

Re: WATER BOOSTER PUMPING STATION - BURNABY MOUNTAIN

Following is a report from the Municipal Engineer regarding the subject pumping station.

RECOMMENDATION:

1. THAT the recommendation of the Municipal Engineer be adopted.

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1981 APRIL 10.

TO: MUNICIPAL MANAGER

FROM: MUNICIPAL ENGINEER

SUBJECT: WATER BOOSTER PUMPING STATION - BURNABY MOUNTAIN

RECOMMENDATIONS:

1. THAT Council rescind the motion contained in Item 2, Manager's Report No. 13, Council Meeting 1981 February 23.
2. THAT Council approve that the cost-sharing arrangements for construction of the pumping station be on a 50/50 basis between the developer of Subdivision Reference #93/79 and the Corporation, as further detailed in this report.
3. THAT the developer of Subdivision Reference #93/79 (Sunshine Mortgages Ltd.) be required to construct the pumping station as a part of his Servicing Agreement with the Corporation for this subdivision.
4. THAT a purchase order be issued to Sunshine Mortgages Ltd. in the amount of \$52,425.00 for the Corporation's share of the cost of the station.

SUMMARY:

A staff review of the whole subject of the pumping station has resulted in the recommended cost-sharing arrangements contained in this report.

REPORT

In previous reports to Council (Item 15, Report No. 44, 1980 June 23 and Item 2, Report No. 13, 1981 February 23), copies attached, recommendations were made and were approved by Council that the water booster pumping station on Burnaby Mountain at Curtis Street and Burnwood Drive be installed and paid for by the Water Utility. The original recommendation was based on the following factors:

1. The Corporation owns property within the water pumping area which would provide a potential of approximately 22 individual lots.
2. The Water Utility has a number of existing customers to whom it has an obligation to continue to provide water at reasonable pressures.
3. The Water Utility has a very old and undersized pumping station in the area now which must be replaced.

During the past two weeks or so, the Municipal Treasurer, Director of Planning and the Municipal Engineer decided to review the equity and soundness of the previous recommendation, with particular reference to the possible responsibility of the developer of Subdivision Reference #93/79 (the first one to start development in this particular area - see cross-hatched area on sketch attached). The review resulted in the conclusion that this whole matter was one of almost complete coincidence of timing as to the individual requirements and obligations of the two parties, i.e., the Water Utility and the developer of #93/79. A good case could be made for a number of possible means of fixing relative responsibilities but each one in turn would be on a somewhat arbitrary basis and, bearing this in mind, the Director of Planning and the Municipal Engineer feel that the cost should be borne on the basis of equal shares, i.e., 50/50. This figure gives recognition to the two parties (Corporation's "Benevolent Subdivider" policy) having approximately the same number of lots to be serviced with the station and also that "the first one in" is often the one who must provide at least a part of basic facilities required for a larger area. The developer had been advised at both preliminary application and at final approval stages that a water pumping station would be required in the area but at that time the precise properties affected could not be spelled out because the design required to determine those properties had not been completed. The first report to Council on this matter (1980 06 23) attached) pointed out:

- "1. There is no feasible method of each stage of development providing its own booster pumping station, and,
2. The Water Utility would certainly not wish to see the creation of a multiplicity of pumping stations where one would do the job."

This highlighted the need to have an overall, integrated approach to the problem of serving the entire area with water.

The elements of cost to be shared are as follows:

1. Design (completed by Consultant)	\$ 12,400
2. Construction (to be done by developer's contractor)	118,925
3. Inspection and supervision (to be done by Corporation employees)	1,675
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Total:	\$133,000
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Design and inspection and supervision services are costs that have been and will be incurred by the Corporation. Therefore, the actual sharing will work out as follows:

<u>Corporation's responsibility to Sunshine</u>	<u>Sunshine's responsibility</u>
\$59,462.50 - ½ construction cost	\$59,462.50
- 7,037.50 - ½ design, inspection and supervision	+ 7,037.50
<u>\$52,425.00</u> (Amount of purchase order)	<u>\$66,500.00</u>

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The station's major components have already been ordered by the developer's contractor (Gosal Bros. Contracting Ltd.) from Pumps and Power Limited in order to avoid imminent price increases and in recognition of slow delivery dates. The station would be installed by the contractor working for the developer as part of his Servicing Agreement with the Corporation for this subdivision. Upon satisfactory completion of the work, the Corporation would pay its share to the developer; this is the normal way in which cost-shared works are constructed in subdivisions and rezonings.

The developer of Subdivision Reference #93/79 (Sunshine Mortgages Ltd.) realizes that the need for a pumping station had been previously set out and has therefore agreed to the arrangements discussed in this report.


