SUBJECT: Isthmus Bay Road Project – Request for Proposal PW 2016-01

FROM: William Rydall, C.E.T., Public Works and Property Manager

DATE: June 27, 2016

RECOMMENDATION:

THAT Council authorizes GSS Engineering Consultants Limited to proceed with engineering services for the Isthmus Bay Road Improvement Project, RFP PW 2016-01, for Phases One (1) and Two (2) of the Class Environmental Assessment Planning process at a cost of $11,473.00, excluding HST.

AND THAT, if required, Council authorizes GSS Engineering Consultants Limited to proceed with Phases Three (3) and Four (4) of the Class Environmental Assessment Planning process at a cost of $19,900.00, excluding HST.

BACKGROUND:

In May 2016, the Public Works Department requested proposals from four (4) engineering firms to proceed with the Class Environmental Assessment Planning process for the Isthmus Bay Road Improvement Project.

The intent of the Project is to provide the public and Council with enough information to make an informed decision as to what the short and long term servicing needs are for the residents of Isthmus Bay Road.

Pricing was requested for the completion of Phases One (1) and Two (2) of the Class Environmental Assessment Planning process, as well as pricing for the completion of Phases Three (3) and Four (4); however, the commencement of the latter two (2) phases will be determined by the outcome of Phases 1 and 2.

COMMENTS:

Three (3) Proposals were received by the closing date and time of June 7, 2016 at 12:00 noon.
<table>
<thead>
<tr>
<th>Consultant</th>
<th>Cost to Complete Phases One (1) and Two (2), excluding HST</th>
<th>Cost to Complete Phases Three (3) and Four (4), excluding HST</th>
<th>Total Cost</th>
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<tr>
<td>GSS Engineering Consultants Ltd.</td>
<td>$11,473.00</td>
<td>$19,900.00</td>
<td>$31,373.00</td>
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<tr>
<td>WSP Canada Inc.</td>
<td>$28,660.00</td>
<td>$30,315.00</td>
<td>$58,975.00</td>
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<td>GM BluePlan Engineering</td>
<td>$22,517.00</td>
<td>$47,135.00</td>
<td>$69,652.00</td>
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</table>

**Costing Notes**

GSS Engineering Consultants Ltd. – Cost above does not include natural environment investigation or extra studies in Phase Two (2).

GM BluePlan Engineering – Above total cost does not include $10,000 each for Ontario Land Surveyor and Geotechnical Allowances to be completed in Phases Three (3) and Four (4), which would bring the total cost to $89,652.00.

WSP Canada Inc. – The price includes a natural environment investigation and a Stage One (1) Archaeological Assessment in Phase Two (2); however, if a Stage Two (2) Archaeological Assessment Report is required, there will be extra costs.

A Municipal Class Environmental Assessment (EA) applies to municipal infrastructure projects, such as roads, wastewater and water that generally share similar types of problems; however, even though there are similarities, all projects may vary in environmental impact. Therefore, projects can be further classified into one of the following four (4) schedules:

Schedule A – includes normal or emergency operation and maintenance projects that have minimal adverse environmental effects. These projects are preapproved and may proceed without a full Class EA process.

Schedule A+ - is a Schedule A project that is pre-approved, but some sort of public notification must be given to adjacent property owners.

Schedule B – is a project that includes minor expansions and improvements to existing facilities that may have the potential for adverse environmental impact. In a Schedule B the proponent is required to undertake a screening process, which will involve mandatory contact with affected public and relevant review agencies.

Schedule C – is a project that has major expansions to an existing facility and/or the construction of a new facility, which have the potential to have significant environmental effects. Schedule C projects must undertake the full EA planning process and require an Environmental Study Report.
There are five (5) Phases within a Class EA Planning process:

Phase 1 – Identify the problem (deficiency) or opportunity.

Phase 2 – Identify solutions to address what was determined in Phase One (1). This will take into consideration the existing environment, public and review agency input and establish the preferred solution. It is at this stage where it is determined which Schedule is appropriate for the project.

