

ANNUAL REPORT OF THE ENGINEERING AND PUBLIC WORKS DEPARTMENT

1968



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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, 1968 to December 31, 1968 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 work:-

Concrete Curb and Gutter	4.54 miles
Concrete Sidewalk	1.94 miles
Asphalt Sidewalk28 miles
Grading and Gravelling City Streets	5.07 miles
New Street Construction	1.01 miles

New Pavement 3/4" Dense Mix
(Diamond Construction Co. (1961) Ltd.) . 2.74 miles

Recap (1/2" Hot Mix) 1.18 miles

Sealing City Streets
(Diamond Construction Co. (1961) Ltd.
1/4" Hot Mix) 5.45 miles

Chip Seal (3/4" - 1/2" - 3/8" Chips)
(The Flintkote Co. of Canada Ltd.) ... 1.47 miles

8" Domestic Sewer 1.38 miles

10" - 24" Surface Sewer 1.80 miles

4" - 6" - 8" - 10" - 12" C.I. Water Pipe .. 1.61 miles

Contractors under contract with the Public Works Department of the City of Fredericton in 1968 constructed or began construction on the following projects:-

- | | |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Everett Farris | - to installing Domestic Sewer,
Surface Sewer and Water on
Priestman Street, Smythe Street
to Regent Street |
| Canada Gunite Co. Ltd. | - construction of a Prestressed
Concrete Reservoir, Montgomery
Street |
| Fredericton Housing Ltd. | - construction of a Pump House to
house the Pumping Equipment for
Well #5 Woodstock Road |
| International Water
Supply Ltd. | - developing Well #5 Woodstock Road,
overhauling Pump #2 Wilmot Park
and installing same in Pump
House #5 |

Scott Wheaton Ltd. - to completion of 1967 contract
 (Gravel Road construction)
 Diamond Construction Co. - to supplying and laying of Asphalt
 pavement on various streets in the
 City of Fredericton
 Flintkote Company of Canada to supply and application of Liquid
 Asphalt and Chips on portion of
 Prospect Street and Industrial
 Road from Lincoln Road to Vanier
 Highway

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

Forbes and Sloat - supply and delivery of crushed
 gravel
 W.R. & W.W.Thomas - to supplying and delivering
 winter sand to City Yard
 Gordon Concrete Products Ltd. - to supplying and delivering
 ready-mixed concrete

The current expenditures for the twelve-month period,
 January 1, 1968 to December 31, 1968 appear as follows:-

	<u>Appropriation</u>	<u>Expenditure</u>	<u>Debit</u>	<u>Credit</u>
Street Lights	\$ 76,915.00	80,012.18	3,097.18	
Public Works	39,400.00	56,597.72	17,197.72	
Roads and Streets	298,797.00	271,954.85		26,842.15
Garbage Collection	65,497.00	61,972.97		3,524.03
Garbage Disposal	16,613.00	15,448.33		1,164.67
Wilmot Park	4,615.00	5,051.03	436.03	
Odell Park	9,975.00	13,087.52	3,112.52	
Carleton Park	3,875.00	5,107.10	1,232.10	
Old Burial Ground	3,135.00	2,283.47		851.53
Loyalist Burial Ground	76.00	38.93		37.07
Clearing Parks	5,180.00	6,867.15	1,687.15	
Street Cleaning	71,700.00	68,645.16		3,054.84
City Yard	12,500.00	8,775.88		3,724.12
Street Signs	2,500.00	2,237.40		262.60
Sidewalks	4,000.00	2,963.87		1,036.13
TOTALS	\$ 614,778.00	601,043.56	26,762.70	40,497.14

	<u>Revenue</u>	<u>Net Expenditure</u>	<u>Credit</u>
Water Pumping Station)		64,617.15	
Sewerage Domestic } \$ 534,459.78	29,728.24		
Water Ordinary })	99,178.65		
Revenue from private hydrants	5,520.00		
Revenue from sprinklers	8,760.00		
Revenue from City owned hydrants	58,680.00		
Water - Office administration		26,327.35	
Salaries		19,180.08	
Principal & Interest		<u>215,313.20</u>	
TOTALS =	<u>\$ 607,419.78</u>	<u>454,344.67</u>	<u>153,075.11</u>

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

The 1966 final census shows that the City's population was 22,460.

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.

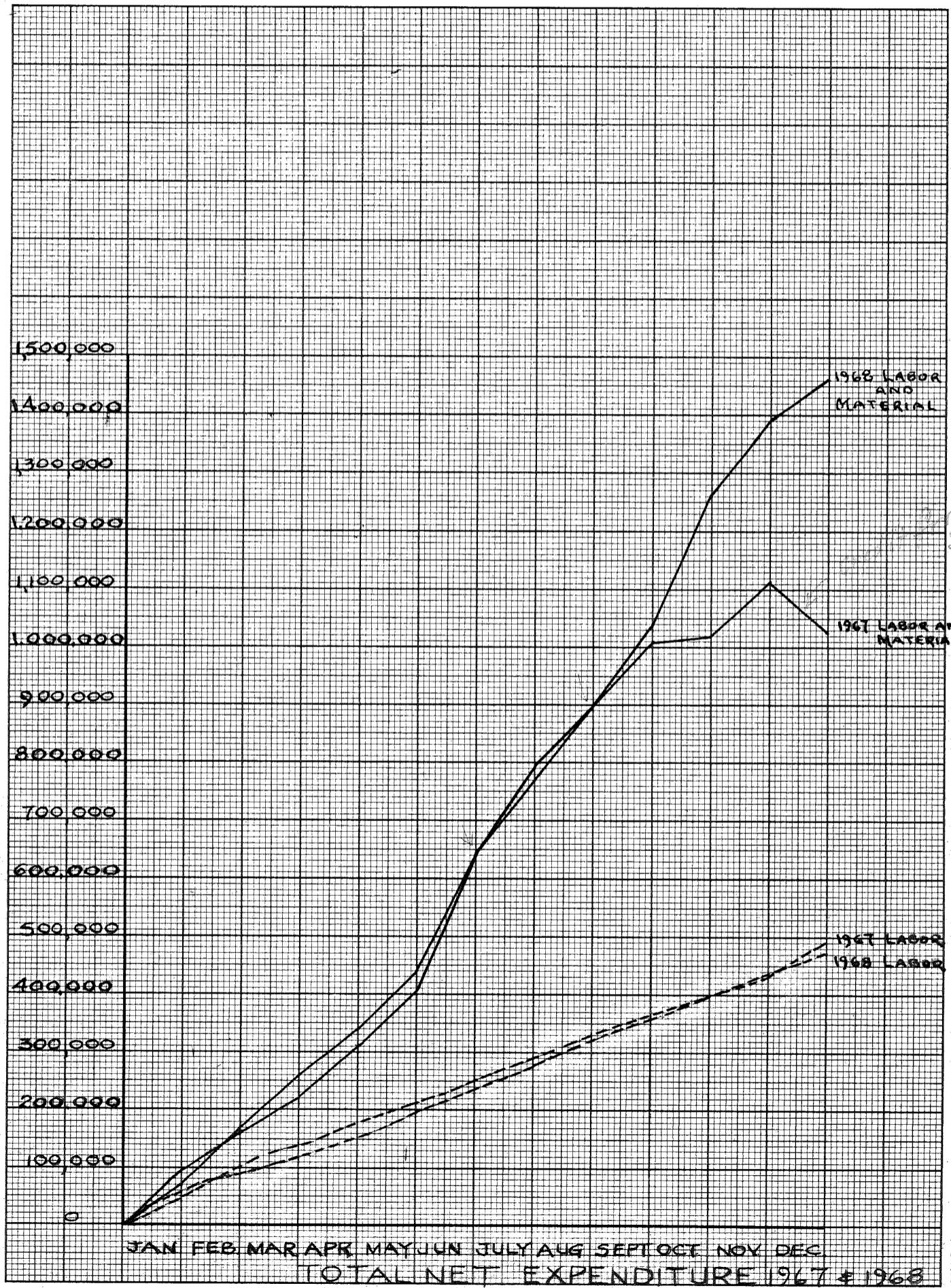
TOTAL YEARLY EXPENDITURE

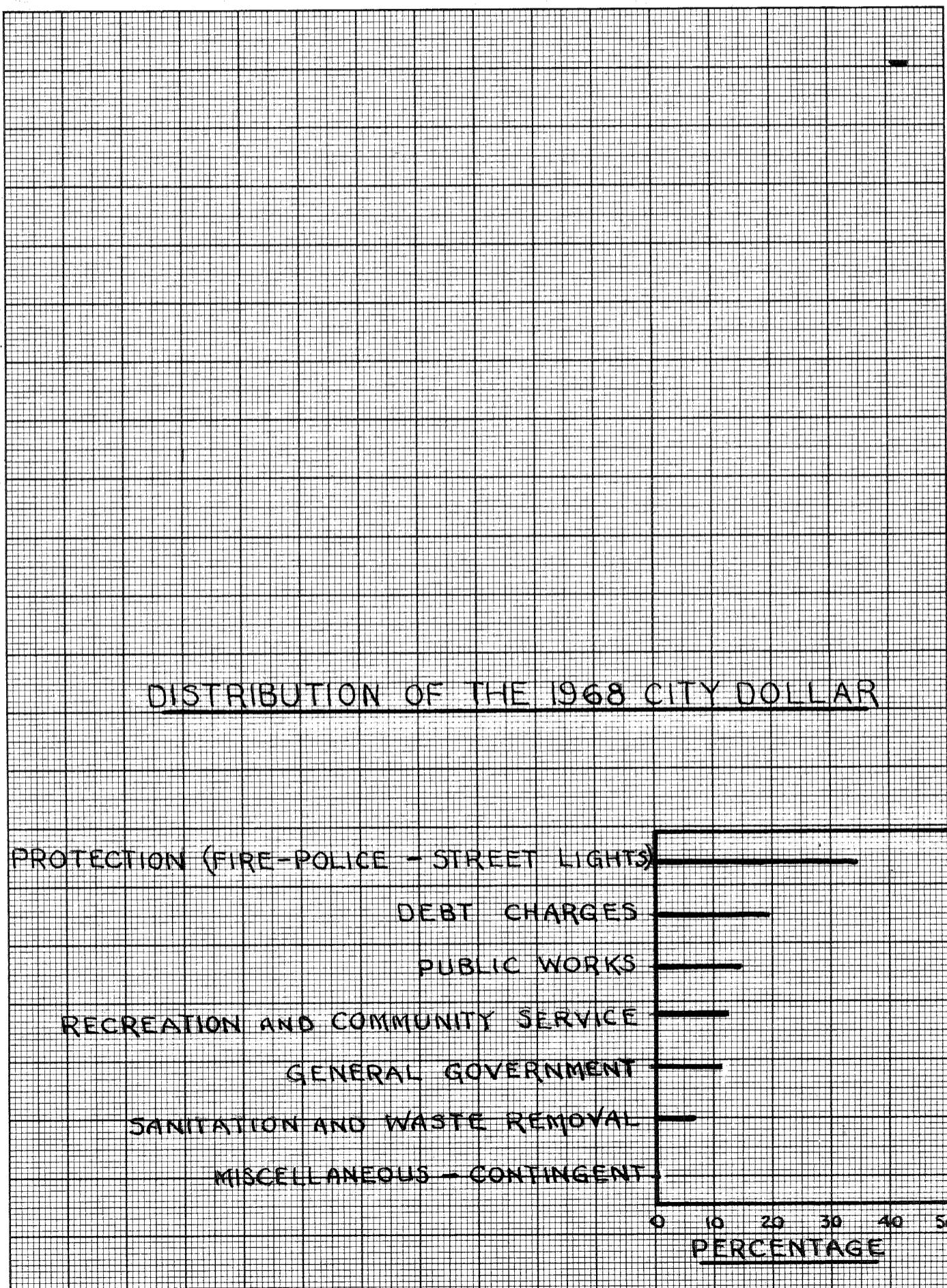
The total yearly net expenditure under the direct supervision of the City Engineer in 1968 amounted to \$1,463,187.22.

A graphic comparison of expenditures for labor, labor and hired machinery and labor, hired machinery and materials for the year 1967 and the year 1968 are shown on the following graph.

The location of new construction completed and commenced in 1968 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 Dollar in 1968.





ROADS AND STREETS

In 1968 the appropriation for Roads and Streets was \$298,797.00.

There are in Fredericton 73.12 miles of Roads and Streets; 12.37 miles being located on the north side of the Saint John River and 60.75 miles on the south side. In addition there are 56.67 miles of concrete and asphalt sidewalks; 9.46 miles on the north side of the Saint John River and 47.21 miles on the south side of the Saint John River.

Roads and Streets

	<u>Urban</u>	<u>Rural</u>	<u>Total (Miles)</u>
Paved	56.30	5.31	61.61
*Gravel	3.14	6.42	9.56
Chip Seal	1.69	.26	1.95
TOTALS =	61.13	11.99	73.12

* Surrey Crescent not included in 1968 mileage as only partially completed.

Roads and Streets Expenditure - 1968

Gross Expenditure	\$ 407,807.06
Credits	<u>135,852.21</u>
Net Expenditure	\$ 271,954.85
1968 Appropriation	<u>298,797.00</u>
CREDIT	<u>\$ 26,842.15</u>

The above credits amounting to \$135,852.21 are made up as follows:-

Materials or charges for machinery to private parties	\$ 2,795.13
Journal Voucher (Materials sold to other City Departments)	715.66
Journal Voucher (Gas, Oil, Varsol, Anti-freeze, Diesel Fuel)	4,766.09
Forest Hill Cemetery (Digging graves)	183.76
Insurance (Damage to city owned vehicles)	845.42
Province of New Brunswick Highway Division (share of cost, resurfacing Route #7 & Route #101). .	19,312.42
Civic Union Public Employees (attending Union)...	66.48
Hubert Kelly (Insurance damage to City Loader)...	3,243.27
Journal Voucher (Pension)	11,560.25
Workmen's Compensation	963.03
Abe Levine & Sons (Sale of Scrap Iron)	47.06
Journal Voucher (Machinery rental on other accounts)	<u>91,353.64</u>
TOTAL	<u>\$ 135,852.21</u>

The Gross Expenditure is divided as follows:-

Labor - the total of Roads and Streets Payrolls..	\$126,135.68
Hired Trucks and Machinery	49,658.00
Material Charges - which includes Workmen's Compensation, Unemployment Insurance and all materials including purchase and repairs to City owned equipment	<u>232,013.38</u>
TOTAL	<u>\$407,807.06</u>

The Gross Expenditure of \$407,807.06 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 during the year.

ITEM #1

Sanding Streets and Walks:-

Storing sand in Winter Storage pile and spreading same on slippery Streets and Walks.

Labor	\$ 15,088.88
Hired Trucks and Machinery	1,863.00
City Machinery charges ...	6,488.00
Materials	<u>16,042.59</u>
Total Expenditure ...	<u>\$ 39,482.47</u>

5,677 cubic yards of sand was purchased during the winter of 1968. The sand was supplied by W. R. and W. W. Thomas at a price of \$1.25 per cubic yard delivered to the City Yard stock pile.

In 1968, 517½ tons of salt was used for ice control. The cost and distribution charges are included under the above heading. The City purchased 477½ tons of salt in 1968. In stock as of December 31, 1968, there were 165 bags (8.3 tons) of salt.

ITEM #2

Snowplowing Sidewalks:- 56.67 miles

56.67 miles of sidewalks were kept plowed in 1968.

Total expenditure under this heading amounted to \$6,372.00 and was made up as follows:-

Labor	\$ 3,582.00
Hired Machinery	643.00
City Machinery charges ..	<u>2,147.00</u>
TOTAL	<u>\$ 6,372.00</u>

In 1968 the unit cost of plowing and sanding one mile of sidewalk was approximately \$220.00 and was calculated as follows:-

Labor	\$ 6,599.78
Hired Trucks and Machinery	1,015.60
City Machinery Charges	3,444.60
Material (Sand)	<u>1,419.25</u>
TOTAL	<u>\$ 12,479.23</u> - - - - - (1)

The overall cost, including Compensation, Pension Fund and Sick Leave was approximately \$241.00/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 amounted to \$132,167.07 and was made up as follows:-

Labor	\$ 39,243.49
Hired Trucks and Machinery	45,675.00
City Machinery Charges (Jeeps, Bulldozers, Graders, etc.)	38,149.50
Expendable Materials (Grader Blades, Chains, etc.)...	5,540.61
Maintenance of Snow Control Equipment (Repairs to Blower, etc.).....	<u>3,558.47</u>
TOTAL EXPENDITURE	<u>\$ 132,167.07</u>

The following table shows comparative labor (including hired trucks and machinery) costs of Snow Control for the years 1966 to 1968 inclusive:-

	<u>1966</u>	<u>1967</u>	<u>1968</u>
Snowplowing Roads and Streets ..	\$ 11,706.60	28,945.09	23,848.90
Blowing, Hauling and Shovelling Snow	27,786.19	106,059.39	53,092.80
Catch Basins	2,628.24	5,472.71	6,643.45
Snow Fences	607.82	910.81	882.72
Plowing Parking Lots	<u>123.25</u>	<u>602.38</u>	<u>450.62</u>
TOTAL	<u>\$ 42,852.10</u>	<u>141,990.38</u>	<u>84,918.49</u>

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

The unit cost per mile of plowing, salting and sanding City Roads and Streets was approximately \$2,276.00 and was calculated as follows:-

Labor (Plowing and Sanding)	\$ 51,314.59
Hired Trucks and Machinery	47,165.40
Machinery charges (Graders, Jeeps, Bulldozers, etc.)	43,339.90
Material (Sand and Salt)	14,623.34
Repairs to Snow Blowers and Boilers	3,558.47
Expendable materials (Grader Blades, Picks, Shovels, etc.)	5,540.61
Miscellaneous materials (Lumber, Fencing, Wire, Picks, etc.)	865.52
TOTAL	\$ 166,407.83 - - (2)

The overall cost including Workmen's Compensation, Pension Fund and Sick Leave was approximately \$2,402.00 per mile.

TOTAL COST OF SNOW CONTROL - Add (1) and (2)\$ 178,887.06

Net Cost of Snow Control (Less City Machinery

Charges - \$46,784.50 \$ 132,102.56

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

January 1, 1964 to December 31, 1964	120.40 in.
January 1, 1965 to December 31, 1965	85.50 in.
January 1, 1966 to December 31, 1966	63.80 in.
January 1, 1967 to December 31, 1967	57.9 185.20 in.
January 1, 1968 to December 31, 1968	86.80 in.

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 1968.

ITEM #4

Streets:-

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

Total expenditure under Streets Account (Labor, Machinery and Materials) amounted to \$77,512.46 and was made up as follows:-

Item	Labor Hired Trucks & Machinery	City Machinery Charges	Materials	Total
Repairing Machinery	\$ 17,941.21	2,140.00	30,362.02	50,443.23
Maintaining Driveways	552.88	392.25	24.50	969.63
Dust Control	872.87	20.00	1,532.18	2,425.05
Culverts	534.89	468.00	705.38	1,708.27
Ditching	278.70	232.00	-----	510.70
Erection of Guard Posts	457.41	50.00	22.74	530.15
Repairing Curbs and Sidewalks	1,654.84	608.50	CR 1,498.28*	765.06
Sodding and Seeding	521.07	142.00	71.40	734.47
Rip-Rapping	1,240.12	106.00	46.20	1,392.32
Cutting Grass	2,458.77	662.00	386.92	3,507.69
Weather Accounts	14,558.26	-----	-----	14,558.26
TOTALS =	\$ 41,071.02	4,820.75	31,653.06	77,544.83

* Due to transfer of Repair to Sidewalks to separate account.

In 1968, 11,770 gallons of oil was used for dust control.

ITEM #5

Surface Sewers:-

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 leaks that occurred or extensions required for the sewer outfalls amounting to \$12,794.06, made up as follows:-

Labor	\$ 7,579.61
Hired Trucks and Machinery ...	214.00
City Machinery Charges	2,615.75
Materials	<u>2,384.70</u>
TOTAL	\$ 12,794.06

There are in Fredericton, 50.61 miles of Surface Sewer, consisting of 6.43 miles on the north side of the Saint John River and 44.18 miles on the south side of the Saint John River.

ITEM #6

Yard:-

This item, in 1968, was taken out of Roads and Streets Account and made a separate account. The account for this item will appear on page 52 of this report.

ITEM #7

Grading and Gravelling:-

Grading and application of Gravel on City Roads and Streets.

Labor.....	\$ 94.67
Hired Trucks and Machinery	12.50
City Machinery Charges	291.00
Materials (Gravel)	<u>266.96</u>
TOTAL	<u>\$ 665.13</u>

252.55 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 Limited at a contract price of \$1.75 per ton for Class "A" crushed gravel.

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

ITEM #8

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	\$ 109.90
City Machinery Charges	126.00
Materials (cement, brick, concrete pipe)	<u>106.75</u>
TOTAL	<u>\$ 342.65</u>

ITEM #9

Wilsey Road:-

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

Labor	\$ 231.57
Hired Trucks and Machinery..	108.00
City Machinery Charges	298.00
Materials (gravel, concrete pipe, cement)	<u>233.69</u>
TOTAL	<u>\$ 871.26</u>

ITEM #10

Doak and Flanagan Roads:-

All work done on the Doak Road, other than work done by the Motor Grader.

The expenditure incurred on this Road was for graveling from the Vanier Highway to the end of the Road and on the Flanagan Road, from the Doak Road to the University of New Brunswick Wood Lot and Game Refuge line.

Labor	\$ 422.08
City Machinery Charges	710.00
Materials	<u>12,103.18</u>
TOTAL	<u>\$13,235.26</u>

6,916.10 tons of Class "A" crushed gravel was applied to the above mentioned Roads.

ITEM #11

Maryland Road:-

Under this heading the expenditure amounted to \$10.32 and was made up as follows:-

Labor	\$ 2.32
City Machinery charge	<u>8.00</u>
TOTAL	<u>\$ 10.32</u>

ITEM #12

Rural Roads:-

Under this heading a portion of the Corbett Road from the Vanier Highway to Merrill Timms residence was reshaped and gravelled. In addition a concrete culvert was constructed on the Tower Road at Lincoln. The expenditure amounted to \$2,337.25 and was made up as follows:-

Labor	\$ 266.36
City Machinery charge	843.00
Materials	<u>1,227.89</u>
TOTAL	<u>\$ 2,337.25</u>

ITEM #13

Resurfacing Asphaltic Concrete Repairs
and Paving Driveway Entrances:-

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

Labor	\$ 17,400.51
Hired Truck and Machinery ...	21.00
City Machinery charges	6,678.75
Materials	<u>18,475.77</u>
TOTAL	\$ 42,576.03

In 1958 a large Aggregate 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 plants set up, patching material can be obtained more economically. Patching material when available was obtained from Diamond Construction Company (1961) Limited and W. J. Gorman.

The total expenditure for Pavement Repair and Driveways for 1968 under the above heading, including Workmen's Compensation, Pension Fund, Holidays, Sick Leave and Depreciation on the Plant, amounted to \$44,828.46 and was computed as follows:-

ASPHALT

Stock from 1967

720 Gallons RC ₃	\$ 273.60	
400 Gallons RS ₂	<u>152.00</u>	\$ 425.60

Plus Stock purchased in 1968

10,350 Gallons RC ₃	\$ 4,099.58	
4,050 Gallons RS ₂	<u>1,554.04</u>	\$ 5,653.62

Total Stock\$ 6,079.22

Less Stock for use in 1969

2,115 Gallons RC ₃	\$ 894.65	
135 Gallons RS ₂	<u>51.71</u>	\$ 946.36

\$ 5,132.86

Less - Credit on Return of Drums 987.00

NET COST OF LIQUID ASPHALT USED\$ 4,145.86

Cost of Hot Mix Asphalt in Patching Streets
and Driveways obtained from Diamond Construction
(1961) Limited and W. J. Gorman\$ 10,571.55

Total Hot Mix Asphalt Cost.....	\$ 10,571.55
Liquid Asphalt	4,145.86
Kerosine (2109 Gallons)	670.66
Chips (103 tons)	386.25
Crusher Dust (423.25 tons)	972.56
Sand (100 cubic yards)	125.00
Maritime Electric Company (Power)	443.28
Repairs to Plant (construction new platform, etc.)	801.31
Propane Gas	34.50
City Labor (City employees, including Pension Fund, Workmen's Compensation, Sick Leave and Holiday Account)	20,557.38
Hired Trucks and Machinery	21.00
City Machinery	6,678.75
Miscellaneous (Pickaxes, oil, etc.)	<u>341.72</u>
Total Gross Expenditure	\$ 45,749.82

LESS CREDITS

Adjusters and Appraisers Ltd.	
Street Repairs, Avondale Court) ..\$ 72.68	
Canada Department of Agriculture	
Patching at Research Station 292.24	
New Brunswick Telephone Company	
Street Repairs (King Street) 25.60	
Journal Voucher (Sale of Crushed Rock and Dust to other City Departments)	<u>529.84</u>
	\$ 920.36
TOTAL NET COST	\$ 44,828.46

Materials in Stock, December 31, 1968:-

2115 Gallons RC ₃ @ .423¢ per Gallon..\$ 894.65	
135 Gallons RS ₂ @ .383¢ per Gallon .. 51.71	
212.05 tons Crusher Dust @ \$2.25 per ton	477.11
103.60 tons 7/16 Rock @ \$3.75 per ton <u>388.50</u>	
TOTAL	<u>\$1,811.97</u>

ITEM #14

City Road Graders:-

Operators' Wages	\$ 687.72
Hired Grader	109.50
Machinery Charges	<u>1,988.00</u>
TOTAL	<u>\$2,785.22</u>

The repair costs for City Graders will be found on
page 20 of this Report under the heading "Roads and
Streets."

ITEM #15

Parking Lots:-

The above heading includes the following areas:
Old Artic Rink Site, corner of Queen and Campbell
Streets, City owned property situated on the north side
of Campbell Street between Regent and Carleton Streets
(Wharf) and an area west of the Canadian Legion property
on Queen Street.

The expenditure on these Parking Areas was as follows:

Labor	\$ 259.80
Hired Machinery	60.00
City Machinery	640.00
Materials	<u>14.00</u>
TOTALS	<u>\$ 973.80</u>

ITEM #16

Street Sign Department:-

In 1968 this item was taken out of "Roads and Streets" and made a separate account, which will appear later in the body of this Report.

ITEM #17

Clearing along Rights-of-Way:-

Expenditure \$ 790.29

The above expenditure was for relocating poles at the intermediate Reservoir site on Smythe Street for the construction of a concrete sidewalk on the east side of Smythe Street, from King's College Road to Lynhaven Street.

ITEM #18

Chip Seal and Seal Coating:-

In 1968 Flintkote Company was awarded a contract to resurface the Industrial Road, from the Lincoln Road to the Doak Road; Doak Road, from the Industrial Road to Vanier Highway and on Prospect Street to extend the existing Chip Seal west 640 feet towards Hanwell Road.

The cost of this contract was made up as follows:-

RSIK Emulsion 10,800 Gallons @ .36¢ per Gal. ...	\$ 3,888.00
3/8" Stone supplied 285.90 tons @ \$6.50 per ton	1,858.35
1/2" Stone supplied 1980 tons @ \$6.00 per ton..	118.80
3/4" Stone supplied 42.20 tons @ \$5.50 per ton.	<u>232.10</u>
Total (Flintkote Co.)	<u>\$ 6,097.25</u>

The Street preparatory work other than the laying in place of the chips was done by regular City Crews at an expenditure of \$330.25 and is made up as follows:-

City Labor	\$ 244.25
City Machinery	<u>86.00</u>
TOTAL	\$ 330.25
	<u> </u>

The total expenditure for Chip Sealing amounted to \$6,427.50 and was made up as follows:-

City Labor	\$ 244.25
City Machinery	86.00
Flintkote Co. (Materials)	<u>6,097.25</u>
Total Expenditure ...	\$ 6,427.50
	<u> </u>

The following Streets were Chip Sealed with 3/8" Chips:-

<u>Street</u>	<u>Location</u>	<u>Lineal Feet</u>
Industrial Road, Lincoln Road to Doak Road		5,765
Doak Road, Industrial Road to the Vanier Highway		1,375
Prospect Street		<u>640</u>
TOTAL		<u>7,780</u>

7,780 lineal feet = 1.47 miles

In addition the Diamond Construction Co. (1961) Ltd. was awarded a contract to lay pavement, recap and seal various City Streets. The expenditure for resurfacing a portion of Route #7 (from western City limits to Elmcroft Place, Waterloo Row) and resurfacing a portion of Route #101 (from the intersection of Regent and Montgomery Streets to the intersection of Regent Street and the Trans Canada Overpass) was charged under "Roads and Streets Account," while the remaining Streets were charged to "Capital Account Paving" which appears later on page 23 of this report.

