

ITEM 5  
MANAGER'S REPORT NO. 19  
COUNCIL MEETING Mar. 11/74

Re: Data Processing  
(Item 18, Report No. 15, February 25, 1974)

The following is the Treasurer's report of March 6, 1974 regarding the above.

The whole question of whether or not we change our computer is dependent primarily on what happens to our Assessment Department. Council will be aware that there are discussions at the Provincial level to have some form of centralized assessments and to take the assessment function out of the hands of local authorities. It would appear that this will be accomplished over a 3 year period. If this happens, then the existing equipment that we have with the proposed additional storage will be capable of handling our general needs for some time to come. Incidentally, the question of the need for a G.V.R.D. regional data centre may also be resolved by this anticipated Provincial action.

Very simply, if the Province centralizes the assessment function (and it appears that it is only a matter of time until this will be a 'fait accompli'), the answer is to purchase the additional storage as recommended in this report. If the assessment function were not to be centralized, then there may be merit in a more in-depth study of our proposal to add to our existing equipment.

RECOMMENDATIONS:

THAT authority be given to purchase 16K additional core storage for the System 360 Model 20 at a cost of \$43,805; and

THAT a loan of this sum be obtained from The Royal Bank of Canada at a rate of prime (currently 9½%) plus ½%, (total 10%) repayable within five years (\$941.50 per month; \$11,298 annually); and

THAT authority be given for the hiring of two extra programmers, a Programmer I (salary range \$920 - \$1,104) to be hired as soon as possible, and a Programmer II (salary range \$1,011 - \$1,208) to be engaged by May 1, 1974 for the exclusive use of the Assessor.

\* \* \* \* \*

6 March 1974

TO: MUNICIPAL MANAGER

File: DL-6

FROM: MUNICIPAL TREASURER

RE: DATA PROCESSING

Council, in considering Manager's Report No. 15, Item 18, of 25 February 1974, asked the following questions:

- (a) Pending Provincial legislation will make assessment procedures a lot simpler. The Government is apparently considering methods of centralizing and consolidating assessment functions by area.
- (b) Is all the information currently in E.D.P. necessary?
- (c) Other organizations, as complex as Burnaby, employ less programmers than the Municipality has now.
- (d) Possibly what is required rather than additional programmers is a systems analyst to review current programs and to make necessary changes.
- (e) The possibility of obtaining outside professional consultants to review Burnaby's data processing operation both from an equipment and personnel point of view should be investigated.
- (f) The possibility of using blank punch cards at this time to be followed by overprinting when the format of the new tax bills is available should also be examined.

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- (a) The Provincial Government can make assessments a lot simpler by removing the restrictions of the past several years. If they do, Burnaby and others can revert to using one assessment roll for all purposes instead of one for general purposes and a second for schools, hospital, Regional District and M.F.A. purposes as at present. The calculations of assessments for all purposes have a common base and the rolls for the separate purposes are by-products. If the restrictions are removed, they will make the task of compiling the rolls simpler, but will not, in themselves, resolve the current problem of expansion of Burnaby's computer and computer staff.

The second part of the question relates to the possibility of the Province taking over the assessment function. This may happen. It has happened in Ontario and Manitoba, to name but two. Currently, the Provincial Assessment Commission is doing the assessing for villages as well as unorganized territory in B.C. Additionally, the Provincial Surveyor of Taxes is providing villages with printed tax bills showing current year's tax information only (villages must add details of arrears and delinquent taxes by hand or by accounting machines). In other words, it is possible that assessments and taxation may eventually become a Provincial function or be done centrally by the municipalities themselves through a Board constituted similar to the Municipal Finance Authority.

However, in the meantime, Burnaby's problems are here and now. The Assessor is already making extensive use of the computer for record keeping, rapid processing of repetitious tasks, analyses and mathematical calculations. However, there are sections of his assessment process that are virtually untouched which, when converted to a computer, will pay dividends. An example of this is the office record card showing details of residential assessments and the calculation of the individual assessments of residential buildings.

To this end, it is planned to engage a programmer-analyst who will examine the systems currently in use, revise them and transfer them, where economical, to the computer. At the same time, he will build into the system as many by-products as possible.