Phase 3 – Alternative methods of implementing the preferred solution is investigated. This will be determined by public and review agency input, existing environment, possible environment impacts and methods on how to maximize positive effects, while minimizing negative effects.

Phase 4 – The completion of an Environmental Study Report, which summarizes the rationale, and the planning, design and consultation process of the project as was established through Phases 1 to 3. This report must also be available for review agencies and public input and scrutiny.

Phase 5 – The stage where construction documents and drawings are completed and construction and/or operation commences. Monitoring of construction for adherence to environmental provisions and commitments and in special circumstances monitor the operation of the completed facilities.

The Class EA is a broad planning process where the parameters of each phase can be interpreted differently attributing to differences in costing dependent on where certain items fall within each phase, which can be observed in the submitted costing summaries for each Proposal. Some proposals include in the first two (2) phases the completion of items such as Archaeological and Environmental Assessments, cost estimates and extra public information sessions, which can increase cost. Other consultants may have included some of these items in future phases.

At this time, it cannot be determined, until the completion of Phases One (1) and Two (2), if the Isthmus Bay Road Project will fall within a Schedule A+ or if it will be upgraded to a Schedule B or C. If the Project is considered a Schedule A+, some or all of the studies may not be required, dependent on the outcome of the first two (2) phases. This is why GSS Engineering Consultants Ltd. is being recommended to start with the completion of Phases One (1) and Two (2) of the Project, and if required, completion of the remaining future phases.

Other tasks that may need to be completed during the future phases include legal and topographical surveys; hydrogeological, traffic, archaeological, cultural and heritage and natural environmental impact studies.

GSS Engineering Consultants Ltd. has indicated that they could complete the work in Phases One (1) and Two (2) by October 15, 2016. If there is need to proceed to Phases Three (3)
and Four (4), a date for completion cannot be established at this time due to the fact that some environmental studies may take place over two (2) or more seasons.

ATTACHMENTS:

1. Exhibit A.2 Municipal Class EA Planning and Design Process – *Municipal Class Environmental Assessment, Municipal Engineers Association*
2. GSS Engineering Consultants Ltd. – Phase Methodology
3. GM BluePlan Engineering – Phase Methodology
4. WSP Canada Inc. – Phase Methodology

BUDGET IMPLICATIONS:

A total of $50,000.00 was included in the 2016 Capital Budget for the Isthmus Bay Road Class Environmental Assessment.
MUNICIPAL STRATEGIC COMMITMENT:

By evaluating strategic objectives, it can be assured that the actions taken by the Municipality create value across all strategic priorities identified in the Strategic Plan. In doing so, the Municipality moves closer to its vision of providing a safe, progressive municipality that is committed to managing growth and providing a welcoming, diverse and environmentally sustainable community that enhances the quality of life for all residents and visitors.

<table>
<thead>
<tr>
<th>Strategic Priority</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well managed and fiscally responsible municipal government is enhanced</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Conservation and protection of unique natural environment including the encouragement of well managed growth is enhanced</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Health, safety and education of the community are enhanced.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Development/promotion of cultural and recreational opportunities is enhanced.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Citizen involvement is enhanced.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Economic development strategies are enhanced.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Does the option(s) recommended create value across all strategic priorities?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Does the option(s) recommended make Northern Bruce Peninsula a municipality of choice for high performance public servants?</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Respectfully submitted:

William Rydall, C.P.T.
Public Works and Property Manager

Approved by:

Bill Jones, Chief Administrative Officer
EXHIBIT A. 2 MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

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

Phase I

Phase I of the study will examine the problems and their severity. It will also include a meeting with municipal staff to discuss their concerns. This phase will include an on-site review of the existing road to assess the obstacles and other problems that may influence the opportunities for roadway improvement. We would print a plan of this road from the available Bruce County mapping as a base on which proposed upgrades can be shown.

