



ANNUAL REPORT
OF THE
PUBLIC WORKS DEPARTMENT
FOR THE
YEAR ENDING DECEMBER 31, 1947.

Boston, January 2, 1948.

HON. JAMES M. CURLEY,
Mayor of Boston.

DEAR MR. MAYOR:

In compliance with the provisions of section 36 of chapter 28 of the Revised Ordinances of 1947, I respectfully submit the Annual Report of the Public Works Department for the year ending December 31, 1947.

Upon the request of this department and with the approval of your Honor the Mayor, the City Council made an appropriation for \$2,000,000 for the construction and reconstruction of streets. All sections of the City benefited by the work that was done, and the program which we have started will be continued in 1948.

The larger number of the contracts which were awarded were completed, and on several the work had to be suspended because of the approach of cold weather. This work will be resumed as soon as weather conditions permit in the spring.

The matter of expediting traffic on our main highways has been given considerable attention, and many improvements have been made by cutting down wide sidewalks and widening the roadways, thereby per-

*Boston City Manager
January 17, 1950*

mitting an easier flow of traffic. Among the improvements of this nature was the reconstruction of Summer street at the South Station, from Atlantic avenue to Dorchester avenue, where the sidewalks were narrowed, and with the cooperation of the Metropolitan Transit Authority a new loading area for streetcars was provided. This will help considerably in alleviating a traffic hazard at this important point.

Another notable improvement was the reconstruction of Columbus avenue. Some sections of this street have been completed, and the installation of a center divisional island has helped very much in improving traffic conditions. Another section of this street is now under contract for similar treatment, namely, from Northampton street in town to Arlington street. Columbus avenue is a direct route in and out of Boston, from Park square to Egleston square, in Roxbury, and the improvement thus brought about will aid traffic entering and leaving the City in this section.

The surfaces of many of our streets in all sections of the City have become worn through use, but their condition was such that a complete reconstruction of the roadways was not necessary. This year, for the first time in many years, we adopted a program of laying a seal coat on top of the existing surface, which will extend the life of these streets for a period of eight or ten years. The program which has been set up will be continued in 1948, so that macadam streets will be given a renewal of life periodically.

During the year this department has installed thousands of yards of asphalt sidewalks. From an economical point of view, it was to the City's advantage to do this work because of the prohibitive cost of laying concrete sidewalks. This type of sidewalk, usually called black top, is equal in all respects to concrete, and a suitable wearing surface will be provided for years of use.

Due to war conditions, it was not possible for the department to replace completely concrete sidewalks where openings had been made by the Water Division for installations and repairs. This year we have concentrated on the matter of permanently replacing these sidewalk openings, and the results attained have been gratifying, with the result that, in a good many cases, the City has saved itself from possible suits because of personal injuries received.

The wooden surfaces on many of our drawbridges have through the course of years outlived their usefulness, and a new program of replacing the wooden bridge decking with asphalt has been inaugurated. This asphalt will require less maintenance than the wooden surface, and the life of the roadway will thereby be prolonged for many years.

On many of our bridges the wooden curbings installed for years have become dilapidated and unsightly in appearance. As fast as we can do this we are removing these curbings and installing modern concrete curbs, in accordance with a design prepared in this department. This new type of curb is substantial and not only will it add to the appearance of our bridges, but will assist materially in reducing accidents and calamities on our bridges.

The garage facilities of this department have been modernized, and our equipment for the purpose of making repairs is second to none in the country. Thousands of dollars have been saved to the City in work done in our own shop, and these savings have been accomplished without any increase in personnel.

With the money made available by your Honor in the so-called Equipment Loan, all mobile equipment of the Public Works Department has been renewed. Many new units have been received and are already in service, and many are now on their way and about to be delivered. When this program is consummated, the Public Works Department will have been completely outfitted with automotive units.

Plastic globes have been developed for street lighting purposes. In many sections of the City the cost of replacing broken glass globes was increasing to such heights that it was becoming difficult for the department to keep up with the demand for replacements. New plastic globes have been installed in many locations and their services have been entirely satisfactory, with a reduction reflected in maintenance costs.

It has long been the opinion of this department that incinerators should be constructed in various locations where dumps were objected to or otherwise unavailable.

All our attempts to obtain dump locations were strenuously resisted in each locality. Plans and specifications were prepared for the construction of an incinerator and, although a suitable site was selected, and funds were provided, the project was abandoned

because of zoning restrictions. The funds for an incinerator are still available, and these plans and specifications that were prepared have been so drawn that they can be used at any location selected.

We are still hopefully seeking locations in all districts of the City for incinerators, as well as sites for sanitary fills, which will obviate the usual objections to common dumps.

For many years the department has been confronted with a problem in the South End. This relates to the disposal of rubbish, particularly from the rooming-house sections. No facilities were available for disposing of small bundles of rubbish, with the result that in many cases they were deposited in the streets and in the alleys of that section. We have made a start on correcting and improving the conditions in the South End by the installation of boxes, so placed as to be easily accessible for the deposit of rubbish. The improvement shown has justified the action of the City in making these installations.

Another problem that has faced the department for years is the condition existing in the market district, following the close of business on Saturday nights. Rubbish was thrown into the streets indiscriminately and it was only with great expense and effort that this department was able to clean up the conditions which existed. We have made much progress along this line, and I am pleased to state that at the present time conditions in the market district are better than they ever were before.

The flow of traffic through the Sumner Tunnel has continued without letup, and this year it is expected that the revenue received from tolls will show an excess of approximately \$500,000 over expenditures.

The Water Division has continued to exert every effort possible to bring in revenue for the use of water, and from present indications the department will wind up the year with a surplus of receipts over expenditures of close to a million dollars. This is a very creditable record and reflects the activities of the Water Division.

There has been put into effect in the Public Works Department a requirement that all new employees entering the service of the department must have a physical examination by the department doctor and must have an X ray made of their chests at the City Hospital. The purpose of this is to insure that men

entering our employ are not incapacitated from doing the work which they will be required to do. These examinations have revealed that the condition of several individuals was such that their employment with this department would not be desirable, and the results obtained by this new requirement have been very satisfactory in all respects.

Beginning with the first of the coming year, a new contract district will be established in the section of Roxbury and the South End approximately from Roxbury Crossing to Massachusetts avenue. One of the terms of the contract is that collections are to be made twice a week. At the present time, at least two collections a week are being made in the sections of the City where the service is still rendered by City employees.

Respectfully submitted,

ROBERT P. CURLEY,
Commissioner of Public Works.

The records of the department show that there are now 2,403 persons eligible for employment in the several divisions, and of that number 2,350 were upon the January, 1948, payrolls.

Grade and Number of Employees.

| TITLE. | SERVICES. | | | | | | | | | |
|----------------------------------|--------------------|-------------------------|--------|-----------|---------------------|---------|--------|---------|--------|--------|
| | Central Office. | Paving and Lighting. | Sewer. | Sanitary. | Street Cleaning. | Bridge. | Ferry. | Tunnel. | Water. | Total. |
| Commissioner..... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Division engineers..... | | 1 | 1 | 1 | ... | 1 | ... | ... | 1 | 5 |
| Assistant engineers (civil)..... | | 17 | 32 | ... | ... | 10 | ... | ... | 4 | 63 |
| Draftsmen..... | | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Instrumentmen..... | | 13 | 12 | ... | ... | 2 | ... | ... | ... | 27 |
| Rodmen..... | | 3 | ... | ... | ... | ... | ... | ... | ... | 3 |
| Blueprinters..... | | ... | 4 | ... | ... | ... | ... | ... | ... | 4 |
| Superintendents..... | | 2 | ... | ... | ... | ... | ... | 1 | 1 | 4 |
| Chief supervisor..... | | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| Supervisors..... | | 2 | ... | ... | 1 | 1 | ... | ... | ... | 4 |
| General foremen..... | | 1 | 1 | ... | ... | ... | ... | ... | ... | 2 |
| Foremen..... | | 13 | 8 | 15 | 14 | 1 | ... | 1 | 6 | 58 |
| Chief inspectors..... | | 1 | 2 | ... | ... | ... | ... | ... | 1 | 4 |
| Inspectors-subforemen..... | 1 | 54 | 19 | 47 | 19 | 2 | ... | 1 | 14 | 157 |
| Executive secretaries..... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | 2 |
| Chief clerks..... | | 1 | 1 | 1 | ... | ... | ... | ... | 2 | 5 |
| Executive clerks..... | | 1 | 1 | ... | ... | 1 | ... | ... | 1 | 4 |
| Clerks-stenographers..... | 9 | 27 | 11 | 7 | ... | 3 | 1 | 8 | 48 | 114 |
| Telephone operators..... | | ... | ... | 1 | ... | ... | ... | ... | 1 | 2 |
| Cashiers and assistants..... | | ... | ... | ... | ... | ... | 1 | 2 | 2 | 5 |
| Storekeepers..... | | ... | ... | ... | ... | ... | 1 | ... | 1 | 2 |
| Patternmakers..... | | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Medical inspector..... | | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| Cement tester and assistant..... | | ... | 1 | ... | ... | ... | ... | ... | ... | 1 |
| Captains..... | | ... | ... | ... | ... | ... | 4 | ... | ... | 4 |
| Quartermaster-pilots..... | | ... | ... | ... | ... | ... | 2 | ... | ... | 2 |
| Deckhands..... | | ... | ... | ... | ... | ... | 10 | ... | ... | 10 |
| Dispatcher..... | | 1 | ... | ... | ... | ... | ... | ... | ... | 1 |
| Investigators..... | | 1 | 1 | ... | ... | ... | ... | ... | 2 | 4 |
| Carried forward..... | 12 | 138 | 94 | 73 | 35 | 21 | 19 | 13 | 87 | 492 |

Grade and Number of Employees.— Concluded.

| TITLE. | SERVICES. | | | | | | | | | |
|--|--------------------|-------------------------|--------|-----------|---------------------|---------|--------|---------|--------|--------|
| | Central Office. | Paving and Lighting. | Sewer. | Sanitary. | Street Cleaning. | Bridge. | Ferry. | Tunnel. | Water. | Total. |
| <i>Brought forward</i> | 12 | 138 | 94 | 73 | 35 | 21 | 19 | 13 | 87 | 492 |
| Matrons..... | | | | | | | 4 | | | 4 |
| Engineers (steam)..... | | 8 | 6 | | | | 4 | | | 18 |
| Oilers..... | | | 4 | | | | 5 | | | 9 |
| Firemen..... | | | 6 | | | | 9 | | | 15 |
| Gate-men-Tollmen-guards..... | | | 5 | | | | 12 | 34 | | 51 |
| Sergeant-Tollmen-guards..... | | | | | | | | 4 | | 4 |
| Gate-men-filth hoisters..... | | | 5 | | | | | | | 5 |
| Meter readers..... | | | | | | | | | 36 | 36 |
| Drawtenders and assistants..... | | | | | | 137 | | | | 137 |
| Chief and electricians..... | | | 2 | | | 1 | | 15 | | 18 |
| Master mechanics..... | | 1 | | 4 | | | 2 | | 5 | 12 |
| Auto mechanic-repairers..... | | 20 | 3 | 3 | | | | | | 26 |
| Blacksmiths-horseshoers..... | | 5 | 1 | 14 | | | | | 1 | 21 |
| Carpenters-joiners..... | | 4 | 4 | 3 | | 12 | 2 | | | 25 |
| Harnessmaker and assistant..... | | | | 2 | | | | | | 2 |
| Machinists..... | | | 3 | | | 2 | 3 | 2 | 17 | 27 |
| Painters..... | | 5 | | 8 | | 2 | 1 | | | 16 |
| Asphalt rakers..... | | 10 | | | | | | | | 10 |
| Pavers..... | | 18 | | | | 1 | | | | 19 |
| Plumbers-pipefitters..... | | | | | | | 1 | | 131 | 132 |
| Boilermakers..... | | | 1 | | | | 1 | | | 2 |
| Sewer cleaners-flushers..... | | | 20 | | | | | | | 20 |
| Catch-basin cleaning machine op- erators..... | | | 6 | | | | | | | 6 |
| Stonecutters-brick masons..... | | 3 | 3 | | 1 | | | | 1 | 8 |
| Wheelwrights and assistants..... | | | | 4 | | | | | | 4 |
| Head chauffeurs..... | | 5 | | | | | | | | 5 |
| Machine operators..... | | 5 | | 5 | 26 | | | | | 36 |
| Chauffeurs, etc..... | | 56 | 24 | 67 | 83 | 5 | | 13 | 38 | 286 |
| Working foremen, laborers, etc..... | | 4 | 2 | | 2 | 3 | | 1 | 1 | 13 |
| Laborers, teamsters, etc..... | | 190 | 40 | 186 | 373 | 6 | 6 | 9 | 84 | 894 |
| Wharfinger..... | | | | 1 | | | | | | 1 |
| Yardmen and yardmasters..... | | 4 | 4 | 2 | 2 | 1 | | | 3 | 16 |
| Constables..... | | | | | 25 | | | | 8 | 33 |
| Totals..... | 12 | 476 | 233 | 372 | 547 | 191 | 69 | 91 | 412 | 2,403 |

**Number of Employees Actually Employed January 1, 1947, and
January 1, 1948.**

| | Tunnel. | Central Office. | Bridge. | Ferry. | Water. | Paving and Lighting. | Sanitary. | Street Cleaning. | Sewer. | Total |
|----------------------|---------|--------------------|---------|--------|--------|-------------------------|-----------|---------------------|--------|-------|
| January 1, 1947..... | 82 | 12 | 182 | 65 | 401 | 499 | 361 | 549 | 229 | 2,380 |
| January 1, 1948..... | 81 | 11 | 180 | 63 | 399 | 470 | 370 | 546 | 230 | 2,350 |

Total Eligible Force.

| | | | | | | | | | | |
|----------------------|----|----|-----|----|-----|-----|-----|-----|-----|-------|
| January 1, 1947..... | 88 | 12 | 190 | 68 | 409 | 506 | 362 | 551 | 239 | 2,425 |
| January 1, 1948..... | 91 | 12 | 191 | 69 | 412 | 476 | 372 | 547 | 233 | 2,403 |

**Appointments, Transfers, Resignations, Retirements, Deaths, Etc., of
Employees.**

| Died. | Retired. | Transferred to Other Depart- ments. | Transferred to Other Services. | Discharged. | Resigned. | January 8, 1947. | SERVICES. 1947-1948. | January 1, 1948. | Transferred from Other Services. | Transferred from Other Depart- ments. | Reinstated. | Appointed. |
|-------|----------|---|-----------------------------------|-------------|-----------|------------------|--------------------------|------------------|-------------------------------------|---|-------------|------------|
| .... | .... | .... | .... | .... | 1 | 12 | Central Office..... | 12 | .... | .... | .... | 1 |
| 3 | 3 | .... | 1 | .... | 3 | 190 | Bridge..... | 191 | .... | 1 | .... | 10 |
| 1 | 6 | .... | .... | .... | 1 | 68 | Ferry..... | 69 | .... | .... | .... | 9 |
| 10 | 22 | 6 | 3 | 3 | 7 | 506 | Paving and Lighting..... | 476 | 5 | 2 | 3 | 43 |
| 10 | 7 | 2 | 22 | 2 | 3 | 362 | Sanitary..... | 372 | 14 | 3 | 1 | 15 |
| 8 | 13 | 4 | 18 | 13 | 15 | 551 | Street Cleaning..... | 547 | 21 | 3 | 1 | 32 |
| 3 | 11 | 2 | 1 | .... | .... | 239 | Sewer..... | 233 | 2 | 1 | 1 | 7 |
| 4 | 15 | 1 | .... | 4 | 10 | 409 | Water..... | 412 | 3 | 2 | .... | 23 |
| 1 | 3 | .... | .... | .... | 1 | 88 | Tunnel..... | 91 | .... | .... | .... | 8 |
| 40 | 80 | 15 | 45 | 22 | 41 | 2,425 | Totals..... | 2,403 | 45 | 12 | 6 | 148 |

MAINTENANCE APPROPRIATIONS AND EXPENDITURES.

| DIVISION OR SERVICE. | Total Appropriations, Including Transfers. | Expenditures. | Unexpended Balance. |
|--------------------------|---|-----------------------|------------------------|
| Central Office | \$39,077 00 | \$38,125 23 | \$951 77 |
| Bridge Service | 596,969 00 | 570,207 95 | 26,761 05 |
| Ferry Service | 305,014 99 | 266,870 15 | 38,144 84 |
| Tunnel Service | 438,451 37 | 395,060 35 | 43,391 02 |
| Lighting Service | 1,002,453 72 | 1,002,453 72 | 0 00 |
| Paving Service | 1,211,687 81 | 1,188,631 87 | 23,055 94 |
| Sanitary Service | 4,388,596 93 | 4,364,740 89 | 23,856 04 |
| Sewer Division | 566,437 25 | 547,931 80 | 18,505 45 |
| Water Division | 1,690,616 74 | 1,613,357 63 | 77,359 11 |
| Totals | \$10,239,304 81 | \$9,987,379 59 | \$251,925 22 |

Expenditures from Special Appropriations, Etc.

| | |
|--|------------------------------|
| Bridges, Construction of (revenue) | \$0 00 |
| Bridges, Construction of (non-revenue) | 0 00 |
| Bridges, Repairs, etc. (revenue) | 176,956 22 |
| Construction of Buildings and other related objects (revenue) | 102 79 |
| Ferry Improvements (revenue) | 45,764 84 |
| Beacon Street (chapter 90) (revenue) | 100,000 00 |
| Reconstruction of Streets (revenue) | 203,242 81 |
| Sidewalks, Construction and Reconstruction of (revenue), | 56,924 84 |
| Sewerage Works (revenue) | 186,600 84 |
| Sewerage Works (non-revenue) | 687,120 12 |
| Snow Removal (revenue) | 650,443 01 |
| Public Ways, Construction of (revenue) | 131,395 39 |
| Public Ways, Construction of (non-revenue) | 1,299,520 38 |
| Total | <u>\$3,538,071 24</u> |

REVENUE.

On Account of Public Works Department.

| | | |
|---------------------------------------|---|----------------|
| Central Office: | | |
| Sale of plans, etc. | . | \$1,442 00 |
| Bridge Service: | | |
| Dorchester Avenue Bridge | . | \$9,537 98 |
| Northern Avenue Bridge | . | 834 99 |
| Chelsea South Bridge | . | 275 25 |
| Rents | . | 2,900 00 |
| Junk | . | 56 78 |
| Meridian Street Bridge | . | 36,686 77 |
| Chelsea North Bridge | . | 64,258 84 |
| | | <hr/> |
| | | 114,550 61 |
| Ferry Service: | | |
| Tolls | . | \$12,921 73 |
| Rents | . | 120 00 |
| Cleaning telephone booths | . | 24 00 |
| Commission on telephones | . | 11 97 |
| Weighing machine | . | 25 00 |
| Junk | . | 75 84 |
| Sale of boat | . | 100 00 |
| | | <hr/> |
| | | 13,278 54 |
| Sumner Tunnel: | | |
| Tolls | . | \$1,757,760 00 |
| Sale of materials | . | 370 80 |
| Fleet discount | . | 18 50 |
| | | <hr/> |
| | | 1,758,149 30 |
| Lighting Service: | | |
| Damage to posts | . | 405 35 |
| Paving Service: | | |
| From assessments on abutters for | | |
| cost of laying sidewalks in front | | |
| of their premises, including material | | |
| for same: | | |
| Assessments added to taxes | . | \$2,879 08 |
| Assessments paid in advance | . | 16 31 |
| Unapportioned | . | 85 20 |
| Permits | . | 40,326 98 |
| Sale of materials, etc. | . | 20 00 |
| Labor and materials furnished | . | 58 48 |
| Junk | . | 168 32 |
| Rent | . | 340 00 |
| | | <hr/> |
| | | 43,894 37 |
| Sewer Service: | | |
| Disposal of sewage | . | \$19,450 00 |
| Labor and materials furnished | . | 30 00 |
| Entrance fees | . | 2,726 59 |
| Junk | . | 178 21 |
| Rent | . | 50 00 |
| Refunds | . | 19 14 |
| Freeing drains | . | 60 00 |
| | | <hr/> |
| | | 22,513 94 |
| Carried forward | . | <hr/> |
| | | \$1,954,234 11 |

PART II.
APPENDICES.

APPENDIX A.

REPORT OF THE DIVISION ENGINEER OF
THE BRIDGE AND FERRY DIVISION.

BOSTON, January 2, 1948.

To the Commissioner of Public Works.

DEAR SIR:

I respectfully submit the following report of the income, expenditures and operation of the Bridge and Ferry Division for the year ending December 31, 1947. The appropriations and expenditures for the Division were as follows:

Bridge Service.

| | |
|---|--------------------|
| Regular appropriation, 1947 | \$591,969 00 |
| Transfers to | 5,000 00 |
| | <hr/> |
| | \$596,969 00 |
| Expenditures, 1947 | 570,207 95 |
| | <hr/> |
| Unexpended balance, December 31, 1947 . | <u>\$26,761 05</u> |

Bridges, Repairs, Etc.

| | |
|---|--------------------|
| Balance from 1946 | \$51,265 78 |
| Appropriation, 1947 | 200,000 00 |
| | <hr/> |
| | \$251,265 78 |
| Transfers from | 5,000 00 |
| | <hr/> |
| | \$246,265 78 |
| Expenditures, 1947 | 176,956 22 |
| | <hr/> |
| Unexpended balance, December 31, 1947 . | <u>\$69,309 56</u> |

Bridges, Construction of.

| | |
|---|-----------------------|
| Balance from 1946 | \$2,433,590 95 |
| Expenditures, 1947 | 00 00 |
| | <hr/> |
| Unexpended balance, December 31, 1947 . | <u>\$2,433,590 95</u> |

*Departmental Equipment, Non-Revenue, Bridge Service.**Marine Equipment.*

| | |
|------------------------------|------------|
| Balance from 1946 | \$8,839 25 |
| Expenditures, 1947 | 00 00 |

| | |
|---|-------------------|
| Unexpended balance, December 31, 1947 . | <u>\$8,839 25</u> |
|---|-------------------|

Ferry Service.

| | |
|---------------------------------------|--------------|
| Regular appropriation, 1947 | \$305,014 99 |
| Expenditures, 1947 | 266,870 15 |

| | |
|---|--------------------|
| Unexpended balance, December 31, 1947 . | <u>\$38,144 84</u> |
|---|--------------------|

Ferry Improvements, Etc.

| | |
|-------------------------------|-------------|
| Balance from 1946 | \$56,722 09 |
| Appropriation, 1947 | 45,000 00 |

| | |
|----------------------------------|--------------|
| Total amount available | \$101,722 09 |
| Expenditures, 1947 | 45,764 84 |

| | |
|---|--------------------|
| Unexpended balance, December 31, 1947 . | <u>\$55,957 25</u> |
|---|--------------------|

Sumner Traffic Tunnel.

| | |
|---------------------------------------|--------------|
| Regular appropriation, 1947 | \$438,451 37 |
| Expenditures, 1947 | 395,060 35 |

| | |
|---|--------------------|
| Unexpended balance, December 31, 1947 . | <u>\$43,391 02</u> |
|---|--------------------|

The foregoing does not include certain expenditures for construction work for other divisions, which work was supervised by the engineers of this division.

In an order from the Department of Public Utilities, Commonwealth of Massachusetts, schedules of tolls and charges for the use of the Sumner Traffic Tunnel, between Boston Proper and East Boston, were approved, covering the year 1947.

The City has been operating only one ferry, the so-called "South Ferry," since early in 1933, with the Boston terminus at Eastern avenue and the East Boston terminus at Lewis street.

