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L. K. Pourke



ANNUAL REPORT

OF THE

PUBLIC WORKS DEPARTMENT

FOR THE

YEAR 1913

COMPLIMENTS OF . . .

L. K. ROURKE,

Commissioner of Public Works

PLEASE EXCHANGE

CITY OF BOSTON
PRINTING DEPARTMENT

1914

(2)

ANNUAL REPORT

OF THE

PUBLIC WORKS DEPARTMENT

FOR THE

YEAR 1913



CITY OF BOSTON
PRINTING DEPARTMENT

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ANNUAL REPORT
OF THE
PUBLIC WORKS DEPARTMENT
FOR THE
YEAR ENDING JANUARY 31, 1914.

BOSTON, February 2, 1914.

HON. JAMES M. CURLEY,
Mayor of the City of Boston:

SIR,— In compliance with the Revised Ordinances, the annual report of the operations and expenses of the Public Works Department for the year ending January 31, 1914, is herewith respectfully submitted. The Public Works Department, created by Ordinances of 1910, chapter 9, was formed by consolidating the Engineering, Water and Street Departments.

ORGANIZATION.

The work of the department has been carried on during the year with four main divisions, as follows:

Central Office.	Sewer and Water Division.
Highway Division.	Bridge and Ferry Division.

NOTE.— The Boston and Cambridge Bridge Division, so called, is not properly a division of the Public Works

Department, as this work is in charge of a commission of two, one member appointed by the Mayor of Boston and the other by the Mayor of Cambridge, under the provisions of chapter 412 of the Acts of 1904; but because of the fact that the present Division Engineer of the Bridge and Ferry Division is the Boston member of this commission and also because one-half of the expenses of this commission is defrayed by the Bridge and Ferry Division of this department, it is here treated as a division of this department.

APPROPRIATIONS.

The money assigned for the work of the Public Works Department during the year was made available from the following sources:

First.— Maintenance appropriation, derived from the income of the city raised by taxation. Before the beginning of the financial year, February 1, the department estimates of the amounts necessary for the proper maintenance of the different services are submitted to the Mayor, who makes such recommendations as he may deem proper to the City Council. The maintenance appropriations, including permanent construction, as passed by the City Council and approved by the Mayor, were as follows:

Central Office	\$80,000 00
Bridge and Ferry Division	597,000 00
Highway Division	3,670,000 00
Sewer and Water Division, Sewer Service	380,000 00
	<hr/>
	\$4,727,000 00
Water Service	895,000 00
	<hr/>
	<u>\$5,622,000 00</u>

Boston and Cambridge Bridges.*

Second.— Loan inside the debt limit for building new streets assessable on abutting property, authorized by chapter 393 of the Acts of 1906. (Paving Service.)

Amount expended during the year	<u>\$265,583 18</u>
---	---------------------

Third.— Loan inside the debt limit under the provisions of chapter 426 of the Acts of 1897, as amended

* Paid by Bridge and Ferry Division.

by chapter 204 of the Acts of 1908, from which all sewerage works are built, except those in the Charles River Basin watershed. (Sewer Service.)

Balance, February 1, 1913	\$193,117 36
Loans	600,000 00
Total	<u>\$793,117 36</u>
Expended during the year	536,099 47
Balance January 31, 1914	<u><u>\$257,017 89</u></u>

Fourth.— Loan under the provisions of chapter 383 of the Acts of 1907, as amended by chapter 485 of the Acts of 1907, by chapter 514 of the Acts of 1908 and by chapter 612 of the Acts of 1911. Amended by chapter 348 of the Acts of 1912, which provides that the City of Boston shall in the year 1913 expend \$400,000 and in each of the next four years shall expend \$400,000, to be met by loan inside the debt limit. (Sewer Service.)

Balance February 1, 1913	\$119,615 74
Loans	400,000 00
Total	<u>\$519,615 74</u>
Expended during the year	455,997 19
Balance January 31, 1914	<u><u>\$63,618 55</u></u>

Fifth.— Loan inside the debt limit under the provisions of chapter 312 of the Acts of 1911 for the installation of a High Pressure Fire Service. (Water Service.)

Balance February 1, 1913	\$127,244 45
Loan	235,000 00
Total	<u>\$362,244 45</u>
Expended during the year	227,823 81
Balance January 31, 1914	<u><u>\$134,420 64</u></u>

\$150,000 loan authorized but not issued.

Sixth.— SPECIAL APPROPRIATIONS.

From Loans:

Loan inside the debt limit under the provisions of chapter 412 of the Acts of 1913, for the construction

of a new bridge over Belle Islet Inlet, between the City of Boston and the town of Winthrop. (Bridge Service.)

Loan, Winthrop Bridge	\$55,000 00
Balance January 31, 1914	<u>\$55,000 00</u>

CHELSEA BRIDGE NORTH. (Bridge Service.)

Balance February 1, 1913	\$217,469 83
Revenue during year	7,500 00
Total	<u>\$224,969 83</u>
Expended during the year	160,368 03
Balance January 31, 1914	<u>\$64,601 80</u>

CHELSEA BRIDGE SOUTH. (Bridge Service.)

Loan	\$75,000 00
Expended during the year	33,347 17
Balance January 31, 1914	<u>\$41,652 83</u>

MERIDIAN STREET BRIDGE. (Bridge Service.)

Balance February 1, 1913	\$39,545 67
Expended during the year	21,077 87
Balance January 31, 1914	<u>\$18,467 80</u>

BROADWAY BRIDGE REBUILDING.

Balance February 1, 1913	\$37,160 67
Loan	115,000 00
Total	<u>\$152,160 67</u>
Expended during the year	3,496 69
Balance January 31, 1914	<u>\$148,663 98</u>

EVERETT STREET, BRIGHTON, PROPERTY (TO BE USED FOR A REFUSE DESTRUCTOR PLANT). (Sanitary Service.)

Balance February 1, 1913	\$23,000 00
Balance January 31, 1914	<u>\$23,000 00</u>

LAND AND BUILDINGS, REFUSE STATION. (Sanitary Service.)

Balance February 1, 1913	\$61,110 85
Expended during the year	45,527 53
	<hr/>
Balance January 31, 1914	<u>\$15,583 32</u>

REFUSE DESTRUCTOR SITE, SPECTACLE ISLAND. (Sanitary Service.)

Balance February 1, 1913	\$15,000 00
	<hr/>
Balance January 31, 1914	<u>\$15,000 00</u>

SERVICE MAINS AND RELAYING MAINS. (Water Service.)

Transferred from Water Service surplus	\$200,000 00
Expended during the year	86,945 40
	<hr/>
Balance January 31, 1914	<u>\$113,054 60</u>

GENERAL REMARKS.

The work accomplished by the Public Works Department during the past year has been satisfactory, considering the amount expended, \$7,849,538.08. A great deal more work should have been done if the money had been available, particularly along the line of so-called permanent paving. The policy of the department of doing practically all new construction work by contract and using the day labor force for maintenance has been continued with satisfactory results.

It is recommended that more money be made available for the construction of sewerage works and the laying out and construction of private ways as public ways. There are in the city to-day something over 2,000 private ways, a considerable percentage of which are built up, and the residents of these private ways should be entitled to the same benefits which others receive who live on public streets.

A brief summary of the chief activities of the various divisions of the Public Works Department follows.

BRIDGE AND FERRY DIVISION.

Chelsea North Bridge was practically finished this year. The old single waterway 60 feet in width has been replaced by two waterways each 125 feet in width,

with a depth of 30 feet at low water, thus opening up the Mystic River Basin to navigation for the largest vessels.

The temporary Chelsea South Bridge is also practically completed.

The work of rebuilding L Street Bridge and strengthening the same to provide for street car traffic was finished. An electric motor was substituted for steam power for the operation of the draw span.

Pleasant Street Bridge over the Tremont Street Subway was widened and rebuilt during the year in connection with the widening of Pleasant street.

The construction of a subway for foot travel under the New York, New Haven & Hartford Railroad at Lawndale terrace, Jamaica Plain, was completed.

During the year two temporary public landings, one at Northern Avenue Bridge and the other at Summer Street Bridge, Fort Point channel, were completed and opened for public use.

The abolishment of the grade crossing on Saratoga street, East Boston, was completed on December 6, 1913.

In the Ferry Service a system of checking the collection of tolls for team traffic was put in operation and is working successfully.

