

ITEM 7
MANAGER'S REPORT NO. 55
COUNCIL MEETING Aug. 15/77

Re: WATER SUPPLY TO BURNABY MOUNTAIN CENTENNIAL
PARK PAVILION.

Following is a report from the Acting Parks and Recreation Administrator regarding the proposed installation of a system that would provide an adequate water supply to the Burnaby Mountain Centennial Park Pavilion.

RECOMMENDATION:

1. THAT Council adopt the three recommendations as noted in the report dated August 8, 1977 from the Acting Parks and Recreation Administrator.

* * * * *

TO: MUNICIPAL MANAGER DATE: AUGUST 8, 1977
FROM: ADMINISTRATOR
 PARKS & RECREATION

SUBJECT: WATER SUPPLY TO BURNABY MOUNTAIN CENTENNIAL
 PARK PAVILION.

At its meeting of August 3, 1977, the Parks and Recreation Commission received the attached report from the Municipal Engineer and approved the following recommendations. The Commission would request Council's concurrence:

- 1: That the Corporation design and construct a 4" diameter connection from the Simon Fraser water system to a 200,000 gallon reservoir at the Centennial Pavilion and from the reservoir to the Pavilion construct 1500 feet of 8" diameter water main including two hydrants, including controls as required by the University at a total estimated cost of \$225,000. The 1977 Water Utility Budget Code #20-02, has included a sum to cover the cost of this proposed work and the full cost of the work should be charged to that account.
- 2: That the Corporation accept the conditions for taking water from the Simon Fraser University system as set forth in the Bursar's letter 13 July, 1977 and enter into an agreement with the University regarding the water connection including an easement as required to contain the 4" diameter connection and appurtenances.
- 3: That the Consulting firm, Dayton and Knight Ltd., who carried out all the preliminary studies for this water system, be engaged to design and supervise the construction of the water system to be constructed from the Simon Fraser system to the Pavilion and including a 200,000 gallon reservoir at the Pavilion.


Gordon Squire
ACTING PARKS AND RECREATION
ADMINISTRATOR

SB:ew

20 July, 1977.

TO: PARKS & RECREATION ADMINISTRATOR

ITEM

FROM: MUNICIPAL ENGINEER

ADMINISTRATOR'S REPORT NO. 17

COMMISSION MEETING AUG. 3/77

SUBJECT: WATER SUPPLY TO BURNABY MOUNTAIN CENTENNIAL PARK PAVILION.

In a report to Council dated 30th September, 1976 (copy attached) the question of the inadequate water supply to the Centennial Park Pavilion was set forth in detail and a recommendation was made that the Corporation include in the 1977 Waterworks Utility the sum of \$350,000 to provide an adequate water supply for the Centennial Pavilion for domestic, fire protection and irrigation.

The Municipal Council did not approve of the recommendation and referred the matter back to the Municipal Manager for further consideration.

We would advise that since that time, we have been carrying on extended discussions and exchange of correspondence with the University in an attempt to gain their permission to take a connection from the University's water system to supply water to the Pavilion, through a proposed new 200,000 gallon reservoir at the Pavilion. The question of the 200,000 gallon reservoir at the Pavilion has been approved by our Underwriters, the Director of Fire Services and it has been confirmed that 200,000 gallons is adequate to provide water for domestic, fire protection and irrigation, provided that the sprinkling system has a separate outlet from the Pavilion reservoir set about half way up in the tank, so that only 60,000 gallons could be drawn for sprinkling purposes and always leaving in the reservoir 120,000 gallons for fire protection and 20,000 gallons for domestic purposes.

Simon Fraser University, in a letter dated the 13 July, 1977 (copy attached), have confirmed that they would allow a 4" diameter connection from their water system to feed water to the proposed 200,000 gallon reservoir at the Pavilion, subject to two conditions.

