
Utilities		\$317,000
Right-of-Way		\$0
Environmental Study		\$20,000
Other	Site Mob./Demob., bonding, environmental protection	\$90,000
	Contingencies	10.00% \$98,000
	Engineering	15.00% \$147,000
	Total Associated Work Cost	\$695,000
	Total Repair / Rehabilitation Cost	\$532,000
	Total Cost	\$1,227,000

Justification

We recommend a complete replacement of the structure based on the overall condition of the structure in order to maintain pedestrian and motorist safety.

Inspection Photos



View of structure facing north.



View of structure facing east.



View of soffit.



View of exterior soffit with severe spalling and exposed corroded rebar.



View of narrow crack on southwest wing wall.



View of map cracking on southeast wingwall.



View of delamination on southwest wingwall.



View of barrier rail repairs with moderate corrosion.



View of east barrier post with spalling.



Spalling of barrier rail.



View of wearing surface with map and alligator cracking.



West abutment severe spall.



View of narrow crack in west abutment.



View of a spall at the base of the east abutment.



View of spall and exposed reinforcing in the east abutment at the storm drain penetration.



View of narrow crack in east abutment.



View of spall on soffit near east abutment interface.



View of severe soffit delamination above storm drain.



View of severe soffit spall with exposed corroded reinforcing and adjacent delamination.



View of small soffit delamination following transverse crack.



21st Street West and 6th Avenue Culvert

Structure: 09b

Bridge Condition Index (BCI):

75

Additional Investigations

Detailed Deck Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Non-Destructive Delamination Survey of Asphalt Covered Deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Substructure Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Coating Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Timber Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Post-Tension Strand Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Underwater Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Fatigue Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Seismic Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Structure Evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring of Deformations, Settlements & Movements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring of Crack Widths	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0

<u>Priority</u>			<u>Estimated Cost</u>
None	Normal	Urgent	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Total Additional Investigations Cost			\$0

Recommended Work

<u>Element</u>	<u>Repair / Rehab</u>	<u>Status</u>	<u>Cost</u>
Culverts - Barrels	Replace in conjunction with structure 9c.	1-5 Years	\$595,000
Culverts - Inlet Components	Replace in conjunction with structure 9c.	1-5 Years	\$20,000
Culverts - Outlet Components	Replace in conjunction with structure 9c.	1-5 Years	\$20,000
Sub-Total Recommended Work Cost			\$635,000
Sub-Total Associated Work Cost			\$81,500
Contingencies 10.00%			\$72,000
Engineering 20.00%			\$143,000
Total Recommended & Associated Work Cost			\$931,500

Maintenance Needs

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09b

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09b

Summary Action Report

Inspection Date: 9/8/2022

Bridge Condition Value (BCI)

75

Next Biennial Inspection: 6/17/2024

Performance Deficiencies**Maintenance Needs****Repair/Rehabilitation**

Element Group	Element Name	Repair/Rehabilitation	Priority	Est. Cost
Culverts	Barrels	Replace in conjunction with structure 9c. 1-5 Years		\$595,000
Culverts	Inlet Components	Replace in conjunction with structure 9c. 1-5 Years		\$20,000
Culverts	Outlet Components	Replace in conjunction with structure 9c. 1-5 Years		\$20,000
Total Repair/Rehabilitation Cost				\$635,000
Total Associated Work Cost				\$296,500
Total Cost				\$931,500

Overall Comments

The structure is in overall good condition. However, structure 9a and 9c are in poor condition requiring replacement. It would be advantageous for the City to replace structure 9b simultaneously to save on construction costs.

Additional Investigations

\$0.00

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09b

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09b

Inventory Data:

Structure Name	21st Street West and 6th Avenue Culvert		
Main Hwy/Road #		On <input type="checkbox"/> Under <input type="checkbox"/>	Crossing Type: Nav Water <input type="checkbox"/> Non Nav Water <input checked="" type="checkbox"/>
Hwy/Road Name	21st Street	Rail <input type="checkbox"/> Road <input checked="" type="checkbox"/> Ped <input type="checkbox"/> Other <input type="checkbox"/>	
Structure Location			
Latitude (decimal degrees)		Longitude (decimal degrees)	
Owner(s)	City of Owen Sound	Heritage:	Not Cons <input type="checkbox"/> Cons Not/App <input type="checkbox"/> List/Not Desig <input type="checkbox"/>
Region	Southwestern	Designation:	Desig Not List <input type="checkbox"/> Desig List <input type="checkbox"/>
District	Owen Sound	Road Class:	Freeway <input type="checkbox"/> Arterial <input type="checkbox"/> Collector <input type="checkbox"/> Local <input checked="" type="checkbox"/>
Old County	Grey	No. of Lanes	2 Posted Speed 40 (km/h)
Geographic Twp	Sarawak - 402	AADT	200 Trucks 0 (%)
Structure Type	Double CSP		
Total Deck Length	3.4 (m)		
Overall Str Width	50 (m)		
Total Deck Area	170 (sq m)	Min. Vertical Clearance	(m)
Roadway Width	6.6	Special Routes:	Transit <input checked="" type="checkbox"/> Truck <input checked="" type="checkbox"/> School <input checked="" type="checkbox"/> Bicycle <input checked="" type="checkbox"/>
Skew Angle	(deg)	Detour Length	(km)
No. of Spans	2	Direction of Structure	East/West
Span Lengths	1.5/1.5 (m)	Fill on Structure	(m)

Historical Data:

Year Built	1971	Year of Last Rehab	
Last OSIM Inspection	6/17/2020	Last Evaluation	
Last Enhanced OSIM Inspection		Current Load Limit	(tonnes)
Enhanced Access Equipment (ladder, boat, lift, etc)		Load Limit By Law	
		By Law expiry Date	
Last Condition Survey		Last underwater Inspection	

Rehabilitation History:

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09b

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09b

Field Inspection Information:

Date of Inspection: 09/08/2022 Inspection Type: OSIM

Inspector: Zak Stewart, P.Eng.

Others in Party: David DeBoer, E.I.T.

Equipment Used: Measuring tape, digital camera, hammer

Weather: Sunny

Temperature °C: 22

Additional Investigations Required:

	Priority			Estimated Cost
	None	Normal	Urgent	
Detailed Deck Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Non-destructive Delam. Survey of Asphalt-Covered Deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Concrete Substructure Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Coating Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Timber Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Post-Tensioned Strand Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Underwater Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Fatigue Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Seismic Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Structure Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring Deformations, Settlements, Movements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring Crack Widths	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Total Cost:				\$0

Investigation Notes:

Overall Structure Notes:

Overall Comments: The structure is in overall good condition. However, structure 9a and 9c are in poor condition requiring replacement. It would be advantageous for the City to replace structure 9b simultaneously to save on construction costs.

Recommended Work: Replace

Next Inspection: 06/17/2024 Recommended Work Time: 1-5yr

Suspected Performance Deficiencies

00 None
01 Load carrying capacity
02 Excessive deformations (deflections & rotations)
03 Continuing settlement
04 Continuing movements
05 Seized bearings

06 Bearing not uniformly loaded/unstable
07 Jammed expansion joint
08 Pedestrian/vehicular hazard
09 Rough riding surface
10 Surface ponding
11 Deck drainage

12 Slippery surface
13 Flooding/channel blockage
14 Undermining of foundation
15 Unstable embankments
16 Other

Maintenance Needs

01 Lift & Swing Bridge Maintenance
02 Bridge Cleaning
03 Bridge Handrail Maintenance
04 Painting Steel Bridge Structures
05 Bridge Deck Joint Repair
06 Bridge Bearing Maintenance

07 Repair to Structural Steel
08 Repair to Bridge Concrete
09 Repair to Bridge Timber
10 Bailey Bridges - Maintenance
11 Animal/Pest Control
12 Bridge Surface Repair

13 Erosion Control at Bridges
14 Concrete Sealing
15 Rout and Seal
16 Bridge Deck Drainage
17 Scaling (Loose Concrete or ACR Steel)
18 Other

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09b

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09b

Element Data:

Element Group:	Culverts	Length:	50.10
Element Name:	Barrels	Width:	1.20
Location:		Height:	1.20
Material:	Steel	Count:	2.0
Element Type:	Pipe Round	Total Quantity:	377.7
Environment:	Moderate	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	377.7	0.0	0.0	

Comments: Moderate corrosion throughout. Moderate sediment and debris within culvert bottoms is restricting flow. Debris buildup in Structure 9a, and Structure 9c grating limited access to Structure 9b. Minor deformation in the top of both pipes located approximately 7m from the outlet.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Replace in conjunction with structure 9c.				

Element Group:	Culverts	Length:	0.00
Element Name:	Inlet Components	Width:	1.20
Location:	North End	Height:	1.20
Material:	Steel	Count:	2.0
Element Type:	-	Total Quantity:	2.9
Environment:	Moderate	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	2.9	0.0	0.0	

Comments: Moderate corrosion throughout. No loss of section. Access limited by Structure 9c grating.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	1-5 Years	Maint. Desc.:			
Work Details:	Replace in conjunction with structure 9c.				

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09b

Structure Name: 21st Street West and 6th Avenue Culvert

Structure ID: OS-09b

Element Group:	Culverts	Length:	0.00
Element Name:	Outlet Components	Width:	1.20
Location:	South End	Height:	1.20
Material:	Steel	Count:	2.0
Element Type:		Total Quantity:	2.9
Environment:	Moderate	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:			
Condition Data:	Units: sq.m.	Exc. 0.0	Good: 1.5
		Fair: 1.4	Poor: 0.0
Comments:	Performance Deficiencies:		
Moderate corrosion throughout. No loss of section. Stone wall between culvert and Structure No. OS-09A is spalling and deteriorating. A wooden support was also noticed at the culvert outlet. This support may have been left from previous patch work. The support has moderate weathering and is beginning to rot and is loose. CSP coating is beginning to fail at the waterline. Sediment buildup in both culverts (500mm of sediment in the east culvert and 300mm in the west culvert).			
Recommended Work:	Replace	Maint. Needs:	Maint. Priority:
Recommended Timing:	1-5 Years	Maint. Desc.:	
Work Details:	Replace in conjunction with structure 9c.		

Element Group:	Embankments & Streams	Length:	0.00
Element Name:	Streams and Waterways	Width:	0.00
Location:		Height:	0.00
Material:		Count:	1.0
Element Type:	-	Total Quantity:	1.0
Environment:	Benign	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:			
Condition Data:	Units: Each	Exc. 0.0	Good: 1.0
		Fair: 0.0	Poor: 0.0
Comments:	Performance Deficiencies:		
Overall in good condition.			
Recommended Work:		Maint. Needs:	Maint. Priority:
Recommended Timing:	None	Maint. Desc.:	
Work Details:			

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09b

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09b

Element Group:	Foundations				Length:	0.00
Element Name:	Foundation (below ground level)				Width:	0.00
Location:	Each End				Height:	0.00
Material:	Concrete				Count:	2.0
Element Type:	-				Total Quantity:	2.0
Environment:	Moderate				Limited Inspection	<input checked="" type="checkbox"/>
Protection System:						
Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	1.0	0.0	0.0	
Comments:	Not visible, but appears stable.					
Recommended Work:			Maint. Needs:			Maint. Priority:
Recommended Timing:	None		Maint. Desc.:			
Work Details:						

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09b

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09b

Repair / Rehabilitation Required

Element Group	Element	Repair / Rehabilitation	Priority	Const Cost
Culverts	Barrels	Replace in conjunction with structure 9c.	1-5 Years	\$595,000
Culverts	Inlet Components	Replace in conjunction with structure 9c.	1-5 Years	\$20,000
Culverts	Outlet Components	Replace in conjunction with structure 9c.	1-5 Years	\$20,000
Total Repair/Rehabilitation Cost				\$635,000

Associated Work

	Comments	Estimated Cost
Approaches		\$0
Detours		\$0
Traffic Control		\$15,000
Utilities		\$0
Right-of-Way		\$0
Environmental Study		\$16,500
Other	Site Mob./Demob.	\$50,000
Contingencies		10.00% \$72,000
Engineering		20.00% \$143,000
Total Associated Work Cost		\$296,500
Total Repair / Rehabilitation Cost		\$635,000
Total Cost		\$931,500

Justification

The recommended repairs are intended to improve the pedestrian and vehicular level of safety and extend the useful life cycle of the structure.

Inspection Photos

View of structure facing north.



View of west barrel.



View of deteriorated headwall.



21st Street West and 6th Avenue Culvert

Structure: 09c

Bridge Condition Index (BCI):

7

Additional Investigations

Detailed Deck Condition Survey
Non-Destructive Delamination Survey of Asphalt Covered Deck
Substructure Condition Survey
Detailed Coating Survey
Detailed Timber Investigation
Post-Tension Strand Investigation
Underwater Survey
Fatigue Investigation
Seismic Investigation
Structure Evaluation
Monitoring of Deformations, Settlements & Movements
Monitoring of Crack Widths

	<u>Priority</u>			<u>Estimated Cost</u>
	None	Normal	Urgent	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Total Additional Investigations Cost				\$0

Recommended Work

<u>Element</u>	<u>Repair / Rehab</u>	<u>Status</u>	<u>Cost</u>
Abutments - Abutment Walls	Replace structure.	Urgent	\$110,000
Abutments - Wingwalls	Replace structure.	Urgent	\$15,000
Approaches - Wearing Surface	Replace structure.	Urgent	\$44,000
Decks - Deck Top	Replace structure.	Urgent	\$55,000
Decks - Soffit - Thick Slab	Replace structure.	Urgent	\$55,000
Decks - Wearing Surface	Replace structure.	Urgent	\$70,000
Embankments & Streams - Streams and Waterways	Reslope while replacing structure.	Urgent	\$5,000
Foundations - Foundation (below ground level)	Replace structure.	Urgent	\$180,000
Sub-Total Recommended Work Cost			\$534,000
Sub-Total Associated Work Cost			\$450,000
Contingencies 10.00%			\$98,000
Engineering 15.00%			\$148,000
Total Recommended & Associated Work Cost			\$1,230,000

Maintenance Needs

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09c

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09c

Summary Action Report

Inspection Date: 9/8/2022

Bridge Condition Value (BCI)

7

Next Biennial Inspection: 9/8/2024

Performance Deficiencies

Maintenance Needs

Repair/Rehabilitation

Element Group	Element Name	Repair/Rehabilitation	Priority	Est. Cost
Abutments	Abutment Walls	Replace structure.	Urgent	\$110,000
Abutments	Wingwalls	Replace structure.	Urgent	\$15,000
Approaches	Wearing Surface	Replace structure.	Urgent	\$44,000
Decks	Deck Top	Replace structure.	Urgent	\$55,000
Decks	Soffit - Thick Slab	Replace structure.	Urgent	\$55,000
Decks	Wearing Surface	Replace structure.	Urgent	\$70,000
Embankments & Strea	Streams and Waterways	Reslope while replacing structure.	Urgent	\$5,000
Foundations	Foundation (below ground level)	Replace structure.	Urgent	\$180,000
Total Repair/Rehabilitation Cost				\$534,000
Total Associated Work Cost				\$696,000
Total Cost				\$1,230,000

Overall Comments

Structure is in overall poor condition with failures of several critical structural elements such as foundations, abutments and the deck. We recommend that the structure be scheduled for replacement within the next year. Should be replaced simultaneously with structure 9a and 9b to save on replacement costs.

Additional Investigations

\$0.00

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09c

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09c

Inventory Data:

Structure Name	21st Street West and 6th Avenue Culvert		
Main Hwy/Road #		On <input type="checkbox"/> Under <input type="checkbox"/>	Crossing Type: Nav Water <input type="checkbox"/> Non Nav Water <input checked="" type="checkbox"/>
Hwy/Road Name	21st Street	Rail <input type="checkbox"/> Road <input checked="" type="checkbox"/> Ped <input type="checkbox"/> Other <input type="checkbox"/>	
Structure Location			
Latitude (decimal degrees)		Longitude (decimal degrees)	
Owner(s)	City of Owen Sound	Heritage:	Not Cons <input type="checkbox"/> Cons Not/App <input type="checkbox"/> List/Not Desig <input type="checkbox"/>
Region	Southwestern	Designation:	Desig Not List <input type="checkbox"/> Desig List <input type="checkbox"/>
District	Owen Sound	Road Class:	Freeway <input type="checkbox"/> Arterial <input type="checkbox"/> Collector <input type="checkbox"/> Local <input checked="" type="checkbox"/>
Old County	Grey	No. of Lanes	2 Posted Speed 40 (km/h)
Geographic Twp	Sarawak - 402	AADT	200 Trucks 0 (%)
Structure Type	Open Footing CIP Culvert		
Total Deck Length	2.7 (m)		
Overall Str Width	8.5 (m)		
Total Deck Area	22.95 (sq m)	Min. Vertical Clearance	(m)
Roadway Width	6.2	Special Routes:	Transit <input type="checkbox"/> Truck <input type="checkbox"/> School <input checked="" type="checkbox"/> Bicycle <input checked="" type="checkbox"/>
Skew Angle	(deg)	Detour Length	(km)
No. of Spans	1	Direction of Structure	North/South
Span Lengths	2.7 (m)	Fill on Structure	(m)

Historical Data:

Year Built	1920	Year of Last Rehab	
Last OSIM Inspection	06/17/2020	Last Evaluation	
Last Enhanced OSIM Inspection		Current Load Limit	6 (tonnes)
Enhanced Access Equipment (ladder, boat, lift, etc)		Load Limit By Law	
		By Law expiry Date	
Last Condition Survey		Last underwater Inspection	

Rehabilitation History:

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09c

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09c

Field Inspection Information:

Date of Inspection: 09/08/2022 Inspection Type: OSIM

Inspector: Zak Stewart, P.Eng.

Others in Party: David DeBoer, E.I.T.

Equipment Used: Digital camera, measuring tape, hammer

Weather: Sunny

Temperature °C: 24

Additional Investigations Required:

	Priority			Estimated Cost
	None	Normal	Urgent	
Detailed Deck Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Non-destructive Delam. Survey of Asphalt-Covered Deck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Concrete Substructure Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Coating Condition Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Detailed Timber Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Post-Tensioned Strand Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Underwater Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Fatigue Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Seismic Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Structure Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring Deformations, Settlements, Movements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Monitoring Crack Widths	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$0
Total Cost:				\$0

Investigation Notes:

Overall Structure Notes:

Overall Comments: Structure is in overall poor condition with failures of several critical structural elements such as foundations, abutments and the deck. We recommend that the structure be scheduled for replacement within the next year. Should be replaced simultaneously with structure 9a and 9b to save on replacement costs.

Recommended Work:

Next Inspection: 09/08/2024

Recommended Work Time:

Suspected Performance Deficiencies

00 None
01 Load carrying capacity
02 Excessive deformations (deflections & rotations)
03 Continuing settlement
04 Continuing movements
05 Seized bearings

06 Bearing not uniformly loaded/unstable
07 Jammed expansion joint
08 Pedestrian/vehicular hazard
09 Rough riding surface
10 Surface ponding
11 Deck drainage

12 Slippery surface
13 Flooding/channel blockage
14 Undermining of foundation
15 Unstable embankments
16 Other

Maintenance Needs

01 Lift & Swing Bridge Maintenance
02 Bridge Cleaning
03 Bridge Handrail Maintenance
04 Painting Steel Bridge Structures
05 Bridge Deck Joint Repair
06 Bridge Bearing Maintenance

07 Repair to Structural Steel
08 Repair to Bridge Concrete
09 Repair to Bridge Timber
10 Bailey Bridges - Maintenance
11 Animal/Pest Control
12 Bridge Surface Repair

13 Erosion Control at Bridges
14 Concrete Sealing
15 Rout and Seal
16 Bridge Deck Drainage
17 Scaling (Loose Concrete or ACR Steel)
18 Other

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09c

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09c

Element Data:

Element Group:	Abutments					Length:	8.50
Element Name:	Abutment Walls					Width:	0.00
Location:	Each Side					Height:	1.30
Material:	Reinforced Concrete					Count:	2.0
Element Type:	Legs of Rigid Frame					Total Quantity:	22.1
Environment:	Moderate					Limited Inspection	<input checked="" type="checkbox"/>
Protection System:							
Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:	
	sq.m.	0.0	0.0	0.0	22.1		
Comments:	50mm wide crack full height of both north and south abutment walls. South wall has 0.5m of scour at base along full length. Both walls are undermined approximately 200mm up to 300mm. 2.3m of north wall at east end is completely disintegrated with washout of backfill. 1m2 of delaminations on the south abutment wall at the west end. 0.1m2 spall with exposed reinforcing on south abutment near west end. Grating limited access to the inlet of the structure only.						
Recommended Work:	Replace		Maint. Needs:		Maint. Priority:		
Recommended Timing:	Urgent		Maint. Desc.:				
Work Details:	Replace structure.						

Element Group:	Abutments					Length:	2.30
Element Name:	Wingwalls					Width:	0.00
Location:	West Side					Height:	1.10
Material:	Reinforced Concrete					Count:	2.0
Element Type:	Reinforced Concrete					Total Quantity:	5.1
Environment:	Moderate					Limited Inspection	<input type="checkbox"/>
Protection System:							
Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:	
	sq.m.	0.0	0.0	3.1	2.0		
Comments:	4m of narrow cracking on southwest. 2m of narrow cracking on northwest. 0.2 m2 spall on northwest wingwall with exposed corroded reinforcing. 1 m2 of spalling at bottom of southwest wingwall with undermining.						
Recommended Work:	Replace		Maint. Needs:		Maint. Priority:		
Recommended Timing:	Urgent		Maint. Desc.:				
Work Details:	Replace structure.						

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09c

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09c

Element Group:	Approaches	Length:	5.00
Element Name:	Wearing Surface	Width:	6.20
Location:	Each End	Height:	0.00
Material:	Asphalt	Count:	2.0
Element Type:	-	Total Quantity:	62.0
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	57.5	4.0	0.5	

Comments: Rutting on north and south approach. Failed patching on south with rutting around the patch.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	Urgent	Maint. Desc.:			
Work Details:	Replace structure.				

Element Group:	Decks	Length:	2.70
Element Name:	Deck Top	Width:	8.50
Location:		Height:	0.00
Material:	Cast-in-Place Concrete	Count:	1.0
Element Type:	Cast-in-place Concrete on Supports	Total Quantity:	23.0
Environment:	Moderate	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	0.0	8.0	15.0	

Comments: Deck top reported as partially exposed in 2018. Repaving in 2020 has covered exposed sections. Deck assumed to be in poor condition based on 2018 review and the current soffit condition.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	Urgent	Maint. Desc.:			
Work Details:	Replace structure.				

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09c

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09c

Element Group:	Decks	Length:	2.70
Element Name:	Soffit - Thick Slab	Width:	8.50
Location:		Height:	0.00
Material:	Reinforced Concrete	Count:	1.0
Element Type:	-	Total Quantity:	23.0
Environment:	Moderate	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	0.0	7.0	16.0	

Comments: 50mm wide crack at east end full width of soffit. 5.5 m2 of severe spalling with exposed corroded rebar. 9.5 m2 of delamination. 175mm crack located near mid span. Grating limited access to the inlet of the structure only.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	Urgent	Maint. Desc.:			
Work Details:	Replace structure.				

Element Group:	Decks	Length:	2.30
Element Name:	Wearing Surface	Width:	6.20
Location:		Height:	0.00
Material:	Asphalt	Count:	1.0
Element Type:	-	Total Quantity:	14.3
Environment:	Severe	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	sq.m.	0.0	9.1	0.0	5.2	

Comments: Area recently repaved, full width transverse crack at south abutment. 4m of narrow longitudinal cracking on east and west side of the northern abutment.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	Urgent	Maint. Desc.:			
Work Details:	Replace structure.				

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09c

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09c

Element Group:	Embankments & Streams	Length:	0.00
Element Name:	Embankments	Width:	0.00
Location:	West Side	Height:	0.00
Material:	Vegetation	Count:	2.0
Element Type:	-	Total Quantity:	2.0
Environment:	Moderate	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	2.0	0.0	0.0	

Comments: In overall good condition.

Recommended Work:		Maint. Needs:		Maint. Priority:	
Recommended Timing:	None	Maint. Desc.:			
Work Details:					

Element Group:	Embankments & Streams	Length:	0.00
Element Name:	Streams and Waterways	Width:	0.00
Location:		Height:	0.00
Material:	Other	Count:	1.0
Element Type:	-	Total Quantity:	1.0
Environment:	Benign	Limited Inspection	<input type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	0.0	0.0	1.0	

Comments: Overall in fair condition. Debris and sediment within culvert bottom is restricting flow.

Recommended Work:	Rehab	Maint. Needs:		Maint. Priority:	
Recommended Timing:	Urgent	Maint. Desc.:			
Work Details:	Reslope while replacing structure.				

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09c

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09c

Element Group:	Foundations	Length:	0.00
Element Name:	Foundation (below ground level)	Width:	0.00
Location:	Each End	Height:	0.00
Material:	Cast-in-Place Concrete	Count:	2.0
Element Type:	Spread	Total Quantity:	2.0
Environment:	Moderate	Limited Inspection	<input checked="" type="checkbox"/>
Protection System:			

Condition Data:	Units:	Exc.	Good:	Fair:	Poor:	Performance Deficiencies:
	Each	0.0	0.0	0.0	2.0	

Comments: Full length of foundation is undermined. Grating limited access to the inlet of the structure only.

Recommended Work:	Replace	Maint. Needs:		Maint. Priority:	
Recommended Timing:	Urgent	Maint. Desc.:			
Work Details:	Replace structure.				