Phase II

We would discuss with municipal staff various improvements that could be considered and probable costs. From these discussions, we would formulate two or more possible design alternatives that might be appropriate and detail the proposed improvements on the plans discussed in Phase I. A preliminary estimate of cost would be prepared for each alternative. We would also provide the positive and negative implications of each option. This information would be presented first to municipal staff and council. After review by the municipality, the plans would be provided to the County of Bruce. The First Nations (S.O.N.) and representatives of the Niagara Escarpment Commission (N.E.C.). We would then host a public meeting inviting all residents who own or occupy property along the roadway, municipal representatives, N.E.C. Representatives and representatives of affected utilities.

The meeting would be advertised in a local newspaper so that other interested parties could attend. Our proposed plans would be presented. Input would be received and recorded. Following the meeting the input would be reviewed. Possible additions / revisions would be assessed and plans adjusted to best accommodate the concerns expressed.

Phase III – Alternative Design Concepts for the Preferred Solution

When the preferred solution is established, various design and concepts will be considered. They may include but not be limited to varying road alignment within the existing right of way, routing, treatment and discharge or storm water, adjustments to cross fall on the traveling lanes, lane width adjustments, curb and gutter, barrier, mountable, none. Cross walks, widened areas for parking and other considerations.
Phase IV – Environmental Study Report

A company that is qualified to assess the environmental features would be engaged to prepare a report setting out the environmental issues and the degree of impact that the proposed construction or maintenance would have. It would also make recommendations as to remedial actions required, future monitoring etc. GSS Engineering Consultants Ltd. would make adjustments to the plan to alleviate or mitigate concerns that arose from the Environmental Study Report.

4.0 TIMING OF THE WORK

GSS Consultants could complete the work in Phase I and Phase II by October 15th, 2016.

Environmental studies very often require inspection during two or more seasons so Phase IV may require up to one year after notification to proceed. A date for completion cannot reasonably establishing at this time.
4.1 Municipal Class EA Project Approach

*Phase 1 Project Initiation*

GM BluePlan has considerable experience in administering the Municipal Class EA approach to project planning. The first Phase of the EA process requires a clear Project Statement, which defines the Problem and/or Opportunity that the process is intended to address.
This critical step will be the main topic of discussion at the Project Initiation meeting with municipal staff.

Generally, it is important to highlight not only the problems but also the potential benefits of the project in the Project Statement.

A succinct Project Statement, such as the following may be appropriate:

“Area residents have identified maintenance and safety concerns along Isthmus Bay Road. The proponent wishes to consider an appropriate level of service to address the concerns in this area.”

The EA process offers an optional Discretionary Phase 1 Public Consultation. GM BluePlan has successfully used this discretionary Public Consultation to gain input from the public at a very early stage for more complex EA processes. Considering the high degree of public interest expected we recommend the hosting of a discretionary Phase 1 PIC to engage the public early in the process. The purposes of this meeting would be not only to provide opportunity for directly affected public to describe their particular concerns, but also for them to hear some of the constraints associated with achieving a design standard. For this discretionary PIC, we propose to overlay a standard road cross section on aerial photography along Isthmus Bay Road (initially without benefit of a topographic survey), to illustrate the potential impacts to individual properties.

Recent changes to the Municipal Class EA (2015) require the proponent to identify in Phase 1 of the process whether a project is or could potentially be occurring within a Source Water Protection “vulnerable area”, such as a surface water Intake Protection Zone. This identification can be made in the review of alternative solutions, as necessary.

**Phase 2 Identify Alternatives**

Once a clear definition of the Problem and/or Opportunity is established, the EA process requires that “All reasonable and feasible solutions shall be identified and described”. The Road Project Schedules in the EA manual identify the following as a Schedule A+ activity, with no limit to construction value:

“Reconstruct where the reconstructed road...will be for the same purpose, use, capacity and at the same location as the facility being reconstructed (e.g. no change in the number of lanes)”

The basic alternatives for Isthmus Bay Road, therefore, are:

1. Do Nothing (maintain existing conditions)
2. Reconstruct the existing road to a current standard, and
3. Reconstruct the existing road to a non-standard

We expect that once the local residents are made aware of the direct impact a road reconstruction will have they may choose to accept the Do Nothing alternative. However, if the municipality chooses to continue with process, we would propose to advance the project as a Schedule A+ activity; proceeding with preliminary and detailed design phases, without formalizing a Schedule ‘B’ EA process.