In this process the wheel will not be re-invented. As much research as possible will be done and available programs be adapted where possible.

Yes, the Province or a Municipal Assessment Bureau may take over the assessment function - but when is this likely to happen? What should be done in the meantime?

- (b) The answer to this question is a qualified "yes". There are some programs such as water meter billing that can be performed on mechanical machines and because of low volume are not particularly suited to a computer. They are done on the computer because the necessary mechanical machines are not available; because computer operational time is currently available and because a computer can more easily provide by-products such as the total volume of water sold to commerce and by classes of commerce than can hand methods or mechanical equipment. There is no information on tapes that is not used frequently.
- (c) If a consultant had been engaged at the time tapes and disks were added to the system and if many hundreds of thousands of dollars had been spent in system analysis and programs such as was done in

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the District of Delta, two programmers would be ample to maintain the programs, conditional that no new programs were introduced. There are few programs that can be used year after year without change. Dates, mill rates, etc., must be replaced in the programs and this task requires the services of a programmer.

However, this was not done. A more powerful computer could have been obtained but this too would require extensive reprogramming. Economics and the feeling of Council that a regional data centre would eventually come about dictated the course of action that was taken. Council already had an investment in hardware. The investment was expanded.

A tape and disk system such as was acquired makes it possible to go offsite for a job too big for the resident computer to perform. Additionally, it can be a terminal to a much larger offsite computer should the need ever arise.

This is not the most efficient way of doing things but at the time it appeared to be the most economical. Time has not shown that this decision has been unwise.

Some of the current problems can be resolved by going offsite. A tape can be taken to a service centre and the work can be performed there. However, a study by I.B.M., referred to later, indicates that a more economical method at this point in time is to buy additional core storage. To go offsite would initially require special programs to be written.

As related in the Manager's Report of 25 February, additional core storage will permit the use of multiple tapes without extensive reprogramming to take care of the expanding master files that will soon be required. Extra core storage will also speed up the work of programmers. Many of the programs now being written exceed the limit of existing core. This means that programmers must use extra time devising ways to reduce the size of programs to fit storage or to split programs into two parts.

- (d) Burnaby's programming staff is composed of a Programmer-analyst; two Programmer II's, some of whose duties involve analysis; and a Programmer I who does little or no analysis work.

Current requirements are a Programmer II to be employed in the Assessment Department and a Programmer I in the data centre. As mentioned earlier, the Programmer II will examine the systems currently in use in the Assessment Department and, where practicable, convert them to E.D.P. To do this, he must thoroughly acquaint himself with the work of the department, even to the extent of accompanying appraisers on their field trips.

Programmer-analysts are commonly used in data centres the size of Burnaby.

A review of nearby data installations shows:

Delta Municipality	- Systems 3 - 16K 2 disk drives Total staff 6 - including 2 programmers not yet in full operation
Surrey Municipality	- Honeywell 115 - 24K 4 tapes, 1 disk Total staff 20 - including 3 programmers, 2 programmer-analysts

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North Vancouver District - Univac 9200 and 1004 - 16K 4 tape, 2K on 1004  
Total staff 7 - including 3 programmers

Vancouver City - Currently 360 Model 30 64K - 4 tapes, 3 disks  
Total staff 40 - including 4 analysts and  
14 programmers

Simpsons-Sears Ltd. - I.B.M. 360 Model 30 - 4 tapes, 2 disks  
Total staff 50 - including 2 programmers  
All major programs written in Toronto

Fraser Valley Milk Producers Association - Burroughs B500 20K - 3 tapes, 1 disk  
Total staff 9 - including 2 programmers

Burnaby - I.B.M. 360 Model 20 16K - 2 tapes, 1 disk  
Total staff 12 - including 3 programmers,  
1 programmer-analyst

Except for Vancouver and Simpsons-Sears, all analysis work is performed by programmers. However, the time may come in Burnaby when most of the work of the programmer-analyst will be analysis. Nevertheless, your Treasurer is of the opinion that the engagement of a full time analyst at this time will not do away with the need to employ two persons.

- (e) I.B.M. made a study of Burnaby's situation before an application was made to Council for extra core storage and extra staff. They investigated the possibility of:
1. Buying additional core storage
  2. Renting a terminal, linking our installation with the computers at Simon Fraser University, U.B.C. and the I.B.M. Service Centre, all three or any one of them
  3. The purchase of an I.B.M. Systems 3.