The more important works undertaken during the past year in the Bridge and Ferry Division were renewing high curbs at Charlestown Bridge; repairs to Charlesgate West Bridge; repairing fender piers of Chelsea North Bridge; cleaning and painting Chelsea Street Bridge; painting, pointing, etc., Congress Street

Bridge; rebuilding Metropolitan Avenue Bridge; furnishing new tail truck at Warren Bridge; repairs to roadway, etc., of Warren Bridge; making wash borings at Warren Bridge; repairs to pile bents, etc., at Warren Bridge; repairing electric pier and navigation lights at various bridges; resurfacing various bridges; renewing high curbs at various bridges; building spar floats at various bridges; building a public boat landing at Warren Bridge; renewing high curbs at Chelsea South and Malden Bridges; repairing hull, etc., of Ferryboat "Ralph J. Palumbo"; alterations, etc., to buildings and pier, South Ferry; painting steel floor system of South Ferry Bridges; alterations, etc., to Vent Buildings at the Sumner Tunnel; repairing pavement of the Summer Traffic Tunnel; cleaning fresh air and exhaust ducts at the Sumner Tunnel; building Old Colony Avenue Stairway; repairs to Victory Road Disposal Station; dredging docks at Victory Road Disposal Station, etc.

BRIDGE SERVICE.

Charlesgate West Bridge.

The steel understructure was cleaned, necessary repairs made, and the bridge and railing painted, under a contract with the J. A. Singarella Company, at a cost of \$9,157.50.

Charlestown Bridge, over the Charles River.

Repairs to the main draw pier and the Boston fender pier were started in 1946, under a contract with W. H. Ellis & Son Company, and were completed this year at a cost of \$14,495.

Due to the unsightly and dangerous condition of the old wooden high curbs, a contract was entered into with the John F. Shea Company for replacing the present high curb with new precast reinforced concrete curbs, in 8-foot lengths, spaced approximately three feet apart, at a cost of \$4,809.40.

Chelsea Bridge North, over the Mystic River.

A contract was entered into with W. H. Ellis & Son Company, at an estimated cost of \$23,585, for making necessary repairs to the main draw pier and the Chelsea fender pier. No work has been started this year but completion is expected by next spring.

Chelsea Bridge South, and Malden Bridge.

A contract was entered into with the John F. Shea Company, Inc., for replacing the present wooden high curbs with precast reinforced concrete curbs, at an estimated cost of \$4,032.80. No payment was made this year and the work is expected to be completed early in 1948.

Chelsea Street Bridge, over the Mystic River.

Cleaning and painting of the steelwork of the draw span and the fasciae and railing of the approach spans, was done under a contract with the Eastern Painting Company, at a cost of \$14,750.

Congress Street Bridge, over Fort Point Channel.

The two abutments were repaired by guniting, the intermediate piers were pointed and the entire steel work of the bridge was cleaned and painted under a contract with Marinucci Brothers & Co., at a cost of \$34,220.56.

Metropolitan Avenue Bridge, over Stony Brook.

The old wood-deck bridge was entirely removed, the old stone abutment walls were repaired by guniting, and a new reinforced concrete bridge with a sheet asphalt pavement was built under a contract with R. A. Bucella & Sons, at a cost of \$3,910.29.

Old Colony Avenue Stairway.

To prevent the necessity of pedestrians being obliged to cross Old Colony Avenue from a present old wooden stairway on the opposite sidewalk, work was commenced on a new steel stairway leading to the sidewalk adjacent to the Columbia Road Rapid Transit Station, under a contract with the West End Iron Works, at an estimated cost of \$8,900. Payments of \$3,965.25 have been made to date and the work is expected to be completed early in 1948.

Spar Floats.

To provide the bridges having draw houses a means to more properly secure and care for their lifeboats, eight wooden spar floats were ordered to be built under a contract with the Rev-Lyn Contracting Company, at an estimated cost of \$7,144. No payment has been made this year and the work is expected to be completed in 1948.

Warren Bridge, over the Charles River.

Repairs to the roadway decking were started in 1946, under a contract with the M. & R. Construction Company, and were completed this year at a cost of \$9,158.43.

Two additional contracts were made for decking repairs and repaving with the Fred J. Wallace Company, Inc., at a total cost of \$35,641.16.

Repairs to the pile bents, which were considered necessary by the D. P. U. inspectors, were made under a contract with A. Orlando, Inc., at a cost of \$12,096.14.

Wash borings required in connection with studies for a new bridge were made under a contract with the Raymond Concrete Pile Company, at a cost of \$1,652.53.

A new public boat-landing float was built and installed, identical with the original float, under a contract with the Murray Engineering Company, at a cost of \$7,741.

Work on a new tail-truck, for the retractile draw span, was started under a contract with Martin J. Kelly Company, Inc., at an estimated cost of \$4,700. This work will be completed early next year.

Various Bridges — Repairing Electric Pier and Navigation Lights.

To comply with U. S. Coast Guard regulations, repairs were made to the Malden Bridge, Meridian Street Bridge, Chelsea South Bridge, and Summer Street Bridge over Fort Point Channel, pier and navigation lights, under a contract with Stearns, Perry & Smith Company, at a cost of \$3,228.

Various Bridges — Resurfacing.

Resurfacing and replacing underplank, where necessary, on various bridges, was started under a contract with John F. Shea Company, Inc., in the amount of \$22,514. A small stretch of the Albany Street Bridge, over the freight tracks, at the expansion-joint end, has been resurfaced. The entire wearing surface of the West Fourth Street Bridge was removed, the underplank repaired, and additional strengthening made by placing a 2-inch tongue-and-groove spruce plank, laid diagonally over the present underdeck and then resurfaced with sheet asphalt wearing surface. This work was done on one roadway at a time.

The southerly roadway of the Southampton Street Bridge over the New York, New Haven and Hartford

Railroad was resurfaced, and the southerly roadway of the Broadway Bridge over the Boston and Albany Railroad was also resurfaced. Payments of \$17,892.99 were made on this contract this year. Four other bridges, included in this contract, will be completed early in 1948.

Various Bridges — Renewing High Curbs.

The replacement of the present old wooden high curbs with new precast reinforced concrete curbs, on various bridges, was started under a contract with John F. Shea Company, Inc., and at the end of the year many sections of new curb were ready, but due to the inclement weather the work was extended to the spring of 1948.

The estimated cost of this contract is \$7,260.60, and the Broadway Bridge over Fort Point Channel, Dover Street Bridge over Fort Point Channel, Summer Street Bridge over Reserved Channel, Summer Street Bridge over A Street, and West Fourth Street Bridge over the New York, New Haven and Hartford Railroad are included therein.

No payments were made under this contract during 1947.

Maintenance Force.

The Maintenance Force patched and replaced deck sheathing, headers, and sidewalk planking on various bridges; repaired platforms, refastened treads, cleaned and painted drawhouses; made repairs to drawhouses and controller houses; added to and deducted from counterweights; repaired steps; removed snow and ice from bridges and sanded same; repaired piers; painted fences and gates; did general carpenter work and painting and made mechanical repairs, etc., repaired wood-block paving; refastened treads on various bridges; repaired and rebuilt gates on various bridges; repaired floats; built and repaired sand boxes; rebuilt coal bins at various bridges; repaired boats, set glass at various drawhouses; made miscellaneous small repairs at various bridges, etc.

The Maintenance Force cleaned the bridge sidewalks and steps in the intown area of snow and refuse during the year.

Electrical and machinery maintenance was taken care of by the electrician and machinists.

Miscellaneous.

Another duty of the division during the winter months was the supervising and inspecting of snow loading and removal, in common with other divisions of the department. This work was done under contract.

In the course of the year part of the activities of the office force was taken up in work for other divisions of the department. These efforts, spread over the entire year, did not require a considerable amount of time; the work being mostly of an advisory and investigating nature.

FERRY SERVICE.

The following ferryboats are in commission:

| NAME. | When Built. | Length. | Gross Tons. |
|--------------------------|-------------|--------------------|-------------|
| Charles C. Donoghue..... | 1926 | 174 feet, 4 inches | 756.77 |
| Daniel A. MacCormack.... | 1926 | 174 feet, 4 inches | 756.77 |
| Ralph J. Palumbo..... | 1930 | 174 feet, 4 inches | 779 |

All these boats are of the propeller type and all are steel boats.

The work of this service for the year consisted of the following:

Ferryboat "Ralph J. Palumbo."

A contract with the Bethlehem Steel Company for the annual overhaul of this vessel, which had been advertised for in 1946, was approved January 8, 1947, and work was completed June 25, 1947, at a cost of \$26,703.92.

South Ferry Fenders.

Extensive repairs and replacements to the Boston and East Boston fenders, which were started in 1946 under a contract with Roy B. Rendle Company, were completed this year at a total cost of \$38,642.75.

South Ferry, East Boston Side, Steel Bridges.

A contract for cleaning and painting the steelwork below the decks of the two steel bridges at East Boston, was awarded to the National Paint Company, at an estimated cost of \$1,730. Payments of \$735.25 have been made to date, and work is expected to be completed early in 1948.

Alterations, Repairs, etc., to Buildings and Pier, South Ferry, East Boston.

The three-story wood-frame building, formerly used by the Fire Department as quarters for the fireboat Engine No. 47, and which is adjacent to the ferry property, was transferred to the Public Works Department, Ferry Service. This gave the division an opportunity to use the building for a combination office and storehouse and permit the demolishing of two wooden storehouses, which were in very bad condition.

A contract was entered into with A. Orlando, Inc., for alterations and painting of the ex-firehouse, including installing a new oil-burning heater, demolishing the old storehouses, and repaving the wharf foundations. Work was completed this year at a cost of \$21,105.99.

Removing Ashes, Cinders, etc., from Ferryboats.

A contract was awarded to Harry Benson for the daily removal of ashes, etc., from the ferryboats. The work for the entire year cost \$3,070.

Department Force.

During the year machinists, carpenters, painters, riggers, and other mechanics, who are included in the personnel of the Ferry Service, made all repairs possible to the plant to the extent of equipment at their disposal. This work consisted mainly of minor repairs to the machinery on the boats, repairs to ferry-bridge machinery, ferry-bridge roadways, and headhouse repairs in general.

TUNNEL SERVICE.

Repairing the Paving of the Sumner Traffic Tunnel.

A contract was awarded to James A. Susi, approved by the Mayor November 7, 1947, for repairing the paving of the Sumner Tunnel. Work commenced November 10, 1947, and was completed December 15, 1947, at a cost of \$15,684.30.

Painting, etc., at the Sumner Tunnel Administration Building.

A contract was awarded to John D. Ahern, approved by the Mayor December 31, 1946, for painting the exterior trim of the Administration Building, toll

booths, etc., the interior of the first and second floors of the Administration Building, all metal railings and fences pertinent to the tunnel, and for replacing the present grill partition in the main office with a wood partition. Work was commenced January 3, 1947, and was completed March 7, 1947, at a cost of \$4,444.

Miscellaneous Alterations, Painting, etc., at the Ventilation Buildings of the Sumner Tunnel.

A contract was awarded to the George J. Bartley Company, approved by the Mayor January 8, 1947, for building false ceilings in the two control rooms and painting both interiors and exteriors of the Vent Buildings, as directed. Work was completed September 27, 1947, at a cost of \$4,453.50.

Cleaning Fresh Air and Exhaust Ducts at Sumner Tunnel.

A contract was awarded to the Rossano Construction Company, approved by the Mayor November 26, 1947, for removal of all dust, debris, etc., from the fresh air and exhaust ducts of the tunnel. Work commenced December 1, 1947, and was completed December 23, 1947, at a cost of \$4,300.

Control Cables for Sumner Tunnel.

A contract was awarded to the Eagle Electric Company, for supplying 4,292 linear feet of cable for controls for the tunnel, at a cost of \$12,414.46.

Telephone Cables for the Sumner Tunnel.

A contract was awarded to the Okenite Company, approved by the Mayor October 10, 1947, for furnishing telephone cables to replace the old ones which had become unfit for use, at a cost of \$6,664.40. These cables, plus control cables, will be installed in 1948 under a separate contract.

Summary of Activities During 1947.

1. *Personnel.*

During the year of 1947, the following changes were made in the personnel of the tunnel:

- 1 Superintendent, appointed.
- 1 Chief Electrician, appointed.
- 2 Electrician-Operators, appointed.
- 2 Chauffeur-Laborers, pensioned.
- 1 Chauffeur-Laborer, died.

2. *Vehicular Traffic.*

| | 1943. | 1944. | 1945. | 1946. | 1947. |
|---------------------|-----------|-----------|-----------|-----------|-----------|
| Total. | 5,715,999 | 6,449,934 | 7,223,762 | 8,432,721 | 8,748,162 |
| Monthly Average ... | 476,000 | 536,500 | 601,980 | 702,727 | 729,014 |
| Weekly Average..... | 110,000 | 124,000 | 138,918 | 162,168 | 168,234 |
| Daily Average..... | 15,650 | 17,600 | 19,791 | 23,103 | 23,968 |

3. *Power.*

The power supply is received from the Boston Edison Company at 13,800 volts and is transformed to other voltages to operate the fans, pumps, heat and lighting.

| | 1943. | 1944. | 1945. | 1946. | 1947. |
|-----------------------|-----------|-----------|-----------|-----------|-----------|
| Total kilowatts. | 2,813,427 | 3,104,104 | 4,097,633 | 5,809,371 | 5,133,526 |
| Number of vehicles. . | 5,715,999 | 6,449,934 | 7,223,762 | 8,432,721 | 8,748,162 |

4. *Garage Service.*

| | 1943. | 1944. | 1945. | 1946. | 1947. |
|---------------|-------|-------|-------|-------|-------|
| Tow Jobs..... | 104 | 185 | 291 | 327 | 321 |

5. *Booth, Red Signals.*

| | 1943. | 1944. | 1945. | 1946. | 1947. |
|---------------------|----------|---------|----------|---------|---------|
| Booth, Red On..... | 8 | 5 | 7 | 5 | 4 |
| Total Duration..... | 255 min. | 56 min. | 155 min. | 57 min. | 51 min. |

6. *Fires.*

There were no fires in the tunnel in 1947.

7. *Toll Registering Equipment.*

All treadles and toll registers are in good condition and are operating properly. Periodic inspection and pressure tests have been made on all toll lanes. Key boxes have been repaired and overhauled as needed.

8. *Motors, Fans and Dampers.*

All motor controllers were inspected, cleaned and adjusted. All damper motors were cleaned, painted and adjusted for most efficient operation. The twenty-eight fan motors have been cleaned and tested for the most efficient operation.

9. *Circuit Breakers, Transformers, etc.*

The oil in all transformers has been tested and changed as required. All relays have been adjusted for the most efficient operation. All circuit breakers have been adjusted and working properly.

10. *Pumps.*

Routine repairs have been made to all foot valves and piping as needed. Portal and harbor pumps have been painted and overhauled.

11. *Motor Generators.*

The four motor generators have been painted and overhauled and new brushes were installed as needed. All machines and controls are working properly.

12. *Storage Batteries.*

The storage batteries have been charged, cleaned and water added as required and are in excellent working condition.

13. *Traffic Signals.*

Broken glass was replaced as required. All relays and contacts were repaired as needed.

14. *Telephone System.*

All defective cords and handsets were repaired and replaced as required. The relays have been cleaned and adjusted.

15. *Carbon Monoxide Equipment.*

The four analyzers have been overhauled, adjusted and calibrated and are all in good working condition.

16. *Tunnel, General.*

During the past year, the following automotive equipment was received at the tunnel:

- 1 Ford tow car.
- 1 Ford pickup car.
- 1 Jeep with plow.
- 1 Austin patrol sweeper.

The tunnel ceiling was given one coat of a special concrete paint. This work was performed between the hours of 12.30 A.M. and 5.30 A.M., with no interference to vehicular traffic. This work was completed by employees of the Public Works Department, City of Boston.

A contract was awarded for the cleaning and painting of the interior and exterior of the Administration Building, installing a new partition in the toll register room, cleaning and painting toll booths and the cleaning and painting of all metal fence and railings of the tunnel.

As of February 1, 1947, all military vehicles will pay a toll for passage through the tunnel.

A forty-hour work week was granted to all employees, effective October, 1947.

Electric heaters were installed in the East Boston toll booths.

All catch-basins and pump rooms were cleaned in March and again in October.

MISCELLANEOUS WORK.

Snow Removal — Area No. 2.

A contract was awarded to the Walter Reed Corporation, approved by the Mayor December 31, 1946, for removing snow in Snow Area No. 2. Work was completed February 22, 1947, at a total cost of \$4,518.83. The work was supervised by this division.

Snow Removal — Area No. 3.

A contract was awarded to Baker & Co., approved by the Mayor December 31, 1946, for removing snow in Snow Area No. 3. Work was completed February 22, 1947, at a total cost of \$7,290.24. The work was supervised by this division.

Snow Removal — Area No. 6.

A contract was awarded to the Ward General Contracting Company, approved by the Mayor December 19, 1947, for removing snow in Snow Area No. 6. Payments of \$4,399.92 were made up to December 31 of this year. The work was supervised by this division.

Snow Removal — Area No. 12.

A contract was awarded to the C. & R. Construction Company, approved by the Mayor December 19, 1947, for removing snow in Snow Area No. 12. Payments of \$4,116.21 were made up to December 31 of this year. The work was supervised by this division.

MISCELLANEOUS WORK FOR OTHER DIVISIONS.

SANITARY DIVISION.

Repairs to Albany Street Disposal Station.

A contract was awarded to Fred J. Wallace, approved by the Mayor September 25, 1946, for repairing the Albany Street Disposal Station by driving new oak piles under the present girder caps and renewing caps, stringers, decking, etc., where directed. Work was completed February 26, 1947, at a cost of \$26,706.20.

Repairs to Victory Road Disposal Station.

A contract was awarded to A. Orlando, Inc., approved by the Mayor May 14, 1947, for repairing the Victory Road Disposal Station, by renewing the pile bent on the easterly side, using creosoted pine piles and creosoted girder caps, renewing plank and wearing surface as directed. Work was completed July 31, 1947, at a cost of \$29,451.63.

Dredging Docks at the Victory Road Disposal Station.

A contract was awarded to the Bay State Dredging & Contracting Company, approved by the Mayor August 21, 1947, for dredging the docks at the Victory Road Disposal Station. Work was completed October 10, 1947, at a cost of \$7,830.09.

Yours respectfully,

JOHN DEMEULENAER,
Division Engineer.

BRIDGE SERVICE.

FINANCIAL STATEMENT FOR 1947.

Expenditures from Maintenance Appropriations.

| | |
|--------------------------|--------------|
| Boston bridges | \$570,207 95 |
|--------------------------|--------------|

Total Expenditures.

| | |
|--|---------------------|
| From Maintenance Appropriation | \$570,207 95 |
| From Special Appropriations | 176,956 22 |
| | <u>\$747,164 17</u> |

*Expenditures on Boston Bridges.**Administration.*

| | |
|--------------------------------|--------------------|
| Division Engineer | \$3,250 00 |
| Engineers and clerks | 44,332 39 |
| Supervisors | 3,335 05 |
| Foreman | 3,000 00 |
| Inspectors | 5,400 00 |
| Pensions | 6,524 46 |
| Injured employees | 93 50 |
| | <u>\$65,935 47</u> |

Office.

| | |
|---|--------------------|
| Printing, postage and stationery | \$1,663 78 |
| Traveling expenses | 12 40 |
| Engineers' instruments, new and repaired | 170 30 |
| Inspection of typewriters and adding machines | 40 28 |
| Binding | 13 80 |
| Office supplies | 161 85 |
| Photographs | 32 60 |
| | <u>2,095 06</u> |
| | <u>\$68,030 53</u> |

*Yard and Stockroom.**Yard.*

| | |
|--|--------------------|
| Clerks, watchman and yardman | \$12,165 80 |
| Holidays, vacations and sick leave | 4,766 10 |
| Travelling expenses | 159 05 |
| Tools, new and repaired | 664 18 |
| Telephone | 212 54 |
| Supplies | 501 31 |
| Auto equipment | 5,439 79 |
| | <u>\$23,908 77</u> |

Stockroom.

| | |
|-----------------------------|--------------------|
| Stock purchased | \$21,886 34 |
| Stock used | 18,844 15 |
| | <u>3,042 19</u> |
| Increase in stock | <u>\$26,950 96</u> |

Tidewater Bridges, 1947.

| BRIDGES. | Drawtenders' Salaries. | Mechanics' Wages. | Material. | Repair Bills. | Supplies. | Total. |
|----------------------|------------------------|-------------------|-------------|---------------|-------------|--------------|
| Broadway..... | \$20,265 08 | \$4,419 70 | \$1,134 18 | \$1,148 42 | \$430 61 | \$27,397 99 |
| Charlestown..... | 36,445 83 | 5,036 16 | 2,474 84 | 3,880 09 | 1,069 77 | 48,906 69 |
| Chelsea North..... | 27,533 55 | 2,615 79 | 777 05 | 8,970 00 | 1,314 41 | 41,210 80 |
| Chelsea South..... | 26,672 92 | 1,957 24 | 708 51 | 1,159 11 | 767 63 | 31,665 41 |
| Chelsea Street..... | 25,968 79 | 2,398 22 | 862 34 | 1,457 72 | 714 38 | 31,401 45 |
| Congress Street..... | 26,840 60 | 1,615 42 | 912 89 | 1,332 83 | 692 30 | 31,394 04 |
| Dover Street..... | 20,824 40 | 2,000 14 | 359 81 | 1,273 92 | 443 34 | 24,901 61 |
| L Street *..... | 26,288 33 | 1,690 82 | 142 92 | 1,227 87 | 1,159 87 | 30,509 81 |
| Malden..... | 26,359 40 | 510 42 | 44 80 | 811 93 | 887 81 | 28,614 36 |
| Meridian Street..... | 26,073 66 | 3,316 16 | 1,581 26 | 874 47 | 616 11 | 32,461 66 |
| Northern Avenue..... | 27,512 54 | 3,783 91 | 1,016 87 | 4,288 66 | 3,181 64 | 39,783 62 |
| Summer Street..... | 27,476 03 | 2,946 02 | 357 10 | 2,397 98 | 475 93 | 33,653 06 |
| Warren..... | 26,772 81 | 8,040 08 | 3,350 84 | 3,359 76 | 779 36 | 42,302 85 |
| Totals..... | \$345,033 94 | \$40,330 08 | \$13,723 41 | \$32,582 76 | \$12,533 16 | \$444,203 35 |

* Now Summer Street, over Reserved Channel.

Repairs on Inland Bridges.

| BRIDGES. | Labor and Material. |
|--|---------------------|
| Albany Street..... | \$37 55 |
| Allston..... | 130 60 |
| Arlington Street..... | 75 40 |
| Babson Street..... | 73 16 |
| Beacon Street..... | 94 76 |
| Belgrade Avenue..... | 302 65 |
| Bennington Street..... | 651 59 |
| Blakemore Street..... | 1,578 51 |
| Boylston Street..... | 197 18 |
| Broadway, over Boston & Albany Railroad..... | 98 88 |
| Broadway, over New York, New Haven & Hartford Railroad..... | 714 26 |
| Byron Street..... | 541 60 |
| Cambridge Street, over Boston & Maine Railroad..... | 180 29 |
| Camden Street — Gainsborough Street..... | 234 98 |
| Central Avenue..... | 50 32 |
| Columbus Avenue..... | 21 38 |
| Cummins Highway..... | 1,483 95 |
| Dana Avenue..... | 265 50 |
| Dartmouth Street (rent)..... | 300 00 |
| Everett Street, Allston..... | 9,598 05 |
| Everett Street, East Boston..... | 560 72 |
| Fairmount Avenue..... | 586 30 |
| Fallon Street — Berwick Park (foot)..... | 278 00 |
| Gove Street..... | 793 59 |
| Ipswich Street..... | 51 22 |
| Irvington Street — Yarmouth Street (foot)..... | 270 35 |
| Jones Avenue..... | 424 91 |
| Massachusetts Avenue, over New York, New Haven & Hartford Railroad.. | 294 90 |
| Metropolitan Avenue..... | 119 28 |
| Carried forward..... | \$20,004 07 |

Repairs on Inland Bridges.—Concluded.

| BRIDGES. | Labor and Material. |
|--|---------------------------|
| <i>Brought forward</i> | \$20,004 07 |
| Milton Lower Mills..... | 162 87 |
| Mystic Avenue..... | 99 77 |
| Neptune Road..... | 186 72 |
| New Allen Street..... | 111 10 |
| Norfolk Street..... | 49 67 |
| Old Colony Avenue..... | 9 16 |
| Perkins Street (foot)..... | 865 19 |
| Redfield Street..... | 282 51 |
| Reservoir Road..... | 320 79 |
| Southampton Street..... | 272 37 |
| Toll Gate Way (foot)..... | 302 21 |
| Tremont Street..... | 97 85 |
| Walworth Street..... | 137 17 |
| Webster Street..... | 268 39 |
| West Fourth Street..... | 2,425 54 |
| West Newton Street..... | 22 00 |
| Winthrop..... | 144 00 |
| Snow and sanding bridges..... | 2,713 24 |
| Other services..... | 653 31 |
| Repairs to Charlestown storehouse..... | 92 95 |
| Moving to Albany Street and repairs in yard..... | 1,802 23 |
| Total..... | \$31,023 11 |

SUMMARY.

| | |
|------------------------------|---------------------|
| Administration | \$68,030 53 |
| Yard and stockroom | 26,950 96 |
| Tidewater bridges | 444,203 35 |
| Inland bridges | 31,023 11 |
| Total | <u>\$570,207 95</u> |

SPECIAL APPROPRIATIONS.

