The Corporation of the Municipality of Brockton

By-Law 2019-064

Being a By-Law to Authorize the Signing of an Agreement With B.M. Ross and Associates Limited for the Purpose of Performing the 2019 Rural Roads Needs Assessment for the Municipality of Brockton.

Whereas The Council for the Corporation of the Municipality of Brockton deems it expedient to enter into an agreement with B.M. Ross and Associates Limited with respect to performing the 2019 Rural Roads Needs Assessment for the Municipality of Brockton;

Now Therefore the Council of the Corporation of the Municipality of Brockton enacts as follows;

1.0 That The Corporation of the Municipality of Brockton Council hereby enters into an agreement with B.M. Ross and Associated Limited which is attached as "Schedule A" and forms part of this By-Law;

2.0 The execution by the Mayor and Clerk of the Agreement and any other documents that may be required for the purpose of the arrangement described in Schedule "A" is hereby authorized, ratified, and confirmed.

3.0 This By-Law shall come into full force and effect upon final passage.

4.0 This By-Law may be cited as the "BM Ross Rural Roads Needs Assessment Agreement By-Law".

Read, Enacted, Signed and Sealed this 4th day of June, 2019.

_____ _____

Mayor – Chris Peabody Clerk – Fiona Hamilton

19074

2017

Consulting Engineers of Ontario (CEO) in partnership with the Municipal Engineers Association (MEA)

CLIENT/ENGINEER AGREEMENT

FOR

PROFESSIONAL CONSULTING SERVICES

2019 Rural Road Needs Assessment
For Municipality of Brockton

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AGREEMENT

FOR

PROFESSIONAL CONSULTING SERVICES

Dated the 24th day of May A. D. 2019

-BETWEEN-

THE CORPORATION OF Municipality of Brockton

Hereinafter called the 'Client'

THE PARTY OF THE FIRST PART

-AND-

B. M. Ross and Associates Limited

Hereinafter called the 'Engineer'

THE PARTY OF THE SECOND PART

WHEREAS the Client intends to (Description of Project)

Provide a Rural Roads Condition and Needs Assessment, as per Request for Proposal 2019-02.

Hereinafter called the 'Project' and has requested the Engineer to furnish professional services in connection therewith.

NOW THEREFORE WITNESSETH that in consideration of the covenants contained herein, the Client and the Engineer mutually agree as follows:

DEFINITIONS

1. **Engineer**

   In this Agreement, the word Engineer shall mean professionals and other specialists engaged by the Client directly and whose names are party to this Agreement.

2. **Services** - Engineering Services for completion of a Road Needs Assessment for the rural roads in the Municipality of Brockton

3. **RFP** – RFP 2019-02 Rural Roads Condition and Needs Assessment

4. **Addenda** – Addenda provided on Wednesday April 24, 2019

5. **Order of Precedence**:

   i. Addendums

   ii. Request for Proposal issued

   iii. Proposal submission document including detailed Work Plan and Fee Estimate

ARTICLE 1 - GENERAL CONDITIONS

1.1 Retainer

The Client hereby retains the services of the Engineer in connection with the Project and the Engineer hereby agrees to provide the services described in Schedule 'A' (The Services) for the Project under the general direction and control of the Client.

1.2 Compensation

The Client shall pay the Engineer in accordance with the provisions set forth in Article 3. For purposes of this agreement, the basis of payment shall be as specified in Article 3.2.

1.3 Staff and Methods

The Engineer shall perform the services under this agreement with the degree of care, skill and diligence normally provided in the performance of such services as contemplated by the agreement at the time such services are rendered and as required by the Professional Engineers Act (RSO 1990, Chapter P.28) and the regulations therein. The Engineer shall employ only competent staff who will be under the supervision of a senior member of the Engineer's staff. The Engineer shall obtain the prior agreement of the Client before making any changes to the staff list after commencement of the Project.

1.4 Drawings and Documents

Subject to Section 3.2.4 of Article 3, drawings and documents or copies thereof required for the Project shall be exchanged between the parties on a reciprocal basis. Documents prepared by the Engineer for the Client may be used by the Client, for the Project herein described, including "record" drawings. The Client has ownership of the drawings and the client indemnifies the Engineer for unauthorized use of the documents and deliverables.

1.5 Intellectual Property

All concepts, products or processes produced by or resulting from the Services rendered by the Engineer in connection with the Project, or which are otherwise developed or first reduced to practice by the Engineer in the performance of his Services, and which are patentable, capable of trademark or otherwise, shall be and remain the property of the Engineer.

The Client shall have permanent non-exclusive royalty-free license to use any concept, product or process, which is patentable, capable of trademark or otherwise produced by or resulting from the Services rendered by the Engineer in connection with the Project and for no other purpose or project.

1.6 Records and Audit

a) In order to provide data for the calculation of fees on a time basis, the Engineer shall keep a detailed record of the hours worked by staff employed for the Project.

b) The Client may inspect timesheets and record of expenses and disbursements of the Engineer during regular office hours with respect to any item which the Client is required to pay on a time scale or disbursement basis as a result of this Agreement.

c) The Engineer, when requested by the Client, shall provide copies of receipts with respect to any disbursement for which the Engineer claims payment under this Agreement.

d) For seven (7) years after the expiry date or any date of termination of the Agreement, the Engineer shall maintain all necessary records to substantiate i) all charges and payments under the Agreement and ii) that all deliverables were provided in accordance with the Agreement.

1.7 Changes and Alterations and Additional Services

With the consent of the Engineer, the Client may in writing at any time after the execution of the Agreement or the commencement of the Services delete, extend, increase, vary or otherwise alter the Services forming the subject of the Agreement, and if such action by the Client necessitates additional staff or services, the Engineer shall be paid in accordance with Section 3.2.2.1 for such additional staff employed directly thereon, together with such expenses and disbursements as allowed under Section 3.2.4, or as otherwise agreed in writing between the parties

1.8 Delays

In the event that the start of the project is delayed for sixty (60) days or more for reasons beyond the control of the consultant, the Engineer shall have the right to renegotiate the agreement before the commencement of the project.

1.9 Suspension or Termination

The Client may at any time by notice in writing suspend or terminate the Services or any portion thereof at any stage of the project. Upon receipt of such written notice, the Engineer shall perform no further Services other than those reasonably necessary to close out his Services. In such an event, the Engineer shall be entitled to payment in accordance with Section 3.2 for any of the Engineer's staff employed directly thereon together with such expenses and disbursements allowed under Section 3.2.

If the Engineer is practicing as an individual and dies before his Services have been completed, this Agreement shall terminate as of the date of his death, and the Client shall pay for the Services rendered and disbursements incurred by the Engineer to the date of such termination.

1.10 Indemnification

The Engineer shall indemnify and save harmless the Client from and against all claims, actions, losses, expenses, costs or damages of every nature and kind whatsoever which the Client, his employees, officers or agents may suffer, to the extent the Engineer is legally liable as a result of the negligent acts of the Engineer, his employees, officers or agents in the performance of this Agreement.

The Client agrees to hold harmless, indemnify and defend the Engineer from and against any and all claims, actions, losses, expenses, costs or damages of every nature including liability and costs of defense arising out of or in any way connected with the presence, discharge, release or escape of contaminants of any kind, excluding only such liability as may arise out of the negligent acts of the Engineer in the performance of consulting services to the Client within this project.

1.11 Insurance

The Client will accept the insurance coverage amount specified in this clause section (a) and (b) or as specified in the RFP as the aggregate limit of liability of the Engineer for Clients damages.

a) Comprehensive General Liability and Automobile Insurance

The Insurance Coverage shall be $5,000,000 per occurrence and in the aggregate for general liability and $2,000,000 for automobile insurance. When requested, the Engineer shall provide the Client with proof of Comprehensive General Liability and Automobile Insurance (Inclusive Limits) for both owned and non-owned vehicles.

b) Professional Liability Insurance

The Insurance Coverage shall be in the amount of $5,000,000 per claim and in the aggregate. When requested, the Engineer shall provide to the Client proof of Professional Liability Insurance carried by the Engineer, and in accordance with Professional Engineers Act (RSO 1990, Chapter P.28) and Regulations therein.

c) Additional Coverage

If the Client requests to have the amount of coverage increased from that detailed in the RFP, or requests other special insurance for this Project then the Engineer shall endeavour forthwith to obtain such additional or special insurance at the Client's expense as a disbursement allowed under Section 3.2.

It is understood and agreed that the coverage provided by these policies will not be changed or amended in any way nor cancelled by the Engineer until (30) days after written notice of such change or cancellation has been delivered to and acknowledged by the Client.

1.12 **Force Majeure**

The Client agrees that the Consultant is not responsible for damages arising directly or indirectly from any delays for causes beyond the Consultant's control. For purposes of this Agreement, such causes include, but are not limited to, strikes or other labour disputes; severe weather disruptions or other natural disasters or acts of God; fires; riots, war or other emergencies; failure of performance by the Client or the Client's contractors or consultants; or discovery of any hazardous substances or differing site conditions.

In addition, if such delays resulting from any such causes increase the cost or time required by the Consultant to perform its services in an orderly and efficient manner, the Consultant shall be entitled to a reasonable adjustment in schedule and compensation.

1.13 **Contracting for Construction**

The Engineer or any person, firm or corporation associated or affiliated with or subsidiary to the Engineer shall not tender for the construction of the Project, or have an interest either directly or indirectly in the construction of the Project.

1.14 **Assignment**

Neither party may assign this Agreement or any portion thereof without the prior consent in writing of the other party.

1.15 **Previous Agreements**

This Agreement supersedes all previous agreements, arrangements or understandings between the parties whether written or oral in connection with or incidental to the Project.

1.16 **Approval by Other Authorities**

Unless otherwise provided in this Agreement, where the work of the Engineer is subject to the approval or review of an authority, department of government, or agency other than the Client, such applications for approval or review shall be the responsibility of the Engineer, but shall be submitted through the offices of the Client and unless authorized by the Client in writing, such applications for approval or review shall not

be obtained by direct contact by the Engineer with such other authority, department of government or agency. Costs for all application fees shall be borne by the Client unless otherwise provided for by the Engineer. The foregoing in no way limits the Engineer's responsibility to identify, understand and coordinate any and all approvals and permits required for the Project unless otherwise specified in the RFP or agreed to by the Client.

1.17 **Sub-Consultants**

The Engineer may engage Sub-Consultants for specialized services provided that prior approval is obtained, in writing, from the Client and may add a mark-up of not more than 5% of the cost of such services to cover office administration costs when claiming reimbursement from the Client.

1.18 **Inspection (Review by the Client)**

The Client, or persons authorized by the Client, shall have the right, at all reasonable times, to inspect or otherwise review the Services performed, or being performed, under the Project and the premises where they are being performed.

1.19 **Publication**

The Engineer agrees to obtain the consent in writing of the Client before publishing or issuing any information regarding the Project.

1.20 **Confidential Data**

The Engineer shall not divulge any specific information identified as confidential, communicated to or acquired by him, or disclosed by the client in the course of carrying out the Services provided for herein. These obligations of confidentiality shall not apply to information which is in the public domain, which is provided to the Engineer by a third party without obligation of confidentially, which is independently developed by the Engineer without access to the Client's information, or whish is required to be disclosed by law or court order. No such information shall be used by the Engineer on any other project without the approval in writing of the Client.

1.21 **Dispute Resolution**

1) Negotiation

   a) In the event a matter of difference between the Consultant and the Client in relation to the Contract the grieved party shall send a notice in writing of dispute to the other party which contains the particulars of the matter in dispute and the relevant provisions of the Contract Documents. The responding party shall send a reply in writing to the dispute within ten (10) business days after receipt of the notice of dispute setting out particulars of this response and any relevant provisions of the Contract Documents.

   b) The Consultant and the Client shall make all reasonable efforts to resolve their dispute by amicable negotiations and agree to provide, without prejudice, frank, candid and timely disclosure of any and all relevant facts, information, and documents to facilitate these negotiations.

c) In the event of failure by the Consultant and the Client to reach agreement within ten (10) business days of receipt of the responding party's reply, or if either party concludes that further negotiation is unlikely to result in agreement, the matter shall be referred to mediation as provided in Section 2 herein.

2) Mediation

a) The Consultant and the Client shall jointly select an impartial Mediator who shall be, preferably, properly qualified in the area of work as contemplated by this Contract. In the event that the parties, acting reasonably, cannot agree on a mediator, the candidates selected by the parties shall, acting reasonably, choose a third party to act as the Mediator.

b) The Mediator shall meet with the parties within ten (10) business days after the selection of the Mediator selection to attempt to mediate and resolve the dispute. The Consultant and the Client shall observe such reasonable procedures for conducting the mediation as the Mediator may reasonably request.

c) If not agreement is reached within twenty (20) business days of the selection of the Mediator of if either party concludes that further mediation is unlikely to result in agreement, then either the Consultant or the Client may request the Mediator to recommend (and only recommend) a basis, or bases, for resolution of the dispute. The Mediator shall, after consideration of the parties' positions and written submissions (if so requested), issue a written recommendation in this regard. Any recommended basis for resolution shall have absolutely no binding effect upon either party unless both parties agree to accept it and shall be without prejudice to the parties' positions in any further proceeding.

d) If no agreement is reached either party may refer such matter as is arbitrable to arbitration as provided in Section 3 herein or exercise any legal rights it may have.

e) All meetings and proceedings shall be held in municipality of the Client or a reasonable alternate at a time and location as determined by the parties.

