

Re: Engineering Services for the Design and Inspection of Watermains

Following is a report from the Municipal Engineer regarding outside engineering services that are required for the design and inspection of watermains.

RECOMMENDATION:

THAT the Corporation enter into an Agreement for engineering services with Web Engineering Ltd. for the works listed in the Engineer's letter of March 13, 1974. The fees for these services are to be in accordance with "Outline of Services and Scale of Minimum fees" as published by the Association of Professional Engineers of B.C. to a maximum of \$7,780 plus disbursements for Phase I and to a maximum of \$5,450 per month for Phase II.

\* \* \* \* \*

TO: MUNICIPAL MANAGER MARCH 28, 1974  
FROM: MUNICIPAL ENGINEER  
RE: ENGINEERING SERVICES FOR THE DESIGN AND INSPECTION OF WATERMAINS

The 1974 Budget allocates monies for watermain construction. This program has two basic elements, namely:

- (1) prior to local improvement street work; and
- (2) upgrading and supplementing the distribution system.

This report deals with the retention of a Consultant to provide engineering services for the first group of projects mentioned above.

Proposals for engineering services were invited from two reputable firms by our letter of March 13, 1974, see Attachment "A". A brief summary of the two proposals (see Attachments "B" and "C") is as follows:

Web Engineering Ltd.

Phase I - design and quantity take-off as per the Corporation's terms of reference for an upset fee of \$7,780. plus disbursements based on the outline of services and scale of minimum fees as recommended by the Association of Professional Engineers of B. C. (Payroll cost plus 100%).

Phase II - construction administration as per the Corporation's terms of reference for an upset fee of \$5,450. per month based on the outline of services and scale of minimum fees as recommended by the Association of Professional Engineers of B. C. (Payroll cost plus 85%). This cost valid only until March 22, 1975.

Dayton & Knight Ltd.

Phase I - design and quantity take-off as per the Corporation's terms of reference for an upset fee of \$13,750. plus disbursements based on the outline of services and scale of minimum fees as recommended by the Association of Professional Engineers of B. C.

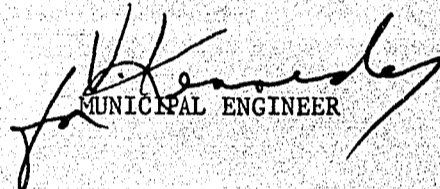
In reviewing this portion of Dayton & Knight's proposal it is noted that Item 1 is in addition to our terms of reference and should be deleted. It is also noted that Item 3 is more extensive than we envisaged and therefore should be reduced. Both of these comments were made to Dayton & Knight and they have re-evaluated their proposal and verbally indicated that a revised upset fee would be \$12,250.

Phase II - construct administration as per the Corporation's terms of reference for an upset fee of \$5,500. per month based on the outline of services and scale of minimum fees as recommended by the Association of Professional Engineers of B. C.

RECOMMENDATION:

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VNW:wlb  
Attachments

  
MUNICIPAL ENGINEER

ITEM 16  
MANAGER'S REPORT NO. 25  
COUNCIL MEETING April 1, 1974

"A"

THE CORPORATION OF THE DISTRICT OF BURNABY

MUNICIPAL HALL  
4949 CANADA WAY,  
BURNABY 2, B.C.  
V5G 1M2  
TELEPHONE 299-7211

The Office of the Engineer

March 13, 1974

Web Engineering Ltd.,  
#101 - 1861 Welch Street,  
North Vancouver, B.C. V7P 1B7.

Dear Sirs:

Re: Engineering Services for Design  
and Construction of Water Mains

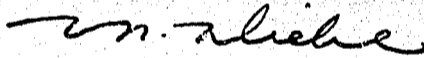
Further to our discussion on the above subject on March 13, 1974 we attach an outline of the engineering services we require and invite you to submit a proposal for the services specified.

As you are aware, we find it necessary that you stipulate an upset limit for your fee for this work and therefore suggest that you do so if you consider it possible. The work is divided into two phases which you should evaluate separately as we do not guarantee that the services in Phase II will necessarily follow the completion of Phase I.

We would appreciate receiving your proposal by March 22, 1974.

Yours truly,

E.E. Olson, P. Eng.  
MUNICIPAL ENGINEER



By: V.N. Wiebe, P. Eng.  
DESIGN ENGINEER

VNW:aa  
Attach.

✓c.c. Design Engineer



ITEM 16

MANAGER'S REPORT NO. 25

COUNCIL MEETING April 1, 1974

Required service from Consulting Engineer for design and construction of water mains and a P.V.R. station as listed on attached.

