

ITEM	8
MANAGER'S REPORT NO.	46
COUNCIL MEETING	July 5/76

Re: PROPOSED DEVELOPMENT OF MUNICIPAL LANDS
STILL CREEK AVENUE

Following is a report from the Municipal Engineer regarding a proposal for engineering services relative to development of land for the eventual relocation of the Municipal Service Center.

RECOMMENDATION:

1. THAT an Agreement be entered into with Golder, Brawner and Associates Ltd. to provide engineering services for monitoring and supervising the filling operation to be undertaken at the end of Still Creek Avenue west of Douglas Road, in accordance with the proposal dated 3 May, 1976.

* * * *

29 June, 1976

TO: MUNICIPAL MANAGER
FROM: MUNICIPAL ENGINEER
SUBJECT: PROPOSED DEVELOPMENT OF MUNICIPAL LANDS
STILL CREEK AVENUE

Funds have been provided in the 1975 and 1976 Capital Budgets for the purpose of preloading and site preparation on Municipal property at the end of Still Creek Avenue west of Douglas Road to facilitate the eventual relocation of the Municipal Service Centre.

Golder, Brawner and Associates Ltd. were retained in 1975 to prepare a report on soil investigation and development feasibility study. Due to the nature of the soil conditions it is necessary that preload construction techniques, together with the use of lightweight fills, be utilized to accommodate settlements. It is essential that the filling procedures be closely monitored in order to regulate settlements and to ensure only acceptable fill materials are received. To this end Golder, Brawner and Associates Ltd. were invited to submit a proposal to provide engineering services for monitoring and supervising the filling operation. The proposal as submitted by Golder, Brawner is attached. Golder, Brawner were selected because of their previous work on this project and because of their particular knowledge and expertise in this field, most notably in the Central Valley peat lands of Burnaby.

RECOMMENDATION:

THAT an Agreement be entered into with Golder, Brawner and Associates Ltd. to provide engineering services for monitoring and supervising the filling operation to be undertaken at the end of Still Creek Avenue west of Douglas Road, in accordance with the proposal dated 3 May, 1976.


MUNICIPAL ENGINEER

WCS:cmg

Attch.

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Golder Associates
CONSULTING GEOTECHNICAL ENGINEERS

E/76/564

May 3, 1976

Corporation of Burnaby,
Engineering Department,
4949 Canada Way,
Burnaby, B.C.

ATTENTION: Mr. W.C. Sinclair, P. Eng.
Construction Engineer

Re: Proposed Still Creek
Municipal Land Development

Dear Sirs:

Golder Brawner & Associates Ltd. are pleased to submit our proposal to carry out an engineering and economic evaluation of the proposed development of the Still Creek Avenue municipal lands and to provide engineering assistance and recommendations in the preparation of documents for bidding purposes. Upon selection of the type and method of development, we will provide additional detailed recommendations concerning the geotechnical aspects of design and construction, and on site supervision as required.

The proposed development site covers an area of some 20 acres which is bounded to the north by the Great Northern Railway right-of-way and to the west by the B.C. Hydro right-of-way. Still Creek covers the south extremity of the site while the proposed extension of Still Creek Avenue will divide the site into two approximately equal portions.

We understand that the site is to be developed to provide an initial stock pile and storage area and, subsequently, municipal maintenance facilities.

The results of a site investigation (our report V74261, dated February, 1975) shows the site is underlain by an extensive deposit of soft fibrous and amorphous organic peat which varies in thickness from 10 ft. to 15 ft. The peat is underlain by a soft clayey silt stratum which extends to depths varying from 22 ft. to in excess of 45 ft. below ground surface and is followed by dense sandy to silty alluvium or glacial drift.

GOLDER, BRAWNER & ASSOCIATES LTD., 224 WEST 8th AVE., VANCOUVER, B.C., V5Y 1N5 CANADA • PHONE: (604) 879-9266 • TELEX: 04-508800

SOIL MECHANICS - FOUNDATIONS - GEOTECHNICAL SURVEY - EARTH DAMS - LABORATORIES - ROCK SLOPE STABILITY
PAVEMENT EVALUATION - SOIL STABILIZATION - AIR PHOTO INTERPRETATION

VANCOUVER - CALGARY - KAMLOOP - TORONTO - SALT LAKE - GRAND BUREAU - CHICAGO - SEATTLE - LONDON - EDINBURGH - BOSTON - MELBOURNE - SYDNEY

RECEIVED IN
ENGINEERING DEPT.

