







ANNUAL REPORT  
OF THE  
**PUBLIC WORKS DEPARTMENT**

FOR THE

YEAR ENDING DECEMBER 31, 1949.

Boston, January 3, 1950.

HON. JOHN B. HYNES,  
*Mayor of Boston.*

DEAR MR. MAYOR:

I respectfully submit the following report relating to the activities of the Public Works Department for the year ending December 31, 1949:

During the year a particularly important and necessary job was done to strengthen and recondition the pier foundations of the Charlestown Bridge which, upon examination, were found to have deteriorated to an alarming degree. Under a contract awarded to the Crandall Engineering Company, this work is now in progress and will be completed early in the coming year.

Much work of a maintenance nature has been done on the city-owned bridges. This work, of necessity, should not be curtailed. In fact, the time has come when larger sums should be made available for rebuilding many of our bridges which are in a dangerous condition, and for major repairs and maintenance.

For the protection of motorists and others using bridges which carry highway traffic, a contract was awarded in 1948 for the installation of traffic signal flashers and reflectors on such of these structures as have center roadway obstructions. The work of

*Boston City Treasurer's Dept.*

*Jan. 31, 1952*

installation was completed in January of this year, and since these devices were considered as being more properly with the general control of vehicular traffic under the jurisdiction of the Boston Traffic Commission, negotiations were carried on with that department for taking over the operation and maintenance of that equipment on 25 bridges throughout the city, together with the care, control and maintenance of the standard push-button traffic control lights at Chelsea North Bridge, Chelsea Street Bridge, and Malden Bridge. With the approval of the Mayor, the Boston Traffic Commission assumed complete jurisdiction for all of this equipment on March 15 of the current year.

The operating machinery of the ferryboat "Daniel A. MacCormack" was completely overhauled and the superstructure painted under one contract. Under another contract the rudders, propellers and other underwater parts of the boat were repaired. The larger part of this work was done in accordance with the requirements of the Coast Guard Steamship Inspection Service. Repairs of a more or less general nature were made to the Ferry plant on both sides of the harbor.

The department has had a problem where, because of freezing, the fire line water pipe originally installed in the Summer Tunnel has at times been unavailable for use. From time to time minor repairs were made and, this year, it was decided to renew the pipe and encase it with an asphalt and sand mastic which will serve as an insulation and, it is expected, will prevent further trouble from freezing. The work, performed under contract, was completed in December.

Although bids were received on the 30th of November, after public advertisement, for removing the drawspan and as much of the approaches on both sides of the Meridian Street Bridge as is necessary to comply with the requirements of the Secretary of the Army that a 175-foot channelway be provided, a contract for doing the work has not, as yet, been awarded. The original order, modified several times, requires that the alteration must be made by January 31, 1950. Negotiations are now being carried on with officials of the Department of the Army for further time for carrying out this requirement.

The plans prepared by the Crandall Engineering Company for a new structure to replace the existing Warren Bridge, over the Charles River, are completed

and ready for use when it appears advisable to proceed with the erection of a new bridge at that location.

Proposals were received on November 23 for collecting and removing garbage, ashes and rubbish during the coming year. In the last remaining district — the South End — where this work has been done by day-labor forces heretofore, the collections, beginning on January 1, will be made by contract, thereby completing the conversion of the entire city to the system of contract collection.

The work of changing over from gas street lighting to electric street lighting, started last year, has been continued in a very satisfactory manner. During the year, 979 gas lamps were eliminated and replaced by an equal number of electric lamps in the various suburban sections of the city. This program will be carried on without interruption in all sections where electric facilities are available and provided that the Boston Edison Company is able to procure the necessary supplies and equipment required for the new installations.

A large and important program of street construction was prepared for the current year which included the reconstruction of a number of main arteries and of many streets in the residential sections. Considerable resurfacing of roadway areas was done in the downtown section of the city. A list of the major improvements is included in the Highway Division section of this report.

The activities of the Sewer and Water Divisions included the maintenance of the systems and the extension of facilities where required. Complete cooperation was given by these two divisions to developers of property who were erecting new homes, and the Boston Housing Authority was assisted in every way in connection with the construction of its projects.

By its diligence in collecting current water charges as well as overdue accounts, the Water Division ended the year with a surplus of \$632,547.10, a very creditable record.

Respectfully yours,

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

The records of the department show that there are now 2,467 persons eligible for employment in the several divisions, and of that number 2,441 were upon the January, 1950, 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)..... |                 | 21                   | 34     |           |                  | 9       |        |         | 4      | 68     |
| Draftsman.....                   |                 |                      |        |           |                  |         |        |         | 1      | 1      |
| Transitmen.....                  |                 | 5                    | 7      |           |                  | 1       |        |         | 1      | 14     |
| Rodmen.....                      |                 | 5                    |        |           |                  | 1       |        |         |        | 6      |
| Blueprinters.....                |                 |                      | 4      |           |                  |         |        |         |        | 4      |
| Superintendents.....             |                 | 2                    |        |           |                  |         |        | 1       | 1      | 4      |
| Chief supervisor.....            |                 |                      |        | 1         |                  |         |        |         |        | 1      |
| Supervisors.....                 |                 | 3                    | 1      | 1         |                  | 1       |        |         |        | 6      |
| General foremen.....             |                 |                      | 1      |           |                  |         |        |         | 1      | 2      |
| Foremen.....                     |                 | 14                   | 8      | 16        | 16               | 1       |        | 1       | 6      | 62     |
| Chief inspectors.....            |                 | 1                    | 2      |           |                  |         |        |         | 1      | 4      |
| Inspectors-subforemen.....       | 1               | 63                   | 18     | 46        | 30               | 4       |        | 1       | 18     | 181    |
| Executive secretaries.....       | 1               |                      |        |           |                  |         |        |         | 1      | 2      |
| Chief clerks.....                |                 | 1                    | 1      | 2         |                  |         |        |         | 2      | 6      |
| Executive clerks.....            |                 | 1                    | 1      |           |                  | 1       |        |         | 1      | 4      |
| Clerks-stenographers.....        | 10              | 26                   | 11     | 8         | 1                | 3       | 1      | 8       | 55     | 123    |
| Telephone operators.....         |                 |                      |        | 1         |                  |         |        |         | 1      | 2      |
| Cashiers and assistants.....     |                 |                      |        |           |                  |         | 1      | 2       | 2      | 5      |
| Storekeepers.....                |                 |                      |        |           |                  |         | 1      |         | 1      | 2      |
| Medical director and nurse.....  | 2               |                      |        |           |                  |         |        |         |        | 2      |
| Cement tester and assistant..... |                 |                      |        |           |                  |         |        |         |        |        |
| Captains.....                    |                 |                      |        |           |                  |         | 4      |         |        | 4      |
| Quartermaster-pilots.....        |                 |                      |        |           |                  |         | 3      |         |        | 3      |
| Deckhands.....                   |                 |                      |        |           |                  |         | 8      |         |        | 8      |
| Dispatcher.....                  |                 | 1                    |        |           |                  |         |        |         |        | 1      |
| Investigators.....               |                 | 1                    | 1      |           |                  |         |        |         | 3      | 5      |
| Matrons.....                     |                 |                      |        |           |                  |         | 4      |         |        | 4      |
| <i>Carried forward.....</i>      | 15              | 145                  | 90     | 76        | 47               | 22      | 22     | 13      | 100    | 530    |

| TITLE.                                       | SERVICES.       |                      |            |            |                  |            |           |            |            | Total.       |
|--|-----------------|----------------------|------------|------------|------------------|------------|-----------|------------|------------|--------------|
|  | Central Office. | Paving and Lighting. | Sewer.     | Sanitary.  | Street Cleaning. | Bridge.    | Ferry.    | Tunnel.    | Water.     |              |
| <i>Brought forward</i> .....                 | 15              | 145                  | 90         | 76         | 47               | 22         | 22        | 13         | 100        | 530          |
| Engineers (steam).....                       |                 | 6                    | 5          |            |                  |            | 4         |            |            | 15           |
| Oilers .....                                 |                 |                      | 4          |            |                  |            | 6         |            |            | 10           |
| Firemen.....                                 |                 |                      | 8          |            |                  |            | 12        |            |            | 20           |
| Gatemen-tollmen-guards.....                  |                 |                      | 5          |            |                  |            | 15        | 42         |            | 62           |
| Sergeant-tollmen-guards .....                |                 |                      |            |            |                  |            |           | 4          |            | 4            |
| Gatemen-filth hoisters.....                  |                 |                      | 5          |            |                  |            |           |            |            | 5            |
| Meter readers .....                          |                 |                      |            |            |                  |            |           |            | 41         | 41           |
| Drawtenders and assistants .....             |                 |                      |            |            |                  | 161        |           |            |            | 161          |
| Chief and electricians.....                  |                 |                      | 2          |            |                  | 1          |           | 17         |            | 20           |
| Motor equipment maintenance man .....        |                 |                      |            | 1          |                  |            |           |            |            | 1            |
| Master mechanics .....                       |                 | 1                    |            | 4          |                  |            | 1         |            | 6          | 12           |
| Auto mechanic-repairers.....                 |                 | 22                   | 5          | 3          |                  |            |           | 2          |            | 32           |
| Blacksmiths-horseshoers.....                 |                 | 5                    | 1          | 13         |                  |            |           |            | 1          | 20           |
| Carpenters-joiners .....                     |                 | 4                    | 3          | 4          |                  | 12         | 2         |            |            | 25           |
| Harnessmaker and assistant .....             |                 |                      |            | 2          |                  |            |           |            |            | 2            |
| Machinists.....                              |                 |                      | 3          |            |                  | 2          | 4         | 2          | 20         | 31           |
| Painters.....                                |                 | 5                    |            | 8          |                  | 2          | 1         |            |            | 16           |
| Asphalt rakers .....                         |                 | 14                   |            |            |                  |            |           |            |            | 14           |
| Pavers .....                                 |                 | 15                   |            |            |                  | 1          |           |            |            | 16           |
| Plumbers-pipefitters-repairers, etc.....     |                 |                      |            |            |                  |            | 1         |            | 153        | 154          |
| Boilermakers.....                            |                 |                      | 1          |            |                  |            | 1         |            |            | 2            |
| Sewer cleaners-flushers .....                |                 |                      | 24         |            |                  |            |           |            |            | 24           |
| Catch-basin cleaning machine operators ..... |                 |                      | 6          |            |                  |            |           |            |            | 6            |
| Stonecutters-brick masons .....              |                 | 3                    | 3          |            | 1                |            |           |            | 1          | 8            |
| Wheelwrights and assistants .....            |                 |                      |            | 3          |                  |            |           |            |            | 3            |
| Head chauffeurs.....                         |                 | 5                    |            |            |                  |            |           |            |            | 5            |
| Machine operators.....                       |                 | 5                    |            | 7          | 23               |            |           |            |            | 35           |
| Chauffeurs, etc.....                         |                 | 60                   | 31         | 39         | 104              | 5          |           | 13         | 43         | 295          |
| Working foremen, laborers, etc.....          |                 | 5                    | 2          |            | 2                | 3          |           | 1          | 1          | 14           |
| Laborers, teamsters, etc.....                |                 | 187                  | 35         | 97         | 400              | 7          | 6         | 8          | 83         | 823          |
| Wharfinger .....                             |                 |                      |            | 1          |                  |            |           |            |            | 1            |
| Yardmen and Yardmasters .....                |                 | 4                    | 4          | 2          | 1                | 1          |           |            | 3          | 15           |
| Constables.....                              |                 |                      |            |            | 32               |            |           |            | 13         | 45           |
| <b>Totals.....</b>                           | <b>15</b>       | <b>486</b>           | <b>237</b> | <b>260</b> | <b>610</b>       | <b>217</b> | <b>75</b> | <b>102</b> | <b>465</b> | <b>2,467</b> |

**Number of Employees Actually Employed January 1, 1949, and  
January 1, 1950.**

|                           | Tunnel. | Central Office. | Bridge. | Ferry. | Water. | Paving and Lighting. | Sanitary. | Street Cleaning. | Sewer. | Total. |
|---------------------------|---------|-----------------|---------|--------|--------|----------------------|-----------|------------------|--------|--------|
| January 1, 1949 . . . . . | 83      | 13              | 216     | 68     | 430    | 479                  | 328       | 570              | 228    | 2,420  |
| January 1, 1950 . . . . . | 100     | 15              | 204     | 74     | 462    | 480                  | 256       | 605              | 235    | 2,441  |

*Total Eligible Force.*

|                           |     |    |     |    |     |     |     |     |     |       |
|---------------------------|-----|----|-----|----|-----|-----|-----|-----|-----|-------|
| January 1, 1949 . . . . . | 90  | 13 | 219 | 70 | 438 | 484 | 333 | 574 | 230 | 2,451 |
| January 1, 1950 . . . . . | 102 | 15 | 217 | 75 | 465 | 486 | 260 | 610 | 237 | 2,467 |

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

| Died. | Retired. | Transferred to Other Departments. | Transferred to Other Services. | Discharged. | Resigned. | January 1, 1949. | SERVICES,<br>1949-1950. |       | January 1, 1950. | Transferred from Other Services. | Transferred from Other Departments. | Reinstated. | Appointed. |
|-------|----------|-----------------------------------|--------------------------------|-------------|-----------|------------------|-------------------------|-------|------------------|----------------------------------|-------------------------------------|-------------|------------|
|       |          |                                   |                                |             |           |                  |                         |       |                  |                                  |                                     |             |            |
| ...   | ...      | ...                               | ...                            | ...         | ...       | 13               | Central Office.....     | 15    | ...              | 1                                | ...                                 | 1           |            |
| ...   | 3        | 3                                 | 1                              | ...         | 3         | 219              | Bridge.....             | 217   | 1                | ...                              | ...                                 | 7           |            |
| 2     | 1        | ...                               | ...                            | ...         | 2         | 70               | Ferry.....              | 75    | ...              | 1                                | ...                                 | 9           |            |
| 5     | 10       | 2                                 | 1                              | ...         | 3         | 484              | Paving.....             | 486   | 6                | 4                                | 2                                   | 11          |            |
| 3     | 6        | ...                               | 76                             | ...         | ...       | 333              | Sanitary.....           | 260   | 9                | 1                                | ...                                 | 2           |            |
| 8     | 9        | 8                                 | 19                             | ...         | 4         | 574              | Street Cleaning .....   | 610   | 74               | 1                                | 1                                   | 8           |            |
| 3     | 5        | 1                                 | 1                              | ...         | 3         | 230              | Sewer.....              | 237   | 3                | 2                                | 2                                   | 13          |            |
| 4     | 8        | 2                                 | ...                            | 2           | 11        | 438              | Water.....              | 465   | 4                | 3                                | 4                                   | 43          |            |
| ...   | ...      | ...                               | 1                              | ...         | 1         | 90               | Tunnel.....             | 102   | 2                | ...                              | ...                                 | 12          |            |
| 25    | 42       | 16                                | 99                             | 2           | 27        | 2,451            | Totals.....             | 2,467 | 99               | 13                               | 9                                   | 106         |            |



## MAINTENANCE APPROPRIATIONS AND EXPENDITURES.

| DIVISION OR SERVICE.                        | Total Appropriations,<br>Including Transfers. | Expenditures.          | Unexpended<br>Balance. |
|---|---|------------------------|------------------------|
| Central Office . . . . .                    | \$42,419 41                                   | \$42,275 67            | \$143 74               |
| Workmen's Compensation<br>Service . . . . . | 21,000 00                                     | 20,795 79              | 204 21                 |
| Bridge Service . . . . .                    | 759,590 28                                    | 751,551 27             | 8,039 01               |
| Ferry Service . . . . .                     | 378,493 40                                    | 368,107 62             | 10,385 78              |
| Tunnel Service . . . . .                    | 544,974 58                                    | 482,982 71             | 61,991 87              |
| Lighting Service . . . . .                  | 1,210,415 16                                  | 1,193,432 03           | 16,983 13              |
| Paving Service . . . . .                    | 1,457,866 00                                  | 1,451,884 14           | 5,981 86               |
| Sanitary Division . . . . .                 | 5,438,848 60                                  | 5,419,665 82           | 19,182 78              |
| Sewer Division . . . . .                    | 742,554 19                                    | 724,405 46             | 18,148 73              |
| Water Division . . . . .                    | 2,481,954 61                                  | 2,338,164 98           | 143,789 63             |
| <b>Totals</b>                               | <b>\$13,078,116 23</b>                        | <b>\$12,793,265 49</b> | <b>\$284,850 74</b>    |

### Expenditures from Special Appropriations, Etc.

|  |                              |
|--|------------------------------|
| Bridges, Construction of (non-revenue) . . . . .                     | \$41,845 53                  |
| Bridges, Repairs, etc. (revenue) . . . . .                           | 266,551 17                   |
| Reconstruction of Streets (revenue) . . . . .                        | 618,913 78                   |
| Sidewalks, Construction and Reconstruction of<br>(revenue) . . . . . | 131,237 15                   |
| Street Signs (revenue) . . . . .                                     | 3,465 68                     |
| Public Ways, Construction of (revenue) . . . . .                     | 158,804 74                   |
| Public Ways, Construction of (non-revenue) . . . . .                 | 2,556,348 28                 |
| Snow Removal . . . . .   | 411,664 39                   |
| Sewerage Works (revenue) . . . . .                                   | 131,829 35                   |
| Sewerage Works (non-revenue) . . . . .                               | 1,001,222 98                 |
| <b>Total . . . . .</b>   | <b><u>\$5,321,883 05</u></b> |

## REVENUE.

*On Account of Public Works Department.*

|   |                |  |                |
|---|----------------|--|----------------|
| Central Office:   |                |  |                |
| Sale of plans, etc. . . . .   | \$1,830 00     |  | \$1,830 00     |
|   | <hr/>          |  |                |
| Bridge Service:   |                |  |                |
| Rents . . . . .   | \$3,280 00     |  |                |
| Meridian Street Bridge . . . . .  | 15,277 74      |  |                |
| Chelsea North Bridge . . . . .  | 25,617 78      |  |                |
| Charlestown Bridge . . . . .  | 700 00         |  |                |
| Summer Street Bridge . . . . .  | 678 45         |  |                |
| L Street Bridge . . . . .   | 143 77         |  |                |
| Damage to property . . . . .  | 392 80         |  |                |
| Junk . . . . .  | 5 00           |  |                |
|   | <hr/>          |  | 46,095 54      |
| Ferry Service:  |                |  |                |
| Tolls . . . . .   | \$18,639 07    |  |                |
| Rents . . . . .   | 95 00          |  |                |
| Cleaning telephone booths . . . . .   | 24 00          |  |                |
| Commission on telephones . . . . .  | 16 86          |  |                |
| Refund . . . . .  | 2,724 04       |  |                |
| Concessions . . . . .   | 50 00          |  |                |
|   | <hr/>          |  | 21,548 97      |
| Summer Tunnel:  |                |  |                |
| Tolls . . . . .   | \$1,852,560 00 |  |                |
| Rent . . . . .  | 489 84         |  |                |
|   | <hr/>          |  | 1,853,049 84   |
| Paving Service:   |                |  |                |
| From assessments on abutters for<br>cost of laying sidewalks in front of<br>their premises, including material<br>for same: |                |  |                |
| Assessments added to taxes . . . . .  | \$873 27       |  |                |
| Permits . . . . .   | 24,739 66      |  |                |
| Sale of materials, etc. . . . .   | 409 36         |  |                |
| Labor and materials furnished . . . . .   | 24 72          |  |                |
| Junk . . . . .  | 1,900 62       |  |                |
| Rent . . . . .  | 410 00         |  |                |
| Damage to property . . . . .  | 117 00         |  |                |
| Refunds . . . . .   | 238 18         |  |                |
|   | <hr/>          |  | 28,712 81      |
| Sewer Service:  |                |  |                |
| Disposal of sewage . . . . .  | \$19,233 00    |  |                |
| Labor and materials furnished . . . . .   | 291 25         |  |                |
| Entrance fees . . . . .   | 3,139 38       |  |                |
| Junk . . . . .  | 68 93          |  |                |
| Rent . . . . .  | 210 00         |  |                |
| Refunds . . . . .   | 15 00          |  |                |
| Damage to property . . . . .  | 81 64          |  |                |
|   | <hr/>          |  | 23,039 20      |
| Sanitary Service:   |                |  |                |
| Collection of commercial waste . . . . .  | \$2,900 00     |  |                |
| Sale of junk . . . . .  | 33 45          |  |                |
| Refunds . . . . .   | 1,280 67       |  |                |
| Rent . . . . .  | 280 00         |  |                |
|   | <hr/>          |  | 4,494 12       |
| <i>Carried forward</i> . . . . .  |                |  | <hr/>          |
|   |                |  | \$1,978,770 84 |

|  |                |                              |
|--|----------------|------------------------------|
| <i>Brought forward</i>                                   |                | \$1,978,770 48               |
| Water Service:   |                |                              |
| Water rates  | \$4,587,688 99 |                              |
| Water added to taxes                                     | 180,335 42     |                              |
| Service pipes for new takers, extending, repairing, etc. | 4,812 26       |                              |
| Fees on overdue rates                                    | 16 20          |                              |
| Sale of junk, etc.                                       | 1,578 24       |                              |
| Damage to property                                       | 1,324 01       |                              |
| Labor and materials                                      | 4,531 89       |                              |
| Deposit account  | 74,529 58      |                              |
| Elevator and fire pipe connections                       | 1,609 87       |                              |
| Refund   | 1,862 11       |                              |
|  |                | <u>4,858,288 57</u>          |
| Grand total  |                | <u><u>\$6,837,059 05</u></u> |



PART II.  
APPENDICES.

## APPENDIX A.

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

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BOSTON, January 3, 1950.

*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, 1949. The appropriations and expenditures for the Division were as follows:

|   |                       |
|---|-----------------------|
| <i>Bridge Service.</i>                          |                       |
| Regular appropriation, 1949 . . . . .           | \$764,790 28          |
| Transfer from . . . . .                         | 9,000 00              |
|   | <hr/>                 |
|   | \$755,790 28          |
| Transfer to . . . . .                           | 3,800 00              |
|   | <hr/>                 |
|   | \$759,590 28          |
| Expenditures, 1949 . . . . .                    | 751,551 27            |
|   | <hr/>                 |
| Unexpended balance, December 31, 1949 . . . . . | <u>\$8,039 01</u>     |
| <br><i>Bridges, Repairs, Etc.</i>               |                       |
| Balance from 1948 . . . . .                     | \$119,567 12          |
| Appropriation, 1949 . . . . .                   | 250,000 00            |
|   | <hr/>                 |
|   | \$369,567 12          |
| Transfers from . . . . .                        | 3,800 00              |
|   | <hr/>                 |
|   | \$365,767 12          |
| Expenditures, 1949 . . . . .                    | 266,551 17            |
|   | <hr/>                 |
| Unexpended balance, December 31, 1949 . . . . . | <u>\$99,215 95</u>    |
| <br><i>Bridges, Construction of.</i>            |                       |
| Balance from 1948 . . . . .                     | \$2,389,998 95        |
| Expenditures, 1949 . . . . .                    | 41,845 53             |
|   | <hr/>                 |
| Unexpended balance, December 31, 1949 . . . . . | <u>\$2,348,153 42</u> |

*Ferry Service.*

|   |                    |
|---|--------------------|
| Regular appropriation, 1949 . . . . .           | \$394,523 40       |
| Expenditures, 1949 . . . . .                    | 368,107 62         |
|   | <hr/>              |
| Unexpended balance, December 31, 1949 . . . . . | <u>\$26,415 78</u> |

*Ferry Improvements, Etc.*

|   |                 |
|---|-----------------|
| Balance from 1948 . . . . .                     | \$523 75        |
| Appropriation, 1949 . . . . .                   | 00 00           |
| Expenditures, 1949 . . . . .                    | 00 00           |
|   | <hr/>           |
| Unexpended balance, December 31, 1949 . . . . . | <u>\$523 75</u> |

*Sumner Tunnel.*

|   |                    |
|---|--------------------|
| Regular appropriation, 1949 . . . . .           | \$544,974 58       |
| Expenditures, 1949 . . . . .                    | 482,982 71         |
|   | <hr/>              |
| Unexpended balance, December 31, 1949 . . . . . | <u>\$61,991 87</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 1949.

The city operates one ferry, the so-called "South Ferry," 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 general repairs to the Bennington Street Bridge: resurfacing, painting, etc., the Brooks Street Bridge and Stairway, Brighton; emergency strengthening of piers of Charlestown Bridge; repairs to the Gove Street Footbridge; repairing fender piers of Meridian Street Bridge; guniting and painting Temple Street Bridge; repairing pile bents and roadway of Warren Bridge; rebuilding the superstructure of Walworth Street Bridge; resurfacing Winthrop Bridge; emergency repairs to machinery of Summer Street Bridge; emergency repairs to machinery foundation of Summer Street Bridge; steel repairs to Allston and Boylston Street Bridges; repairing the pavement of the Sumner Traffic Tunnel; renewing water pipe, Sumner Traffic Tunnel; cleaning

the surface drainage system of the Sumner Tunnel; cleaning exhaust duct and exhaust fan rooms of the Sumner Tunnel; renewing traffic signal control cables at the Sumner Tunnel; furnishing and installing two turnstiles at the South Ferry; cleaning and painting the hull of the ferryboat "Daniel A. MacCormack"; general repairs to the ferryboat "Daniel A. MacCormack"; strengthening northerly pier of gallows frame foundation, South Ferry, East Boston, etc.

