

PUBLIC WORKS DEPARTMENT

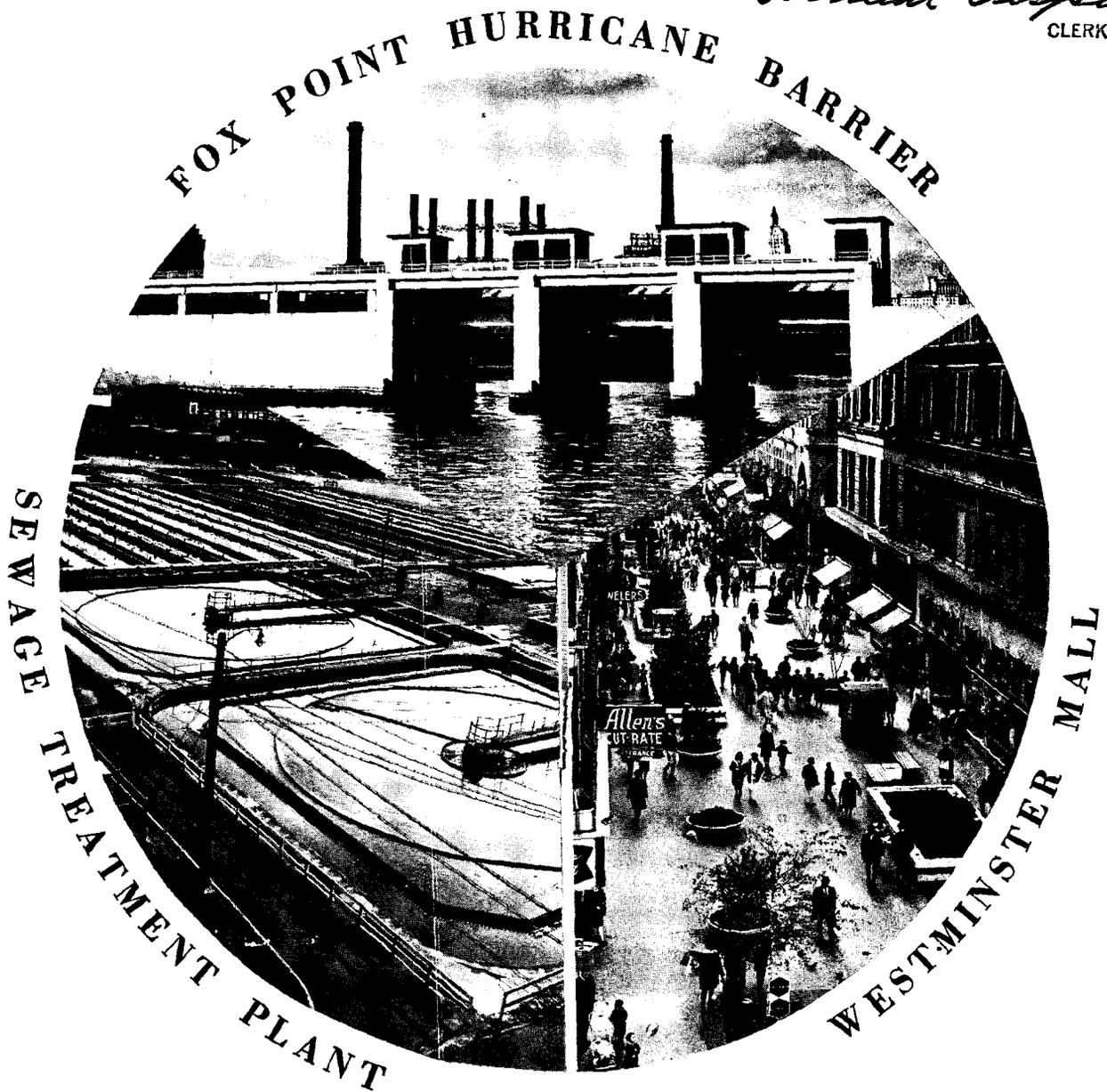
1969 — 1970

ANNUAL REPORT

IN CITY COUNCIL
JUN 17 1971

READ:
WHEREUPON IT IS ORDERED THAT
THE SAME BE RECEIVED.

Wmunt Vespa
CLERK



Providence, Rhode Island

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June 30, 1970

DEPARTMENT OF PUBLIC WORKS
OFFICE OF THE DIRECTOR

The Honorable Joseph A. Doorley, Jr.
Mayor of the City of Providence
City Hall
Providence, Rhode Island

Dear Sir:

The following Annual Report, made in accordance with the provisions of Section 46 of Chapter 832 of the Public Laws of the State of Rhode Island, January Session, 1940, covers the work performed during the year ending June 30, 1970, by various divisions of the Department of Public Works. Appended to this report and to be considered as part thereof, are the reports of the following divisions of this Department:

General Administration
Construction and Maintenance
Sanitation
Engineering Office
Public Service Engineer
Harbor
Environment Control

Contract work on the following projects was completed during the year:

Plans and specifications have been prepared by this Department for the construction of storm sewers in the Mount Hope and West Broadway Redevelopment areas.

We are also furnishing supervision for the relocation of sewers in the Weybosset Hill Redevelopment area and in the area of Interstate Route 195.

Specifications were prepared for the following equipment and materials during the year:

Automobiles	Asphalt Concrete
Dump Trucks	Sand
Garbage Trucks	Rock Salt
Lime Slurry	Liquid Chlorine
	Ferric Chloride

This Department has rendered assistance to various City Departments, Public Works Department of the State of Rhode Island and the surrounding cities and towns as well as to outside agencies including the Chamber of Commerce, Brown University, the N.E. District Corps of Engineers and the U.S. Bureau of Public Roads. Our relationship has been very cordial with all of these agencies.

I am very appreciative of the splendid cooperation extended me by the City Council Committees on Public Works and City Property and wish to thank the members of these committees for their indulgence.

I also wish to thank the various other City Departments for the cooperation extended to this Department.

The successful operation of the Department is due to the united efforts of the staff, section heads and other key personnel in performing their duties and I wish to thank these people for a job well done.

Contract work on the following projects is still in progress.

1. Surfacing and Resurfacing of Roads

Plans and specifications are under preparation by the Engineering Office for the following projects:

1. Plans are being prepared for separating storm water run-off from the sanitary sewer in the various Code-Enforcement and Redevelopment Areas.
2. The plans for a new sewer in Fountain Street and for the separation of the freeway drainage from the Fountain Street-Sabin Street storm sewers have been prepared and coordinated with the Providence Redevelopment Agency and the State Public Works Department for construction of them.

Personnel from the Engineering Office have been trained and are now operating the facilities of the Hurricane Dam.

RECOMMENDATIONS

Consideration should be given to the installation of a warning system for the detection of radio active isotopes at a location in the sewer system which would allow ample time to protect personnel at the Sewage Disposal Plant from radio activity.

Plans and specifications have been prepared for new ventilation fans in the Incinerator Hopper Rooms, the installation of new overhead doors of the Garbage Incinerator, the inspection and repair of the two (2) Westinghouse

Steam Turbines of the Garbage Incinerator and the Retubing of the Boilers at the Garbage Incinerator. These projects should be let on bids and pushed to completion as soon as possible.

The flashing around the brick smoke stack in Unit No. 2, Garbage Incinerator should be replaced.

The City Dump at Hartford Avenue will be filled in a few month and it will also be necessary for the City to obtain another dump site.

Shelter of some kind against radio active fallout should be provided at the Sewage Disposal with supplies of water, food and bedding for a maximum of 32 employees.

Paint all bridges not painted during the past 3 years.

Crib walk at Point Street needs extensive repairs.

Expansion joints of Gen. Edwards Memorial Viaduct require repairing.

Leland Street Foot Bridge should be rebuilt. The floating dock at the Harbor Master's Wharf at Point and South Water Streets is completely gone and a new one should be built.

The Merino Bridge on Glenbridge Avenue and the Promenade Street Bridge are in very poor condition and it is expected that both will be the subject of extensive repairs in 1971.

Many of the Bituminous Macadam Streets require either a surface treatment (seal coat) or a new top.

Expansion Joints in Providence River Complex require re-design and rebuilding.

The New Haven Railroad has been requested to repair and paint the Branch Avenue and Smithfield Avenue Railroad Bridges.

Some of the fender piles and part of the cap log in front of the Sea Wall at the Municipal Dock needs replacing. These piles were broken by boats and are for the purpose of protecting the granite wall.

Some of the main City Streets are showing signs of wear particularly at the joints and will require either extensive patching or new surfaces. We have sealed many of these joints to delay the deterioration but there is much more to be done especially with the increased use of salt for ice control.

Attention should be given in future building construction to the separation of rain water run-off from Sanitary Sewage.

A maintenance gang of one foreman and six men should be set up for the construction and maintenance division to maintain the buildings of the Public Works Department, such as, the Storage and Transit sheds at Fields Point Dock Office, Harbor Master's Building, House and Building at the Red Bridge, Brick Building at Sewer Syphon on India Street, Incinerator Garbage, Sewer Maintenance Building, Highway Building, and Railroad Tracks at Fields Point, the Washington Park Pumping Station, the Reservoir Avenue Pumping Station and the Ernest Street Pumping Station.

There are many items that should be maintained or repaired at the present time. Some of this work has or is presently being accomplished by the Bridge Maintenance Gang and the Carpenters and Masons for the Public Works Shops and Stores; but it could be better accomplished by assigning a definite responsibility for this work.

Several sections of the City are presently being flooded by normal rainstorms and immediate corrective action is required to correct these conditions. The more serious of these conditions are in the following locations:

Fountain Street between Dean Street and Dorrance Street

Pembroke College Area

Dexter Street Area

Elmgrove Avenue and Blackstone Blvd. Area

The surcharged sewer conditions in the following streets should be corrected:

Woonasquatucket River Truck Sewer

Douglas Avenue - Branch Avenue at City Line

Rutherglen Avenue and Alexander Street

Many of the tide gates along the Providence and Seekonk Rivers are in need of being repaired or replaced. (One (1) was replaced in 1969.)

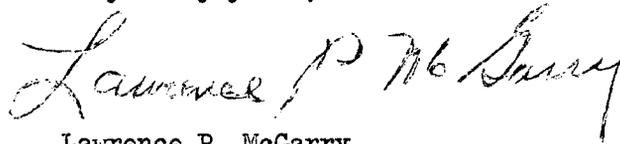
New Sewerage agreements with the towns of North Providence and Johnston should be made. The rates should be revised upward to reflect the actual cost of providing this service.

Provisions should be made to transfer the Mechanical Engineers position from the Sanitation Division to the Engineering Office.

Provisions should be made to establish the position of Electrical Engineer in the Engineering Office.

Provisions should be made to add the position of carpenter and electrician to the personnel of the Shops and Stores Section. This would result in having two (2) carpenters in this section.

Very truly yours,

A handwritten signature in cursive script that reads "Lawrence P. McGarry". The signature is written in dark ink and is positioned above the typed name.

Lawrence P. McGarry
Director of Public Works

GENERAL ADMINISTRATION

Mr. Lawrence P. McGarry
Director of Public Works
700 Allens Avenue
Providence, Rhode Island

Dear Sir:

The Annual Report of the General Administration Office of the Public Works Department for the fiscal year ended June 30, 1970 is respectfully submitted.

STATEMENT OF REVENUE - ESTIMATED AND ACTUAL

	<u>Budget</u> <u>Estimated</u>	<u>Net Actual</u> <u>Revenue</u>	<u>Budget</u> <u>Excess</u>	<u>Comparison</u> <u>Deficiency</u>
Business and Non-Business Licenses:				
Sidewalk Contractors	350.00	470.00	120.00	
Highway Privileges	<u>400.00</u>	<u>320.00</u>		80.00
Total Business & Non-Business	750.00	790.00	120.00	80.00
Special Assesments:				
Sewers	13,500.00	1,708.65		11,791.35
Departmental Revenue:				
P.W. Administration		50.00	50.00	
Sewage Disposal	338,250.00	362,894.58	24,644.58	
Garbage Coll. & Disp.	19,000.00	8,496.74		10,503.26
Refuse Coll. & Disp.		73.00	73.00	
Highway	26,000.00	25,181.89		818.11
Sewer Const. & Maint.	300.00	30.00		270.00
Street Lighting		104.50	104.50	
Municipal Dock	230,000.00	360,807.74	130,807.74	
Draw Bridge		135.00	135.00	
Total Departmental Revenue	\$613,550.00	\$ 757,773.45	\$155,814.82	\$11,591.37
Total Statement	\$627,800.00	760,272.10	155,934.82	23,462.72

STATEMENT OF EXPENDITURES

FOR THE FISCAL YEAR ENDING JUNE 30, 1970

	<u>Personal Services</u>	<u>Services Other Than Personal</u>	<u>Material & Supplies</u>	<u>Capital Outlay</u>	<u>Special Outlay</u>	<u>Total</u>
GENERAL ADMINISTRATION	106,550.59	11,232.81	3,399.58			121,182.98
ENGINEERING OFFICE	179,426.07	5,934.17	996.53			186,356.77
<u>SANITATION DIVISION</u>						
Sanitation Administration	19,631.38	816.06	181.24			20,628.68
Street Cleaning	175,540.35	58,559.65	441.68			234,541.68
Sewage Pumping Station	64,303.40	15,360.93	11,042.60			90,706.93
Sewage Disposal	239,109.94	172,624.97	185,785.30			597,520.21
Garbage Coll. & Disposal	612,379.51	101,829.34	32,963.03		5,993.00	753,164.88
Refuse Coll. & Disposal	76,681.95	23,460.00	61.17			100,203.12
Environment Control	40,706.85	4,736.84	1,951.28			47,394.97
<u>CONSTRUCTION & MAINTENANCE DIVISION</u>						
Const. & Maint. Admin.		600.00	15.25			615.25
Highway	638,777.01	172,801.40	78,622.30			890,200.71
Bridge Maintenance	26,714.43	4,512.83	5,298.00			36,525.26
Snow Removal	159,576.20	100,392.14	71,692.30			331,660.64
Sewer Const. & Maint.	214,095.32	45,845.54	8,989.11			268,929.97
Municipal Dock	46,727.01	10,494.58	2,444.09			59,665.68
Street Lighting	4,680.00	421,812.29				426,492.29
Draw Bridge Operation	9,614.20	529.51	132.00			10,275.71
	<u>\$2,624,514.21</u>	<u>1,151,543.06</u>	<u>404,015.46</u>		<u>5,993.00</u>	<u>4,176,065.73</u>

THE FOLLOWING SERVICES WERE ALSO RENDERED BY THE GENERAL ADMINISTRATION OFFICE FOR THE YEAR ENDING JUNE 30, 1970.

APPLICATIONS RECEIVED

For altering curb openings for driveways	46
Construction of curb openings for driveways	100
Curbing resets	<u>28</u>
Total Applications	174

LICENSES ISSUED

Newspaper Stands	5
Push Carts	7
Sidewalk Stands	10
Drain Layers Licenses	6
Drain Layers Licenses (Limited to sprinkler system)	<u>2</u>
Total Licenses Issued	30

PERMITS ISSUED

Public Utilities	177
Blasting	0
For Moving Cumbersome Equipment	1
Street Openings (Water Supply Board)	163
Original Permits For Sewer Connections	88
Extensions of House Drains	119
Sidewalk Openings for Water Service	162
Street Openings (other)	<u>19</u>
Total Permits Issued	729

Respectfully submitted,

William J. Cain
Admin. Ass't. (P.W.)

