

M.E.A./C.E.O.1989

**AGREEMENT**

**FOR**

**PROFESSIONAL CONSULTING SERVICES**

**MEMORANDUM OF AGREEMENT dated the 28<sup>th</sup> day of March**

**A.D. 2003**

**-BETWEEN-**

**THE CORPORATION OF THE TOWN OF PELHAM**

Hereinafter called the "Client"

**THE PARTY OF THE FIRST PART**

**-AND-**

**EARTH TECH CANADA INC.**

Hereinafter called the "Consultant"

**THE PARTY OF THE SECOND PART**

**WHEREAS** the Client intends to reconstruct Canboro Road from Regional Road 24 to Haist Street, excluding the Fenwick urban area.

hereinafter called the "Project" and has requested the Consultant to furnish professional services in connection therewith;

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

## ARTICLE 1 - GENERAL CONDITIONS

### 1.1 Retainer

The Client hereby retains the services of the Consultant in connection with the Project and the Consultant hereby agrees to provide the services described herein under the general direction and control of the Client.

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

### 1.2 Services

The services to be provided by the Consultant and by the Client for the Project are set forth in Article 2 and such services as changed, altered or added to under Section 1.8 are hereinafter called the "Services".

### 1.3 Compensation

The client shall pay the Consultant in accordance with the provisions set forth in Article 3.

### 1.4 Staff and Methods

The Consultant shall use current state-of-the-art principles and shall skillfully and competently perform the Services and shall employ only skilled and competent staff who will be under the supervision of a senior member of the Consultant's staff.

### 1.5 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 Consultant for the Client may be used by the Client, for the Project herein described, including "as recorded" drawings. The Client has ownership of the drawings.

### 1.6 Patents

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

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 Consultant in connection with the Project and for no other purpose or project.

### 1.7 Records and Audit

- (a) In order to provide data for the calculation of fees on a time basis, the Consultant shall keep a detailed record of the hours worked by and salaries paid to his staff employed for the Project.

- (b) The Client may inspect and audit the books, payrolls, accounts and records of the Consultant 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 Consultant, when requested by the Client, shall provide copies of receipts with respect to any disbursements for which the Consultant claims payment under this Agreement.

1.8 Changes and Alterations and Additional Services

With the consent of the Consultant 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 Consultant shall be paid in accordance with Section 3.2.1 for such additional staff employed directly thereon, together with such expenses and disbursements as allowed under Section 3.2.4.

1.9 Suspension or Termination

The Client may at any time by notice in writing to the Consultant suspend or terminate the Services or any portion thereof at any stage of the undertaking. Upon receipt of such written notice, the Consultant shall perform no further Services other than those reasonably necessary to close out his Services. In such an event, the Consultant shall be entitled to payment in accordance with Section 3.2.1 for any of the Consultant's staff employed directly thereon together with such expenses and disbursements allowed under Section 3.2.4.

If the Consultant 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 Consultant to the date of such termination.

1.10 Indemnification

The Consultant 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 as a result of the negligence of the Consultant, his employees, officers or agents in the performance of this Agreement.

The Client agrees to hold harmless, indemnify and defend the Consultant from and against any and all claim, losses, damages, 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 negligence of the Consultant in the performance of consulting services to the Client within this project.

1.11 Insurance and Limit of Liability

The Client will accept the insurance coverage specified in this clause as the limit of liability of the Consultant.

(a) Comprehensive General Liability and Automobile Insurance.

The Insurance Coverage shall be \$1,000,000.00 for general liability and \$1,000,000.00 for automobile insurance. When requested the Consultant 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 \$1,000,000.00. When requested the Consultant shall provide the Client with proof of Professional Liability Insurance carried by the Consultant, and in accordance with APEO Act, 1984 and Regulations therein.

(c) Change in Coverage.

If the Client requests to have the amount of coverage increased or to obtain other special insurance for this Project then the Consultant shall endeavour forthwith to obtain such increased or special insurance at the Client's expense as a disbursement allowed under Section 3.2.4

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 Consultant until (60) days after written notice of such change or cancellations has been personally delivered to the Client.

1.12 Contracting for Construction

Neither the Consultant nor any person, firm or corporation associated or affiliated with or subsidiary to the Consultant shall tender for the construction of the Project, or have an interest either directly or indirectly in the construction of the Project.

1.13 Assignment

Neither party may assign this Agreement without the prior consent in writing of the other.

1.14 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.

1.15 Approval by Other Authorities

Unless otherwise provided in this Agreement, where the work of the Consultant 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 Consultant, 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 Consultant with such other authority, department of government or agency.

1.16 Principals and Executives

The use of Principals and Executives on a time basis by the Consultant, will be in accordance with Section 1.23.1 (c).

1.17 Specialized Services

The Consultant may engage others 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, plus the cost of the additional insurance incurred by the Consultant for the specialized services.

1.18 Inspection

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 Consultant agrees to obtain the consent of the Client before publishing or issuing any detailed information regarding the Project.

1.20 Confidential Data

The Consultant 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. No such information shall be used by the Consultant on any other project without the approval in writing of the Client.

1.21 Arbitration

- (a) Any dispute, difference or disagreement between the parties hereto in relation to the Agreement may, with the consent of both parties, be referred to arbitration.
- (b) No person shall be appointed to act as arbitrator who is in any way interested, financially or otherwise, in the conduct of the work on the Project or in the business or other affairs of either the Client or the Consultant.
- (c) The award of the arbitrator shall be final and binding upon the parties.
- (d) The provisions of The Arbitrations Act, R.S.O., 1980, Chapter 25, as amended shall apply.