#### BRIDGE SERVICE.

*General Repairs to the Bennington Street Bridge, over the former Boston, Revere Beach & Lynn Railroad.*

Due to the very poor condition of the roadway plank and steel work of this bridge, extensive repairs were necessary and a contract was entered into with Martin J. Kelly Company, Inc., for doing this work. Work commenced October 3, 1949, and is now in progress. It is expected that the work will be completed early in 1950. Payments of \$9,241.09 have been made to date.

*Resurfacing, Painting, Etc., the Brooks Street Bridge and Stairway in Brighton.*

Because of the defective condition of the roadway surface, which allowed water to leak through to the steel work, a contract was entered into with Charles A. Reynolds to remove the existing surface, grout the concrete underdeck, resurface, make necessary repairs and paint. The work commenced August 22, 1949, and was completed October 1, 1949, at a cost of \$2,001.17.

*Emergency Repairs to the Charlestown Bridge Piers.*

An under water inspection of the pier foundations disclosed that seven of the piers had been undermined to an alarming degree. Test samples of the concrete removed showed very poor material for depths up to 2 and 3 feet. Conditions indicated that immediate repairs were necessary and the city entered into a contract with the Crandall Engineering Company for strengthening the pier foundations by driving a short steel bulkhead at the most defective sections, in such a way as to allow the work to be continued, and then



filling between the sheeting and the pier with concrete placed by tremie method. The work commenced August 17, 1949, and is now in progress. Work is expected to be completed about midyear in 1950. Payments of \$54,243.91 have been made to date.

*Repairs to Gove Street Footbridge.*

A contract was entered into with Martin J. Kelly Company, Inc., for making necessary steel repairs, renewing the planking of the walkway and stairways, and cleaning and painting. Work was commenced May 1, 1949, and completed October 5, 1949, at a cost of \$15,524.85.

*Repairs to Gove Street Footbridge (Additional Work).*

While work was progressing on the previous contract it was found necessary to make more extensive repairs to the steel work than was first estimated. Another contract was entered into with Martin J. Kelly Company, Inc., for this additional work using the original bid prices as a basis. The work commenced September 27, 1949, and was completed October 5, 1949, at a cost of \$2,392.50.

*Steel Repairs to the Massachusetts Avenue Bridge, over the Boston & Albany Railroad.*

Extensive repairs to the steel work, including placing new cover plates on the bottom flanges of all girders was commenced in September, 1948, under a contract entered into with Frederick W. Byron. Due to slow deliveries of steel the work was stopped December 21, 1948, and was resumed May 9, 1949. It was completed August 8, 1949, at a cost of \$57,017.90.

*Repairing Fender Piers at Meridian Street Bridge.*

Due to damage caused by the tanker "Abiqua" on January 14, 1949, the upstream end of the East Boston fender pier and the downstream end of the main fender pier were badly damaged. In order to restore the fenders, which protect the drawspan and landing, the city entered into a contract with W. H. Ellis & Son Company, to make necessary repairs. The work was commenced March 21, 1949, and was completed April 29, 1949, at a cost of \$5,385.35.

The shipping interests involved have been billed for the damage.

*Emergency Repairs to the Machinery Foundation at Summer Street Bridge, over Fort Point Channel.*

A collapse of the wooden foundation made it necessary to rebuild immediately. A contract was entered into with the W. H. Ellis & Son Company, and work commenced September 12, 1949, and was completed October 5, 1949, at a cost of \$3,828.37.

*Emergency Repairs to Machinery at Summer Street Bridge, over Fort Point Channel.*

Due to a severe breakdown, caused by foundation failure, it was necessary to make extensive repairs to the machinery. A contract was entered into with the Daniel Marr & Son Company, and work commenced September 6, 1949, and was completed September 29, 1949, at a cost of \$2,221.43.

*Guniting and Painting Temple Street Bridge, Brighton, under the New York, New Haven & Hartford Railroad.*

In order to eliminate a dangerous condition, due to disintegrating surface concrete in extensive areas of the arch and wing walls, a contract was entered into with the Coleman-Doyle Company, for necessary repairs. Work commenced August 18, 1949, and was completed December 12, 1949, at a cost of \$5,014.90.

*Rebuilding the Superstructure of the Walworth Street Bridge, over the New York, New Haven & Hartford Railroad.*

Due to the almost complete failure of the wooden stringers and the poor condition of the roadway planking this division made designs for a new superstructure comprising steel stringers, wood planking, and asphalt concrete wearing surface. A contract was entered into with the Rossano Construction Company, Inc., who commenced work May 16, 1949, and completed same September 8, 1949, at a cost of \$12,649.54.

*Repairing the Pile Bents and Roadway of Warren Bridge.*

In order to continue maintaining traffic it was necessary to make further repairs to the roadway plank, stringers and piles. A contract was entered into with

M. Rufo Company, Inc., for this work. Work commenced May 17, 1949 and was completed November 14, 1949, at a cost of \$34,576.94.

*Resurfacing the Winthrop Bridge, over Belle Isle Inlet.*

Due to the badly worn and disintegrated condition of the 2-inch fir wearing surface, the City of Boston and the Town of Winthrop, the joint owners of the bridge, decided to remove the fir wearing surface and replace with sheet asphalt after making necessary repairs to the roadway deck. A contract was entered into with the Martin J. Kelly Company, Inc., and work commenced May 24, 1949, and was completed June 9, 1949, at a total cost of \$2,859.71. Boston's share at 60 per cent was \$1,715.82 and Winthrop's at 40 per cent was \$1,143.89.

*Steel Repairs to the Allston and Boylston Street Bridges, over the Boston & Albany Railroad.*

Due to the very poor condition of the old blast plates over the two northerly tracks, disintegrated concrete at the fascias at the Allston Bridge, and the need of strengthening the hangars at the Boylston Street Bridge, a contract was entered into with the Eastern Construction Company for this work. Work commenced September 19, 1949, and is now in progress. The work is expected to be completed early in 1950. Payments of \$14,078.50 have been made to date.

*Furnishing and Installing Traffic Signal Flashers and Reflectors on Various Bridges.*

The work of installing traffic lights and flashers was commenced in October, 1948, under a contract with the Eagle Signal Corporation, which in turn made an agreement with the Boston Edison Company to furnish and place all underground installations at a cost of \$14,152.30. This work was completed in January, 1949, at a cost of \$38,091.30.

*Maintenance Force.*

The Maintenance Force patched and replaced deck sheathing, headers, and sidewalk planking on various bridges; repaired platforms; cleaned and painted drawhouses; made repairs to drawhouses and controller houses; regulated the counterweights of bascule bridges, as required; 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; 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.

Ordinary electrical and machinery maintenance work was done by the electricians 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:

#### *General Repairs to Ferryboat "Daniel A. MacCormack."*

A contract was entered into with the Quincy Drydock and Yacht Corporation for making a complete overhaul of the machinery and painting the superstructure. Work was commenced May 25, 1949, and was completed August 4, 1949, at a cost of \$28,774.28.

*Cleaning and Painting Hull of Ferryboat  
"Daniel A. MacCormack."*

A contract was entered into with the Bethlehem Steel Company for drydocking, and making repairs to the rudders, propellers, etc. The work commenced May 17, 1949, and was completed May 24, 1949, at a cost of \$10,811.70.

*Strengthening Northerly Pier of Gallows Frame  
Foundation, South Ferry, East Boston Side.*

As a result of an underwater inspection, which showed that the concrete at the tops of the foundation piles was badly disintegrated and in need of immediate repairs, a contract was entered into with the M. & R. Construction Company for strengthening, by building a wooden cofferdam around the pier and filling with concrete. Work commenced September 26, 1949, and was completed December 23, 1949, at a cost of \$19,452.85.

*Strengthening Southerly Piers of Gallows Frame  
Foundation, South Ferry, Boston Side.*

This work was commenced under a contract with the James B. Rendle Company November 22, 1948, and was completed February 8, 1949, at a cost of \$14,261.52.

*Furnishing and Installing Two Turnstiles  
at the South Ferry.*

The coin operated turnstiles in use being in very poor condition, the city entered into a contract with Martin J. Kelly Company, Inc., to replace them with new manual operated turnstiles. Work commenced April 4, 1949, and was completed May 20, 1949, at a cost of \$2,260.

*Removing Ashes, Cinders, Clinkers,  
and Refuse from the Ferryboats.*

A contract was entered into with J. H. Stack & Co. for performing this work commencing January 1, 1949, and completing December 31, 1949, at a cost of \$2,366.10.

*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.

##### *Renewing the Water Pipe in the Sumner Tunnel.*

The original fire line water pipe had been damaged several times in the past by freezing conditions, necessitating numerous repairs. It was decided this year to renew the pipe for the full length of the tunnel and to encase the pipe with an asphalt and sand mastic. A contract was entered into with Andrew P. Keegan. Work commenced August 22, 1949, and was completed December 22, 1949, at a cost of \$19,000.

##### *Repairing the Pavement of the Sumner Tunnel.*

A contract was entered into with the Hancock Construction Company, Inc., for repairing the granite block pavement of the roadway. Work commenced April 11, 1949, and was completed May 18, 1949, at a cost of \$9,757.25.

##### *Cleaning the Surface Drainage System of the Sumner Tunnel.*

A contract was entered into with Andrew P. Keegan for cleaning the draining system, including sump and seepage chambers. Work commenced August 1, 1949, and was completed August 18, 1949, at a cost of \$3,231.

##### *Cleaning Exhaust Duct and Exhaust Fan Rooms of the Sumner Tunnel.*

A contract was entered into with James A. Freaney, Inc., for doing this periodic maintenance work. Work commenced December 1, 1949, and was completed December 22, 1949, at a cost of \$2,342.

##### *Renewing Traffic Signal Central Cables at the Sumner Tunnel.*

Due to advanced disintegration of the original cables, a contract was entered into with Kenworthy & Taylor, Inc., for renewing the cables and junction boxes, which were supplied by the city, at an estimated cost of \$6,783. Work is expected to commence early in 1950.

*Summary of Operations During 1949.*1. *Vehicular Traffic.*

|                      | 1945      | 1946      | 1947      | 1948      | 1949      |
|----------------------|-----------|-----------|-----------|-----------|-----------|
| Total.....           | 7,223,762 | 8,432,721 | 8,748,162 | 8,784,545 | 9,162,266 |
| Monthly Average..... | 601,980   | 702,727   | 729,014   | 729,545   | 763,522   |
| Weekly Average.....  | 138,918   | 162,168   | 168,234   | 168,356   | 176,197   |
| Daily Average.....   | 19,791    | 23,103    | 23,968    | 23,920    | 25,171    |

2. *Power.*

The Boston Edison Company supplies the electric power at 13,800 volts. This voltage is transformed to 2,300 volts and 115-120 volts for the operation of fans, pumps, heat, lighting, etc.

|                      | 1945      | 1946      | 1947      | 1948      | 1949      |
|----------------------|-----------|-----------|-----------|-----------|-----------|
| Total Kilowatts..... | 4,097,633 | 5,809,371 | 5,133,526 | 5,173,596 | 4,403,936 |
| No. of Vehicles..... | 7,223,762 | 8,432,721 | 8,748,162 | 8,784,545 | 9,162,266 |

3. *Garage Service.*

|               | 1945 | 1946 | 1947 | 1948 | 1949 |
|---------------|------|------|------|------|------|
| Tow Jobs..... | 291  | 327  | 321  | 358  | 242  |

4. *Booth Red Signal.*

|                     | 1945     | 1946    | 1947    | 1948     | 1949    |
|---------------------|----------|---------|---------|----------|---------|
| Booth Red On.....   | 7        | 5       | 4       | 21       | 16      |
| Total Duration..... | 155 min. | 57 min. | 51 min. | 146 min. | 83 min. |

5. *Fires.*

There were no fires in the Tunnel in 1949.

6. *Motors, Fans, Dampers, and Controllers.*

All of the 28 fan motors (14 blowers and 14 exhausters) are in good working condition and are operating efficiently.

All fans have had the oil and grease changed at regular intervals.

All 28 controllers were overhauled and adjusted and are working properly.

7. *Transformers, Circuit Breakers, and Relays.*

All transformers (20) have had the oil tested for acidity and new oil added as required.

All circuit breakers were tested and set for correct voltage operation.

All relays were tested, reset as needed, and adjusted for the safety of the equipment.

8. *Carbon Monoxide Equipment.*

The four Micro-Max recorders are recording properly; repairs and adjustments were made under periodic inspections.

All four carbon monoxide analyzers are operating; adjustments were made as required.

9. *Toll Equipment.*

The toll registers are under constant supervision and are operating properly. Any adjustments of counters and relays were made as needed.

All key boxes were inspected and overhauled. Mechanical and electrical repairs were made as required.

Routine insulation tests of all cables and wiring have been made and pressure tests of treadles indicate all are in good condition. All defective treadles were repaired and replaced as required.

10. *Pumps.*

Various changes to valves and piping in the harbor pump room were made to improve the operation of the pumps. Similar changes and adjustments to float switches, valves, etc., were made in the portal pump room. Repairs to motors and controls were made as needed.

11. *Storage Batteries.*

In each of the ventilating buildings there is a set of 60 storage batteries that are used for emergency lighting. These batteries are under strict supervision and maintenance and are in first-class condition.

12. *Traffic Signals.*

All damaged and defective traffic signals were replaced as needed. All broken glass and lenses were replaced as needed. Defective relays and contacts were replaced in traffic signal relay cabinet.

13. *Motor Generators.*

There are four motor generator sets and all are operating efficiently. Under the regular maintenance schedule, all repairs to brushes, commutators and controls are being performed.

14. *Telephone System.*

All defective hand sets and instruments have been replaced. Repairs and replacements of relays, cords and jacks on the main switchboard were made as required.

15. *Tunnel. General.*

On July 5, 1949, the one hundred millionth car passed through the tunnel. This occasion was noted by exercises held on the Boston Plaza. Mayor James M. Curley was the principal speaker. County, State, and Civic officials were also present.

On June 16, 1949, all oil trucks were prohibited from using the tunnel.

Specifications were written and a contract for the removal of the old 4-inch water line was awarded. This line was replaced with all new pipe and fittings, total length 5,500 feet.

During the past year, it was necessary to remove the paving and reset the drop inlet at the Boston portal.

Specifications were written and a contract was awarded to make repairs to the tunnel roadway. This work amounted to the relaying of defective areas of granite paving. All of this work was performed between the hours of 12.30 A.M. and 5 A.M., and with no interruption to vehicular traffic.

All catch basins, drop inlets, drain pipes, harbor pump room, and portal pump rooms have been cleaned and are in good condition.

Invitation bids were sent out and a contract was awarded for the pointing of the granite wall at the East Boston exit. All open joints were raked out and replaced with new cement mortar.

New uniforms and hats were purchased for all tollman-guards.

Specifications were written and advertised for a contract to clean the fresh air duct. This work was performed between the hours of 12.30 A.M. and 5.30 A.M. with no interference to vehicular traffic.

During the past year, the following automotive equipment was purchased for the tunnel:

1 G. M. C. emergency service truck, 10-ton.

1 aerial ladder for relamping standards.

Specifications were written and advertised to replace 6,200 feet of traffic signal cables. This work was started in January, 1950.

On October 13, 1949, the City Treasurer publicly notified the holders of the 4½ per cent Traffic Tunnel Bonds, City of Boston, that these bonds were being called for retirement and cancellation on December 1, 1949.



## MISCELLANEOUS WORK.

*Meridian Street Bridge.*

Under a contract with the Charles A. Maguire Associates, plans and specifications for the proposed new Meridian Street Bridge were brought to completion.

In order to provide a 175-foot waterway at the site of the existing bridge by January 31, 1950, as required by order of the U. S. Army Engineers, specifications were drawn up and bids received on November 30, 1949, for the work of removing the present drawspan, the entire Chelsea approach and approximately 142 feet of the East Boston approach. The low bidder for this work was the M. & R. Construction Company, in the amount of \$43,200. This work has not been awarded to date.

*Warren Bridge.*

Plans and specifications for the proposed new Warren Bridge were completed on July 26, 1949, under a contract with the Crandall Engineering Company. This division worked in conjunction with the above concern in the preparation of the plans and specifications. As of December 31, 1949, the city has paid a total of \$80,447 to the Crandall Engineering Company for services rendered in accordance with their contract, the total estimated cost of which is \$94,500.

Yours respectfully,

JOHN DEMEULENAER,  
*Division Engineer.*

## BRIDGE SERVICE.

## FINANCIAL STATEMENT FOR 1949.

*Total Expenditures.*

|  |                |
|--|----------------|
| From Maintenance Appropriation . . . . . | \$751,551 27   |
| From Special Appropriations . . . . .    | 308,396 70     |
|  | <hr/>          |
|  | \$1,059,947 97 |

*Expenditures on Boston Bridges.**Administration.*

|  |             |
|--|-------------|
| Division engineer . . . . .                | \$3,215 26  |
| Supervisor . . . . .                       | 3,831 03    |
| Engineers, draftsmen, and rodmen . . . . . | 43,082 97   |
| Clerks . . . . .                           | 7,771 03    |
| Inspectors . . . . .                       | 12,059 25   |
| Foreman . . . . .                          | 3,444 03    |
| Pensions . . . . .                         | 7,625 27    |
| Injured employees . . . . .                | 221 38      |
|  | <hr/>       |
|  | \$81,250 22 |

*Office.*

|   |             |
|---|-------------|
| Printing, postage, and stationery . . . . .       | \$2,357 66  |
| Engineers, instruments, new and repairs . . . . . | 413 23      |
| Typewriter and adding machine service . . . . .   | 57 90       |
| Binding . . . . .                                 | 15 00       |
| Blueprint room . . . . .                          | 113 13      |
| Supplies . . . . .                                | 93 59       |
| Traveling expenses . . . . .                      | 46 15       |
|   | <hr/>       |
|   | 3,096 66    |
|   | <hr/>       |
|   | \$84,346 88 |

*Yard and Stock Room.**Yard.*

|   |             |
|---|-------------|
| Clerks, yardman and watchman . . . . .        | \$13,475 74 |
| Holidays, vacations, and sick leave . . . . . | 6,560 37    |
| Traveling expenses . . . . .                  | 206 60      |
| Telephone . . . . .                           | 312 64      |
| Tools, new and repaired . . . . .             | 2,025 18    |
| Repairs in yard and building . . . . .        | 427 70      |
| Supplies . . . . .                            | 647 79      |
| Motor equipment . . . . .                     | 7,099 50    |
|   | <hr/>       |
|   | \$30,755 52 |

*Stock Room.*

|                             |             |
|-----------------------------|-------------|
| Stock purchased . . . . .   | \$20,146 54 |
| Stock used . . . . .        | 20,687 07   |
|                             | <hr/>       |
| Decrease in stock . . . . . | 540 53      |
|                             | <hr/>       |
|                             | \$30,214 99 |

## Repairs on Inland Bridges.

| BRIDGES.   | Labor<br>and<br>Material. |
|--|---------------------------|
| Allston  | \$139 04                  |
| Atlantic Avenue  | 34 95                     |
| Arlington Street   | 525 91                    |
| Babson Street  | 26 06                     |
| Bennington Street  | 1,279 24                  |
| Blakemore Street   | 379 54                    |
| Boston Street  | 106 42                    |
| Boylston Street  | 3,596 58                  |
| Braddock Park-Follen Street (foot)                                 | 162 42                    |
| Broadway Extension   | 491 53                    |
| Butler Street (foot)   | 175 15                    |
| Byron Street   | 1,127 86                  |
| Cambridge Street, over Boston & Maine Railroad                     | 28 64                     |
| Camden Street-Gainsborough Street (foot)                           | 313 08                    |
| Clarendon Street   | 209 01                    |
| Dana Avenue  | 1,152 41                  |
| Dorchester Avenue, over railroad                                   | 31 80                     |
| Durham Street-West Rutland Square (foot)                           | 26 88                     |
| Dartmouth Street (rent \$300)                                      | 559 71                    |
| Everett Street   | 569 90                    |
| Fairmount Avenue   | 1,109 94                  |
| Glenwood Avenue  | 290 22                    |
| Harrison Avenue  | 132 40                    |
| Irvington Street-Yarmouth Street                                   | 494 28                    |
| Jones Avenue (foot)  | 639 04                    |
| Massachusetts Avenue, over New York, New Haven & Hartford Railroad | 349 25                    |
| Milton Lower Mills   | 672 28                    |
| Mystic Avenue  | 476 12                    |
| Neptune Road   | 63 95                     |
| Perkins Street (foot)  | 703 86                    |
| Redfield Street  | 287 66                    |
| Reservoir Road   | 549 97                    |
| River Street   | 207 80                    |
| Saratoga Street  | 126 90                    |
| Southampton Street   | 127 70                    |
| Summer Street, over A Street                                       | 53 76                     |
| Summer Street, over B Street                                       | 53 77                     |
| Summer Street, over C Street                                       | 53 77                     |
| Toll Gate Way (foot)   | 421 63                    |
| Tremont Street   | 639 65                    |
| Walworth Street  | 198 93                    |
| West Fourth Street   | 1,380 46                  |
| West Newton Street   | 2,728 11                  |
| Winthrop   | 270 69                    |
| Cleaning bridges   | 4,622 20                  |
| Snow and sanding   | 1,682 75                  |
| Other services   | 4,691 98                  |
| <b>Total</b>   | <b>\$34,004 60</b>        |

## Tidewater Bridges, 1949.

| BRIDGES.             | Drawtenders<br>Salaries. | Mechanics<br>Wages. | Material.   | Repair<br>Bills. | Supplies.   | Total.       |
|----------------------|--------------------------|---------------------|-------------|------------------|-------------|--------------|
| Broadway.....        | \$31,713 81              | \$4,265 40          | \$1,951 12  | \$3,849 35       | \$639 65    | \$42,419 33  |
| Charlestown.....     | 51,945 55                | 5,443 37            | 5,772 46    | 4,459 08         | 968 00      | 68,588 46    |
| Chelsea North.....   | 38,418 62                | 2,573 57            | 1,749 51    | 1,071 23         | 1,189 15    | 45,002 08    |
| Chelsea South.....   | 37,043 30                | 4,473 29            | 1,016 33    | 664 43           | 615 98      | 43,813 33    |
| Chelsea Street.....  | 37,475 95                | 1,666 09            | 566 75      | 1,489 33         | 693 55      | 41,891 67    |
| Congress Street..... | 36,223 24                | 3,065 24            | 899 72      | 57 75            | 627 23      | 40,873 18    |
| Dover Street.....    | 30,662 14                | 4,377 39            | 1,263 98    | 3,068 81         | 430 19      | 39,802 51    |
| L Street*.....       | 37,136 79                | 1,604 23            | 151 56      | 176 41           | 701 19      | 39,770 18    |
| Malden.....          | 40,379 93                | 1,483 90            | 206 81      | 1,692 35         | 843 05      | 44,606 04    |
| Meridian.....        | 38,291 98                | 3,669 63            | 861 35      | 2,727 92         | 772 65      | 46,323 53    |
| Northern Avenue..... | 39,796 34                | 3,824 23            | 1,293 92    | 3,524 43         | 2,726 58    | 51,165 50    |
| Summer Street.....   | 36,624 80                | 3,387 06            | 775 08      | 2,429 97         | 466 14      | 43,683 05    |
| Warren.....          | 34,819 88                | 11,595 01           | 4,298 27    | 3,844 57         | 488 21      | 55,045 94    |
| Totals.....          | \$490,532 33             | \$51,428 41         | \$20,806 86 | \$29,055 63      | \$11,161 57 | \$602,984 80 |

\*Now Summer Street, over Reserved Channel.

