







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

Boston, January 2, 1948.

HON. JAMES M. CURLEY,  
*Mayor of Boston.*

DEAR MR. MAYOR:

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

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

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

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

*12-20-48 City Council  
January 1948*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Respectfully submitted,

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

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

### Grade and Number of Employees.

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



## Grade and Number of Employees.— Concluded.

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

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

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

*Total Eligible Force.*

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

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

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

# MAINTENANCE APPROPRIATIONS AND EXPENDITURES.

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

## Expenditures from Special Appropriations, Etc.

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

## REVENUE.

*On Account of Public Works Department.*

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

<i>Brought forward</i>			\$1,954,234 11
Sanitary Service:			
Collection of commercial waste	\$22,888 63		
Sale of junk	199 29		
Cleaning coal	260 63		
Sale of horses	210 00		
Rent	200 00		
Sale of steel	49 56		
Removal of rubbish	30 00		
		23,838 11	
Water Service:			
Water rates	\$4,639,463 16		
Water added to taxes	129,323 14		
Service pipes for new takers, extending repairing, etc.	3,291 09		
Fees on overdue rates	385 20		
Sale of junk, etc.	1,825 95		
Damage to property	1,128 20		
Relocating hydrants	200 00		
Labor and materials	8,724 45		
Deposit account	64,937 26		
Installing gates, etc.	31 06		
Elevator and fire pipe connections	1,891 23		
Miscellaneous income	1,742 50		
		4,852,943 24	
Grand Total		\$6,831,015 46	



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 2, 1948.

*To the Commissioner of Public Works.*

DEAR SIR:

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

*Bridge Service.*

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

*Bridges, Repairs, Etc.*

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

*Bridges, Construction of.*

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



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

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

Unexpended balance, December 31, 1947 . .	<u>\$8,839 25</u>
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*Ferry Service.*

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

Unexpended balance, December 31, 1947 . .	<u>\$38,144 84</u>
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*Ferry Improvements, Etc.*

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

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

Unexpended balance, December 31, 1947 . .	<u>\$55,957 25</u>
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*Sumner Traffic Tunnel.*

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

Unexpended balance, December 31, 1947 . .	<u>\$43,391 02</u>
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The foregoing does not include certain expenditures for construction work for other divisions, which work was supervised by the engineers of this division.

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

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

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

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

#### BRIDGE SERVICE.

##### *Charlesgate West Bridge.*

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

##### *Charlestown Bridge, over the Charles River.*

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

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

##### *Chelsea Bridge North, over the Mystic River.*

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

*Chelsea Bridge South, and Malden Bridge.*

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

*Chelsea Street Bridge, over the Mystic River.*

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

*Congress Street Bridge, over Fort Point Channel.*

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

*Metropolitan Avenue Bridge, over Stony Brook.*

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

*Old Colony Avenue Stairway.*

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

*Spar Floats.*

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

*Warren Bridge, over the Charles River.*

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

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

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

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

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

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

*Various Bridges — Repairing Electric Pier and Navigation Lights.*

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

*Various Bridges — Resurfacing.*

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

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

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

#### *Various Bridges — Renewing High Curbs.*

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

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

No payments were made under this contract during 1947.

#### *Maintenance Force.*

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

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

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

*Miscellaneous.*

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

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

## FERRY SERVICE.

The following ferryboats are in commission:

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

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

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

*Ferryboat "Ralph J. Palumbo."*

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

*South Ferry Fenders.*

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

*South Ferry, East Boston Side, Steel Bridges.*

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

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

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

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

*Removing Ashes, Cinders, etc., from Ferryboats.*

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

*Department Force.*

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

TUNNEL SERVICE.

*Repairing the Paving of the Sumner Traffic Tunnel.*

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

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

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

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

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

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

*Cleaning Fresh Air and Exhaust Ducts at Sumner Tunnel.*

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

*Control Cables for Sumner Tunnel.*

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

*Telephone Cables for the Sumner Tunnel.*

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

*Summary of Activities During 1947.*

1. *Personnel.*

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

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



2. *Vehicular Traffic.*

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

3. *Power.*

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

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

4. *Garage Service.*

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

5. *Booth, Red Signals.*

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

6. *Fires.*

There were no fires in the tunnel in 1947.

7. *Toll Registering Equipment.*

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

8. *Motors, Fans and Dampers.*

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

9. *Circuit Breakers, Transformers, etc.*

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

10. *Pumps.*

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

11. *Motor Generators.*

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

12. *Storage Batteries.*

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

13. *Traffic Signals.*

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

14. *Telephone System.*

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

15. *Carbon Monoxide Equipment.*

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

16. *Tunnel, General.*

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

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

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

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

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

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

Electric heaters were installed in the East Boston toll booths.

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

### MISCELLANEOUS WORK.

#### *Snow Removal — Area No. 2.*

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

#### *Snow Removal — Area No. 3.*

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

#### *Snow Removal — Area No. 6.*

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

*Snow Removal — Area No. 12.*

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

## MISCELLANEOUS WORK FOR OTHER DIVISIONS.

## SANITARY DIVISION.

*Repairs to Albany Street Disposal Station.*

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

*Repairs to Victory Road Disposal Station.*

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

*Dredging Docks at the Victory Road Disposal Station.*

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

Yours respectfully,

JOHN DEMEULENAER,  
*Division Engineer.*

## BRIDGE SERVICE.

## FINANCIAL STATEMENT FOR 1947.

*Expenditures from Maintenance Appropriations.*

Boston bridges . . . . .	\$570,207 95
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*Total Expenditures.*

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

*Expenditures on Boston Bridges.**Administration.*

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

*Office.*

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

*Yard and Stockroom.**Yard.*

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

*Stockroom.*

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

## Tidewater Bridges, 1947.

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

\* Now Summer Street, over Reserved Channel.

