

# ANNUAL REPORT OF THE ENGINEERING AND PUBLIC WORKS DEPARTMENT

## 1971



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TO HIS WORSHIP THE MAYOR AND COUNCILLORS  
OF THE CITY OF FREDERICTON.

Gentlemen:

I submit herewith this report which is a statement of the work done in the various City Departments under the direct supervision of the City Engineer.

This report covers the period January 1, 1971 to December 31, 1971 and is written for the purpose of maintaining an accurate record on file of the activities and costs of the various departments.

During the year along with regular maintenance, City crews and contractors constructed the following works:-

Concrete Curb and Gutter.....	3.25 miles
Concrete Sidewalk.....	1.29 miles
Grading and Gravelling City Sts....	1.88 miles
New Street Construction.....	.69 miles
Ditching.....	.14 miles
New Pavement ( $\frac{3}{4}$ " Dense Mix).....	1.19 miles
Recap ( $\frac{1}{2}$ " Minus).....	.14 miles
Sealing City Streets ( $\frac{3}{8}$ " Minus).....	4.49 miles
Seal Chips ( $\frac{3}{8}$ " Chips).....	2.79 miles
Armour Coating ( $\frac{3}{4}$ " - $\frac{1}{2}$ " - $\frac{3}{8}$ " Chips)	
2 Off Street Parking Lots	
8" - 10" Domestic Sewer.....	1.14 miles
10" - 12" - 15" - 18" - 24" - 30" -	
36" Surface Sewer.....	1.70 miles
4" - 6" - 8" - 10" - 12" C. I.	
Water Pipe.....	1.10 miles
6" Force Main (Domestic Sewer).....	.13 miles

Contractors under contract with the Public Works Department of the City of Fredericton in 1971 constructed, completed construction or began construction on the following projects:-

- |   |   |
|---|---|
| Maplewood Construction Ltd. -                 | Completion of 1970 contract for the installation of Domestic Sewer, Surface Sewer and Water on Parkside Drive and Parklyn Court.        |
| Fredericton Housing & Construction Co. Ltd. - | To installing Domestic Sewer, Surface Sewer and Water in Foley Court.   |
| Fredericton Housing & Construction Co. Ltd. - | To installing Domestic Sewer, Surface Sewer and Water for the Land Assembly Project, New Brunswick Housing Corporation, Southwood Park. |

- John Kilburn & Son Ltd. - To installing Domestic Sewer, Surface Sewer and Water on Boyne Street.
- E. E. McCoy Ltd. - To installing Domestic Sewer, Surface Sewer and Water, Industrial Park, Doak Road.
- Fredericton Housing & Construction Co. Ltd. - Construction of a Concrete Reservoir, Capacity 200,000 Imperial Gallons, Canterbury Drive.
- Horton Steel Works Ltd. - Construction of a Steel Reservoir, Capacity 825,000 Imperial Gallons on Flemming Road.
- International Water Supply - To supply and install a "Deep Well Turbine Pump", Maple Street.
- Eastland Construction Company - To constructing a Pump House to house the Pumping Equipment for Well drilled in 1970 on Maple Street.

In addition tenders were received and accepted from the following contractors:-

- Forbes & Sloat Ltd. - To supplying and laying of Asphalt Pavement on various Streets in the City of Fredericton,
- Forbes & Sloat Ltd. - Supplying and delivering crushed gravel.
- Flintkote Company of Canada - To supplying and application of Liquid Asphalt and Chips at various locations in the City of Fredericton.
- Harry Smith - Supplying and delivering Winter Sand to Maintenance Depot, Maryland Road.
- Harry Smith - Supplying and delivering sand for bedding and backfilling of Domestic Sewer, Surface Sewer and Water.
- Harry Smith - To supplying and delivering Top Soil.
- Elmtree Concrete - To supplying and delivering Ready-Mix Concrete.

The current expenditures for the twelve-month period January 1, 1971 to December 31, 1971 appear as follows:

	<u>Appropriation</u>	<u>Net Expenditures</u>	<u>Debit</u>	<u>Credit</u>
Street Lights	\$ 89,400.00	\$ 87,714.60		\$ 1,685.40
Public Works	48,500.00	57,369.68	8,869.68	
Roads & Streets	330,000.00	*421,097.08	*91,097.08	
Garbage Collect- ion	68,083.00	68,120.25	37.25	
Garbage Disposal	34,540.00	33,379.88		1,160.12
Wilmot Park	7,440.00	6,891.41		548.59
Odell Park	14,425.00	12,293.15		2,131.85
Carleton Park	6,700.00	4,629.41		2,070.59
Old Burial Ground	3,195.00	2,835.45		359.55
Loyalist Burial Ground	102.00	101.46		54
Street Cleaning	78,900.00	90,274.14	11,374.14	
Development of Park Areas	6,200.00	3,310.21		2,889.79
Storm Sewer	18,000.00	16,852.80		1,147.20
<b>TOTALS.....</b>	<b>\$705,485.00</b>	<b>\$804,869.52</b>	<b>\$111,378.15</b>	<b>\$11,993.63</b>

\* Includes deferred Payment of \$28,000.00

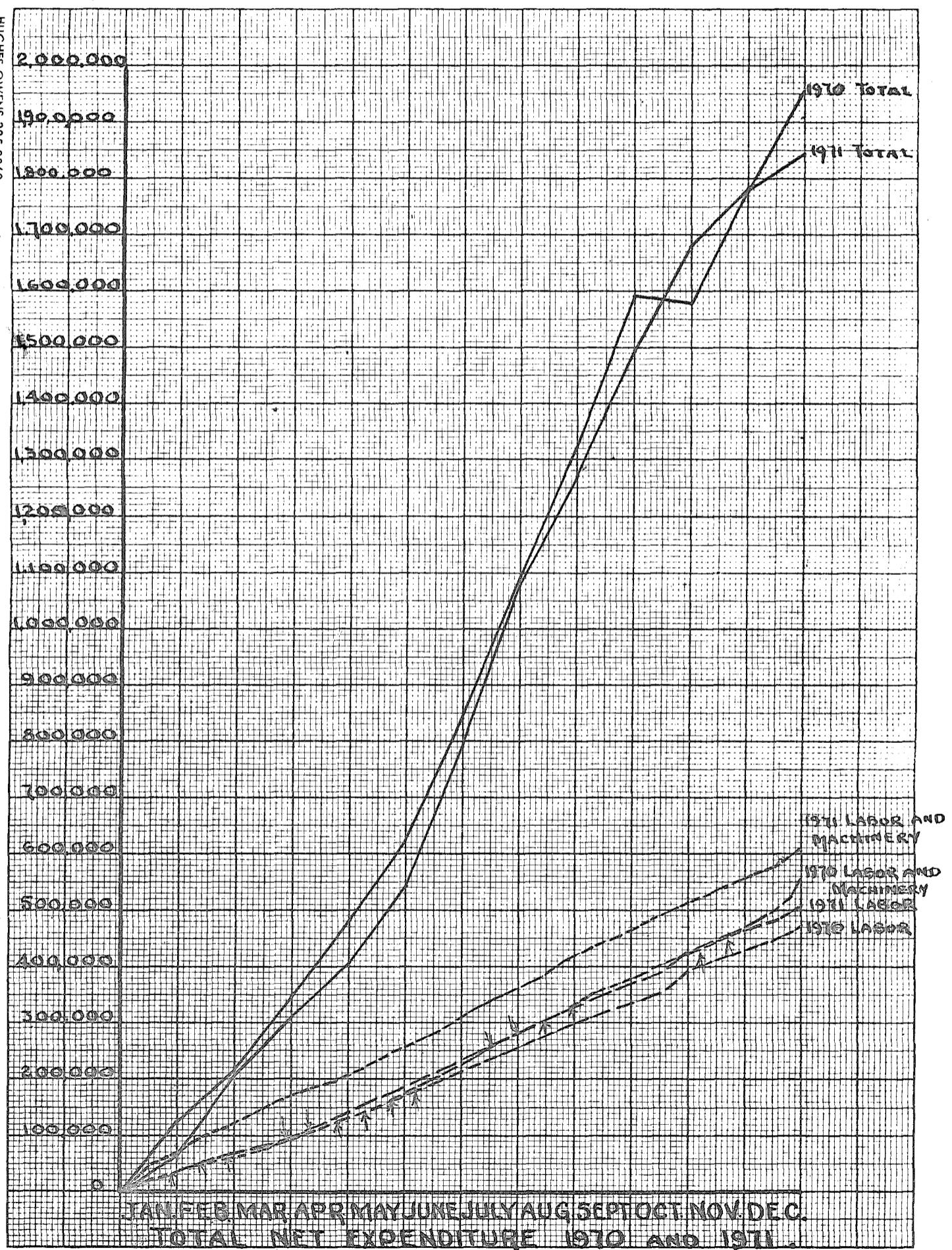
The City of Fredericton occupies a total of some 23.5 square miles. This area includes the water area occupied by the Saint John River within the boundaries of the City.

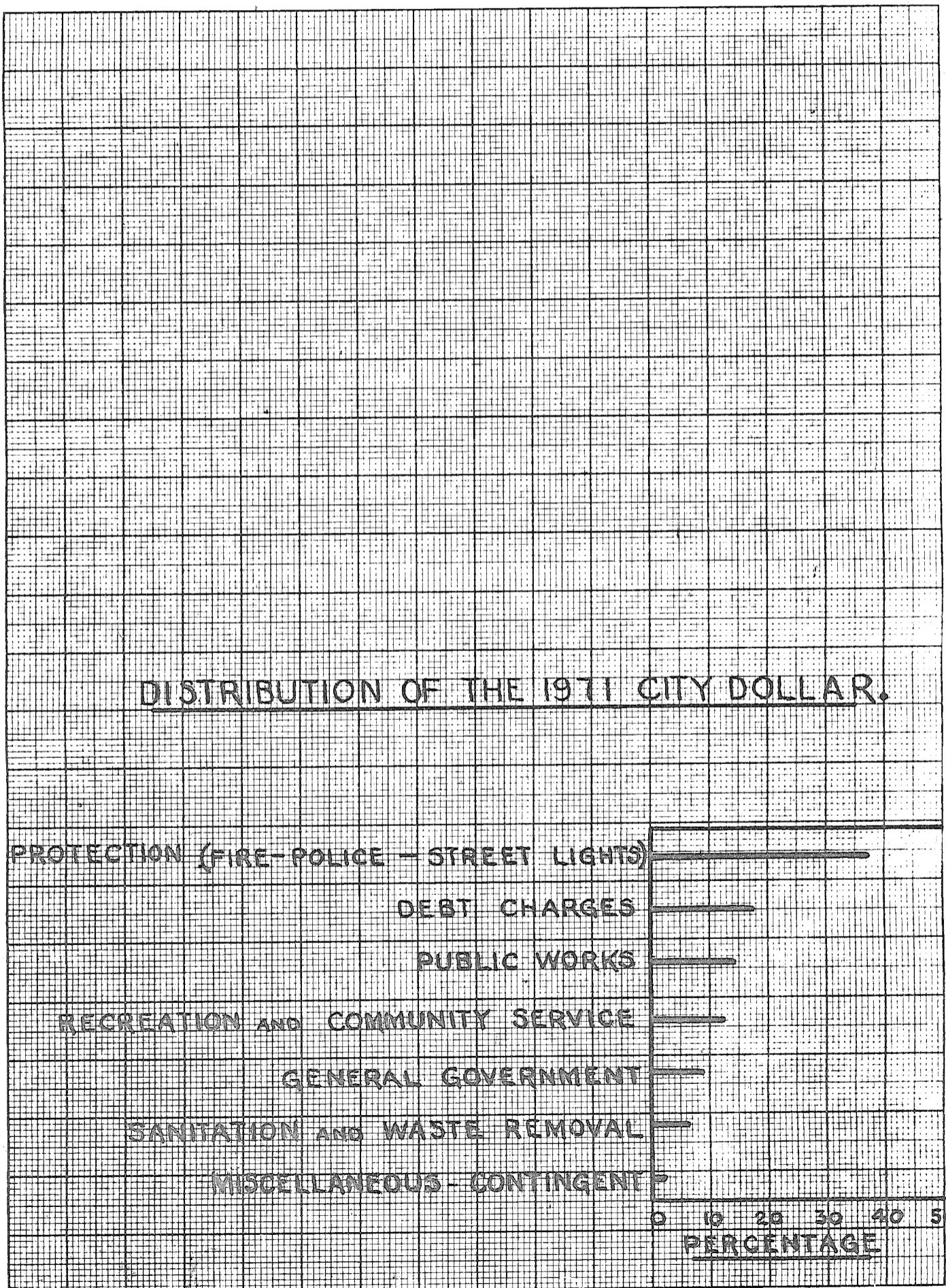
The 1971 preliminary census shows that the City's population was 23,612.

Following in the body of this report is a detailed statement of the work done, comparative expenditures and unit costs under the various departments. The detailed report of any particular department may be found by referring to the index.

Respectfully submitted,

CITY ENGINEER.





### TOTAL YEARLY EXPENDITURE

The total yearly net expenditure under the direct supervision of the City Engineer in 1971 amounted to \$1,844,278.52.

A graphic comparison of expenditures for labor, labor and hired machinery and total expenditure (including labor, hired machinery) and materials are shown on the following graph.

The locations of new construction completed or commenced in 1971 is shown on maps inserted after Page #4 of this report.

Following the maps is a graph showing the distribution of the City of Fredericton Tax Dollars in 1971.

### ROADS AND STREETS

In 1971, the appropriation for Roads and Streets was \$330,000.00, plus a deferred appropriation of \$28,000.00 for a Leaf Collector-Catch Basin Eductor.

There are in Fredericton 76.93 miles of Roads and Streets; 12.37 miles being located on the north side of the Saint John River and 64.56 miles on the south side. In addition there are 61.86 miles of concrete and asphalt sidewalks; 9.66 miles on the north side of the Saint John River and 52.20 miles on the south side of the Saint John River.

### ROADS AND STREETS

	<u>Urban</u>	<u>Rural</u>	<u>Total (Miles)</u>
Paved	60.83	5.31	66.14
Gravel	1.42	6.27	7.69
Chip Seal	2.69	.41	3.10
TOTALS =	<u>64.94</u>	<u>11.99</u>	<u>76.93</u>

Not included in the above mileage, Doone Street in Carleton Ward and Southwood Park (N. B. H. C.) on the south side of the Saint John River.

### ROADS AND STREETS EXPENDITURE - 1971

Gross Expenditure.....	\$550,048.62
Credits.....	\$128,951.54
Net Expenditure.....	\$421,097.08
1971 Appropriation.....	\$330,000.00

DEFICIT....\$\*91,097.08

\* Includes deferred payment -\$28,000.00

The above credit of \$128,951.54 is made up of Labor and Material charged to Private Parties, materials such as Gas, Oil, etc. used by other City Departments, credit on City Pension and Canada Pension, materials such as sand, salt, rock dust, etc. to other City Departments, Workmen's Compensation and machinery rental on other accounts.

The Gross Expenditure is divided as follows:-

Labor-the total of Roads and Streets Payrolls....	\$189,976.16
Hired trucks and machinery.....	85,677.00
Material Charges-which includes Workmen's Compensation, Unemployment Insurance and all materials including purchase and repairs to City owned equipment.....	<u>274,395.46</u>
TOTAL =	<u>\$550,048.62</u>

The Net Expenditure of \$421,097.08 is divided into the following items. These items give an account of the amount and kind of work done by the Roads and Streets Department.

ITEM #1

Salting and Sanding Streets & Sanding Walks:

Storing sand in Winter Storage Pile and spreading same on slippery streets and walks.

Labor.....	\$ 15,876.94
Hired trucks and machinery.....	1,054.00
City Machinery charges.....	6,381.00
Materials.....	<u>26,472.11</u>
Total Expenditure.....	<u>\$ 49,784.05</u>

3,481 cubic yards of sand was purchased during the Fall of 1971. The sand was supplied by Mr. Harry Smith at a price of \$1.25 per cubic yard, delivered to the City Stock Pile.

In 1971, 1,634.9 tons of salt was used for ice control. The cost and distribution charges are included under the above heading. The City purchased 1,584.9 tons of salt in 1971. In stock as of December 31, 1971 - 300 tons.

ITEM #2

Snowplowing Sidewalks:-..... 61.86 miles

61.86 miles of sidewalk were plowed during the winter months in 1971.

Total expenditure under this heading amounted to \$9,506.38 and was made up as follows:-

Labor.....	\$ 6,770.38
Hired machinery.....	307.00
City Machinery charges.....	<u>2,429.00</u>
TOTAL =	<u>\$ 9,506.38</u>

In 1971 the unit cost of plowing and sanding one mile of sidewalk was approximately \$243.00 and was made up as follows:

Labor.....	\$ 9,945.77
Hired trucks and machinery.....	517.80
City machinery charges.....	3,705.20
Material (Sand).....	<u>870.25</u>
TOTAL =	<u>\$ 15,039.02</u> - (1)

The overall cost, including Compensation, Pension Fund and Sick Leave was approximately \$272.00 per mile.

ITEM #3

Snow Control (Streets) :-

Blowing, shovelling and hauling snow, plowing or scraping roads, cleaning gutters, thawing catch basins of ice and snow and any other means of snow control.

The total cost of Snow Control (Streets) amounted to \$176,760.84 and was made up as follows:-

Labor.....	\$ 44,337.62
Hired trucks and machinery.....	78,218.50
City Machinery charges (Jeep, Bulldozers, Graders, etc.).....	41,388.00
Expendable Materials (Grader Blades, Chains, etc.).....	5,390.69
Maintenance of Snow Equipment (repairs to blowers, etc.).....	5,465.65
Miscellaneous Materials (Shovels, Picks, Lumber, Fencing, etc.).....	<u>1,960.38</u>

TOTAL = \$176,760.84

The following table shows comparative labor (including hired trucks and machinery) costs of Snow Control for the year 1969 to 1971 inclusive:-

	1969	1970	1971
Snowplowing Roads & Streets..	\$32,366.41	\$33,861.18	\$54,674.72
Blowing, Hauling & Shovelling snow.....	30,988.56	36,112.41	56,238.00
Catch Basins.....	4,230.39	2,438.37	9,416.04
Snow Fences.....	806.63	882.44	1,189.53
Plowing Parking Lots.....	678.16	137.79	272.32
Repairs.....	-0-	-0-	765.51
<u>TOTALS.</u>	<u>\$69,070.15</u>	<u>73,432.19</u>	<u>122,556.12</u>

76.93 miles of Roads and Streets were plowed and maintained during the winter.

The unit cost per mile of plowing, salting and sanding City Roads and Streets was approximately \$2,853.00 and was calculated as follows:-

Labor (Plowing and Sanding).....	\$ 57,039.17
Hired trucks and machinery.....	79,061.70
City machinery charges (Grader, Jeeps, Bulldozers, etc.).....	46,492.80
Materials (Sand and Salt).....	23,962.58
Repairs to Snow Blowers and Boilers.....	5,557.08
Expendable Materials (Grader Blades, Chains, etc.)	5,390.69
Miscellaneous Materials (Lumber, Wire, Fencing, Shovels, etc.).....	<u>1,960.38</u>
<u>TOTAL</u>	<u>=\$219,464.40 - (2)</u>

The overall cost including Workmen's Compensation, Pension Fund and Sick Leave was approximately \$2,986.00 per mile.

TOTAL COST OF SNOW CONTROL - Add (1) and (2).....\$234,503.42

Net Cost of Snow Control (Less City Machinery  
Charges - \$50,198.00.....\$184,305.42

Snow Fall in Fredericton for the last five years was as follows:

January 1, 1967 to December 31, 1967	152.9 inches
January 1, 1968 to December 31, 1968	86.8 inches
January 1, 1969 to December 31, 1969	77.0 inches
January 1, 1970 to December 31, 1970	121.2 inches
January 1, 1971 to December 31, 1971	107.6 inches

Snow Fences:-

Twelve thousand feet of lath and wire snow fencing was erected under Snow Control to prevent drifting snow from building up on outlying roads. No new fencing was purchased in 1971.

ITEM #4

Streets:-

General work of maintenance of Roads and Streets and any other items such as installing culverts, curbs and gutters or pavement which are not mentioned under some particular heading.

Total expenditure under Streets Account (Labor, Hired Trucks and Machinery and Materials) amounted to \$71,815.58 and was made up as follows:

Item	Labor Hired Trucks & Machinery	City Machinery Charges	Materials	Total
Maintaining Driveways	\$ 941.90	528.00	19.35	1,489.25
Culverts	2,519.30	1,154.25	2,819.75	6,493.30
Ditching	102.20	109.00	-0-	211.20
Erection of Guard Posts	881.84	250.25	152.82	1,284.91
Repairing Curbs & Gutters	3,853.04	1,004.00	1,030.22	5,887.26
Sodding & Seeding	5,289.24	66.00	1,308.65	7,293.89
Rip-Rapping	819.71	110.00	-0-	929.71
Cutting Grass	2,753.79	356.50	383.84	3,494.13
Repairing Sidewalks	7,789.45	1,522.50	4,907.39	14,219.34
Holiday, Sick Leave, Fringe Benefits	29,549.73	-0-	800.99	30,350.72
Making & Repairing Barricades	149.87	12.00	-0-	161.87
TOTALS....	\$54,650.07	\$5,742.50	\$11,423.01	\$71,815.58

ITEM #5

Equipment Repairs:

The expenditure under this heading amounted to \$44,772.51 and is made up as follows:

Labor.....	\$ 15,715.93
Hired trucks and Machinery (Floats, etc.)	407.50
City Machinery Charges.....	1,056.00
Materials.....	738.42
Outside Repairs and Parts for Machines.	26,267.76
Expendable Accessories.....	<u>586.90</u>
 TOTAL.....	\$ 44,772.51

The above expenditure includes all City vehicles with the exception of those used in Street Cleaning, Snow Control and Water, which are charged under their respective headings.

ITEM #6

### Grading and Gravelling:-

## Grading and application of Gravel on City Roads and Streets.

Labor.....	\$ 315.68
Hired trucks and Machinery.....	25.25
City Machinery Charges.....	260.00
Materials (Crushed Rock, Class "A" Gravel)	846.35

TOTAL.....\$1,447.28

393.65 tons of Class "A" crushed gravel was used in the maintenance and repairs to Gravel Roads under Roads and Streets.

The gravel was purchased from Forbes and Sloat at a contract price of \$2.15 per ton for Class "A" ( $1\frac{1}{4}$ "') crushed gravel.

A stock pile is placed at the site of the Old City Dump on the Wilsey Road for Spring frost boils and excavation repairs.

ITEM #7

## Lincoln Road

All work done on the Lincoln Road, other than work done by the Motor Graders.

The current expenditure incurred on this Road was as follows:-

Labor .....	\$	59.93
City Machinery charges.....		<u>78.00</u>
TOTAL.....\$		137.93

The section of Lincoln Road from the C. N. R. Crossing at the Research Station to the City Line (9,550 Lin. Ft.) was Chip Sealed at a cost of \$10,780.59.

ITEM #8

Wilsey Road: - - - Lincoln Road to Vanier Highway.

All work done on the Wilsey Road, other than work done by the Motor Graders.

Labor.....	\$ 483.01
City Machinery charges.....	<u>160.00</u>
TOTAL =	<u>\$ 643.01</u>

The section of Wilsey Road from Doak Road to Vanier Highway (2,200 Lin. Ft.) was Chip Sealed at a cost of \$1,675.93.

Total Expenditures - Wilsey Road 1971 =	\$1,675.93
	<u>643.01</u>
	<u>\$2,318.94</u>

ITEM #9

Doak and Flanagan Roads:-

All work done on the above mentioned Roads, other than work done by the Motor Graders:

Labor.....	\$ 66.62
City Machinery charges.....	<u>186.00</u>
TOTAL....	<u>\$ 252.62</u>

ITEM #10

Maryland Road:-

Under this heading the expenditure amounted to \$2,468.18 and was made up as follows:-

Labor.....	\$ 2,190.18
City Machinery charges.....	<u>278.00</u>
TOTAL..	<u>\$ 2,468.18</u>

Brush growth along this Rt.-of-way was cut in the Fall of 1971.

ITEM #11

Rural Roads:-

This heading includes the Corbett Road from existing pavement on Forest Hill Road to the Vanier Highway and Tower Road.

The expenditure amounting to \$239.03 was made up as follows:

Labor.....	\$ 103.03
City Machinery charges.....	<u>136.00</u>
TOTAL..	<u>\$ 239.03</u>

ITEM #12

Asphaltic Concrete Repairs  
& Paving Driveway Entrances

Patching and repairing pavement, applying seal coat, light tar or asphalt to pavement and applying asphalt to driveway entrances.

Labor.....	\$ 26,831.01
Hired Trucks and Machinery.....	4,132.00
City Machinery Charges.....	12,106.00
Materials.....	<u>24,534.47</u>
TOTAL....	<u>\$ 67,603.48</u>

In 1958 a large Aggragate Dryer and Aggregate Conveyor Belt was purchased to facilitate the mixing of patching material in the City Yard. This equipment has resulted in an improvement to the quality of the patching material produced at the Yard and has also accelerated the operation.

When local contractors have a plant set up, patching material can be obtained more economically. Patching material when available was obtained from Gorman Construction Ltd. and Perma Paving Limited.

The total expenditure for Pavement Repairs and Driveways for 1971 under the above heading, including Workmen's Compensation, Pension Fund, Holiday and Sick Leave amounted to \$69,871.24 and was computed as follows:-

ASPHALT

Stock from 1970

55 Gallons emulsion.....	\$ 24.15
1,845 Gallons RC <sub>3</sub> .....	<u>498.15</u>
	\$ 522.30

Plus Stock Purchased in 1971

4,725 Gallons RS.....	\$2,140.17
2,700 Gallons RC <sub>3</sub> .....	<u>750.85</u>
	\$2,891.02

TOTAL STOCK...\$3,413.32

Less Stock For 1972

180 Gallons RS.....	\$ 81.00
2,054 Gallons RC <sub>3</sub> .....	<u>719.00</u>
	\$ 800.00

NET COST OF LIQUID ASPHALT...\$2,613.32

Cost of Hot Mix Asphalt in Repairing Streets and Paving Driveway entrances obtained from W. J. Gorman and Perma Paving Asphalt Ltd.....\$17,741.40

Total Hot Mix Asphalt Cost.....	\$ 17,741.40
Asphalt from Flintkote Company (Cold Patch).....	3,614.35
Liquid Asphalt.....	2,891.02
Crusher Dust (80 Tons).....	200.00
Crushed Rock (100 Tons $\frac{1}{2}$ " Minus).....	300.00
Sand (100 Tons).....	125.00
Repairs to Plant Equipment.....	306.61
Propane Gas.....	298.60
City Labor (City Employees, including Pension Fund, Workmen's Compensation, Sick Leave and Holiday Account).....	31,660.59
Hired Trucks and Machinery.....	4,132.00
City Machinery.....	12,106.00
Miscellaneous (Pick axes, Water cans, etc.).....	<u>67.19</u>

TOTAL GROSS EXPENDITURE.....\$ 73,442.76

LESS CREDITS:

Work done & Materials used for Private Parties.....	\$ 2,925.87
Journal Vouchers (Materials sold to other City Departments).....	<u>665.65</u> <u>3,571.52</u>
TOTAL NET COST.....\$ 69,871.24	

Materials in Stock, December 31, 1971:-

180 Gallons RS.....	\$ 81.00
2,054 Gallons RC <sup>2</sup> .....	719.00
100 Tons Crushed Rock $\frac{1}{2}$ " Minus.....	300.00
50 Tons Crusher Dust.....	<u>125.00</u>
TOTAL...\$1,225.00	

ITEM #13

City Motor Graders:-

Operators Wages.....	\$ 2,050.49
Machinery Charges.....	<u>1,654.00</u> \$ 3,704.49

LESS CREDITS:

Canadian National Railway (Grading Yard).....	\$ 85.84
Riverview Arms (Grading Yard)....	38.22
Victoria Public Hospital (Grading Yard).....	10.92
Venus Apartments (Grading Yard)...	<u>22.05</u> \$ 157.03
TOTAL...\$ 3,547.46	

ITEM #14

Off Street Parking:-

The expenditure under this heading amounted to \$10,279.47 and was made up as follows:-

Labor.....	\$ 352.28
City Machinery charges.....	369.00
Materials.....	<u>9,558.19</u>
TOTAL.....	<u>\$10,279.47</u>

The above heading includes the Brunswick Street Parking Area, situated between York and Carleton and the Campbell Street Parking Area, between Phoenix Square and Westmorland. Both of these Parking Areas were Armour Coated in 1971. Following is the cost of Materials used:

Brunswick Street Parking Lot:-

11,720 Gallons RS2 @\$.385 per gal.....	\$ 4,512.20
115.8 Tons 3/8" Chips @\$7.10 per ton.....	822.18
162.7 Tons 1/2" Chips @\$6.25 per ton.....	1,016.88
272.45 Tons 3/4" Chips @\$5.75 per ton.....	<u>1,566.59</u>
TOTAL...	<u>\$7,917.85</u>

Campbell Street Parking Lot:-

2,550 Gallons RS2 @\$.385 per Gal.....	\$ 981.75
24.2 Tons 3/8" Chips @\$7.10 per ton.....	171.82
26.5 Tons 1/2" Chips @\$6.25 per ton.....	165.63
55.85 Tons 3/4" Chips @\$5.75 per ton.....	<u>321.14</u>
TOTAL...	<u>\$1,640.34</u>

ITEM #15

Clearing along Right-of-Way:-

There was no expenditure under this heading in 1971.

ITEM #16

Chip Seal and Surface Seal

In 1971 Flintkote Company Canada Ltd. was contracted to Chip Seal (3/8" Chips) various City Streets. In addition various City Streets were Surface Sealed (3/8" Minus) by Forbes & Sloat Ltd.

1). Chip Seal with 3/8" Chips

Expenditure-----\$14,932.08

Under this heading the following Streets and Roads were resurfaced with 3/8" Chips:-

<u>Location</u>	<u>Lineal Feet</u>
Wilsey Road, Doak Road to Vanier Highway.....	2,200
Lincoln Road, Canadian National Railway Crossing at Experimental Station to	
City Line.....	9,550
Regent Street, Albert Street to Montgomery Street.....	<u>3,000</u>
TOTAL.....	<u>14,750</u>

14,750 Lineal Feet = 2.79 miles

Materials used plus Labor charge:-

789.45 Tons 3/8" Chips @ \$7.10 per ton.....	\$ 5,605.10
23,660 Gallons Colas @ \$0.385 per gal.....	9,109.10
City Machinery.....	64.00
City labor.....	<u>153.88</u>
TOTAL.....	<u>\$14,932.08</u>

#### 2). Surface Seal 3/8" Minus Asphalt

Expenditure-----\$18,089.50

Under this heading the following Streets were Surface Sealed with 3/8" Minus Asphalt by Forbes and Sloat Ltd.:

<u>Location</u>	<u>Lineal Feet</u>
Campbell Street, Phoenix Square to Northumberland Street.....	1,300
Northumberland Street, Queen Street to Brunswick Street.....	600
Allen Street.....	340
Carleton Street, George Street to Charlotte Street.....	330
King Street, St. John St. to Church Street.	600
University Ave., Waterloo Row to Canadian National Railway.....	2,900
Regent St., Intersection Prospect St. and Regent Street.....	<u>100</u>
TOTAL.....	<u>6,170</u>

6,170 Lineal Feet = 1.17 miles

Following is the expenditure for materials and labor for the Surface Sealing of the above Streets:-

Horsnell's (Scrap Steel).....	\$ 10.80
1,045.20 Tons 3/8" Asphalt @ \$15.00.....	15,678.00
1,200 Gallons RS1 @ .50¢ per gal...	600.00
Journal Voucher (Machinery).....	608.00
Labor.....	<u>1,192.70</u>
TOTAL.....	<u>\$18,089.50</u>

The Street preparatory work for Chip Sealing and Resurfacing other than the laying in place of the pavement was done by City Crews.

TOTAL EXPENDITURE FOR CHIP SEALING AND SURFACE SEALING  
UNDER ROADS & STREETS WAS ----- \$33,021.58

ITEM #17

Administration:-

Expenditure-----\$ 5,637.60

The above amount represents overhead costs on time-keeping and accounting.

ITEM #18

City Yard and Maintenance Depot:-

Gross Expenditure-----\$22,271.43  
Credit----- 7,200.00

NET EXPENDITURE.....\$15,071.43

City Yard

Caretaker at City Yard, repair work in City Yard, Heat, Power, etc.

Gross Expenditure-----\$ 8,705.25  
Credit----- 7,200.00

NET EXPENDITURE.....\$ 1,505.25

The above credit of \$7,200.00 was for space rental to other City Departments.