3) The costs and expenses of the Mediator shall be shared equally by the Consultant and the Client Arbitration

a) In the event that the parties are unable to settle any dispute between them which is under mediation, either party may refer such matter to arbitration as provided herein:

i. The Client and the Consultant shall select an arbitrator within ten (10) business days of the submission of a dispute to arbitration under this Section. If the parties are unable to agree on a neutral arbitrator, each party shall appoint an arbitrator within ten (10) business days, and the two (2) arbitrators so chosen shall select a third arbitrator acceptable to both of them within a further ten (10) business days.

ii. The arbitration shall be conducted in accordance with the provisions of the *Arbitration Act, 1991*, S.O. 1991, C.17, unless the parties otherwise agree. If the issue in dispute is particularly time sensitive, the parties shall, in good faith, take such reasonable steps as may be required to expedite the arbitration process. In any event, all disputes shall be submitted to the arbitrator within thirty (30) calendar days of the selection of the arbitrator. All arbitration meetings and proceedings shall be held in municipality of the Client or a reasonable alternate, at a time and location determined by the parties, but in any event no later than thirty (30) calendar days following the submission of the dispute to the arbitrator.

iii. In addition to the examination of the parties by each other, the arbitration panel may examine, in the ordinary course, the parties or either of them and the witnesses in the matter referred to the arbitration panel, and the parties and witnesses, if examined, shall be examined on oath or affirmation.

iv. The arbitration panel shall, after full consideration of the issues in dispute, the relevant facts and applicable law, render a decision within thirty (30) calendar days after argument of the issue to the arbitrator, which decision shall be final and binding on the parties and not subject to appeal or challenge, except such limited relief provided under Subsection 45(1) (appeal on a question of law, with leave) or Section 46 (setting aside award) of the *Arbitration Act, 1991.*

v. Each party shall bear is own costs and expenses incurred in the arbitration, and the parties shall share equally in the costs and expenses of the neutral arbitrator.

vi. Any award of the arbitration panel may, at the instance of either of the parties to this Agreement and without notice to the other of them, be made an Order of the Superior Court of Ontario, pursuant to the *Arbitration Act, 1991* and the *Courts of Justice Act,* R.S.O. 1990, c.C-43.

1.22 **Time**

The Engineer shall perform the Services in accordance with the requirements of Schedule A and shall complete any portion or portions of the Services in such order as the Client may require.

The Client shall give due consideration to all designs, drawings, plans, specifications, reports, tenders, proposals and other information submitted by the Engineer, and shall make any decisions which he is required to make in connection therewith within a reasonable time so as not to delay the work of the Engineer.

1.23 **Estimates, Schedules and Staff List**

1.23.1 Preparation of Estimate of Fees, Schedule of Progress and Staff List

When requested by the Client, and where payment is calculated on a time basis, the Engineer shall provide, for approval by the Client:

a) An estimate of the total fees to be paid for the Services.

b) A Schedule showing an estimate of the portion of the Services to be completed in each month and an estimate of the portion of the fee which will be payable for each such month.

c) A Staff list showing the number, classifications and hourly rate ranges for staff, Principals and Executives, for which the Engineer will seek payment on a time basis. The Engineer shall relate such information to the particular type of work that such staff is to perform, while employed on the Project. Such list shall designate the member of the Engineer's staff who is to be the liaison person between the Engineer and the Client.

1.23.2 Subsequent Changes in the Estimate of Fees, Schedule of Progress and Staff List

The Engineer will require prior written approval from the Client for any of the following changes:

a) Any increase in the estimated fees beyond those approved under Subsection 1.23.1 (a).

b) Any change in the schedule at progress which results in a longer period than provided in Subsection 1.23.1 (b).

c) Any change in the number, classification and hourly rate ranges of the staff provided under Subsection 1.23.1 (c).

1.23.3 Monthly Reporting of Progress

When requested by the Client, the Engineer shall provide the Client with a written report showing the portion of the Services completed in the preceding month.

1.24 Additional Conditions

Any requirements regarding insurance, WSIB, permits, approvals, AODA, etc. to be listed here.

ARTICLE 2 – SERVICES TO BE PROVIDED

2.01 Services to be provided by Engineer as detailed in the RFP and as provided for in the Engineer's Proposal.

2.02 Services to be provided by Client as detailed in the RFP and as provided for in the Engineer's Proposal.

ARTICLE 3 - FEES AND DISBURSEMENTS

3.1 **Definitions**

For the purpose of this Agreement, the following definitions shall apply:

a) Cost of the Work:

i. The "Cost of the Work" shall mean the total construction cost of the Project including all materials, equipment, sales taxes, labour and contractor's overhead and profit, necessary to complete the work for which the Engineer prepares designs, drawings or specifications, for which he is responsible. Where sales taxes are not included in the cost of the work, the fee shall be adjusted upwards by the factor equivalent to the sales taxes. The adjusted fee may be computed to the nearest one-tenth of one percent (1/10%).

ii. Wherever the Client furnishes labour or other service which is incorporated in the work, the current price of labour or other service when the work was executed shall be used to compute the Cost of the Work.

iii. Whenever used materials or equipment is furnished by or on behalf of the Client, the fair market value of such materials or equipment, as though it was purchased new, shall be used to compute the Cost of the Work.

iv. In computing the Cost of the Work, no deductions shall be made on account of any penalties or damages claimed by the Client from any contractor or on account of any other sum withheld from any contractor.

v. The Cost of the Work shall not include any fees and disbursements due to the Engineer, the Client's engineering and office expenses, or cost of land.

b) Site:

Site includes the actual work site and other locations where the checking of materials, equipment and workmanship is carried out.

3.2 **Basis of Payment** (*Strike out those that do not apply*)

~~**3.2.1 Fees Calculated on a Percentage of Cost Basis**~~

~~The Client shall pay the Engineer fees to be calculated as a percentage of the Cost of the Work for normal projects as follows:~~

~~**CALCULATION OF FEE**~~

~~**TYPE OF SERVICE**~~	~~**PERCENTAGE**~~

~~**3.2. 2 Fees Calculated on a Time Basis**~~

~~3.2.2.1 Fees~~

~~The Client shall pay the Engineer a fee, calculated on a time basis, for that part of the Services described in Article 2. Fees on a time basis for all staff shall be hourly rates based on job classifications as follows:~~

~~Grade: Hourly Rate:~~

~~For a project of over one (1) year duration, or for projects which become extended beyond one (1) year in duration, the Engineer may from time to time seek approval from the Client to adjust hourly rates and such approval shall not be unreasonably withheld.~~

~~3.2.2.2 Time Expended~~

~~All time expended on the assignment, whether in the Engineer's office, at the Client's premises, or elsewhere, and including travel time, shall be chargeable.~~

3.2.3 Lump Sum Fee

3.2.3.1 Lump Sum Fee Basis

a) Fees for the scope of work covered under this Agreement will be on a Lump Sum Price Basis, inclusive or labour, disbursements and reimbursable expenses.

b) Monthly progress invoices will be based on the percentage of project completed or milestone achieved as detailed in the RFP. Invoices for fees are due upon presentation. Accounts unpaid after 30 days are subject to monthly interest charges at a rate of 15% per annum. The Engineer reserves the right, without penalty, to discontinue services in the event of non-payment after a sixty (60) period from the date of the invoice.

c) If the project is abandoned or delayed for any reason beyond the Engineer's control, the Client shall pay a fee for services rendered to that date, plus the termination expenses reasonably incurred by the Engineer in winding down the project.

d) HST will be added to the Lump Sum Price.

~~**3.2.4 Reimbursable Expenses**~~

~~In addition to the fee, the Engineer shall be reimbursed at cost plus an administrative charge of 5%, for all expenses and disbursements properly incurred by the Consultant in connection with the project.~~

~~**3.2.5 Upset Cost Limit**~~

~~(a) The Consultant shall be paid a fee, calculated on a time basis, for the Services.~~

~~(b) In addition to the fee, the Consultant shall be reimbursed at cost plus an administrative charge of 5% for all reasonable expenses properly incurred by them in connection with the Services, including but not limited to: vehicle use charges, traveling and living expenses, long distance telephone charges, report production costs, photography, special delivery charges, supplies and equipment, field equipment costs, laboratory costs. Computer and office charges are considered part of overhead and shall not be invoiced as disbursements.~~

~~(c) Notwithstanding Subsections (a) and (b) of this Section, the total fees and disbursements paid by the Client to the Consultant for the Services shall not exceed the total upset amount of $_____ plus applicable taxes made up as follows:~~

(i) $_____ plus applicable taxes for Core Services as described in Schedule A; and,

(ii) $_____ plus applicable taxes as a Contingency Allowance for Additional Services that may be required but are not included in Schedule A.

(d) Notwithstanding Subsections (a) and (b) of this Section, the Client, at its sole discretion, may limit the fees and disbursements paid by the Client to the percentage equivalent to the project complete in the opinion of the Client.

(e) The Consultant must request and receive the written approval of the Client before any Additional Services are carried out that are not included in Schedule A. The Consultant shall not be entitled to any payment from the Contingency Allowance unless the Consultant has satisfied this condition. When approving Additional Services that are not included in Schedule A, the Client, at its sole discretion, may, in writing, set a limit on the monies from the Contingency Allowance that may be permitted for the requested Additional Services.

3.3 **Payment**

3.3.1 Fees Calculated on a Time Basis

The Engineer shall submit an invoice to the Client for all Services completed in the immediately preceding month. Interest at the annual rate of ____ percent (_____ percent monthly) will be paid on the total outstanding unpaid balance commencing 30 days after the Client has received the Engineer's invoice.

3.3.2 Fees Calculated on a Percentage of Cost Basis

a) Monthly Payment

The Engineer shall submit an invoice to the Client for that part of the design of the Project completed in the immediately preceding month calculated upon the basis of the Engineer's estimate of the cost of that part of the Project, and, if the Client agrees with such estimate and that such part has been completed, the Engineer will be paid the amount of the fee so invoiced. Interest at the annual rate of____percent (_____ percent monthly) will be paid on the total outstanding unpaid balance commencing 30 days after the Client has received the Engineers' invoice.

b) On Award of Contract

Following the award of the contract for the construction of the Project, the Engineer shall recalculate his fee on the basis of the tender quantities and prices on which the contract for the construction of the Project was awarded, plus the estimated cost of materials and other services supplied by the Client and upon such recalculation, the amount paid to the Engineer shall be adjusted to equal the full amount of the recalculated fee including the repayment by the Engineer of any overpayment made to the Engineer.

c) Delay of Award of Contract

In the event the contract for construction of the Project is not awarded within _____ months of the acceptance of the Design by the Client the final fee for design shall be determined as in paragraph (a) above, and paragraph (b) shall not apply.

Further services for the Project beyond the _____ months will be undertaken on a time basis.

d) On Completion of the Work

Following Completion of the Work, the Engineer shall recalculate his fee on the basis of the actual cost of the work and upon such recalculation the amount paid to the Engineer shall be adjusted to equal the full amount of the recalculated fee including the repayment by the Engineer of any overpayment to the Engineer.

3.3.3 Terms of Payment

The Client will compensate the Engineer in accordance with the fees and charges for services as set out in the proposal or as otherwise mutually agreed. All fees and charges will be payable in Canadian funds unless noted otherwise. Invoices will be due and payable, as presented and without hold-backs, by the Client upon receipt. Interest on overdue accounts will be charged at the rate of 15 % per annum.

ARTICLE 4 – FORM OF AGREEMENT

ENGINEER: **B. M. Ross and Associates Limited**

The signatory shall have the authority to bind the corporation or company for the purposes of this agreement.

This 24th Day of May , 2019

Signature	
Name	Ken Logtenberg
Title	Treasurer

THE CORPORATION OF _____

The signatory shall have the authority to bind the municipality or its agency for the purposes of this agreement.

This _____ Day of _____ , 20___

Signature		**Signature**	
Name		**Name**	
Title		**Title**	

ARTICLE 5 – ATTACHMENTS

Attach copies of Request for Proposal and Proposal Submission documents if required.