## Repairs on Inland Bridges.

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

*Repairs on Inland Bridges.—Concluded.*

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

## SUMMARY.

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

## SPECIAL APPROPRIATIONS.

## BRIDGES, REPAIRS, ETC.

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

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



## SUMMARY.

## Expenditures from Special Appropriations.

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

## Draw Openings, 1947.

BRIDGES.	STEAMERS.			SAILING VESSELS.			TUGS.			BARGES.			ALL OTHERS.			TOTAL NUMBER OF VESSELS.			Total Number of Carries.	Total Number of Openings.
	Day.		Total.	Day.		Total.	Day.		Total.	Day.		Total.	Day.		Total.	Day.		Total.		
	Night.			Night.			Night.			Night.			Night.			Night.				
Broadway.....	2	.....	2	.....	.....	.....	475	7	482	53	1	54	347	3	350	877	11	888	205	458
Charlestown.....	96	83	179	99	45	144	93	41	134	62	33	95	62	16	78	412	218	630	129	456
Chelsea North.....	1,156	97	1,253	.....	1	.....	8,606	1,090	9,696	1,398	592	1,990	360	77	437	11,520	1,857	13,377	1,870	5,069
Chelsea South.....	13	26	39	.....	.....	.....	799	541	1,340	313	254	567	.....	.....	.....	1,125	821	1,946	290	1,109
Chelsea Street.....	915	342	1,257	.....	.....	.....	2,547	448	2,995	533	212	745	352	52	404	4,347	1,054	5,401	1,015	2,772
Congress Street.....	61	39	100	.....	.....	.....	1,219	268	1,487	169	36	205	637	66	703	2,086	409	2,495	684	1,406
Dover Street.....	1	.....	1	2	.....	2	474	5	479	29	.....	29	381	1	382	887	6	893	200	454
L Street *.....	4	1	5	3	3	6	711	761	1,472	496	324	820	1,625	1,524	3,149	2,839	2,613	5,452	1,207	4,658
Malden.....	36	3	39	.....	.....	.....	721	251	972	341	187	528	511	201	712	1,609	612	2,251	412	1,397
Meridian Street.....	663	162	825	.....	.....	.....	5,633	1,392	7,025	2,903	1,341	4,244	2,440	497	2,937	11,639	3,392	15,031	2,542	8,642
Northern Avenue.....	57	44	101	2	2	4	2,384	431	2,815	362	61	423	1,328	134	1,462	4,133	672	4,805	811	2,323
Summer Street.....	47	43	90	.....	.....	.....	1,046	303	1,349	182	45	227	702	82	784	1,977	473	2,450	442	1,251
Warren.....	49	44	93	124	79	203	772	360	1,132	572	478	1,050	1,366	748	2,114	2,883	1,709	4,592	763	2,665
Totals.....	3,100	884	3,984	230	130	360	25,480	5,898	31,378	7,413	3,564	10,977	10,111	3,401	13,512	46,334	13,877	60,211	10,570	32,660

\* Now Summer Street, over Reserved Channel.

## FERRY SERVICE.

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

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

*Breakdown of Toll Receipts for 1947.*

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

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

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

Foot passengers at 1 cent . . . . . 344,255

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

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

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

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

Auto bus with driver and passengers . . . . . 30 cents —

Free vehicles . . . . . 146

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

TOLL.	20 Cents.	20 Cents.	20 Cents.	25 Cents.	20 Cents.	35 Cents.	20 Cents.	1 Dollar.	35 Cents.	* City-Owned.	Total Traffic.
	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.		
CLASSIFICATION.											
January.....	24,752	504,263	17	2,141	608	640	17	19	0	35,066	567,523
February.....	24,513	487,863	14	1,894	736	933	29	13	62	27,060	543,117
March.....	28,397	603,425	72	1,840	847	779	58	16	4	30,164	665,602
April.....	30,870	663,325	225	2,694	1,143	705	144	58	6	26,121	725,291
May.....	34,421	738,644	293	2,648	1,229	905	98	49	11	31,770	810,068
June.....	33,586	735,907	326	2,512	1,338	860	80	44	8	36,529	811,190
July.....	37,094	822,583	405	2,246	1,508	662	85	16	3	38,668	903,270
August.....	33,698	801,484	468	2,083	1,506	719	95	19	8	37,958	878,038
September.....	36,603	701,910	363	2,070	1,568	732	72	18	6	33,671	777,013
October.....	33,313	672,410	384	2,289	1,464	729	56	17	6	36,004	746,672
November.....	32,385	625,897	316	2,254	1,157	674	41	27	4	31,895	694,650
December.....	34,420	563,912	49	2,748	935	956	46	24	7	22,631	625,728
Totals.....	384,052	7,921,623	2,932	27,419	14,039	9,294	821	320	125	† 387,537	8,748,162

\* Boston Elevated Railway and Eastern Massachusetts Railway buses are included in this classification.

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

## SUMNER TRAFFIC TUNNEL.

## Toll Classifications.

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

## SUMNER TRAFFIC TUNNEL.

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

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

\* Carried forward to cover contract.

† Deficit.

‡ Excess.

§ None required.

|| Refunded totals.

**SUMNER TRAFFIC TUNNEL.**  
**Comparative Traffic Count.**

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

## APPENDIX B.

REPORT OF THE DIVISION ENGINEER  
OF THE HIGHWAY DIVISION.

BOSTON, January 2, 1948.

*To the Commissioner of Public Works.*

DEAR SIR:

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

*Maintenance.*

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

*Reconstruction of Streets.*

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

*Public Ways, Construction of (Revenue).*

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

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

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

*Sidewalks, Construction and Reconstruction of.*

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

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

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

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

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

Columbus avenue, from Centre street to Washington street.

Gallivan Boulevard, from Neponset avenue to Granite avenue.

Beacon street, from Cleveland Circle to the Newton line.

Federal street, from High street to Purchase street.

High street, from Summer street to Congress street.

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

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

Pond street, from the Arborway to Brookline line.