ENGINEERING OFFICE

Mr. Lawrence P. McGarry
Director of Public Works
700 Allens Avenue
Providence, R. I.

Dear Sir:

Following is the Annual Report covering various activities of the Engineering Office for the Fiscal Year ending June 30, 1970.

Expenditures:

Item 0	Personal Services	179,426.07
Item 1	Services other than personal	5,934.17
Item 2	Material and Supplies	996.53
Item 5	Equipment	-----
	Total	<u>186,356.77</u>

The Engineering Office consists of three (3) standard and a miscellaneous section. The three standard sections perform the following work:

1. City Property and Street Line Sections perform surveys, produce plans and keep the records of the City streets, miscellaneous City Property, The North Burial Ground and City Parks.

2. Highway Section designs, writes specifications for and supervises the construction and maintenance of highways.

3. Sewer Section designs, writes specifications for and supervises the construction and maintenance of sewers, drains and sewer appurtenances.

The miscellaneous section designs, writes specifications for the construction, maintenance and purchase of miscellaneous facilities and equipment used by the City.

A description of the projects accomplished by these sections during the year ending June 30, 1970, is as follows:

STREET LINE AND CITY PROPERTY SECTION

Notices of Intention To Build

There were 72 notices of intention to build filed in this office during the fiscal period. In response to these notices, the Street Lines were marked on the ground as requested for the specified locations as follows:

418 Broad Street	375 Atwells Avenue
10 Cavallatti Street	220 Broad Street
161 Messer Street	44-46 Raphael Avenue
15-17 Mount Avenue	64 Dresser Street
51 Joseph Street	34 Bismark Street
55 Joseph Street	69 Crandall Street
73 Lubec Street	15 Hillview Avenue
47 Joseph Street	426 Atwells Avenue
81 Lubec Street	25 Sunrise Drive
77 Lubec Street	441 Plainfield Street
15 Stonelaw Avenue	382 Pine Street
140 Eliza Street	133 Gano Street
142 Eliza Street	82 Devonshire Street
49 Ophelia Street	115-119 Waterman Street
53 Ophelia Street	161-175 Manton Avenue
20 Ascham Street	99 Victoria Street
15 Barrows Street	103 Leo Avenue
36 Bolton Avenue	Obediah Brown Road
390 Woodward Road	391-393 Atwells Avenue
251-255 Smith Street	184 Metcalf Street
71 Yorkshire Street	159 Pomona Avenue
130 Cornwall Street	76 Chaucer Street
1612-1614 Chalkstone Avenue	24 Sunrise Drive
304 Branch Avenue	170 Silver Spring Street
401 Elmgrove Avenue	12 Lavaughn Street
138 Lakeview Drive	35 Victor Emanuel
142 Lakeview Drive	11 McMillen Street
195 DuPont Drive	19-29 Knowles Street
77 Westminster Street	35 Burton Street
75 Potters Avenue	142-144 Alverson Avenue
33 Devon Street	138-140 Alverson Avenue
32 Balton Road	134-136 Alverson Avenue
104 Terrace Avenue	126-132 Alverson Avenue
16 Aldine Street	52 Mt. Pleasant Avenue
25 Ethan Street	126 Power Street
230 Meeting Street	110 Hartshorn Road

NEW PLANS WERE DRAWN TO AS IST THE CITY COUNCIL IN C ONSIDERATION OF
PROPOSED CHANGES IN THE ZONING MAPS AS PETITIONED BY VARIOUS PERSONS.
THE FOLLO /ING AMENDMENTS WERE APPROVED:

(Locations by Streets)

Curtis Street

Valley Street

Rill Street

Smith Street

Bosworth Street

Sheridan Street

Alleppo Street

Branch Avenue

Silver Spring Street

Metcalf Street

Petteys Avenue

Plain Street

Frank Street

Oldham Street

Beacon Avenue

Dudley Street

Blackstone Street

Plainfield Street

Common Street

Holden Street

THE FOLLOWING PLANS WERE DRAWN FOR AMENDMENTS TO THE ZONING ORDINANCES
THAT FAILED PASSAGE

(Location by Streets)

Ophelia Street

Angell Street

Pitman Street

East George Street

Butler Avenue

Gallup Street

Prairie Avenue

Colfax Street

Orchard Avenue

West Friendship Street

Parkis Avenue

Gay Street

Plain Street

Blackstone Street

Dudley Street

Eddy Street

Plainfield Street

Douglas Avenue

Eaton Street

Plainfield Street

Temple Street

CITY PROPERTY PLANS AND SURVEYS WERE MADE COVERING THE FOLLOWING PROJECTS:

- | | |
|---|----------------------|
| 1. Rangley Avenue | Proposed Purchase |
| 2. Thurbers Avenue School | Proposed Sale |
| 3. A. C. Dutton Company | Proposed Lease |
| 4. John J. Orr | Proposed Lease |
| 5. Allens Avenue and
Henderson Street
(Portion Lot 243) | Proposed Sale |
| 6. Field's Point (Steel Mets) | Proposed Sale |
| 7. Portion of Laurel Hill Ave.
(Syracuse St. Playground) | Proposed Sale |
| 8. Robin Brook Sewer
(Portion at Raphael Ave.) | Proposed Sale |
| 9. Sewer Easement East of
Silver Spring Street | Proposed Easement |
| 10. Duttons Office at
Field's Point | Proposed Lease |
| 11. Ohio Avenue | Proposed Lease |
| 12. Metals Processing Company | Proposed Lease |
| 13. Valley Street,
Rill Street and
Boyd Street | Zoning Change #230 |
| 14. Field's Point | Proposed Lease |
| 15. Magenta Street | Proposed Abandonment |
| 16. Empire, Westminster Streets
Lot #305 | Proposed Lease |
| 17. India Point | Proposed Park Site |

- 18. Montgomery Avenue Proposed Abandonment
- 19. Smith Street
East of Esten Street Zoning Change #231
- 20. Land Adjacent to
Robin Brook Sewer Proposed Sale
- 21. Branch Avenue and
Silver Spring Street Zoning Change #232
- 22. Salisbury Street (Lot #313) Proposed Condemnation
- 23. Baxter Street (Lot #772) Proposed Condemnation)
- 24. Robin Brook Sewer
Portion at Leo Avenue Proposed Sale
- 25. Carpenter and Dallas
Streets (Portion of Lot 957)
- 26. Field's Point Manufacturing
Co. at Terminal Road Proposed Lease
- 27. G. W. Wilson Company at
Field's Point
Harborside Blvd. Proposed Lease
- 28. Portion of Robin Brook Sewer Proposed Sale
- 29. India Point Park Topography
- 30. Petteys Avenue Zoning Change #233
- 31. Frank and Oldham Streets Zoning Change
- 32. Curtis, Bosworth and
Aleppo Streets Zoning Change
- 33. Piles and Wall at
India Point Park Location Plan
- 34. Dudley Street (Lot #60) Proposed Sale
- 35. Blackstone Street (Lot #77) Proposed Sale

36. Paine Street Proposed Abandonment

37. Variation of Magnetic Needle

THE FOLLOWING PLANS OF STREET LINES WERE DRAWN FOR GENERAL OFFICE USE:

1. Imera Avenue, Actinia Street to Almira Street
2. Middleton Street, Barbara Street-northerly-to Freeway Line
3. Roger Williams Avenue Extension, Changed to Cadillac Drive from Melrose Street to Early Street
4. Montgomery Avenue, Narragansett Blvd. to its easterly termination

Surveys were made and plans were drawn for Leases of City Properties:

Elmwood Avenue and Potters Avenue

Ernest Street (Field's Point)

Metals Processing Co. (Field's Point)

Empire Street and Westminster Streets

B & P O. I. (Field's Point)

Metals Processing

THE FOLLOWING STREETS WERE RECEIVED
DURING THE YEAR

RECEIVED STREETS

<u>NAME</u>	<u>BETWEEN POINTS</u>	<u>LENGTH IN FEET</u>
Middleton Street	Barbara Street northerly to Freeway Line	262.33

THE FOLLOWING STREETS WERE ABANDONED
DURING THE YEAR

RECEIVED STREETS ABANDONED

Roger Williams Avenue	Portion between Narragansett Street and easterly term.	222.90
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UNRECEIVED STREETS ABANDONED

Montgomery Street	Narragansett Blvd. to easterly term.	130.00
Wright Street	Hartford Avenue to Stanfield Street	477.09
Burrows Street		28.00

The approximate length of streets platted but not received is 41.0693564 miles.

The net addition during the year added to the previous total makes the length of Received Streets at June 30, 1970, (measured along the property lines) 370.435907 miles.

In addition to the total of Received Streets, there are 3.21 miles of roadway in the Governor Dennis J. Roberts Expressway.

NORTH BURIAL GROUND

During the year 77 Deeds to lots conveyed by the City and 131 certificates of Prepetual Care have been drawn. Descriptions of lots were furnished the superintendent. Field Surveys were made and lots staked out on the ground when requested. Elevations were taken and surveys were made for the development of three new sections at the request of the superintendent.

GENERAL

DURING THE YEAR THE FOLLOWING WORK OF A SPECIAL NATURE WAS COMPLETED:

Location surveys were made to assist the Police Department in prosecuting license violations.

Title research work was made on various parcels of land in the City's interest.

Street lines were re-established, buildings located and plans made for various streets.

Surveys were made for leases of City owned land at Field's Point.

Various street locations were given to assist the Narragansett Electric Company and the Telephone Company in setting new poles.

Surveys were made and plans drawn for proposed street widening.

Several plans were drawn to assist the City Clerk's Office in accordance with City Council Ordinances.

Measurements were taken and plans for Public Buildings Department for sidewalk construction estimates.

Measurements were taken and plans drawn to assist the Police Department in the prosecution of murder and accident cases.

Resolutions were drafted for the City Council, covering all actions relating to the acceptance and abandonment of streets, defining grades and curbing streets.

Plats presented for record have been compared for the Recorder of Deeds Office and Plats for recovering have been furnished the Recorder's Office under the provisions of Chapter 987 (1913); Chapter 1594 (1917) and Chapter 2118 (1921).

The annual tabulation of all real estate owned by the City of Providence and real estate in which the City of Providence has an interest was made and classified for the City Controller for inclusion in his report and known as Part II - Statistical Information and shown as Tables 1 and 2, of real estate and personal property data in compliance with the provisions of Section 85, Chapter 2, Revised Ordinances of 1946. These tables of real estate were prepared by this office from records of this Department and tax valuations furnished by the Tax Assessor's Office.

Field surveys of streets accepted as public highways by the City Council were made and lay-out maps were drawn for office use and for the official records of the City Clerk.

Engineering assistance was given to the Public Buildings Division, Police Department, City Plan Commission, Traffic Division, Board of Canvassers, City Clerk's Office, City Controller's Office, Tax Assessor's Office, Redevelopment Agency, Water Dept. and Bldg. Inspection Division, from time to time.

Information pertaining to street lines, including records of street lay-outs, widenings, abandonments, alignment changes and name changes, was furnished to engineering firms and title companies throughout the year.

Street lines were marked out on the ground for the construction of new sewers where requested by the Sewer Section of the Engineering Office.

Street line information was furnished to Engineers for the State of Rhode Island Department of Public Roads in Conjunction with their work on various freeways.

Street lines were established, buildings located and plans drawn for various roads in the Field's Point Area.

Inspection was provided by members of this section for ice control and snow removal operations of the Public Works Department.

Operation and inspection of hurricane dam was provided by members of this Department.

Survey was made and plans were drawn for the location of the harbor line in the Field's Point Section.

A survey was made and plans drawn of Kennedy Plaza for general use by the Engineer's Office.

A survey was made and topography was taken, plans were drawn by members of this section to assist architects and locations were made at the request of the architects for proposed park site at India Point.

Surveys were made and plans drawn at the request of the Division of Planning and Urban Development at Hopkins Park, Dillion Field; Colleyer Park, Davis Park, Neutaconkacut Park, Obediah Brown Field, Joseph Williams Field, Merino Park and Dexter Training Grounds.

Grades were marked and designed on the ground for reconstruction of Merino Street by members of the Engineer's Department.

Description of land taken by condemnation for highways and park purposes and for incorporation of deeds of land purchased or sold, leases and rights-of-way and from the City, the methods by which various properties were acquired, the purpose of original purchase and present status were furnished to the Law Department and other assistance was rendered as requested.

Surveys were made and plans were drawn and area staked out on the ground in the Field's Point Section.

A survey was made and topography taken of City owned land at Field's Point.

This report, of the City Controller, divides City held property into the following categories:

Parks and Playgrounds

Miscellaneous Public Buildings

Miscellaneous Real Estate

Public Schools

Fire Stations

Police Stations

Real Estate Acquired at Tax Sale

Water Works

Dexter Donation

Charles H. Smith Estate

This report breaks down each parcel of City-Owned land into Assessor's Plats, Lots, Land Values, Building Improvement Values and Total Unit Valuations.

Also reflected in this report is a compilation of all productive real estate showing a description of property leased, rent per annum, term of lease and termination date.

SEWER AND STRUCTURAL SECTION

The duties of this section consist of the preparation of studies, plans, specifications and estimates of proposed Sanitary and Storm sewers; preparation of studies, plans, specifications and estimates of proposed miscellaneous structures and the field engineering and inspection work of all above projects in progress and the computation of final payments to contractors.

All records on the above are filed for future reference and all field record books are filed in fire-proof cabinets. Plans are made on cloth-mounted drawing paper of all sewer construction and all house drainage connections are plotted on these plans.

A sewer was constructed in Polly Street from Atwood Street, 101.42 feet westerly toward Cumerford Street by the Providence Department of Public Works maintenance crew.

LIST NO. 1

Sewers ordered built by the City Council which are not constructed as of June 30, 1970, exclusive of those contracted for:

<u>CITY COUNCIL RESOLUTION AND YEAR</u>	<u>LOCATION</u>
229 - 1940	Bucklin St., from near Potters Ave. to Greenwich St.
440 - 1940	Niantic Ave., from near Cranston St. to Ackerman St.
293 - 1951	White Street, from Powell St. to Collyer Street
88 - 1970	Donelson St., from Cornwall St. to a point approx. 130' east of Salina St.
475 - 1969	Trent St., from Hereford St. to Loveday Street

LIST NO. 2

Sewers petitioned for and referred to the Public Works Committee for further action, from October 1, 1951 to June 30, 1970:

October 2, 1952	Okie St., from its westerly term. to Bath Street
-----------------	--

April 16, 1953	Myra Street, from near Boundary Ave. to Killingly St.
July 1, 1954	Bullock Avenue, from City Line to Dunbar Street
September 2, 1954	Groton Street, from Durfee St. to Powhatan St.
September 1, 1955	Queen Street, from northerly term. to Cleveland St.
November 3, 1955	Hymer Street, from near Seamans St. to Crandall St.
December 1, 1955	Derry Street, from near Geoffreys Ct. to Oregon St.
May 3, 1956	Stukely Street, from its northerly term. to Hartford Ave.
August 2, 1956	Libia Street, from the City Line to Farmington Ave.
February 7, 1957	Maria Street, from Killingly St., to City Line
June 6, 1957	Cowper Court, from its term. to Messer St.
September 4, 1958	Yorktown Place, from its term. to Linton St.
August 6, 1959	Comp Street, from its northerly term. to Ledge St.
March 3, 1960	Wayland Avenue, from East Geprge St. to southerly termination
March 3, 1960	Unnamed Gangway, from Peter St. to Ledge St.
February 16, 1961	East George Street, from near Wayland Ave. to Butler Ave. and in Butler Ave. from East George St. to Pitman St.