E. E. Olson,
MUNICIPAL ENGINEER.

EEO:bp
Attach.

c.c. Municipal Treasurer
Director of Planning
Purchasing Agent

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RE: WATER BOOSTER PUMPING STATION - BURNABY MOUNTAIN

Following is a report from the Municipal Engineer regarding a water booster pumping station on Burnaby Mountain.

RECOMMENDATION:

1. THAT the recommendations of the Municipal Engineer be adopted.

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ITEM	2
MANAGER'S REPORT NO.	13
COUNCIL MEETING	1981 02 23

TO: MUNICIPAL MANAGER 80 06 18

FROM: MUNICIPAL ENGINEER

SUBJECT: WATER BOOSTER PUMPING STATION - BURNABY MOUNTAIN

RECOMMENDATIONS:

1. THAT an Engineering Agreement be entered into with Phoenix Engineering Ltd. as confirmation of the Engineer's direction to design the water booster pumping station in the vicinity of Curtis Street and Burnwood Drive at an estimated cost of \$12,400, and,
2. THAT arrangements be made with the developer and his contractor for the purchase and installation of the booster station in conjunction with the servicing work on Subdivision #93/79, and,
3. THAT a further report be provided to Council indicating total costs of the station when they are known.

REPORT

Lying below the Conservation Area on Burnaby Mountain, east of Burnwood Drive, and north of Aubrey Street is a triangular segment of Burnaby Mountain comprised of private property, Corporation property, and road allowances where "normal" water pressures in the water utility's mains is inadequate for proper servicing of the area (see attached sketch; this is the area lying to the northeast of the heavy dashed line).

Subdivision Reference #93/79 is the first stage of development east of the Burnwood Collector road requiring a few of its lots to be provided with "boosted" water pressure (see attached sketch).

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For the reasons that:

- (1) there is no feasible method of each stage of development providing its own booster pumping station, and,
- (2) the water utility would certainly not wish to see the creation of a multiplicity of pumping stations where one would do the job, and,
- (3) experience shows that the interests of the Corporation's water utility is best served if the utility itself arranged for design and construction of pumping stations because of their inherent intricacies,

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your Municipal Engineer arranged for Phoenix Engineering Services Ltd. to conduct the required work to design the booster pumping station while being engaged in performing the engineering design work for Subdivision Reference #93/79. Because of the need to integrate the water works requirements of the area, it would not be at all feasible to have another firm do the pumping station design. Phoenix Engineering Ltd. agreed to do the work for an estimated cost of \$12,400, which is considered to be reasonable.

For precisely the same reasons given above for the engineering design work, so should the actual purchase and installation of the station be done by the developer, by means of his contractor, while he is engaged in servicing the subdivision. In this way, integration, timing, and progress of the work is in the hands of the developer, who is the party most vitally affected by these factors at present while at the same time the Corporation is involved to protect the long term interests of its water utility.

The water utility has an obligation to provide adequate water to some existing houses as well as another existing long-established customer, the Trans Mountain Tank Farm at the east end of Aubrey Street. The old pumping station serving Trans Mountain is located on a road allowance which the Corporation wishes to utilize for development purposes; this is a further involvement of the Corporation.

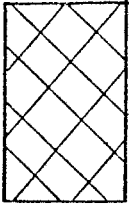
It is not yet known what the water utility's cost of purchase and installation of the booster station will be but it can probably be provided for the amount approved in the C.I.P. Budget under Code 20-02 of \$77,500. When these costs are known, the Council will be advised by means of a further report.