#### LIGHTING SERVICE.

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

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

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Balance unexpended	.	.	.	.	.	None.
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The following is a statement of the work done during 1947:



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

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

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

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

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

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

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

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

Respectfully yours,

R. C. DWYER,  
*Division Engineer.*

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

	LENGTH IN MILES.											AREA IN SQUARE YARDS.										
	Sheet Asphalt.	Asphalt Concrete.	Granite Block.	Wood Block.	Plank on Bridges.	Brick.	Concrete.	Macadam.	Gravel.	Not Graded.	Totals.	Sheet Asphalt.	Asphalt Concrete.	Granite Block.	Wood Block.	Plank on Bridges.	Brick.	Concrete.	Macadam.	Gravel.	Not Graded.	Totals.
1946 Report.....	* 162.9	† 234.35	‡ 68.01	0.63	0.58	0.97	\$ 26.96	1205.59	11.95	0.97	712.10	* 3,229,334	† 4,397,022	‡ 1,812,932	12,974	13,065	21,188	\$ 543,270	‡ 3,340,983	191,390	36,600	13,598,758
Per Cent.....	22.76	32.91	9.55	0.09	0.08	0.14	3.78	28.87	1.68	0.11	100.00	23.75	32.33	13.33	0.09	0.10	0.16	3.99	24.57	1.41	0.27	100.00
JANUARY 1, 1948.																						
City Proper.....	38.13	27.88	22.34	0.28	0.09	0.10	3.21	3.83	0.26		96.42	798,773	623,149	501,426	4,254	2,689	6,568	111,959	61,724	1,794		2,412,336
Charlestown.....	3.18	1.47	8.68	0.08	0.07		0.34	5.89		0.05	22.76	66,717	69,693	212,758	2,014	1,999		4,911	81,668		326	140,083
East Boston.....	4.85	11.37	5.06	0.01	0.05	0.04	0.44	13.77	0.73		36.32	114,417	230,753	119,138	325		771	25,280	296,252	14,809		802,522
South Boston.....	9.98	11.91	9.39	0.04	0.10	0.02	0.50	11.43	0.10	0.50	43.97	197,439	232,109	269,201	1,167	2,707	1,400	16,411	197,086	1,212	15,754	934,486
Roxbury.....	28.75	26.00	10.59	0.10		0.14	6.94	21.15	0.36	0.00	91.03	550,883	469,394	259,959	2,689		5,438	117,180	313,620	5,410	61	1,724,634
West Roxbury.....	31.13	50.47	3.14	0.01	0.07		5.32	52.09	2.25	0.00	144.48	584,309	905,801	143,472	210	1,363		75,953	816,606	37,035	53,90	2,570,139
Dorchester.....	41.02	60.92	6.70	0.06	0.05	0.27	6.70	51.77	2.07	0.02	169.58	170,400	1,071,391	192,509	1,669	795	5,425	119,305	805,066	31,119	668	2,998,347
Engleton.....	14.09	32.39	0.58		0.08		1.23	14.96	0.54		63.87	325,519	596,503	68,214	40	1,231		33,196	244,973	7,763	1,491	1,279,230
Lytle Park.....	2.40	9.92	0.05	0.07	0.05		0.65	22.92	6.37	0.24	42.67	50,007	215,691	8,232	1,922	702		10,317	385,786	99,594	7,255	778,606
Totals.....	173.53	235.33	66.53	0.65	0.56	0.87	25.33	197.81	12.68	0.81	714.10	3,458,464	4,414,484	1,774,909	13,387	12,263	19,602	514,812	3,202,781	198,736	30,945	13,640,383
Per Cent.....	24.30	32.95	9.32	0.09	0.08	0.12	3.55	27.71	1.77	0.11	100.00	25.36	32.36	13.01	0.10	0.09	0.14	3.77	23.48	1.46	0.23	100.00

TOTAL PUBLIC STREETS 714.10 MILES.

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

\* Of this amount 0.10 mile or 834 square yards is Biturock; and 0.09 mile or 310 square yards is Unionite.

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

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

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

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

† Of this amount 129.02 miles or 2,265,818 square yards is asphalt concrete; and 98.02 miles or 1,922,043 square yards is Brulidite; and 0.02 mile or 4,373 square yards is Colprovia; and 0.06 mile or 942 square yards is Filbertine; and 4,000 square yards is Hephornite; and 3,903 square yards is Laykold; and 4,167 square yards is Macasphalt; and 0.21 mile or 5,200 square yards is Simasec; and 7.65 miles or 122,842 square yards is Topeka; and 1,153 square yards is Warcolite; and 0.18 mile or 3,474 square yards is Carey Elastite asphalt plank; and 0.07 mile or 1,735 square yards is Flintkote asphalt plank; and 0.10 mile or 1,234 square yards is Johns-Manville asphalt plank.



## HIGHWAY DIVISION — PAVING SERVICE.

## Street Work Done in 1947 by Contract.

## SUMMARY.

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

## YEARLY REPORT OF WORK DONE BY DEPARTMENT FORCES FOR 1947.

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

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

Districts.	Macadam Repairs.	Granolithic Sidewalk Repairs.	Removal of Snow.	Street Cleaning.	Edgestone, Sidewalk and Gutter Repairs.	Bituminous Sidewalk Repairs.	Miscellaneous.	Total.
South Boston and Dorchester North.....	\$10,474 95	\$11,313 46	\$5,011 79	\$3,099 83	\$6,798 27	\$2,569 97	.....	\$42,268 27
East Boston.....	11,080 70	1,609 44	2,794 54	3,357 54	3,479 85	4,071 79	.....	29,393 86
Charlestown.....	7,116 37	4,439 84	1,358 25	3,147 64	1,423 32	1,341 49	.....	21,826 94
Brighton.....	10,210 00	8,524 67	6,120 23	12,826 53	181 50	2,256 01	.....	40,718 91
West Roxbury.....	48,239 15	16,653 47	10,847 79	6,682 09	3,700 80	6,161 35	.....	92,584 65
Dorchester.....	15,331 38	10,701 26	5,753 97	2,646 05	835 56	6,627 89	.....	41,896 11
Roxbury South and Jamaica Plain.....	26,860 14	12,707 44	6,038 20	5,397 78	1,388 21	3,255 90	.....	55,617 67
City Proper.....	28,082 53	12,462 28	4,594 25	285 00	11,657 26	1,355 00	.....	58,436 32
Ashmont.....	13,179 01	10,465 02	8,634 06	9,472 15	8,129 06	390 00	.....	50,269 30
Hyde Park.....	7,159 34	4,376 95	1,882 70	6,080 20	1,767 93	2,163 01	.....	23,430 13
Totals.....	\$180,733 57	\$96,253 83	\$56,335 78	\$52,994 81	\$39,661 76	\$30,492 41	\$732,159 71	\$1,188,631 87

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

Special Appropriations: Reconstruction of Streets (revenue), \$203,242.81; Public Ways, Construction of (revenue), \$131,395.39; Public Ways, Construction of (non-revenue), \$1,299,520.38; Sidewalks, Construction and Reconstruction of (revenue), \$56,924.84; Snow Removal (revenue), \$650,443.01; Totals, Specials, \$2,341,526.43.