A great amount of repair work was done on the ferry landings and boats, and the condition of the plant is better to-day than it has been for some years.

HIGHWAY DIVISION.

The expenditures for 1913 exceeded those for 1912 by \$310,541.61. This increase in expenditures is chiefly accounted for by the general increase in wages and the increased cost of the Sanitary Service. The increased cost of the Sanitary Service amounts to approximately \$134,000 and was due chiefly to the loss of the inland dumps, which means long hauls and consequent increased teaming charges.

The Paving Service of this division has continued its policy of extending the permanent pavements in the outlying districts as far as the money allotted would permit. Approximately 80,000 yards of permanent work were laid during the year, consisting of bitulithic surface on Washington street, Brighton, and South and Centre streets, Jamaica Plain; wood block on Washington street, Dorchester, and Warren avenue in the South End. Very little waterbound macadam was laid, but

a large amount of tar and asphalt macadam were laid, on which work was used about 90,000 tons of stone and over a half million gallons of tar and asphalt binder.

In the Lighting Service the old style hoods and inclosed arc lamps have all been changed to magnetite arc lamps in the Charlestown district. Gas lamps in the city proper have all been replaced by magnetite arc lamps or tungsten lamps. The proposed street-lighting contracts, both for gas and electricity, have not as yet been accepted.

SEWER AND WATER DIVISION.

The Sewer Service has been extended as far as the appropriation would permit, and the radical improvements of sewerage conditions in the South End are well under way, contract having been let for the construction of a pumping station at the corner of Union Park and Albany streets which, when completed, will be the largest automatic sewage underground pumping station in the world; and this station will keep the storm water from flooding the low yards and alleys in the South End district as far as the improvement has been extended. The new 56,000,000 gallon pumps at the Calf Pasture have been installed, but as yet have not been accepted because of certain changes demanded by the city which the contractor has not made.

In the Water Service $3\frac{1}{4}$ miles of old mains in the East Boston, city proper, Dorchester and West Roxbury districts were cleaned, thereby practically restoring their original carrying capacity. Eight and one-third miles of mains too small for modern fire protection were relaid in Back Bay, Roxbury, Dorchester and Hyde Park. In Dorchester a notable improvement has been made in the three-flat district. The Hyde Park fire protection, which was entirely inadequate, has been made satisfactory. Eleven miles of new mains, ranging in size from 8 to 16 inches, were laid by contract during the year. Two hundred and forty-five hydrants and 1,443 service pipes were established and 7,406 meters were installed.

A gratifying reduction in the consumption throughout the city was effected, the per capita rate having been reduced from 125 gallons in 1912 to 108 in 1913, representing a saving of about 10,000,000 gallons per day.

Reports in detail of the work accomplished by the department and the cost thereof are herewith annexed.

**Financial Statement of the Public Works Department,
February 1, 1913, to January 31, 1914.
Maintenance.**

DIVISION.	Appropriations and Transfers during 1913-14.	Revenue.	Total Credits.	Expenditures for the twelve months ending January 31, 1914.	Balances, January 31, 1914.
Central Office.....	¹ \$80,159 50		\$80,159 50	\$80,159 50	
Bridge and Ferry Division,	² 567,000 00	\$1,189 63	568,189 63	566,894 91	\$1,294 72
Bridge Service.....		289 13		289,167 52	
Ferry Service.....		900 00		277,727 39	
Highway Division.....	³ 3,769,840 50	* 98,805 44	*3,868,645 94	3,867,124 70	1,521 24
Lighting Service.....				795,880 53	
Paving Service.....		* 22,692 59		* 1,392,468 22	
Sanitary Service.....		75,199 43		925,318 56	
Street Cleaning and Oil- ing Service.....		913 42		753,457 39	
Sewer and Water Division:					
Sewer Service.....	⁴ 380,000 00	7,208 91	387,208 91	387,120 67	88 24
Water Service.....	⁵ 899,338 91		899,338 91	899,338 91	
Totals.....	\$5,696,338 91	\$107,203 98	\$5,803,542 89	\$5,800,638 69	\$2,904 20

* Includes refund of \$616.62 overpayment.

¹ Appropriation	\$80,000 00				
Transferred from Highway Division	159 50				<u>\$80,159 50</u>
² Appropriation	\$597,000 00				
Revenue	1,189 63				
Transferred to Highway Division	30,000 00				<u>\$568,189 63</u>
³ Appropriation	\$3,670,000 00				
Revenue	98,805 44				
Transferred from Bridge and Ferry Division	3,768,805 44				
Transferred from Printing Department	30,000 00				
Transferred from Reserve Fund	25,000 00				
Transferred from City Debt Requirements, Interest	20,000 00				
Transferred to Central Office	159 50				<u>\$3,868,645 94</u>
⁴ Appropriation	\$380,000 00				
Revenue	7,208 91				<u>\$387,208 91</u>
⁵ Appropriation	\$895,000 00				
Transferred	4,338 91				<u>\$899,338 91</u>

The expenditures under the several appropriations for the year 1913 were as follows:

Division.	Current Expenses.	Special Appropriations.	Total Expenditures.	Balances, January 31, 1914.
Central Office	\$80,159 50	.....	\$80,159 50	
Bridge and Ferry Division:				
Bridge Service	289,167 52	\$368,317 77	657,485 29	\$349,112 55
Ferry Service	277,727 39	7,532 51	285,259 90	515 60
Highway Division:				
Lighting Service	795,880 53	.....	795,880 53	296,411 48
Paving Service	¹ 1,392,468 22	320,655 71	1,713,123 93	21,556 04
Sanitary Service	925,318 56	45,527 53	970,846 09	53,583 32
Street Cleaning and Oiling Service	753,457 39	.....	753,457 39	
Sewer and Water Division:				
Sewer Service	387,120 67	992,096 66	1,379,217 33	320,636 44
Water Service	899,338 91	314,769 21	1,214,108 12	² 247,475 24
Totals	\$5,800,638 69	\$2,048,899 39	\$7,849,538 08	\$1,289,290 67

¹ Includes \$616.62 overpayment refunded.

² Does not include \$150,000 authorized but not issued.

Comparative Table Showing Cost of Maintenance of the * Street Department and Public Works Department Since 1904.

DIVISION AND SERVICE.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14
Central Office.....	\$20,853 21	\$21,902 91	.....	.....	.....	\$22,518 63	\$23,627 76	\$72,943 26	\$77,515 65	\$80,159 50
Bridge.....	185,269 84	184,564 54	\$188,235 55	\$199,342 12	\$180,273 01	198,852 71	201,995 00	274,876 76	268,959 44	271,423 04
Boston and Cambridge Bridges....	16,263 90	20,878 84	11,609 64	11,230 57	18,524 29	18,464 72	22,006 57	21,055 26	17,183 87	17,744 48
Ferry.....	254,535 20	273,995 90	265,463 83	294,357 82	249,068 39	222,101 10	235,920 63	247,628 07	269,016 52	277,727 39
Lighting.....	.....	.....	826,804 01	840,016 93	809,510 06	719,574 91	710,294 84	726,967 18	768,779 08	795,880 53
Paving.....	808,604 99	874,636 88	860,246 89	831,113 67	775,838 06	1,089,247 94	1,178,546 90	1,162,660 29	1,236,686 29	1,361,082 17
Removal of snow....	264,840 43	137,115 89	77,023 96	144,117 96	58,143 37	131,357 56	112,623 21	124,961 68	106,691 07	64,007 49
Sanitary.....	706,529 89	703,382 08	767,859 76	790,243 78	745,200 90	637,255 93	723,249 64	730,292 62	790,809 01	925,318 56
Sewer.....	324,360 72	381,687 78	374,075 92	402,389 90	351,162 41	301,145 94	312,541 05	325,508 86	378,873 18	387,120 67
Street Cleaning.....	434,172 62	448,837 79	465,005 94	501,688 67	419,275 91	353,550 33	370,602 81	408,571 72	454,623 71	492,324 45
Street Watering.....	165,071 08	189,347 50	153,423 07	152,235 45	154,679 90	170,728 75	160,543 93	163,036 26	198,993 93	228,511 50
Water.....	.....	.....	.....	.....	.....	.....	.....	822,377 46	835,072 00	899,338 91
Totals.....	\$3,184,092 88	\$3,236,350 11	\$3,989,748 57	\$4,166,736 87	\$3,761,676 30	\$3,864,798 52	\$4,051,952 34	\$5,080,879 42	\$5,403,203 75	\$5,800,638 69

* Engineering and Water Departments were consolidated into the Public Works Department February 1, 1911.