Following is the itemized account submitted to the Province of New Brunswick, Department of Highways for the resurfacing of the above mentioned Routes:-

1. Cost of Resurfacing Route #7 (Portion)

Cost of raising manholes and catch basins and surface sewer preparations, patching, etc.

City Labor	\$ 2,145.06
City Machinery	945.00
Cement, Brick, Sand.....	80.05
28.35 tons Asphalt	
@ \$10.00 per ton ..	<u>283.50</u> ...\$ 3,453.61

Cost of Tack Coat, 3966 Gallons @ .05¢ per Gal. 198.30

Cost of resurfacing material in place,
2087.95 tons @ \$12.00 per ton25,055.40 \$ 28,707.31

Cost of Engineering and supervision 10% of
\$28,707.312,870.73

(1) TOTAL\$ 31,578.04

Total mileage resurfaced under this heading
was 3.08.

2. Cost of Resurfacing Route #101 (Portion)

Cost of raising manholes and catch basins and surface preparations, patching, etc.

City Labor	\$ 390.58
City Machinery	144.00
Cement, brick, sand	6.50
11.85 tons asphalt	
@ \$9.00 per ton	<u>106.65</u> \$ 647.73

Cost of Tack Coat 1253 Gallons
@ .05¢ per Gallon 62.65

Cost of Resurfacing material in
place 474.65 tons @ \$12.00 per ton 5,695.80 \$ 6,406.18

Cost of Engineering and supervision, 10% of
\$6,406.18640.62

(2) TOTAL\$ 7,046.80

(1)\$ 31,578.04
(2)7,046.80

Total (1) and (2)\$ 38,624.84

Less Credit 50% -

Provincial Government. 19,312.42

CITY EXPENDITURE\$ 19,312.42

Total mileage resurfaced and charged to Roads
and Streets was 3.64.

ITEM #19

Retro-active Pay:-

Expenditure \$ 913.00

This amount was retro-active pay due to union agreement.

Other Expenditures:-

In addition to the above expenditure included under "Roads and Streets" there is an expenditure of \$14,080.07 which does not show in any of the above accounts and is made up as follows:-

Workmen's Compensation	\$ 3,484.69
Mobile Radio (Telephone Company)	732.27
Telephone Company (Telephone)	59.44
Unemployment Insurance Commission	2,315.29
Receiver General (Canada Pension)	5,913.01
Province of New Brunswick (Registration of Vehicles and Licenses)	86.00
Chippin's Clothing	402.69
Car Allowance	120.00
Valley Oxygen	1.20
Suburban Construction Co. (Repairing sidewalk)	100.00
Brunswick Oxygen	29.50
New Brunswick Department of Labor (Inspecting boilers)	7.50
Battery Electric	37.28
Capital Garage (Rental on Jeep)	150.00
Auto Machinery	12.05
Good Roads Association (Membership)	50.00
Ashley Colter Ltd. (Cedar Posts)	144.11
Rosser Sales Ltd. (Flares, wicks)	26.46
Miles' Tire	6.00
Atlas Building Supplies	2.23
J. S. Neill Wholesale (Brooms, handles, cord, etc.)...	81.23
Provincial Secretary-Treasurer (S.S. & E. Tax, audit 1967 purchases)	238.76
City of Fredericton (City Pension)	11,893.82
Journal Voucher (Portion of L. P. MacNeill's salary) ..	<u>1,000.00</u>
TOTAL	\$ 26,893.53

LESS CREDITS:-

H. Kelly (Insurance credit re W 9 Loader)	\$ 564.35
Ed Gourley (Sale of scrap iron) ...	28.75
Abe Levine (Sale of scrap iron and batteries)	47.06
Journal Voucher (1963 Chevrolet Panel to Fire Dept.) ...	800.00
Journal Voucher (2 Decals to Recreation Department) ..	13.00
Journal Voucher (re pension contribution)	<u>11,360.30</u>
NET EXPENDITURE	\$ 14,080.07

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

ITEM	1965	1966	1967	1968
1. Sanding Streets	\$ 13,704.55	9,671.90	14,540.33	16,951.88
2. Snowplowing Sidewalks	2,507.92	2,698.66	6,301.80	4,225.00
3. Snow Control	50,316.95	42,852.10	141,990.38	84,918.49
4. Streets Account	34,854.56	36,796.51	44,879.18	41,071.02
5. Surface Sewer	5,303.24	7,123.47	8,864.87	7,793.61
6. Yard	4,270.00	4,215.80	4,669.36	-----
7. Grading and Gravelling	1,336.70	437.18	932.41	107.17
8. Lincoln Road	-----	1,250.51	148.83	109.90
9. Wilsey Road	130.40	709.41	316.02	339.57
10. Doak and Flanagan Roads	2,048.55	1,250.76	362.67	422.08
11. Maryland Road	660.62	-----	-----	2.32
12. Rural Roads	-----	165.40	-----	266.36
13. Asphalt Repairs	14,457.25	12,850.74	17,286.39	17,421.51
14. Road Graders	1,002.73	1,132.76	978.67	687.72
15. Parking Lots	-----	1,266.71	366.65	319.80
16. Paint Department	983.25	1,245.29	815.43	-----
17. Clearing along Right-of-Way	789.62	63.94	-----	-----
18. (Chip Seal (Surface Seal	1,415.16	745.74	-----	244.25
19. Retro-active Pay	-----	327.78	-----	(See page 25) 913.00
TOTALS =	\$ 133,781.50	124,804.66	242,452.99	175,793.68

In 1968 the following Items were taken out of
Roads and Streets:-

Item #6 - Yard taken out of Roads and Streets and made
a separate account;

Item #4 - Repairs to sidewalks, etc. were taken out of
Streets Account and made a separate account;

Item #16 - Street Signs were taken out of Roads and
Streets under Paint Department and made a
separate account.

The following items of machinery were purchased
this year and charged to Roads and Streets:-

1 - Electro-Magic Steam cleaner Model 100, SN-30705	\$ 600.00		
6% Provincial Tax	<u>36.00</u>	\$	636.00
1 - 1968 Kaiser Jeep, Model CJ5, Half cab, 1/4 ton, serial 830501724453, Motor NKNH515	\$ 3,434.00		
Jeep 1963, CJ5 - trade in	<u>734.00</u>		
Serial 57548-35897	# 2,700.00		
6% Provincial Tax	<u>162.00</u>	\$	2,862.00

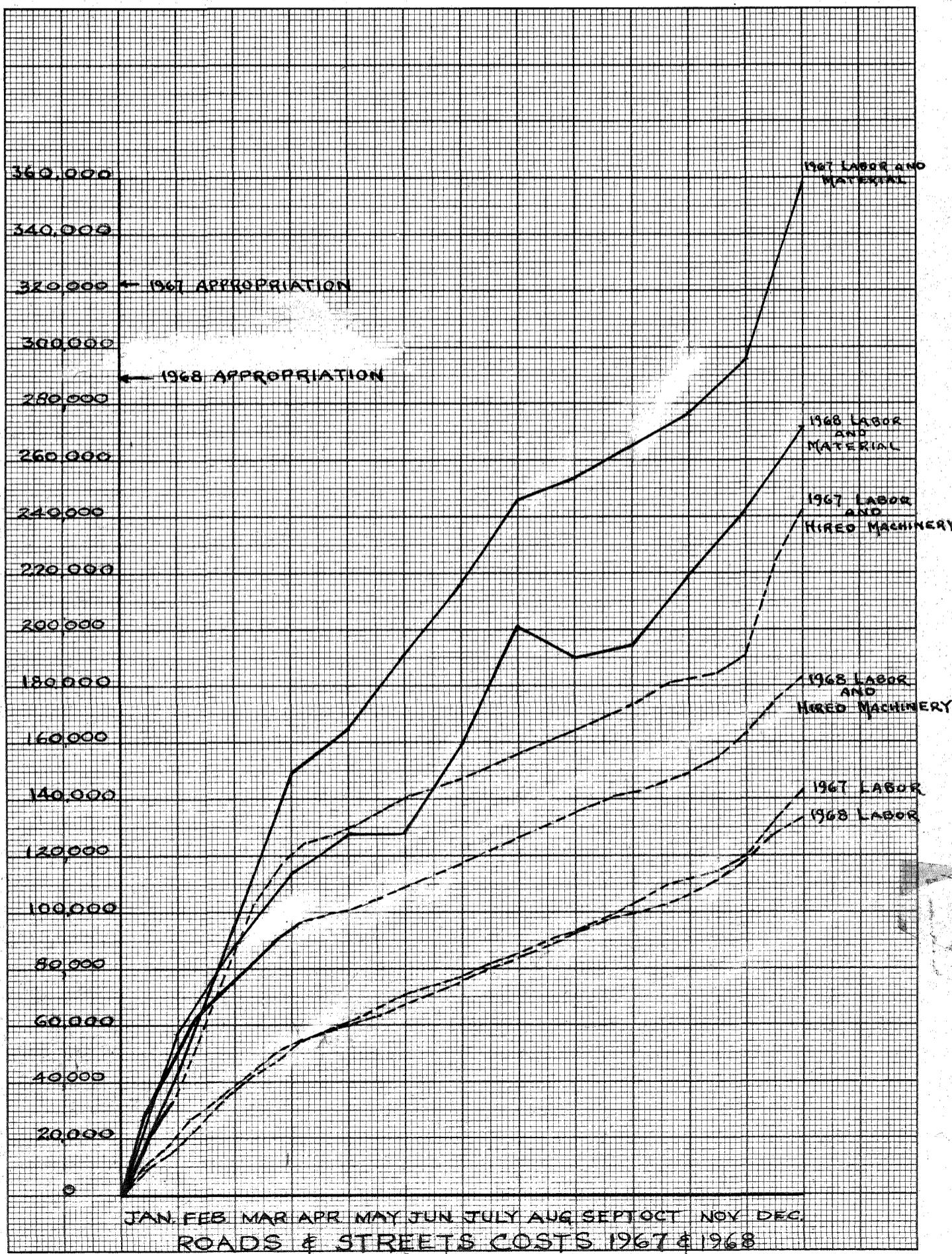
1 - V6 Motor for Jeep	\$ 200.00	
6% Provincial Tax	<u>12.00</u>	\$ 212.00
1 - New Case Model 850 Bulldozer S/N 7072831	\$ 15,600.00	
Less trade in, 1962 Case Model 420 Bulldozer	<u>2,250.00</u>	
	\$ 13,350.00	
6% Provincial Tax	<u>801.00</u>	14,151.00
1 - 3 Ton Internal Loadstar Serial No. 4166000026234 Model 1600, V8 Engine, Front Shocks, 4 speed transmission, 17,000 lb., 2 speed rear axle, West Coast mirrors with lights, Mud Flaps, Under coat, Power take off, 10 ton Phil Wood Hoist installed, 825-20-10 Ply Tires, Spare tire, tube and rim, 175 inch wheel base, heater and defroster, cab marker lights, rear stop and tail lights, back up lights, directional lights, 20,000 G.V.W., color red	\$ 5,674.00	
6% Provincial Tax	<u>340.44</u>	6,014.44
1 - G.M.C. Suburban carryall, panel doors, center seat, dual West Coast mirrors, Jr. dual horns 2-0750 815 x 15 - 4/8 H.W.Y.Pass 3-0750 815 x 15 - 4/8 H.W.Y.Pass	\$ 4,170.00	
Municipal License	2.00	
6% Provincial Tax on \$3,753.00	<u>225.18</u>	
	\$ 4,397.18	
Discount	<u>417.00</u>	3,980.18
TOTAL	\$ 27,855.62	

The following is a list of vehicles and machinery used in the Roads and Streets Department, together with the repair costs for 1967 and 1968, including tires and tubes.

Name of Vehicle	Year Purchased	Repairs 1967	Repairs 1968
Austin Western Grader (300 Pacer)	1962	\$ 1,371.55	\$ 3,294.80
Galion Grader	1961	2,448.40	8,128.17
Galion Grader, Model 118	1966	2,014.10	1,786.67
Caterpillar D-6 Bulldozer	1953	6,337.68	753.73
Case 420 Crawler Tractor	1961	960.21	285.50
Case 420 Crawler Tractor (Traded in 1968)	1962	478.39	3.56
TD5 International Crawler Tractor	1963	1,878.54	938.53
Case 750 D Bulldozer	1965	4,025.19	627.88
Case 850 Bulldozer	1968	-----	13.01
Hy Hoe 3/8 yard Backhoe	1964	886.56	1,806.16
Unit 3/4 yard Backhoe	1957	3,907.86	706.27
Case W9 Front End Loader	1967	421.30	1,485.11
Hough 50 Model Loader	1963	2,862.68	2,295.36
Airpic Compressor	1953	45.65	32.98
Ingersol Rand Compressor	1957	59.57	2,118.84
Copco Compressor	1964	21.05	347.24
Tarvia Roller Model #157	1955	628.38	281.92
Willys Jeep #11	1966	183.68	227.78
Willys Jeep #12	1967	27.87	195.82
Willys Jeep #17	1965	134.27	171.23
Willys Jeep #40 (Traded in 1968)	1962	663.31	89.02
Willys Jeep #40	1968	-----	30.36
Dodge 3 ton	1963	662.21	1,190.48
G.M.C. 3 ton	1962	722.75	421.06
Dodge 3 ton	1967	500.32	176.18
Chevrolet 3 ton	1960	409.03	542.40
Chevrolet 3 ton	1965	310.54	638.60
Chevrolet 1/2 ton	1966	340.41	188.61
International 3 ton	1968	-----	662.81
Chevrolet Panel (sold to Fire Department 1968)	1963	648.99	49.68
Chevrolet 1/2 ton	1965	305.55	278.44
Dodge 1/2 ton	1967	16.94	112.93
Ford	1966	168.48	429.89
G.M.C. Panel	1968	-----	65.06
Expendable accessories (Grader Blades, Bolts, Nuts, Bulldozer Blades and Corners, Tools, etc.)		6,342.95	1,756.06
TOTAL COST	=	\$ 39,784.41	\$ 32,132.14

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

<u>Name of Vehicle</u>	<u>Year Purchased</u>	<u>Repairs 1967</u>	<u>Repairs 1968</u>
Sicard Snow Blower #30	1949	\$ 620.76	\$ 1,700.77
Sicard Snow Blower #39 (1952 Model)	1961	6,284.80	810.63
Sicard Snow Blower #47	1963	3,761.23	707.20
Ford Sand Spreader	1960	<u>1,570.61</u>	<u>1,020.40</u>
TOTAL COST		<u>\$ 12,237.40</u>	<u>\$ 4,239.00</u>



CAPITAL ACCOUNT CURB AND GUTTER

The net expenditure under this heading amounted to \$56,891.97.

For the above expenditure of \$56,891.97, concrete curb and gutter was constructed at the following locations:-

<u>Location</u>	<u>Lineal Feet</u>
Waterloo Row, Acacia Court to Forest Hill Road (south side)	346
Churchill Row, existing to C.N.R. property (both sides)....	421
Southampton Drive, Leeds Drive to Dover Crescent (both sides)	1,875
Dover Crescent (both sides)	1,670
Eglinton Street, Studholm Street to Smythe Street (both sides)	1,727
Eglinton Street, Studholm Street to Oxford Street (south side)	360
Heather Terrace (both sides)	1,259
Lynhaven Street and Court, existing Street to Court (both sides)	1,881
Studholm Street, Lynhaven Street to Eglinton Street (west side)	324
York Street, Lisgar Street to Priestman Street (both sides)	980
Lisgar Street (both sides)	2,119
Beaverbrook Street, Windsor Street to University Avenue ...	1,586
Stanley Street, Massey Street to Willingdon Street (both sides)	2,571
Willingdon Street, Stanley Street to Smythe Street (both sides)	593
Smythe Street, existing to Willingdon Street (both sides) ..	325
Massey Street, Lorne Street to York Street (both sides) ...	983
Grandame Street, Fenety Street to Montgomery Street (both sides)	967
Southampton Drive, Dover Crescent to Liverpool Street (both sides)	2,801
Gregg Court, existing to portion of Gregg Court	<u>130</u>
TOTAL	<u>22,918</u>

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

All the concrete poured was purchased ready-mixed from the firm of Gordon's Concrete Products Ltd. at a price of \$14.50 per cubic yard.

The unit cost of one lineal foot of curb and gutter, found by dividing the total length laid, which equals 22,918 lineal feet, into the total cost of \$56,891.97 is \$2.49 per lineal foot.

The topsoiling of Boulevards is included in the above cost.

CAPITAL ACCOUNT PAVING

The material cost amounted to \$86,584.41 and was made up as follows:-

Diamond Construction Co. (1961) Limited

7287.15 tons 3/4" Dense Mix @ \$7.50 per ton..	\$ 54,653.64
2110.30 tons 1/2" Dense Mix @ \$9.00 per ton..	18,992.70
4053.55 tons 1/4" Plant Mix @ \$12.00 per ton.	48,642.60
28.35 tons 1/4" Minus Asphalt Mix @ \$10.00 per ton	283.50
19,200 Gallons RS ₁ Tack Coat @ \$0.05 per gal.	<u>960.00</u>
	123,532.44

Forbes and Sloat Limited

1018.35 tons Class "A" crushed gravel @ \$1.75 per ton	1,782.11
-----------------------------------------------------------------	----------

W. J. Gorman

21.70 tons 1/2" Dense Mix @ \$9.00 per ton	195.30
--------------------------------------------------	--------

Maritime Electric Co.

Relocated Pole Line (Union Street)	2,618.94
------------------------------------------	----------

New Brunswick Telephone Co.

Relocated telephone facilities (Union Street)	750.00
-----------------------------------------------------	--------

Miscellaneous (Gas, bricks, sand, cement, flares, manholes, Pension Fund contribution and portion of staff salaries)	<u>3,155.95</u>
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TOTAL	\$ 132,034.74
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LESS CREDITS

Province of New Brunswick (relocating costs, Union St.).....	\$ 6,825.49
Journal Voucher (Repaving Route #7 and Route #10)	<u>38,624.84</u>
	45,450.33
TOTAL	\$ 86,584.41

The Street preparatory work, other than laying in place of the premixed material was done by regular City crews at an expenditure of \$16,158.49 made up as follows:-

City Labor	\$ 9,576.99
Hired Trucks and Machinery...	286.50
City Machinery	<u>6,295.00</u>
TOTAL	\$ 16,158.49

The total expenditure under this heading amounted to \$102,742.90 and was made up as follows:-

City Labor	\$ 9,576.99
Hired Trucks and Machinery.	286.50
City Machinery	6,295.00
Material Charges	<u>86,584.41</u>
TOTAL	<u>\$102,742.90</u>

The above expenditure of \$102,742.90 was made up as follows:-

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

1) New Pavement:-

The following streets were paved with 3/4" Hot Mix by the Diamond Construction Co. (1961) Limited:-

<u>Street</u>	<u>Location</u>	<u>Lineal Feet</u>
Norfolk Drive		1,416
Bristol		406
Dover Crescent		870
Southampton Drive, Leeds Drive to Liverpool Street ...		2,361
Sewell, Park Street to south limit		150
Oxford Street, Simcoe Court to Eglinton Street		515
Eglinton, Oxford Street to Smythe Street		1,065
Lynhaven Street and Court		1,093
Lisgar, York Street to Priestman Street		1,080
Willingdon, Stanley Street to Smythe Street		316
Studholm		330
Massey, Lorne Street to York Street		530
Stanley, Massey Street to Willingdon Street		1,260
York, Lisgar Street to Priestman Street		514
Grandame, existing to Montgomery Street		<u>493</u>
TOTAL		<u>12,399</u>

12,399 lineal feet = 2.35 miles

The above listed Streets were laid to a thickness of 3". The street grading and preparatory work was done by regular City crews. The premixed material was supplied by the Diamond Construction Co. (1961) Limited from its plant, situated at Springhill on Route #2, Woodstock Road. The company charged the City of Fredericton \$7.50 per ton in place. The total tonnage for the above construction amounted to 5,947.25 tons.

2) Recap 1/2" Minus

Following is a list of City Streets recapped:-

<u>Street</u>	<u>Location</u>	<u>Lineal Feet</u>
AlbertRegent Street to Windsor Street	1,200	
BeaverbrookRegent Street to Tweedsmuir Street	685	
DundonaldYork Street to Smythe Street	1,980	
BeaverbrookUniversity Avenue to Windsor Street ...	860	
UnionGibson Street to C.N.R. Subway	1,355	
SmytheBeechwood Crescent to Willingdon Street	160	
TOTAL	<u>6,240</u>	

6,240 lineal feet = 1.18 miles

In 1968 a Tennis Court was constructed and paved under this heading in Skyline Acres, between Rochester Street and Leeds Drive. The total tonnage used was 278.70.

The Company charged the City of Fredericton \$9.00 per ton in place. The total tonnage amounted to 1,741.35 tons.

3) Surface Seal 1/4" Minus

The following City Streets were surface sealed with 1/4" Hot Mix:-

<u>Street</u>	<u>Location</u>	<u>Lineal Feet</u>
Hanwell Road, Woodstock Road to Parkhurst Drive	520	
Intersection of Parkhurst Drive and Hanwell Road	100	
Hermitage Court	269	
Harewood Court	838	
Sherwood Court	535	
Elmwood Court	635	
Church, Queen Street to Brunswick Street	530	
Westmorland, Campbell Street to Brunswick Street	980	
King's College Road, Smythe Street to Mitchell Street..	1,450	
Mitchell, King's College Road to Squires Street	275	
King's College Road, Mitchell Street to Regent Street .	975	
Hanson, King's College Road to Fenety Street	965	
Valley View Court	220	
Loyalist Court	220	
Fenety, Hanson Street to Windsor Street	650	
Sewell, Park Street to MacLaren Avenue	570	
Lansdowne, University Avenue to Waterloo Row	1,046	
Reid, King's College Road to Regent Street	918	
Church, Charlotte Street to Aberdeen Street	<u>815</u>	
TOTAL	<u>12,511</u>	

12,511 lineal feet = 2.37 miles

The Company charged the City of Fredericton \$12.00 per ton in place. The total tonnage used was 1,490.95 tons.

CAPITAL ACCOUNT DOMESTIC SEWER

Gross Expenditure and Stocked Material	\$ 40,164.31
Less Inventory, Dec. 31, 1968..	<u>7,169.21</u>
	\$ 32,995.10
Credits	<u>14,570.52</u>
Net Expenditure	<u><u>\$ 18,424.58</u></u>

Included in the net expenditure of \$18,424.58 is the amount of \$2,732.13 holdback from jobs completed in 1967 and showing in 1968 accounts.

The above credit is made up as follows:-

Fredericton Housing Ltd. (portion of Canterbury Drive and Topcliffe Crescent, Phase #1)	\$ 2,369.09
Fredericton Housing Ltd. (portion of Canterbury Drive and Topcliffe Crescent, Phase #2)	2,381.62
Fredericton Housing Ltd. (Surrey Crescent)	2,295.07
Hill Bros. (Bailey Drive and Walker Streets)	2,216.88
Chippins (Michener Court)	1,731.71
Guilfords Ltd., credit re Federal Sales Tax on Pipe	492.42
Work done and materials sold to private parties	503.35
Journal Voucher (Material paid for by Capital Account Domestic Sewer and charged to other City Departments)	<u>2,580.38</u>
TOTAL	<u><u>\$ 14,570.52</u></u>

Domestic Sewer mains were constructed at the following locations:-

Location	Lineal Feet 8" Transite
Fredericton Housing Ltd. (portion of Canterbury Drive and Topcliffe Crescent, Phase #1) Installation by City Workmen and Fredericton Housing crew	546
Fredericton Housing Ltd. (portion of Canterbury Drive and Topcliffe Crescent, Phase #2) Installation by Fredericton Housing crew	1,266
Fredericton Housing Ltd. (Surrey Crescent, Fredericton Housing crew)	1,300
Hill Bros., Bailey Drive and Walker Street	706
Priestman Street, Smythe Street to Regent Street ..	3,082
Chippins (Michener Court)	364
TOTAL	7,264

Fredericton Housing Limited installed Domestic Sewer on portion of Canterbury Drive and Topcliffe Crescent and on Surrey Crescent.

Everett Farris installed Domestic Sewer on Priestman Street, Smythe Street to Regent Street.

City machinery and City crews installed Domestic Sewer on Bailey Drive, Walker Street and Michener Court.

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
Fredericton Housing Ltd. (Phase #1)	\$	1,532.27	836.82	2,369.09
*Fredericton Housing Ltd. (Phase #2)		83.06	2,298.56	2,381.62
*Fredericton Housing Ltd. (Surrey Cres.)		40.73	2,263.57	2,304.30
Hill Bros. (Bailey Dr. and Walker St.)		799.71	1,417.17	2,216.88
Priestman Street Michener Court	7,414.25	552.28 888.79	6,014.27 845.42	13,980.80 1,734.21
TOTALS	\$ 7,414.25	3,896.84	13,675.81	24,986.90

*Installation by Fredericton Housing Limited. Labor and Machinery supplied by Fredericton Housing Limited and therefore not shown on City Accounts. Fredericton Housing Limited also supplied all cement and brick for construction of Domestic Sewer Manholes in Skyline Acres.

Hill Bros. supplied sand and a portion of the machinery charges on Walker Street and Bailey Drive and therefore is not shown 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 \$22,254.77 (\$24,986.90 - \$2,732.13) must be used for determining same.

Total lineal feet laid 7,264

Average cost per foot $\frac{\$22,254.77}{7,264} = \3.06

Cost per foot for Contractor laying Domestic Sewer on Priestman Street was $\frac{\$13,980.80}{3,082} = \4.54 (Common Trench).

Cost by City Crews and Machinery per lineal foot

Location	Size of Pipe 8"
Fredericton Housing Ltd. (Phase #1).....	\$ 4.34 (C.T.)
Michener Court	4.76 (C.T.)
Bailey Drive and Walker Street	3.14 (C.T.)

C.T. = Common Trench

Materials in stock December 31, 1968:-

360 lineal feet of 8" Terra Cotta Pipe @ \$0.86 per ft.	\$ 309.60
32½ lineal feet of 12" Terra Cotta Pipe @ \$1.55 per foot	50.38
2671 lineal feet of 8" Asbestos Pipe @ \$1.50 per ft..	4,140.05
934 lineal feet of 10" Asbestos Pipe @ \$2.06 per ft..	1,924.04
45 lineal feet of 12" Asbestos Pipe @ \$2.40 per ft...	108.00
14 Manholes (Covers and Frames) @ \$45.51 each	637.14
TOTAL	\$7,169.21

CAPITAL ACCOUNT SURFACE SEWER

Gross Expenditure and Stocked Material	\$ 67,154.38
Less Inventory Dec. 31, 1968..	4,246.12
	\$ 62,908.26
Credits	28,242.09
Net Expenditure	\$ 34,666.17

Included in the above expenditure of \$34,666.17 is the amount of \$3,967.48 holdback from jobs completed in 1967 and showing in 1968 accounts.