BRIDGES, REPAIRS, ETC.

| | | |
|---|-------------|-------------|
| Albany Street, over Boston and Albany Railroad: | | |
| John F. Shea Company, Inc. | \$32 01 | |
| Advertising | 3 00 | |
| | | \$35 01 |
| Allston Bridge: | | |
| Advertising | | 3 00 |
| Babson Street Bridge: | | |
| Advertising | | 3 00 |
| Bennington Street Bridge, over Boston, Revere Beach and Lynn Railroad: | | |
| Advertising | | 3 00 |
| Broadway Bridge: | | |
| John F. Shea Company, Inc. | \$732 22 | |
| Inspection of material | 7 84 | |
| | | 740 06 |
| Broadway Bridge, over Boston and Albany Railroad: | | |
| Repairing roadway | \$721 02 | |
| Advertising | 3 00 | |
| | | 724 02 |
| Broadway Bridge, over New York, New Haven and Hartford Railroad: | | |
| Repairs to roadway | | 983 60 |
| Charlesgate West Bridge, over Ipswich street: | | |
| J. A. Singarella Company | \$7,783 87 | |
| Advertising | 24 00 | |
| | | 7,807 87 |
| Charlestown Bridge: | | |
| W. H. Ellis & Son Company | \$10,256 05 | |
| John F. Shea Company, Inc. | 4,809 40 | |
| Repairs to roads | 971 23 | |
| Advertising | 24 00 | |
| | | 16,060 68 |
| Central Avenue Bridge: | | |
| John F. Shea Company, Inc. | | 8,432 18 |
| Chelsea North Bridge: | | |
| Advertising | | 24 00 |
| Chelsea South Bridge: | | |
| Stearns Perry & Smith Company | \$786 25 | |
| New brackets for gate lights | 204 06 | |
| Advertising | 8 50 | |
| | | 1,018 81 |
| Chelsea Street Bridge: | | |
| Eastern Painting Company | | 12,537 50 |
| Carried forward | | \$48,372 73 |

| | | | |
|--|-------------|-------------|---------------------|
| <i>Brought forward</i> | | \$48,372 73 | |
| Congress Street Bridge: | | | |
| Marinucci Brothers Company | \$34,220 56 | | |
| Advertising | 20 50 | | |
| | | | 34,241 06 |
| Dana Avenue Bridge: | | | |
| Advertising | | | 3 00 |
| Dartmouth Street Bridge: | | | |
| Inspection of material | | | 26 37 |
| Dover Street Bridge: | | | |
| Machinery repairs | | | 795 70 |
| Malden Bridge: | | | |
| Stearns Perry & Smith Company | \$62 05 | | |
| Advertising | 8 50 | | |
| | | | 70 55 |
| Meridian Street Bridge: | | | |
| Stearns Perry & Smith Company | | | 888 25 |
| Metropolitan Avenue Bridge: | | | |
| R. A. Buccella & Sons | \$3,910 29 | | |
| Advertising | 24 50 | | |
| | | | 3,934 79 |
| Old Colony Avenue Stairway: | | | |
| West End Iron Works | \$3,965 25 | | |
| Advertising | 24 00 | | |
| | | | 3,989 25 |
| Southampton Street Bridge: | | | |
| John F. Shea Company, Inc. | \$232 46 | | |
| Advertising | 3 00 | | |
| | | | 235 46 |
| Summer Street Bridge, over Fort Point Channel: | | | |
| Stearns Perry & Smith Company | \$956 89 | | |
| Electrical repairs | 929 82 | | |
| Repairs to fender guard | 979 79 | | |
| Advertising | 8 50 | | |
| | | | 2,875 00 |
| Warren Bridge: | | | |
| M. & R. Construction Company | \$9,158 43 | | |
| Murray Engineering Company | 7,741 00 | | |
| Fred Wallace Company, Inc. | 35,641 72 | | |
| A. Orlando, Inc. | 10,281 72 | | |
| Raymond Concrete Pile Company | 1,652 33 | | |
| Advertising | 115 00 | | |
| | | | 64,589 64 |
| West Fourth Street Bridge: | | | |
| John F. Shea Company, Inc. | \$16,896 30 | | |
| Inspection of material | 35 12 | | |
| Advertising | 3 00 | | |
| | | | 16,934 42 |
| Total | | | <u>\$176,956 22</u> |

SUMMARY.

Expenditures from Special Appropriations.

| | Balance from 1946. | Total Credits, Including Balances Carried over and Transfers. | Expended During Year 1947. | Unexpended Balances December 31, 1947. |
|---|--------------------------|---|----------------------------------|---|
| Bridge, repairs | \$51,265 78 | \$246,265 78 | \$176,956 22 | \$69,309 56 |
| Bridges, construction of.. | 2,433,590 95 | 2,433,590 95 | — | 2,433,590 95 |
| Department equipment, non-revenue bridge service, marine equip- ment | 8,839 25 | 8,839 25 | — | 8,839 25 |
| Totals | \$2,493,969 18 | \$2,688,695 98 | \$176,956 22 | \$2,511,739 76 |

Draw Openings, 1947.

| BRIDGES. | STEAMERS. | | | SAILING VESSELS. | | | TUGS. | | | BARGES. | | | ALL OTHERS. | | | TOTAL NUMBER OF VESSELS. | | | Total Number of Cargoes. | Total Number of Openings. |
|----------------------|-----------|-------|--------|------------------|-------|--------|--------|-------|--------|---------|-------|--------|-------------|-------|--------|--------------------------|--------|--------|--------------------------|---------------------------|
| | Day. | | Total. | Day. | | Total. | Day. | | Total. | Day. | | Total. | Day. | | Total. | Day. | | Total. | | |
| | Night. | | | Night. | | | Night. | | | Night. | | | Night. | | | Night. | | | | |
| Broadway..... | 2 | ..... | 2 | ..... | ..... | ..... | 475 | 7 | 482 | 53 | 1 | 54 | 347 | 3 | 350 | 877 | 11 | 888 | 205 | 458 |
| Charlestown..... | 96 | 83 | 179 | 99 | 45 | 144 | 93 | 41 | 134 | 62 | 33 | 95 | 62 | 16 | 78 | 412 | 218 | 630 | 129 | 456 |
| Chelsea North..... | 1,156 | 97 | 1,253 | ..... | 1 | 1 | 8,606 | 1,090 | 9,696 | 1,398 | 592 | 1,990 | 360 | 77 | 437 | 11,520 | 1,857 | 13,377 | 1,870 | 5,069 |
| Chelsea South..... | 13 | 26 | 39 | ..... | ..... | ..... | 799 | 541 | 1,340 | 313 | 254 | 567 | ..... | ..... | ..... | 1,125 | 821 | 1,946 | 290 | 1,109 |
| Chelsea Street..... | 915 | 342 | 1,257 | ..... | ..... | ..... | 2,547 | 448 | 2,995 | 533 | 212 | 745 | 352 | 52 | 404 | 4,347 | 1,054 | 5,401 | 1,015 | 2,772 |
| Congress Street..... | 61 | 39 | 100 | ..... | ..... | ..... | 1,219 | 268 | 1,487 | 169 | 36 | 205 | 637 | 66 | 703 | 2,086 | 409 | 2,495 | 684 | 1,406 |
| Dover Street..... | 1 | ..... | 1 | 2 | ..... | 2 | 474 | 5 | 479 | 29 | ..... | 29 | 381 | 1 | 382 | 887 | 6 | 893 | 200 | 454 |
| L Street *..... | 4 | 1 | 5 | 3 | 3 | 6 | 711 | 761 | 1,472 | 496 | 324 | 820 | 1,625 | 1,524 | 3,149 | 2,839 | 2,613 | 5,452 | 1,207 | 4,658 |
| Malden..... | 36 | 3 | 39 | ..... | ..... | ..... | 721 | 251 | 972 | 341 | 187 | 528 | 511 | 201 | 712 | 1,609 | 642 | 2,251 | 412 | 1,397 |
| Meridian Street..... | 663 | 162 | 825 | ..... | ..... | ..... | 5,633 | 1,392 | 7,025 | 2,903 | 1,341 | 4,244 | 2,440 | 497 | 2,937 | 11,639 | 3,392 | 15,031 | 2,542 | 8,642 |
| Northern Avenue..... | 57 | 44 | 101 | 2 | 2 | 4 | 2,384 | 431 | 2,815 | 362 | 61 | 423 | 1,328 | 134 | 1,462 | 4,133 | 672 | 4,805 | 811 | 2,323 |
| Summer Street..... | 47 | 43 | 90 | ..... | ..... | ..... | 1,046 | 303 | 1,349 | 182 | 45 | 227 | 702 | 82 | 784 | 1,977 | 473 | 2,450 | 442 | 1,251 |
| Warren..... | 49 | 44 | 93 | 124 | 79 | 203 | 772 | 360 | 1,132 | 572 | 478 | 1,050 | 1,366 | 748 | 2,114 | 2,883 | 1,709 | 4,592 | 763 | 2,665 |
| Totals..... | 3,100 | 884 | 3,984 | 230 | 130 | 360 | 25,480 | 5,898 | 31,378 | 7,413 | 3,564 | 10,977 | 10,111 | 3,401 | 13,512 | 46,334 | 13,877 | 60,211 | 10,570 | 32,660 |

* Now Summer Street, over Reserved Channel.

FERRY SERVICE.

FINANCIAL STATEMENT FOR THE YEAR ENDING
DECEMBER 31, 1947.*Toll Receipts.*

| | |
|--|-------------|
| Total cash receipts during the year | \$12,921 75 |
| Cash in hands of tollmen at beginning of year, | \$60 00 |
| Cash paid over to City Collector | \$12,921 75 |
| Cash in hands of tollmen, December 31, 1947, | \$60 00 |

Breakdown of Toll Receipts for 1947.

| | |
|--------------------------------|------------|
| From foot passengers | \$3,442 55 |
| From vehicles | \$9,479 20 |

| | From Foot Passengers. | From Vehicles. | Totals. |
|----------------------------|--------------------------|-------------------|-------------|
| Boston side | \$1,725 16 | \$4,635 85 | \$6,361 01 |
| East Boston side | 1,717 39 | 4,843 35 | 6,560 74 |
| Totals | \$3,442 55 | \$9,479 20 | \$12,921 75 |

TRAVEL ON THE SOUTH FERRY FROM JANUARY 1, 1947,
TO DECEMBER 31, 1947, INCLUSIVE.

Foot passengers at 1 cent 344,255

| | | |
|---|---------|---------|
| Handcart, or wheelbarrow and man | 5 cents | } 9,916 |
| Horse and rider | 5 cents | |
| Horse and cattle, each with attendant | 5 cents | |
| One- or two-horse vehicle with driver | 5 cents | |
| Motoreycle with driver | 5 cents | |

| | | |
|---|----------|----------|
| Trailer | 10 cents | } 67,903 |
| Three- or four-horse vehicle with driver | 10 cents | |
| Passenger automobile with driver and one passenger, | 10 cents | |

| | | |
|--|----------|----------|
| Passenger automobile with driver and more than one passenger | 15 cents | } 12,446 |
| Motor truck, six tons or less, with driver | 15 cents | |

| | | |
|--|----------|---------|
| Motor truck over six tons, with driver | 20 cents | } 1,631 |
| Auto bus with driver | 20 cents | |

| | | |
|---|----------|---|
| Auto bus with driver and passengers | 30 cents | — |
|---|----------|---|

| | | |
|-------------------------|--|-----|
| Free vehicles | | 146 |
|-------------------------|--|-----|

SUMNER TRAFFIC TUNNEL.
ANNUAL TRAFFIC BY CLASSIFICATION FOR THE YEAR 1947.

| TOLL. CLASSIFICATION. | 20 Cents. | 20 Cents. | 20 Cents. | 25 Cents. | 20 Cents. | 35 Cents. | 20 Cents. | 1 Dollar. | 35 Cents. | * City- Owned. | Total Traffic. |
|--------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|-------------------|
| | No. 1. | No. 2. | No. 3. | No. 4. | No. 5. | No. 6. | No. 7. | No. 8. | No. 9. | | |
| January..... | 24,752 | 504,263 | 17 | 2,141 | 608 | 640 | 17 | 19 | 0 | 35,066 | 567,523 |
| February..... | 24,513 | 487,803 | 14 | 1,894 | 736 | 933 | 29 | 13 | 62 | 27,060 | 543,117 |
| March..... | 28,397 | 603,425 | 72 | 1,840 | 847 | 779 | 58 | 16 | 4 | 30,164 | 665,602 |
| April..... | 30,870 | 663,325 | 225 | 2,694 | 1,143 | 705 | 144 | 58 | 6 | 26,121 | 725,291 |
| May..... | 34,421 | 738,644 | 293 | 2,648 | 1,229 | 905 | 98 | 49 | 11 | 31,770 | 810,068 |
| June..... | 33,586 | 735,907 | 326 | 2,512 | 1,338 | 860 | 80 | 44 | 8 | 36,529 | 811,190 |
| July..... | 37,094 | 822,583 | 405 | 2,246 | 1,508 | 662 | 85 | 16 | 3 | 38,668 | 903,270 |
| August..... | 33,698 | 801,484 | 468 | 2,083 | 1,506 | 719 | 95 | 19 | 8 | 37,958 | 878,038 |
| September..... | 36,603 | 701,910 | 363 | 2,070 | 1,568 | 732 | 72 | 18 | 6 | 33,671 | 777,013 |
| October..... | 33,313 | 672,410 | 384 | 2,289 | 1,464 | 729 | 56 | 17 | 6 | 36,004 | 746,672 |
| November..... | 32,385 | 625,897 | 316 | 2,254 | 1,157 | 674 | 41 | 27 | 4 | 31,895 | 694,650 |
| December..... | 34,420 | 563,912 | 49 | 2,748 | 935 | 956 | 46 | 24 | 7 | 22,631 | 625,728 |
| Totals..... | 384,052 | 7,921,623 | 2,932 | 27,419 | 14,039 | 9,294 | 821 | 320 | 125 | † 337,537 | 8,748,162 |

* Boston Elevated Railway and Eastern Massachusetts Railway buses are included in this classification.
† 23,570 Boston Elevated Railway buses at 35 cents, and 216,834 Eastern Massachusetts Railway buses at 35 cents are included in this total.

SUMNER TRAFFIC TUNNEL.

Toll Classifications.

| | | |
|----------|--------|--|
| Class 1. | \$0.20 | Truck not in excess of 2 tons capacity. Tractor without trailer. |
| Class 2. | 0.20 | Passenger car. |
| Class 3. | 0.20 | Motoreycle. |
| Class 4. | 0.25 | Truck over 2 tons and up to 5 tons capacity. Tractor with trailer over 2 tons and up to 5 tons capacity. |
| Class 5. | 0.20 | Passenger car with trailer. |
| Class 6. | 0.35 | Truck over 5 tons and up to 10 tons capacity. Tractor with trailer over 5 tons and up to 10 tons capacity. |
| Class 7. | 0.20 | Tractor with trailer not in excess of 2 tons capacity. |
| Class 8. | 1.00 | Truck over 10 tons capacity. Tractor with trailer over 10 tons capacity. |
| Class 9. | 0.35 | Bus with or without passengers. |

SUMNER TRAFFIC TUNNEL.

Comparison of Receipts, Expenditures, Interest and Sinking Fund Requirements, 1943 to 1947, Inclusive.

| | 1943. | 1944. | 1945. | 1946. | 1947. |
|--------------------------------|----------------|----------------|----------------------------|----------------|----------------|
| Expenditures..... | \$243,257 21 | \$260,220 64 | \$288,390 83 * 6,293 00 | \$342,309 05 | \$395,060 35 |
| Interest Requirements..... | 825,995 00 | 836,411 25 | 831,540 00 | 831,207 50 | 875,673 75 |
| Sinking Fund Requirements..... | 272,549 00 | 273,024 00 | 265,107 00 | § | § \|\| 2 80 |
| Total Expenditures..... | \$1,341,801 21 | \$1,369,655 89 | \$1,391,330 83 | \$1,173,516 55 | \$1,270,736 90 |
| Receipts..... | 1,026,227 33 | 1,288,104 38 | 1,455,246 18 | 1,709,491 00 | 1,758,149 30 |
| | † \$315,573 88 | † \$81,551 51 | ‡ \$63,915 35 | ‡ \$535,974 45 | ‡ \$487,412 40 |

* Carried forward to cover contract.

† Deficit.

‡ Excess.

§ None required.

|| Refunded totals.

SUMNER TRAFFIC TUNNEL.

Comparative Traffic Count.

| | 1943. | 1944. | 1945. | 1946. | 1947. |
|----------------|-----------|-----------|-----------|-----------|-----------|
| January..... | 354,106 | 440,178 | 441,270 | 556,052 | 567,523 |
| February..... | 357,103 | 423,318 | 387,436 | 502,398 | 543,117 |
| March..... | 465,245 | 455,999 | 537,348 | 650,249 | 665,602 |
| April..... | 444,604 | 471,847 | 549,639 | 673,398 | 725,291 |
| May..... | 498,689 | 590,106 | 604,066 | 751,619 | 810,068 |
| June..... | 487,746 | 650,255 | 684,783 | 817,452 | 811,190 |
| July..... | 557,116 | 680,787 | 799,390 | 834,804 | 903,270 |
| August..... | 568,911 | 631,264 | 761,057 | 821,427 | 878,038 |
| September..... | 542,060 | 572,112 | 638,409 | 748,045 | 777,013 |
| October..... | 502,399 | 519,426 | 652,256 | 774,939 | 746,672 |
| November..... | 470,066 | 502,798 | 611,139 | 668,782 | 694,650 |
| December..... | 467,954 | 511,844 | 557,772 | 633,556 | 625,728 |
| Totals..... | 5,715,999 | 6,449,934 | 7,224,565 | 8,432,721 | 8,748,162 |

APPENDIX B.

REPORT OF THE DIVISION ENGINEER
OF THE HIGHWAY DIVISION.

BOSTON, January 2, 1948.

To the Commissioner of Public Works.

DEAR SIR:

I submit the following report of the operations and expenditures of the Highway Division for the year ending December 31, 1947:

Maintenance.

| | |
|----------------------------------|--------------------|
| Appropriation for 1947 | \$1,211,687 81 |
| Expenditures | 1,188,631 87 |
| Balance unexpended | <u>\$23,055 94</u> |

Reconstruction of Streets.

| | |
|----------------------------------|-------------------|
| Appropriation for 1947 | \$212,434 27 |
| Expenditures | 203,242 81 |
| Balance unexpended | <u>\$9,191 46</u> |

Public Ways, Construction of (Revenue).

| | |
|----------------------------------|--------------------|
| Appropriation for 1947 | \$158,319 86 |
| Expenditures | 131,395 39 |
| Balance unexpended | <u>\$26,924 47</u> |

Public Ways, Construction of (Non-Revenue).

| | |
|----------------------------------|-----------------------|
| Appropriation for 1947 | \$2,563,262 95 |
| Expenditures | 1,299,520 38 |
| Balance unexpended | <u>\$1,263,742 57</u> |

Sidewalks, Construction and Reconstruction of.

| | |
|----------------------------------|---------------|
| Appropriation for 1947 | \$56,925 39 |
| Expenditures | 56,924 84 |
| Balance unexpended | <u>\$0 55</u> |

The amount of money taken in through the Permit Office was \$40,295.28. Of this amount \$36,937.03 was deposited with the City Collector and \$3,358.25 was billed to the public service corporations. There are now on file 2,339 bonds for the use of streets and sidewalks covering the City of Boston against claims for damages, etc., through the use of permits.

The regular forces of the Paving Service were employed as usual in the maintenance of all public streets, resurfacing and patching macadam pavements, patching permanent pavements such as asphalt, granite block, and maintaining gravel, brick and artificial stone sidewalks.

Contracts were awarded for the construction and reconstruction of 91 streets during the year and 58 were completed. Work was also completed on 7 streets that were unfinished from 1946.

Some of the more important thoroughfares reconstructed during the year were:

Columbus avenue, from Centre street to Washington street.

Gallivan Boulevard, from Neponset avenue to Granite avenue.

Beacon street, from Cleveland Circle to the Newton line.

Federal street, from High street to Purchase street.

High street, from Summer street to Congress street.

Summer street, from South street to Dewey square, and from Atlantic avenue to bridge over Fort Point Channel.

Independence Drive, from Veterans of Foreign Wars Parkway to Brookline line.

Pond street, from the Arborway to Brookline line.

LIGHTING SERVICE.

The following is a summary of the budget appropriation for the Lighting Service for 1947:

| | | | | | | | |
|------------------------|---|---|---|---|---|---|----------------|
| Appropriation for 1947 | . | . | . | . | . | . | \$1,002,453 72 |
| Expenditures | . | . | . | . | . | . | 1,002,453 72 |

| | | | | | | | |
|--------------------|---|---|---|---|---|---|-------|
| Balance unexpended | . | . | . | . | . | . | None. |
|--------------------|---|---|---|---|---|---|-------|

The following is a statement of the work done during 1947:

Electric lamps of 1,000 c.p. were installed as follows: Congress Street Bridge (7), Friend street (1), Newbury street (3), Van Ness street (1), City Proper; Beacon street (34), Cambridge street (1), Chestnut Hill avenue (2), Market street (1), Brighton; Chelsea street (2), Charlestown; Boston street (1), Columbia road (6), Dorchester avenue (1), Gallivan Boulevard (1), Massachusetts avenue (1), Old Colony avenue (2), Savin Hill avenue (1), Dorchester; Hyde Park avenue (1), Hyde Park; Columbus avenue (30), Dudley street (1), Laurel street (1), Seaver street (1), Warren street (2), Roxbury; East Broadway (1), East Fourth street (1), Gardner Way (10), Southampton street (1), South Boston; Centre street (2), Hyde Park avenue (1), Independence Drive (5), Morton street (1), West Roxbury.

Electric lamps of 600 c.p. were installed as follows: Blagden street (3), Charles street (1), Melrose street (1), Minot street (1), Summer street (3), City Proper; Roland street (4), Charlestown; Gallivan Boulevard (36), Dorchester; Columbus avenue (20), Elm Hill avenue (1), Roxbury; Robert street (1), West Roxbury.

Electric lamps of 400 c.p. were installed as follows: Water street (1), City Proper; Brooks street (1), Wallingford road (1), Brighton; Cushing avenue (3), Jerome street (1), Stanton street (1), Dorchester; George street (1), Roxbury; Columbia Road sea wall (15), South Boston; Vermont street (1), Walworth street (3), West Roxbury.

Electric lamps of 250 c.p. were installed as follows: Academy Hill road (1), Quint avenue (2), Brighton; Tower street (1), East Boston; Weld street (1), West Roxbury.