SCHEDULE “A”

N/A

BMROSS
engineering better communities

Municipality of Brockton
Request for Proposal 2019-02
Rural Roads Condition and Needs Assessment

TECHNICAL PROPOSAL

April 29, 2019

B.M. ROSS AND ASSOCIATES LIMITED
Engineers and Planners
62 North Street, Goderich, ON N7A 2T4
p. (519)524-2641 • f. (519)524-4403
www.bmross.net

B. M. ROSS AND ASSOCIATES LIMITED
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File No. 19074

MUNICIPALITY OF BROCKTON
REQUEST FOR PROPOSAL 2019-02
RURAL ROADS CONDITION AND NEEDS ASSESSMENT

1.0 CORPORATE OVERVIEW

1.1 BMROSS Profile

B. M. Ross and Associates Limited (BMROSS), established in 1951, provides consulting engineering and planning services throughout southwestern Ontario. Our firm specializes in municipal infrastructure and environmental planning, and has long-standing working relationships with municipal and agency staff throughout the Counties of Perth, Huron, Grey, Bruce, Lambton, Middlesex, Oxford and Wellington. BMROSS is a well-established, experienced and progressive consulting firm committed to:

- Developing and implementing safe, economical solutions appropriate to the problem;
- Providing the highest quality service to our clients by maintaining a Quality Management System;
- Maintaining a co-operative learning and challenging work environment;
- Creating and sustaining a relationship with our clients that is fair, honest and collaborative;
- Being accountable for what we do.

Comprised of a staff of over 70, including 18 professional engineers and planners, our multi-disciplinary team provides expertise on a wide range of services. In addition to the professional staff, our staff includes engineering technologists, GIS and AutoCAD specialists, project managers, survey specialists and support staff. Our team is based out of offices in Goderich, Sarnia and Mount Forest. For this project, our Goderich location will serve as our base of operations, however we may also choose to use staff from our Mount Forest office.

1.2 Quality Management

BMROSS has developed a strong QA/QC system based on several considerations:

- The extensive experience of senior staff used in a mentoring and monitoring role;
- A strong internal communication commitment based on engineering discipline groups;
- Projects are examined from a lessons-learned perspective;
- A system of protocols that has been developed to address both repetitive and higher risk activities;
- Annual project manager training related to risk management, communications and case history evaluation.

BMROSS's Quality Management System (QMS) is a component of the work the company undertakes for all of its clients. It is the opinion of the company that creating quality solutions for the client can only be accomplished by continually applying a methodology that delivers appropriate and complete results.

Selected, completed projects are subjected to a thorough review of the actual procedures used. These are then compared to the QA/QC protocols. The Quality Management Committee considers the results of these reviews on a quarterly basis and addresses issues as they are identified.

1.3 Miscellaneous

Occupation Health and Safety Act
BMROSS has an active health & safety program and is aware of Bill 168, an amendment to the OHSA with respect to violence and harassment in the workplace. We have been pro-active with respect to this amendment and have revised our sub-consultant agreements as well as our contract documents to reflect this Bill.

Accessibility for Ontarians with Disabilities Act
BMROSS has staff trained in the Accessibility for Ontarians with Disabilities Act (AODA).

Liability Insurance
As noted in the RFP the mandatory insurance coverage will be provided. That is, Commercial General Liability coverage of not less than $5,000,000 per occurrence, Automobile Liability Insurance of not less than $2,000,000 per occurrence and Professional Liability Insurance in the amount of not less than $5,000,000 per occurrence will be in place. If selected, a Certificate of Insurance, with the Town named as additional insured, to the Commercial General Liability policy and Professional Liability Insurance will be provided.

WSIB
BMROSS certifies that we are in full compliance with the Workplace Safety and Insurance Act. Should we be successful, a copy of our Clearance Certificate will be provided prior to commencing work.

No Conflicts
BMROSS declares that we are not aware of any potential conflict of interest or perceived conflict of interest with this proposal package.

2.0 UNDERSTANDING OF THE PROJECT

This proposal has been submitted in response to the Request for Proposal for rural road condition and needs assessment for the Municipality of Brockton. It is our understanding that the Municipality has developed an Asset Management Plan and the results of this study will be incorporated into that Plan to help make informed decisions about the Municipality's assets in its future capital planning. It is also assumed the information gathered will be used to help document the current level of service being provided by road sections within the road network.

Within Brockton, we completed the Walkerton road study evaluation in general accordance with the 1988 version of Ministry of Transportation's Inventory Manual for Municipal Roads. It has been requested that this road assessment be complete in accordance with the 1991 version of the manual. During the start-up meeting we would explain the differences and explain the changes we are prepared to make such that our process will prioritize the road needs in a similar way to the 1991 version. We will also use the data collected to provide Level of Service and Risk Ratings for each road section which can be used to monitor the average rating over time. We have been calculating these additional ratings because it was our understanding that our clients also need that information for their asset management plan.

Our database system also takes the traffic flow data, current condition rating and road types into consideration to predict the deterioration rate of the roads. We feel this approach is more accurate than predict the year of future needs basing on the age of the road.

A report that summarizes the information gathered from the rural road reviews, cost projections of identified needs and the additional requested information will be provided. Digital copies of the information will be provided in both Excel and shape file format such that it can be easily incorporated into the Asset Management Plan provided by CityWide and municipal ArcGIS mapping system.

Further details related to our understanding and approach are provided in the following proposal sections.

3.0 SCOPE OF WORK

a) Background and Historical Information

It is understood that the Municipality has approximately 100 km of roads with asphalt surfaces, 101 km with bituminous surface treatment, and 198 km of gravel surfaced roads, for a total of approximately 399 km of rural roads. These are to be evaluated and assessed as part of the rural road needs study.

It is understood that a road needs study of the rural roads is not available. Prior to completing field review, we would review the supplied information, create GIS mapping based on information from the Municipality and Bruce County, splitting the road network up into segments and assign new road section ID numbers. This information will be assembled in a GIS mapping program and used to create figures to supplement the final report.

b) Road Section Assessments

BMROSS proposes that our staff would complete all the visual reviews of the roads, while riding with a staff member from the Municipality, to document the road's characteristics and assign condition scores of the various road components. We would also use the information provided to determine the consequence of failure score for each.

The characteristics collected are used to determine if the roads are suitably built for their intended use. This includes features like the road widths, platform width and alignment. Other features to describe the road such as the surface type, road section type, construction history, and other measured parameters will be noted.

The importance or consequence of failure score will generally be based on the volume of traffic on the road; however, this score would be adjusted if the road is frequently used as a detour route or is expected to have growth in the future.

Condition scores for the road surface, structural integrity of the road base and drainage system will be assigned for each road section. It is our opinion that drainage is one of the most important factors that affect the long-term integrity of the road surface and its performance. By documenting the suitability of the current drainage system, it helps to ensure the appropriate rehabilitation method is implemented when required and helps to properly prioritize the needs. The ratings are established based on visual assessments as described in the Ministry of Transportation's Methods and Inventory Manual.

Note, PCI scores will not be determined for each road section as it has been our experience that the additional cost and time required to calculate this score can not be justified. A surface condition score will be assisted based on a visual assessment. Besides, the PCI score is only possible on paved roads.

While driving the roads our staff will also note maintenance needs that are identified and propose a rehabilitation option when it is anticipated that this work will be required within the next 10 years. When identified, drainage infrastructure replacement or improvement needs can also be documented.

A sample of the appraisal sheet recently used in another municipality is provided in Appendix A. As explained earlier, some revisions to these will be required to accommodate the potentially changing from the 1988 inventory manual to the 1991 inventory manual.

Within the appraisal sheet are spaces to include additional information such as sidewalk and drainage information. Given these are rural roads there may not be a need for this feature.

As stated in the Manual, it is recommended that the Municipality provide a staff member to accompany BMROSS on the road tours. We understand from Addendum No. 1 that the Town will be providing a staff member and municipal vehicle for the road tours, this has been noted and our work plan reflects this condition. We have found considerable value in having a Town staff member accompany staff on the tour. Experienced staff are often very familiar with the road sections being reviewed and are able to provide historical or local knowledge of road construction and any past problems. This historical knowledge is often very valuable. It is anticipated it will take 4 days or about 32 hours in the field to complete this work.

c) Traffic Data Collection

As outlined in the Addendum No. 1, we are not required to complete traffic counts. It is understood, that the Municipality completed traffic counts in 2018 and these numbers will be provided to the successful proponent. If the Municipality wishes to complete additional traffics counts for this study, this work will be an extra to the project.

Once the existing municipal traffic count data has been received, projections of traffic on all the roads within the Municipality will be generated and submitted for review and approval by municipal staff. This data will then be entered on the appraisal sheets and maintenance classifications will be determined for each road section. If desired, summary tables of this information can be supplied.

d) Set-up Road Databases

BMROSS has developed a comprehensive road inventory and asset mapping program that works using Microsoft Access linked to ArcGIS. While we have set it up to record data for other assets such as watermains and sanitary sewers; for this project, only the rural road component would be entered. Data tables of information can be exported into Excel format so it can be easily uploaded into other programs such as your asset management software.

The program we have developed allows for documenting all the road data for the study purposes, plus any sidewalk information, drainage needs, construction history and budget estimates for future road maintenance and rehabilitation work. The construction history helps staff now and in the future to choose appropriate rehabilitation methods. Once the type of repair is identified, the program automatically calculates the anticipated costs (base & surface) using adjustable unit prices. With traffic data, speed and other parameters identified, it will calculate the required maintenance standard and anticipated deterioration rate of the road. The section numbers, road names, length, year built or rehabilitated and any other background information supplied by the Municipality or gathered by our staff will be entered before the datasheets or computer is sent to the field. Once this data is entered the first time, future updates generally only require changes to the condition ratings, documenting new construction activities and recommendations for rehabilitation work.

A sample of the output tables and maps is provided in Appendix B. Given BMROSS developed this database program, changes such as adding another inspection parameter or modifying the output tables to satisfy your Municipal’s needs are possible.

e) Road Data Analysis

As a value added feature, BMROSS would use the parameters entered to develop scores for each section of rural road which can be used to enhance the Town's existing asset management plan and prioritize the needs. The traffic data, condition ratings and a review of road characteristics vs. the Municipality's rural road standards will be used to determine a consequence of failure, probability of failure and performance grade score. These parameters are combined to determine a risk rating, a level of service rating and a priority for improvement score. Although these are simple theoretical priority scores and the priority schedule should be shifted to account for other factors, many of our clients have adopted this relatively simple scoring system for all the assets included in their asset management plan for tracking purposes. The data provided with this scoring system is also formatted such that it can be uploaded into CityWide's Financial Asset Management Software program or BMROSS' FINDIT program (our GIS mapping/asset management program).

An estimated projection of future rural road needs, up to 20 years, will be developed based on theoretical deterioration rates (based on traffic volumes, traffic types, and surface types) and the assessed condition ratings. As long term projections depend on a number of factors which have a tendency of changing with time, it is recommended that an updated needs study be prepared in approximately 5 years with updated condition ratings.

To assist in the development of your asset management plan, a weighted average road system condition rating, based on length, would be calculated in order to provide an indication of the overall state of the road system.

Prior to completing this assessment work, we would require a copy of any existing GIS database files and information related to any previous budget allowances for road work. We would also like descriptions of your typical maintenance activity schedule. A list of the required information will be provided to the Municipality following authorization to proceed with this work.

f) Rural Road Condition and Needs Assessment Report

The rural road condition and needs assessment report will summarize the data collected, explain the methodology and results of our assessment, and outline our recommendations.

The inventories of the road networks information would be documented in the report with tables and colour-coded maps created in ArcGIS to identify surface types and sections in need of work over the next six and twenty year periods. Samples of these are provided in Appendix B. The inventories tables would include Road ID, name, location, length, service class, traffic volume, condition rating, needs and the proposed asset management theoretical scores.

The needs & condition assessment report will include a detailed 5 year work plan and a list of needs that are expected in the 6 to 10 year period. As priorities change and roads/sidewalks do not always deteriorate as predicted, it is recommended the plan be updated about every 5 years. A table showing the anticipated needs up to 20 years in the future will be supplied; however, we recommend only using the list of work in the 10 to 20 year period to determine trends such as if needs will be going up or down further into the future.

The detailed work plan will be developed in an effort to maintain an acceptable level of service, address safety concerns, minimize over-all costs, stay within budget restraints and be scheduled to avoid other commitments of the Municipality. Other recommendations of proactive maintenance activities, change in surface type based traffic counts, land use & network continuity and construction strategies that would benefit the Municipality or save costs will also be outlined in the report.

In many Municipalities, they are trying to determine which rural roads should have a paved surface, have a low-class bitumen surface and which roads should remain as gravel roads. The life cycle costs for each option should take into consideration the construction work required prior to paving, maintenance costs and future rehabilitation costs. This comparison will be presented with an explanation of when it would be appropriate to apply an asphalt or LCB surface on the roadway.

An overall review of the adequacy of the rural road system will be performed to identify if there are apparent inadequacies with the system or level of service reduction that can be justified.

This report will be first submitted in a draft format to allow your staff time to review the needs identified, the probable costs, and compare them with your typical available budgets for roadwork and sidewalk replacement/construction. The cost to meet and discuss the needs has been included in our price. The final draft will incorporate the necessary changes. Once revised, two hard copies of the report and the road & sidewalk appraisal sheet sets will be supplied, as well as digital copies.