REVENUE.

Collected by City Collector on Account of the Public Works Department (Maintenance Account) and Credited to General Revenue, as per Collector.

Bridge Service:		
Sale of old material	\$25 86	
Sale of horses	340 10	
	<hr/>	\$365 96
Ferry Service:		
Tolls	\$103,797 50	
Rents	514 00	
Sale of old material	74 00	
Headhouse privileges	600 00	
Commission on telephone stations,	51 52	
	<hr/>	105,037 02
Lighting Service:		
Rents		1,200 00
Paving Service:		
Assessments on abutters for side-		
walks	\$28,292 87	
Permits	31,572 92	
Stone from Chestnut Hill ledge . .	1,117 17	
Sale of buggy and cart	25 00	
Sale of old material	948 49	
Hire of steam roller	39 75	
Hyde Park sidewalk assessments	69 40	
	<hr/>	62,065 60
Sanitary Service:		
Sale of manure	\$878 58	
Sale of offal — Hyde Park	1,267 65	
Sale of old material	289 59	
Hire of dumping scows	3,580 00	
Hire of teams	27 50	
Refund from building run at Fort		
Hill Wharf	356 00	
Dumping boat service	859 85	
	<hr/>	7,259 17
Street Cleaning Service:		
Rent	\$600 00	
Sale of old barrels	3 50	
	<hr/>	603 50
Sewer Service:		
Sewer Assessments	\$285 04	
Sewer Assessments — Hyde Park,	3,692 50	
Entrance fees	4,854 24	
Disposal of sewerage	6,423 73	
	<hr/>	
<i>Carried forward</i>	\$15,255 51	\$176,531 25

<i>Brought forward</i>	\$15,255 51	\$176,531 25
Rents	10 00	
Sale of horse	147 25	
Sale of Junk	44 00	
Labor and material	240 50	
	<hr/>	15,697 26
Water Service:		
Water rates	\$2,947,210 88	
Off and on for non-payment	2,085 45	
Fees for summonses	5,013 94	
Labor and material for construction, changes and repairs of mains, service pipes and other structures	63,051 40	
Sale of merchandise	7,970 75	
Sale of old materials	3,615 55	
Interest on Bank deposits	248 25	
Miscellaneous	2,404 14	
	<hr/>	3,031,600 36
		<hr/>
		<u>\$3,223,828 87</u>

CONTRACTS MADE BY PUBLIC WORKS DEPARTMENT, FROM FEBRUARY 1, 1913, TO JANUARY 31, 1914.
 Hired Team Contracts, from February 1, 1913, to January 31, 1914.

District.	Awarded to	Single, per Day.	Double, per Day.	Extra Men, per Day.	Paving Service.	Sanitary Service.	Sewer Service.	Street Cleaning Service.	Total.
1. South Boston and Dorchester North ¹	Frank J. Hannon.....	\$3 24	\$4 98	\$2 00	\$1,638 96	\$8,051 52	\$435 75	\$1,487 16	\$14,613 39
3. Charlestown ¹	Northern Construction Co.....	3 50	4 25	2 25	.....	5,101 35	.....	1,700 63	6,801 98
4. Brighton ¹	Bernard Malone.....	2 40	4 75	2 00	3,826 16	.....	159 12	.....	3,985 28
5. West Roxbury ¹	Edward Bryan.....	3 00	4 50	2 00	5,446 50	.....	141 75	.....	5,588 25
6-9. Dorchester and Ashmont ¹	James F. Dooley.....	3 00	4 95	2 00	7,990 30	115 00	787 07	.....	8,892 37
7. Roxbury South and Jamaica Plain ¹	George H. Noone.....	3 25	5 00	2 25	4,820 00	29,774 45	.....	.....	34,594 54
8. South End and Roxbury North ¹	Northern Construction Co.....	3 50	5 25	2 50	11,619 57	31,651 12	.....	3,549 45	46,820 14
10. North and West Ends and Back Bay ¹	Northern Construction Co.....	3 25	4 25	2 25	1,317 07	15,519 51	.....	7,602 72	24,439 30
11. Hyde Park ¹	Thomas H. Corrigan.....	3 00	5 00	2 00	.....	.....	30 00	22 00	52 00

¹ Advertised and awarded to the lowest bidder.

BRIDGE AND FERRY DIVISION.—BRIDGE SERVICE.
Bridge Work.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
1, ¹ Leasing storehouses under the new Charlestown Bridge.	Michael P. Coleman.....	Mch. 10, 1913.	Completed Feb. 1, 1913.....	*\$1,265 00	
2 ² Repairing and restoring railing of Chelsea Bridge South.	W. A. Snow Iron Works.....	Mch. 14, 1913.	Completed April 10, 1913.....	506 00	\$506 00
3 ³ Repairing draw fender piers, Meridian Street Bridge.	Lawler Brothers.....	May 12, 1913.	Completed May 29, 1913.....	333 33	333 33
2 ² Dredging upper side new Chelsea Bridge North..	Bay State Dredging Company..	April 16, 1913.	Completed April 21, 1913.....	924 20	924 20
3 ³ Dredging channel, Meridian Street Bridge.....	Bay State Dredging Company..	May 9, 1913.	Unfinished.....	900 00	324 40
4 ⁴ Widening Pleasant Street Bridge, over subway ...	W. A. & H. A. Root, Inc.....	June 21, 1913.	Completed Nov. 19, 1913.....	6,437 00	5,670 21
4 ⁴ Repairing Tremont street pipe bridge, over B. & A. R. R.	Boston Bridge Works, Inc.....	July 8, 1913.	Completed Aug. 8, 1913.....	748 00	748 00
4 ⁴ Building a temporary bridge at Chelsea Bridge South, over south channel of Mystic river.	Rendle & Stoddard.....	Aug. 15, 1913.	Unfinished.....	57,000 00	29,061 50
1, ¹ Planking and paving Brookline Street Bridge, Boston to Cambridge.	James Doherty.....	Aug. 19, 1913.	Completed Oct. 10, 1913.....	13,949 12	12,645 60
2 ² Cleaning and painting water pipe bridge, Tremont street, over B. & A. R. R.	W. L. Waples Company.....	Aug. 11, 1913.	Completed Sept. 16, 1913.....	260 00	260 00
3 ³ Rebuilding Chelsea Bridge North, over north channel of the Mystic river, Charlestown to Chelsea, completion of contract No. 1.	William E. Litefield.....	Aug. 20, 1913.	Unfinished.....	15,000 00	12,809 26
2, ² Purchase of old Chelsea North Temporary Bridge,	Rendle & Stoddard.....	Sept. 2, 1913.	.....	7,500 00	
3 ³ Hot water heater, drawtender's house, Dorchester Avenue Bridge.	Henry N. Clark Company.....	Oct. 28, 1913.	Completed Nov. 20, 1913.....	220 00	227 50
4 ⁴ Rebuilding draw span, Broadway Bridge, over Fort Point channel.	Boston Bridge Works, Inc.....	Nov. 20, 1913.	Unfinished.....	93,984 00	Nothing.
4 ⁴ Rebuilding fender guard, Chelsea Bridge North..	W. H. Ellis.....	Nov. 28, 1913.	Unfinished.....	2,825 00	Nothing.
4 ⁴ Building the substructure approaches, temporary bridge, etc., Granite Avenue Bridge, over Neponset river, between Milton and Boston.	Holbrook, Cabot & Rollins Corporation.	Dec. 4, 1913.	Unfinished.....	36,910 00	Nothing.
3 ³ Bronze tablets on Chelsea Bridge North draw and Meridian Street Bridge draw.	T. F. McGann & Sons Company.	Jan. 13, 1914.	Unfinished.....	100 00	Nothing.

* Per year.

¹ Advertised and awarded to highest bidder.² Not advertised, only bid.³ Invitation bid, awarded to lowest bidder.⁴ Advertised and awarded to lowest bidder.⁵ Paid to city.⁶ One-half paid by the city of Cambridge.