Their cost benefit analysis showed the purchase of the additional core storage to be the most economical route to follow.

An examination of Burnaby's data processing system by a consultant is bound to show inefficiencies. This is because many card oriented systems are still being used whereas a tape disk system will use less machine time and provide more by-products. He may also be able to suggest better systems, particularly if a more powerful computer is acquired. However, after considering the constraints under which the system is operating, the likelihood is that he will find that the overall system is as efficient as possible.

Whenever necessary, technical assistance is obtained from I.B.M. and the City of Vancouver data processing department. Currently, the Assessor is using the services of Mr. Dennis Miller, formerly of Wayne County, Oregon, in the computerization of assessment records. There are no technical problems currently requiring the services of a consultant other than Mr. Miller.

Your Treasurer is working under the following constraints:

1. To carry out the data processing function as cheaply and efficiently as possible with an eye to the future when there may be a regional data centre to take over some or all of the functions currently being performed locally.

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2. To apply to tape and disk those systems which tape and disk give the most return on the time invested in them.
3. Instead of spending a great deal of money in changing all systems so that they will work most efficiently on a tape disk configuration, carry on with the card oriented systems where possible and convert them gradually as time permits.

From a staff point of view, a consultant is not needed at this point in time. As far as can be seen, there are no recognized special problems on which his advice is necessary. On the other hand, if Council feels that a consultant can assist them to better understand the workings of its data centre, then perhaps the engagement of a consultant may be worthwhile. It is suggested that a quick look will not be of much value. If a study is made, it should be in depth to be of value to staff as well as to Council. However, if this is done prior to an order being confirmed for additional core storage, the current manufacturing date of May or June this year may be missed, followed by an indefinite wait until the next order date becomes available. This would work to Burnaby's disadvantage.

- (f) Treasury staff were told by their supplier that he required seventy-five days lead time from the acceptance of new copy; that they could not give Burnaby a slot in the production line. They returned Burnaby's purchase order. However, the salesman on Burnaby's account values Burnaby's business, and has since persuaded his superiors to help out so that the new tax bill is now anticipated to arrive on time without having to adjust the taxes due date.

Information is on hand that the Municipal Act no longer will dictate the form in which tax information is to be presented to the public but that it will require certain specific information. Also, that the regulations concerning the home-owner grant and the new school tax removal and resource grant will be:

The Provincial Home-Owner Grant to remain the same at \$200.00 plus an additional \$50.00 for persons aged 65 or older.

Where a person is eligible for the Provincial Home-Owner Grant, an additional school tax removal and resource grant is to be paid as follows:

Section 2(1) of the Special Funds Appropriation Act 1974:

- (a) such amount, not exceeding forty dollars, as is necessary to reimburse that person in respect of his liability for twenty per cent of the amount by which the amount of the school tax exceeds, during 1974, the amount of the grant under the Provincial Home-Owner Grant Act; and
- (b) where there is no amount payable under clause (a), or where the amount payable under clause (a) is less than thirty dollars, a resource grant in such amount as is necessary to increase the amount payable to thirty dollars.

In other words, the following calculation must be made if

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a school tax levy is \$300.00:

School tax levy	\$ 300.00
Provincial Home-Owner Grant	<u>200.00</u>
	<u>\$ 100.00</u>

20% of \$100.00 equals \$20.00. Therefore, the taxpayer is entitled to a minimum school tax removal and resource grant of \$30.00.

If the school tax levy is \$380.00, the calculation is:

School tax levy	\$ 380.00
Provincial Home-Owner Grant	<u>200.00</u>
	<u>\$ 180.00</u>

20% of \$180.00 equals \$36.00, being the amount of the resource grant.

Obviously, there are many variations to these calculations, e.g. age 65 or over; or if the total grant exceeds all taxes, the taxpayer is to be paid the amount of his resource grant in cash less \$1.00 and the Municipality will be reimbursed by the Province; also the resource grant must be kept separate from the home-owner grant for purposes of recovery from the Province.

All these variations can be built into the computer program logic. In addition, the tax bill is being redesigned in order to inform each taxpayer as to the amount of grant to which he is entitled.