4.0 SUPPLIED DOCUMENTATION

We note that our proposal was prepared understanding the following documentation and services would be provided by the Town:

- An export of the current CityWide database, including excel spreadsheets of current asset lists
- 2017 Bridge Inspection Report
- Municipality of Brockton Development Standards and/or Construction Standards
- Historical capital and operating budgets for maintenance and capital work upgrades to the road system.
- Additional information about the road, such as year of construction, construction history, etc. if the Municipality wants it included in the database and appraisal sheets for each road section.
- Information about the road section from a staff member familiar with the road network and able to explain the known history or problem areas.
- Transportation around the road network by Municipal staff when the assessments are being completed.

5.0 WORK PLAN AND SCHEDULE

The work plan with estimated hours and a schedule in the form of a Gantt chart is provided in Appendix C. The schedule assumes direction to proceed is received by May 15th, 2019. The following milestone dates are proposed.

- Start-Up Meeting – May 21, 2019
- Receipt of documentation from Municipality – May 21, 2019
- Field Review of Roads and Sidewalks – Early/Mid-June
- Project Meeting #2 – 40% - Early July
- Project Meeting #3 – 70% – Late July
- Draft Report – Early August
- Project Meeting #4 – 90% – Mid August
- Council Presentation – September 10, 2019
- Final Report – Late September

* The timing for completion of the final reports will depend on receiving information and feedback from the Municipality in a timely manner. The specified schedule will require an aggressive approach to complete the maps, field review and report.

** In the RFP document, the Municipality has requested 4 project meetings. We have scheduled and priced four project meetings, however, we feel three project meetings is more than sufficient and would provide some financial savings to the municipality.

6.0 DELIVERABLES

The key deliverables that are expected to be completed through the progression of this project are:

1. Road inventory and inspection appraisal sheets and ID numbers for each road section reviewed (399 km total).
2. A Rural Road Condition and Needs Assessment report which includes an inventory of road network and recommended repair or replacment work for these assets, maintenance recommendations to minimize future costs (base & surface), and other features as outlined in the Scope of Work section within Part 2.3 of this proposal.
3. Four project meetings with Municipal staff and one project presentation to Council.
4. While one hard copy of the final Rural Road Needs Study will be provided and one digital copy of the report. Also to be provided electronical the data tables that are included in the road study will be provided in a Microsoft Excel spreadsheet and shape file format so it can be uploaded into another asset management software program such as Citywide.

7.0 PROJECT TEAM

Numerous staff members will help compile the inventories and undertake the cost evaluations. Below is the list of likely key staff members that will be responsible for various aspects of the work:

Ken Logtenberg, P.Eng. will be the Project Manager. He has over 25 years' experience and will oversee the project, completing a review of the final report and the general recommendations. Ken developed the scoring and prioritizing system proposed and has prepared many similar reports. He will also oversee the project from a QA/QC standpoint.

Larry McGregor, Senior Technologist will either complete the road section review or review the data collected and provide recommendations for the road improvements. He has completed many of these inspections for various municipalities. Larry has a wide range of experience within the municipal public sector, his municipal knowledge is advantage when setting asset management priorities.

Jennette Walker, C.E.T is a member of the horizontal infrastructure group with over 16 years consulting and municipal management experience. Her responsibilities will include either reviewing the road sections or the recommendations, condition scoring, assembling data and report preparation. Jennette has been involved in several asset management project during her time in both the public and private sectors.

Rick Steele, Information Management Supervisor, is responsible for data management and the creation of the database used to house the road system inventory. Rick prepared the database program and is responsible for managing all ArcGIS mapping databases used by our company. He will be your point of contact when incorporating the road section numbering system and will be responsible for managing the data entry process, and coordinating development of the output tables used for the report.

CVs for our key staff and a map of the Roads Needs Study BMROSS has completed in the last 10 years are included in Appendix "D".

8.0 REFERENCE PROJECTS

BMROSS has provided engineering services for Road Needs Studies for approximately 16 rural municipalities in southwestern Ontario, including the Walkerton Urban Roads for the Municipality. Samples of recent projects undertaken by BMROSS, which are similar in scope to the project currently being requested by the Municipality of Brockton, are as follows:

Municipality of Lambton Shores – Road Management Study 2017

- Completed a road needs study inspection report for the Municipality.
- This included an evaluation of the condition of the municipal road assets and the preparation of a 0-5 year and 6-10 year capital budget plans.
- The Lambton Shores road system consists of approx. 326.8 km of road (not including all of the lakeshore unassumed and private roads).
- Contact: Steve McAuley, Director of Community Services
  Phone: 519-243-1400 ext. 8215

Township of North Huron – Road Management Study 2016

- Completed a road needs study for the Township.
- These included an evaluation of the condition of the Town's roads and the preparation of a five year and ten year capital budget plans.
- The Township of North Huron road system consists of approx. 156.2 km of road.
- Contact: Sean McGhee, Director of Public Works
  Phone: 519-357-3550

Municipality of Kincardine - Road Needs Study 2015

- Completed a 5 year update to a road needs study for the Municipality including the preparation of a five year capital budget plan along with priority scores.
- The Municipality's road system consists of approx. 485 km of road.
- Contact: Adam Weishar, Director of Public Works
  Phone: 519-396-3468 ext 7119

9.0 PROPOSAL FEE

Our fee to complete the requested scope of work is defined in the Pricing Proposal document.

Proposal Submission Forms for the Technical Proposal are located in Appendix E.

All of which is respectfully submitted.

B. M. ROSS AND ASSOCIATES LIMITED

Per _____
Ken Logtenberg, P. Eng.

KDL:jw

APPENDIX A

SAMPLE ROAD SECTION APPRAISAL SHEET

Section No.	1057	Asset ID.	1815
Road Name	Jefferson Street		
From	Main Street		
To	Prince Street		
Former Municipality	Forest		
Length (m)	119		
Speed Limit (km/h)	50		
Boundary Road	No		
Road Classification	Local		
Road Side Environment	Urban		
Road Maintenance Class	5		
Surface Type	HCB - 2 lifts		

Curb: Type	No.	L (m)	W (m)
Concrete	2		0.45

Platform Width (m)	11.5
Surface Width (m)	10.6
ROW Width (m)	20.1
Winter Maintenance	Yes
Traffic Range (vpd)	50-199
Traffic Type	Local Traffic
Traffic Count Year	2010
Traffic Count (vpd)	

Sidewalks: Width	Length	Type	Condition

Road Condition Rating: 10 PCI: <Null>

Drainage Rating/Method: Good / Sewer

Recommended Road Improvements and Probable Cost Inspection Date: 8/8/2017

Spot Road and Drainage	($,000)	Remarks
Maintenance:	0.0	<Null>
Maintenance:	0.0	<Null>
Other:	0	<Null>
Sub-Total 1:	0.0	

Specific Maintenance	($,000)	Remarks
Maintenance:	0.0	<Null>
Maintenance:	0.0	<Null>
Other:		<Null>
Sub-Total 2:	0.0	

Construction	($,000)	Remarks
Construction:	0.0	<Null>
Additional:	0.0	☐ Sidewalk ☐ Storm ☐ Minor Storm
Other:		<Null>
Sub-Total 3:	0.0	
Total:	**0.0**	

Theoretical Year of Need: > 2027

Proposed Year of Need: > 2027

Construction History and Sidewalk History

Other Notes: 20/20 Has pipe. Conc s/w n side 1.5m wide score 9.5

Section No.	1058	Asset ID.	1424
Road Name	Jefferson Street		
From	Main Street North		
To	James Street North		
Former Municipality	Forest		
Length (m)	121		
Speed Limit (km/h)	50		
Boundary Road	No		
Road Classification	Local		
Road Side Environment	Urban		
Road Maintenance Class	5		
Surface Type	HCB - 2 lifts		

Curb: Type	No.	L (m)	W (m)
Concrete	2		0.6

Platform Width (m)	8.5
Surface Width (m)	7.3
ROW Width (m)	20.1
Winter Maintenance	Yes
Traffic Range (vpd)	50-199
Traffic Type	Local Traffic
Traffic Count Year	2010
Traffic Count (vpd)	

Sidewalks: Width	Length	Type	Condition

Road Condition Rating: 6 PCI: <Null>

Drainage Rating/Method: Fair / Sewer

Recommended Road Improvements and Probable Cost Inspection Date: 8/8/2017

Spot Road and Drainage	($,000)	Remarks
Maintenance:	0.0	<Null>
Maintenance:	0.0	<Null>
Other:	0	<Null>
Sub-Total 1:	0.0	

Specific Maintenance	($,000)	Remarks
Maintenance:	0.0	<Null>
Maintenance:	0.0	<Null>
Other:		<Null>
Sub-Total 2:	0.0	

Construction	($,000)	Remarks
Construction:	33.4	Urban Partial depth cold planing and resurfacing
Additional:	0.0	☐ Sidewalk ☐ Storm ☐ Minor Storm
Other:		<Null>
Sub-Total 3:	33.4	
Total:	**33.4**	

Theoretical Year of Need: 2023

Proposed Year of Need: 2023

Construction History and Sidewalk History

Other Notes: 14/20 Has pipe. Conc s/w n side 1.2m wide score 7.0. West block similar to east block but score 6.5 road.

APPENDIX B

EXAMPLE OF FIGURES AND TABLES REFERENCED IN THE PROPOSAL

Figure 3
Condition Rating by Road Surface

Appendix A1 - Inventory Summary Sheet
Sorted by Road Section Number

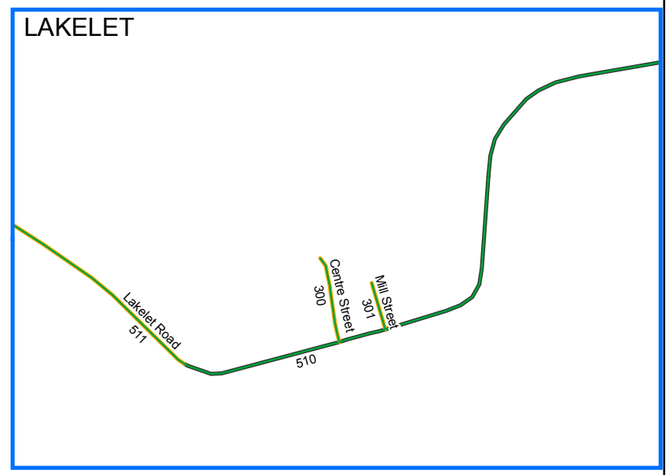
Township of Howick
Road Management Study