1.22 Time

The Consultant shall perform the Services expeditiously to meet the requirements of the Client and shall complete any portion or portions of the Services in such order as the Client may require and the Client shall have the right to take possession of and use any completed or partially completed portions of the Work notwithstanding any provisions expressed or implied to the contrary.

The Client shall give due consideration to all designs, drawings, plans, specifications, reports, tenders, proposals and other information submitted by the Consultant, 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 Consultant.

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, the Consultant shall within fourteen days of the execution of this Agreement 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 salary ranges of staff and/or hourly rate ranges for Principals and Executives, for which the Consultant will seek payment on a time basis. The Consultant 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 Consultant's staff who is to be the liaison person between the Consultant and the Client.

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

The Consultant will require written approval, from the Client for any of the following changes:

- (a) Any increase in the estimated fees beyond those approved under Section 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 salary ranges of the staff provided under Subsection 1.23.1 (c).

1.23.3 Monthly Reporting of Progress

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

1.24 Additional Conditions

None.

## ARTICLE 2 –SERVICES

For this agreement, the Consultant's proposal, attached in Appendix A, is used to define services to be provided to the client. Delivery of the services defined in the proposal are as follows:

### 2.1 Consultant's Services for Detailed Design

The Services to be provided by the Consultant in the execution of the design of the Project shall include:

1. Preparation and recommendation of alternative concepts and designs considering geometrics, property, cost and environmental features.
2. Development and recommendation of horizontal and vertical alignments for the Project on a plan scale acceptable to the Client.
3. Proposed typical sections for the roadway, including number of lanes, median (if required), turning lanes, rights-of-way, bus bays, entrances, intersecting roads and other cross section elements.
4. Preparation of a design criteria with due consideration being given to such ancillary features as illumination, signs, signals, fences, landscaping and zone painting.
5. Preparation of a preliminary design report which outlines nature of project, a summary of the principal design standards, an outline cost estimate and the extent of services and recommendations.
6. Existing soils data shall be assembled and evaluated. On the basis of this evaluation, a preliminary soils investigation program shall be carried out to obtain sufficient data to permit appropriate decisions to be made during the preliminary design stage. Terms of Reference shall be prepared for the Geotechnical Consultant. The Client shall hire the Geotechnical Consultant directly.
7. Preparation and distribution of minutes of Project meetings.
8. Correspondence with governmental ministries, agencies and other public authorities for design information.
9. General drainage requirements.
10. Preliminary property and right-of-way requirements.
11. Major utility installations and adjustments.
12. Expertise required for the design of all structures and facilities to serve the best interests of the public, with due regard for environmental concerns, capital cost and operating efficiency in accordance with current state of the art and acceptable standards established by the Client and regulatory authorities.
13. The preparation and submission to the Client of a field inspection report setting out the salient features of the Work, and the Consultant's proposed design methods in consideration of these features.

14. Preliminary site investigation to inspect the topographical features and to obtain information which will facilitate the choice of the most suitable structure or structures.
15. Preparation of preliminary sketch plans and quantity estimates of alternative designs which shall be submitted to the Client for consideration and approval before proceeding with the actual detailed design of the Project.
16. Utilizing field survey work (completed by others) required after the design criteria and functional alignment have been established, which shall include all survey work necessary for the estimating of quantities, the detailed setting of alignment and grade to fit controlling natural and artificial topographic and underground features, the design of culverts, ditches, drains and storm sewers and the positioning of all appurtenances associated with the construction of the Project.
17. Drainage studies and the preparation of detailed design drawings and specifications for culverts and all necessary drainage works.
18. A preliminary sketch plan showing the principal features and geometrics of any proposed structure or structures, which shall be submitted in duplicate to the Client for his approval or review before final detailed drawings are begun.
19. Investigation and confirmation of the present location of all above ground utilities, updating of the Client's plans and profiles to show the present location and the proposed location, and preparation of additional drawings required for alternative utility relocation as required by the Client subject to clause 7 of Section 2.2. Underground utilities are to be indicated on the plans and profiles in accordance with information submitted by the respective utility.
20. The preparation and submission of preliminary drawings, investigations, and recommendations to the Client, on such alternatives or modifications to the Project that the Consultant in his professional judgement, deems advantageous to the Client.
21. The preparation of appropriate plans showing any lands or interests in land required for the Project.
22. Advising the Client of the need to seek permission to enter private lands for investigation purposes.
23. Participation in a reasonable number of meetings for informative, negotiative or presentative purposes with the Client in connection with the Services provided under this Agreement, after the establishment of the design criteria and functional alignment.
24. The preparation of contract documents for the Project including the detailed construction drawings, tender quantity forms, material lists, specifications and information to bidders.
25. The preparation of detailed quantity and cost estimates, sundry engineering and materials.



26. The provision of twenty (20) complete sets of tendering documents and drawings.
27. Incorporation into the contract document package of design drawings and specifications of work designed by others, when required.
28. The submission of plans, specifications, schedules, and applications for approval to the client and to appropriate authorities, as required. Attend meetings at the offices of these public authorities to discuss designs and to provide explanations for the purpose of furthering the applications towards approval.
29. The preparation of special applications or reports to assist the client in obtaining subsidy payments, grants and special financing from senior levels of government.
30. Advice, consultation and assistance to the Client in the advertising, receiving and evaluation of bids, and awarding of a contract for construction.