The above credit is made up as follows:-

Fredericton Housing Ltd. (portion of) Canterbury Drive and Topcliffe Crescent Phase #1)	Local	\$ 3,984.95
Fredericton Housing Ltd. (portion of) Canterbury Drive and Topcliffe Crescent Phase #2)	Improvement	2,457.86
Fredericton Housing Ltd. (Surrey Crescent)	Charges	3,518.15
Hill Bros. (Bailey Drive and Walker Street)		3,785.39
Chippins (Michener Court)	Private Parties	3,984.30
Work done and materials sold to other City Depts.		964.88
Journal Voucher (Materials paid for by Capital Account, Surface Sewer and sold to other City Departments)		9,546.56
- 28 -	TOTAL	\$ 28,242.09

City crews and City machinery laid Surface Sewer on Michener Court and Beaverbrook Street.

Everett Farris laid Surface Sewer on Priestman Street from Regent Street to Smythe Street.

All above costs include any holdback payments which will appear in 1969 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

Location	Concrete Pipe			
	18"	15"	12"	10"
Priestman St., Smythe Street to Regent Street	\$ 7.50	6.86	6.24	5.94

Cost by City Crews and Machinery per Lineal Foot

Location	Concrete Pipe		
	15"	12"	19"
*Fredericton Housing Ltd. (Portion of Canterbury Drive and Topcliffe Crescent Phase #1)	\$	7.73	7.43
Michener Court		9.62	9.32
Bailey Drive and Walker Street	5.28	4.66	4.36
Beaverbrook Street, Windsor Street to University Avenue		6.02	5.72

*Fredericton Housing Ltd. supplied brick and cement not included in above costs.

Hill Bros. supplied sand and a portion of machinery charge on Bailey Drive and Walker Street not included in above costs.

Also included under this heading "Capital Account Surface Sewer" was an expenditure of \$1,342.50 for landscaping the Back Drain Diversion through Odell Park property by the addition of top soil and seeding.

Stock on hand December 31, 1968:-

96 lineal feet of 10" Concrete Pipe @ \$1.01 per foot ...\$	96.96
210 lineal feet of 12" Concrete Pipe @ \$1.31 per foot ..	275.10
462 lineal feet of 15" Concrete Pipe @ \$1.93 per foot ..	891.66
112 lineal feet of 18" Concrete Pipe @ \$2.57 per foot ..	287.84
168 lineal feet of 24" Concrete Pipe @ \$4.95 per foot ..	831.60
32 lineal feet of 36" Concrete Pipe @ \$9.02 per foot ..	288.64
28 lineal feet of 60" Concrete Pipe @ \$23.91 per foot..	669.48
16 Catch Basins (Covers and Frames) @ \$46.94 each	751.04
10 Pre-Cast Bottoms @ \$15.38 each	<u><u>153.80</u></u>
TOTAL	<u><u>\$ 4,246.12</u></u>

CAPITAL ACCOUNT WATER

Gross Expenditure and Stocked Material	\$ 243,927.40
Less Inventory Dec. 31, 1968.	<u><u>36,390.40</u></u>
	\$ 207,537.00
Less Credits	<u><u>43,780.25</u></u>
Net Expenditure	<u><u>\$ 163,756.75</u></u>

Included in the net expenditure of \$163,756.75 is the amount of \$2,449.86 holdback from jobs completed in 1967 and shown in 1968 accounts.

The above credit is made up as follows:-

Fredericton Housing Ltd. (portion of) Canterbury Drive and Topcliffe) Crescent, Phase #1)	\$ 4,760.48
Fredericton Housing Ltd. (portion of) Canterbury Drive and Topcliffe) Crescent, Phase #2)	6,099.29
Fredericton Housing Ltd. (Surrey Crescent)	6,028.23
Chippins, Michener Court	1,962.29
Hill Bros., Bailey Drive and Walker Street	6,917.14
Work done and materials sold to private parties	2,188.20
Province of New Brunswick, Highway Division, relocating water line, Union Street	4,158.80
Journal Voucher (to correct Receiver General Invoice, Leith Draper)	8,000.00
Journal Voucher (Materials paid for by Capital Account Water and sold to other City Departments)	<u><u>3,665.82</u></u>
TOTAL	<u><u>\$ 43,780.25</u></u>

Water Main installations were made at the following locations:-

Location	Size of C. I. Pipe				
	4"	6"	8"	10"	12"
Fredericton Housing Ltd. Phase #1		628'		136'	
Fredericton Housing Ltd. Phase #2		987'		316'	
Fredericton Housing Ltd., Surrey Crescent		18'	1290'		
Michener Court	390'				
Priestman Street, Smythe Street to Regent St.		149'	13'		
Walker St. and Bailey Drive		11'	810'		3212'
TOTALS	390'	1793'	2113'	449'	3212'

Total lineal feet all sizes 7,957

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

Location	Payment to Contractors Including Reserve for Holdbacks	City Labor and Machinery	Materials	Total
Fredericton Housing Ltd. (Phase #1)	\$	1,507.04	3,253.44	4,760.48
*Fredericton Housing Ltd. (Phase #2)		129.35	5,969.94	6,099.29
*Fredericton Housing Ltd. (Surrey Cres.)		54.61	5,988.85	6,043.46
Michener Court		732.53	1,229.76	1,962.29
Priestman Street		1,083.67	27,949.38	37,425.10
Walker Street and Bailey Drive		1,979.56	4,937.58	6,917.14
TOTAL	\$ 8,392.05	5,486.76	49,328.95	63,207.76

*Labor, machinery, sand and brick supplied by Fredericton Housing Limited and does not show on City Accounts.

All above costs include any holdback payments which will appear in 1969 accounts.

Fredericton Housing installed Water Mains for Phase #2 (portion of Canterbury Drive and Topcliffe Crescent and on Surrey Crescent).

City crews and City machinery installed Water Mains on Michener Court, Bailey Drive and Walker Street.

E. W. Farris installed the Water Main on Priestman Street.

The following shows the cost per foot for laying various sizes of Cast Iron Pipe by Contractors and City workmen and includes gates and manholes, but does not include fire hydrants.

Cost by Contractors per lineal foot

Location	Size of Pipe		
	6"	8"	12"
Priestman Street, Regent Street to Smythe Street	\$ 7.19	8.47	11.31

Water Main on Priestman Street was laid in a common trench.

Cost by City Crews and City Machinery per lineal foot

Location	Size of Pipe			
	4"	6"	8"	10"
Fredericton Housing Ltd. Phase #1 Michener Court Walker Street and Bailey Drive	\$ 5.04	5.77		8.51

All above construction was laid in a common trench.

Total inventory as of December 31, 1968 -
\$36,390.40.

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

- 1) Water High Level Reservoir
- 2) Water Intermediate Level Reservoir
- 3) Relocation of Water Main, Union St.
- 4) Water Exploration (Well #5)

1) 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. A survey was made and a plan of the site supplied to the City by Seaboard Surveys in 1967.

It is proposed that this Reservoir will be constructed and be in operation in 1969.

Expenditure\$ 9,859.01

The above expenditure is made up as follows:-

Sub-Surface Surveys (Foundation investigation)	\$ 1,413.96
Seaboard Surveys (Preliminary survey, etc.)	346.00
Purchase of property (Leith Draper)	8,000.00
City Labor	<u>99.05</u>
TOTAL	\$ 9,859.01

Expenditures to date:-

1967	\$ 124.10
1968	<u>9,859.01</u>
Total	
Expenditure ..	\$ 9,983.11

2) Water - Intermediate Level Reservoir

In 1968 Canada Gunite Company Limited was awarded a contract to construct a prestressed 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.

Expenditure to date\$ 101,974.63

The above expenditure is made up as follows:-

Payment to Canada Gunite Company Limited	\$ 88,380.87
W. R. and W. W. Thomas (1022 yards sand @ \$1.10 per yard)	1,124.20
MacLaren Atlantic Ltd. (Engineering services)	4,902.45
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)	1,969.16
Journal Voucher (Pension contribution)	<u>84.77</u>
TOTAL	\$101,974.63

The above reservoir was put in operation December 31, 1968.

3) Relocating of Water Main, Union Street

Due to the construction of a new bridge over the Nashwaak River in 1967, a portion of the Water Main on Union Street (268 feet) was relocated in 1968; cost of which was borne by the Province of New Brunswick.

Expenditure (1968)\$ 3,984.26

The above expenditure is made up as follows:-

City Labor	\$ 1,490.65
City Machinery	1,135.50
Materials (Pipe, Manholes,etc.)	<u>1,358.11</u>
TOTAL	\$ 3,984.26

Expenditure 1967\$ 95.85
Expenditure 19683,984.26

Total Expenditure (1967 & 1968) \$ 4,080.11 (Plus labor overhead)

4) Water Exploration - Drilled Well #5

In 1968 International Water Supply was awarded a contract to develop Well #5, Overhaul Pump #2 Saunders Street and install same in a new Pump House. The contract price being \$45,292.00. To date Well #5 has been developed and tested and a contract entered into with Fredericton Housing Limited to construct a Pump House to house the above mentioned pumping equipment. The contract price of this construction is \$7,400.00. The footing course for this building has been completed and construction will be completed in 1969.

This Well is situated on Woodstock Road on the south bank of the St. John River just west of Royal Canadian Mounted Police property; on property acquired from the Province of New Brunswick.

It is estimated that this Well will produce 900 I.G.M.

Expenditure 1968\$ 49,872.45

The expenditure of \$49,872.45 is made up as follows:-

International Water Supply	\$ 44,257.00
MacLaren Atlantic Limited	5,237.77
Canadian Pacific Railway (Well plans to International Water Supply)	3.25
Daily Gleaner (Ad re #5 Well and printing tender)	19.80
Seaboard Surveys (Prints, survey of new site)	246.64
Journal Voucher (City Machinery)	4.00
Journal Voucher (City Labor)	101.65
Journal Voucher (Pension contribution)	2.34
TOTAL	<u>\$ 49,872.45</u>

A summary of ground water explorations and development costs from 1953 to December 31, 1968 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 #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 of #3 Well ...	46,554.32
1961 Develop, House and Connecting of #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 and 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..	<u>49,872.45</u>
TOTAL	<u>\$ 344,299.32</u>

Capacity available 1968 2,600 I.G.P.M.
Present average demand 1,400 I.G.P.M.
Maximum demand 1,903 I.G.P.M.

CAPITAL ACCOUNT GRAVEL ROADS

Gross Expenditure	\$ 101,751.39
Credits	<u>30,866.01</u>
Net Expenditure	<u>\$ 70,885.38</u>

The above credits are made up as follows:-

Parkside Development (Prospect St.).....	\$ 4,264.08
Fredericton Housing Ltd., (portion of Canterbury Drive and Topcliffe Crescent, Phase #1)	Local 8,664.27
Fredericton Housing Ltd. (portion of Canterbury Drive and Topcliffe Crescent, Phase #2)	Improvement 7,198.42
Fredericton Housing Ltd. (Surrey Cres.)... Chippins Ltd. (Michener Court)	Charges 263.23 5,061.00
Hill Bros. (Walker Street and Bailey Dr.) Journal Voucher (Gravel from Roads and Streets),.....	5,349.38 65.63
TOTAL	<u>\$ 30,866.01</u>

Included in the above expenditures are:-

- 1) Grading and Gravelling Curbed Streets
- 2) Gravel Road Construction (New City Streets)
- 3) Completion of Gravel Road Construction,
Priestman and Prospect Streets.

1) Grading and Gravelling Curbed Streets

The list of Streets under this heading will be found under "Capital Account Curb and Gutter" which is contained in the body of this Report on page 22. The expenditure for Gravelling Curbed Streets amounted to \$12,692.46.

2) Gravel Road Construction

The following Streets were constructed and gravelled under this heading:-

<u>Location</u>	<u>Lineal Feet</u>
Bailey Drive, Kennedy Court to Walker Street	255
Walker Street, Bailey Drive to Irvine Street	513
Topcliffe Crescent	1,775
Canterbury Drive, Cambridge Crescent to Topcliffe Crescent	970
Michener Court	365
TOTAL	<u>3,878</u>

3,878 lineal feet = .73 miles

Surrey Crescent is not included in above mileage as only partially gravelled in 1968 due to the request of the subdivider.

In addition Beaverbrook Street, from University Avenue to Forest Hill Road was constructed and gravelled a distance of .28 miles and is included under the heading "Capital Account Beaverbrook Street", which appears on page 39 of this Report.

3) Completion of Gravel Construction, Priestman and Prospect Sts.

In 1967 partial construction only was possible on Priestman Street from Regent Street 600 feet east due to the delay in the relaying of an underground telephone cable from Regent Street to the new Telephone Building situated on Priestman Street, and partial construction was done on Prospect Street from Station 11+50 to the City line, a distance of .57 miles, due to the lateness of the season. Both of these projects were completed in 1968. In addition under this heading, Priestman Street was reconstructed and gravelled from Smythe Street to Regent Street, a distance of .6 miles at an expenditure of \$28,737.62 and was made up as follows:-

Labor	\$ 4,167.77
Machinery charges ...	3,211.00
Material	<u>21,358.85</u>
TOTAL	<u>\$ 28,737.62</u>

The expenditure under this heading for grading and graveling the City portion of Prospect Street was \$33,994.65 and was made up as follows:-

<u>1967</u>	Labor	\$ 20,039.48
	City Machinery	48.90
	Materials	<u>723.60</u>
		\$ 20,811.98
<u>1968</u>	Labor	\$ 6,628.47
	City Machinery	570.00
	Materials	<u>5,984.20</u>
	Total Expenditure (1967 and 1968)	<u>\$ 33,994.65</u>

The expenditure under this heading for grading and graveling Priestman Street east from Regent Street amounted to \$8,705.86 and was made up as follows:-

<u>1967</u>	Labor	\$ 1,762.59
	City Machinery	1,845.00
	Materials	<u>1,224.18</u>
		\$ 4,831.77
<u>1968</u>	Labor	\$ 942.01
	City Machinery	744.25
	Materials	<u>2,187.83</u>
	Total Expenditure (1967 and 1968)	<u>\$ 8,705.86</u>

Prospect Street mileage from Station 11+50 to the City line is included in the 1968 City Street Mileage.

CAPITAL ACCOUNT BEAVERBROOK STREET

In 1963 the Diamond Construction Co. (1961) Limited was awarded a contract to construct Beaverbrook Street from Forest Hill Road to University Avenue. The major portion of this road was cleared and approximately 800 feet was rough graded from the eastern entrance of Waterloo Row towards University Avenue. Further construction on this road in 1963 was halted by an injunction served on the City of Fredericton. The expenditure of the above construction amounted to \$3,180.07.

In 1968 after a court decision in favour of the City, the construction of the above Road was completed at an expenditure of \$62,817.84 made up as follows:-

Forbes and Sloat (8680.55 tons gravel)	\$ 14,382.32
Maritime Accessories (paint for posts)	24.60
Provincial Artisans Inc. (stakes)	76.66
J. S. Neill Wholesale (wire)	6.71
John Gibson and Son (fertilizer)	25.18
Mr. Roy Reed (42 yards topsoil)	71.40
Harry C. Smith (21 yards topsoil)	35.70
W. R. and W. W. Thomas (196 yards topsoil)	240.80
Ashley Colter (1961) Ltd. (25 - 8 x 8 x 8 Cedar Posts)	94.16
Sansom Equipment (S.S. & E. Tax - Compactor rental on Payroll)	43.20
Diamond Construction Co. (1961) Ltd. (paving)	16,284.75
Cameron Grant Inc. (Specification and plan for Traffic Signal)	610.00
Maritime Electric Co. (Installing 13-35' Poles and underground wiring)	2,475.73
Gordon Concrete (11½ yards concrete)	163.13
Canadian Pacific Railway (cost of relocating signal)	1,106.58
Stan Cassidy (Installing signal lights)	5,634.90
Journal Voucher (City labor)	9,951.31
Journal Voucher (City machinery)	4,958.00
Journal Voucher (Pension contribution)	292.35
Journal Voucher (Materials, cement, sand, brick, manholes, catch basins, etc.)	2,375.36
Journal Voucher (1586' of concrete curbing)	<u>3,965.00</u>
TOTAL	\$ 62,817.84
Total expenditure (1963 and 1968).....	<u>\$ 65,979.91</u>

For the above expenditure the Road was constructed, gravelled and paved, an asphalt sidewalk and a concrete curb were constructed on the south side of Beaverbrook Street; trees were relocated, catch basins were installed where necessary; extensions made to existing surface sewer mains; guard posts installed where required; street lights installed and traffic lights erected at University Avenue and Beaverbrook Street.

CAPITAL ACCOUNT TRAFFIC LIGHTS

Expenditure.....\$ 1,112.00

The above expenditure was for preparing plans and specifications for the installation of traffic lights at various Street intersections, by Cameron Grant Associates.

The following locations for Traffic Lights were approved in 1968 and will be installed in 1969:-

Intersection of Brunswick and Northumberland Streets

Intersection of St. John and Brunswick Streets

Intersection of Gibson and Union Streets

The synchronization of the Traffic Lights on Queen Street were deferred until a later date.

CAPITAL ACCOUNT FOREST HILL ACCESS ROAD

Expenditure\$ 1,027.92

The above expenditure was for ripraping along the sidewalk in front of the property of Hazen Jordan, 49 Forest Hill Road.

CAPITAL ACCOUNT MAINTENANCE DEPOT

In 1968 the City purchased land from Crown Assets Disposal Corporation on the east side of Maryland Hill Road beyond the Trans Canada Highway. Some clearing has been done on this property but due to some experiments being conducted by the University in this area, cutting operations have been suspended.

To date expenditures are as follows:-

Purchase of property	\$ 13,000.00
J. S. Neill Wholesale (axes, files, etc.)	46.21
Journal Voucher (City Machinery)	182.00
Journal Voucher (Gas, Diesel, Oil)	19.53
Journal Voucher (Labor)	875.15
Journal Voucher (Pension contribution)	22.04
TOTAL	\$ 14,144.93

CAPITAL ACCOUNT RIVER FRONT DEVELOPMENT

Expenditure \$ 2,898.70

Included in the above expenditure is a shared cost agreement with the Provincial Government for a study and report of the Fredericton River Front Drive, information having been requested by the Technical Committee on the new Bridge location. This study was carried out by Conlon Engineering Ltd. Also included is a survey of the upper end of Queen Street by Seaboard Surveys for a future shopping area.

CAPITAL ACCOUNT PARK DEVELOPMENT

Under this heading, a caretaker's residence was constructed by Topmar Housing, under the supervision of Associated Designers. This construction was begun in 1967 and completed in 1968. Further progress was made on the construction of a future Athletic Field begun in 1966. The Field is situated in the southerly section of the Odell Park property with an entrance from Smythe Street, adjacent to Willingdon Street.

Expenditure 1968 \$ 21,262.65

The above expenditure is made up as follows:-

Topmar Housing (Payment on Caretaker's Residence)	\$ 2,920.52
Associated Designers (Field and office supervision)	26.67
Bond Discount.....	855.00
Provincial Artisans Inc. (Stakes)	15.90
Harry C. Smith (2625 yards topsoil @ \$1.70 per yard) ...	4,462.50
W. R. and W. W. Thomas (3550 yards topsoil @ \$1.70 per yd.)	6,035.00
W. R. and W. W. Thomas (70 yards sand @ \$1.10 per yard).	77.00
J. S. Neill Wholesale (Chain)	10.11
City Labor	3,015.43
Journal Voucher (Pension contribution)	92.66
Journal Voucher (Materials)	218.36
Journal Voucher (City machinery)	<u>3,533.50</u>
TOTAL	<u>\$ 21,262.65</u>

Cost of Caretaker's residence, including hold-back which will show in 1969 accounts:-

Topmar Housing \$ 13,744.00
Associated Designers . 909.98
Total completed cost.. \$ 14,653.98

Expenditures to date on Athletic Field:-

1966 Expenditure (less credits)	\$ 3,161.64
1967 Expenditure	9,164.67
1968 Expenditure	<u>18,315.46</u>
TOTAL	<u>\$ 30,641.77</u>

LOCAL IMPROVEMENT

In 1966 the Local Improvement By-Law was amended to full cost of initial services to the subdivider.

The following summary of Local Improvement projects undertaken in 1968, show the actual cost of construction (including holdback payments) which were paid by the subdivider.

<u>Location</u>	<u>Service</u>	<u>Cost</u>	<u>No. of Lots</u>
Parkside Development (incomplete 1967)	Gravel Road	\$ 4,264.08	Shown in 1967 Report
Fredericton Housing	Water	10,859.77	
Topcliffe Crescent	Domestic Sewer	4,650.71	
Canterbury Drive	Storm Sewer	6,442.81	
Incomplete 1967	Gravel Road	15,862.69	51
	Sidewalk	<u>3,027.00</u>	
	TOTAL	\$ 40,842.98	
	Plus 1967 Costs	<u>19,384.12</u>	
		<u>\$ 60,227.10</u>	
Chippin's Ltd.	Water	1,962.29	
Michener Court	Domestic Sewer	1,731.71	7
	Storm Sewer	3,984.30	
	Gravel Road	<u>5,061.00</u>	
	TOTAL	\$ 12,739.30	
Hill Brothers	Water	6,917.14	
Bailey Drive &	Domestic Sewer	2,216.88	15
Walker Street	Storm Sewer	3,785.39	
	Gravel Road	5,349.38	
	Sidewalk	<u>1,633.75</u>	
	TOTAL	\$ 19,902.54	
F'ton Housing Ltd. Surrey Crescent (Incomplete 1968)	Water	\$ 6,028.23	
	Domestic Sewer	2,295.07	27
	Storm Sewer	3,518.15	
	Gravel Road	263.23	
	Sidewalk	<u>3,629.25</u>	
	TOTAL	\$ 15,733.93	

SUMMARY OF COSTS TO
SUBDIVIDERS FOR SERVICES - 1968

<u>Service</u>	<u>Cost</u>	<u>No. of Lots</u>
Water	\$ 25,767.43	
Domestic Sewer	10,994.37	
Storm Sewer	17,730.65	73
Gravel Road	30,800.38	
Sidewalk	<u>8,290.00</u>	
TOTAL	<u><u>\$ 93,582.83</u></u>	

NOTE:- Fredericton Housing supplied crew and equipment on their projects in 1968. All work was carried out under City supervision.

PUBLIC WORKS

Gross Expenditure	\$ 61,062.99
Credits	<u>4,465.27</u>
Net Expenditure	\$ 56,597.72
1968 Appropriation	<u>39,400.00</u>
DEBIT	<u>\$ 17,197.72</u>

The credits of \$4,465.27 are made up as follows:-

Sale of Maps to private parties (City of Fredericton) ...\$	8.35
Sale of Hard Hats to casual employees	236.25
Arthur D. Cloff (Lawn damage)	16.00
N.B.E.P.C. (cleaning flats)	2,261.58
Harley Carr (Removal of tree parts)	125.12
Removal of Stumps for private parties	399.07
N. B. Telephone Co. (Long distance calls)	3.34
Journal Voucher (Fertilizer)	271.06
Journal Voucher (City machinery)	<u>1,144.50</u>
TOTAL	<u>\$ 4,465.27</u>

The labor, hired trucks and city machinery charges under Public Works expenditure was incurred as follows:-

<u>Item</u>	<u>Labor</u>	<u>Hired Trucks</u>	<u>City Machinery</u>
Trees	\$ 19,474.47	\$ 2,258.60	\$ 8,241.50
Back Drain Diversion	30.97		
Back Drain	21.52		4.00
Survey	526.19		
Surface Sewer	275.92	13.50	134.00
Unforseen	5,576.10	362.50	830.50
Casuals' Vacation Pay	4,189.47		
Retro-active Pay	472.00		
TOTALS =	<u>\$ 30,566.64</u>	<u>\$ 2,634.60</u>	<u>\$ 9,210.00</u>

TREES:-

Expenditure \$ 34,879.90

The above expenditure is made up as follows:-

Labor	\$ 19,474.47
Hired Trucks	2,258.60
City Machinery	8,241.50
Materials	4,305.33
Mr. Charles Smith (Honorary for services rendered)	<u>600.00</u>
TOTAL	<u>\$ 34,879.90</u>

In 1968, 249 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 1968:-

<u>Species</u>	<u>Number Removed</u>
Elm	207
Maple	20
Ash	3
Tamarack	3
Basswood	4
Willow	1
Spruce	5
Poplar	5
Birch	1
Total all Species	= 249

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 Elm Bark Beetle, which carries the fungus of Dutch Elm Disease, are also removed by City crews. Following is a list of trees which were confirmed as Dutch Elm Disease trees:-

<u>Location</u>	<u>Number of Trees</u>
Salamanca, University of New Brunswick	2
Lincoln Road	2
230 University Avenue	1
Between George and Charlotte Streets along Railway Road.	1
Wilsey Road near Lincoln Road	1
Lincoln Road, McKeen's Irving Service Station	1
527 Regent Street	1
University Avenue	1
Back York Structural Steel (old location) Union Street ..	1
721 Union Street	1
267 Forbes Street	1
Woodstock Road (Brick Yard Area)	6
Woodstock Road and Golf Club Road	2
Victoria Street	1
Woodstock Road opposite Hermitage Cemetery	1
276 Parkhurst Drive	1
Lincoln Road, Canada Research Station	1
225 Smythe Street	1

Forward 26

<u>Location</u>	<u>Number of Trees</u>
Carried Forward	26
743 MacLaren Avenue	1
344 Forbes Street	1
639 MacLaren Avenue	1
749 MacLaren Avenue	1
158 Friel Street (rear yard)	1
385 Union Street	1
Odell Park	1
TOTAL	<u>33</u>

Following is the number of trees removed from 1961 to 1968 with Dutch Elm Disease:-

1961	2
1962	2
1963	1
1964	14
1965	8
1966	12
1967	18
1968	<u>33</u>
TOTAL	<u>90</u>

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 owner, 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 (967) 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 1968 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>
Lorne Street	14
Massey Street	26
York Street	20
Mansfield Street	2
Oxford Street	15
Lynhaven Street	5
Eglinton Street	6
Norfolk Street	40
Bristol Street	13
Liverpool Street	19
Waggoner's Lane	32
Irvine Street	24
Canterbury Drive	8
Coventry Crescent	8
TOTAL	<u>232</u>

56 trees were replaced in 1968 at various locations in the City due to loss through dry weather or vandalism.

Under the above heading the following trees were purchased in 1968 from Lansdowne Nursery:-

50 Norway Maples (8' - 10') @ \$5.50 each	\$ 275.00
10 Norway Maples (7' - 8') @ \$4.50 each	45.00
60 Silver Maples (8' - 10') @ \$5.40 each	324.00
50 Crimson King Maples @ \$6.00 each	300.00
50 Tilia Cordata (8' - 10') @ \$5.90 each	295.00
10 Tilia Cordata (6' - 8') @ \$4.40 each	44.00
50 Tilia Pallida (8' - 10') @ \$5.25 each	<u>262.50</u>
TOTAL	<u>\$ 1,545.50</u>

In addition 50 Lombardi Poplars were planted at the Regent Street Recreation Park and charged under the heading "Development Park Areas" and will appear later in this Report.

In 1965 the City of Fredericton purchased a Power - R - Stumper at a cost of \$5,746.16.

With the addition of this machine 144 stumps were removed at various locations in the City at an expenditure of \$3,492.18 and was made up as follows:-

Labor	\$ 2,340.23
Machinery charges	965.14
Material	<u>186.81</u>
TOTAL	<u>\$ 3,492.18</u>

In 1967 Mr. David Urquhart was appointed Supervisor of Parks and Trees, responsible to the City Engineer. It is anticipated that with this addition to staff that this branch will be 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:-

The expenditure under this heading was for labor \$30.97 and was for general maintenance of the drain.

BACK DRAIN:-

The expenditure under this heading amounted to \$25.52, made up of Labor \$21.52 and City machinery \$ 4.00 and was for general maintenance of the drain.

SURVEYING:-

Under this heading, expenditures amounted to \$771.02 made up as follows:-

Labor	\$ 526.19
Materials	<u>244.83</u>
TOTAL	\$ 771.02

The labor charge of \$526.19 was for helpers with the Engineers during the course of their work during 1968, on other than programmed projects.