The above expenditure is made up as follows:

Labor.....	\$ 6,066.73
City Machinery charges.....	207.50
Light, Power, Telephone.....	785.03
Furnace Oil (7,305 Gallons).....	1,148.96
Repairs to City Yard (Furnace, Doors, etc.)..	220.46
Miscellaneous (Tools, soap, light bulbs, towels, dustbane, etc.).....	276.57
TOTAL...\$ 8,705.25	

Less Credit \$ 7,200.00

NET EXPENDITURE .....\$ 1,505.25

The City Yard situated on Dundonald Street is being used by the following Departments:-

"Water and Sewer"  
"Parks and Trees"  
"Street Cleaning"

Maintenance Depot

Expenditure-----\$13,566.18

The above expenditure of \$13,566.18 is made up as follows:

Raymond Savage (Padlock and keys).....	\$ 8.53
Atlas Building Supplies (Blackboard materials) ..	3.91
Horsnells (Oil pit funnel assembly).....	25.92
Petrofina Canada Ltd. (7,715 gals. furnace oil) ..	1,208.62
Canadian General Electric (charger).....	27.12
Dobbelstyn Electric (wiring yard lamp).....	198.76
Atlantic Fire Safety (recharging extinguishers, gauntlets and gloves).....	72.18
Glenn's Plumbing & Heating (Pressure tank).....	405.00
Irving Oil Co. Ltd. (2,606 gals. furnace oil) ...	427.39
Maritime Engineering Ltd. (repairing insulation)	309.60
New Brunswick Electric Power Commission.....	1,583.12
Stanley DeLong (Towels).....	1.28
Provincial Motor Sales (soap, towels, wipers)...	197.48
Bargain House (double bunks & mattresses).....	237.60
H. S. Gill (lumber).....	6.00
Auto Machinery (air hose fitting, spray nozzle, hand cleaner, etc.).....	98.01
Harris & Roome Ltd. (bulbs).....	9.53
Eastern Drug Service (comet, towels, soap).....	125.85
E. M. Young (knife, clothes, utensils, dust pan, mops).....	16.23
Neill's Wholesale (pails, bulbs, nails, spikes, etc.).....	141.85
Kitchen Bros. (Bonami).....	7.34
Department of Labor (Inspection of Compressor)...	5.00
New Brunswick Telephone Co. Ltd.....	251.27
John Gibson & Sons (Window spray).....	15.66
City Machinery.....	819.00
Labor .....	<u>7,363.87</u>
TOTAL... <u>\$13,566.18</u>	

The cost of the above building will be taken up later in  
this report under "Capital Account Maintenance Depot".

ITEM #19

Street Signs

Purchasing, repairing and installing Street Signs on City  
Streets.

The expenditure under this heading amounted to \$3,945.85  
made up as follows:-

Labor.....	\$ 1,290.96
City Machinery.....	10.00
Materials.....	<u>2,709.89</u>
	\$ 4,010.85

Less Credits:

J. A. McAdam.....	\$ 36.00
4 Decals (Police Dept.).....	<u>29.00</u>
	\$ 65.00

TOTAL..\$ 3,945.85

In addition to the listed expenditures, there is included under "Roads and Streets" an expenditure of \$30,208.18 which does not show in any of the previous accounts and is made up as follows:

Workmen's Compensation.....	\$ 5,333.80
Carleton Safety Supplies (Vests, flags).....	54.82
Auto Machinery (Car wash, hand lantern, batteries)	7.78
City Tire (Used tire for trailer).....	5.40
Sherwin Williams (Paint for barricades).....	24.41
Ross Drug (Supplies for first aid kit).....	7.46
Minister of Finance (S. S. & E. Tax, vehicle registrations).....	432.47
Daily Gleaner (Tender calls).....	69.30
Miles Tire (Tubes, retreads).....	35.50
Car Allowance.....	120.00
Mobile Radios (Telephone Co.).....	1,082.71
New Brunswick Telephone Co.....	75.76
Motor Vehicle Branch (License transfers).....	7.00
Atlantic Fire & Safety (Traffic cones).....	184.68
Maritime Accessories (Paint).....	2.14
E. M. Young (Wicks for flares).....	15.55
Wood Motors (vehicle license).....	6.00
Royal Mills Ltd. (Jute bags).....	7.50
Atlas Building Supplies (Nails for barricades) .....	7.82
Horsnells (Track pads for Unit Shovel).....	86.40
Sansom Equipment (Muffler, frost wedges).....	45.48
Unemployment Insurance Commission.....	2,515.75
H. S. Gill (Lumber for barricades).....	341.51
Neill's Wholesale (Enamel).....	26.49
Capital Garage (License for Jeep).....	6.00
Petty Cash (Vehicle registration).....	11.00
To correct invoice re-compensation.....	68.04
Labor-making barricades.....	149.87
City Machinery (Barricades).....	12.00
City of Fredericton (City Pension).....	6,473.64
Canada Pension.....	2,883.16
Fuels and Lubricants.....	<u>10,886.34</u>

TOTAL....\$30,985.78

Less Credits:

Workmen's Compensation (cheques) ...	\$ 68.04
Workmen's Compensation (rebate) ...	569.80
R. Dorcas (Long Distance calls) ...	6.30
Auto Machinery (Credit from Recreation) ...	5.96
Sydney Satter (Sale of scrap iron) <u>127.50</u>	<u>\$ 777.60</u>
NET EXPENDITURE.....	<u>\$30,208.18</u>

TABLE COMPARING YEARLY COSTS OF LABOR AND HIRED MACHINERY ON ROADS AND STREETS ITEMS

ITEM	1968	1969	1970	1971
1. Sanding Streets	\$ 16,951.88	18,919.25	13,707.47	16,930.94
2. Snowplowing Side-walks	4,225.00	6,075.34	4,492.84	7,077.38
3. Snow Control	84,918.49	69,070.15	73,432.19	122,556.12
4. Streets Account	41,071.02	43,927.08	38,724.30	54,650.07
5. Equipment Repair	-0-	-0-	16,031.85	16,123.43
6. Grading & Graveling	107.17	1,129.04	571.87	340.93
7. Lincoln Road	109.90	590.15	465.37	59.93
8. Wilsey Road	339.57	454.09	2,351.64	483.01
9. Doak & Flanagan Roads	422.08	564.87	1,394.38	66.62
10. Maryland Road	2.32	833.93	2,219.72	2,190.18
11. Rural Roads	266.36	87.32	55.25	103.03
12. Asphalt Repairs	17,421.51	18,653.57	39,016.15	30,963.01
13. Motor Graders	687.72	848.13	1,597.02	2,050.49
14. Parking Lots	319.80	1,129.95	892.31	352.28
15. Clearing along Rights-of-way	-0-	1,520.85	169.95	-0-
16. Chip Seal	244.25	631.63	559.44	153.88
Surface Seal	-0-	911.67	1,716.21	1,192.70
17. Administration	-0-	-0-	2,168.96	5,637.60
18. (Maintenance Depot (City Yard	-0-	-0-	-0-	(7,363.87
19. Street Signs	-0-	-0-	9,365.52	(6,066.73
TOTALS.....	\$167,087.07	165,347.02	210,654.96	275,653.16

The following items of machinery were purchased in 1971 and charged to Roads and Streets:-

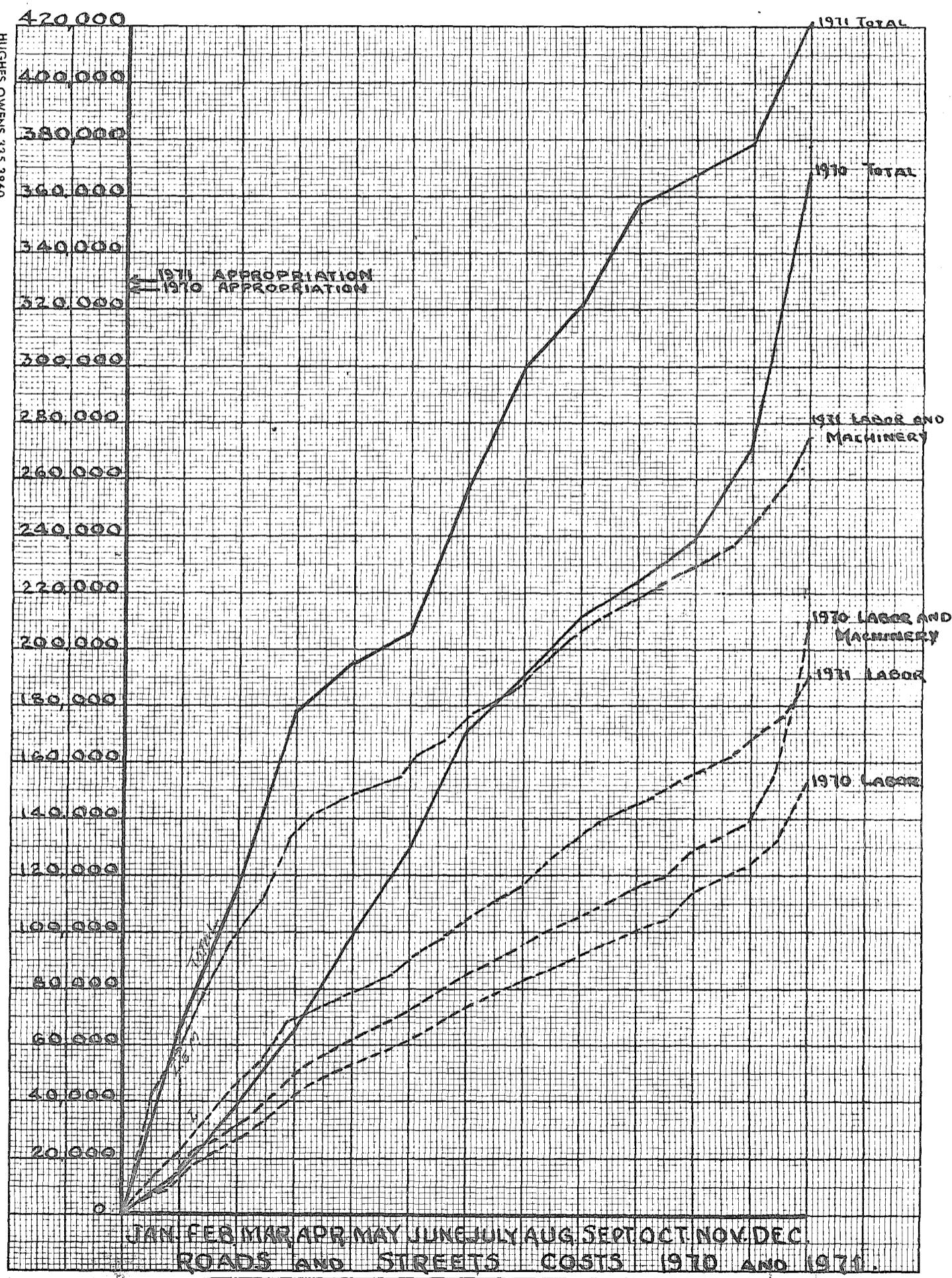
1 - 1971 3 Ton Chevrolet Truck, Model CE57703 Serial No. C.E. 531P107640 .....	\$6,190.00
Less trade-in on truck.....	750.00
	\$5,440.00
Provincial Sales Tax.....	<u>475.20</u>
	\$ 5,915.20
1 - New Crawler Tractor Model TD80 Angle Dozer, Serial No. 704.....	\$20,363.00
Less trade-in Case Tractor.....	7,364.00
& Int. TD5	\$12,999.00
Provincial Sales Tax.....	<u>1,039.92</u>
	\$14,038.92
1 - Catch Basin, Eductor Leaf Collector (Atlantic Mussels).....	\$29,762.00
Provincial Sales Tax.....	<u>2,380.96</u>
	\$32,142.96

1 - 1971 CJ Jeep, $\frac{1}{2}$ Cab Serial No. 8305015 -282049, =4 cyl. front seat (5) 855 x 15 Mud and Snow Tires, Draw Bar, Heavy Duty Springs front and rear, 70 amp. battery, heater 427 T Front Axele, 427 F SE2040520 Half Cab under coated.....	\$ 4,131.14
Less trade-in.....	<u>831.14</u>
	\$ 3,300.00
Provincial Sales Tax.....	<u>264.00</u>
	\$ 3,564.00
1 - 1971 Dodge Model D100 Serial No. D13SB15378750.....	\$ 3,895.00
Less trade-in $\frac{1}{2}$ Ton Chev.....	<u>1,095.00</u>
	\$ 2,800.00
Provincial Sales Tax.....	<u>224.00</u>
	\$ 3,024.00
TOTAL.....	<u><u>\$58,685.08</u></u>

The following is a list of vehicles and machinery used in the Roads and Streets Department, together with the repair costs for 1970 and 1971, including tires and tubes.

Name of Vehicle	Year Purchased	Repairs 1970	Repairs 1971
Austin Western Grader (300 Pacer)	1962	1,054.30	1,156.32
Galion Grader	1961	5,283.68	3,788.73
Galion Grader Model 118	1966	1,007.59	3,249.32
Caterpillar D-5 Bulldozer	1969	994.81	3,737.63
International TD-8	1971	-0-	30.38
TD5 International Crawler Tractor (Traded in 1971)	1963	183.84	6.80
Case 750 D Bulldozer	1965	1,645.72	505.53
Case 850 Bulldozer	1968	273.72	3,646.31
Dodge Vacall	1971	-0-	65.53
Hy Hoe 3/8 Yd. Backhoe	1964	1,097.82	2,853.70
Unit 3/4 Yd. Backhoe	1957	1,375.91	1,391.70
Case W9 Front End Loader	1967	819.53	1,812.18
Allis Chalmers Loader	1970	243.35	1,026.47
Arpic Compressor	1953	36.45	82.95
Ingersol Rand Compressor	1957	57.66	449.12
Copco Compressor	1964	263.88	52.80
Ingersol Rand Compressor	1969	20.76	9.91
Tarvia Roller Model #157	1955	161.33	98.00
Essick Roller	1970	5.11	387.12
Willys Jeep #12	1971	-0-	33.97
Willys Jeep #12 (Trade-in 1971)	1967	264.03	287.27
Willys Jeep #40	1968	290.91	670.63
Willys Jeep #11	1970	64.35	400.71
Ford Bronco	1969	70.04	731.15
Ford 3 Ton	1970	43.90	210.26
Dodge 3 Ton	1969	87.12	631.67
Dodge 3 Ton	1967	1,114.59	226.77
Chevrolet 3 Ton (Trade-in 1971)	1965	296.37	71.29
Chevrolet $\frac{1}{2}$ Ton (Trade-in 1971)	1966	123.09	403.92
International 3 Ton	1968	586.07	154.27
Dodge $\frac{1}{2}$ Ton	1970	65.38	150.31
Dodge $\frac{1}{2}$ Ton	1967	290.89	337.49
G.M.C. Panel	1968	192.88	325.31
Chevrolet 3 Ton	1971	-0-	158.10
Dodge $\frac{1}{2}$ Ton	1971	-0-	61.40
Miller Welder	1959	-0-	736.04
Ford Custom 2 Door	1969	244.37	120.11
Expendable Accessories (Grader Blades, Bolts, Nuts, Bulldozer Blades and Tools, etc.)		746.90	5,390.69
TOTAL COST =		\$19,006.35	\$35,451.86

HUGHES OWENS 335 3860



The following equipment is used on Snow Control and the repair and maintenance cost for this equipment is shown as follows:-

Name of Vehicle	Year Purchased	Repairs 1970	Repairs 1971
Sicard Snow Blower #30	1949	\$ 261.73	\$1,247.19
Sicard Snow Blower #39 (1952 Model)	1961	211.32	922.75
Sicard Snow Blower #47	1963	1,541.73	2,240.45
Ford Sand Spreader	1960	1,158.35	2,048.29
International Sand Spreader #62	1951	255.04	488.05
Chevrolet Sand Spreader #10	1960	374.64	405.64
Oil-Fired Boiler		661.68	330.88
Bombardier	1968	338.63	686.11
<b>TOTAL COST =</b>		<b>\$4,803.12</b>	<b>\$8,369.36</b>

The above costs include City Labor, Outside Labor and parts for the equipment shown.

#### CAPITAL ACCOUNT CURB AND GUTTER

The net expenditure under this heading amounted to \$60,752.12.

For the above expenditure of \$60,752.12 concrete curb and gutter was constructed at the following locations:-

<u>Location</u>	<u>Lineal Feet</u>
Prospect Street, Smythe St. to Regent Street (both sides).....	6,286
McLeod Ave., Church St. to St. John St. (both sides)	1,344
Waggoner's Lane, existing to Hanwell Rd. (both sides)	972
Rankine St., Forest Hill Rd. to Residence #105 Rankine (both sides)....	1,617
Tims Court.....	581
Chippin Court.....	585
Dufferin St.; from York St. south (both sides).....	1,777
Mitchell St., from Squires St. south (both sides)....	206
Golf Club Road, Woodstock Road to City Limits (both sides).....	1,402
Corner York and Dundonald Streets (south side).....	58
Union St., Bridge St. to Babbitt Street (south side).....	2,343
<b>TOTAL ... <u>17,171</u></b>	

All the above listed Curb and Gutter was constructed by City Crews.

All the concrete poured was purchased ready-mixed from Elmtree Concrete Ltd. at a price of \$18.80 per cubic yard.

The unit cost of one lineal foot of curb and gutter, found by dividing the total length laid, which equals 17,171 lineal feet into the total cost of \$60,752.12 is \$3.54 per lineal foot. The topsoiling of Boulevards is included in this cost.

The unit cost of one lineal foot of curb and gutter minus topsoiling was \$2.82 per lineal foot and was calculated as follows:-

#### Topsoiling Costs

Labor.....	\$ 5,810.68
Hired Trucks and Machinery.....	74.00
City Machinery Charges.....	1,105.00
Materials (3,500 yds. topsoil.....	5,250.00
(Grass seed.....	<u>22.20</u>
TOTAL = \$12,261.88	

Total cost for Curbings, including Topsoiling..\$60,752.12  
Cost of Topsoiling.....\$12,261.88

TOTAL COST OF CURBING..\$48,490.24

\$48,490.24      = \$2.82 per lineal foot  
17,171

Cost per lineal foot of Topsoiling - - \$12,261.88 = \$0.71 per lineal foot  
17,171

Labor cost of constructing 1 lineal foot  
of Curb and Gutter, minus Topsoiling

was..... \$20,671.29 = \$1.20 per lineal  
17,171 foot

#### CAPITAL ACCOUNT PAVING

In 1971 Forbes and Sloat Ltd. was awarded a contract to lay pavement and resurface a number of City Streets. The material cost amounted to \$137,396.65 and was made up as follows:

#### Forbes & Sloat Ltd.

5,991.90 tons 3/4" Hot Mix Asphalt @ \$11.50 per ton...	\$ 68,906.86
2,813.15 tons 3/8" Minus Asphalt @ \$15.00 per ton.....	42,197.25
435.0 tons 1/2" Seal @ \$12.00 per ton .....	5,220.00
2,900 Gallons Tack Coat @ \$0.50 per gal.....	1,450.00
17,700 Gallons Primer @ \$0.30 per gal.....	5,310.00

#### Gorman Construction Ltd.

28.60 Tons Seal Asphalt @ \$10.00 per ton.....	\$ 286.00
Bond Discount.....	\$ 3,147.58
Miscellaneous (advertisement, paint, pension fund contribution and portion of staff Salaries) 3,228.93	
TOTAL..\$129,746.62	

The Street preparatory work, other than the laying in place of the pre-mixed material, was done by regular City Crews at an expenditure of \$7,650.03 made up as follows:-

City Labor .....	\$ 5,339.78
Hired Trucks and Machinery.....	32.00
City Machinery.....	<u>2,278.25</u>
	<u>\$ 7,650.03</u>

The total expenditure under this heading amounted to \$137,396.65 and was made up as follows:-

City Labor.....	\$ 5,339.78
Hired Trucks and Machinery.....	32.00
City Machinery charges.....	2,278.25
Forbes & Sloat Ltd.....	123,084.11
Gorman Construction Ltd.....	286.00
Bond Discount.....	3,147.58
Miscellaneous.....	<u>3,228.93</u>
TOTAL....	<u>\$137,396.65</u>

The paving program required the supply and placement of the following grades of materials:-

- 1). Pavement 3/4" Dense Mix
- 2). Recap 1/2" Minus
- 3). Surface Seal 3/8" Minus
- 1). New Pavement

The following Streets were paved with 3/4" Hot Mix by Forbes & Sloat Ltd.: -

<u>Street</u>	<u>Location</u>	<u>Lineal Feet</u>
McLeod Ave., St. John St. to Church Street....	614	
Prospect, Smythe St. to Regent St.	3,180	
Waggoner's Lane existing to Hanwell Rd.....	450	
Rankine, Forest Hill Road to #105 Rankine St..	809	
Tims Court.....	156	
Chippin Court.....	151	
Dufferin, York St. towards South.....	868	
Mitchell, York St. towards South.....	60	
<u>SQUARES</u>		
	TOTAL....	<u>6,288</u>

6,288 lineal feet = 1.19 miles

For the above the following materials were used:-

17,700 I.G. Prime @ \$0.30 per gal.....	\$ 5,310.00
5,991.90 tons 3/4" Hot Mix Asphalt @\$11.50 per ton.....	<u>\$68,906.86</u>
TOTAL...\$74,216.86	

The above listed Streets were laid to a thickness of 3". The Street grading and preparatory work was done by regular City Crews. The pre-mixed material was supplied by Forbes and Sloat Ltd. from its plant situated at Nashwaak Village on Route #8. The Company charged the City of Fredericton \$11.50 per ton in place.

2). Recap 1/2" Minus

Under this heading Golf Club Road from Woodstock Road to the City Limits a distance of 733 feet (.14 miles) was recapped using the following material:-

435.0 tons 1/2" Minus Asphalt @ \$15.00 per ton = \$5,220.00

The Company charged the City of Fredericton \$15.00 per ton in place.

3). Surface Seal 3/8" Minus

The following City Streets were surface sealed under "Capital Account" with 3/8" Minus Hot Mix:-

<u>Street</u>	<u>Location</u>	<u>Lineal Feet</u>
Canterbury Drive, Forest Hill Rd. to Liverpool St...		2,850
Chelsea Court.....		230
Brighton Court.....		182
Sheffield Court.....		400
Leicester, Woodbridge Street to Cambridge Cres....		800
Cambridge Cres., Canterbury Drive (West) to Canterbury Drive (East).....		1,980
Liverpool, Canterbury Drive to Vanier Highway.....		1,650
Noble, MacLaren Avenue to Irvine Street.....		1,820
Irvine, Noble Street to Gibson Street.....		2,620
Beechwood Crescent.....		1,420
Smythe, Montgomery St. to Beechwood Crescent.....		1,300
York, Montgomery St. to Priestman Street.....		1,820
Beaverbrook Court.....		480
TOTAL...17,552		

17,552 Lineal feet = 3.32 miles

For the above the following materials were used:-

2,813.15 tons 3/8" Asphalt Seal @ \$15.00 per ton.. \$42,197.25  
28.60 tons 3/8" Asphalt Seal @ \$10.00 per ton.. 286.00  
2,900 gals. Tack Coat @ \$0.50 per gal..... 1,450.00

TOTAL...\$43,933.25

The Company charged the City of Fredericton \$15.00 per ton in place.

CAPITAL ACCOUNT DOMESTIC SEWER

Gross Expenditure and Stocked Material...	\$46,147.18
Less Inventory December 31, 1971.....	<u>3,962.97</u>
	\$42,184.21
	<u>Credit... \$25,955.20</u>
	<u>Net Expenditure.. \$16,229.01</u>

Included in the Net Expenditure of \$16,229.01 is the amount of \$1,914.45 holdback from jobs completed in 1970 and showing in 1971 accounts (Prospect Street).

The above credit is made up as follows:-

Mar-Sands Properties (Boyne Street)	\$ 3,157.33
Parkside Development (Parkside Dr.)	Local
and Parklyn Court	7,629.17
Fredericton Housing & Const. Co.	Improvement
Ltd. (Charing Crescent)	3,278.26
Metro Home Builders (Foley Ct.)	Charges
	5,038.35
 Work done & materials sold to Private Parties	566.54
 Journal Vouchers (materials paid for by Capital Account, Domestic Sewer and charged to other City Departments)	<u>6,285.55</u>
 <b>TOTAL..</b>	<b><u>\$25,995.20</u></b>

Domestic Sewer mains were constructed at the following locations:-

	Lineal Feet			
	12"	10"	8"	6" Ductile
Parkside Development (Parkside Dr. & Parklyn Ct.) Installed by Maplewood Construction Co. Incomplete in 1970, completed in 1971	*	430	463	
Charing Cres. (Installed by F'ton. Housing & Construction Co. Ltd.)			1670	
Boyne St. (Installed by John Kilburn & Son Ltd.)			405	
Foley Ct. (Installed by F'ton. Housing & Construction Co. Ltd.)			721	
Forest Hill (Canterbury Dr. to Woodbridge St.) (Installed by City Crews)	577		3	
Ranger School (Installed by F'ton. Housing & Construction Co. Ltd.) (Incomplete in '71)				216
N. B. Housing Corp. Land Assembly-Southwood Park (Installed by F'ton. Housing & Construction Co. Ltd. (Incomplete in '71))	513	390		
<b>TOTALS..</b>	<b>577</b>	<b>943</b>	<b>3652</b>	<b>216</b>

\* Laid in 1970-not included in 1971 totals

Total lineal feet installed in 1971....4,495

The actual cost of installing the above listed Sewer Mains was as follows:

Location	Payment to Contractors Including Reserve for Holdbacks	City Labor and Machinery	Materials	Total
Parkside Development (Parkside Dr. & Parklyn Ct.)				
Expenditure 1970	4,253.23	395.23	1,836.02	6,485.48
Expenditure 1971	970.57		173.13	1,143.70
*Charing Crescent		244.57	3,033.69	3,278.26
Boyne Street	2,127.50	171.00	858.83	3,157.33
Foley Court	3,445.00		1,593.35	5,038.35
Forest Hill Road		5,821.81	2,950.05	8,771.86
Ranger School (Incomplete in 1971)	2,785.27		1,291.20	4,076.47
N. B. Housing Corp., Land Assembly (Southwood Park-Incomplete in 1971)	3,595.92	54.08	1,894.36	5,544.36
TOTALS.....	\$17,177.49	\$6,686.69	\$13,631.63	\$37,495.81

\* Labor and machinery supplied by Fredericton Housing and Construction Co. Ltd. and do not appear on City Accounts.

The above costs include any holdback payments thus showing the actual cost of construction greater than the net expenditure. To arrive at the cost per foot of construction the cost of \$35,581.36 (\$37,495.81 minus \$1,914.45 holdback from 1970 must be used for determining same.

Total lineal feet laid (1970-1971)-----4,495

Average cost per foot \$35,581.36 = \$7.92  
4,495

Following is the cost of paying various sizes of pipe including manholes by Contractors and City Workmen and Machinery:-

#### Cost by Contractor-per lineal foot

Location	A.C.D.S. 8"	10"	6" Ductile
Parkside Development (Maplewood Construction Co.)	\$7.81	8.43	
Boyne St. (John Kilburn & Sons Ltd.)		7.80	
Foley Court (F'ton. Housing & Construction Co. Ltd.)		7.00	
Ranger School (F'ton. Housing & Construction Co. Ltd.)			\$18.87

Cost by City Crews and Machinery - per lineal foot

Location	12" A.C.D.S. Pipe
Forest Hill Road, Canterbury Drive to Woodbridge St.	\$15.20

The repairs to the pavement due to the constructing of a Sewer Line across the Trans Canada Highway for the Ranger School, to be completed in 1972 are included in the Unit Price per foot in the above table as also is the repairs to the pavement on Forest Hill Road included in the Unit Price per foot.

All above Domestic Sewers were laid in a common trench with the water main.

Materials in Stock December 31, 1971 :-

29 5½ lineal feet of 8" Terra Cotta Pipe @ .86¢ per foot .....	\$ 254.13
32 ½ lineal feet of 12" Terra Cotta Pipe @ \$1.55 per foot.....	50.38
1,306 lineal feet of 8" Asbestos Pipe @ \$1.50 per foot.....	1,959.00
408 lineal feet of 10" Asbestos Pipe @ \$1.97 per foot.....	803.76
117 lineal feet of 12" Asbestos Pipe @ \$2.40 per foot.....	280.80
10 Manhole Covers and Frames @ \$61.49 each.....	<u>614.90</u>
TOTAL...\$3,962.97	

CAPITAL ACCOUNT SURFACE SEWER

Gross Expenditure and Stocked Material.....	\$115,831.32
Less Inventory December 31, 1971..	<u>7,167.46</u>
	\$108,663.86
Credit... <u>50,411.84</u>	
Net Expenditure..	<u>\$ 58,252.02</u>

Included in the above expenditure of \$58,252.02 is the amount of \$2,570.00 holdback from a job completed in 1970 and showing in 1971 accounts (Prospect Street).

The above credit is made up as follows:-

Mar-Sands Properties (Boyne Street) )	\$10,996.85
Parkside Development (Parkside Drive )	
and Parklyn Court)	Local
Fredericton Housing and Construction )	Improvement 13,872.26
Company Limited )	Charges 7,458.91
Metro-Builders (Foley Court) )	8,578.14
Work done & Materials sold to Private Parties	1,365.06
Journal Vouchers (Materials paid for by Capital Account, Surface Sewer and charged to other City Depts.)	<u>\$140.62</u>
TOTAL....	<u>\$50,411.84</u>

Under this heading Surface Sewer Mains and Laterals were constructed at the following locations:-

Location	Lineal Feet					
	10"	12"	15"	18"	24"	30"
Parkside Development (Parkside Dr. & Parklyn Ct.) Installed by Maplewood Construction Co. Incomplete in 1970, completed in 1971 Construction 1970 *	(196	386			423)	
Charing Crescent (Installed by F'ton. Housing & Construction Co. Ltd.)	142		285	1210	256	
Boyne St. (Installed by John Kilburn & Sons Ltd.)	124			400		315
Foley Court (Installed by F'ton. Housing & Construction Co. Ltd.)	165	435	180			
Water Course, Gibson St. to Noble St. (Installed by City Crews)			18		16	1096
School St. (Installed by City Crews)					30	
Regent St. near Canadian Pacific Track (Installed by City Crews)					40	
New Brunswick Housing Corp. Land Assembly, Southwood Park (Installed by F'ton. Housing & Construction Co. Ltd.) (Incomplete in 1971)	90	800	576	1888	392	
TOTALS.....	717	1639	1041	3921	734	315
						1096

\* Laid in 1970 - not included in 1971 Totals

Total lineal feet installed under this heading in 1971 was 8,458

In addition to the above, under this heading, a portion of the City Back Drain (737') from University Avenue to Waterloo Row was ditched and re-aligned at an expenditure of \$3,145.73 - Piping of a portion of this water course will be completed in 1972.

An itemized account was kept for the installing of the above Sewers at the following locations:-

Location	Payment to Contractors Including Reserve for Holdbacks	City Labor and Machinery	Material	Total
Parkside Development (Parkside Dr. & Parklyn Ct.)				
Expenditure 1970	7,647.28	656.58	3,349.80	11,653.66
Expenditure 1971	1,744.02	13.02	461.28	2,218.32
*Charing Crescent		573.56	6,885.35	7,458.91
Boyne Street	5,359.00	676.00	4,961.85	10,996.85
Foley Court	5,887.00	26.80	2,664.34	8,578.14
Water Course (Gibson St. to Noble St.)		8,595.74	13,377.65	21,973.39
School Street		97.27	87.90	185.17
Regent Street		246.98	276.67	523.65
New Brunswick Housing Corp. Land Assembly, Southwood Park	23,440.28	1,399.35	13,805.05	38,644.68
TOTALS.....	\$44,077.58	12,285.30	45,869.89	102,232.77

\* Labor and machinery supplied by Fredericton Housing and Construction Ltd. and do not appear on City Accounts.

Following is the cost of laying various sizes of pipe including Catch Basins in place by Contractors and City Workmen and machinery:-

Cost by Contractor-per lineal foot

	CONCRETE PIPE				
	10"	12"	15"	18"	30"
Parkside Development (Parkside Dr. and Parklyn Court)					
Maplewood Construction Co.	12.93	13.29			14.66
Boyne St. (John Kilburn & Sons Ltd.)	9.46			11.31	16.28
Foley Court (F'ton. Housing & Construction Co. Ltd.)	\$10.56	10.92	11.57		

Cost by City Crews and Machinery -----per lineal foot

Location	CONCRETE PIPE		
	12"	24"	36"
Water Course, Gibson St. to Noble Street	9.64	14.68	19.67

Included in the above expenditure under the above heading "Capital Account Surface Sewer", was an expenditure of \$1,775.50 for extending surface sewer mains and repairing Catch Basins at the following locations:-

McNair Drive,  
Hearne Street,  
Cambridge Crescent.