February 16, 1961	Howe Street, from Niantic Ave. to Lakeview Dr.
February 16, 1961	Jordan St., from Westmore St. to Reservoir Ave.
April 20, 1961	Haswell Street, from approximately 300 ft. east of Eddy St. to Eddy St.
August 10, 1961	Genoa Avenue, from near Taranto St. to Fruit Hill Ave..
August 10, 1961	Corsica Street, from near Genoa Ave. to Fruit Hill Ave.
March 1, 1962	Unnamed Gangway east of Havana St., westerly to City Line
May 2, 1963	Clarkson Street, from near Admiral St. to its easterly termination and northerly in Right of Way to Suffolk St.
October 3, 1963	Eylestead Street, from northerly term. to Pavilion Ave.
December 17, 1964	Neutaconkanut Road, from Sunset Ave. to and including Lot No. 1
March 18, 1965	Lynde Street, from easterly term. to Longwood Ave.
July 1, 1965	Unnamed Gangway (opposite Lynch St.) between Manton Ave. and Atwells Ave.
August 16, 1965	Yorkshire Street, from Hawkins St. to Anchor St.
September 16, 1965	Edgeworth Avenue, from westerly term. to present sewer in Edgeworth Ave.
May 18, 1967	Hyacinth Street, from Vicksburg St. to beyond 200' of Shiloh St.
August 16, 1967	Woodward Road, from present sewer, northerly for a distance of 175 ft.
April 16, 1970	Horace Street, from Killingly St. to City Line.

SEWER SYSTEM STATISTICS: In order to make complete the Providence Sewer Statistics up to the end of the Fiscal Year of June 30, 1970, the following extracts from previous reports are herein included and the mileage figures changed to the new totals:

The City is divided into four main drainage areas bounding on the Providence, Woonasquatucket, Moshassuck and Seekonk Rivers.

Combined sewers, discharging both crude sewage and storm water into rivers, were constructed in these areas between the years 1871 and 1890 to a total length of 62.7 miles.

(A) In 1890 a new method of handling sewage flow was devised and was called the improved sewer system. From 1890 to 1904, 28.1511 miles of this system were constructed with sizes varying from 6 in. to 110 in. in diameter. This system included the intercepting sewers, designed for the collection of sewage flow from older sewers which heretofore discharged into rivers, which helped toward the elimination of sewage pollution of river and harbor waters. Due to later revisions in conjunction, the length of the improved sewer system equaled as of June 30, 1970, 28.1014 miles.

(B) In 1872 the first storm sewer construction was started and as of June 30, 1970, a total of 87.9390 miles of sewers for storm water only have been constructed and discharged into the nearest pond or stream.

(C) The total length of the so-called regularcombined sewers as of June 30, 1970, equals 351.5527 miles.

The total lengths (A+B+C) of all types and sizes of sewers maintained by the Sewer Division of the Public Works Dept. as of June 30, 1970, equals 467.5931 miles. Increase this year .0192 miles.

Included in this mileage are approximately 20,406 manholes, also there are approximately 4734 inlets and 12,044 basins for collecting surface water and trapping debris before entrance into sewers.

The normal of dry weather flow of sewage is collected and conveyed to the Sewage Treatment Plant at Field's Point. Tide gates are installed at river outfalls to prevent tidewater or river water from entering sewers.

The sewage from the Washington Park and Field's Point Districts drains into a small pumping station equipped with two automatic electrically driven pumps, located on City land at Field's Point just south of New York Avenue and from these is pumped through a cast-iron force main directly to the Sewage Treatment Plant.

A part of the sewage from the West Elmwood District drains into a small pumping station, equipped with two automatic electrically driven pumps, located on City land at Reservoir Avenue and Pontiac Avenue and from there is pumped through a cast-iron force main into the Pytherglen Avenue gravity flow sewer.

A comparatively high level sewer collects sewage from the Elmwood and South Providence Districts and flows through gravity sewers, directly to the Sewage Pumping Station.

Generally, with the exceptions as outlined in previous paragraphs, low level sewers collect the sewage from the remainder of the City Districts, with most of the East Side Sewage flowing through an inverted syphon sewer under the Providence River at India Street, and then the sewage flows by gravity to the large pumping station at Ernest Street. At the pumping station the sewage is lifted approximately 27 feet to the high level in Ernest Street and flows by gravity to the Sewage Treatment Plant.

RECEIVED FROM CRANSTON: (Narragansett Brewing Company)

On contract dated June 1, 1965, terms \$102.00 per million gallons, 98,680,000 gallons metered and billed for \$10,065.36.

RECEIVED FROM JOHNSTON:

Contract dated March 9, 1956, terms \$57.00 per million gallons was revised August 15, 1966, to \$103.00 per million gallons. 322,094,100 gallons metered and billed for \$33,175.69.

RECEIVED FROM NORTH PROVIDENCE:

Flow estimated to equal 2,564,504,100 gallons. Contract dated Sept. 8, 1959, terms \$100,000.00 annually was revised September 26, 1966, to \$103.00 per million gallons, and again June 9, 1967, to \$116.40 per million gallons. On July 2, 1968, the contract was revised to read that beginning Jan. 1, 1968, the rate to be charged will be \$116.40 per million gallons, not to exceed a maximum charge of \$275,000.00 for the calendar year of 1968 only. Total billing was \$298,508.28.

PRIVATE DRAINS

A complete record is made of all sewage drainage installations in private houses and other buildings. These records and record plans are made and filed by the Sewer Section of the Public Works Engineering Office and contain valuable information of interest to property owners, Title Searchers, Etc. All new work is covered by field inspection and must comply with the City Ordinance as to workmanship and materials and the work must be done by licensed plumbers or drainlayers who must prove their qualifications before being issued permits by the Director of Public Works.

In the January session of the State Legislature-Chapter 1661-1945, there was enacted by the General Assembly an Act to simplify the present system of Licensing Master and Journeymen Plumbers for the protection of public health. Section 39 reads as follows: "Nothing in this Act shall prohibit any City of Town from granting a license to any person as a drainlayer to engage in the business of laying of drains and cesspools"(with the provision, that it is not required by the holder of a State License.)

For the calendar year of 1970, the Director of Public Works issued Licenses to six (6) drain layers and two (2) special for sprinkler licenses. No list of Licensed Plumbers was received from State authorities. There were approximately 1710 titles investigated for encumbrances of drainage facilities by title company investigators, and 2645 sketches of present drainage installations given to interested parties. (Owners, Plumbers and Drainlayers.)

MISCELLANEOUS WORK:

During the year specifications were written, stencils cut and checked and the bids were tabulated for the following:

<u>BIDS SUBMITTED</u>	<u>DESCRIPTION</u>	<u>ORDERED BY</u>
11/10/69	Furnish and Deliver Tires and Tubes for Loader and Grader Vehicles	Highway Dept.
11/10/69	Furnish and Deliver Screened Sand	Highway Dept.
11/10/69	One (1) New Low Priced Four (4) Door Sedan	D. P. W.
11/24/69	Backhoe and Loader Tractor with GWW 13,750 lbs. Backhoe capacity of 7.9 cu. ft. and 3000 lbs. Loader capacity of 1 cu.yd. and 4000 lbs.	D. P. W.
12/8/69	One (1) 1970 Low Priced Four (4) Door, Six (6) Passenger Station Wagon	Forestry Dept.
12/8/69	Five (5) New Low Price Four (4) Door Sedans	D. P. W.
12/22/69	Two (2) New Air Compressors (150 C.F.M. Minimum) Mounted On Two (2) 15,000 lbs. GWW Truck Chassis	Highway Dept.

2/16/70	Furnish and Deliver Liquid Ferric Chloride	Sewage Treatment Plant
2/16/70	Furnish and Deliver Lime Slurry	Sewage Treatment Plant
2/16/70	Furnish and Deliver Liquid Chlorine	Sewage Treatment Plant
3/16/70	One (1) New Brush or Wood Chipper Trailer Mounted	Highway Dept.
3/16/70	One (1) Conventional Type Utility Truck of 15,000 lbs. Min. GVW	Sewer Maint.
3/16/70	Asphaltic Concrete for the 1970 Construction Season	Highway Dept.

Many conferences were held in connection with the Providence Freeways, with the Public Works Department of the State of Rhode Island in regard to the disposal of storm waters from the various highways and all sewer sizes and connections to the City sewers were approved. Some of this work is now in construction.

The various projects are named as follows with the Engineers engaged in the preparation of the plans and specifications:

Freeway Drainage Outfall (Aborn St. to West Exchange St.)	Charles A. Maguire & Associates Providence, R.I.
Louisquisset Pike Connector to I-95	Charles A. Maguire & Associates Providence, R.I.

All plans made in connection with the sewer basins and inlets required for drainage of new or rebuilt streets were made in this office.

This division has made studies, prepared preliminary plans, conferred with other City Departments, and consulted with the State Department of Public Works, the Federal Public Roads Administration and the contract engineers and architects, preparing plans and specifications for all Public Works Projects in the City.

Plans submitted by architects, private engineers, the various utilities and contractors were checked over, revised and approved for sidewalk slabs, vaults, bridge crossings and duct installations under or over streets and sidewalks.

Cost accounts, budgets, inventories, sick leaves, vacations, employee data entrances, and terminations were reported to the Finance Department. Pay-rolls and requisitions were made up and delivery slips forwarded.

SEWER ASSESSMENTS: Sewer Assesments as provided by authority of Chapter 870 of the Public Laws of the State of Rhode Island of 1901 are certified for payment by the Director of Public Works to the City Collector. Special working plans are made and areas and amounts are computed by this office and filed for permanent record.

Respectfully submitted,

Robert B. Strong
Deputy Director of Public Works

HIGHWAY SECTION

WORK PERFORMED IN GENERAL AS FOLLOWS:

ESTIMATES. Estimates for payment to contractors for work performed under the supervision of this section are prepared on a monthly basis and a final estimate, showing the complete cost of all work performed, is prepared for each contract. In addition, bids for highway work are checked and tabulation sheets drawn for the Board of Contract & Supply.

Estimates of the cost of making improvements, consisting of curb openings, furnishing and setting curbing, relaying pavements in curb openings, changing curb as desired by 54 individuals or corporations, were furnished the Director of Public Works.

BUILDING NOTICES. Grades either proposed, defined or established have been marked on the ground for parties intending to build on one (1) street covering one (1) application.

CURBING. Lines and grades have been marked out for resetting curbing and paving gutters in portions of streets as requested.

PROFILES. Profiles of sundry streets, approximately 0.052 miles have been made for the purpose of defining grades. The contours of the center and side lines are shown at fifty foot stations, also the levels of the sills and ground lines of the houses adjoining the streets. The profile plan views with property lines and houses shown.

STREET GRADING. Abutting owners: Grades in sundry streets have been marked out at intervals of about fifty feet for street grading or for the benefit of individuals owning abutting property.

ASSESSMENTS. The highway Section computes assessments for curbing and grading.

SPECIAL. During the year, this section supplied personnel for operations other than normal duties. During snow storms, men from this section inspected conditions in their assigned zones.

The Fox Point Hurricane Barrier Pumping Station is staffed, in part, by men from this section.

Assistance was provided to the Redevelopment Agency and various consultants during the fiscal year on various projects.

Plans and Specifications, Engineering Field Work and Inspections were furnished for the Construction of the reconstruction of the following streets by the Construction and Maintenance Division-Highway Section.

Type - Bituminous Concrete

<u>STREET</u>		<u>SQUARE YARDS</u>
Aborn Street	West Exchange St. to 195	1,443
Alden Street	Samoset Ave. to Victoria St.	1,174
Ardoens Street	Reservoir Ave. to Easterly Term.	2,117
Bissell Street	Elmwood Ave. to Westerly Termination	726
Corinth Street	Broad St. to Niagara St.	3,688
Crout Street	Atwells Ave. to Spruce St.	347
Elton Street	Humbolt Ave. to Blackstone Blvd.	2,360
Fifth Street	Highland Ave. to Summit Avenue	1,570
Foster Street	Broad St. to Pine St.	591
Freese Street	Whitford Ave. to Metropolitan Road	1,720
Grotto Avenue	Laurel Ave. to Irving Avenue	4,204
Lawn Street	Whitford Ave. to Metropolitan Rd.	1,202
Lynch Street	Atwells Ave. to Yale Ave.	1,358
Minto Street	Whitford Ave. to Metropolitan Rd.	1,384
Overhill Road	Sarah Street to Hope St.	1,337
Ponagansett Ave.	Hartford Ave. to Barbara St.	1,640
Progress Ave.	Webster Ave. to Whitehall St.	2,359
Seventh St.	Highland Ave. to Brewster St.	2,525
Victoria St.	Chalkstone Ave. to Gage St.	1,993
Webb Street	Whitford Ave. to Metropolitan Rd.	1,022
	<u>Total</u>	34,760

Plans and Specifications, Engineering Field Work and Inspections were furnished for the grading, curbing and construction of the following streets:

By Narragansett Improvement Company
Type Bituminous Concrete

<u>Street</u>		<u>Square Yards</u>
Cadillac Drive	Melrose to Niagara St.	6,222
	Total under contract to Narragansett Improvement Co.	6,222

Construction was in progress in the following streets on June 30, 1970:

Badger Road	Sharon St. to Hillview St.
Barbara St.	King Philip St. to Middleton St.
Brookfield St.	Riverdale St. to Glenbridge Ave.
Dresser St.	Ponagansett Ave. to Melissa St.
Drill St.	Sharon St. to Hillview St.
Early St.	Prairie Ave. to Niagara St.
Erie St.	Sharon St. to Rome Ave.
Fairfield St.	Manton Ave. to Richland Ave.
Galileo Ave.-	Chalkstone Ave. to a pt. 508 ft. northerly
LaSalle Drive	Sharon St. to Sharon St.
Merino St.	Plainfield St. to Eastwood Ave.
Niagara St.	Detroit Ave. to Starwood St.
Rome Ave.	Sharon St. to Enfield Ave.
Richland St.	Edgemere Ave. to Glenbridge Ave.
Riverdale St.	Manton Ave. to southerly termination
Sandringham Ave.	Annie St. to Sharon St.
Stonelaw Ave.	River Ave. to Sharon St.
Walton St.	Academy Ave. to Enfield Ave.