Electric lamps of 100 c.p. were installed as follows: Haverhill street (1), Sever street (1), Wall street (1), Charlestown.

Electric lamps of 80 c.p. were installed as follows: Emery road (2), Kenrick street (15), Brighton; Butler street (1), Favre street (1), Gibson street (2), Harvard street (1), Houghton street (1), Normandy street (1), Ocean street (8), Valley road (2), Dorchester; Lillian street (1), Tower street (1), East Boston; Blake street (1), Cottage place (1), Franklin street (1), George street (1), Hillside street (1), Rosewood street (1), Hyde Park; Elmwood place (1), Stanmore place (1),

Valentine street (4), Roxbury; Alarie terrace (1), Aldwin road (1), Allandale street (5), Alward road (2), Bradeen street (5), Buchanan road (1), Dent street (1), DeStefano road (1), Franklin place (1), Furbush road (1), Glenham street (1), Hackensack Circle (2), Hackensack road (1), Graham terrace (1), Keystone street (1), Ledgeale road (2), Pond street (16), Roslindale avenue (1), Rumford road (1), Truman road (2), West Roxbury.

Electric fire-alarm lamps were installed as follows: Columbus avenue (1), Roxbury; Lasell street (1), Oakview terrace (1), West Roxbury.

Respectfully yours,

R. C. DWYER,
Division Engineer.

TABLE SHOWING LENGTH AND AREA OF PAVING ON ACCEPTED STREETS, CORRECTED TO JANUARY 1, 1948.

| | LENGTH IN MILES. | | | | | | | | | | | AREA IN SQUARE YARDS. | | | | | | | | | | |
|----------------------|------------------|-------------------|----------------|-------------|-------------------|--------|-----------|----------|---------|-------------|---------|-----------------------|-------------------|----------------|-------------|-------------------|--------|-----------|------------|---------|-------------|------------|
| | Sheet Asphalt. | Asphalt Concrete. | Granite Block. | Wood Block. | Plank on Bridges. | Brick. | Concrete. | Macadam. | Gravel. | Not Graded. | Totals. | Sheet Asphalt. | Asphalt Concrete. | Granite Block. | Wood Block. | Plank on Bridges. | Brick. | Concrete. | Macadam. | Gravel. | Not Graded. | Totals. |
| ear 1946 Report..... | *162.9 | †234.35 | ‡68.01 | 0.63 | 0.58 | 0.97 | \$26.96 | ‡205.59 | 11.95 | 0.97 | 712.10 | *3,229,334 | †4,397,022 | ‡1,812,932 | 12,974 | 13,065 | 21,188 | \$543,270 | ‡3,340,983 | 191,390 | 36,600 | 13,598,758 |
| er Cent..... | 22.76 | 32.91 | 9.55 | 0.09 | 0.08 | 0.14 | 3.78 | 28.87 | 1.68 | 0.14 | 100.00 | 23.75 | 32.33 | 13.33 | 0.09 | 0.10 | 0.16 | 3.99 | 24.57 | 1.41 | 0.27 | 100.00 |
| JANUARY 1, 1948. | | | | | | | | | | | | | | | | | | | | | | |
| ity Proper..... | 38.13 | 27.88 | 22.34 | 0.28 | 0.09 | 0.40 | 3.21 | 3.83 | 0.26 | ..... | 96.42 | 798,773 | 623,149 | 501,426 | 4,254 | 2,689 | 6,568 | 111,959 | 61,724 | 1,794 | ..... | 2,112,336 |
| harlestown..... | 3.18 | 4.47 | 8.68 | 0.08 | 0.07 | ..... | 0.34 | 5.89 | ..... | 0.05 | 22.76 | 66,717 | 69,693 | 212,758 | 2,011 | 1,999 | ..... | 4,911 | 81,668 | ..... | 326 | 440,083 |
| ast Boston..... | 4.85 | 11.37 | 5.06 | 0.01 | 0.05 | 0.04 | 0.44 | 13.77 | 0.73 | ..... | 36.32 | 114,417 | 230,753 | 119,138 | 325 | 777 | 771 | 25,280 | 296,252 | 14,809 | ..... | 802,522 |
| outh Boston..... | 9.98 | 11.91 | 9.39 | 0.04 | 0.10 | 0.02 | 0.50 | 11.43 | 0.10 | 0.50 | 43.97 | 197,439 | 232,109 | 269,201 | 1,167 | 2,707 | 1,400 | 16,411 | 197,086 | 1,212 | 15,754 | 934,486 |
| oxbury..... | 28.75 | 26.00 | 10.59 | 0.10 | ..... | 0.14 | 6.94 | 21.15 | 0.36 | 0.00 | 94.03 | 550,883 | 469,394 | 259,950 | 2,689 | ..... | 5,438 | 117,180 | 313,620 | 5,410 | 61 | 1,724,634 |
| West Roxbury..... | 31.13 | 50.47 | 3.14 | 0.01 | 0.07 | ..... | 5.32 | 52.09 | 2.25 | 0.00 | 144.48 | 584,309 | 905,801 | 143,472 | 210 | 1,363 | ..... | 75,953 | 816,606 | 37,085 | 53,90 | 2,570,139 |
| orchester..... | 41.02 | 60.92 | 6.70 | 0.06 | 0.05 | 0.27 | 6.70 | 51.77 | 2.07 | 0.02 | 169.58 | 170,400 | 1,071,391 | 192,509 | 1,669 | 795 | 5,425 | 119,305 | 805,066 | 31,119 | 668 | 2,998,347 |
| righton..... | 14.09 | 32.39 | 0.58 | ..... | 0.08 | ..... | 1.23 | 14.96 | 0.54 | ..... | 63.87 | 325,519 | 596,503 | 68,214 | 40 | 1,231 | ..... | 33,496 | 244,973 | 7,763 | 1,491 | 1,279,230 |
| lyde Park..... | 2.40 | 9.92 | 0.05 | 0.07 | 0.05 | ..... | 0.65 | 22.92 | 6.37 | 0.24 | 42.67 | 50,007 | 215,691 | 8,232 | 1,022 | 702 | ..... | 10,317 | 385,786 | 99,594 | 7,255 | 778,606 |
| Totals..... | 173.53 | 235.33 | 66.53 | 0.65 | 0.56 | 0.87 | 25.33 | 197.81 | 12.68 | 0.81 | 714.10 | 3,458,464 | 4,414,484 | 1,774,909 | 13,387 | 12,263 | 19,602 | 514,812 | 3,202,781 | 198,736 | 30,945 | 13,640,383 |
| Per Cent..... | 24.30 | 32.95 | 9.32 | 0.09 | 0.08 | 0.12 | 3.55 | 27.71 | 1.77 | 0.11 | 100.00 | 25.36 | 32.36 | 13.01 | 0.10 | 0.09 | 0.14 | 3.77 | 23.48 | 1.46 | 0.23 | 100.00 |

TOTAL PUBLIC STREETS 714.10 MILES.

NOTE.— In the above table the city is subdivided substantially on the boundary lines between the districts as they existed when annexed to Boston. Territory annexed from Brookline included in City Proper.

* Of this amount 0.10 mile or 834 square yards is Biturock; and 0.00 mile or 310 square yards is Unionite.

† Of this amount 0.02 mile or 185 square yards is cobble; and 43.76 miles or 1,352,759 square yards is granite block paving on concrete base.

‡ Of this amount 0.06 mile or 924 square yards is Blome granitoid concrete block.

§ Of this amount 163.95 miles or 2,680,303 square yards is bituminous macadam.

6.67 miles or 35,456 square yards public alleys included in this table; 7.57 miles or 335,828 square yards public streets in charge of Park Department included in this table; 7.06 miles or 237,812 square yards public streets in charge of Commonwealth of Massachusetts included in this table. In addition to this table there are 2.15 miles or 10,591 square yards of accepted footways.

† Of this amount 129.02 miles or 2,265,818 square yards is asphalt concrete; and 98.02 miles or 1,992,043 square yards is Bitulithic; and 0.02 mile or 4,973 square yards is Colprovia; and 0.06 mile or 942 square yards is Filbertine; and 4,000 square yards is Hepburnite; and 3,903 square yards is Laykold; and 4,167 square yards is Macasphalt; and 0.21 mile or 5,200 square yards is Simasco; and 7.65 miles or 122,842 square yards is Topeka; and 4,153 square yards is Warcolite; and 0.18 mile or 3,474 square yards is Carey Elastite asphalt plank; and 0.07 mile or 1,735 square yards is Flutkote asphalt plank; and 0.10 mile or 1,234 square yards is Johns-Manville asphalt plank.

HIGHWAY DIVISION — PAVING SERVICE.

Street Work Done in 1947 by Contract.

SUMMARY.

| | |
|---|-----------------------|
| Earth excavation | 115,364 cubic yards. |
| Rock and wall excavation | 4,695 cubic yards. |
| Bank gravel | 69,283 tons. |
| Crushed stone | 2,918 tons. |
| Existing concrete base removed | 11,362 square yards. |
| Existing pavement removed | 11,086 square yards. |
| Straight edgestone furnished | 13,538 linear feet. |
| Circular edgestone furnished | 3,423 linear feet. |
| Edgestone reset | 53,585 linear feet. |
| Concrete, Class B base | 3,015 cubic yards. |
| Concrete, Class B base | 108,862 square yards. |
| Extra concrete | 782 cubic yards. |
| Bituminous macadam base | 37,609 square yards. |
| Granite block hip gutters | 2,879 square yards. |
| Three-inch sheet asphalt pavement | 146,841 square yards. |
| One and a half-inch sheet asphalt pavement | 60,196 square yards. |
| Sheet asphalt binder | 10,036 tons. |
| Two and a quarter-inch bituminous concrete pavement | 7,609 square yards. |
| Bituminous concrete binder | |
| Cement concrete (air-entrained) pavement | 4,977 square yards. |
| Artificial stone sidewalks | 417,128 square feet. |
| Bituminous concrete sidewalks | 15,030 square yards. |
| Brick sidewalks relaid | 24,958 square yards. |
| Loam spaces | 1,132 square yards. |
| Bradley heads reset | 36 each. |
| Covers reset | 1,391 each. |
| Brick courses | 2,684 |
| Artificial stone sidewalk foundation | 7,114 cubic yards. |
| Flagstone walks | 13,080 square feet. |
| Chain link fence | 800 linear feet. |
| Precast straight edgestone furnished | 5,075 linear feet. |
| Precast circular edgestone furnished | 190 linear feet. |

YEARLY REPORT OF WORK DONE BY DEPARTMENT FORCES FOR 1947.

| | |
|---|-----------------------|
| Brick sidewalks, laid and relaid | 10,650 square yards. |
| Gravel sidewalks, relaid | 7,466 square yards. |
| Granolithic sidewalks, relaid (old) | 150,237 square feet. |
| Granolithic sidewalks, laid (new) | 9,073 square feet. |
| Tar sidewalks | 53,727 square yards. |
| Block gutters, laid | 1,638 square yards. |
| Granite block roadway, laid | 478 square yards. |
| Edgestone set (new) | 412 linear feet. |
| Edgestone reset (old) | 5,008 linear feet. |
| Macadam roadway, patched | 106,904 square yards. |
| Macadam roadway, resurfaced | 8,574 square feet. |
| Street cleaning | 10,773 cubic yards. |
| Snow removal | 55,819 cubic yards. |

Objects of Expenditures from Maintenance Appropriation, Classified by Districts, from January 1, 1947,
to December 31, 1947.

| DISTRICTS. | Macadam Repairs. | Granolithic Sidewalk Repairs. | Removal of Snow. | Street Cleaning. | Edgestone, Sidewalk and Gutter Repairs. | Bituminous Sidewalk Repairs. | Miscellaneous. | Total. |
|--|------------------|-------------------------------|------------------|------------------|---|------------------------------|----------------|----------------|
| South Boston and Dorchester North..... | \$10,474 95 | \$14,313 46 | \$5,011 79 | \$3,099 83 | \$6,798 27 | \$2,569 97 | ..... | \$42,268 27 |
| East Boston..... | 14,080 70 | 1,609 44 | 2,794 54 | 3,357 54 | 3,479 85 | 4,071 79 | ..... | 29,393 86 |
| Charlestown..... | 7,116 37 | 4,439 84 | 4,358 25 | 3,147 64 | 1,423 32 | 1,341 49 | ..... | 21,826 91 |
| Brighton..... | 10,210 00 | 8,524 67 | 6,420 23 | 12,826 53 | 481 50 | 2,256 01 | ..... | 40,718 94 |
| West Roxbury..... | 48,239 15 | 16,653 47 | 10,847 79 | 6,682 09 | 3,700 80 | 6,461 35 | ..... | 92,584 65 |
| Dorchester..... | 15,331 38 | 10,701 26 | 5,753 97 | 2,646 05 | 835 56 | 6,627 89 | ..... | 41,896 11 |
| Roxbury South and Jamaica Plain..... | 26,860 14 | 12,707 44 | 6,038 20 | 5,397 78 | 1,388 21 | 3,255 90 | ..... | 55,647 67 |
| City Proper..... | 28,082 53 | 12,462 28 | 4,594 25 | 285 00 | 11,657 26 | 1,355 00 | ..... | 58,436 32 |
| Ashmont..... | 13,179 01 | 10,465 02 | 8,634 06 | 9,472 15 | 8,129 06 | 390 00 | ..... | 50,269 30 |
| Hyde Park..... | 7,159 34 | 4,376 95 | 1,882 70 | 6,080 20 | 1,767 93 | 2,163 01 | ..... | 23,430 13 |
| Totals..... | \$180,733 57 | \$96,253 83 | \$56,335 78 | \$52,994 81 | \$39,661 76 | \$30,492 41 | \$732,159 71 | \$1,188,631 87 |

Miscellaneous includes: Street signs, \$20,317.93; sanding streets, \$7,629.58; fence repairs, \$3,618.01; granite block roadway repairs, \$2,342.24; F-7, \$24,351.89; F-11, \$2,906.21; miscellaneous, \$670,993.85.

Special Appropriations: Reconstruction of Streets (revenue), \$203,242.81; Public Ways, Construction of (revenue), \$131,995.39; Public Ways, Construction of (non-revenue), \$1,299,520.38; Sidewalks, Construction and Reconstruction of (revenue), \$56,924.84; Snow Removal (revenue), \$650,443.01; Totals, Specials, \$2,341,526.43.

Totals, Maintenance and Specials, \$3,530,158.30.

PERMIT OFFICE ACTIVITIES, 1947.

Under Classes 1 and 2 of the schedule of permit fees, permits were issued for openings in public ways as follows:

| | |
|---|--------------------|
| City departments | 2,321 |
| Public service corporations (Class 1) | 2,221 |
| Public service corporations (Class 2) | 1,646 |
| | <hr/> |
| Total | 6,188 |
| Class 1. Permits for street openings | 889 |
| Class 3. Occupation permits for painting, repairs to buildings | 3,514 |
| Class 4. Cleaning snow from roofs | 1 |
| Class 5. Erecting and repairing awnings | 62 |
| Class 6. Moving buildings | 2 |
| Class 7. Erecting and repairing signs | 249 |
| Class 8. Raising and lowering machinery | 64 |
| Class 9. Special permits | 335 |
| | <hr/> |
| | 5,116 |
| Total of all permits | <u>11,304</u> |
| Fees received | \$40,295 28 |
| Deposited with City Collector | 36,937 03 |
| Billed to public service corporations | 3,358 25 |
| | <hr/> |
| | <u>\$40,295 28</u> |

BONDS.

There are now on file 2,339 bonds protecting the City of Boston against claims that may be made on account of permits issued.

APPENDIX C.

REPORT OF THE DIVISION ENGINEER
OF THE SANITARY DIVISION.

BOSTON, January 2, 1948.

MR. ROBERT P. CURLEY,
Commissioner of Public Works.

DEAR SIR:

Herewith, I submit a statement of the activities and expenditures of the Sanitary Division of the Public Works Department for the year ending December 31, 1947:

| | |
|--|----------------|
| Maintenance expenditures | \$4,364,740 89 |
| I. Waste collection and disposal (Table I) | \$2,973,494 97 |
| (a) By contract (Table II) | \$2,193,267 62 |
| (b) By day labor (Table III) | 780,227 35 |
| II. Street cleaning (Table IV) | \$1,272,968 70 |
| III. Not directly chargeable to 1947 operation | \$118,277 22 |
| (a) Pensions | \$37,617 24 |
| (b) Injured roll | 4,410 67 |
| (c) Preventive street cleaning | 55,967 58 |
| (d) Columbus avenue | 19,400 00 |
| (e) Leverett street | 881 73 |
| Personnel changes in permanent force: | |
| Total personnel January 1, 1947 | 935* |
| Transfers from other departments and divisions | 12 |
| New appointments | 54 |
| Reinstatements | 3 |
| | — 69 |
| | 1,004 |
| Deaths | 18 |
| Resignations | 16 |
| Retirements | 21 |
| Transfers out | 16 |
| Discharged or terminated | 12 |
| | — 83 |
| Personnel total January 1, 1948 | * 921 |

* Including two military leaves of absence. Net loss of fourteen employees.

Increases and Decreases.—The increase in the 1947 expenditures over those of the year 1946 amounted to \$696,221.70, and in the main may be accounted for as follows:

The salaries and wages of employees were increased, in most cases, by \$200 per year, and Emergency Compensation Allotments were made permanent, \$358,118.

An 18 per cent increase in the waste collection contract prices, \$255,838. In the case of the disposal contract, besides this 18 per cent increase, it was necessary to provide, in 1947, for the reception of material for disposal from the Brighton district for the whole year, \$98,520. This was done for only four months in 1946.

It is interesting to note that there were decreases in the following items: hire, labor, and purchase of motor vehicles; there was no temporary labor employed during the year 1947, as there had been in 1946. The total decreases in these items amount to \$56,680.

Incinerator.—Plans were drawn and an appropriation was made for a 120-ton incinerator on land belonging to the City of Boston at Soldiers Field road and Everett street in the Brighton district. However, it was necessary to have the zoning regulations changed in order to permit this construction. Accordingly, hearings were held before the Board of Appeal. The City's petition was opposed by various commercial interests as well as certain private residents, and on August 27 the Board of Appeal dismissed the petition and refused to make the necessary change in the zoning regulations. Therefore, the incinerator project was abandoned.

On January 1, 1947, the new price of 20 cents each for commercial waste tickets was put into effect, as provided by city ordinance.

On March 26, 1947, two new street-cleaning districts were created in the Brighton and Hyde Park areas, which were formerly taken care of by the Paving Service of the Highway Division.

On September 1, 1947, the headquarters of the South Boston Sanitary and Street-Cleaning districts were transferred from South Boston to the Albany Street Yard.

It seems fitting to mention here the retirement on July 31, 1947, of Peter F. Gerrity, supervisor of the Sanitary Division for seventeen years, and an employee of the City for forty-five years. At his retirement, the City lost a faithful servant.

Respectfully submitted,

ADOLPH J. POST,
Division Engineer.

TABLE I.
Amount Expended for the Collection and Disposal of Ashes and Garbage by Districts, 1947.

| Number. | District. | Population. | MIXED REFUSE. | | GARBAGE. | | Total Cost. | Total Cost Per Capita. |
|-----------|------------------------------|-------------|----------------|-------------|--------------|-------------|----------------|------------------------|
| | | | Cost. | Per Capita. | Cost. | Per Capita. | | |
| 1. | South Boston..... | 56,247 | \$191,001 70 | \$3 40 | \$10,025 19 | \$0 17 | \$201,026 89 | \$3 57 |
| 2. | East Boston..... | 55,112 | 118,049 63 | 2 14 | 3,969 62 | 0 07 | 122,019 25 | 2 21 |
| 3. | Charlestown..... | 25,655 | 98,337 36 | 3 83 | — | — | 98,337 36 | 3 83 |
| 4. | Brighton..... | 66,808 | 280,162 88 | 4 19 | 11,490 09 | 0 17 | 291,652 97 | 4 36 |
| 5a. | West Roxbury..... | 46,237 | 104,672 36 | 2 26 | 15,892 53 | 0 35 | 120,564 89 | 2 61 |
| 5b. | Jamaica Plain..... | 43,384 | 100,861 33 | 2 33 | 11,785 28 | 0 27 | 112,646 61 | 2 60 |
| 6 and 7a. | Dorchester and Elm Hill..... | 217,047 | 574,110 27 | 2 65 | 75,347 92 | 0 34 | 649,458 19 | 2 99 |
| 7. | Roxbury..... | 34,489 | 221,029 44 | 6 41 | — | — | 221,029 44 | 6 41 |
| 7b. | Dudley..... | 36,833 | 127,881 33 | 3 47 | 12,456 08 | 0 34 | 140,337 41 | 3 81 |
| 7c. | Mission Hill..... | 31,992 | 117,738 04 | 3 68 | 11,584 36 | 0 36 | 129,322 40 | 4 04 |
| 9. | South End..... | 42,495 | 255,876 67 | 6 02 | — | — | 255,876 67 | 6 02 |
| 9a. | Back Bay..... | 22,042 | 112,353 46 | 5 09 | — | — | 112,353 46 | 5 09 |
| 9b. | Stuart..... | 20,144 | 156,923 09 | 7 79 | — | — | 156,923 09 | 7 79 |
| 10. | North and West Ends..... | 42,232 | 303,321 24 | 7 18 | — | — | 303,321 24 | 7 18 |
| 11. | Hyde Park..... | 25,669 | 52,935 79 | 2 06 | 5,689 31 | 0 22 | 58,625 10 | 2 28 |
| | Totals..... | 766,386 | \$2,794,493 49 | \$3 65 | \$179,001 48 | \$0 23 | \$2,973,494 97 | \$3 88 |

TABLE II.
Cost of Collection and Disposal of Refuse by Contract in City of Boston, 1947.

| CONTRACT DISTRICT. | CONTRACTOR. | CHARACTER OF REFUSE. | Cubic Yards. | Cost Per District. | Cost Per Cubic Yard. | Population. | Total Cost Per Capita. |
|--------------------|------------------------------------|----------------------|--------------|--------------------|----------------------|-------------|------------------------|
| South Boston..... | Ward General Contracting Company.. | Mixed refuse..... | 80,705 | | | | |
| | | Garbage..... | 4,236 | | | | |
| | | Totals..... | 84,941 | \$201,026 89 | \$2 36 | 56,247 | \$3 57 |
| East Boston..... | Edward J. McHugh & Son..... | Mixed refuse..... | 83,624 | | | | |
| | | Garbage..... | 2,812 | | | | |
| | | Totals..... | 86,436 | \$122,019 25 | \$1 41 | 55,112 | \$2 21 |
| *Charlestown..... | Edward J. McHugh & Son..... | Mixed refuse..... | 49,938 | | | | |
| | | Garbage..... | — | | | | |
| | | Totals..... | 49,938 | \$98,337 36 | \$1 97 | 25,655 | \$3 83 |
| Brighton..... | Anthony J. Ryan, Inc..... | Mixed refuse..... | 136,496 | | | | |
| | | Garbage..... | 5,598 | | | | |
| | | Totals..... | 142,094 | \$291,652 97 | \$2 05 | 66,808 | \$4 36 |
| West Roxbury..... | John J. Moore Company..... | Mixed refuse..... | 65,889 | | | | |
| | | Garbage..... | 10,004 | | | | |
| | | Totals..... | 75,893 | \$120,564 89 | \$1 59 | 46,237 | \$2 61 |

* Disposal of garbage and refuse to Coleman Disposal Company.