## 2.2 Client's Services for Detailed Design

The Client shall provide the Consultant with the following services, notwithstanding that, should the Client be unable to provide any of the services hereunder, services under (1) may be assigned to the Consultant under a 'Design Services Agreement', and other services herein under Section 1.08.

1. Available Functional Study or Predesign Investigation undertaken for the Work.
2. Access to and the use of existing plans, profiles, utility information, legal documents and correspondence relevant to the Work.
3. Traffic information.
4. Available Traffic or Transportation Study Reports of the area.
5. Access to and, where necessary, copies of existing plans, profiles or other topographic information showing or pertaining to existing conditions within the Project area.
6. Registered land plans, legal documents and surveys, where necessary, defining the property limits of existing rights-of-way and other parcels of land affected by the Project, and as required in the acquisition of property and lands for the Project.
7. Specimen contract documents for the guidance of the Consultant in the design of the Project to the standards required by the Client.
8. General direction of the Consultant in the provision of the services.
9. Soils, foundation and hydrological reports for road works, where required, for the proper design of the Project.
10. Retain Geotechnical Consultant for the Project.

11. Any information regarding utilities necessary for the preparation of the plans referred to in Section 2.1 in the possession of the Client.
12. Arrange and make provision for the Consultant's entry and ready access to property (public and private) as well as to the site of the Project, as necessary to enable him to perform his services.
13. Designate in writing an individual to act as his Representative who will transmit instructions to and receive information from the Consultant.

The Consultant shall be entitled to rely upon the information, direction and approvals provided by the Client pursuant to Clauses 1 through 13 hereof, inclusive, as being accurate in the performance of the consultant's services under this agreement.

### 2.3 Consultant's Services for Construction Administration

The Consultant, on behalf of the Client, provides a review of the Project during construction. The Contractor is responsible for discharging his obligations under the terms and conditions of the construction contract. The performance of the contract is not the Consultant's responsibility nor are his review services rendered for the Contractor's benefit. The Contractor is responsible for the quality of the work. It is understood that only work which has actually been seen during examination of representative samples can be said to have been appraised, and comments on the balance of the work are assumptions based upon extrapolation.

The extent of the Consultant's duties for general review are as follows:

#### **a) Administrative Services**

1. Consultation in the tendering of a contract for the Project, the comparative analysis of bids and recommendations thereon, and the preparation of contract documents for execution.
2. The review, modification and approval of the Contractor's construction schedule, the processing of progress and final payment certificates for the work, and the preparation and submission of work progress reports to the Client at such time and in such form and detail as the client may require.
3. The review and checking of proposed construction methods as warranted, to ensure that the Contractor's drawings and methods comply with the design requirements for the Project.
4. Consideration and recommendation in respect to alternatives of construction methods or material proposed by the contractor, and preparation of change orders.
5. Review shop drawings submitted to the degree necessary to ensure they conform with the design requirements and contract documents.
6. Recommend on the validity of charges for additions or deletions and recommend on the issue of change orders.

#### **b) Field Administration**

1. Direction of the Consultant's field staff, and review of the Contractor's work to ensure compliance with the plans and specifications.
2. Calculation and recording of quantities, and the preparation of progress and final payment certificates prescribed by the Client, together with the compilation of such survey notes, diaries, records and reports substantiating such certificates during construction and on completion of the work.
3. Arranging for testing materials, by the Town's Geotechnical Consultant, of materials supplied by the Contractor for incorporation in the work, and the review of test results and judgement of acceptability.
4. The assignment of the necessary field staff to perform such field operations necessary in the provision of the foregoing construction administration services.
5. Investigating, reporting and recommending on unusual circumstances which may arise during construction.
6. Carrying out final review at the conclusion of the construction contract, at the end of the maintenance period and as part of the acceptance program of the Client.
7. The preparation and submission to the Client of one complete set of reproducible, revised contract drawings showing the 'as recorded' Project, to the extent requested by the Client and to the extent possible from information provided by the Contractor or otherwise patently visible. Consultant is not responsible for the accuracy or completeness of field change information supplied (or to have been supplied) by persons not in the Consultant's employ.

#### 2.4 Client's Services for Construction Administration

The Client shall provide the Consultant with the following Services notwithstanding that, should the Client be unable to provide any of the Services hereunder, they may be assigned to the Consultant under Section 1.08.

1. Supplementary factors governing the Contractor's operations, such as by-laws, property considerations, maintenance of public services and traffic.
2. General direction of the Consultant in the provision of the services.
3. Arrange and make provision for the Consultant's entry and ready access to property (public and private) as well as to the site of the Work, as necessary to enable him to perform his Services.
4. Designate in writing an individual to act as his Representative, who will transmit instructions to, and receive information from, the Consultant.
5. Retain a Geotechnical Consultant to test materials for acceptability according to the specifications.

The Consultant shall be entitled to rely upon the information, direction and approvals provided by the Client pursuant to Clauses 1 through 5 hereof, inclusive, as being accurate, in the performance of the Consultant's Services under this Agreement.

### ARTICLE 3 - FEES AND DISBURSEMENTS

#### 3.1 Definitions

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

(a) Payroll Cost

Payroll Cost is defined as hourly salary plus payroll burden.