## SUMMARY.

|                               |                     |
|-------------------------------|---------------------|
| Administration . . . . .      | \$81,250 22         |
| Office . . . . .              | 3,096 66            |
| Yard and stock room . . . . . | 30,214 99           |
| Inland bridges . . . . .      | 34,004 60           |
| Tidewater bridges . . . . .   | 602,984 80          |
| Total . . . . .               | <u>\$751,551 27</u> |

## SPECIAL APPROPRIATIONS.

## BRIDGES, REPAIRS, ETC.

|   |             |             |
|---|-------------|-------------|
| Albany Street Bridge, over Boston and Albany Railroad:                  |             |             |
| Charles A. Reynolds, painting . . . . .                                 |             | \$342 90    |
| Allston Bridge:   |             |             |
| Eastern Contracting Company . . . . .                                   | \$8,928 15  |             |
| Traffic signal flashers and reflectors . . . . .                        | 1,483 65    |             |
| Advertising . . . . .   | 13 00       |             |
|   | <hr/>       | 10,424 80   |
| Arlington Street Bridge:  |             |             |
| Traffic signal flashers and reflectors . . . . .                        | \$1,825 75  |             |
| Relocate lamp . . . . .   | 350 00      |             |
|   | <hr/>       | 2,175 75    |
| Bennington Street Bridge, over Boston, Revere Beach & Lynn Railroad:    |             |             |
| Martin J. Kelly Company, Inc. . . . .                                   | \$9,241 09  |             |
| Traffic signal flashers and reflectors . . . . .                        | 1,202 05    |             |
| Advertising . . . . .   | 27 50       |             |
|   | <hr/>       | 10,470 64   |
| Berkeley Street Bridge, over New York, New Haven and Hartford Railroad: |             |             |
| Traffic signal flashers and reflectors . . . . .                        |             | 1,358 25    |
| Boston Street Bridge:   |             |             |
| Traffic signal flashers and reflectors . . . . .                        |             | 1,494 66    |
| Boylston Street Bridge:   |             |             |
| Eastern Contracting Company . . . . .                                   | \$5,150 43  |             |
| Advertising . . . . .   | 13 00       |             |
|   | <hr/>       | 5,163 43    |
| Broadway and Albany Street Bridges:                                     |             |             |
| Traffic signal flashers and reflectors . . . . .                        |             | 1,521 06    |
| Broadway Bridge, over Foundry Street:                                   |             |             |
| Traffic signal flashers and reflectors . . . . .                        |             | 1,149 26    |
| Brooks Street Bridge and Stairway:                                      |             |             |
| Charles A. Reynolds . . . . .   | \$2,001 17  |             |
| Advertising . . . . .   | 26 00       |             |
|   | <hr/>       | 2,027 17    |
| Cambridge Street Bridge, over Boston & Maine Railroad:                  |             |             |
| Traffic signal flashers and reflectors . . . . .                        |             | 1,901 78    |
| Charlestown Bridge:   |             |             |
| Crandall Engineering Company . . . . .                                  | \$54,243 91 |             |
| Gustavo Preston Company . . . . .                                       | 365 25      |             |
|   | <hr/>       | 54,609 16   |
| Columbus Avenue Bridge:   |             |             |
| Traffic signal flashers and reflectors . . . . .                        |             | 2,272 36    |
| <i>Carried forward</i> . . . . .  |             | <hr/>       |
|   |             | \$94,911 22 |

|   |             |              |
|---|-------------|--------------|
| <i>Brought forward</i> . . . . .  |             | \$94,911 22  |
| Cummins Highway Bridge, Mattapan:   |             |              |
| Martin J. Kelly Company, Inc. . . . .   | \$8,101 46  |              |
| Traffic signal flashers and reflectors . . . . .                              | 1,407 76    |              |
|   | <hr/>       | 9,509 22     |
| Dorchester Avenue Bridge, at Rawson Street:                                   |             |              |
| Traffic signal flashers and reflectors . . . . .                              |             | 1,838 96     |
| Gove Street Footbridge:   |             |              |
| Martin J. Kelly Company, Inc. . . . .   | \$17,917 35 |              |
| Advertising . . . . .   | 25 50       |              |
|   | <hr/>       | 17,942 85    |
| Harvard Street Bridge:  |             |              |
| Traffic signal flashers and reflectors . . . . .                              |             | 1,349 46     |
| Massachusetts Avenue Bridge, over Boston &<br>Albany Railroad:                |             |              |
| Frederick W. Byron . . . . .  | \$57,017 90 |              |
| Advertising . . . . .   | 26 50       |              |
|   | <hr/>       | 57,044 40    |
| Massachusetts Avenue Bridge, over New York,<br>New Haven & Hartford Railroad: |             |              |
| Traffic signal flashers and reflectors . . . . .                              |             | 1,873 06     |
| Mystic Avenue Bridge:   |             |              |
| Traffic signal flashers and reflectors . . . . .                              |             | 2,706 20     |
| Meridian Street Bridge:   |             |              |
| W. H. Ellis & Son Company . . . . .   | \$5,385 35  |              |
| Machinery parts, gears . . . . .  | 480 00      |              |
| Advertising . . . . .   | 25 50       |              |
|   | <hr/>       | 5,890 85     |
| Norfolk Street Bridge:  |             |              |
| Traffic signal flashers and reflectors . . . . .                              |             | 1,379 16     |
| Northern Avenue Bridge:   |             |              |
| Traffic signal flashers and reflectors . . . . .                              |             | 1,479 26     |
| Southampton Street Bridge:  |             |              |
| Traffic signal flashers and reflectors . . . . .                              |             | 1,359 36     |
| Summer Street Bridge, over B Street:  |             |              |
| Traffic signal flashers and reflectors . . . . .                              |             | 1,472 66     |
| Summer Street Bridge, over Fort Point<br>Channel:                             |             |              |
| Daniel Marr & Son Company . . . . .   | \$2,221 43  |              |
| Traffic signal flashers and reflectors . . . . .                              | 1,416 56    |              |
| Machinery parts, gears . . . . .  | 993 00      |              |
|   | <hr/>       | 4,630 99     |
| Summer Street Bridge, over Reserved Channel:                                  |             |              |
| Traffic signal flashers and reflectors . . . . .                              |             | 1,725 57     |
| Temple Street Bridge:   |             |              |
| Coleman Doyle Company, Inc. . . . .   | \$2,723 40  |              |
| Advertising . . . . .   | 27 00       |              |
|   | <hr/>       | 2,750 40     |
| Tremont Street Bridge:  |             |              |
| Traffic signal flashers and reflectors . . . . .                              | \$2,824 56  |              |
| Relocate lamp . . . . .   | 1,346 00    |              |
|   | <hr/>       | 4,170 56     |
| <i>Carried forward</i> . . . . .  |             | \$212,034 18 |

|  |             |                     |
|--|-------------|---------------------|
| <i>Brought forward</i> . . . . .                 |             | \$212,034 18        |
| Warren Bridge:                                   |             |                     |
| M. Rufo Company, Inc. . . . .                    | \$37,021 75 |                     |
| Traffic signal flashers and reflectors . . . . . | 1,319 83    |                     |
| Advertising . . . . .                            | 26 00       |                     |
|  | <hr/>       | 38,367 58           |
| Walworth Street Bridge:                          |             |                     |
| Rossano Contracting Company . . . . .            | \$12,649 54 |                     |
| Advertising . . . . .                            | 26 00       |                     |
|  | <hr/>       | 12,675 54           |
| West Fourth Street Bridge:                       |             |                     |
| Traffic signal flashers and reflectors . . . . . |             | 1,730 06            |
| Winthrop Bridge:                                 |             |                     |
| Martin J. Kelly Company, Inc. . . . .            | \$1,715 82  |                     |
| Advertising . . . . .                            | 27 99       |                     |
|  | <hr/>       | 1,743 81            |
| Total . . . . .                                  |             | <u>\$266,551 17</u> |

## BRIDGES, CONSTRUCTION OF.

|   |  |                    |
|---|--|--------------------|
| Meridian Street Bridge:                 |  |                    |
| Charles A. Maguire Associates . . . . . |  | \$4,990 53         |
| Warren Bridge:                          |  |                    |
| Crandall Engineering Company . . . . .  |  | 36,855 00          |
| Total . . . . .                         |  | <u>\$41,845 53</u> |

## SUMMARY.

## Expenditures from Special Appropriations.

|                                 | Balances<br>from<br>1948. | Total Credits,<br>Including<br>Balances<br>Carried Over<br>and Transfers. | Expended<br>During Year<br>1949. | Unexpended<br>Balances<br>December 31,<br>1949. |
|---------------------------------|---------------------------|---|----------------------------------|---|
| Bridges, repairs, etc . . . . . | \$119,567 12              | \$365,767 12  | \$266,551 17                     | \$99,215 95                                     |
| Bridges, construction of . .    | 2,389,998 95              | 2,389,998 95  | 41,845 53                        | 2,348,153 42                                    |
| Totals . . . . .                | \$2,509,566 07            | \$2,755,766 07  | \$308,396 70                     | \$2,447,369 37                                  |



## Draw Openings, 1949.

| BRIDGES.             | STEAMERS. |        |        | SAILING VESSELS. |        |        | TUGS.  |        |        | BARGES. |        |        | ALL OTHERS. |        |        | TOTAL NUMBER OF VESSELS. |        |        | TOTAL NUMBER OF CARGOES. | TOTAL NUMBER OF OPENINGS. |
|----------------------|-----------|--------|--------|------------------|--------|--------|--------|--------|--------|---------|--------|--------|-------------|--------|--------|--------------------------|--------|--------|--------------------------|---------------------------|
|                      | Day.      | Night. | Total. | Day.             | Night. | Total. | Day.   | Night. | Total. | Day.    | Night. | Total. | Day.        | Night. | Total. | Day.                     | Night. | Total. |                          |                           |
|                      |           |        |        |                  |        |        |        |        |        |         |        |        |             |        |        |                          |        |        |                          |                           |
| Broadway.....        | 4         | 0      | 4      | 0                | 0      | 0      | 410    | 2      | 412    | 0       | 2      | 2      | 398         | 0      | 398    | 812                      | 4      | 816    | 203                      | 416                       |
| Charlestown.....     | 0         | 18     | 18     | 0                | 0      | 0      | 85     | 40     | 125    | 180     | 110    | 290    | 161         | 52     | 213    | 426                      | 220    | 646    | 136                      | 519                       |
| Chelsea North.....   | 838       | 80     | 918    | 0                | 0      | 0      | 6,530  | 824    | 7,354  | 1,188   | 321    | 1,509  | 365         | 28     | 393    | 8,921                    | 1,253  | 10,174 | 1,849                    | 3,987                     |
| Chelsea South.....   | 3         | 0      | 3      | 0                | 0      | 0      | 751    | 540    | 1,291  | 291     | 254    | 542    | 0           | 0      | 0      | 1,045                    | 791    | 1,836  | 261                      | 1,120                     |
| Chelsea Street.....  | 952       | 340    | 1,292  | 0                | 0      | 0      | 3,452  | 588    | 4,040  | 284     | 85     | 369    | 835         | 210    | 1,045  | 5,523                    | 1,223  | 6,746  | 1,157                    | 3,429                     |
| Congress Street..... | 72        | 47     | 119    | 0                | 0      | 0      | 1,208  | 218    | 1,426  | 164     | 1      | 165    | 552         | 22     | 574    | 1,936                    | 288    | 2,284  | 603                      | 1,267                     |
| Dover Street.....    | 2         | 0      | 2      | 0                | 0      | 0      | 448    | 1      | 449    | 0       | 0      | 0      | 448         | 1      | 449    | 898                      | 2      | 900    | 222                      | 466                       |
| L Street*.....       | 2         | 9      | 11     | 0                | 0      | 0      | 362    | 768    | 1,130  | 295     | 185    | 480    | 1,416       | 1,793  | 3,209  | 2,075                    | 2,755  | 4,830  | 1,565                    | 4,308                     |
| Malden.....          | 21        | 0      | 21     | 0                | 0      | 0      | 446    | 87     | 533    | 363     | 127    | 490    | 347         | 141    | 488    | 1,177                    | 355    | 1,532  | 285                      | 1,249                     |
| Meridian Street..... | 672       | 94     | 766    | 0                | 0      | 0      | 7,375  | 1,381  | 8,756  | 3,216   | 1,344  | 4,560  | 2,641       | 609    | 3,250  | 13,904                   | 3,428  | 17,332 | 2,700                    | 8,368                     |
| Northern Avenue..... | 70        | 54     | 124    | 3                | 2      | 5      | 2,033  | 356    | 2,389  | 1,225   | 59     | 1,284  | 258         | 124    | 382    | 3,589                    | 595    | 4,184  | 680                      | 2,085                     |
| Summer Street.....   | 59        | 39     | 98     | 0                | 0      | 0      | 976    | 196    | 1,172  | 111     | 16     | 127    | 747         | 60     | 807    | 1,893                    | 311    | 2,204  | 373                      | 1,033                     |
| Warren.....          | 71        | 78     | 149    | 136              | 100    | 236    | 861    | 361    | 1,222  | 715     | 538    | 1,253  | 1,610       | 997    | 2,607  | 3,393                    | 2,074  | 5,467  | 990                      | 3,212                     |
| Totals.....          | 2,766     | 759    | 3,525  | 139              | 102    | 241    | 24,937 | 5,362  | 30,299 | 8,032   | 3,039  | 11,071 | 9,778       | 4,637  | 13,815 | 45,652                   | 13,299 | 58,951 | 11,024                   | 31,489                    |

\* Now Summer Street, over Reserved Channel.

## FERRY SERVICE.

### FINANCIAL STATEMENT FOR THE YEAR ENDING DECEMBER 31, 1949.

#### *Toll Receipts, 1949.*

|  |             |
|--|-------------|
| Total cash receipts during the year.....           | \$18,492 75 |
| Cash in hands of tollmen at beginning of year..... | \$60 00     |
| Cash paid over to City Collector.....              | \$18,492 75 |
| Cash in hands of tollmen at end of year.....       | \$60 00     |

#### *Breakdown of Toll Receipts, 1949.*

|                           |             |
|---------------------------|-------------|
| From foot passengers..... | \$4,494 65  |
| From vehicles.....        | 13,998 10   |
|                           | \$18,492 75 |

|                       | From Foot<br>Passengers. | From<br>Vehicles. | Total.      |
|-----------------------|--------------------------|-------------------|-------------|
| Boston side.....      | \$2,244 47               | \$6,657 95        | \$8,902 42  |
| East Boston side..... | 2,250 18                 | 7,340 15          | 9,590 33    |
| Totals.....           | \$4,494 65               | \$13,998 10       | \$18,492 75 |

### TRAVEL ON THE SOUTH FERRY, FROM JANUARY 1, 1949, TO DECEMBER 31, 1949, INCLUSIVE.

|  |         |
|--|---------|
| Foot passengers . . . . .  | 449,465 |
| Handcart or wheel barrow and men . . . . .                             | 4,568   |
| Horse and rider . . . . .  | —       |
| Horse and cattle, each with attendant . . . . .                        | —       |
| One or two-horse vehicle with driver . . . . .                         | 3,477   |
| Passenger automobile with driver and one passenger . . . . .           | 114,439 |
| Passenger automobile with driver and more than one passenger . . . . . | 350     |
| Motor truck, six tons or less, with driver . . . . .                   | 10,235  |
| Motor truck, over six tons, with driver . . . . .                      | 2,821   |
| Free vehicles . . . . .  | 82      |

## SUMNER TRAFFIC TUNNEL.

## Annual Traffic by Classification for the Year 1949.

| CLASS.        | Toll.  | Description.   | No. of<br>Vehicles. |
|---------------|--------|--|---------------------|
| 1.            | \$0 20 | Truck not in excess of two tons capacity.<br>Tractor without trailer.  | 445,915             |
| 2.            | 0 20   | Passenger car.   | 8,408,658           |
| 3.            | 0 20   | Motorcycle.  | 2,690               |
| 4.            | 0 25   | Truck over two tons and up to five tons<br>capacity. Tractor with trailer over two<br>tons and up to five tons capacity. | 29,635              |
| 5.            | 0 20   | Passenger car with trailer.  | 11,832              |
| 6.            | 0 35   | Truck over five tons and up to ten tons<br>capacity. Tractor with trailer over five<br>tons and up to ten tons capacity. | 9,151               |
| 7.            | 0 20   | Tractor with trailer not in excess of two<br>tons capacity.  | 797                 |
| 8.            | 1 00   | Truck over ten tons capacity. Tractor with<br>trailer over ten tons capacity.  | 872                 |
| 9.            | 0 35   | Bus with or without passengers.  | 298                 |
| * City-owned  |        |  | † 252,418           |
| Total traffic |        |  | 9,162,266           |

\* MTA and Eastern Massachusetts Railway buses are included in this classification.  
 † 7,566 MTA and 174,749 Eastern Massachusetts Railway buses at 35 cents are included  
 in this total.

## SUMNER TRAFFIC TUNNEL.

## Comparative Traffic Count.

| 1945.     | 1946.     | 1947.     | 1948.     | 1949.     |
|-----------|-----------|-----------|-----------|-----------|
| 7,224,565 | 8,432,721 | 8,748,162 | 8,754,545 | 9,162,266 |

## SUMNER TRAFFIC TUNNEL.

Comparison of Receipts, Expenditures, Interest, and Sinking Fund Requirements,  
1945 to 1949, Inclusive.

|                               | 1945.          | 1946.          | 1947.          | 1948.          | 1949.          |
|-------------------------------|----------------|----------------|----------------|----------------|----------------|
| Operating expenditure.....    | \$288,390 83   | \$334,345 71   | \$395,060 35   | \$428,733 58   | \$482,982 71   |
| Balance to next year.....     | 6,293 00       | 14,256 34      | 11,850 05      | 4,298 18       | —              |
| Interest requirements.....    | \$31,540 00    | \$31,207 50    | \$75,673 75    | \$36,876 25    | \$37,611 25    |
| Sinking fund requirements...  | 265,107 00     | —              | †<br>‡ 2 80    | †              | †              |
| Total expenses.....           | \$1,391,330 83 | \$1,179,809 55 | \$1,282,586 95 | \$1,269,908 01 | \$1,320,593 96 |
| Receipts.....                 | \$1,455,246 18 | \$1,709,491 00 | \$1,758,149 30 | \$1,776,655 00 | \$1,853,049 84 |
| Balance from previous year... | —              | 6,293 00       | 14,256 34      | 11,850 05      | 4,298 18       |
| Total receipts.....           | \$1,455,246 18 | \$1,715,784 00 | \$1,772,405 64 | \$1,788,505 05 | \$1,857,348 02 |
| Net result.....               | * \$63,915 35  | * \$535,974 45 | * \$489,818 69 | * \$518,597 04 | * \$536,754 06 |

\* Excess.

† None required.

‡ Refunded tolls.

## APPENDIX B.

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 REPORT OF THE DIVISION ENGINEER  
 OF THE HIGHWAY DIVISION.
 

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BOSTON, January 3, 1950.

*To the Commissioner of Public Works.*

DEAR SIR:

The following annual report of the Highway Division for the year 1949 is submitted:

## PAVING SERVICE.

## Summary of Budget Appropriations.

*Maintenance.*

|                                  |                   |
|----------------------------------|-------------------|
| Appropriation for 1949 . . . . . | \$1,457,866 00    |
| Expenditures . . . . .           | 1,451,884 14      |
| Balance unexpended . . . . .     | <u>\$5,981 86</u> |

*Reconstruction of Streets.*

|                                  |                    |
|----------------------------------|--------------------|
| Appropriation for 1949 . . . . . | \$636,990 49       |
| Expenditures . . . . .           | 618,913 78         |
| Balance unexpended . . . . .     | <u>\$18,076 71</u> |

*Public Ways, Construction of (Revenue).*

|                                  |                 |
|----------------------------------|-----------------|
| Appropriation for 1949 . . . . . | \$159,396 85    |
| Expenditures . . . . .           | 158,804 74      |
| Balance unexpended . . . . .     | <u>\$592 11</u> |

*Public Ways, Construction of (Non-Revenue).*

|                                  |                       |
|----------------------------------|-----------------------|
| Appropriation for 1949 . . . . . | \$4,056,348 28        |
| Expenditures . . . . .           | 2,556,348 28          |
| Balance unexpended . . . . .     | <u>\$1,500,000 00</u> |

*Sidewalks, Construction and Reconstruction of.*

|                                  |                   |
|----------------------------------|-------------------|
| Appropriation for 1949 . . . . . | \$135,767 75      |
| Expenditures . . . . .           | 131,237 15        |
|                                  | <hr/>             |
| Balance unexpended . . . . .     | <u>\$4,530 60</u> |

*Snow Removal.*

|                                  |                   |
|----------------------------------|-------------------|
| Appropriation for 1949 . . . . . | \$420,450 24      |
| Expenditures . . . . .           | 411,664 39        |
|                                  | <hr/>             |
| Balance unexpended . . . . .     | <u>\$8,785 85</u> |

*Street Signs.*

|                                  |                   |
|----------------------------------|-------------------|
| Appropriation for 1949 . . . . . | \$7,000 00        |
| Expenditures . . . . .           | 3,465 68          |
|                                  | <hr/>             |
| Balance unexpended . . . . .     | <u>\$3,534 32</u> |

The amount of money taken in through the Permit Office was \$25,651.91; of this amount \$22,321.41 was deposited with the City Collector and \$3,330.50 was billed to the Public Service Corporations. There are now on file 2,391 bonds protecting the City of Boston against claims that may be made on account of the permits issued.

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

Contracts were awarded for the construction and reconstruction of 172 streets during the year and 107 were completed. Work was also completed on 41 streets that were unfinished from 1948.

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

Beacon street, from Raleigh street to east of Brookline avenue.

Bowdoin street, from Geneva avenue to Hancock street.

Brighton avenue, from Malvern street to Cambridge street.

Cambridge street, from Union square to Allston Railroad Bridge.

Centre street, from Columbus avenue to South Huntington avenue.

Chauncy street, from Summer street to Essex street.

Congress street, from State street to Dock square.

Congress, Franklin, Pearl, and High streets, around the new Telephone Company Building.

Dorchester avenue, from West Broadway to West Fourth street.

Dorchester avenue, from south of Charles street to Gallivan Boulevard.

Dorchester avenue, from Gallivan Boulevard to St. Gregory street and from Richmond street to Washington street.

Dudley street, from Washington street to Columbia road.

Faneuil street, from Parsons street to Montfern avenue.

Geneva avenue, from Blue Hill avenue to Park street.

Hancock street, from Bowdoin street to Columbia road.

Huntington avenue, from Wigglesworth street to Tremont street.

Hyde Park avenue, from Collins street to Arlington street.

Market street, from Washington street to Leo M. Birmingham Parkway.

Massachusetts avenue, from Boylston street to Back street.

Old Colony avenue, from Dorchester avenue to Columbia road.

Rutherford avenue, from Chapman street to City square.

Sawyer avenue, from Pleasant street to Cushing avenue.

State street, from Broad street to Atlantic avenue.

Talbot avenue, from Blue Hill avenue to Dorchester avenue.

Washington street, from Kneeland street to Broadway.

Washington street, from Dudley street to Columbus avenue.

Washington street, from Haymarket square to Adams square.

Washington Street North, from Haymarket square to Causeway street.

#### LIGHTING SERVICE.

The following is a summary of the budget appropriation for the Lighting Service for 1949:

|                                  |                    |
|----------------------------------|--------------------|
| Appropriation for 1949 . . . . . | \$1,210,415 16     |
| Expenditures . . . . .           | 1,193,432 03       |
|                                  | <hr/>              |
| Balance unexpended . . . . .     | <u>\$16,983 13</u> |

The following is a statement of the work done during 1949:

Electric lamps of 1,600 c.p. were installed on Brighton avenue, Brighton. These 43 lamps are the mercury vapor type.

Electric lamps of 1,000 c.p. were installed as follows: Cambridge street (1), Kelton street (10), Warren street (14), Brighton; Beacon street (1), Boston Common (1), Cotting street (1), Harrison avenue (10), Massachusetts avenue (18), North Margin street (1), North square (1), Prince street (1), Staniford street (1), State street (4), City Proper; Norfolk street (1), Dorchester; Randall street (1), Roxbury; Bolton street (2), Dorchester avenue (9), East Broadway (12), West Seventh street (2), Strandway (4), South Boston; Green street (1), Washington street (1), West Roxbury.

Electric lamps of 600 c.p. were installed as follows: Strathmore road (1), Brighton; Braddock park (1), Stoneholm street (1), City Proper; Topliff street (1), Dorchester; Paris street (2), East Boston; Circuit street (1), Crawford street (1), Roxbury; Perkins street (1), West Roxbury; Hartford street (1), Lingard street (1), Robin Hood street (2), Roxbury; Dorchester street (2), South Boston.

Electric lamps of 400 c.p. were installed as follows: Cummings road (9), Chiswick road (1), Brighton; Michigan avenue (1), Rhoades street (2), Dorchester; Folsom street (5), Glenwood street (1), Pontiac street (4), Roxbury; Gardner street (1), West Roxbury.

Electric lamps of 250 c.p. were installed as follows: Holton street (1), Brighton; Cameron street (4), Ledgebrook road (2), Leahaven road (2), Meadowbrook avenue (5), Norwell street (1), Tovar street (2), Southmere road (2), Dorchester; Cottage street (3), Wolcott road (4), Hyde Park.

Electric lamps of 100 c.p. were installed as follows: Allen road (1), Allston street (2), Ashford terrace (1), Bennett street (2), Blaine avenue (2), Brackett street (2), Chester street (1), Glencoe street (1), Hobson street (3), Holton street (6), Hobart street (1), Kenrick street (1), Lawrence place (1), Malbert road (1), Murdock street (1), Newcastle road (2), Oak Square avenue (2), Parsons street (3), Platt road (1), Pratt street (1), Surrey street (1), Wiltshire road (1), Brighton; Ashland street (2), Austin avenue (2), Brockton street (1), Capen street (1), Chickatawbut street (1), Frost avenue (1), Greenfield road (1), Irma street (1), Matapan street (1), Olney street (1), Orchardfield street (4),



Parkman street (2), Peverell street (1), Sedalia street (1), Sumner street (1), Wheatland avenue (1), Woodhaven street (2), Dorchester; Orient avenue (1), East Boston; Baker street (1), Providence street (1), Stark avenue (1), Wachusett street (1), Hyde Park; Highland place (1), Lambert avenue (1), Lambert street (1), Linwood square (1), Logan street (1), Loyola street (2), Regent court (2), Sunset street (1), Thornton street (3), Willoughby place (1), Roxbury; Alpheus road (1), Bateman street (3), Beech street (3), Bonair street (1), Bradstreet avenue (1), Bronx road (1), Brown avenue (2), Buchanan road (1), Canterbury street (1), Carlson Circle (2), Castleton street (2), Catherine street (2), Cranston road (2), Cypress street (1), Delano park (1), Eastwood Circuit (1), Ferncroft road (1), Florence street (1), Gardner street (1), Glendower street (1), Glenside avenue (1), Grew Hill road (2), Grove terrace (1), Hart street (2), Hastings street (1), Holbrook street (4), Lasell street (1), Ledgewood road (2), Lyall street (1), Oakdale street (3), Orchard street (2), Paragon road (3), Park street (2), Pond street (1), Poplar street (4), Potomac street (1), Rambler road (1), Rockwood street (1), Seaverns avenue (2), Sheridan street (3), Temple street (1), Tollgate Way (1), Vermont street (1), Vincent road (1), Wachusett street (2), Willow street (2), Woodley avenue (1), Wycliff avenue (1), Zamora street (1), West Roxbury.