Stock on hand December 31, 1971:-

332 lineal feet of 10" Concrete Pipe @ \$1.25 per foot.....	\$ 415.00
386 lineal feet of 12" Concrete Pipe @ \$1.52 per foot .....	586.72
788 lineal feet of 15" Concrete Pipe @ \$2.18 per foot.....	1,717.84
216 lineal feet of 18" Concrete Pipe @ \$2.93 per foot.....	632.88
192 lineal feet of 24" Concrete Pipe @ \$6.56 per foot.....	1,259.52
147 lineal feet of 30" Concrete Pipe @ \$8.44 per foot.....	1,240.68
36 lineal feet of 36" Concrete Pipe @ \$11.55 per foot.....	415.80
1 Catch Basin (Cover and Frame) @\$61.12.....	61.12
42 Pre-Cast Bottoms @ \$19.95 ea.....	<u>837.90</u>
 TOTAL.....\$ 7,167.46	

#### CAPITAL ACCOUNT WATER

Gross Expenditure and Stocked Material.....	\$204,111.45
Less Inventory December 31 .....	<u>38,161.31</u>
	\$165,950.14
Less Credits.....	<u>53,477.54</u>
Net Expenditure....	<u>\$112,472.60</u>

Included in the net expenditure of \$112,472.60 is the amount of \$1,419.35 holdback from a job completed in 1970 and showing in 1971 accounts (Prospect Street).

The above credit is made up as follows:-

Mar-Sands Properties (Boyne Street) )	\$ 4,715.55
Parkside Development (Parkside Drive ) and Parklyn Court ) Local	11,132.53
F'ton. Housing & Construction Co. Ltd. ) Improvement	
(Charing Crescent) ) Charges	7,578.48
Metro Home Builders (Foley Court) )	6,531.15
Work done and materials sold to Private Parties.....	\$ 4,645.11
Journal Voucher (Materials paid for by Capital Account Water and sold to other City Departments .....	\$ 18,874.71
TOTAL.....	<u>\$ 53,477.54</u>

Water Main installations were made at the following locations :-

Location	LINEAL FEET				
	4"	6"	8"	10"	10" Ductile
C.I.	C.I.	C.I.	C.I.		
Parkside Development (Parkside Drive and Parklyn Ct.) Installed by Maplewood Construction Co. Incomplete in 1970, completed in 1971					430)
Charing Crescent (Installed by F'ton. Housing & Construction Co. Ltd.)		1724			
Boyne Street (Installed by J. Kilburn & Sons Ltd.)		420			
Foley Court (Installed by F'ton. Housing and Construction Co. Ltd.)		737			
Ranger School (Installed by F'ton. Housing & Construction Company Ltd.) Incomplete in 1971					216
N. B. Housing Corporation, Land Assembly (Installed by F'ton. Housing & Construction Co. Ltd. Incomplete in 1971)			512	18	
TOTALS.....	485	2905	512	448	216

\*Laid in 1970 - Not included in 1971 Totals

Total Lineal feet laid in 1971 = 3,627

An itemized account was kept of installing Water Mains at the following locations and expenditures were made up as follows :-

In addition to laying of the above listed Water Mains the following is included under this heading :-

- 1). Water-Forest Hill Reservoir, Canterbury Drive,
- 2). Water-Intermediate Level Reservoir
- 3). Water-High Level Reservoir
- 4). Water-Maple St. and Construction of Pump House
- 5). Water-Lincoln Road.

1). Water - Forest Hill Reservoir, Canterbury Drive.

In 1971 Fredericton Housing and Construction Co. Ltd. was awarded a contract to construct a 200,000 Gallon Reservoir to be situated on Canterbury Drive near the existing 35,000 Gallon Reservoir at a price of \$59,250.00.

Preliminary work was done on the site location of this project in 1970 amounting to \$9,555.01 including surveying, investigation of the foundation and cutting the City Water Main and installing pipe inside the Street Line.

Expenditure 1971-----\$64,319.13

The expenditure of \$64,319.13 was made up as follows :-

Provincial Artisans (Surveyors Stakes).....	\$ 5.83
A. D. I. (Concrete tests).....	202.00
Glenn's Plumbing (Installing valve chamber, engine studs).....	460.40
Horsnells (Machining pipe).....	24.00
Hagerman's (Plastic pipe and couplings).....	1.75
Harry Smith (84 yds. topsoil).....	126.00
Maritime Accessories (1 Gallon metal primer).....	9.80
Phillips and Pringle (Fittings).....	3.59
Fredericton Housing & Construction Co. Ltd. (Connecting Pipe to Reservoir).....	461.25
Canada Valve (Valves and fittings).....	610.74
Crane Supplies Ltd. (copper tubing, altitude valve parts).....	72.23
Canron Ltd. (6" C. I. Fittings).....	235.97
Diamond Canapower (Transmitter and receiver).....	1,208.00
Atlas Building Supplies (Styrofoam, masonry cement, adhesive).....	7.36
Fredericton Housing and Construction Co. Ltd.....	53,325.50
MacLaren Atlantic Associates (Engineering & Inspection Services).....	6,624.83
Journal Voucher (City Machinery).....	32.00
Journal Voucher (City Materials).....	257.34
Journal Voucher (City Labor).....	<u>650.54</u>
TOTAL.....	<u>\$64,319.13</u>

The total expenditure to date (1970-1971) amounted to \$73,874.14 and was made up as follows :-

Provincial Artisans (Surveyors stakes).....	\$ 16.85
Sub-Surface Surveys (Foundation investigation).....	1,014.00
Wendall Thomas (36 yds. sand).....	43.20
L. E. Shaw (Brick).....	41.34
Cutting City Main and Installing Pipe inside St. Line - Labor.....	\$494.91
City Machinery.....	204.00
Materials (Sleeve, valve, pipe, etc.....	<u>693.56</u>
	1,392.47

Expenditures (Continued)

A.D.I. (Concrete tests).....	\$ 202.00
Glenn's Plumbing (Installing valve chamber, engine studs).....	460.40
Horsnell's (Machining pipe).....	24.00
Hagerman's (Plastic pipe and couplings).....	1.75
Harry Smith (84 yds. topsoil).....	126.00
Maritime Accessories (1 gallon metal primer).....	9.80
Phillips & Pringle (fittings).....	3.59
Fredericton Housing & Construction Co. Ltd. (Connecting pipe to Vault).....	461.25
Canada Valve (Valves and fittings).....	610.74
Crane Supplies Ltd. (Copper tubing, altitude valve parts).....	72.23
Canron Ltd. (6" C. I. Fittings).....	235.97
Diamond Canapower (Transmitter & receiver).....	1,208.00
Atlas Building Supplies (Styrofoam, masonry cement, adhesive).....	7.36
Fredericton Housing & Construction Co. Ltd. (Constructing Reservoir).....	53,325.50
MacLaren Atlantic Associates.....	13,677.81
Journal Voucher (City Machinery).....	32.00
Journal Voucher (City materials).....	257.34
Journal Voucher (City labor).....	<u>650.54</u>
 <u>TOTAL....\$73,874.14</u>	

Not included in the above cost is the amount of \$5,924.50 holdback on Fredericton Housing and Construction Co. Ltd. for construction of the Reservoir and this amount will appear in 1972 accounts.

The above Reservoir was put in operation--November 3, 1971

2). Water - Intermediate Level Reservoir

In 1968 Canada Gunite Company Limited was awarded a contract to construct a pre-stressed concrete cylindrical ground storage reservoir (capacity 1,000,000 gallons) off Montgomery Street on the Odell Park property at a contract price of \$109,450.00.

The expenditure in 1971 amounted to \$5,472.50 and was for holdback to Canada Gunite Company Limited.

The total expenditure for the above construction commenced in 1968 and completed in 1969 amounted to \$123,091.44 and is made up as follows:-

Payment to Canada Gunite Co. Ltd.....	\$109,450.00
W. R. and W. W. Thomas (1,022 yds. sand @ \$1.10 per yd.).....	1,124.20
MacLaren Atlantic Ltd. (Engineering Services)...	4,925.69
Sub-Surface Surveys (Foundation investigation) ..	870.06
Daily Gleaner (Tender call for Reservoir).....	10.50
Horsnell's (Making tie-rods).....	29.09
Journal Voucher (materials connecting reservoir to Water Main).....	3,120.53
Journal Voucher (City machinery).....	1,483.00
Journal Voucher (City labor).....	1,992.23
Journal Voucher (Pension contribution).....	<u>86.14</u>

TOTAL EXPENDITURE \$123,091.44

The above Reservoir was put in operation-December 31, 1968

Leakage appeared in the sidewalls in 1969 and Canada Gunite Company Ltd. repaired same. However in 1970, leakage in the sidewalls appeared again and Canada Gunite Co. Ltd. proceeded to line the inside of the reservoir with Fibre-Glass and Emulsion. Leaks did not appear in 1971 and the hold-back was released.

### 3). Water - High Level Reservoir

In 1968 a site on Regent Street, near the Trans Canada Highway was purchased by the City of Fredericton from Mr. Leith Draper for a Reservoir for the High Level Water System.

In 1969 Canada Gunite Co. Ltd. was awarded a contract to construct a 250,000 Gallon Reservoir on this site at a price of \$159,000.00. This Reservoir has been constructed and connected to the Water Main on Regent Street, and on December 31, 1969 was put in operation.

The expenditure in 1971 amounted to \$11,985.16 and is made up as follows:-

MacLaren Associates Ltd.....	\$ 2,314.20
Canada Gunite Co. Ltd.....	9,301.50
Journal Voucher (Machinery).....	156.00
Journal Voucher (Pension Fund).....	3.29
Journal Voucher (Labor).....	<u>210.17</u>
TOTAL... <u>\$11,985.16</u>	

Expenditures to date for the above construction are as follows:-

1967-----	\$ 124.10
1968-----	9,859.01
1969-----	150,462.14
1970-----	3,177.61
1971-----	<u>11,985.16</u>

TOTAL EXPENDITURE 1967 - 1971 = \$175,608.02

The above expenditure does not include a holdback of \$15,900.00 on Canada Gunite Co. Ltd. which will be paid in 1972, after leakage repairs have been satisfactorily carried out.

### 4). Water - Maple Street Well and Pump House

A drilling program was carried out in Carleton Ward in 1970 for an additional Water Supply. Three test holes were drilled at the following locations:-

Maple Street, Forbes Street and Noble Street, and as a result the Maple Street Site proved to be the most satisfactory.

Sullivan Well and Drilling Co. Ltd. was hired for test drilling and develop the Well in 1970 at a total expenditure of \$11,720.00.

In 1971 International Water Supply Co. was awarded a contract to supply and install a "Deep Well Turbine Pump" at the Maple Street Site at a contract price of \$6,762.55. In addition Eastland Construction Co. was awarded a contract to construct a Pump House to house the Pumping Equipment for the Well at a contract price of \$7,900.00.

City crews and machinery laid the 8" Water Main from St. Mary's Street to the Well Site on Maple Street in 1971.

The expenditure in 1971 amounted to \$22,524.24 and was made up as follows:-

International Water Supply (contract on Pump)....	\$ 5,748.17
Eastland Construction Co. (Constructing Pump House).....	7,110.00
Melanson Electric (Electric work).....	600.00
Elmtree Concrete (concrete).....	217.80
Provincial Artisans (stakes).....	4.75
International Water Supply (Base plate for Pump and Pressure Gauge).....	71.95
S. T. E. Fetterley (Release Valve).....	145.46
McLennan Sales (Dresser coupling).....	43.20
McAvity Crane Ltd. (check valve).....	182.03
Forbes & Sloat (Gravel).....	701.65
Harry Smith (Sand).....	330.00
Canadian General Electric (Auto-Transformer Starter).....	748.33
Canron Ltd. (Pipe fittings).....	247.97
J. W. Bird & Co. Ltd. (No corrode pipe & fittings)	93.92
M & D Transfer (Cartage on coupling).....	2.50
Horsnell's Ltd. (Machining pipe).....	94.50
Hired Machinery.....	18.00
E. M. Young (Tap and nipple).....	2.74
Crane Supply (Glove valve).....	11.77
Journal Voucher (City Machinery).....	1,295.00
Journal Voucher (Materials).....	2,955.41
Journal Voucher (City Labor).....	<u>1,899.09</u>

TOTAL.....\$22,524.24

#### Expenditure to Date:-

1970-----	\$11,720.00
1971-----	<u>\$22,524.24</u>

TOTAL (1970-1971).....\$34,244.24

This Well will be put in operation in 1972.

#### 5). Water - Lincoln Road

Expenditure-----\$ 3,053.82

The above expenditure was for exploratory work to MacLaren Associates for future extension of water on the Lincoln Road.

A summary of ground water exploration and development costs from 1953 to December 31, 1971 is as follows:-

COST OF WELL WATER SUPPLY TO DATE (SOUTH SIDE)

1953 Test Hole Program-----	\$ 7,500.00
1954 Supply Line and partial development of #1 Well-----	\$ 42,271.16
1955 Develop, House and Connecting of #1 Well-----	\$ 22,883.05
1956 Remote Control and Landscaping-----	\$ 3,048.33
1957 Develop, House and Connecting #2 Well-----	\$ 44,217.72
1958 Holdbacks, etc.-----	\$ 7,641.01
1958-1959 Test Hole Program-----	\$ 24,294.40
1960-1961 Develop, House and Connecting #3 Well-----	\$ 46,554.32
1961 Develop, House and Connecting #4 Well-----	\$ 42,834.45
1962 Remote Control and Landscaping #4 Well-----	\$ 1,011.41
1965 Test Hole Program (Water Exploration)-----	\$ 13,597.08
1966-1967 Develop, House & Connecting Cameron Court Well-----	\$ 26,642.17
1966 Test Hole Program (Continuation of 1965 Program)-----	\$ 5,143.07
1966-1967 Drilling and Testing Well, St. Anne's Point, Woodstock Road, together with a report on future supply-----	\$ 6,788.70
1968 Developing and Testing Well #5, St. Anne's Point, Woodstock Road-----	\$ 43,233.90
1969 Housing, Installing Pumping Equipment, connecting #5 Well, St. Anne's Point, Woodstock Road to City supply line in Wilmot Park and Landscaping-----	\$ 26,272.48

TOTAL-----\$363,933.25

Capacity available in 1971-----3,300 I.G.P.M.

Present average demand-----1,587 I.G.P.M.

Maximum demand-----2,000 I.G.P.M.

Carleton Ward Water Supply 1956-1971 --  
Including Feeder Lines, Wells, Reservoir & Pump House

<u>1956-1957</u> <u>Bridge Street, drilling well,</u> <u>construction of building,</u> <u>installation of pumps and</u> <u>connecting to City Water Main.....</u>	\$ 25,997.25
<u>1957-1958-1959</u> <u>Highland Avenue Reservoir (1,000,000 I.G.)</u> Expenditure 1957.....\$23,440.28 Expenditure 1958.....\$60,432.95 Expenditure 1959.....\$17,267.72.....\$101,140.95	
<u>1957-1958</u> <u>Feeder Main to Highland Ave. Reservoir</u> Expenditure 1957.....\$30,231.00 Expenditure 1958.....\$ 2,353.97.....\$ 32,584.97	
<u>1961</u> <u>Killarney Road Well-Changes in</u> <u>Piping to Distribution System.....</u>	\$ 1,375.98

Carleton Ward Water Supply 1956-1971 (Continued)

1963-1964    Highland Avenue Well,  
drilling near Reservoir  
Constructed in 1959,  
erection of building to  
house equipment and  
electrical 1963.....\$13,781.74  
Installing of Pumping  
Equipment, connecting  
from Well to Reservoir,  
installation of meters  
and completion of  
electrical equipment  
1964.....\$ 5,427.08      \$ 19,208.82

1970    Total cost of Water Exploration  
& Development Program  
Maple Street.....\$11,720.00  
Noble Street.....\$ 3,600.00  
Forbes Street.....\$ 1,008.00  
Setting, Testing &  
Pumping, 28 hrs.  
@\$20.00 per hour.....\$ 560.00 } 2060  
City labor, machinery  
charges and materials...\$ 491.62 } \$ 17,379.62

1971    Development of Maple Street Well  
including laying of Water Main  
from Pump House to Well,  
Constructing Pump House and  
installing and connecting  
Pump to Well.....\$ 22,524.24

TOTAL..., \$220,211.83

CAPITAL ACCOUNT GRAVEL ROADS

Gross Expenditure.....	\$64,694.68
Credits.....	<u>35,231.70</u>
NET EXPENDITURE.....	<u>\$29,462.98</u>

The above credits are made up as follows:-

Mar-Sands Properties (Boyne Street) )	\$ 4,805.91
Parkside Development (Parkside Dr. & )	
Parklyn Court ) Local	\$ 11,608.18
F'ton. Housing & Construction Co. Ltd) Improvement	
(Charing Crescent ) Charges	\$ 8,670.53
Metro Builders Ltd. (Foley Ct.) )	\$ 9,672.55
Journal Voucher (Materials).....	\$ 474.53
TOTAL.....	<u>\$ 35,231.70</u>

Included in the above expenditures are:-

- 1). Grading and Gravelling Curbed Streets,
- 2). Gravel Road Construction.

### 1). Grading and Gravelling Curbed Streets

The list of Streets under this heading will be found under "Capital Curb and Gutter", which is contained in the body of this Report on Page 20. The expenditure for gravelling Curbed Streets amounted to \$20,546.86.

### 2). Gravel Road Construction

The cost of constructing and gravelling the following Streets under this heading was as follows:

Location	Lineal Feet	Expenditure
Parkside Development (Parkside Dr. and Parklyn Court)		
Expenditure 1970		\$ 168.89
Expenditure 1971	914	<u>11,439.29</u> <u>11,608.18</u>
Charing Crescent	1611	8,670.53
Boyne Street	356	4,805.91
Foley Court	745	9,672.55
Southwood Park (Incomplete in 1971)		471.06
TOTALS	3626	\$35,228.23

Total Mileage for new Street Construction for 1971 = .69

#### Note:

Not included in City Mileage for Roads and Streets are the following:

Doone Street) Carleton Ward  
Southwood Park

### CAPITAL MAINTENANCE DEPOT

In 1968 the City of Fredericton purchased land from Crown Assets Disposal Corporation on the east side of Maryland Road, beyond the Trans Canada Highway. Due to experiments being conducted on this property by the University of New Brunswick, the City of Fredericton traded this section of land for a section of land owned by the University of New Brunswick on the west side of the Maryland Road beyond the Trans Canada Highway.

In 1969 the City of Fredericton awarded a contract to Maritime Engineering Ltd. for the construction of a Maintenance Depot on this property at a cost of \$189,630.00. This project was completed in 1970.

Expenditures to date:-

1968-----	\$ 14,144.93
1969-----	96,458.58
1970-----	128,972.36
1971 (Including holdback on buildings, Magnetic Sign and continuation of fence)	<u>10,311.11</u>
TOTAL FOR 1968-1971.....\$249,886.98	

The total expenditure of \$249,886.98 is made up as follows:

A.D.I. (Design, Field and Office Supervision).....	\$ 12,110.11
Maritime Engineering Ltd.....	189,641.70
Minister of Finance (S. S. & E. Tax Audit).....	.68
Merrithew Refrigeration Ltd. (Used frig and stove) .....	200.00
Atlantic Bridge Co. (Shelves, Benches, Pan Rack) ...	842.85
Provincial Artisans (Stakes).....	12.85
Brick Hill Equipment Ltd. (Rental on D-6 Tractor) ..	783.00
J. W. Bird & Co. (Sonotube for fencing).....	81.00
L. E. Shaw (Brick).....	8.42
Wendall Thomas (Sand).....	31.20
Forbes & Sloat (Class "A" Gravel).....	11,638.10
Fredericton Rentals Ltd. (Magnetic sign).....	125.80
Scott Concrete Works (Precast curbs).....	131.22
Sullivan Well Drilling.....	1,800.00
Purchase of Property.....	13,000.00
James S. Neill (Axes, Files, etc.).....	46.21
Bond Discount.....	4,200.00
Millar Motors (Repairs to saw).....	8.00
W. R. Thomas (Hauling Pulp).....	157.12
Journal Voucher (Materials).....	513.43
Journal Voucher (Pension contributions).....	295.46
Journal Voucher (Hired trucks and machinery).....	481.00
Journal Voucher (City machinery).....	7,749.27
Journal Voucher (City Labor).....	<u>6,775.88</u>
TOTAL.....\$250,633.30	

### Less Credit

Sale of Pulp to J. D. Irving - 1969.....	\$ 746.32
NET EXPENDITURE (1968 - 1971).....\$249,886.98	

The Roads and Streets Department occupied the new Maintenance Depot - November 13, 1970.

CAPITAL ACCOUNT-URBAN RENEWAL

Expenditure-----\$207.39

The above expenditure was to wages for surveying for Urban Renewal.

CAPITAL ACCOUNT-INDUSTRIAL PARK A.D.B.

Gross Expenditure-----\$234,885.58  
Credit-----\$144,706.91

NET EXPENDITURE.....\$ 90,178.67

The above credit is for "shared cost" payments by the Province of New Brunswick on behalf of the Atlantic Development Board Agreement.

In 1971, under the above heading a Reservoir on the south side of the Flemming Road and west of Ayers Street was constructed, the graveling of Hilton and Hubbard Roads completed and Water and Sewer was installed on the Doak Road from the Wilsey Road to the entrance of Atlas Construction Company south of the Vanier Highway. This portion of the Doak Road was also reconstructed.

In 1971 the City of Fredericton awarded a contract to Horton Steel & Iron Works to construct a steel cylindrical reservoir on the south side of Flemming Road west of Ayers Street at a contract price of \$142,315.00.

Expenditure 1971-----\$121,657.83

The above expenditure is made up as follows:-

Horton Steel and Iron Works (constructing Reservoir)	\$105,958.02
Sub Surface Surveys (Professional service)	150.00
A. D. I. (Testing concrete)	356.00
Q. E. D. Services (Drilling program)	436.29
Harry Smith (44 yds. pipe sand)	104.50
J. W. Bird (Plastic Pipe)	40.90
Crane Supply (Brass nipple, lubricant)	3.94
Petty Cash (Crane Supply)	.94
McLaren Associates	11,040.83
Provincial Artisans (Stakes)	5.51
Journal Voucher (Pension contributions)	74.75
Journal Voucher (Hired machinery)	30.00
Journal Voucher (City machinery)	792.00
Journal Voucher (Materials, pipe fittings, cement, etc)	1,531.98
Journal Voucher (City labor)	1,132.17
TOTAL.....	<u>\$121,657.83</u>

Total expenditure to date (1970-1971) including Reservoir and connecting Reservoir to City Main was \$124,170.98 and is made up as follows:-

Sub Surface Surveys (Foundation investigation)	\$ 1,402.62
Horton Steel and Iron Works (Constructing Reservoir)	105,958.02
MacLaren Atlantic Associates (Engineering and Design)	12,179.15
A. D. I. (Testing concrete)	356.00
Q. E. D. Services (Drilling program)	436.29

Expenditures (Continued)

Harry Smith (44 yds. pipe sand).....	\$ 104.50
J. W. Bird (Plastic Pipe).....	40.90
Crane Supply (Brass nipple, lubricant).....	3.94
Petty Cash (Crane Supply).....	.94
Provincial Artisans (stakes).....	5.51
Journal Voucher (Pension contributions).....	78.43
Journal Voucher (Hired machinery).....	30.00
Journal Voucher (City Machinery).....	800.00
Journal Voucher (Materials).....	1,531.98
Journal Voucher (City labor).....	<u>1,242.70</u>
TOTAL.... <u>\$124,170.98</u>	

Landscaping for the above Reservoir will be completed in 1972.

The above Reservoir was put in operation - December 23, 1971

In 1971 Road construction and graveling was completed on Hilton and Hubbard Roads at an expenditure of-----\$ 44,098.26

The total expenditure amounted to \$76,101.23 and was made up as follows:-

Expenditure 1970-----	\$32,002.97
Expenditure 1971-----	<u>\$44,098.26</u>

Expenditure 1970 - 1971.....\$76,101.23

E. E. McCoy Co. Ltd. was awarded a contract to install Water, Domestic Sewer and Surface Sewer (where necessary) on the Doak Road from the Wilsey Road to the entrance of Atlas Construction Co. property just south of the Vanier Highway.

Following is the cost for the above items:-

Installing Domestic Sewer Main...\$26,578.98
Installing Water Mains..... 23,349.16
Installing Storm Sewer..... 3,070.41
Road construction and graveling. <u>16,130.94</u>

TOTAL....\$69,129.49

Following is the cost per foot of installing Domestic Sewer, Surface Sewer and Water on the above portion of the Doak Road:

Domestic Sewer - 1,440' - 10" A.C. Pipe @ \$7.91
325' - 8" A.C. Pipe @ \$7.18
495' - 6" Ductile Pipe @ \$10.34

Surface Sewer - 96' - 24" Concrete Pipe  
 @ \$15.76  
 96' - 12" Concrete Pipe  
 @ \$10.12

Water - 1885' - 10" Cast Iron Pipe  
 @ \$13.21  
 8' - 8" Cast Iron Pipe  
 @ \$11.60  
 20' - 6" Cast Iron Pipe  
 @ \$10.19

#### LOCAL IMPROVEMENT 1971

The following summary of Local Improvement Projects undertaken or continued from 1970, show the actual cost of construction (including holdback payments) which was paid by the subdivider.

<u>Location</u>	<u>Service</u>	<u>Cost</u>	<u>No. of Lots</u>
Parkside Development (Off Smythe St.)	Water	\$ 11,132.53	
Parkside Drive & Parklyn Court	Dom. Sewer Storm Sewer Gravel Rd. Sidewalk	7,629.17 13,872.26 11,608.18 <u>1,115.00</u>	24
	TOTAL.....	\$ 45,357.14	
Mar-Sand (Off Dunn Road) (Apt. Complex)	Water Domestic Sewer Storm Sewer Gravel Rd. Sidewalk	4,820.55 3,157.33 10,996.85 4,805.91 <u>872.50</u>	3 (133 Units)
Boyne Street		TOTAL.....\$ 24,653.14	
Metro-Home Builders off Hanwell Road <i>Foley Ct.</i>	Water Dom. Sewer Storm Sewer Gravel Road	6,531.15 5,038.35 8,578.14 <u>9,672.55</u>	19
	TOTAL.....	\$ 29,820.19	
*Fenton. Housing Ltd. (Skyline Acres) Charing Crescent	Water Dom. Sewer Storm Sewer Gravel Rd. Sidewalk	7,578.48 3,278.26 7,458.91 8,670.53 <u>3,852.00</u>	37
	TOTAL.....	\$ 30,838.18	TOTAL....83

New Brunswick Housing Corp. - Land Assembly - Completion scheduled for 1972  
Southwood Park

\*Installation by own forces under City Supervision.

SUMMARY OF COSTS TO  
SUBDIVIDERS FOR SERVICES - 1971

<u>Service</u>	<u>Cost</u>
Water	\$ 30,062.71
Domestic Sewer	19,103.11
Storm Sewer	40,906.16
Gravel Road	34,757.17
Sidewalk	<u>5,839.50</u>
	<u>\$130,668.65</u>

Total number of lots abutting streets  
serviced in 1971 - 83

PUBLIC WORKS

Gross Expenditure-----	\$ 67,840.58
Credits-----	<u>\$ 10,470.90</u>
Net Expenditure-----	\$ 57,369.68
1971 Appropriation-----	<u>\$ 48,500.00</u>
DEBIT.....	<u>\$ 8,869.68</u>

The credits of \$10,470.90 are made up as follows:

New Brunswick Telephone Co. (Long distance calls).....	\$ 18.15
Workmen's Compensation (cheques).....	235.00
Removal of Stumps on private properties.....	253.48
D. Urquhart (refund on Convention expenses).....	88.63
School District #26 (Mowing Grass).....	367.50
Journal Voucher (Gas and Oil).....	160.60
Journal Voucher (Bales of peat moss).....	18.00
Journal Voucher (Mobile Radios).....	7,670.54
Journal Voucher (Use of Ford Tractor).....	<u>1,659.00</u>
TOTAL....	<u>\$10,470.90</u>

The labor, hired truck and City machinery charges under Public Works expenditure were incurred as follows:-

Item	Labor & Supervision	Hired Trucks	City Machinery
Trees	\$22,003.99	\$1,376.82	\$6,468.00
Back Drain Diversion	155.78	180.50	38.00
Back Drain	330.98		72.00
Seminars	170.96		
Unforseen	5,993.21	92.00	884.00
Casuals' Vacation Pay	7,153.17		
TOTALS.....	\$35,808.69	\$1,649.32	\$7,462.00

Trees:

Total Expenditure-----	<u>\$36,312.53</u>
------------------------	--------------------

The above expenditure of \$36,312.53 is made up as follows:

Labor & Supervision.....	\$22,003.99
Hired Trucks & Machinery.....	1,376.82
City Machinery charges.....	6,468.00
Materials.....	6,440.83
Mr. Charles Smith (Honorarium for services rendered).....	<u>600.00</u>
	\$36,889.64
Less Credits.....	<u>577.11</u>
	NET EXPENDITURE. <u>\$36,312.53</u>

In 1971, 163 trees were removed upon the recommendation of the Fredericton Tree Commission. The condemned trees were either in a decadent condition, a menace to public safety or possible breeding places for the Elm Bark Beetle.

Following is a list of trees removed in 1971:-

<u>Species</u>	<u>Number Removed</u>
Elm	134
Maple	13
Poplar	5
Spruce	2
Pine	2
Tamarack	1
Birch	2
Willow	<u>4</u>
	<u>163</u>

The procedure followed at the present time is as follows:

The trees are condemned by four members of the Fredericton Tree Commission. The list, signed by the four members of the Commission is then forwarded to the office of the City Engineer.

Trees on private property which are condemned as possible breeding places for the Dutch Elm Disease, are also removed by City crews.

In 1971, 57 trees were removed with Dutch Elm Disease at various locations within the City Limits.

Following is a list of trees removed from 1961 to 1971 with Dutch Elm Disease:-

1961-----	2
1962-----	2
1963-----	1
1964-----	14
1965-----	8
1966-----	12
1967-----	18
1968-----	33
1969-----	30
1970-----	49
1971-----	57

TOTAL--- 226

Permission for the removal of trees on private property, as well as a statement to the effect that no claim for damages will be filed by the property owners, are obtained before proceeding with this work.

The system is working very well, with a minimum of delay, after the tree has been condemned.

A considerable number of trees were pruned (1,929) during the year as well as the usual planting program.

Spraying of Mountain Ash at various locations in the City of Fredericton was carried out in 1971 to keep down the defoliation of these trees due to Beetles.

Trees were planted at the following locations:-

<u>Location</u>	<u>Number of Trees</u>
Priestman Street	63
Michener Court	14
Oxford Street	18
Bailey Drive	3
Walker Street	9
Willingdon Street	13
Canterbury Drive	14
Woodbridge Street	31
Leeds Drive	2
Lansdowne Street	6
Hanwell Road	<u>48</u>
TOTAL..	<u>221</u>

102 trees were planted at various locations to replace losses due to dry weather and vandalism.

Under the above heading the following trees were purchased in 1971 from Lansdowne Nursery:-

60 Norway Maples 8'-10'	@\$6.00 each.....	\$ 360.00
26 Norway Maples 12'-14'	@\$7.00 each.....	182.00
15 Crimson King Maples 7'-8'	@\$6.50 each....	97.50
26 Crimson King Maples 8'-10'	@\$6.75 each...	175.50
25 Schwedler Maples 7'-8'	@\$6.50 each.....	162.50
14 Schwedler Maples 8'-10'	@\$6.75 each.....	94.50
53 Tilia Cordata 8'-10'	@\$6.25 each.....	331.25
50 Tilia Pallida 8'-10'	@\$6.00 each.....	300.00
12 White Ash 8'-10'	@\$5.25 each.....	63.00
22 White Ash 7'-8'	@\$4.75 each.....	104.50
15 Red Oak 8'-10'	@\$7.25 each.....	108.75
10 Red Oak 7'-8'	@\$6.25 each.....	<u>62.50</u>
		\$2,042.00

Less overpayment 1970 trees..... \$62.25

5 Tilia Pallida for planting  
in 1972 .... \$30.00 92.25

TOTAL = \$1,949.75

In 1967 Mr. David Urquhart was appointed Superintendent of Parks and Trees, responsible to the City Engineer. With this addition to staff, this branch is more efficiently operated, with beneficial results in the beautification of the Public Parks and Recreational areas of the City as well as improved tree care.