Contracts in Force Made in Previous Years.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
Rebuilding Chelsea Bridge North, over north channel of the Mystic river, Charlestown to Chelsea, Contract No. 1.	George T. Rendle.....	Feb. 28, 1912.	Unfinished, work being completed by W. E. Litchfield.	\$178,003 80	\$163,998 74
Rebuilding Chelsea Bridge North, over north channel of the Mystic river, Charlestown to Chelsea, Contract No. 2.	Boston Bridge Works, Inc.....	June 22, 1912.	Completed July 8, 1913.....	117,997 00	108,091 71

BRIDGE AND FERRY DIVISION.—FERRY SERVICE.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
^{1, 2} Weighing and vending machines in the ferry headhouses.	Autosales Gum and Chocolate Company.	Jan. 30, 1913.	Completed Jan. 31, 1914.....	\$600 00	\$600 00
³ Teaming coal from coal pockets from North or South Ferries, East Boston side, and delivering same to ferriboats.	Simon Collins.....	Feb. 8, 1913.	Completed Jan. 31, 1914.....	28 cents ton. (2,000 lbs.)	3,021 21
⁴ Furnishing and installing an 8-inch suction pipe for the circulating pump for the ferriboat "Noddle Island." "John H. Sullivan"	Boston Copper Works Company.	Feb. 24, 1913.	Completed Sept. 10, 1913.....	188 00	188 00
⁴ Painting ferriboat "John H. Sullivan"	J. J. Silva.....	June 7, 1913.	Completed Aug. 1, 1913.....	245 00	245 00
² Lease of land, No. 60 Eastern avenue.....	Patrick J. Connolly.....	Sept. 1, 1913.	Completed Jan. 31, 1914.....	* 12 50	

* Per month.

² Paid to city.⁴ Invitation bid, awarded to lowest bidder.³ Advertised and awarded to lowest bidder.¹ Advertised and awarded to highest bidder.

HIGHWAY DIVISION.— LIGHTING SERVICE.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
* Furnishing and installing automatic devices for lighting gas lamps.	Automatic Gas Light Equipment Company.	Oct. 11, 1913.	Completed Nov. 24, 1913.	\$2,400 00	\$227 50

* Not advertised, only bid.

Contracts in Force Made in Previous Years.

CONTRACTS.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
* Gas lighting.	Rising Sun Street Lighting Company.	Sept. 2, 1909.	Extended to January 31, 1914.	Single gas burner, \$23.60 per year with gas; single gasolene or naphtha burner, \$29.20; lantern with two burners, \$35.20 with gas; lantern with three burners, \$47.60 with gas; fire alarm lamps, \$10.50 without gas.	\$258,188 84
* Electric lighting.	Edison Electric Illuminating Company.	May 7, 1909.	From April 1, 1909, to April 1, 1914.	\$385,000 per year.	486,096 54

* Not advertised, only bid.

*** Artificial Stone Sidewalks.— Rebate.**

CONTRACTOR.	Dated.	Contract Completed.	Price per Square Foot.	Amount Expended in 1913.
W. A. Murtfeldt Company.	March 20, 1913.	January 31, 1914.	\$0 06	\$655 14
Jeremiah J. Sullivan.	March 20, 1913.	January 31, 1914.	06	1,853 10
W. L. Waples Company.	March 22, 1913.	January 31, 1914.	06	130 80
David M. Biggs & Co.	March 22, 1913.	January 31, 1914.	06	798 66
John Landis.	March 26, 1913.	January 31, 1914.	06	1,267 32

Warren Brothers Company.....	April 4, 1913.....	January 31, 1914.....	06	2,317 26
Arnor Concrete Construction Company.....	April 8, 1913.....	January 31, 1914.....	06	883 80
John Varnerin.....	April 9, 1913.....	January 31, 1914.....	06	18 00
Hervey F. Arrington, Inc.....	April 9, 1913.....	January 31, 1914.....	06	130 86
Thomas J. Hind, Inc.....	April 15, 1913.....	January 31, 1914.....	06	2,273 58
Connolly & Diamond.....	April 15, 1913.....	January 31, 1914.....	06	108 30
William J. Rafferty Company.....	April 16, 1913.....	January 31, 1914.....	06	95 46
Maggi & Smith.....	April 21, 1913.....	January 31, 1914.....	06	353 40
James Dolerty.....	April 21, 1913.....	January 31, 1914.....	06	35 92
Adams Pond Company.....	April 25, 1913.....	January 31, 1914.....	06	1,298 16
C. W. Dolloff & Co.....	May 1, 1913.....	January 31, 1914.....	06	91 44
Robert Eagar, Jr.....	May 6, 1913.....	January 31, 1914.....	06	604 32
Alfred Brenci.....	May 9, 1913.....	January 31, 1914.....	06	106 86
Michael D. Russo.....	May 14, 1913.....	January 31, 1914.....	06	567 12
Simpson Brothers Corporation.....	May 15, 1913.....	January 31, 1914.....	06	374 76
Hugh Nawn Contracting Company.....	May 23, 1913.....	January 31, 1914.....	06	24 48
W. J. Grosvenor & Co.....	June 3, 1913.....	January 31, 1914.....	06	777 24
Edgar R. Taylor.....	June 9, 1913.....	January 31, 1914.....	06	651 12
Frank P. Rossano.....	June 12, 1913.....	January 31, 1914.....	06	257 34
Charles R. Gow Company.....	June 14, 1913.....	January 31, 1914.....	06	109 98
Jeremiah J. McCarthy Company.....	June 27, 1913.....	January 31, 1914.....	06	76 44
John A. McCarthy.....	July 10, 1913.....	January 31, 1914.....	06	66 66
American Architectural Iron Works.....	August 15, 1913.....	January 31, 1914.....	06	Nothing.
Joseph Tolosa.....	September 2, 1913.....	January 31, 1914.....	06	Nothing.
Benjamin Fox, Inc.....	October 24, 1913.....	January 31, 1914.....	06	106 56

* These walks are guaranteed by a surety company bond for five years (5) years from date of completion, and were laid on various public streets where the contractor had agreements with the abutters. The price, 6 cents per square foot, is equivalent to the expense to the city for one half the cost of brick sidewalk.

Asphalt Pavement.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
1, 2 Union Park street, between Washington street and Harrison avenue, city proper. (Bermudez asphalt.)	Fred S. & A. D. Gore Corporation.	April 25, 1913.	Completed June 28, 1913.	(A) 2,360 square yards @ \$2 57 \$6,065 20 (B) 10 square yards @ 1 85 18 50 (C) 100 linear feet @ 0 19 19 00 (D) 87 linear feet @ 0 15 13 05 (E) 800 linear feet @ 0 15 120 00 (F) 20 square yards @ 2 25 45 00 (G) 10 square yards @ 95 9 50 (H) 10 square yards @ 50 5 00 (I) 23 square yards @ 2 25 51 75 (J) 5 square yards @ 0 95 4 75 (K) 5 square yards @ 0 50 2 50 (L) 12 square yards @ 3 75 45 00 (M) 20 square yards @ 0 50 10 00 (N) 10,100 square feet @ 0 15½ 1,565 50 (O) 50 square feet @ 0 15½ 7 75 (P) 1 cubic yard @ 3 25 3 25 (Q) 1 cubic yard @ 1 00 1 00	\$7,986 75 \$1,438 50 93 70 1 50 63 00 22 70 4 85 5 10 10 25 10 25 2 27 15 89 4 85 47 30 186 20 3 50 1 00 20 00
1, 2 Lovering place, between Washington street and Harrison avenue, city proper. (Trinidad asphalt.)	James Doherty.....	April 28, 1913.	Completed June 16, 1913.	(A) 525 square yards @ \$2 74 (C) 245 linear feet @ 0 26 (D) 10 linear feet @ 0 15 (E) 420 linear feet @ 0 15 (F) 10 square yards @ 2 27 (G) 5 square yards @ 0 97 (H) 10 square yards @ 0 51 (I) 5 square yards @ 2 05 (FF) 5 square yards @ 2 05 (KK) 7 square yards @ 2 27 (L) 7 square yards @ 2 27 (J) 5 square yards @ 0 97 (M) 110 square yards @ 0 43 (NO) 980 square feet @ 0 19 (P) 1 cubic yard @ 3 50 (Q) 1 cubic yard @ 1 00 (R) Removing trees,	\$1,898 59 \$1,955 90

1 Hayward place, between Wash- ton street and Harrison avenue, city proper. (bermudez asphalt.)	Boston Paving Company . . .	Aug. 9, 1913.	Completed Aug. 19, 1913.	(B) (G) (S) (T) (Q)	565 square yards @ \$2 05 20 square yards @ 1 15 65 cubic yards @ 8 25 2 cubic yards @ 10 00 1 cubic yard @ 1 25	\$1,158 25 23 00 536 25 20 00 1 25	\$1,709 00
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¹ Advertised and awarded to lowest bidder.
² Work done under chapter 393, Acts of 1906.