The material cost of \$244.83 was made up as follows:-

J. S. Neill Wholesale (Tapes, crayons, cord, axes, nails) ..	\$ 106.91
J. C. Risteen Co. (Stakes)	36.82
Paul Burden (Field Books)	19.08
Seaboard Surveys (Survey work on Lincoln Road)	<u>82.02</u>
TOTAL	\$ 244.83

SURFACE SEWERS:-

Expenditure\$ 524.88

The total expenditure is made up as follows:-

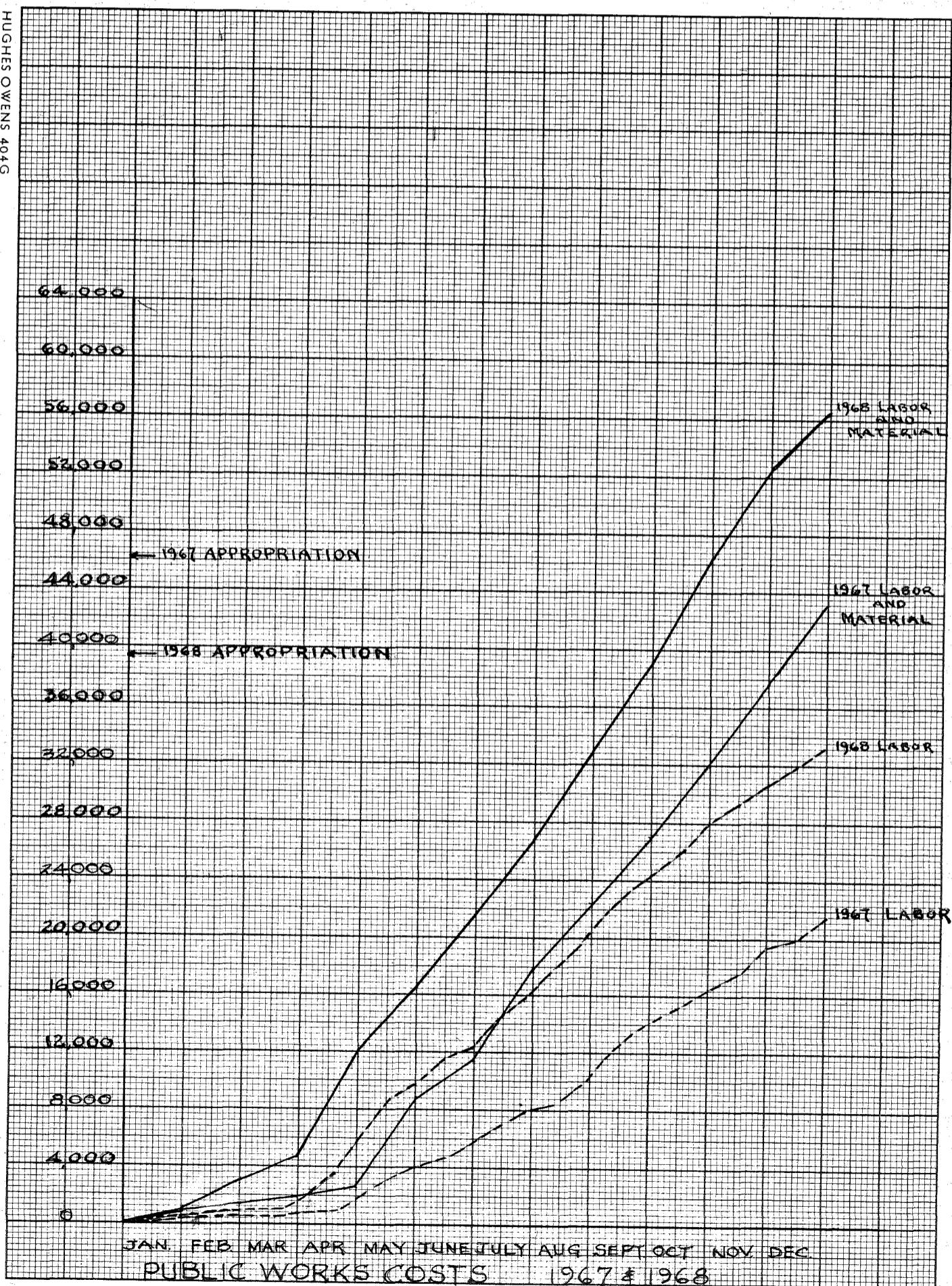
Labor	\$ 275.92
Hired Trucks	13.50
City Machinery	134.00
Materials	<u>100.86</u>
TOTAL	\$ 524.28

For the above expenditure Surface Sewer mains were extended on MacLaren Avenue and Mansfield Street to take care of the overflows from private property to City Streets.

UNFORSEEN ACCOUNT - LABOR AND HIRED TRUCKS:-

Removal of Christmas Trees from City Streets..	\$ 336.41
Marking Domestic Sewer Outlet, St. John River.	55.22
Office Maintenance	9.31
Grace Memorial	1.92
Benches (Painting and repairs)	271.44
Sir James Dunn Fountain	64.02
Spraying Swamp areas	91.28
Drilling course	13.40
Armistice Stand	48.78
Taking of Inventory, 1968	98.46
Greens (Cutting, raking, seeding, topsoiling, etc.).....	<u>4,948.36</u>
TOTAL	\$ 5,938.60

HUGHES OWENS 404G



The total expenditure amounted to \$12,381.74 and was made up as follows:-

Labor	\$ 5,576.10
Hired Trucks	362.50
City Machinery	830.50
Other Materials	<u>5,612.64</u>
TOTAL	\$ 12,381.74

CASUALS' VACATION PAY:-

The total amount under this heading amounted to \$4,189.47 for casual labor Vacation pay.

RETRO-ACTIVE PAY:-

The amount under this heading was \$472.00 which was retro-active pay due to Union agreement.

ODELL PARK

Gross Expenditure	\$ 13,239.99
Credit	<u>152.47</u>
Net Expenditure	\$ 13,087.52

The above credit is made up as follows:-

N. B. Telephone Co. (credit re J. Doherty long distance calls)	\$ 9.59
L. Hunter (Tractor damage)	102.63
Journal Voucher (Use of Tractor at Wilmot Park)	<u>40.25</u>
TOTAL	\$ 152.47

The above expenditure is made up as follows:-

N. B. Minister of Finance (Vehicle registration)	\$ 2.00
Saunders and Nason (set of chains and new plow for Massey Harris)	568.61
N. B. Telephone Co. (phone)	68.49
Miles Tire (repairing tractor tire and service call)	20.00
Auto Machinery (grease gun, fan belt, hose fittings).....	31.75
Sutherland Marine (repairing saw)	3.75
Frank Blaney (2 chain links, repairs to mower)	<u>149.56</u>
Forward	\$ 744.16

	Carried Forward	\$ 744.16
Millar Motors (repair to saw)	58.02	
Duke Lawn Equipment (parts for mower)	6.76	
J. C. Risteen Co. (paint)	83.67	
H. R. Nicholson (200 Gladiola bulbs)	20.00	
W. R. and W. W. Thomas (300 yards topsoil)	510.00	
John Gibson and Son (feed, fertilizer)	32.55	
Moore Water Gardens (12 water flowers)	57.25	
Minister of Finance (S. S. and E. Tax on water plants) ..	3.84	
C.N.R. (express on water plants)	3.95	
E. M. Young Ltd. (glue, chicken wire)	32.51	
Atlas Building Supplies (lumber, nails)	48.01	
L. E. Shaw (brick)	82.68	
Labor by Police Department (painting signs)	5.32	
Lansdowne Nursery (various flowers and shrubs)	102.35	
Atlantic Rentals Ltd. (rental on mixer)	10.60	
Scott's Nursery (plants)	135.00	
Workmen's Compensation (1968 Provincial payment)	82.43	
Capital Garden Supply (grass seed, tulip bulbs)	92.00	
J. S. Neill Wholesale (paint, turpentine, padlock, wire, etc.)	386.35	
Hedley Greer (pipe)	7.42	
City of Fredericton (Water and sewer rates)	39.70	
Journal Voucher (Pension contribution)	316.16	
Journal Voucher (City machinery)	1,490.50	
Journal Voucher (salt, rock dust, crushed rock, lime sand, cement, etc.)	573.29	
Journal Voucher (Gas, Diesel Fuel, Oil)	48.29	
Journal Voucher (City labor)	<u>8,167.18</u>	
TOTAL	\$ 13,239.99	

For the above expenditure, trees were cut and pruned where necessary, flower beds constructed and flowers planted, underbrush was cleared, paths were constructed and the grass was kept mowed.

CARLETON PARK

Expenditure \$ 5,107.10

The above expenditure is made up as follows:-

John Gibson and Son (fertilizer, grass seed)	\$ 25.15
Scott Nursery (Plants)	99.75
Royal Mills (mixed seed)	11.50
Harry C. Smith (28 yards topsoil)	47.60
J. S. Neill Wholesale (Rose dust, spade, lime, shears, file, padlock, paint)	78.60
Marathon Realty (Park rental)	700.00
Miller Motors (tune up mower)	16.80
Capital Garden Supply (grass seed, rose dust, tulip bulbs, rosebushes)	259.14
W. R. and W. W. Thomas (17 yards topsoil)	130.90
Journal Voucher (Gas and Oil)	7.22
Journal Voucher (Machinery)	608.50
Journal Voucher (lime)	64.40
E. M. Young (Mower)	70.49
Journal Voucher (Labor and Hired Machinery)	2,835.96
Journal Voucher (Pension contribution)	151.09
TOTAL	\$ 5,107.10

The following was purchased under this heading:-

1 - Rotary Mower #139B	\$ 66.50
Tax	<u>3.99</u>
TOTAL	\$ 70.49

WILMOT PARK

Expenditure \$ 5,051.03

The expenditure of \$5,051.03 is made up as follows:-

Materials used on Lawns and Flower Beds	\$ 121.39
Supplies and Repairs to Lawn Mowers	15.93
Materials and labor charges expended on Caretaker's House	106.82
Lighting, Wilmot Park (14 - 4' Fluorescent lamps)	840.00
Journal Voucher (Machinery)	527.75
Journal Voucher (Lime)	168.30
Journal Voucher (Oil)	3.15
Journal Voucher (Pension contribution)	136.55
Journal Voucher (Labor)	3,089.14
Journal Voucher (Water 1968)	30.00
Journal Voucher (Sewer rental 1968)	12.00
TOTAL	\$ 5,051.03

CITY YARD

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

Expenditure \$ 8,775.88

The above expenditure is made up as follows:-

Labor	\$ 5,297.00
City Machinery charges	88.00
Light, Power and	
Telephone	1,047.58
Journal Voucher (Pension	
contribution)...	109.14
Materials (Tools,	
Lumber, etc.) ..	<u>2,234.16</u>
TOTAL	<u>\$ 8,775.88</u>

DEVELOPMENT of PARK AREAS

Gross Expenditure	\$ 6,967.42
Credit	<u>100.27</u>
Net Expenditure	<u>\$ 6,867.15</u>

The above credit was for cedar posts used in
the constructing of pathways and fences.

For the above expenditure, pedestrian walkways
were constructed in Skyline Acres subdivision, Odell
Park and on Alexandra Street. Seeding was done on
Fisher Park and a fence constructed in Henry Park
between the properties facing on Medley Street and
Henry Park property from Canadian Pacific Railway
property to Henry Park Pool location. Crusher Dust
was applied to the paths, topsoil added and the
sidelines of the pathways fenced.

RECREATION

Expenditure \$ 6,532.70

The above expenditure does not include all
playground expenditures, but only those which appear on
department 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 playgrounds
appear here.

The expenditure of \$6,532.70 is made up as follows:-

Maritime Electric Co. (setting 2 poles)	\$ 110.00
Atlas Building Supplies (insulation, moulding, caulking compound)	56.21
W. R. and W. W. Thomas (7 yards topsoil)	11.90
Provincial Artisans (stakes)	22.05
Diamond Construction (1961) Ltd. (368.95 tons 1/2" Hot Mix, Queens Square).....	3,320.55
Journal Voucher (cement, crushed rock, brooms, decals)....	51.26
Journal Voucher (Gas)	213.33
Journal Voucher (Machinery)	482.00
Journal Voucher (Labor)	976.82
Journal Voucher (Pension contributions)	38.58
Journal Voucher (Water used at Queens Square Pool)	500.00
Journal Voucher (Water used at Henry Park Pool)	500.00
Journal Voucher (City Wading Pools)	250.00
TOTAL	\$ 6,532.70

SIGN DEPARTMENT

Purchasing, repairing and installing street signs on City Streets.

The expenditure under this heading amounted to \$2,237.40, made up as follows:-

Labor	\$ 1,536.17
Journal Voucher (Pension contribution)	27.83
Materials	<u>699.40</u>
	\$ 2,263.40
Less Credit (4 Decals to Police Department)....	26.00
TOTAL	\$ 2,237.40

CITY HALL

Expenditure \$ 364.55

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 \$364.55 is made up as follows:-

Millar Motors Ltd. (Recharging fire extinguishers).....	\$ 4.24
J. L. Simms (Plywood)	10.68
J. S. Neill Wholesale (Shut off valve cap)50
Journal Voucher (Pension contributions)	8.04
Journal Voucher (Labor)	<u>341.09</u>
TOTAL	<u>\$ 364.55</u>

DOMESTIC SEWER

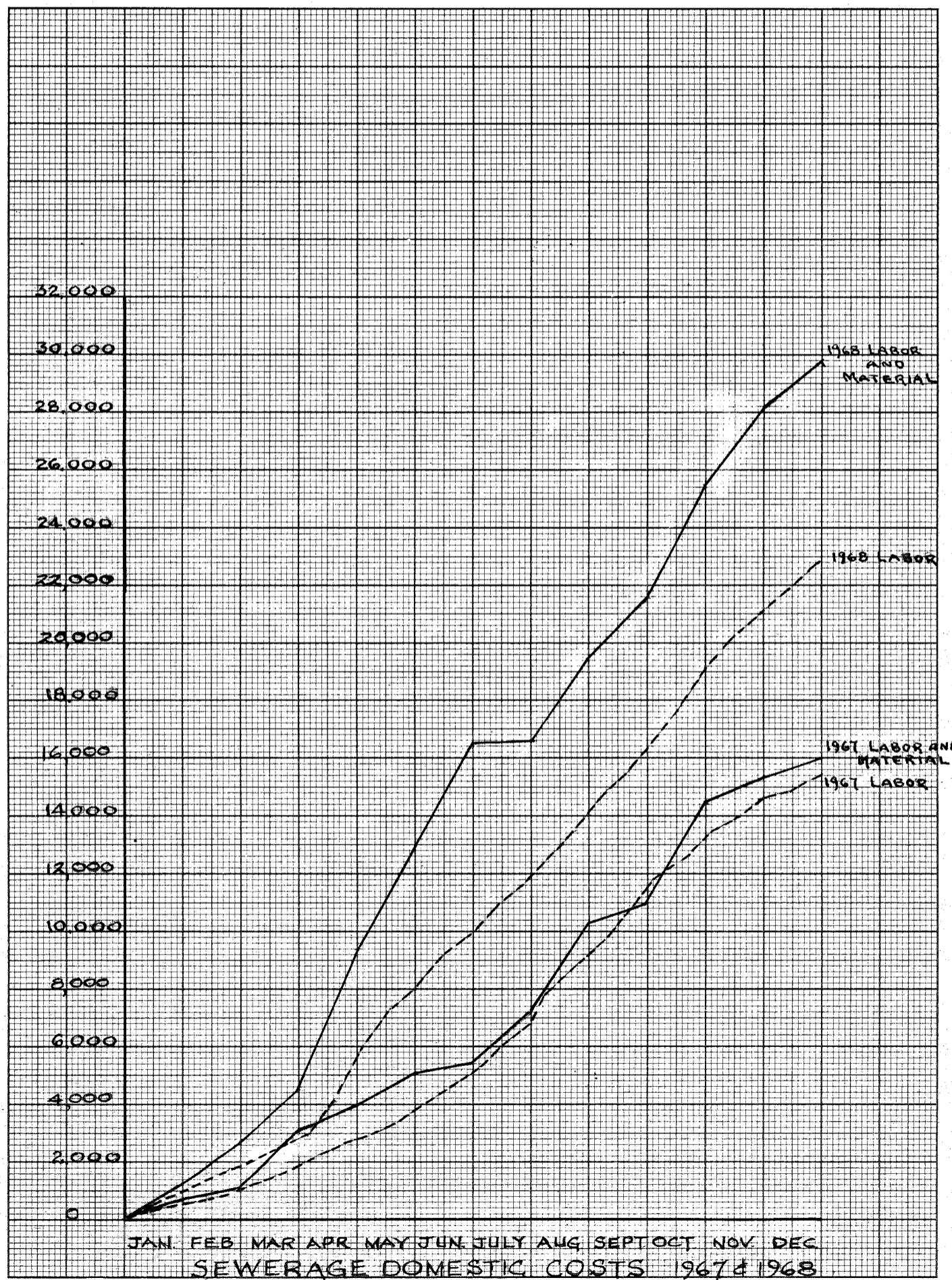
Labor Cost	\$ 22,005.80
Hired Trucks and Machinery	786.48
City Machinery Cost	9,178.00
Material Cost	<u>17,873.87</u>
Gross Expenditure	\$ 49,844.15
Credit	<u>20,115.91</u>
Net Expenditure	<u>\$ 29,728.24</u>

The above credit of \$20,115.91 is made up as follows:-

Material, Labor and Machinery supplied for house connections	\$ 19,716.04
Work done for private parties (cleaning floor drains, cleaning main sewer (U.N.B.) and pumping out ducts)	171.61
G. B. Gill (1 set used sewer rods)	50.00
E. W. Clowater (8' - 4" Transite Pipe)	3.36
W. J. Bearisto Co. Ltd. (2 - 4" Adaptors)	3.40
Department of Indian Affairs (8 - 4" Asbestos concrete couplings)	8.00
Journal Voucher (Pipe)	1.50
Journal Voucher (Sewer rental, Fire Department)	150.00
Journal Voucher (Sewer rental, Wilmot Park)	<u>12.00</u>
TOTAL	<u>\$ 20,115.91</u>

New customers connected to the City Sewer system in 1968 totalled 172.

HUGHES OWENS 404G



No Domestic Sewer extensions were made under this heading but do appear under "Capital Account Sewer Domestic."

All Sewer Mains were cleaned and flushed in 1968.

The Fredericton Domestic Sewer System consists of 63.76 miles (12.59 miles in Carleton Ward and 51.17 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
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 Pipe92 miles
8" Terra Cotta Pipe	35.38 miles
12" Transite Pipe	0.53 miles
12" Corrugated Iron Pipe...	0.07 miles
10" Transite Pipe	1.38 miles
8" Transite Pipe	14.30 miles
8" Cast Iron Pipe	0.04 miles
6" Transite Pipe	0.02 miles
6" C.I. Force Main	<u>0.30</u> miles
TOTAL	<u>63.76</u> miles

OLD BURIAL GROUND

The Old Burial Ground between Brunswick and George Streets was kept in good condition in 1968.

The tombstones that could be repaired and were not too seriously damaged by vandals were repaired.

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

Gross Expenditure ...	\$ 2,575.36
Credit	<u>291.89</u>
Net Expenditure	\$ 2,283.47

The above credit was interest on Trust Fund and Bonds.

The expenditures on the Old Burial Ground were as follows:-

Maritime Electric Co. (6 Fluorescent Lights)	\$ 450.00
Minister of Finance (S.S. and E. Tax audit re 1968 purchases)	1.35
J. L. Simms (Plywood)	5.77
J. S. Neill Wholesale (Grass, shears, glass, cord)	34.76
Millar Motors Ltd. (repairs to mower)	17.10
W. R. and W. W. Thomas (7 yards topsoil)	11.90
Atlas Building Supplies (moulding)	2.23
Journal Voucher (Gas and Oil)	9.80
Journal Voucher (Cement, rock dust, brick)	4.74
Journal Voucher (Machinery)	67.50
Journal Voucher (Labor)	1,931.32
Journal Voucher (Pension contribution)	<u>38.89</u>
TOTAL	<u>\$2,575.36</u>

FIRE DEPARTMENT

Gross Expenditure	\$ 60,899.02
Credit	<u>261.00</u>
Net Expenditure	<u>\$ 60,638.02</u>

The above credit is for Gasoline and Diesel Fuel paid for by the Fire Department.

The above expenditure of \$ 60,899.02 is made up as follows:-

Journal Voucher (2689.7 gallons gasoline)	\$ 618.64
Journal Voucher (489 hydrants - rental)	58,680.00
Journal Voucher (City Machinery)	114.00
Journal Voucher (City Labor)	228.18
Journal Voucher (Pension contributions)	4.45
Journal Voucher (Purchase of 1963 Chevrolet Panel Truck)	800.00
Journal Voucher (3 bags salt)	3.75
Journal Voucher (Sewer rental 1968)	150.00
Journal Voucher (Water consumption 1968)	<u>300.00</u>
TOTAL	<u>\$ 60,899.02</u>

CEMENT WALKS

Expenditure \$ 24,872.29

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

<u>Location</u>	<u>Lineal Feet</u>
Waterloo Row, portion between Acacia Court and Forest Hill Road (south side)	220
Churchill Row, Church Street to C.N.R. property (north side)	268
Dover Crescent (south side)	862
Southampton Drive, Leeds Drive to Liverpool Street (east side)	2,207
Eglinton Street, Studholm Street to Smythe Street (north side)	646
Lynhaven Street, existing to Studholm St. (north side) ..	342
Studholm Street, Lynhaven Street to Eglinton Street (west side)	330
York Street, Lisgar Street to Priestman Street (west side)	506
Lisgar Street, York Street to Priestman Street (north side)	1,106
Stanley Street, Massey Street to Willingdon Street (west side)	1,300
Beaverbrook Street, Windsor Street to University Avenue (south side)	925
Willingdon Street, Stanley Street to Smythe Street (north side)	258
Massey Street, Lorne Street to York Street (north side) ..	570
Grandame Street, Fenety Street to Montgomery Street (west side)	685
TOTAL	<u>10,225</u>

The cost of the above sidewalk is apportioned, one-half to the City and one-half to the property owner, except where Local Improvement agreements are in effect with the subdividers.

The concrete for the above construction of sidewalks was obtained from Gordon Concrete Products Ltd. @ \$14.50 per cubic yard.

The property owner was charged \$1.14 per lineal foot which does not include Compensation, Pension Fund and Holiday Fund.

REPAIRS TO CONCRETE SIDEWALKS

Gross Expenditure	\$ 3,205.37
Credits	<u>241.50</u>
Net Expenditure	\$ 2,963.87
	<u> </u>

The above credit was for repairs to walks for private parties.

Under this heading deteriorated concrete sidewalks were replaced at various locations in the City.

SANITATION

Gross Expenditure	\$ 146,307.61
Credit	<u>241.16</u>
Net Expenditure	\$ 146,066.45
	<u> </u>

The above credit is made up as follows:-

Journal Voucher (Use of Flusher)	\$ 198.00
Journal Voucher (3 street brooms to Recreation Dept.)..	<u>15.00</u>
Labor (Excavating grave at Forest Hill Cemetery)	<u>28.16</u>
TOTAL	\$ 241.16
	<u> </u>

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

- 1) Garbage Collection
- 2) Sanitary Land Fill
- 3) Street Cleaning

1) Garbage Collection:-

The Garbage Collection was operated by the Capital Sanitation Company until the contract expired May 26, 1968 at which time the contract was awarded to Blizzard's Trucking and Service Ltd. The amount paid for the above operation was \$61,972.97 in 1968.

2) Sanitary Land Fill:-

Expenditure\$ 15,448.33

The expenditure is made up as follows:-

Daily Gleaner (Advertisement for Garbage Collection)	\$ 230.36
W. R. and W. W. Thomas (21 yards sand)	23.10
Forbes and Sloat (412.80 tons Class "C" Gravel)	639.84
J. S. Neill Wholesale (Padlocks)	9.43
Journal Voucher (City Machinery)	908.00
Journal Voucher (City Labor)	1,154.35
Journal Voucher (Pension contributions)	58.33
Shiretown Construction Company	<u>12,424.92</u>
TOTAL	\$15,448.33 <hr/>

In 1966 a five-year contract for bulldozing services at the Sanitary Land Fill was awarded to Shiretown Construction Company at a cost of \$12,424.92 per year.

3) Street Cleaning:-

Gross Expenditure	\$ 68,886.31
Credits	<u>241.16</u>
Net Expenditure	\$ 68,645.15 <hr/>

The Gross Expenditure is made up as follows:-

Labor	\$ 36,415.10
Hired Trucks and Machinery..	5,681.00
City Machinery	3,065.00
Materials	<u>23,725.21</u>
TOTAL	\$ 68,886.31 <hr/>

City Machinery and Material charges amounted to \$26,790.21 and are made up as follows:-

Purchase of cans, hand brooms, shovels, rakes, forks, scrapers, repairs to carts, etc.....	\$ 1,303.70
Main Broom Wire	2,152.57
Gutter Broom Wire	755.31
Labor and repair charges on Street Sweepers	688.44
Labor and repair charges on Sicard Flusher	2,034.02
Gas and Oil:- 4883.0 Gallons gas	\$ 1,123.08
229.0 Quarts oil	80.15
1½ Quarts Hydraulic Oil	<u>10.12</u>
W. R. and W. W. Thomas (42 yards sand)	1,213.35
Harry C. Smith (49 yards topsoil)	46.20
W. R. and W. W. Thomas (63 yards topsoil)	83.30
Tractors and Equipment (Wayne Sweeper)	107.10
Tractors and Equipment (Installing power steering)	13,356.00
Minster of Finance (S.S. and E. Tax re audit 1968 purchase)	285.63
Journal Voucher (Machinery)	135.24
Journal Voucher (Antifreeze)	3,065.00
Journal Voucher (Pension contributions)	33.13
Miscellaneous (Car allowance, printing)	1,397.98
TOTAL	<u>133.24</u> <hr/>
	\$ 26,790.21

The Elgin Sweeper (purchased in 1960) was traded in 1968 and a Wayne Sweeper purchased from Tractors and Equipment at a cost of \$13,356.00. The combined Sweepers worked 1,381 hours. The actual cost for cleaning streets with these machines was \$7,876.46 and was calculated as follows:-

Labor and repairs on Sweepers	\$ 688.44
Main Brooms	2,152.57
Gutter Broom Wire	755.31
Gasoline (1599.30 Gallons)	367.84
Oil (72 Quarts, 1½ Hydraulic)	35.32
Antifreeze (1 Gallon)	2.54
Water (469,540 Gallons)	249.25
Insurance on 1960 Elgin Sweeper (traded in 1968)	15.00
Insurance on 1968 Wayne Sweeper	74.00
Labor (including Workmen's Compensation, Holiday and Pension Fund - Operator)	<u>3,536.19</u>
TOTAL	\$ 7,876.46
	<u>974.40</u>

Repairs

The operating dates for the above machines (Sweepers) were from March 20, 1968 to November 8, 1968.

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 the above mentioned machine (Flusher) were from April 17, 1968 to November 8, 1968.