Ontario Structure Inspection Manual - Inspection Form

MTO Site Number: 09c

Structure Name 21st Street West and 6th Avenue Culvert

Structure ID: OS-09c

Repair / Rehabilitation Required

Element Group	Element	Repair / Rehabilitation	Priority	Const Cost
Abutments	Abutment Walls	Replace structure.	Urgent	\$110,000
Abutments	Wingwalls	Replace structure.	Urgent	\$15,000
Approaches	Wearing Surface	Replace structure.	Urgent	\$44,000
Decks	Deck Top	Replace structure.	Urgent	\$55,000
Decks	Soffit - Thick Slab	Replace structure.	Urgent	\$55,000
Decks	Wearing Surface	Replace structure.	Urgent	\$70,000
Embankments & Streams	Streams and Waterways	Reslope while replacing structure.	Urgent	\$5,000
Foundations	Foundation (below ground level)	Replace structure.	Urgent	\$180,000

Total Repair/Rehabilitation Cost \$534,000

Associated Work

	Comments	Estimated Cost
Approaches		\$0
Detours		\$0
Traffic Control		\$23,000
Utilities		\$317,000
Right-of-Way		\$0
Environmental Study		\$20,000
Other	Site Mob./Demob., bonding, enironmental protection	\$90,000
	Contingencies	10.00% \$98,000
	Engineering	15.00% \$148,000
	Total Associated Work Cost	\$696,000
	Total Repair / Rehabilitation Cost	\$534,000
	Total Cost	\$1,230,000

Justification

Due to the ongoing deterioration of the structure and its overall poor condition, we recommend full replacement of the structure within the next year. Several structural elements were observed to be in a poor to critical condition.

Inspection Photos



View of structure facing east.



View of structure facing north.



View of soffit.



View of spall near midspan.



View of north abutment undermining.



View of south abutment undermining.



View of southwest wingwall undermining.



View of severe crack in north abutment wall.



View of severe crack in south abutment wall.



View of severe spall at inlet.



View of spall on northwest wingwall.



View of narrow crack in wearing surface.



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 Fax: 519 922-2678
 E-mail : xxx

Defect Grade Description

Project Name :
BROOK BASIN STUDY

Project number :

Contact :

Date :
04/04/2020

1:

Excellent Condition

Minor Defects- Failure unlikely in the foreseeable future

2:

Good Condition

Defects that have not begun to deteriorate- Pipe unlikely to fail for at least 20 years.

3:

Fair Condition

Moderate defects that will continue to deteriorate- Pipe may fail in 10-20 years.

4:

Poor condition

Severe Defects that will become Grade 5 defects within the foreseeable future- Pipe will probably fail in 5-10 years

5:

Immediate Attention

Defects require immediate attention- Pipe has failed or will likely fail within the next 5 years or sooner.



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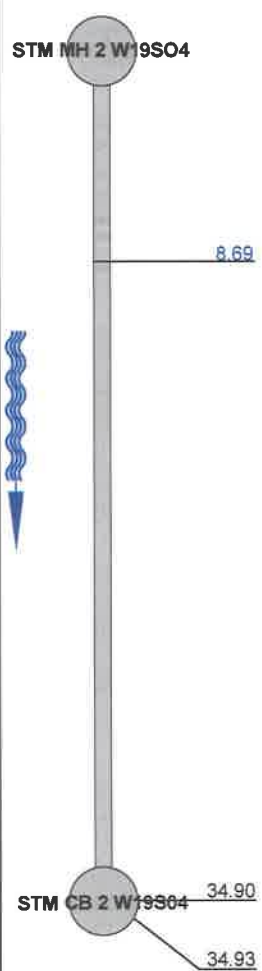
Inspection Report

Date 01/04/2020	P/O. No.	Weather Dry	Surveyor's Name BRIAN	Pipe Segment Reference	Section No. 1
Certificate No.	Survey Customer	System Owner OWEN SOUND	Date Cleaned	Pre-Cleaning No Pre-Cleaning	Sewer Category

Street 19th st west	Use of Sewer Stormwater	Upstream MH STM MH 2 W19SO4
City OWEN SOUND	Drainage Area	Dowstream MH STM CB 2 W19SO4
Loc. details	Flow Control	Dir. of Survey Downstream
Location Code	Length surveyed 34.93 m	Section Length 34.93 m

Purpose of Survey Routine Assessment	Joint Length	900 mm
Year Laid	Dia./Height	Corrugated Metal Pipe
Year Rehabilitated 0	Material	
Tape / Media No.	Lining Method	

Add. Information :

1:285	Position	Code	Observation	Grade			
							
		OBI	Obstacles Including Thru Wall, 5 % of cross sectional area, from 12 o'clock, to 1 o'clock	M 2			
		ACB	Catch Basin				
		MGO	General Observation, END SURVEY				
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
0000	2100	0	2	2	0	2	2



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Inspection Report

Date 01/04/2020	P/O. No.	Weather Dry	Surveyor's Name BRIAN	Pipe Segment Reference	Section No. 2
Certificate No.	Survey Customer	System Owner OWEN SOUND	Date Cleaned	Pre-Cleaning No Pre-Cleaning	Sewer Category

Street 19th st west	Use of Sewer Stormwater	Upstream MH STM CB 2 W19S04
City OWEN SOUND	Drainage Area	Dowstream MH STM CBMH W19S04
Loc. details	Flow Control	Dir. of Survey Downstream
Location Code	Length surveyed 39.81 m	Section Length 39.81 m

Purpose of Survey Routine Assessment	Joint Length 975 mm
Year Laid	Dia./Height Corrugated Metal Pipe
Year Rehabilitated 0	Material
Tape / Media No.	Lining Method

Add. Information :

1:315	Position	Code	Observation	Grade
	17.14	SCP	Surface Corrosion Metal Pipe, from 5 o'clock, to 8 o'clock	S 3
	31.55	SRIZ	Surface Roughness Increased Unknown, at 11 o'clock	S 1
	37.18	SRIZ	Surface Roughness Increased Unknown, from 3 o'clock, to 8 o'clock	S 1
	38.03	MGO	General Observation, END SURVEY	
	38.23	SRIZ	Surface Roughness Increased Unknown, from 3 o'clock, to 8 o'clock	S 1
	39.81	MGO	General Observation, catch basin at 19th st stm	
QSR 3113	QMR 0000	SPR 6	COM W19S04 MPR 0	OPR 6
				SPRI 1.5
				MPRI 0
				OPRI 1.5



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Inspection photos

City : OWEN SOUND	Street : 19th st west	Date :	Pipe Segment Reference :	Section No : 2
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Photo: 2_1A
17.14m, Surface Corrosion Metal Pipe, from 5 o'clock, to 8 o'clock



Photo: 2_3A
37.18m, Surface Roughness Increased Unknown, from 3 o'clock, to 8 o'clock



Legend

- Inlet IDs
- Manhole
- Inlet
 - Catch Basin
 - Ditch Inlet Catch Basin
 - Double Catch Basin
 - Side Inlet Catch Basin
- Manhole
 - Manhole
 - Catch Basin Manhole
 - Double Catch Basin Manhole
- Storm Main
- Storm Lead
- PARCELS

Notes

Brook Basin Asset ID 1



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 E-mail: xxx

Inspection Report

Date 01/04/2020	P/O. No.	Weather Dry	Surveyor's Name BRIAN	Pipe Segment Reference	Section No. 3
Certificate No.	Survey Customer	System Owner OWEN SOUND	Date Cleaned	Pre-Cleaning No Pre-Cleaning	Sewer Category

Street 19th st west	Use of Sewer Stormwater	Upstream MH STM MH 1 W19S03
City OWEN SOUND	Drainage Area	Downstream MH STM CB MH W19S04
Loc. details	Flow Control	Dir. of Survey Upstream
Location Code	Length surveyed 118.02 m	Section Length 118.02 m

Purpose of Survey Routine Assessment	Joint Length 1650 mm
Year Laid	Dia./Height
Year Rehabilitated 0	Material Corrugated Metal Pipe
Tape / Media No.	Lining Method

Add. Information :

1:930	Position	Code	Observation	Grade			
<div><div><div>STM MH 1 W19S03</div><div><div>16.37</div><div>25.12</div><div>61.56</div><div>84.24</div><div>85.76</div><div>105.64</div><div>105.64</div><div>118.02</div></div><div>STM CB MH W19S04</div></div><div><div>16.37</div><div>25.12</div><div>61.56</div><div>84.24</div><div>85.76</div><div>105.64</div><div>105.64</div><div>118.02</div></div></div>							
	16.37	MGO	General Observation, line unknown				
	25.12	MGO	General Observation, ACCESS TO DITCH INLET				
	61.56	SSSZ	Surface Spalling Other, from 9 o'clock, to 6 o'clock	S 2			
	84.24	SSSZ	Surface Spalling Other, from 9 o'clock, to 8 o'clock	S 2			
	85.76	MGO	General Observation, ACCESS PIPE				
	105.64	SSSZ	Surface Spalling Other, from 6 o'clock, to 12 o'clock	S 2			
	105.64	SSSZ	Surface Spalling Other, from 6 o'clock, to 12 o'clock	S 2			
	118.02	MGO	General Observation, END SURVEY				
<div><div><div>STM MH 1 W19S03</div><div>61.56 m</div></div><div><div>STM CB MH W19S04</div><div>105.64 m</div></div></div>							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
2400	0000	8	0	8	2	0	2



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Inspection photos

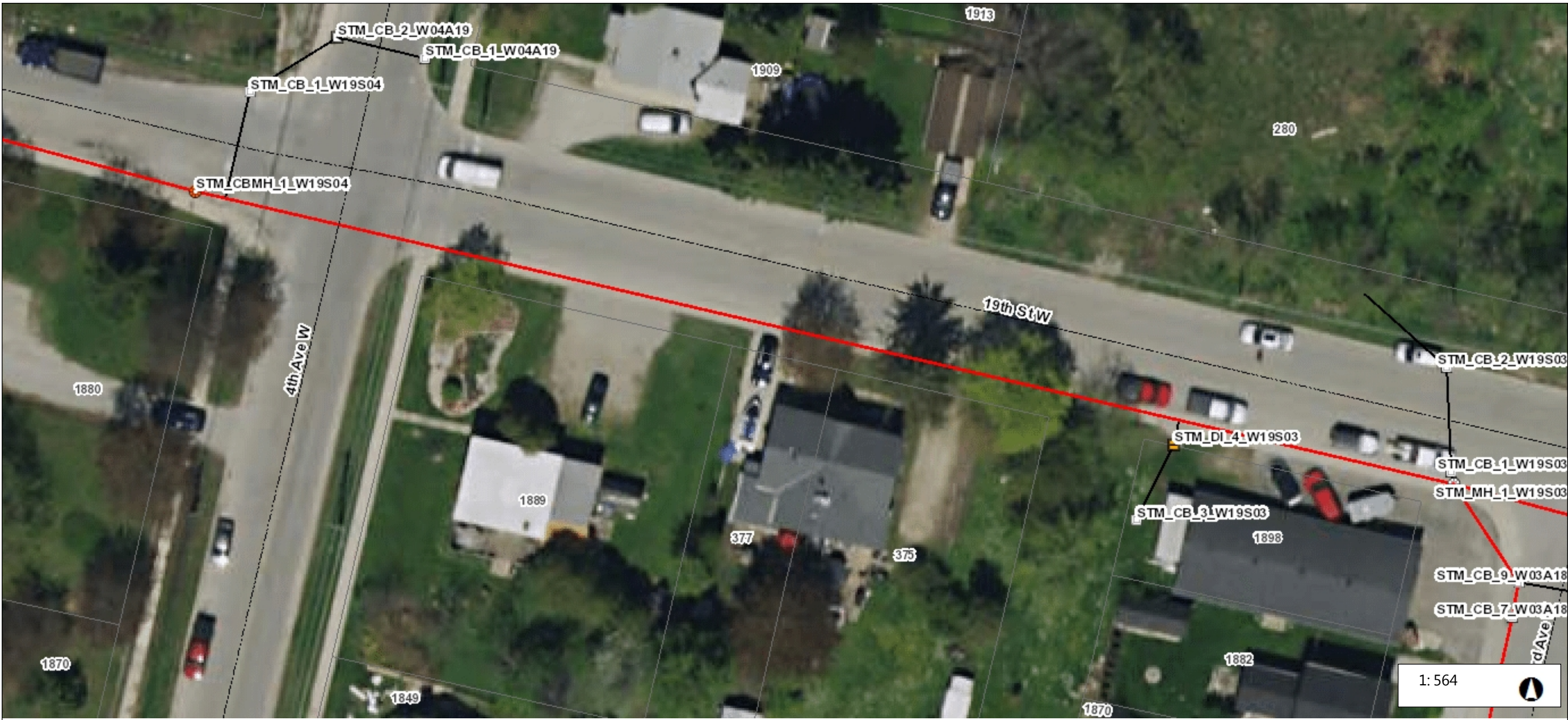
City : OWEN SOUND	Street : 19th st west	Date :	Pipe Segment Reference :	Section No : 3
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Photo: 3_3A
61.56m, Surface Spalling Other, from 9 o'clock, to 6 o'clock



Photo: 3_7A
105.64m, Surface Spalling Other, from 6 o'clock, to 12 o'clock



Legend

- Inlet IDs
- Manhole
- Inlet
 - Catch Basin
 - Ditch Inlet Catch Basin
 - Double Catch Basin
 - Side Inlet Catch Basin
- Manhole
 - Manhole
 - Catch Basin Manhole
 - Double Catch Basin Manhole
- Storm Main
- Storm Lead
- PARCELS

Notes

Brook Basin Asset ID 1



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Inspection Report

Date 01/04/2020	P/O. No.	Weather Dry	Surveyor's Name BRIAN	Pipe Segment Reference	Section No. 4
Certificate No.	Survey Customer	System Owner OWEN SOUND	Date Cleaned	Pre-Cleaning No Pre-Cleaning	Sewer Category

Street 19th st west	Use of Sewer Stormwater	Upstream MH STM MH 1 W19S03
City OWEN SOUND	Drainage Area	Dowstream MH STM MH 1 W1PSE SP
Loc. details	Flow Control	Dir. of Survey Downstream
Location Code	Length surveyed 34.49 m	Section Length 34.49 m

Purpose of Survey Routine Assessment	Joint Length 1650 mm
Year Laid	Dia./Height Corrugated Metal Pipe
Year Rehabilitated 0	Material
Tape / Media No.	Lining Method

Add. Information :

1:285

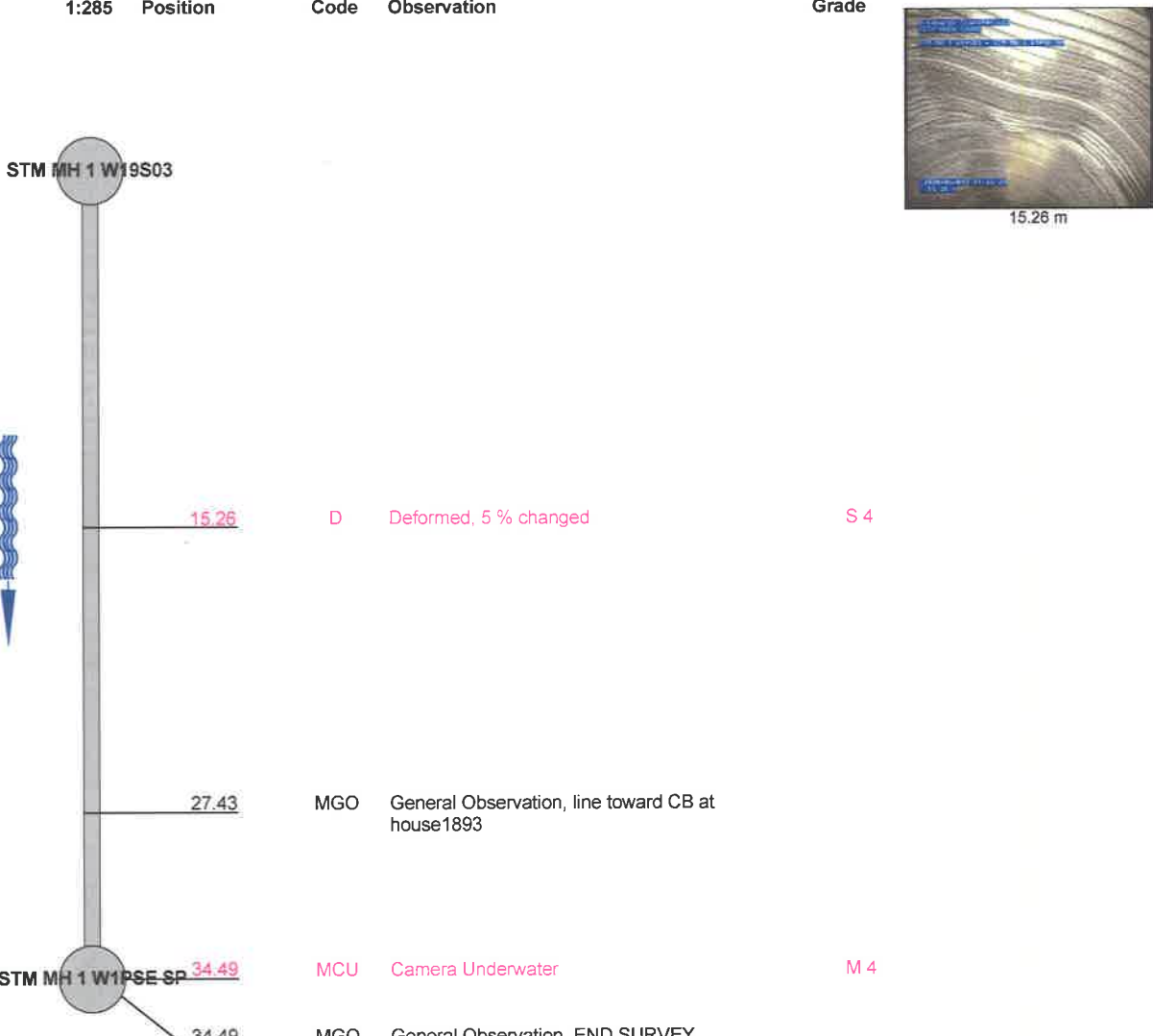
Position

Code

Observation

Grade

STM MH 1 W19S03



15.26 m

15.26

D

Deformed, 5 % changed

S 4

27.43

MGO

General Observation, line toward CB at house1893

34.49

MCU

Camera Underwater

M 4

34.49

MGO

General Observation, END SURVEY

QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4100	4100	4	4	8	4	4	4



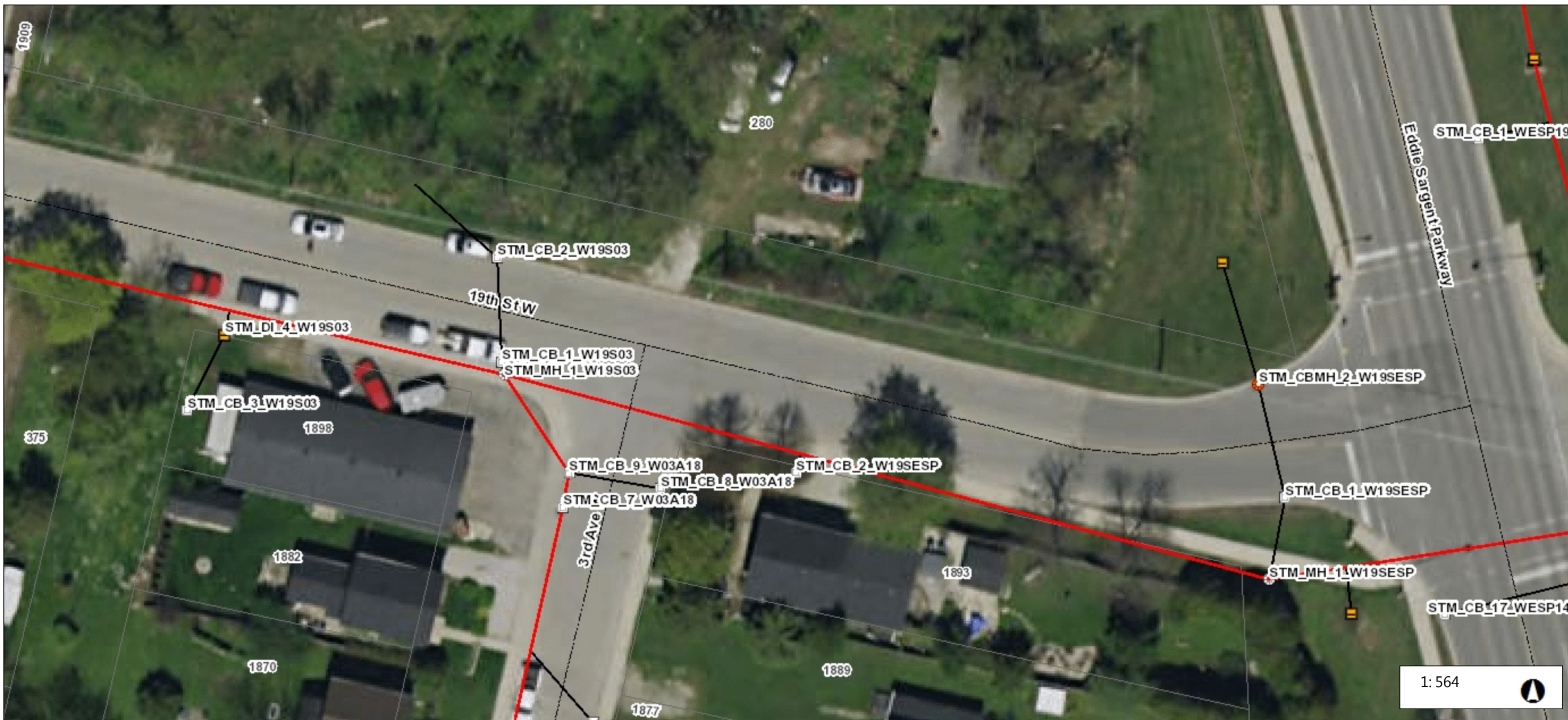
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Fax: 519 922-2678
E-mail: xxx

Inspection photos

City : OWEN SOUND	Street : 19th st west	Date :	Pipe Segment Reference :	Section No : 4
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Photo: 4_1A
15.26m, Deformed, 5 % changed



Legend

Inlet IDs

Manhole

Inlet

- Catch Basin
- Ditch Inlet Catch Basin
- Double Catch Basin
- Side Inlet Catch Basin

Manhole

- Manhole
- Catch Basin Manhole
- Double Catch Basin Manhole

Storm Main

Storm Lead

PARCELS

Notes

Brook Basin Asset ID 1



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Inspection Report

Date 01/04/2020	P/O. No.	Weather Dry	Surveyor's Name BRIAN	Pipe Segment Reference	Section No. 5
Certificate No.	Survey Customer	System Owner OWEN SOUND	Date Cleaned	Pre-Cleaning No Pre-Cleaning	Sewer Category

Street 19th st west	Use of Sewer Stormwater	Upstream MH STM CB MH 1 W1PS05
City OWEN SOUND	Drainage Area	Downstream MH STM MH 2 W19S04
Loc. details	Flow Control	Dir. of Survey Downstream
Location Code	Length surveyed 41.07 m	Section Length 41.07 m

Purpose of Survey Routine Assessment	Joint Length 600 mm
Year Laid	Dia./Height Concrete Segments (unbolted)
Year Rehabilitated 0	Material
Tape / Media No.	Lining Method

Add. Information :

1:330	Position	Code	Observation	Grade
STM CB MH 1 W1PS05				
	8.96	ISSR	Intruding Sealing Ring, 40 % of cross sectional area, from 3 o'clock, to 10 o'clock	M 2
	9.90	CM	Crack Multiple, from 2 o'clock, to 12 o'clock, 100 mm defective, 1 mm intrusion	S 3
	10.62	ISSR	Intruding Sealing Ring, 5 % of cross sectional area, from 2 o'clock, to 12 o'clock	M 2
	11.15	S1	CL Crack Longitudinal, at 12 o'clock, 1 mm defective, 1 mm intrusion, Start	S 2
	16.15	E1	CL Crack Longitudinal, at 12 o'clock, 1 mm defective, 1 mm intrusion, Finish	S 2
	16.15	S2	CM Crack Multiple, from 11 o'clock, to 2 o'clock, 1 mm defective, 1 mm intrusion, Start	S 3
	22.54	E2	CM Crack Multiple, from 11 o'clock, to 2 o'clock, 1 mm defective, 1 mm intrusion, Finish	S 3
	24.97	S3	CL Crack Longitudinal, at 1 o'clock, 1 mm defective, 1 mm intrusion, Start	S 2
	33.20	E3	CL Crack Longitudinal, at 1 o'clock, 1 mm defective, 1 mm intrusion, Finish	S 2
	34.44	JOL	Joint Offset Large, 30 mm, 30 mm	S 2
	41.07	MGO	General Observation, END SURVEY	
STM MH 2 W19S04				



8.96 m



10.62 m



16.15 m



34.44 m

QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
3529	2200	33	4	37	2.36	2	2.31



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Inspection photos

City : OWEN SOUND	Street : 19th st west	Date :	Pipe Segment Reference :	Section No : 5
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Photo: 5_1A
 8.96m, Intruding Sealing Ring, 40 % of cross sectional area, from 3 o'clock, to 10 o'clock



Photo: 5_3A
 10.62m, Intruding Sealing Ring, 5 % of cross sectional area, from 2 o'clock, to 12 o'clock



Photo: 5_6A
 16.15m, Crack Multiple, from 11 o'clock, to 2 o'clock, 1 mm defective, 1 mm intrusion, Start



Photo: 5_10A
 34.44m, Joint Offset Large, 30 mm, 30 mm










Legend

Inlet IDs

Manhole

Inlet

-  Catch Basin
-  Ditch Inlet Catch Basin
-  Double Catch Basin
-  Side Inlet Catch Basin
- Manhole**
-  Manhole
-  Catch Basin Manhole
-  Double Catch Basin Manhole

 Storm Main

 Storm Lead

 PARCELS

Notes

28.7 0 14.33 28.7 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

APPENDIX H:
INITIAL CONSULTATION (PIC NO.1)

BROOKE AREA BASIN A3 CITY OF OWEN SOUND

MASTER PLAN & Municipal Class Environmental Assessment Schedule 'B' Consultation

BACKGROUND:

The Brooke Area Stormwater Management Study (2008) investigated and identified drainage issues and deficiencies within seven drainage areas that cross a common municipal border within the Township of Georgian Bluffs and outlet through the City of Owen Sound to Georgian Bay. Brooke Basin A3 was identified as having multiple issues.

In 2015, the Township of Georgian Bluffs constructed the Carney Street Stormwater Management Pond to manage the increase in stormwater peak flows due to development within the Township. Further to the completion of the Carney Street SWM Pond, the City is investigating in greater detail the outlet system for Brooke Area Basin A3, by following a Master Plan approach.