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

## PERMIT OFFICE ACTIVITIES, 1947.

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

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

## BONDS.

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

## APPENDIX C.

REPORT OF THE DIVISION ENGINEER  
OF THE SANITARY DIVISION.

BOSTON, January 2, 1948.

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

DEAR SIR:

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

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

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

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



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

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

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

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

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

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

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

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

Respectfully submitted,

ADOLPH J. POST,  
*Division Engineer.*

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

Number.	District.	Population.	MIXED REFUSE.		GARBAGE.		Total Cost.	Total Cost Per Capita.
			Cost.	Per Capita.	Cost.	Per Capita.		
1.	South Boston.....	56,247	\$191,001 70	\$3 40	\$10,025 19	\$0 17	\$201,026 89	\$3 57
2.	East Boston.....	55,112	118,049 63	2 14	3,969 62	0 07	122,019 25	2 21
3.	Charlestown.....	25,655	98,337 36	3 83	—	—	98,337 36	3 83
4.	Brighton.....	66,808	280,162 88	4 19	11,490 09	0 17	291,652 97	4 36
5a.	West Roxbury.....	46,237	104,672 36	2 26	15,892 53	0 35	120,564 89	2 61
5b.	Jamaica Plain.....	43,384	100,861 33	2 33	11,755 28	0 27	112,646 61	2 60
6 and 7a.	Dorchester and Elm Hill.....	217,047	574,110 27	2 65	75,347 92	0 34	649,458 19	2 99
7.	Roxbury.....	34,489	221,029 44	6 41	—	—	221,029 44	6 41
7b.	Dudley.....	36,833	127,881 33	3 47	12,456 08	0 34	140,337 41	3 81
7c.	Mission Hill.....	31,992	117,738 04	3 68	11,584 36	0 36	129,322 40	4 04
9.	South End.....	42,495	255,876 67	6 02	—	—	255,876 67	6 02
9a.	Back Bay.....	22,042	112,353 46	5 09	—	—	112,353 46	5 09
9b.	Stuart.....	20,144	156,923 09	7 79	—	—	156,923 09	7 79
10.	North and West Ends.....	42,232	303,321 24	7 18	—	—	303,321 24	7 18
11.	Hyde Park.....	25,669	52,935 79	2 06	5,689 31	0 22	58,625 10	2 28
	Totals.....	706,386	\$2,794,403 49	\$3 65	\$179,001 48	\$0 23	\$2,973,494 97	\$3 88

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

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

\* Disposal of garbage and refuse to Coleman Disposal Company.

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

CONTRACT DISTRICT.	CONTRACTOR.	CHARACTER OF REFUSE.	Cubic Yards.	Cost Per District.	Cost Per Cubic Yard.	Population.	Total Cost Per Capita.
Jamaica Plain.....	John J. Moore Company.....	Mixed refuse.....	65,462				
		Garbage.....	7,649				
		Totals.....	73,111	\$112,646 61	\$1 54	43,384	\$2 60
†Dorchester and Elm Hill.....	Coleman Brothers Corporation.....	Mixed refuse.....	425,120				
		Garbage.....	55,794				
		Totals.....	480,914	\$649,458 19	\$1 35	217,047	\$2 99
*Dudley.....	Marinucci Brothers & Co.....	Mixed refuse.....	55,265				
		Garbage.....	5,383				
		Totals.....	60,648	\$140,337 41	\$2 31	36,833	\$3 81
*Mission Hill.....	Marinucci Brothers & Co.....	Mixed refuse.....	51,596				
		Garbage.....	5,112				
		Totals.....	57,008	\$129,322 40	\$2 27	31,992	\$4 04
*Back Bay.....	Dooley Brothers, Inc.....	Mixed refuse.....	50,630				
		Garbage.....	—				
		Totals.....	50,630	\$112,353 46	\$2 22	22,042	\$5 09

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

\* Disposal of garbage and refuse to Coleman Disposal Company.

† Disposal of garbage only to Coleman Disposal Company.

TABLE III.

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

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

TABLE IV.

## Street Cleaning Service, 1947.

*Distribution of Expenditures.*

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

APPENDIX D.

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REPORT OF THE DIVISION ENGINEER  
OF THE SEWER DIVISION.

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BOSTON, January 2, 1948.

*To the Commissioner of Public Works.*

DEAR SIR:

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

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

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

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

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

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

1,500 catch-basin complaints were received.



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

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

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

Respectfully,

ROBERT P. SHEA,  
*Division Engineer.*

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

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

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

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

## Total Length of Sewers.

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

## Grand Total Lengths of Sewers.

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

\* No additional lengths built during 1947.

## Catch-Basins in Charge of Sewer Division.

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

## Electric Current Used for 1947, Calf Pasture Pumping Station.

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

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

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

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

**Fuel Record for 1947, Calf Pasture Pumping Station.**

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

\* Average, .060516 gallon.

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

*From Pumping Records.*

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

**Cost of Pumping for 1947, Calf Pasture Pumping Station.**

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

## Sewage Statistics for 1947, Calf Pasture Pumping Station.

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

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

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

## SEWER DIVISION.

### *Improved Sewerage.*

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

### *Maintenance — Regular.*

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

### *Maintenance — Repairs.*

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

*Carried forward* . . . . . \$515,838 56



*Maintenance — Miscellaneous.*

<i>Brought forward</i> . . . . .			\$515,838 56
Miscellaneous . . . . .	\$8,147 43		
Back Bay Fens . . . . .	638 39		
Telephones . . . . .	1,089 25		
Wearing apparel (rubber goods) . . . . .	90 00		
Pensions and annuities . . . . .	10,172 13		
Holidays, vacations, time allowed, etc. . . . .	57,759 75		
Unadvertised jobs. . . . .	4,570 93		
36 Cummington street, unadvertised contract			
No. 3.746, repair sewer and drain. . . . .	2,688 79		
			<u>85,156 67</u>
Total . . . . .			\$600,995 23