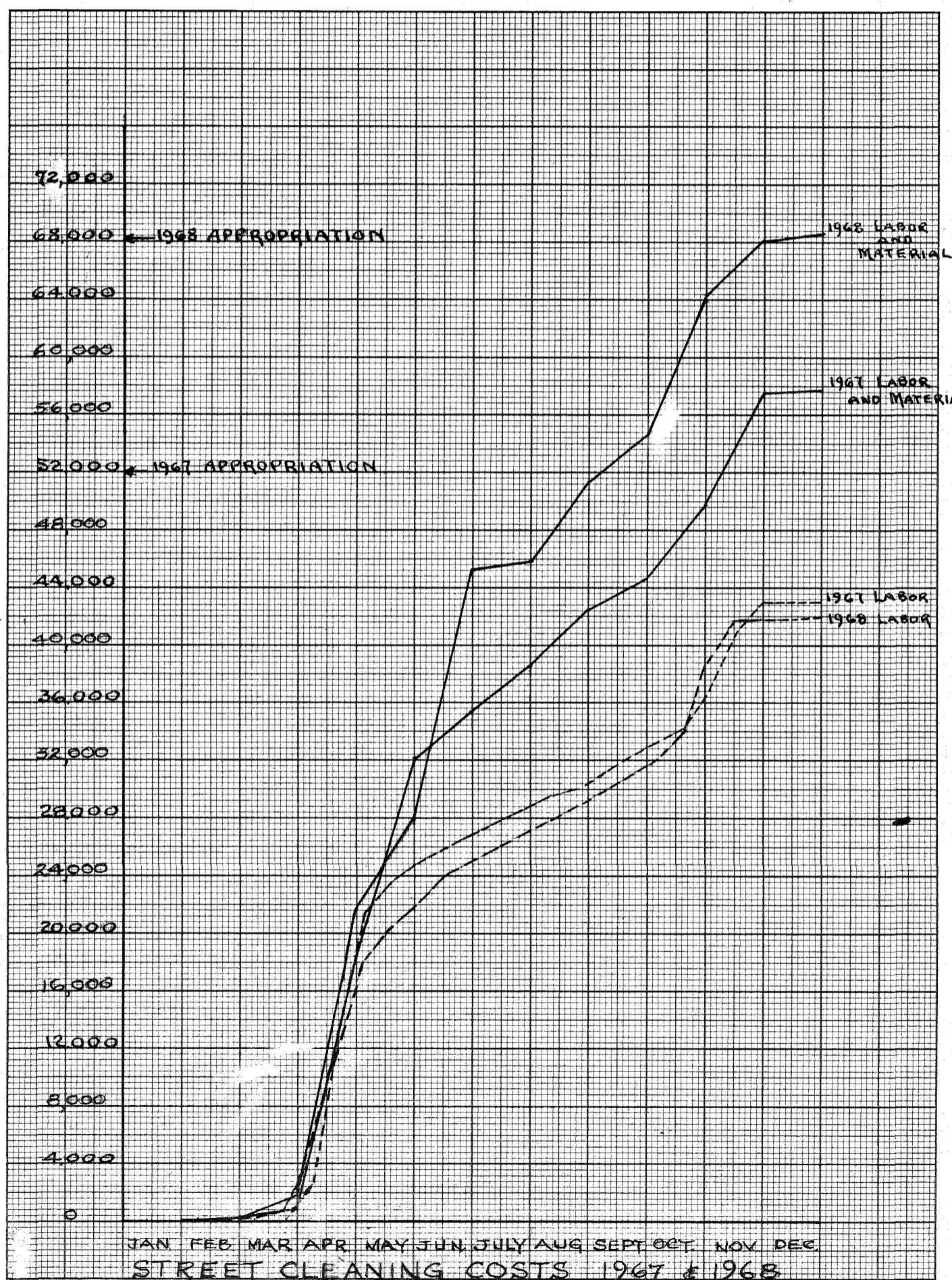
The Flusher worked 1072 hours. The actual cost for flushing Streets with this machine was \$8,061.27 and was computed as follows.

Labor and Repairs to Flusher	\$ 2,034.02
Gasoline (3,283.7 Gallons)	755.24
Oil (157 Quarts)	54.95
Antifreeze (1½ Gallons)	30.59
Water (4,824,000 Gallons)	2,426.75
Insurance on Flusher	78.00
Labor (including Workmen's Compensation, Holiday and Pension Fund - Operator)	<u>2,681.72</u>
TOTAL	\$ 8,061.27
	<u> </u>

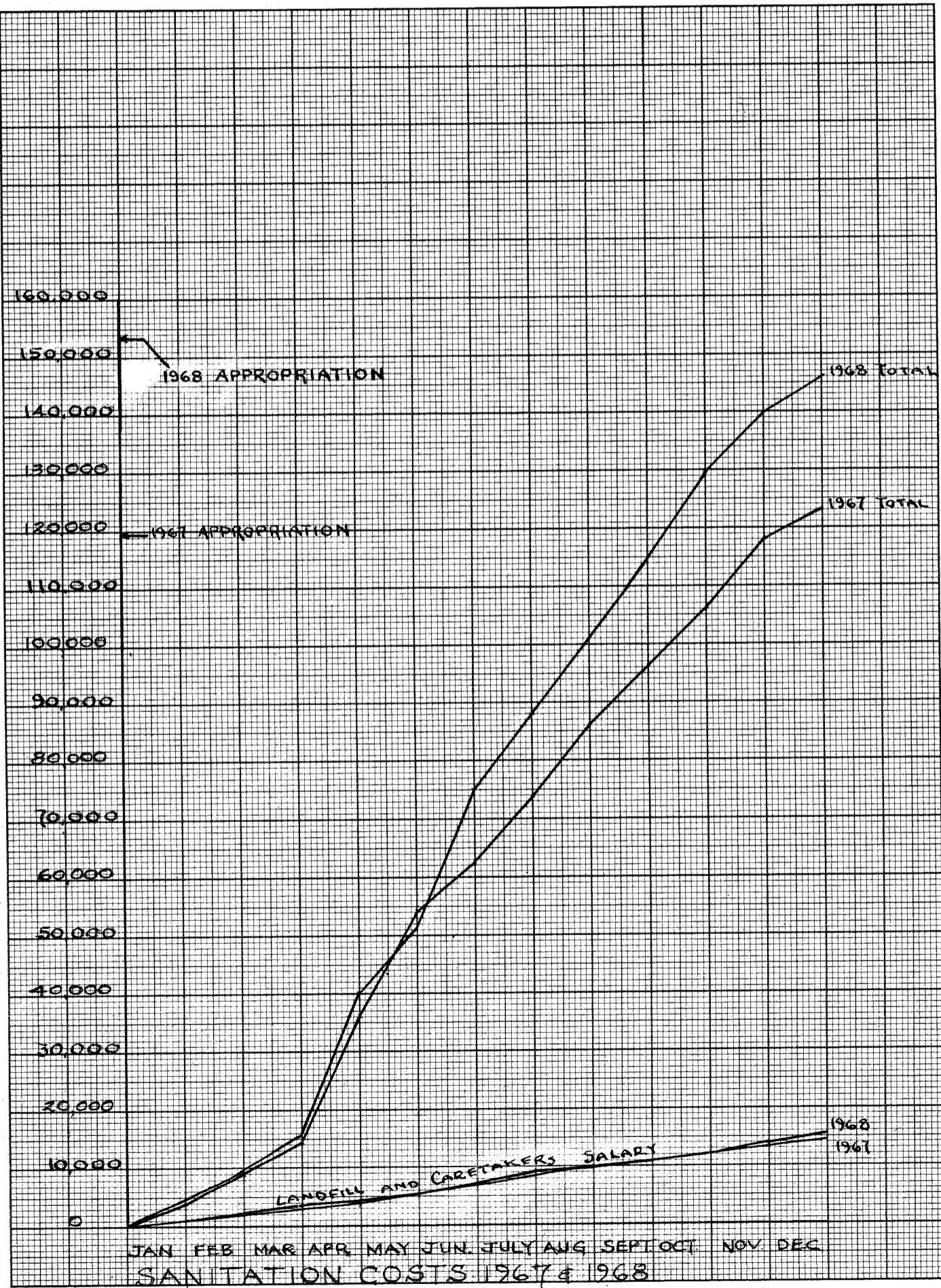
The following is a list of machinery used in the Sanitation Department together with the repair costs, showing a comparison of costs for 1967 and 1968, including tires and tubes.

<u>Name of Machine</u>	<u>Year Purchased</u>	<u>Repairs 1967</u>	<u>Repairs 1968</u>
Elgin Street Sweeper (traded in 1968)	1960	\$ 2,750.11	\$ 688.44
Wayne Street Sweeper	1968		
Sicard Flusher (2250 I.G.)	1955	<u>347.94</u>	<u>2,034.02</u>
TOTALS		\$ 3,098.05	\$ 2,722.46
		<u> </u>	<u> </u>

HUGHES OWENS #404C



HUGHES OWENS 404G



ADMINISTRATION OF JUSTICE

Expenditure\$ 1,722.36

The above expenditure of \$1,722.36 is made up
as follows:-

Journal Voucher (6,479.6 Gallons gasoline)	\$ 1,490.32
Journal Voucher (83 Quarts oil).....	29.05
Journal Voucher (Decals, crushed rock, cement)	173.84
Journal Voucher (Machinery)	10.50
Journal Voucher (Varsol)50
Journal Voucher (City labor)	17.32
Journal Voucher (Pension contributions)83
TOTAL	<u>\$ 1,722.36</u>

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

In 1968 the upkeep expenditure amounted to
\$38.93 made up as follows:-

Labor	\$ 13.72
City Machinery	24.50
Journal Voucher (pension contributions)	<u>.71</u>
TOTAL	<u>\$ 38.93</u>

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.

J. T. CLARK MEMORIAL BUILDING

Expenditure\$ 1.25

The above expenditure was for a bag of salt for
de-icing the walk into the building.

CONTINGENT

Expenditure \$ 481.54

The above expenditure is made up as follows:-

Labor	\$ 306.68
City Machinery	18.00
Materials	<u>156.86</u>
TOTAL	<u>\$ 481.54</u>

The material charge of \$156.86 was made up as follows:-

Seaboard Surveys (Survey on Massey Street)	\$ 12.00
Seaboard Surveys (Replacing pins on Cameron Court)	131.20
Journal Voucher (Pension contribution)	<u>13.66</u>
TOTAL	<u>\$ 156.86</u>

MUNICIPAL PARKING LOT - CAMPBELL STREET

In 1966 the City Council authorized the changing of the free parking area, in order to give better parking facilities to the shopping public.

In 1968 expenditure for the above amounted to \$1,242.11 and was made up as follows:-

J. S. Neill Wholesale (bolts, screws, enamel, letters for gates).....	\$ 30.15
H. S. Gill (Lumber)	32.65
J. C. Risteen (Paint)	13.50
Stan Cassidy (checking and repairing gates)	214.00
Cameron Grant Inc. (Coin selectors)	243.50
Minister of Finance (S.S. and E. Tax on Cameron Grant Inc., invoices)	10.76
W. L. Barrett (Expenses to Parking Convention)	250.00
Journal Voucher (Machinery)	122.00
Journal Voucher (Pension contributions)	9.91
Journal Voucher (City labor)	255.64
Journal Voucher (Hired Trucks and Machinery)	<u>85.00</u>
	\$ 1,267.11
Less Credits (Repairs to gate)	<u>25.00</u>
TOTAL	<u>\$ 1,242.11</u>

TOURIST and INDUSTRY

Expenditure\$ 147.47

The above expenditure was for replacement bulbs, labor and 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 near the City limits.

The expenditure was made up as follows:-

Maritime Electric Co. (Light Bill)	\$ 80.79
J. S. Neill Wholesale (12-200 Watt Bulbs)	4.16
Haley Lumber Co. (Plywood and glue)	14.46
Mrs. Bessie Wilby (2 years rental, Lincoln Road signs)...	30.00
C.N.R. Express (Marking stamp)	3.25
Richard's Electric (6 - 200 Watt Bulbs)	3.63
Journal Voucher (City Labor)	10.77
Journal Voucher (Pension contributions)41
TOTAL	\$ 147.47

YORK ARENA

The expenditure under this heading was for the purchase of 16 Gallons Varsol at a cost of \$8.00.

INDUSTRIAL DEVELOPMENT

Expenditure\$ 2,745.88

The above expenditure of \$2,745.88 is made up as follows:-

Seaboard Surveys (Survey of Lot P-21, Industrial Park)....	\$ 227.20
Seaboard Surveys (Survey of Lot P-22, Industrial Park)....	145.90
Seaboard Surveys (Survey of Lot P-15, Industrial Park)...	21.10
Seaboard Surveys (Survey of Lot P-23, Industrial Park)...	22.70
Seaboard Surveys (Survey of Lot P-24, Industrial Park)...	161.90
Seaboard Surveys (Survey of Lot P-26, Industrial Park)...	69.70
Seaboard Surveys (Survey of Lot P-25, Industrial Park)...	120.08
Seaboard Surveys (10 Prints Industrial Park)	10.80
Bond Discount	<u>1,966.50</u>
TOTAL	\$ 2,745.88

STREET LIGHTS

The City Street Lighting System on December 31, 1968 consisted of:-

- 1 - A Series Lighting System on the south side of the Saint John River;
- 2 - A Multiple Lighting System on the south side of the Saint John River;
- 3 - A Multiple Lighting System in the C.N.R. Subway;
- 4 - A Series Lighting System in Carleton Ward;
- 5 - A Multiple Lighting System in Carleton Ward.

System #1

The Series Lighting System (south side) consists of some 18.48 miles of line and 70 lamps. This system is divided into two circuits; one of which is controlled by a 25 K.W. constant current transformer, the other by a 15 K.W. constant current transformer. One of these transformers along with the main switchboard is housed in a building on Carleton Street, south of Needham Street. The second transformer is on a pole situated on Regent Street, between King's College Road and Albert Street and controls the circuit for Maryland Heights.

The two circuits are made up as follows:-

<u>Upper Rear Circuit</u>	<u>Load</u>	<u>Transformer Size</u>
6 - 250 C.P. Lamps @ .160 demand	.96	
12 - Fluorescent Lamps @ .50 demand	<u>6.00</u>	
	<u>6.96</u>	25 K.W.

Maryland Heights

33 - 250 C. P. Lamps @ .160 demand	5.28	
10 - 600 C. P. Lamps @ .350 demand	3.50	
9 - Fluorescent Lamps @ .50 demand	<u>4.50</u>	
	<u>13.28</u>	15 K.W.

System #2 and #5

The Multiple Lighting System as of December 31, 1968 was as follows:-

252 - 500 Watt Incandescent Units @ \$60.00 per light per year
144 - 200 Watt Incandescent Units @ \$40.00 per light per year
348 - 250 Mercury Vapor Units @ \$60.00 per light per year
174 - 400 Mercury Vapor Units @ \$90.00 per light per year
186 - 4' Fluorescent Units @ \$60.00 per light per year
64 - 6' Fluorescent Units @ \$75.00 per light per year

Each of the units excepting the Fluorescents consists of either a 500, 400 Mercury, 250 Mercury or 200 Watt 150 Volt Lamp, set in a nouvalex luminar fixture and hung on a bracket attached to the pole. These units are controlled by a control switch, which is energized by the Series Lighting System. The System was installed and is maintained by the Maritime Electric Company; the City paying the Company \$60.00 per year for each 500 Watt Unit; \$40.00 per year for each 200 Watt Unit; \$90.00 per year for each 400 Mercury Vapor Lamp; \$60.00 per year for each 250 Mercury Vapor Lamp; \$60.00 per year for each 4' Fluorescent Lamp and \$75.00 per year for each 6' Fluorescent Lamp.

System #3

System #3 consists of 4 Multiple Lights, each of 150 Watt strength, located in the C.N.R. Subway. This System is also controlled by a control switch which is energized by the Series Lighting System.

System #4

System #4 is a Series Lighting System (north side) which had formerly been installed in the Town of Devon and consists of 8.59 miles of line and 149 lamps. The System originally comprised three circuits but in 1960 a new circuit was added due to the change from 2500 Lumen Series Lamps. The three former circuits are controlled by three 15 K. W. constant current transformers, located on a pole platform on Pine Street, while the new circuit is controlled by a 15 K. W. constant current transformer situated on a pole on the Road leading from MacLaren Avenue to the Carleton Ward School.

The four circuits comprise the following:-

- Carleton Ward (Up) - mainly from Hughes Street west;
- Carleton Ward (Central) - mainly between Hughes Street and Pine Street, including Dobie Subdivision;
- Carleton Ward (Down) - Pine Street east to Gibson Street and between the Canadian Pacific Railway tracks and Union Street;
- Carleton Ward (Rear) - including Gibson Street from Devon Avenue to the City Line and the easterly extremities of the Dobie Subdivision.

<u>Carleton Ward (Up)</u>	<u>Load</u>	<u>Transformer Size</u>
3 - 600 C. P. Lamps @ .350 demand	1.05	
33 - 250 C. P. Lamps @ .160 demand	5.28	
15 - Fluorescent Lamps @ .50 demand	<u>7.50</u>	
	13.83	15 K.W.
<u>Carleton Ward (Central)</u>		
36 - 250 C.P. Lamps @ .160 demand	5.76	
12 - Fluorescent Lamps @ .50 demand	<u>6.00</u>	
	11.76	15 K.W.
<u>Carleton Ward (Down)</u>		
1 - 600 C.P. Lamp @ .350 demand	.35	
13 - 250 C.P. Lamps @ .160 demand	2.08	
3 - Fluorescent Lamps @ .50 demand	<u>1.50</u>	
	3.93	15 K.W.
<u>Carleton Ward (Rear)</u>		
1 - 600 C.P. Lamp @ .350 demand	.35	
11 - 250 C.P. Lamps @ .160 demand	1.76	
21 - Fluorescent Lamps @ .50 demand	<u>10.50</u>	
	12.61	15 K.W.

All materials such as wire, pole fixtures, lamps, lamp fixtures, transformers, etc. are paid for by the City, installed by the Maritime Electric Company under their contract price for maintenance. Any new installations that require an enlargement of circuits must be paid for by the City of Fredericton, including labor and material.

The Street Light costs for the year 1968 are as follows:-

Expenditure	\$ 80,012.18
1968 Appropriation	<u>76,915.00</u>
DEBIT	<u>\$ 3,097.18</u>

The Street Lighting expenditure of \$80,012.18 is made up as follows:-

Bulb Replacements

88-F48T12/CW/HO Fluorescent Lamps ...	\$ 189.80
4-F72T12/CW/HO Fluorescent Lamps ...	12.13
48-600 C.P.Series Lamps	53.85
312-250 C.P.Series Lamps	<u>232.26</u> \$ 488.04)

Power Costs for Subway and Series

Lighting December 31, 1967 to December 31, 1968 - 214,970 K.W.Hrs.	5,440.97)
-------------------------------------------------------------------------	-----------

<u>Maintenance and Contract of Pole Lines</u>	\$ 541.44	} Series
<u>Maintenance of Lamp Fixtures</u> , including such articles as lamp standards, lamp brackets, heads, sockets, shades, cut-outs, line switches, etc.	680.26	
<u>Light Bill Fredericton Highway Bridge</u>	631.44	
<u>Cenotaph Light Bill</u>	146.85	} Lighting
Charges on Multiple Fixtures, owned and operated by the Maritime Electric Company at \$40.00, \$60.00, \$75.00 and \$90.00 per light per year	70,121.75	
Maintenance and Labor used in major repairs and new installations	1,961.43	
TOTAL	\$80,012.18	
<u>TOTAL COST OF SERIES SYSTEM</u>	<u>\$ 7,929.00</u>	

During the year 1968 various changes and extensions were made to the City of Fredericton Street Lighting System. These additions, transfers and removals are shown on a Map in the office of the City Engineer.

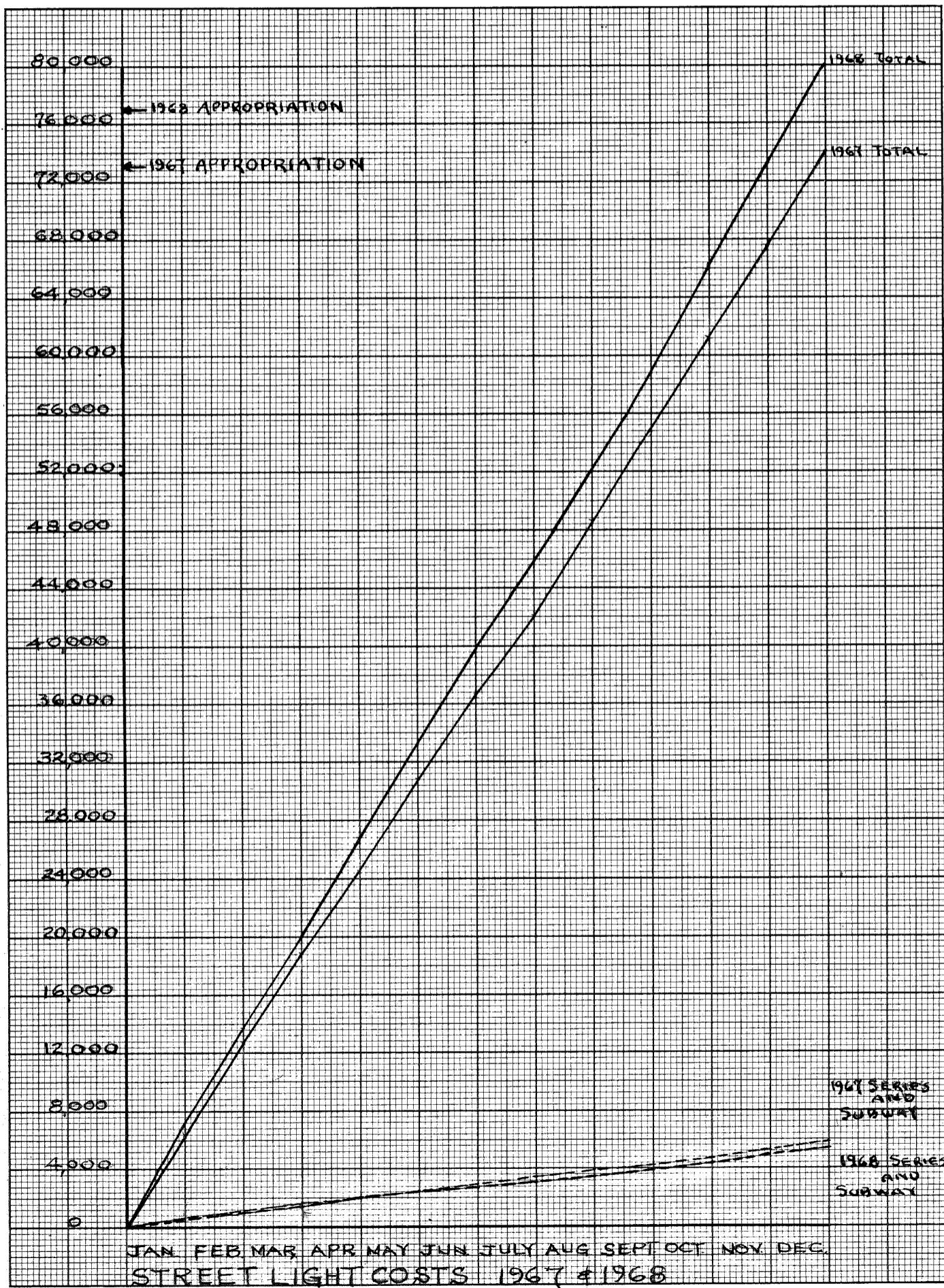
The total per capita charge for Street Lighting for 1968 population, 22,158 as per 1966 census is:-

$$\frac{80,012.18}{22,158} = \$3.35$$

TABLE SHOWING COMPARATIVE YEARLY COST IN STREET LIGHTING

<u>Year</u>	<u>Total Yearly Cost</u>	<u>Yearly Appropriation</u>
1954	\$ 23,812.54	\$ 27,000.00
1955	28,542.77	27,000.00
1956	31,877.10	27,700.00
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	62,874.90
1966	72,083.35	70,180.00
1967	74,017.50	73,010.00
1968	80,012.18	76,915.00

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WATER

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

1) During 1968 the south side of the Saint John River derived its water from three Gravel Wall Wells located in Wilmot Park; namely No. 1, No. 3 and No. 4 and from a Rock Wall Well in Cameron Court. This source supplies approximately three quarters of the residences on Hanwell Road.

Number 2 Well on Saunders Street has been abandoned and the pumping equipment will be installed in the new Well developed at St. Anne's Point Barracks in 1968 as explained under "Capital Account Water". This Well will be in operation in 1969.

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. Bridge Street Well is a standby service only due to the marginal chemical characteristics.

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 Road Well.

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

- 1 - Water Ordinary
- 2 - Water Administration (Salaries of staff and office equipment)
- 3 - Hydrant Revenue
- 4 - Water Pumping Station

Gross Expenditure	\$ 250,845.45
Credits	<u>41,542.22</u>
Net Expenditure	\$ 209,303.23

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 made up as follows:-

Gross Expenditure	\$ 127,118.49
Credit	<u>27,939.84</u>
Net Expenditure	\$ 99,178.65

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	\$ 19,443.37
Forbes and Sloat (repairs to break in Water line)	243.84
Department of Indian Affairs (Installing Tap, Sleeve and Valve)	30.85
Maritime Electric (2 months credit on pump)	35.38
N. B. Research and Productivity (thawing Water Service)	13.12
W. L. Barrett (refund on Convention expenses)	21.00
Workmen's Compensation (cheque re J. Malloy).....	110.16
Workmen's Compensation (cheque re H. Parker)	43.27
N. B. Telephone Co. (credit - long distance calls) ...	2.54
Town of Marysville (1 - 1" x 1" x 1") Corporation Tee.	9.69
Abe Levine (sale of scrap copper).....	170.56
N. B. Department of Public Works (repair hydrant)....	56.00
To cancel "M and D" Transfer cartage	2.00
Day and Ross (repairs to hydrant)	186.60
Repairs to frozen Water Meters	146.40
Neptune Meter Ltd. (credit on return of Meters).....	5,486.40
Journal Voucher (200# Lead)	50.00
Journal Voucher (Maritime Electric Co. adjustment on Power to Cameron Court Well)	249.86
Journal Voucher (N. B. Telephone Co., adjustment to telephone charge at Cameron Court Well).....	58.80
Journal Voucher (Water used at Fire Stations)	300.00
Journal Voucher (Water used at Wilmot Park)	30.00
Journal Voucher (Water used by Recreation Department). <u> </u>	<u>1,250.00</u>
TOTAL	\$ 27,939.84

The Gross Expenditure is made up as follows:-

City Payrolls for Hydrants	\$ 3,106.69
City Payrolls for Meters (maintenance)	6,508.73
City Payrolls for Meters (reading)	3,740.93
City Payrolls for Water (installations)	10,447.39
City Payrolls for Carleton Ward Pumping Station	1,607.79
City Payrolls for Lincoln Road Pumping Station	838.45
City Payrolls for Smythe Street (Booster Station)	842.02
City Payrolls for Montgomery Street (Booster Station) ..	870.01
City Payrolls for Cameron Court Pumping Station	774.29
City Payrolls for Forest Hill (Booster Pump)	901.39
City Payrolls for Water (maintenance)	<u>13,931.24</u>
Total Payrolls	\$ 43,568.93
Materials and other charges	<u>83,549.54</u>
Gross Expenditure ...	<u>\$ 127,118.49</u>

No water extensions were laid under this heading in 1968. They appear under "Capital Account Water".

The following Sprinkler Systems were installed in 1968:-

Zellar's Ltd., 436 Queen Street
Craig Electric, 912 Union Street

There are at present (1968) 72 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, 523 hydrants; 414 on the south side of the Saint John River and 109 on the north side.