Section Number	Road Name	From	To	Section Length (m)	Roadside Environment	Surface Type	Platform Width (m)	Surface Width (m)	Traffic Range (vpd)	Commercial Traffic	Street Condition Rating
100	North Street	Dead End	Patrick Street	68	Semi-Urban	Gravel	8.5	6.0	0-49	Local Traffic	7.5
101	Queen Street	West Limit	0.3 Km West of Patrick Street	114	Semi-Urban	Gravel	0.0	0.0	0-49	Local Traffic	2.0
102	Queen Street	0.3 Km West of Patric Street	Patric Street	308	Semi-Urban	HCB - 1 lift	8.0	8.0	50-199	Special Case	9.0
103	Queen Street	Patrick Street	0.2 Km East of Patrick Street	62	Semi-Urban	HCB - 1 lift	8.0	6.8	0-49	Local Traffic	8.5
104	Queen Street	0.2 Km East of Patrick Street	Dead End	189	Semi-Urban	Gravel	8.0	6.0	0-49	Local Traffic	8.5
105	Station Road	West Limit	Patrick Street	341	Urban	HCB - 1 lift	8.0	6.6	0-49	Local Traffic	9.0
106	Brookhaven Drive	Patrick Street	Victoria Street	490	Semi-Urban	HCB - 1 lift	8.0	6.6	50-199	Local Traffic	8.0
107	Victoria Street	Patrick Street	William Street	199	Semi-Urban	HCB - 1 lift	10.0	6.6	50-199	Local Traffic	10.0
108	Victoria Street	William Street	East Street	205	Semi-Urban	HCB - 1 lift	8.0	6.5	0-49	Local Traffic	8.5
109	Albert Street	Arthur Street	Patrick Street	199	Semi-Urban	HCB - 1 lift	8.0	6.5	0-49	Local Traffic	6.0
110	Albert Street	Patrick Street	William Street	200	Semi-Urban	HCB - 1 lift	8.0	6.6	50-199	Local Traffic	10.0
111	Albert Street	William Street	East Street	236	Semi-Urban	HCB - 1 lift	8.0	6.6	50-199	Local Traffic	7.5
112	Adelaide Street	Arthur Street	West Street	216	Rural	Gravel	7.0	5.5	0-49	Local Traffic	8.0
113	Adelaide Street	Arthur Street	Patrick Street	204	Urban	HCB - 1 lift	8.0	6.6	0-49	Local Traffic	8.0
114	Adelaide Street	Patrick Street	William Street	199	Semi-Urban	HCB - 1 lift	10.6	6.6	50-199	Local Traffic	10.0
115	Adelaide Street	William Street	Dead End	69	Semi-Urban	Gravel	8.0	4.0	0-49	Local Traffic	8.5
116	Mary Street	Patrick Street	William Street	210	Semi-Urban	HCB - 1 lift	8.0	6.6	0-49	Local Traffic	8.5
117	Mary Street	William Street	East Street	82	Semi-Urban	HCB - 1 lift	7.5	6.6	0-49	Local Traffic	10.0
118	Water Street	Dead End	Patrick Street	66	Semi-Urban	Gravel	8.0	5.5	0-49	Local Traffic	6.5
119	Louisa Street	West Street	Arthur Street	216	Semi-Urban	HCB - 1 lift	8.6	7.7	50-199	Trucks/Farm Equipment	10.0
120	Louisa Street	Arthur Street	Patrick Street	126	Semi-Urban	HCB - 1 lift	8.6	7.7	50-199	Trucks/Farm Equipment	10.0
121	Louisa Street	Patrick Street	River	39	Semi-Urban	Gravel	10.0	9.0	0-49	Special Case	9.0
122	Louisa Street	Old Mill Road	William Street	149	Semi-Urban	HCB - 1 lift	7.5	6.6	50-199	Trucks/Farm Equipment	10.0
123	Louisa Street	William Street	East Street	203	Semi-Urban	Gravel	8.0	6.6	50-199	Trucks/Farm Equipment	10.0
124	Edward Street	West Street	Arthur Street	215	Urban	HCB - 1 lift	7.8	6.6	0-49	Local Traffic	9.0
125	Edward Street	Arthur Street	Patrick Street	160	Urban	HCB - 1 lift	8.8	6.6	0-49	Local Traffic	8.5
126	Alice Street	West Street	Arthur Street	209	Rural	HCB - 1 lift	8.6	6.6	0-49	Local Traffic	9.5
127	Alice Street	Arthur Street	Patrick Street	201	Urban	HCB - 1 lift	8.8	6.6	0-49	Local Traffic	9.0
128	Alfred Street	Arthur Street	Patrick Street	202	Semi-Urban	HCB - 1 lift	9.0	6.6	0-49	Local Traffic	9.5
129	Helena Street	Arthur Street	Patrick Street	180	Semi-Urban	HCB - 1 lift	8.5	6.6	0-49	Trucks/Farm Equipment	6.5
130	West Street	Louisa Street	Edward Street	120	Urban	HCB - 1 lift	7.8	6.6	0-49	Local Traffic	9.0
131	Arthur Street	Albert Street	Adelaide Street	119	Semi-Urban	HCB - 1 lift	8.0	6.6	0-49	Local Traffic	9.0
132	Arthur Street	Mary Street	Louisa Street	188	Semi-Urban	Gravel	6.0	4.5	0-49	Local Traffic	7.5

N

Road Surf Type
- Earth
- Gravel
- HCB
- LCB
- Not maintained by Municipality

LAKELET



Huron Bruce Road
Bruce Road 12
B Line
Sideroad 5 South
Bruce Road 28
Huron-Bruce Road
Field Road
Highway 9
Townline West Minto Normanby
Elora Street
Under Way
15th Line
Glenannon Road
Lakelet Road
Howick-Turnberry Road
13th Line
Howick Turnberry Road
McIntosh Line
Fordwich Line
Belmore Line
Forest Line
Gorrie Line
Salem Road
11th Line
Howick-Minto Line
Orangehill Road
Highway 87
Orange Hill Road
Lawrie Street
Harriston Road
Gough Road
River Road
Victoria Street
Mill Street
Park Street
Wroxeter Figure 2
Gorrie Figure 3
Fordwich Figure 4
Brussels Line
Church Street
Toll Gate Line
Malcolm Line
Spencetown Road
Mud Lake Line
C-Line Road
Quarry Line
Creamery Road
County Road 4
89 Line
McDonald Line
Amberley Road
Johnston Line
Adam's Line
Perth Road 178
87 Line
177 Road
176 Road
88 Line
175 Road
171 Road

0 1,250 2,500 5,000 7,500 10,000 METRES

BMROSS engineering better communities	**TOWNSHIP OF HOWICK ROAD NEEDS STUDY** SURFACE TYPE	DATE NOV 15, 2013	PROJECT No. 13008
		SCALE 1: 90,000	FIGURE No. 1.0

Appendix D1 - Road Construction Needs
Sorted by Proposed Year of Need and Priority Score

Township of Howick
Road Management Study

Section ID	Road Name	From	To	Section Length (m)	Surface Type	Traffic Range (vpd)	Road Construction Needs	Theo. Year of Need	Proposed Year of Work	Priority	Probable Costs ($,000)
551	Spencetown Road	Toll Gate Line	Fordwich Line	2064	Gravel	50-199	Rural Full Reconstruction - Gravel Surface	2023	2014	13	557.4
510	Lakelet Road	Lakelet Road	Fordwich Line	1365	HCB - 1 lift	50-199	Rural Paving (50mm HL-4)	2017	2014	11	150.1
509	Driftwood Beach Road	Dead End	Fordwich Line	515	LCB - 2 lifts	0-49	Surface Treatment - Single surface	2016	2014	8	12.9
503	Huron-Bruce Road	Gorrie Line	McIntosh Line	2056	LCB - 2 lifts	500-999	Rural Full depth pulverize and pave	2014	2015	17	287.8
501	Huron-Bruce Road	Belmore Line	Forest Line	2159	LCB - 2 lifts	200-499	Rural Full depth pulverize and pave	2014	2015	15	302.3
502	Huron-Bruce Road	Forest Line	Gorrie Line	2040	LCB - 2 lifts	200-499	Rural Full depth pulverize and pave	2014	2015	15	285.6
504	Huron-Bruce Road	McIntosh Line	Toll Gate Line	2045	HCB - 1 lift	50-199	Rural Full depth pulverize and pave	2017	2015	11	286.3
520	Howick-Minto Line	Clifford Road	Howick-Turnberry Road	1302	LCB - 2 lifts	200-499	Rural Full depth pulverize and pave	2015	2016	12	182.2
521	Howick-Minto Line	Howick-Turnberry Road	Salem Road	2058	LCB - 2 lifts	200-499	Rural Full depth pulverize and pave	2015	2016	12	288.1
214	Mill Street	Albert Street	Victoria Street	102	HCB - 1 lift	50-199	Semi-Urban Full depth pulverize and pave	2017	2016	12	14.3
208	George Street	Victoria Street	Wellington Street	98	HCB - 1 lift	50-199	Semi-Urban Full depth pulverize and pave	2018	2016	9	13.7
224	John Street	Victoria Street	Wellington Street	102	HCB - 1 lift	50-199	Semi-Urban Hot Mix Resurfacing	2020	2016	8	9.7
223	John Street	Albert Street	Victoria Street	98	HCB - 1 lift	50-199	Semi-Urban Hot Mix Resurfacing	2020	2016	8	28.9
209	George Street	Wellington Street	Princess Street	102	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2019	2016	8	14.3
216	Edward Street	Alma Street	Maitland Street	101	HCB - 1 lift	50-199	Semi-Urban Full depth pulverize and pave	2021	2016	8	14.2
211	George Street	Nelson Street	East Limit	116	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2019	2016	8	16.2
210	George Street	Princess Street	Nelson Street	101	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2019	2016	8	14.1
217	Edward Street	Maitland Street	Albert Street	101	HCB - 1 lift	50-199	Semi-Urban Full depth pulverize and pave	2021	2016	7	14.2
241	Maitland Street	Mill Street	Edward Street	120	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2022	2016	7	16.8
227	John Street	Nelson Street	East Limit	89	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2020	2016	7	55.4
222	John Street	Maitland Street	Albert Street	101	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2022	2016	7	14.2
243	Maitland Street	John Street	James Street	123	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2020	2016	7	17.2
229	James Street	Maitland Street	Albert Street	100	HCB - 1 lift	0-49	Semi-Urban Hot Mix Resurfacing	2023	2016	5	9.5
109	Albert Street	Arthur Street	Patrick Street	199	HCB - 1 lift	0-49	Semi-Urban Full Reconstruction - Base Course of Asphalt	2017	2017	11	63.8
553	Spencetown Road	Gorrie Line	McIntosh Line	2028	Gravel	50-199		> 2023	2017	10	39.0
562	Creamery Road	Mud Lake Line	Minto Boundary	933	Gravel	50-199		> 2023	2017	10	20.0
552	Spencetown Road	McIntosh Line	Toll Gate Line	2041	Gravel	50-199		> 2023	2017	10	33.0
560	Creamery Road	Fordwich Line	Malcolm Line	2098	Gravel	50-199		> 2023	2017	10	85.2
561	Creamery Road	Malcolm Line	Mud Lake Line	2069	Gravel	50-199		> 2023	2017	10	98.8
129	Helena Street	Arthur Street	Patrick Street	180	HCB - 1 lift	0-49	Semi-Urban Full Reconstruction - Base Course of Asphalt	2018	2017	9	57.6

Appendix D1 - Road Construction Needs
Sorted by Proposed Year of Need and Priority Score

Township of Howick
Road Management Study

Section ID	Road Name	From	To	Section Length (m)	Surface Type	Traffic Range (vpd)	Road Construction Needs	Theo. Year of Need	Proposed Year of Work	Priority	Probable Costs ($,000)
549	Spencetown Road	Malcolm Line	Mud Lake Line	2068	Gravel	50-199		> 2023	2017	8	30.0
425	Centre Street	Queen Street	Ann Street	121	LCB - 2 lifts	200-499	Urban Partial depth cold planing and resurfacing	2017	2017	7	25.3
242	Maitland Street	Edward Street	John Street	119	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2020	2017	7	16.7
106	Brookhaven Drive	Patrick Street	Victoria Street	490	HCB - 1 lift	50-199	Semi-Urban Hot Mix Resurfacing	2023	2017	5	46.5
506	Huron-Bruce Road	Malcolm Line	Elora Road	2240	HCB - 2 lifts	50-199	Rural Full depth pulverize and pave	2018	2018	11	313.6
403	Queen Street	Marietta Street	Centre Street	204	HCB - 1 lift	50-199	Semi-Urban Full Reconstruction - Base Course of Asphalt	2018	2018	10	163.2
507	Huron-Bruce Road	Elora Road	West Heritage	1381	LCB - 2 lifts	50-199	Surface Treatment - Single surface	2018	2018	6	34.5
579	McIntosh Line	Creamery Road	Perth Road 178	1841	Gravel	0-49		> 2023	2019	12	65.0
591	Toll Gate Line	Creamery Road	Perth Road 178	1899	Gravel	0-49		> 2023	2019	11	40.0
581	McIntosh Line	Gough Road	Spencetown Road	2058	Gravel	0-49		> 2023	2019	9	5.0
589	Toll Gate Line	Gough Road	Spencetown Road	2060	Gravel	0-49		> 2023	2019	9	15.0
420	Marietta Street	Main Street	South Limit	106	HCB - 1 lift	0-49	Semi-Urban Full Reconstruction - Base Course of Asphalt	2019	2019	9	84.8
546	Gough Road	Malcolm Line	Mud Lake Line	2067	Gravel	50-199		> 2023	2019	8	18.0
613	C-Line Road	McDonald Line	Johnston Line	2052	Gravel	50-199		> 2023	2019	8	4.0
600	Malcolm Line	Creamery Road	Perth Road 178	2014	Gravel	0-49		> 2023	2019	7	20.0
540	Gough Road	McDonald Line	Quarry Line	2084	Gravel	50-199		> 2023	2019	7	33.0
588	Toll Gate Line	Harriston Road	Gough Road	2043	Gravel	0-49		> 2023	2019	7	65.0
603	Mud Lake Line	Gough Road	Spencetown Road	2058	Gravel	0-49		> 2023	2020	12	160.0
554	Spencetown Road	Quarry Line	Gorrie Line	2046	Gravel	50-199		> 2023	2020	8	30.0
537	Orangehill Road	Mud Lake Line	Howick-Minto Line	1203	Gravel	50-199		> 2023	2020	8	33.0
602	Mud Lake Line	Spencetown Road	Creamery Road	2056	Gravel	0-49		> 2023	2020	7	10.0
233	Alma Street	Harriston Road	William Street	172	HCB - 1 lift	0-49	Urban Full Reconstruction - Base Course of Asphalt	2020	2020	7	199.1
431	Vogt Street	Harriston Road	Gibson Street	228	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2020	2020	7	31.9
201	William Street	Alma Street	Victoria Street	303	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2022	2020	6	42.4
601	Mud Lake Line	Creamery Road	Perth Road 178	2059	Gravel	0-49	Rural Full Reconstruction - Gravel Surface	> 2023	2021	10	555.8
400	Mill Street	Centre Street	Church Street	231	HCB - 1 lift	50-199	Semi-Urban Hot Mix Resurfacing	2021	2021	8	22.0
418	Marietta Street	Queen Street	Ann Street	120	HCB - 1 lift	50-199	Semi-Urban Full Reconstruction - Base Course of Asphalt	2021	2021	8	62.6
111	Albert Street	William Street	East Street	236	HCB - 1 lift	50-199	Semi-Urban Hot Mix Resurfacing	2021	2021	7	22.5
583	Toll Gate Line	Huron-Bruce Road	Glenannon Road	2041	Gravel	0-49		> 2023	2022	11	250.0
566	Lawrie Street	Salem Road	Orangehill Road	2046	Gravel	50-199		> 2023	2022	8	25.0