EXPLANATION OF LETTERS.

- (A) Furnishing and laying a 1½-inch wearing surface and a 1½-inch binder and concrete base, including preparing site, and guaranteeing same for a period of five (5) years after completion.
- (B) Furnishing and laying a 1½-inch wearing surface and a 1½-inch binder on existing concrete base, including preparing site and guaranteeing same for a period of five (5) years after completion.
- (C) Flagstones hauled and set.
- (D) Circular edgestone set.
- (E) Resetting edgestone.
- (F) Hauling and laying granite block paving with pitch joints and concrete base.
- (FF) Relaying granite block paving with pitch joints, including preparing site and concrete base.
- (G) Relaying granite block paving with gravel joints.
- (H) Relaying granite block paving with gravel joints.
- (I) Hauling and laying flagging crosswalks with pitch joints and concrete base.
- (J) Relaying flagging crosswalks with pitch joints.
- (K) Relaying flagging crosswalks with gravel joints, including preparing site and concrete base.
- (KK) Relaying flagging crosswalks with gravel joints, including preparing site and concrete base.
- (L) Furnishing and laying wood block pavement and concrete base.
- (M) Relaying brick sidewalks.
- (NO) Furnishing and laying artificial stone sidewalks and driveways and guaranteeing same for five (5) years from date of completion.
- (P) Rock excavation.
- (Q) Excavation for water boxes and hydrants.
- (R) Removing trees.
- (S) Furnishing and laying concrete base.
- (T) Extra binder.

Asphalt Pavements.—Repairs.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
1, 2 Repairing asphalt or bitulithic pavements.	Warren Brothers Company.	Jan. 30, 1913.	Completed Jan. 31, 1914.	\$39,800; wearing surface and bituminous binder or bitulithic pavement surface, \$1.37 per square yard; wearing surface repaired by surface heater method, 75 cents per square yard; extra bituminous binder, \$11 per cubic yard; concrete base, \$1.15 per square yard.	\$24,274 42

¹ Advertised and awarded to lowest bidder.
² Acme asphalt.

Bitulithic Pavement.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
¹ Norfolk street, between Washington street and N. Y., N. H. & H. R. R. Bridge, near Corbet street, Dorchester.	James Doherty.....	April 21, 1913.	Unfinished.	(A) 15,200 square yards @ \$2 38 \$36,176 00 (B) 1,130 square yards @ 3 10 3,503 00 (C) 50 square yards @ 1 50 75 00 (D) 140 square yards @ 0 93 130 20 (E) 50 square yards @ 0 45 22 50 (F) 300 square yards @ 1 88 564 00 (G) 50 square yards @ 1 45 72 50 (H) 10 square yards @ 0 50 5 00 (I) 5,170 linear feet @ 0 23 1,189 10 (J) 810 linear feet @ 0 15 121 50 (K) 1,630 linear feet @ 0 14 228 20 (L) 20 square yards @ 0 30 6 00 (M) 54,300 square feet @ 0 14 1/2 8,009 25 (N) 500 square feet @ 0 15 75 00 (O) 20 cubic yards @ 3 25 65 00 (P) 1 cubic yard @ 1 00 1 00 (Q) 8,250 cubic yards @ 0 83 6,847 50 (R) Removing trees, etc. (S) Building wall, 315 00	\$58,095 75

\$26,599 60

<p>Washington street, from Cambridge street across Market street, Brighton.</p>	<p>Warren Brothers Company,</p>	<p>May 26, 1913.</p>	<p>Completed Nov. 12, 1913.</p>	<p>(A) 6,100 square yards @ \$2.62 \$15,982.00 (B) 1,350 square yards @ 4.20 5,670.00 (C) 10 square yards @ 1.85 18.50 (D) 50 square yards @ 0.42 21.00 (E) 300 square yards @ 2.20 660.00 (F) 10 square yards @ 1.80 18.00 (G) 10 square yards @ 0.40 4.00 (H) 150 linear feet @ 0.25 37.50 (I) 130 linear feet @ 0.22 28.60 (J) 1,230 linear feet @ 0.20 246.00 (K) 10 square yards @ 0.25 2.50 (L) 10,500 square feet @ 0.18 1,900.80 (M) 100 square feet @ 0.18 18.00 (N) 1 cubic yard @ 1.15 1.15 (O) 1 cubic yard @ 1.75 1.75</p>	<p>\$24,584.80</p>
<p>Spring street, between Allen and Poplar streets, city proper.</p>	<p>Warren Brothers Company,</p>	<p>June 13, 1913.</p>	<p>Completed June 30, 1913.</p>	<p>(A) 400 square yards @ \$2.68 \$1,072.00 (B) 50 linear feet @ 0.35 17.50 (C) 17 linear feet @ 0.35 5.95 (D) 340 linear feet @ 0.30 102.00 (E) 230 square yards @ 0.25 57.50 (F) 1 cubic yard @ 1.25 1.25 (G) 1 cubic yard @ 5.00 5.00</p>	<p>\$1,261.20</p>
<p>Centre and South streets, between Green and Keyes streets, West Hoxbury.</p>	<p>Warren Brothers Company,</p>	<p>June 13, 1913.</p>	<p>Completed Nov. 25, 1913.</p>	<p>(A) 9,150 square yards @ \$2.63 \$24,064.50 (B) 1,720 square yards @ 4.18 7,189.60 (C) 60 square yards @ 1.85 111.00 (D) 60 square yards @ 0.40 24.00 (E) 280 square yards @ 2.15 602.00 (F) 60 square yards @ 1.75 105.00 (G) 20 square yards @ 0.35 7.00 (H) 60 linear feet @ 0.24 14.40 (I) 40 linear feet @ 0.22 8.80 (J) 4,400 linear feet @ 0.19 836.00 (K) 30 square yards @ 0.25 7.50 (L) 33,000 square feet @ 0.20 6,600.00 (M) 630 square feet @ 0.20 126.00 (N) 1 cubic yard @ 1.25 1.25 (O) 1 cubic yard @ 1.25 1.25</p>	<p>\$39,698.85</p>

\$23,012.90

\$1,321.61

\$38,284.89

Bitulithic Pavement.—*Concluded.*

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
1, 2 Harvard avenue, between Commonwealth avenue and Cambridge street, Brighton.	Coleman Brothers	Sept. 12, 1913.	Unfinished.	(A) 6,150 square yards @ \$2 50 \$15,375 00 (C) 120 square yards @ 1 50 180 00 (E) 280 square yards @ 0 50 140 00 (F) 180 square yards @ 2 00 360 00 (G) 10 square yards @ 1 50 15 00 (H) 20 square yards @ 1 00 20 00 (I) 140 linear feet @ 0 17 23 80 (J) 115 linear feet @ 0 17 19 55 (K) 2,650 linear feet @ 0 13 344 50 (M) 20,300 square feet @ 0 16 3,248 00 (N) 1,050 square feet @ 0 20 210 00 (O) 1 cubic yard @ 3 00 3 00 (P) 1 cubic yard @ 1 25 1 25 (Q) 3,100 cubic yards @ 0 60 1,860 00 (R) 1,160 square yards @ 3 60 4,176 00 (T) Removing trees, etc.	\$26,076 10

¹ Advertised and awarded to the lowest bidder.

² Work done under chapter 393, Acts of 1906.

EXPLANATION OF LETTERS.