- (i) The following formula shall be used to calculate the hourly salary for the billing purposes. Hourly salary equals:

$$\frac{\text{Annual Salary}}{\text{Hours per week} \times 52}$$

- (ii) Payroll burden equals fringe benefits expressed as a percentage of salary that provides for health and medical insurance, group life and disability insurance, company and Canada pension employer contribution, Workers' Compensation and Unemployment Insurance, but excludes bonuses or profit sharing. For the purposes of this agreement payroll burden is 36%.

(b) Cost of the Work

- (i) The "Cost of the Work" shall mean the total 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 Consultant 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 any 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 material or equipment is furnished by or on behalf of the Client, the fair market value of such material 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 Consultant, the Client's engineering and office expenses, or cost of land.

(c) 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

3.2.1 Fees Calculated on a Time Basis

3.2.1.1 The Client shall pay the Consultant a fee, calculated on a time basis, for that part of the Services described in Article 2. Fees on a time basis shall be based on the rates indicated in Appendix B. For consultant staff not identified on Appendix B, the following shall apply:

- (a) Principals and Executives on normal assignments \$185 per hour. This rate will be reviewed annually and adjusted accordingly.
- (b) Staff on normal assignments - Payroll Cost plus 100%.
- (c) Principals, Executives and staff rendering individual services on assignments for which they are eminently qualified and for which they require little or no assistance including providing expert testimony and attendance at hearings or courts ... 50% more than the rates specified above.
- (d) Services During Construction

- (i) For all services, except for staff full-time continuously on site:

Principals and Executives  
on Normal assignments .....\$185 per hour.

This rate will be reviewed annually and adjusted accordingly.

Other Staff: Payroll Cost Plus 100%.

- (ii) For site staff working full time continuously.... Payroll Cost plus 70%.

3.2.1.2 Time Expended

All time expended on the assignment, whether in the Consultant's office, at the Client's premises, or elsewhere, and including travel time, shall be chargeable. This also includes, but is not limited to, stenographic and clerical staff engaged in the preparation of documents such as reports and specifications.

### 3.2.3 Computer Services

Computer services, except where a computer is used for design under the percentage fee scale or for the Consultant's normal office administration, shall be considered a reimbursable expense.

### 3.2.4 Reimbursable Expenses

In addition to the fee, the Consultant shall be reimbursed at cost plus an administrative charge of 5%, plus the cost of the additional insurance incurred by the Consultant, for all expenses properly incurred by him in connection with the project, including but not limited to: vehicle use charges, travelling and living expenses, long distance telephone charges, fax charges, printing and reproductions, progress photography, advertising for tenders, special delivery and express charges, overtime premium cost, and the cost of providing and maintaining site offices, supplies and equipment, chemical and physical tests.

## 3.3 Payment

### 3.3.1 Fees Calculated on a Time Basis

The Consultant shall submit an invoice to the Client for all Services completed in the immediately preceding month. Interest at the annual rate of 15.0 percent (1.2 percent monthly) will be paid on the total outstanding unpaid balance commencing 30 days after the Client has received the Consultant's invoice.



IN WITNESS THEREOF the parties hereto have caused to be executed those presents by their officers properly authorized in that behalf on the day and year first above written.

SIGNED, SEALED AND DELIVERED

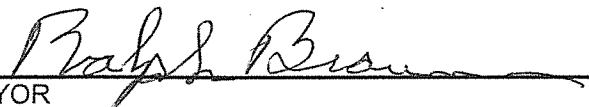
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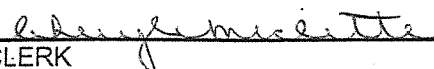
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EARTH TECH CANADA INC.

  
\_\_\_\_\_, Ron Verney, General Manager  
  
\_\_\_\_\_, R.F. Andrews, Senior VP  
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THE CORPORATION OF THE TOWN OF PELHAM

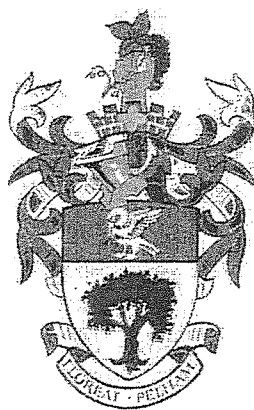
  
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MAYOR

  
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CLERK

## **Appendix A**

### **Proposal for Engineering Services for the Reconstruction of Canboro Road from Regional Road 24 to Haist Street**





Proposal for Engineering Services:

## **Reconstruction of Canboro Road from Regional Road 24 to Haist Street**

Prepared by:  
Earth Tech Inc.  
80 King Street, 2<sup>nd</sup> Floor  
Corbloc Building  
St. Catharines, Ontario  
L2R 7G1

March 2003



A **tyco** INTERNATIONAL LTD. COMPANY



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Figure 1 Project Team Structure

Figure 2 Work Schedule

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## 1. INTRODUCTION

This proposal has been prepared in response to the Town of Pelham's request to provide engineering services associated with the detailed design, contract preparation and contract administration for the reconstruction of Canboro Road from Regional Road 24 to Haist Street, with the exception of the section through the Fenwick urban area, in the Town Pelham. We have reviewed the project in the field. Earth Tech (ET) has successfully completed similar assignments for the Town, Niagara Region, and other local municipalities, and has the staff and expertise to complete this project on time and within budget.