The hydrant rental on the above hydrants amounted to \$58,680.00 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>
Priestman Street.....	5
Michener Court	1
Surrey Crescent	1
Bailey Drive	1
Canterbury Drive	2
Topcliffe Crescent	<u>2</u>
TOTAL	<u>12</u>
	<u><u> </u></u>

In addition, two private hydrants were installed:-

- 1 - School site (Senior High School) Priestman Street
- 1 - University of New Brunswick (Beaverbrook Street)

Meters:-

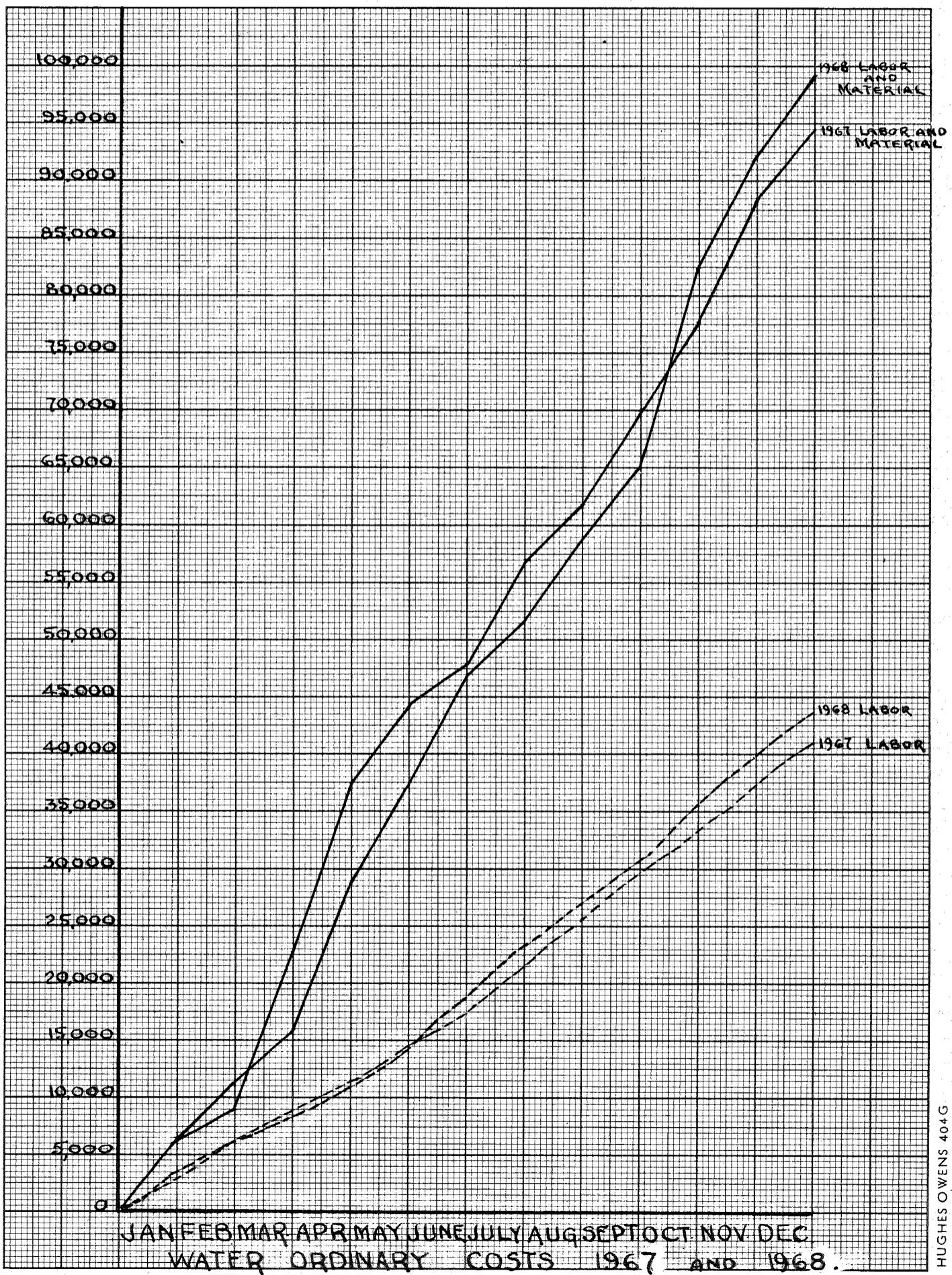
On December 31, 1968 there were 4,793 water services on Meter and 377 services on Flat Rate, making a total of 5,170.

The labor cost per meter for installing, reading, repairing, etc. was \$2.14 for 1968.

218 Meters were installed in 1968.

In 1968, 24 discontinued services were excavated and shut off at the Main.

In 1968 all meters were read quarterly and bills sent out quarterly during the year.



HUGHES OWENS 4046

Meters in Stock, December 31, 1968:-

5/8" Meters - repaired and fit for service)	20
1/2" Meters - repaired and fit for service } Neptune	12
3/4" Meters - repaired and fit for service }	1
1" Meters - repaired and fit for service } Meters	4
1½" Meters - repaired and fit for service)	1
3" Meters - repaired and fit for service (Rockwell)	1
5/8" Meters - to be repaired for service) Neptune	21
1" Meters - to be repaired for service) Meters	2
5/8" Meters - to be repaired for service (Neptune, A.R.B.)..	3
New 5/8" Meters (Neptune A.R.B.)	44
New 1½" Meters (Neptune)	1
New 1½" Meters (Rockwell)	2

Distribution System:-

New Services installed in 1968	174
Old Services relayed in 1968	17
Frozen services that had to be thawed	23

The Fredericton distribution system consists of 66.71 miles of Water Main made up as follows:-

18" Main	0.98 miles
14" Main	0.33 miles
12" Main	6.11 miles
10" Main	6.80 miles
8" Main	16.20 miles
6" Main	30.11 miles
4" Main	5.91 miles
3" Main	<u>0.27</u> miles
TOTAL ...	<u>66.71</u> miles

This does not include the water mains installed by the National Defence at the Exhibition Grounds, University of New Brunswick, St. Thomas College and Teachers' College and St. Anne's Point Barracks (so called) on Woodstock Road.

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 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 the following meters from Neptune Meters Limited and Rockwell Manufacturing Company:-

6 - 1" x 1" S.R. Water Meters, Imperial Gallons, C/W connections
 2 - 1½" x 1½" S. R. Water Meters, Imperial Gallons, C/W connections
 2 - 2" x 2" S. R. Water Meters, Imperial Gallons, C/W connections
 200 - 5/8" x 3/4" Trident seal, frost proof, cold water meters, straight reading, imperial gallons, complete with couplings.

Following is a list of vehicles used and charged to "Water Ordinary" showing a comparison of repair charges for 1967 and 1968, including tires and tubes.

Name of Vehicle	Year Purchased	Repairs 1967	Repairs 1968
Chevrolet ½ ton #5 (Traded in 1967)	1963	\$ 215.94	----
Dodge ½ ton #5	1967	61.83	259.13
Chevrolet ½ ton #2	1964	693.97	1,299.59
Ford ½ ton #32	1966	12.90	85.10
TOTALS		\$ 984.64	\$ 1,643.82

2 - Water Administration (Salaries and Office Equipment)

Gross Expenditure	\$ 58,522.29
Credit	<u>13,014.86</u>
Net Expenditure	<u>\$ 45,507.43</u>

The above credit is made up of Journal Vouchers for a portion of L. E. Keenan, E. L. Coy and L. P. McNeill salaries and credit on return of machine to Pitney-Bowes Ltd.

The salaries for Water Administration (Office Staff) amounted to \$19,180.08.

Expenditures for Water Administration was \$26,327.35 and was made up as follows:-

Brunswick Office Equipment (services on 3 machines).....	\$ 21.00
Pitney-Bowes Ltd. (service contract on 2 machines).....	344.41
R.L.Crain Ltd. (12 carbon rolls, printing forms)	201.02
Paul Burden (1 alphabetical index, index cards, 1 Precisa Multiplier, rubber stamp, metal index tabs)	493.48
Addressograph Multigraph (service)	406.80
Capital Free Press (20 books each, water and sewer permit forms)	<u>58.40</u>
Forward	1,525.11

	Carried forward	\$ 1,525.11
N. B. Office Supplies (repairs to typewriter)	9.16	
Burroughs Business Machine (16,500 water bills, validating and receipting machine, labor on control panel, conversion of billing machine)	2,449.19	
C. N. R. Express (Water bills)	14.75	
Government of Canada (Refilling postal meter)	1,000.00	
Fraser Hazlett (Supply and printing meter cards and window envelopes)	244.40	
C. W. Hall (Typewriter ribbon, time book, columnar pads, rubber bands, files and index cards)....	26.18	
Eastern Drug Services (Staples and stick pens)	8.33	
Olivetti Underwood (maintenance on machine)	299.92	
Unipress (printing of Water bills)	985.58	
Journal Voucher (supplies for Treasurer's Office).....	1.54	
W. L. Barrett (advance on A.W.W.A. Convention and expenses to Six Cities meeting)	132.69	
Salaries	<u>19,630.50</u>	
TOTAL	\$ 26,327.35	

3 - Hydrant Revenue

Hydrant revenue amounting to \$58,680.00 was rental on hydrants in the City of Fredericton, charged to the Fire Department at \$120.00 per hydrant per year. Revenue for hydrants and sprinklers on private property appears under Revenue Account.

4 - Water Pumping Station

Gross Expenditure	\$ 65,204.67
Credits	<u>587.52</u>
Net Expenditure	\$ 64,617.15

The above credit is made up as follows:-

John Malloy (Compensation cheque)	\$ 477.36
Journal Voucher (Correction on J. Malloy, June cheque). <u>110.16</u>	
TOTAL	\$ 587.52

The above expenditure is divided as follows:-

City Payrolls for salaries of employees at Pumping Station	\$ 30,458.16
Work done by City employees in and around the Pumping Station	2,119.96
Material charges	<u>32,039.03</u>
TOTAL	\$ 64,617.15

The material cost of \$32,039.03 is itemized as follows:-

Item 1 - Light and Power supplied by Maritime Electric Co. (777,400 K.W.Hours)	\$ 14,623.99
Item 2 - Light and Power supplied by Maritime Electric Co. at Wells in the Park and Cameron Court	8,384.76
Item 3 - Heating (6121.5 Gallons)	837.63
Item 4 - Diesel Fuel (2996 Gallons)	488.35
Item 5 - Liquid Chlorine (1800#).....	358.20
Item 6 - Oil (57 Gallons HDX #40, 6 Gallons HD #10, 6 Gallons HDX #30, 6 Gallons Mobile #30).	120.65
Item 7 - Maintenance and repairs to building and equipment	2,320.46
Item 8 - Supplies, packing rags, lamps, tools, etc. ...	300.44
Item 9 - Stationery forms, charts, chemicals, ink, etc.	287.81
Item 10 - Workmen's Compensation	260.00
Item 11 - E. W. Hagerman (City Analyst Salary)	1,800.00
Journal Voucher (Gas, Salt, Varsol)	14.32
Journal Voucher (City Machinery)	164.00
Journal Voucher (Pension contribution).....	1,912.89
Miscellaneous (Uniforms, telephones, etc.)	<u>753.05</u>
TOTAL	\$ 32,626.55

Less Credits:-

John Malley (Compensation cheque) ..\$ 477.36	
Journal Voucher (John Malley - adjustment to cheque) <u>110.16</u>	<u>587.52</u>
Net Expenditure.....	\$ 32,039.03
	<u> </u>

Following is a further explanation of some of the above items:-

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>
1959	6,110.8	\$ 1,005.50
1960	6,165.5	1,012.19
1961	4,513.8	709.01
1962	5,079.1	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

Item 7 - Maintenance and Repairs - Water Pumping Station

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

- 1) 2 - Low lift pump glands packed and overhauled;
- 2) #1 and #2 Service pump glands were packed and overhauled;
- 3) #3 Service pump glands were packed and two new sleeves were installed;
- 4) Dorman Diesel glands were packed and a new check valve installed;
- 5) Prime pump was checked;
- 6) Furnace was checked and cleaned and all parts that were needed were replaced;
- 7) All valves in the pipe gallery were overhauled and put in working order;
- 8) Electrodes were checked and cleaned and two were replaced;
- 9) All pipes in the pipe gallery were painted along with the ceiling, walls and floor;
- 10) The floors in the Alternator Room, Lime Room, Pump Room and Low Lift Pump Room were painted. The Furnace Room, Entrance Room and Wash Room were completely painted. The Rear Entrance was paved and the main chimney was removed. A weather cap was installed on the furnace chimney. Glass was installed in the windows where necessary.

The Pumping Station Plant at the present time has all the Wells operating automatically on demand, with the exception of the Cameron Court Well which is operated 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-hour 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

<u>Year</u>	<u>Imperial Gallons Produced</u>	<u>Production Expenditures</u>	<u>Production Costs per 1,000 Gallons</u>
1950	372,412,000	\$ 44,548.09	11.9 cents
1951	367,130,000	35,058.09	9.5 cents
1952	339,330,000	40,476.10	11.9 cents
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	668,514,000	52,749.40	7.9 cents
1968	735,296,000	64,617.14	8.8 cents

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

The total water consumption ^{from} of Wells in Carleton Ward for 1968 was 131,927,580 Gallons.

The total amount of water pumped from January 1, 1968 to December 31, 1968 therefore, for the whole City, is 867,223,580 Imperial Gallons.

The total net water expenditure (operating) for the City from January 1, 1968 to December 31, 1968 is \$163,795.78.

Therefore the net cost to pump and deliver to the customer 1,000 Imperial Gallons of water, from January 1, 1968 to December 31, 1968 is
163,795 = 18.9 cents.
867,223

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

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

WATER AND SEWER REVENUE 1968

<u>Revenue</u>	<u>Expenditure</u>
Hydrant Revenue.....\$ 58,680.00	Water Ordinary \$ 209,303.23
Water and Sewer Revenue..... <u>548,739.78</u>	Domestic Sewer 29,728.24
\$607,419.78	Principal and Interest <u>215,313.20</u>
	\$ 454,344.67
	<u> </u>

Total cost of Water per thousand gallons:-

$$\frac{424,616.43}{867,223} = \underline{\underline{48.9}} \text{ cents/1,000 I.G.} - 43 \frac{1}{1000} \text{ Wateronly}$$

Principal and Interest Costs:-

$$\frac{215,313.20}{867,223} = \underline{\underline{24.8}} \text{ cents/1,000 I.G.}$$

Administration and Operating Costs:-

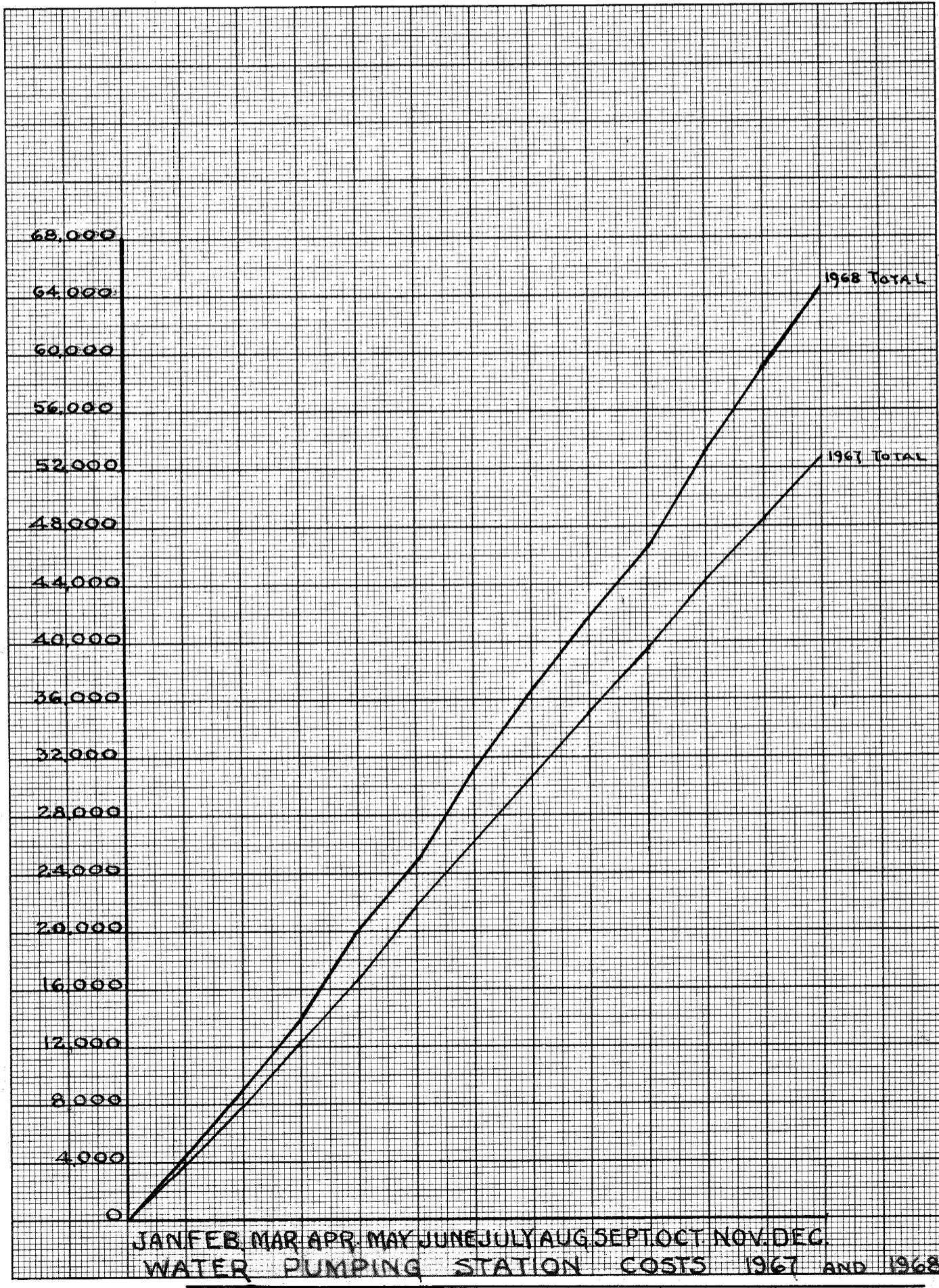
$$\frac{209,303.23}{867,223} = \underline{\underline{24.1}} \text{ cents/1,000 I.G.}$$

The Water Pumping Station was under the supervision of Plant Superintendent Mr. George Clark until his retirement in October. The new Plant Superintendent is Mr. George Parker.

Accompanying this Report is the Report of Mr. E. W. Hagerman, City Analyst, on the Fredericton Water Supply from January 1, 1968 to December 31, 1968.

Respectfully submitted,

W L. Barrett
CITY ENGINEER.



FREDERICTON WATER SUPPLY

YEAR 1968

JANUARY 1st to DECEMBER 31st

Fredericton's water supply for 1968 came from seven Wells. On the south side of the River there are three Wells located in Wilmot Park and a fourth, southeast of Hanwell Road in Cameron Court. On the north side of the Saint John River there are three Wells; one on Saint Mary's Street, a second on Bridge Street and a third, east of Highland Avenue, adjacent to a one million gallon reservoir of the same name.

A new Well, developed late in the year on the River bank almost opposite the intersection of Rockwood Avenue with Woodstock Road, has not, as yet, been completed.

The hardness of the water as supplied to the consumer varies slightly, depending on the combination of Wells in use. The south Fredericton supply averages about 90 parts per million (6.3 grains per gallon) whereas the Carleton Ward water is somewhat harder, up to 120 parts per million (8.4 grains per gallon).

Some brown staining of plumbing fixtures is caused by manganese compounds which are present in very small quantities in most of the Wells. Blue stains, beneath hot water drips, are from copper compounds.

As a safeguard against contamination through breaks in mains or from possible cross connections, a small amount of chlorine is added to the almost sterile Well water. The treated water carries a free chlorine residual of 0.1 to 0.15 parts per million as it enters the City mains. This residual does not persist to the ends of the system, disappearing more or less proportionately as the distance from the point of application increases.

The Hanwell Well has its own chlorinator in the pump house and does not supply water to the main City system but pumps to a high level reservoir of 100,000 gallon capacity and serves an area along the Hanwell Road up to the City line. The treated water carries a residual of about 0.35 parts per million chlorine as it leaves the pump. When the pump is off and the flow is down from the reservoir by gravity, the chlorine residual varies down to 0.1 parts per million.

Sixty-two samples were collected throughout the City for bacteriological examination. From each sample five 10-milliliter portions were put on test, making 310 portions tested during the year. From the list of tests it is evident that the only positive results were found in raw water from Hanwell Well. Chlorinated samples collected at the same time from domestic taps in the area were negative.

Throughout dry periods this Well gave negative results but after prolonged rains coliforms appeared. Because it is impossible to forecast contamination it is necessary to apply continuous chlorination.

A condensation of the U.S.A. Treasury Standards specifications for potable water and a list of sampling stations is attached.

EXTRACTS FROM UNITED STATES TREASURY STANDARDS
APPLICABLE to FREDERICTON WATER SUPPLY

- 1 - A sample of one hundred cubic centimeters (cc.) is collected;
- 2 - Five 10 cc. portions of the collected sample are tested;
- 3 - The confirmed test is used to show presence or absence of the Coliform Group;
- 4 - The Primary media is Lactose Broth and the Confirmatory media is 2% Brilliant Green Bile.

Application of Test

- 1 - Of all the 10 cc. portions examined per month, not more than 10% shall show positive;
- 2 - When less than 20 samples per month are examined, one sample may have 3 positive portions.
- 3 - Using a standard sample of 5 portions provides for an estimation of the Most Probable Number (M.P.N.) of Coliform bacteria per 100 cc. of sample as shown in the table below.

<u>Negative</u>	<u>Positive</u>	<u>When five 10 cc. portions are tested</u>
5	0	Less than 2.2 per 100 is the M.P.N.
4	1	2.2 per 100 is the M.P.N.
3	2	5.1 per 100 is the M.P.N.
2	3	9.2 per 100 is the M.P.N.
1	4	16 per 100 is the M.P.N.
0	5	More than 16 per 100 is the M.P.N.

Following is a list of sampling points used in
1968:-

<u>DATE OF SAMPLE</u>	<u>ORIGIN OF SAMPLE</u>	<u>POSITIVE RESULTS WILL BE NOTED. NEGATIVE RESULTS LEFT BLANK</u>
<u>January</u>		
Saturday 6	99 Smith Street	
Thursday 11	MacLaren Avenue Fire Station	
Wednesday 17	127 Charlotte Street	
Wednesday 24	City Hall	
Sunday 28	Hanwell Well (after chlorination)	
<u>February</u>		
Friday 9	MacLaren Avenue Fire Station	
Thursday 15	Hanwell Well (after chlorination)	
Saturday 17	Hanwell Well (raw)	
Sunday 25	Hanwell Well (raw)	
Tuesday 27	Crawford Bakery	
<u>March</u>		
Saturday 16	99 Smith Street	
Saturday 23	K-Mart	
Sunday 24	Bridge Street Well	
Saturday 30	MacLaren Avenue Fire Station	
<u>April</u>		
Saturday 6	99 Smith Street	
Saturday 13	MacLaren Avenue Fire Station	
Friday 19	City Hall	
Friday 26	Motel, Smythe Street	
<u>May</u>		
Wednesday 1	U.N.B. Engineering Bldg.	
Saturday 11	99 Smith Street	
Thursday 16	MacLaren Avenue Fire Station	
Wednesday 22	Hanwell Well (raw)	
Saturday 25	277 Gibson Street	
<u>June</u>		
Sunday 2	MacLaren Avenue Fire Station	
Monday 10	510 Hanwell Road (uses Hanwell Well)	
Sunday 16	U.N.B. Engineering Bldg.	
Sunday 23	Rural Cemetery	
Wednesday 26	York Structural Steel	
<u>July</u>		
Wednesday 3	Hanwell Well (raw)	
Tuesday 9	Pony Club	
Thursday 18	99 Smith Street	
Sunday 21	MacLaren Avenue Fire Station	
Thursday 25	Old Round House, Union Street	
<u>August</u>		
Friday 2	99 Smith Street	
Wednesday 7	York Structural Steel	
Sunday 18	MacLaren Avenue Fire Station	
Friday 23	251 Sewell Street	
Friday 23	Killarney Well (raw)	
Saturday 24	Hanwell Well (raw)	1 positive 4 negative
Saturday 24	597 Hanwell Road (after Chlor)	
Wednesday 28	Fredericton Boat Club	

<u>DATE OF SAMPLE</u>	<u>ORIGIN OF SAMPLE</u>	<u>POSITIVE RESULTS WILL BE NOTED. NEGATIVE RESULTS LEFT BLANK</u>
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September

Thursday 5	99 Smith Street
Thursday 12	377 Gibson Street
Saturday 21	Hanwell Well (raw)
Thursday 26	MacLaren Avenue Fire Station

October

Tuesday 1	Diplomat Motel
Thursday 10	Pony Club
Thursday 17	Centennial Building
Tuesday 22	Hanwell Well (raw) 5 positive 0 negative
Thursday 24	Hanwell Well (raw) 5 positive 0 negative
Thursday 24	597 Hanwell Road (after chlor)

November

Friday 1	99 Smith Street
Monday 4	510 Hanwell Road
Thursday 7	Bridge Street Well (raw)
Monday 11	U.N.B. Engineering Bldg.
Thursday 21	99 Smith Street
Tuesday 26	Motel, Smythe Street

December

Monday 2	99 Bridge Street
Monday 16	MacLaren Avenue Fire Station
Tuesday 17	510 Hanwell Road
Tuesday 17	Hanwell Well (raw) 2 positive 3 negative
Monday 30	597 Hanwell Road

(Signed) E. W. Hagerman

February 13, 1969

City Analyst.