- (A) Furnishing and laying bitulithic pavement and guaranteeing same for a period of five (5) years after completion.
- (B) Furnishing and laying granite block paving with pitch joints, including concrete base.
- (C) Granite block paving relaid with pitch joints on concrete base.
- (D) Granite block paving relaid with pitch joints.
- (E) Granite block paving relaid and laid with pitch joints, including concrete base.
- (F) Flagging crosswalks hauled and laid with gravel joints.
- (G) Flagging crosswalks relaid on concrete base with pitch joints.
- (H) Flagging crosswalks relaid with gravel joints.
- (I) Edgestones and corners hauled and set.
- (J) Circular edgestones set.
- (K) Edgestones reset.
- (L) Brick sidewalks relaid.
- (M) Furnishing and laying artificial stone sidewalks and guaranteeing same for a period of five (5) years after completion.
- (N) Furnishing and laying artificial stone driveways and guaranteeing same for a period of five (5) years after completion.
- (O) Rock excavation.
- (P) Excavation for water boxes and hydrants.
- (Q) Excavation other than rock.
- (R) Removing trees, etc.
- (S) Building wall.
- (T) Furnishing and laying wood block pavement and guaranteeing same for a period of five (5) years after completion.

Brick Block Pavement.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913
1, 2, 3 Hancock and Bowdoin streets, between Winter and Hancock streets, Dorchester.	Central Construction Company.	June 26, 1913.	Completed Sept. 12, 1913.	(A) 1,090 square yards @ \$2 30 (B) 450 linear feet @ 0 20 (C) 115 linear feet @ 0 20 (D) 12 square yards @ 2 00 (E) 17 square yards @ 0 70 (F) 25 square yards @ 0 80 (G) 20 square yards @ 1 25 (H) 5 square yards @ 1 50 (I) 8 square yards @ 0 70 (J) 3,870 square feet @ 0 25 (K) 140 cubic yards @ 5 50 (L) 200 square yards @ 1 00	\$2,507 00 90 00 23 00 24 00 11 90 20 00 25 00 7 50 5 60 967 50 770 00 200 00
					\$4,651 50

¹ Advertised and awarded to lowest bidder.

² Mack brick used.

³ Work done under Chapter 393, Acts of 1906.

EXPLANATION OF LETTERS.

- (A) Furnishing and laying brick block paving and concrete base, including preparing site, and guaranteeing same for a period of five (5) years after completion.
 (B) Circular edgestone set.
 (C) Resetting edgestone.
 (D) Hauling and laying granite block paving with grout joints and concrete base.
 (E) Relaying granite block paving with gravel joints.
 (F) Hauling and laying granite block paving with gravel joints.
 (G) Hauling and laying flagging crosswalks with grout joints and concrete base.
 (H) Hauling and laying flagging crosswalks with gravel joints.
 (I) Relaying flagging crosswalks with gravel joints.
 (J) Furnishing and laying artificial stone sidewalks and driveways and guaranteeing same for five (5) years from date of completion.
 (K) Furnishing and laying concrete base.
 (L) Furnishing, placing and seeding loam spaces.

Wood Block Pavement.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
1 Marvin, Vernon and Ruggles streets, between Washington street and Shawmut avenue, Roxbury.	Boston Paving Company . . .	July 1, 1913.	Completed Oct. 22, 1913.	(A) 2,660 square yards @ \$3 69 \$9,815 40 (B) 25 square yards @ 2 00 50 00 (C) 59 square yards @ 50 47 50 (D) 35 square yards @ 2 50 87 50 (E) 30 square yards @ 2 00 60 00 (F) 75 linear feet @ 75 18 75 (G) 25 linear feet @ 0 19 4 75 (H) 1,760 linear feet @ 0 15 264 00 (I) 30 square yards @ 0 30 9 00 (J) 10,000 square feet @ 0 18 1,800 00 (K) 70 square feet @ 0 18 12 60 (L) 1 cubic yard @ 3 50 3 50 (M) 1 cubic yard @ 1 25 1 25	\$12,439 88
1 Warren avenue, between Berkeley street and Columbus square, city proper.	Boston Paving Company . . .	July 1, 1913.	Completed Dec. 13, 1913.	(A) 12,350 square yards @ \$3 69 \$45,571 50 (B) 75 square yards @ 1 85 138 75 (C) 50 square yards @ 0 43 21 50 (D) 60 square yards @ 1 85 111 00 (E) 50 square yards @ 0 43 21 50 (F) 10 square yards @ 0 43 4 30 (G) 100 linear feet @ 0 23 23 00 (H) 175 linear feet @ 0 15 26 25 (I) 3,480 linear feet @ 0 13 452 40 (J) 370 square yards @ 0 50 185 00 (K) 4,520 square yards @ 0 30 1,356 00 (L) 1 cubic yard @ 3 50 3 50 (M) 1 cubic yard @ 1 25 1 25	\$47,986 95
					\$47,977 39

1, 2 Pleasant street, between Eliot and Washington streets, city proper.	Coleman Brothers	July 11, 1913.	Unfinished.	(A) 6,320 square yards @ \$3 70 \$23,384 00 (B) 290 square yards @ 3 00 870 00 (C) 30 square yards @ 2 00 60 00 (D) 140 square yards @ 1 00 140 00 (E) 1,100 square yards @ 3 65 4,015 00 (F) 160 square yards @ 0 50 80 00 (G) 225 square yards @ 2 00 450 00 (H) 10 square yards @ 1 00 10 00 (I) 1,200 linear feet @ 0 20 240 00 (J) 460 linear feet @ 0 20 92 00 (K) 1,280 linear feet @ 0 13 166 40 (L) 80 square yards @ 0 30 24 00 (M) 23,710 square feet @ 0 16 3,793 60 (N) 230 square feet @ 0 23 52 90 (O) 1 cubic yard @ 4 00 4 00 (P) 1 cubic yard @ 1 00 1 00 (R) 102 linear feet @ 0 20 20 40	\$33,403 30	\$31,554 80
1, 2 Dorchester avenue, from Ralston street about 140 feet southerly, Dorchester.	Coleman Brothers	Aug. 9, 1913.	Completed, Sept. 10, 1913.	(A) 440 square yards @ \$3 90 \$1,716 00 (C) 20 square yards @ 2 00 40 00 (E) 140 square yards @ 0 60 84 00 (F) 5 square yards @ 2 00 10 00 (G) 15 square yards @ 1 80 27 00 (H) 5 square yards @ 1 00 5 00 (I) 10 linear feet @ 0 25 2 50 (K) 320 linear feet @ 0 16 51 20 (L) 320 square yards @ 0 35 112 00 (P) 1 cubic yard @ 2 00 2 00	\$2,097 70	\$1,822 48
1, 2 Church street, between Boylston and Providence streets, city proper.	Coleman Brothers	Aug. 9, 1913.	Completed, Aug. 11, 1913.	(A) 440 square yards @ \$3 90 \$1,716 00 (E) 5 square yards @ 0 35 1 75 (I) 10 linear feet @ 0 20 2 00 (J) 9 linear feet @ 1 80 1 80 (K) 50 linear feet @ 0 15 7 50 (M) 1,640 square feet @ 0 17 278 80 (O) 1 cubic yard @ 3 00 3 00 (P) 1 cubic yard @ 2 00 2 00	\$2,012 85	\$1,990 38

Wood Block Pavement.—Concluded.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
1. Exchange street, from State street about 174 feet northerly, city proper.	Central Construction Company.	Nov. 10, 1913.	Completed Dec. 3, 1913.	204 square yards @ \$4.98 10 square yards @ 2.45 10 square yards @ 1.43 5 square yards @ 0.90 2 square yards @ 2.80 4 square yards @ 1.75 2 square yards @ 2.35 2 square yards @ 1.35 10 linear feet @ 0.40 64 linear feet @ 0.30 20 square yards @ 0.43 1 cubic yard @ 1.00	\$1,458.24 24.50 14.90 4.50 5.60 7.00 4.70 2.70 4.00 19.20 8.60 1.00
2. Beacon street, between Massachusetts avenue and Raleigh street, city proper.	Central Construction Company.	Dec. 3, 1913.	Completed Jan. 21, 1914.	500 square yards @ \$3.27 300 square yards @ 0.98 10 cubic yards @ 6.90	\$1,554.94 \$1,635.00 294.00 69.00

1 Advertisd and awarded to the lowest bidder. 2 Work done under chapter 393, Acts of 1906. 3 Contract extended to Dock square.

EXPLANATION OF LETTERS.