Appendix D1 - Road Construction Needs
Sorted by Proposed Year of Need and Priority Score

Township of Howick
Road Management Study

Section ID	Road Name	From	To	Section Length (m)	Surface Type	Traffic Range (vpd)	Road Construction Needs	Theo. Year of Need	Proposed Year of Work	Priority	Probable Costs ($,000)
567	Lawrie Street	Orangehill Road	Harriston Road	2054	Gravel	50-199		> 2023	2022	8	25.0
514	Glenannon Road	Gorrie Line	McIntosh Line	2049	Gravel	50-199		> 2023	2022	8	50.0
248	Albert Street	Edward Street	John Street	123	HCB - 1 lift	0-49	Semi-Urban Hot Mix Resurfacing	2022	2022	7	36.3
565	Forest Line	Howick-Turnberry Road	Salem Road	2040	Gravel	0-49		> 2023	2022	7	65.0
408	Ann Street	Centre Street	Church Street	231	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2022	2022	7	32.4
578	Gorrie Line	Orangehill Road	Harriston Road	2062	Gravel	50-199		> 2023	2022	5	5.0
576	Gorrie Line	Howick-Turnberry Road	Salem Road	2039	Gravel	50-199		> 2023	2022	5	25.0
515	Glenannon Road	Forest Line	Gorrie Line	2046	Gravel	50-199		> 2023	2022	5	40.0
531	Orangehill Road	Lawrie Street Line	Gorrie Line	3056	Gravel	50-199		2023	2023	12	250.0
407	Ann Street	Marietta Street	Centre Street	200	HCB - 1 lift	50-199	Semi-Urban Full depth pulverize and pave	2023	2023	6	28.0
419	Marietta Street	Ann Street	Main Street	102	HCB - 1 lift	50-199	Semi-Urban Full Reconstruction - Base Course of Asphalt	2023	2023	6	81.5
417	Allen Street	Main Street	McLaughlin Street	143	HCB - 1 lift	50-199	Semi-Urban Full depth pulverize and pave	2023	2023	5	20.0
225	John Street	Wellington Street	Princess Street	100	HCB - 1 lift	0-49	Semi-Urban Hot Mix Resurfacing	2023	2023	5	9.5
265	Nelson Street	John Street	James Street	146	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2023	2023	4	20.4
226	John Street	Princess Street	Nelson Street	102	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2023	2023	4	14.2
113	Adelaide Street	Arthur Street	Patrick Street	204	HCB - 1 lift	0-49	Urban Paving (40mm HL-4)	2023	2023	4	28.6
264	Nelson Street	George Street	Dead End	45	HCB - 1 lift	0-49	Semi-Urban Hot Mix Resurfacing	2023	2023	4	4.3
252	Wellington Street	Dead End	Martin Street	68	HCB - 1 lift	0-49	Semi-Urban Full depth pulverize and pave	2023	2023	4	9.6

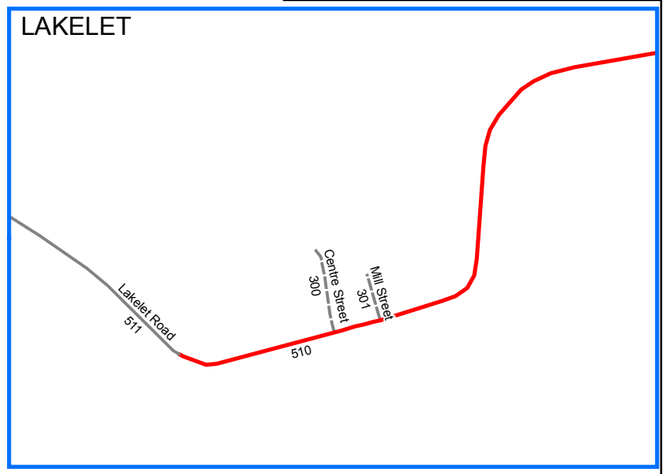
N

Proposed Year of Need

- 2014
- 2015
- 2016
- 2017
- 2018
- 2019-2023
- > 2023
- Not maintained by Municipality

Dashed Line Indicates Traffic Range Less Than 50 VPD

LAKELET



Wroxeter Figure 6

Gorrie Figure 7

Fordwich Figure 8

0 1,250 2,500 5,000 7,500 10,000 METRES

BMROSS engineering better communities

TOWNSHIP OF HOWICK ROAD NEEDS STUDY PROPOSED YEAR OF WORK		DATE NOV 15, 2013	PROJECT No. 13008
		SCALE 1: 90,000	FIGURE No. 5.0

APPENDIX C

WORK PLAN AND GANTT CHART

Municipality of Brockton

Cost Estimate/Work Plan

Rural Roads Condition and Needs Assessment (19074)

No.	Description	Code	Staff & Time Commitment (Hours)						Total Hours
			Ken Logtenberg	Larry McGregor	Jennette Walker	Rick Steele	GIS Technologist	Secretarial	
			Sr Eng	Sr Tech	Eng Tech	Info Supervisor	GIS Technologist	Secretarial	
			Hrs	Hrs	Hrs	Hrs	Hrs	Hrs	
1.0	**Road Needs Study**								
1.1	Start Up Meeting		4.0	4.0				0.5	8.5
1.2	Review of Background Information		1.0	2.0		1.0			4.0
1.3	Create mapping with IDs & database		1.0	2.0		1.0	10.0		14.0
1.4	Field Review			40.0					40.0
1.5	Data Quality Control			2.0			12.0		14.0
1.6	Project Meeting #2		3.5	3.5	1.0			0.5	8.5
1.7	Assess Data, Assign priorities of need		3.0	15.0	5.0	1.0	16.0		40.0
1.8	Project Meeting #3		3.5	3.5		1.0		0.5	8.5
1.9	Prepare draft report		6.0	6.0	25.0		5.0	3.0	45.0
1.10	Project Meeting #4		3.5	3.5				0.5	7.5
1.11	Council Presentation		5.0	5.0	1.0				11.0
1.12	Submit Final Report		2.0		3.0		2.0	2.0	9.0
Sub-total			**32.5**	**86.5**	**35.0**	**4.0**	**45.0**	**7.0**	**210.0**

Municipality of Brockton

Rural Road Condition and Needs Assessment

19074

TASK	Week Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	Month/Year	May-19	May-19	Jun-19	Jun-19	Jun-19	Jun-19	Jul-19	Jul-19	Jul-19	Jul-19	Jul-19	Aug-19	Aug-19	Aug-19	Aug-19	Sep-19	Sep-19	Sep-19	Sep-19
	Monday Date	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	2	9	16	23
Start-up Meeting																				
Review of Background Information																				
Create maps & database with road ID #s																				
Field Review Rural Roads																				
Data entry																				
Project Meeting #2																				
Assess data, assign priorities for needs																				
Project Meeting #3																				
Prepare draft report																				
Project Meeting #4																				
Prepare Council presentation																				
Presentation to Council																				
Finalize report																				

APPENDIX D

PROJECT TEAM
CURRICULA VITAE

Kenneth D. Logtenberg, M.A. Sc., P. Eng.
Project Engineer, Principal

Education
M.A. Sc.., University of Waterloo, 1994

B.A.Sc. (Civil Engineering) University of Waterloo, 1992

Employment History
BMROSS: 22 years
Other Firms: 1 year

Professional Associations
Professional Engineers of Ontario, licensed since 1995

Canadian Society of Civil Engineering: Member

Workshops and Seminars
International Short & Medium Span Bridge Conference by CSCE

Project Managers Boot Camp by PMSJ

Upgrading Bridge Inspection Skills, EPIC
Managing Bridges Within Your Budget, EPIC

Various In situ Sewer Repair Seminars, CATT

MTO - Construction Estimating and Scheduling Course

General Legal Course for 2003 OBC
Large Buildings Course for 2003 OBC
Complex Building Course for 2003 OBC

Volunteer
Dungannon United Church-Head Steward/Treasurer

Lucknow-Dungannon Slo-pitch-President

Port Albert Recreation Society-Board Member

Profile

Ken is a Senior Engineer, a Principal within the company and a member of the firm's Structural Group. Ken has over 25 years of experience working on a wide variety of structural projects, roadwork and site servicing projects. His varied skill sets allow him to take the lead on designs that involve a number of disciplines and co-ordinate the team involved.

Ken has helped many municipalities develop their asset management plans with site assessments up to prioritization of roads, bridges and building needs.

Ken's work has included involvement with over 200 bridge projects, pumping stations, reservoirs, and at least 50 buildings of one type or another.

Project Experience

Bridge Replacements

Project Engineer responsible for preparation of design and tender documents, contract administration and construction review on the following sample projects:

- Replacement of Mud Creek Bridge with 24 m span structure on a curve and supported with steel girders in the Municipality of Lambton Shores. Scope of work included re-alignment of the road approaches and specification to accommodate construction during winter months.
- Construction of 9 m span bridge with steel girders on Road No. 25, Municipality of South Bruce. Scope of work included revisions to the road grades.
- Replacement of 10 m span Penetangore Bridge on Road No. 7, Bruce County. Scope of work included extensive road re-alignment work, stream erosion protection measures and replacement of this bridge with a twin box culvert.

Culvert Replacements

Project Engineer responsible for design, preparations of tender documents, contract administration, and site review on the following projects:

- Replacement of River Mill Line Culvert in the Township of Ashfield-Colborne-Wawanosh, scope of work included re-alignment and widening of the road and replacement of 5 m span structure and miscellaneous associated work
- Replacement of Culvert 55 on County Road 55 in Oxford County, scope of work included placement of 5.2 m span pre-cast box culvert with shear plates and post tensioning.
- Replacement of twin arch culverts on Chatham Drive in Municipality of Middlesex Centre, scope of work included tendering the project as cast-in-place or pre-cast to determine most cost effective solution and construction of a new 5.8 m span cast-in-place box culvert

Bridge Repairs

Project Engineer responsible for design, preparations of tender documents, contract administration, and site review on the following projects:

- Rehabilitation of Bridge 50 on Lambton Line in the Township of Dawn-Euphemia. Scope of work included re-coating of steel girders, replacement of railing and expansion joints, bearing pads, and miscellaneous associate project tasks.
- Rehabilitation of Purple Grove Bridge in the Township of Huron-Kinloss. Scope of work included replacement of the deck, girders, railings, and repairs to the abutments.

- Rehabilitation of Forrester's Bridge in Bruce County on County Road 3. Scope of work included re-coating the ends of the steel girders, replacement of expansion joints and barrier walls, deck and soffit repairs.
- Rehabilitation of Dolbear Bridge in the Municipality of Brooke-Alvinston. Scope of work included rehabilitation of truss member, replacement of bearing pads, stringers and deck sections and other miscellaneous repairs.
- Performed design and contract preparation for MTO highway redesign and structure rehabilitation projects. Responsibilities have included preparing design, contract documents and the quality assurance program as per MTO requirements. Scope of work included for structures on highways include steel girder repairs to address fatigue cracks, replacement of expansion joints with semi-integral abutments, pre-stress girder repairs, railing replacement and miscellaneous other repairs.

Building Projects

- Structural design of industrial, commercial and public type buildings for new construction or renovation projects. Responsible for design of concrete, steel, masonry, and wood components, as required. Project Manager responsible for structural design, managing sub-consultants, preparing tender documents and providing contract administration for some of the listed projects. With other projects responsible for the structural design work required. Projects include Kincardine Water Treatment Plant expansion - $2.75M, Bruce Power Main Guardhouse and Site Improvement - $3M, Huron-East Seniors Apartments - $4.5M, Goderich Town Hall - $2.8M, Maitland Valley Medical Centre Renovations - $1.9M, Kincardine MAC Renovations - $1.8M, Perth East Municipal Garage - $1.5M.

Bridge Inspections

- Bridge, road and building condition reviews for preparation of asset management reports, with prioritized rehabilitation and cost budgeting recommendations for numerous municipalities including: A-C-W, Municipality of Lambton Shores, Township of Wellington North, Township of Dawn-Euphemia, Municipality of Brooke-Alvinston, and Township of Huron-Kinloss.

Water and Wastewater

- Structural design of sewage pumping stations and water treatment plant buildings, storage facilities, inlet works and various other forms of municipal water and wastewater. Projects include Goderich, Mitchell and Seaforth Underground Water Storage Reservoirs, St. Marys Wellhouse and Treatment Buildings.