Following is a list of unimproved streets ordered built by City Council Resolution, construction of which has not commenced:

<u>STREET</u>	<u>LIMITS</u>	<u>ORDERED</u>	<u>LENGTH IN FT.</u>
Aurelia Dr.	Lecia Dr. to Neutaconkanut Rd.	5/11/65	396
Canonchet St.	Samoset Ave. to Standish Ave.	5/11/65	176
Crary St.	Allens Ave. to east line of unnamed street	12/5/40	276
Cutler St.	Newark St. to Atwells Ave.	8/7/52	206
Gage St.	Victoria St. to Samoset Ave.	5/11/65	361
Guelph St.	Victoria St. to its easterly termination	5/11/65	219
Havana St.	Tubec St. to Joseph St.	10/26/65	174
Jacqueline Dr.	From a pt. 225 ft. west of Legion Memorial Drive to Neutaconkaut Road	5/11/65	191
Joseph St.	Unnamed St. east of Havana St. westerly to its westerly termination	10/26/65	409
Joy St.	River Ave. to its westerly termination	12/6/54	400
Manomet St.	Samoset Ave. to Victoria St.	5/11/65	391
Neutaconkanut Rd	Sunset Ave. to its southerly termination	5/11/65	792

Platted St. Redwood Dr.	Crary St. to Globe St. City Line at Longwood Ave. to City line at Royal Ave.	12/5/40 5/6/60	117 301
Roda Drive Samoset Ave.	Lecia Dr. to Neutaconkanut Rd. From the southerly line of Gage St., northerly to Galileo Ave.	5/11/65 5/11/65	313 543
Stillwater Ave.	Brightwood Ave., northerly to the City Line	2/19/65	818
Trainor St. Virginia Lane	Acorn St. to DePasquale Ave. From a pt. 421 ft. east of Douglas Ave. to the easterly line of Glasgow St.	6/20/35 5/11/65	249 <u>490</u>
		Total	6,822

PETITIONS TO HAVE GRADE DEFINED

Jan. 20, 1955	Adie St. from Atwells Ave. to Cedar St.
Feb. 17, 1955	Ophelia St. from a pt. 120 ft. S. of Thornton St. to Wolfe St.
June 2, 1955	Almond St., from Edgewood Blvd. to City Line
Sept. 1, 1955	Queen St. from Cleveland St. to its northerly termination
Nov. 3, 1955	Hymer St. from Crandall St. to Seamans St.
Dec. 1, 1955	Derry St. from Oregon St. to Geoffreys Ct.
May 3, 1956	Stukely St. from Hartford Ave. to 41 Stukely St.
Aug. 2, 1956	Libia St. from Farmington Ave. to its term.
Sept. 6, 1956	Minnesota St. from Woodward Rd. to its term.
Feb. 7, 1957	Maria St. from Killingly St. to City Line
May 16, 1957	Corsica St. from Fruit Hill Ave. to Genoa St.
May 16, 1957	Genoa St., from Fruit Hill Ave. to Taranto St.
July 11, 1957	Hillard St. from Manton Ave. to Pelham St.
July 11, 1957	Cowper Court, from Messer St. to its termination
Oct. 3, 1957	Duke St. from Orms St. to Smith St.
May 1, 1958	York St. from No. Main St. to Steel St.
Aug. 7, 1958	Sedan St. from Argol St. to termination
Sept. 4, 1958	Yorktown Place, from Linton St. to its termination
Nov. 6, 1958	Myra St. from Killingly St. to Boundary Ave.
Feb. 19, 1959	Deerfield Terrace, from Alger Ave. to its termination
Mar. 5, 1959	Sibley St. from Crescent St. to its westerly term.
April 2, 1959	Nye St. from Ida St. to Merino St.
July 2, 1959	Batterson St. from Walsh St. to Bullock Ave.
July 2, 1959	Bullock Ave., from Batterson St. to City Line
July 2, 1959	Hennessey St. from St. Thomas St. to Bullock Ave.
July 2, 1959	Rowley St. from Batterson St. to Hennessey St.

July 2, 1959	Triggs St. from Walsh St. to Bullock Ave.
July 2, 1959	Walsh St. from Batterson St. to Hennessey St.
March 3, 1960	Wayland Ave. from Pitman St. to its southerly term.
March 3, 1960	Unnamed Gangway, from Peter St. to Ledge St.
Sept. 1, 1960	Owen St. from Manton Ave. to King St.
Feb. 16, 1961	East George St. from Gano St. to Butler Ave.
April 20, 1961	Haswell St. from Eddy St. to its easterly term.
May 18, 1961	Shaw St. from Langton St. to Lakeside St.
Aug. 10, 1961	Lakeside St. from Shaw St. to Everson St.
Feb. 15, 1962	Shaw St. easterly line of Lakeside St. westerly to its westerly termination.
June 7, 1962	Dakota St. Woodward Rd. to termination.
Feb. 20, 1964	Thurston St. Stamford Ave. to the westerly line of Potter Road.
March 18, 1964	Molter St. from Service Road #10 to Lakeview Dr.
March 18, 1965	Lynde St. from Longwood Ave. to its easterly term.
July 2, 1969	Buchanan St. from Seneca Ave. to Sedan St.
April 2, 1970	Middleton St. from Barbara St. to the Freeway Lane
June 4, 1970	Kinfield St. from Barbara St. to the Freeway Line

PETITIONS FOR CURBING AND GRADING

<u>DATE</u>	<u>STREET AND LOCATION</u>
Feb. 17, 1955	Ophelia St. from a pt. 120 ft. S. of Thurston St. to Wolfe St.
May 5, 1955	Park Row, from Edgewood Blvd. southerly to Cranston City Line
June 2, 1955	Aumond St. from Edgewood Blvd. to City Line
Sept. 1, 1955	Queen St. Cleveland St. to its northerly term.
Nov. 3, 1955	Hymers St. from Crandall St. to Seamans St.
Dec. 1, 1955	Derry St. from Oregon St. to Geoffreys Ct.
May 3, 1956	Stukely St. from Hartford Ave. to #41 Stukely St.
Aug. 2, 1956	Libia St. from Farmington Ave. to its termination
Nov. 15, 1956	Burton St. from Bingham St. to its termination
Feb. 7, 1957	Maria St. from Killingly St. to City Line
May 2, 1957	Hagan St. from Charles St. to Langton St.
July 11, 1957	Hillard St. from Manton Ave. to Pelham St.
July 11, 1957	Cowper Court, from Messer St. to its termination
Aug. 15, 1957	Grotto Ave. from Upton Ave. to portion already recd.
Oct. 3, 1958	Carver Ct. from 53 Pleasant St. to its termination
May 1, 1958	York St. from No. Main St. to Steele St.
Sept. 4, 1958	Yorktown Place, from Linton St. to its termination
Sept. 18, 1958	Tapan St. from Angle to Admiral St.
Nov. 6, 1958	Myra St. from Killingly St. to Boundary Ave.
March 5, 1959	Sibley St. from Crescent St. to its westerly term.
July 2, 1959	Batterson St. from Walsh St. to Bullock Ave.

July 2, 1959	Hennessey St. from St. Thomas St. to Bullock Ave.
July 2, 1959	Rowley St. from Batterson St. to Hennessey St.
July 2, 1959	Triggs St. from Walsh St. to Bullock Ave.
July 2, 1959	Walsh St. from Batterson St. to Hennessey St.
March 3, 1960	Wayland Ave. from Pitman St. to its southerly term.
March 3, 1960	Unnamed Gangway, from Peter St. to Ledge St.
Feb. 16, 1961	Ea. George St. from Cano St. to Butler Ave.
April 20, 1961	Haswell St. Eddy St. to its Easterly termination
May 18, 1961	Shaw St. Langdon St. to Lakeside St.
Aug. 10, 1961	Lakeside St. from Shaw St. to Everson St.
Aug. 10, 1961	Genoa St. Fruit Hill Ave. to Taranto St.
Aug. 10, 1961	Corscia St. from Fruit Hill Ave. to Genoa St.
Feb. 15, 1962	Shaw St. easterly line of Lakeside Dr. westerly to its westerly termination.
Feb. 20, 1964	Thurston St. Stamford Ave. to the westely line of Potter Dr.
March 19, 1964	Molter St. from Service Rd. #10 to Lakeview Dr.
March 18, 1965	Lynde St. from Longwood Ave. to its easterly term.
June 2, 1966	Concord St. from Cemetery St. to Overpass
Aug. 16, 1967	Burrows St. Roger Williams Ave. to City Line
Sept. 18, 1969	Woodward Rd. Dakota St. to Tingley Lane
Nov. 6, 1969	Boundary Ave. Killingly St. to City Line
April 2, 1970	Middleton St. Barbara St. to the Freeway Line
June 4, 1970	Kinfield St. Barbara St. to the Freeway Line

SUMMARY TO JULY 1, 1970

The following table shows type of pavement, lengths and areas;

<u>Types of Pavement</u>	<u>Lengths Miles</u>	<u>Area Sq. Yds.</u>
Reinforced Concrete	0.170	3,101.0
Bituminous Concrete (curbed)	231.959	3,954,569.3
Bituminous Concrete (not curbed)	8.174	139,887.0
Sheet Asphalt (curbed)	50.410	1,233,485.3
Sheet Asphalt (not curbed)	0.300	4,195.0
Bituminous Macadam (curbed)	71.520	1,103,659.0
Bituminous Macadam (Not curbed)	0.983	19,498.0
Asphalt Blocks	0.119	958.0
Granite Blocks	2.469	38,232.8
Waterbound Macadam (curbed)	1.534	28,948.0
Waterbound Macadam (not curbed)	<u>0.327</u>	<u>4,454.0</u>
	367.965	6,530,987.4
Received (not improved)	<u>2.051</u>	

Total 370.016

The following work has been completed during the year - namely:

Streets paved with new material 13,149 linear ft.

Bituminous Concrete Pavement Laid 37,560 Sq. Yds.

Mr. Lawrence P. McGarry
Director of Public Works
700 Allens Avenue
Providence, Rhode Island

Dear Mr. McGarry:

Attached hereto is the annual report of the Sanitation Division of the Department of Public Works for the fiscal year October 1969 to June 30, 1970.

This Division is divided into the following Sections:

Sanitation Administration

Street Cleaning

Sewage Pumping

Sewage Treatment

Garbage Collection and Disposal

Refuse Collection and Disposal

Respectfully yours,

Gommaire Domaige, P.E.
Chief of Sanitation

SANITATION ADMINISTRATION

The office personnel of each section handles all the necessary clerical work pertaining to their section.

Condensed records from all Sections are maintained and filed in this office for reference.

The expenditures for this Section for the fiscal year were as follows:

ITEM 0	Personal Services	\$19,631.38
ITEM 1	Services other than Personal	816.06
ITEM 2	Materials and Supplies	181.24
		<hr/>
	Total	\$20,628.68

STREET CLEANING SECTION

The expenditures for this section were as follows:

ITEM 0	Personal Service	\$175,540.35
ITEM 1	Services other than Personal	58,559.65
ITEM 2	Materials and Supplies	<u>441.68</u>
	Total	\$232,540.68

This section is responsible for the cleaning of all streets and highways within the City and the maintenance and care of all the trash cans situated both downtown and in the outlying sections of the City.

The streets in the downtown section of the City, bounded by Dyer Street, South Main St., Washington Row, Union Station, West Exchange Street, Aborn St., Empire Street, Chestnut Street and Clifford Street are cleaned daily.

The following streets and squares are also cleaned daily:

Broadway from LaSalle Square to Olneyville Square
Westminister Street from Empire Street to Hoyle Square
Weybosset Street from Empire Street to Cathedral Square
Broad Street from Empire Street to Trinity Square
Atwells Avenue from Aborn Street to Ridge Street
Pocassett Avenue from Olneyville Square to City Line
Randall Street from Charles Street to North Main Street
Smith Street from State House to Oakland Avenue
Douglas Avenue from Admiral Street to Mowry Street
Plainfield St. from Hartford Ave. to Webster Ave.
Gay St. from Willard Ave. to Blackstone St.
North Main St. from College Hill to Mill St.
Charles St. from Railroad Bridge to City Line
South Main St. from College Hill to Point St.
Wickenden St. from East St. to Power St.
Ives St. from Wickenden St. to Power St.
Governor St. from Wickenden St. to Power St.
Wayland Ave. from Waterman St. to Angell St.
South Angell St. from Wayland Avenue to Butler Ave.
Hope St. from Butler Ave. to Wayland Ave.
Hartford Ave. from Laurel Hill Ave. to Olneyville Sq.
Thayer St. from Brook St. to Waterman St.
Waterman St. from Thayer St. to Brook St.
Cranston St. from Dexter St. to City Line
Potters Ave. from Cranston St. to Dexter St.

Eagle Park
Randall Sq.
Wayland Sq.

Olneyville Sq.
Trinity Sq.
Washington Sq.

A crew of men with hand broom and hand push barrels are assigned to the downtown area and the outlying section of the City to keep these sections free from debris. 197 trash cans are located throughout these sections. They are emptied twice daily.

All the main arteries in the City were cleaned twice a week. All the streets in the outlying sections were inspected and cleaned by the day and night cleaning crews supplemented by the mechanical sweepers. Additional highway cleaning crews were assigned in cleaning the outlying sections during the spring and fall.

Nine mechanical sweepers were in operation, both day and night.

Our dual gutter broom sweeper is in service and is capable of cleaning gutters from either side of the sweeper, and is advantageous on one way streets.

Three front end loaders were used to pick up the sweepers dumps and load them in trucks for disposal. Three large trucks were used in the fall to pick up leaves. These trucks are equiped with Elgin Leaf Collectors and have a capacity of 10 tons. An operator and two laborers are needed for this operation.

Two reversible trailer mounted vacuum loading leaf litter collections are used to help in the removal of leaves from the streets.

An emergency crew was on duty twenty-four hours a day to handle complaints from the general public and to correct conditions outlined in a police report.

A summary of operations for this section follows:

Hand Broom Sweeping	42 miles
Machine Broom Sweeping	20,496 miles
Beat Patrol	4,362 miles
Hand Broom Sweeping	247 tons
Street Container Disposal	2,631 tons
Machine Broom Disposal	14,111 tons

SEWAGE PUMPING STATION

Total monthly flow, in millions gallons, for each station, is as follows:

	<u>ERNEST STREET</u>	<u>WASHINGTON PARK*</u>	<u>RESERVOIR AVE.*</u>	<u>TOTAL</u>
<u>1969</u>	<u>STATION NO. 1</u>	<u>STATION NO. 2</u>	<u>STATION NO. 3</u>	
October	1,376.11	35.00	35.00	1446.11
November	1,476.21	35.00	35.00	1546.21
December	1,764.11	35.00	35.00	1834.11
<u>1970</u>				
January	1,611.69	35.00	35.00	1681.69
February	1,860.81	35.00	35.00	1930.81
March	1,666.68	35.00	35.00	1736.68
April	1,739.68	35.00	35.00	1809.68
May	1,548.31	35.00	35.00	1618.31
June	<u>1,568.48</u>	<u>35.00</u>	<u>35.00</u>	<u>1638.48</u>
	14,612.08	315.00	315.00	15,242.08

* Estimated flow

SEWAGE PUMPING STATION

Following is a monthly tabulation of the electrical power from the Garbage Incinerator used at the Ernest Street Station.

<u>1969</u>	<u>K.W.H.</u>
October	46,200
November	50,000
December	56,900
 <u>1970</u>	
January	none
February	none
March	none
April	none
May	none
June	<u>none</u>
Total	153,100

SEWAGE PUMPING STATION

This section is charged with the operation and maintenance of three Sewage Pumping Stations in the City. The main station is located on Ernest Street and handles approximately all of the Sewage flow. One of the smaller stations is situated on Reservoir Avenue near the City Line, and the other in Harborside Park, Field's Point.