TABLE II.—Concluded.
Cost of Collection and Disposal of Refuse by Contract in City of Boston, 1947.—Concluded.

| CONTRACT DISTRICT. | CONTRACTOR. | CHARACTER OF REFUSE. | Cubic Yards. | Cost Per District. | Cost Per Cubic Yard. | Population. | Total Cost Per Capita. |
|-------------------------------|-----------------------------------|----------------------|--------------|--------------------|----------------------|-------------|------------------------|
| Jamaica Plain..... | John J. Moore Company..... | Mixed refuse..... | 65,462 | | | | |
| | | Garbage..... | 7,649 | | | | |
| | | Totals..... | 73,111 | \$112,646 61 | \$1 54 | 43,384 | \$2 60 |
| †Dorchester and Elm Hill..... | Coleman Brothers Corporation..... | Mixed refuse..... | 425,120 | | | | |
| | | Garbage..... | 55,794 | | | | |
| | | Totals..... | 480,914 | \$649,458 19 | \$1 35 | 217,047 | \$2 99 |
| *Dudley..... | Marinucci Brothers & Co..... | Mixed refuse..... | 55,265 | | | | |
| | | Garbage..... | 5,383 | | | | |
| | | Totals..... | 60,648 | \$140,337 41 | \$2 31 | 36,833 | \$3 81 |
| *Mission Hill..... | Marinucci Brothers & Co..... | Mixed refuse..... | 51,596 | | | | |
| | | Garbage..... | 5,112 | | | | |
| | | Totals..... | 57,068 | \$129,322 40 | \$2 27 | 31,992 | \$4 04 |
| *Back Bay..... | Dooley Brothers, Inc..... | Mixed refuse..... | 50,630 | | | | |
| | | Garbage..... | — | | | | |
| | | Totals..... | 50,630 | \$112,353 46 | | 22,042 | \$5 09 |
| | | | | | \$2 22 | | |

| | | | | | | | |
|----------------|----------------------------------|--|----------------------------------|----------------|--------|---------|--------|
| *Stuart..... | Capitol Contracting Company..... | {Mixed refuse..... Garbage..... Totals.....} | 93,456 — 93,456 | \$156,923 09 | \$1 68 | 20,144 | \$7 79 |
| Hyde Park..... | Mary C. Bryan..... | {Mixed refuse..... Garbage..... Totals.....} | 34,837 3,748 38,621 | \$58,625 10 | \$1 52 | 25,669 | \$2 28 |
| Total..... | | {Mixed refuse..... Garbage..... Totals.....} | 1,197,650 96,100 1,293,750 | \$2,193,267 62 | \$1 69 | 647,170 | \$3 39 |

* Disposal of garbage and refuse to Coleman Disposal Company.

† Disposal of garbage only to Coleman Disposal Company.

TABLE III.

Cost of Collection and Disposal of Refuse by Day Labor Force in the City of Boston for the Year Ending December 31, 1947.

| Number. | DISTRICTS AND POPULATION. | CHARACTER OF REFUSE. | Cubic Yards. | COST PER CUBIC YARD. | | | TOTAL COST. | | Total Cost, Collection and Disposal. | Total Cost Per Capita. |
|---------|---------------------------------|----------------------|--------------|----------------------|---------------|--------------------------|------------------|--------------------|--------------------------------------|------------------------|
| | | | | To Collect. | For Disposal. | Collection and Disposal. | Cost to Collect. | Cost for Disposal. | | |
| 7. | Roxbury (34,489) | Mixed refuse..... | 85,024 | \$1 77 | \$0 83 | \$2 60 | \$150,816 82 | \$70,212 62 | \$221,029 44 | \$6 41 |
| 9. | South End (42,495)..... | Mixed refuse..... | 94,577 | \$1 88 | \$0 83 | \$2 71 | \$177,775 20 | \$78,101 47 | \$255,876 67 | \$6 02 |
| 10. | North and West Ends (42,232) .. | Mixed refuse..... | 123,021 | \$1 64 | \$0 83 | \$2 47 | \$201,730 78 | \$101,590 46 | \$303,321 24 | \$7 18 |
| | Total (119,216)..... | Mixed refuse..... | 302,622 | \$1 75 | \$0 83 | \$2 58 | \$530,322 80 | \$249,904 55 | \$780,227 35 | \$6 54 |

TABLE IV.

Street Cleaning Service, 1947.

Distribution of Expenditures.

| | |
|----------------------------------|-----------------------|
| Removing snow | \$133,163 67 |
| Brooming | 790,082 97 |
| Pushcart patrol | 261,502 28 |
| Refuse box collections | 36,191 67 |
| Motor sweeping | 52,028 11 |
| Total | <u>\$1,272,968 70</u> |

APPENDIX D.

REPORT OF THE DIVISION ENGINEER
OF THE SEWER DIVISION.

BOSTON, January 2, 1948.

To the Commissioner of Public Works.

DEAR SIR:

I submit herewith statement of the activities and expenditures of the Sewer Division for the year ending December 31, 1947.

During the fiscal year 1947 there were built by contractors and day labor 7.46 miles of common sewers and surface drains throughout the city. After deducting 0.06 miles of sewers and surface drains, rebuilt or abandoned, the net increase for 1947 is 7.40 miles, which, added to the existing 1,227.04 miles of common sewers and surface drains and 30.93 miles of intercepting sewers, makes a grand total of 1,265.37 miles of all sewers belonging to the City of Boston, and under the care of the Sewer Division on January 1, 1948.

There were 159 catch-basins built or rebuilt and 12 abandoned or removed during the year, making a net gain of 147 catch-basins and a grand total of 22,836 catch-basins under the care of the Sewer Division on January 1, 1948.

Entrance fees to the amount of \$2,463.99 have been deposited with the City Collector for collection from estates upon which no sewer assessments were ever paid, in accordance with Ordinances of 1925, chapter 27, section 10.

956 permits have been issued, viz.: 247 to district foremen and contractors and 609 to drainlayers for repairing or laying new house drains. Inspectors from this office have personally inspected the work done under these drainlayers' permits.

2,898 complaints have been investigated and inspectors are instructed to report in writing in each case.

1,500 catch-basin complaints were received.

Reported in writing on 2,292 municipal liens to the City Collector, in accordance with chapter 60, section 25, of the General Laws. Reported orally on about 2,500 requests for information on municipal liens.

Notices have been mailed to abutters in conformity with the Ordinances of 1925, chapter 27, section 8, apprising them of the construction of new sewers or repairs to old sewers.

During the year 1947, 1,527 catch-basins were cleaned by day labor and 2,744 catch-basins were cleaned by contract.

Respectfully,

ROBERT P. SHEA,
Division Engineer.

**Summary of Sewer Construction for Twelve Months Ending
December 31, 1947.**

| DISTRICTS. | Built by the City Either by Contract or Day Labor. | Built by Private Parties. | Total Lengths Built. | |
|-------------------|---|------------------------------|----------------------|---------------|
| | <i>Linear Feet.</i> | <i>Linear Feet.</i> | <i>Linear Feet.</i> | <i>Miles.</i> |
| City Proper..... | 1,768.14 | ..... | 1,768.14 | 0.3349 |
| Roxbury..... | 127.00 | ..... | 127.00 | 0.0240 |
| South Boston..... | 228.00 | ..... | 228.00 | 0.0432 |
| East Boston..... | None. | None. | None. | None. |
| Charlestown..... | 486.00 | ..... | 486.00 | 0.0920 |
| Brighton..... | 1,973.95 | ..... | 1,973.95 | 0.3737 |
| West Roxbury..... | 14,433.24 | ..... | 14,433.24 | 2.7336 |
| Dorchester..... | 2,376.56 | 15,216.70 | 17,593.26 | 3.3320 |
| Hyde Park..... | 2,773.54 | ..... | 2,773.54 | 0.5253 |
| Totals..... | 24,166.43 | 15,216.70 | 39,383.13 | 7.4588 |

**Summary of Sewer Construction for Five Years Previous to
January 1, 1948.**

| | 1943. | 1944. | 1945. | 1946. | 1947. |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|
| | <i>Linear Feet.</i> | <i>Linear Feet.</i> | <i>Linear Feet.</i> | <i>Linear Feet.</i> | <i>Linear Feet.</i> |
| Built by city by contract or day labor... | 2,008.53 | 2,457.36 | 6,388.17 | 14,204.38 | 24,166.43 |
| Built by private parties or other city departments..... | ..... | 270.50 | ..... | 4,463.00 | 15,216.70 |
| Totals..... | 2,008.53 | 2,727.86 | 6,388.17 | 18,667.38 | 39,383.13 |

Total Length of Sewers.

| DISTRICTS. | Total Lengths Built During Twelve Months Ending December 31, 1947. | Lengths Removed or Abandoned During Twelve Months Ending December 31, 1947. | Additional Lengths for the Twelve Months Ending December 31, 1947. | |
|-------------------|--|---|--|---------------|
| | <i>Linear Feet.</i> | <i>Linear Feet.</i> | <i>Linear Feet.</i> | <i>Miles.</i> |
| City Proper..... | 1,768.14 | 1,531.80 | 236.34 | 0.0447 |
| Roxbury..... | 127.00 | 17.00 | 110.00 | 0.0208 |
| South Boston..... | 228.00 | ..... | 228.00 | 0.0432 |
| East Boston..... | None. | None. | None. | None. |
| Charlestown..... | 486.00 | ..... | 486.00 | 0.0920 |
| Brighton..... | 1,973.95 | ..... | 1,973.95 | 0.3738 |
| West Roxbury..... | 14,433.24 | 1,608.64 | 12,824.60 | 2.4289 |
| Dorchester..... | 17,593.26 | 19.00 | 17,574.26 | 3.3285 |
| Hyde Park..... | 2,773.54 | ..... | 2,773.54 | 0.5253 |
| Totals..... | 39,383.13 | 3,176.44 | 36,206.69 | 6.8572 |

Grand Total Lengths of Sewers.

| | <i>Miles.</i> |
|---|---------------|
| Common sewers and surface drains built previous to January 1, 1947 | 1,227 04 |
| Common sewers and surface drains built between January 1 and December 31, 1947 | 6 86 |
| Total length of common sewers and surface drains built to December 31, 1947 | 1,233 90 |
| Total length of City intercepting sewers connecting with Metropolitan sewers to December 31, 1947 | * 6 81 |
| Total length of Boston main drainage intercepting sewers to December 31, 1947 | * 24 12 |
| Grand total of common and intercepting sewers to December 31, 1947 | 1,264 83 |
| Total mileage of streets containing sewerage works to January 1, 1948 | 690 86 |

* No additional lengths built during 1947.

Catch-Basins in Charge of Sewer Division.

| DISTRICTS. | CATCH-BASINS FOR TWELVE MONTHS ENDING DECEMBER 31, 1947. | | | TOTAL FOR WHOLE CITY IN CHARGE OF SEWER DIVISION. | |
|-------------------|---|------------------------------------|------------------|---|--|
| | Number Built or Rebuilt. | Number Abandoned or Removed. | Net Increase. | Previous Report to January 1, 1947. | Grand Total to January 1, 1948. |
| City Proper..... | 2 | 0 | 2 | 3,628 | 3,630 |
| Roxbury..... | 20 | 12 | 8 | 3,367 | 3,375 |
| South Boston..... | 1 | 0 | 1 | 1,458 | 1,459 |
| East Boston..... | 0 | 0 | 0 | 1,106 | 1,106 |
| Charlestown..... | 1 | 0 | 1 | 841 | 842 |
| Brighton..... | 13 | 0 | 13 | 1,991 | 2,004 |
| West Roxbury..... | 34 | 0 | 34 | 3,968 | 4,002 |
| Dorchester..... | 48 | 0 | 48 | 5,391 | 5,439 |
| Hyde Park..... | 40 | 0 | 40 | 939 | 979 |
| Totals..... | 159 | 12 | 147 | 22,689 | 22,836 |

Electric Current Used for 1947, Calf Pasture Pumping Station.

| MONTH. | ELECTRIC CURRENT. | | Amount. |
|----------------|-----------------------------------|------------------------------------|-------------|
| | Kilowatt-Hours, Inside Meters. | Kilowatt-Hours, Outside Meters. | |
| January..... | 497,000 | 540,260 | \$5,973 77 |
| February..... | 414,200 | 476,780 | 5,873 24 |
| March..... | 510,300 | 505,520 | 5,902 67 |
| April..... | 506,200 | 511,960 | 5,923 87 |
| May..... | 537,300 | 530,500 | 6,070 51 |
| June..... | 453,500 | 533,580 | 5,842 68 |
| July..... | 477,200 | 494,000 | 5,722 54 |
| August..... | 472,300 | 434,000 | 5,131 24 |
| September..... | 497,700 | 508,000 | 6,365 77 |
| October..... | 469,800 | 487,280 | 5,994 98 |
| November..... | 485,900 | 573,360 | 6,607 72 |
| December..... | 463,100 | 456,920 | 5,925 28 |
| Totals..... | 5,784,500 | 6,052,160 | \$71,334 27 |

**Amount of Refuse Removed from Filth Hoist for 1947,
Calf Pasture Pumping Station.**

| MONTH. | Wheelbarrow Loads. | Weight.* Pounds. |
|----------------|-----------------------|--|
| January..... | 167 | 15,865 |
| February..... | 154 | 14,630 |
| March..... | 158 | 15,010 |
| April..... | 172 | 16,340 |
| May..... | 152 | 14,440 |
| June..... | 147 | 13,965 |
| July..... | 159 | 15,105 |
| August..... | 161 | 15,295 |
| September..... | 131 | 12,445 |
| October..... | 154 | 14,630 |
| November..... | 168 | 15,960 |
| December..... | 166 | 15,770 |
| Totals..... | 1,889 | 179,455 lbs. 89 $\frac{1455}{2000}$ tons. |

* Refuse removed from filth hoist, averaging 95 pounds to wheelbarrow.

Fuel Record for 1947, Calf Pasture Pumping Station.

| MONTH. | FUEL OILS. | | Amount. |
|----------------|----------------------|------------------|-------------|
| | Gallons Received. | Gallons Used. | |
| January..... | 27,564 | 25,600 | \$1,668 06 |
| February..... | 20,866 | 23,575 | 1,262 72 |
| March..... | 21,963 | 25,230 | 1,329 11 |
| April..... | 22,317 | 25,551 | 1,350 54 |
| May..... | 26,626 | 25,377 | 1,611 31 |
| June..... | 22,763 | 21,255 | * 1,377 52 |
| July..... | 16,727 | 18,560 | 1,012 25 |
| August..... | 18,141 | 19,414 | 1,097 82 |
| September..... | 16,765 | 19,308 | 1,014 55 |
| October..... | 23,360 | 20,150 | 1,413 65 |
| November..... | 24,944 | 24,403 | 1,509 51 |
| December..... | 20,420 | 26,867 | 1,235 74 |
| Totals..... | 262,456 | 275,290 | \$15,882 78 |

* Average, .060516 gallon.

**Pumping Statistics for 1947, Calf Pasture Pumping
Station.**

From Pumping Records.

| | |
|--|--------------------|
| Total gallons pumped | 37,702,484,000 |
| Daily average gallons pumped | 103,294,000 |
| Average dynamic head (feet) | 40.0 |
| Total foot gallons | 1,508,099,360,000 |
| Total foot pounds | 12,621,283,543,840 |

Cost of Pumping for 1947, Calf Pasture Pumping Station.

| ITEMS. | Total. | Cost Per Million Foot Gallons. |
|--|--------------|--------------------------------------|
| Labor..... | \$68,196 29 | \$0.04522 |
| Edison power..... | 71,334 27 | .04730 |
| Fuel oil..... | 15,882 78 | .01053 |
| Packing..... | 226 63 | .00015 |
| Miscellaneous renewals and supplies..... | 6,898 58 | .00457 |
| Oils and waste..... | 682 70 | .00045 |
| Totals..... | \$163,221 25 | \$0.10822 |
| Labor at screens..... | \$14,300 69 | \$0.00948 |

Sewage Statistics for 1947, Calf Pasture Pumping Station.

| MONTH. | Total Gallons Pumped. | Average Gallons Pumped Daily. | Maximum Gallons Pumped Daily. | Minimum Gallons Pumped Daily. | Average Lift (Feet). |
|----------------|-----------------------------|--|--|--|----------------------------|
| January..... | 3,375,599,000 | 108,890,290 | 149,788,000 | 88,275,000 | 40.0 |
| February..... | 2,818,861,000 | 100,673,607 | 119,738,000 | 106,169,000 | 40.0 |
| March..... | 3,285,857,000 | 105,995,387 | 177,525,000 | 82,700,000 | 40.0 |
| April..... | 3,125,856,000 | 104,195,200 | 141,575,000 | 78,738,000 | 40.0 |
| May..... | 3,429,030,000 | 110,613,871 | 179,219,000 | 82,925,000 | 40.0 |
| June..... | 3,119,478,000 | 103,982,600 | 129,200,000 | 85,225,000 | 40.0 |
| July..... | 3,125,920,000 | 100,832,903 | 144,057,000 | 83,062,000 | 40.0 |
| August..... | 3,059,813,000 | 98,703,645 | 124,010,000 | 80,706,000 | 40.0 |
| September..... | 3,126,685,000 | 104,222,833 | 156,023,000 | 78,150,000 | 40.0 |
| October..... | 3,017,727,000 | 97,355,709 | 136,740,000 | 78,270,000 | 40.0 |
| November..... | 3,155,082,000 | 105,169,400 | 174,200,000 | 89,760,000 | 40.0 |
| December..... | 3,062,576,000 | 98,792,774 | 151,375,000 | 89,000,000 | 40.0 |
| Totals..... | 37,702,484,000 | 1,239,428,219 | | | |
| Averages..... | 103,294,203 | 103,285,843 | | | |

Total Running Time of Pumps.— No. 1, 3,925 hours, 35 minutes; No. 2, 4,645 hours, 00 minutes; No. 3, 2,491 hours, 45 minutes; No. 4, 4,138 hours, 25 minutes; No. 5, 3,978 hours, 15 minutes; No. 6, 5,515 hours, 50 minutes.

MAINTENANCE EXPENDITURES FROM JANUARY 1, 1947, TO DECEMBER 31, 1947.

SEWER DIVISION.

Improved Sewerage.

| | | |
|--|-----------|--------------|
| Pumping Station, Calf Pasture, inside . . . | \$101,644 | 23 |
| Pumping Station, Calf Pasture, outside . . . | 5,271 | 11 |
| Pumping Station, Calf Pasture, engines . . . | 34,932 | 52 |
| Pumping Station, Calf Pasture, boilers . . . | 31,651 | 14 |
| Pumping Station, Union Park Street . . . | 12,226 | 47 |
| Pumping Station, Summer Street . . . | 4,898 | 17 |
| Moon Island | 31,131 | 42 |
| Main and intercepting sewers | 21,823 | 44 |
| | <hr/> | \$243,578 50 |

Maintenance — Regular.

| | | |
|--|----------|------------|
| Automobiles | \$15,337 | 43 |
| Cleaning catch-basins | 72,238 | 74 |
| Cleaning sewers | 51,565 | 39 |
| Fuel and oil | 275 | 02 |
| Hardware and tools | 4,995 | 97 |
| House connections | 16,623 | 85 |
| Maintenance, Stony Brook | 602 | 38 |
| Office and engineers' expense | 4,466 | 60 |
| Office and engineers' salaries | 22,894 | 35 |
| Stock | 2,753 | 11 |
| Yard and locker | 45,477 | 46 |
| Testing laboratory | 185 | 73 |
| | <hr/> | 237,416 03 |

Maintenance — Repairs.

| | | |
|---|-------|-----------|
| Repair streets | \$492 | 43 |
| Repair department buildings | 1,303 | 81 |
| Repair catch-basins, South Boston | 520 | 03 |
| Repair catch-basins, East Boston | 172 | 88 |
| Repair catch-basins, Charlestown | 1,108 | 06 |
| Repair catch-basins, Brighton | 1,226 | 82 |
| Repair catch-basins, West Roxbury | 1,999 | 70 |
| Repair catch-basins, Dorchester | 5,875 | 77 |
| Repair catch-basins, Hyde Park | 85 | 85 |
| Repair catch-basins, Roxbury | 2,792 | 90 |
| Repair catch-basins, City Proper | 2,769 | 35 |
| Repair sewers, South Boston | 880 | 55 |
| Repair sewers, East Boston | 93 | 72 |
| Repair sewers, Charlestown | 694 | 53 |
| Repair sewers, Brighton | 3,171 | 74 |
| Repair sewers, West Roxbury | 2,822 | 93 |
| Repair sewers, Dorchester | 1,311 | 09 |
| Repair sewers, Hyde Park | 271 | 38 |
| Repair sewers, Roxbury | 2,001 | 33 |
| Repair sewers, City Proper | 1,297 | 26 |
| Repair sewers, 3,751 (cont.) Vernon and Cabot streets, Roxbury | 3,951 | 90 |
| | <hr/> | 34,844 03 |

Carried forward \$515,838 56

Maintenance — Miscellaneous.

| | | | |
|---|------------|--|------------------|
| <i>Brought forward</i> | | | \$515,838 56 |
| Miscellaneous | \$8,147 43 | | |
| Back Bay Fens | 638 39 | | |
| Telephones | 1,089 25 | | |
| Wearing apparel (rubber goods) | 90 00 | | |
| Pensions and annuities | 10,172 13 | | |
| Holidays, vacations, time allowed, etc. | 57,759 75 | | |
| Unadvertised jobs. | 4,570 93 | | |
| 36 Cummington street, unadvertised contract No. 3,746, repair sewer and drain. | 2,688 79 | | |
| | | | <u>85,156 67</u> |
| Total | | | \$600,995 23 |

CREDITS.

| | | | |
|---|-------------|-------------|---------------------|
| Cost of trucks, cleaning machines, etc., used on maintenance | \$32,257 75 | | |
| Cost of stock (maintenance) used on maintenance | 2,374 60 | | |
| Cost of stock (sewerage works) used on maintenance | 2,743 36 | | |
| Cost of maintenance materials paid for by sewerage works | 5,762 15 | | |
| Cost of maintenance payrolls paid for by sewerage works | 15,777 27 | | |
| Less amount in hands of City Treasurer | 15 50 | \$58,930 63 | 58,930 63 |
| | | | <u>\$542,064 60</u> |

DEBITS.

| | | | |
|---|------------|------------|----------------------------|
| Cost of sewerage works payrolls paid by maintenance | \$1,193 17 | | |
| Cost of sewerage works materials paid by maintenance | 695 90 | | |
| Debit transfer from sewerage works payrolls | 3,978 13 | \$5,867 20 | 5,867 20 |
| Total expenditures | | | <u><u>\$547,931 80</u></u> |

Sewer Division — Maintenance Expenditures, Details, 1947.