## CREDITS.

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

## DEBITS.

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

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

ACCOUNTS.	Totals.	Labor.	Repairs.	Motor Vehicles, Cleaning Machines, Etc.	Taxes.	Contractors.	Light, Fuel, Power.	Materials and Supplies.	Equipment, Tools.	Miscellaneous.
Automobiles.....	\$13,337 43	.....	\$9,148 06	\$5 00	.....	.....	\$85 65	\$1,172 73	\$1,067 17	Gasoline..... \$3,295 57 Fees..... 94 00 Storage..... 469 25 Advertising..... 45 00
Cleaning catch-basins..	72,238 74	\$42,117 98	.....	10,104 25	.....	\$19,334 93	.....	36 58	.....	.....
Cleaning sewers.....	51,565 39	43,808 85	.....	7,756 54	.....	.....	.....	.....	.....	.....
Fuel and oil.....	275 02	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hardware and tools..	4,995 97	.....	166 12	.....	.....	.....	275 02	.....	.....	.....
House connections...	16,623 85	16,158 95	.....	40 00	.....	422 95	.....	1 95	4,828 55	Freight charge..... 1 30
Maintenance, Stony Brook.....	602 38	509 00	.....	91 50	.....	.....	.....	1 88	.....	.....
Office and engineers' expense.....	4,466 60	757 19	133 29	804 61	.....	.....	.....	1,695 51	154 50	Printing..... 35 00 Postage..... 99 55 Transportation..... 617 50 Meals..... 14 00 Telephone..... 155 45
Office and engineers' salaries.....	22,894 35	22,894 35	.....	.....	.....	.....	.....	.....	.....	.....
Stock.....	2,753 11	.....	.....	5 00	.....	.....	.....	2,748 11	.....	.....
Yard and locker.....	45,477 46	40,062 26	98 39	4,822 54	.....	.....	.....	220 14	.....	Towel service..... 62 40
Testing laboratory....	185 73	.....	.....	27 84	.....	.....	.....	43 28	.....	Towel service..... 15 60 Gas service..... 96

Miscellaneous.....	8,147 43	2,086 08	824 00			18 56	56
Back Bay Fens.....	638 39	516 92					Postage..... 1,326 15
Telephones.....	1,089 25						Transportation..... 89 10
Rubber goods.....	90 00						Meals..... 278 25
Pensions and annuities,	10,172 13	10,172 13					Telephone calls..... 89 60
Holidays, vacations,	57,759 75	57,759 75					Workmen's Com- pensation..... 1,942 91
time allowed, etc....							Injured..... 892 22
Unadvertised jobs.....	4,570 93	128 81			121 47		Unliquidated re- serve..... 1,089 23
36 Cunningham street, City Proper, repair sewer and drain — (Edward M. Matz, Inc.).....	2,688 79	41 18					Telephone..... 90 00
Vernon and Cabot streets, Roxbury (Hancock Construc- tion Company).....	3,951 90	242 44					Rubber mitts.....
Repair streets, etc.....	492 43	344 24			4,442 12		
Repair department buildings.....	1,303 81	44 76					
Repair catch-basins, South Boston.....	520 03	425 11					
Carried forward....	\$328,840 87	\$238,070 00	\$10,534 56	\$24,595 28	\$31,233 26	\$791 92	\$6,050 22
						\$6,262 01	\$10,703 62

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

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

Repair sewers, Brighton.....	3,171 74	2,497 55	.....	398 50	.....	.....	.....	275 69	.....
Repair sewers, West Roxbury.....	2,822 93	2,184 95	.....	279 00	.....	.....	.....	358 98	.....
Repair sewers, Dorchester.....	1,311 09	828 40	.....	216 25	.....	104 46	.....	161 98	.....
Repair sewers, Hyde Park.....	271 38	187 77	.....	44 00	.....	.....	.....	39 61	.....
Repair sewers, Roxbury.....	2,001 33	1,001 87	.....	157 48	.....	666 98	.....	175 00	.....
Repair sewers, City Proper.....	1,297 26	270 30	.....	90 00	.....	708 88	.....	228 08	.....
Total — Outside improved sewers, Total — Improved sewers.....	\$357,416 73 243,578 50	\$258,374 56 130,955 42	\$10,534 56 5,969 84	\$27,491 01 7,945 81	..... \$379 50	\$33,110 10 .....	\$791 92 91,456 93	\$10,360 74 559 88	\$10,703 62 189 74
Totals.....	\$600,995 23	\$389,329 98	\$16,504 40	\$35,436 82	\$379 50	\$33,110 10	\$92,248 85	\$10,920 62	\$12,171 60 \$10,893 36
CREDITS.									
Trucks, etc., used on maintenance.....	\$32,257 75	.....	.....	32,257 75	.....	.....	.....	.....	.....
Maintenance stock used on maintenance.....	2,374 60	.....	.....	.....	.....	.....	.....	2,374 60	.....
Construction stock used on maintenance.....	2,743 36	.....	.....	.....	.....	.....	.....	2,743 36	.....
Carried forward...	\$503,619 52	\$389,329 98	\$16,504 40	\$3,179 07	\$379 50	\$33,110 10	\$92,248 85	\$5,802 66	\$12,171 60 \$10,893 36

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

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

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

Accounts.	Totals.	Labor.	Contractors.	Trucks.	Repairs.	Light, Heat and Power.	Materials and Supplies.	Tools and Equipment.	Taxes.	Miscel- laneous.
Pumping Stations:										
Calf Pasture, inside.....	\$101,644 23	\$29,183 28	.....	.....	\$91 57	\$71,346 37	\$20 64	\$948 27	.....	\$54 10
Calf Pasture, outside.....	5,271 11	949 74	.....	\$3,355 37	301 64	.....	.....	664 36	.....	.....
Calf Pasture, engines.....	34,932 52	28,955 64	.....	.....	4,722 66	.....	.....	790 35	.....	58 84
Calf Pasture, boilers.....	31,651 14	14,140 01	.....	.....	315 61	15,883 64	17 72	1,294 16	.....	.....
Union Park Street.....	12,226 47	10,336 97	.....	6 96	2 25	1,723 66	13 78	123 65	.....	19 20
Summer Street.....	4,898 17	2,636 13	.....	.....	461 81	1,800 23	.....	.....	.....	.....
Moon Island.....	31,131 42	27,119 44	.....	1,984 26	33 40	547 63	92 71	936 08	\$379 50	38 40
Main and intercepting sewers.....	21,823 44	17,634 21	.....	2,599 22	40 90	155 40	10 00	1,364 51	.....	19 20
Totals.....	\$243,578 50	\$130,955 42	.....	\$7,945 81	\$5,969 84	\$91,456 93	\$559 88	\$6,121 38	\$379 50	\$189 74