1. When the S. F. U. water reserve is drawn down by 90,000 gallons no further water will be available to the Pavilion reservoir until 18,000 gallons have been restored to the S. F. U. reservoir, that is until the draw down level is 72,000 gallons.
2. Subject to the first condition, the water flow to the 200,000 gallon Pavilion reservoir will cease when it is full and will start again when it is drawn down by 20,000 gallons.

We have reviewed these requirements with our Consulting Engineer and can confirm that they will impose no undue hardship in the operation of the water supply to the Pavilion, and we are prepared to recommend that the condition be accepted. We have confirmed with S. F. U. that their reference in the last paragraph of their letter, to a review of all arrangements after a trial period of six months, refers only to a review of the operating procedure and in no way refers to a review of the question of the water connection.

We have estimated the cost of providing a 200,000 gallon reservoir plus 2500' of 4" diameter connection from the University system together with all the controls as required by the University, plus 1500 feet of 8" pipe from the Pavilion reservoir to the Pavilion including the installation of two hydrants at a total cost of \$225,000.

We would therefore request that you submit the following recommendations to the Parks & Recreation Commission for transmittal to the Municipal Council.

ITEM 7
MANAGER'S REPORT NO. 55
COUNCIL MEETING Aug. 15/77

(cont'd)

ITEM

ADMINISTRATOR'S REPORT NO. 17

COMMISSION MEETING AUG. 3/77

- 2 -

ITEM

7

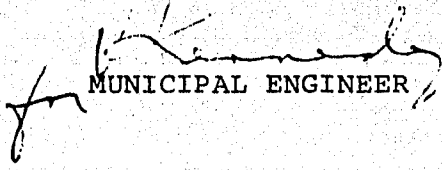
MANAGER'S REPORT NO.

55

COUNCIL MEETING Aug. 15/77

RECOMMENDATIONS:

1. THAT the Corporation design and construct, a 4" diameter connection from the Simon Fraser water system to a 200,000 gallon reservoir at the Centennial Pavilion and from the reservoir to the Pavilion construct 1500 feet of 8" diameter water main including two hydrants, including controls as required by the University at a total estimated cost of \$225,000. The 1977 Water Utility Budget Code #20-02, has included a sum to cover the cost of this proposed work and the full cost of the work should be charged to that account.
2. THAT the Corporation accept the conditions for taking water from the Simon Fraser University system as set forth in the Bursar's letter 13 July, 1977 and enter into an agreement with the University regarding the water connection including an easement as required to contain the 4" diameter connection and appurtenances.
3. THAT the Consulting firm, Dayton and Knight Ltd., who carried out all the preliminary studies for this water system, be engaged to design and supervise the construction of the water system to be constructed from the Simon Fraser system to the Pavilion and including a 200,000 gallon reservoir at the Pavilion.


MUNICIPAL ENGINEER

VK:cj
Attachments

cc: () Municipal Manager
() Municipal Treasurer
() Director of Planning

ITEM

141

ADMINISTRATOR'S REPORT NO. 17

COMMISSION MEETING Aug. 3/77

ITEM

17

MANAGER'S REPORT NO. 62

COUNCIL MEETING Oct. 4/77

Re: WATER SUPPLY TO BURNABY MOUNTAIN
CENTENNIAL PARK PAVILION

Following is a report from the Municipal Engineer regarding the above.

The line would not be installed through any development and in fact would pass entirely through the Burnaby Mountain Conservation Area on the Hastings Street alignment.

The Municipal Manager met with the Vice-President of Administration at S.F.U. and discussed this matter at some length. It was pointed out by the University's insurance brokers, who were also in attendance, that the University's insurance could conceivably be jeopardized should approval be given to connect the line to the University's water system. This was verified by our brokers who advised that the insurance business is much different in nature than in years past and that underwriters are becoming more reluctant to cover items that are risky or complex.