| Accounts. | Totals. | Labor. | Repairs. | Motor Vehicles, Cleaning Machines, Etc. | Taxes. | Contractors. | Light, Fuel, Power. | Materials and Supplies. | Equipment, Tools. | Miscellaneous. |
|-------------------------------------|-------------|-------------|------------|---|--------|--------------|---------------------|-------------------------|-------------------|--|
| Automobiles..... | \$15,337 43 | ..... | \$9,148 06 | \$5 00 | ..... | ..... | \$85 65 | \$1,172 73 | \$1,067 17 | Gasoline..... \$3,295 57 Fees..... 94 00 Storage..... 469 25 Advertising..... 45 00 |
| Cleaning catch-basins.. | 72,238 74 | \$42,117 98 | ..... | 10,104 25 | ..... | \$19,934 93 | ..... | 36 58 | ..... | ..... |
| Cleaning sewers..... | 51,565 39 | 43,808 85 | ..... | 7,756 54 | ..... | ..... | ..... | ..... | ..... | ..... |
| Fuel and oil..... | 275 02 | ..... | ..... | ..... | ..... | ..... | 275 02 | ..... | ..... | ..... |
| Hardware and tools.. | 4,995 97 | ..... | 166 12 | ..... | ..... | ..... | ..... | ..... | 4,828 55 | Freight charge..... 1 30 |
| House connections.. | 16,623 85 | 16,158 95 | ..... | 40 00 | ..... | 422 95 | ..... | 1 95 | ..... | ..... |
| Maintenance, Stony Brook..... | 602 38 | 509 00 | ..... | 91 50 | ..... | ..... | ..... | 1 88 | ..... | ..... |
| Office and engineers' expense..... | 4,466 60 | 757 19 | 133 29 | 804 61 | ..... | ..... | ..... | 1,695 51 | 154 50 | Printing..... 35 00 Postage..... 99 55 Transportation..... 617 50 Meals..... 14 00 Telephone..... 155 45 |
| Office and engineers' salaries..... | 22,894 35 | 22,894 35 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Stock..... | 2,753 11 | ..... | ..... | 5 00 | ..... | ..... | ..... | 2,748 11 | ..... | ..... |
| Yard and locker..... | 45,477 46 | 40,062 26 | 98 39 | 4,822 54 | ..... | ..... | 211 73 | 220 14 | ..... | Towel service..... 62 40 |
| Testing laboratory.... | 185 73 | ..... | ..... | 27 84 | ..... | ..... | 98 05 | 43 28 | ..... | Towel service..... 15 60 Gas service..... 96 |

| | | | | | | | | | |
|--|------------------------|------------------------|-------------|-------------|-------------------|----------|------------|---|--|
| Miscellaneous..... | 8,147 43 | 2,686 08 | 824 00 | ..... | ..... | ..... | 18 56 | Postage..... Transportation..... Meals..... Telephone calls..... Workmen's Com- pensation..... Injured..... Unliquidated re- serve..... | 56 1,326 15 89 10 278 25 89 60 1,942 91 892 22 |
| Back Bay Fens..... | 638 39 | 516 92 | ..... | ..... | ..... | 121 47 | ..... | Telephone..... | 1,089 25 |
| Telephones..... | 1,089 25 | ..... | ..... | ..... | ..... | ..... | ..... | Rubber mitts..... | 90 00 |
| Rubber goods..... | 90 00 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Pensions and annuities, Holidays, vacations, time allowed, etc.... | 10,172 13 57,759 75 | 10,172 13 57,759 75 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Unadvertised jobs..... | 4,570 93 | 128 81 | ..... | ..... | 4,442 12 | ..... | ..... | ..... | ..... |
| 36 Cunningham street, City Proper, repair sewer and drain— (Edward M. Matz, Inc.)..... | 2,088 79 | 41 18 | ..... | ..... | 2,047 61 | ..... | ..... | ..... | ..... |
| Vernon and Cabot streets, Roxbury (Hancock Construc- tion Company)..... | 3,951 90 492 43 | 242 44 344 24 | ..... | ..... | 3,709 46 76 19 | ..... | ..... | ..... | ..... |
| Repair streets, etc..... | ..... | ..... | 72 00 | ..... | ..... | ..... | ..... | ..... | ..... |
| Repair department buildings..... | 1,303 81 | 44 76 | 988 70 | ..... | ..... | ..... | 270 35 | ..... | ..... |
| Repair catch-basins, South Boston..... | 520 03 | 425 11 | ..... | ..... | ..... | ..... | 52 92 | ..... | ..... |
| Carried forward... | \$328,840 87 | \$238,670 00 | \$10,534 56 | \$24,595 28 | \$31,233 26 | \$791 92 | \$6,262 01 | \$6,050 22 | \$10,703 62 |

Sewer Division — Maintenance Expenditures, Details, 1947 — Continued.

| ACCOUNTS. | Totals. | Labor. | Repairs. | Motor Vehicles, Cleaning Machines, Etc. | Taxes. | Contractors. | Light, Fuel, Power. | Materials and Supplies. | Equipment, Tools. | Miscellaneous. |
|--|--------------|--------------|-------------|---|--------|--------------|---------------------|-------------------------|-------------------|----------------|
| <i>Brought forward...</i> | \$328,840 87 | \$238,070 00 | \$10,534 56 | \$24,395 28 | ..... | \$31,233 26 | \$791 92 | \$6,262 01 | \$6,050 22 | \$10,703 62 |
| Repair catch-basins, East Boston..... | 172 88 | 77 62 | ..... | 20 00 | ..... | ..... | ..... | 75 26 | ..... | ..... |
| Repair catch-basins, Charlestown..... | 1,108 06 | 984 49 | ..... | 76 50 | ..... | ..... | ..... | 47 07 | ..... | ..... |
| Repair catch-basins, Brighton..... | 1,226 82 | 789 68 | ..... | 144 50 | ..... | ..... | ..... | 292 64 | ..... | ..... |
| Repair catch-basins, West Roxbury..... | 1,999 70 | 1,300 26 | ..... | 173 25 | ..... | 35 00 | ..... | 491 19 | ..... | ..... |
| Repair catch-basins, Dorchester..... | 5,875 77 | 3,450 62 | ..... | 562 75 | ..... | 361 52 | ..... | 1,500 88 | ..... | ..... |
| Repair catch-basins, Hyde Park..... | 85 85 | 51 30 | ..... | 21 00 | ..... | ..... | ..... | 13 55 | ..... | ..... |
| Repair catch-basins, Roxbury..... | 2,792 90 | 2,226 58 | ..... | 378 25 | ..... | ..... | ..... | 188 07 | ..... | ..... |
| Repair catch-basins, City Proper..... | 2,769 35 | 2,415 37 | ..... | 254 25 | ..... | ..... | ..... | 99 73 | ..... | ..... |
| Repair sewers, South Boston..... | 880 55 | 735 55 | ..... | 45 00 | ..... | ..... | ..... | 100 00 | ..... | ..... |
| Repair sewers, East Boston..... | 93 72 | 93 72 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Repair sewers, Charlestown..... | 694 53 | 608 53 | ..... | 35 00 | ..... | ..... | ..... | 51 00 | ..... | ..... |

| | | | | | | | |
|---|----------------------------|----------------------------|-------------------------|-------------------|----------------------|-----------------------|-----------------------|
| Repair sewers, Brighton..... | 3,171 74 | 2,497 55 | 398 50 | ..... | ..... | 275 69 | |
| Repair sewers, West Roxbury..... | 2,822 93 | 2,184 95 | 279 00 | ..... | ..... | 358 98 | |
| Repair sewers, Dorchester..... | 1,311 09 | 828 40 | 216 25 | ..... | 104 46 | 161 98 | |
| Repair sewers, Hyde Park..... | 271 38 | 187 77 | 44 00 | ..... | ..... | 39 61 | |
| Repair sewers, Roxbury..... | 2,001 33 | 1,001 87 | 157 48 | ..... | 666 98 | 175 00 | |
| Repair sewers, City Proper..... | 1,297 26 | 270 30 | 90 00 | ..... | 708 88 | 228 08 | |
| Total — Outside improved sewers, Total — Improved sewers..... | \$357,416 73 243,578 50 | \$258,374 56 130,955 42 | \$10,534 56 5,969 84 | \$379 50 | \$33,110 10 | \$791 92 91,456 93 | \$10,703 62 189 74 |
| Totals..... | \$600,995 23 | \$389,329 98 | \$35,436 82 | \$379 50 | \$33,110 10 | \$92,248 85 | \$10,893 36 |
| CREDITS. | | | | | | | |
| Trucks, etc., used on maintenance..... | \$32,257 75 | ..... | 32,257 75 | ..... | ..... | ..... |  |
| Maintenance stock used on maintenance.... | 2,374 60 | ..... | ..... | ..... | ..... | 2,374 60 | |
| Construction stock used on maintenance.... | 2,743 36 | ..... | ..... | ..... | ..... | 2,743 36 | |
| Carried forward... | \$503,619 52 | \$389,329 98 | \$16,504 40 | \$379 50 | \$33,110 10 | \$92,248 85 | \$10,893 36 |

Sewer Division — Maintenance Expenditures, Details, 1947. — Concluded.

| ACCOUNTS. | Totals. | Labor. | Repairs. | Motor Vehicles, Cleaning Machines, Etc. | Taxes. | Contractors. | Light, Fuel, Power. | Materials and Supplies. | Equipment, Tools. | Miscellaneous. |
|---|--------------|--------------|-------------|---|----------|--------------|---------------------------|-------------------------------|----------------------|----------------|
| <i>Brought forward...</i> | \$563,619 52 | \$389,329 98 | \$16,504 40 | \$3,179 07 | \$379 50 | \$33,110 10 | \$92,248 85 | \$5,802 66 | \$12,171 60 | \$10,893 36 |
| Materials paid for by sewerage works.... | \$5,762 15 | | | | | | | 5,762 15 | | |
| Payrolls paid for by sewerage works.... | 15,777 27 | 15,777 27 | | | | | | | | |
| Less amount in hands of City Treas- urer.... | 15 50 | | | | | | | | | 15 50 |
| Totals..... | \$542,064 60 | \$373,552 71 | \$16,504 40 | \$3,179 07 | \$379 50 | \$33,110 10 | \$92,248 85 | \$40 51 | \$12,171 60 | \$10,877 86 |
| DEBITS. | | | | | | | | | | |
| Sewerage works pay- rolls paid by main- tenance... | \$1,193 17 | 1,193 17 | | | | | | | | |
| Sewerage works ma- terials paid by main- tenance... | 695 90 | | | | | | | 695 90 | | |
| Debit trans- fer from sewerage works.... | 3,978 13 | 3,978 13 | | | | | | | | |
| Total maintenance expenditures De- cember 31, 1947, | \$547,931 80 | \$378,724 01 | \$16,504 40 | \$3,179 07 | \$379 50 | \$33,110 10 | \$92,248 85 | \$736 41 | \$12,171 60 | \$10,877 86 |

Sewer Division — Maintenance Expenditures, Details, 1947.

| ACCOUNTS. | Totals. | Labor. | Contractors. | Trucks. | Repairs. | Light, Heat and Power. | Materials and Supplies. | Tools and Equipment. | Taxes. | Miscel- laneous. |
|-------------------------------------|--------------|--------------|--------------|------------|------------|------------------------------|-------------------------------|----------------------------|----------|---------------------|
| Pumping Stations: | | | | | | | | | | |
| Calf Pasture, inside, | \$101,644 23 | \$29,183 28 | ..... | ..... | \$91 57 | \$71,346 37 | \$20 64 | \$948 27 | ..... | \$54 10 |
| Calf Pasture, outside, | 5,271 11 | 949 74 | ..... | \$3,355 37 | 301 64 | ..... | ..... | 664 36 | ..... | ..... |
| Calf Pasture, engines, | 34,932 52 | 28,955 64 | ..... | ..... | 4,722 66 | ..... | ..... | 790 35 | ..... | 58 84 |
| Calf Pasture, boilers, | 31,651 14 | 14,140 01 | ..... | ..... | 315 61 | 15,883 64 | ..... | 1,294 16 | ..... | ..... |
| Union Park Street, | 12,226 47 | 10,336 97 | ..... | 6 96 | 2 25 | 1,723 66 | 13 78 | 123 65 | ..... | 19 20 |
| Summer Street, | 4,898 17 | 2,636 13 | ..... | ..... | 461 81 | 1,800 23 | ..... | ..... | ..... | ..... |
| Moon Island, | 31,131 42 | 27,119 44 | ..... | 1,984 26 | 33 40 | 547 63 | 92 71 | 936 08 | \$379 50 | 38 40 |
| Main and intercepting sewers, | 21,823 44 | 17,634 21 | ..... | 2,599 22 | 40 90 | 155 40 | 10 00 | 1,364 51 | ..... | 19 20 |
| Totals, | \$243,578 50 | \$130,955 42 | ..... | \$7,945 81 | \$5,969 84 | \$91,456 93 | \$559 88 | \$6,121 38 | \$379 50 | \$189 74 |

Recapitulation, Maintenance, Detail, 1947.

| ACCOUNTS. | | Improved Sewerage. | Outside Improved Sewerage. | Total. |
|---|--|--------------------|----------------------------|--------------|
| CREDITS. | | | | |
| Labor..... | | \$130,955 42 | \$258,374 56 | \$389,329 98 |
| Repairs..... | | 5,969 84 | 10,534 56 | 16,504 40 |
| Trucks, motor vehicles, and hired crane..... | | 7,945 81 | 27,491 01 | 35,436 82 |
| Taxes..... | | 379 50 | ..... | 379 50 |
| Contractors..... |  | ..... | 33,110 10 | 33,110 10 |
| Light, heat, and power..... | | 91,456 93 | 791 92 | 92,248 85 |
| Materials and supplies..... | | 559 88 | 10,360 74 | 10,920 62 |
| Equipment and tools..... | | 6,121 38 | 6,050 22 | 12,171 60 |
| Gasoline..... |  | ..... | 3,295 57 | 3,295 57 |
| Fees..... | | 94 00 | 94 00 | 188 00 |
| Storage..... |  | ..... | 469 25 | 469 25 |
| Advertising..... |  | ..... | 45 00 | 45 00 |
| Printing..... |  | ..... | 35 00 | 35 00 |
| Postage..... |  | ..... | 100 11 | 100 11 |
| Car fares..... |  | ..... | 1,943 65 | 1,943 65 |
| Meals..... |  | ..... | 103 10 | 103 10 |
| Telephone calls..... |  | ..... | 433 70 | 433 70 |
| Unliquidated reserve..... |  | ..... | 892 22 | 892 22 |
| Telephone service..... |  | ..... | 1,089 25 | 1,089 25 |
| Wearing apparel..... |  | ..... | 90 00 | 90 00 |
| Sundries..... | | 189 74 | 1 30 | 191 04 |
| Towel service..... |  | ..... | 78 00 | 78 00 |
| Gas service..... |  | ..... | 96 | 96 |
| Workmen's Compensation..... |  | ..... | 89 60 | 89 60 |
| Injured..... |  | ..... | 1,942 91 | 1,942 91 |
| Totals..... | | \$243,578 50 | \$357,416 73 | \$600,995 23 |
| DEBITS. | | | | |
| CREDITS. | | | | |
| Trucks, etc., used on maintenance..... | | \$5,849 40 | \$26,408 35 | |
| Maintenance stock used on jobs..... | | 954 60 | 1,420 00 | |
| Sewerage works used on jobs..... |  | ..... | 2,743 36 | |
| Maintenance materials paid by sewerage works..... | | 4,088 07 | 1,674 08 | |
| Maintenance payrolls paid by sewerage works..... | | 509 37 | 15,267 90 | |
| Less amount in hands of City Treasurer..... |  | ..... | 15 50 | |
| Totals..... | | \$11,401 44 | \$47,529 19 | 58,930 63 |
| DEBITS. | | | | |
| Sewerage works payrolls paid by maintenance..... |  | ..... | \$309,887 54 | \$542,064 60 |
| Sewerage works materials paid by maintenance..... |  | ..... | ..... | ..... |
| Debit transfer from sewerage works..... |  | ..... | ..... | ..... |
| Totals..... |  | ..... | 5,867 20 | 5,867 20 |
| Totals..... | | \$232,177 06 | \$315,754 74 | \$547,931 80 |

Sewerage Works, January 1 to December 31, 1947.

| LOCATION. | Begun. | Finished. | Built by. | Length in Feet. | Character. | Amount Expended in 1947. |
|---|----------------|----------------|-------------------------------|-----------------------|--|--------------------------------|
| EAST BOSTON. | | | | | | |
| Lubec Street outlet, from Cottage street to Prescott street — removing deposit from outlet (first contract unadvertised). | Nov. 18, 1946 | Dec. 26, 1946 | C & R Construction Company. | ..... | 150 cubic yards of deposit removed. | \$3,789 64 |
| Lubec Street outlet, from Cottage street to Prescott street — removing deposit from outlet. | Dec. 27, 1946 | April 16, 1947 | C & R Construction Company. | ..... | 110 cubic yards of deposit removed. | 1,778 76 |
| CHARLESTOWN. | | | | | | |
| Nearen Row, from Ferrin street to Tremont street. | Sept. 18, 1947 | Oct. 6, 1947 | Anthony D'Alessandro, | 211.00 | 10" pipe, sewer. 2 manholes. 1 catch-basin. | 2,782 97 |
| Monument Lane, from Bunker Hill street to Concord avenue, Charlestown; and Pittsburgh street, from Congress street to New York, New Haven & Hartford Railroad, South Boston. | Nov. 13, 1947 | Dec. 22, 1947 | Anthony D'Alessandro, | 275.00 228.00 | 10" pipe, sewer. 12" pipe, sewer. 4 manholes. | 1,483 71 |
| BRIGHTON. | | | | | | |
| Reedsdale street, Kilsyth road, and Union street, Brighton; Spring Park avenue and Washington street, West Roxbury; Pond street, Dorchester; Homer street and Saratoga street, East Boston. | Nov. 18, 1946 | Dec. 20, 1946 | Charles Struzziery Company. | 162.00 | Minor drain. 8 catch-basins. 2 drop inlets. 2 manholes. | 3,661 60 |
| Commonwealth avenue, at Colborne road... | Feb. 27, 1947 | April 26, 1947 | Hancock Construction Company. | 32.00 32.00 | 10" pipe, sewer relaid. 12" pipe, catch-basin drain relaid. | 4,173 91 |
| Beacon street, from Cleveland Circle to Newton line (chapter 90 job). | March 31, 1947 | July 9, 1947 | C. J. Maney Company, Inc. | ..... | Iron frames and covers delivered and inspection. | 2,796 39 |

Sewerage Works, January 1 to December 31, 1947.—Continued.

| LOCATION. | Begun. | Finished. | Built by. | Length in Feet. | Character. | Amount Expended in 1947. |
|--|----------------|---------------|------------------------------------|----------------------------|--|--------------------------------|
| Glendale terrace, Brighton, and outlet in Crescent terrace to Breck avenue. | July 10, 1947 | Aug. 11, 1947 | Caruso & Barone..... | 512.30 489.90 20.00 | 10" pipe, sewer..... 10" pipe, surface drain. Minor drain. 6 manholes. | \$4,185 45 |
| Richardson street, from Western avenue to Mackin street, Emery road and Rugg road, Brighton. | July 5, 1947 | Aug. 2, 1947 | Anthony D'Alessandro..... | 235.10 94.00 | 10" pipe, sanitary sewer..... Minor drain. 6 catch-basins. 2 manholes. | 4,616 07 |
| Commonwealth avenue, at Colborne road, repaving sewer trench. | Aug. 11, 1947 | Aug. 18, 1947 | Hancock Construction Com- pany. | ..... | 294.87 square yards asphalt paving. 1,900 square feet artificial stone sidewalk. | 2,113 30 |
| WEST ROXBURY. | | | | | | |
| Andover road, from Buchanan road to Weld street, and Brook Farm road, from La Grange street to 900 feet southwesterly. | Aug. 15, 1946 | Oct. 21, 1946 | J. D'Amico..... | ..... | Final payments only..... | 1,410 38 |
| Boylston place, Myles Standish road, West Roxbury; Pleasant Hill avenue, Dor- chester; Birchcroft road and Gwinnett street, Hyde Park. | June 3, 1946 | Aug. 14, 1946 | J. D'Amico..... | ..... | Final payments only..... | 1,298 82 |
| Hackensack road, from Lucia road to Brook- line line, and outlet in Payson road and in Neillian Crescent (southwesterly arm), West Roxbury. | April 8, 1946 | June 1, 1946 | Edward M. Matz..... | ..... | Final payments only..... | 402 43 |
| Independence Drive, from Veterans of Foreign Wars Parkway to the Brookline line. | April 10, 1947 | June 25, 1947 | Baker & Co..... | 636.70 169.00 566.50 | 10" pipe, sanitary sewer..... 30" pipe, surface drain. 24" pipe, surface drain. 5 manholes. 1 combination manhole. 1 lug handle manhole. 6 catch-basins. | 19,338 37 |

| | | | | | | |
|---|----------------|----------------|----------------------------------|--|---|------------|
| Ledgeale road, Truman road, Alward road (sewer works and water works contract). | Dec. 24, 1946 | April 19, 1947 | C. Russo, Inc. | 1,052.80 1,057.73 | 10" pipe, sanitary sewer. 10" pipe, surface drain. 11 manholes. 1 catch-basin. | 10,626 72 |
| Stony Brook (section 16), from 20 feet south of Stella road to Hyde Park line. | Nov. 13, 1946 | Not completed. | C & R Construction Company. | 1,424.24 32.50 14.75 10.00 29.00 202.50 | 12' 0" by 10' 0" reinforced concrete conduit. 30" pipe, sanitary sewer. 30" pipe, surface drain. 24" pipe, surface drain. 15" pipe, surface drain. Minor drain. 7 manholes. | 178,067 36 |
| Whitcomb avenue, from Centre street to Arborview road. | May 7, 1946 | June 20, 1946 | Baker & Co. | ..... | Final payments and extra work order. | 8,023 92 |
| Zeller street, Glenhaven Road Brook, Spalding Street outlet, Neponset avenue, and Bourne street, West Roxbury. | Oct. 17, 1946 | Dec. 11, 1946 | C. Russo, Inc. | ..... | Final payments only. | 4,631 90 |
| Metropolitan avenue, from Kittredge street to Poplar street. | Oct. 7, 1946 | Nov. 19, 1946 | Baker & Co. | ..... | Final payments only. | 3,608 87 |
| Private land, from Keystone street to Joyce Kilmer road. | March 20, 1946 | March 26, 1946 | Baker & Co. | ..... | Final payments only. | 411 30 |
| Sherman road and Veterans of Foreign Wars Parkway. | July 2, 1947 | Nov. 28, 1947 | Baker & Co. | 1,170.80 791.14 595.00 980.84 | 10" pipe, sanitary sewer. 12" pipe, sanitary sewer. 12" pipe, surface drain. 24" pipe, surface drain. 18" pipe, surface drain. 15" pipe, surface drain. 13 manholes. | 34,649 76 |
| Waterman road, from Neponset avenue to Bourne street, and minor sewerage works in Woodbourne road, Garth road, Burwood road, Hodgdon terrace, Florian street, West Roxbury; and Niles street, Brighton. | April 14, 1947 | June 14, 1947 | Roslindale Contracting Company. | 608.80 219.00 | 10" pipe, surface drain. Minor drain. 3 manholes. 17 catch-basins. | 9,700 90 |
| Centre street, at St. Theresa avenue (unadvertised). | Oct. 18, 1945 | Nov. 24, 1945 | M. DeMatteo Contracting Company. | 38.00 | 15" pipe, sewer relaid. | 2,000 00 |

Sewerage Works, January 1 to December 31, 1947. — Continued.