STUDY APPROACH:

MASTER PLAN

Reviews an overall
drainage system
across the broader
Study Area.



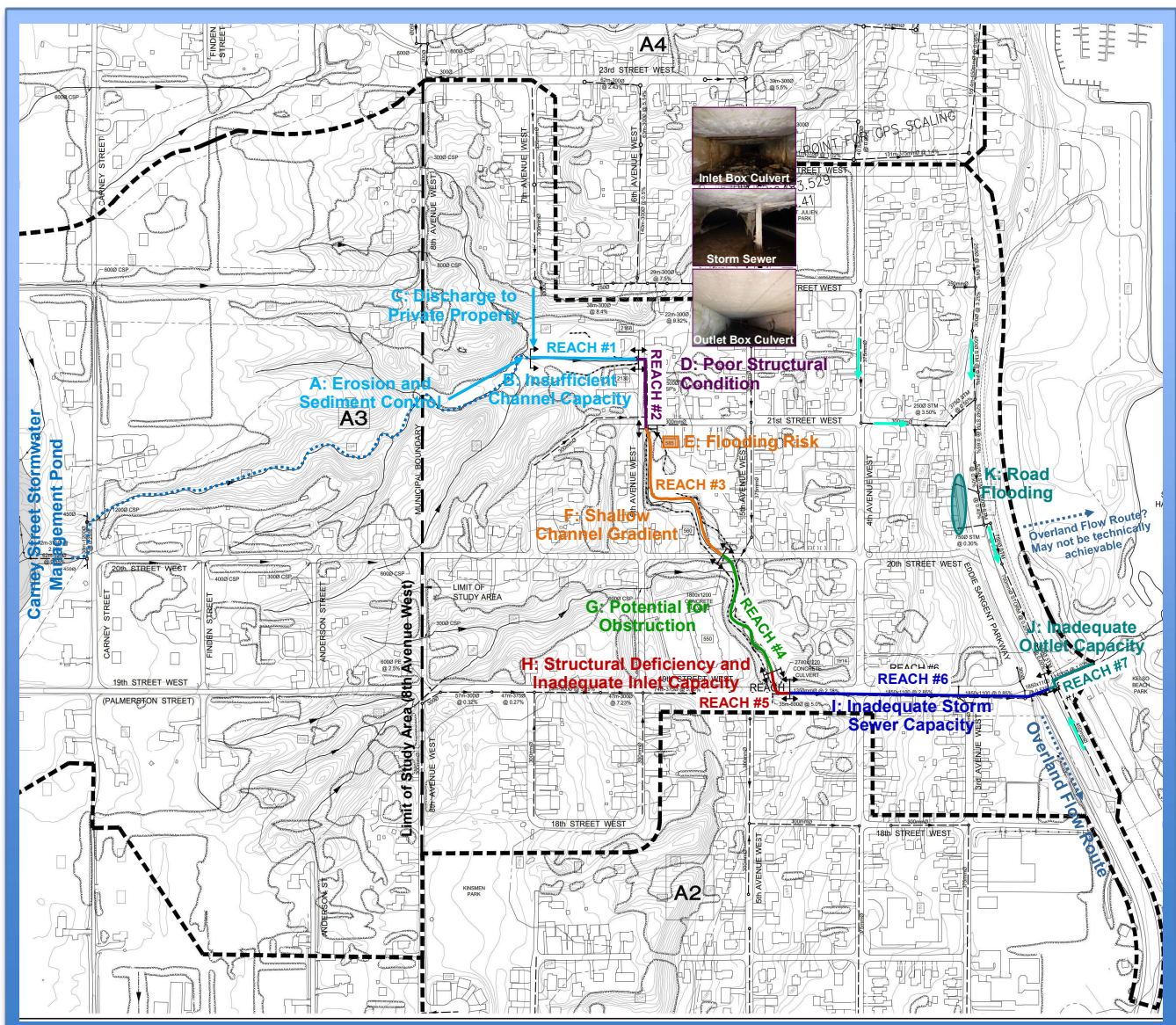
EA PROCESS

Reviews specific
project solutions to
identified problems
for Schedule 'B' EA
projects.

BROOKE AREA BASIN A3

The system includes a combination of open watercourses and closed storm sewers which will require maintenance or replacement in the coming years.

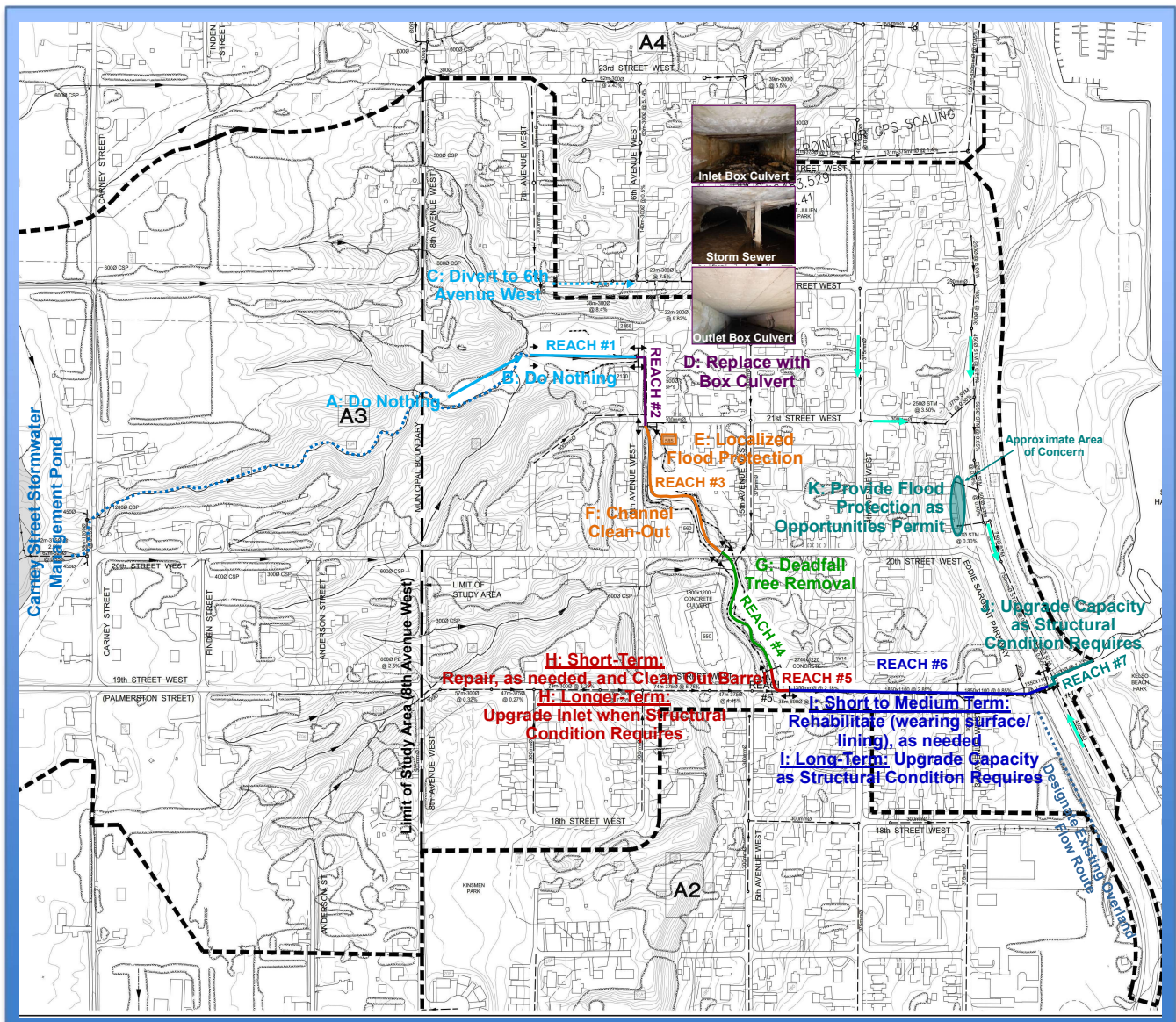
ISSUES TO BE ADDRESSED:



BROOKE AREA BASIN A3

The design development for the Schedule 'B' projects identified within the Master Plan will be completed as part of the implementation phase for each project, as required.

SUMMARY OF RECOMMENDED SOLUTIONS:



BROOKE AREA BASIN A3

SUMMARY OF RECOMMENDED SOLUTIONS:

REACH	RECOMMENDED SOLUTION(S)	EA SCHEDULE	RELATIVE PRIORITY	CONSTRUCTION COST ESTIMATE
1	Do Nothing	N/A	N/A	N/A
2	Replacement with Box Culvert and Foundation <u>Other:</u> 7 th Avenue West storm sewer diversion	B Included	High	\$1.5M Included
3	Channel improvements within existing watercourse; and Localized Flood Protection <u>Other:</u> Obtain maintenance easements, as possible.	B N/A	Medium High	\$100,000 \$20,000
4	Remove Deadfall Trees <u>Other:</u> Obtain maintenance easements, as possible.	A	Low	\$10,000
5	Short-Term: Repair, clean-out and maintain culvert; and Longer-Term: Replace culvert, based on end of service life.	A B	High Medium	\$100,000 \$500,000
6	Short to Medium Term: Rehabilitate (wearing surface/ lining), as needed; and Longer-Term: Replace the storm sewer system as it approaches the end of its service life.	A B	As Needed Low	\$250,000 to \$400,000 \$2.0M
7	Remove and replace existing outlet pipe; Develop municipal flood protection standards; Designate existing overland flow route to the Pottawatomi River.	B N/A N/A	Medium N/A Medium	\$500,000

- YOUR FEEDBACK IS IMPORTANT -

Please provide any comments you have by completing a comment sheet or by submitting comments via mail, phone, or email to:

[City of Owen Sound](#)

Chris Webb, P.Eng., Manager of Engineering Services

cwebb@owensound.ca

[GM BluePlan Engineering](#)

John Slocombe, P.Eng., Project Manager

john.slocombe@gmblueplan.ca

Thank You!

*Your involvement is encouraged for the
successful completion of this Study.*

**With the exception of personal information, all comments
will become part of the public record of the study**

Please Provide
Comments By:
November 25th, 2022

MASTER PLAN BROOKE AREA BASIN A3

CITY OF OWEN SOUND

Presentation to Committee

November 8, 2022

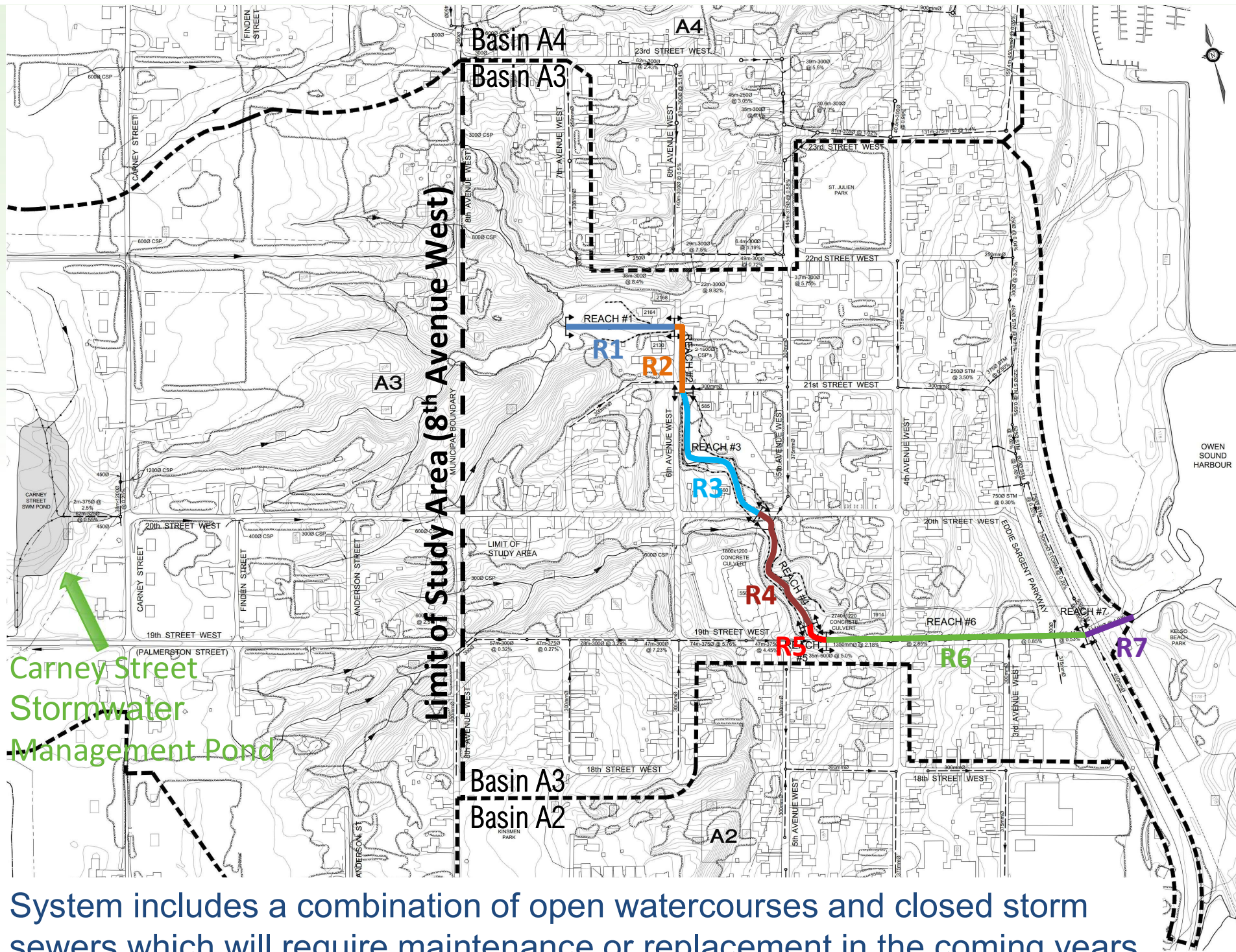


BACKGROUND

Brooke Area Stormwater Management Study (2008):

- Investigated and identified drainage issues and deficiencies within seven drainage areas that cross a common municipal border with Georgian Bluffs and outlet through the City to Georgian Bay.
- Brooke Basin A3 was identified as having multiple issues both in Georgian Bluffs and the City.
- 2015: The Carney Street SWM Pond was constructed to manage the increase in stormwater peak flows due to development within the Township of Georgian Bluffs.

STUDY AREA: Basin A3



System includes a combination of open watercourses and closed storm sewers which will require maintenance or replacement in the coming years.

STUDY APPROACH

MCEA Appendix 4 - Approach #2: Combined Master Plan and EA Processes

MASTER PLAN

Reviews an overall drainage system across the broader Study Area.



EA PROCESS

Reviews specific project solutions to identified problems for Schedule 'B' EA projects.

REACH #1: Open Channel

(7th Avenue West to 6th Avenue West)

Issues Identified (BASWM, 2008):

A. Erosion and Sediment Control

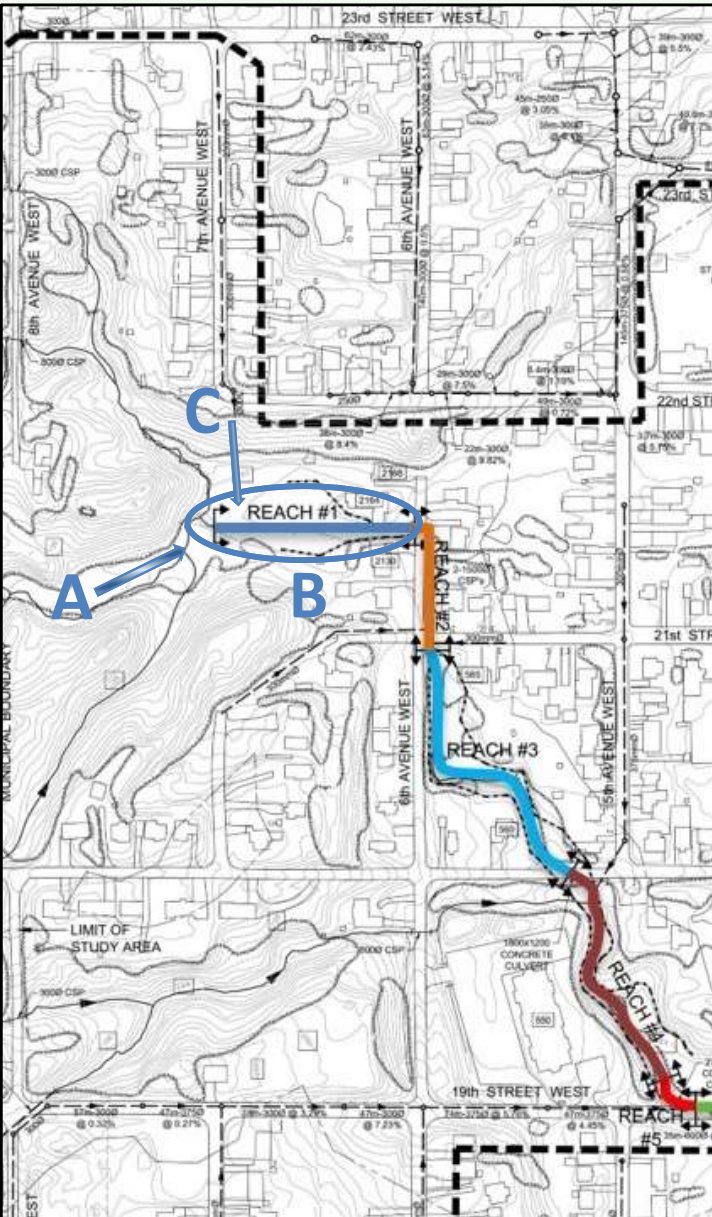
Upstream watercourses may be susceptible to erosion which could result in sedimentation, ultimately impairing their function.

B. Insufficient Channel Capacity

The channel has insufficient capacity to convey flows greater than the 1:2 year storm.

C. Discharge to Private Property

Storm sewer on 7th Avenue West discharges down the bluff at 22nd Street West, with overland flows across private properties. Bluff beneath the outfall is highly eroded.



ASSESSMENT OF ALTERNATIVES

KEY Considerations:

- Following the completion of the Carney Street SWM Pond, channel capacity appears to be sufficient.
- Regrading efforts would be necessary to increase capacity (Alt 1-2).
- The area required for a SWM pond (Alt 1-4) would be land intensive.
- Existing watercourse can generally be considered self-cleaning.

ALTERNATIVES (REACH #1)		ENVIRONMENTS				RANKING
		Social	Natural	Technical	Economic	
1-1	Do Nothing	✓	✓	✓	\$	FAVOURED
1-2	Increase Open Channel Capacity				\$\$	
1-3	Divert Storm Sewer Outlet Flows from 7 th Ave West	Previously Considered: A design plan to divert this discharge was planned for implementation with a Reach #2 Solution				
1-4	Construct a Stormwater Management Pond				\$\$\$	

EA Schedule for Recommended Solution: Not Applicable

REACH #2: Culvert

(6th Avenue West; North of 21st Street)

Issues Identified:

D. Poor Structural Condition

Inlet Box Culvert:

Condition: **Deteriorated**

Recommendation: Replacement

Load restrictions have been posted.



Storm Sewer (Twin Culvert):

Condition: Good to Fair

Recommendation: Minor repairs to barrels and foundation, at a minimum.



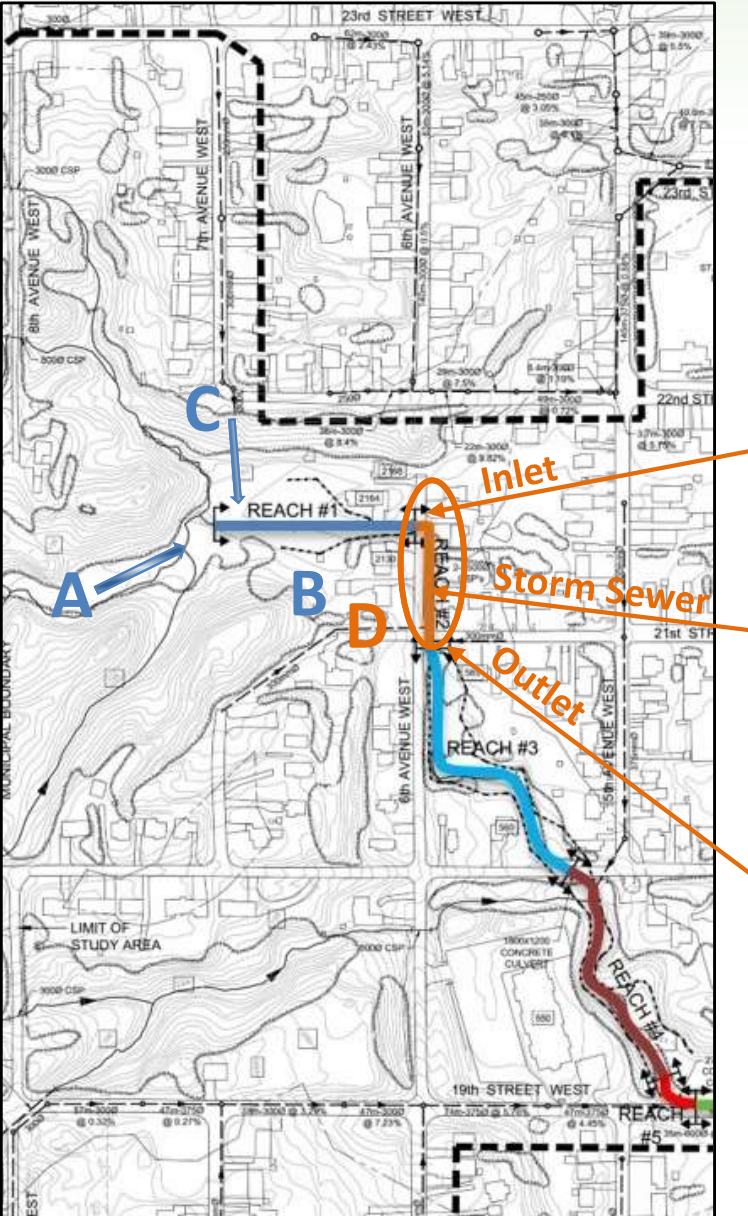
Outlet Box Culvert:

Condition: Fair to poor

Recommendation: Major rehabilitation to several elements



POOR SOIL CONDITIONS REQUIRE CONSIDERATION



ASSESSMENT OF ALTERNATIVES

KEY Considerations:

- Six different replacement alternatives considered in the Master Plan:
The recommended replacement Alternative includes a 2400 x 1500 mm box culvert within the 6th Avenue West ROW.
- ***OSIM Reports suggest that replacement is favoured over repairs.**

Note: The 7th Ave W storm sewer diversion could be constructed concurrently with Reach #2.

ALTERNATIVES (REACH #2)		ENVIRONMENTS				RANKING
		Social	Natural	Technical	Economic	
2-1	Do Nothing	Eventual structural failure would impact property access (5 homes), fish habitat, drainage and costs.				X
2-2	Repair Existing System			*Beyond Repair	\$\$\$\$	X
2-3	Remove and Replace Existing System	✓	✓	✓	\$\$\$	FAVOURED
EA Schedule for Recommended Solution: Schedule 'B'						

REACH #3: Open Channel

(21st Street West to 20th Street West)

Issues Identified:

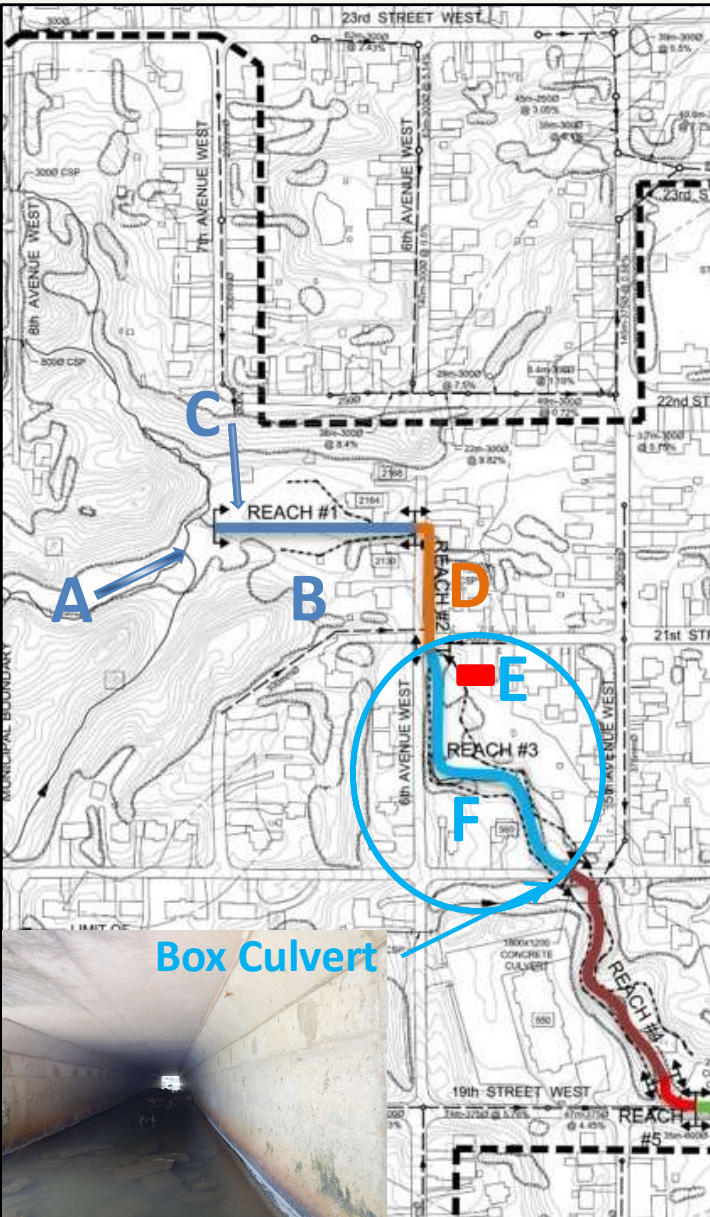
E. Flooding Risk

585 21st Street West: Low basement door opening elevation may be susceptible to flooding.