RECOMMENDATIONS:

1. THAT the Corporation include, in the 1977 Waterworks Utility Budget, a sum of money to provide adequate domestic, fire protection and irrigation water supply to the Centennial Pavilion at a revised estimate of cost of \$350,000, and,
2. THAT the firm of Dayton & Knight Ltd., who carried out the preliminary study for this water supply, be asked to proceed immediately with the design of the approved alternative (2), which will supply adequate water for domestic, fire protection, and irrigation to Centennial Park Pavilion, including the installation of a new pumping station and a 300,000 gallon concrete reservoir at the Centennial Pavilion.

30 September, 1976

TO: MUNICIPAL MANAGER

FROM: MUNICIPAL ENGINEER

SUBJECT: WATER SUPPLY TO BURNABY MOUNTAIN
CENTENNIAL PARK PAVILION

Approximately one year ago, it became apparent that the water supply to the Centennial Park Pavilion, which had always been quite inadequate for fire protection, had now, with the changing use of the Pavilion, become inadequate for even domestic water on some occasions. This, together with the fact that the existing system involving a small pumping system at the foot of Hastings Street and a wooden ten-thousand gallon storage reservoir at the Pavilion providing no reserve for sprinkling of the park facilities at the Pavilion, indicated that it was necessary to carry out a study for the best method of bringing the water supply to the Pavilion up to an acceptable standard. As a result, the firm of Dayton & Knight Ltd., Consulting Engineers, were engaged on 2 October, 1975, to study the water supply to Centennial Pavilion. The Consultant's report was prepared and received by the Corporation on 19 December, 1975, and it recommended two alternatives which would provide full domestic, fire protection, and water for irrigation at the Centennial Park Pavilion, as follows:

- Alt. (1) This alternative included the construction of a new pumping station on the site of the existing pumping station at Hastings Street, 5,500 feet of 6" diameter pipe to connect the new pumping station to a proposed 300,000 gallon concrete reservoir at the Pavilion; the estimate also includes new control cable and 1,500 feet of 8" feeder pipe from the new reservoir to the Pavilion, at a total estimated cost of \$338,000.

ITEM 2
ADMINISTRATOR'S REPORT NO. 17
COMMISSION MEETING Aug. 3/77

- 2 -

ITEM 17
MANAGER'S REPORT NO. 62
COUNCIL MEETING Oct. 4/76

Alt. (2) This alternative involved a connection from the westerly end of the Simon Fraser University system to the Pavilion and the estimated cost to provide the same water supply as Alternative (1) was \$143,000.

On 6 January, 1976, we forwarded the Consultant's report to the Simon Fraser University and asked them to review the report and consider our request to run a connecting line from the westerly end of their system to the Pavilion. In May, 1976, the University advised us that they were considering our application but would require a report from an independent Consulting Engineer to confirm that it would not be detrimental to the University's water system to permit an extension to service Centennial Pavilion. The Corporation agreed to this requirement and paid \$700 to have another Consulting Engineer study the proposal; this Consultant, Mr. D.H. Mill, P. Eng., prepared a report, received by us on 21 May, 1976, which concluded that it would be feasible to make a connection from the University system to the Centennial Pavilion provided that certain conditions were met, such as:

- (1) not taking more than 200 gallons per minute from the connection except when there was a fire;
- (2) not imposing sprinkling restrictions on the University except when restrictions are imposed on the Municipality as a whole;
- (3) not allowing the water level in the tower to drop more than 15 feet below the top water level except when there is a fire;
- (4) the University would reserve the right to shut off the water supply completely to the Centennial Park Pavilion whenever the water level in the tower dropped more than 15 feet below the top water level or whenever there was a fire at the University.

We had our Consulting Engineer review these requirements and we checked with the Greater Vancouver Water District regarding the requirement that affected water supply and subsequently advised the University that we could accept these conditions.