Rural Roads

- Project Engineer and project Manager for rural road reconstruction projects for Perth South, Middlesex Centre, Bruce Power and Bluewater.
- Project Engineer for the design of bridge approaches with significant modifications required to the vertical and horizontal alignment on lower tier and county roads.

Bruce Power Projects

- Project Engineer for the design and contract administration for the Main Guardhouse, overseeing the entire project with construction of the building, heating, ventilating and electrical systems, water and sewage servicing with a sewage pumping station, site roads and parking facilities at the main entrance.
- Project Engineer for the design and contract administration of site road improvements along Central Services, Rear Access to Bruce B and A, Re-Alignment of 10th Avenue at B21, Heavy Water Plant, 28th Avenue, Interconnecting Roads and various other site road improvements projects.
- Project Engineer for the design, and contract administration for new parking lots and rehabilitation of existing parking lots on site with site work and electrical work for lighting, including new Bruce B parking lots in 2003 and more recently for the MCR expansion requirements at Bruce B, Bruce A and B21 parking lot expansions,

Roads and Bridge Need Studies

- Ken has managed and prepared Road and Bridge Needs Studies as well as provide assistance with developing asset management plans in numerous municipalities. Below is a list of municipalities that these reports have been prepared for:
  - Municipality of Brockton
  - Bruce Power Site
  - Municipality of Central Huron
  - Municipality of Bluewater
  - Municipality of West Perth
  - Township of Perth South
  - Township of Wellington North
  - Township of Dawn-Euphemia
  - Municipality of Brooke-Alvinston
  - Municipality of Morris-Turnberry

LARRY McGREGOR,
Senior Technologist

Education

Resources Civil Engineering Technology, Seneca College, Willowdale, 1984

Employment History

BMROSS: 9 years
Township of Perth South: 6 years
Town of Shelburne: 21 years

Courses and Seminars

Ontario Good Roads Association, Public Administration Course – Part 1 and 2

T. J. Mahony Road School Certificate - Ontario Good Roads Association

Association of Municipal Managers, Clerks and Treasurers of Ontario, Municipal Administration Program Certificate

MOE, Water Distribution System Licence Class 3

Profile

Larry is a Senior Technologist and member of the Outside Services group at BMROSS. His work includes conducting road needs studies, construction site review, contract preparation and peer review of contracts.

Larry brings over 26 years of municipal public works and operations experience to BMROSS. Prior to joining BMROSS, Larry was Director of Public Works in the Township of Perth South, C.A.O/Works Supervisor/Deputy Clerk and General Superintendent of Works for the Town of Shelburne. Prior to that, he had 9 years of experience with a civil engineering firm and 5 years experience managing road and erosion control projects with the Metro Toronto Conservation Authority. His extensive public works and municipal administrative background gives him key skills for completing municipal infrastructure projects.

Related Experience

Road Needs Studies

- Field inspector for a Road Needs Study for the Township of Plympton-Wyoming (2015). Conducted visual road reviews and road section assessments. Completed inventory and inspection appraisal sheets, and assigned conditions scores and drainage condition ratings.

- Field inspector for a Roads Needs Study for the Municipality of Central Huron (2015). Responsible for completing road surveys, preparing and reviewing road needs and recommendation, assisting in cost evaluation and assignment of repair time periods and priorities for road sections.

Jennette Walker, C.E.T.
Senior Technologist

Education

Environmental Engineering Technology, Georgian College, 2002

Employment History

10 years in Public Works
5 years with BMROSS
1.5 years with other firms

Professional Associations

Ontario Association of Certified Engineering Technicians and Technologists,
Certified Engineering Technologist, 2005

Courses and Seminars

T. J. Mahony Road School Certificate – Ontario Good Roads Association

Profile

Jennette is a Senior Technologist with over 16 years of experience in engineering and construction involving a wide range of municipal assets. Jennette has experience in numerous types of infrastructure projects including roads, bridges, municipal drains, water, wastewater, facilities, solid waste management, and land development. She has been involved in a great variety of projects ranging in scope from small building renovations to multi-year construction contracts to municipal policy development and master plans.

Jennette's responsibilities include contract administration and management of projects of all types from inception through to construction.

Project Experience

Projects that Jennette has been involved with include:

Municipal Infrastructure Projects

- Simcoe St. Reconstruction, Municipality of South Huron – 2017
- Nichol Ave S Reconstruction, Municipality of North Perth – 2017
- North Perth Treatment & Conveyance Upgrades, Municipality of North Perth – 2017/2018
- Mollard Line Forcemain Replacement, Municipality of Lambton Shores - 2017
- B26 Culvert Replacement, Municipality of Bluewater – 2016
- B04 & B32 Culvert Rehabilitation, Municipality of Bluewater – 2016
- King St. Watermain Replacement, Hensall, Municipality of Bluewater – 2016
- Centre St. Reconstruction, Zurich, Municipality of Bluewater– 2015
- B53 Culvert Replacement, Municipality of Bluewater – 2015
- B64 Culvert Repair, Municipality of Bluewater – 2015
- Bayfield Water – Phase 4, Municipality of Bluewater – 2014/2015
- Babylon Line Paving, Municipality of Bluewater – 2015
- Goderich Water Pollution control Plant – UV Disinfection Project, Town of Goderich – 2009

Solid Waste Management

- Hensall Landfill Site, Remedial Action Plan, Municipality of Bluewater
- Mid-Huron Landfill Site, Wet Well Replacement, Mid-Huron Landfill Site Board – 2018
- Goderich Tornado Recovery, 2011
- Huron County Household Hazardous Waste Depot, County of Huron/Mid-Huron Landfill Site Board

- Mid-Huron Landfill Site, Clear Waste Disposal
- Annual Landfill Site Monitoring, Municipality of Bluewater – 2003-2007
- Annual Landfill Site Monitoring, Municipality of Huron East – 2003-2007
- Annual Landfill Site Monitoring, Municipality of Morris-Turnberry – 2003-2007
- Annual Landfill Site Monitoring, Municipality of South Huron – 2002-2007

Municipal Studies

- Asset Management, Municipality of Bluewater and Town of Goderich
- Goderich Water Pollution Control Plant, Biosolids Master Plan, Town of Goderich – 2013
- Goderich Pollution Prevention Plan, Town of Goderich
- Bayfield Water Master Plan, Municipality of Bluewater
- Pine River Water Quality Monitoring, Township of Huron-Kinloss
- Lambton Shores Water Quality Monitoring, Municipality of Lambton Shores

BMROSS
engineering better communities

Richard J. Steele, GISP
Information Management

Education
Honours Bachelor of Science in Agriculture Majoring in Resource Management, Ecology Minor, University of Guelph (1991)

Employment History
BMROSS: 10 years

Maitland Valley Conservation Authority: 17 years

Professional Associations
GIS Certification Institute
URISA – Urban and Regional Information Systems Association: Ontario Chapter

Software
ArcGIS 10.x
ArcReader
ArcPad
TerraSync
PathFinder Office
MapServer
PC1 Geomatica 10
PC1 OrthoEngine 10
MS Access

Profile

Rick brings GIS (geographic information system) and database management expertise to numerous projects undertaken by our firm. Due to his extensive background and experience with Conservation Authorities, he understands relationships between aquatic and terrestrial ecosystems, data collection methods and key information requirements for structured GIS data. He plays a key role for asset inventory, data management and GIS support to our municipal clients.

Professional Experience

Database and GIS Management

For projects with a spatial and information focus, Rick coordinates database and spatial management of information, including the use of GPS collected data. Major projects include:

- Rick was Project Manager related to the development of an Enterprise Property Database for the Maitland Valley Conservation Authority. The project requirements included visualizing the information in both mapped (GIS) and database form and the ability to support multiple users. A data structure was designed that supports the management of all staff interactions with property owners, including documents, photos, chronological events and reporting necessary for program delivery and evaluation. The scope also included the development of work processes, staff training and the creation of a user manual
- Township of Huron-Kinloss' Septic Re-Inspection Program and the development of an information management system. The system satisfies the needs of field data collection, reporting, and the organization of related information such as permits, photos, property contact history and repair records. It involves both GIS and database interfaces to meet multi-user needs.
- Project Manger for a GIS/IT Review for the Maitland Valley Conservation Authority. This entailed an evaluation of information management processes and GIS user needs assessment through surveys and interviews. Recommendations were provided for staff roles, responsibilities and GIS information management. Centralized data storage and efficiencies were also part of the scope.

- In the last seven years, BMROSS has developed an Infrastructure Document Management System that has been branded as FIND IT!©. The client receives a GIS viewer and database that allows them to visualize, query or print maps of their municipal assets. With a single click on a specific asset, related documents such as drawings, reports, C of A's, payment certificates, or photos can be opened. Municipal staff have the ability to add maintenance and inspection information to any asset through the user-friendly database. Rick oversees the development for the five municipalities the have selected FIND IT!© as the system to manage asset documents and mapping.
- Threats database and significance rating for the Ausable Bayfield Maitland Valley Source Protection Project. In the absence of a provincial database model, a GIS implementation was considered ideal since DWSP is a place-based program. The GIS and field inventories were used to overlay the necessary input data to calculate the significance of the threat. This information was used to populate a database to meet the needs of DWSP staff to manage and report significant threats.

Asset Management

Rick has conducted asset inventories and valuations for PSAB reporting for a number of municipalities, including water, sanitary, storm and associated facilities. His ability to understand data relationships and key information has made it easier for those municipalities to undertake detailed asset management planning since the infrastructure data was segmented and attributed appropriately.

Recent asset management projects include:

- Municipality of Bluewater – Asset Management Plan, Project Manager.
- Municipality of Bluewater – Storm Sewer Asset Management Plan.
- Town of Minto – development of a priority score system for municipal assets to be incorporated into their AMP.
- Townships of Howick and Dawn-Euphemia – development of an inventory and database that municipal staff can use for priority score calculation and 10 year capital forecasting.

Water Quality Projects

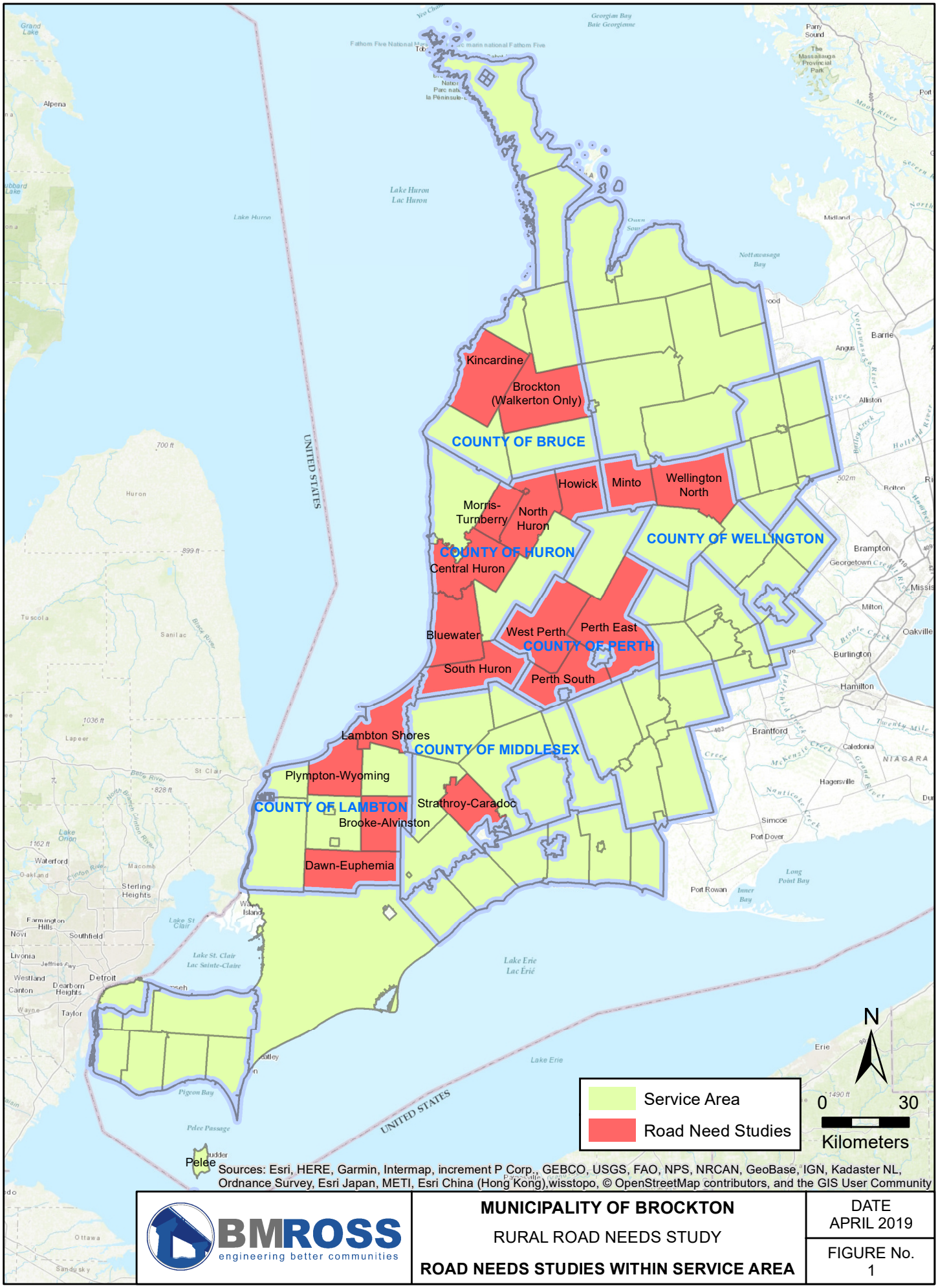
Rick has coordinated the following projects and reports since joining the firm:

- Township Huron-Kinloss, Water quality investiga.tion to determine sources of high phosphorus concentrations upstream of sites 17 & 18
- St. Clair Region Conservation Authority, Ipperwash Drain Water Quality and Treatment Options Study.
- Township of Huron-Kinloss, Pine River Watershed Water Quality Program 10 Year Statistical Review.
- Township of Huron-Kinloss, Annual surface water quality reports.