F. Shallow Channel Gradient

- Does not provide adequate capacity to convey modelled flows: Results in flooding on private lands.
- Flat gradient permits sediments to settle under low flow conditions, reducing the conveyance capacity.

Note: Box culvert on 20th St W is in good condition. Regardless of improvements to the open channel, the box culvert will produce some backwater effect.



ASSESSMENT OF ALTERNATIVES

ALTERNATIVES (REACH #3)		ENVIRONMENTS				RANKING
		Social	Natural	Technical	Economic	
3-1	Do Nothing	Does not address sedimentation issues Flooding Risk = \$\$\$?				X
3-2	Channel Improvements Along Current Alignment		✓	✓ Long-Term	\$\$\$	FAVOURED Long-Term
3-3	Re-alignment Along Straighter Route				\$\$\$\$	
3-4	Piped Diversion System				\$\$\$\$	
3-5	Increase Flow Area Across 20 th Street W (through Box Culvert)	NOT TECHNICALLY VIABLE Does not result in lowered upstream surface elevations.				X
3-6	Flood Protection	✓		✓ Short-Term	\$	FAVOURED Short-Term
EA Schedule for Recommended Solution: Schedule 'B' for Alt 3-2, Not applicable for Alt 3-6						

ASSESSMENT OF ALTERNATIVES

KEY Considerations:

- Channel improvements (Alt 3-2 and Alt 3-3) would include widening and establishing a uniform gradient.
- A partial conveyance of the Regional flood flow within the overbanks is acceptable as long as it does not pose a flood risk to adjacent residences.
- In function, Alt 3-2 (existing alignment) and Alt 3-3 (straightened) would be expected to be similar.
- Alt 3-2 would require the establishment of permanent easements for routine maintenance along this section, whereas Alt 3-3 may require property acquisition.
- Piped Diversion (Alt 3-4), which would be more costly and complex, would also require open channel improvements.
- The recommended flood protection measures (Alt 3-6), such as removal of basement door or localized flood protection, are contingent on access.

REACH #4: Open Channel

(20th Street West to 19th Street West)

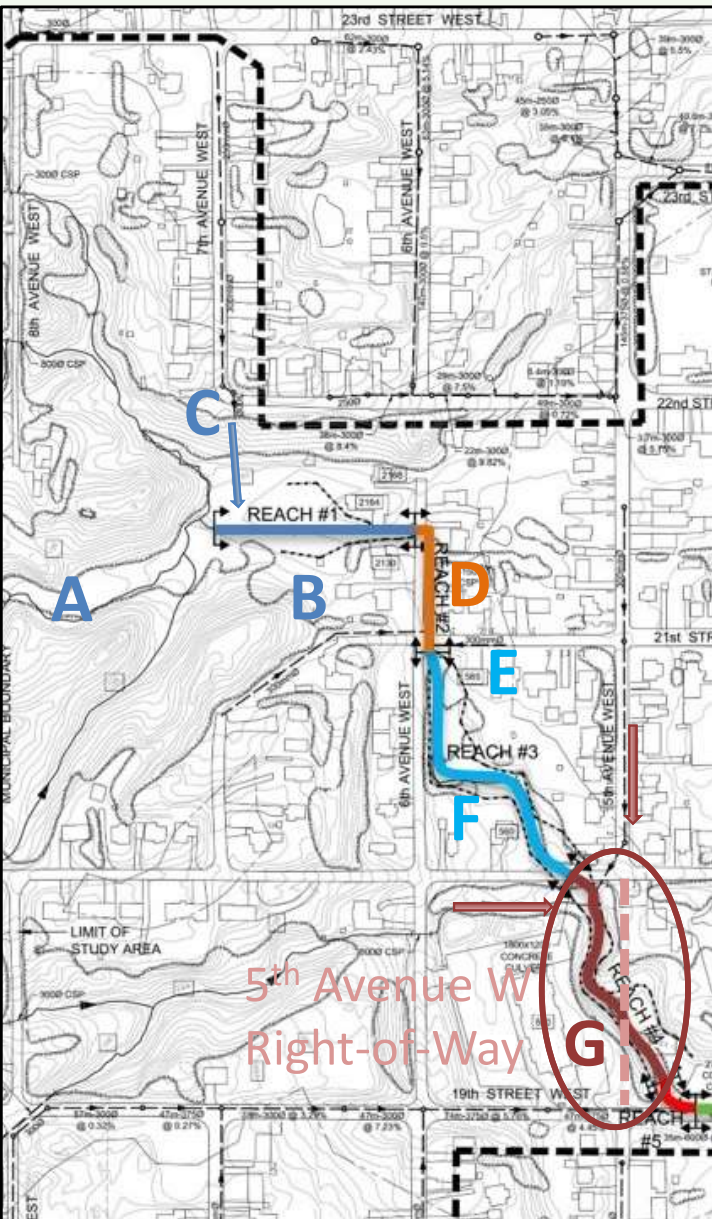
Description:

- Deep gully-like watercourse
- Receives additional flows from 5th Avenue West ROW and tributary channel from the west
- Longitudinal slope between 1% and 2.5%
- Densely vegetated surroundings

Issues Identified:

G. Potential for Obstruction

- No Municipal easements exist over the areas that traverse private properties.
- Consider obtaining easements for maintenance access, as opportunities permit.
- Monitor and maintain, as necessary.



ASSESSMENT OF ALTERNATIVES

KEY Considerations:

- To facilitate maintenance, access agreements could be resolved (or easements established) to allow for the removal of deadfall trees.
- Alt 4-3 is not considered to be a practical alternative to address potential obstructions.

ALTERNATIVES (REACH #4)		ENVIRONMENTS				RANKING
		Social	Natural	Technical	Economic	
4-1	Do Nothing	Does not address the potential for flooding risk in Reach #3 posed by deadfall trees				X
4-2	Provide Maintenance to the Open Channel Watercourse	✓	✓	✓	\$	FAVOURED
4-3	Fully or Partially Piped System along ROWs		Woodlands Fish Habitat	Large pipe ∅	\$\$\$\$	
EA Schedule for Recommended Solution: Schedule 'A' (Monitor and maintain, as necessary)						

REACH #5: Culvert Inlet

(19th Street West)

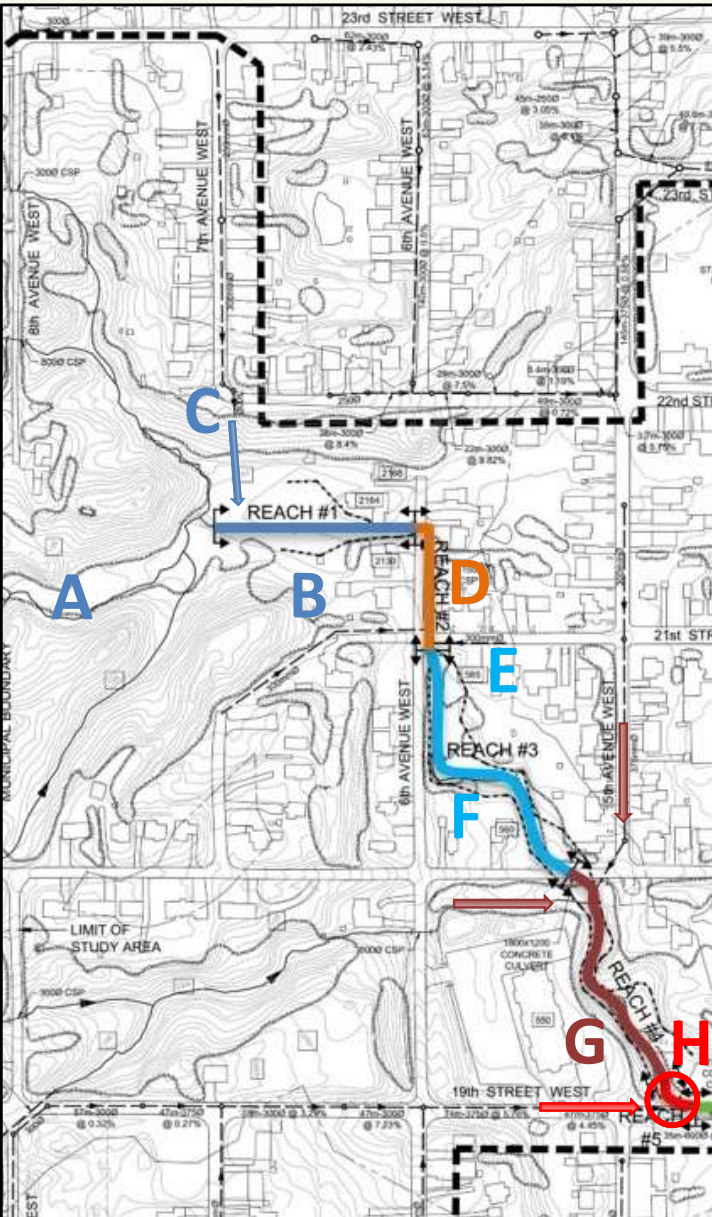
Description:

- Inlet system: Transition from open channel to culvert flow easterly towards Georgian Bay.
- Inlet to the 19th Street West storm sewer system, at a confluence with other upstream flows.

Issues Identified:

H. Structural Deficiency and Inadequate Inlet Capacity

- Inlet structure is aging and may need to be replaced in the foreseeable future.
- Has inadequate capacity for the Regional Flood flow.



ASSESSMENT OF ALTERNATIVES

Rising flows due to backwater effect resulting from inadequate inlet capacity can discharge at an overland spill point along 19th Street West.

OSIM Reports Recommend:

- i. Removal and replacement of poor concrete; and
- ii. Clean out of sediment and debris accumulations.

Recommended Preferred Alternative(s):

Short-Term (Inspect and Maintain: Schedule A)

Alternative 5-2: Repair and Clean Out Culvert Barrel

Long-Term (Schedule B)

Alternative 5-3: Remove and Replace Existing Culvert

- Maintain existing structure until replacement is required or replace simultaneously with Reach #6 Solution.
- Consider increased capacity at time of replacement.



REACH #6: Storm Sewer System

(19th Street West: 5th Ave West to Eddie Sargent Parkway (ESP))

Issues Identified:

I. Inadequate Storm Sewer Capacity

- Based on a CCTV Inspection, completed in the Spring 2020, the existing corrugated steel pipe is in overall good condition.
- Most restrictive capacity is in the vicinity of the ESP, with greater than 50% of the design flows being conveyed overland.



ASSESSMENT OF ALTERNATIVES

Recommended Preferred Alternative(s):

Utilization of each of the Alternatives over a longer-term planning horizon:

The service life of existing infrastructure is dependent of the structural integrity of the system, which may be extended by Alternative 6-2.

	Short-Term	Short- to Medium-Term	Long-Term
Alternative	6-1: Do Nothing	6-2: Repair	6-3: Replace
Comments	The existing system, including the ability of the system to manage overland flows, adequately conveys flows.	<p>The service life may be extended by adding a new wearing surface or lining.</p> <p>The service life may be extended to better align with other infrastructure upgrades along this well travelled road.</p>	<p>The existing system is in overall good condition.</p> <p>Increased capacity may be considered at such a time that replacement is required.</p>
EA Schedule	Not Applicable	Schedule A	Schedule B

REACH #7: Outlet System

(Eddie Sargent Parkway to Kelso Beach)

Description:

- Receives additional flows, primarily from ESP
- Constitutes drainage outlet for the entirety of Basin A3
- Capacity of outlet system may be influenced by water levels in Georgian Bay
- Improvements to the storm sewer outfall through Kelso Beach were completed in 2020

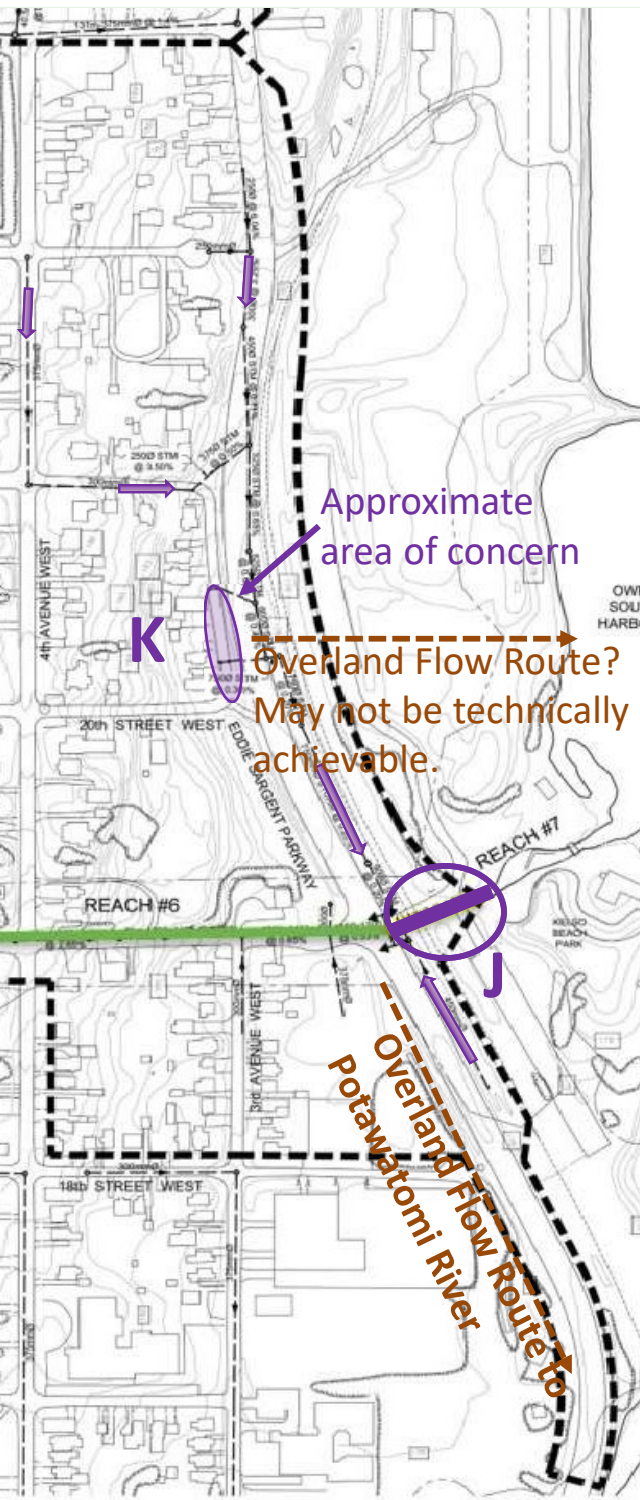
Issues Identified:

J. Inadequate Outlet Capacity

The existing outlet pipe, through Kelso Beach, has the capacity only to convey the 1:10 year design flow under free flow conditions.

K. Road Flooding

Flooding conditions occur along 3rd Avenue West.



ASSESSMENT OF ALTERNATIVES

ALTERNATIVES (REACH #7)		ENVIRONMENTS				RANKING
		Social	Natural	Technical	Economic	
7-1	Do Nothing	Does not address problem identified				X
7-2	Backflow Preventers for 3 rd Ave W Storm Sewer		✓		\$\$ + Liability	
7-3	Construct Better Defined Overland Flow Route				\$\$ + Liability	FAVOURED Short-Term
7-4	Remove and Replace Existing Outlet Pipe	✓	✓	✓ Unlikely that full capacity is achievable.	\$\$\$	FAVOURED Long-Term
7-5	Municipal Flood Protection Standards	✓	✓		\$ + Liability	FAVOURED Short-Term
EA Schedule for Recommended Solution: Schedule 'B' (Alt 7-4), Not Applicable (Alt 7-3 & 7-5)						

Alternates 7-3 and 7-5 would be inadequate on their own but are considered relevant in conjunction with other alternatives.

ASSESSMENT OF ALTERNATIVES

Flooding Risk: Inadequate capacity leads to a flooding risk along 3rd Avenue West (between 20th and 21st Street).

Alt 7-2: While Backflow Preventers may prevent surcharge from the sewer outlet, the risk of flooding due to flow from the upstream lands would remain.

Alt 7-3: An Overland Flow Route would allow surcharge flows to be conveyed overland by ditch grading either easterly to the Bay or southerly to the Pottawatomini River. As 'High Water Elevations' in the Bay are greater than the 3rd Ave W road surface, flooding of the roadway can not likely be prevented. However, an overland route to the Pottawatomini River may be beneficial.

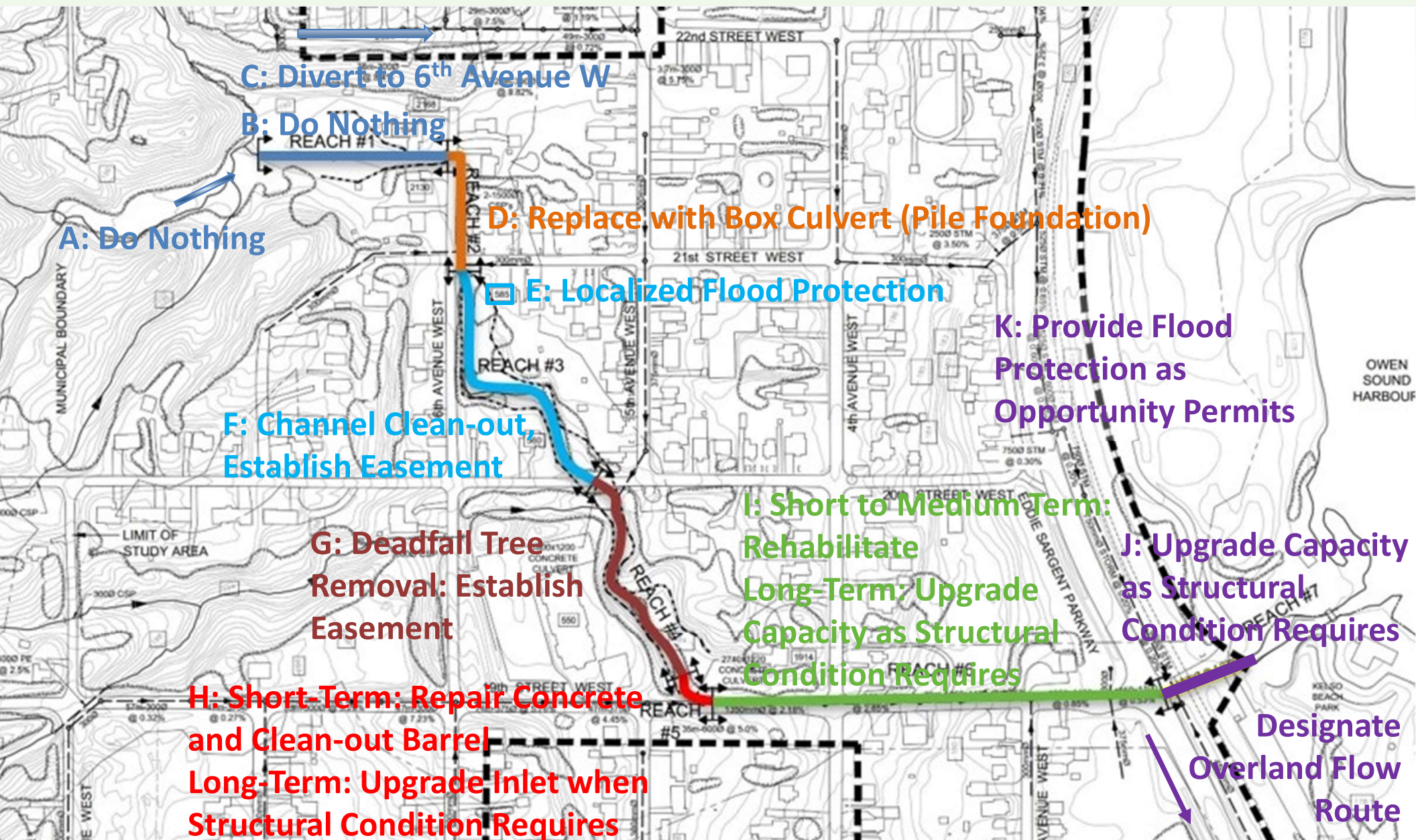
Alt 7-4: The Replacement of the Existing Outlet Pipe would include replacement with an outlet that is as large in X-sectional flow area as practicable, placed as high as possible, while still maintaining necessary cover, conveyance and access to Kelso.

Alt 7-5: Municipal Flood Protection Standards could be implemented as opportunities arise (i.e., Zoning Policy for no openings below flood elevation and/or Official Plan land use designation for overland route).

SUMMARY OF RECOMMENDED SOLUTIONS (Preliminary)

REACH	RECOMMENDED SOLUTION(S)	EA SCHEDULE	RELATIVE PRIORITY	PROJECT COST EST.
1	Do Nothing	N/A	N/A	N/A
2	Replacement (2400x1500 mm Box Culvert with Foundation) <u>Other:</u> 7 th Avenue West storm sewer diversion	B Included	High	\$1.5M Included
3	Channel improvements within existing watercourse; and Localized Flood Protection <u>Other:</u> Obtain maintenance easements, as possible.	B N/A	Medium High	\$100,000 \$20,000
4	Remove Deadfall Trees <u>Other:</u> Obtain maintenance easements, as possible.	A	Low	\$10,000
5	Short-Term: Repair, clean-out and maintain culvert; and Longer-Term: Replace culvert, based on end of service life.	A B	High Medium	\$100,000 \$500,000
6	Short to Medium Term: Rehabilitate (wearing surface and lining), as needed; and Longer-Term: Replace the storm sewer system as it approaches the end of its service life.	A B	As Needed Low	\$250,000 – \$400,000 \$2.0M
7	Remove and replace existing outlet pipe; and Develop municipal flood protection standards. Designate overland flow route to the Pottawatomie River	B N/A N/A	Low N/A Medium	\$500,000

SUMMARY OF RECOMMENDED SOLUTIONS



NEXT STEPS

- November 25th: End of Comment Period
- Incorporation of comments and new information into the Master Plan and re-assessment of alternatives
- December 6th: Report to Operations Committee Meeting for acceptance (or otherwise)
- December 12th: Approval (or otherwise) by City Council
- December/January: Issue Notice of Completion and provide 30-day review period for Schedule 'B' EA projects
- Implementation of individual projects (subject to Council approval)

APPENDIX I: COMMENTS AND FEEDBACK

Drea Nelson - GM BluePlan

From: Tim Lanthier <t.lanthier@greysauble.on.ca>
Sent: Tuesday, October 25, 2022 2:54 PM
To: John Slocombe - GM BluePlan; Drea Nelson - GM BluePlan; 'Chris Webb (cwebb@owensound.ca)'
Cc: Gloria Dangerfield
Subject: RE: 216301 Basin A3 (Owen Sound): Municipal Class EA Master Plan - Notice of Project Initiation

Sounds good. Gloria will reach out with a data sharing agreement.

Tim Lanthier
Chief Administrative Officer

519.376.3076 Ext. 234
237897 Inglis Falls Road
Owen Sound, ON N4K 5N6
www.greysauble.on.ca



Please note that due to the ongoing COVID-19 situation, GSCA staff will be continuing to work in a combination of in-office and remote situations and not have access to office phones. Please utilize email as the most reliable way to reach our staff at this time. A full staff directory is available on our website. Rest assured that GSCA is committing to continuing to provide a high level of service and staff will be doing their best to ensure this. The GSCA Administrative Office is open to the public in limited capacity. Most of GSCA's conservation areas continue to remain open. As this situation continues to evolve, please monitor our website at www.greysauble.on.ca for up-to-date information.

For after-hours non-911 emergencies please call 226-256-8702. Please do not use this number for planning related inquiries. For information regarding properties, visit our website at www.greysauble.on.ca.

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From: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>
Sent: Tuesday, October 25, 2022 2:52 PM
To: Tim Lanthier <t.lanthier@greysauble.on.ca>; Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>; 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>
Cc: Gloria Dangerfield <g.dangerfield@greysauble.on.ca>
Subject: RE: 216301 Basin A3 (Owen Sound): Municipal Class EA Master Plan - Notice of Project Initiation

Thanks Tim.
We'd be happy to receive that info.

John Slocombe, P.Eng.
Designated Consulting Engineer
Branch Manager, Vice President

GM BluePlan Engineering Limited
1260-2nd Avenue East | Owen Sound ON N4K 2J3
t: 519.376.1805 ext. 2204 | c: 519.372.4600
john.slocombe@gmblueplan.ca | www.gmblueplan.ca



From: Tim Lanthier <t.lanthier@greysauble.on.ca>
Sent: Tuesday, October 25, 2022 2:49 PM
To: Drea Nelson - GM BluePlan <Drea.Nelson@gmbblueplan.ca>; 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmbblueplan.ca>; Gloria Dangerfield <g.dangerfield@greysauble.on.ca>
Subject: RE: 216301 Basin A3 (Owen Sound): Municipal Class EA Master Plan - Notice of Project Initiation

Hi All,

I notice that the report references using existing contours, pending site level survey if necessary. I would note that we have a LiDAR derived DEM for this area, if that would be beneficial to the project.

Regards,

Tim Lanthier
Chief Administrative Officer

519.376.3076 Ext. 234
237897 Inglis Falls Road
Owen Sound, ON N4K 5N6
www.greysauble.on.ca



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From: Drea Nelson - GM BluePlan <Drea.Nelson@gmbblueplan.ca>
Sent: Tuesday, October 25, 2022 9:43 AM
To: 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmbblueplan.ca>
Subject: 216301 Basin A3 (Owen Sound): Municipal Class EA Master Plan - Notice of Project Initiation

Good Morning,

The City of Owen Sound has completed a Master Plan (Version 1) to address drainage deficiencies identified within Brooke Basin A3. The Study Area is shown on the attached Notice. The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects identified. Version 1 of the report discusses the findings, to date. This

correspondence is being provided to your agency (i.e. department, ministry, authority or community) as it has been identified to have an area of interest that may be affected by this plan.

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https://sendafile.gmblueplan.ca/public_uploads/2022-10-25_132856_andrea.nelson.zip

Alternatively, the City of Owen Sound also has the Master Plan posted on their website for viewing purposes.

<https://www.owensound.ca/Modules/News/index.aspx?newsId=83da4f68-93d6-4c0d-98c7-d84783fc81ed>

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Please contact Chris Webb, Manager of Engineering Services, City of Owen Sound at the address listed on the attached Notice, with any questions or comments regarding this project.