## Recapitulation, Maintenance, Detail, 1947.

## ACCOUNTS.

	ACCOUNTS.		
	Improved Sewerage.	Outside Improved Sewerage.	Total.
Labor.....	\$130,955.42	\$258,374.56	\$389,329.98
Repairs.....	3,969.84	10,534.56	14,504.40
Trucks, motor vehicles, and hired crane.....	7,945.81	27,491.01	35,436.82
Taxes.....	379.50		379.50
Contractors.....		33,110.10	33,110.10
Light, heat, and power.....	91,456.93	791.92	92,248.85
Materials and supplies.....	559.88	10,360.74	10,920.62
Equipment and tools.....	6,121.38	6,050.22	12,171.60
Gasoline.....		3,295.57	3,295.57
Fees.....		94.00	94.00
Storage.....		469.25	469.25
Advertising.....		45.00	45.00
Printing.....		35.00	35.00
Postage.....		100.11	100.11
Car fares.....		1,943.65	1,943.65
Meals.....		103.10	103.10
Telephone calls.....		433.70	433.70
Unliquidated reserve.....		892.22	892.22
Telephone service.....		1,089.25	1,089.25
Wearing apparel.....		90.00	90.00
Sundries.....	189.74	1.30	191.04
Towel service.....		78.00	78.00
Gas service.....		96	96
Workmen's Compensation.....		89.60	89.60
Injured.....		1,942.91	1,942.91
Totals.....	\$243,578.50	\$357,416.73	\$600,995.23
CREDITS.			
	Improved Sewers.	Outside Improved Sewers.	
	\$5,849.40	\$26,408.35	
Trucks, etc., used on maintenance.....	954.60	1,420.00	
Maintenance stock used on jobs.....		2,743.36	
Sewerage works used on jobs.....		1,674.08	
Maintenance materials paid by sewerage works.....	4,088.07	15,267.90	
Maintenance payrolls paid by sewerage works.....	509.37	15.50	
Less amount in hands of City Treasurer.....			
Totals.....	\$11,401.44	\$47,529.19	
DEBITS.			
Sewerage works payrolls paid by maintenance.....		\$1,193.17	
Sewerage works materials paid by maintenance.....		695.90	
Debit transfer from sewerage works.....		3,978.13	
Totals.....		\$5,867.20	
Totals.....	\$232,177.06	\$309,887.54	\$542,064.60
Totals.....	\$232,177.06	\$315,754.74	\$547,931.80



## Sewerage Works, January 1 to December 31, 1947.

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

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

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

Ledgedale road, Truman road, Alward road (sewer works and water works contract).	Dec. 24, 1946	April 19, 1947	C. Russo, Inc.	1,052.80 1,057.73	10" pipe, sanitary sewer. 10" pipe, surface drain. 11 manholes. 1 catch-basin.	10,626 72
Stony Brook (section 16), from 20 feet south of Stella road to Hyde Park line.	Nov. 13, 1946	Not completed.	C & R Construction Com- pany.	1,424.24 32.50 14.75 10.00 29.00 202.50	12' 0" by 10' 0" reinforced con- crete conduit. 10" pipe, sanitary sewer. 30" pipe, surface drain. 24" pipe, surface drain. 15" pipe, surface drain. Minor drain. 7 manholes.	178,067 36
Whitecomb avenue, from Centre street to Arboretum road.	May 7, 1946	June 20, 1946	Baker & Co.	.....	Final payments and extra work order.	8,029 92
Zeller street, Glenhaven Road Brook, Spalding Street outlet, Neponset avenue, and Bourne street, West Roxbury.	Oct. 17, 1946	Dec. 11, 1946	C. Russo, Inc.	.....	Final payments only.	4,631 90
Metropolitan avenue, from Kittredge street to Poplar street.	Oct. 7, 1946	Nov. 19, 1946	Baker & Co.	.....	Final payments only.	3,608 87
Private land, from Keystone street to Joyce Kilmer road.	March 20, 1946	March 26, 1946	Baker & Co.	.....	Final payments only.	411 30
Sherman road and Veterans of Foreign Wars Parkway.	July 2, 1947	Nov. 28, 1947	Baker & Co.	1,170.80 791.14 595.00 980.84	10" pipe, sanitary sewer. 12" pipe, sanitary sewer. 12" pipe, surface drain. 24" pipe, surface drain. 18" pipe, surface drain. 15" pipe, surface drain. 13 manholes.	31,649 76
Waterman road, from Neponset avenue to Bourne street, and minor sewerage works in Woodbourne road, Garth road, Bur- wood road, Hodgdon terrace, Florian street, West Roxbury; and Niles street, Brighton.	April 11, 1947	June 14, 1947	Rosindale Contracting Com- pany.	608.80 219.00	10" pipe, surface drain. Minor drain. 3 manholes. 17 catch-basins.	9,700 90
Centre street, at St. Theresa avenue (unad- vertised).	Oct. 18, 1945	Nov. 24, 1945	M. DeMatteo Contracting Company.	38.00	15" pipe, sewer relaid.	2,000 00