DOMESTIC SEWER INSTALLATIONS - 1968

1.Highland Co.Ltd.	465 Lisgar St.	April 9	4"	Transit
2.United Baptist Church	135 Canterbury Drive	April 10	4"	"
3.Dept.of Indian Affairs	217 Paul St.	April 15	4"	"
4.Dept.of Indian Affairs	227 Paul St.	April 15	4"	"
5.Dept.of Indian Affairs	237 Paul St.	April 15	4"	"
6.Topmar Housing Ltd.	337 Northumberland St.	April 16	4"	"
7.Topmar Housing Ltd.	323 Northumberland St.	April 17	4"	"
8.Topmar Housing Ltd.	138 Limerick Road	April 18	4"	"
9.Topmar Housing Ltd.	154 Limerick Road	April 19	4"	"
10.Topmar Housing Ltd.	146 Limerick Road	April 19	4"	"
11.Topmar Housing Ltd.	162 Limerick Road	April 19	4"	"
12.E.H.Rogers	30 Birch Court	April 23	4"	"
13.Starlite Homes Ltd.	288 Willingdon St.	April 24	4"	"
14.Starlite Homes Ltd.	291 Willingdon St.	April 25	4"	"
15.Fredericton Housing Ltd.	264 Oxford St.	April 26	4"	"
16.Custom Builders Ltd.	25 Studholm St.	April 26	4"	"
17.E.L.Coy	264 Sewell St.	April 29	4"	"
18.Dept.of Public Works	625 King St.	May 6	4"	"
19.Fredericton Rentals Ltd.	385 Canterbury Drive	May 7	6"	"
20.Highland Coltd.	470 Lisgar St.	May 8	4"	"
21.Wayne Hill	299 Willingdon St.	May 9	4"	"
22.Wayne Hill	260 Willingdon St.	May 10	4"	"
23.Topmar Housing Ltd.	164 Lynhaven St.	May 28	4"	"
24.Topmar Housing Ltd.	144 Lynhaven St.	May 29	4"	"
25.Custom Builders Ltd.	184 Lynhaven St.	May 29	4"	"
26.Custom Builders Ltd.	213 Lynhaven St.	May 30	4"	"
27.K.W.Howlett	730 Irvine St.	May 31	4"	"
28.Diamond Const.Co.Ltd.	130 Regent St.	June 3	4"	"
29.Highland Co.Ltd.	450 Lisgar St.	June 4	4"	"
30.Donald Hill	296 Willingdon St.	June 5	4"	"
31.Hill Bros.	322 Willingdon St.	June 6	4"	"
32.Wayne Hill	295 Willingdon St.	June 6	4"	"
33.Donald Hill	280 Willingdon St.	June 7	4"	"
34.Wayne Hill	275 Willingdon St.	June 7	4"	"
35.Miles Minit Car Wash	89 Prospect St.	June 12	6"	"
36.Starlite Homes Ltd.	52 McNair Drive	June 14	4"	"
37.Starlite Homes Ltd.	62 McNair Drive	June 14	4"	"
38.Topmar Housing Ltd.	41 Richards Court	June 17	4"	"
39.Edward S.Doane	Lot P-15 Wilsey Road	June 18	4"	"
40.Fredericton Housing Ltd.	534 Canterbury Drive	June 19	4"	"
41.Fredericton Housing Ltd.	544 Canterbury Drive	June 19	4"	"
42.Fredericton Housing Ltd.	112 Topcliffe Crescent	June 20	4"	"
43.Zellers Building	436 Queen St.	June 20	6"	"
44.E.A.Petrie	224 Oxford St.	June 24	4"	"
45.K.W.Howlett	728 Irvine St.	June 25	4"	"
46.Larry Hill	746 Irvine St.	June 25	4"	"
47.J.D.Duffie	125 Eglington St.	June 26	4"	"
48.Robert Calhoun	998 York St.	June 27	4"	"
49.R.D.Neill	233 Lynhaven St.	June 28	4"	"
50.Donald Hill	245 Willingdon St.	June 28	4"	"
51.Topmar Housing Ltd.	685 Gregg Court	July 2	4"	"
52.L.S.O'Leary	757 Albert St.	July 2	4"	"
53.Cummings Housing Ltd.	254 Noble St.	July 4	4"	"
54.Maritime Engineering Ltd	870 Granddame St.	July 8	4"	"
55.Fredericton Housing Ltd.	8 Topcliffe Crescent	July 8	4"	"
56.Fredericton Housing Ltd.	15 Topcliffe Crescent	July 9	4"	"
57.Fredericton Housing Ltd.	56 Topcliffe Crescent	July 9	4"	"
58.Fredericton Housing Ltd.	38 Topcliffe Crescent	July 9	4"	"
59.Fredericton Housing Ltd.	5 Topcliffe Crescent	July 10	4"	"
60.Fredericton Housing Ltd.	25 Topcliffe Crescent	July 10	4"	"
61.Fredericton Housing Ltd.	43 Topcliffe Crescent	July 11	4"	"
62.Fredericton Housing Ltd.	33 Topcliffe Crescent	July 11	4"	"
63.Fredericton Housing Ltd.	145 Topcliffe Crescent	July 12	4"	"
64.Topmar Housing Ltd.	381 Lisgar St.	July 15	4"	"
65.Topmar Housing Ltd.	31 Richards Court	July 15	4"	"
66.Topmar Housing Ltd.	387 Lisgar St.	July 15	4"	"
67.Topmar Housing Ltd.	393 Lisgar St.	July 16	4"	"
68.Hill Bros.	211 Willingdon St.	July 17	4"	"
69.Fredericton Housing Ltd.	102 Topcliffe Crescent	July 18	4"	"
70.Hill Bros.	287 Willingdon St.	July 19	4"	"

71.Fredericton Housing Ltd.	53 Topcliffe Crescent	July 19	4"	Transite
72.Fredericton Housing Ltd.	98 Topcliffe Crescent	July 22	4"	"
73.Fredericton Housing Ltd.	63 Topcliffe Crescent	July 23	4"	"
74.David Laughlin8	24 Pembroke Crescent	July 24	4"	2
75.Fredericton Housing Ltd,	123 Grey St.	July 29	4"	"
76.Topmar Housing Ltd.	145 McNair Drive	Aug. 5	4"	"
77.Topmar Housing Ltd.	133 McNair Drive	Aug. 6	4"	"
78.Topmar Housing Ltd.	165 McNaird Drive	Aug. 6	4"	"
79.J.C.Risteen Co.Ltd.	106 Queen St.	Aug. 8	4"	"
80.Starlite Homes Ltd.	347 Massey St.	Aug. 12	4"	"
81.Starlite Homes Ltd.	337 Massey St.	Aug. 12	4"	"
82.Fredericton Housing Ltd.	492-494 Canterbury Drive	Aug. 13	4"	"
83.Fredericton Housing Ltd.	165 Topcliffe Crescent	Aug. 13	4"	"
84.Fredericton Housing Ltd.	172 Topcliffe Crescent	Aug. 16	4"	"
85.Fredericton Housing Ltd.	94 Topcliffe Crescent	Aug. 16	4"	"
86.Community Racing Assoc.	Exhibition Grounds	Aug. 16	4"	"
87.Diamond Const.Co.Ltd.	Priestman St.High School	Aug. 16	8"	"
88.Fredericton Housing Ltd.	84 Topcliffe Crescent	Aug. 19	4"	"
89.Fredericton Housing Ltd.	72 Topcliffe Crescent	Aug. 19	4"	"
90.Starlite Homes Ltd.	317 Massey St.	Aug. 20	4"	"
91.Carl Hay	733 Irvine St.	Aug. 21	4"	"
92.Mummings Housing Ltd.	991 Regent St.	Aug. 23	6"	"
93.Larry Hill	107 Beechwood Crescent	Aug. 28	4"	"
94.Fredericton Housing Ltd.	185 Topcliffe Crescent	Aug. 29	4"	"
95.Fredericton Housing Ltd.	225 Topcliffe Crescent	Aug. 29	4"	"
96.Fredericton Housing Ltd.	175 Topcliffe Crescent	Aug. 29	4"	"
97.Fredericton Housing Ltd.	195 Topcliffe Crescent	Aug. 30	4"	"
98.Mrs. Annie Desrosier	273 Priestman St.	Sept. 3	4"	"
99.Custom Builders	271 Kings College Road	Sept. 9	4"	"
100.G.M.Baker	51 Golf Club Road	Sept.10	4"	"
101.Dr. I. Unger	66 Cameron Court	Sept.12	4"	"
102.Fredericton Housing Ltd.	192 Topcliffe Crescent	Sept.16	4"	"
103.Primary School	Liverpool St. & Canterbury	Sept.17	6"	"
104.Fredericton Housing Ltd.	245 Topcliffe Crescent	Sept.17	4"	"
105.Fredericton Housing Ltd.	259 Topcliffe Crescent	Sept.17	4"	"
106.Fredericton Housing Ltd.	605 Canterbury Drive	Sept.17	4"	"
107.Primary School	York St.& Priestman St.	Sept.19	6"	"
108.J.F.Sherwood	56 Cameron Court	Sept.19	4"	"
109.Topmar Housing Ltd,	690 Gregg Court	Sept.20	4"	"
110.Hill Bros.	748 Irvine St.	Sept.23	4"	"
111.Carl Hay	795 Irvine St.	Sept.23	4"	"
112.Hill Bros.	611 Hanwell Road	Sept.25	4"	"
113.Hill Bros.	623 Hanwell Road	Sept.25	4"	"
114.Fredericton Housing Ltd.	132 Topcliffe Crescent	Sept.26	4"	"
115.Fredericton Housing Ltd.	242 Topcliffe Crescent	Sept.26	4"	"
116.C.F.N.B. Building	125 Hanwell Road	Sept.30	4"	"
117.Mrs.Edna Charters	424 Priestman St.	Oct. 1	4"	"
118.Kenneth Murchland	348 Priestman St.	Oct. 1	4"	"
119.G,E.Kitchen	328 Priestman St.	Oct. 2	4"	"
120.Donald Hill	652 Fenety St.	Oct. 3	4"	"
121.Donald Hill	330 Willingdon St.	Oct. 3	4"	"
122.Larry Hill	23 Michener Court	Oct. 4	4"	"
123.Col.G.D.Dailley	83 Shore St.	Oct. 10	4"	"
124.Maria Florean	209 Montgomery St.	Oct. 10	4"	"
125.Albert O'Leary	526 Priestman St.	Oct. 11	4"	"
126.Wayne Hill	376 Priestman St.	Oct. 11	6"	"
127.Llewellyn Const.Co.Ltd.	1119 Smythe St.	Oct. 16	4"	"
128.Metro Builders	400 Hanwell Road	Oct. 18	4"	"
129.Metro Builders	390 Hanwell Road	Oct. 18	4"	"
130.Topmar Housing Ltd.	72 McNair Drive	Oct. 21	4"	"
131.Topmar Housing Ltd.	80 McNair Drive	Oct. 23	4"	"
132.Topmar Housing Ltd.	88 McNair Drive	Oct. 23	4"	"
133.Roland Rickard	726 Irvine St.	Oct. 24	4"	"
134.Fredericton Housing Ltd.	232 Topcliffe Crescent	Oct. 25	4"	"
135.Leith Draper	1206 Regent St.	Oct. 29	4"	"
136.Fredericton Housing Ltd.	235 Topcliffe Crescent	Oct. 29	4"	"
137.Fredericton Housing Ltd.	152 Topcliffe Crescent	Oct. 30	4"	"
138.Fredericton Housing Ltd.	142 Topcliffe Crescent	Oct. 30	4"	"
139.Fredericton Housing Ltd.	20 Topcliffe Crescent	Oct. 31	4"	"
140.Fredericton Housing Ltd.	632 Canterbury Drive	Oct. 31	4"	"

141.Fredericton Housing Ltd.	252 Topcliffe Crescent	Nov. 1	4"	Transite
142.Fredericton Housing Ltd.	565-567 Canterbury Drive	Nov. 1	4"	"
143.Topmar Housing Ltd. XXX .	130 McNair Drive	Nov. 1	4"	"
144.Topmar Housing Ltd.	126 McNair Drive	Nov. 1	4"	"
145.Fred A.Titus	155 Turnbull Court	Nov. 5	4"	"
146.Bernard Chippin	171 Priestman St.	Nov. 6	4"	"
147.J.R.Hewey	1226 Regent St.	Nov.13	4"	"
148.Fish & Game Association	Exhibition Grounds	Nov.14	4"	"
149.Topmar Housing Ltd.	52 Michener Court	Nov.15	4"	"
150.Firestone Tire & Rubber	315 Brunswick St.	Nov.18	4"	"
151.K.W.Howlett	59 Bailey Drive	Nov.19	4"	"
152.K.W.Howlett	317 Kings College Road	Nov.20	4"	"
153.Metro Builders	380 Hanwell Road	Nov.21	4"	"
154.Metro Builders	410 Hanwell Road	Nov.21	4"	"
155.Holgar Mollegard	535 Montgomery St.	Nov.22	4"	"
156.Hill Bros.	45 Walker St.	Nov.26	4"	"
157.Starlite Homes Ltd.	31 Michener Court	Nov.26	4"	"
158.Larry Hill	40 Walker St.	Nov.27	4"	"
159.Starlite Homes Ltd.	42 Michener Court	Nov.28	4"	"
160.Topmar Housing Ltd.	32 Michener Court	Nov.28	4"	"
161.Leonard Yerxa	80 Limerick Road	Dec. 2	4"	"
162.Coates & Hamnes Ltd.	18 Hearne St.	Dec. 3	4"	"
163.Starlite Homes Ltd.	30 Hearne St.	Dec. 4	4"	"
164.Fredericton Housing Ltd.	155 Topcliffe Crescent	Dec. 5	4"	"
165.Fredericton Housing Ltd.	205 Topcliffe Crescent	Dec. 6	4"	"
166.Fredericton Housing Ltd.	182 Topcliffe Crescent	Dec. 9	4"	"
167.Mrs.Harry Smith	187 Priestman St.	Dec.11	4"	"
168.Fredericton Housing Ltd.	162 Topcliffe Crescent	Dec.13	4"	"
169.Fredericton Housing Ltd.	581 Canterbury Drive	Dec.16	4"	"
170.Fredericton Hosuing Ltd.	621 Canterbury Drive	Dec.16	4"	"
171.Fredericton Hosuing Ltd.	122 Topcliffe Crescent	Dec.17	4"	"
172.Leo Brewer	755 Irvine St.	Dec.20	4"	"

WATER SERVICE RELAYS - 1968

1.Harry Brooks	50 Paul St.	Mar. 21	5/8" Cop.
2.J.Raymond Savage	447 King St.	Apr. 21	1" Cop.
3.William H.Reynolds	347 George St.	Apr. 25	1" Cop.
4.J.Raymond Savage	445 King St.	Apr. 28	1" Cop.
5.Harold Coyle	726 - 728 Beaverbrook St.	May 23	3/4" Cop.
6.Mrs.Francis Winters	550 Charlotte St.	June 4	3/4" Cop.
7.Ian Thomas	330 University Ave.	July 3	3/4" Cop.
8.Lawrence M.Hanson	403 Westmorland St.	July 12	3/4" Cop.
9.P.G.Wilson	453 Highland Ave.	July 15	3/4" Cop.
10.John Horsnell	243 Gibson St.	Aug. 8	3/4" Cop.
11.Kent Thompson	706 Albert St.	Aug. 22	3/4" Cop.
12.Mrs.Julia White	765 Prince St.	Sept. 9	3/4" Cop.
13.Thomas Gough	315 York St.	Sept.10	3/4" Cop.
14.Mrs.Mina Valentine	359 Dundonald St.	Sept.11	3/4" Cop.
15.Lester J.Whalen	328 Woodstock Road	Oct. 16	3/4" Cop.
16.Miss Helen Morrison	247 St.John St.	Oct. 18	3/4" Cop.
17.N.B.Reg.Nurses Assoc.	231 Saunders St.	Nov. 7	3/4" Cop.

WATER SERVICE INSTALLATIONS 1968

1.Highland Co.Ltd.	465 Lisgar St.	April 9	$\frac{3}{4}$ " Cop.
2.James K.Shannon	75 Prospect St.	April 9	1" Cop.
3.United Baptist Church	135 Canterbury Drive	April 10	5/8" Cop.
4.Dept.of Indian Affairs	217 Paul St.	April 15	$\frac{3}{4}$ " Cop.
5.Dept.of Indian Affairs	227 Paul St.	April 15	$\frac{3}{4}$ " Cop.
6.Dept.of Indian Affairs	237 Paul St.	April 15	$\frac{3}{4}$ " Cop.
7.Topmar Housing Ltd.	337 Northumberland St.	April 16	$\frac{3}{4}$ " Cop.
8.Topmar Housing Ltd.	323 Northumberland St.	April 17	$\frac{3}{4}$ " Cop.
9.Topmar Housing Ltd.	138 Limerick Road	April 18	$\frac{3}{4}$ " Cop.
10.Topmar Hpusing Ltd.	154 Limerick Road	April 19	$\frac{3}{4}$ " Cop.
11.Topmar Housing Ltd.	146 Limerick Road	April 19	$\frac{3}{4}$ " Cop.
12.Topmar Housing Ltd.	162 Limerick Road	April 19	$\frac{3}{4}$ " Cop.
13.E.H.Rogers	30 Birch Court	April 23	1" Cop.
14.Starlite Homes Ltd.,	288 Willingdon St.	April 24	$\frac{3}{4}$ " Cop.
15.Starlite Homes Ltd.	291 Willingdon St.	April 25	$\frac{3}{4}$ " Cop.
16.Fredericton Housing Ltd.	264 Oxford St.	April 26	$\frac{3}{4}$ " Cop.
17.Custom Builders Ltd.	25 Studholm St.	April 26	$\frac{3}{4}$ " Cop.
18.E.L.Coy	264 Sewell St.	April 29	$\frac{3}{4}$ " Cop.
19.Dept.of Public Works	625 King St.	May 6	5/8" Cop.
20.Fredericton Rentals Ltd.	385 Canterbury Drive	May 7	1" Cop.
21.Highland Co.Ltd.	470 Lisgar St.	May 8	$\frac{3}{4}$ " Cop.
22.Wayne Hill	299 Willingdon St.	May 9	$\frac{3}{4}$ " Cop.
23.Wayne Hill	260 Willingdon St.	May 10	$\frac{3}{4}$ " Cop.
24.Topmar Housing Ltd.	164 Lynhaven St.	May 28	$\frac{3}{4}$ " Cop.
25.Topmar Housing Ltd.	144 Lynhaven St.	May 29	$\frac{3}{4}$ " Cop.
26.Custom Builders Ltd.	184 Lynhaven St.	May 29	$\frac{3}{4}$ " Cop.
27.Custom Builders Ltd.	213 Lynhaven St.	May 30	$\frac{3}{4}$ " Cop.
28.K.W.Howlett	730 Irvine St.	May 31	$\frac{3}{4}$ " Cop.
29.Diamond Const.Co.Ltd.	130 Regent St.	June 3	1" Cop.
30.Highland Co.Ltd.	450 Lisgar St.	June 4	$\frac{3}{4}$ " Cop.
31.Donald Hill	296 Willingdon St.	June 5	$\frac{3}{4}$ " Cop.
32.Hill Bros.	322 Willingdon St.	June 6	$\frac{3}{4}$ " Cop.
33.Wayne Hill	295 Willingdon St.	June 6	$\frac{3}{4}$ " Cop.
34.Donald Hill	280 Willingdon St.	June 7	$\frac{3}{4}$ " Cop.
35.Wayne Hill	275 Willingdon St.	June 7	$\frac{3}{4}$ " Cop.
36.Miles Minit Car Wash	89 Prospect St.	June 12	1" Cop.
37.Starlite Homes Ltd.	52 McNair Drive	June 14	$\frac{3}{4}$ " Cop.
38.Starlite Homes Ltd.	62 McNair Drive	June 14	$\frac{3}{4}$ " Cop.
39.Topmar Housing Ltd.	41 Richards Court	June 17	$\frac{3}{4}$ " Cop.
40.Edward S.Doane	Lot P-15 Wilsey Road	June 18	$\frac{3}{4}$ " Cop.
41.Fredericton Housing Ltd.	534 Canterbury Drive	June 19	5/8" Cop.
42.Fredericton Housng Ltd.	544 Canterbury Drive	June 19	5/8" Cop.
43.Fredericton Housng Ltd.	112 Topcliffe Crescent	June 20	5/8" Cop.
44.Zellers Building	436 Queen St.	June 20	2" Cop.
45.E.A.Petrie	224 Oxford St.	June 24	$\frac{3}{4}$ " Cop.
46.K.W.Howlett	728 Irvine St.	June 25	$\frac{3}{4}$ " Cop.
47.Larry Hill	746 Irvine St.	June 25	$\frac{3}{4}$ " Cop.
48.J.D.Duffie	125 Eglington	June 26	$\frac{3}{4}$ " Cop.
49.Robert Calhoun	998 York St.	June 27	$\frac{3}{4}$ " Cop.
50.R.D.Neill	233 Lynhaven St.	June 28	$\frac{3}{4}$ " Cop.
51.Donald Hill	245 Willingdon St.	June 28	$\frac{3}{4}$ " Cop.
52.Topmar Housing Ltd.	685 Gregg Court	July 2	$\frac{3}{4}$ " Cop.
53.L.S.O'Leary	757 Albert St.	July 2	$\frac{3}{4}$ " Cop.
54.Cummings Housing Ltd.	254 Noble St.	July 4	$\frac{3}{4}$ " Cop.
55.Maritime Engineering Ltd.	870 Grandame St.	July 8	$\frac{3}{4}$ " Cop.
56.Fredericton Housing Ltd.	8 Topcliffe Crescent	July 8	5/8" Cop.
57.Fredericton Housing Ltd.	15 Topcliffe Cresdcent	July 9	5/8" Cop.
58.Fredericton Housing Ltd.	56 Topcliffe Crescent	July 9	5/8" Cop.
59.Fredericton Housing Ltd.	38 Topcliffe Cresdcent	July 9	5/8" Cop.
60.Fredericton Housing Ltd.	5 Topcliffe Crescent	July 10	5/8" Cop.
61.Fredericton Housing Ltd.	25 Topcliffe Crescent	July 10	5/8" Cop.
62.Fredericton Housing Ltd.	43 Topcliffe Crescent	July 11	5/8" Cop.
63.Fredericton Housing Ltd.	33 Topcliffe Crescent	July 11	5/8" Cop.
64.Fredericton Housing Ltd.	145 Topcliffe Crescent	July 12	5/8" Cop.
65.Topmar Housing Ltd.	381 Lisgar St.	July 15	$\frac{3}{4}$ " Cop.
66.Topmar Housing Ltd.	31 Richards Court	July 15	$\frac{3}{4}$ " Cop.
67.Topmar Housing Ltd.	387 Lisgar St.	July 15	$\frac{3}{4}$ " Cop.
68.Topmar Housing Ltd.	393 Lisgar St.	July 16	$\frac{3}{4}$ " Cop.
69.Hill Bros.	211 Willingdon St.	July 17	$\frac{3}{4}$ " Cop.
70.Fredericton Housing Ltd.	102 Topcliffe Crescent	July 18	5/8" Cop.

71.Hill Bros.	287 Willingdon St.	July 19	$\frac{3}{4}$ " Cop.
72.Fredericton Housing Ltd.	53 Topcliffe Crescent	July 19	5/8" Cop.
73.Fredericton Housing Ltd.	98 Topcliffe Crescent	July 22	5/8" Cop.
74.Fredericton Housing Ltd.	63 Topcliffe Crescent	July 23	5/8" Cop.
75.David Laughlin	24 Pembroke Crescent	July 24	$\frac{3}{4}$ " Cop.
76.U.N.B.	Hut # 4	July 29	$\frac{3}{4}$ " Cop.
77.Fredericton Housing Ltd.	123 Grey St.	July 29	$\frac{3}{4}$ " Cop.
78.Topmar Housing Ltd.	145 McNair Drive	Aug. 5	$\frac{3}{4}$ " Cop.
79.Topmar Housing Ltd.	133 McNair Drive	Aug. 6	$\frac{3}{4}$ " Cop.
80.Topmar Housing Ltd.	165 McNair Drive	Aug. 6	$\frac{3}{4}$ " Cop.
81.J.C.Risteen Co.Ltd.	106 Queen St.	Aug. 8	$\frac{3}{4}$ " Cop.
82.Starlite Homes Ltd.	347 Massey St.	Aug. 12	$\frac{3}{4}$ " Cop.
83.Starlite Homes Ltd.	337 Massey St.	Aug. 12	$\frac{3}{4}$ " Cop.
84.Fredericton Housing Ltd.	492-494 Canterbury Drive	Aug. 13	5/8" Cop.
85.Fredericton Housing Ltd.	165 Topcliffe Crescent	Aug. 13	5/8" Cop.
86.Fredericton Housing Ltd.	172 Topcliffe Crescent	Aug. 16	5/8" Cop.
87.Fredericton Housing Ltd.	94 Topcliffe Crescent	Aug. 16	5/8" Cop.
88.Community Racing Assoc.	Exhibition Grounds	Aug. 16	5/8" Cop.
89.Diamond Const.Co.Ltd.	Priestman St.High School	Aug. 16	6" C.I.
90.Fredericton Housing Ltd.	84 Topcliffe Crescent	Aug. 19	5/8" Cop.
91.Fredericton Housing Ltd.	72 Topcliffe Crescent	Aug. 19	5/8" Cop.
92.Starlite Homes Ltd.	317 Massey St.	Aug. 20	$\frac{3}{4}$ " Cop.
93.Carl Hay	733 Irvine St.	Aug. 21	$\frac{3}{4}$ " Cop.
94.Cummings Housing Ltd.	991 Regent St.	Aug. 23	1" Cop.
95.Larry Hill	107 Beechwood Crescent	Aug. 28	$\frac{3}{4}$ " Cop.
96.Fredericton Housing Ltd.	185 Topcliffe Crescent	Aug. 29	5/8" Cop.
97.Fredericton Housing Ltd.	225 Topcliffe Crescent	Aug. 29	5/8" Cop.
98.Fredericton Housing Ltd.	175 Topcliffe Crescent	Aug. 29	5/8" Cop.
99.Fredericton Housing Ltd.	195 Topcliffe Crescent	Aug. 30	5/8" Cop.
100.Mrs.Annie Desrosier	273 Priestman St.	Sept. 3	$\frac{3}{4}$ " Cop.
101.Custom Builders Ltd.	271 Kings College Road	Sept. 9	$\frac{3}{4}$ " Cop.
102.G.M.Baker	51 Golf Club Road	Sept.10	$\frac{3}{4}$ " Cop.
103.Dr.I.Unger	66 Cameron Court	Sept.12	$\frac{3}{4}$ " Cop.
104.Fredericton Housing Ltd.	192 Topcliffe Crescent	Sept.16	5/8" Cop.
105.Primary School	Liverpool St.& Canterbury	Sept.17	1" Cop.
106.Fredericton Housing Ltd.	245 Topcliffe Crescent	Sept.17	5/8" Cop.
107.Fredericton Housing Ltd.	259 Topcliffe Crescent	Sept.17	5/8" Cop.
108.Fredericton Housing Ltd.	605-607 Canterbury Drive	Sept.17	$\frac{3}{4}$ " Cop.
109.Primary School	York St.& Priestman St.	Sept.19	1" Cop.
110.J.F.Sherwood	56 Cameron Court	Sept.19	$\frac{3}{4}$ " Cop.
111.Topmar Housing Ltd.	690 Gregg Court	Sept.20	$\frac{3}{4}$ " Cop.
112.Hill Bros.	748 Irvine St.	Sept.23	$\frac{3}{4}$ " Cop.
113.Carl Hay	795 Irvine St.	Sept.23	$\frac{3}{4}$ " Cop.
114.Hill Bros.	611 Hanwell Road	Sept.25	$\frac{3}{4}$ " Cop.
115.Hill Bros.	623 Hanwell Road	Sept.25	$\frac{3}{4}$ " Cop.
116.Fredericton Housing Ltd.	132 Topcliffe Crescent	Sept.26	5/8" Cop.
117.Fredericton Housing Ltd.	242 Topcliffe Crescent	Sept.26	5/8" Cop.
118.C.F.N.B. Building	125 Hanwell Road	Sept.30	2-1" Cop.
119.Mrs.Edna Charters	424 Priestman St.	Oct. 1	$\frac{3}{4}$ " Cop.
120.Kenneth Murchland	348 Priestman St.	Oct. 1	$\frac{3}{4}$ " Cop.
121.G.E.Kitchen	328 Priestman St.	Oct. 2	$\frac{3}{4}$ " Cop.
122.Donald Hill	652 Fenety St.	Oct. 3	$\frac{3}{4}$ " Cop.
123.Donald Hill	330 Willingdon St.	Oct. 3	$\frac{3}{4}$ " Cop.
124.Larry Hill	23 Michener Court	Oct. 4	$\frac{3}{4}$ " Cop.
125.Maria Florean	209 Montgomery St.	Oct. 10	$\frac{3}{4}$ " Cop.
126.Albert O'Leary	526 Priestman St.	Oct. 11	$\frac{3}{4}$ " Cop.
127.Wayne Hill	376 Priestman St.	Oct. 11	1" Cop.
128.Llewellyn Const.Co.Ltd.	1119 Smythe St.	Oct. 16	$\frac{3}{4}$ " Cop.
129.Mrs. Helen Kitchen	Dunn Road	Oct. 17	1" to $\frac{3}{4}$ Cop.
130.Metro Builders	400 Hanwell Road	Oct. 18	$\frac{3}{4}$ " Cop.
131.Metro Builders	390 Hanwell Road	Oct. 18	$\frac{3}{4}$ " Cop.
132.Topmar Housing Ltd.	72 McNair Drive	Oct. 21	$\frac{3}{4}$ " Cop.
133.Topmar Housing Ltd.	80 McNair Drive	Oct.23	$\frac{3}{4}$ " Cop.
134.Topmar Housing Ltd.	88 McNair Drive	Oct. 23	$\frac{3}{4}$ " Cop.
135.Roland Rickard	726 Irvine St.	Oct. 24	$\frac{3}{4}$ " Cop.
136.Fredericton Housing Ltd.	232 Topcliffe Crescent	Oct. 25	5/8" Cop.
137.Leith Draper	1206 Regent St.	Oct. 29	$\frac{3}{4}$ " Cop.
138.Fredericton Housing Ltd.	235 Topcliffe Crescent	Oct. 29	5/8" Cop.
139.Fredericton Housing Ltd.	152 Topcliffe Crescent	Oct. 30	5/8" Cop.
140.Fredericton Housing Ltd.	142 Topcliffe Crescent	Oct. 30	5/8" Cop.
141.Fredericton Housing Ltd.	20 Topcliffe Crescent	Oct. 31	5/8" Cop.