Back Drain Diversion:-

Expenditure-----\$404.18

The above expenditure is made up as follows:

Labor.....	\$155.78
Hired trucks & machinery.....	180.50
City machinery.....	38.00
Journal Voucher (Pension contributions)...	8.24
Materials (sand, brick, cement).....	<u>21.66</u>

TOTAL...\$404.18

The above expenditure was for general maintenance.

Back Drain:-

Expenditure-----\$433.83

The above expenditure is made up as follows:-

Labor.....	\$330.98
City machinery.....	72.00
Journal Voucher (Pension contributions)...	8.18
Materials (brick, cement, sand).....	<u>22.67</u>

TOTAL...\$433.83

This expenditure was for general maintenance to the Back Drain.

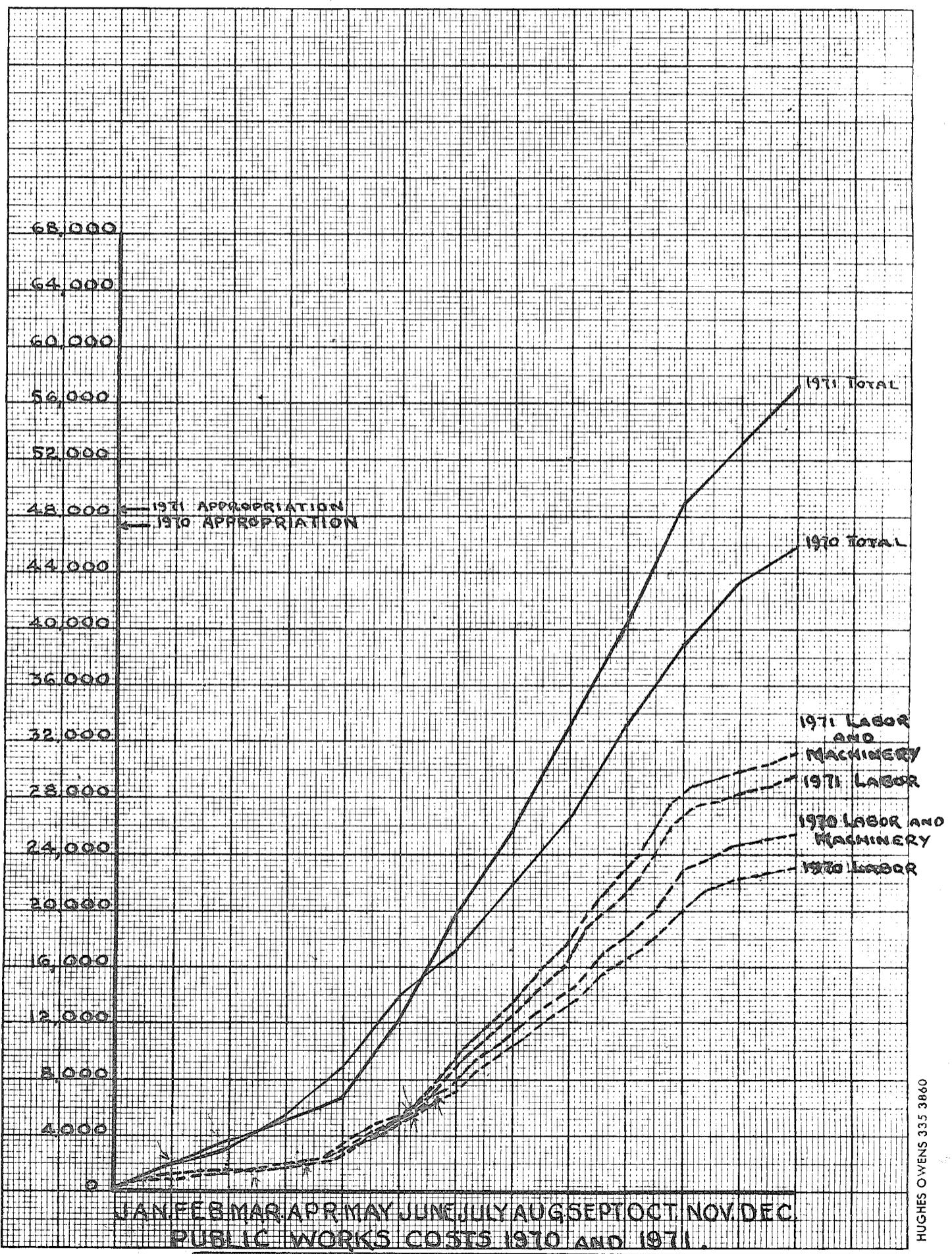
Surveying:-

Expenditure-----\$1,235.00

The above expenditure is made up as follows:-

Trainor Surveys Ltd. (Graham Avenue)....	\$ 295.95
Norman Wade Co. Ltd. (Range Poles, tapes, table covering).....	188.89
Horsnell's (Repairs).....	2.50
E. M. Young (lumber crayons, cord, axes, paint, tapes).....	55.53
Auto Machinery (paint).....	9.01
J. L. Simms and Sons (Enamel).....	2.70
J. W. Bird (Refill for tape).....	5.97
Seaboard Surveys Ltd. (Prospect & Regent Streets).....	422.05
Paul Burden (Range Poles).....	194.40
Balfour Bailey (Updating City Maps)....	<u>58.00</u>

TOTAL...\$1,235.00



Seminars:-

Expenditure-----\$170.96

The above expenditure was for City employees attending Safety Conference.

Surface Sewers:

Expenditure-----\$ 93.55

The above expenditure was a Journal Voucher for materials (sand, brick and manhole cover and frame).

Unforseen Account - Labor and Hired Trucks:-

Removal of Christmas Trees from City Street.....	\$ 798.79
Benches (Painting and repairs).....	636.15
Stencilling Coveralls and Rain Coats.....	5.26
Cenotaph Stand.....	33.32
Sir James Dunn Fountain.....	65.50
Taking of Inventory 1971.....	142.34
Greens (cutting, raking, seeding, topsoiling, etc.)	4,154.32
Promotion Days.....	219.95
Rotary Auction.....	4.94
Jury Duty.....	24.64

TOTAL....\$6,085.21

The total expenditure amounted to \$19,014.72 and was made up as follows:-

Labor.....	\$ 5,993.21
Hired trucks.....	92.00
City Machinery charges.....	884.00
Other materials.....	<u>21,943.06</u>
	TOTAL.....\$28,912.27
Less Credit (Long Dist. Calls & Mobile Phones)	<u>9,897.55</u>
	NET EXPENDITURE..\$19,014.72

Casuals' Vacation Pay:-

The total amount under this heading amounted to \$7,153.77 for casual labor vacation pay.

Odell Park

Gross Expenditure-----\$12,701.35  
Credits-----408.20

NET EXPENDITURE..\$12,293.15

Included in the above are the following :-

- 1). Odell Park Maintenance.
- 2). Odell Park Development.

1). Odell Park Maintenance:-

Gross Expenditure-----	\$ 9,249.43
Credit -----	<u>171.50</u>
NET EXPENDITURE....\$ 9,077.93	

The above credit is for the use of City machinery in the Odell Park.

The Gross Expenditure of \$9,249.93 is made up as follows:

Frank A. Blaney (repairs to tractor).....	\$ 89.39
J. W. Bird & Co. Ltd. (Paint).....	26.79
H. S. Gill (Lumber).....	9.66
Hawkins Equipment & Rentals (repairs to mower).....	59.82
Moore Water Gardens (Assorted water flowers).....	77.00
C. N. Express on flowers.....	10.10
Petty Cash-Air express on flowers.....	7.00
Scott's Nursery (bedding plants).....	116.90
E. M. Young (twine, axes, handles, etc.).....	21.57
Elm Glass Ltd. (Paint).....	9.25
Auto Machinery & General Supply Co. (Belt, weather-head fittings).....	10.92
Bud Wolfe Service Station (Gasoline).....	8.97
Harry Smith (Topsoil).....	48.00
Co-Op Hardware (Watering dishes, scythe handle & blade)	23.01
J. L. Simms & Sons (Spray paint).....	1.38
Battery & Electric (Battery for tractor).....	24.93
Workmen's Compensation Board (1971 Assessment).....	142.29
Miles Tire Ltd. (repair tire).....	2.00
New Brunswick Telephone Co. (Telephone).....	67.22
John Gibson & Sons Ltd. (Dairy rations, feed, etc.)....	160.42
Minister of Finance (License, audit 1970 purchases)....	19.12
City of Fredericton (Water and Sewer Rates).....	40.00
Journal Voucher (Diesel fuel, antifreeze, gas).....	58.86
Journal Voucher (Cement, peat moss, brick).....	36.97
Journal Voucher (machinery).....	337.50
Journal Voucher (Pension contribution).....	376.12
Journal Voucher (City labor).....	<u>7,464.24</u>
TOTAL...\$9,249.93	

2). Odell Park Development

Gross Expenditure-----	\$3,451.92
Credit -----	<u>236.70</u>
NET EXPENDITURE....\$3,215.22	

The above credit of \$236.70 was for 400 lineal feet of Fencing sold to Recreation Department.

The Gross expenditure of \$3,451.92 is made up as follows:

Atlas Building Supplies (Polyethelene, nails).....\$	13.43
York Structural Steel (Reinforcing steel).....	14.44
E. M. Young (Chicken netting).....	20.82
Albron Game Farm (Turkey and Partridge eggs).....	15.60
Seaboard Surveys Ltd. (Survey Park near Prospect St.)	897.20
J. L. Simms & Sons (Nails, insulation, door frame, putty, etc.).....	70.54
Forbes & Sloat (Class "A" Gravel).....	500.41
H. S. Gill (Lumber, shaving and nails).....	693.03
J. W. Bird & Co. Ltd. (Staples, rail line posts, plastic pipe, etc.).....	209.67
Journal Voucher (Cement, cedar posts).....	31.69
Journal Voucher (Machinery).....	224.00
Journal Voucher (Pension contributions).....	33.02
Journal Voucher (City labor).....	<u>728.07</u>
TOTAL.....\$	<u>3,451.92</u>

Under this heading "Odell Park", trees were cut and pruned where necessary, flowers planted, underbrush cleared, grass mowed and trails constructed, as well as the construction of a Pheasant Shelter.

In addition animals and pheasants were added to the Park making Odell Park a picturesque attraction. The co-operation of the Department of Fish and Game is appreciated for the addition of fawns and Mr. T. Roy Myles supplied the pheasants.

#### Carleton Park

Expenditure-----\$4,629.41

The above expenditure is made up as follows:-

Hawkins Equipment & Rentals (repairs to mower).....\$	3.00
Harry Smith (Topsoil).....	48.00
Marathon Realty (Yearly Park Rental).....	700.00
Bud Wolfe Service Station (Gasoline).....	6.73
Battery & Electric (1 Super Commercial Mower).....	146.88
Scott's Nursery (bedding plants).....	97.30
H. S. Gill (Lumber, spikes).....	9.25
John Gibson & Sons (Grass seed, peat moss, tulip bulbs)	91.45
Elm Glass Ltd. (Paint for benches).....	9.98
Journal Voucher (Peat moss).....	6.00
Journal Voucher (Machinery).....	502.50
Journal Voucher (Gas, Oil).....	8.90
Journal Voucher (Pension contributions).....	160.24
Journal Voucher (City Labor).....	<u>2,839.18</u>
TOTAL....\$	<u>4,629.41</u>

#### Wilmet Park

Expenditure-----\$6,891.41

The expenditure of \$6,891.41 is made up as follows:

Materials used on lawns and flower beds.....	\$ 320.75
Supplies and repairs to lawn mowers.....	38.35
Materials and labor charges expended on Caretaker's House.....	130.98
Lighting (Wilmot Park 14 - 250 W. Merc. Lamps).....	826.00
Water and Sewer Rates.....	48.00
Journal Voucher (Peat moss, cedar posts, cement).....	16.89
Journal Voucher (City Machinery).....	557.50
Journal Voucher (Pension contributions).....	203.21
Journal Voucher (Hired machinery).....	88.00
Journal Voucher (City Labor).....	<u>4,661.73</u>
TOTAL... <u>\$6,891.41</u>	

#### Development of Park Areas

Gross Expenditure-----	\$3,401.61
Credit-----	<u>91.40</u>

NET EXPENDITURE...\$3,310.21

The above credit was a journal voucher (cedar posts).

For the above expenditure the following Park Areas were fenced; pathway from Massey Street to playgrounds, two paths from playgrounds to Stanley Street.

Park area between Willingdon Street and Priestman Street, parallel to Priestman Street was undercut and put in a satisfactory condition.

The Park area in Carleton Ward, south of Irvine Street was cleared in preparation for a playground area.

#### RECREATION

Expenditure-----\$1,922.40

The above expenditure does not include all playground expenditures, but only those which appear on departmental payrolls or costs of materials ordered through the office of the City Engineer. The salaries of the Recreation Director and Playground Supervisors hired for the summer months are not in the above costs, nor does the cost of equipment on the playground appear here.

The expenditure of \$1,922.40 is made up as follows:

Journal Voucher (Coliseum Yard Lights).....	\$ 360.00
Journal Voucher (Gasoline, varsol).....	350.05
Journal Voucher (City machinery).....	178.50
Journal Voucher (Hired trucks and machinery).....	16.00
Journal Voucher (Pension contributions).....	27.16
Journal Voucher (City labor).....	678.09
Journal Voucher (Decals, rock dust, fencing, fence posts, cement).....	<u>312.60</u>

TOTAL....\$1,922.40

### CITY HALL

Expenditure-----\$574.33

The above is of course, only the expenditure for the City Hall made through the Office of the City Engineer and is not the total expenditure made on City Hall.

The expenditure of \$574.33 is made up as follows:

Scott's Nursery (Bedding Plants).....	\$ 12.60
Elm Glass Ltd. (Paint and Brushes).....	16.17
Richards Electric (Repairing Air-conditioner) ..	94.53
Atlantic Speedy Propane.....	3.00
J. W. Bird & Co. Ltd. (Paint, roller, paint remover, polyfiller).....	74.82
Journal Voucher (City machinery).....	8.00
Journal Voucher (Pension contribution).....	14.08
Journal Voucher (City labor).....	<u>351.13</u>

TOTAL....\$574.33

### SURFACE SEWERS

Gross Expenditure-----\$17,217.94  
Credits-----365.14

NET EXPENDITURE.\$16,852.80

The above credits are made up as follows:

Wood Motors Ltd. (Thawing floor drain).....	\$ 31.82
Fredericton Medical Clinic (Clearing storm Sewer).....	12.50
General Dairies (Installing surface sewer)....	99.67
Francis Delmas (Installing surface sewer).....	83.17
A. Mueller (connecting surface sewer).....	10.07
New Brunswick Electric Power Commission (clearing roof drain).....	25.92
New Brunswick Telephone Co. (repairing surface sewer).....	31.55
Province of New Brunswick (Cleaning catch basin)	37.94
Journal Voucher (Cement).....	<u>32.50</u>

TOTAL....\$365.14

The Surface Sewers in the City were flushed where necessary and all Catch Basins were cleaned and repaired during the year and repairs were made to any breaks that occurred or extensions required for the sewer outfalls, amounting to \$16,852.80, made up as follows:

Labor.....	\$8,948.88
City Machinery charges.....	345.00
Materials less Credits.....	<u>7,558.92</u>

TOTAL...\$16,852.80

### DOMESTIC SEWER

Labor.....	\$ 31,311.19
Hired trucks and machinery.....	232.25
City machinery cost.....	12,551.75
Material cost & Sewerage Treatment..	<u>229,633.40</u>

GROSS EXPENDITURE.....	\$273,728.59
Credits.....	<u>\$ 59,479.77</u>

NET EXPENDITURE...\$214,248.82

The Credit of \$59,479.77 is made up as follows:

Material, labor and supplies for house connections.....	\$ 23,461.72
Work done for private parties.....	753.18
To credit for Sewer Treatment - Set up as Accounts Payable - 1970.....	35,000.00
Canadian National Railway (check broken pipe).....	42.87
Workmen's Compensation Board (Rebate)....	63.75
Journal Voucher (pipe, frame and cover, saddles, bends).....	<u>158.25</u>
TOTAL....	<u>\$ 59,479.77</u>

The above expenditure of \$214,248.82 is made up as follows:-

Domestic Sewer-----	\$ 41,992.36
Fredericton Area Pollution Control Commission-----	<u>\$172,256.46</u>
TOTAL....	<u>\$214,248.82</u>

New customers connected to the City Sewer System in 1971 totalled 143.

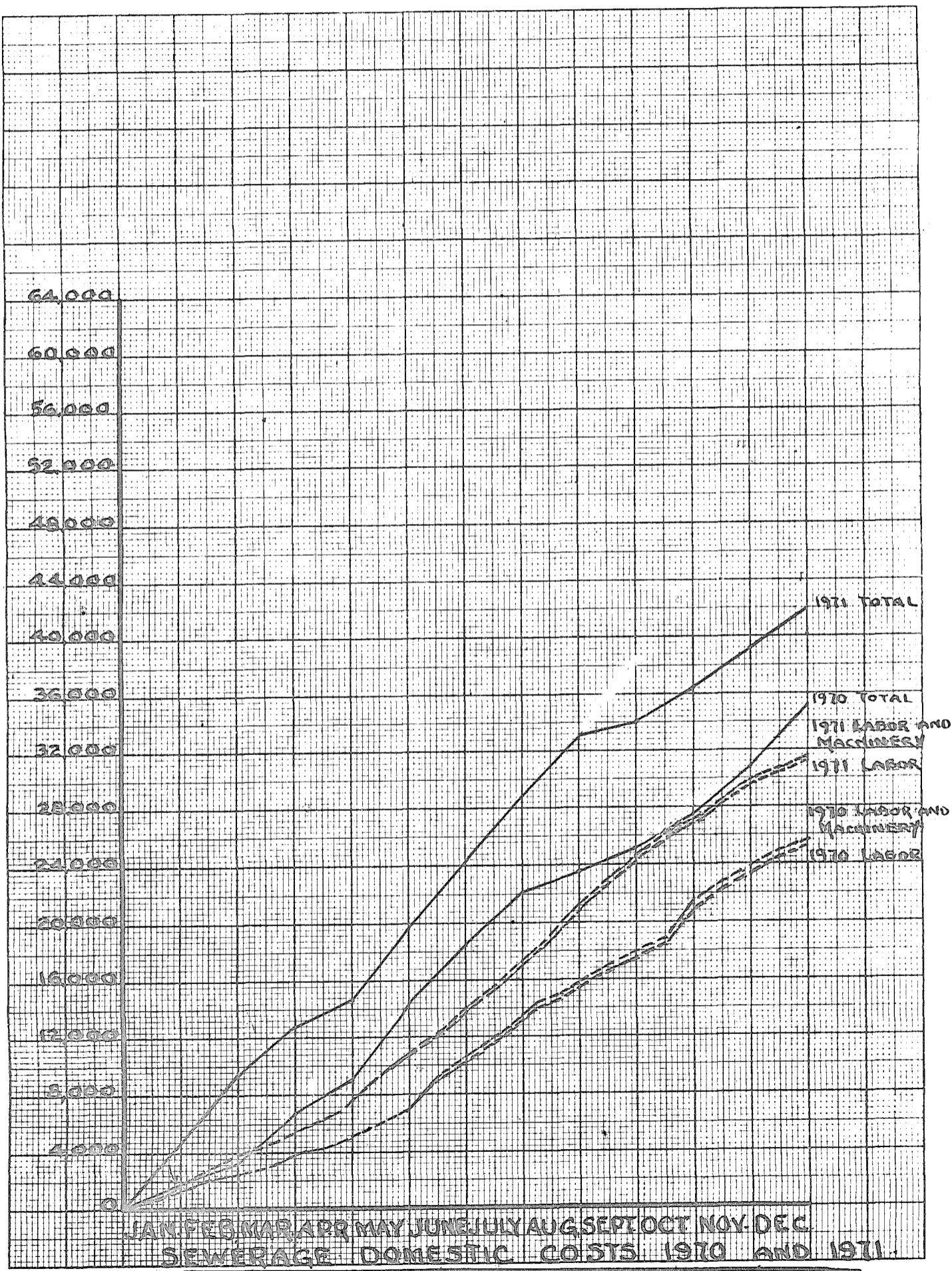
Dead End Sewer Mains were cleaned and flushed in 1971.

The Fredericton Pollution Control Commission was formed in 1968 and work commenced on Pollution Control of Sewerage for the Fredericton Area, including Nashwaaksis, Marysville, Fredericton and Barkers Point. This system was put in operation October 10th, 1970.

The Fredericton Domestic Sewer System consists of 69.04 miles (12.59 in Carleton Ward and 56.45 miles in the City proper) of Sewer Mains and are made up as follows:

36" Armco Pipe-----	0.05 miles
36" Concrete Pipe-----	0.84 miles
30" Concrete Pipe-----	0.20 miles
18" Concrete Pipe-----	0.32 miles
24" Terra Cotta Pipe-----	0.54 miles
18" Terra Cotta Pipe-----	1.29 miles
15" Terra Cotta Pipe-----	1.63 miles
12" Terra Cotta Pipe-----	6.27 miles
10" Terra Cotta Pipe-----	.92 miles

HUGHES OVENS 335 3860



(Continued)

8" Terra Cotta Pipe-----35.38 miles

12" Transite Pipe----- 0.74 miles  
12" Corrugated Pipe----- 0.07 miles  
10" Transite Pipe----- 2.47 miles  
8" Transite Pipe----- 17.59 miles  
8" Cast Iron Pipe----- 0.04 miles  
6" Transite Pipe----- 0.02 miles  
6" C. I. Force Main----- 0.67 miles

TOTAL....69.04 miles

This does not include the sewer mains installed by the National Defence at the Exhibition Grounds, University of New Brunswick, St. Anne's Point on Woodstock Road and the Low Rental Housing Development in Carleton Ward.

The Fredericton Pollution Control Commission Sewer System constructed in 1969 and 1970 is not included on the above mileage.

#### OLD BURIAL GROUND

The Old Burial Ground between Brunswick and George Street was kept in good condition in 1971.

The grass was kept mowed and sodding and seeding was done where necessary.

Gross Expenditure-----\$3,095.74  
Credit----- 260.29

NET EXPENDITURE....\$2,835.45

The above credit was interest on Trust Fund and Bonds.

The expenditures on the Old Burial Ground were as follows:

Atlas Building Supplies (Polyethelene & putty).....	\$ .63
Bud Wolfe Service Station (Gasoline).....	6.74
Battery and Electric (1 Lawn Boy Mower).....	103.68
J. W. Bird & Co. Ltd. (repair parts for fountain).....	4.78
Phillips & Pringle (copper tubing and union for fountain).....	2.76
E. M. Young (polyfiller and glue).....	4.49
Hawkins & Equipment and Rental (repairs to mower).....	3.38
Journal Voucher (6 Fluorescent lamps).....	429.00
Journal Voucher (Cement).....	1.63
Journal Voucher (Gasoline, Oil).....	15.70
Journal Voucher (Machinery).....	138.00
Journal Voucher (Pension contributions).....	44.64
Journal Voucher (City Labor).....	<u>2,340.31</u>

TOTAL....\$3,095.74

FIRE DEPARTMENT

Expenditure ----- \$80,937.98

Journal Voucher (3,133.9 gals. gasoline).....	\$ 762.59
Journal Voucher (Hydrants and Sprinklers).....	76,920.00
Journal Voucher (Pension contribution).....	6.79
Journal Voucher (Mobile Radios).....	3,018.95
Journal Voucher (City Machinery).....	27.50
Journal Voucher (City Labor).....	202.15
TOTAL.....\$80,937.98	

CEMENT WALKS

Expenditure----- \$23,018.04

For the above expenditure, concrete sidewalks were laid at the following locations:-

<u>Location</u>	<u>Lineal Feet</u>
Prospect Street, Smythe Street to Regent Street (North side).....	3,022
Regent Street, Prospect St. towards Montgomery Street (West side).....	133
Waggoner's Lane, Existing to Hanwell Road (South side).....	629
Rankine Street, Forest Hill Road to Residence #105 (West side).....	840
Forest Hill Road, Woodbridge St. to Rankine Street (South side).....	615
Dufferin Street, York Street towards South (North side).....	910
Golf Club Road, Woodstock Road to City Line (South side).....	667
TOTAL..... <u>6,816</u>	

The cost of the above sidewalk is apportioned one half to the City and one half to the property owner, except where Local Impovement Agreements are in effect with the Subdivider.

The concrete for the above construction of sidewalks was obtained from Elm Tree Concrete Ltd. at \$18.80 per cubic yard.

The property owner was charged \$1.69 per lineal foot of sidewalk.

The actual cost for laying one lineal foot of sidewalk was \$3.60 which includes Compensation, Pension and Holiday Fund.

SANITATION

Gross Expenditure-----	\$192,402.78
Credits-----	<u>628.51</u>
NET EXPENDITURE.....\$191,774.27	

The above credits are made up as follows:-

Custom Builders (Cleaning Oxford Street).....	\$ 46.68
Wilmot Downs (Use of Flusher on Race Track).....	37.52
Canadian National Railway (Oiling Yard at Freight Shed).....	26.40
Province of New Brunswick (Oiling gravel roads)....	130.64
Journal Voucher (credit re-charge on lumber-H. S. Gill).....	20.80
Journal Voucher (credit re-2 keys-E. M. Young Ltd.)	2.59
Journal Voucher (Rental on Sweeper & Flusher).....	352.00
Journal Voucher (2 Bags calcium chloride).....	<u>11.88</u>
TOTAL.....	\$628.51

Under the heading "Sanitation" the following items are included:-

- 1). Garbage Collection
- 2). Sanitary Landfill
- 3). Street Cleaning (including Dust Control)

1). Garbage Collection:-

The Garbage Collection was operated by Blizzard's Trucking Service Ltd. The amount paid for the above operation was \$68,083.00 in 1971.

2). Sanitary Landfill:-

Expenditure-----	\$33,382.47
Credit-----	<u>2.59</u>
NET EXPENDITURE....	<u>\$33,379.88</u>

The above credit was for 2 keys-E. M. Young Ltd.

The above expenditure is made up as follows:-

Seaboard Surveys (Surveying re, salvage leased.....	\$ 249.15
Elm Glass Ltd. (1 gal. paint for signs).....	9.98
J. W. Bird & Co. Ltd. (chain).....	11.74
J. L. Simms (Plywood).....	40.46
Daily Gleaner (Printing tenders, cardboard salvage).....	29.40
Forbes & Sloat (Class "C" gravel - 1,262.90 tons)...	2,588.95
J. Raymond Savage (Padlock, keys).....	13.06
Journal Voucher (Machinery).....	770.00
Journal Voucher (Pension contributions).....	64.59
Journal Voucher (City labor).....	1,164.40
Shiretown Construction Company.....	2,070.90
Gerard Burns (Sanitary Landfill).....	26,366.56
Petty cash (3 copies, "Garbage & Waste Disposal")...	<u>3.28</u>
TOTAL.....	<u>\$33,382.47</u>

A five year contract for bulldozing services at the Sanitary Landfill by Shiretown Construction Company expired in February 1971. The new contract was taken over in March 1971 by Gerard Burns, the successful bidder on the Tender Call for Bulldozing Services.

3). Street Cleaning:-

Gross Expenditure-----	\$90,900.06
Credit-----	<u>625.92</u>

NET EXPENDITURE.. \$90,274.14

The Gross expenditure is made up as follows:-

Labor.....	\$50,316.71
Hired Trucks & Machinery.....	4,962.00
City Machinery.....	12,909.00
Materials.....	<u>22,712.35</u>
TOTAL.... <u>\$90,900.06</u>	

City Machinery and Material Charges amounted to \$35,621.35 and are made up as follows:

Purchase of cans, hand brooms, shovels, rakes, forks, scrapers, repairs to carts, etc.....	\$ 989.61
Gutter Broom Wire.....	1,420.63
Main Broom Wire.....	2,095.38
Labor and Repairs to Wayne Sweeper (not including Shop Labor).....	3,909.55
Labor & Repairs to Sicard Flusher (not including Shop Labor).....	2,165.27
Labor and Repairs charged to Ford Oil Truck.....	180.17
Gas & Oil: - 4,660.7 gallons gas...\$1,158.11	
149 Quarts Oil..... 60.73	
12½ Quarts Hydro Oil..... 12.76	
½ Gal. Antifreeze <u>1.20</u>	1,232.80

Minister of Finance (3 motor registrations & Audit 1970 purchases).....	334.80
J. W. Bird and Co. Ltd. (Calcium Chloride-400 Bags).....	2,393.33
Wilson & Cousins Ltd. (24 hose expansion rings).....	25.83
Department of Highways (12 litter signs).....	151.20
M. J. & T. Sales (50 Model H-1 Litter Baskets).....	1,300.00
Horsnell's (Plates for spare broom core).....	49.25
Sansom Equipment Ltd. (100'-2½" Hose).....	155.73
Burtt's Tire Service (Tire repair, tube).....	6.10
Sanfax Industries Ltd. (45 gallons).....	312.98
Harry Smith (48 yds. sand).....	52.80
Royal Mills (24 Feed bags).....	6.00
Journal Voucher (Rental space City Yard).....	3,000.00
Journal Voucher (Cement pipe, brick, manhole cover and frames).....	1,010.72
Journal Voucher (City Machinery).....	12,909.00
Journal Voucher (Pension Fund).....	1,822.52
Miscellaneous (Car Allowance, printing).....	<u>97.68</u>
TOTAL... <u>\$35,621.35</u>	

The Wayne Sweeper (purchased in 1968) worked 1,300½ hours. The Actual Cost for cleaning Streets with this machine was \$13,066.12 and was calculated as follows:-

Labor and Repairs on Sweeper (including Shop Labor)	\$ 4,541.93
Main Brooms.....	2,095.38
Gutter Wire Broom.....	1,420.63
Gasoline (2,219.30 gallons).....	547.58
Oil (49 Quarts, 12½ Quarts hydraulic).....	32.36
Antifreeze (½ Gallon).....	1.20
Water (442,170 gallons).....	213.65
Insurance on 1968 Sweeper .....	70.00
Labor (including Workmen's Compensation, Holiday and Pension Fund - Operators).....	<u>4,143.39</u>
TOTAL.....	<u>\$13,066.12</u>

The operating dates for the above machine (Sweeper)  
were from April 1st 1971 to November 25th, 1971.

In 1955 the City of Fredericton purchased a Sicard  
Master Flusher with a capacity of 2,250 Imperial Gallons.  
The price of this machine was \$19,435.00 and was paid for in  
1956. The operating dates for this machine (Flusher) were  
from April 28th 1971 to November 5th, 1971.