Kind Regards,
Andrea Nelson

Andrea Nelson, M.Sc.

Senior Hydrogeologist

GM BluePlan Engineering Limited

1260-2nd Avenue East | Owen Sound ON N4K 2J3

t: 519.376.1805 ext. 2219 | c: 519.372.4678

andrea.nelson@gmblueplan.ca | www.gmblueplan.ca



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Drea Nelson - GM BluePlan

From: Kristopher Robinson <k.robinson@greysauble.on.ca>
Sent: Wednesday, October 26, 2022 11:22 AM
To: John Slocombe - GM BluePlan; Drea Nelson - GM BluePlan; Chris Webb (Manager of Engineering Services)
Cc: Gloria Dangerfield
Subject: Re: Basin A3 LiDAR Data Request
Attachments: SMP_DLA_GM_BluePlan_26_10_2022.pdf

Good morning,

Please see attached for the DLA for the requested information. Please read it over and then sign it. Once both the City on GM BluePlan have signed it, we will sign it and send a link for download the data and the signed copy agreement. Please let me know if you have any questions or need anything else.

Thanks for your time,

Kristopher Robinson
Geospatial Technician

1-548-877-0507
237897 Inglis Falls Road
Owen Sound, ON N4K 5N6
www.greysauble.on.ca



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From: Kristopher Robinson
Sent: October 25, 2022 3:28 PM
To: John.Slocombe@gmblueplan.ca <John.Slocombe@gmblueplan.ca>; Drea.Nelson@gmblueplan.ca <Drea.Nelson@gmblueplan.ca>; Chris Webb (Manager of Engineering Services) <cwebb@owensound.ca>
Cc: Gloria Dangerfield <g.dangerfield@greysauble.on.ca>
Subject: Basin A3 LiDAR Data Request

Good afternoon Folks,

For the project GM Blue Plan is under contract for the City of Owen Sound so there will be no charge for the requested data. I will need to do a multiuser agreement that the City and GM Blue Plan. For the AOI could you folks please provide a shapefile or CAD file so I can select the LiDAR tiles based on it?

If you have any questions or need anything else, please let me know and I will be happy to help,

Kristopher Robinson (He/Him/His)
Geospatial Technician

1-548-877-0507
237897 Inglis Falls Road
Owen Sound, ON N4K 5N6
www.greysauble.on.ca



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Drea Nelson - GM BluePlan

From: Ethan Roy <EthanR@metisnation.org>
Sent: Monday, November 07, 2022 10:24 AM
To: Drea Nelson - GM BluePlan
Subject: RE: 216301 Basin A3 (Owen Sound): Municipal Class EA Master Plan - Notice of Project Initiation

Thank you for the project notification. The Lands, Resources and Consultation staff of the Métis Nation of Ontario, have conducted a high-level review of the documents provided and do not have any immediate concerns of impact on Métis rights or interests. In accordance with the Métis Nation of Ontario Statement of Prime Purpose, some of the core concerns of MNO Citizens are below:

- to promote and foster community development;
- to provide care and support necessary to meet the fundamental needs of the citizens of the Métis Nation
- to promote the improved health and wellness of the individual, the family and the whole Métis community
- to ensure that Métis can exercise their Aboriginal and Treaty rights and freedoms and in so doing, act in a spirit of cooperation with other Aboriginal and non-Aboriginal people;
- to re-establish land and resource bases
- to protect and preserve the land and waters within our homelands for future generations.

I encourage you to read the Statement of Prime Purpose in its entirety ([Statement of Prime Purpose - Métis Nation of Ontario \(metisnation.org\)](https://metisnation.org/Statement-of-Prime-Purpose)), and consider the perspective of Métis citizens during future stages of the project.

If there are any significant changes to this plan or project please email the Lands, Resource and Consultations Branch at consultations@metisnation.org. We value an ongoing dialogue with municipalities.

Thank you.

Ethan Roy (he/him)
Consultation Advisor
Lands, Resources, and Consultations (LRC) Branch
Métis Nation of Ontario
Sault Ste. Marie, ON, Canada
Email: ethanr@metisnation.org
Phone: (705) 527 3612
www.metsnation.org

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Please consider the environment before printing this e-mail.

From: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Sent: October 25, 2022 9:43 AM
To: 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>
Subject: 216301 Basin A3 (Owen Sound): Municipal Class EA Master Plan - Notice of Project Initiation

Good Morning,

The City of Owen Sound has completed a Master Plan (Version 1) to address drainage deficiencies identified within Brooke Basin A3. The Study Area is shown on the attached Notice. The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects identified. Version 1 of the report discusses the findings, to date. This correspondence is being provided to your agency (i.e. department, ministry, authority or community) as it has been identified to have an area of interest that may be affected by this plan.

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https://sendafile.gmblueplan.ca/public_uploads/2022-10-25_132856_andrea.nelson.zip

Alternatively, the City of Owen Sound also has the Master Plan posted on their website for viewing purposes.

<https://www.owensound.ca/Modules/News/index.aspx?newsId=83da4f68-93d6-4c0d-98c7-d84783fc81ed>

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Please contact Chris Webb, Manager of Engineering Services, City of Owen Sound at the address listed on the attached Notice, with any questions or comments regarding this project.

Kind Regards,
Andrea Nelson

Andrea Nelson, M.Sc.

Senior Hydrogeologist

GM BluePlan Engineering Limited

1260-2nd Avenue East | Owen Sound ON N4K 2J3

t: 519.376.1805 ext. 2219 | c: 519.372.4678

andrea.nelson@gmblueplan.ca | www.gmblueplan.ca



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Drea Nelson - GM BluePlan

From: Carl Seider <c.seider@greysauble.on.ca>
Sent: Monday, December 12, 2022 9:49 AM
To: Drea Nelson - GM BluePlan
Cc: John Slocombe - GM BluePlan; 'Chris Webb (cwebb@owensound.ca)'; RMO Mailbox
Subject: RE: 216301 Basin A3 (Owen Sound): Municipal Class EA Master Plan - Notice of Project Initiation

Hi Andrea,

Thanks for the reminder email regarding the Notice of Project Initiation for the Brooke Area stormwater project. As noted in your letter, this area falls within the Events-Based Area, where the storage of fuel greater than 25,000L is considered a significant threat and would require a Risk Management Plan. It is not anticipated that fuel storage would be associated with this project therefore there are no anticipated concerns or source protection policies that may apply.

Furthermore, it is not anticipated that noted activities will significantly impact or change flow models for the 2-hour time of travel, which delineates the Intake Protection Zone (IPZ) boundary, as modelled fuel spills were estimated at a conservative velocity of 1m/s for the on-land portion of the model. If changes to stormwater flows are anticipated to increase significantly as a result of this project, please let us know and we will revisit the IPZ model projections.

Regards,

Carl Seider
Risk Management Official

519.376.3076 Ext. 201
237897 Inglis Falls Road
Owen Sound, ON N4K 5N6
www.greysauble.on.ca



Please note that GSCA's Administrative Office has re-opened to the public. All visitors are asked to self-screen prior to entering and to wear a mask while in the building. Meetings with staff are by appointment only and should be scheduled at least 3 days in advance with the appropriate department. Many GSCA staff continue to work remotely and may not have access to office phones. Please utilize email as the most reliable way to reach our staff.

From: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Sent: December 9, 2022 3:48 PM
To: Carl Seider <c.seider@greysauble.on.ca>; Carl Seider <c.seider@greysauble.on.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; 'Chris Webb (cwebb@owensound.ca)'
<cwebb@owensound.ca>
Subject: FW: 216301 Basin A3 (Owen Sound): Municipal Class EA Master Plan - Notice of Project Initiation

Carl,
At the end of October we issued the Notice of Project Initiation for the Brooke Area Basin A3 Master Plan (City of Owen Sound). As we typically receive a response from you for our requests to review various projects, I thought I would send a quick message to ensure you received our Notice. Although the comment period for the Basin A3 Master Plan project has passed, we would be happy to include any comments or feedback regarding potential Source Water Protection considerations specific to the project.

Kind Regards,
Andrea

Andrea Nelson, M.Sc.
Senior Hydrogeologist

GM BluePlan Engineering Limited
1260-2nd Avenue East | Owen Sound ON N4K 2J3
t: 519.376.1805 ext. 2219 | c: 519.372.4678
andrea.nelson@gmblueplan.ca | www.gmblueplan.ca



From: Drea Nelson - GM BluePlan
Sent: Tuesday, October 25, 2022 9:42 AM
To: Carl Seider <c.seider@greysauble.on.ca>; mail@waterprotection.ca
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>
Subject: 216301 Basin A3 (Owen Sound): Municipal Class EA Master Plan - Notice of Project Initiation

Good Morning,

The City of Owen Sound has completed a Master Plan (Version 1) to address drainage deficiencies identified within Brooke Basin A3. The Study Area is shown on the attached Notice. The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects identified. Version 1 of the report discusses the findings, to date. This correspondence is being provided to your agency (i.e. department, ministry, authority or community) as it has been identified to have an area of interest that may be affected by this plan.

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https://sendafile.gmblueplan.ca/public_uploads/2022-10-25_132856_andrea.nelson.zip

Alternatively, the City of Owen Sound also has the Master Plan posted on their website for viewing purposes.

<https://www.owensound.ca/Modules/News/index.aspx?newsId=83da4f68-93d6-4c0d-98c7-d84783fc81ed>

With the circulation of the *Notice of Project Initiation* and the Master Plan (Version 1), the public, agencies and Indigenous Communities are invited to provide comments. The public comments received, and agency feedback provided, will be incorporated into the review and assessment of the recommendations, for consideration and acceptance (or otherwise) by Council, prior to issuing the *Notice of Completion* for the project process.

Further, in support of the EA process, we are consulting you with respect to Source Water Protection. Please find enclosed correspondence describing the project that requests your comment.

Please contact Chris Webb, Manager of Engineering Services, City of Owen Sound at the address listed on the attached Notice, with any questions or comments regarding this project.

Kind Regards,
Andrea Nelson

Andrea Nelson, M.Sc.
Senior Hydrogeologist

GM BluePlan Engineering Limited
1260-2nd Avenue East | Owen Sound ON N4K 2J3



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**Ministry of the Environment,
Conservation and Parks**

**Ministère de l'Environnement,
de la Protection de la nature
et des Parcs**

Environmental Assessment
Branch

Direction des évaluations
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November 10, 2022

Chris Webb, P.Eng.
Manager of Engineering Services
City of Owen Sound
cwebb@owensound.ca

BY EMAIL ONLY

Re: **Brooke Area Basin A3 Outlet Master Plan
City of Owen Sound
Municipal Class Environmental Assessment, Master Plan
Acknowledgement of Notice of Commencement**

Dear Chris Webb,

This letter is in response to the Notice of Commencement for the above noted Master Plan. The Ministry of the Environment, Conservation and Parks (MECP) acknowledges that the City of Owen Sound (proponent) has indicated that the study is following the approved environmental planning process for a Master Plan under the Municipal Class Environmental Assessment (Class EA) to fulfill the requirements for Schedule A/A+ and Schedule B projects.

The **updated (August 2022)** attached "Areas of Interest" document provides guidance regarding the ministry's interests with respect to the Class EA process. Please address all areas of interest in the EA documentation at an appropriate level for the EA study. Proponents who address all the applicable areas of interest can minimize potential delays to the project schedule. **Further information is provided at the end of the Areas of Interest document relating to recent changes to the Environmental Assessment Act through Bill 197, Covid-19 Economic Recovery Act 2020.**

The Crown has a legal duty to consult Aboriginal communities when it has knowledge, real or constructive, of the existence or potential existence of an Aboriginal or treaty right and contemplates conduct that may adversely impact that right. Before authorizing the project(s) identified in this Master Plan, the Crown must ensure that its duty to consult has been fulfilled, where such a duty is triggered. Although the duty to consult with Aboriginal peoples is a duty of the Crown, the Crown may delegate procedural aspects of this duty to project proponents while retaining oversight of the consultation process.

The proposed project(s) may have the potential to affect Aboriginal or treaty rights protected under Section 35 of Canada's *Constitution Act* 1982. Where the Crown's duty to consult is triggered in relation to the proposed project(s), **the MECP is delegating the procedural aspects of rights-based consultation to the proponent through this letter.** The Crown intends to rely on the delegated consultation process in discharging its duty to consult and maintains the right to participate in the consultation process as it sees fit.

Based on information provided to date and the Crown's preliminary assessment the proponent is required to consult with the following communities who have been identified as potentially affected by the proposed Master Plan:

- Saugeen First Nation and the Chippewas of Nawash Unceded First Nation
 - These communities work together on consultation issues and are known collectively as the Saugeen Ojibway Nation. They have requested notices be sent to the Saugeen Ojibway Nation Environment Office with a copy to the Chief and Council of Saugeen First Nation and Chippewas of Nawash Unceded First Nation.
- Métis Nation of Ontario - Lands and Resources Dept, Region 7

Steps that the proponent may need to take in relation to Aboriginal consultation for the proposed Master Plan project(s) are outlined in the "[Code of Practice for Consultation in Ontario's Environmental Assessment Process](#)". Additional information related to Ontario's Environmental Assessment Act is available online at: www.ontario.ca/environmentalassessments.

Please also refer to the attached document "A Proponent's Introduction to the Delegation of Procedural Aspects of consultation with Aboriginal Communities" for further information, including the MECP's expectations for EA report documentation related to consultation with communities.

The proponent must contact the Director of Environmental Assessment Branch (EABDirector@ontario.ca) under the following circumstances after initial discussions with the communities identified by the MECP:

- Aboriginal or treaty rights impacts are identified to you by the communities;
- You have reason to believe that your proposed project may adversely affect an Aboriginal or treaty right;

- Consultation with Indigenous communities or other stakeholders has reached an impasse; or
- A Section 16 Order request is expected based on impacts to Aboriginal or treaty rights


The MECP will then assess the extent of any Crown duty to consult for the circumstances and will consider whether additional steps should be taken, including what role you will be asked to play should additional steps and activities be required.

A draft copy of the report should be sent directly to me prior to the filing of the final report, allowing a minimum of 30 days for the ministry's technical reviewers to provide comments.

Please also ensure a copy of the final notice is sent to the ministry's Southwest Region EA notification email account (eanotification.swregion@ontario.ca) after the draft report is reviewed and finalized.

Should you or any members of your project team have any questions regarding the material above, please contact me at mark.badali1@ontario.ca.

Sincerely,



Mark Badali
Regional Environmental Planner – Southwest Region

Cc: John Ritchie, Manager, Owen Sound District Office, MECP
John Slocombe, P.Eng., GM BluePlan Engineering Limited
Andrea Nelson, M.Sc., Senior Hydrogeologist, GM BluePlan Engineering Limited

Enclosed: Areas of Interest

Attached: Client's Guide to Preliminary Screening for Species at Risk
A Proponent's Introduction to the Delegation of Procedural Aspects of Consultation with Aboriginal Communities

AREAS OF INTEREST (v. August 2022)

It is suggested that you check off each section after you have considered / addressed it.

☐ Planning and Policy

- Applicable plans and policies should be identified in the report, and the proponent should describe how the proposed project adheres to the relevant policies in these plans.
 - Projects located in MECP Central, Eastern or West Central Region may be subject to [A Place to Grow: Growth Plan for the Greater Golden Horseshoe \(2020\)](#).
 - Projects located in MECP Central or Eastern Region may be subject to the [Oak Ridges Moraine Conservation Plan \(2017\)](#) or the [Lake Simcoe Protection Plan \(2014\)](#).
 - Projects located in MECP Central, Southwest or West Central Region may be subject to the [Niagara Escarpment Plan \(2017\)](#).
 - Projects located in MECP Central, Eastern, Southwest or West Central Region may be subject to the [Greenbelt Plan \(2017\)](#).
 - Projects located in MECP Northern Region may be subject to the [Growth Plan for Northern Ontario \(2011\)](#).
- The [Provincial Policy Statement \(2020\)](#) contains policies that protect Ontario's natural heritage and water resources. Applicable policies should be referenced in the report, and the proponent should describe how the proposed project is consistent with these policies.
- In addition to the provincial planning and policy level, the report should also discuss the planning context at the municipal and federal levels, as appropriate.

☐ Source Water Protection

The *Clean Water Act*, 2006 (CWA) aims to protect existing and future sources of drinking water. To achieve this, several types of vulnerable areas have been delineated around surface water intakes and wellheads for every municipal residential drinking water system that is located in a source protection area. These vulnerable areas are known as a Wellhead Protection Areas (WHPAs) and surface water Intake Protection Zones (IPZs). Other vulnerable areas that have been delineated under the CWA include Highly Vulnerable Aquifers (HVAs), Significant Groundwater Recharge Areas (SGRAs), Event-based modelling areas (EBAs), and Issues Contributing Areas (ICAs). Source protection plans have been developed that include policies to address existing and future risks to sources of municipal drinking water within these vulnerable areas.

Projects that are subject to the Environmental Assessment Act that fall under a Class EA, or one of the Regulations, have the potential to impact sources of drinking water if they occur in designated vulnerable areas or in the vicinity of other at-risk drinking water systems (i.e.

systems that are not municipal residential systems). MEA Class EA projects may include activities that, if located in a vulnerable area, could be a threat to sources of drinking water (i.e. have the potential to adversely affect the quality or quantity of drinking water sources) and the activity could therefore be subject to policies in a source protection plan. Where an activity poses a risk to drinking water, policies in the local source protection plan may impact how or where that activity is undertaken. Policies may prohibit certain activities, or they may require risk management measures for these activities. Municipal Official Plans, planning decisions, Class EA projects (where the project includes an activity that is a threat to drinking water) and prescribed instruments must conform with policies that address significant risks to drinking water and must have regard for policies that address moderate or low risks.

- In October 2015, the MEA Parent Class EA document was amended to include reference to the Clean Water Act (Section A.2.10.6) and indicates that proponents undertaking a Municipal Class EA project must identify early in their process whether a project is or could potentially be occurring with a vulnerable area. **Given this requirement, please include a section in the report on source water protection.**
 - The proponent should identify the source protection area and should clearly document how the proximity of the project to sources of drinking water (municipal or other) and any delineated vulnerable areas was considered and assessed. Specifically, the report should discuss whether or not the project is located in a vulnerable area and provide applicable details about the area.
 - If located in a vulnerable area, proponents should document whether any project activities are prescribed drinking water threats and thus pose a risk to drinking water (this should be consulted on with the appropriate Source Protection Authority). Where an activity poses a risk to drinking water, the proponent must document and discuss in the report how the project adheres to or has regard to applicable policies in the local source protection plan. This section should then be used to inform and be reflected in other sections of the report, such as the identification of net positive/negative effects of alternatives, mitigation measures, evaluation of alternatives etc.
- While most source protection plans focused on including policies for significant drinking water threats in the WHPAs and IPZs it should be noted that even though source protection plan policies may not apply in HVAs, these are areas where aquifers are sensitive and at risk to impacts and within these areas, activities may impact the quality of sources of drinking water for systems other than municipal residential systems.
- In order to determine if this project is occurring within a vulnerable area, proponents can use [Source Protection Information Atlas](#), which is an online mapping tool available to the public. Note that various layers (including WHPAs, WHPA-Q1 and WHPA-Q2, IPZs, HVAs, SGRAs, EBAs, ICAs) can be turned on through the “Map Legend” bar on the left. The

mapping tool will also provide a link to the appropriate source protection plan in order to identify what policies may be applicable in the vulnerable area.

- For further information on the maps or source protection plan policies which may relate to their project, proponents must contact the appropriate source protection authority. **Please consult with the local source protection authority to discuss potential impacts on drinking water. Please document the results of that consultation within the report and include all communication documents/correspondence.**

More Information

For more information on the *Clean Water Act*, source protection areas and plans, including specific information on the vulnerable areas and drinking water threats, please refer to [Conservation Ontario's website](#) where you will also find links to the local source protection plan/assessment report.

A list of the prescribed drinking water threats can be found in [section 1.1 of Ontario Regulation 287/07](#) made under the *Clean Water Act*. In addition to prescribed drinking water threats, some source protection plans may include policies to address additional "local" threat activities, as approved by the MECP.

☐ **Climate Change**

The document "[Considering Climate Change in the Environmental Assessment Process](#)" (Guide) is now a part of the Environmental Assessment program's Guides and Codes of Practice. The Guide sets out the MECP's expectation for considering climate change in the preparation, execution and documentation of environmental assessment studies and processes. The guide provides examples, approaches, resources, and references to assist proponents with consideration of climate change in EA. Proponents should review this Guide in detail.

- **The MECP expects proponents of Class EA projects to:**

1. Consider during the assessment of alternative solutions and alternative designs, the following:
 - a. the project's expected production of greenhouse gas emissions and impacts on carbon sinks (climate change mitigation); and
 - b. resilience or vulnerability of the undertaking to changing climatic conditions (climate change adaptation).
2. Include a discrete section in the report detailing how climate change was considered in the EA.

How climate change is considered can be qualitative or quantitative in nature and should be scaled to the project's level of environmental effect. In all instances, both a project's impacts on climate change (mitigation) and impacts of climate change on a project (adaptation) should be considered.

- The MECP has also prepared another guide to support provincial land use planning direction related to the completion of energy and emission plans. The "[Community Emissions Reduction Planning: A Guide for Municipalities](#)" document is designed to educate stakeholders on the municipal opportunities to reduce energy and greenhouse gas emissions, and to provide guidance on methods and techniques to incorporate consideration of energy and greenhouse gas emissions into municipal activities of all types. We encourage you to review the Guide for information.

□ **Air Quality, Dust and Noise**

- If there are sensitive receptors in the surrounding area of this project, a quantitative air quality/odour impact assessment will be useful to evaluate alternatives, determine impacts and identify appropriate mitigation measures. The scope of the assessment can be determined based on the potential effects of the proposed alternatives, and typically includes source and receptor characterization and a quantification of local air quality impacts on the sensitive receptors and the environment in the study area. The assessment will compare to all applicable standards or guidelines for all contaminants of concern.
Please contact this office for further consultation on the level of Air Quality Impact Assessment required for this project if not already advised.
- If a quantitative Air Quality Impact Assessment is not required for the project, the MECP expects that the report contain a qualitative assessment which includes:
 - A discussion of local air quality including existing activities/sources that significantly impact local air quality and how the project may impact existing conditions;
 - A discussion of the nearby sensitive receptors and the project's potential air quality impacts on present and future sensitive receptors;
 - A discussion of local air quality impacts that could arise from this project during both construction and operation; and
 - A discussion of potential mitigation measures.
- As a common practice, "air quality" should be used as an evaluation criterion for all road projects.
- Dust and noise control measures should be addressed and included in the construction plans to ensure that nearby residential and other sensitive land uses within the study area are not adversely affected during construction activities.
- The MECP recommends that non-chloride dust-suppressants be applied. For a comprehensive list of fugitive dust prevention and control measures that could be applied, refer to [Cheminfo Services Inc. Best Practices for the Reduction of Air Emissions from](#)

[Construction and Demolition Activities](#) report prepared for Environment Canada. March 2005.

- The report should consider the potential impacts of increased noise levels during the operation of the completed project. The proponent should explore all potential measures to mitigate significant noise impacts during the assessment of alternatives.

☐ **Ecosystem Protection and Restoration**

- Any impacts to ecosystem form and function must be avoided where possible. The report should describe any proposed mitigation measures and how project planning will protect and enhance the local ecosystem.
- Natural heritage and hydrologic features should be identified and described in detail to assess potential impacts and to develop appropriate mitigation measures. The following sensitive environmental features may be located within or adjacent to the study area:
 - Key Natural Heritage Features: Habitat of endangered species and threatened species, fish habitat, wetlands, areas of natural and scientific interest (ANSIs), significant valleylands, significant woodlands; significant wildlife habitat (including habitat of special concern species); sand barrens, savannahs, and tallgrass prairies; and alvars.
 - Key Hydrologic Features: Permanent streams, intermittent streams, inland lakes and their littoral zones, seepage areas and springs, and wetlands.
 - Other natural heritage features and areas such as: vegetation communities, rare species of flora or fauna, Environmentally Sensitive Areas, Environmentally Sensitive Policy Areas, federal and provincial parks and conservation reserves, Greenland systems etc.

We recommend consulting with the Ministry of Natural Resources and Forestry (MNRF), Fisheries and Oceans Canada (DFO) and your local conservation authority to determine if special measures or additional studies will be necessary to preserve and protect these sensitive features. In addition, for projects located in Central Region you may consider the provisions of the Rouge Park Management Plan if applicable.

☐ **Species at Risk**

- The Ministry of the Environment, Conservation and Parks has now assumed responsibility of Ontario's Species at Risk program. Information, standards, guidelines, reference materials and technical resources to assist you are found at <https://www.ontario.ca/page/species-risk>.
- The Client's Guide to Preliminary Screening for Species at Risk (Draft May 2019) has been attached to the covering email for your reference and use. Please review this document for next steps.

- For any questions related to subsequent permit requirements, please contact SAROntario@ontario.ca.

☐ **Surface Water**

- The report must include enough information to demonstrate that there will be no negative impacts on the natural features or ecological functions of any watercourses within the study area. Measures should be included in the planning and design process to ensure that any impacts to watercourses from construction or operational activities (e.g. spills, erosion, pollution) are mitigated as part of the proposed undertaking.
- Additional stormwater runoff from new pavement can impact receiving watercourses and flood conditions. Quality and quantity control measures to treat stormwater runoff should be considered for all new impervious areas and, where possible, existing surfaces. The ministry's [Stormwater Management Planning and Design Manual \(2003\)](#) should be referenced in the report and utilized when designing stormwater control methods. **A Stormwater Management Plan should be prepared as part of the Class EA process** that includes:
 - Strategies to address potential water quantity and erosion impacts related to stormwater draining into streams or other sensitive environmental features, and to ensure that adequate (enhanced) water quality is maintained
 - Watershed information, drainage conditions, and other relevant background information
 - Future drainage conditions, stormwater management options, information on erosion and sediment control during construction, and other details of the proposed works
 - Information on maintenance and monitoring commitments.
- Ontario Regulation 60/08 under the *Ontario Water Resources Act* (OWRA) applies to the Lake Simcoe Basin, which encompasses Lake Simcoe and the lands from which surface water drains into Lake Simcoe. If the proposed sewage treatment plant is listed in Table 1 of the regulation, the report should describe how the proposed project and its mitigation measures are consistent with the requirements of this regulation and the OWRA.
- Any potential approval requirements for surface water taking or discharge should be identified in the report. A Permit to Take Water (PTTW) under the OWRA will be required for any water takings that exceed 50,000 L/day, except for certain water taking activities that have been prescribed by the Water Taking EASR Regulation – *O. Reg. 63/16*. These prescribed water-taking activities require registration in the EASR instead of a PTTW. Please

review the [Water Taking User Guide for EASR](#) for more information. Additionally, an Environmental Compliance Approval under the OWRA is required for municipal stormwater management works.