Two hundred millions of gallons a day is the capacity of the main pumping station on Ernest Street. Electric power to operate this station is partially supplied from the Garbage Incinerator Plant, balance of power required is provided by the local power company. The two smaller stations operated automatically and the power to operate them is supplied by the local power company. All stations are in operation twenty-four hours per day.

Expenditures for this section for the fiscal year were as follows:

Item 0	Personal Services	\$64,303.40
Item 1	Services Other than Personal	15,360.93
Item 2	Materials and Supplies	<u>11,042.60</u>
	Total	\$90,706.93

Sewage Disposal Works

This section is responsible for the treatment and disposal of all the sewage from the City of Providence, Town of North Providence, Town of Johnston, and waste from the Narragansett Brewing Co., Cranston, Rhode Island. The Disposal Plant is located in the southerly section of the city near the Municipal Dock at Fields Point.

The following tables show the statistics for the Disposal Plant for the fiscal year 1969-1970.

Estimated population served by the plant.

Providence	187,061
Johnston	
North Providence	

<u>Sewage Flow</u>	<u>Million Gallons</u>
Providence	
Johnston	
North Providence	
Cranston (Narragansett Brewing Co.)	
Total Flow	14,939.15

Summary of Operations

Total flow of Sewage	14939.15 M.G.
Average Daily Flow	54.87 M.G.
Max. Daily Flow (27 December 1969)	120.89 M.G.
Min. Daily Flow (24 March 1970)	15.92 M.G.
Total air used for Aeration	11252.23 M.C.F.
Liquid Chlorine	764.4 Tons
Ferric Chloride	141.13 Tons
Lime as Chemline Slurry	2126.1 Tons
Grit Removals	413.3 Tons
Sludge cake incinerated	32794.0 Tons
Ash removed from Incinerator	4222.2 Tons
Oil for operation of Incinerator No. 2 Oil	179,930 Gals.

During the period from October 1, 1969 to June 30, 1970 mechanical breakdowns resulting from normal wear and tear were repaired by the plant personnel.

A complete new barminuter was installed in the north passage. The barminuter in the south passage was completely overhauled. Both units are presently in operation.

Tank scraper drive mechanisms, sludge pumps, and motors in the primary section of the plant were reconditioned.

A new sludge conveyor belt was installed in the filter building and all three filters are in the process of being reconditioned.

Two spray effluent water pumps were rebuilt and two aeration tanks were equipped with dacron sock air diffusers.

The #4 air blower was put back in operation following a needed cleaning and adjustment.

The ash disposal process unit superstructure was primed and painted and outside lighting units were repaired and re-installed.

Three sewage pumps located in the main sewage pumping station have been overhauled and the fourth is in the process of being done. A new 36" main valve was installed in the #3 pump discharge line.

The following projects are in the process of being completed: assembling and installing a spare chlorinizer, installation of a new vacuum pump and general overhaul of all filters.

Electric power used from the Garbage Incinerator

<u>1969</u>	<u>K.W.H.</u>
October	91,000
November	110,000
December	110,000
<u>1970</u>	
January	none
February	none
March	none
April	none
May	none
June	<u>none</u>
	<u>Total</u>
	311,000

The expenditures for the fiscal year were as follows:

Item 0	Personal Services	239,109.94
Item 1	Services other than personal	172,624.97
Item 2	Materials and Supplies	<u>185,785.30</u>
	<u>Total</u>	597,520.21

GARBAGE COLLECTION & DISPOSAL

The Garbage Collection & Disposal Section is charged with the collection and disposal of Domestic Combustible Refuse and the disposal of Commercial refuse. The Domestic refuse is collected by City trucks and transported to the Incinerator of disposal. All Commercial refuse is transported to the Incinerator in private vehicles. Electric power is generated at the Garbage Incinerator by means of waste heat boilers and Turbo-Generators. The power generated is used at the Sewage Disposal Works, Sewage Pumping Station, Highway Department Building, Municipal Garage, Garbage Incinerator and the Sanitation Maintenance Garages.

A fleet of twenty trucks, with special load packing bodies, is used in making the collection of domestic garbage and combustible household rubbish. Two collections per week are made from every residence in the City.

Two Garbage Incinerators, each with a capacity of 160 tons per day, are situated at 100 Terminal Road in Providence, only one unit is in operation at a time, the other is on stand-by. Each unit has two steam boilers and the steam generated is used to generate electric power to drive auxiliary machinery at the plant and to heat the Incinerator Plant, the Sanitation Garage, and several buildings at the Sewage Disposal Works. The two Turbo-Generators, each with a rating of 1250 K.W. are operated one at a time keeping second unit on stand-by. Both the Incinerator and Power Plant are in operation twenty-four hours per day.

The expenditures of this section for the fiscal year were as follows:

Item 0	Personal Services	612,379.51
Item 1	Services other than Personal	101,829.34
Item 2	Materials and Supplies	32,963.03
Item 3	Special Items	<u>5,993.00</u>
	Total	753,164.88

GARBAGE COLLECTION AND DISPOSAL

The following is the K.W.H. furnished the Sewage Disposal Works, the Municipal Garage, the Sewage Pumping Station, the Highway Garage and Station Power.

1969	SEWAGE DISPOSAL	SEWAGE* PUMPING	MUNICIPAL GARAGE	HIGHWAY GARAGE	STATION POWER	TOTAL
October	none	46,200	7,300	22,870	14,630	91,000
November	8,000	50,000	7,800	25,330	18,870	110,000
December	none	56,900	8,400	32,600	12,100	110,000
<u>1970</u>						
January	none	none	none	none	none	none
February	none	none	none	none	none	none
March	none	none	none	none	none	none
April	none	none	none	none	none	none
May	none	none	none	none	none	none
June	none	none	none	none	none	none
Totals	8,000	153,100	23,400	80,800	45,600	311,000

GARBAGE DISPOSAL

During the year the following work was done by plant personnel. A number of new boiler tubes were installed in boilers Nos. 3 & 4. Steam and water pipe lines, which had deteriorated due to age have been replaced. A new ash chute was constructed for plant #1. Plant #1 also received new drive chains for the conveyor and carriers for the ash conveyor. Routine maintenance on both electric cranes was performed. New bearings were placed in the forced draft fans and water pumps.

The refractory lining in the combustion chambers and fire-boxes have been patched in both plants, where necessary. The burning hearth in Plant #1 was replaced.

In plant #2 the charging doors and charging door seats have been repaired and replaced as needed.

The batteries in the outside transformer station were checked, cleaned and filled.

Heaters in the Sanitation garage have been taken down, cleaned, repaired and re-installed.

GARBAGE COLLECTION AND DISPOSAL

<u>TOTAL POWER GENERATED</u>	<u>K.W.H.</u>
Average Daily Distributed Load	3,379
Average Daily Distributed Load to Sewage Disposal Works	87
Average Daily Distributed Load to Sewage Pumping Station	1,664
Average Daily Distributed Load to Municipal Garage	255
Average Daily Distributed Load to Highway Garage	878
Average Daily Distributed Load to Garbage Incinerator	495

The monthly ash totals from the Incinerator during the year were as follows:

<u>1969</u>	<u>Tons</u>
October	1,030.30
November	1,000.40
December	1,075.90
<u>1970</u>	
January	1,078.85
February	922.65
March	1,040.00
April	1,040.00
May	1,026.90
June	1,036.20
Total	9,251.20

GARBAGE COLLECTION AND DISPOSAL

The following is the total amount of Garbage and Refuse disposed of by this department from October 1969 to June 30, 1970.

<u>1969</u>	<u>Garbage (Tons)</u>	<u>Rubbish (Tons)</u>
October	3,175.35	1,553.86
November	3,173.34	1,322.45
December	3,241.07	1,229.42
<u>1970</u>		
January	2,966.00	1,314.36
February	2,496.67	1,157.32
March	2,870.72	1,223.60
April	3,201.62	1,211.64
May	3,237.29	918.30
June	3,461.87	1,396.81
<hr/>		
Totals	27,823.93	11,327.86
Daily average for collection based on 234 working days		118.90 (Tons)
Daily average for disposal based on 273 working days		143.41 (Tons)

REFUSE COLLECTION AND DISPOSAL

The total cubic yards collected for the fiscal year follows

<u>1969</u>	<u>Total</u>
October	6,638.00
November	5,530.00
December	6,450.00
<u>1970</u>	
January	5,802.00
February	5,424.00
March	5,770.00
April	5,181.00
May	6,768.00
June	<u>5,480.00</u>
Total	55,043.00

REFUSE COLLECTION AND DISPOSAL

The Refuse Collection and Disposal Section is responsible for the Collection and disposal of all non-combustible refuse from the residential section of the city once each month. The City is divided into twenty routes. Six trucks, six drivers and twelve laborers are used in this collection.

All materials collected are disposed of in a sanitary land fill dump situated at 668 Hartford Avenue, Providence, Rhode Island opened for operation in May 1968. This section has a laborer assigned to the dump to maintain a clean disposal area. The dump is opened five days a week during the year. The Highway Section has a bulldozer and operator assigned to the site to maintain the land fill operation.

The trucks used are 16 cubic yards load packers and are rented from Shop and Stores Revolving Fund.

This section also collects non-combustible refuse from Fire and Police Stations, City Buildings and Public Libraries.

Expenditures for this section for the fiscal year were as follows:

Item 0.	Personal Services	76,681.95
Item 1	Services other than personal	23,460.00
Item 2	Materials and Supplies	<u>61.17</u>
	Total	100,203.12

SANITATION DIVISION REVENUE

Sewage Pumping Station	
Sewage Disposal Section	362,894.58
Garbage Collection and Disposal	8,496.74
Refuse Collection and Disposal	<u>73.00</u>
Total	371,464.32

RECOMMENDATIONS

1. The Narragansett Brewery waste should be treated at the source prior to discharge into municipal sewage system, preferably the one of the City of Cranston. The geotrichum candidum infestation of the Providence sewage is due to the Narragansett Brewery waste as proven by trials in 1968.
2. It is again recommended that in this era of radioactivity, serious consideration should be given to the installation of a warning system for the detection of radioactive isotopes in the Sewage system of the City. This warning device should be installed at some point in the Sewage system where the employees at the pumping station and the sewage disposal plant would receive advance warning of the presence of these dangerous isotopes in the flow of sewage. Radioactive isotopes are being used more and more in medicine and industry and it is very possible that some of them could inadvertently find their way into the sewage system.
3. Erect a wire fence with two gates at the entrance and exit of the Garbage Incinerator. These gates would be closed during the hours when no dumping is allowed at the incinerator.
4. The diversion gate #5A and 5B installation at the Sewage Disposal Plant must be replaced.
5. The position of electrician should be added to the personnel of the Sanitation Division to perform electrical maintenance in the Sewage Disposal, the Refuse Incinerator and the Sewage Pumping Station installations. This work is usually done by outside contractors.
6. Further the study required toward the acquisition of a new Refuse Incinerator. This to be in the form of a preliminary survey to include: Recommended design, size, space, air pollution control, and operating estimates for equipment, installation and operation and a pictorial representation of the project for assimilation of the proposal. This study should include a thorough investigation of the benefits to be gained by the addition of a solid waste disintegrator to an incinerator installation. Benefits may include savings resulting from reduced storage requirements, small hopper capacities, wide choice of furnace design, and an incinerator fuel approaching homogeneousness, etc..
7. Provision must be made to incinerate sewage grit and grease, this entails a study to determine the most economical method of disposal by use of a feed mechanism to the present Sludge Incinerator or the acquisition of a new Grit and Grease Incinerator.

8. The sludge incinerator and garbage incinerator metal stacks must be painted.
9. Purchase a mobile paint spraying outfit for painting outdoor equipment located in the Sewage Disposal Plant: for more efficient use of material, time and personnel.
10. The filter building and the blower building are in acute need of repairs. This condition is a constant source of danger to personnel, especially due to falling bricks.
11. The fees for disposal of commercial combustible waste should be reviewed and increased to the same level set by some of our neighbor's such as Pawtucket.
12. The co-operation of the law enforcement agency should be obtained for the enforcement of the Ordinance for the collection, conveyance, and disposal of waste materials in the City of Providence.
13. The program to replace ceramic diffusers in the aeration tanks of the Sewage Disposal Plant with Raypro diffuser socks must be continued.
14. The spray water intake manifold in the Sewage Plant must be altered to increase spray water capacity.
15. A new sludge pump and a new vacuum pump must be provided for the Sewage Plant to replace obsolete equipment, and an existing pump must be converted from 1400 GPM to 2000 GPM capacity.
16. The sewage grit pumping and piping system must be renovated.
17. Garbage Incinerator Plant #2 must be completely renovated including the boilers to insure continued operation in event Plant #1 breaks down. Plant #2 currently inoperative.
18. The capacity of the chlorination of sewage effluent process must be increased to maintain prescribed dosage at peak flow during storms and normal chlorination of the north passage.

HIGHWAY SECTION

The main duty of this section is the maintenance of approximately 340 miles of paved streets, including the repairing, patching seal coating, surfacing, resurfacing or reconstruction of Highways and the setting, re-setting or replacing of granite curbing. This section also constructs new highways when ordered and performs miscellaneous jobs for other sections of the Department of Public Works as well as for other City Departments.

EXPENDITURES:

ITEM 0	Personal Service	\$638,777.01
ITEM 1	Services other than Personal	172,801.40
ITEM 2	Materials and Supplies	<u>78,622.30</u>
	Total Expenditures	\$890,200.71
	Revenue	25,181.89

DRIVEMAYS & CURBINGS

Driveways constructed	95
Driveways Widened	24
2' circular corners set	160
SP corners set	19
Driveways relocated	10
Curbs set and reset (feet)	1642
Replacing stone	32

Received Streets Repaired and Surfaced 1969-1970

<u>STREETS</u>	<u>LOCATION</u>
Crout St.	Atwells Ave. to Spruces St.
Meadow St.	Lockwood St. to Summer St.
Shipyards St.	Ernest to New York Ave.
Freese St.	Whitford Ave. to Metropolitan Rd.
Webb St.	Whitford Ave. to Metropolitan Rd.
Lawn St.	Whitford Ave. to Metropolitan Rd.
Saratoga St.	Prairie Ave. to Burnside St.
Victoria St.	Chalkstone Ave. to Gage St.
Alden St.	Sanoset Ave. to Victoria St.
Lynch St.	Atwells Ave. to Yale Ave.
Ponagansett Ave.	Hartford Ave. to Barbara St.
Minto St.	Whitford Ave. to Metropolitan Rd.
Progress Ave.	Webster Ave. to Whithall St. (2 sections)
Union Ave. Bridge	Union Ave. Bridge Rt. 95 Overpass

Received Streets Repaired and Surfaced 1969-1970 con't.