**Phase 3 Preliminary Design**

In order to inform the preliminary design phase, we recommend the municipality complete a legal survey along the road allowance. GM BluePlan would assist the municipality in retaining an OLS to complete this task. A topographic survey and a hydrology study would also be necessary, which GM BluePlan staff would complete in-house.
At this time, we do not see a need for additional studies such as a traffic study, archaeological, natural environment impact, or cultural heritage.

If additional studies are identified through the process as being required to inform the preliminary design, then such additional studies would be suggested for client consideration, as necessary.

The preliminary design phase would result with the preparation of a 60% complete set of plan and profile drawings, illustrating in greater detail the proposed work to a design standard and the impacts along the road allowance. We would include a “Class C” construction cost estimate with the preliminary design. We recommend the preliminary design be presented for public review prior to proceeding with the detailed design phase.

**Phase 4 Detailed Design**

The detailed design phase would be further informed by public input and a geotechnical investigation along the road allowance. GM BluePlan would assist the municipality in procuring a specialist to complete this task. At this phase, additional details would be included to bring the project design drawings to 90% complete, in preparation for construction. We see a potential for the structural design of retaining walls. GM BluePlan can provide this service in-house, if necessary. We do not believe these permanent features should be left to the contractor as “design by others”, as is sometimes the case. A “Class B” construction cost estimate would be prepared. At this phase, the project would be "shovel ready", in support of any grant application. GM BluePlan could assist in preparing grant applications, as requested.

**Phase 5 Agency Review**

The subject area is in the Niagara Escarpment planning area. During a recent project completed by GM BluePlan, the NEC noted that road reconstruction efforts may need to be identified as “essential infrastructure” by the NEC to be permitted. It is not clear what is considered by the NEC for their process. We recommend a meeting with an NEC planner at this stage.

Drainage is expected to be achieved mainly by roadside ditches and small drains. No storm sewer is anticipated and, therefore, no ECA application, or water quantity or quality provisions are expected to require approval from the MOECC.

**4.2 Methodology - Scope of Work**

The following provides a step-by-step approach to our intended project delivery. Agendas and Minutes will be prepared for all meetings noted.

**Phase 1 Project Initiation**

1. Project Team Meeting #1 – Project Initiation,
2. Collect and review background information,
3. Define purpose and refine scope of work,
4. Prepare materials for PIC#1,
5. Project Team Meeting #2 – Prepare for PIC#1,
6. Public Information Centre #1 – PIC#1

**Phase 2 Identify Alternatives**

1. Consider alternatives, options and constraints
2. Project Team Meeting #3 – Decision to proceed, or not
Phase 3 Preliminary Design
   ix) Coordinate legal survey,
   x) Complete topographic survey, and hydrology study
  xi) Prepare 60% complete design drawings,
  xii) Prepare Class C construction cost estimate,
   xiii) Project Team Meeting #4 – prepare for PIC#2
  xiv) Public Information Centre #2 – PIC#2

Phase 4 Detailed Design
   xv) Coordinate geotechnical investigation,
   xvi) Prepare 90% complete design drawings,
   xvii) Prepare Class B construction cost estimate,
   xviii) Project Team Meeting #5
  xix) Complete Design Report

Phase 5 Agency Review
   xx) Meet with NEC
   xxi) Council Meeting

We have not included background studies, additional to those identified herein, in this Scope of Work, since the need for additional studies is project-specific and will be developed through the process.
6. WORK PLAN & METHODOLOGY

6.1 PROJECT INITIATION MEETING

Once the project has been awarded, a project initiation meeting would be set up to further discuss the scope and project limits. This meeting will form the basis of all work that is completed. Any known areas of concern that need specific attention during the EA process will be discussed at this meeting to ensure all key components of the project are accounted for. The EA will follow the Municipal Class EA Planning and Design Process as outlined by the Municipal Engineers Association. A copy of Planning and Design Process can be found in Appendix D.