MAY 05 1976

REFER TO	NOTED	DATE
W.S. 6/2		
W.M.R. 8/2		
G.C.M. 1/1		
V.K. 1/1		
E.E.O. 8/2		

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The ground water level across the site is controlled by Still Creek, which flows within the peat deposit and fluctuates seasonably within some 4 ft. of existing ground surface.

Stage I

We propose to carry out a detailed assessment of the economic and engineering aspects of various development techniques, including the utilization of the existing peat soils, the use of light weight demolition fill, mineral fill and the like. Acceptable methods must permit the long term development and utilization of the site as discussed above while restricting the influences on adjacent properties and Still Creek to acceptable values during and on completion of the development.

On completion of our assessment, we will provide detailed information concerning suitable alternative development methods and together with our recommendations for the geotechnical aspects of the site including:

- a) Preloading, influence on adjacent properties and the suitability of Still Creek slopes,
- b) Estimated quantities of various fills required for development together with preliminary construction schedules and construction procedures,
- c) An outline of the site management and site monitoring requirements,
- d) Geotechnical engineering input in the preparation of draft proposals and contract documents for bidding purposes,
- e) Upon selection of the site development method, we will provide detailed recommendations concerning specific site monitoring and supervision together with comprehensive construction scheduling.

Our charges for this investigation will be in accordance with the enclosed Schedule of Charges which is based on the minimum rate of fees set out by the B.C. Association of Professional Engineers. Based on the scope of work outlined above for the first phase of the project; the initial site assessment and assistance in preparation of bidding documents, we estimate that the total cost for this portion will be about \$3,500. If we are requested to provide the detailed specifications and documents this cost would be in addition to the above.

Stage 2

The costs of site instrumentation, monitoring and supervision of the project in the second phase will be greatly influenced by the method and rate of development chosen. A more detailed estimate of the costs involved during the phase may be provided on completion of the initial work and selection of the development technique to be used. For budgeting purposes we suggest that

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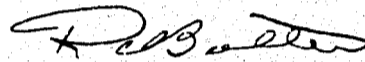
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the costs of initial set up, monitoring and supervision will be of the order of \$15,000 with provision for an average monthly cost of continuing supervision and monitoring of the established program of about \$1,500.

We trust that this proposal meets with your approval and we look forward to being of service to you on this project. Should you have any questions regarding this proposal, please call us.

Yours very truly,

GOLDER BRAWNER & ASSOCIATES LTD.



R.C. Butler, P. Eng.

RCB/sm
Encl.: Schedule of Charges
V 76852

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Outline of Services
and
Schedule of Minimum Fees
excerpted from

CONSULTING PROFESSIONAL ENGINEERS DIVISION
ASSOCIATION OF PROFESSIONAL ENGINEERS
OF BRITISH COLUMBIA
SCHEDULE OF FEES, JANUARY, 1975

1. Principals and Specialists - not less than \$45.00 per hour.
2. Engineers, Technicians, Draftsmen, etc. - payroll cost plus 125%

Payroll costs are obtained by adding 25 percent to salary cost to cover statutory holidays, vacations with pay, unemployment insurance, health, medical and liability insurance, group life insurance, pension plan contributions and holiday time allowance.

Hourly salaries are based on a work week of 37 1/2 hours, 52 weeks a year.

3. Disbursements. The cost of all disbursements shall be increased not less than 5% to cover office service, and cost of handling and shall be applicable to the following.
 - a) Reproduction of drawings and documents for tender and construction purposes, except those required by the contract agreement.
 - b) Travel Expenses.
 - c) Telegraph and telex messages and long distance telephone calls.
 - d) Living expenses for personnel where authorized by the Client.
 - e) Advertising for tenders on Client's behalf.
 - f) Use of special Consultants as approved by the Client.
 - g) Use of highly specialized equipment.
 - h) Use of computer services.
 - i) Any other proper expense paid out by the Consultant on the Client's behalf, and not specifically named as being covered by the normal fee.

All time expended on the work, in the engineer's office, at the client's office or in the field shall be charged. This shall include travel.

Golder Associates