<u>STREETS</u>	<u>LOCATIONS</u>
Elton St.	Wayland Ave. to Blackstone Blvd.
Grotto Ave.	Mount Ave. to Lincoln Ave. Lincoln Ave. to Irving Ave. (2 sections)

Received Streets Started 1968-1969 Completed 1969-1970

<u>STREET</u>	<u>LOCATION</u>
Corinth St.	Broad St. to Niagara St.
Bissel St.	Elmwood Ave. to Northerly Term.
Ardoene St.	Reservoir Ave. to Louis Ave.
Overhill Road	Sarah St. to Hope St.
Seventh St.	Highland Ave. to Overhill Road
Fifth St.	Highland Ave. to Summit Ave.
Foster St.	Broad St. to Pine St.
Aborn St.	West Exchange St. to Dead End (at Freeway)

Received Streets Repaired and Surface Incomplete as of June 30, 1970

<u>STREET</u>	<u>LOCATION</u>
Riverdale St.	Manton Ave. to So. Term.
Brookfield St.	Manton Ave. to Glenbridge Ave.
Fairfield St.	Manton Ave. to Richland St.
Richland St.	Edgemere Ave. to Glenbridge Ave.
Badger Rd.	Sharon St. to Hillview St.
LaSalle Dr.	Sharon St. to Sharon St.
Drill St.	Sharon St. to Hillview St.

Received Street Repaired and Surface Incomplete as of June 30, 1970 con't.

<u>STREET</u>	<u>LOCATION</u>
Erie St.	Sharon St. to Rome Ave.
Sandringham Ave.	Annie St. to River Ave.
Rome Ave.	Sharon St. to Enfield Ave.
Clematis St.	Molloy St. to Glover St.
Walton St.	Academy Ave. to Enfield Ave.
Gallileo Ave.	Chalkstone Ave. to "BEY"
Barbara St.	King Philip St. to Middleton St.
Merino St.	Plainfield St. to Eastwood Ave.
Stonelaw Ave.	River Ave. to Sharon St.
Niagara Street	Detroit Ave. to Standwood Ave. (12 Sections)
Early St.	Prairie Ave. to Niagara St. (2 Sections)
Dresser St.	Ponagansett St. to Melissa St.

Unreceived Streets Resurfaced Completed 1969-1970

STREET

LOCATION

Trainor St.	DePasquale Ave. to Acorn St.
Fernando St.	Corina St. to Virginia Lane
Hagan St.	Charles St. to Greeley St.
Sedan St.	Windmill St. to 125' Ea. Term.
Willow St.	Ellery St. to Service Rd.
Adie St.	Cedar St. to Mountain St.
Cyril Ct.	Manton Ave. to Ea. Term.

Permanent Maintenance

Danforth St.	Haskins St.
Killingly St.	Winfield Rd.

Gaspee Street

SNOW REMOVAL

Expenditures

ITEM 0	Personal Services	\$159576.20
ITEM 1	Services other than Personal	100392.14
ITEM 2	Materials and Supplies	<u>71692.30</u>
	Total	\$331660.64

Snow removal is primarily a function of the Highway Section. All the ice control (sanding, salting, etc.) is accomplished by this section. The plowing is performed in the following manner.

Zones 1-2-3-8-10	By the Incinerator Trucks
Zones 4-5-6-9-13	By the Highway Dept. Trucks
Zones 11-12	By the Sewer Trucks

Thirteen main routes of the City are plowed in tandem by hired trucks working under the supervision of zone supervisors. All hills and main highways are sprayed with salt.

For the fiscal year 1969-1970 the City had 22 snow storms, the first on December 1, 1969 and the last on March 31, 1970 with a total of 46.7 inches. During this period the following work was completed.

Sanding Streets	22,344 miles
Plowing Streets	15,860 miles
Removal of Snow	14,038 cu.yds.
(Business areas, churches and Funeral Homes)	8,320 cy.yds.

The following materials were used during the year:

Sand	10,116.20 Tons
Salt	5,366.45 tons

The following equipment was hired from private contractors:

Trucks (Plow)	32	1222.5 hours
Payloader (Removal)	2	76.0 hours
Grader	4	148.0 hours
Bulldozer	1	8.0 hours

FOX POINT HURRICANE BARRIER

ORGANIZATION CHART

CHIEF ENGINEER

PUMPING STATION

Operators 5

BLDG. MAINT.

Crew 4

EQUIP. MAINT.

Foreman 1
Crew 8

SEWER GATES

Foreman 2
Crew 10

GROUNDS MAINT.

Foreman 1
Crew 4

ELECTRICAL MAINT.

General
Electric 2

STREET GATES

Foreman 1
Crew 8

The Hurricane Flood Protection for the City of Providence was authorized by the Flood Control Act, dated July 3, 1956, Public Law 85-500, 85th Congress and is located across the Providence River 900 feet upstream from its confluence with the Seekonk River at Fox Point. It extends from the expressway at Allens Avenue on the West across the Providence River to Traverse St. on the East.

The structure was constructed under three contracts, completed January 31, 1966 and accepted by the City on March 19, 1966.

The protection for Providence consists of a river gate section, pumping station, barrier wall sections and earth and rock fill dikes.

The hurricane protection system includes about 700 feet of concrete structures across the Providence River, which includes a 50 ft. concrete cellular structure in the West abutment, a 24 ft. pumping station, a 180 ft. center barrier, a 148 ft. river gate section, and a 108 ft. concrete wall section on the east abutment between the barrier wall section and the land dike. The pumping station includes five vertically mounted axial flow 119-inch pumps with a total capacity of 7,000 c.f.s. at a 20 ft. head. In the westerly end bay of the pumping station, two 10 ft. by 15 ft. gates for the control of flows into the cooling water canal are located. The river gates section includes three 40 ft. by 40 ft. tainter gates with sill at elevation - 15.0 mean sea level.

The west dike section is approximately 1,400 ft. long and includes 1,250 feet of an earth and rock fill section with armor stone protection, a concrete wall section and the Allens Avenue and Narragansett Electric Company Vehicular Gates.

The east abutment, approximately 780 feet long, includes the South Main Street Vehicular Gate and 730 feet of an earth and rock fill section with stone protection.

The hurricane protection project provides complete protection to about 280 acres in the downtown business and industrial sections. This project provides a high degree of protection from a hurricane of design intensity, with a still water flood level of 20.5 feet mean sea level.

During the year the Pumping Station has been operated monthly to maintain working order. In addition to monthly tests, the station has been on alert and manned by City Personnel during coastal storms.

The operation and maintenance of the Barrier requires the co-operation of various sections of the Public Works Department, namely the Engineering Personnel, the Highway Section, Sewer Section and the Bridge Section.

The Engineering Personnel supply the required work force for operation of the Pumping Station with the Chief Engineer designated by Federal Authorities as superintendent of the Barrier Operations.

The highway curb crews supply the required work for maintenance of the street gate.

The Bridge Section is assigned the station heavy equipment maintenance and was made available as required.

It is noted that all personnel are permanently assigned to other duties.

In addition to Public Works Maintenance a contract with General Electric Company provided the required electrical equipment maintenance. Testing of the Cathodic Protection System was let to contract.

It is recommended that three additional personnel be assigned the Bridge Section to perform the increasing maintenance demand of the Barrier facility.

Joseph J. Campo, P.E.
Chief Engineer

BRIDGE MAINTENANCE SECTION

The Bridge Maintenance Section personnel consists of eleven (11) men. The tasks performed by these men are the most varied of all sections in the Public Works Department.

Mainly concerned with structural maintenance and reconstruction of forty (40) bridges varying in size and complexity, two (2) viaducts and eight (8) culverts including timber, concrete and steel repairs and maintenance. The bridge section maintains twenty (20) additional bridges for sidewalk snow removal.

In addition to their main task, the section performs difficult structural repairs for all sections of Public Works.

Also, the Bridge Section erects heavy duty barricades and maintains rail switches and tracks at West River Park and Port facilities.

The expenditures of the section for the fiscal year 1969-1970 were as follows:

Item 0	Personal Services	\$ 26,714.43
Item 1	Services other than Personal	4,512.83
Item 2	Materials and Supplies	<u>5,298.00</u>
	Total	\$ 36,525.26

Of the aforementioned forty (40) structures, nineteen (19) required work this year and are as follows:

1. Point St. Bridge Repaired roadway expansion Joints also, section of roadway sub deck. Repaired wood sidewalk stringers and replaced worn planking, replaced broken windows on engine roomhouse. Replaced deteriorated section of wood sheathing on center gear house.
2. Red Bridge Maintenance of navigation lights on shore spans and bridge.
3. Point St. Viaduct Repaired roadway expansion joints.

- | | | |
|-----|---|---|
| 4. | Roger Williams Avenue
R. R. Bridge | Repaired washout on Sidewalk approach. Repaired wood sidewalk stringers and replaced worn sidewalk planking. |
| 5. | Adelaide Avenue Footbridge | Repaired wood approach Fence. Replaced worn sidewalk planking. |
| 6. | Reservoir Avenue Bridge | Repaired loose tread plates on roadway expansion joints. Repaired concrete sidewalk slabs. |
| 7. | "Merino Bridge"
Glenbridge Avenue | Replaced worn sidewalk planking. |
| 8. | "Manton Bridge" at
Manton Avenue City Line | Repaired loose steel angles and tread plates on roadway expansion joint. |
| 9. | "Tar Bridge" Manton Avenue | Repaired loose steel angle and tread plate. Roadway expansion joint. |
| 10. | Delaine St. Bridge | Removed asphalt and repaired wood subdeck at two (2) areas of bridge road. Replaced worn section of wood guard. |
| 11. | Veazie St. Bridge | Repaired worn concrete sidewalk slabs and concrete curbing. |
| 12. | Branch Avenue Bridge | Repaired steel sidewalk fence also, worn concrete sidewalk slabs and concrete curbing. |
| 13. | Atwells Avenue Bridge | Repaired damaged cast iron on Bridge sidewalk truss. |
| 14. | Acorn Street Bridge | Repaired loose section of steel sidewalk fence. Replaced worn sidewalk planking. |
| 15. | Leland St. Foot Bridge | Repaired wood pileing, wooden rails on bridge fences. Replaced worn sidewalk planking. |

- | | | |
|-----|------------------------|--|
| 16. | Park St. Bridge | Repaired Sections of wood subdeck and top deck of roadway. Repaired section of wood sidewalk curbing. Replaced worn sidewalk planking. |
| 17. | Smith St. Bridge | Replaced deteriorated subdeck Planks at several areas of bridge roadway. Repaired sidewalk stringers. Replaced worn sidewalk planking. |
| 18. | Crawford St. Bridge | Removed worn rubber in expansion joint. Poured in new rubber. |
| 19. | South Water St. Bridge | Repaired damaged section of bridge Fence. |

BARRICADE FENCES

Erected Steel Guard Rails Kepler Street. Extended wood guard rails Freedom Road.

Repaired and painted barricade fences and guard rails at following locations:

Harris Ave. Ramp, Woodward Road, South Water St., San Souci Drive, Freedom Road, New York Ave. at Allens Ave., New York Ave. and Service Road, Humes St., Sibley St., Indiana Ave., Netop Drive, Thurston St., Lakeview Drive, Marconi St., Eastwood Ave., Riverdale St., Veazie St. Bridge, Social St., Adelaide Ave.

SNOW REMOVAL

Removed snow and sanded sidewalks on all city owned bridges. Plus all sidewalks on bridges over route 95 and areas under route 295 in city. Also sidewalks on Westminster St. and Broadway over Roberts Expressway.

SERVICES RENDERED OTHER DEPARTMENTS

West River Industrial Park Railroad	General Maintenance
Municipal Dock	Repaired Rails. Replaced damaged ties.
Pedestrian Mall	Masonry and Carpenter work.
Public Works Administration Building	Cleaned and painted Fire doors, Fire escape ladders. Replaced twenty broken Panes of glass in basement windows. Painted walls and ceilings in basement rooms used by Bridge Section.
Hurricane Barrier	Lubrication, rigging, cleaning and painting.

Mr. Lawrence P. McGarry
Director of Public Works
700 Allens Avenue
Providence, Rhode Island

Dear Sir:

I respectfully submit the following report on the operations of the Sidewalk and Curbing Section, of the Department of Public Works, for the fiscal year ending June 30, 1970.

This section is responsible for the condition of all sidewalks in the City. It serves notices on property owners for the repair, construction or reconstruction of sidewalks; issues licenses and permits to sidewalk contractors for repairs, construction or reconstruction of sidewalks; inspects all sidewalk work; makes temporary minor repairs to sidewalks; and is responsible for the posting and maintenance of defective street signs and memorial square signs.

THE OPERATIONS OF THIS SECTION WERE AS FOLLOWS:

Sidewalk Contractor's License Issued	47
Notices Served To Build or Repair	110
Build or Repaired	34
Permits Issued to Build or Repair	220
Sewer Openings Inspected	22
Construction of New Curb Openings for Driveways Inspected	146
Memorial Square Signs Repainted and Relettered	31
Sidewalks Inspected - Damage due to Tree Roots	158
Sidewalks Inspected After Installation of New Water Service	73
Sidewalks Opening by Narr. Elec. & Telephone Co. Inspected	88
Sidewalks Opening by Gas Co. Inspected	125
Streets Abandoned by Council and Signs Erected	4
Sidewalk Washout and Depressions Inspected and Repaired	181

Sidewalk Claims Investigated	33
Investigated Accidents Claims and Private Property Claims	42
Street Signs Repainted and Relettered	368
Street Names Changed by Council and New Signs Erected	1
Total Lin. Ft. of Brick Sidewalks Built	25
Total Lin. Ft. of Bituminous Sidewalks Built	12,448
Total Lin. Ft. of Concrete Sidewalks Built	7,986

Respectfully Submitted

Charles J. Fidrych
Sidewalk and Curbing Section

SEWER CONSTRUCTION & MAINTENANCE

The Sewer Construction and Maintenance Section of the Public Works Department is responsible for the inspection, maintenance, cleaning, repairing, construction and reconstruction of the sewers and sewer appurtenances, such as manholes, catch basins, inlets, etc. of the sewer system.

EXPENDITURES

Item 0	Personal Services	\$214,095.32
Item 1	Services other than Personal	45,845.54
Item 2	Materials & Supplies	<u>8,989.11</u>
	Total	\$268,929.97
	Revenue	30.00

MAINTENANCE WORK PERFORMED

Catch basins replaced	3
Catch basins repaired and built	8
Catch basins frames and covers reset	10
Catch basin covers replaced	2
Catch basin covers repaired or rebuilt	14
Catch basin covers reset	8
Domed over basins	3
New catch basins built	7
Manhole covers replaced	8
Manhole frame & covers reset	30
Manhole frames replaced	6
Manhole covers and grates raised to grade	21
Manhole covers replaced	5
Inlet stones reset	4
Inlet stones replaced	32
Inlet stones removed	4
Gutter grates replaced frame & cover	5
Gutter grates repaired and reset	6
Gutter grates raised or lowered to grade	3
Weirs raised	1
Weirs built	2
Weirs removed	2
Broken pipes replaced	18
Pipes repaired	4
Pipes reset	3

Pipes installed	5
Storm line repaired	2
Broken line repaired	11
Trunk line cleaned	1
Reset pipe frame	1

Basins, gutter grates and sumps cleaned: Deposits removed, lines flushed and complaints received.