☐ **Groundwater**

- The status of, and potential impacts to any well water supplies should be addressed. If the project involves groundwater takings or changes to drainage patterns, the quantity and quality of groundwater may be affected due to drawdown effects or the redirection of existing contamination flows. In addition, project activities may infringe on existing wells such that they must be reconstructed or sealed and abandoned. Appropriate information to define existing groundwater conditions should be included in the report.
- If the potential construction or decommissioning of water wells is identified as an issue, the report should refer to Ontario Regulation 903, Wells, under the OWRA.
- Potential impacts to groundwater-dependent natural features should be addressed. Any changes to groundwater flow or quality from groundwater taking may interfere with the ecological processes of streams, wetlands or other surficial features. In addition, discharging contaminated or high volumes of groundwater to these features may have direct impacts on their function. Any potential effects should be identified, and appropriate mitigation measures should be recommended. The level of detail required will be dependent on the significance of the potential impacts.
- Any potential approval requirements for groundwater taking or discharge should be identified in the report. A Permit to Take Water (PTTW) under the OWRA will be required for any water takings that exceed 50,000 L/day, with the exception of certain water taking activities that have been prescribed by the Water Taking EASR Regulation – *O. Reg. 63/16*. These prescribed water-taking activities require registration in the EASR instead of a PTTW. Please review the [Water Taking User Guide for EASR](#) for more information.
- Consultation with the railroad authorities is necessary wherever there is a plan to use construction dewatering in the vicinity of railroad lines or where the zone of influence of the construction dewatering potentially intercepts railroad lines.

☐ **Excess Materials Management**

- In December 2019, MECP released a new regulation under the Environmental Protection Act, titled “[On-Site and Excess Soil Management](#)” (O. Reg. 406/19) to support improved management of excess construction soil. This regulation is a key step to support proper management of excess soils, ensuring valuable resources don’t go to waste and to provide

clear rules on managing and reusing excess soil. New risk-based standards referenced by this regulation help to facilitate local beneficial reuse which in turn will reduce greenhouse gas emissions from soil transportation, while ensuring strong protection of human health and the environment. The new regulation is being phased in over time, with the first phase in effect on January 1, 2021. For more information, please visit <https://www.ontario.ca/page/handling-excess-soil>.

- The report should reference that activities involving the management of excess soil should be completed in accordance with O. Reg. 406/19 and the MECP's current guidance document titled "[Management of Excess Soil – A Guide for Best Management Practices](#)" (2014).
- All waste generated during construction must be disposed of in accordance with ministry requirements

☐ **Contaminated Sites**

- Any current or historical waste disposal sites should be identified in the report. The status of these sites should be determined to confirm whether approval pursuant to Section 46 of the EPA may be required for land uses on former disposal sites. We recommend referring to the [MECP's D-4 guideline](#) for land use considerations near landfills and dumps.
 - Resources available may include regional/local municipal official plans and data; provincial data on [large landfill sites](#) and [small landfill sites](#); Environmental Compliance Approval information for waste disposal sites on [Access Environment](#).
- Other known contaminated sites (local, provincial, federal) in the study area should also be identified in the report (Note – information on federal contaminated sites is found on the Government of Canada's [website](#)).
- The location of any underground storage tanks should be investigated in the report. Measures should be identified to ensure the integrity of these tanks and to ensure an appropriate response in the event of a spill. The ministry's Spills Action Centre must be contacted in such an event.
- Since the removal or movement of soils may be required, appropriate tests to determine contaminant levels from previous land uses or dumping should be undertaken. If the soils are contaminated, you must determine how and where they are to be disposed of, consistent with *Part XV.1 of the Environmental Protection Act* (EPA) and Ontario Regulation 153/04, Records of Site Condition, which details the new requirements related to site assessment and clean up. Please contact the appropriate MECP District Office for further consultation if contaminated sites are present.

☐ **Servicing, Utilities and Facilities**

- The report should identify any above or underground utilities in the study area such as transmission lines, telephone/internet, oil/gas etc. The owners should be consulted to discuss impacts to this infrastructure, including potential spills.
- The report should identify any servicing infrastructure in the study area such as wastewater, water, stormwater that may potentially be impacted by the project.
- Any facility that releases emissions to the atmosphere, discharges contaminants to ground or surface water, provides potable water supplies, or stores, transports or disposes of waste must have an Environmental Compliance Approval (ECA) before it can operate lawfully. Please consult with MECP's Environmental Permissions Branch to determine whether a new or amended ECA will be required for any proposed infrastructure.
- We recommend referring to the ministry's [environmental land use planning guides](#) to ensure that any potential land use conflicts are considered when planning for any infrastructure or facilities related to wastewater, pipelines, landfills or industrial uses.

☐ **Mitigation and Monitoring**

- Contractors must be made aware of all environmental considerations so that all environmental standards and commitments for both construction and operation are met. Mitigation measures should be clearly referenced in the report and regularly monitored during the construction stage of the project. In addition, we encourage proponents to conduct post-construction monitoring to ensure all mitigation measures have been effective and are functioning properly.
- Design and construction reports and plans should be based on a best management approach that centres on the prevention of impacts, protection of the existing environment, and opportunities for rehabilitation and enhancement of any impacted areas.
- The proponent's construction and post-construction monitoring plans must be documented in the report, as outlined in Section A.2.5 and A.4.1 of the MEA Class EA parent document.

☐ **Consultation**

- The report must demonstrate how the consultation provisions of the Class EA have been fulfilled, including documentation of all stakeholder consultation efforts undertaken during the planning process. This includes a discussion in the report that identifies concerns that were raised and **describes how they have been addressed by the proponent** throughout

the planning process. The report should also include copies of comments submitted on the project by interested stakeholders, and the proponent's responses to these comments (as directed by the Class EA to include full documentation).

- Please include the full stakeholder distribution/consultation list in the documentation.

☐ **Class EA Process**

- If this project is a Master Plan: there are several different approaches that can be used to conduct a Master Plan, examples of which are outlined in Appendix 4 of the Class EA. **The Master Plan should clearly indicate the selected approach for conducting the plan**, by identifying whether the levels of assessment, consultation and documentation are sufficient to fulfill the requirements for Schedule B or C projects. Please note that any Schedule B or C projects identified in the plan would be subject to Part II Order Requests under the Environmental Assessment Act, although the plan itself would not be. **Please include a description of the approach being undertaken (use Appendix 4 as a reference).**
- If this project is a Master Plan: Any identified projects should also include information on the MCEA schedule associated with the project.
- The report should provide clear and complete documentation of the planning process in order to allow for transparency in decision-making.
- The Class EA requires the consideration of the effects of each alternative on all aspects of the environment (including planning, natural, social, cultural, economic, technical). The report should include a level of detail (e.g. hydrogeological investigations, terrestrial and aquatic assessments, cultural heritage assessments) such that all potential impacts can be identified, and appropriate mitigation measures can be developed. Any supporting studies conducted during the Class EA process should be referenced and included as part of the report.
- Please include in the report a list of all subsequent permits or approvals that may be required for the implementation of the preferred alternative, including but not limited to, MECP's PTTW, EASR Registrations and ECAs, conservation authority permits, species at risk permits, MTO permits and approvals under the *Impact Assessment Act*, 2019.
- Ministry guidelines and other information related to the issues above are available at <http://www.ontario.ca/environment-and-energy/environment-and-energy>. We encourage you to review all the available guides and to reference any relevant information in the report.

Amendments to the EAA through the Covid-19 Economic Recovery Act, 2020

Once the EA Report is finalized, the proponent must issue a Notice of Completion providing a minimum 30-day period during which documentation may be reviewed and comment and input can be submitted to the proponent. The Notice of Completion must be sent to the appropriate MECP Regional Office email address.

The public can request a higher level of assessment on a project if they are concerned about potential adverse impacts to constitutionally protected Aboriginal and treaty rights. In addition, the Minister may issue an order on his or her own initiative within a specified time period. The Director (of the Environmental Assessment Branch) will issue a Notice of Proposed Order to the proponent if the Minister is considering an order for the project within 30 days after the conclusion of the comment period on the Notice of Completion. At this time, the Director may request additional information from the proponent. Once the requested information has been received, the Minister will have 30 days within which to make a decision or impose conditions on your project.

Therefore, the proponent cannot proceed with the project until at least 30 days after the end of the comment period provided for in the Notice of Completion. Further, the proponent may not proceed after this time if:

- a Section 16 Order request has been submitted to the ministry regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights, or
- the Director has issued a Notice of Proposed order regarding the project.

Please ensure that the Notice of Completion advises that outstanding concerns are to be directed to the proponent for a response, and that in the event there are outstanding concerns regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights, Section 16 Order requests on those matters should be addressed in writing to:

Minister David Piccini
Ministry of Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3
minister.mecp@ontario.ca

and

Director, Environmental Assessment Branch
Ministry of Environment, Conservation and Parks
135 St. Clair Ave. W, 1st Floor
Toronto ON, M4V 1P5
EABDirector@ontario.ca

A PROPONENT'S INTRODUCTION TO THE DELEGATION OF PROCEDURAL ASPECTS OF CONSULTATION WITH ABORIGINAL COMMUNITIES

DEFINITIONS

The following definitions are specific to this document and may not apply in other contexts:

Aboriginal communities – the First Nation or Métis communities identified by the Crown for the purpose of consultation.

Consultation – the Crown's legal obligation to consult when the Crown has knowledge of an established or asserted Aboriginal or treaty right and contemplates conduct that might adversely impact that right. This is the type of consultation required pursuant to s. 35 of the *Constitution Act, 1982*. Note that this definition does not include consultation with Aboriginal communities for other reasons, such as regulatory requirements.

Crown – the Ontario Crown, acting through a particular ministry or ministries.

Procedural aspects of consultation – those portions of consultation related to the process of consultation, such as notifying an Aboriginal community about a project, providing information about the potential impacts of a project, responding to concerns raised by an Aboriginal community and proposing changes to the project to avoid negative impacts.

Proponent – the person or entity that wants to undertake a project and requires an Ontario Crown decision or approval for the project.

I. PURPOSE

The Crown has a legal duty to consult Aboriginal communities when it has knowledge of an existing or asserted Aboriginal or treaty right and contemplates conduct that may adversely impact that right. In outlining a framework for the duty to consult, the Supreme Court of Canada has stated that the Crown may delegate procedural aspects of consultation to third parties. This document provides general information about the Ontario Crown's approach to delegation of the procedural aspects of consultation to proponents.

This document is not intended to instruct a proponent about an individual project, and it does not constitute legal advice.

II. WHY IS IT NECESSARY TO CONSULT WITH ABORIGINAL COMMUNITIES?

The objective of the modern law of Aboriginal and treaty rights is the *reconciliation* of Aboriginal peoples and non-Aboriginal peoples and their respective rights, claims and interests. Consultation is an important component of the reconciliation process.

The Crown has a legal duty to consult Aboriginal communities when it has knowledge of an existing or asserted Aboriginal or treaty right and contemplates conduct that might adversely impact that right. For example, the Crown's duty to consult is triggered when it considers

issuing a permit, authorization or approval for a project which has the potential to adversely impact an Aboriginal right, such as the right to hunt, fish, or trap in a particular area.

The scope of consultation required in particular circumstances ranges across a spectrum depending on both the nature of the asserted or established right and the seriousness of the potential adverse impacts on that right.

Depending on the particular circumstances, the Crown may also need to take steps to accommodate the potentially impacted Aboriginal or treaty right. For example, the Crown may be required to avoid or minimize the potential adverse impacts of the project.

III. THE CROWN'S ROLE AND RESPONSIBILITIES IN THE DELEGATED CONSULTATION PROCESS

The Crown has the responsibility for ensuring that the duty to consult, and accommodate where appropriate, is met. However, the Crown may delegate the procedural aspects of consultation to a proponent.

There are different ways in which the Crown may delegate the procedural aspects of consultation to a proponent, including through a letter, a memorandum of understanding, legislation, regulation, policy and codes of practice.

If the Crown decides to delegate procedural aspects of consultation, the Crown will generally:

- Ensure that the delegation of procedural aspects of consultation and the responsibilities of the proponent are clearly communicated to the proponent;
- Identify which Aboriginal communities must be consulted;
- Provide contact information for the Aboriginal communities;
- Revise, as necessary, the list of Aboriginal communities to be consulted as new information becomes available and is assessed by the Crown;
- Assess the scope of consultation owed to the Aboriginal communities;
- Maintain appropriate oversight of the actions taken by the proponent in fulfilling the procedural aspects of consultation;
- Assess the adequacy of consultation that is undertaken and any accommodation that may be required;
- Provide a contact within any responsible ministry in case issues arise that require direction from the Crown; and
- Participate in the consultation process as necessary and as determined by the Crown.

IV. THE PROPONENT'S ROLE AND RESPONSIBILITIES IN THE DELEGATED CONSULTATION PROCESS

Where aspects of the consultation process have been delegated to a proponent, the Crown, in meeting its duty to consult, will rely on the proponent's consultation activities and documentation of those activities. The consultation process informs the Crown's decision of whether or not to approve a proposed project or activity.

A proponent's role and responsibilities will vary depending on a variety of factors including the extent of consultation required in the circumstance and the procedural aspects of consultation the Crown has delegated to it. Proponents are often in a better position than the Crown to discuss a project and its potential impacts with Aboriginal communities and to determine ways to avoid or minimize the adverse impacts of a project.

A proponent can raise issues or questions with the Crown at any time during the consultation process. If issues or concerns arise during the consultation that cannot be addressed by the proponent, the proponent should contact the Crown.

a) What might a proponent be required to do in carrying out the procedural aspects of consultation?

Where the Crown delegates procedural aspects of consultation, it is often the proponent's responsibility to provide notice of the proposed project to the identified Aboriginal communities. The notice should indicate that the Crown has delegated the procedural aspects of consultation to the proponent and should include the following information:

- a description of the proposed project or activity;
- mapping;
- proposed timelines;
- details regarding anticipated environmental and other impacts;
- details regarding opportunities to comment; and
- any changes to the proposed project that have been made for seasonal conditions or other factors, where relevant.

Proponents should provide enough information and time to allow Aboriginal communities to provide meaningful feedback regarding the potential impacts of the project. Depending on the nature of consultation required for a project, a proponent also may be required to:

- provide the Crown with copies of any consultation plans prepared and an opportunity to review and comment;
- ensure that any necessary follow-up discussions with Aboriginal communities take place in a timely manner, including to confirm receipt of information, share and update information and to address questions or concerns that may arise;

- as appropriate, discuss with Aboriginal communities potential mitigation measures and/or changes to the project in response to concerns raised by Aboriginal communities;
- use language that is accessible and not overly technical, and translate material into Aboriginal languages where requested or appropriate;
- bear the reasonable costs associated with the consultation process such as, but not limited to, meeting hall rental, meal costs, document translation(s), or to address technical & capacity issues;
- provide the Crown with all the details about potential impacts on established or asserted Aboriginal or treaty rights, how these concerns have been considered and addressed by the proponent and the Aboriginal communities and any steps taken to mitigate the potential impacts;
- provide the Crown with complete and accurate documentation from these meetings and communications; and
- notify the Crown immediately if an Aboriginal community not identified by the Crown approaches the proponent seeking consultation opportunities.

b) What documentation and reporting does the Crown need from the proponent?

Proponents should keep records of all communications with the Aboriginal communities involved in the consultation process and any information provided to these Aboriginal communities.

As the Crown is required to assess the adequacy of consultation, it needs documentation to satisfy itself that the proponent has fulfilled the procedural aspects of consultation delegated to it. The documentation required would typically include:

- the date of meetings, the agendas, any materials distributed, those in attendance and copies of any minutes prepared;
- the description of the proposed project that was shared at the meeting;
- any and all concerns or other feedback provided by the communities;
- any information that was shared by a community in relation to its asserted or established Aboriginal or treaty rights and any potential adverse impacts of the proposed activity, approval or disposition on such rights;
- any proposed project changes or mitigation measures that were discussed, and feedback from Aboriginal communities about the proposed changes and measures;
- any commitments made by the proponent in response to any concerns raised, and feedback from Aboriginal communities on those commitments;
- copies of correspondence to or from Aboriginal communities, and any materials distributed electronically or by mail;

- information regarding any financial assistance provided by the proponent to enable participation by Aboriginal communities in the consultation;
- periodic consultation progress reports or copies of meeting notes if requested by the Crown;
- a summary of how the delegated aspects of consultation were carried out and the results; and
- a summary of issues raised by the Aboriginal communities, how the issues were addressed and any outstanding issues.

In certain circumstances, the Crown may share and discuss the proponent's consultation record with an Aboriginal community to ensure that it is an accurate reflection of the consultation process.

c) Will the Crown require a proponent to provide information about its commercial arrangements with Aboriginal communities?

The Crown may require a proponent to share information about aspects of commercial arrangements between the proponent and Aboriginal communities where the arrangements:

- include elements that are directed at mitigating or otherwise addressing impacts of the project;
- include securing an Aboriginal community's support for the project; or
- may potentially affect the obligations of the Crown to the Aboriginal communities.

The proponent should make every reasonable effort to exempt the Crown from confidentiality provisions in commercial arrangements with Aboriginal communities to the extent necessary to allow this information to be shared with the Crown.

The Crown cannot guarantee that information shared with the Crown will remain confidential. Confidential commercial information should not be provided to the Crown as part of the consultation record if it is not relevant to the duty to consult or otherwise required to be submitted to the Crown as part of the regulatory process.

V. WHAT ARE THE ROLES AND RESPONSIBILITIES OF ABORIGINAL COMMUNITIES' IN THE CONSULTATION PROCESS?

Like the Crown, Aboriginal communities are expected to engage in consultation in good faith. This includes:

- responding to the consultation notice;
- engaging in the proposed consultation process;
- providing relevant documentation;

- clearly articulating the potential impacts of the proposed project on Aboriginal or treaty rights; and
- discussing ways to mitigate any adverse impacts.

Some Aboriginal communities have developed tools, such as consultation protocols, policies or processes that provide guidance on how they would prefer to be consulted. Although not legally binding, proponents are encouraged to respect these community processes where it is reasonable to do so. Please note that there is no obligation for a proponent to pay a fee to an Aboriginal community in order to enter into a consultation process.

To ensure that the Crown is aware of existing community consultation protocols, proponents should contact the relevant Crown ministry when presented with a consultation protocol by an Aboriginal community or anyone purporting to be a representative of an Aboriginal community.

VI. WHAT IF MORE THAN ONE PROVINCIAL CROWN MINISTRY IS INVOLVED IN APPROVING A PROPONENT'S PROJECT?

Depending on the project and the required permits or approvals, one or more ministries may delegate procedural aspects of the Crown's duty to consult to the proponent. The proponent may contact individual ministries for guidance related to the delegation of procedural aspects of consultation for ministry-specific permits/approvals required for the project in question. Proponents are encouraged to seek input from all involved Crown ministries sooner rather than later.

**Ministry of Citizenship
and Multiculturalism**

Heritage Branch
400 University Ave.
5th Floor
Toronto ON M7A 2E7
Tel.: 613.242.3743

**Ministère des Affaires civiques
et du Multiculturalisme**

Direction du patrimoine
400, av. University
5th étage
Toronto ON M7A 2E7
Tél.: 613.242.3743



November 29, 2022

EMAIL ONLY

John Slocombe, P.Eng.
GM BluePlan Engineering Ltd.
1260-2nd Avenue East, Unit 1
Owen Sound, ON N4K 2J3
john.slocombe@gmblueplan.ca

MCM File : 0008311
Proponent : City of Owen Sound
Subject : Notice of Project Initiation and Public Information Center - Master Plan Approach 2
Project : Master Plan: Brooke Area Basin A3 Outlet
Location : City of Owen Sound, Grey County

Dear John Slocombe:

Thank you for providing us with the Notice of Initiation and making the Master Plan: Brooke Area Basin A3 Outlet (dated October 25, 2022 and prepared by GM BluePlan Engineering) available for our review and comment.

Please note that the responsibility for administration of the *Ontario Heritage Act* and matters related to cultural heritage recently transferred from the Ministry of Tourism, Culture and Sport (MTCS) to the Ministry of Citizenship and Multiculturalism (MCM). Individual staff roles and contact information remain unchanged. Please continue to send any notices, report and/or documentation to both Karla Barboza and myself.

MCM's interest in this master plan relates to it's mandate of conserving Ontario's cultural heritage, which includes archaeological resources, built heritage resources and cultural heritage landscapes.

Master Plan Summary

In July 2008, the City of Owen Sound (City) and the Township of Georgian Bluffs completed the '*Brooke Area Stormwater Management Study*' which investigated drainage issues within seven drainage areas that cross the common municipal border and outlet through the City to Georgian Bay. Brooke Area Basin A3 was identified as one of the drainage areas having multiple issues.

The City has initiated a Master Plan study to address the drainage deficiencies identified within the Study Area specific to Brooke Basin and to assist in the planning of seven individual projects (or Reaches) toward an appropriate overall drainage strategy. The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects for the proposed individual drainage projects.

Comments

We have reviewed the above referenced Master Plan and have a couple of observations and comments:

- Section 8.1 (Archaeological Assessment) – We can confirm that a Stage 1 archaeological assessment (AA) and report (under Project Information Form (PIF) P027-0331-2018 (included in Appendix E)) has been entered into the Ontario Public Register of Archaeological Reports. The Stage 1 AA recommends that a Stage 2 archaeological assessment be undertaken for portions of the study area.

We recommend that a Stage 2 archaeological assessment and any further recommended archaeological assessments (e.g., Stage 3,4) be undertaken by a licensed archaeologist as early as possible during detailed design and prior to any ground disturbing activities.

Please note archaeological concerns have not been addressed until reports have been entered into the Ontario Public Register of Archaeological Reports where those reports recommend that:

1. the archaeological assessment of the project area is complete and
2. all archaeological sites identified by the assessment are either of no further cultural heritage value or interest (as per Section 48(3) of the *Ontario Heritage Act*) or that mitigation of impacts has been accomplished through excavation or an avoidance and protection strategy.

Approval authorities and proponents typically wait to receive the ministry's review letter for an archaeological assessment report before issuing a decision on the application as it can be used, for example, to document that due diligence has been undertaken.

- Section 8.1.2 (Built Heritage Resource and Cultural Heritage Landscape Assessment) – A Cultural Heritage Evaluation Report (CHER) (dated April, 2018 and prepared by Scarlett Janusas Archaeology Inc.) was undertaken and included as Appendix E. The CHER found that there are no built heritage resources or cultural heritage landscapes within the study area. More detailed comments are in the attached table.

The attached a table includes detailed comments and recommendations to support the documentation of cultural heritage due diligence.

Thank you for consulting MCM on this project. We look forward to reviewing the updated project documentation. Please contact me with any questions or concerns.