All of this takes a considerable amount of computer programming time.

Samples of the 1973 and (draft) 1974 bills are attached, the latter setting forth the information required by law.

To answer Council's question with respect to overprinting of punch cards - this is done in Burnaby for internal use where the information does not require to be precisely placed. However, on tax bills, the information must be placed precisely and can only be done by letter press which is a slow and costly process, much too slow to resolve the problem originally presented. However, the problem of supply of adequate bill forms no longer exists.

#### RECOMMENDATIONS

THAT authority be given to purchase 16K additional core storage for the System 360 Model 20 at a cost of \$43,805; and

THAT a loan of this sum be obtained from The Royal Bank of Canada at a rate of prime (currently 9 1/2%) plus 1/2%, (total 10%) repayable within five years (\$941.50 per month; \$11,298.00 annually); and

THAT authority be given for the hiring of two extra programmers, a Programmer I (salary range \$920 - \$1,104) to be hired as soon as possible, and a Programmer II (salary range \$1,011 - \$1,208) to be engaged by 1 May 1974 for the exclusive use of the Assessor.

*B. Mayhew*  
MUNICIPAL TREASURER

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BM:gw  
Attach.

**ITEM 5  
 MANAGER'S REPORT NO. 19  
 COUNCIL MEETING Mar. 11/74**

**NOTICE OF CURRENT REAL PROPERTY TAX LEVIES**  
 THE CORPORATION OF THE DISTRICT OF **BURNABY** BURNABY 2, B.C. 1973

<b>NAME AND ADDRESS OF OWNER</b>	<b>PROPERTY DESCRIPTION</b>
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THE PROVINCIAL HOME OWNER GRANT APPLIES ONLY TO CURRENT TAXES. IF ELIGIBLE MAKE APPLICATION BEFORE JULY 4TH TO AVOID A PENALTY

<b>A. SCHOOL TAXES</b>	<b>LESS PROVINCIAL GOVT. HOME-OWNER GRANT</b>	<b>NET SCHOOL TAXES</b>	<b>B. GENERAL MUNICIPAL TAXES</b>	<b>OTHER LOCAL SERVICES</b>	<b>MUNICIPAL TAXES GROSS</b>	<b>LESS BALANCE FROM GOVT. HOME-OWNER GRANT (NOT APPLICABLE TO SCHOOL TAX)</b>	<b>NET MUNICIPAL TAXES</b>	<b>C. TOTAL SCHOOL AND MUNICIPAL TAXES PAYABLE</b>
\$	\$	\$	\$	\$	\$	\$	\$	\$

- D. NOTE:**
- (1) **PENALTY:** A PERCENTAGE ADDITION OF 1% WILL BE ADDED TO CURRENT TAXES UNPAID AT CLOSE OF BUSINESS ON 4TH DAY OF JULY 1973. SEE REVERSE SIDE FOR ADDITIONAL PENALTIES.
  - (2) DETAILS WITH RESPECT TO TAX LEVIES MAY BE OBTAINED ON ENQUIRY FROM MUNICIPAL COLLECTOR.
  - (3) COMPLETE PROVINCIAL HOME-OWNER GRANT APPLICATION ON THE REVERSE SIDE, IF ELIGIBLE, AND DELIVER TO COLLECTOR PRIOR TO DECEMBER 31st, 1973.
  - (4) IF NOT ELIGIBLE FOR PROVINCIAL HOME-OWNER GRANT, PAY GROSS AMOUNT OF SCHOOL AND MUNICIPAL TAXES.

O . . . . .

THE CORPORATION OF THE DISTRICT OF **BURNABY** BURNABY 2, B.C.

DAY MO. CO-ORDINATE

RETURN MAILING ADDRESS

MORTGAGE NO.