- (A) Furnishing and laying wood block pavement, including concrete base, and guaranteeing same for a period of five (5) years after completion.
- (B) Furnishing and laying wood block pavement and guaranteeing same for a period of five (5) years after completion.
- (C) Granite block paving relaid with pitch joints.
- (D) Granite block paving relaid with gravel joints.
- (E) Granite block paving relaid with gravel joints.
- (F) Flagging crosswalks hauled and laid, including concrete base, with pitch joints.
- (G) Flagging crosswalks relaid on concrete base with pitch joints.
- (H) Flagging crosswalks relaid with gravel joints.
- (I) Edgestones and corners hauled and set.
- (J) Circular edgestones set.
- (K) Edgestones reset.
- (L) Brick sidewalks relaid.
- (M) Furnishing and laying artificial stone sidewalks and guaranteeing same for a period of five (5) years after completion.
- (N) Furnishing and laying artificial stone driveways and guaranteeing same for a period of five (5) years after completion.
- (O) Rock excavation.
- (P) Excavation for water boxes and hydrants.
- (Q) Granite block paving furnished and laid with pitch joints, including concrete base.
- (R) Steel angles set.
- (S) Flagging crosswalks hauled and laid, including pitch joints.
- (T) Brick sidewalks laid, including preparing site.
- (U) Flagging crosswalks relaid with pitch joints.
- (V) Relaying wood block pavement.
- (W) Furnishing and laying concrete base.
- (X) Furnishing and laying wood block pavement.

Street Construction under Chapter 393 of the Acts of 1906.
Macadam Roadways.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not Including Materials Furnished by City.	Amount Expended in 1913.
1, 2 Clement avenue, between Stratford and Park streets, Dorchester.	Thomas F. Minton.....	April 28, 1913.	Completed July 7, 1913.....	\$2,396 90	\$2,478 35
1, 2 Lithgow street, between Washington street and Talbot avenue, Dorchester.	Jeremiah J. McCarthy Company,	May 1, 1913.	Completed June 18, 1913.....	2,046 90	1,955 90
1, 2 Don street, between Woodrow avenue and Callender street, Dorchester.	Boston Paving Company.....	May 1, 1913.	Completed Sept. 6, 1913.....	1,839 50	1,827 72
1, 2 Playstead road, between Savin Hill avenue and Springdale street, Dorchester.	William J. Rafferty Company.....	May 2, 1913.	Completed July 14, 1913.....	1,951 86	2,603 36
1, 2 Dawes street, between East Cottage and Willis streets, Dorchester.	Jeremiah J. McCarthy Company,	May 6, 1913.	Completed July 5, 1913.....	1,688 25	1,725 96
1, 2 Quincefield street, between Humphreys and Wendover streets, Dorchester.	James Doherty.....	May 6, 1913.	Completed July 16, 1913.....	1,082 13	1,099 08
1, 2 Byrner street, between South Huntington avenue and Day street, Roxbury.	J. C. Coleman & Sons Company ..	May 6, 1913.	Completed Sept. 27, 1913.....	4,298 50	4,395 43
1, 2 Tyndale street, between Walworth and Guernsey streets, West Roxbury.	Hugh J. McGuire.....	May 12, 1913.	Completed Nov. 15, 1913.....	10,703 30	10,720 73
1, 2 Walworth street, between Bolgrade avenue and Brook street, West Roxbury.	Hugh J. McGuire.....	May 12, 1913.	Completed Dec. 5, 1913.....	6,444 60	6,336 75
1, 2 Vesta road, between Blue Hill avenue and Harvard street, Dorchester.	James Doherty.....	May 16, 1913.	Completed Nov. 11, 1913.....	2,777 06	2,836 95
1, 3 Hansborough street, between Blue Hill avenue and Harvard street, Dorchester.	James Doherty.....	May 16, 1913.	Completed July 24, 1913.....	4,123 15	4,140 63

¹ Advertised and awarded to lowest bidder.

² Tar macadam.

³ Asphalt macadam.

Street Construction under Chapter 393 of the Acts of 1906.—Continued.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not Including Materials Furnished by City.	Amount Expended in 1913.
1, 2 Mountfort street, between Audubon road and St. Mary's street, city proper.	James Doherty.....	May 17, 1913.	Completed Sept. 22, 1913....	\$1,980 70	\$2,722 55
1, 3 Greenock street, between Blue Hill avenue and Harvard street, Dorchester.	James Doherty.....	May 17, 1913.	Completed Aug. 4, 1913.....	3,707 30	3,753 26
1, 3 Wildfield street, between Wreghland and Talbot avenues, Dorchester.	William J. Raftery Company.....	May 23, 1913.	Completed Aug. 28, 1913....	4,636 94	3,816 76
1, 2 Priesing street, between Mozart street and Chestnut avenue, Roxbury.	John Kelly Company.....	May 26, 1913.	Completed July 31, 1913....	2,254 05	2,293 98
1, 3, 4 Calumet street, between Parker Hill avenue and Hillside street, Roxbury.	James Doherty.....	June 3, 1913.	Completed Nov. 8, 1913.....	8,432 95	6,471 69
1, 3 Cliffdale street, between Kittredge and Norfolk streets, West Roxbury.	Thomas F. Minton.....	June 9, 1913.	Completed Dec. 31, 1913....	7,147 45	7,178 51
1, 3, 4 Orient avenue, from Walley street to beyond Tower street, East Boston.	James Doherty.....	June 13, 1913.	Completed Nov. 6, 1913....	20,505 20	8,297 49
1, 2 Danmons street, between Paris and Chelsea streets, East Boston.	Jeremiah J. McCarthy Company.	July 10, 1913.	Completed Oct. 28, 1913....	1,739 25	1,837 35
1, 2 Byans road, between Corey road and Brookline line, Brighton.	John J. Lane.....	July 18, 1913.	Completed Aug. 25, 1913....	810 47	856 95
1, 2 Naples road, between Commonwealth avenue and Brookline line, Brighton.	John J. Lane.....	July 18, 1913.	Completed Aug. 6, 1913....	919 42	924 58
1, 2, 5 Evedyn street, between Blue Hill avenue and Norfolk street, Dorchester.	Jeremiah J. McCarthy Company.	July 28, 1913.	Completed Oct. 29, 1913....	1,858 00	1,880 99
1, 3, 5 Woolson street, between Blue Hill avenue and Norfolk street, Dorchester.	Jeremiah J. McCarthy Company.	July 28, 1913.	Completed Oct. 29, 1913....	2,274 00	2,108 00

1, 2, 4	Rough street, between Donechester avenue and Pleasant street, Dorchester.	James Doherty.....	Aug. 4, 1913.	Unfinished.....	1,820 86	1,333 23
1, 2, 4	Lawnside terrace, between Lamartine and Amory streets, West Roxbury.	James Doherty.....	Aug. 15, 1913.	Unfinished.....	1,296 59	1,084 75
1, 2, 4	Mitchell street, from Old Colony avenue about 240 feet northerly, South Boston.	William J. Rafferty Company.....	Aug. 15, 1913.	Unfinished.....	669 66	697 18
1, 2, 4	Crossman street, between Norfolk and West Selden streets, Dorchester.	James Doherty.....	Aug. 25, 1913.	Unfinished.....	3,331 80	614 12
1, 2, 3	Porter street, between Bismarck and Amory streets, West Roxbury.	James Doherty.....	Aug. 25, 1913.	Not started.....	2,001 15	Nothing.
1, 2	Potot street, between Mt. Ida road and Percival street, Dorchester.	James Doherty.....	Sept. 9, 1913.	Unfinished.....	1,785 65	Nothing.
1, 2	Appian way, between Franklin and Raymond streets, Brighton.	John J. Lane.....	Sept. 9, 1913.	Completed Nov. 15, 1913....	1,713 66	\$1,714 89
1, 2, 4	Sheffield road, between Walter and Selwyn streets, West Roxbury.	William J. Rafferty Company.....	Sept. 9, 1913.	Completed Nov. 28, 1913....	4,376 36	3,729 15
1, 3, 4	Spring street, between Webster street and Charles River, West Roxbury.	West Roxbury Trap Rook Company.	Sept. 29, 1913.	Unfinished.....	14,336 83	2,346 50
1, 2	Gayland street, between West Cottage and Judson streets, Roxbury.	James Doherty.....	Oct. 11, 1913.	Unfinished.....	3,249 15	Nothing.
1, 3	Wellington Hill street, between Blue Hill avenue and Morton street, Dorchester.	William J. Barry.....	Oct. 21, 1913.	Unfinished.....	22,227 50	Nothing.
1, 2, 4	Armington and Islington streets, between Webster street and Brighton avenue, Brighton.	A. J. & G. H. McMurtry.....	Oct. 24 1913.	Unfinished.....	3,384 10	\$1,980 46
1, 3	Clermont street, between Bailey and Fuller streets, Dorchester.	James Doherty.....	Oct. 27, 1913.	Unfinished.....	1,483 70	Nothing.