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

LOCATION.	Began.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1947.
Jacqueline road, Ashland avenue, Atwill road, Keith street, Hackensack road, and Hackensack Circle.	July 3, 1947	Oct. 4, 1947	F. Susi and DeSantis Company.	1,429.53 422.51 530.26	10" pipe, sanitary sewer. 10" pipe, surface drain. 12" pipe, surface drain. 12 manholes.	\$14,700 27
Pond street, from Rockwood street to Neil- lian Crescent.	May 28, 1947	June 20, 1947	C. Russo, Inc.	639.95	15" and 12" pipe, surface drain. 4 manholes. 6 catch-basins.	8,446 36
Spring Street Brook, in Prospect street and private land, Baker street, at Belle avenue, Centre street, at No. 2501; Bussey Brook inlet, and Hart street, West Roxbury.	Sept. 3, 1947	Dec. 2, 1947	Joseph Civitarese.	188.17 36.00 60.00 559.22 36.00	24" pipe, surface drain. 30" pipe, surface drain. 10" pipe, surface drain. 10" pipe, sanitary sewer. Minor drain. 3 catch-basins. 5 manholes.	5,881 88
Lyal street, West Roxbury, and Colwell avenue, Brighton.	Oct. 8, 1947	Oct. 28, 1947	F. Susi and DeSantis Com- pany.	499.28 360.10	10" pipe, sanitary sewer. 15" and 12" pipe, surface drain. 5 manholes.	4,795 96
Tolin road, Florian street, Goedie street, Kerna street, West Roxbury; Ridgmont street, Brighton; Sherborn street, New- bury street, Commonwealth avenue, at Kenmore street, West Roxbury.	Oct. 14, 1947	Not completed.	R. A. Buccella & Son.	110.00 44.00	10" pipe, surface drain. Minor drain. 6 catch-basins. 2 manholes.	4,522 96
Keystone street, from North avenue to Upland street, and North avenue, between Keystone street and 130 feet westerly.	Not started.		C. Russo, Inc.		Advertising and engineering.	84 14
DORCHESTER. Tenean Creek, Victory road, Freeport street, Tenean street, and Old Colony Parkway.	Oct. 2, 1946	Not completed.	John Deveney Company.	604.00 536.66 60.00 200.00 280.00 18.00	12" 0" by 12" 0" concrete conduit. 12" pipe, sewer. 15" pipe, surface drain. 48" pipe, surface drain. 30" pipe, surface drain. Minor drain. 14 manholes.	175,432 65

Franklin Field — veterans' temporary housing development.	Sept. 9, 1946	Oct. 31, 1946	Baker & Co .....	.....	Testing pipe.....	25 00
Gallivan Boulevard, from Granite avenue to Neponset avenue (chapter 90, state job).	State contract.....	.....	A. Singarella.....	.....	Inspection and iron frames and covers.....	1,692 44
Calf Pasture Pumping Station—making wash borings for Sewage Treatment Plant.	May 15, 1947	June 24, 1947	Raymond Concrete Pile Company.	2,904.00	Wash borings.....	3,488 23
River street, veterans' housing project (Liversidge development),	.....	.....	Boston Housing Authority..	.....	Engineering inspection and iron frames and covers.....	730 95
Pierce avenue extension in private land, Rockwell street, Sawyer avenue, and Richfield park.	Aug. 11, 1947	Sept. 24, 1947	Anthony D'Alessandro.....	15.00 320.20 67.70 58.00	15" pipe, sewer relaid..... 24" pipe, surface drain..... 12" pipe, surface drain..... Minor drain..... 4 manholes..... 4 catch-basins.....	6,373 41
Calf Pasture Pumping Station—installing switches and busses.	Jan. 7, 1946	Nov. 8, 1946	Kenworthy & Taylor, Inc.	.....	Final payment.....	324 30
Sewage Treatment Plant—engineering services.	.....	.....	Charles A. Maguire & Associates,	.....	Engineering services.....	17,853 43
HYDE PARK.						
West street, between Gwinnet street and Austin street, at Myopia road, and Myopia road in private land, from Stony Brook to West street, 90' northwest of Myopia road.	Sept 16, 1946	Nov. 25, 1946	F. Susi and DeSantis Company.	.....	Semifinal and final payment.....	3,196 88
Lewiston street, Taunton avenue, Tacoma street, Farrar avenue, Rosebery road and Navarre street.	April 7, 1947	Aug. 12, 1947	J. D'Amico.....	128 60 126 30 575 90 617 85 174 20 737 00	10" pipe, sewer..... 10" pipe, surface drain..... 12" pipe, surface drain..... 15" pipe, surface drain..... 21" pipe, surface drain..... Minor drain..... 12 manholes..... 33 catch-basins..... 1 drop inlet.....	28,698 64

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

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

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

**CONSTRUCTION REPORT, 1947.**  
**Sewerage Works, 1947.**

ACCOUNTS.	Totals.	Labor.	Trucks, Compressors, Pumps, etc.	Tools and Materials.	Contractors.	Sundries.
Office and engineers' salaries.....	\$114,430 13	\$114,430 13				
Office and engineers' expense.....	11,196 52	3,338 22	\$5,829 57	\$1,809 23	.....	\$219 50
Miscellaneous.....	3,170 96	2,094 02	367 02	709 92		
Land-takings.....	83 29	83 29				
New manholes, entire city.....	537 09	262 55	41 00	233 54		
New catch-basins, South Boston.....	2,727 69	2,237 52	263 25	206 92		
New catch-basins, East Boston.....	1,460 13	1,088 19	124 50	250 44		
New catch-basins, Charlestown.....	728 78	527 81	75 00	125 97		
New catch-basins, Brighton.....	546 32	273 79	48 50	224 03		
New catch-basins, West Roxbury.....	424 17	226 94	44 00	153 23		
New catch-basins, Roxbury.....	2,506 98	1,988 73	314 00	204 25		
New catch-basins, City Proper.....	1,138 61	912 81	127 00	98 80	\$93 26	
Repair streets.....	93 26		.....	.....		
Release sewers.....	917 22	864 99	.....	52 23		
Mechanics Iron Foundry.....	24,356 73	.....	.....	24,356 73		
Stock.....	13,956 35	.....	.....	13,956 35		
Testing laboratory.....	8,368 95	8,207 91	.....	115 74	.....	45 30



Holidays, vacations, sickness, etc.....	19,872 78	19,872 78	.....	752 09	5,254 78	
Unadvertised jobs.....	7,039 58	1,032 71				
Total miscellaneous.....	\$213,555 54	\$157,402 39	\$7,230 84	\$43,249 47	\$5,348 04	\$264 80
Sewers built, entire city.....	666,796 53	49,684 28	.....	17,540 44	596,982 42	2,589 39
Totals.....	\$880,352 07	\$207,146 67	\$7,230 84	\$60,789 91	\$602,330 46	\$2,854 19
CREDITS.						
Cost of maintenance stock used on sewerage works.....	\$918 34					
Cost of sewer works stock used on sewerage works.....	19,819 24					
Cost of trucks, etc., used on sewerage works.....	1,565 75					
Sewerage works payrolls paid by maintenance.....	1,193 17					
Sewerage works bills paid by maintenance.....	695 90					
Debit transfer to maintenance (labor).....	3,978 13	\$5,171 30	\$1,565 75	\$21,433 48		
Totals.....	\$852,181 54	\$201,975 37	\$5,665 09	\$39,356 43	\$602,330 46	\$2,854 19
DEBITS.						
Maintenance payrolls paid by sewerage works.....	\$15,777 27					
Maintenance bills paid by sewerage works.....	5,762 15	15,777 27	.....	5,762 15		
Totals.....	\$873,720 96	\$217,752 64	\$5,665 09	\$43,118 58	\$602,330 46	\$2,854 19

## APPENDIX E.

REPORT OF THE DIVISION ENGINEER OF  
THE WATER DIVISION.