On January 1, 1949, 5,343 street and 172 fire alarm lamps were increased from 80 to 100 candle power.

During the year 979 gas lamps in various suburban areas were removed and replaced by an equal number of 100 c.p. electric lamps.

Electric Fire Alarm lamps were installed as follows: Allston street (1), Franklin Field Housing Project (10), Hartford street (2), Alsen Village Housing Project (3), Morton street (1), Dorchester; Washington street (1), Warren street (1), Roxbury; Washington street (1), West Roxbury.

Respectfully,

R. C. DWYER,  
*Division Engineer.*

Objects of Expenditures from Maintenance Appropriation, Classified by Districts, from January 1, 1949,  
to December 31, 1949.

| Districts.                             | Macadam Repairs. | Granolithic Sidewalk Repairs. | Removal of Snow. | Street Cleaning. | Edgstone, Sidewalk and Gutter Repairs. | Bituminous Sidewalk Repairs. | Miscellaneous. | Total.         |
|--|------------------|-------------------------------|------------------|------------------|--|------------------------------|----------------|----------------|
| South Boston and Dorchester North..... | \$7,814 63       | \$15,348 82                   | \$2,963 80       | \$5,838 88       | \$8,041 19                             | \$513 62                     | .....          | \$40,520 94    |
| East Boston.....                       | 13,176 89        | 1,465 08                      | 2,242 48         | 5,284 04         | 433 00                                 | 12,365 58                    | .....          | 34,987 07      |
| Charlestown.....                       | 9,592 58         | 4,592 51                      | 2,316 53         | 5,870 90         | 226 72                                 | 7,359 71                     | .....          | 29,958 95      |
| Brighton.....                          | 15,498 23        | 15,502 90                     | 2,131 41         | 4,723 94         | 2,295 57                               | 1,610 37                     | .....          | 41,732 42      |
| West Roxbury.....                      | 31,063 97        | 25,087 77                     | 5,546 83         | 5,799 29         | 995 53                                 | 3,733 39                     | .....          | 74,167 78      |
| Dorchester.....                        | 9,243 68         | 15,430 24                     | 3,860 98         | 2,913 95         | 1,527 04                               | 1,218 93                     | .....          | 34,194 82      |
| Roxbury South and Jamaica Plain.....   | 25,504 38        | 17,265 88                     | 3,508 66         | 1,333 97         | 116 21                                 | 17,663 93                    | .....          | 65,333 03      |
| City Proper.....                       | 32,500 46        | 9,255 78                      | 2,335 20         | 3,940 70         | 2,914 10                               | 13,302 60                    | .....          | 64,248 84      |
| Aslmont.....                           | 14,698 68        | 19,545 55                     | 3,592 19         | 12,588 85        | 1,885 50                               | .....                        | .....          | 52,250 77      |
| Hyde Park.....                         | 9,795 98         | 3,611 05                      | 1,711 62         | 2,689 62         | 2,227 05                               | 5,415 39                     | .....          | 25,450 71      |
| Totals.....                            | \$168,889 48     | \$127,045 58                  | \$30,149 70      | \$51,004 14      | \$20,392 91                            | \$65,183 52                  | \$989,018 81   | \$1,451,884 14 |

Miscellaneous includes: Fence repairs, \$4,613.59; sanding streets, \$8,179.72; street signs, \$20,334.32; F-11, \$3,172.91; F-7, \$41,916.87; miscellaneous, \$910,801.40.  
Special Appropriations: Public Ways, Construction of (revenue), \$158,804.74; Reconstruction of Streets (revenue), \$618,913.78; Public Ways, Construction of (non-revenue), \$2,536,348.28; Sidewalks, Construction and Reconstruction of (revenue), \$131,237.15; Snow Removal (revenue), \$411,664.39; Street Signs, \$3,463.68;  
Totals, Specials, \$3,880,434.02.  
Totals (Maintenance and Specials), \$5,332,318.16.

YEARLY REPORT OF WORK DONE BY DEPARTMENT  
FORCES FOR 1949.

|  |                       |
|--|-----------------------|
| Brick sidewalks, laid and relaid . . . . .         | 11,660 square yards.  |
| Gravel sidewalks, relaid . . . . .                 | 2,713 square yards.   |
| Artificial stone sidewalks, laid (new) . . . . .   | 8,765 square feet.    |
| Artificial stone sidewalks, relaid (old) . . . . . | 166,915 square feet.  |
| Bituminous concrete sidewalks . . . . .            | 44,085 square yards.  |
| Block gutters, laid . . . . .                      | 684 square yards.     |
| Granite block roadway, laid . . . . .              | 50 square yards.      |
| Edgestone set (new) . . . . .                      | 607 linear feet.      |
| Edgestone reset (old) . . . . .                    | 6,141 linear feet.    |
| Macadam roadway, patched . . . . .                 | 123,092 square yards. |
| Macadam roadway, resurfaced . . . . .              | 7,933 square yards.   |
| Street cleaning . . . . .                          | 12,622 cubic yards.   |
| Snow removal . . . . .                             | 30,316 cubic yards.   |

HIGHWAY DIVISION — PAVING SERVICE.

Street Work Done in 1949 by Contract.

SUMMARY.

|   |                       |
|---|-----------------------|
| Earth and water box excavation . . . . .                        | 133,268 cubic yards.  |
| Rock and wall excavation . . . . .                              | 4,952 cubic yards.    |
| Bank gravel . . . . .   | 106,622 tons.         |
| Crushed stone . . . . .   | 2,236 tons.           |
| Existing concrete base removed . . . . .                        | 31,436 square yards.  |
| Existing pavement removed . . . . .                             | 102,124 square yards. |
| Straight edgestone set . . . . .                                | 21,444 linear feet.   |
| Circular edgestone set . . . . .                                | 1,690 linear feet.    |
| Corners set . . . . .   | 399                   |
| Precast straight edgestone set . . . . .                        | 20,663 linear feet.   |
| Precast circular edgestone set . . . . .                        | 1,422 linear feet.    |
| Precast corners set . . . . .                                   | 297                   |
| Edgestone reset . . . . .                                       | 96,964 linear feet.   |
| Concrete base, class B . . . . .                                | 4,813 cubic yards.    |
| Concrete base, class B . . . . .                                | 3,083 square yards.   |
| Extra concrete . . . . .  | 335 cubic yards.      |
| Bituminous macadam base . . . . .                               | 178,669 square yards. |
| Bituminous concrete base . . . . .                              | 8,996 square yards.   |
| Granite block pavement . . . . .                                | 1,441 square yards.   |
| Granite block hip gutters . . . . .                             | 1,343 square yards.   |
| Three-inch sheet asphalt pavement . . . . .                     | 245,358 square yards. |
| One and one-half-inch sheet asphalt pavement . . . . .          | 491,202 square yards. |
| Sheet asphalt binder . . . . .                                  | 78,068 tons.          |
| Two and one-quarter-inch bituminous concrete pavement . . . . . | 1,284 square yards.   |
| Bituminous concrete binder . . . . .                            | 5 tons.               |

|   |                        |
|---|------------------------|
| Artificial stone sidewalks . . . . .        | 1,168,680 square feet. |
| Bituminous concrete sidewalks . . . . .     | 9,524 square yards.    |
| Artificial stone foundation . . . . .       | 1,809 cubic yards.     |
| Covers reset . . . . .                      | 5,500                  |
| Courses of brick . . . . .                  | 10,725                 |
| Concrete around boxes . . . . .             | 1,555 cubic yards.     |
| Loam spaces . . . . .                       | 710 square yards.      |
| Bradley heads reset . . . . .               | 98                     |
| Chain link fence . . . . .                  | 2,102 linear feet.     |
| Cedar post fence . . . . .                  | 40 linear feet.        |
| Ground water drain . . . . .                | 605 linear feet.       |
| New catch basins . . . . .                  | 4                      |
| Catch basins remodeled . . . . .            | 3                      |
| New drop inlets . . . . .                   | 5                      |
| Reinforced concrete wall removed . . . . .  | 611 cubic yards.       |
| Concrete curb . . . . .                     | 25 cubic yards.        |
| Class A reinforced concrete walls . . . . . | 490 cubic yards.       |

TABLE SHOWING LENGTH AND AREA OF PAVING ON ACCEPTED STREETS, CONCRETE TO JANUARY 1, 1950.

|                            | 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. | Total.     |
| Year 1948 Report . . . . . | 198.51           | 1226.83           | 164.19         | 0.48        | 0.56              | 0.87   | 324.78    | 1187.28  | 12.26   | 0.83        | 716.59  | 3,961,552             | 14,220,404        | 11,709,198     | 10,293      | 13,046            | 19,325 | \$500,762 | 3,024,627 | 191,888 | 30,607      | 13,681,702 |
| Per Cent . . . . .         | 27.70            | 31.65             | 8.96           | 0.07        | 0.08              | 0.12   | 3.46      | 26.13    | 1.71    | 0.12        | 100.00  | 28.96                 | 30.85             | 12.49          | 0.07        | 0.10              | 0.14   | 3.66      | 22.11     | 1.40    | 0.22        | 100.00     |
| JANUARY 1, 1950.           |                  |                   |                |             |                   |        |           |          |         |             |         |                       |                   |                |             |                   |        |           |           |         |             |            |
| City Proper . . . . .      | 44.07            | 25.39             | 19.22          | 0.22        | 0.13              | 0.40   | 3.01      | 3.66     | 0.29    | 0.03        | 96.42   | 954,356               | 554,431           | 432,674        | 2,679       | 3,993             | 6,308  | 101,117   | 58,773    | 2,105   | 361         | 2,116,797  |
| Charlestown . . . . .      | 4.27             | 4.48              | 7.73           | 0.08        | 0.07              | .....  | 0.36      | 5.76     | 0.00    | 0.01        | 22.76   | 85,346                | 71,323            | 194,293        | 2,011       | 1,999             | .....  | 5,333     | 79,955    | 80      | 41          | 440,381    |
| East Boston . . . . .      | 5.86             | 11.33             | 4.88           | 0.01        | 0.05              | 0.03   | 0.44      | 13.27    | 0.24    | 0.04        | 36.15   | 135,153               | 228,918           | 115,650        | 325         | 777               | 771    | 25,280    | 286,583   | 4,576   | 865         | 798,898    |
| South Boston . . . . .     | 12.42            | 10.74             | 8.64           | 0.04        | 0.07              | 0.02   | 0.53      | 10.91    | 0.09    | 0.50        | 43.96   | 261,003               | 201,432           | 249,517        | 1,134       | 1,809             | 1,400  | 17,156    | 187,542   | 1,024   | 15,754      | 937,771    |
| Roxbury . . . . .          | 37.39            | 23.95             | 8.35           | 0.05        | .....             | 0.14   | 6.67      | 17.92    | 0.36    | 0.00        | 94.25   | 726,287               | 424,729           | 200,035        | 836         | .....             | 4,027  | 112,657   | 240,636   | 5,410   | 27          | 1,724,044  |
| West Roxbury . . . . .     | 39.62            | 49.32             | 3.91           | .....       | 0.07              | .....  | 4.53      | 47.12    | 2.03    | 0.00        | 146.60  | 731,824               | 887,601           | 142,371        | .....       | 1,340             | .....  | 63,970    | 741,571   | 31,236  | 5,390       | 2,605,283  |
| Dorchester . . . . .       | 56.28            | 57.77             | 2.60           | 0.06        | 0.04              | 0.01   | 0.89      | 44.89    | 1.73    | 0.02        | 170.29  | 1,080,157             | 1,040,401         | 76,627         | 1,669       | 889               | 145    | 112,588   | 702,652   | 24,358  | 1,737       | 3,041,311  |
| Brighton . . . . .         | 20.34            | 28.13             | 1.03           | .....       | 0.08              | .....  | 1.23      | 13.11    | 1.05    | .....       | 64.97   | 459,848               | 514,645           | 67,837         | .....       | 1,231             | .....  | 30,380    | 212,795   | 17,924  | 170         | 1,304,740  |
| Hyde Park . . . . .        | 8.15             | 9.54              | 0.04           | 0.01        | 0.04              | .....  | 0.04      | 20.62    | 5.96    | 0.24        | 45.25   | 153,438               | 295,368           | 7,173          | 186         | 702               | .....  | 10,123    | 344,811   | 92,379  | 5,080       | 819,260    |
| Totals . . . . .           | 228.40           | 220.65            | 56.40          | 0.47        | 0.55              | 0.60   | 24.30     | 176.67   | 11.75   | 0.84        | 720.63  | 4,587,412             | 4,128,738         | 1,486,157      | 8,840       | 12,740            | 13,251 | 478,604   | 2,864,228 | 170,092 | 29,425      | 13,788,487 |
| Per Cent . . . . .         | 31.69            | 30.62             | 7.82           | 0.07        | 0.08              | 0.08   | 3.37      | 24.52    | 1.63    | 0.12        | 100.00  | 33.27                 | 29.95             | 10.78          | 0.06        | 0.09              | 0.10   | 3.47      | 20.77     | 1.30    | 0.21        | 100.00     |

TOTAL PUBLIC STREETS 720.63 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 0.09 mile or 310 square yards is Unonite.  
 †Of this amount 0.02 mile or 202 square yards is cobble; and 35.32 miles or 1,106,876 square yards is granite block paving on concrete base.  
 ‡Of this amount 0.06 miles or 465 square yards is Blaine granitoid concrete block.  
 §Of this amount 150.48 miles or 2,494,524 square yards is bituminous macadam.

¶Of this amount 121.36 miles or 2,104,483 square yards is asphalt concrete; and 92.96 miles or 1,865,167 square yards is Bitulithel and 4.33 miles or 72,936 square yards is Topuck; and 0.06 miles or 942 square yards is Fibrelitic; and 0.21 miles or 4,893 square yards is Sinasco; and 0.03 miles or 595 square yards is Carey Elastite Asphalt Plank; and 0.09 miles or 1,047 square yards is Johns-Manville Asphalt Plank; and 1.61 miles or 48,675 square yards is tar concrete.

6.67 miles or 35,456 square yards public alleys included in this table; 7.56 miles or 335,627 square yards public streets in charge of Park Department included in this table; 7.51 miles or 252,293 square yards public streets in charge of Commonwealth of Massachusetts included in this table. In addition to this table there are 2.24 miles or 10,839 square yards of accepted footways.



## APPENDIX C.

REPORT OF THE DIVISION ENGINEER OF  
THE SANITARY DIVISION.

BOSTON, January 3, 1950.

*To the 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, 1949:

|  |                   |                       |
|--|-------------------|-----------------------|
| Maintenance expenditures . . . . .                       |                   | <u>\$5,419,665 82</u> |
| I. Waste collection and disposal (Table I) . . . . .     |                   | \$3,330,408 59        |
| (a) By contract (Table II) . . . . .                     | \$2,936,255 56    |                       |
| (b) By day labor (Table III) . . . . .                   | <u>394,153 03</u> |                       |
| II. Street cleaning . . . . .                            |                   | \$1,948,571 36        |
| III. Not directly chargeable to 1949 operation . . . . . |                   | \$140,685 87          |
| (a) Pensions . . . . .                                   | \$61,389 37       |                       |
| (b) Injured roll . . . . .                               | 4,498 03          |                       |
| (c) Preventive street cleaning . . . . .                 | 71,746 86         |                       |
| (d) Miscellaneous . . . . .                              | <u>3,051 61</u>   |                       |
| Personnel changes in permanent force:                    |                   |                       |
| Total personnel January 1, 1949 . . . . .                |                   | *907                  |
| Transfers from other departments and divisions . . . . . |                   | 1                     |
| New appointments . . . . .                               |                   | 11                    |
| Reinstatements . . . . .                                 |                   | 1                     |
|  |                   | <u>13</u>             |
|  |                   | 920                   |
| Deaths . . . . .   |                   | 11                    |
| Resignations . . . . .                                   |                   | 3                     |
| Retirements . . . . .                                    |                   | 15                    |
| Transfers out . . . . .                                  |                   | 20                    |
| Discharged or terminated . . . . .                       |                   | 1                     |
|  |                   | <u>50</u>             |
| Personnel total January 1, 1950 . . . . .                |                   | <u>†870</u>           |

\* Including two military leaves.

† Including one military leave.  
Net loss of 37 employees.

*Work Accomplished.*—During the early part of the year 1949, while the motor sweepers were out of service, 200 temporary laborers were employed for three months on street cleaning.

The servicing of the Dempster-Dumpster equipment has been performed by the South End day labor refuse collection force, because this system was largely used for the relay of refuse from the ends of the South End alleys.

In 1950, the refuse collection will be done by contract, and the relay system for rubbish collection by city forces will then be discontinued. Therefore, a new street cleaning subdivision was created to service the Dempster-Dumpster system. Standard boxes were placed at strategic locations throughout the city, and are picked up by a crane designed for this purpose. It is a functional service, and has no district boundaries.

On January 1, 1949, the North and West Ends (refuse removal) district was placed under contract, and the city day labor force of 76 men, thus released, were distributed among the various street-cleaning districts.

On June 28, the cleaning of Columbia road, from Edward Everett square to Blue Hill avenue (at Franklin Park), was transferred from the Park Department to the Sanitary Division, and this area is now cleaned by District C-13, Dorchester.

The following listed repairs and improvements have been accomplished:

- Repairs to Receiving Station at Albany street.
- Repairs to buildings at 650 Albany Street Yard.
- Repairs to Fort Hill Receiving Station, including painting.
- Repairs at Battery Street Yard Lavatory.
- Repairs at Victory Road Receiving Station.

At the Albany Street Receiving Station, a bulkhead was constructed not only to retain the land area, which had fallen into the slip, but also to serve as a dust curtain.

Extensive repairs were made at the Fort Hill Wharf Receiving Station, costing upwards of \$40,000, and consisting chiefly of replacement of defective piling and underframing and decking. The dredging of the slips at this location was also accomplished.

The following listed equipment was received under the Equipment Loan:

- 1 Elgin sweeper.

The following listed equipment was received under Item C-4, during the year 1949:

- Three Ford sedans, six pickup trucks, six Elgin sweepers, ten Ford dump trucks.



The quota of the Sanitary Division permanent employees was reduced to 883, on account of the placing of the North and West Ends district under contract for refuse removal.

*Increases and Decreases.*—The expenditures for the year 1949 show an increase over those of 1948 of \$766,739.39. This increase is explained as follows:

1. There was an increase in the contract prices for collecting and removing of waste material amounting to \$111,882.60.

2. The North and West Ends district was placed under contract for the first time at a price of \$201,420.

3. Extensive repairs to the disposal stations, particularly the Fort Hill Station, account for an increase over 1948 amounting to \$61,649.80. On account of the closing of the Fort Hill Station for repairs for two and one-half months, the contractors using this station were awarded the sum of \$20,310.

4. There was an increase in the amount of the disposal contract amounting to \$57,287.

5. Street cleaning expenditures were increased in the amount of \$458,691.05, chiefly on account of the transfer of the North and West Ends district laborers to this service.

6. Against these increases, decreases should be noted in the following items:

|                                |              |
|--------------------------------|--------------|
| (a) Waste collection day labor | \$244,216 95 |
| (b) Indirect                   | 42,187 39    |

7. In the indirect item, there was an increase of \$13,662.81 in pensions, \$19,034.65 in preventive street cleaning, and \$3,051.61 in miscellaneous items.

Against these increases, there was a decrease of \$1,895.06 in the injured roll, and there was no special spring clean-up expense, which in 1948 amounted to \$76,041.40.

8. Distributed throughout these expenditures is the full-year increase in wages and salaries of employees, amounting to about \$200,000 in 1949, as against \$100,000 granted in 1948 for one-half year, or a net increase in this amount of about \$100,000 in 1949.

Respectfully submitted,

ADOLPH J. POST,  
*Division Engineer.*

TABLE I.  
Amount Expended for the Collection and Disposal of Ashes and Garbage by Districts, 1949.

| Number. | DISTRICT.                | Population. | MIXED REFUSE.  |             | GARBAGE.     |             | Total Cost.    | Total Cost Per Capita. |
|---------|--------------------------|-------------|----------------|-------------|--------------|-------------|----------------|------------------------|
|         |                          |             | Cost.          | Per Capita. | Cost.        | Per Capita. |                |                        |
| 1.      | South Boston.....        | 56,247      | \$225,061 02   | \$4 00      | \$7,325 26   | \$0 13      | \$232,386 28   | \$4 13                 |
| 2.      | East Boston.....         | 55,112      | 124,602 03     | 2 26        | 1,391 59     | 0 03        | 125,993 62     | 2 29                   |
| 3.      | Charlestown.....         | 25,655      | 97,895 54      | 3 81        | —            | —           | 97,895 54      | 3 81                   |
| 4.      | Brighton.....            | 66,808      | 354,655 10     | 5 31        | 18,026 58    | 0 27        | 372,681 68     | 5 58                   |
| 5a.     | West Roxbury.....        | 46,237      | 109,586 79     | 2 37        | 15,760 63    | 0 34        | 125,347 42     | 2 71                   |
| 5b.     | Jamaica Plain.....       | 43,384      | 105,020 76     | 2 42        | 11,278 66    | 0 26        | 116,299 42     | 2 68                   |
| 6.      | Dorchester.....          | 193,080     | 572,950 63     | 2 97        | 74,355 99    | 0 38        | 647,306 62     | 3 35                   |
| 7a.     | Elm Hill.....            | 23,907      | 59,060 24      | 2 47        | 5,030 62     | 0 20        | 64,120 86      | 2 67                   |
| 7b.     | Dudley.....              | 36,833      | 128,069 38     | 3 47        | 11,536 27    | 0 32        | 139,605 65     | 3 79                   |
| 7c.     | Mission Hill.....        | 31,992      | 114,145 96     | 3 57        | 12,604 52    | 0 39        | 126,750 48     | 3 96                   |
| 7d.     | Roxbury.....             | 34,489      | 206,612 98     | 5 99        | 15,960 04    | 0 46        | 222,573 02     | 6 45                   |
| 9.      | South End.....           | 42,495      | 391,153 03     | 9 27        | —            | —           | 394,153 03     | 9 27                   |
| 9a.     | Back Bay.....            | 22,042      | 116,441 77     | 5 28        | —            | —           | 116,441 77     | 5 28                   |
| 9b.     | Stuart.....              | 20,144      | 127,279 07     | 6 31        | —            | —           | 127,279 07     | 6 31                   |
| 10.     | North and West Ends..... | 42,232      | 339,818 77     | 8 04        | 15,329 15    | 0 36        | 355,147 92     | 8 40                   |
| 11.     | Hyde Park.....           | 25,669      | 59,333 77      | 2 31        | 7,062 44     | 0 27        | 66,396 21      | 2 58                   |
|         | Totals.....              | 766,386     | \$3,134,746 84 | \$4 09      | \$195,661 75 | \$0 26      | \$3,330,408 59 | \$4 35                 |

TABLE II.  
Cost of Collection and Disposal of Refuse by Contract in City of Boston, 1949.

| 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         | 105,998      |                    |                      |             |                        |
|                    |                                  | Garbage              | 3,450        |                    |                      |             |                        |
|                    |                                  | Totals               | 109,448      | \$232,386 28       | \$2 123              | 56,247      | \$4 13                 |
| East Boston        | Edward J. McHugh & Son           | Mixed refuse         | 84,794       |                    |                      |             |                        |
|                    |                                  | Garbage              | 2,947        |                    |                      |             |                        |
|                    |                                  | Totals               | 87,741       | \$125,993 62       | \$1 436              | 55,112      | \$2 29                 |
| Charlestown        | Edward J. McHugh & Son           | Mixed refuse         | 46,606       |                    |                      |             |                        |
|                    |                                  | Garbage              | —            |                    |                      |             |                        |
|                    |                                  | Totals               | 46,606       | \$97,805 54        | \$2 10               | 25,655      | \$3 81                 |
| Brighton           | Anthony J. Ryan, Inc.            | Mixed refuse         | 160,068      |                    |                      |             |                        |
|                    |                                  | Garbage              | 8,136        |                    |                      |             |                        |
|                    |                                  | Totals               | 168,204      | \$372,081 68       | \$2 216              | 66,808      | \$5 58                 |
| West Roxbury       | John J. Moore Company            | Mixed refuse         | 71,771       |                    |                      |             |                        |
|                    |                                  | Garbage              | 10,322       |                    |                      |             |                        |
|                    |                                  | Totals               | 82,093       | \$125,347 42       | \$1 527              | 46,237      | \$2 71                 |