| LOCATION. | Begun. | Finished. | Built by. | Length in Feet. | Character. | Amount Expended in 1947. |
|---|---------------|----------------|-------------------------------|--|--|--------------------------------|
| Jacqueline road, Ashland avenue, Atwill road, Keith street, Hackensack road, and Hackensack Circle. | July 3, 1947 | Oct. 4, 1947 | F. Susi and DeSantis Company. | 1,429.53 222.51 530.26 | 10" pipe, sanitary sewer. 10" pipe, surface drain. 12" pipe, surface drain. 12 manholes. | \$14,700 27 |
| Pond street, from Rockwood street to Neil- lian Crescent. | May 28, 1947 | June 20, 1947 | C. Russo, Inc. | 699.95 | 13" and 12" pipe, surface drain. 4 manholes. 6 catch-basins. | 8,446 36 |
| Spring Street Brook, in Prospect street and private land, Baker street, at Belle avenue, Centre street, at No. 2501; Bussey Brook inlet, and Hart street, West Roxbury. | Sept. 3, 1947 | Dec. 2, 1947 | Joseph Civitarese. | 188.17 36.00 60.00 559.22 36.00 | 24" pipe, surface drain. 30" pipe, surface drain. 10" pipe, surface drain. 10" pipe, sanitary sewer. Minor drain. 3 catch-basins. 5 manholes. | 5,881 88 |
| Lyall street, West Roxbury, and Colwell avenue, Brighton. | Oct. 8, 1947 | Oct. 28, 1947 | F. Susi and DeSantis Company. | 499.28 360.10 | 10" pipe, sanitary sewer. 15" and 12" pipe, surface drain. 5 manholes. | 4,795 96 |
| Tolin road, Florian street, Goethe street, Kema street, West Roxbury; Ridgmont street, Brighton; Sherborn street, Newbury street, Commonwealth avenue, at Kenmore street, West Roxbury. | Oct. 14, 1947 | Not completed. | R. A. Buccella & Son. | 110.00 44.00 | 10" pipe, surface drain. Minor drain. 6 catch-basins. 2 manholes. | 4,522 96 |
| Keystone street, from North avenue to Upland street, and North avenue, between Keystone street and 130 feet westerly. | Not started. | | C. Russo, Inc. | | Advertising and engineering. | 84 14 |
| DORCHESTER. Tenean Creek, Victory road, Freeport street, Tenean street, and Old Colony Parkway. | Oct. 2, 1946 | Not completed. | John Deveney Company. | 604.00 536.66 60.00 200.00 280.00 18.00 | 12' 0" by 12' 0" concrete conduit. 12" pipe, sewer. 15" pipe, surface drain. 48" pipe, surface drain. 30" pipe, surface drain. Minor drain. 14 manholes. | 175,432 05 |

| | | | | | | |
|--|---------------------|----------------|----------------------------------|--|---|-----------|
| Franklin Field — veterans' temporary housing development. | Sept. 9, 1946 | Oct. 31, 1946 | Baker & Co ..... | ..... | Testing pipe..... | 25 00 |
| Gallivan Boulevard, from Granite avenue to Neponset avenue (chapter 90, state job). | State contract..... | ..... | A. Singarella..... | ..... | Inspection and iron frames and covers..... | 1,692 44 |
| Calf Pasture Pumping Station—making wash borings for Sewage Treatment Plant. | May 15, 1947 | June 24, 1947 | Raymond Concrete Pile Company. | 2,904.00 | Wash borings..... | 3,488 23 |
| River street, veterans' housing project (Liverside development). | ..... | ..... | Boston Housing Authority.. | ..... | Engineering inspection and iron frames and covers..... | 730 95 |
| Pierce avenue extension in private land, Rockwell street, Sawyer avenue, and Richfield park. | Aug. 11, 1947 | Sept. 24, 1947 | Anthony D'Alessandro..... | 15.00 320.20 67.70 58.00 | 15" pipe, sewer relaid..... 24" pipe, surface drain..... 12" pipe, surface drain..... Minor drain..... 4 manholes..... 4 catch-basins..... | 6,373 41 |
| Calf Pasture Pumping Station—installing switches and busses. | Jan. 7, 1946 | Nov. 8, 1946 | Kenworthy & Taylor, Inc. | ..... | Final payment..... | 324 30 |
| Sewage Treatment Plant—engineering services. | ..... | ..... | Charles A. Maguire & Associates. | ..... | Engineering services..... | 17,853 43 |
| HYDE PARK. | | | | | | |
| West street, between Gwinnet street and Austin street, at Myopia road, and Myopia road in private land, from Stony Brook to West street, 90' northwest of Myopia road. | Sept 16, 1946 | Nov. 25, 1946 | F. Susi and DeSantis Company. | ..... | Semifinal and final payment..... | 3,196 83 |
| Lewiston street, Taunton avenue, Tacoma street, Farrar avenue, Rosebery road and Navarre street. | April 7, 1947 | Aug. 12, 1947 | J. D'Amico..... | 128.60 126.30 575.90 617.85 174.20 737.00 | 10" pipe, sewer..... 10" pipe, surface drain..... 12" pipe, surface drain..... 15" pipe, surface drain..... 21" pipe, surface drain..... Minor drain..... 12 manholes..... 33 catch-basins..... 1 drop inlet..... | 28,698 64 |

Sewerage Works, January 1 to December 31, 1947. — Concluded.

| LOCATION. | Begun. | Finished. | Built by. | Length in Feet. | Character. | Amount Expended in 1947. |
|---|---------------|-----------------|-------------------------------|----------------------------|--|--------------------------------|
| Greenwood avenue, Birchcroft road, Laurel road, Reservoir street, Rosewood street. | Aug. 12, 1946 | Oct. 15, 1946 | Charles Struzziery Company. | ..... | Final payment..... | \$319 98 |
| Summer Brook in private land and Lewiston street, and Lewiston street, Farrar avenue, and Hyde Park avenue. | Sept. 5, 1947 | Oct. 4, 1947 | J. D'Amico..... | 56.00 340.64 177.00 | 20" pipe, surface drain. 54" pipe, surface drain. Minor drain. 3 manholes. 2 drop inlets. | 10,567 89 |
| Ruskindale road and Joyce road, Hyde Park; Clearwater Drive and Gallivan Boulevard, Dorchester. | Oct. 7, 1947 | Not completed.. | J. D'Amico..... | 426.75 530.46 175.00 | 10" pipe, sewer. 12" pipe, surface drain. Minor drain. 7 manholes. 1 lamp pole. | 9,738 65 |
| ROXBURY. | | | | | | |
| Alleys Nos. 918, 919, from Newbury street to Alley No. 917. | July 12, 1946 | Aug. 9, 1946 | F. Susi and DeSantis Company. | ..... | Final payment..... | 85 77 |
| Columbus avenue, from Northampton street to Station street. | July 17, 1946 | Sept. 12, 1946 | John Deveney Company... | ..... | Final payment..... | 320 84 |
| Columbus avenue, from Centre street to Washington street. | Aug. 4, 1947 | Oct. 15, 1947 | John Deveney Company... | 1,696.11 | 10" pipe, catch-basin drain..... 5 catch-basins. 14 drop inlets. 1 manhole. 14 old catch-basins converted to manhole tops. | 6,729 31 |
| Symphony road, from 200 feet west of St. Stephen street to point 232 feet westerly. | Aug. 11, 1947 | Sept. 13, 1947 | Charles Struzziery Company. | 232.00 | 12" pipe, sewer relaid..... | 5,926 98 |

| | | | | | | |
|--|------------------|-----------------|-------------------------------|------------------|---|-----------|
| Cunnington street, from Hinsdale street to Blandford street. | Oct. 30, 1947 | Not completed.. | F. Susi and DeSantis Company. | 250.30 | 18" pipe, sewer relaid..... | 7,080 42 |
| Public Alley No. 931, from Boylston street to Peterborough street. | Not started..... | ..... | Charles Struzziery Company. | ..... | Advertising..... | 25 00 |
| CITY PROPER. | | | | | | |
| Appleton street, from Clarendon street to Berkeley street. | Dec. 3, 1945 | March 26, 1946 | R. A. Buccella & Son..... | ..... | Final payment and execution of court. | 698 18 |
| Milk street, from Arch street to Hawley street. | May 28, 1946 | July 26, 1946 | J. A. Singarella Company... | ..... | Final payment..... | 708 27 |
| Jersey street, from Boylston street to Park Drive. | March 17, 1947 | June 16, 1947 | Charles Struzziery Company. | 649.90 35.20 | 18" pipe, sewer relaid..... | 25,302 93 |
| Exchange place, from Kilby street to Congress street. | May 12, 1947 | June 19, 1947 | R. A. Buccella & Son..... | 191.40 | 18" pipe, sewer relaid..... | 9,864 78 |
| North street, from Richmond street to North square. | April 24, 1947 | June 18, 1947 | R. A. Buccella & Son..... | 80.00 | 18" pipe, sewer..... | 1,967 63 |
| East Newton street, from Harrison avenue to 230 feet southerly. | Sept. 27, 1947 | Oct. 16, 1947 | Charles Struzziery Company. | 241.17 108.00 | 15" pipe, sewer house drain..... | 5,008 71 |
| Catch-basins and manholes in City Proper, Roxbury, East Boston, and South Boston. | Not started..... | ..... | R. A. Buccella & Son..... | ..... | Advertising and iron frames and covers. | 380 56 |
| Columbus avenue, from Arlington street to Northampton street (paving service and sewerage works contract). | Nov. 3, 1947 | Not completed.. | John Deveney Company..... | ..... | Inspection only..... | 265 92 |

CONSTRUCTION REPORT, 1947.
Sewerage Works, 1947.

| ACCOUNTS. | Totals. | Labor. | Trucks, Compressors, Pumps, etc. | Tools and Materials. | Contractors. | Sundries. |
|-------------------------------------|--------------|--------------|--|-------------------------|--------------|-----------|
| Office and engineers' salaries..... | \$114,430 13 | \$114,430 13 | | | | |
| Office and engineers' expense..... | 11,196 52 | 3,338 22 | \$5,829 57 | \$1,809 23 | ..... | \$219 50 |
| Miscellaneous..... | 3,170 96 | 2,094 02 | 367 02 | 709 92 | | |
| Land-takings..... | 83 29 | 83 29 | | | | |
| New manholes, entire city..... | 537 09 | 262 55 | 41 00 | 233 54 | | |
| New catch-basins, South Boston..... | 2,727 69 | 2,257 52 | 263 25 | 206 92 | | |
| New catch-basins, East Boston..... | 1,460 13 | 1,088 19 | 121 50 | 250 44 | | |
| New catch-basins, Charlestown..... | 728 78 | 527 81 | 75 00 | 125 97 | | |
| New catch-basins, Brighton..... | 546 32 | 273 79 | 48 50 | 224 03 | | |
| New catch-basins, West Roxbury..... | 424 17 | 226 94 | 44 00 | 153 23 | | |
| New catch-basins, Roxbury..... | 2,506 98 | 1,988 73 | 314 00 | 204 25 | | |
| New catch-basins, City Proper..... | 1,138 61 | 912 81 | 127 00 | 98 80 | | |
| Repair streets..... | 93 26 | ..... | ..... | ..... | \$93 26 | |
| Release sewers..... | 917 22 | 864 99 | ..... | 52 23 | | |
| Mechanics Iron Foundry..... | 24,356 73 | ..... | ..... | 24,356 73 | | |
| Stock..... | 13,956 35 | ..... | ..... | 13,956 35 | | |
| Testing laboratory..... | 8,368 95 | 8,207 91 | ..... | 115 74 | ..... | 45 30 |

| | | | | | | |
|---|--------------|--------------|------------|-------------|--------------|------------|
| Holidays, vacations, sickness, etc..... | 19,872 78 | 19,872 78 | ..... | 752 09 | 5,254 78 | |
| Unadvertised jobs..... | 7,039 58 | 1,032 71 | | | | |
| Total miscellaneous..... | \$213,555 54 | \$157,462 39 | \$7,230 84 | \$43,249 47 | \$5,348 04 | \$264 80 |
| Sewers built, entire city..... | 666,796 53 | 49,684 28 | ..... | 17,540 44 | 508,982 42 | 2,589 39 |
| Totals..... | \$880,352 07 | \$207,146 67 | \$7,230 84 | \$60,789 91 | \$602,330 46 | \$2,854 19 |
| CREDITS. | | | | | | |
| Cost of maintenance stock used on sewerage works..... | \$918 34 | | | | | |
| Cost of sewer works stock used on sewerage works..... | 19,819 24 | | | | | |
| Cost of trucks, etc., used on sewerage works..... | 1,565 75 | | | | | |
| Sewerage works payrolls paid by maintenance..... | 1,193 17 | | | | | |
| Sewerage works bills paid by maintenance..... | 695 90 | | | | | |
| Debit transfer to maintenance (labor)..... | 3,978 13 | \$5,171 30 | \$1,565 75 | \$21,433 48 | | |
| Totals..... | \$852,181 54 | \$201,975 37 | \$5,665 09 | \$39,356 43 | \$602,330 46 | \$2,854 19 |
| DEBITS. | | | | | | |
| Maintenance payrolls paid by sewerage works..... | \$15,777 27 | | | | | |
| Maintenance bills paid by sewerage works..... | 5,762 15 | 15,777 27 | ..... | 5,762 15 | | |
| Totals..... | \$873,720 96 | \$217,752 64 | \$5,665 09 | \$45,118 58 | \$602,330 46 | \$2,854 19 |

APPENDIX E.

REPORT OF THE DIVISION ENGINEER OF
THE WATER DIVISION.

BOSTON, January 2, 1948.

To the Commissioner of Public Works.

DEAR SIR:

I respectfully submit the following report of the activities of the Water Division, operations and expenditures for the fiscal year ending December 31, 1947.

The work of laying and relaying water mains, and the replacement of obsolete meters, etc., has been considerably curtailed due to the critical shortages of water pipes, fittings and meters.

A total of 16,176 linear feet of pipe were either laid or relaid, varying in sizes from 3-inch to 16-inch, inclusive, as follows:

| | LAID. Linear Feet. | RELAID. Linear Feet. |
|------------------------|-----------------------|-------------------------|
| City Proper | 3,226 | 110 |
| South Boston | 549 | |
| Dorchester | 963 | 804 |
| Brighton | 1,283.5 | |
| West Roxbury | 7,235.5 | 1,091.5 |
| Hyde Park | 913.5 | |
| Total | 14,170.5 | 2,005.5 |

The particular streets in which the above work was performed are shown on the accompanying tables.

DISTRIBUTION BRANCH.

Due to the increased volume of work caused by applications for service pipes, etc., the department has engaged the services of contractors during the year.

The regular work of this branch, consisting of installation of new services and fire pipes, repairing of leaks, caring for complaints, shutting off and letting on water, freeing of stoppages in pipes, etc., was performed in such a manner and at such periods as to cause minimum delay and inconvenience to applicants for water, water takers and the general public.

The machine shop and plumbing shop were forced to handle all the drilling and connecting of services in addition to the regular work carried on in these shops, such as the machining and assembling of gates, valves and hydrants, and the department assisted the other branches of the Public Works Department in performing special jobs.

BUSINESS OFFICE.

In order to enforce the payment of outstanding water bills, customers in arrears are notified that the flow of water will be reduced, but yet enough water is left on the premises to provide a minimum for health and sanitary requirements. As a result, the Water Division ended the year 1947 with a surplus of \$1,456,541.81, this surplus being due mainly to the collection of bills due and payable.

| | |
|---|-----|
| Main pipe petitions received | 9 |
| Domestic service applications | 692 |
| Fire pipe applications | 76 |
| Special meter tests | 147 |
| Hydrant permits issued | 18 |
| Repair deposits received | 103 |
| Miscellaneous deposits | 30 |

APPROPRIATIONS, EXPENDITURES AND REVENUE.

| | |
|---|----------------|
| Amount appropriated | \$1,690,616 74 |
| Amount expended | 1,613,357 63 |
| | <hr/> |
| Balance | \$77,259 11 |
| Amount of money collected during the year | \$4,903,276 84 |
| Amount expended from all sources | 3,446,735 03 |
| | <hr/> |
| | \$1,456,541 81 |

The Metropolitan Assessment for 1947 amounted to \$1,619,881.32, at the rate of \$40 per million gallons, an increase of \$4,008.48 over the assessment for 1946.

| | |
|--|----------------|
| Total amount billed in 1947 | \$4,881,056 55 |
| Total amount collected for 1947 bills, as of December 31, 1947 | \$4,076,644 90 |
| Total amount abated for 1947 bills, as of December 31, 1947 | \$28,636 62 |
| Total amount collected in 1947 on bills rendered prior to 1947 | \$571,372 11 |

This department contacts the water consumers very frequently throughout the year, and the conduct of the office has been such that I believe a spirit of good will between the customers and the employees has been brought about which is beneficial to the consumers and the city.

The issuance of statements of outstanding water bills to the consumers has been continued. The appreciation of the customers is shown by the fact that the number of liens placed on premises this year has been reduced.

Respectfully submitted

D. M. N,
Division Engineer.

Table No. 1. Statement of Work Done During 1947.

| NAME. | Applied. | Discontinued. | METERS CHANGED. | | Tested in Shop. | Repaired in Service. | Repaired in Shop. | Resets. | Total. |
|--------------------|----------|---------------|-----------------|-------|-----------------|----------------------|-------------------|---------|--------|
| | | | Out. | In. | | | | | |
| City Disc..... | 354 | 160 | 1,547 | 2,362 | 3,672 | 711 | 330 | 287 | 91 |
| City Detector..... | 4 | ..... | 7 | 6 | 13 | 1 | 7 | ..... | ..... |
| City Sound..... | 2 | ..... | 9 | 11 | 19 | 1 | 7 | ..... | 2 |
| City ..... | ..... | ..... | ..... | 2 | 2 | ..... | ..... | ..... | 3 |
| City Dis ..... | ..... | 11 | 165 | 2 | 162 | 6 | ..... | ..... | 204 |
| Wash Do | 104 | 48 | 992 | 555 | 1,489 | 200 | 932 | 178 | 7 |
| King..... | ..... | 8 | 163 | 2 | 148 | 36 | ..... | ..... | 190 |
| Federal..... | ..... | 4 | 23 | ..... | 23 | ..... | ..... | ..... | 32 |
| American..... | ..... | 2 | 21 | ..... | 21 | 3 | ..... | ..... | 2 |
| Lambert..... | ..... | ..... | 3 | ..... | 3 | 2 | ..... | ..... | 6 |
| Crown..... | ..... | 1 | 6 | ..... | 4 | 4 | ..... | ..... | 6 |
| Trident..... | 1 | ..... | 1 | 1 | 2 | 1 | 1 | ..... | ..... |
| Arctic..... | 1 | 3 | 2 | 4 | 6 | 4 | 2 | ..... | ..... |
| Nash..... | ..... | 1 | 4 | ..... | 4 | 1 | 1 | ..... | 3 |
| Keystone..... | ..... | ..... | 2 | ..... | 2 | 1 | 2 | ..... | ..... |
| Totals..... | 466 | 238 | 2,945 | 2,945 | 5,570 | 971 | 1,282 | 465 | 566 |

Table No. 3. Meters in Shop December 31, 1947.

| MAKE. | DIAMETER IN INCHES. | | | | | | | | | Total. |
|-----------------------|---------------------|---------------|-------|----------------|-------|-------|-------|-------|-------|--------|
| | $\frac{3}{8}$ | $\frac{3}{4}$ | 1 | $1\frac{1}{2}$ | 2 | 3 | 4 | 6 | 8 | |
| NEW. | | | | | | | | | | |
| Hersey Disc..... | 400 | 17 | ..... | 6 | 30 | ..... | ..... | ..... | ..... | 453 |
| Hersey Compounds..... | ..... | ..... | ..... | ..... | ..... | 3 | 3 | ..... | ..... | 6 |
| Totals..... | 400 | 17 | ..... | 6 | 30 | 3 | 3 | ..... | ..... | 459 |
| OLD. | | | | | | | | | | |
| Hersey Disc..... | 100 | ..... | ..... | 23 | 4 | 9 | ..... | ..... | ..... | 118 |
| Hersey Detector..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2 | 2 | 5 |
| Watch Dog..... | ..... | ..... | 1 | 3 | 3 | ..... | 1 | ..... | ..... | 8 |
| Totals..... | 100 | ..... | 1 | 26 | 7 | 9 | 2 | 2 | 2 | 131 |

Table No. 4. Meters Repaired and Rebuilt at Factory.

| MAKE. | DIAMETER IN INCHES. | | Total. |
|------------------|---------------------|---------------|--------|
| | $\frac{3}{8}$ | $\frac{3}{4}$ | |
| Hersey Disc..... | 949 | 94 | 1,043 |

Table No. 4A. Meters Purchased New in 1947.

| MAKE. | DIAMETER IN INCHES. | | | | | | | Total. |
|----------------------|---------------------|---------------|-------|----------------|----|----|-------|--------|
| | $\frac{3}{8}$ | $\frac{1}{2}$ | 1 | $1\frac{1}{2}$ | 2 | 3 | 4 | |
| Hersey Disc..... | 1,030 | 61 | ..... | 20 | 50 | 5 | ..... | 1,166 |
| Hersey Compound..... |  |  | ..... |  |  | 5 | 5 | 10 |
| Totals..... | 1,030 | 61 | ..... | 20 | 50 | 10 | 5 | 1,176 |

Table No. 5. Meters Reset.

| MAKE. | DIAMETER IN INCHES. | | | | | | | | Total. | Occupied. | Connection Pieces. | Total. |
|------------------|---------------------|---------------|----|----------------|----|---|-------|-------|--------|-----------|--------------------|--------|
| | $\frac{5}{8}$ | $\frac{3}{4}$ | 1 | $1\frac{1}{2}$ | 2 | 3 | 4 | 6 | | | | |
| Hersey Disc..... | 245 | 20 | 9 | 5 | 3 | 2 | 2 | 1 | 287 | 72 | 215 | 287 |
| Watch Dog..... | 146 | 7 | 9 | 5 | 8 | 3 | ..... | ..... | 178 | 44 | 134 | 178 |
| Totals | 391 | 27 | 18 | 10 | 11 | 5 | 2 | 1 | 465 | 116 | 349 | 465 |

Table No. 6A. Meters Changed in 1947. Meters Taken Out.

| MAKE. | DIAMETER IN INCHES. | | | | | | | | Total. |
|-----------------------|---------------------|---------------|-------|----------------|-------|-------|-------|-------|--------|
| | $\frac{5}{8}$ | $\frac{3}{4}$ | 1 | $1\frac{1}{2}$ | 2 | 3 | 4 | 6 | |
| Hersey Disc..... | 1,249 | 143 | 17 | 45 | 28 | 11 | 9 | ..... | 1,547 |
| Hersey Detector..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 7 | 7 |
| Hersey Compound..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 8 | 9 |
| Worthington Disc..... | 163 | ..... | ..... | 1 | 1 | ..... | ..... | ..... | 165 |
| Watch Dog..... | 706 | 111 | 81 | 34 | 40 | 19 | 1 | ..... | 992 |
| King..... | 150 | 6 | 2 | 1 | 4 | ..... | ..... | ..... | 163 |
| Arctic..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | 2 |
| Nash..... | 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4 |
| Lambert..... | 2 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 3 |
| Crown..... | ..... | ..... | 3 | ..... | 1 | ..... | ..... | ..... | 4 |
| Federal..... | 25 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 25 |
| American..... | 14 | 6 | ..... | ..... | ..... | ..... | ..... | ..... | 20 |
| Trident..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 2 |
| Keystone..... | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 |
| Totals..... | 2,361 | 267 | 103 | 82 | 74 | 32 | 11 | 15 | 2,945 |

Table No. 6B. Meters Changed in 1947. Meters Put In.

| MAKE. | DIAMETER IN INCHES. | | | | | | | | Total. |
|-----------------------|---------------------|---------------|-----|-----------------|----|----|----|---|--------|
| | $\frac{3}{8}$ | $\frac{3}{4}$ | 1 | 1 $\frac{1}{2}$ | 2 | 3 | 4 | 6 | |
| Hersey Disc..... | 2,049 | 160 | 39 | 54 | 49 | 7 | 4 | 1 | 2,360 |
| Hersey Detector..... | | | | | 1 | 3 | 6 | | 10 |
| Hersey Compound..... | | | | | | 6 | 1 | | 7 |
| Hersey Rotary..... | 2 | | | | | | | | 2 |
| Worthington Disc..... | 2 | | | | | | | | 2 |
| Watch Dog..... | 347 | 43 | 100 | 28 | 22 | 14 | 1 | | 555 |
| King..... | 2 | | | | | | | | 2 |
| Arctic..... | | | | 2 | 1 | 1 | | | 4 |
| Trident..... | | | | | | 1 | | | 1 |
| Totals..... | 2,402 | 203 | 139 | 83 | 73 | 32 | 12 | 1 | 2,945 |

Table No. 7. Cause of Meter Changes in 1947.