FOR OFFICE USE ONLY		
CURRENT		
ARREARS		
DELING.		
PENALTY		
INT. ARR.		
INT. DEL.		
CASH		
INITIAL		
HOME OWNER GRANT		
TOTAL PAID		

**DUE DATE JULY 4th**

GENERAL	
SCHOOL	
HOSPITAL	
OTHER CHARGES	
MUNICIPAL	
LESS CREDITS	
ARREARS	
DELINQUENT	
INT. ARREARS	
INT. DELING.	
<b>TOTAL \$</b>	
PROVINCIAL HOME OWNER GRANT	
<b>NET TOTAL \$</b>	

**THIS CARD TO ACCOMPANY PAYMENT**  
 IF RECEIPT IS REQUIRED RETURN BOTH PARTS  
 DO NOT STAPLE OR OTHERWISE MUTILATE THIS CARD

**STATEMENT OF ALL REAL PROPERTY TAXES**

CODE	DESCRPTION	TOTAL \$	CONTRIBUTION	ARREARS	DELINQUENT	INT. DEL.	INT. ARR.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00							

ITEM 5  
 MANAGER'S REPORT NO. 19  
 COUNCIL MEETING Mar. 11/74

NOTICE OF CURRENT REAL PROPERTY TAX LEVIES  
 THE CORPORATION OF THE DISTRICT OF BURNABY BURNABY, B.C. V5G 1M2 1974

PROP. CODE - NAME AND ADDRESS OF OWNER		PROPERTY DESCRIPTION			
				GENERAL	
				SCHOOL	
				OTHER MILL RATES	
				SPECIAL CHARGES	
				LESS CREDITS	
				ARREARS	
				DELINQUENT	
				INT. ARREARS	
				INT. DELINQ.	
				\$ GROSS TOTAL	

IF NOT ELIGIBLE FOR PROVINCIAL GRANT PAY THIS AMOUNT

IF UNDER 65 YRS AND ELIGIBLE FOR RRUV. GRANT P.H.O.G. RESERVE GRANT NET TAXES DUE

IF OVER 65 YRS AND ELIGIBLE FOR A PROV. GRANT P.H.O.G. RESERVE GRANT NET TAXES DUE

THE PROVINCIAL HOME OWNER GRANT APPLIES ONLY TO CURRENT TAXES. IF ELIGIBLE MAKE APPLICATION BEFORE JULY 3RD 1974 TO AVOID PENALTIES.

COMPLETE PROV. HOMEOWNER GRANT APPLICATION ON THE REVERSE SIDE AND DELIVER TO COLLECTOR BEFORE JULY 10TH. IF NOT ELIGIBLE FOR PROV. HOMEOWNER GRANT, PAY THE GROSS TOTAL OF SCHOOL AND MUNICIPAL TAXES DUE.

**PENALTY:** A PERCENTAGE ADDITION OF 1% WILL BE ADDED TO CURRENT TAXES UNPAID AT CLOSE OF BUSINESS ON 31ST DAY OF JULY 1974. SEE REVERSE SIDE FOR ADDITIONAL PENALTIES.

DETAILS WITH RESPECT TO TAX LEVIES MAY BE OBTAINED ON ENQUIRY FROM MUNICIPAL COLLECTOR.

REWRITE

THE CORPORATION OF THE DISTRICT OF BURNABY BURNABY, B.C. V5G 1M2  
 DAY MC CO-ORDINATE

RETURN MAILING ADDRESS

MORTGAGE NO.

1974

FOR OFFICE USE ONLY	
CURRENT	
ARREARS	
DELINQ.	
PENALTY	
INT. ARR.	
INT. DEL.	
CASH	
TOTAL	
HOME OWNER GRANT	
TOTAL PAID	

GENERAL	
SCHOOL	
OTHER MILL RATES	
SPECIAL CHARGES	
LESS CREDITS	
ARREARS	
DELINQUENT	
INT. ARREARS	
INT. DELINQ.	
GROSS TOTAL	\$
LESS PROVINCIAL GRANT IF APPLICABLE	
NET TOTAL	\$

DUE DATE JULY 3

THIS CARD TO ACCOMPANY PAYMENT  
 IF PROXY IS REQUIRED RETURN BOTH PARTS  
 DO NOT STAPLE OR OTHERWISE MUTILATE THIS CARD

STATEMENT OF ALL REAL PROPERTY TAXES

CODE	DAY	MC	VR	P.H.O.G.	DESCRIPTION	TOTAL	CURRENT	ARREARS	DELINQUENT	ARR. INT.	DEL. INT.
1	2	3	4	5	6	7	8	9	10	11	12