6.2 COLLECTION OF BACKGROUND INFORMATION

All existing background information that is in the possession of the Municipality of Northern Bruce Peninsula will be obtained for review. This information may include:

- Current design standards of the Municipality of Northern Bruce Peninsula;
- Any existing reports or studies dealing with Isthmus Bay Road;
- As-constructed and GIS drawings of the existing streets and underground infrastructure;
- Utility Locate Request

6.3 CLASS EA PHASE 1

Notice of Project letters shall be prepared, with location map, and project problem/opportunity identification to be circulated to reviewing agencies for initial notice and comments. Any meeting(s) shall be arranged if necessary. Agencies shall include, but not limited to the following:

- Ministry of Natural Resources
- Department of Fisheries & Oceans
- Ministry of Industry & Culture
- Niagara Escarpment Commission
- Bruce Trails Association
- Saugeen Ojibway Nations
- Metis Nation
- Community Groups and neighbouring landowners

During this time, the project file shall be set up. The first public notice of project shall be prepared, that shall be published in the local paper's and mailed to previously mentioned agencies, community groups and landowners for their comments to be received.

Such received comments shall be collected, summarized and evaluated. This detail shall be added to the project file that is recommended to be kept on either Northern Bruce Peninsula or WSP Canada Inc.'s website, to be available and acceptable to the public.

6.4 CLASS EA PHASE 2

Using previously obtained topographic information with some additional surveying to fill any information that is missing, alternative solutions will be identified. These include but are not limited to the following:

- Do Nothing
- Full Rural Cross Section
- Full Urban Cross Section
- Hybrid Rural and Urban Cross Sections
- Any other identified during Agency/ Public Consultation
Identify and confirm studies to detail the inventory of the natural, social and economic environment including identifying the impacts of such for each alternative and propose mitigation measures for these impacts.

These studies would be as follows:

- Archaeological Investigation
- Natural Heritage Assessment

Based on the information included in the RFP, we have assumed that no geotechnical investigations will be required as the report outlines the new pavement base to be used. If a geotechnical investigation is required, WSP will co-ordinate to obtain three quotes on behalf of the Municipality.

Preliminary design and cost estimates shall be prepared and reported for each previously identified alternative. A summary chart would be prepared for comparison purposes for each alternative that would include a study results brief. The summary chart will also outline the timelines to complete the work based on current levels of funding.

The first public meeting shall be scheduled by public notice and letters to agencies, community group(s), landowners and any person who responded to the first notification of project under Phase 1.

Based on the results of the consultation including previously mentioned studies, conceptual designs and cost estimates, possible preferred alternatives will be discussed and selected on a preliminary basis.

Based on our understanding of the project, and the proposed cost estimates from the RFP, we anticipate the project will remain as a Schedule 'B' EA under Roads Section 19 - Construction of New Culvert. If this is the case, we will issue a Notice of Completion.

If however, the project becomes a Schedule 'C' project the following outlines the work plan that will be undertaken.

### 6.5 CLASS EA PHASE 3

An evaluation of the alternatives shall be completed in the form of a summary chart/matrix for comparison in order to arrive at the preferred alternative. The evaluation will consider the comments received from the agencies, public and landowners as well as the study results and recommendations.

Public notification for a second public meeting to present the results of the process to date shall be scheduled. The alternative evaluations, study results, agency and public comments/replies shall be made available at this meeting including the reporting of the preferred alternative.

A follow-up meeting with the Northern Bruce Peninsula staff shall occur to report the results/comments of the public meeting in order to confirm the selection of the preferred alternative.

WSP shall submit to the approval agencies to confirm preliminary design of the preferred alternative.
6.6 CLASS EA PHASE 4

A report of this EA process shall be prepared and circulated for comments to each of the approval agencies and concerned community. Once comments are received, a final EA report shall be issued.

At all times through this EA process, a project file shall be maintained and made available to the public as this is recommended by the MOECC.

Lastly, a Final Notice of Study Completion shall be issued, circulated and published.