PHASE I

1. Field survey, where necessary, to establish location and grades for mains and station.
2. Review of sub-soil conditions.
3. Design of mains and all appurtenances including connections to existing mains.
4. Preparation of bill of quantities, specifications and tender contract documents based on Corporation standards.

This work to be completed by April 30, 1974.

PHASE II

1. Provide office administration of construction, including checking of construction proposals, interpretation of drawings and specifications to the contractor, evaluation of equipment to be installed for approval by the Corporation, routine visits by senior Engineering personnel to inspect the execution of the work, certification of interim and final payments to the contractor and preparation of as-built record drawings.
2. Provision of resident inspection and survey staff for detailed layout of all work and supervision of construction of the work as authorized by the Corporation.
3. Maintain a daily work diary of each days work for submission to the Corporation at completion of construction, submit to the Corporation a weekly progress report on the progress of the work, maintain continuous close liaison with the Corporation throughout the course of construction, in order to ensure that all work is performed to the satisfaction of the Corporation.

1974 WATERWORKS PROGRAM - L.I.P.

A) Replacement of 4" Mains Prior to 1974 L.I.P.

<u>Street</u>	<u>Location</u>	<u>Design No.</u>	<u>Length</u>	<u>Suggested Size of Main</u>
Portland St.	McGregor to D/E E. McPherson	740001-1	2720'	6"
McKee St.	McGregor to D/E E. McPherson	740001-2	2720'	6"
Union St.	Boundary to McDonald	740002-1	1600'	6"
Lane St.	Royal Oak to Kingsway	740002-3	1760'	8"
Jubilee Ave.	Watling to Imperial	740002-4	1880'	6"
Chaffey Ave.	Kingsway to Burke	740001-3	2030'	8"

B) New Mains and P.V.R. Station Prior to 1974 L.I.P.

Southwood	Boundary to Joffre	740001-4	400'	6"
Spruce St.	Carleton to Halley Avenue	740002-2	800'	6"
Southwood & Clinton	Joffre to Patterson	740002-5	2300'	8"
Dundas	Gilmore (P.V.R. Station)	740002-6	-	-





ITEM 16  
MANAGER'S REPORT NO. 25  
COUNCIL MEETING April 1, 1974

"C"  
R. GORDON KNIGHT, P. ENG.  
MARTIN J. J. DAYTON, P. ENG.  
AGRIS BERZINS, P. ENG.  
KENLEY R. KERR, P. ENG.

**DAYTON & KNIGHT LTD. Consulting Engineers**

1865 MARINE DRIVE, BOX 91247, WEST VANCOUVER, B.C. V7V 3N9 PHONE 922-3255

VNW

March 19, 1974

Mr. E. E. Olson, P.Eng.,  
Municipal Engineer,  
District of Burnaby,  
4949 Canada Way,  
Burnaby, B.C.

Attention: Mr. V. N. Wiebe, P.Eng.,  
Design Engineer

Dear Sirs,

Re: Engineering Services for Design  
and Construction of Watermains

Thank you for your letter of March 13, 1974. We are pleased to submit a proposal for the design as requested.

We understand our work would comprise:

1. A review of the preliminary design by GVWD to check sizes of pipe and connections.
2. A soils investigation by auger holes where it is suspected that a problem exists with poor foundations. A bedrock profile would not be part of this investigation.
3. An instrument field survey to confirm Burnaby data for existing utilities, blacktop and other major features affecting design.
4. A detailed design in conformity with Burnaby Standards, together with preparation of plans and specifications as well as bills of material.
5. Submission of reproducible copies of drawings and specifications for Burnaby to produce.

/Continued ...

ITEM 16

MANAGER'S REPORT NO. 25

COUNCIL MEETING April 1, 1974

2/Continued ...

6. Assistance as required in calling tenders and tender analyses.

We note you wish this phase of the work to be completed by April 30, 1974. However, we understand you might change this requirement as long as about one-half of the project is completed and ready for tendering by that date which we feel is possible.

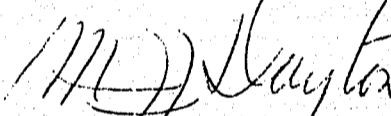
We propose that our fee for the above work be calculated on the payroll cost plus a percentage method promulgated by the Consulting Engineers' Division of the Association of Professional Engineers of British Columbia with a top limit of \$13,750.

For the second phase of the project we are unable to give you a top limit because of possible events beyond our control. We propose that our services be used on the per diem rate as above, and estimate our maximum cost at \$5,500 per month.

Please let us know if the foregoing is not adequate for your purposes.

Yours very truly,

DAYTON & KNIGHT LTD.



Martin J. J. Dayton

AB/cflh