TABLE II. Concluded.  
 Cost of Collection and Disposal of Refuse by Contract in City of Boston, 1949. 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.....    | 80,181       |                    |                      |             |                        |
|                    |                                     | Garbage.....         | 8,611        |                    |                      |             |                        |
|                    |                                     | Totals.....          | 88,792       | \$116,299.42       | \$1.310              | 43,384      | \$2.68                 |
| Dorchester.....    | Coleman Brothers Corporation.....   | Mixed refuse.....    | 432,518      |                    |                      |             |                        |
|                    |                                     | Garbage.....         | 56,131       |                    |                      |             |                        |
|                    |                                     | Totals.....          | 488,649      | \$647,306.02       | \$1.325              | 193,080     | \$3.35                 |
| Edin Hill.....     | Coleman Brothers Corporation.....   | Mixed refuse.....    | 38,727       |                    |                      |             |                        |
|                    |                                     | Garbage.....         | 3,297        |                    |                      |             |                        |
|                    |                                     | Totals.....          | 42,024       | \$64,120.86        | \$1.526              | 23,967      | \$2.67                 |
| *Dudley.....       | Marinucci Brothers & Co., Inc. .... | Mixed refuse.....    | 57,186       |                    |                      |             |                        |
|                    |                                     | Garbage.....         | 5,150        |                    |                      |             |                        |
|                    |                                     | Totals.....          | 62,336       | \$139,635.65       | \$2.240              | 36,833      | \$3.79                 |
| *Mission Hill..... | Marinucci Brothers & Co., Inc. .... | Mixed refuse.....    | 51,800       |                    |                      |             |                        |
|                    |                                     | Garbage.....         | 5,720        |                    |                      |             |                        |
|                    |                                     | Totals.....          | 57,520       | \$126,750.48       | \$2.204              | 31,992      | \$3.96                 |

|                          |                                     |                   |           |                |         |         |        |  |  |
|--------------------------|-------------------------------------|-------------------|-----------|----------------|---------|---------|--------|--|--|
| Roxbury.....             |                                     | Mixed refuse..... | 93,830    |                |         |         |        |  |  |
|                          | Marineucci Brothers & Co., Inc..... | Garbage.....      | 7,248     |                |         |         |        |  |  |
|                          |                                     | Totals.....       | 101,078   | \$225,573 02   | \$2 202 | 34,489  | \$6 45 |  |  |
| *Back Bay.....           |                                     | Mixed refuse..... | 62,889    |                |         |         |        |  |  |
|                          | Dooley Brothers, Inc.....           | Garbage.....      | —         |                |         |         |        |  |  |
|                          |                                     | Totals.....       | 62,889    | \$116,441 77   | \$1 851 | 22,042  | \$5 28 |  |  |
| *Stuart.....             |                                     | Mixed refuse..... | 68,321    |                |         |         |        |  |  |
|                          | Capitol Contracting Company.....    | Garbage.....      | —         |                |         |         |        |  |  |
|                          |                                     | Totals.....       | 68,321    | \$127,279 07   | \$1 863 | 20,144  | \$6 31 |  |  |
| North and West Ends..... |                                     | Mixed refuse..... | 137,886   |                |         |         |        |  |  |
|                          | M. Doyle & Co., Inc.....            | Garbage.....      | 6,220     |                |         |         |        |  |  |
|                          |                                     | Totals.....       | 144,106   | \$355,147 92   | \$2 464 | 42,232  | \$8 40 |  |  |
| Hyde Park.....           |                                     | Mixed refuse..... | 30,732    |                |         |         |        |  |  |
|                          | Mary C. Bryan.....                  | Garbage.....      | 3,658     |                |         |         |        |  |  |
|                          |                                     | Totals.....       | 34,390    | \$66,346 21    | \$1 930 | 25,669  | \$2 58 |  |  |
| Total.....               |                                     | Mixed refuse..... | 1,523,307 |                |         |         |        |  |  |
|                          |                                     | Garbage.....      | 120,890   |                |         |         |        |  |  |
|                          |                                     | Totals.....       | 1,644,197 | \$2,936,255 56 | \$1 786 | 723,891 | \$4 07 |  |  |

\* 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, 1949.

| 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. |                                      |                        |
| 9.      | South End (42,465).....   | Mixed refuse.....    | 136,258      | \$2 14               | \$0 75        | \$2 89                   | \$292,378 64     | \$101,774 39       | \$394,153 03                         | \$9 27                 |

APPENDIX D.

---

REPORT OF THE DIVISION ENGINEER  
OF THE SEWER DIVISION.

---

BOSTON, January 3, 1950.

*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, 1949.

During the fiscal year 1949, there were built by contractors and day labor 7.50 miles of common sewers and surface drains throughout the city. After deducting 0.21 miles of sewers and surface drains, rebuilt or abandoned, the net increase for 1949 is 7.29 miles, which added to the existing 1,241.14 miles of common sewers and surface drains and 30.93 miles of intercepting sewers, makes a grand total of 1,279.36 miles of all sewers belonging to the City of Boston, and under the care of the Sewer Division on January 1, 1950.

There were 125 catch basins built or rebuilt and 10 abandoned or removed during the year, making a net gain of 115 catch basins and a grand total of 23,155 catch basins under the care of the Sewer Division on January 1, 1950.

Entrance fees to the amount of \$3,019.38 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.

Seven hundred and twenty-eight permits have been issued, viz., 240 to district foremen and contractors and 488 to drainlayers for repairing or laying new house drains. Inspectors from this office have personally inspected the work done under these drainlayers' permits.

Two thousand nine hundred and three complaints have been investigated and inspectors are instructed to report in writing in each case.

One thousand five hundred and sixty-seven catch basin complaints were received.

Reported in writing on 2,402 municipal liens to the City Collector, in accordance with chapter 60, section 25, of the General Laws. Reported orally on about 2,600 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 1949, 4,170 catch basins were cleaned by day labor and 3,044 catch basins were cleaned by contract.

Respectfully,

ROBERT P. SHEA,  
*Division Engineer.*



**Summary of Sewer Construction for Twelve Months Ending  
December 31, 1949.**

| DISTRICTS.         | Built by the<br>City Either by<br>Contract or<br>Day Labor. | Built by<br>Private<br>Parties. | Total Lengths Built. |               |
|--------------------|---|---------------------------------|----------------------|---------------|
|                    | <i>Linear Feet.</i>   | <i>Linear Feet.</i>             | <i>Linear Feet.</i>  | <i>Miles.</i> |
| City Proper.....   | 1,001.65  | .....                           | 1,001.65             | 0.1897        |
| Roxbury.....       | 1,159.15  | .....                           | 1,159.15             | 0.2195        |
| South Boston.....  | None.   | None.                           | None.                | None.         |
| East Boston.....   | None.   | None.                           | None.                | None.         |
| Charlestown.....   | 286.00  | .....                           | 286.00               | 0.0541        |
| Brighton.....      | 3,943.92  | .....                           | 3,943.92             | 0.7469        |
| West Roxbury.....  | 14,192.22   | .....                           | 14,192.22            | 2.6883        |
| Dorchester.....    | 719.40  | .....                           | 719.40               | 0.1362        |
| Hyde Park.....     | 18,294.54   | .....                           | 18,294.54            | 3.4648        |
| <b>Totals.....</b> | <b>39,596.88</b>  | <b>.....</b>                    | <b>39,596.88</b>     | <b>7.4995</b> |

**Summary of Sewer Construction for Five Years Previous to  
January 1, 1950.**

|   | 1945.               | 1946.               | 1947.               | 1948.               | 1949.               |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|
|   | <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...               | 6,388.17            | 14,204.38           | 24,166.43           | 29,754.60           | 39,596.88           |
| Built by private parties or other city departments..... | .....               | 4,463.00            | 15,216.70           | 8,969.68            | .....               |
| <b>Totals.....</b>                                      | <b>6,388.17</b>     | <b>18,667.38</b>    | <b>39,383.13</b>    | <b>38,724.28</b>    | <b>39,596.88</b>    |

## Total Length of Sewers.

| DISTRICTS.        | Total Lengths Built During Twelve Months Ending December 31, 1949. | Lengths Removed or Abandoned During Twelve Months Ending December 31, 1949. | Additional Lengths for the Twelve Months Ending December 31, 1949. |               |
|-------------------|--|---|--|---------------|
|                   | <i>Linear Feet.</i>  | <i>Linear Feet.</i>   | <i>Linear Feet.</i>  | <i>Miles.</i> |
| City Proper.....  | 1,001.65   | 578.05  | 423.60   | 0.0802        |
| Roxbury.....      | 1,159.15   | 157.00  | 1,002.15   | 0.1898        |
| South Boston..... | None.  | None.   | None.  | None.         |
| East Boston.....  | None.  | None.   | None.  | None.         |
| Charlestown.....  | 286.00   | .....   | 286.00   | 0.0541        |
| Brighton.....     | 3,943.92   | .....   | 3,943.92   | 0.7469        |
| West Roxbury..... | 14,192.22  | .....   | 14,192.22  | 2.6883        |
| Dorchester.....   | 719.40   | 189.10  | 530.30   | 0.1004        |
| Hyde Park.....    | 18,294.54  | 170.00  | 18,124.54  | 3.4326        |
| Totals.....       | 39,596.88  | 1,094.15  | 38,502.73  | 7.2923        |

## Grand Total Lengths of Sewers.

|   |        |          |
|---|--------|----------|
| Common sewers and surface drains built previous to January 1, 1949                                | Miles. | 1,241.14 |
| Common sewers and surface drains built between January 1 and December 31, 1949                    |        | 7.29     |
| Total length of common sewers and surface drains built to December 31, 1949                       |        | 1,248.43 |
| Total length of city intercepting sewers connecting with metropolitan sewers to December 31, 1949 |        | * 6.81   |
| Total length of Boston main drainage intercepting sewers to December 31, 1949                     |        | * 24.12  |
| Grand total of common and intercepting sewers to December 31, 1949                                |        | 1,279.36 |
| Total mileage of streets containing sewerage works to January 1, 1950                             |        | 696.49   |

\* No additional lengths built during 1949.

## Catch Basins in Charge of Sewer Division.

| DISTRICTS.         | CATCH BASINS FOR TWELVE MONTHS<br>ENDING DECEMBER 31, 1949. |                                    |                  | TOTAL FOR WHOLE CITY<br>IN CHARGE OF SEWER<br>DIVISION. |  |
|--------------------|---|------------------------------------|------------------|---|--|
|                    | Number<br>Built or<br>Rebuilt.                              | Number<br>Abandoned<br>or Removed. | Net<br>Increase. | Previous<br>Report to<br>January 1,<br>1949.            | Grand Total<br>to<br>January 1,<br>1950. |
| City Proper.....   | 0   | 0                                  | 0                | 3,637   | 3,637                                    |
| Roxbury.....       | 0   | 0                                  | 0                | 3,379   | 3,379                                    |
| South Boston.....  | 7   | 8                                  | 1                | 1,462   | 1,461                                    |
| East Boston.....   | 0   | 0                                  | 0                | 1,107   | 1,107                                    |
| Charlestown.....   | 0   | 0                                  | 0                | 843   | 843                                      |
| Brighton.....      | 15  | 0                                  | 15               | 2,020   | 2,035                                    |
| West Roxbury.....  | 36  | 0                                  | 36               | 4,048   | 4,084                                    |
| Dorchester.....    | 14  | 0                                  | 14               | 5,529   | 5,543                                    |
| Hyde Park.....     | 53  | 2                                  | 51               | 1,015   | 1,066                                    |
| <b>Totals.....</b> | <b>125</b>  | <b>10</b>                          | <b>115</b>       | <b>23,040</b>   | <b>23,155</b>                            |

## Sewage Statistics for Year 1949, Calf Pasture Pumping Station.

| MONTH.               | Total<br>Gallons<br>Pumped. | Average<br>Gallons<br>Pumped<br>Daily. | Maximum<br>Gallons<br>Pumped<br>Daily. | Minimum<br>Gallons<br>Pumped<br>Daily. | Average<br>Lift<br>(Feet). |
|----------------------|-----------------------------|--|--|--|----------------------------|
| January.....         | 3,240,080,000               | 104,518,710                            | 155,325,000                            | 97,713,000                             | 40.0                       |
| February.....        | 3,117,654,000               | 111,344,786                            | 151,100,000                            | 100,100,000                            | 40.0                       |
| March.....           | 3,187,252,000               | 102,814,581                            | 125,525,000                            | 88,437,000                             | 40.0                       |
| April.....           | 3,279,448,000               | 109,314,933                            | 153,559,000                            | 87,500,000                             | 40.0                       |
| May.....             | 3,207,696,000               | 103,474,065                            | 141,725,000                            | 88,437,000                             | 40.0                       |
| June.....            | 2,993,656,000               | 99,788,533                             | 129,350,000                            | 77,350,000                             | 40.0                       |
| July.....            | 3,068,795,000               | 98,993,387                             | 120,700,000                            | 81,450,000                             | 40.0                       |
| August.....          | 3,198,385,000               | 103,174,709                            | 126,987,000                            | 87,970,000                             | 40.0                       |
| September.....       | 3,062,397,000               | 102,079,900                            | 163,806,000                            | 77,650,000                             | 40.0                       |
| October.....         | 2,735,559,000               | 88,243,873                             | 132,575,000                            | 76,900,000                             | 40.0                       |
| November.....        | 2,914,143,000               | 97,138,100                             | 154,275,000                            | 72,925,000                             | 40.0                       |
| December.....        | 2,734,101,000               | 88,064,839                             | 140,712,000                            | 72,455,000                             | 40.0                       |
| <b>Totals.....</b>   | <b>36,739,166,000</b>       | <b>1,208,949,416</b>                   |  |  |                            |
| <b>Averages.....</b> | <b>100,655,249</b>          | <b>100,745,785</b>                     |  |  |                            |

*Total Running Time of Pumps.*—No. 1, 3,469 hours, 10 minutes; No. 2, 2,229 hours, 00 minutes; No. 3, 2,047 hours, 30 minutes; No. 4, 5,287 hours, 30 minutes; No. 5, 3,297 hours, 30 minutes; No. 6, 7,531 hours, 20 minutes.

## Pumping Statistics for Year 1949, Calf Pasture Pumping Station.

*From Pumping Records.*

|  |                    |
|--|--------------------|
| Total gallons pumped . . . . .         | 36,739,166,000     |
| Daily average gallons pumped . . . . . | 100,655,249        |
| Average dynamic head . . . . .         | 40.0               |
| Total foot gallons . . . . .           | 1,469,566,640,000  |
| Total foot pounds . . . . .            | 12,298,803,210,160 |

## Electric Current Used for 1949, Calf Pasture Pumping Station.

| MONTH.         | ELECTRIC CURRENT.                 |                                    | Amount.     |
|----------------|-----------------------------------|------------------------------------|-------------|
|                | Kilowatt-Hours,<br>Inside Meters. | Kilowatt-Hours,<br>Outside Meters. |             |
| January.....   | 451,600                           | 559,080                            | \$7,015 87  |
| February.....  | 451,400                           | 506,700                            | 6,538 28    |
| March.....     | 459,100                           | 496,980                            | 6,486 95    |
| April.....     | 469,600                           | 462,980                            | 6,191 12    |
| May.....       | 461,700                           | 598,940                            | 7,314 55    |
| June.....      | 454,300                           | 504,280                            | 6,655 45    |
| July.....      | 489,600                           | 544,000                            | 6,530 57    |
| August.....    | 485,600                           | 513,980                            | 6,112 71    |
| September..... | 479,000                           | 541,620                            | 6,435 60    |
| October.....   | 435,800                           | 522,000                            | 6,280 10    |
| November.....  | 447,300                           | 490,680                            | 5,906 78    |
| December.....  | 432,600                           | 468,900                            | 5,706 19    |
| Totals.....    | 5,517,600                         | 6,203,040                          | \$77,204 17 |

**Amount of Refuse Removed from Filth Hoist for Year 1949,  
Calf Pasture Pumping Station.**

| MONTH.         | Wheelbarrow Loads. | Weight,* Pounds.                        |
|----------------|--------------------|---|
| January.....   | 158                | 15,010                                  |
| February.....  | 153                | 14,535                                  |
| March.....     | 156                | 14,820                                  |
| April.....     | 166                | 15,770                                  |
| May.....       | 166                | 15,770                                  |
| June.....      | 152                | 14,440                                  |
| July.....      | 174                | 16,530                                  |
| August.....    | 171                | 16,245                                  |
| September..... | 148                | 14,060                                  |
| October.....   | 176                | 16,720                                  |
| November.....  | 174                | 16,530                                  |
| December.....  | 158                | 15,010                                  |
| Totals.....    | 1,952              | 185,440<br>92 $\frac{1440}{1000}$ tons. |

\* Average 95 pounds to load.

**Fuel Record for Year 1949, Calf Pasture Pumping Station.**

| MONTH.         | FUEL OILS.        |               | Amount.   |
|----------------|-------------------|---------------|-----------|
|                | Gallons Received. | Gallons Used. |           |
| January.....   | 32,062            | 25,361        | 81,704 74 |
| February.....  | 18,569            | 23,336        | 987 31    |
| March.....     | 25,072            | 25,314        | 1,333 08  |
| April.....     | 14,975            | 17,115        | 796 22    |
| May.....       | 18,451            | 20,230        | 981 04    |
| June.....      | 21,769            | 18,041        | 1,157 46  |
| July.....      | 10,846            | 18,247        | 576 68    |
| August.....    | 18,307            | 18,340        | 973 38    |
| September..... | 22,192            | 19,263        | 1,179 95  |
| October.....   | 16,197            | 21,481        | 861 19    |
| November.....  | 24,325            | 23,891        | 1,293 46  |
| December.....  | 24,379            | 24,598        | 1,296 23  |
| Totals.....    | 247,144           | 255,217       | 13,140 64 |

Average .05317 gallons.

**Summary for the Year 1949, Calf Pasture Pumping Station.**

|   |              |          |
|---|--------------|----------|
| Labor . . . . .                               | \$84,997 31  | \$.05784 |
| Edison power . . . . .                        | 77,204 17    | .05254   |
| Fuel oil . . . . .                            | 13,140 64    | .00894   |
| Packing . . . . .                             | 34 76        | .00002   |
| Miscellaneous renewals and supplies . . . . . | 5,006 51     | .00341   |
| Oils and waste . . . . .                      | 717 05       | .00049   |
|   | <hr/>        | <hr/>    |
| Totals . . . . .                              | \$181,100 44 | \$.12324 |
| Labor at screens . . . . .                    | \$17,094 19  | \$.01163 |

## MAINTENANCE EXPENDITURES FROM JANUARY 1, 1949, TO DECEMBER 31, 1949.

### SEWER DIVISION.

#### *Improved Sewerage.*

|  |           |    |
|--|-----------|----|
| Pumping Station, Calf Pasture, inside . . . . .  | \$112,103 | 83 |
| Pumping Station, Calf Pasture, outside . . . . . | 3,462     | 55 |
| Pumping Station, Calf Pasture, engines . . . . . | 40,437    | 83 |
| Pumping Station, Calf Pasture, boilers . . . . . | 35,370    | 51 |
| Pumping Station, Union Park Street . . . . .     | 13,980    | 52 |
| Pumping Station, Summer Street . . . . .         | 3,530     | 46 |
| Moon Island . . . . .                            | 38,964    | 70 |
| Main and intercepting sewers . . . . .           | 28,132    | 00 |
|  | \$275,982 | 40 |

Maintenance expenditures (for complete details, see table on page 61) . . . . . 22,196 56

#### *Maintenance — Regular.*

|  |          |    |
|--|----------|----|
| Automobiles . . . . .                    | \$16,643 | 71 |
| Cleaning catch basins . . . . .          | 111,324  | 36 |
| Cleaning sewers . . . . .                | 64,354   | 44 |
| Fuel and oil . . . . .                   | 578      | 21 |
| Hardware and tools . . . . .             | 3,646    | 87 |
| House connections . . . . .              | 15,489   | 70 |
| Maintenance — Stony Brook . . . . .      | 6,650    | 73 |
| Office and engineers' expense . . . . .  | 14,050   | 53 |
| Office and engineers' salaries . . . . . | 45,555   | 57 |
| Stock . . . . .                          | 3,840    | 62 |
| Yard and locker . . . . .                | 58,894   | 26 |
| Testing laboratory . . . . .             | 3,634    | 73 |
|  | 344,663  | 73 |

#### *Maintenance — Repairs.*

|   |        |    |
|---|--------|----|
| Repair, clean and sand streets . . . . .    | \$655  | 18 |
| Repair department buildings . . . . .       | 582    | 36 |
| Repair catch basins, South Boston . . . . . | 2,038  | 97 |
| Repair catch basins, East Boston . . . . .  | 1,948  | 27 |
| Repair catch basins, Charlestown . . . . .  | 274    | 93 |
| Repair catch basins, Brighton . . . . .     | 419    | 81 |
| Repair catch basins, West Roxbury . . . . . | 3,897  | 59 |
| Repair catch basins, Dorchester . . . . .   | 9,208  | 26 |
| Repair catch basins, Hyde Park . . . . .    | 2,013  | 18 |
| Repair catch basins, Roxbury . . . . .      | 4,861  | 81 |
| Repair catch basins, City Proper . . . . .  | 8,346  | 75 |
| Repair sewers, South Boston . . . . .       | 107    | 48 |
| Repair sewers, East Boston . . . . .        | 496    | 00 |
| Repair sewers, Charlestown . . . . .        | 253    | 52 |
| Repair sewers, Brighton . . . . .           | 1,855  | 06 |
| Repair sewers, West Roxbury . . . . .       | 3,010  | 66 |
| Repair sewers, Dorchester . . . . .         | 2,175  | 74 |
| Repair sewers, Hyde Park . . . . .          | 904    | 51 |
| Repair sewers, Roxbury . . . . .            | 3,203  | 83 |
| Repair sewers, City Proper . . . . .        | 3,138  | 18 |
|   | 49,392 | 09 |

*Carried forward* . . . . . \$692,234 78

*Maintenance — Miscellaneous.*

|   |             |  |                  |
|---|-------------|--|------------------|
| <i>Brought forward</i> . . . . .                  |             |  | \$692,234 78     |
| Miscellaneous . . . . .                           | \$10,511 70 |  |                  |
| Back Bay Fens . . . . .                           | 1,554 67    |  |                  |
| Telephones . . . . .                              | 1,858 61    |  |                  |
| Wearing apparel . . . . .                         | 430 52      |  |                  |
| Pensions and annuities . . . . .                  | 17,191 84   |  |                  |
| Holidays, vacations, sick, time allowed . . . . . | 61,274 53   |  |                  |
|   |             |  | <u>92,821 87</u> |
|   |             |  | \$785,056 65     |

## CREDITS.

|  |             |             |                  |
|--|-------------|-------------|------------------|
| Trucks, etc., used on maintenance . . . . .              | \$46,830 25 |             |                  |
| Maintenance stock used on maintenance . . . . .          | 3,543 71    |             |                  |
| Construction stock used on maintenance . . . . .         | 8,561 69    |             |                  |
| Maintenance materials paid for by construction . . . . . | 790 27      |             |                  |
| Maintenance payrolls paid for by construction . . . . .  | 1,926 40    | \$61,652 32 | <u>61,652 32</u> |
|  |             |             | \$723,404 33     |

## DEBITS.

|  |          |            |                     |
|--|----------|------------|---------------------|
| Construction payrolls paid by maintenance . . . . .      | \$651 13 |            |                     |
| Construction materials paid for by maintenance . . . . . | 350 00   | \$1,001 13 | <u>1,001 13</u>     |
| Total expenditures, 1949 . . . . .                       |          |            | <u>\$724,405 46</u> |





## Sewer Division Maintenance Expenditures, Details, 1949.

| ACCOUNTS.                           | Totals.     | Labor.      | Repairs.   | Motor Vehicles. | Taxes. | Contractors. | Light, Heat, and Power. | Materials. | Tools, and Equipment. | Miscellaneous.   |
|-------------------------------------|-------------|-------------|------------|-----------------|--------|--------------|-------------------------|------------|-----------------------|--|
| Automobiles.....                    | \$16,613 71 |             | \$6,885 91 |                 |        |              | \$57 11                 | \$829 90   | \$1,035 91            | Gasoline..... \$5,370 40<br>Fees..... 87 20<br>Storage..... 1,021 00<br>Sundries..... 32 85<br>New cars..... 1,323 40<br>Sundries..... 55 50                       |
| Cleaning catch basins.....          | 111,321 36  | \$63,836 29 |            | \$17,087 25     |        | \$30,345 32  |                         |            |                       |  |
| Cleaning sewers.....                | 61,351 44   | 55,101 91   |            | 9,252 50        |        |              |                         |            |                       |  |
| Fuel and oil.....                   | 578 21      |             |            |                 |        |              | 578 21                  |            |                       |  |
| Hardware and tools.....             | 3,616 87    |             | 509 38     |                 |        |              |                         | 3,137 49   |                       |  |
| House connections.....              | 15,489 76   | 15,132 51   |            | 333 25          |        |              |                         | 23 94      |                       |  |
| Maintenance, Stony Brook.....       | 6,650 73    | 5,830 73    |            | 820 00          |        |              |                         |            |                       |  |
| Office and engineers' expense.....  | 14,650 53   | 5,166 52    | 273 90     | 3,979 08        |        |              |                         | 2,235 03   | 538 24                | Printing..... 1,402 96<br>Postage..... 431 80<br>Sundries..... 23 00   |
| Office and engineers' salaries..... | 15,555 57   | 15,555 57   |            |                 |        |              |                         |            |                       |  |
| Stock.....                          | 3,810 62    |             |            | 3 00            |        |              |                         | 3,835 80   |                       | Sundries..... 1 82   |
| Yard and locker.....                | 58,891 26   | 51,385 80   | 8 93       | 7,031 02        |        |              | 218 50                  | 157 52     |                       | Sundries..... 92 40  |
| Testing laboratory.....             | 3,631 73    | 850 71      | 5 27       | 634 00          |        |              | 186 06                  |            | 1,908 54              | Sundries..... 50 15  |
| Miscellaneous.....                  | 10,511 70   | 5,971 03    |            | 111 00          |        |              |                         |            |                       | Transportation..... 1,418 52<br>Unliquidated re-serve..... 636 26<br>Telephone calls..... 404 40<br>Workmen's Com-pensation..... 1,072 40<br>Injured..... 1,798 90 |