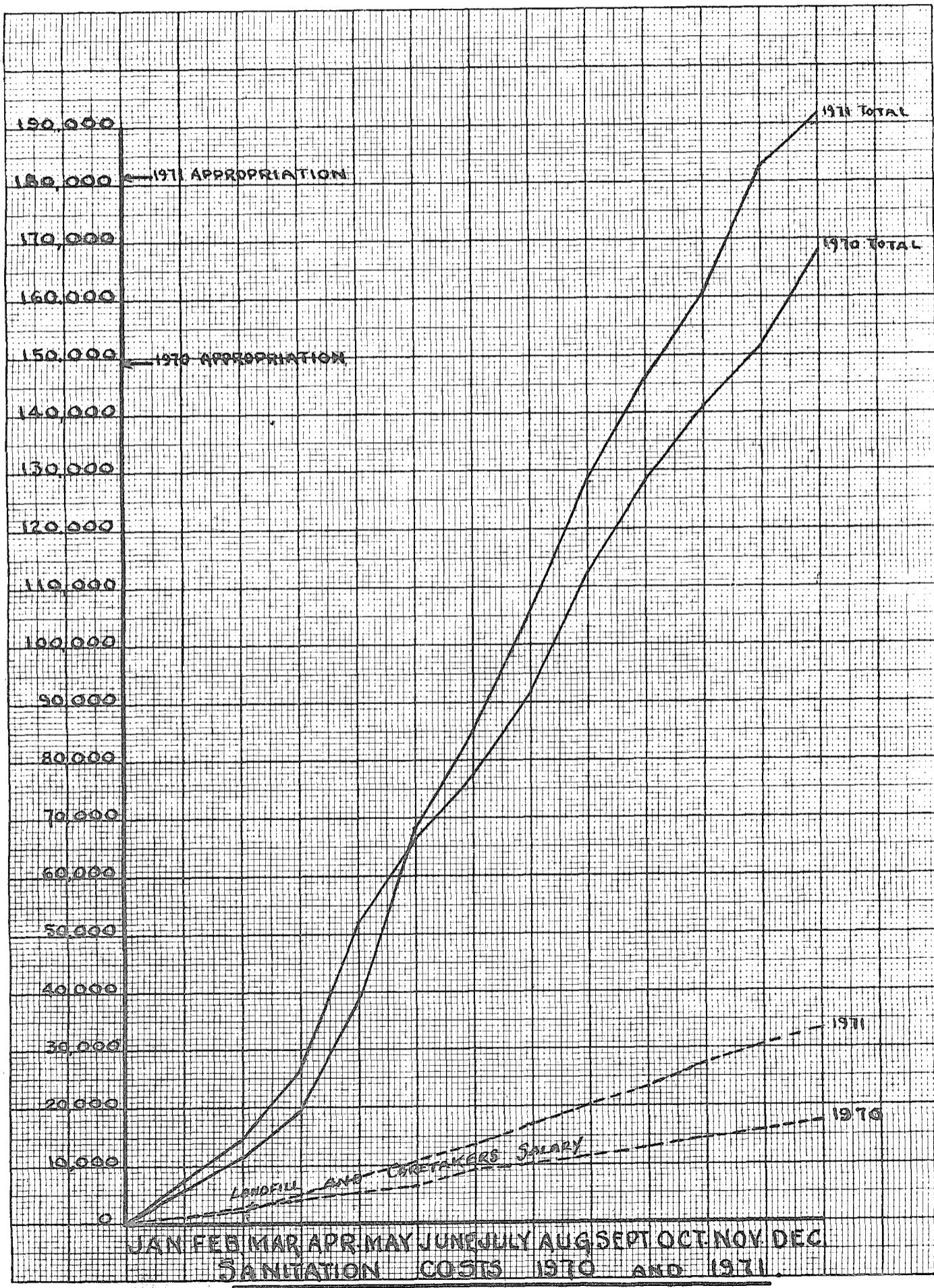
The Flusher worked 720 hours. The Actual Cost for  
flushing streets with this machine was \$7,075.00 and was  
computed as follows:-

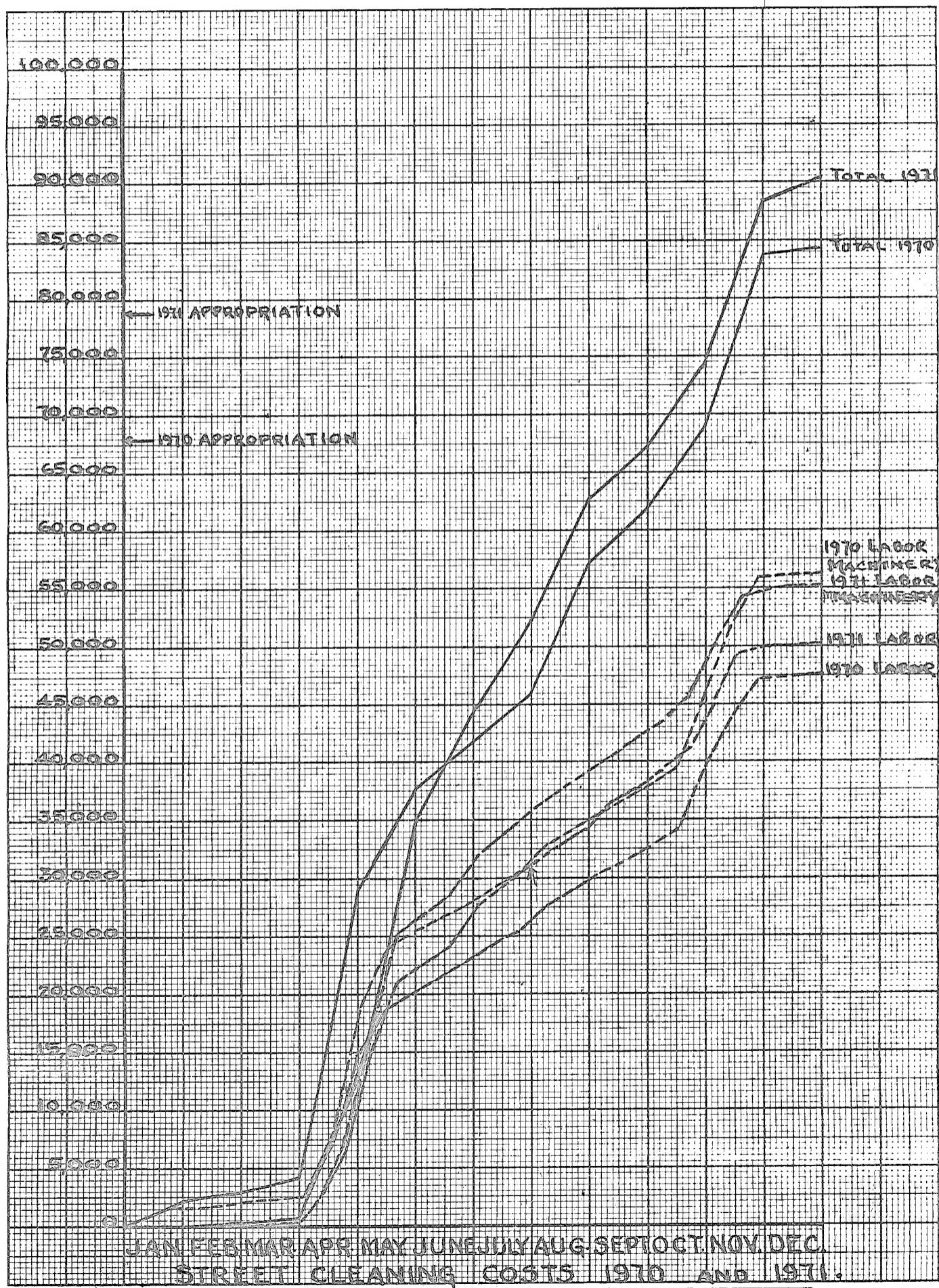
Labor & repairs to Flusher (including Shop Labor)....	\$ 2,792.16
Gasoline (2,441.40 gals.).....	610.53
Oil (100 Quarts).....	41.13
Antifreeze.....	-0-
Water (3,240,000 gallons).....	1,472.75
Insurance on Flusher.....	60.00
Labor (including Workmen's Compensation, Holiday and Pension Fund - Operators).....	<u>2,098.51</u>
TOTAL.....	<u>\$ 7,075.00</u>

In 1971, 6,000 gallons of Oil and 400 bags of  
Calcium Chloride were used for dust control.

The following is a list of machinery used in the  
Sanitation Department together with the repair costs for  
1970 and 1971, including tires and tubes.

<u>Name of Machine</u>	<u>Year Purchased</u>	<u>Repairs 1970</u>	<u>Repairs 1971</u>
Wayne Street Sweeper	1968	\$ 7,783.90	\$4,541.93
Sicard Flusher (2,250 I.G.)	1955	5,792.11	2,792.16
Ford (1947) Oil Truck		478.34	180.17
TOTALS.....		<u>\$14,064.35</u>	<u>\$7,514.26</u>





### LOYALIST BURIAL GROUND

On the recommendation of the Park Committee of Fredericton Town Planning Commission; the Loyalist Cemetery on the "Flats" adjacent to the back lots in Elmcroft Place was improved in 1958.

In 1971 the upkeep expenditure amounted to \$101.46 made up as follows:-

Labor.....	\$ 96.00
Journal Voucher (Pension contribution).....	1.45
Journal Voucher (Cement, cedar posts).....	<u>4.01</u>
TOTAL...\$101.46	

This area continues to be of historic interest and is also a tourist attraction with pedestrian traffic only from the Little League Ball Field on the "Flats" to the site.

### ANTI-LITTER CAMPAIGN

The Fredericton City Council in 1971 authorized the employment of six students known as the Anti-Litter Squad under shared cost with the Federal Government.

Employment was from mid June to mid September.

The expenditure amounted to \$3,117.22 and was made up as follows:-

Sherwin Williams Co. (2 Gallons enamel for barrels)	\$ 12.20
Provincial Artisans (1 Bundle 30" Stakes).....	1.84
Maritime Accessories (1 Can Spray Enamel for stencil).....	1.07
E. M. Young Ltd. (1 Can spray enamel for cans).....	1.38
Advance of Grant.....	3,000.00
Payment to A. L. C. Management.....	100.00
Journal Voucher (Gasoline and diesel fuel).....	.73
TOTAL....\$3,117.22	

### ADMINISTRATION OF JUSTICE

Expenditure-----\$5,488.90

The above expenditure of \$5,488.90 is made up as follows:-

Journal Voucher (8,447.5 gals. gas & 68 qts. oil)...	\$2,087.98
Journal Voucher (Mobile radios).....	2,532.79
Rental Space (Paint Shop).....	600.00
Journal Voucher (City Machinery).....	52.00
Journal Voucher (Pension contribution).....	5.25
Journal Voucher (Decals, cement).....	39.20
Journal Voucher (City labor).....	<u>171.68</u>
TOTAL....\$5,488.90	

### MUNICIPAL PARKING LOTS-CAMPBELL STREET

In 1966 the City Council authorized the changing of the free Parking Area at the rear of the City Hall in order to give better parking facilities to the shopping public.

In 1971 the expenditure for the above, amounted to \$1,688.34 and was made up as follows:-

Elm Glass Ltd. (Paint for fence).....	\$ 6.60
H. S. Gill (Lumber).....	26.91
Garnett Howe (collecting cash box after hours).....	18.00
Stan Cassidy (Maintenance and repairs).....	412.68
Auto-Mated Carpark Controls (repairs).....	382.03
Minister of Finance (Tax audit on 1970 purchases)...	18.28
Canadian National Express (parts for parking system)	9.75
Cincinnati Parking System (2 Brake assemblies).....	15.55
Journal Voucher (Pension contributions).....	12.07
Journal Voucher (cedar posts).....	5.20
Journal Voucher (Machinery).....	347.25
Journal Voucher (City Labor).....	<u>504.80</u>

TOTAL...\$1,759.12

#### Less Credits:

Karnes Bakery Ltd. (repairs to fence) \$25.00	
Eugene Grant (Payment fence damage) <u>\$45.78</u>	
	70.78

NET EXPENDITURE.\$1,688.34

In addition, a new Parking Area on Campbell Street, east of Westmorland Street was constructed in 1970.

The 1971 expenditure amounted to \$2,751.47 and was made up as follows:-

J. J. MacKay Canada Ltd. (30 meter yokes).....	\$ 354.30
Sherwin Williams (Paint).....	20.43
Province of New Brunswick (Taxes on property).....	1,581.00
Journal Voucher (Machinery).....	362.25
Journal Voucher (Cement).....	4.89
Journal Voucher (Pension contribution).....	6.82
Journal Voucher (City labor).....	<u>421.78</u>

TOTAL....\$2,751.47

The above Parking Area was Armoured Coated in 1971, the cost of which was charged to "Off Street Parking" under Roads and Streets.

### BRUNSWICK STREET PARKING LOT

In 1958 the City of Fredericton constructed a Parking Area on the North side of Brunswick Street, between York Street and Carleton Street, just east of J. Clark & Sons property. This area was enlarged in 1970 by the development of the area formerly occupied by the "Eaton" building.

The 1971 expenditure for the above Parking Lot was \$991.13 and was calculated as follows:

Journal Voucher (Hired trucks and machinery).....	\$ 265.00
Journal Voucher (City Machinery).....	502.00
Journal Voucher (Pension contribution).....	6.00
Journal Voucher (City Labor).....	<u>218.13</u>
TOTAL.....	<u><u>\$ 991.13</u></u>

The above Parking Area was Armoured Coated in 1971, the cost of which was charged to "Off Street Parking" under Roads and Streets.

#### ARCTIC RINK SITE PARKING LOT

In 1969 the free Parking Area situated on the south side of Campbell Street, just east of Carleton Street was changed to a metered parking site by the installation of parking meters.

1971 Expenditure-----\$5,050.72

The expenditure is made up as follows:-

J. J. MacKay Canada Ltd. (meters, repair parts, yoke, plugs, etc.).....	\$2,654.98
Province of New Brunswick (Taxes on property).....	1,597.95
Journal Voucher (Pension contributions).....	4.00
Journal Voucher (City Machinery).....	213.00
Journal Voucher (Hired trucks and machinery),	72.00
Journal Voucher (City labor).....	140.24
Accounts Payable.....	<u>368.55</u>
TOTAL...\$5,050.72	

#### TOURIST & INDUSTRY

Expenditure-----\$ 874.77

The above expenditure was for replacing bulbs and cost of lighting of two signs supplied by the Tourist and Industrial Committee, one placed at the junction of Woodstock Road and Golf Club Road, the other on the Lincoln Road.

New Brunswick Electric Power Commission (light bill)\$	147.00
Ted Grey (Refurbishing 2 - 8' x 20' signs).....	600.00
Phillips and Pringle (bulbs).....	5.83
Richards Electric (service relighting sign, bulbs).....	74.57
Journal Voucher (pension contribution).....	1.45
Journal Voucher (City labor).....	<u>45.92</u>
TOTAL...\$ 874.77	

#### YORK ARENA

The expenditure under this heading was for the purchase of 1 - bag cement at a cost of \$1.63.

#### INDUSTRIAL DEVELOPMENT

Expenditure-----\$ 89.00

The above expenditure of \$89.00 is made up as follows:-

Seaboard Surveys Ltd. (12 ft. of Ozafilm).....	\$12.00
Seaboard Surveys Ltd. (Up-dating Park Plans).....	12.00
Ted Gray (Refurbishing sign).....	<u>65.00</u>
TOTAL.. <u>\$89.00</u>	

#### URBAN RENEWAL

The expenditure under this heading amounted to \$13.36 and was for City labor.

#### J. T. CLARK MEMORIAL BUILDING

Expenditure-----\$155.06

The above expenditure was for labor and city machinery charges in moving District Planning Commission Office and plowing and hauling snow from the parking area.

#### CONTINGENT

Expenditure-----\$128.45

The above expenditure is made up as follows:

Labor.....	\$108.89
City machinery.....	16.00
Pension contributions.....	<u>3.56</u>

TOTAL....\$128.45

#### STREET LIGHTS

Previous to 1969 the City of Fredericton obtained its electric power from the Maritime Electric Company. On January 1st, 1969 the Maritime Electric Company was taken over by the New Brunswick Electric Power Commission.

In 1970 all Series Street Lights on both sides of the Saint John River were converted to a multiple lighting system using Mercury Vapor Lamps. By the end of 1972, the conversion of all Incandescent Lights to Mercury Vapor Lights, should be complete.

The Multiple lighting system as of December 31, 1971, was as follows:-

250-500 Watt Incadescent Units @	\$4.33 per light per month
127-200 Watt Incadescent Units @	\$2.33 per light per month
597-250 Watt Incadescent Units @	\$4.50 per light per month
257-400 Mercury Vapor Units @	\$5.67 per light per month
199-4' Fluorescent Units @	\$5.00 per light per month
67-6' Fluorescent Units @	\$6.25 per light per month
2-200 Watt Incandescent Units @	\$1.50 per light per month

(All above prices net, i.e. 20% off per light per month).

In 1972 the above rates will be revised upward.

The Street Lighting costs for the year 1971 are as follows:-

Expenditure-----	\$87,714.60
1971 Appropriation-----	<u>\$89,400.00</u>
CREDIT.... <u>\$ 1,685.40</u>	

The lighting expenditure of \$87,714.60 is made up as follows:-

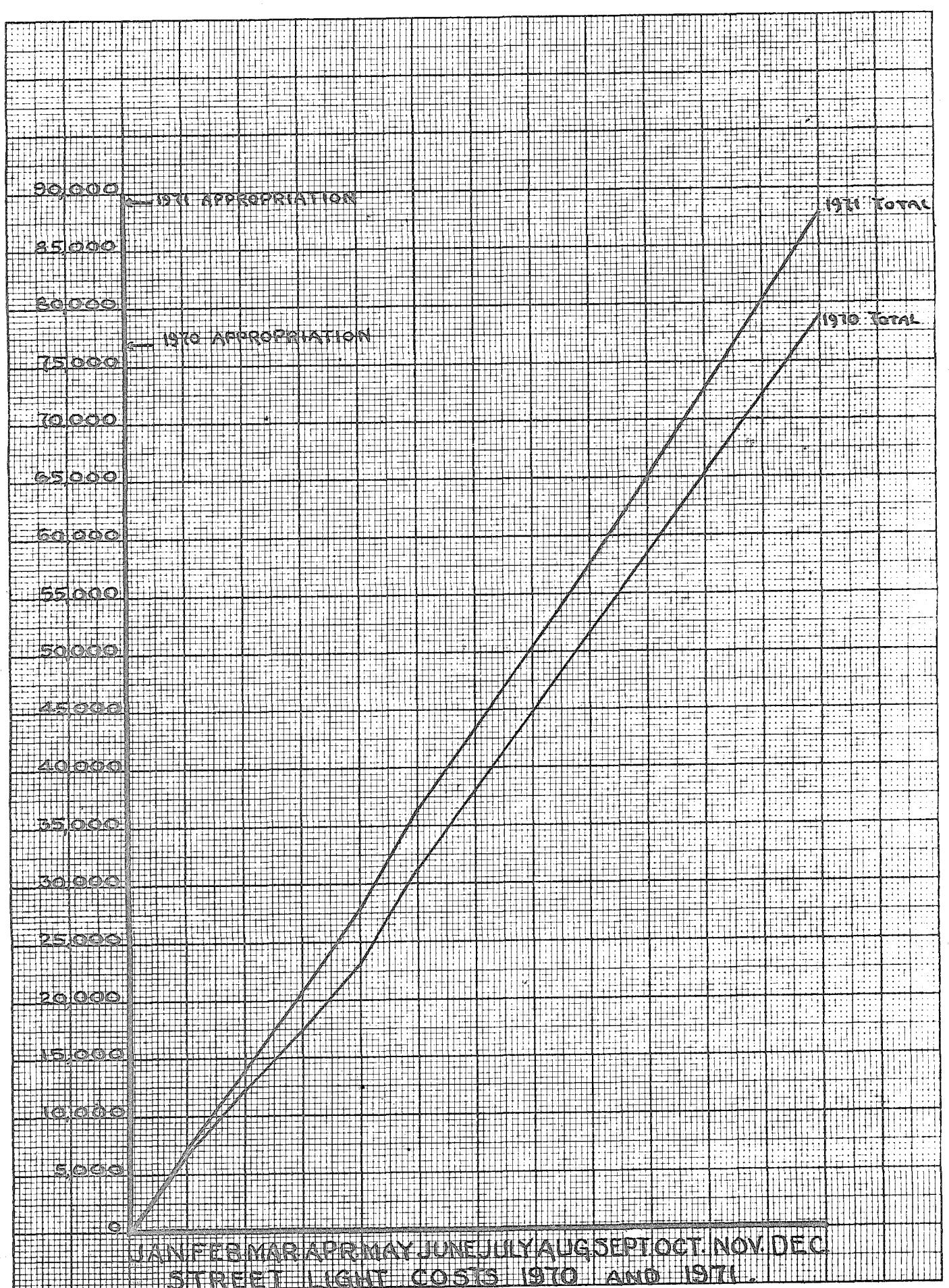
New Brunswick Electric Power Commission (Multiple lighting).....	\$87,353.55
New Brunswick Electric Power Commission (Waterloo Row Subway lighting).....	43.59
New Brunswick Electric Power Commission (Cenotaph lighting).....	102.30
Richards Electric (Work on Subway and Cenotaph light)	152.91
J. W. Bird & Co. Ltd. (Spring type roller coater)...	5.82
Dobbelsteyn Electric (Painting 22 Light Standard brackets).....	265.00
Sherwin Williams Co. (Paint).....	66.38
Auto Machinery Co. (6 Cans spray paint).....	9.01
New Brunswick Electric Power Commission (Treated poles and installation).....	1,271.40
Journal Voucher (Pension contribution).....	17.89
Journal Voucher (City labor).....	<u>348.00</u>
TOTAL....\$89,635.85	

LESS CREDIT:

All State Insurance-Payment rebroken standard.....	\$ 233.65
Mr. Sid Satter (Sale of scrap light poles).....	72.60
Journal Voucher (Lights at Old Burial Ground, Coliseum, <u>1,615.00</u> <u>1,921.25</u> and Wilmot Park)	
NET EXPENDITURE..... <u>\$87,714.60</u>	

TABLE SHOWING COMPARATIVE YEARLY COST IN  
STREET LIGHTING

<u>Year</u>	<u>Total Yearly Cost</u>	<u>Yearly Appropriation</u>
1957	\$33,101.56	\$29,000.00
1958	36,038.79	33,500.00
1959	39,907.64	37,500.00
1960	44,481.71	44,010.00
1961	46,835.74	46,965.00
1962	46,989.38	47,875.00
1963	52,400.10	51,975.00
1964	57,682.43	56,930.00
1965	63,526.25	62,874.00
1966	72,083.35	70,180.00
1967	74,017.50	73,010.00
1968	80,012.18	76,915.00
1969	72,591.54	82,305.00
1970	78,928.31	78,000.00
1971	87,714.60	89,400.00



LAND ACCOUNT - (RICHARDS PROPERTY)

Expenditure-----\$1,307.62

The above expenditure is made up as follows:-

Labor.....	\$ 108.48
Hired Trucks and Machinery.....	68.75
City Machinery;.....	122.00
Journal Voucher (Pension contributions) .....	2.40
City Labor.....	177.23
Materials (467.9 tons Class "A" Gravel)....	<u>1,005.99</u>
TOTAL.....	<u>\$1,307.62</u>

The above expenditure was for filling and grading the area occupied by Richards Electric Co. on King Street, the buildings on which were destroyed by fire in 1971. This property was expropriated by the City of Fredericton.

The cost of demolition would be shown in the accounts of the City Treasurer.

WATER

There are two separate water systems in the City of Fredericton.

1). During 1971 the south side of the Saint John River derived its water from Four Gravel Wall Wells and a Rock Wall Well. Three of these Gravel Wall Wells, namely #1, #3 and #4 are situated in Wilmot Park and #5 on Woodstock Road on the south bank of the Saint John River, west of the Royal Canadian Mounted Police property. This property was acquired from the Province of New Brunswick in 1968. The Rock Wall Well is situated in Cameron Court and supplies approximately three-quarters of the residences on Hanwell Road.

2). The water supply on the north side of the Saint John River is derived from three Wells; two of these Wells are outside the City Limits and pump directly into the system and a 1,000,000 Gallon Reservoir. The Third Well is located on Bridge Street. The Bridge Street Well is a standby service only due to marginal chemical characteristics. In 1972 a new Well drilled in 1971 on Maple Street will be put into operation pumping directly into the system and the 1,000,000 Gallon Reservoir.

Chlorine has been added to the water in Carleton Ward since the Reports from the City Analyst showed objectionable Coliform in the water. A liquid solution (HTH) is added at the Killarney Well.

The Water costs for the City of Fredericton are divided as follows:-

- 1). Water Ordinary,
- 2). Water Administration (Salaries of Office Staff and Office Equipment),

- 3). Hydrant Revenue,  
4). Water Pumping Station.

Gross Expenditure-----	\$313,522.18
Credits-----	<u>42,464.70</u>
NET EXPENDITURE.....	<u>\$271,057.48</u>

This account includes all expenditures, other than Capital Expenditure for Water, expenditures for the main Pumping Station, cost of supply from Wells and Salaries and Office Equipment. These items will appear later under their various headings. Also included are all current Water Expenditures in Carleton Ward.

1). Water Ordinary

The expenditure under this heading is as follows:-

Gross Expenditure-----	\$146,157.96
Credits-----	<u>24,948.29</u>
NET EXPENDITURE.....	<u>\$121,209.67</u>

The credits are made up as follows:-

Work done and materials sold to private parties when installing a water service over ground other than City property or when the materials are used on parts of the system which do not belong to the City.....	\$ 21,975.74
Forbes & Sloat (repairs to Water Meter).....	61.51
Atlas Construction Co. (2 Stand pipes for Hydrant, 2-6" Hydrants).....	757.50
Sid Satter (Sale of pump and parts, scrap iron and bronze).....	106.72
Workmen's Compensation Board (Rebate).....	182.18
Elm Glass Ltd. (Paint).....	15.77
Maplewood Construction Co. (Tapping Water main, materials on Sewer Line).....	86.89
Sterling Parent (Long distance calls).....	4.11
To correct Canada Pension and City Pension .....	581.86
To correct Unemployment Insurance.....	8.24
Abe Levine & Sons (Sale of scrap copper).....	128.04
Mar-Sands (Water consumption).....	100.00
New Brunswick Telephone Co. (Cost of locating break).....	55.00
Miles Tire Ltd. (Hydrant repairs -Waggoner's Lane)....	50.72
All State Insurance Co. (Hydrant repairs, Woodstock Road).....	391.26
Bellboy Cleaners (Hydrant repairs-King Street).....	40.71
Kitchen Insurance Agency (Hydrant repairs).....	37.96
Wendell Keetch (Credit re sale of scrap brass).....	20.00
Province of New Brunswick (repair 1" Meter).....	9.10
Repairs to Frozen Meters.....	130.71
Maritime Water Supply (Rental on Meter).....	10.00
Giles Electric Ltd. (Cost of Meter).....	30.00
Journal Voucher (Copper and coupling-Wilmot Park House, lead).....	164.27
TOTAL.....	<u>\$ 24,948.29</u>

The Gross Expenditure is made up as follows:-

City Payrolls for Hydrants.....	\$ 4,370.54
City Payrolls for Meters (Maintenance).....	9,429.57
City Payrolls for Meters (Reading).....	4,614.33
City Payrolls for Water (Installations).....	10,371.78
City Payrolls for Lincoln Road Pumping Station.....	1,132.53
City Payrolls for Smythe St. (Booster Station).....	1,098.30
City Payrolls for Montgomery St. (Booster Station) ..	1,133.04
City Payrolls for Forest Hill (Booster Station).....	1,015.36
City Payrolls for Water (Maintenance).....	<u>25,297.55</u>

TOTAL PAYROLLS..\$ 58,463.11  
Materials & Other Charges... 87,694.85

GROSS EXPENDITURE.....\$146,157.96

No water extensions were laid under this heading in 1971. They appear under "Capital Account Water".

The following Sprinklers were installed in 1971:-

1. Dominion Shopping Complex (Dundonald St.)
2. Elm City Chrysler (King St.)
3. New Brunswick Liquor Warehouse (Wilsey Road)
4. City Tire (Wilsey Road)
5. Atlas Construction Co. (Doak Road)

There are at present (December 31, 1971) 85 Sprinkler Systems in the City. The City rate for Sprinkler connection demand was \$120.00 per year, charged to "Fire Protection".

There are in the City as of December 31, 1971 - 577 Hydrants 460 on the south side of the Saint John River and 117 on the north side of the Saint John River.

The Hydrant Rental for 1971 amounted to \$67,320.00 which will appear in this report later and is not included in credits to "Water Ordinary".

Hydrants were installed at the following locations:-

<u>Location</u>	<u>Number</u>
Parkside Development (Parklyn Ct.)	1
Charng Crescent	3
Foley Court	1
Boyne Street	1
Doak Road	3
Liquor Commission Warehouse Main (Wilsey Rd.)	3
Atlas Construction Co. (Doak Rd.)	2
St. Mary's Street near City line	1
Indian Reserve (Malliset Drive)	1
TOTAL...	<u>16</u>

Meters:-

On December 31, 1971 there were 5,370 water services on meter and 317 on Flat Rate, making a total of 5,687.

The labor cost per meter for installing, reading, repairing, etc. was \$2.62 for 1971.

189 Meters were installed in 1971, and 151 regular meters changed to ARB.

In 1971, 15 discontinued services were excavated and shut off at the main.

In 1971 all meters were read quarterly and billed quarterly during the year.

Meters in Stock December 31, 1971:-

5/8"	Meters - repaired and fit for service)	8
1/2"	Meters - repaired and fit for service)	9
3/4"	Meters - repaired and fit for service) Neptune	3
1"	Meters - repaired and fit for service) Meters	4
1 1/4"	Meters - repaired and fit for service)	4
1 1/2"	Meters - repaired and fit for service)	1
2"	Meters - repaired and fit for service)	1
1 1/2"	Meters - repaired and fit for service (Rockwell)	2
2"	Meters - repaired and fit for service (Rockwell)	1
1/2"	Meters - to be repaired for service (Neptune)	5
5/8"	Meters - to be repaired for service (Neptune)	9
1 1/2"	Meters - to be repaired for service (Neptune)	1
New 5/8"	Meters (Neptune A.R.B.)	0
New 1/2"	Meters (Neptune)	0
New 1"	Meters (Neptune)	8
New 1 1/2"	Meters (Neptune)	5
New 2"	Meters (Neptune)	1

Distribution System:-

New Services Installed in 1971.....	146
Old Services relayed in 1971.....	26
Frozen Services that had to be thawed.....	21

The Fredericton Distribution System consists of 71.52 miles of Water Main, made up as follows:-

18" Main.....	0.98 miles
14" Main.....	0.33 miles
12" Main.....	7.21 miles
10" Main.....	7.81 miles
8" Main.....	16.99 miles
6" Main.....	31.79 miles
4" Main.....	6.14 miles
3" Main.....	0.27 miles
TOTAL...71.52	miles

This does not include the water mains installed by the National Defence at the Exhibition Grounds, University of New Brunswick, St. Anne's Point Barracks (so called) on Woodstock Road, and the low rental housing development in Carleton Ward.

The supply system consists of 0.36 miles of 14" Cast Iron Pipe, extending from the Well Site at Wilmot Park to the Pumping Station; 0.16 miles of 12" Cast Iron Pipe extending from the Well on the south bank of the Saint John River on Woodstock Road to the Well Site of #1 Well at Wilmot Park, and 0.10 miles of 15" Steel Pipe extending from the Intake Pier in the Saint John River to the Pumping Station. This latter supply has not been used for Domestic consumption since 1957.

Also included in the above expenditure was the purchase of meters from Neptune Meters Limited and Rockwell Manufacturing Company.

Following is a list of vehicles used and charged to "Water Ordinary" showing a comparison of repair charges for 1970 and 1971, including tires and tubes:-

Name of Vehicle	Year Purchased	Repairs 1970	Repairs 1971
Dodge $\frac{1}{2}$ Ton #5	1967	\$ 893.54	\$ 330.31
Chevrolet $\frac{1}{2}$ Ton #2	1969	362.98	231.21
Ford $\frac{1}{2}$ Ton #32	1966	193.81	165.81
G.M.C. Van $\frac{1}{2}$ Ton #35	1971	-0-	65.07
Ford Van #5	1971	-0-	237.79
TOTAL.....		\$1,450.33	\$1,030.19

## 2). Water Administration

Gross Expenditure-----	\$81,033.96
Credits-----	<u>17,003.75</u>
NET EXPENDITURE.....	<u>\$64,030.21</u>

The above credit is made up as follows:-

NCR Co. (Credit re-express charges).....	\$ 3.75
Journal Voucher (L. P. McNeill, portion of salary, Engineering Dept. Staff).....	5,000.00
Journal Voucher (L. E. Keenan, portion of salary, Engineering Dept. Staff).....	6,000.00
Journal Voucher (E. L. Coy, portion of salary, Engineering Dept. Staff).....	<u>6,000.00</u>
TOTAL.....	<u>\$17,003.75</u>

Expenditure for Billing and Collecting was \$47,172.18 and was made up as follows:-

Unipress Ltd. (Printing 3,000 payment notices).....\$	63.50
Industrial Acceptance Corporation (Payment to National Cash Register Co.).....	5,671.40
Capital Free Press (Window envelopes, meter cards, amendment forms).....	153.37
Paul Burden (Package index tabs).....	1.21
Unemployment Insurance Commission.....	53.28
Receiver General of Canada (Postage).....	2,000.00
Olivetti Canada Ltd. (Maintenance on machine).....	92.00
Pitney Bowes Ltd. (Inspection on machine, meter rental on R. T. machine).....	259.22
Rental for Office Space.....	3,831.96
Canadian National Express (Materials from National Cash Register).....	16.60
Burroughs Ltd. (Maintenance service, ribbons for machine).....	54.40
New Brunswick Telephone Co. (PBX charges).....	499.40
National Cash Register Co. (Petronic file tray, Jour-Na-Rol Paper, printing water bills).....	1,841.92
Richards Electric Co. (checking air conditioner)...	16.00
Canadian National Railway (Cartage on Water bills)...	5.40
C. W. Hall and Co. (Assorted supplies).....	23.60
W. L. Barrett (A.W.W.A. Convention expenses).....	118.01
Copy paper used by Department .....	25.00
Journal Voucher (City and Canada Pensions).....	1,716.82
Journal Voucher (Labor).....	5,115.60
Salaries.....	<u>25,617.24</u>
GROSS EXPENDITURE..\$47,175.93	

Credit.....\$ 3.75

NET EXPENDITURE....\$47,172.18

### 3). Hydrant Revenue

Hydrant and Sprinkler revenue amounted to \$76,920.00 (Hydrants \$67,320.00 and Sprinklers \$9,600.00). Rental on Hydrants and Sprinklers in the City of Fredericton are charged to the Fire Department at \$120.00 per hydrant per year.