## 2. OUR UNDERSTANDING

The Town would like to reconstruct the road as it is in poor shape, including structural deficiencies, lane width restrictions, and drainage problems (in Ridgeville). The Town is considering various methods of reconstruction depending on the problem(s) with the roadway and the location.

The road is presently a rural arterial cross-section, however, the cross-section in many areas is substandard. In Ridgeville, the road will be constructed to an urban cross-section. The road may be designated a bicycle route on the Region's Bike Trail System. This will be confirmed in the preliminary design stage of the project.

The CP Rail crossing, west of Fenwick, will not be reconstructed (the reconstruction of the road will be brought up to the edge of the outside rails), but CP Rail will be contacted to discuss this project in the preliminary design and construction stages to inform them of the project and construction schedule.

Included in this project are new sanitary sewers required from Vinemount Drive to the Fonthill urban boundary with the outlet into the Oakridge Boulevard. Storm sewers in the Ridgeville area will be required in association with the planned urban cross-section.

### 2.1. Key Issues

Based on our knowledge of the study area, the Town's design requirements, and the proposed schedule, we have identified several key issues that must be address during the detailed design, including:

- Defining the Project – There are different reconstruction and design approaches that will be utilized in this project. They include full reconstruction requiring full detail design and resurface, pulverize and/or milling of the existing road requiring minimal detailed design. We have identified the areas where these two techniques will be used and there are some areas where we will have to do further investigation to determine the construction/design requirements. To confirm the method of



construction/design, a Preliminary Design Brief will be completed. The following list identifies areas where the construction/design method has been determined, as well as implemented and the areas where the method is yet to be determined:

Area	Location		Length (m)	Method
	From	To		
1	Regional Road 24	Farr Street	1200	Resurface
2	Farr Street	Fenwick Urban Service Area (west)	500	Pulverize/Pave
3	Fenwick Urban Service Area (east)	Church Street	300	Reconstruction
4	Church Street	Garner Street	900	Mill/Pave
5	Garner Street	Balfour Road	150	Reconstruction
6	Balfour Road	Cream Street	850	To Be Determined
7	Cream Street	Centre Street	850	To Be Determined
8	Centre Street	Effingham Road	1600	To Be Determined
8A	Ridgeville		200	Reconstruction
9	Effingham Road	Haist Street	1350	To Be Determined
9A	Haist Street Intersection			Reconstruction

- Design/Construction Schedule – The Town has established an extremely aggressive project schedule. To meet a mid November construction completion, we will commit our senior project manager, project engineer, and designers to this project. We will also need the cooperation of the Town, and utility companies. In many instances, decisions and review will need to be provided within 48 hours. We will assign a Project Manager who will track, monitor and follow up on all requests for information to ensure timely receipt of requested information. We will also hold bi-weekly meetings with all key stakeholders to provide schedule updates and as much advance notice as possible. We have set the project up into two contracts to ensure completion by mid November. Two experienced design and contract administration teams will be involved through the project.
- Construction Staging – Widening the roadway platform (where possible to 8.0 metres) will be difficult while maintaining through traffic. A traffic control plan will be required from the contractors for each contract. This is important for the residents in the area as well as people utilizing the road as a transportation corridor.



### 3. OUR APPROACH

To meet the project deadline, the detailed design will need to be fast tracked. Fast tracking will introduce a considerable amount of risk for the Town. To mitigate this risk, Earth Tech has identified key factors that will ensure that the project is delivered on time and on budget, including:

- An experienced Project Manager;
- A compact Project Team, using primarily in-house resources;
- Sophisticated project management tools;
- A comprehensive quality control program;
- Regular project meetings; and,
- Utilizing previous engineering data.

Earth Tech is proposing that Mark Swan, P.Eng. will act as the Project Manager for the duration of the project. Mark is an experienced Senior Project Managers with over 16 years of municipal and MTO design road project experience. He has successfully completed large-scale detailed designs for various clients and has worked closely with Town staff for many years. Kelly Walsh, P.Eng., will lead the design team on this project. Kelly will be supported from our Transportation Design division including Mr. Bob Koziol, P.Eng. who will provide QA/QC throughout the project. Bob is familiar with the design standards throughout the Niagara Region, as he is currently working on the Montrose Road and Woodlawn Road design projects for the Region. Neil Johnston, C.E.T., will lead one design team while Salim Alibhai, P.Eng. will lead the second design team. The teams will be supported as required by staff in our St. Catharines and Toronto office to ensure the project meets the Town's schedule.

To maintain control of the project schedule, we are proposing to use a compact Project Team. This project will demand a commitment to the timely completion of interim deliverables. Keeping a small Project Team promotes internal "ownership" and accountability.

Earth Tech will provide the Town with a spreadsheet, updated monthly, outlining the current construction cost estimate, broken down by major items and by responsible parties' costs. This will allow all responsible parties to budget appropriately for this project.

Time will be of the essence on this project. There will not be time to re-do work: it must be done right the first time. Earth Tech will implement a robust quality control (QC) plan, specifically created for the Canboro Road project. The QC plan will be built upon the foundation of our Generic and Specialty QC



plans that have already been prepared. Our proposed QC Auditor, Bob Koziol, P.Eng. is Earth Tech's Transportation Senior Project Manager. He will conduct independent milestone reviews, as well as monitoring the QC plan for compliance. We expect the Town to provide project guidance, not design checking services.