Sincerely,

Joseph Harvey
Heritage Planner
joseph.harvey@ontario.ca

Copied to: Chris Webb, City of Owen Sound
Andrea Nelson, Senior Hydrogeologist, GM BluePlan Engineering Limited
Mark Badali, Environmental Resource Planner & EA Coordinator, MECP

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. The Ministry of Citizenship and Multiculturalism (MCM) makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MCM be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with *Ontario Regulation 30/11* the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

Item	Document Section	Given Text	MCM Comments
Master Plan: Brooke Area Basin A3 Outlet (dated October 25, 2022 and prepared by GM BluePlan Engineering)			
1.	Throughout the Documentation	The Ministry of Heritage, Sport, Tourism, and Culture Industries	The ministry name should be revised from 'Ministry of Heritage, Sport, Tourism, and Culture Industries' to the 'Ministry of Citizenship and Multiculturalism (MCM)'.
2.	8.1 (Cultural Environment) p. 10	<p>8.1.1 Archaeological Assessment</p> <p>In consideration of Section 1.3.1 of the 2011 Standards and Guidelines for Consultant Archaeologists (S&G) administered by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), which lists criteria that are indicative of archaeological potential, the study area meets the following criteria indicative of archaeological potential:</p> <p>Water sources (primary, secondary, features indicating past water sources, accessible or inaccessible);</p> <ul style="list-style-type: none"> • Early historic transportation routes; and • Proximity to early settlements. <p>Scarlett Janusas Archaeology Inc. was retained to complete a Stage 1 Archeological Assessment for the area that may be impacted by drainage improvements within Brooke Area Basin A3. A copy of the Report (April 25, 2018) is provided in Appendix E. The assessment was conducted under the S&G. In a letter dated March 11,</p> <p>...</p> <p>8.1.2 Built Heritage Resource and Cultural Heritage Landscape Assessment</p> <p>Scarlett Janusas Archaeology Inc. was retained to conduct a Cultural Heritage Evaluation Report (CHER) for</p>	<p>Section 8.1 address the cultural heritage environment. We recommend the following revisions to align the Master plan section with the current legislation and terminology.</p> <p>8.1 Cultural Environment</p> <p>Cultural heritage resources include archaeological resources, built heritage resources and cultural heritage landscapes.</p> <p>8.1.1 Archaeological Resources</p> <p>In consideration of Section 1.3.1 of the 2011 Standards and Guidelines for Consultant Archaeologists (S&G) administered by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), which lists criteria that are indicative of archaeological potential, the study area meets the following criteria indicative of archaeological potential:</p> <p>Water sources (primary, secondary, features indicating past water sources, accessible or inaccessible);</p> <ul style="list-style-type: none"> • Early historic transportation routes; and • Proximity to early settlements. <p>Scarlett Janusas Archaeology Inc. was retained to complete a Stage 1 Archaeological Assessment (PIF) P027-0331-2018 of the area that may be impacted by drainage improvements within Brooke Area Basin A3. <u>A Stage 1 AA consists of a review of geographic, land use and historical information for the property and the relevant surrounding area, and contacting</u></p>

Item	Document Section	Given Text	MCM Comments
		<p>Brooke Area Basin A3. A copy of the CHER dated April 26, 2018 is included in Appendix E. The assessment encompassed the area along the drainage basin, including the lots adjoining the drainage features, as well as buildings within lots situated adjacent to the drainage basin. ...</p>	<p><u>MCM to find out whether, or not, there are any known archaeological sites on or near the property. Its purpose is to identify areas of archaeological potential and further archaeological assessment (e.g., Stage 2-4) as necessary.</u> A copy of the Report (April 25, 2018) is provided in Appendix E. The assessment was conducted under the S&G. In a letter dated March 11, 2019, MHSTCI (now MCM) confirmed the entry of the Stage 1 Assessment Report into the Ontario Public Register of Archaeological Reports (Appendix E).</p> <p>...</p> <p>[Then include the outcomes and recommendations of the report, as is in the Executive Summary – just copy and paste, don't summarize]</p> <p>A Stage 2 archaeological assessment and any further recommended assessment (e.g., Stage 3 and 4) will be completed as early as possible in the detailed design phase and prior to any ground disturbing activities.</p> <p>8.1.2 Built Heritage Resources and Cultural Heritage Landscapes Assessment</p> <p>A CHER was undertaken on (dated April, 2018 and prepared by Scarlett Janusas Archaeology Inc.). The assessment for this report consisted of data collection, background historic research, review of secondary source material and field review. A total of # (known and potential) cultural heritage landscapes and built heritage resources were identified within or adjacent to project study area.</p>

Item	Document Section	Given Text	MCM Comments
			<p>Cultural Heritage Evaluation Reports were recommended for the # properties that could be directly impacted. All CHERs were undertaken on [date] by [heritage consultant]. The Cultural Heritage Report Existing Conditions and Preliminary Impacts Assessment and CHERs are included in Appendix X.</p> <p>MCM may have additional comments on how due diligence for built heritage resources and cultural heritage landscapes has been addressed once it has reviewed the updated Cultural Heritage Report (See comments below).</p> <p>For Schedule B MCEAs undertaken as part of the master plan, where a known or potential built heritage resource or cultural heritage landscape may be directly and adversely impacted, and where it has not yet been evaluated for Cultural Heritage Value or Interest (CHVI), completion of a Cultural Heritage Evaluation Report (CHER) is required to fully understand its CHVI and level of significance. The CHER must be completed as part of the final EA report. If a potential resource is found to be of CHVI, then a Heritage Impact Assessment (HIA) will need to be undertaken and included in the final Master Plan. Our Ministry's Info Sheet #5: Heritage Impact Assessments and Conservation Plans outlines the scope of HIAs. Please send any CHERs or HIAs to MCM for review and make it available to local organizations or individuals who have expressed interest in review.</p>
3.	9.0 (Alternative Solutions and Assessments) Tables 10-3, 11-7, 12-2, 13,2, and 16-2 p. 15-59	Environment - Cultural Ranking - Net neutral for all alternatives	<p>This evaluation of alternatives should be revisited to incorporate the recommendations from any technical cultural heritage studies undertaken (e.g., Stage 1 AA and revised CHER).</p> <p>Each evaluation of alternatives table should consider impacts to cultural heritage resources. The preferred solution should be established by considering public and review agency input as well as the findings of any technical cultural heritage studies.</p>

Item	Document Section	Given Text	MCM Comments
			<p>We recommend the following revision to better align with the current terminology and our suggested revisions to section 8.1 of the Master Plan.</p> <p>Environment</p> <ul style="list-style-type: none"> - Cultural <p>Subcomponent</p> <ul style="list-style-type: none"> - Impacts to Archaeological Resources - Impacts to Built Heritage Resources and Cultural Heritage Landscapes <p>Ranking</p> <p>— Not neutral for all alternatives</p>
4.	<p>Mitigations and Commitments</p> <p>NEW Section</p>	NA	<p>We recommend including the following text in a new section addressing Mitigations and commitments:</p> <p>Compliance with the recommendations of the Stage 1 archaeological assessment report.</p> <p>A licensed archaeologist should undertake a Stage 2 archaeological assessment and any further recommended archaeological assessments (e.g., Stage 3,4) as early as possible during detailed design and prior to any ground disturbing activities.</p> <p>Where archaeological resources are impacted by EA project work, MCM will be notified by contacting archaeology@ontario.ca. All activities impacting archaeological resources must cease immediately, and a licensed archaeologist is required to carry out an archaeological assessment in accordance with the <i>Ontario Heritage Act</i> and the Standards and Guidelines for Consultant Archaeologists.</p>

Item	Document Section	Given Text	MCM Comments
			<p>If human remains are encountered, all activities must cease immediately, and the local police and coroner must be contacted. In situations where human remains are associated with archaeological resources, MCM should also be notified (at archaeology@ontario.ca) to ensure that the site is not subject to unlicensed alterations which would be a contravention of the <i>Ontario Heritage Act</i>.</p> <p>Any recommended technical cultural heritage studies should be completed as early as possible during detailed design prior to the construction of any proposed works included as part of this Master Plan.</p> <p>[Insert the recommendations and mitigation measures provided by the Cultural Heritage Report – just copy and paste, don't summarize]</p>
Cultural Heritage Evaluation Report (CHER) (dated April, 2018 and prepared by Scarlett Janusas Archaeology Inc.)			
5.	2.0 (Assessment Methodology) p. 10	<p>A field visit was conducted of the Study Area and adjacent properties on February 22, 2018 under sunny skies with a high of -3 degrees C.</p> <p>A photographic record was maintained of the Study Area, the surrounding landscape, and any properties located within, or adjacent to, the Study Area. Three forms were completed on site: 1) photographic log; 2) Canadian Inventory of Historic Building form; and, 3) Inventory for Roadscapes and Cultural Landscapes form. The product of these field notes and field forms assisted in the evaluation process of the cultural and built heritage of the area.</p>	This section should articulate municipal and agency consultation, including consultations with the planning staff and the Owen Sound Heritage Committee.
6.	5.0 (Identification of Built Heritage Resources & Cultural Heritage Landscapes)	<ul style="list-style-type: none"> 5.1 Built Heritage Resources 5.2 Roadscapes 5.3 Cultural Heritage Landscapes 5.4 Summary of Cultural Heritage Values 	<p>MCM recommends the following revisions to section 5.0:</p> <ul style="list-style-type: none"> Section 5.2 (Roadscapes) – Roadscapes should be evaluated as cultural heritage landscapes and included in Appendix B.

Item	Document Section	Given Text	MCM Comments
	p. 41-52	<ul style="list-style-type: none"> 5.4.1 Built Heritage Resources within Lots of the Study Area 5.4.2 Built Heritage Resources in Lots Adjacent to the Study Area 5.4.3 Cultural Heritage Landscape 	<ul style="list-style-type: none"> Section 5.3 – states that the study area is considered a cultural heritage landscape. This resource should be included and evaluated in Appendix B. Section 5.4 (Summary of Cultural Heritage Value) – Please delete the reiteration of Ontario regulation 9/06, it has been discussed in section 2.0 (Methodology) and is redundant. Section 5.4.1 Built Heritage Resources within Lots of the Study Area – MCM would like some clarification as to what information this relates to. If this information is describing the Cultural Heritage Value of identified resources this information should be included in Appendix B and associated with the relevant resource.
7.	6.0 (Potential Impacts of Undertaking on Cultural Heritage Resources) p. 53	<p>6.1 Extent of Development The proponent retained the services of Scarlett Janusas Archaeology Inc. (SJA) to conduct a cultural heritage resource evaluation report for the Brooke Area Basin A3 (Figure 2). A description of the project is presented in Section 1.1.</p> <p>6.2 Impact on Built Heritage The proposed Brooke Area Basin A3 development will not have a direct impact on the built heritage resources located within (or adjacent to) the Study Area.</p> <p>6.3 Impact on Cultural Heritage Landscapes The landscape associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development.</p> <p>6.4 Impact on Current Viewsheds The current viewsheds associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development.</p>	MTCS recommends this section to include an evaluation of anticipated impacts. This should include a description of the undertaking and the construction processes involved. It would be helpful to see impact assessment information in a table, detailing the heritage resources and potential for direct and indirect impacts (destruction, alteration, shadows, isolation, obstruction, change in land use) as well as a column for discussions and a photograph of the property.

Item	Document Section	Given Text	MCM Comments
8.	7.0 (Mitigation Options) p. 54	<p>Mitigation options are based solely on heritage values.</p> <p>The majority of the built heritage (structures) adjacent to the Study Area have been evaluated as having no cultural heritage value and interest. There are no heritage structures located directly within the Study Area.</p> <p>Options for managing the built heritage features can be broad, and include:</p> <ol style="list-style-type: none"> 1. Do Nothing: This is recommended for all of the identified heritage buildings. 2. ... 	<p>Please clarify this recurring statement, "This is not recommended the built heritage buildings."</p>
9.	NEW Section Community engagement	NA	<p>Key components of an environmental assessment and also part of heritage conservation framework include consultation with the public, please clarify whether this has been done as part of this report or it would be done during the environmental assessment process. Community engagement protects the public interest in identifying and protecting cultural heritage resources, while helping to ensure that any concerns are identified and appropriately addressed.</p> <p>The revised report should be submitted for review to groups and individuals that may have an interest in the future of this bridge, e.g. Owen Sound Heritage committee. MCM may have additional comments once the report is revised.</p>
10	Appendix B p. 76		<p>The description of resources meeting the criteria will need to be expanded upon. Details as to why a resource does not meet the criteria will be helpful. Resources that do meet the criteria and are considered to have cultural heritage value will need a statement. For further information on preparing a Statement of Cultural Heritage Value refer to the Ontario Heritage Toolkit.</p>

Drea Nelson - GM BluePlan

From: Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>
Sent: Wednesday, January 11, 2023 11:47 AM
To: Drea Nelson - GM BluePlan
Cc: Barboza, Karla (MCM); John Slocombe - GM BluePlan; 'Chris Webb (cwebb@owensound.ca)'; Badali, Mark (MECP)
Subject: FW: File 0008311: Basin A3 (Owen Sound): Municipal Class EA Master Plan - DRAFT Response to MCM Comments

Hi Andrea,

Thanks for providing us with your reply and our conversation on January 10th.

We agree with the overall approach provided in your response and, consistent with our discussion, we have the following recommendations to support the documentation of cultural heritage due diligence:

- *Culverts to be replaced.* The Ministry's [Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes](#) should be used to help determine whether the two culverts are of potential cultural heritage value. If either of the culverts is determined to be of potential cultural heritage value the preliminary impact assessment included in the CHER should be revised to include an assessment of impacts for each culvert. If it is unlikely that the culverts are of potential cultural heritage value or no impacts are anticipated then the completed checklists should be included as part of the Master Plans final documentation. Section 8.1.2 (Built Heritage Resources and Cultural Heritage Landscape Assessment) can document the conclusion based on the completed checklist.
- *Cultural Heritage Evaluation Report (CHER).* We recommend that a copy of the CHER be shared with the City of Owen Sound's Planning and Heritage Division and the City's municipal heritage committee for review and comment. Any feedback should be incorporated into the CHER and as well as the updated Master Plan.

Please do not hesitate to reach out if you have any further questions or concerns.

Thanks,

Joseph Harvey | Heritage Planner
Citizenship, Inclusion and Heritage Division | Heritage Branch | Heritage Planning Unit
Ministry of Citizenship and Multiculturalism
613.242.3743
Joseph.Harvey@ontario.ca

From: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Sent: December 16, 2022 5:19 PM
To: Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>
Cc: Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>; John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>; Badali, Mark (MECP) <Mark.Badali1@ontario.ca>
Subject: File 0008311: Basin A3 (Owen Sound): Municipal Class EA Master Plan - DRAFT Response to MCM Comments

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Joseph,

Thank you for providing us with comments pertaining to the Master Plan for the Brooke Area Basin A3 Outlet, specifically the Cultural Heritage related aspects. Please find attached a DRAFT response to the MCM comments issued in

correspondence dated November 29th, 2022. The draft response includes a review of the work completed, preliminary impact assessments for the cultural heritage resources identified and a summary of the consultation efforts. It is proposed that the CHER (April 2018) and the enclosed correspondence (once finalized) be included in Appendix E of the Master Plan, and that no further cultural heritage assessments be required at this time.

In terms of next steps, once the MCM has reviewed the enclosed documentation (provided in draft format), we request that the MCM provide confirmation of the receipt of the enclosed correspondence and acceptance of the proposed approach. Alternatively, we request that a meeting be arranged (virtual) to discuss a mutually agreeable approach to addressing the MCM comments provided. We think it would be beneficial to include Karla Barboza in the proposed meeting, if arranged, as we have some history with Karla on similar projects.

Kind Regards,
Andrea

Andrea Nelson, M.Sc.
Senior Hydrogeologist

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From: Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>
Sent: Tuesday, November 29, 2022 8:12 AM
To: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>
Cc: cwebb@owensound.ca; Badali, Mark (MECP) <Mark.Badali1@ontario.ca>; Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Subject: FW: File 0008311: Basin A3 (Owen Sound): Municipal Class EA Master Plan - Notice of Project Initiation

John Slocombe,

Please accept my apologies for the delayed response. I've attached our comments written in response to the above referenced notice.

Please note that the responsibility for administration of the *Ontario Heritage Act* and matters related to cultural heritage recently transferred from the Ministry of Tourism, Culture and Sport (MTCS) to the Ministry of Citizenship and Multiculturalism (MCM). Individual staff roles and contact information remain unchanged. Please continue to send any notices, report and/or documentation to both Karla Barboza and myself.

Please do not hesitate to contact me with any questions or concerns.

Regards,

Joseph Harvey | Heritage Planner
Inclusion and Heritage Division | Heritage Branch | Heritage Planning Unit
Ministry of Citizenship and Multiculturalism
613.242.3743
Joseph.Harvey@ontario.ca

From: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Sent: October-25-22 9:43 AM

To: 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>

Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>

Subject: 216301 Basin A3 (Owen Sound): Municipal Class EA Master Plan - Notice of Project Initiation

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

Good Morning,

The City of Owen Sound has completed a Master Plan (Version 1) to address drainage deficiencies identified within Brooke Basin A3. The Study Area is shown on the attached Notice. The Master Plan is being completed in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (Class EA) process. Upon completion, the intention is to include a sufficient level of investigation, consultation and documentation to fulfill the requirements for the Schedule A/A+ and Schedule B EA projects identified. Version 1 of the report discusses the findings, to date. This correspondence is being provided to your agency (i.e. department, ministry, authority or community) as it has been identified to have an area of interest that may be affected by this plan.

The *Notice of Project Initiation and Public Information Centre* is attached and the Master Plan (Version 1), which includes background technical reports, is available for viewing and can be accessed/saved by clicking on the link below. This link will be valid for 21 days.

https://sendafile.gmblueplan.ca/public_uploads/2022-10-25_132856_andrea.nelson.zip

Alternatively, the City of Owen Sound also has the Master Plan posted on their website for viewing purposes.

<https://www.owensound.ca/Modules/News/index.aspx?newsId=83da4f68-93d6-4c0d-98c7-d84783fc81ed>

With the circulation of the *Notice of Project Initiation* and the Master Plan (Version 1), the public, agencies and Indigenous Communities are invited to provide comments. The public comments received, and agency feedback provided, will be incorporated into the review and assessment of the recommendations, for consideration and acceptance (or otherwise) by Council, prior to issuing the *Notice of Completion* for the project process.

Please contact Chris Webb, Manager of Engineering Services, City of Owen Sound at the address listed on the attached Notice, with any questions or comments regarding this project.

Kind Regards,
Andrea Nelson

Andrea Nelson, M.Sc.

Senior Hydrogeologist

GM BluePlan Engineering Limited

1260-2nd Avenue East | Owen Sound ON N4K 2J3

t: 519.376.1805 ext. 2219 | c: 519.372.4678

andrea.nelson@gmblueplan.ca | www.gmblueplan.ca



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Subject: FW: County comments for Brooke Area Basin A3 - Owen Sound Master Plan

From: planning@grey.ca <planning@grey.ca>

Sent: Tuesday, January 17, 2023 10:43 AM

To: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>

Subject: County comments for Brooke Area Basin A3 - Owen Sound Master Plan

County comments for Brooke Area Basin A3 - Owen Sound Master Plan

County comments for Brooke Area Basin A3 - Owen Sound Master Plan



Hello John Slocombe,

Please note that County Staff have reviewed the Master Plan for the Brooke Area Basin A3 Outlet: Notice of Project Initiation for the City of Owen Sound. A 'Master Plan,' prepared by GM BluePlan and dated October 25, 2022 has been reviewed in advance of preparing these comments.

County Planning staff would generally defer to the City's Engineering Department for a technical review of the proposed plan to improve and facilitate drainage infrastructure in the Brooke area of the City. That said, given the present need for this project, in combination with fluctuating water levels and weather patterns that may become more extreme through climate change, County staff commend the City for taking proactive steps to improve drainage infrastructure within the City.

Portions of the proposed work will fall within designated 'Hazard Lands,' and the entirety of the area is within an Intake Protection Zone II and Events Based Area. Section 7.2(7) of the County's Official Plan states:

7) Certain public or private works which, by their nature, must locate within Hazard Lands shall be permitted to do so. These works include flood and erosion control, drainage, water works, those directly required for the management or maintenance of the natural environment, and other necessary works of approved design.

Given the potential implications that this project may have on the stability of the Hazard Lands, as well as water resources, including fish habitats and municipal water supplies (Georgian Bay), it is recommended that this work be undertaken in close collaboration with Grey Sauble Conservation Authority to ensure no negative impact to these features.

Grey County's Transportation Services staff have reviewed the proposal and have indicated that any works within the County's Road Allowances will

require an Encroachment Permit from the County. Please email roads@grey.ca for further information regarding Encroachment Permits.

Please note, a paper copy will not be provided unless requested.

Let us know if you have any questions.

Best regards,

Becky Hillyer

County of Grey, Owen Sound, ON

Memorandum

To: GM BluePlan
Director, Public Works & Engineering Services Division
Director, Community Services

From: Sabine Robart, Manager of Planning & Heritage

Date: March 3, 2023

File: Master Plan: Brooke Area Basin A3 Outlet

Subject: Planning & Heritage comments

The City's Official Plan (2021) provides that the City may undertake Class Environmental Assessments or other master plan studies for water and sanitary servicing and stormwater management.

Section 5.2.4 Stormwater Management requires that the City may develop or require submission of master drainage plans for all major drainage systems in response to new development or prior to major capital expenditures. The design of stormwater management facilities shall also be in accordance with any Ministry design manuals, approved City standards, subwatershed management plans or other approved master plans.

Planning staff would note that where possible, natural features should be incorporated into master drainage plans and individual stormwater management plans for areas of new development and redevelopment. This may include preserving the existing physical watercourse configuration and at-source stormwater management techniques. (Section 5.2.4.11)

Cultural Heritage

The City' OP notes that cultural heritage resources are built or natural features which may have design or physical value, associative or historic value and/or contextual value. Cultural heritage resources provide social, economic environmental and educational value that contribute to the City's identity and character.

Section 7.1.2.6 requires that all new development and public works shall have regard for significant built heritage resources identified on the City's Heritage Register. As well the City will protect and conserve built heritage resources in

accordance with cultural resource management best practices including, but not limited to, the Standards and Guidelines for the Conservation of Historic Places in Canada, as amended from time to time, and the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) eight guiding principles in the conservation of built heritage properties (Section 7.1.2.7).

Development and site alterations may be permitted on adjacent lands to protected heritage properties where the proposed development and site alteration has been evaluated and it has been demonstrated through the preparation of a heritage impact assessment by a qualified person, that the heritage attributes of the protected heritage property will be conserved. Mitigation measures and/or alternative development approaches may be required in order to conserve the heritage attributes of the protected heritage property affected by the adjacent development or site alteration (Section 7.1.3.7).

The Cultural Heritage Evaluation Report (CHER) identified built heritage resources located within lots of the study area and in lots adjacent to the study area as well the CHER determined the study area to be a 'cultural heritage landscape'. The built heritage resources include eight (8) non-listed and two (2) listed (Building 11 & 25) buildings. There are no designated Heritage buildings/structures within the study area itself (i.e., within the drainage system of Basin A3).

The CHER opined that:

- The proposed Brooke Area Basin A3 development will not have a direct impact on the built heritage resources located within (or adjacent to) the Study Area;
- The landscape associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development;
- The current viewsheds associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development; and,
- Given the scope of the proposed Brooke Area Basin A3 project it is not anticipated that any of the identified built heritage features, cultural heritage landscape, roadways or viewsheds will be negatively impacted by the development and no mitigation or protective measures are required.

The Ministry of Citizenship and Multiculturalism reviewed the CHER and requested that *'impact assessment information be provided in a table, detailing the heritage resources and potential for direct and indirect impacts'*. GM Blue Plan provided an assessment of potential direct and indirect impacts which included an impact assessment for each cultural heritage resource (or resource area), findings and recommendations.

Specifically, GM BluePlan recommends that:

- When the locations of the built heritage resources identified in the CHER are compared to the extents of each Reach, potential impacts are identified for Reach #3 and Reach #6;
- The Recommended Solution for Reach #3, which is to complete gradient improvements and widening of the open channel watercourse, is not expected to have the potential to result in direct or indirect impacts to the identified potential built heritage resources.
- The need for further assessments within Reach #6 is to be evaluated at the detailed design phase and will be based on the findings of the Geotechnical Investigations that will be completed to support the detailed design;
- Additional cultural heritage evaluations and heritage impact assessments may be recommended for the undertakings within Reach #6 if the known and potential built heritage resources are identified to fall within the 'vibration zone of influence';
- For built heritage resources identified to lie within the 'vibration zone of influence', cultural heritage evaluations would only be recommended for identified potential built heritage resources to better understand the cultural heritage value and interest and the associated level of significance. Heritage impact assessments may be recommended for all known (or confirmed) built heritage resources;
- The GM BluePlan assessment recommends that technical cultural heritage studies should be completed as early as possible during detailed design prior to the construction of any proposed works completed within Reach #6.
- Should future work require an expansion of the Study Area, then a qualified heritage consultant should be retained to complete further review and assessment.

Planning & Heritage staff concur with the proposed process at the detailed design phase. Staff recommend that the Planning & Heritage division be involved in the detailed design phase once the results from the Geotechnical Investigation are available and the requirement for further heritage evaluation and assessments be evaluated in consultation with Planning & Heritage staff.

Archaeological Resources

Section 7.1.1.3 of the Official Plan requires that the City shall engage with Indigenous Communities and consider their interests when identifying, protecting and managing cultural heritage and archeological resources.

Section 7.1.6 Archaeological Resources of the City's Official Plan notes:

7.1.6.1 The City will encourage the conservation of archaeological resources as may be identified by the City, the Province, or other group and agency, and will continue to enforce municipal and provincial legislation with respect to lands containing archaeological resources or areas of archaeological potential and/or the discovery of items of archeological or historic interest on a property.

7.1.6.2 Development and site alteration shall only be permitted on lands containing archaeological resources or areas of archaeological potential if the significant archaeological resources have been conserved by removal and documentation, or by preservation on site. Where significant archaeological resources must be preserved on site, only development and site alteration that maintains the heritage integrity of the site may be permitted.

7.1.6.3 The City may require studies, such as an Archaeological Assessment Report, prepared by a qualified person, to identify and protect archaeological resources from destruction or alteration through development or public works operations.

7.1.6.4 The City will encourage consultation with Indigenous Communities in areas identified with significant archaeological potential both before and during the archaeological assessment process.

7.1.6.5 All archaeological assessment reports must be provided to the Province, as per the Standards and Guidelines for Consultant Archaeologists, as amended from time to time, and to the City for information purposes. All correspondence from the MHSTCI on their review/acceptance of any archaeological assessment will be provided to the City.

Scarlett Janusas Archaeology Inc completed a Stage 1 Archaeological Assessment of the area that may be impacted by drainage improvements within Brooke Area Basin A3. The Ministry of Citizenship and Multiculturalism has confirmed the entry of the Stage 1 Assessment Report into the Ontario Public Register of Archaeological Reports.

The Stage 1AA report recommended that a Stage 2AA is recommended for approximately 56% of the Study area (areas of archaeological potential), more specifically:

1. The west side of Reach 1 should be the subject of Stage 2AA if there is any proposed development, excluding routine maintenance of the existing culvert.
2. The west side of Reach 2 exhibits potential and will require Stage 2AA if this area is to be developed.
3. The water course in Reach 3 has been dredged several times, although the majority of the area on either side of the course has remained

undeveloped. Should any development be proposed in this area, Stage 2AA is recommended.

4. Reach 4 is a mix of areas of both archaeological potential and no potential. Those areas of archaeological potential are recommended for Stage 2AA should development be proposed within Reach 4.

5. There is no potential for Reach 5 and no further archaeological assessment is required in the area of Reach 5.

6. There is no archaeological potential for Reach 6 and no further archaeological assessment is recommended within the Reach 6 area.

The draft Master Plan notes that a Stage 2 archaeological assessment and any further recommended assessment (e.g., Stage 3 and Stage 4) will be completed as early as possible in the detailed design phase and prior to any ground disturbing activities in areas identified to have not been previously disturbed.

For those projects where a Stage 2 assessment is recommended, Planning & Heritage staff recommend that the qualified professional undertaking the assessment contact the Saugeen Ojibway Nation Environment Office as an acknowledgement that the subject lands are located within the Traditional Territory of the Anishinabek Nation: The People of the Three Fires known as Ojibway, Odawa, and Pottawatomi Nations and to ensure SON's Archaeological Standards are addressed in the assessment. Planning & Heritage staff strongly recommend a framework for meaningful consultation and accommodation with SON regarding the any work required as part of the Master Plan which may include a SON liaison person being on site during field work/excavation.