### 4). Water Pumping Station

Gross Expenditure-----\$86,330.26

Credits-----512.66

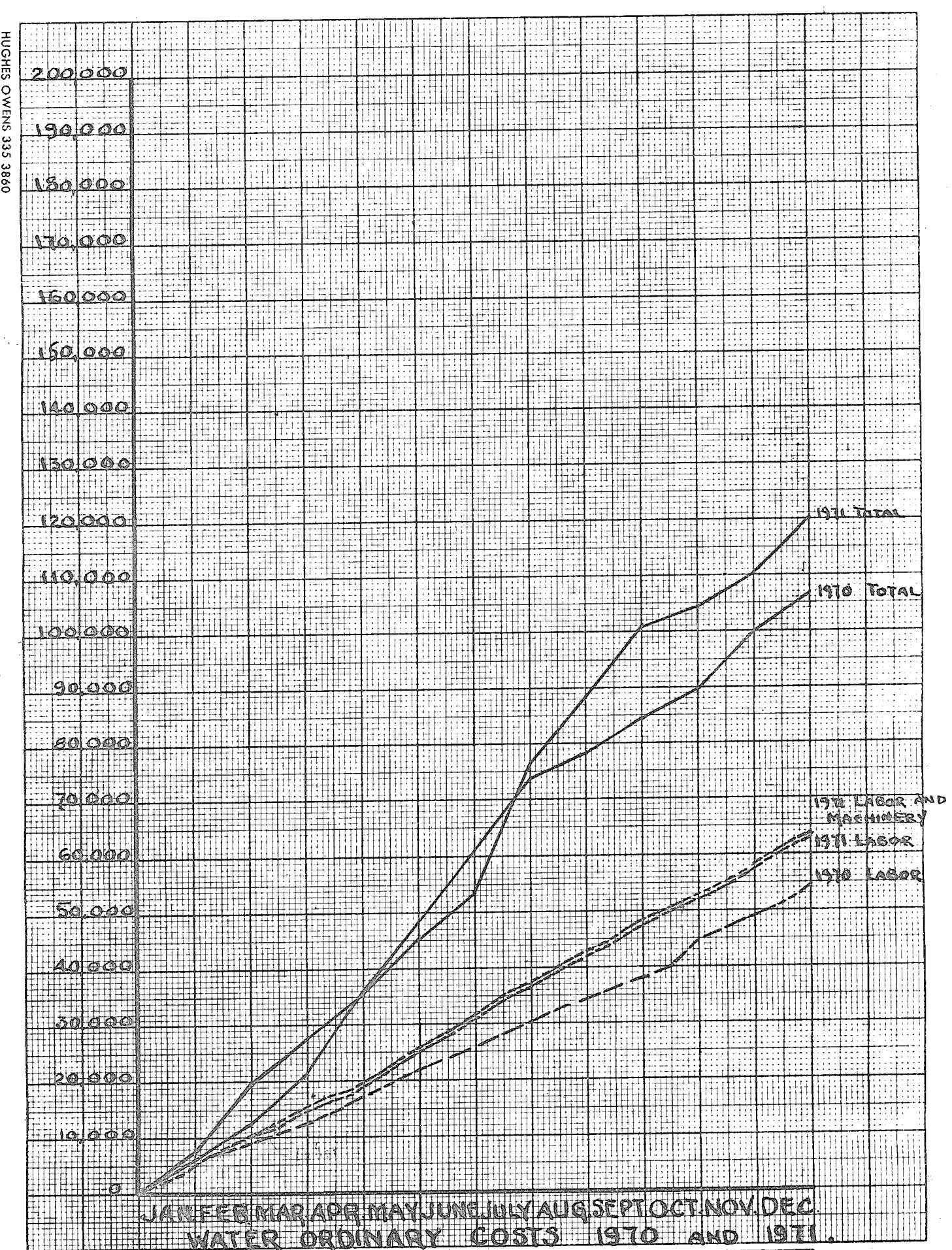
NET EXPENDITURE.....\$85,817.60

The above credit is made up as follows:-

Canadian Industries (return of cylinders).....\$ 300.00

Workmen's Compensation Board (cheque Milton Wheeler).....212.66

TOTAL...\$ 512.66



The above expenditure is divided as follows:-

City Payrolls for salaries of employees at Pumping Station.....	\$34,207.50
Work done by City Employees in and around the Pumping Station.....	162.60
Work done by City Employees at Cameron Court Pump and Well.....	1,123.34
Work done by City Employees at Carleton Ward Pumps.....	2,158.17
Material charges.....	<u>48,165.99</u>
	TOTAL.....\$85,817.60

The material cost of \$48,165.99 is made up as follows:

Item #1 - Light and Power supplied by New Brunswick Electric Power Commission.	\$11,967.86
Item #2 - Light and Power supplied by New Brunswick Electric Power Commission at Wells .....	7,423.33
Item #3 - Heating (5,125.0 gallons furnace Oil)	810.45
Item #4 - Diesel Fuel (3,000 gallons).....	553.50
Item #5 - Liquid Chlorine (1800 lbs.).....	626.71
Item #6 - Oil 4 cases HDX30-----\$ 50.29 2 cases HDX10----- 28.00 5 Gals. NUTO H44----- <u>7.13</u> .....	85.42
Item #7 - Maintenance and repairs to buildings and Equipment.....	9,091.15
Item #8 - New Installations (1 Patterson Centrifugal Pump).....	2,446.55
Item #9 - Supplies, Packing Rags, Lamps, Tools, etc.....	772.23
Item #10- Stationery Forms, Charts, Chemicals, Ink, etc.....	629.84
Item #11- Workmen's Compensation.....	549.95
Item #12- E. W. Hagerman (City Analyst Salary)	2,400.00
Item #13- Province of New Brunswick (Taxes)..	1,663.35
Item #14- Carleton Ward Pumping Stations..... Journal Voucher (Cement, sand)..... Journal Voucher (Gas, Oil)..... Journal Voucher (Pension contributions).....	6,831.97 1.63 6.63 2,047.83
Miscellaneous (Uniforms, Dues, Telephone, Keys, etc)	<u>770.25</u>

TOTAL.....\$48,678.65

Less credits as previously shown.....\$ 512.66

NET EXPENDITURE.....\$48,165.99

Item #3 - Heating

Following is the yearly consumption and costs of heating at the Fredericton Pumping Station Plant for the last ten years:-

<u>Year</u>	<u>Gallons</u> <u>Furnace Oil</u>	<u>Cost</u>
1962	5,089.1	763.10
1963	5,592.8	822.48
1964	5,355.4	762.55
1965	5,067.2	707.75
1966	5,583.1	769.80
1967	3,961.7	539.84
1968	6,121.5	837.63
1969	6,032.6	869.90
1970	5,829.6	840.79
1971	5,125.0	810.45

Item #7 - Maintenance & Repairs - Water Pumping Station:

In reference to Item #7 the following is included:-

New Patterson Pump installed replacing #2 Service Pump.  
New Panel Board was added to make room for additional flow watch meters.

New Receiver installed, others changed around so as to be in order.

Fluorescent light installed.

Furnace Room chimney was repaired, new pipe rods and bands added.

The floors were painted in the Pump Room, the Furnace Room, the Lowlift area and the Entrance Room.

Extensive repairs were made to the mens Toilet Room.

The above along with other general maintenance duties were carried out.

Also included under Item #7 were repairs to any of the Wells. The pump in Well #3 in 1971 was pulled and cleaned by International Water Supply Co. at an expenditure of \$3,320.95, Also Well #1 by the above Company at a cost of \$2,498.73. Diamond Construction Company supplied the Crane for the above jobs at a cost of \$125.00.

The Pumping Station Plant at the present time has Wells #1, #3 and #4 operating automatically on demand, and Well #5 and Cameron Court Well operating manually. The Saint John River supply operates manually, and the supply must pass through the Filter Plant for purification. This supply will only be used in an emergency; that is when the Wells are not operating due to failure, etc. or when the demand for water is higher than the Wells can produce or during a prolonged electrical interruption, probably longer than 24 hours.

During a 24 hr. interruption, the 2,000,000 Imperial Gallon Reservoir will supply the system unless there is a serious break or a fire when a high consumption of water is required.

**COMPARISON OF WATER PUMPED AND COSTS  
FOR SOUTH SIDE OF RIVER  
FOR LAST NINETEEN YEARS**

Year	Imperial Gallons Produced	Production Expenditures	Production Cost Per 1,000 Gallons
1953	351,310,000	\$ 36,179.74	10.3 cents
1954	388,540,000	40,403.81	10.4 cents
1955	376,591,000	48,063.07	12.7 cents
1956	448,096,000 (13 months)	41,351.18	9.2 cents
1957	469,185,000	42,465.50	9.0 cents
1958	454,765,000	42,888.56	9.4 cents
1959	487,704,000	47,923.19	9.8 cents
1960	520,081,000	50,280.09	9.6 cents
1961	510,250,000	45,081.88	8.8 cents
1962	499,880,000	48,298.53	9.7 cents
1963	519,168,000	48,441.10	9.3 cents
1964	544,650,000	52,431.23	9.6 cents
1965	605,170,000	50,915.76	8.4 cents
1966	634,501,000	50,519.49	8.0 cents
1967	688,514,000	52,749.40	7.9 cents
1968	735,296,000	64,617.14	8.8 cents
1969	730,089,200	69,831.20	9.5 cents
1970	796,421,300	72,282.38	9.1 cents
1971	841,712,300	76,827.46	9.1 cents

The columns in the preceding comparison, showing Imperial Gallons produced, does not include water used from Wells in Carleton Ward.

The total consumption from Wells in Carleton Ward for 1971 was 133,407,570 gallons.

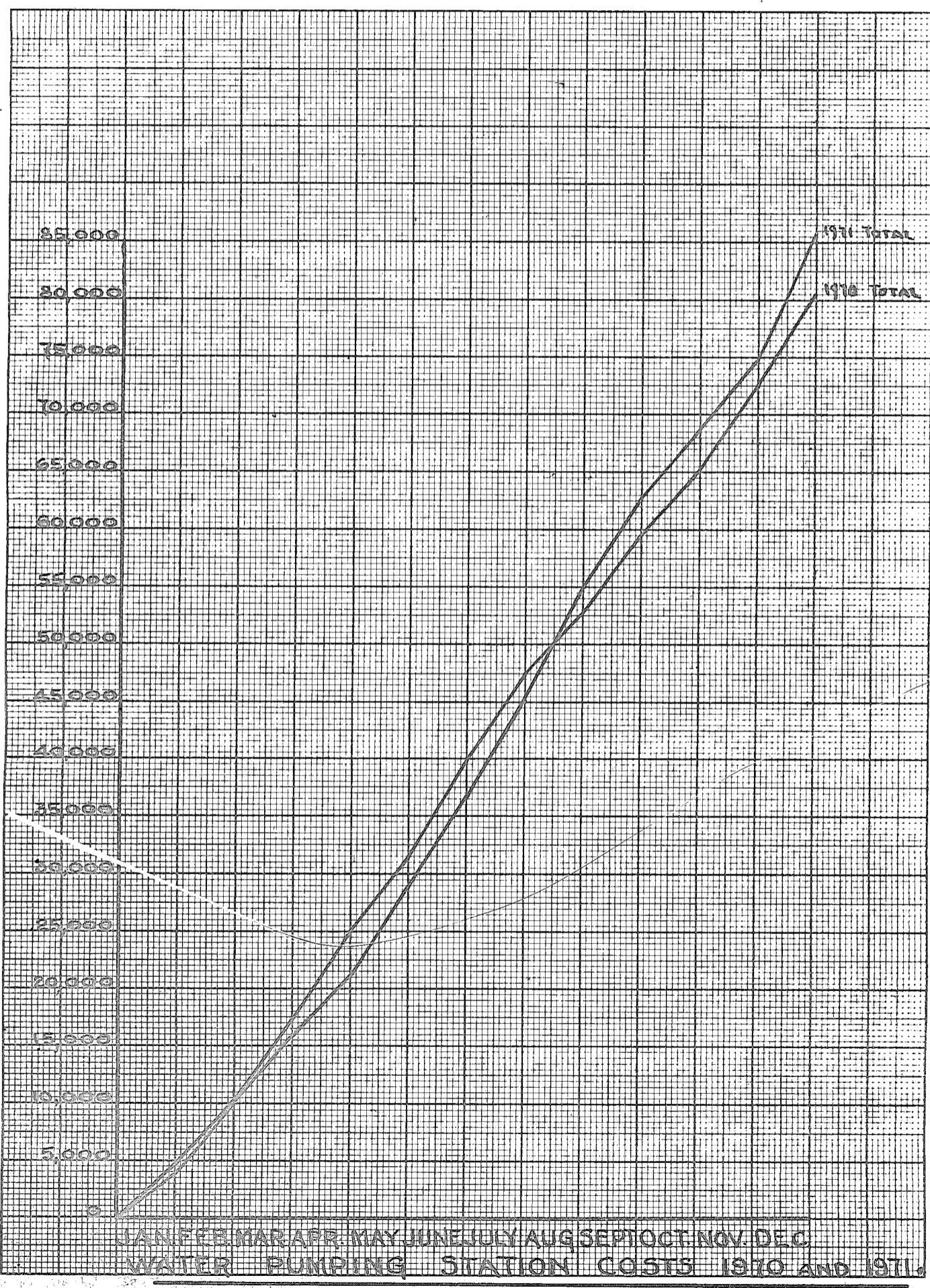
The total amount of water pumped from January 1, 1971 to December 31, 1971, therefore, for the whole City is 975,119,870 Imperial Gallons.

The total net water expenditure (operating) for the City from January 1, 1971 to December 31, 1971 is \$207,027.27.

Therefore the net cost to pump and deliver to the customer 1,000 Imperial Gallons of Water from January 1, 1971 to December 31, 1971 is -----

$$\frac{207,027}{975,119} = 21.2 \text{ cents}$$

All the preceding costs shown under "Water Pumping Station" and "Water Ordinary" do not include bond payments or sinking fund charges.



WATER AND SEWER REVENUE 1971

Water:-

	Net Revenue	Expenditure	Deficit
Water Pumping Station		\$ 85,817.60	
Water Ordinary	\$419,017.62	121,209.67	
Hydrants	67,320.00		
Sprinklers	9,600.00		
Water Office Admin.		47,172.18	
Salaries		16,858.03	
Principal and Interest		217,617.05	
<u>Domestic Sewer:-</u>	<u>495,937.62</u>	<u>488,674.53</u>	
Sewerage Domestic	158,701.84	41,992.36	
*F.P.C.C. Accs. P.		4,450.70 (Deficit 1970)	
Principal & Interest	<u>167,805.76</u>	(Expend. 1971)	
	<u>56,902.75</u>		
TOTALS.....	<u>\$654,639.46</u>	<u>\$759,826.10</u>	<u>\$105,186.64</u>

\* Fredericton Pollution Control Commission Sewage Treatment

The cost of 1,000 gallons of water delivered including principal and interest, was as follows:-

Total cost of Water Per Thousand Gallons:-

$$\frac{488,674.53}{975,119} = 50.1 \text{ cents}$$

Principal and Interest Costs:-

$$\frac{217,617.05}{975,119} = 22.3 \text{ cents}$$

Administration and Operating Costs:-

$$\frac{271,057.48}{975,119} = 27.8 \text{ cents}$$

The Water Pumping Station was under the supervision of Plant Superintendent, Mr. George Parker.

Accompanying this Report is the Report of Mr. E. W. Hagerman, City Analyst, on the Fredericton Water Supply from January 1, 1971 to December 31, 1971.

Respectfully submitted,

CITY ENGINEER.

## FREDERICTON WATER SUPPLY

YEAR 1971.....JANUARY 1st to DECEMBER 31st.

Fredericton is divided into North and South areas by the Saint John River, each area having its own water supply.

Carleton Ward or Fredericton North of the River pumped its water, for 1971, from three Wells, St. Mary's, Carleton and Bridge Street. All are drilled in ledge rock.

The water consumption in Carleton Ward was over 300,000 Imperial Gallons daily in 1971. Because they produce a better combined water St. Mary's and Carleton usually work together with Bridge St. as the make up and alternate Well.

Adequate chlorine, in the form of hypochlorite solution, is added at the St. Mary's Well to produce a 0.3 to 0.5 chlorine residual in the Well effluent. This residual is consumed, more or less in proportion as the distance from the point of application increases. Tests in the far ends of the system will find chlorine residuals very small and perhaps not at all. The waters from these three Wells are free of harmful bacteria when pumped and the chlorine is added as a safeguard against organisms that could gain entrance to the system through breaks in the main or by way of cross connections in plumbing.

No coliform tests have been positive in this system.

St. Mary's is Fredericton's oldest Well. On the City's list of Wells 1944 is noted as its first year in production. This would be the first use by the City, but the Village of St. Mary's pumped the same vein of water with steam engine and windmill from 1914.

Below is a table showing analyses of St. Mary's Well water. These figures show very little change in the quantities of the constituents over this seventeen year period.

Yr.	Mo	Da	Ph	Alk	Hard	Fe	Mn	Cl
'53	Aug.	28	7.3	80	96	Tr.	--	2.4
'64	Feb.	23	7.3	76	92	Nil	.15	6.5
'65	Nov.	27	7.2	84	105	.01	.16	8.0
'70	Feb.	9	7.2	71	88	--	.12	---
Average.....			7.2	78	95	.01	.14	5.6

Three Analyses made in 1965, 1966 and 1970 on mixed waters from combinations of the three Carleton Ward Wells are also listed below. There is very little change here in five years - in perhaps a half billion gallons of water pumped.

Year & Location	Ph.	Alk	Hard	Fe	Mn	Cl
1965 Barker St.	7.8	99	68	.01	.00	5.6
1966 Barker St.	8.2	102	72	.05	.03	5.7
1970 Barker St.	7.7	94	54	.03	.00	9.0
Average.....	7.9	98	65	.03	.01	6.8

Ideal water for domestic and industrial use should be free of or very low in Manganese or Iron.

Manganese is the nuisance element in Fredericton's water supply. It causes stains, raises the hardness and uses valuable chlorine. Iron is low and therefore no problem.

The Manganese content of St. Mary's Well is about 0.15 ppm, Carleton Well .03 ppm and Bridge St. .07. The new Maple St. Well, not yet on line, is .12 ppm. These waters mixed give an effluent having about the maximum amount of manganese that can be tolerated without treatment.

The low 5 year average of 0.01 ppm for Barker Street as shown in the above table on this page, would suggest that manganese has combined and precipitated out of solution or the combined form does not show in the test.

South Fredericton has four gravel wall Wells, Nos. 1, 3 and 4, in Wilmot Park, and number 5 is on St. Anne's Point. Hanwell Well is drilled in ledge rock and is situated in Cameron Court to the East side of Hanwell Road.

Wells 1, 3, 4 and 5 are piped to the Pumping Station at the West end of Queen Street. Here the waters are mixed as needed, chlorinated and pumped to the mains and reservoirs.

The first three wells, 1, 3 and 4 produce coliform free water. They are low in Manganese (#1 - .05, #3 -.01 and #4 - .01) and therefore do not require a large dose of chlorine.

No. 5 Well likewise produces a coliform free water, but carries a heavy charge of manganese. This Well went into production on June 21, 1969, with a manganese content of .17 ppm. This has been increasing gradually until as of December 31, 1971, it has reached .55 ppm (.73 ppm test by Dept. of Environment). This large charge of manganese requires a large initial dose of chlorine, enough to satisfy the manganese plus some remaining for a sterilizing agent.

As the evils of high manganese have already been discussed in respect to Carleton Ward water and as the problem is recognized with steps being taken to solve it, further discussion seems to be unnecessary. Manganese values for all of the Wells may be found in the analyses attached to this report.

Because of the movement of industry and housing development to the outer areas of the City, it has been necessary to extend the water mains considerable distances.

Water leaves the Pumping Station with a residual chlorine dose of 0.1 ppm to 0.15 ppm. Three miles down the water main at the Lincoln Booster Station it is still measurable, but in hundredths of a part per million. The end of this main is over five miles from the Pumping Station, but no measurements have been made at this point.

The writer believes that some form of portable chlorinator should be on hand so that distant points could be sterilized in cases of emergency. Furthermore it would be an invaluable tool for sterilizing reservoirs. Chlorine solutions of known strength could be fed in any proportion to the entering water. This would result in a uniform concentration and would eliminate the stirring problem which is so difficult in large bodies of water. Power could be supplied, where unavailable, by a portable generator.

Hanwell Well pumps about 6,000 gallons per day of clear good tasting water to a small area along Hawnell Road. Occasionally someone complains of chlorinous tastes, but only when asked. Positive coliform results show occasionally in the raw water, but the chlorinated effluent has always been negative.

Finally, even with high manganese and occasional localized taste problems, the writer believes that Fredericton water is the most palatable of any supply that comes out of pipes.

(SGD) E. W. HAGEMAN

EXTRACTS FROM UNITED STATES TREASURY STANDARDS  
APPLICABLE TO FREDERICTON WATER SUPPLY

- (1). A minimum sample of 100 milliliters is collected.
- (2). Five 10 milliliter portions of this sample are tested.
- (3). Primary plantings are made in Lactose Broth.
- (4). Portions forming gas in Lactose Broth are confirmed in 2% Brilliant Green Bile.

Application of Test

- (1). Of all the 10 milliliter portions examined per month, not more than 10% shall show positive (i.e. make gas).
- (2). When less than 20 samples per month are examined, one sample may show three positive portions.
- (3). Using a standard sample of five 10 milliliter portions, provides for an estimation of the MOST PROBABLE NUMBER (M.P.N.) of Coliform bacteria per 100 milliliter of sample as shown in the table below.

Negative Positive      When five 10 milliliter portions are tested

5	0	Less than 2.2 organisms per 100 is the MPN
4	1	2.2 organisms per 100 is the MPN
3	2	5.1 organisms per 100 is the MPN
2	3	9.2 organisms per 100 is the MPN
1	4	16 organisms per 100 is the MPN
0	5	More than 16 organisms per 100 is the MPN

Fredericton Water Supply (Coliform Tests)

Year 1971-----January 1st to December 31st

Following is a list of sampling points used in 1971

Date of Sample	Origin of Sample	The test divides the 5 portions as positive or negative, for use with table on previous page.
<u>January</u>		
Sat. 9	62 Alexandria St.	NOTE - Blank in this column
Wed. 13	492 Killarney Rd.	indicates negative
Tue. 26	Fire Station-College Hill	test. Coliforms absent. Harmless Growths noted.

Date of Sample      Origin of Sample

The test divides the 5 portions as positive or negative, for use with table on previous page.

February

Mon. 1	Killarney Well	
Mon. 1	Bridge St. Well	Some growth--Non Coliform
Mon. 1	Engineering Bldg., U.N.B.	
Thur. 11	127 Charlotte St.	
Fri. 19	York Structural Steel	
Sat. 27	77 Smith Street	

March

Wed. 10	Hanwell Well (Raw)	Some growth--Non Coliform
Thur. 18	Sobey's Mall	
Fri. 26	449 Woodbridge St.	Some growth--Non Coliform, new pipes.
Tues. 30	756 Hanwell Road	Chlorine Residual .05 ppm present

April

Sun. 4	290 Charlotte St.	
Fri. 9	U.N.B. Engineering	
Tues. 20	Police Station, York & Dundonald St.	Growth New pipes.
Fri. 30	701 Albert St.	

May

Tues. 4	277 Gibson Street	
Mon. 10	U.N.B. Steam Plant, College Hill	
Mon. 17	727 Irvine Street	
Tues. 25	Cameron Court	

June

Wed. 2	MacLaren Ave., Fire Station	
Thur. 10	Rural Cemetery	
Mon. 14	355 Queen Street	
Sat. 19	530 Lincoln Road	

July

Thur. 8	249 Lynhaven	Note-Blank in this column
Sat. 24	384 Forbes St.	Growth indicates negative test.
Tues. 27	384 Forbes St.	Coliforms absent.
Thur. 29	479 Union St.	Harmless growths noted.

Date of              Origin of  
Sample              Sample

The test divides the 5 portions as positive or negative, for use with table on previous page.

August

Tues.	3	O'Dell Park
Tues.	10	377 Gibson Street
Mon.	23	276 Dundonald St.
Sun.	29	689 Beaverbrook St.

September

Sat.	11	Mrs. Seymour, Killarney Rd.	Water smells of creosote
Wed.	22	Mrs. Seymour, Killarney Rd.	Water smells of creosote
Mon.	27	530 Lincoln Road	

October

Mon.	4	Hanwell Well (Raw)	2 plus    3 minus
Mon.	11	510 Hanwell Road	
Mon.	18	510 Hanwell Road	
Wed.	27	355 Queen Street	

November

Wed.	3	160 Edinburgh Street	
Mon.	15	York Structural Steel	
Mon.	15	311 Canterbury Drive	
Mon.	15	Hanwell Well (Raw)	
Mon.	22	510 Hanwell Rd.	Chlorine Nil
Mon.	29	Centennial Bldg.	Chlorine Trace.

December

Fri.	3	277 Gibson Street	
Wed.	8	99 Smith Street	
Dec.	21	Flemming Reservoir (South Wilsey Rd.)	
Dec.	21	City Yard (Maryland Road)	

STOPPED METERS 1971

	<u>NAME</u>	<u>ADDRESS</u>	<u>DATE CHANGED</u>	<u>READING</u>
1.	Joseph Kileel	520 Queen Street	Feb.4/71	000,000
2.	N.B. Telephone Co.	550 Union Street	Feb.4/71	000,000
3.	Harry Smith	207 Priestman Street	Feb.8/71	000,000
4.	Mrs. Henry Bishop	173 Victoria Street	Feb.8/71	000,000
5.	George Street High School	575 George Street	Feb.8/71	000,000
6.	Arthur Beardsley	15 Sherwood Court	Feb.18/71	000,000
7.	C.M. Waddell	4 Elmcroft Place	Feb.18/71	000,000
8.	Paul M. Watson	734 McEvoy Street	Mar.2/71	000,000
9.	Harriet Irving Library	University of N.B.	May 3/71	1,079,000
10.	George Howes	318 Edinburgh Street	May 27/71	000,000
11.	Alfred Brown	337-39 Aberdeen Street	May 27/71	000,000
12.	Forestry Service	498 York Street	May 27/71	000,000
13.	Dept. of Public Works	184-86 York Street	May 27/71	000,000
14.	James Addison	205 Church Street	May 27/71	000,000
15.	Kieth Campbell	46 Cambridge Crescent	May 27/71	000,000
16.	John Glen	8 Surrey Crescent	May 27/71	000,000
17.	N.B. Housing Corp.	5 Wilson Row	June 4/71	000,000
18.	A. C. Pelkman	456 Gibson Street	June 7/71	000,000
19.	Warren W. Steen	80 Hayes Street	June 7/71	000,000
20.	Mrs. C.A. Jewett	238 Carleton Street	June 18/71	000,000
21.	MacDonalds Drive In	465 Prospect Street East	June 24/71	000,000
22.	Amusement Centre	Store #21 Mall	Aug.3/71	000,000
23.	Royal Canadian Legion	199 Queen Street	Aug.4/71	000,000
24.	L. J. Griesbach	165 Surrey Crescent	Aug.25/71	000,000
25.	Provincial Archives	University of N.B.	Aug.31/71	000,000
26.	Thomas McCarty	337 St. Marys Street	Sept.9/71	000,000
27.	Robert Bird	254 Medley Street	Sept.9/71	000,000
28.	Alfred Howe	404 Westmorland Street	Sept.10/71	000,000
29.	Cdn. Imperial Bank of Co.	325 University Avenue	Sept.10/71	000,000
30.	Mrs. Thomas Cass.	196 Dunn Road	Sept.10/71	000,000
31.	Mrs. Ann Price	121 Winslow Street	Sept.10/71	000,000
32.	Raymond McGee	267 Smythe Street	Sept.10/71	000,000
33.	Mrs. Albert Rowan	314 Lincoln Road	Sept.13/71	000,000
34.	R. G. Phillips	133 Victoria Street	Nov.9/71	000,000
35.	Mrs. Blanche Green	745 Reid Street	Nov.16/71	000,000
36.	John McNair	92 Waterloo Row	Nov.19/71	000,000
37.	Mrs. G. McCutcheon	348 George Street	Nov.19/71	000,000
38.	Roy Ramey Est.	115 Charlotte Street	Nov.19/71	000,000
39.	Arthur McKenzie	388 George Street	Nov.22/71	000,000
40.	Walter McAdam	558 Woodstock Road	Nov.22/71	000,000
41.	Mrs. A.M. Malone	541 Charlotte Street	Nov.23/71	000,000
42.	Ron Lawrence	769 Regent Street	Nov.23/71	000,000
43.	Anthoney David	467-69 York Street	Nov.23/71	000,000
44.	Fraser McHatten	257 Canterbury Drive	Nov.23/71	000,000
45.	Gilbert Brunett	349 University Avenue	Dec.6/71	000,000
46.	Mrs. Lillian Palmer	264 Canterbury Drive	Dec.6/71	000,000
47.	Irwin Rosenweig	632 Graham Avenue	Dec.6/71	000,000
48.	Eric Levison	319 Oxford Street	Dec.7/71	000,000

FLAT RATES METERED 1971

1. Mary Chambers	123 Crerar Court	Mar. 24/71	5/8" A.R.B.
2. Allan Ramey	111 Crerar Court	Apr. 6/71	5/8" A.R.B.
3. Arthur McKenzie	113 Crerar Court	Apr. 6/71	5/8" A.R.B.
4. Robert Kupkee	203 School Street	Apr. 7/71	5/8" A.R.B.
5. St. Marys Reserve	117 Paul Street	Apr. 8/71	5/8"
6. John Evans Est.	117 Crerar Court	Apr. 16/71	5/8" A.R.B.
7. Holger Mollegaard	142 Miles Street	Apr. 16/71	5/8" A.R.B.
8. Hedley R. Nash	88 McKeen Street	June 7/71	5/8" A.R.B.
9. John E. Boyd	146 Jaffery Street	June 17/71	5/8" A.R.B.
10. Harold Dorcas	219 Carney Street	Jul. 15/71	5/8" A.R.B.
11. George Blank	252 Argyle Street	Jul. 23/71	5/8" A.R.B.
12. Charles W. Allport	204 Victoria Street	Oct. 7/71	5/8" A.R.B.
13a. J.G. & G.H. Crawford	751 MacLaren Avenue	Dec. 9/71	5/8" A.R.B.