It is our experience that regular progress meetings are a very important tool to ensure that compressed schedules are maintained. We will hold bi-weekly progress meetings during the detail design. The meetings act as "mini-milestones" and help to focus the Project Team members on meeting their goals and objectives throughout the design process. They are also useful in allowing for an exchange of information and study direction going forward.

### 3.1. Work Plan

The detailed design of the recommended improvements will be completed including the geometric design of Canboro Road, drainage design, landscaping, sanitary/storm sewer design and approvals, construction staging plans. A Preliminary Design Brief will be undertaken to set out guidelines for the road cross-sections to be used in various areas, as well as identifying drainage issues. The Town will review this report before detailed design begins. Detailed design will be based on the preliminary design work. Design criteria will be prepared as part of the Preliminary Design Brief and will be provided to the design team. All work will be carried out in accordance with the latest Town and Region procedures and guidelines and Ontario Provincial Standards and Specifications.

During the detail design, we will undertake the following:

- Confirm typical sections;
- Complete the detailed design and contract drawings; including:
  - Plans, profiles, typical sections and details in areas requiring this level of detail, as outlined in the Preliminary Design Report;
  - Typical sections and details will be prepared for areas requiring only resurfacing, pulverizing or milling;
  - Design storm drainage option, cross-sections, grading limits and associated plans illustrating property requirements;
  - Design storm and sanitary sewers, prepare approval applications; and
  - Electronic Form of Tender in Niagara Peninsula contract format.



- Design and implement construction staging. One lane of traffic will be maintained during construction. Restrictions will be placed on Contractor regarding lane closures. Construction Staging drawings shall be part of the Contract Package based on Town and Region of Niagara Standards and Book 7 of the Ontario Traffic Manual. The need for limited roadway over-building on the boulevards shall be investigated and proposed to the Town as necessary;
- Review preliminary drainage design and confirm the catchbasin location, culvert replacements, ditching and incorporate the drainage design with the roadway design;
- Confirm utility relocation requirements and finalize the relocation costs and schedule;
- Determine traffic operations requirements including work staging, traffic flows, parking restrictions, pedestrian accessibility, emergency services, etc. for the duration of the construction;
- Circulate final drawings for mark-ups to all internal and external stakeholders for comments. Incorporate their inputs on the Contract Drawings;
- Prepare Form of Tender and Specifications and complete the documents required for tendering for the two project sections;
- Submissions for Town Review will be prepared at the following milestones: Preliminary Design Brief/Criteria, sewer applications for MOE, approvals, 60% completion, 90% completion, and prior to tendering;
- Prepare and present final tender documents to the Town in digital format and hard copy. The final documents will include the Niagara Peninsula general specifications. One set of hardcopy (mylar) drawings signed by a Professional Engineer and, an unbound hardcopy and electronic version of the documents will be provided to the Town. The unbound Schedule of Item Quantities and Unit Prices will be submitted in hardcopy and electronic format. An electronic copy of the drawings (Auto CAD 2000 format) will also be submitted. Cross-sections illustrating the existing and proposed roadway will be prepared and submitted in hardcopy and electronic (Auto CAD) formats;
- Provide a detailed cost estimate (Engineer's estimate) monthly and on completion of the Contract Documents;
- Review and respond to Contractors' queries during the tender stage;
- Attend bi-weekly meetings with Town Project Staff, prepare and distribute minutes of meetings.
- Submit drawings to the Town for Review at 60% and 90% complete stages. Five business days for review time will be allowed for the Town.



- Incorporate all comments from the Town;
- Attend meetings with and obtain all approvals from utilities;
- Obtain all necessary approvals;
- Review final drawings with Region staff at a Design Turnover meeting;
- Tender advisory services include attendance at tender opening, tender review and recommendations on project awards;
- Pre-construction services including meeting, pre-construction photos and traffic control plan review. Coordination of utilities if relocation of plant is required;
- Contract administration services including bi-weekly site meetings including meeting minute preparation, preparation of payment certificates, responding to questions from the contractor and public, and utility coordination if plant cannot be move before construction begins;
- Full-time field review of construction works totaling 150 working days for the two projects; and
- Preparation of record drawings and finalize all construction documentation.

Maintenance reviews are not included in our fees and will be invoiced on a time plus expenses basis.

#### 4. PROJECT TEAM

**Mark Swan, P.Eng.**, will act as Earth Tech's Project Manager throughout the project's duration. He has extensive experience in managing the detailed design of large scale, multi-disciplinary roadway projects.

**Kelly Walsh, P.Eng.**, will lead the design team and has successfully completed detailed designs of road projects for the Regional Municipality of Niagara, MTO and various local municipalities.