EEO/asm
MUNICIPAL ENGINEER

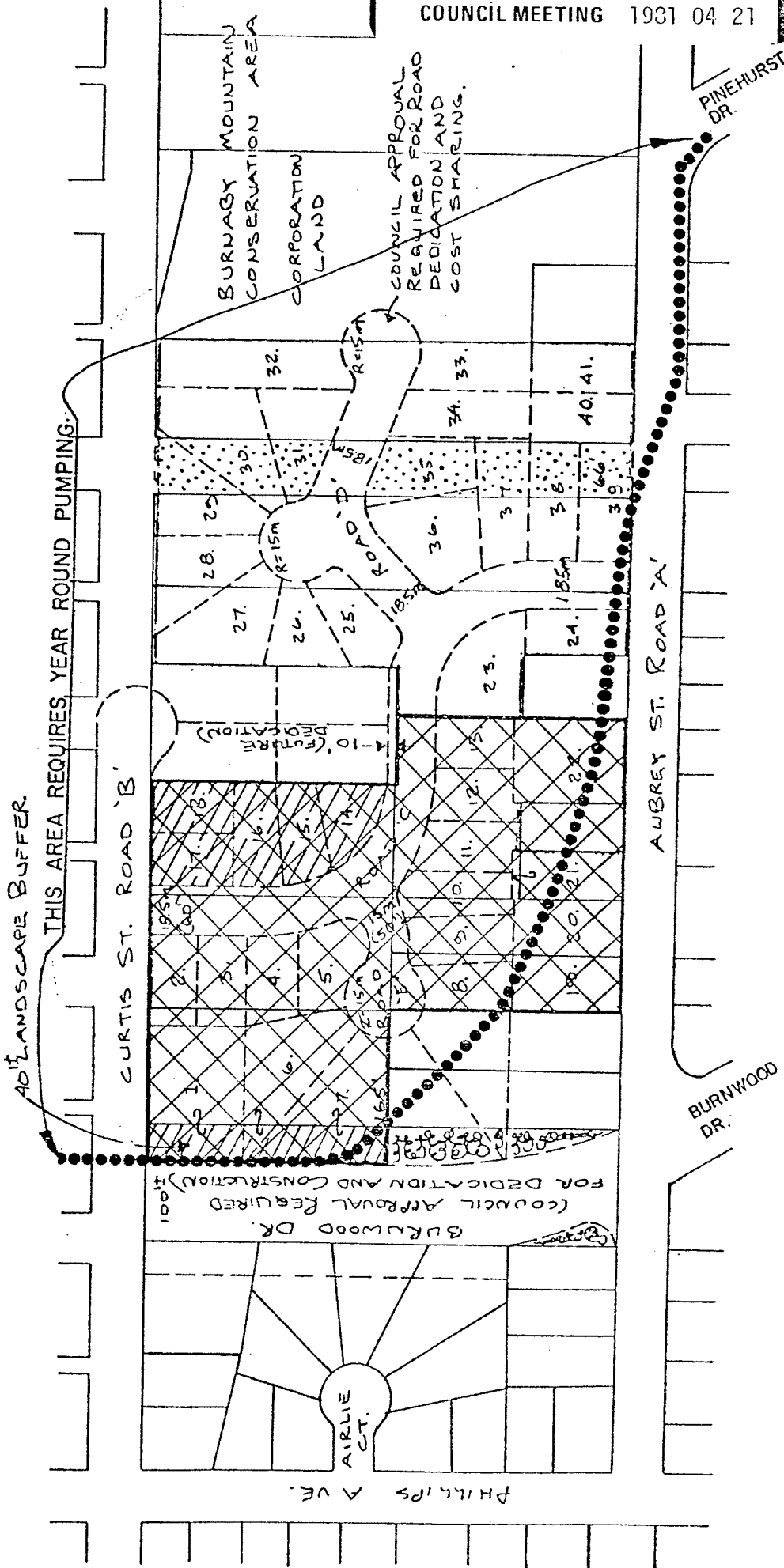
EEO/ch
Att.
c.c. () Director of Planning

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S.D. 93/79



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WATER PRESSURE ZONES ON BURNABY MOUNTAIN

ITEM 2
MANAGER'S REPORT NO. 13
COUNCIL MEETING 1981 02 23

Re: WATER BOOSTER PUMPING STATION - BURNABY MOUNTAIN

Following is a report from the Municipal Engineer regarding a water booster pumping station on Burnaby Mountain.

RECOMMENDATION:

1. THAT the recommendation of the Municipal Engineer be adopted.

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ITEM 3
MANAGER'S REPORT NO. 20
COUNCIL MEETING 1981 04 21

1981 FEBRUARY 18.

TO: MUNICIPAL MANAGER

FROM: MUNICIPAL ENGINEER

SUBJECT: WATER BOOSTER PUMPING STATION - BURNABY MOUNTAIN

RECOMMENDATION:

1. THAT the Municipal Council confirm the action taken by the Municipal Engineer (as previously authorized by Council) in making arrangements with the developer of Subdivision Reference #93/79 for the purchase and installation of the booster station at a total cost of \$118,925.

REPORT

On 1980 June 23, Council approved of three recommendations in Item 15, Manager's Report No. 44 (copy attached).

As called for in Recommendation #2, arrangements have been made with the developer of Subdivision Reference #93/79 and his contractor for the purchase and installation of the booster station in conjunction with the servicing work on Subdivision Reference #93/79.

The total cost of the installed station will be \$118,925. No design at all was available when the very rough and preliminary budget provision of \$77,500 was originally made; also, we were out of touch with the up-to-date cost of such stations because very few are installed by Burnaby. However, the cost of this station (\$118,925) compares very favourably

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with one just recently completed by the Greater Vancouver Regional District at Curtis Street and Duthie Avenue (approximately \$115,000). Of the total cost, approximately \$70,000 is for the station itself and the remainder is the cost of materials, labour, equipment and hook-ups required to install the station and to make it fully operational.

The total cost is considered to be fair and reasonable. Sufficient funds are available in the 1981 C.I.P. Budget for the Waterworks Utility under Mains and Pumping Stations to pay for the total cost of the station.



E. E. Olson,
MUNICIPAL ENGINEER.

EEO:bp
Attach.

c.c. Director of Planning

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