## Sewer Division — Maintenance Expenditures, Details, 1949. — Concluded.

| Accounts.                               | Totals.      | Labor.       | Repairs.    | Motor Vehicles. | Taxes.   | Contractors. | Light, Heat, and Power. | Materials.  | Tools, and Equipment. | Miscellaneous. |
|---|--------------|--------------|-------------|-----------------|----------|--------------|-------------------------|-------------|-----------------------|----------------|
| <i>Brought forward</i> .....            | \$471,840 19 | \$348,100 12 | \$8,878 52  | \$43,085 60     | .....    | \$30,941 95  | \$1,110 86              | \$18,621 69 | \$3,482 69            | \$17,511 28    |
| Repair sewers, East Boston.....         | 496 00       | 363 06       | .....       | 80 00           | .....    | .....        | .....                   | 52 94       | .....                 | .....          |
| Repair sewers, Charlestown.....         | 253 52       | 212 73       | .....       | 25 00           | .....    | .....        | .....                   | 15 79       | .....                 | .....          |
| Repair sewers, Brighton.....            | 1,855 06     | 1,055 29     | .....       | 9 50            | .....    | 790 27       | .....                   | .....       | .....                 | .....          |
| Repair sewers, West Roxbury.....        | 3,010 66     | 1,697 62     | .....       | 585 75          | .....    | .....        | .....                   | 727 29      | .....                 | .....          |
| Repair sewers, Dorchester.....          | 2,175 74     | 1,289 76     | .....       | 308 50          | .....    | 391 00       | .....                   | 186 48      | .....                 | .....          |
| Repair sewers, Hyde Park.....           | 901 51       | 561 78       | .....       | 105 75          | .....    | .....        | .....                   | 236 98      | .....                 | .....          |
| Repair sewers, Roxbury.....             | 3,293 83     | 1,666 10     | .....       | 515 50          | .....    | .....        | .....                   | 992 23      | .....                 | .....          |
| Repair sewers, City Proper.....         | 3,138 18     | 1,816 77     | .....       | 518 00          | .....    | .....        | .....                   | 803 41      | .....                 | .....          |
| Total of outside improved sewerage..... | \$486,877 69 | \$356,763 23 | \$8,878 52  | \$45,296 60     | .....    | \$32,123 22  | \$1,110 86              | \$21,711 29 | \$3,482 69            | \$17,511 28    |
| Total of improved sewerage.....         | 298,178 96   | 165,031 79   | 3,992 63    | 5,693 10        | \$451 00 | 22,280 05    | 94,918 08               | 5,014 97    | 572 28                | 225 06         |
| Totals.....                             | \$785,056 65 | \$521,795 02 | \$12,871 15 | \$50,989 70     | \$451 00 | \$54,403 27  | \$96,028 94             | \$26,726 26 | \$4,054 97            | \$17,736 34    |

|  |              |              |             |            |          |             |             |             |             |            |
|--|--------------|--------------|-------------|------------|----------|-------------|-------------|-------------|-------------|------------|
| CREDITS.   |              |              |             |            |          |             |             |             |             |            |
| Trucks, etc., used on maintenance....                  | \$46,830 25  |              |             |            |          |             |             |             |             |            |
| Maintenance stock used on maintenance.....             | 3,543 71     |              |             |            |          |             |             |             |             |            |
| Construction stock used on maintenance....             | 8,561 69     |              |             |            |          |             |             |             |             |            |
| Maintenance materials paid for by construction 7 90 27 |              |              |             |            |          |             |             |             |             |            |
| Maintenance payrolls paid for by construction 1,926 40 |              | 1,926 40     |             |            |          |             |             |             | 12,805 67   |            |
| Totals.....  | \$723,404 33 | \$519,868 62 | \$12,871 15 | \$4,159 45 | \$451 00 | \$54,403 27 | \$96,028 94 | \$13,830 59 | \$17,736 34 | \$4,054 97 |
| DEBITS.  |              |              |             |            |          |             |             |             |             |            |
| Construction payrolls paid by maintenance....          | \$651 13     |              |             |            |          |             |             |             |             |            |
| Construction materials paid by maintenance....         | 350 00       |              |             |            |          |             |             |             |             |            |
| Totals.....  | \$1,001 13   | 651 13       |             |            |          |             |             | 350 00      |             |            |
| Total maintenance expenditure December 31, 1949        | \$724,405 46 | \$520,519 75 | \$12,871 15 | \$4,159 45 | \$451 00 | \$54,403 27 | \$96,028 94 | \$14,180 59 | \$17,736 34 | \$4,054 97 |

## Sewer Division — Maintenance Expenditures, Details, 1949.

| ACCOUNTS.  | Totals.             | Labor.              | Repairs.          | Motor Vehicles.   | Taxes.          | Contractors.       | Light, Heat, and Power. | Materials.        | Equipment and Tools. | Miscellaneous.   |
|--|---------------------|---------------------|-------------------|-------------------|-----------------|--------------------|-------------------------|-------------------|----------------------|--|
| <b>Pumping Stations:</b>   |                     |                     |                   |                   |                 |                    |                         |                   |                      |  |
| Calf Pasture, inside.....  | \$112,103 83        | \$33,160 06         | \$122 28          |                   |                 | \$894 53           | \$77,204 17             |                   | \$572 28             | First aid supplies..... \$4 80<br>Towel service..... 45 60 |
| Calf Pasture, outside.....   | 3,462 55            | 1,453 58            |                   | \$1,974 10        |                 |                    | 9 00                    | \$25 87           |                      |  |
| Calf Pasture, engine.....  | 40,437 83           | 35,831 93           | 3,368 40          |                   |                 |                    |                         | 1,220 45          |                      | Deposit on oil drums 16 00<br>Express charges..... 1 05    |
| Calf Pasture, boilers.....   | 35,370 51           | 21,048 40           | 332 75            | 140 00            |                 |                    | 13,140 96               | 798 40            |                      |  |
| Union Park Street.....   | 13,980 52           | 11,996 39           |                   |                   |                 |                    | 1,841 62                | 115 69            |                      | Towel service..... 26 82                                   |
| Summer Street.....   | 3,530 46            | 1,786 59            |                   |                   |                 |                    | 1,693 87                | 50 00             |                      |  |
| Moon Island.....   | 38,964 70           | 36,444 66           | 2 50              | 906 00            | \$451 00        |                    | 875 06                  | 226 38            |                      | Towel service..... 45 60<br>Insurance..... 13 50           |
| Main and intercepting sewers.....  | 28,132 00           | 22,449 12           | 166 70            | 2,673 00          |                 |                    | 153 40                  | 2,668 18          |                      | Towel service..... 21 60                                   |
| <b>MAINTENANCE CONTRACTS.</b>  |                     |                     |                   |                   |                 |                    |                         |                   |                      |  |
| Union Park Street Pumping Station, repairing sidewalks (contract No. 3,776).     | 1,300 00            |                     |                   |                   |                 | 1,300 00           |                         |                   |                      |  |
| Calf Pasture Pumping Station, new roof drains (contract No. 3,758).              | 65 76               | 65 76               |                   |                   |                 |                    |                         |                   |                      |  |
| Calf Pasture Pumping Station, cleaning deposit from sewers (contract No. 3,796). | 11,979 25           |                     |                   |                   |                 | 11,955 25          |                         |                   |                      | Advertising..... 24 00                                     |
| Calf Pasture Pumping Station, repairing fifth hoist (contract No. 3,811).        | 3,235 30            | 795 30              |                   |                   |                 | 2,414 00           |                         |                   |                      | Advertising..... 20 00                                     |
| Calf Pasture Pumping Station, rebuilding No. 5 pump (contract No. 3,788).        | 5,616 25            |                     |                   |                   |                 | 5,616 25           |                         |                   |                      |  |
| <b>Totals.....</b>   | <b>\$298,178 96</b> | <b>\$165,031 79</b> | <b>\$3,992 63</b> | <b>\$5,693 10</b> | <b>\$451 00</b> | <b>\$22,280 05</b> | <b>\$94,918 08</b>      | <b>\$5,014 97</b> | <b>\$572 28</b>      | <b>\$225 00</b>  |

**CONSTRUCTION REPORT, 1949.**  
**Sewerage Works, 1949.**

| ACCOUNTS.  | Totals.      | Labor.       | Trucks,<br>Compressors,<br>Pumps, etc. | Tools and<br>Materials. | Contractors. | Sundries. |
|--|--------------|--------------|--|-------------------------|--------------|-----------|
| Office and engineers' salaries.....                  | \$106,397 21 | \$106,397 21 |  |                         |              |           |
| Office and engineers' expense.....                   | 11,866 56    | 1,517 26     | 80,365 70                              | 83,508 43               | \$292 04     | \$153 13  |
| Miscellaneous.....                                   | 7,593 27     | 3,466 67     | 45 00                                  | 4,081 60                |              |           |
| New manholes, entire city.....                       | 1,343 10     | 376 42       | 51 00                                  | 562 68                  | 350 00       |           |
| New catch basins, South Boston.....                  | 61 51        |              |  | 64 51                   |              |           |
| New catch basins, East Boston.....                   | 408 43       | 237 49       | 36 00                                  | 134 94                  |              |           |
| New catch basins, West Roxbury.....                  | 176 97       | 93 20        |  | 83 77                   |              |           |
| New catch basins, Dorchester.....                    | 765 46       | 91 83        |  | 67 71                   | 605 92       |           |
| New catch basins, Hyde Park.....                     | 1,816 08     |              |  | 353 39                  | 1,462 69     |           |
| New catch basins, Roxbury.....                       | 203 27       |              |  | 203 27                  |              |           |
| New catch basins, City Proper.....                   | 859 98       | 480 98       |  | 379 00                  |              |           |
| Stock.....   | 4,290 10     |              |  | 4,290 10                |              |           |
| Testing laboratory.....                              | 14,643 03    | 14,643 03    |  |                         |              |           |
| Holidays, vacations, sickness, and time allowed..... | 14,182 65    | 14,182 65    |  |                         |              |           |
| <i>Carried forward</i> .....                         | \$164,810 62 | \$141,716 74 | \$6,500 70                             | \$13,729 40             | \$2,710 65   | \$153 13  |

**CONSTRUCTION REPORT, 1949. — Concluded.**  
**Sewerage Works, 1949. — Concluded.**

| ACCOUNTS.                                      | Totals.        | Labor.       | Trucks,<br>Compressors,<br>Pumps, etc. | Tools and<br>Materials. | Contractors. | Sundries.  |
|--|----------------|--------------|--|-------------------------|--------------|------------|
| <i>Brought forward</i> .....                   | \$164,810 62   | \$141,716 74 | \$6,500 70                             | \$13,729 40             | \$2,710 65   | \$153 13   |
| Unadvertised jobs.....                         | 3,867 94       | 177 12       | .....                                  | 3,690 82                | .....        | .....      |
| Iron castings.....                             | 53,752 43      | 1,451 55     | .....                                  | 52,297 88               | .....        | .....      |
| Total, miscellaneous.....                      | \$222,430 99   | \$143,348 41 | \$6,500 70                             | \$69,718 10             | \$2,710 65   | \$153 13   |
| Sewers built, entire city.....                 | 931,327 87     | 71,962 79    | 39 00                                  | 16,579 38               | 842,178 48   | 868 22     |
| Totals.....                                    | \$1,153,758 86 | \$215,011 20 | \$6,539 70                             | \$86,297 48             | \$844,889 13 | \$1,021 35 |
| C R E D I T S.                                 |                |              |  |                         |              |            |
| Maintenance stock used on construction.....    | \$282 87       | .....        | .....                                  | .....                   | .....        | .....      |
| Construction stock used on construction.....   | 21,965 20      | .....        | .....                                  | .....                   | .....        | .....      |
| Trucks, etc., used on construction.....        | 174 00         | .....        | .....                                  | .....                   | .....        | .....      |
| Construction payrolls paid by maintenance..... | 651 13         | .....        | .....                                  | .....                   | .....        | .....      |
| Construction bills paid by maintenance.....    | 350 00         | 651 13       | 174 00                                 | 22,598 07               | .....        | .....      |
| Totals.....                                    | \$1,130,335 66 | \$214,360 07 | \$6,365 70                             | \$63,699 41             | \$844,889 13 | \$1,021 35 |
| D E B I T S.                                   |                |              |  |                         |              |            |
| Maintenance payrolls paid by construction..... | \$1,926 40     | .....        | .....                                  | .....                   | .....        | .....      |
| Maintenance bills paid by construction.....    | 790 27         | 1,926 40     | .....                                  | 790 27                  | .....        | .....      |
| Totals.....                                    | \$1,133,052 33 | \$216,286 47 | \$6,365 70                             | \$64,489 68             | \$844,889 13 | \$1,021 35 |



## Sewerage Works Contracts, from January 1, 1949, to December 31, 1949.

| LOCATION.  | Begun.         | Finished.     | Built by.                         | Length in Feet. | Character.  | Amount Expended in 1949. |
|--|----------------|---------------|-----------------------------------|-----------------|---|--------------------------|
| <b>SOUTH BOSTON.</b><br>Dorchester avenue, from West Broadway to West Fourth street, and in Silver street.   | June 20, 1949  | Aug. 1, 1949  | Matz Contracting Company          | 82.00           | Minor drain.....<br>5 new catch basins.<br>6 catch basins dismantled.<br>1 drop inlet dismantled. | \$759 76                 |
| <b>EAST BOSTON.</b><br>Deatur street overflow in private land, from Border street to 260 feet northerly.   | .....          | .....         | H. Cibotti and C. Andreassi       | .....           | Preliminary work only.....<br>No construction.  | 265 23                   |
| <b>CHARLESTOWN.</b><br>Monument Lane, from Bunker Hill street to Concord avenue, Charlestown; and Pitts-burgh street, from Congress street to New York, New Haven & Hartford Railroad, South Boston. | Nov. 13, 1947  | Dec. 22, 1947 | Ward General Contracting Company. | .....           | 113.37 square yards granite block pavement.   | 986 32                   |
| Roland street overflow in private land, between Roland street and 308 feet southerly.  | Aug. 29, 1949  | Oct. 11, 1949 | Joseph Botti & Son.....           | 286.00<br>21.35 | 36% concrete pipe.....<br>12% pipe sewer relaid.<br>1 manhole.                                    | 9,597 55                 |
| <b>BRIGHTON.</b><br>Minor sewerage works in West Roxbury and Brighton districts.   | April 29, 1948 | June 28, 1948 | J. D'Amico.....                   | .....           | Final payment.....  | 1,305 56                 |
| Third street, from North Beacon street to Buffalo street.  | Dec. 12, 1948  | March 2, 1949 | Kennedy Crane Service.....        | 497.13          | 10" pipe, sanitary sewer.....<br>4 manholes.  | 9,261 14                 |
| Brighton avenue, northerly and southerly sides, from Commonwealth avenue to Cambridge street, and outlets in Chester street, Ashford street, Ashford terrace, and Platt road.                        | June 25, 1948  | Jan. 25, 1949 | Baker & Co., Inc.....             | .....           | Final payment.....  | 25,219 11                |
| Brayton road, from Kenrick street to Crescent avenue.  | Nov. 4, 1948   | Dec. 3, 1948  | R. A. Buccella & Sons, Inc.       | .....           | Final payment.....  | 1,141 18                 |

## Sewerage Works Contracts, from January 1, 1949, to December 31, 1949. — Continued.

| LOCATION.  | Begun.         | Finished.      | Built by.                           | Length in Feet.  | Character.   | Amount Expended in 1949. |
|--|----------------|----------------|-------------------------------------|--|--|--------------------------|
| Colwell avenue, Umline road, private land, and Rena street.  | July 8, 1948   | Aug. 26, 1948  | John Williams Construction Company. | .....  | Final payment.....   | \$398 03                 |
| Mt. Vernon street and Platt road.  | June 8, 1949   | Oct. 6, 1949   | James D'Amico, Inc.....             | 1,073.73<br>257.82<br>209.78<br>598.76<br>58.00                | 10" pipe, sanitary sewer.....<br>15" pipe, surface drain.....<br>12" pipe, surface drain.....<br>10" pipe, surface drain.....<br>Catch-basin drain.....<br>8 manholes.....<br>2 catch basins.....                  | 15,476 28                |
| WEST ROXBURY.  |                |                |                                     |  |  |                          |
| Billings street, Prospect street, Oakmere street, Gould street, Eastwood Circuit, Rockliffe street, and in private land, West Roxbury.                               | Nov. 10, 1948  | Aug. 18, 1949  | James D'Amico, Inc.....             | 3,149.44<br>1,176.47<br>1,547.82<br>385.50<br>749.14<br>640.93 | 10" pipe, sanitary sewer.....<br>15" pipe, sanitary sewer.....<br>10" pipe, surface drain.....<br>12" pipe, surface drain.....<br>15" pipe, surface drain.....<br>18" pipe, surface drain.....<br>32 manholes..... | 55,613 52                |
| Keystone street, from Glenhaven street to Upland road, West Roxbury; Paragon road, from North avenue to Glenhaven road, West Roxbury; Ruskindale road.               | March 25, 1948 | Dec. 14, 1948  | A. Singarella & Sons.....           | .....  | Final payment.....   | 1,934 88                 |
| Ledgewood road, West Roxbury, from Carey street northeasterly, and Shrewsbury road, West Roxbury, between Veterans of Foreign Wars Parkway and Macey street.         | Dec. 7, 1948   | April 28, 1949 | John Williams Construction Company. | .....  | Final payment.....   | 9,314 37                 |
| Paragon road and Glenellen road.   | March 28, 1949 | May 21, 1949   | Joseph Capone & Son.....            | 1,385.79<br>91.00  | 10" pipe, surface drain.....<br>10" pipe, catch-basin drain.....<br>6 manholes.....<br>4 catch basins.....   | 15,051 06                |
| Spring Street Brook, in Prospect street and private land, Baker street, Belle avenue, Centre street, at No. 2501, Bussey Brook inlet, and Hart street, West Roxbury. | Sept. 3, 1947  | Dec. 2, 1947   | Joseph Civitarese.....              | .....  | Final payment.....   | 600 40                   |

|  |                           |                |                                |                                     |  |           |
|--|---------------------------|----------------|--------------------------------|-------------------------------------|--|-----------|
| Widening and deepening Sawmill Brook, in private land, from Newton line to Brookline line.   | Jan. 24, 1949             | Jan. 28, 1949  | P. J. Joyce & Son.             | .....                               | Final payment.   | 3,717 11  |
| Carlson Circle and outlet in private land to Courtney road and Ferncroft road, West Roxbury.   | July 16, 1948             | Aug. 13, 1948  | R. A. Bucella & Sons, Inc.     | .....                               | Final payment.   | 460 82    |
| Morton street and Arborway, West Roxbury, from Stony Brook conduit to Forest Hills street.   | May 17, 1949              | Aug. 31, 1949  | Baker & Co., Inc.              | 735.71<br>736.10                    | 10" pipe, sanitary sewer.<br>18" pipe, surface drain.<br>6 manholes.   | 23,340 43 |
| Worley street, Brook Farm road, and Lyall street.  | Aug. 24, 1948             | Oct. 28, 1948  | Anthony D'Alessandro           | .....                               | Final payment.   | 1,816 25  |
| Jeffers street, Crew Hill avenue, Bateman street, and Alpheus road, West Roxbury.  | Aug. 23, 1948             | Nov. 21, 1948  | H. DiTullio & Sons, Inc.       | .....                               | Final payment.   | 4,700 89  |
| Weld street, from Corey street to Ruskin street.   | Aug. 2, 1948              | Sept. 2, 1948  | Joseph Capone & Son.           | .....                               | Final payment.   | 191 36    |
| New Haven street, Sulman street, Vogel street, Riverview street, Stinson street, and outlet in private land and in Belle avenue, West Roxbury. | Sept. 14, 1949            | Not completed. | Andrew F. Keegan.              | 235.00<br>235.00                    | 12" pipe, sanitary sewer.<br>36" pipe, surface drain.<br>2 manholes.   | 12,212 85 |
| Worley street, Starr Lane, and Ennis road, West Roxbury, and in Beechcroft street and Brook street, Brighton.                                  | Oct. 3, 1949              | Dec. 14, 1949  | Rosindale Contracting Company. | 1,133.90<br>471.40<br>298.00        | 10" pipe, surface drain.<br>15" pipe, surface drain.<br>10" pipe, catch-basin drain.<br>4 manholes.<br>20 catch basins.<br>1 drop inlet. | 18,362 16 |
| Gloria road, and minor sewerage works in various streets in West Roxbury and Brighton.   | Construction not started. | .....          | James D'Amico, Inc.            | .....                               | Advertising and engineering.   | 520 48    |
| Minor sewerage works in West Roxbury and Brighton.   | Aug. 4, 1949              | Oct. 26, 1949  | Angelo Grande.                 | 367.00                              | 10" pipe, catch-basin drain.<br>21 catch basins.<br>1 drop inlet.  | 11,672 21 |
| Anafran street, Cummins Highway to Roanoke road, Hahofield avenue, River street to Neponset River Reservation, Hyde Park.                      | Dec. 15, 1949             | Not completed. | Baker & Co.                    | 345.00<br>330.00<br>160.00<br>35.00 | 8" pipe, surface drain.<br>12" pipe, surface drain.<br>10" pipe, surface drain.<br>Minor drain.<br>4 catch basins.                       | 1,503 25  |

## Sewerage Works Contracts, from January 1, 1949, to December 31, 1949. — Continued.

| LOCATION.  | Began.                    | Finished.      | Built by.                        | Length<br>in<br>Feet.  | Character.   | Amount<br>Expended<br>in 1949. |
|--|---------------------------|----------------|----------------------------------|--|--|--------------------------------|
| Metropolitan avenue, from Poplar street to 565 feet northwly.                                    | Sept. 12, 1949            | Sept. 24, 1949 | Walter Reed Corporation          |  | 320.59 cubic yards asphalt top   | \$2,692 96                     |
| Centre street, at St. Theresa avenue   | Oct. 18, 1945             | Nov. 25, 1945  | M. DeMattio Contracting Company. |  | Final payment  | 2,881 23                       |
| Crieket Lane and outlet in private land to Covey street.   | Construction not started. | Not completed  | Joseph Capone & Son              |  | Advertising and engineering  | 728 66                         |
| Jamaicaway court, Shrewsbury road, Ruslowood road, and Potomac Street Extension.                 | Construction not started. | Not completed  | Bagaralla Contracting Company.   |  | Preliminary engineering  | 213 26                         |
| DORCHESTER.  |                           |                |                                  |  |  |                                |
| Sewage Treatment Plant   | Nov. 2, 1945              | Sept. 30, 1949 | Charles A. Maguire & Associates. |  | Design of Calf Pasture Treatment Plant   | 279,854 15                     |
| Soundings and wash borings for sludge disposal line, from Calf Pasture to Long Island.           | Aug. 5, 1948              | Oct. 25, 1948  | James A. Freaney, Inc.           |  | Final payment  | 1,266 37                       |
| Tenean Creek, Victory road and Freeport street, Tenean street and Old Colony Parkway.            | Oct. 2, 1946              | Dec. 15, 1948  | John Deveney Company             |  | Final payment  | 61,370 86                      |
| Moon Island, extending east shaft of Dorchester Bay Tunnel.                                      | June 28, 1948             | July 23, 1948  | Martin J. Kelly, Inc.            |  | Final payment  | 435 00                         |
| Barry park, Bismarck street, Lorna road, Edna road, Dorchester, and Reservoir street, Hyde Park. | March 17, 1949            | Not completed  | R. A. Buccella & Sons, Inc.      |  | Advertising and engineering  | 353 17                         |
| Rockne avenue, Dorchester  | Nov. 1, 1949              | Nov. 5, 1949   | John P. Condon Corporation.      | 80.00  | 10" minor drain  | 2,025 39                       |
| HYDE PARK.   |                           |                |                                  |  |  |                                |
| Millstone road, Colchester street, and Stanbro street.   | June 22, 1949             | Aug. 27, 1949  | Pacella Brothers, Inc.           | 105.53<br>274.10<br>286.42<br>184.59<br>250.47<br>213.47<br>782.16<br>240.00<br>534.00 | 36" pipe, sanitary sewer.<br>30" pipe, sanitary sewer.<br>24" pipe, sanitary sewer.<br>21" pipe, sanitary sewer.<br>18" pipe, sanitary sewer.<br>15" pipe, sanitary sewer.<br>12" pipe, sanitary sewer.<br>10" pipe, sanitary sewer.<br>Minor drain. | 41,681 58                      |