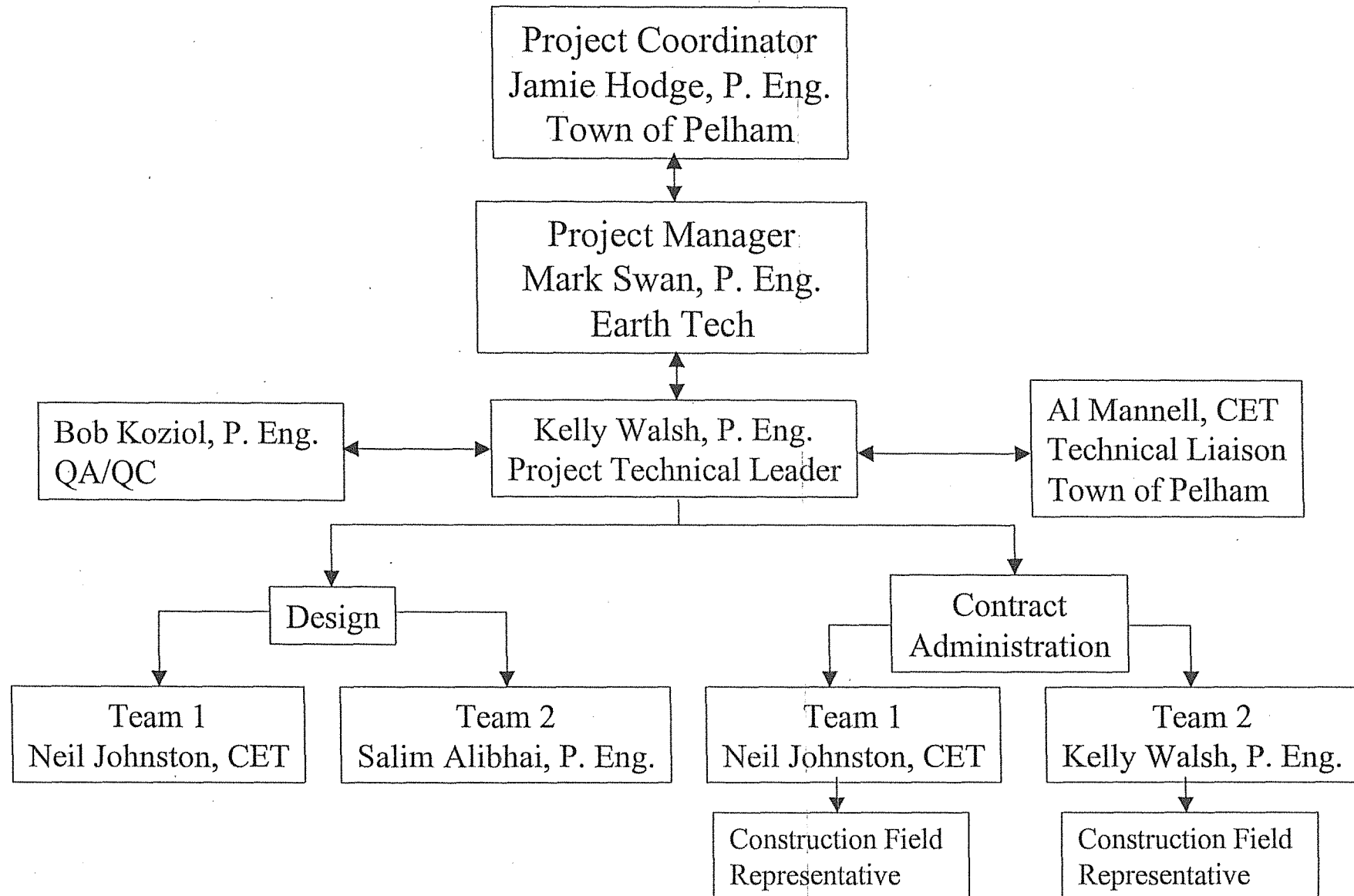
Figure 1 outlines our project team.

#### 5. PROJECT MANAGEMENT

We have designated our Transportation Senior Project Manager, **Bob Koziol, P.Eng.**, to act as QA/QC Manager. He will independently and personally review all deliverables before they are submitted to the Town. He will be copied on all correspondence and he will attend our bi-weekly internal progress meetings. As Project Manager, **Mark Swan, P.Eng.** will provide guidance on design as well as budget and schedule issues.



**Town of Pelham  
Canboro Road Reconstruction  
RR 24 to Haist Street**





As illustrated in Figure 2, ET will use MS Project to schedule work activities. The schedule will be updated bi-weekly and reviewed at the Project Team meetings. We will also provide the Town with Current Activity Reports and Overview Reports. Additional resources from our complement of over 60 transportation design staff will be brought on board, if needed, to meet the project deadlines.

## 6. ENGINEERING FEES

We have carefully reviewed the project and confirm that our team of skilled technical staff will provide a timely, cost effective and practical solution for this project. Our team consists of a group of professionals all with documented reputations and extensive knowledge of the Town.