Hazard Lands (Section 3.13)

The City OP states that the Hazard Lands designation is intended primarily for the preservation and conservation of lands in their natural state. Lands designated Hazard Lands are lands having qualities that, in combination with their location, present a risk to human safety, potential for property damage, or have physical limitations to development. Hazard Lands within the City include those lands that are susceptible to flooding, wave uprush, erosion or slope instability and in many cases are characterized by steep slopes, organic soils or poor drainage.

Permitted uses in the Hazard Land designation in those buildings or structures necessary for flood or erosion control, and conservation purposes and related private access (Section 3.13.1.1 a). Section 6.1.5 requires that where significant development is proposed adjacent to Hazard Lands, Open Space or any significant natural heritage feature, the City shall require the preparation of an Environmental Impact Study in accordance with the provisions of this section and in consultation with the Grey Sauble Conservation Authority.

A 'Natural Heritage Feature Analysis' (NHFA) was completed for the subject portion of Part of Brooke Area Basin A3, by Aquatic and Wildlife Services (AWS) Environmental Consulting Inc., in April 2019 which identified the following Natural Heritage Features within the General Study Area of within 120 m adjacent lands to the focused water course features:

- i. Habitat for Species-At-Risk (SAR) Species:
 - a. Confirmed presence for Butternut
 - b. Candidate suitable habitat for bats, barn swallow, gypsy cuckoo bumble bee and rusty patched bumble bee.
- ii. Fish Habitat: Confirmed fish habitat present for warm-water resident population of common Cyprinidae Family (minnows, dace) species.
- iii. Significant Woodlands: Confirmed forest stands of significant woodlands within the western portion of the NHFA Study Area (Polygon No.'s 1 and 2 on Figure 4).
- iv. Significant Wildlife Habitat (SWH):
 - a. Confirmed presence of snapping turtle
 - b. Candidate for bat maternity colonies, specialized habitat and flora species of conservation concern.

The NHFA concluded that 'with confirmed SAR and candidate other SAR habitat along with the confirmed Fish Habitat, Significant Woodland and Significant Wildlife Habitat within the general study area, site alterations will require further natural heritage impact assessment review. Such works shall be required to demonstrate compliance with the Endangered Species Act 2007, Fisheries Act and applicable Official Plan policies with survey works focused on site alteration impact zones with possible species or habitat related mitigation measures required'.

Additional natural environment study may be required to support individual projects within the Study Area. The Master Plan notes that the need for additional investigations and/or site-specific mitigation strategies would be assessed and developed at the planning and design stage for a given project, as appropriate.

Planning & Heritage staff note that as a result of recent provincial legislation changes Grey Sauble Conservation is no longer able to comment on Natural Heritage matters. As such, previous peer review services provided by the GSCA will not be available at the detailed design stage of individual projects. The City and County Planning division are working on accessing qualified consultants and/or staff to provide peer review services for Natural Heritage matters. Planning & Heritage staff recommend that Planning & Heritage staff be involved in

the detailed design phase to facilitate the peer review services available at that time.

**Ministry of Citizenship
and Multiculturalism**

Heritage Planning Unit
Heritage Branch
Citizenship, Inclusion and
Heritage Division
5th Flr, 400 University Ave
Tel.: 613.242.3743

**Ministère des Affaires civiques
et du Multiculturalisme**

Unité de la planification relative au
patrimoine
Direction du patrimoine
Division des affaires civiques, de
l'inclusion et du patrimoine
Tél.: 613.242.3743



April 3, 2023

EMAIL ONLY

Andrea Nelson, M.Sc.
GM BluePlan Engineering Ltd.
1260-2nd Avenue East, Unit 1
Owen Sound, ON N4K 2J3
andrea.nelson@gmblueplan.ca

MCM File : 0008311
Proponent : City of Owen Sound
Subject : Draft Master Plan Report - Approach 2
Project : Master Plan: Brooke Area Basin A3 Outlet
Location : City of Owen Sound, Grey County

Dear Andrea Nelson:

Thank you for making the draft copy of the Master Plan Report (Version 2) for the Brooke Basin A3 Outlet (dated March 6, 2023 and prepared by GM BluePlan Engineering) available for our review and comment.

Comments

We provided comments on a previous draft version of the Master plan Report (dated October 25, 2022) and note that many of our comments were addressed in the revised draft Master Plan. However, we have the following comments:

Culverts

Section 8.1.2 (Municipal Heritage Bridges Checklist) (page 19 PDF) of the Master Plan indicates that the culverts were screened out as they have a span under 3 metres. If the Municipal Engineers Association (MEA) bridge checklist (104) is not applicable, then the proponent should complete the [Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes](#) to help determine whether the two culverts are of potential cultural heritage value or interest (CHVI).

If either of the culverts is determined to be of potential CHVI, then the preliminary impact assessment included in the CHER should be revised to include an assessment of impacts for each culvert. If it is unlikely that the culverts are of potential (CHVI), or no impacts are anticipated then the completed checklists should be included as part of the Master Plan final documentation. Section 8.1.2 (Built Heritage Resources and Cultural Heritage Landscape Assessment) should document the conclusion based on the completed checklist.

If the culverts are found to be of CHVI, the evaluation of alternatives (Section 9.0) will need to be revised to reflect the results of the recommended preliminary impact assessment.

Archaeological Assessment

Section 8.1.1 (Archaeological Assessment) – The outcomes and recommendations of the Stage 1 AA report need to be included (copy and paste, don't summarize).

Thank you for the opportunity to review the revised draft Master Plan. We look forward to reviewing the updated project documentation. Please contact me with any questions or concerns.

Sincerely,

Joseph Harvey
Heritage Planner
joseph.harvey@ontario.ca

Copied to: John Slocombe, GM BluePlan
Sabine Robart, City of Owen Sound
Mark Badali, Environmental Resource Planner & EA Coordinator, MECF

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. The Ministry of Citizenship and Multiculturalism (MCM) makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MCM be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with *Ontario Regulation 30/11* the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

**Ministry of the Environment,
Conservation and Parks**

**Ministère de l'Environnement,
de la Protection de la nature
et des Parcs**

Environmental Assessment
Branch

Direction des évaluations
environnementales

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Via E-mail Only

April 4, 2023

Andrea Nelson
Senior Hydrogeologist
GM BluePlan Engineering Limited
drea.nelson@gmblueplan.ca

**Re: Brooke Area Basin A3 Outlet Master Plan
City of Owen Sound
Municipal Class Environmental Assessment – Master Plan
Project Review Unit Comments – Draft Report**

Dear Andrea Nelson,

Thank you for providing the ministry with an opportunity to comment on the draft Master Plan Report (Report) for the above noted Class Environmental Assessment (EA) Master Plan. Our understanding is that in order to proactively address drainage issues associated with the open watercourses and closed storm sewers in the Brooke Area Basin A3 study area, the City of Owen Sound (the proponent) has determined that the preferred alternatives include maintenance, monitoring, repairs, improvements and replacements for the drainage outlet system. The Ministry of the Environment, Conservation and Parks (ministry, MECP) provides the following comments for your consideration.

General

- 1) Section 9 of the Report states in the Cultural Environment subsection, “A 50-meter buffer is generally applied in the absence of a project-specific defined vibration zone of influence and is based on literature and direction provided by the Ministry for similar projects.” As there is no other reference to a specific ministry in this subsection, this reference should be clarified (e.g., replace “Ministry” with “Ministry of Citizenship and Multiculturalism”, if appropriate).

Class EA Process

- 2) The Report indicates that certain impact assessments, such as the Stage 2 Archaeological Assessment and detailed investigations pertaining to the confirmed Species at Risk identified within the study area, will be undertaken subsequent to this Class EA process. Please note that if the outcomes of any future studies would result in a significant modification to the project, including impacting the evaluation of alternative solutions or the preferred solution, then a Class EA addendum may be required through the Municipal Class EA process.

Agency Consultation

- 3) The proponent should continue consultation directly with the Ministry of Citizenship and Multiculturalism to address any outstanding comments that they may have, specifically those pertaining to outcomes and recommendations of the Stage 1 Archaeological Assessment report, the potential cultural heritage value of the two culverts proposed to be replaced, and the findings of any additional Cultural Heritage Evaluation Report/Heritage Impact Assessment undertaken. In accordance with section A.3.6 of the Municipal Class EA parent document, the Report must document all correspondence with review agencies, including details of comments and input received and an explanation of how issues were addressed.

Indigenous Consultation

- 4) The proponent should continue to engage with all communities that have been engaged with to date to ensure that they are aware of the Stage 2 Archaeological Assessment that will be required and, further to that, provided the opportunity to participate in that process.

Air Quality and Odour

- 5) Please note that the ministry recommends that non-chloride dust suppressants be applied during construction.

Noise

- 6) As described in Section A.2.3 of the Municipal Class EA parent document, Phase 2 of the Schedule B planning process involves identification of mitigating measures with respect to negative effects of the project. Given that residences have been identified as being adjacent to various reaches of the drainage outlet system, the ministry recommends that the Report be revised to include a description of mitigation measures for noise impacts from construction activities associated with the recommended alternatives project, where applicable. Noise control measures should be addressed in construction mitigation plans in order to mitigate adverse noise impacts to nearby residential land uses within the study area during construction activities.

Species at Risk

- 7) If the proponent believes that their proposed activities are going to have an impact or are uncertain about the impacts to the confirmed Species at Risk and candidate other SAR habitat within the general study area, as discussed in sections 8.3.1 and 20.2 of the Report, they

should contact SAROntario@ontario.ca to undergo a formal review under the *Endangered Species Act*.

- 8) Section 8.3.2 of the Report states, *“An authorization or permit between the proponent and the Ministry of Natural Resources and Forestry (MNRF) would be required to authorize activities that would otherwise be prohibited by subsection 9(1) and 10(1) of the ESA.”*

Section 20.2 states, *“Therefore, additional natural environment study and consultation with the MNRF may be required to support individual projects within the Study Area.”*

These instances of *“Ministry of Natural Resources and Forestry (MNRF)”* and *“MNRF”* should be revised to reference the Ministry of the Environment, Conservation and Parks instead, as MECP now has responsibility of Ontario’s Species at Risk program.

Thank you for circulating this draft Report for the ministry’s consideration. Please document the provision of the draft Report to the ministry as well as this Project Review Unit Comments letter in the final report, and please provide an accompanying response letter to support our review of the final report. A copy of the final Notice should be sent to the ministry’s Southwest Region EA notification email account (eanotification.swregion@ontario.ca).

Should you or any members of your project team have any questions regarding the material above, please contact me at mark.badali1@ontario.ca.

Sincerely,



Mark Badali
Regional Environmental Planner
Project Review Unit, Environmental Assessment Branch
Ontario Ministry of the Environment, Conservation and Parks

cc John Ritchie, Manager, Owen Sound District Office, MECP

Drea Nelson - GM BluePlan

Subject: FW: 216301 City of Owen Sound: Municipal Class EA Master Plan (Basin A3 Drainage Area) [MCM File 0008311] - Response to Comments
Attachments: 216301 Response to MCM and Preliminary Impact Assessment (Revised April 2023).pdf

From: Harvey, Joseph (MCM) <joseph.harvey@ontario.ca>
Sent: Friday, April 14, 2023 1:49 PM
To: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Sabine Robart <srobart@owensound.ca>; Badali, Mark (MECP) <mark.badali1@ontario.ca>; Barboza, Karla (MCM) <karla.barboza@ontario.ca>; 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>; Peter Paquette <ppaquette@owensound.ca>
Subject: FW: 216301 City of Owen Sound: Municipal Class EA Master Plan (Basin A3 Drainage Area) [MCM File 0008311] - Response to Comments

Hello Andrea,

Thanks for providing us with the updated documentation.

We continue to recommend that a cultural heritage evaluation is prepared for the culverts as they are of potential cultural heritage value or interest (CHVI). However, if you have consulted with the City of Owen Sound's Planning and Heritage Division and its municipal heritage committee and they have accepted your decision to not evaluate the culverts, this should be documented in the final Master Plan.

If you have not already done so, a copy of the updated preliminary impact assessment should be shared with the City's Planning and Heritage Division and municipal heritage committee for review and comment. Any feedback should be incorporated into the preliminary impact assessment and as well as the final Master Plan.

We look forward to receiving the notice of completion and reviewing the final Master Plan.

Please do not hesitate to reach out if you have any additional questions or concerns.

Thanks,

Joseph Harvey | Heritage Planner

Citizenship, Inclusion and Heritage Division | Heritage Branch | Heritage Planning Unit

Ministry of Citizenship and Multiculturalism

613.242.3743

Joseph.Harvey@ontario.ca

From: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>

Sent: April 6, 2023 12:10 PM

To: Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>

Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Sabine Robart <srobart@owensound.ca>; Badali, Mark (MECP) <Mark.Badali1@ontario.ca>; Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>; 'Chris Webb (cwebb@owensound.ca)' <cwebb@owensound.ca>; Peter Paquette <ppaquette@owensound.ca>

Subject: RE: 216301 City of Owen Sound: Municipal Class EA Master Plan (Basin A3 Drainage Area) [MCM File 0008311] - Response to Comments

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Joseph,

Please find attached a response to the MCM comments received on April 3, 2023 and a copy of the updated documentation, including the requested checklists. The response to comments has been incorporated into the previous documentation in an effort to ensure that the revisions to the preliminary impact assessment remain under one separate cover. At this time the updates to the documentation are shown in blue text to facilitate your review.

Can you please confirm receipt of this correspondence. If you have any questions, please contact me at 519-372-4678.

Kind Regards,
Andrea

Andrea Nelson, M.Sc.
Senior Hydrogeologist

GM BluePlan Engineering Limited
1260-2nd Avenue East | Owen Sound ON N4K 2J3
t: 519.376.1805 ext. 2219 | c: 519.372.4678
andrea.nelson@gmblueplan.ca | www.gmblueplan.ca



From: Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>
Sent: Monday, April 03, 2023 10:31 AM
To: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Cc: John Slocombe - GM BluePlan <John.Slocombe@gmblueplan.ca>; Sabine Robart <srobart@owensound.ca>; Badali, Mark (MECP) <Mark.Badali1@ontario.ca>; Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>
Subject: FW: 216301 City of Owen Sound: Municipal Class EA Master Plan - Updated Version 2 - DRAFT (Basin A3 Drainage Area) [MCM File 0008311]

Andrea Nelson,

Please find attached our comments on the revised Master Plan Report prepared for the above referenced undertaking.

Please do not hesitate to contact me with any questions or concerns.

Regards,

Joseph Harvey | Heritage Planner
Citizenship, Inclusion and Heritage Division | Heritage Branch | Heritage Planning Unit
Ministry of Citizenship and Multiculturalism
613.242.3743
Joseph.Harvey@ontario.ca

From: Drea Nelson - GM BluePlan <Drea.Nelson@gmblueplan.ca>
Sent: March 6, 2023 3:40 PM

Memorandum

To: GM BluePlan
Director, Public Works & Engineering Services Division
Director, Community Services

From: Sabine Robart, M.SC. (PL), MCIP, RPP, Manager of Planning & Heritage

Date: March 3, 2023
Updated May 25, 2023

File: Master Plan: Brooke Area Basin A3 Outlet

Subject: Planning & Heritage comments

The City's Official Plan (2021) provides that the City may undertake Class Environmental Assessments or other master plan studies for water and sanitary servicing and stormwater management.

Section 5.2.4 Stormwater Management requires that the City may develop or require submission of master drainage plans for all major drainage systems in response to new development or prior to major capital expenditures. The design of stormwater management facilities shall also be in accordance with any Ministry design manuals, approved City standards, subwatershed management plans or other approved master plans.

Planning staff would note that, where possible, natural features should be incorporated into master drainage plans and individual stormwater management plans for areas of new development and redevelopment. This may include preserving the existing physical watercourse configuration and at-source stormwater management techniques. (Section 5.2.4.11)

Cultural Heritage

The City's OP notes that cultural heritage resources are built or natural features which may have design or physical value, associative or historic value and/or contextual value. Cultural heritage resources provide social, economic, environmental and educational value that contribute to the City's identity and character.

Section 7.1.2.6 requires that all new development and public works shall have regard for significant built heritage resources identified on the City's Heritage Register. As well the City will protect and conserve built heritage resources in accordance with cultural resource management best practices, including, but not limited to, the Standards and Guidelines for the Conservation of Historic Places in Canada, as amended from time to time, and the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) eight guiding principles in the conservation of built heritage properties (Section 7.1.2.7).

Development and site alterations may be permitted on adjacent lands to protected heritage properties where the proposed development and site alteration has been evaluated, and it has been demonstrated through the preparation of a heritage impact assessment by a qualified person that the heritage attributes of the protected heritage property will be conserved. Mitigation measures and/or alternative development approaches may be required in order to conserve the heritage attributes of the protected heritage property affected by the adjacent development or site alteration (Section 7.1.3.7).

The Cultural Heritage Evaluation Report (CHER) identified known and potential built heritage resources located within lots of the study area and in lots adjacent to the study area and the CHER determined the study area to be a potential 'cultural heritage landscape'. The built heritage resources include eight (8) non-listed and two (2) listed (Building 11 & 25) buildings. There are no designated Heritage buildings/structures within the study area itself (i.e., within the drainage system of Basin A3).

The CHER opined that:

- The proposed Brooke Area Basin A3 development will not have a direct impact on the built heritage resources located within (or adjacent to) the Study Area;
- The landscape associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development;
- The current viewsheds associated with the Study Area will not be adversely impacted by the Brooke Area Basin A3 development; and,
- Given the scope of the proposed Brooke Area Basin A3 project it is not anticipated that any of the identified known and potential built heritage features, cultural heritage landscape, roadways or viewsheds will be negatively impacted by the development and no mitigation or protective measures are required.

The Ministry of Citizenship and Multiculturalism reviewed the CHER and requested that *'impact assessment information be provided in a table, detailing the heritage resources and potential for direct and indirect impacts'*. GM Blue Plan provided an assessment of potential direct and indirect impacts which included an impact assessment for each cultural heritage resource (or resource area), findings and recommendations.

Specifically, GM BluePlan recommends that:

- When the locations of the built heritage resources identified in the CHER are compared to the extents of each Reach, potential impacts are identified for Reach #3 and Reach #6;
- The Recommended Solution for Reach #3, which is to complete gradient improvements and widening of the open channel watercourse, is not expected to have the potential to result in direct or indirect impacts to the identified potential built heritage resources.
- The need for further assessments within Reach #6 is to be evaluated at the detailed design phase and will be based on the findings of the Geotechnical Investigations that will be completed to support the detailed design;
- Additional cultural heritage evaluations and heritage impact assessments may be recommended for the undertakings within Reach #6 if the known and potential built heritage resources are identified to fall within the 'vibration zone of influence';
- For built heritage resources identified to lie within the 'vibration zone of influence', cultural heritage evaluations would only be recommended for identified potential built heritage resources to better understand the cultural heritage value and interest and the associated level of significance. Heritage impact assessments may be recommended for all known (or confirmed) built heritage resources;
- The GM BluePlan assessment recommends that technical cultural heritage studies should be completed as early as possible during detailed design prior to the construction of any proposed works completed within Reach #6.
- Should future work require an expansion of the Study Area, then a qualified heritage consultant should be retained to complete further review and assessment.

Planning & Heritage staff concur with the proposed process at the detailed design phase. Staff recommend that the Planning & Heritage division be involved in the detailed design phase once the results from the Geotechnical Investigation are available and the requirement for further heritage evaluation and assessments be evaluated in consultation with Planning & Heritage staff.

In response to comments from Ministry of Citizenship and Multiculturalism (MCM), Archaeological Services Inc was retained to determine if culverts proposed for replacement, that is Structure OS-7 and Culvert system OS9a/b/c, have the potential for cultural heritage value or interest (CHVI). ASI notes that it is ASI's professional opinion that there is no potential for cultural heritage value or interest and a CHER is not required for Structure OS-7 or Culvert System OS-9. Planning & Heritage staff accept the findings of the ASI review as per the May 25, 2023 technical memorandum from ASI.

Archaeological Resources

Section 7.1.1.3 of the Official Plan requires that the City shall engage with Indigenous Communities and consider their interests when identifying, protecting and managing cultural heritage and archeological resources.

Section 7.1.6 Archaeological Resources of the City's Official Plan notes:

7.1.6.1 The City will encourage the conservation of archaeological resources as may be identified by the City, the Province, or other group and agency, and will continue to enforce municipal and provincial legislation with respect to lands containing archaeological resources or areas of archaeological potential and/or the discovery of items of archeological or historic interest on a property.

7.1.6.2 Development and site alteration shall only be permitted on lands containing archaeological resources or areas of archaeological potential if the significant archaeological resources have been conserved by removal and documentation, or by preservation on site. Where significant archaeological resources must be preserved on site, only development and site alteration that maintains the heritage integrity of the site may be permitted.

7.1.6.3 The City may require studies, such as an Archaeological Assessment Report, prepared by a qualified person, to identify and protect archaeological resources from destruction or alteration through development or public works operations.

7.1.6.4 The City will encourage consultation with Indigenous Communities in areas identified with significant archaeological potential both before and during the archaeological assessment process.

7.1.6.5 All archaeological assessment reports must be provided to the Province, as per the Standards and Guidelines for Consultant Archaeologists, as amended from time to time, and to the City for information purposes. All correspondence from the MHSTCI on their review/acceptance of any archaeological assessment will be provided to the City.

Scarlett Janusas Archaeology Inc completed a Stage 1 Archaeological Assessment of the area that may be impacted by drainage improvements within Brooke Area Basin A3. The Ministry of Citizenship and Multiculturalism has confirmed the entry of the Stage 1 Assessment Report into the Ontario Public Register of Archaeological Reports.

The Stage 1AA report recommended that a Stage 2AA is recommended for approximately 56% of the Study area (areas of archaeological potential), more specifically:

1. The west side of Reach 1 should be the subject of Stage 2AA if there is any proposed development, excluding routine maintenance of the existing culvert.
2. The west side of Reach 2 exhibits potential and will require Stage 2AA if this area is to be developed.
3. The water course in Reach 3 has been dredged several times, although the majority of the area on either side of the course has remained undeveloped. Should any development be proposed in this area, Stage 2AA is recommended.
4. Reach 4 is a mix of areas of both archaeological potential and no potential. Those areas of archaeological potential are recommended for Stage 2AA should development be proposed within Reach 4.
5. There is no potential for Reach 5 and no further archaeological assessment is required in the area of Reach 5.
6. There is no archaeological potential for Reach 6 and no further archaeological assessment is recommended within the Reach 6 area.

The draft Master Plan notes that a Stage 2 archaeological assessment and any further recommended assessment (e.g., Stage 3 and Stage 4) will be completed as early as possible in the detailed design phase and prior to any ground disturbing activities in areas identified to have not been previously disturbed.

For those projects where a Stage 2 assessment is recommended, Planning & Heritage staff recommend that the qualified professional undertaking the assessment contact the [Saugeen Ojibway Nation Environment Office](#) as an acknowledgement that the subject lands are located within the Traditional Territory of the Anishinabek Nation: The People of the Three Fires known as Ojibway, Odawa, and Pottawatomi Nations and to ensure [SON's Archaeological Standards](#) are addressed in the assessment.

Planning & Heritage staff strongly recommend that a framework for meaningful consultation and accommodation with SON be developed regarding the work required as part of the Master Plan. At minimum, a SON liaison person will require to be present during any field work/excavation.

Hazard Lands (Section 3.13)

The City OP states that the Hazard Lands designation is intended primarily for the preservation and conservation of lands in their natural state. Lands designated Hazard Lands are lands having qualities that, in combination with their location, present a risk to human safety, potential for property damage, or have physical limitations to development. Hazard Lands within the City include those lands that are susceptible to flooding, wave uprush, erosion or slope instability and in many cases are characterized by steep slopes, organic soils or poor drainage.

Permitted uses in the Hazard Land designation in those buildings or structures necessary for flood or erosion control, and conservation purposes and related private access (Section 3.13.1.1 a). Section 6.1.5 requires that where significant development is proposed adjacent to Hazard Lands, Open Space or any significant natural heritage feature, the City shall require the preparation of an Environmental Impact Study in accordance with the provisions of this section and in consultation with the Grey Sauble Conservation Authority.

A 'Natural Heritage Feature Analysis' (NHFA) was completed for the subject portion of Part of Brooke Area Basin A3, by Aquatic and Wildlife Services (AWS) Environmental Consulting Inc., in April 2019 which identified the following Natural Heritage Features within the General Study Area of within 120 m adjacent lands to the focused water course features:

- i. Habitat for Species-At-Risk (SAR) Species:
 - a. Confirmed presence for Butternut
 - b. Candidate suitable habitat for bats, barn swallow, gypsy cuckoo bumble bee and rusty patched bumble bee.
- ii. Fish Habitat: Confirmed fish habitat present for warm-water resident population of common Cyprinidae Family (minnows, dace) species.
- iii. Significant Woodlands: Confirmed forest stands of significant woodlands within the western portion of the NHFA Study Area (Polygon No.'s 1 and 2 on Figure 4).
- iv. Significant Wildlife Habitat (SWH):
 - a. Confirmed presence of snapping turtle
 - b. Candidate for bat maternity colonies, specialized habitat and flora species of conservation concern.

The NHFA concluded that 'with confirmed SAR and candidate other SAR habitat along with the confirmed Fish Habitat, Significant Woodland and Significant

Wildlife Habitat within the general study area, site alterations will require further natural heritage impact assessment review. Such works shall be required to demonstrate compliance with the Endangered Species Act 2007, Fisheries Act and applicable Official Plan policies with survey works focused on site alteration impact zones with possible species or habitat related mitigation measures required'.

Additional natural environment study may be required to support individual projects within the Study Area. The Master Plan notes that the need for additional investigations and/or site-specific mitigation strategies would be assessed and developed at the planning and design stage for a given project, as appropriate.

Planning & Heritage staff note that as a result of recent provincial legislation changes Grey Sauble Conservation is no longer able to comment on Natural Heritage matters. As such, previous peer review services provided by the GSCA will not be available at the detailed design stage of individual projects. The City and County Planning division are working on accessing qualified consultants and/or staff to provide peer review services for Natural Heritage matters. Planning & Heritage staff recommend that Planning & Heritage staff be involved in the detailed design phase to facilitate the peer review services available at that time.