1971 Sewer Installations

1.	George MacAllister	137 Montgomery St.	Apr. 19/71	4" A.C.
2.	Topmar Housing	184 Dundonald St.	Apr. 20/71	4" A.C.
3.	Topmar Housing	505 Northumberland St.	Apr. 23/71	4" A.C.
4.	Prospect Rentals	59 Prospect St. West	Apr. 27/71	4" A.C.
5.	MacDonalds	465 Prospect St. East	Apr. 28/71	4" A.C.
6.	Hill Bros.	221 Willingdon St.	Apr. 29/71	4" A.C.
7.	F'ton. Housing Ltd.	130 Surrey Cres.	Apr. 30/71	4" A.C.
8.	F'ton. Housing Ltd.	230 Surrey Cres.	Apr. 30/71	4" A.C.
9.	Dept of Indian Affairs	97 Maliseet Dr.	May 3/71	4" A.C.
10.	Topmar Housing	66 Ayres St.	May 4/71	4" A.C.
11.	Hill Bros.	181 Willingdon St.	May 6/71	4" A.C.
12.	Starlite Homes	480 Dufferin St.	May 7/71	4" A.C.
13.	Calvary Baptist Church	845 Regent Street	May 11/71	4" A.C.
14.	Starlite Homes	470 Duffering St.	May 17/71	4" A.C.
15.	Atlantic Const.	210 Wright Street	May 18/71	4" A.C.
16.	Hill Bros.	693 Hanwell Road	May 19/71	4" A.C.
17.	Donald Hill	21 Cameron Court	May 20/71	4" A.C.
18.	Starlite Homes	447 Dufferin St.	May 21/71	4" A.C.
19.	Chippins Ltd.	25 Tims Court	May 27/71	4" A.C.
20.	Chippin'S Ltd.	80 Rankine St.	May 29/71	4" A.C.
21.	Chippin's Ltd.	312-314 York Street	June 1/71	4" A.C.
22.	Larry Hill	424 Dufferin St.	June 2/71	4" A.C.
23.	Adolf Mueller	174 Lynhaven Street	June 3/71	4" A.C.
24.	Chippins Ltd.	70 Rankine Street	June 4/71	4" A.C.
25.	MarSand Properties	80 Dunn Road	June 6/71	6" A.C.
26.	Chippin'S Ltd.	110 Rankine St.	June 8/71	4" A.C.
27.	Diamond Construction	686 Queen Street	June 8/71	4" A.C.
28.	F'ton. Housing	140 Surrey Cres.	June 9/71	4" A.C.
29.	Topmar Housing 240	240 Wright Street	Junell/71	4" A.C.
30.	Arnold Acton	250 Wright Street	Junell/71	4" A.C.
31.	Parkside Development	15 Parkside Dr.	Juge 15/71	4" A.C.
32.	Parkside Development	25 Parkside Dr.	Junel6/71	4" A.C.
33.	Chippin's Ltd.	16 Tims Court	June22/71	4" A.C.
34.	Parkside Developement	35 Parkside Dr.	June23/71	4" A.C.
35.	Parkside Developement	65 Parkside Dr.	June23/71	4" A.C.
36.	Parkside Developement	55 Parkside Dr.	June25/71	4" A.C.
37.	Parkside Developement	45 Parkside Dr.	June28/71	4" A.C.
38.	Hollie V. Craig	740 Valleyview St.	June30/71	4" A.C.
39.	Chippin's Ltd.	26 Tims Court	July 6/71	4" A.C.
40.	Cummings Housing	602 Graham Ave.	July 8/71	6" A.C.
41.	Custom Builders	180 Oxford St.	July 9/71	4" A.C.
42.	Larry Hill	485 Dufferin St.	July 12/71	4" A.C.
43.	Custom Builders	170 Oxford St.	Julyl3/71	4" A.C.
44.	Custom Builders	267 Wright St.	Julyl5/711	4" A.C.
45.	Hill Bros.	231 Willingdon St.	Julyl5/71	4" A.C.
46.	Custom Builders	247 Wright St.	Julyl6/71	4" A.C.
47.	F'ton. Housing Ltd.	215 Charing Cres.	Julyl6/71	4" A.C.
48.	Chippin's Ltd.	115 Rankine St.	July 19/71	4" A.C.

1971 Sewer Installations

49.	S.C.R. Const.	56 Colonial Heights	July 19/71	4" A.C.
50.	S.C.R. Const.	19 Colonial Heights	July 19/71	4" A.C.
51.	F'ton. Housing Ltd.	195 Charing Cres.	July 20/71	4" A.C.
52.	Custom Builders	120 Oxford Street	July 20/71	4" A.C.
53.	Mar Sand Properties	25 Boyne Street	July 21/71	6" A.C.
54.	F'ton. Housing Ltd.	205 Charing Cresc.	July 21/71	4" A.C.
55.	F'ton. Housing Ltd.	175 Charing Cres.	July 22/71	4" A.C.
56.	F'ton. Housing Ltd.	185 Charing Cres.	July 22/71	4" A.C.
57.	F'ton. Housing Ltd.	165 Charing Cres.	July 22/71	4" A.C.
58.	Starlite Homes	490 Dufferin Street	July 22/71	4" A.C.
59.	F'ton. Housing Ltd.	188 Charing Cres.	July 23/71	4" A.C.
60.	Custom Builders	257 Wright Street	July 23/71	4" A.C.
61..	F'ton. Housing Ltd.	198 Charing Cres.	July 23/71	4" A.C.
62.	Custom Builders	277 Wright Street	July 23/71	4" A.C.
63.	Horizon Dev.	242 Saunders St.	July 26/71	6" A.C.
64.	Don Wilson	745 Graham Ave.	July 27/71	4" A.C.
65.	F'ton. Housing	100 Charing Cres.	July 27/71	4" A.C.
66.	F'ton. Housing	120 Charing Cres.	July 28/71	4" A.C.
67.	Starlite Homes	417 Dufferin St.	July 28/71	4" A.C.
68.	Starlite Homes	434 Dufferin St.	July 28/71	4" A.C.
69.	Everitt Ferris	12 Michener Court	July 28/71	4" A.C.
70.	Fred Holland	23 Perley Court	July 30/71	4" A.C.
71.	F'ton. Housing Ltd.	10 Charing Cres.	July 30/71	4" A.C.
72.	F'ton Housing Ltd.	75 Charing Cres.	Aug. 2/71	4" A.C.
73.	F'ton. Housing Ltd.	180 Charing Cres.	Aug. 3/71	4" A.C.
74.	Larry Hill	15 Walker St.	Aug. 3/71	4" A.C.
75.	Donald Hill	5 Walker Street	Aug. 3/71	4" A.C.
76.	Gerald Myers	35 Walker Street	Aug. 3/71	4" A.C.
77.	F'ton. Housing Ltd.	85 Charing Cres.	Aug. 3/71	4" A.C.
78.	Arnum Canning	95 Limerick Road	Aug. 4/71	4" A.C.
79.	Fredericton Housing	170 Charing Cres.	Aug. 4/71	4" A.C.
80.	Fredericton Housing	95 Charing Cres.	Aug. 5/71	4" A.C.
81.	Fredericton Housing	90 Charing Cres.	Aug. 5/71	4" A.C.
82.	Custom Builders	280 Wright Street	Aug. 5/71	4" A.C.
83.	Custom Builders	290 Wright Street	Aug. 5/71	4" A.C.
84.	Highland Co.	31 Cameron Ct.	Aug. 6/71	4" A.C.
85.	M. & H. Mechanical	130 Dundonald St.	Aug. 9/71	4" A.C.
86.	Hill Bros.	525 Hanwell Road	Aug. 10/71	4" A.C.
87.	Chippin's Ltd.	55 Rankine St.	Aug. 16/71	4" A.C.
88.	Chippin's Ltd.	65 Rankine St.	Aug. 16/71	4" A.C.
89.	Chippin's Ltd.	714 Forest Hill Road	Aug. 17/71	4" A.C.
90.	Hill Bros.	575 Hanwell Road	Aug. 19/71	4" A.C.
91.	Mar Sand Properties	120 Dunn Road	Aug. 19/71	6" A.C.
92.	Vipond Auto Sprinklers	180 Wilsey Road	Aug. 20/71	8" A.C.
93.	Custom Builders	270 Wright St.	Aug. 20/71	4" A.C.
94.	Donald Hill	647 Hanwell Road	Aug. 23/71	4" A.C.
95.	Hill Bros.	683 Hanwell Road	Aug. 23/71	4" A.C.
96.	Hill Bros.	671 Hanwell Road	Aug. 23/71	4" A.C.

1971 Sewer Installations

97.	Custom Builders	130 Oxford Street	Aug. 25/71	4" A.C.
98.	W. J. Watson	223 Lynhaven Ct.	Aug. 26/71	4" A.C.
99.	Custom Builders	260 Wright St.	Aug. 27/71	4" A.C.
100.	Custom Builders	347 Wright St.	Aug. 27/71	4" A.C.
101.	Chippin's Ltd.	119 Lynhaven St.	Aug. 30/71	4" A.C.
102.	Topmar Housing	2 Heather Terrace	Sept. 1/71	4" A.C.
103.	Chippin's Ltd.	756 Smythe Street	Sept. 1/71	4" A.C.
104.	Phillips & Crawford	254 Lynhaven St.	Sept. 2/71	4" A.C.
105.	Diamond Const.	891 Barker St.	Sept. 4/71	{4" A.C. 6" A.C.
106.	Horizon Dev.	151 Willingdon St.	Sept. 9/71	4" A.C.
107.	Hill Bros.	136 Willingdon St.	Sept. 9/71	4" A.C.
108.	Hill Bros.	126 Willingdon St.	Sept. 13/71	4" A.C.
109.	William Worrall	592 Smythe Street	Sept. 22/71	4" A.C.
110.	Allan Lawrence	202 Wright St.	Sept. 23/71	4" A.C.
111.	F'ton Housing Ltd.	150 Surrey Cres.	Sept. 24/71	4" A.C.
112.	W. W. Waite	80 Surrey Cres.	Sept. 24/71	4" A.C.
113.	Atlantic Const.	41 Parklyn Ct.	Sept. 29/71	4" A.C.
114.	F'ton Housing Ltd.	45 Charing Cres.	Sept. 29/71	4" A.C.
115.	F'ton. Housing Ltd.	140 Charing Cres.	Sept. 29/71	4" A.C.
116.	F'ton. Housing Ltd.	155 Charing Cres.	Sept. 30/71	4" A.C.
117.	Atlantic Const.	29 Parklyn Ct.	Sept. 30/71	4" A.C.
118.	Atlantic Const.	20 Parklyn Ct.	Oct. 1/71	4" A.C.
119.	F'ton. Housing Ltd.	130 Charing Cres.	Oct. 1/71	4" A.C.
120.	F'ton. Housing Ltd.	150 Charing Cres.	Oct. 4/71	4" A.C.
121.	F'ton. Housing Ltd.	110 Charing Cres.	Oct. 4/71	4" A.C.
122.	F'ton. Housing Ltd.	160 Charing Cres.	Oct. 6/71	4" A.C.
123.	Topmar Housing Ltd.	71 Ayres Street	Oct. 6/71	4" A.C.
124.	F'ton. Housing Ltd.	125 Charing Cres.	Oct. 7/71	4" A.C.
125.	F'ton. Housing Ltd.	115 Charing Cres.	Oct. 7/71	4" A.C.
126.	Topmar Housing Ltd.	83 Ayres St.	Oct. 8/71	4" A.C.
127.	F'ton. Housing Ltd.	105 Charing Cres.	Oct. 12/71	4" A.C.
128.	F'ton. Housing Ltd.	65 Charing Cres.	Oct. 13/71	4" A.C.
129.	Irving Oil Co. Ltd.	1169 Regent St.	Oct. 14/71	{4" A.C. 6" A.C.
130.	F'ton. Housing Ltd.	25 Charing Cres.	Oct. 14/71	4" A.C.
131.	Larry Hill	42 Foley Court	Oct. 15/71	4" A.C.
132.	F'ton. Housing Ltd.	55 Charing Cres.	Oct. 15/71	4" A.C.
133.	Topmar Housing	499 Canterbury Dr.	Oct. 18/71	4" A.C.
134.	Atlas Const.	191 Doak Road	Oct. 20/71	6" A.C.
135.	Donald Barrett	150 Lincoln Road	Oct. 20/71	4" A.C.
136.	Custom Builders	287 Wright St.	Oct. 21/71	4" A.C.
137.	Hill Bros.	314 Dayton Ct.	Oct. 27/71	4" A.C.
138.	D. O. Calhoun	165 Oxford St.	Nov 1/71	4" A.C.
139.	Starlite Homes	243 Priestman St.	Nov. 2/71	4" A.C.
140.	Starlite Homes	233 Priestman St.	Nov. 3/71	4" A.C.
141.	Hill Bros.	242 Willingdon St.	Nov. 4/71	4" A.C.
142.	Winnifred Coleman	278 Lincoln Road	Nov. 8/71	4" A.C.

1971 Sewer Installations

143.	Co-op Service Station	931 Barker St.	Nov. 9/71	6" A.C.
144.	Horizon Dev.	32 Ayres Street	Nov. 10/71	4" A.C.
145.	Horizon Dev.	22 Ayres Street	Nov. 10/71	4" A.C.
146.	Horizon Dev.	40 Ayres Street	Nov. 12/71	4" A.C.
147.	F'ton. Housing Ltd.	35 Charing Cres.	Nov. 15/71	4" A.C.
148.	F'ton. Housing Ltd.	15 Charing Cres.	Nov. 16/71	4" A.C.
149.	Donald Wilson	440 Needham St.	Nov. 16/71	6" A.C.
150.	Topmar Housing	284 Highland Ave.	Nov. 18/71	4" A.C.
151.	F'ton. Housing Ltd.	135 Charing Cres.	Nov. 17/71	4" A.C.
152.	F'ton. Housing Ltd.	40 Charing Cres.	Nov. 17/71	4" A.C.
153.	S.C.R. Const.	119 Colonial Heights	Nov. 18/71	4" A.C.
154.	S.C.R. Const.	93 Colonial Heights	Nov. 19/71	4" A.C.
155.	S.C.R. Const.	79 Colonial Heights	Nov. 19/71	4" A.C.
156.	Larry Hill	51 Foley Court	Nov. 22/71	4" A.C.
157.	Cap. Equip. Trading	130 Wilsey Road	Nov. 23/71	4" A.C.
158.	Cap. Equip. Trading	140 Wilsey Road	Nov. 24/71	4" A.C.
159.	Nelson Adams	166 Wilsey Road	Nov. 25/71	4" A.C.
160.	Atlantic Const.	64 Parklyn Court	Dec. 2/71	4" A.C.
161.	Atlantic Const.	61 Parklyn Court	Dec. 6/71	4" A.C.
162.	Horizon Dev.	31 Ayres Street	Dec. 9/71	4" A.C.
163.	City Tire	P-26 Wilsey Road	Dec. 13/71	4" A.C.
164.	Custom Builders	5 Cameron Ct.	Dec. 14/71	4" A.C.
165.	Horizon Dev.	98 Ayres St.	Dec. 15/71	4" A.C.

REGULAR METERS CHANGED TO ARB 1971

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
1. Boyce Market	665 George Street	Jan.14/71	5/8" ARB
2. Prov. of N.B.	35 Woodstock Road	Jan.15/71	5/8" ARB
3. Fish & Game Rifle Range	Exhibition Grounds	Jan.15/71	5/8" ARB
4. William Bell	285 Victoria Street	Jan.18/71	5/8" ARB
5. Mrs. John Birch	271 Victoria Street	Jan.18/71	5/8" ARB
6. Mrs. Reva Thibideau	415 Needham Street	Jan.20/71	5/8" ARB
7. J.H. Reynolds	245 Medley Street	Jan.21/71	5/8" ARB
8. Hilton Taylor	343 Clark Street	Jan.21/71	5/8" ARB
9. Mrs. L.F. Mooers	402 Needham Street	Jan.21/71	1" ARB
10. Mrs. O. Jackson	441 Needham Street	Jan.21/71	5/8" ARB
11. Ferdinand Valentine	418-28 Needham Street	Jan.22/71	5/8" ARB
12. Kitchen Bros. Ltd.	698 McLeod Avenue	Jan.25/71	5/8" ARB
13. John T. White	471 Waterloo Row	Jan.25/71	5/8" ARB
14. Mrs. Gorden Saunders	450 Needham Street	Jan.25/71	5/8" ARB
15. Abe Levine & Sons	259 King Street	Jan.26/71	5/8" ARB
16. Brian Burtt	41 Norfolk Drive	Feb.19/71	5/8" ARB
17. Amie Desormeaux	146 Limerick Road	Mar.3/71	5/8" ARB
18. Andre Parent	52 McNair Drive	Mar.3/71	5/8" ARB
19. C. D. Nickerson	138 Limerick Road	Mar.5/71	5/8" ARB
20. Robert D. Scott	161 McNair Drive	Mar.5/71	5/8" ARB
21. Dale McIntyre	100 Limerick Road	Mar.8/71	5/8" ARB
22. William A. Court	108 Limerick Road	Mar.8/71	5/8" ARB
23. Arnold MacPherson	118 Limerick Road	Mar.8/71	5/8" ARB
24. James C. Arbeau	90 Limerick Road	Mar.9/71	5/8" ARB
25. Basil Losier	59 McNair Drive	Mar.9/71	5/8" ARB
26. W. A. Gallagher	69 McNair Drive	Mar.9/71	5/8" ARB
27. G. R. Yeomans	79 McNair Drive	Mar.10/71	5/8" ARB
28. Mrs. E.S. O'Leary	81 McNair Drive	Mar.10/71	5/8" ARB
29. Neill DesJardines	91 McNair Drive	Mar.10/71	5/8" ARB
30. Basil Wood	685 Churchill Row	Mar.10/71	5/8" ARB
31. Peter Sangster	62 McNair Drive	Mar.11/71	5/8" ARB
32. James Ruther	123 McNair Drive	Mar.11/71	5/8" ARB
33. Lloyd W. Smith	111 McNair Drive	Mar.12/71	5/8" ARB
34. Frank DeWolfe	575 Needham Street	Mar.12/71	5/8" ARB

REGULAR METERS CHANGED TO ARB 1971

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
35. Jean Murdock	614 York Street	Mar.12/71	5/8" ARB
36. Gladys Kitchen	203 Dundonald Street	Mar.15/71	5/8" ARB
37. James McGallan	202 Dundonald Street	Mar.16/71	5/8" ARB
38. Edward Rogers	206-08 Dundonald Street	Mar.16/71	5/8" ARB
39. R. S. Goodspeed	254 Dundonald Street	Mar.16/71	5/8" ARB
40. Bernice Mehlitz	269 Dundonald Street	Mar.16/71	5/8" ARB
41. Roy McQuinn	285 Dundonald Street	Mar.16/71	5/8" ARB
42. Demolitions Ltd.	760 Forest Hill	Mar.17/71	5/8" ARB
43. Frank Dunham	770 Forest Hill	Mar.17/71	5/8" ARB
44. Rita McAlinden	788 Forest Hill	Mar.17/71	5/8" ARB
45. Mildredt Sloat	120 Gibson Street	Mar.17/71	5/8" ARB
46. Robert Black	144 Gibson Street	Mar.18/71	5/8" ARB
47. Allan Carman Est.	233 Gibson Street	Mar.18/71	5/8" ARB
48. Douglas Northrup	242 Gibson Street	Mar.18/71	5/8" ARB
49. Florence Green	123 Friel Street	Mar.19/71	5/8" ARB
50. Wendall Thomas	160 Friel Street	Mar.19/71	5/8" ARB
51. Wendall Thomas	162 Friel Street	Mar.19/71	5/8" ARB
52. William Smith	163 Friel Street	Mar.19/71	5/8" ARB
53. Charles Stewart	165 Friel Street	Mar.19/71	5/8" ARB
54. Arthur Bunker	144 Friel Street	Mar.22/71	5/8" ARB
55. Aubrey Gorman	148 Friel Street	Mar.22/71	5/8" ARB
56. Roderick Black	157 Friel Street	Mar.22/71	5/8" ARB
57. Fred Webb	159 Friel Street	Mar.22/71	5/8" ARB
58. Annie Thomas	161 Friel Street	Mar.22/71	5/8" ARB
59. J. C. McManus	81 Babbitt Street	Mar.23/71	5/8" ARB
60. A.R. Watters	82 Babbitt Street	Mar.23/71	5/8" ARB
61. George Markey	277 Carney Street	Mar.23/71	5/8" ARB
62. Percy Morgan Est.	136 Friel Street	Mar.23/71	5/8" ARB
63. Chester Gorman	152 Friel Street	Mar.23/71	5/8" ARB
64. Irving Oil Co. Ltd/	114 Crerar Court	Mar.24/71	5/8" ARB
65. Irving Oil Co. Ltd.	126 Crerar Court	Mar.24/71	5/8" ARB
66. Mrs. Effie Kidney	187 Carney Street	Mar.24/71	1/2" ARB
67. Edward Morgan	327-29 Dundonald Street	Mar.25/71	5/8" ARB
68. Lawrence Gould	677 Reid Street	Mar.25/71	5/8" ARB

REGULAR METERS CHANGED TO ARB 1971

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
69. M. E. Scammell	211 School Street	Mar.25/71	5/8" ARB
70. Mrs. Ethel Scott	219 School Street	Mar.25/71	5/8" ARB
71. Arthur Wade	581 Windsor Street	Mar.25/71	5/8" ARB
72. Robert Read	183 Dundonald Street	Mar.26/71	5/8" ARB
73. Paul O'Hara Est.	235 Dundonald Street	Mar.26/71	5/8" ARB
74. George McIntyre	253 Dundonald Street	Mar.26/71	5/8" ARB
75. Roy Reid	261 Dundonald Street	Mar.26/71	5/8" ARB
76. Mrs. G. Hashey Est.	284 Dundonald Street	Mar.26/71	5/8" ARB
77. Mrs. Blanche Levine	266 Northumberland St.	Mar.26/71	5/8" ARB
78. Irwin Rosenzweig	369 Charlotte Street	Mar.29/71	5/8" ARB
79. Margaret Bishop	264 Dundonald Street	Mar.29/71	5/8" ARB
80. Donald Stevenson	276 Dundonald Street	Mar.29/71	5/8" ARB
81. Margaret Baxter	281 Dundonald Street	Mar.29/71	5/8" ARB
82. William R. Stuart	328 Dundonald Street	Mar.29/71	5/8" ARB
83. Carl Fraser	330 Dundonald Street	Mar.29/71	5/8" ARB
84. Christina Hart	355 Dundonald Street	Mar.29/71	5/8" ARB
85. Arthur Toft	318 Dundonald Street	Mar.30/71	5/8" ARB
86. Fred Cowperthwaite	321 Dundonald Street	Mar.30/71	5/8" ARB
87. J. Levesque	349 Dundonald Street	Mar.30/71	5/8" ARB
88. Allan Grant	351 Dundonald Street	Mar.30/71	5/8" ARB
89. Michael MacDonald	363 Dundonald Street	Mar.30/71	5/8" ARB
90. G. V. Morgan	567 York Street	Mar.30/71	5/8" ARB
91. Noble Snowden	205 Dundonald Street	Apr.1/71	5/8" ARB
92. Stanley Fraser	230 Dundonald Street	Apr.1/71	5/8" ARB
93. John R. Bird	362-64 Dundonald Street	Apr.1/71	5/8" ARB
94. Stewart Gough	365 Dundonald Street	Apr.1/71	5/8" ARB
95. Hubert McKenna	131 Woodbridge Street	Apr.1/71	5/8" ARB
96. William Gibbs	8 Woodbridge Street	Apr.2/71	5/8" ARB
97. Reginald White	61 Woodbridge Street	Apr.2/71	5/8" ARB
98. A. B. Atkinson	141 Woodbridge Street	Apr.2/71	5/8" ARB
99. John Glenn	8 Surrey Crescent	Apr.2/71	5/8" ARB
100. Leachmans Plumbing	900 Barker Street	Apr.5/71	5/8" ARB
101. Charles Urquhart	318 Gibson Street	Apr.7/71	5/8" ARB
102. Helen Lean	337 Gibson Street	Apr.7/71	5/8" ARB

REGULAR METERS CHANGED TO ARB 1971

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
103. Mrs. Grace MacNeill	327 Gibson Street	Apr.8/71	5/8" ARB
104. William Davidson	20 Woodbridge Street	Apr.14/71	5/8" ARB
105. Arthur Woods	290 Lincoln Road	Apr.15/71	5/8" ARB
106. Hedley Nash	84 McKeen Street	June 7/71	5/8" ARB
107. Mrs. Mary Geldart	316 St. Marys Street	June 17/71	5/8" ARB
108. Mrs. C.A. Jewett	238 Carleton Street	June 18/71	5/8" ARB
109. Vincent McCain	432 St. Marys Street	June 18/71	5/8" ARB
110. Gordon Richardson	258-60 Queen Street	June 22/71	5/8" ARB
111. A. L. Gorman	753 MacLaren Avenue	June 22/71	5/8" ARB
112. Ralph Fullerton	82 Smith Street	June 22/71	5/8" ARB
113. Harriet Coyle	677 Albert Street	Jul.6/71	5/8" ARB
114. Horizon Development	242 Saunders Street	Jul.29/71	1" ARB
115. Dr. J. W. Redstone	864 Smythe Street	Sept.3/71	5/8" ARB
116. Robert Bird	254 Medley Street	Sept.9/71	5/8" ARB
117. Helen Johnston	252 Brunswick Street	Sept.10/71	5/8" ARB
118. Anthoney David	467-69 York Street	Sept.10/71	5/8" ARB
119. Alfred Howe	404 Westmorland Street	Sept.10/71	5/8" ARB
120. Lillian Chippin	658-60 Charlotte St.	Sept.16/71	5/8" ARB
121. Walter Cluff	660A Charlotte Street	Sept.16/71	5/8" ARB
122. Firman Soucie	177 Gibson Street	Oct.5/71	5/8" ARB
123. Willian F. Palin	50 Lorne Street	Oct.12/71	5/8" ARB
124. Mrs. Henry Lehr	663 Charlotte Street	Oct.19/71	5/8" ARB
125. Roy Ramey Est.	115 Charlotte Street	Nov.19/71	5/8" ARB
126. Mrs. G. McCutcheon	348 George Street	Nov.22/71	5/8" ARB
127. Arthur McKenzie	388 George Street	Nov.22/71	5/8" ARB
128. Brian Miles	16 Londale Court	Nov.22/71	5/8" ARB
129. Walter McAdam	558 Woodstock Road	Nov.22/71	5/8" ARB
130. Mrs. Anna Malone	541 Charlotte Street	Nov.23/71	5/8" ARB
131. Francis Delmas	382 George Street	Nov.23/71	5/8" ARB
132. Fraser McHatten	257 Canterbury Drive	Nov.23/71	1/2" ARB
133. Eric Levinson	319 Oxford Street	Dec.7/71	5/8" ARB
134. Larry Swallow	720 Irvine Street	Dec.8/71	5/8" ARB
135. David Muttart	722 Irvine Street	Dec.8/71	5/8" ARB
136. Mrs. Patricia Smith	741 Gregg Court	Dec.14/71	5/8" ARB

REGULAR METERS CHANGED TO ABB 1971

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
137. Herbert Dawkins	563 Windsor Street	Dec.14/71	5/8" ARB
138. Mrs. Clara Khoury	593 Union Street	Dec.15/71	5/8" ARB
139. T.R. Gervais	674 Hanson Street	Dec.15/71	5/8" ARB
140. Mrs. Grace O'Connor	148 Argyle Street	Dec.15/71	5/8" ARB
141. James Ralston	821 Jones Street	Dec.15/71	5/8" ARB
142. Mrs. E.T. Olsen	725 Graham Avenue	Dec.16/71	5/8" ARB
143. N.B. Telephone Co. Ltd.	551 King Street	Dec.16/71	1½" ARB
144. Gladius Brewer	582 Chestnut Street	Dec.17/71	5/8" ARB
145. Orville Scott	303 Albert Street	Dec.17/71	5/8" ARB
146. Thomas Doherty	695 Palmer Street	Dec.20/71	5/8" ARB
147. P. Courish	720 Palmer Street	Dec.20/71	5/8" ARB
148. Mrs. Joan Guthrie	714 Union Street	Dec.23/71	5/8" ARB
149. University of N.B.	810 Albert Street	Dec.30/71	5/8" ARB
150. Richard McArthur	129 Jaffrey Street	Dec.31/71	5/8" ARB
151. Murray Smith	157 Jaffrey Street	Dec.31/71	5/8" ARB

1971 Water Installations

1.	George MacAllister	137 Montgomery St.	Apr. 19/71	3/4" Copper
2.	Topmar Housing	184 Dundonald St.	Apr. 20/71	3/4" Copper
3.	Topmar Housing	505 Northumberland St.	Apr. 23/71	3/4" Copper
4.	MacDonald Drive In	465 Prospect St. East	Apr. 28/71	1" Copper
5.	Hill Bros.	221 Willingdon St.	Apr. 29/71	3/4" Copper
6.	F'ton. Housing	130 Surrey Cres.	Apr. 30/71	3/4" Copper
7.	F'ton Housing	230 Surrey Cres.	Apr. 30/71	3/4" Copper
8.	Dept. of Indian Affairs	97 Maliseet Dr.	May 3/71	3/4" Copper
9.	Topmar Housing	66 Ayres St.	May 4/71	3/4" Copper
10.	Hill Bros.	181 Willingdon St.	May 6/71	3/4" Copper
11.	Starlite Homes	480 Dufferin St.	May 7/71	3/4" Copper
12.	Calvary Baptist Church	845 Regent St.	May 11/71	3/4" Copper
13.	Starlite Homes	470 Dufferin St.	May 17/71	3/4" Copper
14.	Atlantic Const.	210 Wright St.	May 18/71	3/4" Copper
15.	Hill Bros.	693 Hanwell Road	May 19/71	3/4" Copper
16.	Donald Hill	21 Cameron Court	May 20/71	3/4" Copper
17.	Starlite Homes	447 Dufferin St.	May 21/71	3/4" Copper
18.	Chippin's Ltd.	25 Tims Court	May 27/71	3/4" Copper
19.	Chippin's Ltd.	80 Rankine St.	May 29/71	3/4" Copper
20.	Chippin's Ltd.	312-314 York St.	June 1/71	3/4" Copper
21.	Larry Hill	424 Dufferin St.	June 2/71	3/4" Copper
22.	Adolf Mueller	174 Lynhaven St.	June 3/71	3/4" Copper
23.	Chippin's Ltd.	70 Rankine St.	June 4/71	3/4" Copper
24.	Mar Sand Properties	80 Dunn Road	June 6/71	4-1" Copper
25.	Chippin's Ltd.	110 Rankine St.	June 8/71	3/4" Copper
26.	F'ton. Housing	140 Surrey Cres.	June 9/71	3/4" Copper
27.	Topmar Housing	240 Wright St.	June 11/71	3/4" Copper
28.	Arnold Acton	250 Wright St.	June 11/71	3/4" Copper
29.	Parkside Dev.	15 Parkside Dr.	June 15/71	3/4" Copper
30.	Parkside Dev.	25 Parkside Dr.	June 16/71	3/4" Copper
31.	Chippins Ltd.	16 Tims Court	June 22/71	3/4" Copper
32.	Parkside Dev.	35 Parkside Dr.	June 23/71	3/4" Copper
33.	Parkside Dev.	65 Parkside Dr.	June 23/71	3/4" Copper
34.	Parkside Dev.	55 Parkside Dr.	June 25/71	3/4" Copper
35.	Parkside Dev.	45 Parkside Dr.	June 28/71	3/4" Copper
36.	Hollie V. Craig	740 Valleyview St.	June 30/71	3/4" Copper
37.	Chippin's Ltd.	26 Tims Court	July 6/71	3/4" Copper
38.	Cummings Housing	602 Graham Ave.	July 8/71	2-1" Copper
39.	Custom Builders	180 Oxford St.	July 9/71	3/4" Copper
40.	Larry Hill	485 Dufferin St.	July 12/71	3/4" Copper
41.	Custom Builders	170 Oxford St.	July 13/71	3/4" Copper
42.	Custom Builders	267 Wright St.	July 15/71	3/4" Copper
43.	Hill Bros.	231 Willingdon St.	July 15/71	3/4" Copper
44.	F'ton. Housing Ltd.	215 Charing Cres.	July 16/71	5/8" Copper
45.	Custom Builders	247 Wright St.	July 16/71	3/4" Copper
46.	Chippin's Ltd.	115 Rankine St.	July 19/71	3/4" Copper
47.	S.C.R. Const.	56 Colonial Heights	July 19/71	3/4" Copper
48.	S.C.R. Const.	19 Colonial Heights	July 19/71	3/4" Copper