BOSTON, January 2, 1948.

*To the Commissioner of Public Works.*

DEAR SIR:

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

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

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

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

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

## DISTRIBUTION BRANCH.

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

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

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

#### BUSINESS OFFICE.

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

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

#### APPROPRIATIONS, EXPENDITURES AND REVENUE.

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

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

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

This department contacts the water consumers very frequently throughout the year, and the conduct of this 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' utility.

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

Respectfully submitted

D. M. S,  
Division Engineer.

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

NAME.	Applied.	Discontinued.	METERS CHANGED.		Tested in Shop.	Repaired in Service.	Repaired in Shop.	Resets.	Total.
			Out.	In.					
City Disc.....	354	160	1,547	2,362	3,672	711	330	287	91
City Detector.....	4		7	6	13	1	7		
City Ground.....	2		9	11	19	1	7		2
City.....				2	2				3
City Dis.....		11	165	2	162	6			204
Wash D.C.....	104	48	992	555	1,489	200	932	178	7
King.....		8	163	2	148	36			190
Federal.....		4	23		23				32
American.....		2	21		21	3			24
Lambert.....			3		3	2			6
Crown.....		1	6		4	4			6
Trident.....	1		1	1	2	1	1		
Arctic.....	1	3	2	4	6	4	2		
Nash.....		1	4		4	1	1		3
Keystone.....			2		2	1	2		
Totals.....	466	238	2,945	2,945	5,570	971	1,282	465	566



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

MAKE.	DIAMETER IN INCHES.									Total.
	$\frac{3}{8}$	$\frac{1}{2}$	1	1½	2	3	4	6	8	
NEW.										
Hersey Disc.....	400	17	.....	6	30	.....	.....	.....	.....	453
Hersey Compounds.....	.....	.....	.....	.....	.....	3	3	.....	.....	6
Totals.....	400	17	.....	6	30	3	3	.....	.....	459
OLD.										
Hersey Disc.....	100	.....	.....	23	4	9	.....	.....	.....	118
Hersey Detector.....	.....	.....	.....	.....	.....	.....	1	2	2	5
Watch Dog.....	.....	.....	1	3	3	.....	1	.....	.....	8
Totals.....	100	.....	1	26	7	9	2	2	2	131

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

MAKE.	DIAMETER IN INCHES.		Total.
	$\frac{3}{8}$	$\frac{1}{2}$	
Hersey Disc.....	949	94	1,043

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

MAKE.	DIAMETER IN INCHES.							Total.
	$\frac{3}{8}$	$\frac{1}{2}$	1	1½	2	3	4	
Hersey Disc.....	1,030	61	.....	20	50	5	.....	1,166
Hersey Compound.....	.....	.....	.....	.....	.....	5	5	10
Totals.....	1,030	61	.....	20	50	10	5	1,176

Table No. 5. Meters Reset.

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

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

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



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

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

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

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

Table No. 8. Meters Applied in 1947.

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

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

Table No. 9. Meters Discontinued in 1947.

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

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

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

Table No. 11. Meters Salvaged in 1947.

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

Table No. 1.

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

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

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

## Financial Transactions, Water Service, 1947.

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

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

**Table No. II. High Pressure Fire Service.**

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

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

18.72 miles of mains in system.



WATERWORKS STATISTICS, CITY OF BOSTON.  
FOR THE FISCAL YEAR ENDING DECEMBER 31, 1947.

*Mains.*

Kind of pipe: cast iron, wrought iron, steel.  
Size, 2-inch to 48-inch.  
Extended, miles, 2,743.  
Size enlarged, miles, none.  
Total miles now in use, 1,004.023.  
Public hydrants added, 26.  
Total hydrants now in use, 12,280.  
Stop gates added, 51.  
Stop gates now in use, 16,073.  
Stop gates smaller than 4-inch, 37.  
Number of blow-offs, 861.  
Range of pressure on mains, 30 to 90 pounds.

*Services.*

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



### Cost of Replacement of Main Pipe, 1947.

STREET.	Location.	District.	Size. (Inches)	Feet.	Materials.	Labor.	Inspection.	Total Cost.	Original Size. (Inches.)	Feet.
Cottage street.....	Between Washington street and Milton line.	Hyde Park.	12	180	\$1,918 70	\$387 40	\$127 12	\$2,413 22	4 5	180
Cushing avenue.....	Between Columbia road and Wilbur street.	Dorchester.	8	225	1,238 91	827 41	101 72	2,168 04	6	225
Hart street.....	Between Baker and Prospect streets.	West Roxbury.	8	28	71 00	37 50	9 60	118 10	6	28
Upham avenue.....	Between Hancock street and Cushing avenue.	Dorchester.	12	413	1,286 49	437 12	144 81	1,868 42	6	413
Wilbur street.....	Between Cushing and Upham avenues.	Dorchester.	8	87	281 82	193 12	30 28	505 22	6	87
Washington street.....	Between Tyler street and Wolcott road.	Hyde Park.	12	355	4,073 78	1,017 28	254 12	5,345 18	4 6	355
Athelwold street.....	Between School and Thane streets.	Dorchester.	8	54	249 20	147 52	18 64	415 56	6	54
Bradlee street.....	Between School and Washington streets.	Dorchester.	8	24	203 62	161 12	27 48	392 22	6	24
Fairmount avenue.....	Opposite Third New Way.....	Hyde Park.	12	9	193 03	148 69	24 12	365 84	12	9
Fairmount court.....	From Third New Way.....	Hyde Park.	8	195	1,040 66	697 73	179 86	1,918 25	6	195
Third New Way.....	Between Fairmount avenue and Fairmount court.	Hyde Park.	8	236	1,278 92	901 72	216 54	2,397 18	6	236
					\$11,836 13	\$4,956 61	\$1,114 29	\$17,907 05		
			8 12	840 957					4-6 6 12	555 1,262 9
	Totals.....			1,806						1,806

## Cost of Extension of Main Pipe, 1947.

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

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

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