Our application to take water from the University system was in accordance with an agreement made with the University at the time it was located in Burnaby when the Corporation paid \$60,000 towards the cost of construction of the ground storage reservoir facilities at the University upon the stipulation that the Corporation reserved the right to utilize water supplies from the reservoir on a reciprocal basis should the necessity arise in the future. The University agreed to this commitment in a letter signed by P.D. McTaggart-Cowan, addressed to the Municipal Clerk on 3 March, 1964 (copy attached). Considering this commitment and the lengthy negotiations that had been carried out with the University, it came as a surprise to us to be advised by letter dated 10 August, 1976, that the University had decided in view of advice from their Insurance Brokers that they could not permit the proposed connection from the west end of the University water system. On 7 September, 1976, we received a letter from the University advising that we could extend a water line the complete distance from the Pavilion through the University to the water tower and run the line up the tower and make a connection 15 feet

(cont'd)

M 2
ADMINISTRATOR'S REPORT NO. 17
COMMISSION MEETING AUG. 3/77

- 3 -

ITEM 17
MANAGER'S REPORT NO. 62
COUNCIL MEETING Oct. 4/76

below top water level. It would be unthinkable to expend several hundred thousand dollars to obtain such a limited supply of water and therefore we cannot accept this alternative solution which has been put forth as the only one acceptable to the University. The University has, effectively, terminated the technically feasible and more economic solution of providing water supply to the Centennial Pavilion. 143

RECOMMENDATIONS:

1. THAT the Corporation include, in the 1977 Waterworks Utility Budget, a sum of money to provide adequate domestic, fire protection and irrigation water supply to the Centennial Pavilion at a revised estimate of cost of \$350,000, and,
2. THAT the firm of Dayton & Knight Ltd., who carried out the preliminary study for this water supply, be asked to proceed immediately with the design of the approved alternative (2), which will supply adequate water for domestic, fire protection, and irrigation to Centennial Park Pavilion, including the installation of a new pumping station and a 300,000 gallon concrete reservoir at the Centennial Pavilion.

EEO
MUNICIPAL ENGINEER

VK:EEO:cmg

Attch.

c.c. () Municipal Treasurer
() Parks & Recreation Administrator
() Planning Director
() Chief Public Health Inspector
() Fire Chief

7
55
ITEM
MANAGER'S REPORT NO.
COUNCIL MEETING Aug. 15/77

ITEM

ADMINISTRATOR'S REPORT NO.17

COMMISSION MEETING AUG. 3/77



SIMON FRASER UNIVERSITY, BURNABY, B.C. CANADA V5A 1S6 291-3111

RECEIVED IN July 13 1977
ENGINEERING DEPT.

JUL 14 1977

REF.	DATE
EEQ	ES
UK	

ITEM	7
MANAGER'S REPORT NO.	55
COUNCIL MEETING	AUG. 15/77

Mr. E.E. Olson; P. Eng.
Municipal Engineer
Corporation of the District
of Burnaby
4949 Canada Way
Burnaby, B.C.
V5G 1M2

Dear Sir,

We have reviewed your letter of March 31 1977 and the accompanying engineering report dated March 30.

We are aware of the points raised and the comments of your consultants however we must be concerned to meet the requirements of the University, including the following,

1. When the SFU water reserve is drawn down by 90,000 gallons, no further water will be available to the Pavilion reservoir until 18,000 gallons have been restored to the SFU reservoir, that is until the drawn down level is 72,000 gallons; and
2. Subject to the first condition, the water flow to the 200,000 gallon Pavilion reservoir will cease when it is full and will start again when it is drawn down by 20,000 gallons.

The University asks that the design of the proposed system be submitted to us in order that we may inform our insurers of the material change to the risk before the issuance of contracts to carry out the work.

We also reserve the right to review all arrangements after a trial period of six months following the possible start of water flow into the new Burnaby Pavilion reservoir and to discuss any difficulties which may have arisen.

Yours very truly,

Donald H.M. Ross
Bursar