7,185 Catch Basins Cleaned	10,627 $\frac{1}{4}$ cu. yds.
77 Sumps cleaned	195 $\frac{1}{2}$ cu. yds.
765 Gutter Grates Cleaned	654 cu. yds.
30 Pot Holes Cleaned	25 cu. yds.
Open Drains Cleaned	1632 cu. yds.
6,932 complaints received	All Cleared
Sewer Lines Flushed	18,984 feet.

Following is a resume of private drain connections, inspections made in conjunction with private construction and alterations:

Original

Extensions

Construction Work Performed 1969-1970

Broad and Montgomery Avenue	Remodel Catch Basin
Overhill Road and Hope	Replace Broken Inlet Stones
Ernest St. (Municipal Garage)	Repair Broken Connection
Elmwood Avenue & Bissell St.	Build Small Basin
Roger Williams Ave. at Melrose St.	Build a Gutter Grate Basin
Aborn Street	Replace 3 manhole frames
Montgomery Avenue	Construct new 6" drain
174 Donelson Street	Build Box Chute
240 Aborn Street	Rebuild Grate Basins
Service Road Fields Point	Build New Manhole to Grade
Douglas Avenue	Build Concave Gutter Grate Inlet
West River Project	Construct New Drain
Municipal Dock #3 Warehouse	Build Ramp
Samoset Street	Rebuild $\frac{1}{2}$ Manhole & Reset Manhole Covers
Polly Street	Build New 12 Inch Sanitary Line
Donelson Street	Build New 12 inch Sanitary Line
Trent Street	Build New 12 inch Sanitary Line
Freedom Road	Construct catch basins & drop inlet
Rutherglen Ave.	Rebuilt Chute
Prairie Ave. & Potters Ave.	Rebuild Fractured Chute
149 Hillside Avenue	Remodel Catch Basins
Incinerator Garage	Repair 12" cast iron pipe

Atwells Avenue
Davis Park
33 Fillmore Street
Modena at Forbes
183 Union Avenue

Lower Basin to Grade
Excavate 36" Sanitary line & free debris
Repair brick work on basin
Repair Box Chute
Repair Chute

PERSONNEL
ADMINISTRATION

*Deceased February, 1970

Public Service Engineer

Street Lighting

John T. Crowley

Utility Inspector

PUBLIC SERVICE DIVISION

Mr. Lawrence P. McGarry
Director of Public Works
700 Allens Avenue
Providence, Rhode Island

Dear Sir:

I respectfully submit the following report for the Public
Service Division for the fiscal year 1969-1970.

STREET LIGHTING DATA

September 30, 1969 - June 30, 1970 Changes

Total number equivalent single incadescent lights	8231	6149	2082
Total number mercury lights 15c 21,000, & 7,000 Lu. & 3500 Lu.	4760	7381	..2621

From May 1, to October 14, inclusive, the half night lights burn one extra hour until 1 A.M.

The United Transit Company os charged for $\frac{1}{2}$ the cost of the 15,000c lumen U.G. mercury which is located at the Thayer Street entrance to the tunnel.

There are 8 lights on Montgomery Avenue for which Cranston pays \$7.00 per light per annum.

These charges shown for the United Transit Company and the City of Cranston are billed by the City Controllers. Office.

NUMBER AND KIND OF STREET LIGHTING UNITS IN SERVICE IN PROVIDENCE SINCE 1954

INCANDESCENTS

MERCURY

YEAR	MERCURY		BRIDGES		STRUCTURES					
	24 hr. Burning	5.5A 1000Lu	2500Lu	10000Lu	15000c O.H.	15000c U.G.	3500Lu	7000Lu	21000Lu	
1954	44	8308	314	506	3293					
1955	44	8277	414	449	3428					
1956	44	8228	447	435	3476					
1957	44	8248	489	391	3501					
1958	44	8192	484	349	3570					
1959	44	8236	512	348	3593			7		
1960	44	8244	519	345	3623			42		
1961	44	8212	547	331	3607			88		
1962	44	8122	536	309	3567			118	12	
1963	44	8139	541	187	2754	825		173	231	
1964	44	8136	534	122	1081	2311		245	321	
1965	44	8100	530	66	2076	1203		297	426	
1966	44	8069	526	38	2054	1187		404	501	
1967	44	8040	537	33	2036	1174		512	526	
1968	44	8042	546	33	2034	1152		544	544	
1969	44	7674	525	32	1984	1112	351	646	667	
1970	44	5840	281	28	1477	1077	2095	1302	1386	

*15000c Lu. means a 21000 Lu, Mercury Vapor Lamp Installed-In An Existing 15000 Lu. Mercury Designed Luminaire.

The rates which are affected by fuel costs are:

General Service Rate D, Power Rate F, Power Rate G.

NARRAGANSETT ELECTRIC COMPANY FUEL COSTS

The amount determined under the preceeding provisions shall be increased or decreased by .000005 per kallowatt hour for each \$.01 increase or decrease in cost of fuel, as defined in the Company's terms and conditions, above or below \$10.75 per net ton. The cost of fuel for any month shall affect the price of electricity billed in the second month following such month.

The cost of fuel by month was as follows:

*1969	October.....	8.410
	November.....	8.218
	December.....	7.943
1970	January.....	7.876
	February.....	7.937
	March.....	8.045
	April.....	7.949
	May.....	7.886
	June.....	8.095

*Standard Net Ton

The number of lamps and globes reported as broken on street lights during the years 1969-1970, is as follows:

<u>INCANDESCENT</u>	<u>LIGHTS BROKEN</u>	<u>MERCURY GLOBES</u>
1969-1970	4444	19

STREET LIGHTING UNIT COSTS

Under the provisions of terms and conditions for street light -- this being the so called "Fuel Clause", the cost of the street lights for the year beginning October 1, 1969, depended upon the cost of fuel for the year ending July 31, 1970. This cost averaged 8.19 per standard net ton. This is \$2.56 below the base price of \$10.75. All base prices shown in the rate schedule will therefore be decreased by an amount obtained by multiplying the decrease per ten cent variation by .25. A tabulation showing the unit prices for the year beginning October 1, 1970, is as follows:

	Annual Decrease Per 10¢ Decrease in cost of fuel below \$10.75	No. of 10¢ below \$10.75 base Fuel Prices	Decrease To Base Price	Annual Base Price	Net Price
<u>INCANDESCENT 100 cp.</u>					
U. G. All Night	.021	25	.53	29.12	28.59
U.G. Single, ½ Night	.009	25	.23	25.11	24.88
Aerial Single, A.N.	.021	25	.53	16.09	15.56
Aerial Single, ½ Night	.009	25	.23	10.40	10.17
<u>MISCELLANEOUS</u>					
2500 Lu. U.G. A.N.	.043	25	1.08	52.19	57.11
2500 Lu. Aerial, A.N.	.043	25	1.08	32.19	31.11
10000 Lu. Aerial, A.N.	.132	25	3.30	72.51	69.21
10000 Lu. U.G. A.N.	.132	25	3.30	92.51	89.21
10000 Lu. U.G. ½ Night	.072	25	1.80	72.39	70.59
2500 Lu. U.G. ½ Night	.0245	25	.61	43.74	43.13
21,000 Lu. O.H.	-----	--	-----	94.00	94.00
21,000 Lu. U.G.	-----	--	-----	114.00	114.00
7,000 Lu. O.H. Mercury	-----	--	-----	55.00	55.00
7,000 Lu. U.G. Mercury	-----	--	-----	75.00	75.00
21,000 Lu. U.G. 2 Lt.	-----	--	-----	208.00	208.00
15,000-c Lu. O.H.				77.00	77.00
15,000-c Lu. U.G.				97.00	97.00
15,000-c Lu. U.G. 2 Lt.				174.00	174.00
15,000-c Lu. Underpasses 24 Hr.				123.00	123.00
7,000 Lu. U.G. 2 Lt.				130.00	130.00
3,500 Lu. O.H.				45.00	45.00
3,500 Lu. U.G.				65.00	65.00

Notes:

15,000-c Mercury Vapor means a 21,000 Lumen Mercury Vapor Lamp installed in an existing 15,000 Lumen Mercury Vapor Luminaire.

MALL PARKING DECK LIGHTS

1 FRANCIS STREET

The Mall Parking Deck lights are charged to the general street lighting account. However, they will not show on the schedule because they are on a separately metered circuit and do not come under the contract price per light unit. They are metered on a "G" Rate, and so much per K. W.

<u>No. of Lights</u>	<u>Type of Lights</u>	<u>Hours of Burning</u>
12 U. G.	21,000 Lumen M. V.	24
14 U. G. A.N.	21,000 Lumen M. V.	Predetermined Ft. Candle Level
18 U. G. A.N.	2,500 Lumen Inc.	Predetermined Ft. Candle Level

The 10 U. G. A.N. 21,000 Lumen M.V. lights on the top deck are separately metered and charged to the Meyers Brothers Parking System.

MONTHLY CHARGES

<u>MONTH</u>	<u>BILL</u>
October, 1969	\$ -----
November, 1969	181.32
December, 1969	86.62
January, 1970	84.94
February, 1970	87.28
March, 1970	-----
April, 1970	166.61
May, 1970	-----
June, 1970	166.51

Sign Inspection

Signs inspected for overhead wire clearance 157

These signs are inspected for wire clearance as noted in the National Safety Code Standard.

Private Floodlight Inspections

APPROVED

148

WESTMINSTER PEDESTRIAN MALL

<u>MONTH</u>	<u>BILL</u>
October 1969	\$ 229.50
November 1969	335.97
December 1969	498.54
January 1970	323.34
February 1970	238.86
March 1970	191.75
April 1970	165.07
May 1970	182.18
June 1970	184.06

STREET LIGHTING SECTION

STREET LIGHTING COSTS

The total expenditures for the fiscal year ending June 30, 1970, for street, bridge, subway, and park lighting bills, contracted in the months stated, less all credits for outage, have been as follows:

1969-1970 Appropriation -- \$474,126.93

INCANDESCENTS AND MERCURY'S

<u>1969</u>	<u>TOTAL BILL</u>	<u>LESS OUTAGE</u>	<u>NET COST</u>
October	44,836.74	44.71	44,792.03
November	45,221.88	72.66	45,149.22
December	45,948.33	106.42	45,841.91
<u>1970</u>			
January	45,862.27	86.92	45,775.35
*February	46,954.65	545.28	46,409.37
March	48,392.96	75.72	48,317.24
April	50,247.47	98.22	50,149.25
May	50,278.02	47.75	50,230.27
June	<u>53,067.34</u>	<u>29.02</u>	<u>53,038.32</u>
	\$430,809.66	\$1,106.70	\$429,702.96

*Storm 2/3, 2/5

Recapitulation

Grand Total	\$429,702.96'
Total monthly average cost 1968-1969	\$ 43,493.29
Total monthly average cost 1969-1970	\$ 47,744.77
Increase from previous year of the Monthly Average	\$ 4,251.48
Total savings in outages	\$ 1,106.70

New Street Light Petitions Received Granted Hold

115	17	98
-----	----	----

Utility Pole Petitions Received and Field Checked 107

Very truly yours,

John T. Crowley
Acting Public Service Engineer

PUBLIC SERVICE SUMMARY

The small amount of utility pole petitions received and field checked by this department again this year is because neither one of the utility companies conducted a depreciation survey. The 107 figure represented new and regular maintenance work.

An added duty of this division is the field inspection and approval of all gas permits and the checking of soil resistivity.

The sign inspections by this division were prompted by some near fatalities in the past, which is now controlled by allowing signs to be only as near high tension wires as the National Safety Code Standard allows and recommends.

This division also field checks, inspects and approves all petitions submitted for the installation of all underground conduit, vaults, manholes and duct lines installed in Providence by the Narragansett Electric Company, Providence Gas Company, New England Telephone & Telegraph Company, Western Union Telegraph Company, Department of Public Safety and the Traffic Engineering Department.

Christmas decorations have been inspected and approved at Olneyville Square, Mount Pleasant Area, Wayland Square, Federal Hill and the Downtown Area, sponsored by the various businessmen's associations.

This division also checked and approved all monthly department electric and gas bills rendered to all City of Providence Departments.

Consequently, it would seem advisable at this time to recommend to the department an assistant to be added to the street lighting division, to help maintain and keep up to date card files, outage records, gas testing, and field check light locations.

In this way our department can work in closer proximity and more efficiently with all utility companys.

I suggest some expense item for new equipment, the maintaining of same; and travel expense, if the opportunity arises, to attend another street light institute. These outdoor lighting institutes are frequently given by the General Electric Company and other street lighting equipment companies and will keep us abreast of the new developments in street lighting.

This department also sends inspectors out of the State on occasions during the year to wire and cable manufacturers, to witness and approve the testing of Traffic Signal Cable and Fire Alarm Cable to make certain it meets the required specifications. This cable is destined to be installed in the City of Providence.

STREET LIGHTING SUMMARY

We can again say the high standard of street lighting enjoyed by the citizens on the travelled arteries of the City of Providence has contributed in a big way to the welfare of the pedestrian as well as the motorist in protecting the lives and property of its citizens.

We also feel that our improved street lighting still contributes an important part in enabling the Traffic Engineering Division and the Police Department to gain national recognition for traffic safety on our streets.

Our Master Plan for the relighting of the entire City of Providence is now approximately one-third complete and if conditions are favorable the project should be completed around the later part of 1972.

At the time of its completion the City shall be relighted entirely with three different sources of mercury vapor lighting and all the existing incandescents shall be removed. Some of these remaining incandescent lights have been in service since 1914.

Our main problem is still trees and as the project progresses, information is forwarded to the City Forester for his cooperation in clearing the light brackets.

This Department also inspects every new installation request for private lighting by the Narragansett Electric Company for adverse affect on traffic and homes. These private light sources are either 400 Watt or 1000 Watt mercury vapor floodlights, or private lighting on the sidewalk side of the utility pole which is called area lighting.

DEPARTMENT OF PUBLIC SAFETY

	INVENTORY	SIGNAL CONSTRUCTION		FIRE ALARM DIVISION		POLICE SIGNALS	
	<u>TOTAL</u>	<u>AERIAL</u>	<u>U.G.</u>	<u>QUICK ACTION DOOR</u>	<u>KEY TYPE DOOR</u>	<u>BLANK DOOR</u>	<u>KEYLESS</u>
Fire Alarm Boxes	1043	638	406	1006	9	24	12
City Owned	688	423	266	690	0	0	0
Private Owned	355	215	140	294	9	24	12
Police Call Boxes	167	102	65				
Total number of all box and cable pedestals					366		
Total number of Fire Box pedestals					274		
Total number of Police Box pedestals					67		
Total numbers of cable pedestals only					36		
Total number of miles of underground cables					87.15		
Total number of miles of Parkway Cables					1.47		
Total number of miles of Aerial Cable					4.82		
Total number of miles of Equivalent Single Conductor - Underground					1258.4		
			Aerial		129.3		
			Parkway		6.42		
Total footage of all underground ducts and laterals owned by by the city					3445.6		
Number of Poles owned by the City					36		
Increase of number of Fire Alarm Boxes owned by the City					3		
Increase of number of Fire Alarm Boxes owned privately					14		
These figures are for the year 1969-1970							

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY

Total number of wood poles (including jointly used, but not including those jointly used with no Telephone Company Owner-ship).	18,275
Total number of jointly used poles with New England Company	14,282
Total number of miles main conduit (trench miles)	72.91
Total number of miles U. G. cable	371.95
Total number of miles aerial cable	387.42
Total number wood terminal boxes on poles	144
Approximate number of telephones supplied directly by underground or block distribution	52,630
Approximate number of telephones supplied directly by overhead lines on highways	51,315

The following additions have been made to the equipment in use by this company during the past year

Additional miles of cable - underground and aerial	53.08
Increases in the number of telephones in use	2,557

ESTIMATE

This report covers plant statistics as of June 30, 1970.