26 on each business.

|  |               |                |                                |  |  |            |
|--|---------------|----------------|--------------------------------|--|--|------------|
| Orchard street, Hyde Park; Charles road, Dorechester; and minor sewers works in Dorechester and Hyde Park, private land off Washington street, Hyde Park; and Harwood street, Dorechester; and Columbus avenue, Roxbury. | Dec. 6, 1948  | Nov. 18, 1949  | R. A. Bucciona & Sons, Inc.    | 555.22<br>169.10<br>35.50<br>475.52<br>63.00   | 10" pipe, sanitary sewer.<br>12" pipe, sanitary sewer.<br>18" pipe, sanitary sewer.<br>12" pipe, surface drain.<br>Minor drain.<br>3 catch basins,<br>2 drop inlets.   | 15,496 73  |
| Turtle Pond Parkway, from River street to Berwick street, and from Berwick street to 786 feet northerly and 114 feet easterly.   | Oct. 4, 1948  | March 21, 1949 | Baker & Co., Inc.              | 2,459.72   | 15" pipe, sanitary sewer.  | 44,489 60  |
| Bradlee street, from Tacoma street to Safford street, Safford street, from Bradlee street to Melba Way, and Melba Way, from Safford street to 185 feet northerly.  | June 20, 1949 | Aug. 4, 1949   | Angelo Grande                  | 1,000.62<br>208.65<br>628.91<br>209.95   | 12" pipe, sanitary sewer.<br>10" pipe, sanitary sewer.<br>12" pipe, surface drain.<br>10" pipe, surface drain.   | 13,604 44  |
| Garfield avenue, Loring street, Glenwood avenue, Tyler street, Washington street, New street, and Woodglen road.   | Aug. 4, 1949  | Oct. 8, 1949   | Baker & Co., Inc.              | 426.45<br>758.55<br>680.56<br>690.37<br>658.75<br>146.65<br>543.17<br>2,309.97<br>379.16 | 12" pipe, sanitary sewer.<br>10" pipe, sanitary sewer.<br>30" pipe, surface drain.<br>27" pipe, surface drain.<br>24" pipe, surface drain.<br>18" pipe, surface drain.<br>15" pipe, surface drain.<br>12" pipe, surface drain.<br>10" pipe, surface drain. | 42,732 53  |
| Riverside square, Radford place, Hyde Park; and Hebron street, Dorechester.  | Nov. 28, 1949 | Not completed. | Baker & Co., Inc.              | 270.00<br>265.00   | 10" pipe, sanitary sewer.<br>10" pipe, surface drain.  | 1,146 17   |
| Skyline road and outlet in private land, from Williams avenue to Skyline road.   | Nov. 10, 1949 | Dec. 23, 1949  | Angelo Grande                  | 561.26<br>227.70   | 10" pipe, sanitary sewer.<br>10" pipe, surface drain.<br>2 catch basins.   | 1,592 79   |
| Child street, Linwood street, Valencia road, Avila road, Hyde Park; and Wenlock road, Dorechester.   | Nov. 28, 1949 | Not completed. | Sisti & DeSantis Company, Inc. | 39.00<br>250.00<br>200.00<br>40.00<br>170.00   | 18" pipe, surface drain.<br>12" pipe, surface drain.<br>10" pipe, surface drain.<br>Minor drain.<br>10" pipe, sanitary sewer.<br>4 catch basins.   | 2,615 72   |
| Roxbury.   | Oct. 22, 1948 | Nov. 22, 1948  | James D'Amico                  |  | Final payment  | 4,750 72   |
| Cunnington street, from point about 250 feet east of St. Mary's street to 130 feet easterly, Roxbury; Dale street, Roxbury; Kneeland street, City Proper.  | Dec. 29, 1948 | April 12, 1949 | J. J. Struzziery Company, Inc. | 288.00   | 72" double concrete pipe, surface drain.   | 119,455 53 |

## Sewerage Works Contracts, from January 1, 1949, to December 31, 1949.—Concluded.

| LOCATION.  | Began.         | Finished.      | Built by.                              | Length in Feet.  | Character.   | Amount Expended in 1949. |
|--|----------------|----------------|--|------------------|--|--------------------------|
| Wieglesworth street, from Longwood avenue to Huntington avenue.                    | July 7, 1949   | Sept. 1, 1949  | Bagarella Construction Company, Inc.   | 255 00<br>261 00 | 12" pipe, sanitary sewer.....<br>10" pipe, surface drain.....<br>6 manholes.   | \$3,983 21               |
| Camden street, from Slaawmut avenue to Northfield street.                          | Sept. 26, 1949 | Oct. 4, 1949   | R. A. Buocella & Sons, Inc..           | 157.00           | 18" pipe, sanitary sewer.....  | 2,301 02                 |
| Rollins court, from Dennis street to 167 feet southeasterly.                       | Dec. 14, 1949  | Dec. 20, 1949  | Bagarella Construction Company, Inc.   | 163 00           | 12" pipe, sanitary sewer.....<br>2 manholes.   | 1,636 82                 |
| CITY PROPER.   |                |                |  |                  |  |                          |
| Aron street, from Chauncy street to 200 feet northwesterly.                        | Aug. 21, 1948  | Oct. 6, 1948   | R. A. Buocella & Sons, Inc..           | .....            | Final payment.....   | 1,027 40                 |
| Rebuild Savin Hill overflow and rebuild Union Park Street sidewalk.                | Sept. 23, 1948 | Feb. 4, 1949   | Martin J. Kelly Company, Inc.          | 368.50           | cubic yards concrete. Alter fidegate chamber and furnish and hang 4 fidegates. Reinforced concrete sidewalk. Steel side walls and door and wall bracket. | 35,816 51                |
| Columbus avenue, from Arlington street to Northampton street.                      | Nov. 3, 1947   | Nov. 5, 1948   | John Deveney Company.....              | .....            | Final payment.....   | 3,768 47                 |
| Washington Street Housing Project.....   | No date.       | No date.       | Boston Housing Authority               | .....            | Engineering and inspection.....  | 2,922 72                 |
| Myrtle street, from Irving street to Anderson street, and outlet in Irving street. | Aug. 11, 1949  | Oct. 4, 1949   | Andrew P. Keegan.....                  | 423 60           | 12" pipe, sanitary sewer.....  | 5,687 40                 |
| Cedar Lane Way, from Chestnut street to Mt. Vernon street.                         | Sept. 13, 1949 | Oct. 29, 1949  | Rosa and Todisco Construction Company. | 238.05           | 12" pipe, sanitary sewer.....<br>2 manholes.   | 4,416 63                 |
| Decatur street, from Harrison avenue to Washington street.                         | Sept. 7, 1949  | Nov. 30, 1949  | Bagarella Construction Company, Inc.   | 340.00           | 15" pipe, sanitary sewer.....<br>2 manholes.   | 4,621 35                 |
| Church street and outlet in Public Garden.   | Dec. 28, 1949  | Not completed. | R. A. Buocella & Sons, Inc..           | .....            | Advertising and inspection.....  | 137 19                   |

## APPENDIX E.

REPORT OF THE DIVISION ENGINEER OF  
THE WATER DIVISION.

BOSTON, January 3, 1950.

*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, 1949.

The shortage of critical materials having been lessened, and new meters made available, the work of laying and relaying water mains and the replacement of obsolete meters, etc., was resumed.

A total of 15,993 linear feet of pipe were either laid or relaid, varying in sizes from 6-inch to 12-inch, inclusive, as follows:

| DISTRICT.              | LAI D.<br>Linear Feet. | RELAID.<br>Linear Feet. |
|------------------------|------------------------|-------------------------|
| Roxbury . . . . .      | 0                      | 0                       |
| East Boston . . . . .  | 0                      | 1,108                   |
| City Proper . . . . .  | 0                      | 1,141                   |
| South Boston . . . . . | 0                      | 232                     |
| Dorchester . . . . .   | 343                    | 1,396                   |
| Brighton . . . . .     | 2,856.5                | 0                       |
| West Roxbury . . . . . | 1,198                  | 0                       |
| Hyde Park . . . . .    | 3,582.5                | 1,389                   |
| Charlestown . . . . .  | 1,566                  | 1,181                   |
| Total . . . . .        | 9,546.0                | 6,447.0                 |

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 1949 with a surplus of \$632,547.10, this surplus being due mainly to the collection of bills due and payable.

|   |     |
|---|-----|
| Main pipe petitions received . . . . .  | 8   |
| Domestic service applications . . . . . | 599 |
| Fire pipe applications . . . . .        | 41  |
| Special meter tests . . . . .           | 87  |
| Hydrant permits issued . . . . .        | 13  |
| Repair deposits received . . . . .      | 103 |
| Miscellaneous deposits . . . . .        | 34  |

#### APPROPRIATIONS, EXPENDITURES AND REVENUES.

|   |                |
|---|----------------|
| Budget appropriation . . . . .                      | \$2,481,954 61 |
| Amount expended . . . . .                           | 2,338,164 98   |
| Unexpended balance . . . . .                        | \$143,789 63   |
| Amount of money collected during the year . . . . . | \$4,897,091 96 |
| Amount expended from all sources . . . . .          | 4,264,544 86   |
| Balance . . . . .                                   | \$632,547 10   |

The metropolitan assessment for 1949 amounted to \$1,719,906.76, at the rate of \$40 per million gallons, an increase of \$41,516.16 over the assessment for 1948.

|   |                |
|---|----------------|
| Total amount billed in 1949 . . . . .                                       | \$4,813,934 63 |
| Total amount collected for 1949 bills, as of<br>December 31, 1949 . . . . . | \$3,916,742 72 |



|  |              |
|--|--------------|
| Total amount abated for 1949 bills, as of<br>December 31, 1949 . . . . .     | \$40,771 15  |
| Total amount collected in 1949, on bills<br>rendered prior to 1949 . . . . . | \$677,795 33 |

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 before placing of liens on premises 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,

DANIEL M. SULLIVAN,  
*Division Engineer.*

Table No. 1. Statement of Work Done During 1949.

| MAKE.                 | Applied. | Discontinued. | METERS CHANGED. |        | Tested in Shop. | Repaired in Service. | Repaired in Shop. | Resets. | Salvaged. |
|-----------------------|----------|---------------|-----------------|--------|-----------------|----------------------|-------------------|---------|-----------|
|                       |          |               | Out.            | In.    |                 |                      |                   |         |           |
| Hersey Disc.....      | 398      | 138           | 6,912           | 9,909  | 16,821          | 490                  | 1,617             | 531     | 168       |
| Hersey Detector.....  |          | 1             | 3               | 5      | 8               | 31                   |                   |         |           |
| Hersey Compound.....  | 51       |               | 1               | 21     | 22              | 12                   | 2                 | 2       |           |
| Worthington Disc..... |          | 7             | 488             | 7      | 495             | 35                   |                   |         | 566       |
| Watch Dog.....        | 59       | 54            | 2,361           | 371    | 2,732           | 121                  |                   | 18      | 1,421     |
| King.....             |          | 2             | 457             | 2      | 459             | 15                   |                   |         | 489       |
| Federal.....          |          |               | 13              |        | 13              |                      |                   |         | 15        |
| American.....         |          |               | 52              |        | 52              |                      |                   |         | 62        |
| Lambert.....          |          |               | 4               |        | 4               |                      |                   |         | 4         |
| Crown.....            |          |               | 7               |        | 7               |                      |                   |         | 6         |
| Trident.....          |          | 1             | 2               |        | 2               |                      |                   |         |           |
| Arctic.....           |          |               | 7               |        | 7               |                      |                   |         | 3         |
| Nash.....             |          | 1             | 5               |        | 5               |                      |                   |         | 6         |
| Keystone.....         |          |               | 1               |        | 1               |                      |                   |         | 1         |
| National.....         |          |               |                 |        |                 |                      |                   |         | 4         |
| Neptune.....          |          |               | 2               | 2      |                 |                      |                   |         | 2         |
| Totals.....           | 508      | 204           | 10,315          | 10,315 | 20,630          | 704                  | 1,619             | 551     | 2,747     |

Table No. 2. Meters in Service December 31, 1949.

| MAKE.                 | DIAMETER IN INCHES. |               |       |                 |       |       |       |       |       |       |       | Total. |        |
|-----------------------|---------------------|---------------|-------|-----------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
|                       | $\frac{5}{8}$       | $\frac{3}{4}$ | 1     | 1 $\frac{1}{2}$ | 2     | 3     | 4     | 6     | 8     | 10    | 12    |        |        |
| Hersey Disc.....      | 60,673              | 3,431         | 2,107 | 1,214           | 726   | 157   | 148   | 37    | 1     | ..... | ..... | 68,494 |        |
| Hersey Detector.....  | .....               | .....         | ..... | .....           | ..... | ..... | 9     | 52    | 64    | 34    | 23    | 9      | 191    |
| Hersey Compound.....  | .....               | .....         | ..... | .....           | 5     | 115   | 44    | 25    | ..... | ..... | ..... | .....  | 189    |
| Hersey Rotary.....    | 43                  | 53            | 26    | 29              | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....  | 151    |
| Worthington Disc..... | 3,075               | 21            | 22    | 26              | 34    | 7     | ..... | ..... | ..... | ..... | ..... | .....  | 3,185  |
| Watch Dog.....        | 21,197              | 961           | 814   | 705             | 473   | 402   | ..... | ..... | ..... | ..... | ..... | .....  | 24,552 |
| American.....         | 272                 | 90            | ..... | .....           | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....  | 362    |
| King.....             | 877                 | 97            | 2     | 4               | 21    | ..... | ..... | ..... | ..... | ..... | ..... | .....  | 1,001  |
| Federal.....          | 189                 | .....         | ..... | .....           | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....  | 189    |
| Crown.....            | 139                 | 272           | 12    | 37              | 58    | 17    | ..... | ..... | ..... | ..... | ..... | .....  | 535    |
| Nash.....             | 62                  | 28            | 18    | 5               | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....  | 113    |
| Lambert.....          | 36                  | 11            | 19    | .....           | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....  | 66     |
| Arctic.....           | 1                   | .....         | ..... | .....           | 18    | 20    | 17    | 10    | ..... | ..... | ..... | .....  | 66     |
| Keystone.....         | 13                  | 6             | 1     | .....           | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....  | 20     |
| Empire.....           | 25                  | .....         | 2     | .....           | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....  | 27     |
| Trident.....          | 34                  | 2             | 2     | 11              | 11    | 19    | 2     | 1     | 1     | 1     | ..... | .....  | 84     |
| Totals.....           | 86,636              | 4,972         | 3,025 | 2,031           | 1,346 | 746   | 263   | 137   | 36    | 24    | 9     | .....  | 99,225 |

Table No. 3. Meters in Shop December 31, 1949.

| MAKE.                 | DIAMETER IN INCHES. |               |       |                |       |       |       |       | Total. |
|-----------------------|---------------------|---------------|-------|----------------|-------|-------|-------|-------|--------|
|                       | $\frac{5}{8}$       | $\frac{1}{1}$ | 1     | $1\frac{1}{2}$ | 2     | 3     | 4     | 6     |        |
| NEW.                  |                     |               |       |                |       |       |       |       |        |
| Hersey Disc. ....     | 750                 | 1,410         | 165   | 24             | 85    | ..... | ..... | ..... | 2,434  |
| Hersey Compound. .... | .....               | .....         | ..... | .....          | ..... | 5     | 25    | ..... | 30     |
| Hersey Detector. .... | .....               | .....         | ..... | .....          | ..... | ..... | 4     | 3     | 7      |
| Totals. ....          | 750                 | 1,410         | 165   | 24             | 85    | 5     | 29    | 3     | 2,471  |
| OLD.                  |                     |               |       |                |       |       |       |       |        |
| Hersey Disc. ....     | 75                  | 60            | 55    | 22             | 28    | 9     | 4     | 1     | 254    |
| Hersey Compound. .... | .....               | .....         | ..... | .....          | ..... | ..... | ..... | 2     | 2      |
| Totals. ....          | 75                  | 60            | 55    | 22             | 28    | 9     | 4     | 3     | 256    |

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

| MAKE.             | DIAMETER IN INCHES. |               |     | Total. |
|-------------------|---------------------|---------------|-----|--------|
|                   | $\frac{5}{8}$       | $\frac{1}{1}$ | 1   |        |
| Hersey Disc. .... | 3,200               | 500           | 215 | 3,915  |

Table No. 4A. Meters Purchased New in 1949.

| MAKE.                 | DIAMETER IN INCHES. |               |       |                |       |       |       |       | Total. |
|-----------------------|---------------------|---------------|-------|----------------|-------|-------|-------|-------|--------|
|                       | $\frac{5}{8}$       | $\frac{1}{1}$ | 1     | $1\frac{1}{2}$ | 2     | 3     | 4     | 6     |        |
| Hersey Disc. ....     | 5,220               | 1,505         | 300   | 135            | 150   | ..... | ..... | ..... | 7,310  |
| Hersey Compound. .... | .....               | .....         | ..... | .....          | ..... | 40    | 40    | ..... | 80     |
| Hersey Detector. .... | .....               | .....         | ..... | .....          | ..... | ..... | 4     | 2     | 6      |
| Totals. ....          | 5,220               | 1,505         | 300   | 135            | 150   | 40    | 44    | 2     | 7,396  |

Table No. 5. Meters Reset in 1949.

| MAKE.                | DIAMETER IN INCHES. |               |   |                 |       |       |   | Total. | Occupied. | Connection Pieces. |
|----------------------|---------------------|---------------|---|-----------------|-------|-------|---|--------|-----------|--------------------|
|                      | $\frac{1}{2}$       | $\frac{3}{4}$ | 1 | 1 $\frac{1}{2}$ | 2     | 3     | 4 |        |           |                    |
| Hersey Disc.....     | 485                 | 27            | 6 | 3               | 8     | ..... | 2 | 531    | 77        | 454                |
| Hersey Compound..... |                     |               |   |                 |       |       | 1 | 1      | 2         | 2                  |
| Watch Dog.....       | 11                  | .....         | 1 | 4               | ..... | 1     | 1 | 18     | 7         | 11                 |
| Totals.....          | 496                 | 27            | 7 | 7               | 8     | 2     | 4 | 551    | 84        | 467                |

Table No. 6A. Meters Changed in 1949. Meters Taken Out.

| MAKE.                 | DIAMETER IN INCHES. |               |       |                 |       |       |       |       | Total. |
|-----------------------|---------------------|---------------|-------|-----------------|-------|-------|-------|-------|--------|
|                       | $\frac{1}{2}$       | $\frac{3}{4}$ | 1     | 1 $\frac{1}{2}$ | 2     | 3     | 4     | 6     |        |
| Hersey Disc.....      | 5,938               | 543           | 253   | 117             | 54    | 5     | 1     | 1     | 6,912  |
| Hersey Detector.....  |                     |               |       |                 |       |       | 3     | ..... | 3      |
| Hersey Compound.....  |                     |               |       |                 |       | 1     | ..... | ..... | 1      |
| Worthington Disc..... | 486                 | 1             | ..... | .....           | ..... | 1     | ..... | ..... | 488    |
| Watch Dog.....        | 1,976               | 113           | 113   | 106             | 32    | 17    | 4     | ..... | 2,361  |
| King.....             | 434                 | 16            | 3     | 4               | ..... | ..... | ..... | ..... | 457    |
| Arctic.....           | .....               | .....         | ..... | .....           | 4     | 3     | ..... | ..... | 7      |
| Nash.....             | 5                   | .....         | ..... | .....           | ..... | ..... | ..... | ..... | 5      |
| Lambert.....          | 2                   | 1             | 1     | .....           | ..... | ..... | ..... | ..... | 4      |
| Crown.....            | .....               | 1             | 1     | 4               | 1     | ..... | ..... | ..... | 7      |
| Federal.....          | 13                  | .....         | ..... | .....           | ..... | ..... | ..... | ..... | 13     |
| American.....         | 42                  | 10            | ..... | .....           | ..... | ..... | ..... | ..... | 52     |
| Trident.....          | .....               | .....         | ..... | .....           | ..... | 2     | ..... | ..... | 2      |
| Keystone.....         | 1                   | .....         | ..... | .....           | ..... | ..... | ..... | ..... | 1      |
| Neptune.....          | 2                   | .....         | ..... | .....           | ..... | ..... | ..... | ..... | 2      |
| Totals.....           | 8,899               | 685           | 371   | 231             | 91    | 29    | 8     | 1     | 10,315 |

Table No. 6B. Meters Changed in Year 1949. Meters Put In.

| MAKE.                 | DIAMETER IN INCHES. |               |     |                |    |    |    |       | Total. |
|-----------------------|---------------------|---------------|-----|----------------|----|----|----|-------|--------|
|                       | $\frac{3}{8}$       | $\frac{1}{2}$ | 1   | $1\frac{1}{2}$ | 2  | 3  | 4  | 6     |        |
| Hersey Disc .....     | 8,536               | 766           | 356 | 168            | 76 | 5  | 2  | ..... | 9,909  |
| Hersey Detector.....  |                     |               |     |                |    |    |    | 3 2   | 5      |
| Hersey Compound.....  |                     |               |     |                |    | 15 | 6  | ..... | 21     |
| Worthington Disc..... | 7                   |               |     |                |    |    |    | ..... | 7      |
| Watch Dog.....        | 287                 | 4             | 6   | 52             | 9  | 13 |    | ..... | 371    |
| King.....             | 1                   | 1             |     |                |    |    |    | ..... | 2      |
| Arctic.....           |                     |               |     |                |    |    |    | ..... |        |
| Lambert.....          |                     |               |     |                |    |    |    | ..... |        |
| Nash.....             |                     |               |     |                |    |    |    | ..... |        |
| Crown.....            |                     |               |     |                |    |    |    | ..... |        |
| Federal.....          |                     |               |     |                |    |    |    | ..... |        |
| American.....         |                     |               |     |                |    |    |    | ..... |        |
| Trident.....          |                     |               |     |                |    |    |    | ..... |        |
| Keystone.....         |                     |               |     |                |    |    |    | ..... |        |
| Totals.....           | 8,831               | 771           | 362 | 220            | 85 | 33 | 11 | 2     | 10,315 |

Table No. 7. Causes of Meter Changes for the Year 1949.

| MAKE.                 | Department Test. | Do Not Register. | No Force. | Clock Broken. | Enlarged Meter. | Coupling Leak. | Spindle Leak. | Noisy. | Set Backwards. | Special Test. | Frost. | Total. |
|-----------------------|------------------|------------------|-----------|---------------|-----------------|----------------|---------------|--------|----------------|---------------|--------|--------|
| Hersey Disc.....      | 3,752            | 1,894            | 46        | 68            | 38              | 209            | 771           | 43     | 15             | 67            | 9      | 6,912  |
| Hersey Detector.....  | 3                |                  |           |               |                 |                |               |        |                |               |        | 3      |
| Hersey Compound.....  | 1                |                  |           |               |                 |                |               |        |                |               |        | 1      |
| Watch Dog.....        | 891              | 877              | 21        | 10            | 7               | 365            | 150           | 12     | 3              | 25            |        | 2,361  |
| Worthington Disc..... | 260              | 151              | 2         | 1             |                 | 20             | 54            |        |                |               |        | 488    |
| King.....             | 178              | 192              |           | 9             |                 | 19             | 59            |        |                |               |        | 457    |
| Arctic.....           | 2                | 5                |           |               |                 |                |               |        |                |               |        | 7      |
| Nash.....             |                  | 4                |           | 1             |                 |                |               |        |                |               |        | 5      |
| Lambert.....          |                  | 3                |           |               |                 |                | 1             |        |                |               |        | 4      |
| Crown.....            |                  | 5                |           |               |                 | 1              | 1             |        |                |               |        | 7      |
| Federal.....          |                  | 8                |           | 2             |                 |                | 3             |        |                |               |        | 13     |
| American.....         | 15               | 22               |           | 5             |                 |                | 10            |        |                |               |        | 52     |
| Trident.....          |                  | 2                |           |               |                 |                |               |        |                |               |        | 2      |
| Keystone.....         |                  | 1                |           |               |                 |                |               |        |                |               |        | 1      |
| Neptune.....          |                  | 2                |           |               |                 |                |               |        |                |               |        | 2      |
| Totals.....           | 5,162            | 3,166            | 69        | 96            | 45              | 614            | 1,049         | 55     | 18             | 92            | 9      | 10,315 |

Table No. 8. Meters Applied in 1949.

| MAKE.                 | DIAMETER IN INCHES. |               |    |    |    |    |     |     | Total. |
|-----------------------|---------------------|---------------|----|----|----|----|-----|-----|--------|
|                       | $\frac{5}{8}$       | $\frac{3}{4}$ | 1  | 1½ | 2  | 3  | 4   | 6   |        |
| Hersey Disc.....      | 301                 | 8             | 16 | 24 | 47 | 1  | ... | 1   | 398    |
| Hersey Compound.....  |                     |               |    |    |    |    | 29  | 22  | 51     |
| Hersey Dectector..... |                     |               |    |    |    |    |     |     |        |
| Watch Dog.....        |                     | 4             |    | 30 | 18 | 5  | 2   | ... | 59     |
| Totals.....           | 305                 | 8             | 16 | 54 | 65 | 35 | 24  | 1   | 508    |