1971 Water Installations

9.	F'ton. Housing Ltd.	195 Charing Cres.	July 20/71	5/8" Copper
0.	Custom Builders	120 Oxford St.	July 20/71	3/4" Copper
1.	Marsand Properties	25 Boyne St.	July 21/71	4" C.I. To 2"
2.	F'ton. Housing Ltd.	205 Charing Cres.	July 21/71	5/8" Copper
3.	F'ton. Housing Ltd.	175 Charing Cres.	July 22/71	5/8" Copper
4.	F'ton. Housing Ltd.	185 Charing Cres.	July 22/71	5/8" Copper
5.	F'ton. Housing Ltd.	165 Charing Cres.	July 22/71	5/8" Copper
6.	Starlite Homes	490 Dufferin St.	July 22/71	3/4" Copper
7.	F'ton. Housing Ltd.	188 Charing Cres.	July 23/71	5/8" Copper
8.	F'ton. Housing Ltd.	198 Charing Cres.	July 23/71	5/8" Copper
9.	Custom Builders	257 Wright St.	July 23/71	3/4" Copper
0.	Custom Builders	277 Wright St.	July 23/71	3/4" Copper
1.	Horizon Development	242 Saunders St.	July 26/71	1" Copper
2.	Donald Wilson	745 Graham Ave.	July 27/71	1" Copper
3.	F'ton. Housing Ltd.	100 Charing Cres.	July 27/71	5/8" Copper
4.	F'ton. Housing Ltd.	120 Charing Cres.	July 28/71	5/8" Copper
5.	Starlite Homes	417 Dufferin St.	July 28/71	3/4" Copper
6.	Starlite Homes	434 Dufferin St.	July 28/71	3/4" Copper
7.	Everitt Ferris	12 Michener Ct.	July 28/71	3/4" Copper
8.	Fred Holland	23 Perley Ct.	July 30/71	3/4" Copper
9.	F'ton. Housing Ltd.	10 Charing Cres.	July 30/71	5/8" Copper
0.	F'ton. Housing Ltd.	75 Charing Cres.	Aug. 2/71	5/8" Copper
1.	F'ton. Housing Ltd.	180 Charing Cres.	Aug. 3/71	5/8" Copper
2.	Larry Hill	15 Walker St.	Aug. 3/71	3/4" Copper
3.	Donald Hill	5 Walker St.	Aug. 3/71	3/4" Copper
4.	Gerald Myers	35 Walker St.	Aug. 3/71	3/4" Copper
5.	F'ton. Housing Ltd.	85 Charing Cres.	Aug. 3/71	5/8" Copper
6.	Arnum Canning	95 Limerick Road	Aug. 4/71	3/4" Copper
7.	F'ton. Housing Ltd.	170 Charing Cres.	Aug. 4/71	5/8" Copper
8.	F'ton. Housing Ltd.	95 Charing Cres.	Aug. 5/71	5/8" Copper
9.	F'ton. Housing Ltd.	90 Charing Cres.	Aug. 5/71	5/8" Copper
0.	Custom Builders	280 Wright St.	Aug. 5/71	3/4" Copper
1.	Custom Builders	290 Wright St.	Aug. 5/71	3/4" Copper
2.	Highland Co.	31 Cameron Ct.	Aug. 6/71	3/4" Copper
3.	M & H Mechanical	130 Dundonald St.	Aug. 9/71	4-1" <sup>To 2"</sup> Copper
4.	Hill Bros.	525 Hanwell Road	Aug. 10/71	3/4" Copper
5.	Chippin's Ltd.	55 Rankine St.	Aug. 16/71	3/4" Copper
6.	Chippin's Ltd.	65 Rankine St.	Aug. 16/71	3/4" Copper
7.	Chippin's Ltd.	714 Forest Hill Road	Aug. 17/71	3/4" Copper
8.	Hill Bros.	575 Hanwell Road	Aug. 19/71	3/4" Copper
9.	Mar Sand Properties	120 Dunn Road	Aug. 19/71	4-1" <sup>To 2"</sup> Copper
0.	Vipond Auto Sprinklers	180 Dunn Road <sup>WILSON ROAD</sup>	Aug. 20/71	10" C.I.
1.	Custom Builders	270 Wright St.	Aug. 20/71	3/4" Copper
2.	Donald Hill	647 Hanwell Road	Aug. 23/71	3/4" Copper
3.	Hill Bros.	683 Hanwell Road	Aug. 23/71	3/4" Copper
4.	Hill Bros.	671 Hanwell Road	Aug. 23/71	3/4" Copper
5.	Custom Builders	130 Oxford St.	Aug. 25/71	3/4" Copper
6.	W. J. Watson	223 Lynhaven Ct.	Aug. 26/71	3/4" Copper

1971 Water Installations

97.	Custom Builders	260 Wright St.	Aug. 27/71	3/4" Copper
98.	Custom Builders	347 Wright St.	Aug. 27/71	3/4" Copper
99.	Chippin's Ltd.	119 Lynhaven St.	Aug. 30/71	3/4" Copper
100.	Topmar Housing	2 Heather Terrace	Sept. 1/71	3/4" Copper
101.	Chippin's Ltd.	756 Smythe St.	Sept. 1/71	3/4" Copper
102.	Phillips & Crawford	254 Lynhaven St.	Sept. 2/71	3/4" Copper
103.	Horizon Dev.	151 Willingdon St.	Sept. 9/71	3/4" Copper
104.	Hill Bros.	136 Willingdon St.	Sept. 9/71	3/4" Copper
105.	Hill Bros.	126 Willingdon St.	Sept. 13/71	3/4" Copper
106.	Rocca Const.	130 Donald St.	Sept. 21/71	6" C.I. Sprink.
107.	William Worrall	592 Smythe St.	Sept. 22/71	3/4" Copper
108.	Allan Lawrence 2	202 Wright St.	Sept. 23/71	3/4" Copper
109.	F'ton. Housing Ltd.	150 Surrey Cres.	Sept. 24/71	3/4" Copper
110.	W.W.Waite	80 Surrey Cres.	Sept. 24/71	3/4" Copper
111.	Atlantic Const.	41 Parklyn Court	Sept. 29/71	3/4" Copper
112.	F'ton. Housing Ltd.	45 Charing Cres.	Sept. 29/71	5/8" Copper
113.	F'ton. Housing Ltd.	140 Charing Cres.	Sept. 29/71	5/8" Copper
114.	F'ton. Housing Ltd.	155 Charing Cres.	Sept. 30/71	5/8" Copper
115.	Atlantic Const.	29 Parklyn Ct.	Sept. 30/71	3/4" Copper
116.	Atlantic Const.	20 Parklyn Court	Oct. 1/71	3/4" Copper
117.	F'ton. Housing Ltd.	130 Charing Cres.	Oct. 1/71	5/8" Copper
118.	F'ton. Housing Ltd.	150 Charing Cres.	Oct. 4/71	5/8" Copper
119.	F'ton. Housing Ltd.	110 Charing Cres.	Oct. 4/71	5/8" Copper
120.	F'ton. Housing Ltd.	160 Charing Cres.	Oct. 6/71	5/8" Copper
121.	Topmar Housing	71 Ayres St.	Oct. 6/71	3/4" Copper
122.	Vipond Auto Sprinkler	190 King Street	Oct. 6/71	6" C.I. Sprink.
123.	F'ton. Housing Ltd.	125 Charing Cres.	Oct. 7/71	5/8" Copper
124.	F'ton. Housing Ltd.	115 Charing Cres.	Oct. 7/71	5/8" Copper
125.	Topmar Housing	83 Ayres St.	Oct. 8/71	3/4" Copper
126.	F'ton Housing Ltd.	105 Charing Cres.	Oct. 12/71	5/8" Copper
127.	F'ton Housing Ltd.	65 Charing Cres.	Oct. 13/71	5/8" Copper
128.	Irving Oil Co. Ltd.	1169 Regent St.	Oct. 14/71	6" C.I. To 4" 102"
129.	F'ton Housing Ltd.	25 Charing Cres.	Oct. 14/71	5/8" Copper
130.	Larry Hill	42 Foley Court	Oct. 15/71	3/4" Copper
131.	F'ton. Housing	55 Charing Cres.	Oct. 15/71	5/8" Copper
132.	Topmar Housing	499 Canterbury Dr.	Oct. 18/71	1" Copper
133.	Atlas Const.	191 Doak Road	Oct. 20/71	8" C.I.
134.	Custom Builders	287 Wright St.	Oct. 21/71	3/4" Copper
135.	R. L. McGinnis	465 Highland Ave.	Oct. 22/71	3/4" Copper
136.	Hill Bros.	314 Dayton Court	Oct. 27/71	3/4" Copper
137.	D. O. Calhoon	165 Oxford St.	Nov. 1/71	3/4" Copper
138.	Starlite Homes	243 Priestman St.	Nov. 2/71	3/4" Copper
139.	Starlite Homes	233 Priestman St.	Nov. 3/71	3/4" Copper
140.	Hill Bros.	242 Willingdon St.	Nov. 4/71	3/4" Copper
141.	Horizon Dev.	32 Ayres St.	Nov. 10/71	3/4" Copper
142.	Horizon Dev.	22 Ayres St.	Nov. 10/71	3/4" Copper
143.	Horizon Dev.	40 Ayres St.	Nov. 12/71	3/4" Copper

1971 Water Installations

L44.	F'ton Housing Ltd.	35 Charing Sres.	Nov. 15/71	5/8" Copper
L45.	F'ton Housing Ltd.	15 Charing Cres.	Nov. 16/71	5/8" Copper
L46.	Donald Wilson	440 Needham	Nov. 16/71	2 - 1" Copper
L47.	Topmar Housing	284 Highland Ave.	Nov. 17/71	5/8" Copper
L48.	F'ton. Housing Ltd.	135 Charing Cres.	Nov. 17/71	5/8" Copper
L49.	F'ton. Housing Ltd.	40 Charing Cres.	Nov. 17/71	5/8" Copper
L50.	S.C.R. Const.	119 Colonial Heights	Nov. 18/71	5/8" Copper
L51.	S.C.R. Const.	93 Colonial Heights	Nov. 19/71	5/8" Copper
L52.	S.C.R. Const.	79 Colonial Heights	Nov. 19/71	5/8" Copper
L53.	Larry Hill	51 Foley Court	Nov. 22/71	3/4" Copper
L54.	Cap. Equip. Trading	130 Wilsey Road	Nov. 23/71	5/8" Copper
L55.	Cap. Equip. Trading	140 Wilsey Road	Nov. 24/71	5/8" Copper
L56.	Nelson Adams	166 Wilsey Road	Nov. 25/71	5/8" Copper
L57.	Atlantic Const.	64 Parklyn Ct.	Dec. 2/71	3/4" Copper
L58.	Atlantic Const.	61 Parklyn Ct.	Dec. 6/71	5/8" Copper
L59.	Horizon Dev.	31 Ayres Street	Dec. 9/71	3/4" Copper
L60.	City Tire	P-26 Wilsey Road	Dec. 13/71	6" C.I.
L61.	Custom Builders	5 Cameron Ct.	Dec. 14/71	3/4" Copper
L62.	Horizon Dev.	98 Ayres St.	Dec. 15/71	3/4" Copper

NEW METERS 1971

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
1. City of Fredericton	520 York Street	Jan.4/71	1½"
2. City of Fredericton	441 King Street	Jan.4/71	5/8"
3. Starlite Homes	475 Dufferin St.	Jan.4/71	5/8" ARB
4. Starlite Homes	465 Dufferin St.	Jan.6/71	5/8" ARB
5. Stan Cassidy	358 Westmorland St.	Jan.6/71	5/8"
6. City of Fredericton	771 MacLaren Ave.	Jan.6/71	1½"
7. Ashley Hemphill	180 St. Marys Street	Jan.8/71	5/8" ARB
8. Atlantic Rentals	463 Union Street	Jan.8/71	5/8" ARB
9. N.B. Housing Corp.	578 Doone Street	Jan.11/71	5/8" ARB
10. N.B. Housing Corp.	580 Doone Street	Jan.11/71	5/8" ARB
11. N.B. Housing Corp.	594 Doone Street	Jan.12/71	5/8" ARB
12. N.B. Housing Corp.	582 Doone Street	Jan.12/71	5/8" ARB
13. N.B. Housing Corp.	606 Doone Street	Jan.13/71	5/8" ARB
14. N.B. Housing Corp.	608 Doone Street	Jan.13/71	5/8" ARB
15. N.B. Housing Corp.	602 Doone Street	Jan.13/71	5/8" ARB
16. N.B. Housing Corp.	584 Doone Street	Jan.13/71	5/8" ARB
17. Maritime Engineering	259 Brunswick St.	Jan.22/71	1" ARB
18. Parkside Development	5 Parkside Drive	Feb.3/71	5/8" ARB
19. Betty Brite Cleaners	97 York Street	Feb.26/71	5/8"
20. Topmar Housing Ltd.	48 Ayres Street	Mar.1/71	5/8" ARB
21. Topmar Housing Ltd.	128 Limerick Road	Mar.3/71	5/8" ARB
22. F'ton Housing Ltd.	836 Aberdeen Street	Mar.3/71	5/8"
23. Topmar Housing Ltd.	59 Ayres Street	Mar.3/71	5/8" ARB
24. F'ton Housing Ltd.	237 Woodbridge Street	Mar.11/71	5/8" ARB
25. Leo Brewer	753 Irvine Street	Mar.19/71	5/8" ARB
26. Mary Chambers	123 Crerar Court	Mar.24/71	5/8" ARB
27. Francis Delmas	84 Regent Street	Apr.5/71	1"
28. Allan Ramey	111 Crerar Court	Apr.6/71	5/8" ARB
29. Arthur McKenzie	113 Crerar Court	Apr.6/71	5/8" ARB
30. Robert Kupkee	203 School Street	Apr.7/71	5/8" ARB
31. St. Marys Indian Band	217 Paul Street	Apr.8/71	5/8"
32. St. Marys Indian Band	117 Paul Street	Apr.8/71	5/8"
33. John Evans Est.	117 Crerar Court	Apr.16/71	5/8" ARB

NEW METERS 1971

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
34. Holger Mollegaard	142 Miles Street	Apr. 16/71	5/8" ARB
35. Crown Motors Ltd.	161 Prospect St. West	Apr. 16/71	5/8" ARB
36. George McAllister	137 Montgomery St.	Apr. 21/71	5/8" ARB
37. Stan Hawkins	736 McLeod Ave.	Apr. 26/71	5/8"
38. Dept. of Indian Affairs	97 Maliseet Drive	May 4/71	5/8"
39. W. G. Quinn	147 Westmorland St.	May 5/71	5/8" ARB
40. Arthur McKenzie	656 Charlotte Street	May 7/71	5/8" ARB
41. Stand Pipe	Wilmot Downs	May 7/71	1"
42. MacDonalds Drive In	465 Prospect St. East	May 10/71	1" ARB
43. Prospect Motors Ltd.	59 Prospect St. West	May 13/71	5/8" ARB
44. N.B. Telephone Co. Ltd.	131 Carleton Street	May 13/71	2"
45. Topmar Housing Ltd.	505 Northumberland St.	May 20/71	5/8" ARB
46. Topmar Housing Ltd.	184 Dundonald St.	May 20/71	5/8" ARB
47. Calvary Baptist Church	845 Regent Street	May 26/71	5/8" ARB
48. Hill Bros Ltd.	181 Willingdon Street	May 28/71	5/8" ARB
49. Starlite Homes	470 Dufferin Street	May 28/71	5/8" ARB
50. Starlite Homes	480 Dufferin Street	May 28/71	5/8" ARB
51. Ralph Dingee	247 Dundonald St.	May 31/71	5/8" ARB
52. Mrs. Winnifred Coleman	278 Lincoln Road	May 31/71	5/8" ARB
53. Chippins Ltd.	312-14 York Street	June 4/71	5/8" ARB
54. Chippins Ltd.	25 Tims Court	June 4/71	5/8" ARB
55. F'ton Housing Ltd.	130 Surrey Crescent	June 4/71	5/8" ARB
56. Atlantic Const. Ltd.	210 Wright Street	June 7/71	5/8" ARB
57. Hedley R. Nash	88 McKeen Street	June 7/71	5/8" ARB
58. Wouter J. Cudemans	1013 Regent Street	June 7/71	5/8" ARB
59. Donald Hill	21 Cameron Court	June 16/71	5/8" ARB
60. Chippins Ltd.	70 Rankine Street	June 16/71	5/8" ARB
61. Chippins Ltd.	80 Rankine Street	June 16/71	5/8" ARB
62. Chippins Ltd.	110 Rankine Street	June 16/71	5/8" ARB
63. Hetty Woodbridge	580 Forest Hill	June 17/71	1/2"
64. Topmar Housing Ltd.	66 Ayres Street	June 17/71	5/8" ARB
65. Starlite Homes	447 Dufferin Street	June 17/71	5/8" ARB
66. John E. Boyd	146 Jaffery Street	June 17/71	5/8" ARB

NEW METERS 1971

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
67. Larry Hill	424 Dufferin Street	June 24/71	5/8" ARB
68. F'ton Housing Ltd.	230 Surrey Crescent	June 24/71	5/8" ARB
69. Mar Sand Properties	80 Dunn Road	Jul.2/71	2" ARB
70. Hill Bros.	693 Hanwell Road	Jul.5/71	5/8" ARB
71. Chippins Ltd.	16 Tims Court	Jul.5/71	5/8" ARB
72. Parkside Development	35 Parkside Drive	Jul.7/71	5/8" ARB
73. Parkside Development	45 Parkside Drive	Jul.7/71	5/8" ARB
74. Parkside Development	15 Parkside Drive	Jul.7/71	5/8" ARB
75. Parkside Development	25 Parkside Drive	Jul.7/71	5/8" ARB
76. Parkside Development	55 Parkside Drive	Jul.7/71	5/8" ARB
77. Parkside Development	65 Parkside Drive	Jul.7/71	5/8" ARB
78. Harold Dorcas	219 Carney Street	Jul.15/71	5/8" ARB
79. Imperial Oil Ltd.	313 Campbell Street	Jul.15/71	1"
80. Adolf Mueller	174 Lynhaven Street	Jul.16/71	5/8" ARB
81. Thomas Hughes	287 Hanwell Road	Jul.16/71	5/8" ARB
82. Custom Builders	170 Oxford Street	Jul.19/71	5/8" ARB
83. Chippins Ltd.	26 Tims Court	Jul.20/71	5/8" ARB
84. George Blank	252 Argyle Street	Jul.22/71	5/8" ARB
85. Mrs. Hazel Sanborn	292 Gibson Street	Jul.22/71	5/8" ARB
86. Cummings Housing	602 Graham Avenue	Jul.27/71	1½" ARB
87. Custom Builders	247 Wright Street	Jul.27/71	5/8" ARB
88. Custom Builders	267 Wright Street	Jul.27/71	5/8" ARB
89. Mar Sand Properties	25 Boyne Street	Jul.29/71	2" ARB
90. F'ton Housing Ltd.	205 Charing Crescent	Jul.29/71	5/8" ARB
91. F'ton Housing Ltd.	215 Charing Crescent	Jul.29/71	5/8" ARB
92. F'ton Housing Ltd.	175 Charing Crescent	Aug.4/71	5/8" ARB
93. Chippins Ltd.	115 Rankine Street	Aug.6/71	5/8" ARB
94. Hut # 3	Exhibition Grounds	Aug.16/71	5/8"
95. Custom Builders	120 Oxford Street	Aug.17/71	5/8" ARB
96. Starlite Homes	490 Dufferin Street	Aug.18/71	5/8" ARB
97. Hill Bros.	231 Willingdon Street	Aug.18/71	5/8" ARB
98. Hill Bros.	221 Willingdon Street	Aug.18/71	5/8" ARB
99. Custom Builders	257 Wright Street	Aug.18/71	5/8" ARB

NEW METERS 1971

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
100. Topmar Housing	240 Wright Street	Aug.18/71	5/8" ARB
101. Custom Builders	277 Wright Street	Aug.18/71	5/8" ARB
102. Mar Sand Properties	120 Dunn Road	Aug.19/71	2" ARB
103. F'ton Housing Ltd.	165 Charing Crescent	Aug.20/71	5/8" ARB
104. S.C.R. Construction	56 Colonial Heights	Aug.20/71	5/8" ARB
105. Chippins Ltd.	714 Forest Hill	Aug.25/71	5/8" ARB
106. Custom Builders	180 Oxford Street	Aug.25/71	5/8" ARB
107. Gerald K. Myers	35 Walker Street	Aug.31/71	5/8" ARB
108. Maryland Development	471-75 Union Street	Aug.31/71	5/8" ARB
109. Highland Co. Ltd.	31 Cameron Court	Sept.1/71	5/8" ARB
110. Starlite Homes	434 Dufferin Street	Sept.1/71	5/8" ARB
111. S.C.R. Construction	19 Colonial Heights	Sept.2/71	5/8" ARB
112. Everitt Ferris	12 Michener Court	Sept.2/71	5/8" ARB
113. Don Wilson	745 Graham Avenue	Sept.2/71	1" ARB
114. F'TON Housing Ltd.	140 Surrey Crescent	Sept.3/71	5/8" ARB
115. Custom Builders	290 Wright Street	Sept.3/71	5/8" ARB
116. Bertram Targett	576 Lincoln Road	Sept.7/71	5/8" ARB
117. Arnold Acton	250 Wright Street	Sept.7/71	5/8" ARB
118. Custom Builders	280 Wright Street	Sept.7/71	5/8" ARB
119. Topmar Housing Ltd.	2 Heather Terrace	Sept.7/71	5/8" ARB
120. St. Marys Indian Band	147 Paul Street	Sept.8/71	5/8"
121. Chippins Ltd.	65 Rankine Street	Sept.8/71	5/8" ARB
122. F'ton Housing Ltd.	195 Charing Crescent	Sept.8/71	5/8" ARB
123. Larry Hill	15 Walker Street	Sept.14/71	5/8" ARB
124. Hill Bros.	525 Hanwell Road	Sept.14/71	5/8" ARB
125. Hill Bros.	575 Hanwell Road	Sept.14/71	5/8" ARB
126. William J. Watson	223 Lynhaven Street	Sept.16/71	5/8" ARB
127. Starlite Homes	417 Dufferin Street	Sept.17/71	5/8" ARB
128. Hollie V. Craig	740 Valleyview St.	Sept.17/71	5/8" ARB
129. Arnum Canning	95 Limerick Road	Sept.17/71	5/8" ARB
130. F'ton Housing Ltd.	95 Charing Crescent	Sept.20/71	5/8" ARB
131. F'ton Housing Ltd.	100 Charing Crescent	Sept.20/71	5/8" ARB
132. Chippins Ltd.	119 Lynhaven Street	Sept.20/71	5/8" ARB

NEW METERS 1971

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
133. Custom Builders	260 Wright Street	Sept.21/71	5/8" ARB
134. Custom Builders	270 Wright Street	Sept.21/71	5/8" ARB
135. H.B. Hovey	250 Neill Street	Sept.23/71	5/8" ARB
136. Larry Hill	485 Dufferin Street	Sept.30/71	5/8" ARB
137. Chippins Ltd.	756 Smythe Street	Sept.30/71	5/8" ARB
138. Allen S. Lawrence	202 Wright Street	Sept.30/71	5/8" ARB
139. Custom Builders	347 Wright Street	Sept.30/71	5/8" ARB
140. Chippins Ltd.	55 Rankine Street	Oct.1/71	5/8" ARB
141. F'ton Housing Ltd.	75 Charing Crescent	Oct.4/71	5/8" ARB
142. F'ton Housing Ltd.	85 Charing Crescent	Oct.4/71	5/8" ARB
143. F'ton Housing Ltd.	170 Charing Crescent	Oct.4/71	5/8" ARB
144. F'ton Housing Ltd.	185 Charing Crescent	Oct.4/71	5/8" ARB
145. F'ton Housing Ltd.	188 Charing Crescent	Oct.4/71	5/8" ARB
146. Donald Hill	5 Walker Street	Oct.5/71	5/8" ARB
147. Charles W. Allport	204 Victoria Street	Oct.7/71	5/8" ARB
148. Horizon Development	151 Willingdon Street	Oct.8/71	5/8" ARB
149. York Arena	891 Barker Street	Oct.9/71	2"
150. Topmar Housing	71 Ayres Street	Oct.25/71	5/8" ARB
151. F'ton Housing Ltd.	45 Charing Crescent	Oct.25/71	5/8" ARB
152. F'ton Housing Ltd.	140 Charing Crescent	Oct.25/71	5/8" ARB
153. Custom Builders	130 Oxford Street	Oct.25/71	5/8" ARB
154. F'ton Housing Ltd.	30 Charing Crescent	Oct.26/71	5/8" ARB
155. F'ton Housing Ltd.	90 Charing Crescent	Oct.26/71	5/8" ARB
156. George Debly	254 Lynhaven St.	Nov.1/71	5/8" ARB
157. Topmar Housing Ltd.	284 Highland Avenue	Nov.17/71	5/8" ARB
158. Hill Bros.	126 Willingdon Street	Nov.23/71	5/8" ARB
159. Hill Bros.	136 Willingdon Street	Nov.23/71	5/8" ARB
160. National Leaseholds Ltd.	130 Dundonald Street	Nov.24/71	2" ARB
161. Capital Co-Op Garage	931 Barker Street	Nov.24/71	5/8"
162. Wilfred W. Waite	80 Surrey Crescent	Nov.24/71	5/8" ARB
163. Lift Station # 4	495 Lincoln Road	Nov.26/71	5/8"
164. F'ton Housing Ltd.	120 Charing Crescent	Nov.30/71	5/8" ARB
165. Robert McGinnis	465 Highland Avenue	Nov.30/71	5/8" ARB

NEW METERS 1971

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
166. F'ton Housing Ltd.	20 Charing Crescent	Dec.7/71	5/8" ARB
167. F'ton Housing Ltd.	150 Surrey Crescent	Dec.7/71	5/8" ARB
* 168. N.B. Liquor Warehouse	180 Wilsey Road	Dec.7/71	4" Comp.
169. F'ton Housing Ltd.	10 Charing Crescent	Dec.8/71	5/8" ARB
170. F'ton Housing Ltd.	105 Charing Crescent	Dec.9/71	5/8" ARB
171. St. Marys Indian Band	57 Paul Street	Dec.9/71	5/8"
172. J.G. & G.H. Crawford	751 MacLaren Avenue	Dec.9/71	5/8" ARB
173. Topmar Housing	83 Ayres Street	Dec.9/71	5/8" ARB
174. Hill Bros.	683 Hanwell Road	Dec.10/71	5/8" ARB
175. Atlantic Construction	20 Parklyn Court	Dec.10/71	5/8" ARB
176. Atlantic Construction	29 Parklyn Court	Dec.10/71	5/8" ARB
177. Atlantic Construction	41 Parklyn Court	Dec.10/71	5/8" ARB
178. Hill Bros.	314 Dayton Court	Dec.13/71	5/8" ARB
179. Donald Hill	647 Hanwell Road	Dec.13/71	5/8" ARB.
180. Hill Bros.	671 Hanwell Road	Dec.13/71	5/8" ARB
181. Irving Car Wash	1169 Regent Street	Dec.15/71	2"
182. Cap. Equip. & Trading	130 Wilsey Road	Dec.16/71	5/8" ARB
183. Custom Builders	287 Wright Street	Dec.21/71	5/8" ARB
184. Starlite Homes	233 Priestman Street	Dec.22/71	5/8" ARB
185. F'ton Housing Ltd.	180 Charing Crescent	Dec.22/71	5/8" ARB
186. F'ton Housing Ltd.	198 Charing Crescent	Dec.22/71	5/8" ARB
187. F'ton Housing Ltd.	110 Charing Crescent	Dec.22/71	5/8" ARB
188. St. Marys Indian Band	67 Paul Street	Dec.28/71	5/8"
189. F'ton Housing Ltd.	130 Charing Crescent	Dec.29/71	5/8" ARB

\* Supplied own meter.



THE CITY OF  
FREDERICTON & VICINITY

FEET 1000 0 1 2 3 4 5

CONSTRUCTION 1971

SURFACE SEWER

DOMESTIC SEWER

WATER

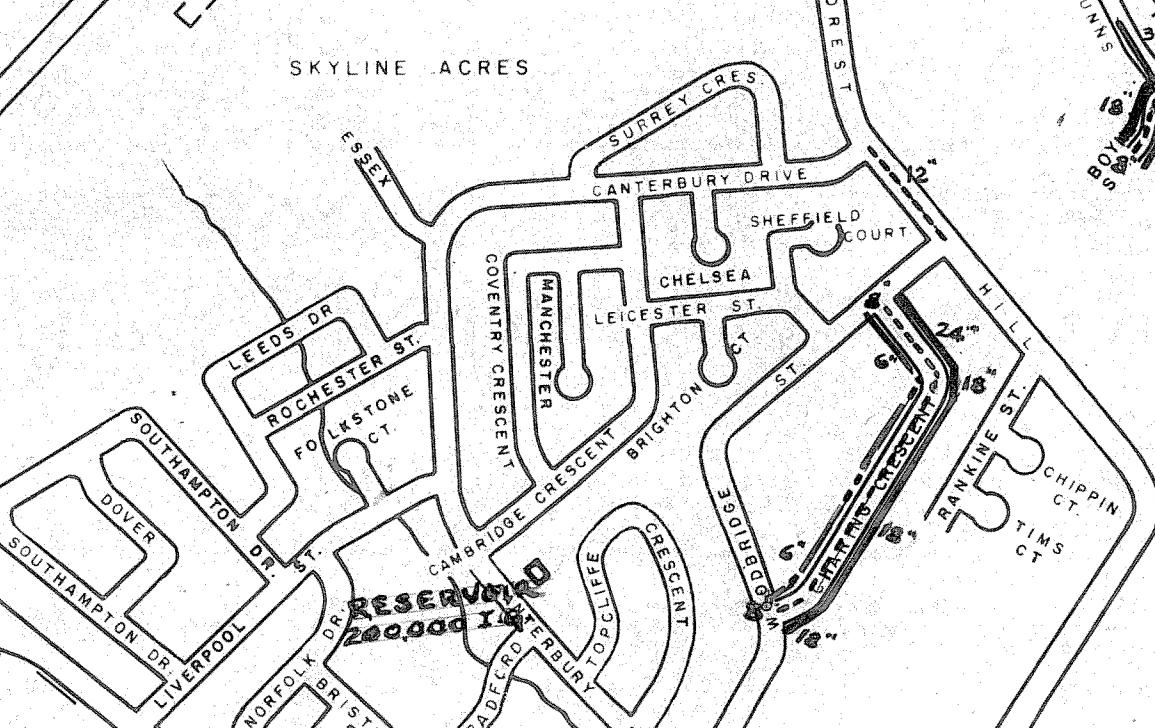
SURFACE SEWER										DOMESTIC SEWER			WATER		
60"	36"	24"	18"	15"	12"	10"	8"	6"	4"	3"	2"	1"	1/2"	1/4"	
- 1096	315'	848'	3564'	1041'	1386'	711'	577'	1953'	3514'	50'	1903'	934'	2946'		

DUCTILE 6" FORCemain DOMESTIC SEWER - 71'

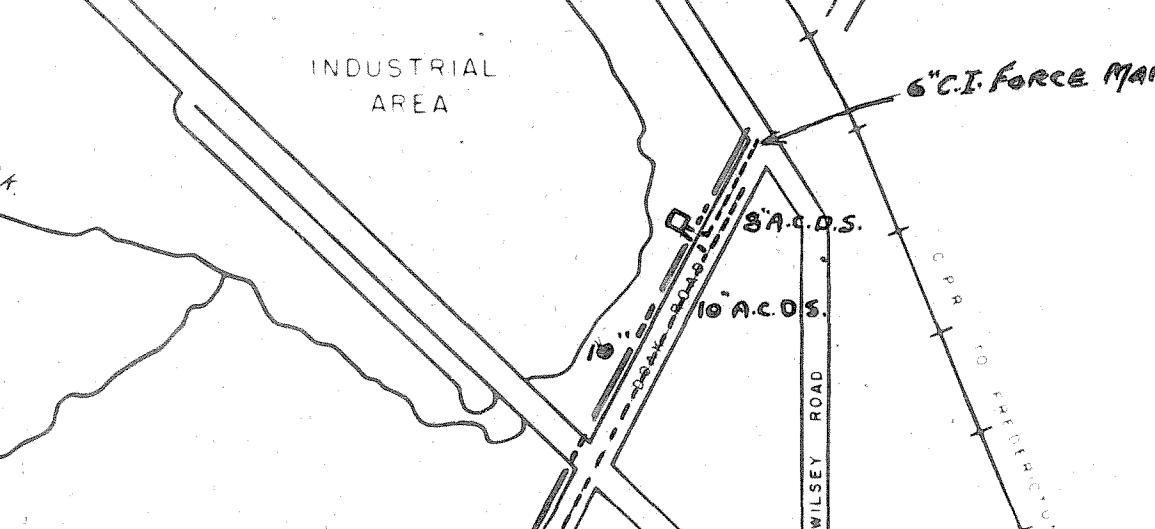
10" DUCTILE WATER - 216'

CITY OF  
FREDERICTON  
MAINTENANCE  
DEPOT

UNIVERSITY OF NEW BRUNSWICK WOODLOT  
AND GAME REFUGE



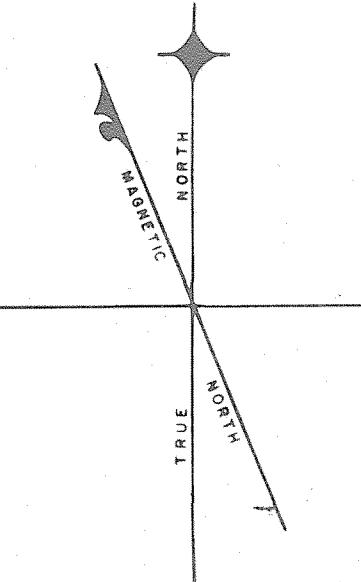
DOMINION AGRICULTURAL  
RESEARCH STATION



REVISED NOV. 1971

# THE CITY OF FREDERICTON & VICINITY

Scale 1:1000



CONSTRUCTION 1971

— Curb & Gutter  
— Concrete Walks

3.25 MILES  
1.29 MILES

CITY OF FREDERICTON  
MAINTENANCE DEPOT

UNIVERSITY OF NEW BRUNSWICK WOODLOT  
AND GAME REFUGE

DOMINION AGRICULTURAL  
RESEARCH STATION

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