Other Experience

During his previous employment experience, Mr. Steele prepared a number of technical reports and spatial data projects, including:

- Lead author of Water Quality Summary chapter for the Drinking Water Source Protection Project of the Ausable Bayfield Maitland Valley Partnership.
- Innovations in Water Management - project manager of a pilot that investigated and tested approaches to delivering water related information to rural landowners and farmers. This project had an interactive web mapping application and a technical transfer report http://www.conservation-ontario.ca/projects/pdf/reports/PHASE%20II/water_resource_information.pdf.
- Maitland Watershed Partnerships - coordinated the technical component of the process and was an active member of a team that assisted community representatives in developing issues, setting priorities and implementation targets using participatory approaches. This project won the Excellence in Planning Award from the Ontario Professional Planners Institute in the Research/New Direction category, 2002.
- Developed a GIS methodology for mapping areas prone to surface water runoff and potential risk to shallow groundwater contamination.
- Ecosystem Health Project- collaborated on the development of a watershed characterization approach to measuring relative ecosystem health through the use of indices.



BMROSS engineering better communities

MUNICIPALITY OF BROCKTON

RURAL ROAD NEEDS STUDY

ROAD NEEDS STUDIES WITHIN SERVICE AREA

DATE
APRIL 2019

FIGURE No.
1

APPENDIX E

PROPOSAL SUBMISSION FORMS
(TECHNICAL ONLY)

Technical Proposal Form

For the Provision of: Task 1 – Rural Roads Condition and Needs Assessment

Submitted by: B. M. Ross and Associates Limited
Firm Name

62 North Street, Goderich, ON N7A 2T4
Address Postal Code

Hereinafter Called the Proponent

To: Municipality of Brockton
PO Box 68, 100 Scott Street
Walkerton, ON, N0G 2V0

Hereinafter Called the Municipality

The Proponent declares that:

1. No person(s), firm or Municipality, other than the Proponent, has any personal interest in this Proposal or in the award for which this Proposal is made;
2. No officer or employee of the Municipality is or will become interested directly or indirectly as a contracting party, partner, shareholder, surety or in any portion of the profits thereof, or in any of the monies to be derived, therefrom;
3. This Proposal is made without any connection, comparison of figures, or arrangements with, or knowledge of any other Municipality, firm or person making a bid for the same and is in all respects without collusion or fraud; and
4. By signing this submission, I confirm I have read and understood the content and requirements of this proposal document;

Acknowledgement to receipt of Addenda
This will acknowledge receipt of the following addenda and that the pricing quoted includes the provision set out in such addenda;

Addendum #	**Date Received**
# One (1)	April 24, 2019
# _____	_____

____ **Check here if no Addenda received**

Lowest or Any Bid Not Necessarily Accepted

Date April 29, 2019

Signature of Proponent

Signature of Witness

By my signature, I hereby confirm I am a principal, or have been duly authorized by the Principal/ Board of Ken Logtenberg, Prinicpal, to sign on behalf

(Name of Firm)

of the above named.

4.5 Proponent Information Form

The following Proponent Information Form shall be completed and included with the proposal. One copy of the Proponent Information Form shall be included in each of the Technical Proposal and Pricing Proposal envelopes and on the soft copy of each of the Technical Proposal and Pricing Proposal.

1	Proponent's Contact Individual:	Ken Logtenberg, P. Eng.
2	Mailing Address:	62 North Street, Goderich, ON N7A 2T4
3	Office Phone Number:	519-524-2641
4	Toll Free Phone Number:	1-888-524-2641
5	Mobile Phone Number:	519-525-2736
6	E-mail Address:	klogtenberg@bmross.net
7	Website:	www.bmross.net
8	WSIB Account #:	2395703
9	HST Account #:	10055 9301 RT0001

Proponent: B. M. Ross and Associates Limited

Signature: _____ Date April 29, 2019

4.6 Proponent's Ability and Experience Form

The following Proponent's Ability and Experience Form shall be completed and included with the proposal. Three copies of the Proponent's Ability and Experience Form shall be included in the Technical Proposal envelope.

A copy of the Proponent's Ability and Experience Form shall also be included on the soft copy of the Technical Proposal.

Proponent's Ability and Experience Form

Proponents shall provide information below on previous, similar projects that have been successfully undertaken by the Proponent's firm in the past three (3) years.

Contract/Project #1	**Insert Information**
Name of reference municipality	Municipality of Lambton Shores
Name of Contact and Telephone number	Steve McAuley, Director of Community Services 519-243-1400 ext. 8215
Total Value (annual)	$32,900
Description of Work	Completed a Road Needs Study Inspection for the Municipality in 2017
Additional Comments (optional)	

Contract/Project #2	**Insert Information**
Name of reference municipality	Township of North Huron
Name of Contact and Telephone number	Sean McGhee, Director of Public Works 519-357-3550
Total Value (annual)	$16,400

Description of Work	Completed a Road Needs Study for the Township in 2016
Additional Comments (optional)	

Contract/Project #3	**Insert Information**
Name of reference municipality	Municipality of Kincardine
Name of Contact and Telephone number	Adam Weishar, Director of Public Works 519-396-3468 ext. 7119
Total Value (annual)	$10,360
Description of Work	Completed a 5 year udated to the Road Needs Study for the Municipality - 2015
Additional Comments (optional)	

Proponent: B. M. Ross and Associates Limited

Signature: _____ Date April 29, 2019

BMROSS
engineering better communities

Municipality of Brockton
Request for Proposal 2019-02
Rural Roads Condition and Needs Assessment

FINANCIAL PROPOSAL

April 29, 2019

B.M. ROSS AND ASSOCIATES LIMITED
Engineers and Planners
62 North Street, Goderich, ON N7A 2T4
p. (519)524-2641 • f. (519)524-4403
www.bmross.net

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File No. 19074

MUNICIPALITY OF BROCKTON
REQUEST FOR PROPOSAL 2019-02
RURAL ROADS CONDITION AND NEEDS ASSESSMENT

PRICING PROPOSAL

1.1 Introduction

We are pleased to provide this Pricing Proposal in response to the Municipality's Request for Proposal for the provision of engineering services for the Rural Road Condition and Needs Assessment (RFP 2019-02).

1.2 Cost Control and Monitoring

As noted in our technical proposal BMROSS has developed several tools to facilitate the monitoring and control of project costs including an aggressive approach related to control of the schedule.

1.3 Cost Breakdown

The following pages provide a summary of our proposed fees for each of the above noted projects in accordance with the scope of work defined in the RFP. Detailed worksheets are provided in **Appendix A** and provide for additional breakdown of the cost by task for each work effort:

Cost Summary Table

Task	Fees	Mileage/ Expenses	Total
Rural Road Needs Study	$23,056	$905	$23,961

*excludes HST

1.4 Notes Related to Expenses

The following provides details of what we feel are some of the key assumptions and qualifications incorporated into our fee schedule:

- As per the addendum, the fees are based on Brockton providing a municipal staff person and vehicle for the field review of all the rural roads.
- The proposed fees do not include any additional traffic counts, the municipality has indicated traffic counts were completed by the municipality in 2018.
- Proposed fees reflect the short timeline proposed in the RFP.
- Price includes allowance for 4 meetings, our cost could be reduced if it is decided that a meeting is not required.

Proposal submission forms for the pricing section are located in Appendix B.

Please feel free to call if you require any clarification.

Yours very truly

B. M. Ross and Associates Limited

Per _____
Ken Logtenberg, P. Eng.

KDL:jw

APPENDIX A

FEE WORKSHEET

Municipality of Brockton — Print date: 26-Apr-19

Cost Estimate/Work Plan — Project Manager: JMW

Rural Roads Condition and Needs Assessment (19074) — Latest Version: V1

No.	Description	Code	Staff & Time Commitment (Hours)												Total Hours	Total Fees	Expenses	Total Fees and Expenses
			Ken Logtenberg		Larry McGregor		Jennette Walker		Rick Steele		GIS Technologist		Secretarial					
			Sr Eng		Sr Tech		Eng Tech		Info Supervisor		GIS Technologist		Secretarial				Value	
			Hrs	Value	Hrs	Value	Hrs	Value	Hrs	Value	Hrs	Value	Hrs	Value				
1.0	**Road Needs Study**																	
1.1	Start Up Meeting		4.0	$716	4.0	$428							0.5	$38	8.5	$1,182	$75	$1,257
1.2	Review of Background Information		1.0	$179	2.0	$214			1.0	$117					4.0	$510		$510
1.3	Create mapping with IDs & database		1.0	$179	2.0	$214			1.0	$117	10.0	$830			14.0	$1,340		$1,340
1.4	Field Review				40.0	$4,280									40.0	$4,280	$400	$4,680
1.5	Data Quality Control				2.0	$214					12.0	$996			14.0	$1,210		$1,210
1.6	Project Meeting #2		3.5	$627	3.5	$375	1.0	$93					0.5	$38	8.5	$1,132	$75	$1,207
1.7	Assess Data, Assign priorities of need		3.0	$537	15.0	$1,605	5.0	$465	1.0	$117	16.0	$1,328			40.0	$4,052		$4,052
1.8	Project Meeting #3		3.5	$627	3.5	$375			1.0	$117			0.5	$38	8.5	$1,156	$75	$1,231
1.9	Prepare draft report		6.0	$1,074	6.0	$642	25.0	$2,325			5.0	$415	3.0	$225	45.0	$4,681	$80	$4,761
1.10	Project Meeting #4		3.5	$627	3.5	$375							0.5	$38	7.5	$1,039	$75	$1,114
1.11	Council Presentation		5.0	$895	5.0	$535	1.0	$93							11.0	$1,523	$75	$1,598
1.12	Submit Final Report		2.0	$358			3.0	$279			2.0	$166	2.0	$150	9.0	$953	$50	$1,003
Sub-total			**32.5**	**$5,818**	**86.5**	**$9,256**	**35.0**	**$3,255**	**4.0**	**$468**	**45.0**	**$3,735**	**7.0**	**$525**	**210.0**	**$23,056**	**$905**	**$23,961**

	Description		Summary of Staff & Time Commitment (Hours)						Total Hours	Total Fees	Expenses	Sub-Total of Fees and Expenses
			Ken Logtenberg	Larry McGregor	Jennette Walker	Rick Steele	GIS Technologist	Secretarial			Value	
			Sr Eng	Sr Tech	Eng Tech	Info Supervisor	GIS Technologist	Secretarial				
Hours			32.5	86.5	35.0	4.0	45.0	7.0	210.0			
Hourly Rate			$179	$107	$93	$117	$83	$75				
Cost			$5,818	$9,256	$3,255	$468	$3,735	$525		$23,056	$905	

Total Fees and Expenses **$ 23,961**

APPENDIX B

PROPOSAL SUBMISSION FORMS
(PRICING ONLY)

4.3 Pricing Proposal Form

One hard copy of the following **Pricing Proposal Form** shall be completed and submitted with the Proponent's proposal inside the "**Pricing Proposal**" envelope.

This form shall be included on the soft copy of the pricing proposal that is to be submitted, but not on the soft copy of the technical proposal.

Pricing Proposal Form

The price bid shall include for all professional fees, meetings, sub-consultant's charges, if any, and for all disbursements for mileage, meals, printing, equipment rental rates, associated office disbursements and any other activity relating to the completion of the Project. **The lump sum fee submitted shall not be exceeded without the prior written authorization of the Town.**

Description	**Fee (Excluding HST)**
Task 1 – Rural Roads Condition and Needs Assessment Study Lump Sum Fee	$ 23,961.00
	$
Total	**$** 23,961.00

Proponent: B. M. Ross and Associates Limited Date April 29, 2019

Signature: _____