Meters applied on new services..... 481  
Meters applied on old services..... 27  
Total..... 508

Table No. 9. Meters Discontinued in 1949.

| MAKE.                 | DIAMETER IN INCHES. |       |       |       |       |       |       |       |       | Total. | Permanently<br>Discontinued. | Vacancies. | Connection Pieces. |
|-----------------------|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|------------------------------|------------|--------------------|
|                       | 5                   | 4     | 1     | 1½    | 2     | 3     | 4     | 6     | 10    |        |                              |            |                    |
| Hersey Disc.....      | 422                 | 31    | 16    | 4     | 13    | 1     | 1     | ..... | ..... | 488    | 138                          | 71         | 279                |
| Hersey Compound.....  | .....               | ..... | ..... | ..... | ..... | 1     | ..... | 1     | ..... | 2      | 1                            | .....      | 1                  |
| Hersey Detector.....  | 1                   | ..... | ..... | ..... | ..... | ..... | 1     | ..... | 1     | 3      | 1                            | 1          | 1                  |
| Watch Dog.....        | 145                 | 5     | 3     | 10    | 3     | ..... | ..... | ..... | ..... | 166    | 53                           | 15         | 98                 |
| Worthington Disc..... | 33                  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 33     | 7                            | 1          | 25                 |
| Federal.....          | 2                   | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2      | .....                        | .....      | 2                  |
| Trident.....          | .....               | ..... | ..... | ..... | ..... | 1     | ..... | ..... | ..... | 1      | 1                            | .....      | .....              |
| King.....             | 25                  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 25     | 2                            | 3          | 20                 |
| Nash.....             | .....               | ..... | ..... | 2     | ..... | ..... | ..... | ..... | ..... | 2      | 1                            | 1          | .....              |
| Totals.....           | 628                 | 36    | 19    | 16    | 16    | 3     | 2     | 1     | 1     | 722    | 204                          | 92         | 426                |

Table No. 10. Meters Repaired in Service in 1949.

| MAKE.                 | Defaced and<br>Broken Clocks. | Spindle Leaks. | Coupling Leaks. | New Trains. | Broken Gears. | Examinations. | Repaired Trains. | Total. |
|-----------------------|-------------------------------|----------------|-----------------|-------------|---------------|---------------|------------------|--------|
| Hersey Disc.....      | 57                            | 398            | 43              | 7           | 3             | 70            | 2                | 580    |
| Hersey Detector.....  | 21                            | 4              | .....           | 1           | .....         | 24            | .....            | 50     |
| Hersey Compound.....  | 7                             | 2              | 1               | 3           | 1             | 31            | .....            | 45     |
| Worthington Disc..... | .....                         | .....          | .....           | .....       | .....         | 8             | .....            | 8      |
| Watch Dog.....        | 29                            | 82             | 5               | .....       | 7             | 146           | .....            | 269    |
| King.....             | .....                         | 9              | .....           | .....       | .....         | 17            | .....            | 26     |
| Federal.....          | .....                         | 2              | .....           | .....       | .....         | 3             | .....            | 5      |
| Arctic.....           | 1                             | 3              | .....           | .....       | .....         | 2             | .....            | 6      |
| Totals.....           | 115                           | 500            | 49              | 11          | 11            | 301           | 2                | 989    |



Table No. 11. Meters Salvaged in 1949.

| MAKE.                 | DIAMETER IN INCHES. |               |           |           |           |           |          |          | Total.       |
|-----------------------|---------------------|---------------|-----------|-----------|-----------|-----------|----------|----------|--------------|
|                       | $\frac{3}{8}$       | $\frac{1}{2}$ | 1         | 1½        | 2         | 3         | 4        | 6        |              |
| Hersey Disc.....      | 122                 | 5             | 1         | 7         | 10        | 17        | 5        | 1        | 168          |
| Watch Dog.....        | 1,266               | 61            | 90        | 2         | 2         |           |          |          | 1,421        |
| King.....             | 484                 | 2             | 2         | 1         |           |           |          |          | 489          |
| Worthington Disc..... | 563                 |               |           | 1         | 1         | 1         |          |          | 566          |
| American.....         | 54                  | 8             |           |           |           |           |          |          | 62           |
| Federal.....          | 15                  |               |           |           |           |           |          |          | 15           |
| Arctic.....           |                     |               |           |           | 3         |           |          |          | 3            |
| National.....         |                     | 1             | 1         | 1         | 1         |           |          |          | 4            |
| Nash.....             | 5                   |               |           | 1         |           |           |          |          | 6            |
| Keystone.....         | 1                   |               |           |           |           |           |          |          | 1            |
| Lambert.....          | 3                   | 1             |           |           |           |           |          |          | 4            |
| Neptune.....          | 2                   |               |           |           |           |           |          |          | 2            |
| Crown.....            |                     |               |           | 4         | 1         | 1         |          |          | 6            |
| <b>Totals.....</b>    | <b>2,515</b>        | <b>78</b>     | <b>94</b> | <b>17</b> | <b>18</b> | <b>19</b> | <b>5</b> | <b>1</b> | <b>2,747</b> |

Table No. 12. Meters Repaired and Tested in Shop in 1949.

| MAKE.                | DIAMETER IN INCHES. |               |           |            |           |           |          |          | Total.       |
|----------------------|---------------------|---------------|-----------|------------|-----------|-----------|----------|----------|--------------|
|                      | $\frac{5}{8}$       | $\frac{3}{4}$ | 1         | 1½         | 2         | 3         | 4        | 6        |              |
| Hersey Disc.....     | 1,248               | 50            | 21        | 191        | 76        | 24        | 6        | 1        | 1,617        |
| Hersey Compound..... |                     |               |           |            |           |           |          | 2        | 2            |
| <b>Totals.....</b>   | <b>1,248</b>        | <b>50</b>     | <b>21</b> | <b>191</b> | <b>76</b> | <b>24</b> | <b>6</b> | <b>3</b> | <b>1,619</b> |

TABLE I.  
*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, 1949.*

|   | DIAMETER OF PIPE IN INCHES. |        |       |        |        |        |         |         |       |           |         |           | Total.  |        |        |       |           |
|---|-----------------------------|--------|-------|--------|--------|--------|---------|---------|-------|-----------|---------|-----------|---------|--------|--------|-------|-----------|
|   | 48                          | 42     | 40    | 36     | 30     | 24     | 20      | 16      | 14    | 12        | 10      | 8         |         | 6      | 4      | 3     | 2         |
| Length owned and operated, December 31, 1948.....                                       | 55,595                      | 16,191 | 9,599 | 30,238 | 75,843 | 89,285 | 108,061 | 366,550 | 285   | 1,240,403 | 449,686 | 1,236,870 | 932,358 | 61,907 | 12,486 | 6,509 | 5,312,466 |
| Gate valves in same.....  | 26                          | 4      | 5     | 31     | 50     | 75     | 71      | 767     | 14    | 5,217     | 1,576   | 4,581     | 3,112   | 547    | 19     | 18    | 16,113    |
| Air valves in same.....   | 60                          | 5      | 10    | 35     | 113    | 84     | 53      | 101     | 1     | 166       | 40      | 203       | 141     | 66     | 9      | 13    | 545       |
| Blow-offs in same.....  | 11                          | 5      | 6     | 11     | 33     | 37     | 525     | 76      | ..... | 4,207     | 43      | 8,383     | 750     | .....  | .....  | 5     | 861       |
| Lengths laid and relaid during 1949.....  | .....                       | .....  | ..... | .....  | .....  | .....  | .....   | .....   | ..... | 12        | 2       | .....     | .....   | .....  | .....  | ..... | 13,946    |
| Gate valves in same.....  | .....                       | .....  | ..... | .....  | .....  | .....  | .....   | 1       | ..... | .....     | .....   | .....     | .....   | .....  | .....  | ..... | 46        |
| Air valves in same.....   | .....                       | .....  | ..... | .....  | .....  | .....  | .....   | .....   | ..... | .....     | .....   | .....     | .....   | .....  | .....  | ..... | .....     |
| Blow-offs in same.....  | .....                       | .....  | ..... | .....  | .....  | .....  | .....   | .....   | ..... | .....     | .....   | .....     | .....   | .....  | .....  | ..... | .....     |
| Length abandoned in 1949.....   | .....                       | .....  | ..... | .....  | .....  | .....  | 523     | .....   | ..... | 1,092     | 518     | 112       | 3,996   | .....  | .....  | ..... | 6,565     |
| Gate valves in same.....  | .....                       | .....  | ..... | .....  | .....  | .....  | .....   | .....   | ..... | .....     | .....   | .....     | .....   | .....  | .....  | ..... | 10        |
| Air valves in same.....   | .....                       | .....  | ..... | .....  | .....  | .....  | .....   | .....   | ..... | .....     | .....   | .....     | .....   | .....  | .....  | ..... | .....     |
| Blow-offs in same.....  | .....                       | .....  | ..... | .....  | .....  | .....  | .....   | .....   | ..... | .....     | .....   | .....     | .....   | .....  | .....  | ..... | .....     |
| Length owned and operated, December 31, 1949, including high pressure fire service..... | 55,595                      | 16,191 | 9,599 | 30,238 | 75,843 | 89,285 | 108,061 | 366,550 | 285   | 1,843,526 | 449,511 | 1,245,027 | 949,112 | 61,907 | 12,486 | 6,509 | 5,319,547 |
| Gate valves in same.....  | 26                          | 4      | 5     | 31     | 50     | 75     | 71      | 768     | 14    | 5,229     | 1,577   | 4,608     | 3,107   | 547    | 19     | 18    | 16,149    |
| Air valves in same.....   | 60                          | 5      | 10    | 35     | 113    | 84     | 53      | 106     | ..... | 166       | 40      | 203       | 141     | 66     | 9      | 13    | 545       |
| Blow-offs in same.....  | 11                          | 5      | 6     | 11     | 33     | 37     | 52      | .....   | ..... | .....     | .....   | .....     | .....   | .....  | .....  | ..... | 861       |
| High pressure fire service.....   | .....                       | .....  | ..... | .....  | .....  | .....  | 20,140  | 46,953  | ..... | 31,756    | .....   | .....     | .....   | .....  | .....  | ..... | 98,849    |

1,007.490 miles in system, including high pressure fire service.  
 18,721 miles in high pressure fire service.

## Financial Transactions, Water Service, 1949.

|  |                       |                     |
|--|-----------------------|---------------------|
| Cash balance from 1948 . . . . .                             |                       | \$919,450 20        |
| Receipts:  |                       |                     |
| Water rates and services . . . . .                           | \$1,858,288 57        |                     |
| Tax titles — water . . . . .                                 | 38,803 39             |                     |
|  |                       | <u>4,897,091 96</u> |
|  |                       | \$5,816,542 16      |
| Expenditures from revenue:                                   |                       |                     |
| Current expenses and extensions . . . . .                    | \$2,338,164 98        |                     |
| Collecting Department . . . . .                              | 192,447 45            |                     |
| Auditing Department . . . . .                                | —                     |                     |
| Refunded water rates . . . . .                               | 1,080 10              |                     |
| Refunded water collections . . . . .                         | —                     |                     |
| Refunded water tax titles . . . . .                          | —                     |                     |
| Metropolitan assessment . . . . .                            | 1,719,906 76          |                     |
|  | <u>\$4,251,599 29</u> |                     |
| Transfer of surplus to redemption<br>of city loans . . . . . | \$25,639 15           |                     |
|  |                       | <u>5,077,238 44</u> |
|  |                       | \$739,303 72        |
| Expenditures from debt account:                              |                       |                     |
| Boston water debt . . . . .                                  | \$36,000 00           |                     |
| Interest on loans . . . . .                                  | 6,675 00              |                     |
|  |                       | <u>42,675 00</u>    |
| Cash balance, December 31, 1949 . . . . .                    |                       | \$696,628 72        |
| Cash forwarded to 1950 . . . . .                             |                       | 64,081 62           |
|  |                       | <u>\$632,547 10</u> |
| Loan account:  |                       |                     |
| Balance outstanding January 1,<br>1949 . . . . .             | \$228,000 00          |                     |
| Paid during 1949, Boston water<br>debt . . . . .             | 36,000 00             |                     |
|  |                       | <u>\$192,000 00</u> |
| Construction account:  |                       |                     |
| Extension of mains (from revenue)                            |                       |                     |
| Cost of construction, December 31,<br>1949 . . . . .         | \$24,610,501 85       |                     |
| Cost of construction, December 31,<br>1948 . . . . .         | 24,594,120 41         |                     |
|  |                       | <u>\$16,381 44</u>  |

## Cost of existing works, December 31, 1949:

|                             |               |                        |
|-----------------------------|---------------|------------------------|
| Pipe yards and buildings*   | \$84,332 16   |                        |
| Engineering expense         | 57,873 58     |                        |
| Distribution system †       | 24,222,478 36 |                        |
| Hyde Park water works       | 175,000 00    |                        |
|                             |               | \$24,539,684 10        |
| High pressure fire system ‡ |               | 2,293,316 75           |
| Total cost                  |               | <u>\$26,833,000 85</u> |

\*\$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 1949.**

|  |               |
|--|---------------|
| Number of shutoffs for repairs   | 6,660         |
| Number of premises turned on after repairs                             | 6,207         |
| Number of shutoffs for vacancy   | 252           |
| Number of premises turned on for occupancy                             | 221           |
| Number of premises shut off for nonpayment of water rates              | 26            |
| Number of premises turned on again after being shut off for nonpayment | 24            |
| 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               | 274           |
| Total number of times water was shut off or turned on                  | <u>13,666</u> |

Table No. II. High Pressure Fire Service.

Showing Lengths of Water Pipes, Connections, Hydrants and Valves in Same,  
December 31, 1949.

|  | 20-Inch. | 16-Inch. | 12-Inch. | 8-Inch. | 6-Inch. | Total. |
|--|----------|----------|----------|---------|---------|--------|
| Length owned and operated,<br>December 31, 1948..... | 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,<br>December 31, 1949..... | 20,140   | 46,953   | 31,756   | .....   | .....   | 98,849 |
| Gate valves in same.....                             | .....    | 201      | 144      | 502     | .....   | 847    |
| Blowoffs 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, 1949.*Mains.*

Kind of pipe: cast iron, wrought iron, steel.  
Size, 2-inch to 48-inch.  
Extended, miles, 1,398.  
Size enlarged, miles, none.  
Total miles now in use, 1,007.490.  
Public hydrants added, 32.  
Public hydrants now in use, 12,353.  
Stop gates added, 36.  
Stop gates now in use, 16,149.  
Stop gates smaller than 4-inch, 37.  
Number of blowoffs, 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.  
Service taps added.  
Total service taps now in use as per metered service.

Cost of Replacement of Main Pipe, 1949.

| STREET.       | Location.                               | District.   | Size (Inches). | Feet. | Material. | Labor.     | Inspection. | Original Size (Inches). | Feet. | Contract Cost. | Total Cost. | Contractor or Other Agency. |
|---------------|---|-------------|----------------|-------|-----------|------------|-------------|-------------------------|-------|----------------|-------------|-----------------------------|
| W. Fifth st.  | Bet. A and B sts.                       | S. Boston   | 12             | 112   | \$386 39  | \$1,179 77 | \$308 58    | { 2                     | { 112 | .....          | \$1,874 74  | Water Yard                  |
| Chauncy st.   | Bet. Bedford and Summer sts.            | City Proper | 12             | 393   | 2,979 84  | 135 03     | 75 95       | 6                       | 393   | .....          | { 3,190 82  | Baker & Co.                 |
| Howard st.    | Bet. Stoddard st. and Scollay sq.       | City Proper | 12             | 185   | 1,123 50  | 31 95      | 50 64       | 6                       | 185   | \$9,964 48     | { 11,170 57 | Baker & Co.                 |
| E. Canton st. | Bet. Washington st. and Harrison av.    | City Proper | 20             | 563   | 241 36    | 93 18      | 189 87      | 20                      | 563   | .....          | 524 41      | J. S. Cassidy, Inc.         |
| Bremen st.    | Bet. Cove and Porter sts.               | E. Boston   | 8              | 148   | 1,066 34  | 188 10     | 137 46      | 10                      | 148   | .....          | 1,391 90    | Water Yard                  |
| Clitfiek rd.  | Bet. Loring st. and dead end.           | Hyde Park   | 8              | 975   | 2,902 56  | 399 89     | 341 82      | 6                       | 975   | 2,687 25       | 6,331 52    | Baker & Co.                 |
| Garfield av.  | Bet. Loring st. and Washington st.      | Hyde Park   | 8              | 414   | 1,075 06  | 179 54     | 128 31      | 6                       | 414   | 875 50         | 2,258 41    | Baker & Co.                 |
| Ocean st.     | Bet. Ashmont st. and Welles av.         | Dorchester  | 12             | 1,344 | 9,030 15  | 360 00     | 291 18      | 6                       | 1,344 | .....          | .....       | .....                       |
| Mellen st.    | From Ocean st.                          | Dorchester  | 8              | 32    | .....     | .....      | .....       | 6                       | 32    | 7,795 24       | 17,476 57   | Baker & Co.                 |
| Roslin st.    | From Ocean st.                          | Dorchester  | 8              | 20    | .....     | .....      | .....       | 6                       | 20    | .....          | .....       | .....                       |
| Ferrin st.    | From Chelsea st. and beyond Service st. | Charlestown | 8              | 187   | .....     | .....      | .....       | 6                       | 187   | .....          | .....       | Coleman Brothers            |
| Tremont st.   | From Service st.                        | Charlestown | 8              | 42    | 181 02    | 62 50      | 50 69       | 10                      | 42    | .....          | 294 21      | Coleman Brothers            |
| Prospect st.  | Bet. Service st. and Chelsea st.        | Charlestown | 8              | 84    | .....     | .....      | .....       | 6                       | 84    | .....          | .....       | .....                       |



|                 |                                   |                  |             |            |            |     |        |             |                          |
|-----------------|-----------------------------------|------------------|-------------|------------|------------|-----|--------|-------------|--------------------------|
| Bullock st..... | Bet. D and E sts.....             | S. Boston .....  | 78 01       | 312 51     | 231 49     | 12  | 120    | 622 01      | Water Yard               |
| Henley st.....  | Bet. Park and Chelsea sts.....    | Charlestown..... |             |            |            | 6   | 400    |             | Gahagan Construction Co. |
| Maudlin st..... | Bet. Wapping and Foss sts.....    | Charlestown..... |             |            |            | 6   | 140    |             | Gahagan Construction Co. |
| Foss st.....    | From Chelsea st.....              | Charlestown..... |             |            |            | 10  | 210    |             | Gahagan Construction Co. |
| Tremont st..... | Bet. Service and Chelsea sts..... | Charlestown..... |             |            |            | 10  | 118    |             | Coleman Brothers         |
| Orleans st..... | From Porter st.....               | E. Boston .....  | 654 27      | 162 08     | 16         | 960 | 816 35 |             | Water Yard               |
|                 | Totals.....                       |                  | \$19,064 23 | \$3,596 74 | \$1,968 07 |     |        | \$21,322 47 | \$45,951 51              |

| Size.<br>(Inches.) | Feet.<br>(Length.) | Size.<br>(Inches.) | Feet.<br>(Length.) |
|--------------------|--------------------|--------------------|--------------------|
| 20.....            | 563                | 12.....            | 2,272.5            |
| 12.....            | 2,034              | 10.....            | 43.0               |
| 8.....             | 1,902              | 8.....             | 6,480.5            |
|                    |                    | 6.....             | 750.0              |
|                    |                    | Totals.....        | 9,540.0            |

Totals..... 4,499

NOTE. — Work done by Mystic Bridge Authority in Charlestown, no charge; work done on Bremen street, East Boston, by department forces; work done on East Canton street City Proper, by department forces.

Cost of Extension of Main Pipe, 1949.

| STREET.                  | Location.                                     | District.  | Size<br>(Inches.) | Feet. | Material.  | Labor.  | Inspection. | Contract Cost. | Total Cost. | Contractor or Other Agency. |
|--------------------------|---|------------|-------------------|-------|------------|---------|-------------|----------------|-------------|-----------------------------|
| Shrewsbury rd.....       | Bet. Morey and Vincent rds.....               | W. Roxbury | 8                 | 340   | \$1,039 18 | \$21 02 | \$75 96     | \$923 05       | \$2,059 21  | John Williams Co.           |
| Chelman rd.....          | Bet. LaSalle and Addington rds.....           | W. Roxbury | 8                 | 202   | .....      | .....   | 59 03       | 600 00         | 665 03      | J. A. Freaney, Inc.         |
| Buffalo st.....          | Bet. Market and Third sts.....                | Brighton   | 12                | 688   | .....      | .....   | 25 32       | .....          | 47 82       | R. A. Buccella & Sons       |
| Buffalo st.....          | Bet. Market and Third sts.....                | Brighton   | 10                | 43    | 731 00     | 22 50   | 88 62       | 1,249 40       | 1,338 02    | R. A. Buccella & Sons       |
| Third st.....            | Bet. N. Beacon and Buffalo sts.....           | Brighton   | 12                | 632.5 | 8,738 74   | .....   | 145 59      | 1,864 19       | 10,748 52   | R. A. Buccella & Sons       |
| Market st.....           | From Buffalo st.....                          | Brighton   | 12                | 10    | .....      | .....   | .....       | .....          | .....       | R. A. Buccella & Sons       |
| Soldiers Field rd.....   | Bet. Western ave. and Telford st.....         | Brighton   | 8                 | 1,483 | 5,876 33   | .....   | 303 84      | 6,214 54       | 12,394 71   | R. A. Buccella & Sons       |
| Turtle Pond Parkway..... | From Berwick st.....                          | Hyde Park  | 12                | 942   | 9,251 23   | 270 00  | 417 78      | 5,033 91       | 14,972 92   | Rosa & Tedesco              |
| Skyline rd.....          | From Prospect st.....                         | Hyde Park  | 8                 | 475   | 1,763 30   | 94 14   | 240 54      | 1,312 91       | 3,410 89    | A. Grande Co.               |
| East Glenwood ave.....   | Bet. Washington and Loring sts.....           | Hyde Park  | 8                 | 560   | 1,844 46   | 56 25   | 88 62       | 1,222 55       | 3,211 88    | Baker & Co.                 |
| Garfield Ave. Ext.....   | Bet. Washington and New Acre sts.....         | Hyde Park  | 8                 | 435.5 | 2,418 08   | 202 50  | 132 93      | 921 15         | 3,674 66    | Baker & Co.                 |
| New Acre st.....         | Bet. Washington st. and Garfield Ave.<br>Exc. | Hyde Park  | 8                 | 647   | 2,532 43   | 180 00  | 202 56      | 1,177 80       | 4,092 79    | Baker & Co.                 |

|                           |                                     |             |       |       |             |          |            |             |             |                          |
|---------------------------|-------------------------------------|-------------|-------|-------|-------------|----------|------------|-------------|-------------|--------------------------|
| Carlson Circle.....       | Bet. Church and Weld sts.....       | W. Roxbury  | 8     | 323   | 1,182 32    | .....    | 79 63      | 645 20      | 1,907 15    | A. D'Amico               |
| Hautevale st.....         | From Poplar st.....                 | W. Roxbury  | 8     | 183   | 940 13      | .....    | 65 01      | 974 56      | 1,979 70    | R. A. Bucella & Sons     |
| Amer. Legion Highway..... | Near Canterbury st.....             | W. Roxbury  | 8     | 150   | 427 61      | .....    | 50 44      | 754 00      | 1,232 05    | J. Botti & Sons          |
| Badger rd.....            | From Washington St. Ext.....        | Hyde Park   | 8     | 294   | 1,059 98    | .....    | 307 64     | 1,558 84    | 2,926 46    | J. Susi & Co.            |
| Badger rd.....            | From Washington St. Ext.....        | Hyde Park   | 8     | 229   | 1,016 35    | .....    | .....      | .....       | 1,016 35    | R. A. Bucella & Sons     |
| Prairie st.....           | From Wabash st.....                 | Dorchester  | 8     | 266   | .....       | .....    | 44 18      | 1,412 85    | 1,457 03    | Appel & O'Toole          |
| Westview st.....          | Bet. Tonset st. and Talbot ave..... | Dorchester  | 8     | 77    | 32 80       | .....    | 12 66      | 601 30      | 646 76      | Appel & O'Toole          |
| Henley st.....            | Bet. Park and Chelsea sts.....      | Charlestown | 6     | 750   | .....       | .....    | 419 78     | .....       | 419 78      | Gahagan Construction Co. |
| Henley st.....            | Bet. Park and Chelsea sts.....      | Charlestown | 8     | 40    | .....       | .....    | .....      | .....       | .....       | Gahagan Construction Co. |
| Maudlin st.....           | Bet. Wapping and Foss sts.....      | Charlestown | 8     | 190   | .....       | .....    | .....      | .....       | .....       | Gahagan Construction Co. |
| Service st.....           | Bet. Ferrin and Mt. Vernon sts..... | Charlestown | 8     | 586   | .....       | .....    | .....      | .....       | .....       | Coleman Bros.            |
| Totals.....               | .....                               | .....       | ..... | ..... | \$38,122 94 | \$846 41 | \$2,760 13 | \$26,472 25 | \$68,201 73 | .....                    |

NOTE.—Work done by Mystic Bridge Authority in Charlestown, no charge.

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