142.Fredericton Housing Ltd.	632 Canterbury Drive	Oct. 31	5/8" Cop.
143.Fredericton Housing Ltd.	252 Topcliffe Crescent	Nov. 1	5/8" Cop.
144.Fredericton Housing Ltd.	565-567 Canterbury Drive	Nov. 1	3/4" Cop.
145.Topmar Housing Ltd.	130 McNair Drive	Nov. 1	3/4" Cop.
146.Topmar Housing Ltd.	126 McNair Drive	Nov. 1	3/4" Cop.
147.Fred A.Titus	155 Turnbull Court	Nov. 5	3/4" Cop.
148.Bernard Chippin	171 Priestman St.	Nov. 6	1" Cop.
149.J.R.Hewey	1226 Regent St.	Nov. 13	3/4" Cop.
150.Fish & Game Assoc.	Exhibition Grounds	Nov. 14	3/4" Cop.
151.Topmar Housing Ltd.	52 Michener Court	Nov. 15	3/4" Cop.
152.Firestone Tire & Rubber	315 Brunswick St.	Nov. 18	1" Cop.
153.Kenneth Howlett	59 Bailey Drive	Nov. 19	3/4" Cop.
154.Kenneth Howlett	317 Kings College Road	Nov. 20	3/4" Cop.
155.Metro Builders	380 Hanwell Road	Nov. 21	3/4" Cop.
156.Metro Builders	410 Hanwell Road	Nov. 21	3/4" Cop.
157.Holgar Mollegard	535 Montgomery St.	Nov. 22	3/4" Cop.
158.Hill Bros.	45 Walker St.	Nov. 26	3/4" Cop.
159.Starlite Homes	31 Michener Court	Nov. 26	3/4" Cop.
160.Larry Hill	40 Walker St.	Nov. 27	3/4" Cop.
161.Starlite Homes Ltd.	42 Michener Court	Nov. 28	3/4" Cop.
162.Topmar Housing Ltd.	32 Michener Court	Nov. 28	3/4" Cop.
163.Leonard Yerxa	80 Limerick Road	Dec. 2	3/4" Cop.
164.Coates & Haines Ltd.	18 Hearne St.	Dec. 3	3/4" Cop.
165.Starlite Homes Ltd.	30 Hearne St.	Dec. 4	3/4" Cop.
166.Fredericton Housing Ltd.	155 Topcliffe Crescent	Dec. 5	5/8" Cop.
167.Fredericton Housing Ltd.	205 Topcliffe Crescent	Dec. 6	5/8" Cop.
168.Fredericton Housing Ltd.	182 Topcliffe Crescent	Dec. 9	5/8" Cop.
169.Mrs.Harry Smith	187 Priestman St.	Dec. 11	3/4" Cop.
170.Fredericton Housing Ltd.	162 Topcliffe Crescent	Dec. 13	5/8" Cop.
171.Fredericton Housing Ltd.	581 Canterbury Drive	Dec. 16	3/4" Cop.
172.Fredericton Housing Ltd.	621 Canterbury Drive	Dec. 16	3/4" Cop.
173.Fredericton Housing Ltd.	122 Topcliffe Crescent	Dec. 17	5/8" Cop.
174.Leo Brewer	755 Irvine St.	Dec. 20	3/4" Cop.

NEW WATER METERS INSTALLED 1968

	<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
1.	Fredericton Housing Ltd.	298 Southampton Drive	Jan. 5	5/8"
2.	Fredericton Housing Ltd.	285 Southampton Drive	Jan. 5	5/8"
3.	Fredericton Housing Ltd.	288 Southampton Drive	Jan. 5	5/8"
4.	Fred Herkert	418 Lisgar St.	Jan. 9	5/8"
5.	New Law School	U.N.B.	Jan. 11	1 $\frac{1}{2}$ "
6.	Fredericton Housing Ltd.	245 Southampton Drive	Jan. 11	5/8"
7.	Hill Bros.	314 Willingdon St.	Jan. 11	5/8"
8.	Donald Hill	306 Willingdon St.	Jan. 11	5/8"
9.	Hill Bros.	60 Lorne St.	Jan. 11	5/8"
10.	A. Ler Gorman	753 MacLaren Avenue	Jan. 12	5/8"
11.	J. A. Dixon	727 Irvine St.	Jan. 12	5/8"
12.	Carl Hay	745 Irvine St.	Jan. 12	5/8"
13.	Wendell Farris	6 Heather Terrace	Jan. 12	5/8"
14.	Mrs. Harry Cook Est.	408-410 Union St.	Jan. 15	5/8"
15.	C. W. Gross	748 Forest Hill	Jan. 15	5/8"
16.	Lewis Lamb	742 Irvine St.	Jan. 15	5/8"
17.	Donald Wilson	244 Lynhaven Court	Jan. 18	5/8"
18.	R. J. Wallace	3 Heather Terrace	Jan. 19	5/8"
19.	Teachers Association Bldg.	Montgomery St.	Jan. 20	1"
20.	Kenneth W. Howlett	763 Irvine St.	Jan. 27	5/8"
21.	Miss E. D. Savoie	661 Elizabeth St.	Feb. 12	5/8"
22.	Dep't of Indian Affairs	36 Sappier St.	Feb. 15	5/8"
23.	Donald Wilson	369 Montgomery St.	Feb. 20	5/8"
24.	D. G. Sedgewick	21 Forest Acres Court	Feb. 20	5/8"
25.	Central City Investments	445 King St.	Feb. 26	5/8"
26.	Hill Bros.	208 Stanley St.	Feb. 27	5/8"
27.	Hill Bros.	188 Stanley St.	Feb. 27	5/8"
28.	Dep't of Indian Affairs	50 Paul St.	Feb. 29	5/8"
29.	Topmar Housing Ltd.	518 Westmorland St.	Mar. 6	5/8"
30.	Ross Drug United	1128 Smythe St.	Mar. 7	5/8"
31.	Imperial Bank of Commerce	1142 Smythe St.	Mar. 7	1"
32.	William Smylie	720 Hanwell Road	Mar. 8	5/8"
33.	Myles E. Chown	221 Oxford St.	Mar. 14	5/8"
34.	Fredericton Housing Ltd.	275 Southampton Drive	Mar. 26	5/8"
35.	Fredericton Housing Ltd.	295 Southampton Drive	Mar. 26	5/8"
36.	Fredericton Housing Ltd.	305 Southampton Drive	Mar. 26	5/8"
37.	Suburban Construction Co.	178 Eglinton St.	Mar. 26	5/8"
38.	Kardamah Gift Shop	1136 Smythe St.	Mar. 28	5/8"
39.	Mrs. Dorothy Myers	668 MacLaren Avenue	Mar. 28	5/8"
40.	Mrs. Violet Nesbitt	623 Windsor St.	Apr. 1	5/8"
41.	Medjuck's Furniture	1132 Smythe St.	Apr. 1	5/8"
42.	Psychology Building	U.N.B.	Apr. 8	1 $\frac{1}{2}$ "
43.	The Villager	1134 Smythe St.	Apr. 8	5/8"
44.	Seraf Studio	1138 Smythe St.	Apr. 8	5/8"
45.	Fredericton Housing Ltd.	235 Southampton Drive	Apr. 8	5/8"
46.	United Baptist Church	135 Canterbury Drive	Apr. 10	5/8"
47.	Western Tire Store	1130 Smythe St.	Apr. 10	1"
48.	Kenneth W. Howlett	736 Irvine St.	Apr. 11	5/8"
49.	Hugh Smith	318 Union St.	Apr. 11	5/8"
50.	Myles E. Chown	244 Oxford St.	Apr. 11	5/8"
51.	New Student Centre	U.N.B.	Apr. 17	2"
52.	Hill Bros.	119 Stanley St.	Apr. 17	5/8"
53.	Hill Bros.	265 Stanley St.	Apr. 17	5/8"
54.	CO-OPerative Insurance Ltd.	1140 Smythe St.	Apr. 18	5/8"
55.	Highland Co. Ltd.	465 Lisgar St.	Apr. 19	5/8"
56.	Donald Hill	220 Eglinton St.	Apr. 19	5/8"
57.	Dep't of Indian Affairs	237 Paul St.	Apr. 22	5/8"
58.	David Carson	664 MacLaren Avenue	Apr. 22	5/8"
59.	H. B. Allen	323 Northumberland St.	May 9	5/8"
60.	Robert Black	146 Gibson St.	May 16	5/8"

	<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
61.	Wilfred H. Sullivan Est.	Priestman St.	May 24	5/8"
62.	James Shannon	59 Prospect St.	May 29	1"
63.	Topmar Housing Ltd.	337 Northumberland St.	June 3	5/8"
64.	Starlite Homes Ltd.	291 Willingdon St.	June 3	5/8"
65.	Monseigneur Boyd Centre	120 Regent St.	June 4	1 1/2"
66.	Dr. Angus A. MacLean	106 Parkhurst Drive	June 5	5/8" ARB
67.	Starlite Homes Ltd.	288 Willingdon St.	June 6	5/8"
68.	Mrs. I. Parker	170 Friel St.	June 7	5/8" ARB
69.	Dep't of Indian Affairs	217 Paul St.	June 12	5/8"
70.	Dep't of Indian Affairs	227 Paul St.	June 12	5/8"
71.	Topmar Housing Ltd.	144 Lynhaven St.	June 28	5/8"
72.	Topmar Housing Ltd.	164 Lynhaven St.	June 28	5/8"
73.	Wayne Hill	299 Willingdon St.	July 2	5/8"
74.	Donald Hill	296 Willingdon St.	July 3	5/8"
75.	Wayne Hill	260 Willingdon St.	July 3	5/8" ARB
76.	Leo Green	347 Charlotte St.	July 4	5/8"
77.	Florence Miller	259 Gibson St.	July 4	5/8"
78.	Fredericton Rentals Ltd.	385 Canterbury Drive	July 5	1 1/2"
79.	J. D. Duffy	125 Eglinton St.	July 8	5/8"
80.	J. Edwin Hall	375-377 York St.	July 10	5/8"
81.	Highland Co. Ltd.	470 Lisgar St.	July 11	5/8" ARB
82.	Mrs. Iva R. Hancox	440 Northumberland St.	July 11	5/8"
83.	Ralph Slocum	444 Northumberland St.	July 11	5/8"
84.	Custom Builders Ltd.	184 Lynhaven St.	July 12	5/8"
85.	Custom Builders Ltd.	213 Lynhaven Court	July 12	5/8"
86.	R. D. Neill	233 Lynhaven Court	July 12	5/8"
87.	Larry Coy	264 Sewell St.	July 17	5/8"
88.	Robert Calhoun	998 York St.	July 17	5/8"
89.	Wesleyan Methodist Church	870 Grandame St.	July 19	5/8"
90.	Fredericton Housing Ltd.	534 Canterbury Drive	July 23	5/8"
91.	Fredericton Housing Ltd.	112 Topcliffe Crescent	July 23	5/8"
92.	Fredericton Housing Ltd.	264 Oxford St.	July 24	5/8"
93.	E. A. Petrie	224 Oxford St.	July 24	5/8"
94.	Topmar Housing Ltd.	146 Limerick Road	July 25	5/8"
95.	Leon Staples	687 Union St.	July 29	5/8"
96.	Starlite Homes Ltd.	62 McNair Drive	July 30	5/8"
97.	Starlite Homes Ltd.	52 McNair Drive	July 30	5/8"
98.	Edward A. Doane	Wilsey Road	July 30	5/8"
99.	Frédericton Housing Ltd.	544 Canterbury Drive	July 30	5/8"
100.	Topmar Housing Ltd.	31 Richards Court	July 30	5/8"
101.	Cummings Housing Ltd.	254 Noble St.	July 31	5/8"
102.	Kenneth W. Howlett	728 Irvine St.	July 31	5/8"
103.	Kenneth W. Howlett	730 Irvine St.	July 31	5/8"
104.	Highland Co. Ltd.	450 Lisgar St.	July 31	5/8"
105.	E. H. Rogers Apartments	30 Birch Court	Aug. 1	1"
106.	Academic Building	St. Thomas University	Aug. 5	2"
107.	University Child Day Care Centre	Hut # 4 U.N.B.	Aug. 5	5/8"
108.	Topmar Housing Ltd.	41 Richards Court	Aug. 5	5/8"
109.	Donald Hill	254 Willingdon St.	Aug. 5	5/8"
110.	Wayne Hill	275 Willingdon St.	Aug. 5	5/8"
111.	R. A. Chiasson	756 Hanwell Road	Aug. 7	5/8"
112.	J. C. Risteen Co. Ltd.	106 Queen St.	Aug. 7	5/8"
113.	L. S. O'Leary	757 Albert St.	Aug. 8	5/8"
114.	Herbert Kitchen	123 Grey St.	Aug. 8	5/8"
115.	Fredericton Housing Ltd.	8 Topcliffe Crescent	Aug. 14	5/8"
116.	Fredericton Housing Ltd.	15 Topcliffe Crescent	Aug. 14	5/8"
117.	Fredericton Housing Ltd.	38 Topcliffe Crescent	Aug. 14	5/8"
118.	Fredericton Housing Ltd.	56 Topcliffe Crescent	Aug. 14	5/8"
119.	Wayne Hill	295 Willingdon St.	Aug. 14	5/8"
120.	L. G. Agnew	762 Coombes St.	Aug. 20	5/8"

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
121. Topmar Housing Ltd.	138 Limerick Road	Aug. 22	5/8"
122. Topmar Housing Ltd.	685 Gregg Court	Aug. 24	5/8"
123. Fredericton High School Meter	# 2 George St.	Aug. 24	2"
124. Fredericton Housing Ltd.	33 Topcliffe Crescent	Aug. 29	5/8" ARB
125. Fredericton Housing Ltd.	43 Topcliffe Crescent	Aug. 29	5/8" ARB
126. Fredericton Housing Ltd.	97 Topcliffe Crescent	Aug. 30	5/8" ARB
127. Fredericton Housing Ltd.	145 Topcliffe Crescent	Aug. 30	5/8" ARB
128. Wilmont United Church	469 King St.	Sept. 3	5/8" ARB
129. Topmar Housing Ltd.	162 Limerick Road	Sept. 11	5/8" ARB
130. Topmar Housing Ltd.	154 Limerick Road	Sept. 11	5/8" ARB
131. Mrs. Annie Desrosier	273 Priestman St.	Sept. 12	5/8" ARB
132. Herschel MacKinney	732 MacLaren Avenue	Sept. 12	5/8" ARB
133. Daniel E. Ellis	876 Barker St.	Sept. 17	5/8"
134. Charles Wall	135 Friel St.	Sept. 18	5/8" ARB
135. Mrs. Marion Chase	158 Friel St.	Sept. 18	5/8" ARB
136. Carl Hay	733 Irvine St.	Sept. 19	5/8"
137. Larry Hill	746 Irvine St.	Sept. 19	5/8" ARB
138. Floyd Gray	145 McNair Drive	Sept. 20	5/8" ARB
139. Topmar Housing Ltd.	165 McNair Drive	Sept. 20	5/8" ARB
140. Topmar Housing Ltd.	133 McNair Drive	Sept. 20	5/8" ARB
141. Custom Builders Ltd.	271 King's College Rd.	Sept. 20	5/8" ARB
142. Topmar Housing Ltd.	381 Lisgar St.	Sept. 24	5/8" ARB
143. Topmar Housing Ltd.	387 Lisgar St.	Sept. 24	5/8" ARB
144. Fredericton Housing Ltd. # 1	492 Canterbury Drive	Sept. 25	5/8" ARB
145. Fredericton Housing Ltd. # 2	494 Canterbury Drive	Sept. 25	5/8" ARB
146. Fredericton Housing Ltd.	5 Topcliffe Crescent	Sept. 25	5/8" ARB
147. Fredericton Housing Ltd.	25 Topcliffe Crescent	Sept. 27	5/8" ARB
148. Fredericton Housing Ltd.	84 Topcliffe Crescent	Sept. 27	5/8" ARB
149. Fredericton Housing Ltd.	102 Topcliffe Crescent	Sept. 30	5/8" ARB
150. Fredericton Housing Ltd.	94 Topcliffe Crescent	Sept. 30	5/8" ARB
151. Fredericton Housing Ltd.	72 Topcliffe Crescent	Sept. 30	5/8" ARB
152. Fredericton Housing Ltd.	165 Topcliffe Crescent	Oct. 1	5/8" ARB
153. Fredericton Housing Ltd.	53 Topcliffe Crescent	Oct. 1	5/8" ARB
154. Mrs. Edna Charters	424 Priestman St.	Oct. 2	5/8" ARB
155. Fredericton Housing Ltd.	63 Topcliffe Crescent	Oct. 2	5/8" ARB
156. Fredericton Housing Ltd.	172 Topcliffe Crescent	Oct. 2	5/8" ARB
157. Fredericton Housing Ltd.	185 Topcliffe Crescent	Oct. 2	5/8" ARB
158. Fredericton Housing Ltd.	175 Topcliffe Crescent	Oct. 2	5/8" ARB
159. Dave Laughlin	24 Pembroke Crescent	Oct. 3	5/8" ARB
160. Topmar Housing Ltd.	393 Lisgar St.	Oct. 3	5/8" ARB
161. Larry Hill	107 Beechwood Crescent	Oct. 6	5/8" ARB
162. Donald Hill	280 Willingdon St.	Oct. 7	5/8" ARB
163. Hill Bros.	322 Willingdon St.	Oct. 8	5/8" ARB
164. Starlite Homes Ltd.	347 Massey St.	Oct. 8	5/8" ARB
165. Starlite Homes Ltd.	337 Massey St.	Oct. 8	5/8" ARB
166. Hill Bros.	201 Willingdon St.	Oct. 8	5/8" ARB
167. Miss Hazel Parker	153 Gill St.	Oct. 9	5/8" ARB
168. Fredericton Housing Ltd.	195 Topcliffe Crescent	Oct. 15	5/8" ARB
169. Fredericton Housing Ltd.	245 Topcliffe Crescent	Oct. 15	5/8" ARB
170. Fredericton Housing Ltd.	259 Topcliffe Crescent	Oct. 15	5/8" ARB
171. Albert O'Leary	526 Priestman St.	Oct. 16	5/8" ARB
172. Fredericton Housing Ltd.	225 Topcliffe Crescent	Oct. 17	5/8" ARB
173. Fredericton Housing Ltd.	192 Topcliffe Crescent	Oct. 22	5/8" ARB
174. G. M. Baker	51 Golf Club Road	Oct. 24	5/8" ARB
175. Mrs. Helen Kitchen	306 Dunn Road	Oct. 24	5/8" ARB
176. Kenneth Murchland	348 Priestman St.	Oct. 25	5/8" ARB
177. J. F. Sherwood	56 Cameron Court	Oct. 25	5/8" ARB
178. G. E. Kitchen	328 Priestman St.	Oct. 31	5/8" ARB
179. George Thomson	746 MacLaren Avenue	Nov. 1	5/8" ARB
180. Leith Draper	1206 Regent St.	Nov. 7	5/8"

<u>NAME</u>	<u>ADDRESS</u>	<u>DATE</u>	<u>SIZE</u>
181. Donald Hill	652 Fenety St.	Nov. 8	5/8" ARB
182. Fredericton Housing Ltd.	132 Topcliffe Crescent	Nov. 9	5/8" ARB
183. Fredericton Housing Ltd.	242 Topcliffe Crescent	Nov. 19	5/8" ARB
184. John R. Hewey	1216 Regent St.	Nov. 20	5/8" ARB
185. Primary School	York & Priestman St.	Nov. 25	2"
186. J. R. Burgess Track Barn	Exhibition Grounds	Nov. 26	5/8"
187. Fredericton Housing Ltd. 605=607	Canterbury Drive	Dec. 3	5/8" ARB
188. Roland Rickard	726 Irvine St.	Dec. 3	5/8" ARB
189. Carl Hay	795 Irvine St.	Dec. 3	5/8" ARB
190. Fredericton Housing Ltd.	232 Topcliffe Crescent	Dec. 4	5/8" ARB
191. Fredericton Housing Ltd.	235 Topcliffe Crescent	Dec. 4	5/8" ARB
192. Forest Hill School # 2	445 Canterbury Drive	Dec. 4	2"
193. Fredericton Housing Ltd.	152 Topcliffe Crescent	Dec. 5	5/8" ARB
194. Fredericton Housing Ltd.	142 Topcliffe Crescent	Dec. 5	5/8" ARB
195. Hill Bros.	748 Irvine St.	Dec. 5	5/8" ARB
196. Topmar Housing Ltd.	88 McNair Drive	Dec. 6	5/8" ARB
197. Topmar Housing Ltd.	80 McNair Drive	Dec. 6	5/8" ARB
198. Topmar Housing Ltd.	72 McNair Drive	Dec. 7	5/8" ARB
199. Metro Builders	390 Hanwell Road	Dec. 9	5/8" ARB
200. Metro Builders	400 Hanwell Road	Dec. 9	5/8" ARB
201. Topmar Housing Ltd.	690 Gregg Court	Dec. 9	5/8" ARB
202. Dr. Isreal Unger	66 Cameron Court	Dec. 9	5/8" ARB
203. Hill Bros.	611 Hanwell Road	Dec. 11	5/8" ARB
204. Hill Bros.	623 Hanwell Road	Dec. 11	5/8" ARB
205. Hill Bros.	287 Willingdon St.	Dec. 12	5/8" ARB
206. Maria Florean	209 Montgomery St.	Dec. 12	5/8" ARB
207. Starlite Homes Ltd.	317 Massey St.	Dec. 12	5/8" ARB
208. Topmar Housing Ltd.	52 Michener Court	Dec. 12	5/8" ARB
209. Starlite Homes Ltd.	42 Michener Court	Dec. 16	5/8" ARB
210. Larry Hill	23 Michener Court	Dec. 16	5/8" ARB
211. Cummings Housing Ltd.	991 Regent St.	Dec. 16	1"
212. Miles Minit Car Wash Meter #1 89	Prospect St.	Dec. 18	1"
213. Miles Minit Car Wash Meter #2 89	Prospect St.	Dec. 18	1"
214. Metro Builders	410 Hanwell Road	Dec. 30	5/8" ARB
215. Llewellyn Construction	1119 Smythe St.	Dec. 30	5/8" ARB
216. Fredericton Housing Ltd.	20 Topcliffe Crescent	Dec. 30	5/8" ARB
217. Fredericton Housing Ltd.	155 Topcliffe Crescent	Dec. 30	5/8" ARB
218. Fredericton Housing Ltd.	632 Canterbury Drive	Dec. 30	5/8" ARB

THE CITY OF
FREDERICTON & VICINITY

FEET 1000 0 1 2 3 4 5

CONSTRUCTION 1968

SURFACE SEWER

DOMESTIC SEWER

WATER

SURFACE SEWER	DOMESTIC SEWER	WATER
24"	18" 15" 12" 10"	8"
90' 240' 3595' 3940' 1662'	7264' 3465' 452' 2172' 2031'	390' 6" 4"

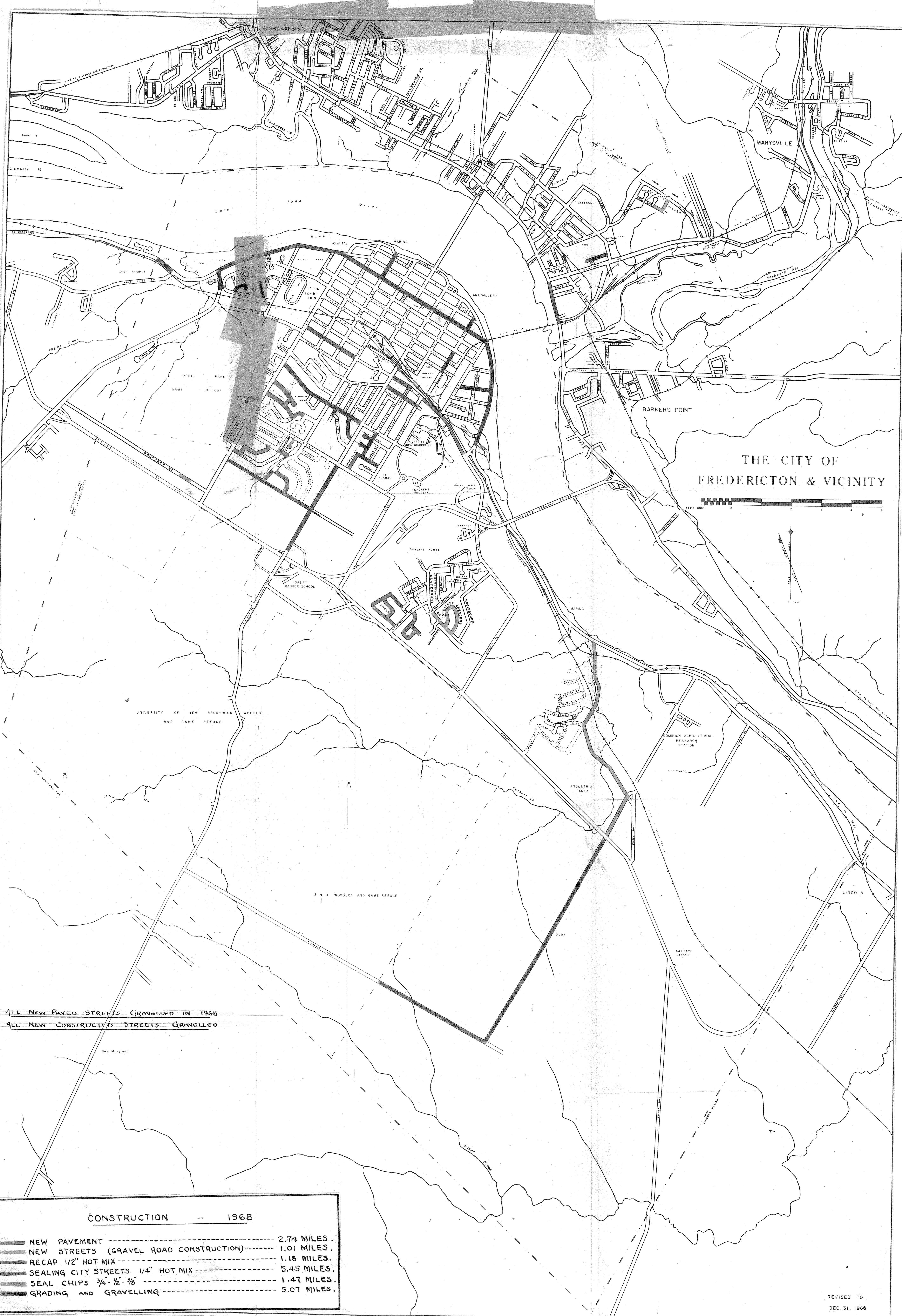
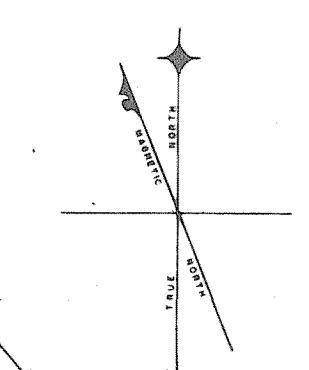
UNIVERSITY OF NEW BRUNSWICK WOODLOT
AND GAME REFUGE

DOMINION AGRICULTURAL
RESEARCH STATION

INDUSTRIAL AREA

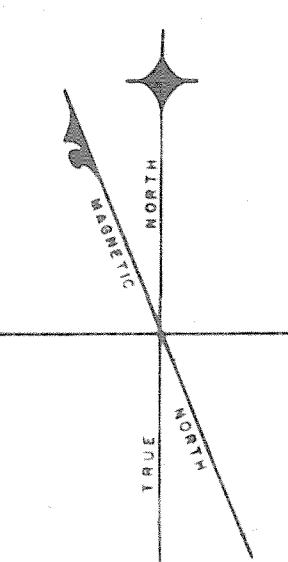
THE CITY OF
FREDERICTON & VICINITY

FEET 1000 0 1 2 3 4 5



THE CITY OF FREDERICTON & VICINITY

Scale: 1:250,000



CONSTRUCTION 1968

— Curb & Gutter

— Sidewalk

4.54 MILES
1.94 MILES

UNIVERSITY OF NEW BRUNSWICK AND
AND GAME REFUGE

INDUSTRIAL AREA

REVISED TO
DEC. 31, 1968