| MAKE. | Department Test. | Do Not Register. | No Force. | Enlarged Meter. | Coupling Leak. | Clock Broken. | Spindle Leak. | Set Backwards. | Special Test. | Frost. | Total. |
|-----------------------|------------------|------------------|-----------|-----------------|----------------|---------------|---------------|----------------|---------------|--------|--------|
| Hersey Disc..... | 139 | 655 | 62 | 41 | 386 | 16 | 116 | 14 | 110 | 8 | 1,547 |
| Hersey Detector..... | | 5 | 2 | | | | | | | | 7 |
| Hersey Compound..... | | | | 1 | 5 | | 3 | | | | 9 |
| Worthington Disc..... | 3 | 82 | 2 | | 40 | 2 | 35 | 1 | | | 165 |
| Watch Dog..... | 43 | 555 | 15 | 13 | 195 | 8 | 132 | 4 | 25 | 2 | 992 |
| King..... | 7 | 76 | 6 | 1 | 44 | 2 | 21 | | 6 | | 163 |
| Arctic..... | | 2 | | | | | | | | | 2 |
| Nash..... | | | 1 | | 2 | | | | 1 | | 4 |
| Lambert..... | | | | | 1 | | 2 | | | | 3 |
| Crown..... | | 2 | | | 2 | | | | | | 4 |
| Federal..... | | 3 | | | 10 | | 12 | | | | 25 |
| American..... | 4 | 5 | 3 | 1 | 6 | | | | 1 | | 20 |
| Trident..... | 1 | | | | | 1 | | | | | 2 |
| Keystone..... | | 2 | | | | | | | | | 2 |
| Totals..... | 197 | 1,387 | 91 | 57 | 691 | 29 | 321 | 19 | 143 | 10 | 2,945 |

Table No. 8. Meters Applied in 1947.

| MAKE. | DIAMETER IN INCHES. | | | | | | | | Total. |
|----------------------|---------------------|---------------|----|----------------|----|----|----|---|--------|
| | $\frac{5}{8}$ | $\frac{3}{4}$ | 1 | $1\frac{1}{2}$ | 2 | 3 | 4 | 6 | |
| Hersey Disc..... | 257 | 7 | 3 | 35 | 36 | 4 | 9 | 3 | 354 |
| Hersey Compound..... | | | | | | 2 | | | 2 |
| Hersey Detector..... | | | | | | | 1 | 3 | 4 |
| Watch Dog..... | 14 | 3 | 11 | 33 | 29 | 4 | 10 | | 104 |
| Arctic..... | | | | 1 | | | | | 1 |
| Trident..... | | | | | | 1 | | | 1 |
| Totals..... | 271 | 10 | 14 | 69 | 65 | 11 | 20 | 6 | 466 |

| | |
|------------------------------------|-----|
| Meters applied on old service..... | 29 |
| Meters applied on new service..... | 437 |
| Total..... | 466 |

Table No. 9. Meters Discontinued in 1947.

| MAKE. | DIAMETER IN INCHES. | | | | | | | | Total. | Permanently Discontinued. | Vacancies. | Connection Pieces. | Total. |
|-----------------------|---------------------|---------------|----|----------------|----|----|----|---|--------|------------------------------|------------|-----------------------|--------|
| | $\frac{5}{8}$ | $\frac{3}{4}$ | 1 | $1\frac{1}{2}$ | 2 | 3 | 4 | 6 | | | | | |
| Hersey Disc..... | 302 | 40 | 22 | 41 | 27 | 2 | 2 | | 436 | 160 | 25 | 251 | 436 |
| Hersey Compound..... | | | | | | | 8 | 4 | 12 | | | 12 | 12 |
| Watch Dog..... | 124 | 8 | 17 | 31 | 35 | 7 | 12 | | 234 | 48 | 13 | 173 | 234 |
| Worthington Disc..... | 43 | 2 | | 1 | | 1 | | | 47 | 11 | | 36 | 47 |
| American..... | 2 | 1 | | | | | | | 3 | 2 | | 1 | 3 |
| Arctic..... | | | | 3 | 2 | | | | 5 | 3 | 2 | | 5 |
| Federal..... | 9 | | | | | | | | 9 | 4 | | 5 | 9 |
| Crown..... | | | | | 1 | 2 | | | 3 | 1 | | 2 | 3 |
| Nash..... | 1 | 1 | | 1 | | | | | 3 | 1 | | 2 | 3 |
| Trident..... | | | | | | 1 | | | 1 | | 1 | | 1 |
| King..... | 18 | 1 | 4 | | | | | | 23 | 8 | | 15 | 23 |
| Totals..... | 499 | 53 | 43 | 77 | 65 | 13 | 22 | 4 | 776 | 238 | 41 | 497 | 776 |

Table No. 10. Meters Repaired in Service in 1947.

| MAKE. | Defaced and Broken Clocks. | Spindle Leaks. | Coupling Leaks. | No Force. | Broken Gears. | Examinations. | Repaired Trains. | Total. |
|-----------------------|----------------------------|----------------|-----------------|-----------|---------------|---------------|------------------|--------|
| Hersey Disc..... | 133 | 472 | 87 | 4 | 11 | 180 | 2 | 889 |
| Worthington Disc..... | | 4 | 2 | | | 150 | | 156 |
| Watch Dog..... | 29 | 137 | 31 | | 2 | | 1 | 200 |
| King..... | | 35 | 1 | | | 180 | | 216 |
| American..... | | 3 | | | | | | 3 |
| Lambert..... | | 2 | | | | | | 2 |
| Arctic..... | 1 | 3 | | | | | | 4 |
| Nash..... | | 1 | | | | | | 1 |
| Crown..... | 1 | 3 | | | | | | 4 |
| Trident..... | 1 | | | | | | | 1 |
| Keystone..... | 1 | | | | | | | 1 |
| Hersey Detector..... | 1 | | | | | | | 1 |
| Hersey Compound..... | 1 | | | | | | | 1 |
| Totals..... | 168 | 660 | 121 | 4 | 13 | 510 | 3 | 1,479 |

Table No. 11. Meters Salvaged in 1947.

| MAKE. | DIAMETER IN INCHES. | | | | | | | Total. |
|-----------------------|---------------------|-----|---|-------|----|---|---|--------|
| | 8 1/4 | 3/4 | 1 | 1 1/2 | 2. | 3 | 6 | |
| Hersey Disc..... | 84 | 4 | 1 | | | | 2 | 91 |
| Hersey Rotary..... | 2 | | 1 | | | | | 3 |
| Watch Dog..... | 4 | 1 | 1 | 1 | | | | 7 |
| King..... | 173 | 1 | 5 | 6 | 5 | | | 190 |
| Worthington Disc..... | 201 | | | 2 | 1 | | | 204 |
| Federal..... | 32 | | | | | | | 32 |
| American..... | 17 | 5 | | | | | | 22 |
| Lambert..... | 5 | 1 | | | | | | 6 |
| Crown..... | | | 1 | 1 | 2 | 2 | | 6 |
| Nash..... | 1 | | | 2 | | | | 3 |
| Keystone..... | | | | | | | | |
| Totals..... | 519 | 12 | 9 | 12 | 8 | 2 | 2 | 564 |

Table No. 1.

Showing Length of Water Pipe and Connections Owned and Operated by Public Works Department, Water Division, Water Service, and Number of Valves in Same, December 31, 1947.

| DIAMETER OF PIPE IN INCHES. | | | | | | | | | | | | | | | | | | |
|---|--------|--------|-------|--------|--------|--------|---------|---------|-----|-----------|---------|-----------|---------|--------|--------|-------|-----------|--|
| | 48 | 42 | 40 | 36 | 30 | 24 | 20 | 16 | 14 | 12 | 10 | 8 | 6 | 4 | 3 | 2 | Total. | |
| Length owned and operated, De- cember 31, 1946..... | 55,595 | 16,191 | 9,599 | 30,238 | 75,843 | 89,285 | 108,061 | 365,877 | 285 | 1,834,826 | 451,026 | 1,208,664 | 960,832 | 62,442 | 12,486 | 6,509 | 5,287,759 | |
| Gate valves in same..... | 26 | 4 | 5 | 31 | 50 | 75 | 71 | 763 | 14 | 5,195 | 1,580 | 4,480 | 3,144 | 546 | 19 | 18 | 16,027 | |
| Air valves in same..... | 60 | 5 | 10 | 35 | 113 | 84 | 53 | 101 | ... | 64 | 40 | 203 | 141 | 66 | 9 | 5 | 861 | |
| Blow-offs in same..... | 11 | 5 | 6 | 11 | 33 | 37 | 52 | 76 | ... | 166 | 40 | 11,147 | 348 | ... | ... | ... | 15,292 | |
| Length laid and relaid during 1947..... | | | | | | | | | | 3,797 | ... | ... | ... | ... | ... | ... | | |
| Gate valves in same..... | | | | | | | | 1 | ... | 16 | ... | 32 | 1 | ... | ... | ... | 51 | |
| Air valves in same..... | | | | | | | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Blow-offs in same..... | | | | | | | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Length abandoned during 1947..... | | | | | | | | ... | ... | 9 | ... | ... | 1,262 | 535 | 2 | ... | ... | |
| Gate valves in same..... | | | | | | | | ... | ... | ... | ... | ... | 5 | ... | ... | ... | 1,806 | |
| Air valves in same..... | | | | | | | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Blow-offs in same..... | | | | | | | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Length owned and operated, De- cember 31, 1947, including high pressure fire service..... | 55,595 | 16,191 | 9,599 | 30,238 | 75,843 | 89,285 | 108,061 | 365,877 | 285 | 1,838,614 | 451,026 | 1,219,811 | 959,918 | 61,907 | 12,486 | 6,509 | 5,301,245 | |
| Gate valves in same..... | 26 | 4 | 5 | 31 | 50 | 75 | 71 | 764 | 14 | 5,211 | 1,580 | 4,518 | 3,140 | 547 | 19 | 18 | 16,073 | |
| Air valves in same..... | 60 | 5 | 10 | 35 | 113 | 84 | 53 | 101 | ... | 64 | 40 | 203 | 141 | 66 | 9 | 5 | 861 | |
| Blow-offs in same..... | 11 | 5 | 6 | 11 | 33 | 37 | 52 | 76 | ... | 166 | 40 | 11,147 | 348 | ... | ... | ... | 98,849 | |
| High pressure fire service..... | | | | | | | 20,140 | 46,953 | ... | 31,756 | ... | ... | ... | ... | ... | ... | | |

1,004,023 miles in system, including high pressure fire system.
18,721 miles in high pressure fire service.

Financial Transactions, Water Service, 1947.

| | | | |
|---|-----------------------|------------------------|-----------------|
| Cash balance from 1946 | | \$2,605,308 40 | |
| Receipts: | | | |
| Water rates and services | \$4,852,943 24 | | |
| Tax titles — water | 50,333 60 | | |
| | | <u>4,903,276 84</u> | |
| | | | \$7,508,585 24 |
| Expenditures from revenue: | | | |
| Current expenses and extensions | \$1,613,357 63 | | |
| Collecting Department | 162,800 86 | | |
| Auditing Department | 800 00 | | |
| Refunded water rates | 5,095 22 | | |
| Refunded water collections | — | | |
| Refunded water tax titles | — | | |
| Metropolitan assessment | 1,619,881 32 | | |
| | <u>\$3,401,935 03</u> | | |
| Transfer of surplus to city loans, redemption of | 2,558,966 89 | | |
| | | <u>5,960,901 92</u> | |
| | | | \$1,547,683 32 |
| Expenditures from debt account: | | | |
| Boston water debt | \$36,000 00 | | |
| Interest on loans | 8,800 00 | | |
| | | <u>44,800 00</u> | |
| | | | \$1,502,883 32 |
| Cash forwarded to 1948 | | 46,644 65 | |
| Surplus on hand, December 31, 1947 | | 1,456,238 67 | |
| | | <u>\$1,502,883 32</u> | |
| Loan account: | | | |
| Balance outstanding, January 1, 1947 | \$300,000 00 | | |
| Paid during 1947, Boston water debt | 36,000 00 | | |
| | | <u>\$264,000 00</u> | |
| Balance outstanding, December 31, 1947 | | | \$264,000 00 |
| Construction account: | | | |
| Extensions of mains (from revenue) | | \$21,535 68 | |
| Cost of construction, December 31, 1947 | \$24,564,088 42 | | |
| Cost of construction, December 31, 1946 | 24,542,552 74 | | |
| | | <u>\$21,535 68</u> | |
| Increase in plant cost during 1947 | | | \$21,535 68 |
| Cost of existing works, December 31, 1947: | | | |
| Pipe yards and buildings * | \$84,332 16 | | |
| Engineering expense | 57,873 58 | | |
| Distribution system † | 24,222,487 36 | | |
| Hyde Park water works | 175,000 00 | | |
| | | <u>\$24,539,684 10</u> | |
| High pressure fire system ‡ | | 2,293,316 75 | |
| | | <u>\$26,833,000 85</u> | |
| Total cost | | | \$26,833,000 85 |

* \$10,500 deducted on account of abolishment of Charlestown yard.

† Includes \$155,023.89 expended on high pressure fire system in 1925, 1926, 1931, 1932, 1933.

‡ \$33,850.96 deducted from cost of high pressure fire system on account of abandonment of pumping station, Battery street.

Shutting Off and Turning On Water in 1947.

| | |
|--|---------------|
| Number of shut-offs for repairs | 5,824 |
| Number of premises turned on after repairs. | 5,286 |
| Number of shut-offs for vacancy | 213 |
| Number of premises turned on for occupancy | 237 |
| Number of premises shut off for nonpayment of water rates. | 284 |
| Number of premises turned on again after being shut off for nonpayment | 158 |
| Number of premises shut off on account of waste | 2 |
| Number of premises turned on again after being shut off for waste | 0 |
| Number of new service pipes turned on for the first time | 273 |
| <hr/> | |
| Total number of times water was shut off or turned on | <u>12,277</u> |

Table No. II. High Pressure Fire Service.

Showing Lengths of Water Pipes, Connections, Hydrants and Valves in Same, December 31, 1947.

| | 20-Inch. | 16-Inch. | 12-Inch. | 8-Inch. | 6-Inch. | Total. |
|---|----------|----------|----------|---------|---------|--------|
| Length owned and operated, December 31, 1946 (feet).... | 20,140 | 46,953 | 31,756 | ..... | ..... | 98,849 |
| Gates in same..... | ..... | 201 | 144 | 502 | ..... | 847 |
| Blow-offs in same..... | ..... | ..... | ..... | ..... | 6 | 6 |
| Length owned and operated, December 31, 1947 (feet).... | 20,140 | 46,953 | 31,756 | ..... | ..... | 98,849 |
| Gate valves in same..... | ..... | 201 | 144 | 502 | ..... | 847 |
| Blow-offs in same..... | ..... | ..... | ..... | ..... | 6 | 6 |
| High pressure fire hydrants.... | ..... | ..... | ..... | ..... | ..... | 505 |

18.72 miles of mains in system.

WATERWORKS STATISTICS, CITY OF BOSTON.

FOR THE FISCAL YEAR ENDING DECEMBER 31, 1947.

Mains.

Kind of pipe: cast iron, wrought iron, steel.

Size, 2-inch to 48-inch.

Extended, miles, 2.743.

Size enlarged, miles, none.

Total miles now in use, 1,004.023.

Public hydrants added, 26.

Total hydrants now in use, 12,280.

Stop gates added, 51.

Stop gates now in use, 16,073.

Stop gates smaller than 4-inch, 37.

Number of blow-offs, 861.

Range of pressure on mains, 30 to 90 pounds.

Services.

Kind of pipe and size: lead and lead-lined, $\frac{1}{2}$ -inch; cast iron, 2-inch to 16-inch;
wrought iron and cement lined, $\frac{3}{4}$ -inch to 2-inch; brass and copper,
 $\frac{5}{8}$ -inch to 2 $\frac{1}{2}$ -inch.

93

| STREET. | Location. | District. | Size. (Inches.) | Feet. | Materials. | Labor. | Inspection. | Total Cost. | Original Size. (Inches.) | Feet. |
|------------------------|---|---------------|--------------------|------------|-------------|------------|-------------|-------------|-----------------------------|-------------------|
| Cottage street..... | Between Washington street and Milton line. | Hyde Park. | 12 | 180 | \$1,918 70 | \$387 40 | \$127 12 | \$2,413 22 | 4-5 | 180 |
| Cushing avenue..... | Between Columbia road and Wilbur street. | Dorchester. | 8 | 225 | 1,238 91 | 827 41 | 101 72 | 2,168 04 | 6 | 225 |
| Hart street..... | Between Baker and Prospect streets. | West Roxbury. | 8 | 28 | 71 00 | 37 50 | 9 60 | 118 10 | 6 | 28 |
| Upham avenue..... | Between Hancock street and Cushing avenue. | Dorchester. | 12 | 413 | 1,286 49 | 437 12 | 144 81 | 1,808 42 | 6 | 413 |
| Wilbur street..... | Between Cushing and Upham avenues. | Dorchester. | 8 | 87 | 281 82 | 193 12 | 30 28 | 505 22 | 6 | 87 |
| Washington street..... | Between Tyler street and Wolcott road. | Hyde Park. | 12 | 355 | 4,073 78 | 1,017 28 | 254 12 | 5,345 18 | 4-6 | 355 |
| Athelwold street..... | Between School and Thane streets. | Dorchester. | 8 | 54 | 249 20 | 147 52 | 18 64 | 415 56 | 6 | 54 |
| Bradlee street..... | Between School and Washington streets. | Dorchester. | 8 | 24 | 203 62 | 161 12 | 27 48 | 392 22 | 6 | 24 |
| Fairmount avenue..... | Opposite Third New Way..... | Hyde Park. | 12 | 9 | 193 03 | 148 69 | 24 12 | 365 84 | 12 | 9 |
| Fairmount court..... | From Third New Way..... | Hyde Park. | 8 | 195 | 1,040 66 | 697 73 | 179 86 | 1,918 25 | 6 | 195 |
| Third New Way..... | Between Fairmount avenue and Fairmount court. | Hyde Park. | 8 | 236 | 1,278 92 | 901 72 | 216 54 | 2,397 18 | 6 | 236 |
| | | | | | \$11,836 13 | \$4,956 61 | \$1,114 29 | \$17,907 05 | | |
| | | | 8 12 | 849 957 | | | | | 4-6 6 12 | 535 1,262 9 |
| | Totals..... | | | 1,806 | | | | | | 1,806 |

Cost of Extension of Main Pipe, 1947.

| STREET. | Location. | District. | Size. (Inches.) | Feet. | Materials. | Labor. | Inspection. | Total Cost. |
|--------------------------|--|---------------|--------------------|-------|------------|------------|-------------|----------------|
| Alward road..... | Between Weld street and Buchanan road. | West Roxbury. | 8 | 457 | \$2,170 42 | \$1,171 40 | \$159 60 | \$3,501 42 |
| Arnold street..... | Between Vale and River streets..... | Hyde Park. | 8 | 184.5 | 319 36 | 137 60 | 27 41 | 484 37 |
| Ashland street..... | From Everdean street..... | Dorchester. | 8 | 253 | 1,101 91 | 674 40 | 75 42 | 1,851 73 |
| Atwill road..... | From Richmond street..... | West Roxbury. | 8 | 80 | 421 18 | 217 33 | 26 87 | 665 38 |
| Beacon street..... | Between Arlington and Exeter streets. | City. | 8 | 2,590 | 7,544 02 | 3,987 42 | 854 02 | 12,385 46 |
| Beecherof road..... | ..... | Brighton. | 8 | 665 | 3,004 42 | 1,361 01 | 207 41 | 4,572 84 |
| Branch street..... | From Spruce street..... | City. | 8 | 91 | 246 05 | 161 80 | 22 19 | 430 04 |
| Buchanan road..... | Between Alward and Morey roads.... | West Roxbury. | 8 | 179 | 313 08 | 141 86 | 19 81 | 474 75 |
| Charles Street Jail..... | ..... | City. | 8 | 545 | 2,876 40 | 1,197 03 | 183 41 | 4,256 84 |
| Chestnut road..... | Between Walnut and Cedar roads.... | West Roxbury. | 6 | 348 | 569 92 | 243 12 | 89 27 | 902 31 |
| D street..... | Between West First and West Second streets. | South Boston. | 8 | 259 | 2,315 02 | 1,079 63 | 141 49 | 3,536 14 |
| DeStefano road..... | Between Mt. Hope street and Cummings Highway. | West Roxbury. | 8 | 80 | 417 11 | 209 25 | 23 12 | 649 48 |
| Furbush road..... | Between La Grange and Newfield streets. | West Roxbury. | 8 | 250.5 | 660 83 | 417 93 | 125 86 | 1,204 62 |
| Hacksack Circle..... | From Hacksack road..... | West Roxbury. | 8 | 324 | 861 90 | 512 22 | 257 60 | 1,631 72 |
| Hart street..... | Between Baker and Prospect streets. | West Roxbury. | 8 | 571.5 | 1,117 09 | 387 50 | 61 02 | 1,565 61 |
| Hautevale street..... | Between Winton and Poplar streets.. | West Roxbury. | 8 | 259.5 | 1,839 02 | 1,163 12 | 274 98 | 3,277 12 |
| Independence Drive..... | Between Veterans of Foreign Wars Parkway and Sherman road. | West Roxbury. | 12 | 1,119 | 3,529 70 | 1,898 42 | 233 33 | 5,661 45 |
| Jacqueline road..... | Between Ashland avenue and Ansonia road. | West Roxbury. | 8 | 253 | 1,541 75 | 911 47 | 186 42 | 2,639 64 |

| | | | | | | | | |
|-----------------------------------|--|---------------|--------------|------------------------|-------------|-------------|------------|-------------|
| Joyce road..... | From Wood avenue..... | Hyde Park. | 8 | 431 | 1,491 32 | 814 62 | 143 42 | 2,449 36 |
| Keith street..... | Between Albright and La Grange streets. | West Roxbury. | 8 | 394 | 1,169 75 | 643 11 | 98 57 | 1,911 43 |
| Ledgeale road..... | Between Weld street and Buchanan road. | West Roxbury. | 8 | 359 | 987 60 | 549 83 | 87 61 | 1,625 04 |
| Libbey street..... | From Keith street..... | West Roxbury. | 8 | 36.5 | 203 76 | 117 12 | 26 80 | 347 68 |
| Mansfield street..... | Between Alpheus road and Jeffers street. | West Roxbury. | 8 | 245 | 1,453 17 | 779 54 | 86 42 | 2,319 13 |
| Newcroft Circle..... | From River street..... | Dorchester. | 8 | 710 | 2,184 12 | 961 02 | 157 10 | 3,302 24 |
| Paragon road..... | Between Glenhaven road and North avenue. | West Roxbury. | 8 | 520 | 2,790 49 | 1,119 16 | 187 56 | 4,097 21 |
| Sherman road..... | Between Independence Drive and Brookline line. | West Roxbury. | 12 | 1,235 | 5,896 98 | 2,741 09 | 342 12 | 8,980 19 |
| Soldiers Field road..... | Near Telford street..... | Brighton. | 8 | 360 | 951 32 | 312 10 | 162 01 | 1,425 43 |
| Soldiers Field road..... | Near Everett street..... | Brighton. | 12 | 218.5 | 971 60 | 317 11 | 157 12 | 1,445 83 |
| Truman road..... | Between Weld street and Buchanan road. | West Roxbury. | 8 | 417.5 | 1,276 16 | 611 50 | 187 98 | 2,075 64 |
| Vale street..... | From Linwood street..... | Hyde Park. | 8 | 271.5 | 600 11 | 308 11 | 57 28 | 965 50 |
| Veterans of Foreign Wars Parkway. | From Farmington street..... | West Roxbury. | 12 | 113 | 1,318 09 | 587 12 | 93 12 | 1,998 33 |
| Washington street..... | Between Tyler street and Wolcott road. | Hyde Park. | 12 | 128.5 | 1,279 01 | 673 81 | 167 12 | 2,119 94 |
| Wedgemere road..... | From Centre street..... | West Roxbury. | 8 | 70 | 449 62 | 187 32 | 36 80 | 673 74 |
| West Second street..... | Between D and C streets..... | South Boston. | 8 | 290 | 1,641 84 | 982 12 | 176 49 | 2,800 45 |
| Wolcott road..... | From Washington street..... | Hyde Park. | 12 | 26.5 | 187 62 | 98 41 | 37 98 | 324 01 |
| | | | 6 8 12 | 348 11,147 2,840 | \$55,701 74 | \$27,675 60 | \$5,174 73 | \$88,552 07 |
| | Total..... |  | ..... | 14,335 | | | | |

CITY OF BOSTON  PRINTING DEPARTMENT

BOSTON PUBLIC LIBRARY



3 9999 06315 974 1