PROVIDENCE GAS COMPANY

Total Gas Services in Providence 36,533

Miles of Main:

L. P.	392 Miles	4,796 Feet	
H. P.	19 Miles	5,021 Feet	
Natural Gas	<u>1 Mile</u>	<u>1,800 Feet</u>	
Total	414 Miles	1,057 Feet or	414.2

Gas Holders 4

Number of Meters (Active) 50,527

Decrease in Gas Services 6/30/69 - 6/30/70 262 $\frac{1}{2}$

Increase in Miles of Main 6/30/69 - 6/30/70 1.7

Increase in Number of Meters 6/30/69 - 6/30/70 6

WESTERN UNION TELEGRAPH COMPANY

City Plan, Providence, Rhode Island

Manholes Owned

1

*Number of feet of Telegraph Cable

*This cable is enclosed in conduit which is leased from the
New England Telephone Company.

THE NARRAGANSETT ELECTRIC COMPANY

1.	(a) Total number of wood poles in City (including those jointly owned but not including those jointly used, with no Narragansett ownership).	18,403
	(b) Total number jointly owned poles with N.E.T. & T. Company.	14,282
2.	(a) Total number iron poles in City.	240
	(b) Number of underground street light standards (ornamental incandescent and mercury vapor).	-
	(c) Number of iron poles with N.E.T. & T. Company.	9
3.	Total number miles conduit (trench feet) in City.	86
4.	Total number miles conduit (duct feet) in City.	718.84
5.	Total number miles underground cable in City.	953.62
6.	(a) Total number miles equivalent single underground conductor.	1,308.44
	(b) Total number miles aerial cable.	380.02
	(c) Total number miles equivalent single conductor aerial cable.	1,003.70
7.	Total number miles aerial open wire.	3,620.66
8.	Total number service pipes or laterals.	68.25
9.	Total number commercial transformers in City.	6,362.00
10.	Total number customers supplied directly by U.G. connection.	23,837.00
11.	Total number customers supplied directly by O.H. connection.	49,235.00
12.	Total number meters installed in City.	73,072.00
13.	Approximate total number of 1 ϕ 2 wire 115 V. meters in City.	23,624.00
14.	Approximate total number of 1 ϕ 3 wire 115/230 B. meters in City.	44,528.00
15.	Approximate total number of 3 ϕ 3 wire 115 V. meters in City.	9
16.	Approximate total number of 3 ϕ 3 wire 230 B. meters in City.	209

THE NARRAGANSETT ELECTRIC COMPANY

- | | | |
|-----|---|----------|
| 17. | Total number of 3Ø 4 wire 120/208 V. meters in City. , | 1,631.00 |
| 18. | Total number of 1Ø 3 wire 120 V. two element meters in City. | 1,862.00 |
| 19. | Total number of D.C. 2 wire and 3 wire 250 and 250/500 V. meters in City. | 31 |
| 20. | Approximate total number of 3Ø wire 575 V. meters in City. | 1,178.00 |

Mr. Lawrence P. McGarry
Director of Public Works
700 Allens Avenue
Providence, Rhode Island

Dear Mr. McGarry:

We respectfully submit the following report concerning the activities of the division of the Public Works and Environment Control Division for the year October 1, 1969 to June 30, 1970.

ITEM 0	Personal Services	\$40,706.85
ITEM 1	Services Other Than Personal	4,736.84
ITEM 2	Materials and Supplies	<u>1,951.28</u>
	Total	\$47,394.97

ENVIRONMENT CONTROL

This department was established as an adjunct to the Sanitation Division after the transfer of the major portion of the Health Department to the State of Rhode Island. The primary purpose of the department is to hold the line against the careless disposition of refuse and other discards that attract rodents and vermin which are the forerunners of disease.

RODENTS

This department activities have covered the inspection and baiting of yards and mercantile areas where the presence of rodents or ideal conditions for their multiplication were evident.

DANGEROUS WEEDS

The department has been consistently called upon to detect and destroy marijuana growing in the city. Experienced workmen remove the weed including the roots and truck it away for destruction.

REMOVAL OF POISON WEEDS

Jimson Weed, Ragweed, Poke Berries, Poison Ivy are also destroyed by this department. These weeds although not classed in the same category as marijuana are a definite menace to the physical comfort of the city's population.

CLEARANCE OF RIVERS AND DAMS

The crew of the department has also been called upon to clear the dams and river banks of the local streams in order to facilitate navigation and restore their natural beauty.

HURRICANE BARRIER

In addition to this departments general duties there is included the task of clearing all vegetation from the rocky Hurricane Barrier. The winds carry the seeds dropping them between the large rocks, where they grow, causing an eye sore. The removal of this growth, which can only be accomplished by clambering over the rocks and pulling by hand is a long tedious task but the results keeps the barrier in an orderly condition.

ASSISTANCE TO SUPERVISOR OF PUBLIC WORKS

This department also assists the Department of Public Buildings in the transportation and moving of equipment during elections and dismantling after the functions are completed. Bath houses and comfort stations are also kept clear of debris.

MAINTENANCE OF CITY OWNED LAND

City owned land is kept clear of debris and rubbish that is carelessly deposited by un-thinking individuals. The land is also cleared of the growth that otherwise destroy the appearance of the area.

RAZED BUILDINGS

This department also oversees the fumigation of buildings that are to be torn down in order to prevent the escape of rodents and vermin to adjacent buildings in the area.

SNOW REMOVAL

This department has regularly included in its activities the regular removal of snow from the areas covering the Manton Avenue sidewalks adjacent to the dumping area. Our administration building and the Hopkins Park Area.

OPERATIONAL STATISTICS
STAFF AND EQUIPMENT

Laborers	9
Foreman	1
Office Clerk	1
Vermin Control Officer	1
Inspector	1
Dump Truck	1
Passenger Car	1
Jeep Truck	1
Panel Truck	1

OPERATION

Rodent Complaints	3,697
Stations Baited	2,561
Loads of debris removed	811
Supervision of razed bldg. areas	521
Dirty yard complaints received	2,825
Bags of bait distributed without charge (1½ lbs. to bag)	4,560
Warning signs posted	189

Although there is a substantial increase in the operational statistics it is our opinion that the tremendous rubbish removal campaigns diligently instituted by the Director of Public Works in the various wards of the City, removing thousands of pounds of rubbish, held the situation in check.

RECOMMENDATIONS

In addition to the enactment of the changes in the laws that control the departments operation we would suggest an official inquiry into the feasibility of instituting a public educational campaign in conjunction with the injerent disease that is a natural adjunct to the conditions brought about by the unsantary conduct by the occupants of the consistantly offending dwelling areas. Historically we know that some of these areas were once some of the finest in the city as we can only conclude that the conditions were brought about by the occupants. It seems that economic depression need not be aacpanied by squalor.

Respectfully submitted

Charles H. Oatley
Environment Control Dept.

Mr. Lawrence P. McGarry
 Director of Public Works
 700 Allens Avenue
 Providence, Rhode Island

Dear Mr. McGarry,

The following rigs arrived during the period from October 1, 1969 to June 30, 1970.

	Steamships	382
	Motor Vessels	228
	Barges	173
	Tugs	513
	Dredges	3
	French Destroyer	1
1	British Sub	1

The following cargo was received and, the following cargo was shipped during the above period.

<u>Received</u>		<u>Shipped</u>	
Gasoline	1,771,941 Tons	Gasoline	87,837 Tons
Fuel Oils	3,548,864	Fuel Oils	571,244
Kerosene	224,747	Kerosene	20,749
Diesel	74,522	Diesel	16,692
Lubes	22,502	Scrap	172,033
Asphalt	81,445	Gen. Cargo	746
Cement	111,316		<u>869,301 Tons</u>
Chemicals	9,746		
Gen. Cargo	82,741		
Lumber	<u>43,506</u>		
	5,971,330 Tons	26,106,895 B.F.	
Tons Received	5,971,330		
Tons Shipped	<u>869,301</u>		
Total	6,840,631		

Very truly yours,

Thomas C. O'Rourke
 Port Director

Tonnage Received Oct. 1, 1969 to June 30, 1970

	<u>Gasoline</u>	<u>Fuel Oils</u>	<u>Kerosene</u>	<u>Diesel</u>
Oct. 1969	190,074 Tons	285,834 Tons	8,934 Tons	1,589 Tons
November	181,206	518,679	125,850	17,933
December	224,075	431,064	10,774	5,998
January 1970	208,680	530,801	22,411	11,062
February	203,447	518,191	14,024	739
March	154,742	382,713	4,007	-----
April	283,485	425,444	25,811	13,590
May	136,960	313,575	6,631	13,806
June	<u>189,272</u>	<u>142,563</u>	<u>6,305</u>	<u>9,805</u>
Total	1,771,941	3,548,864	224,747	74,522 Tons
	<u>Lubes</u>	<u>Asphalt</u>	<u>Cement</u>	<u>Chemicals</u>
Oct. 1969	3,353 Tons	5,831 Tons	15,764 Tons	610 Tons
November	1,380	4,998	14,646	986
December	5,011	-----	10,434	900
January 1970	1,192	4,333	7,479	1,000
February	-----	-----	-----	1,652
March	-----	4,206	3,531	2,583
April	1,725	-----	16,790	1,031
May	8,611	49,998	21,266	-----
June	<u>1,230</u>	<u>12,079</u>	<u>21,406</u>	<u>984</u>
Total	22,502 Tons	81,445 Tons	111,316 Tons	9,746 Tons

	<u>Gen. Cargo</u>	<u>Lumber</u>	<u>B.F. Lumber</u>	<u>Total</u>
Oct. 1969	2,343 Tons	1,345 Tons	808,111	515,677 Tons
November	4,752	-----	-----	870,430
December	895	4,815	2,889,576	693,966
January 1970	30,340	3,492	2,095,432	820,790
February	34,485	2,561	1,536,948	775,099
March	1,097	5,237	3,142,359	558,116
April	2,191	9,817	5,890,594	780,100
May	3,363	13,435	8,061,132	567,429
June	<u>3,275</u>	<u>2,804</u>	<u>1,682,743</u>	<u>389,723</u>
Total	82,741 Tons	43,506 Tons	26,106,895 B.F.	5,971,330 Tons

Tonnage Shipped Oct. 1969 to June 30, 1970

	<u>Gasoline</u>	<u>Fuel Oils</u>	<u>Kerosene</u>	<u>Diesel</u>
October 1969	6,120 Tons	42,765 Tons	210 Tons	294 Tons
November	21,700	78,795	6,527	2,491
December	30,664	56,265	5,719	3,022
January 1970	2,934	72,362	3,520	596
February	3,513	66,808	514	-----
March	297	68,569	1,270	-----
April	10,562	89,472	1,624	1,708
May	8,142	47,324	1,365	6,126
June	<u>3,905</u>	<u>48,884</u>	<u>-----</u>	<u>2,455</u>
Total	87,837 Tons	571,244 Tons	20,749 Tons	16,692 Tons

	<u>Scrap</u>	<u>Gen. Cargo</u>	<u>Total</u>
October 1969	14,257 Tons	-----	63,646 Tons
November	-----	746 Tons	110,259
December	5,658	-----	101,328
January 1970	42,861	-----	122,273
February	31,483	-----	102,318
March	22,733	-----	92,869
April	27,261	-----	130,627
May	15,000	-----	77,957
June	12,780	-----	68,024
	<hr/>	<hr/>	<hr/>
Total	172,033 Tons	746 Tons	869,301 Tons

SHOPS AND STORES

The Public Works Shops and Stores service completely all sections of the Public Works Department.

All the automotive construction and maintenance equipment is furnished to the section requiring its use on a rental basis. These rental payments are shown as receipts in the Revolving Fund which, together with the money received for stock orders and job orders, comprise the money used for defraying the operating costs and the purchase cost for the rental equipment of these sections.

A detailed resume of the activities is as follows:

This section has no budget allowance. All the expense for labor and materials are paid for with the money received from the equipment rentals, and from stock and job orders, together with the initial capital appropriated.

This section is responsible for procuring, servicing, maintaining and repairing all equipment, materials and supplies required by the sections and divisions of the Public Works Department.

A list of the available rental equipment is as follows:

2 Dump Trucks 2 cu. yds.	1 Utility Truck
30 Garwood Packer Trucks	4 Derrick Trucks
4 Dump Trucks 10 cu.yds.	1 Hoist Truck 5000#
3 Compressors, Truck Mounted	2 Bulldozers TD 18
33 Dump Trucks 4 cu.yds.	1 Sky Worker
4 Dump Trucks 6 cu.yds.	1 Welder, Electric Portable
1 Bulldozer TD 93 cu.yds.	5 Road Graders
10 Pickup Trucks 3/4 Tons	2 Mist Sprayers
1 Stake Body Truck 1 Ton	2 Concrete Mixers 3S
1 Express Body Truck 2 1/2 Tons	2 Snow Loaders
1 Express Body Truck 1/2 Ton	3 Lawn Mowers, Power
24 Passenger Cars	108 Snow Plows
8 Air Compressors, Portable	4 Snow Blowers
1 Trailer 25 T Flatbed w/tractor	3 Scout Cars
1 Station Wagon	3 Front End Loaders
2 Hoist Trucks 2500#	1 Roller 10-14 tons tandem
1 Roller 8-10 ton tandem	2 Pavers, asphalt
1 Roller 10-12 ton 3 wheel	3 Tool Heaters
1 Walters Snow Fighter	6 Generators, Portable
1 Roller 3-5 tons tandem	6 Tool Wagons
1 Tar Kettle	19 Spreaders, Mounted
4 Leaf Collectors	1 Utility Truck
1 Wood Chipper	1 Vac. All Basin Cleaner
2 Eductor Trucks	1 Sewer Cleaning Machine
9 Mechanical Sweepers	

This equipment is serviced and repaired in the repair shops by personnel of this section.

During the year the following new equipment was purchased by the section and incorporated in the rental pool.

6 Automobiles	25 Plows
2 Compressors, Truck Mounted	1 Station Wagon
1 Back Hoe	

In addition to the rental equipment in the pool, this section also services, repairs and maintains the following equipment for the sections shown:

1 Outboard Motor	Bridge Maint. Sec.
2 Fork Lifts	Automobile Repair Shop
1 Air Compressor	Paint Shop
1 Emergency Motor & Generator	Point St. Bridge
2 Bucket, Clamshell	Incinerator
4 Buckets, Orange Peel	Sewer Maint. Section
1 Roller, 5 ton tandem	Recreation Dept.

The Public Works Stock Room carries much of the material, parts and supplies required by the sections of the division. An inventory of \$124,848.34 in material and supplies and parts was on hand on June 30, 1970.

The following is an inventory of the Equipment used by the Department:

Rental Equipment	\$878,917.58
Plant Equipment	49,879.21
Radio System	<u>40,663.35</u>
Total	\$969,460.14