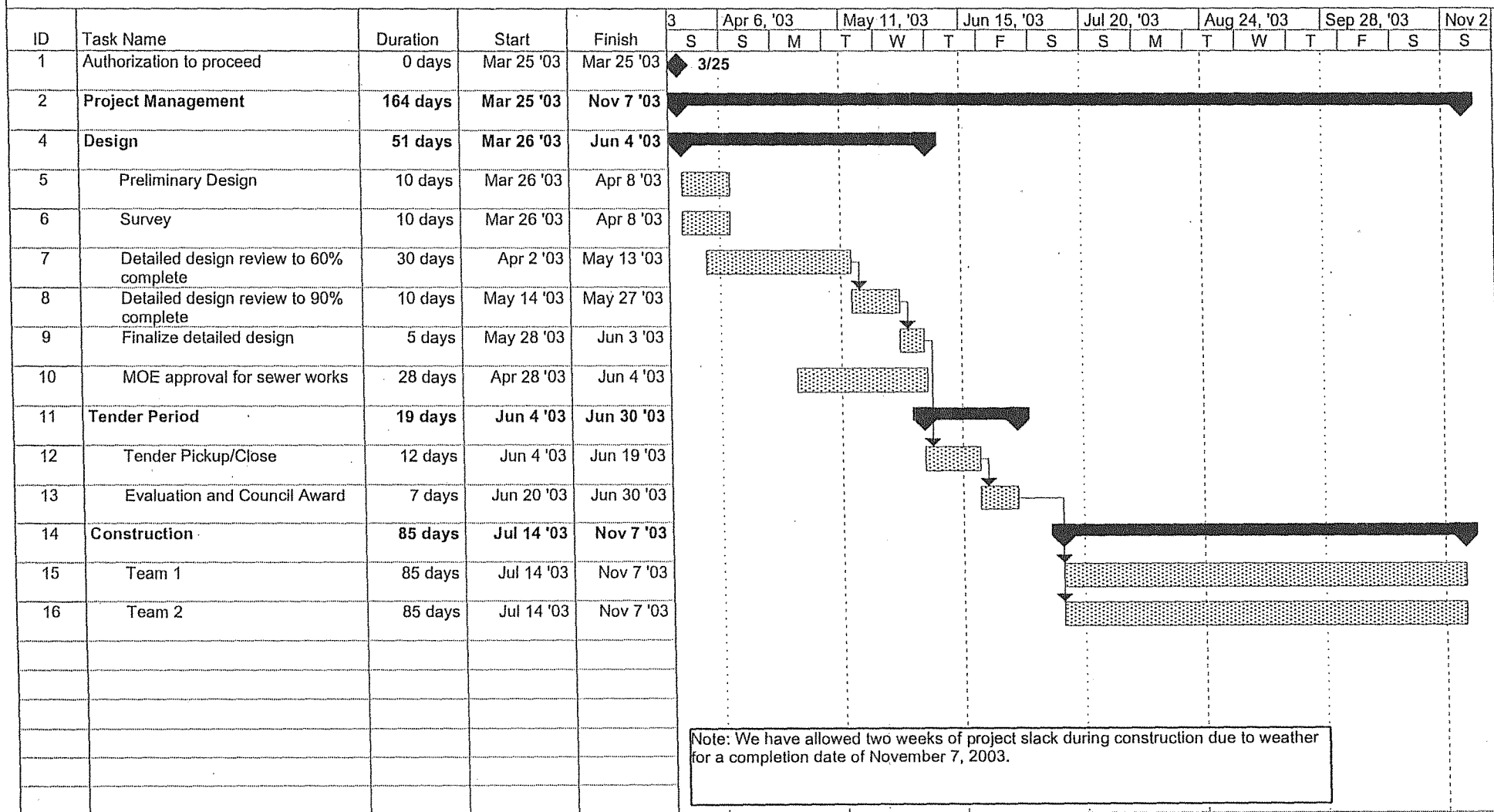
This proposal briefly specifies the responsibilities of each team member, explains our understanding of the scope of work, and includes an outline for our work program for the project. It is important to note that our proposal contains confidential information and should be treated as such.

We have attached the Cost Summary Table identifying project costs including our fees, estimated construction cost, surveying costs and geotechnical services. Hourly rates for key team members are as follows:

Mark Swan	Senior Project Manager	\$105/hour
Kelly Walsh	Project Technical Leader	\$90/hour
Neil Johnston	Team Leader – Design/Conad	\$90/hour
Salim Alibhai	Team Leader – Design	\$90/hour
Bob Koziol	QA/QC	\$120/hour
Technical Support Staff		\$65-75/hour
Senior Field Rep		\$56/hour
Field Rep		\$52/hour

Our fee estimate to complete a Preliminary Design Brief, detailed design for two tender packages, tender, contract administration, full-time field review of two project teams based on a combined total of 150 working days and preparation of record documents is \$182,000 plus G.S.T., including expenses. Our fee estimate is based on the level of effort for design of the various road sections outlined in Section 2.1.

**Figure 2.**  
**Town of Pelham**  
**Canboro Road Reconstruction RR 24 to Haist Street**



Project: Canboro Road Reconstruction  
Date: Mar 12 '03

Task



Milestone



External Tasks



Split



Summary



External Milestone



Progress



Project Summary



Deadline





**Canboro Road Reconstruction  
Cost Summary Table**

Construction Cost Estimate	\$ 1,792,000
Topographic Survey	\$ 18,000
Geotechnical Investigation	\$ 5,000
Geotechnical Testing	\$ 16,000
Engineering (Earth Tech)	\$ 182,000
<b>Subtotal</b>	<b>\$ 2,013,000</b>
<b>Contingencies (5%)</b>	<b>\$ 101,000</b>
<b>Total Project</b>	<b>\$ 2,114,000</b>

Note: These are budget estimates for construction, survey and geotechnical services.



Thank you for the opportunity to work on this project. If you have any questions on this proposal, please call me at your convenience.

Yours very truly,

Earth Tech Inc.

Mark Swan, P.Eng.  
Senior Project Manager

**Appendix B**

**Earth Tech Canada Inc.**  
**Project Team and Rate Schedule**

Team Member	Title	Rate (per hour)
Mark Swan	Senior Project Manager	\$105
Kelly Walsh	Project Technical Leader	\$90
Neil Johnston	Team Leader – Design/Conad	\$90
Salim Alibhai	Team Leader – Design	\$90
Bob Koziol	QA/QC	\$120
Technical Support Staff		\$65-75
Senior Field Rep		\$56
Field Rep		\$52