¹ Advertised and awarded to lowest bidder.

² Tar macadam.

³ Asphalt macadam.

⁴ Final payment not made.

⁵ Streets laid out prior to 1891 never constructed.

Street Construction under Chapter 393 of the Acts of 1906.—*Concluded.*

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not Including Materials Furnished by City.	Amount Expended in 1913.
1, 3 Audubon road, between Ivy and Mountfort streets, city proper.	Boston Paving Company.....	Oct. 29, 1913.	Completed Dec. 20, 1913....	\$2,588 25	\$2,522 59
1, 2, 4 Montebello road, between Washington street and Brookside avenue; Martin street, from Montebello road about 112 feet southwesterly; Haverford street, from Montebello road about 100 feet southwesterly.	James Doherty.....	Oct. 31, 1913.	Unfinished.....	3,185 00 513 00 455 00	700 40
1, 3 Ballou avenue, between Woodrow avenue and Willowood street, Dorchester.	Jeremiah J. McCarthy Company.	Nov. 10, 1913.	Not started.....	12,424 35	Nothing.
1, 2 Normandy street, between Creston and Intervale streets, Dorchester.	Hugh J. McGuire.....	Nov. 10, 1913.	Completed Dec. 23, 1913....	1,224 35	\$1,301 22
1, 2 Vassar street, between Washington and Kilton streets, Dorchester.	William J. Rafferty Company....	Nov. 10, 1913.	Not started.....	4,225 45	Nothing.
1, 2 Puritan avenue, between Richfield and an unnamed street, Dorchester.	William J. Rafferty Company.....	Nov. 11, 1913.	Not started.....	3,738 83	Nothing.
1, 2 Marlowe street, between Vinson and Park streets, Dorchester.	Daniel E. Lynch.....	Nov. 15, 1913.	Not started.....	1,657 95	Nothing.
1, 3 Colonial avenue, between Talbot and New England avenues, Dorchester.	James Doherty.....	Nov. 19, 1913.	Not started.....	4,484 25	Nothing.
1, 2 Cottage and Jubee streets, between Grove and Porter streets, East Boston.	James Doherty.....	Nov. 19, 1913.	Not started.....	7,432 10	Nothing.
1, 2 St. Lukes road, between Brighton and Commonwealth avenues, Brighton.	William J. Rafferty Company....	Nov. 19, 1913.	Not started.....	3,232 92	Nothing.
1, 3 Binney street, between Longwood avenue and Francis street, Roxbury.	J. C. Coleman & Sons Company...	Nov. 28, 1913.	Not started.....	4,411 70	Nothing.
1, 2 Myrick street, between Easton street and Coolidge road, Brighton.	A. J. & G. H. McMurtry.....	Nov. 29, 1913.	Not started.....	1,063 37	Nothing.

1, 3 REXHAME street, between BELGRADE and COLBERG avenues, WEST ROXBURY.	WEST ROXBURY TRAP ROCK COMPANY.	NOV. 29, 1913.	NOT STARTED.....	3,291 00	Nothing.
1, 3 WILMORE street, between BLUE HILL AVENUE and NORFOLK street, DORCHESTER.	JAMES DOHERTY.....	DEC. 3, 1913.	NOT STARTED.....	2,213 20	Nothing.

¹ Advertised and awarded to lowest bidder.

² Tar macadam.

³ Asphalt macadam.

⁴ Final payment not made.

Paving and Regulating.

CONTRACT.	AWARDED TO	DATED.	PROGRESS OF WORK.	ESTIMATED COST AS PER ESTIMATED QUANTITIES, NOT INCLUDING MATERIALS FURNISHED BY CITY.	AMOUNT EXPENDED IN 1913.
² WEST FIRST street, between A street and railroad crossing, SOUTH BOSTON.	JOHN E. QUINN.....	MAY 7, 1913.	COMPLETED MAY 29, 1913.....	\$5,193 50	\$5,475 85
¹ SHEPHER street, from CONGRESS street, about 650 feet northeasterly, SOUTH BOSTON.	JOHN E. QUINN.....	JUNE 3, 1913.	COMPLETED OCT. 9, 1913.....	9,037 00	9,351 93
¹ PROVIDENCE street, from 70 feet east of Church street to Berkeley street, city proper.	COLEMAN BROTHERS.....	JUNE 30, 1913.	COMPLETED AUG. 21, 1913.....	15,772 50	16,413 79
¹ WASHINGTON street, at and near HYDE PARK AVENUE and TOWER street, WEST ROXBURY.	JAMES DOHERTY.....	AUG. 4, 1913.	COMPLETED AUG. 30, 1913.....	3,587 74	3,743 78
¹ FALTON street, between RICHMOND and LEWIS streets, city proper.	BOSTON PAVING COMPANY.....	SEPT. 30, 1913.	COMPLETED NOV. 5, 1913.....	3,586 90	3,989 23

¹ Advertised and awarded to the lowest bidder.

² Advertised and awarded to the second lowest bidder.

Edgestones, Gutters, Crosswalks and Artificial Stone Sidewalks.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
1 Woolson street, between Blue Hill avenue and Norfolk street, Dorchester.	Warren Brothers Company.....	May 9, 1913.	Completed Sept. 22, 1913....	\$3,632 00	\$3,892 70
1 Minot street, between Neponset avenue and Charlemont street, Dorchester.	D. M. Biggs & Co.....	May 14, 1913.	Completed July 10, 1913....	5,640 05	5,537 89
1 Evelyn street, between Blue Hill avenue and Norfolk street, Dorchester.	Central Construction Company....	May 15, 1913.	Completed Aug. 7, 1913....	2,162 75	2,217 46
1 Welles avenue, northerly side from Talbot avenue to opposite Harley street, Dorchester.	Robert Eager, Jr.....	May 26, 1913.	Completed July 11, 1913....	623 20	635 12
1 Howard street, between Gerard and Magazine streets, Roxbury.	Boston Paving Company.....	June 3, 1913.	Completed Sept. 26, 1913....	831 50	982 08
1 Armandine street, between Milton avenue and Washington street, Dorchester.	Jeremiah J. McCarthy Company,	June 3, 1913.	Completed Aug. 25, 1913....	4,388 55	4,978 28
1 Dennis street, between Dudley and Woodville streets, Roxbury.	James Doherty.....	June 9, 1913.	Completed July 16, 1913....	2,352 40	2,311 26
1 Dudley street, between Washington street and Harrison avenue, Roxbury.	Robert Eager, Jr.....	June 9, 1913.	Completed Aug. 13, 1913....	941 00	1,295 10
1 Nightingale street, northerly side between Wales street and Talbot avenue, Dorchester.	Warren Brothers Company.....	June 9, 1913.	Completed Aug. 27, 1913....	669 05	666 81
1 Withington street, between Norfolk and Torrey streets, Dorchester.	W. A. Murtfeldt Company.....	June 27, 1913.	Completed Nov. 21, 1913....	1,618 70	1,574 11
1 Pope's Hill street, between Neponset avenue and Freeport street, Dorchester.	Jeremiah J. McCarthy Company,	June 27, 1913.	Completed Nov. 28, 1913....	1,250 35	1,203 43
1 Dorchester avenue, easterly side, between Bel- fort and St. William streets; Hollander street, from Humboldt avenue, about 200 feet west- erly, and Rosedale street at Nos. 7, 9, 10 and 12, Dorchester.	William J. Rafferty Company.....	June 27, 1913.	Completed Aug. 26, 1913....	942 60	988 75

Walnut street, between Franklin and Ericson streets, Dorchester.	D. M. Biggs & Co.....	July 2, 1913.	Completed Sept. 22, 1913.....	4,346 19	4,505 35
Massachusetts avenue, westerly side, between N. E. R. Bridge and Columbia road, Dorchester.	James Doherty.....	July 10, 1913.	Completed Aug. 19, 1913.....	4,643 50	6,155 12
Alban street, between Welles avenue and Ashmont street, Dorchester.	James Doherty.....	July 10, 1913.	Completed Aug. 2, 1913.....	2,362 78	2,514 76
Park street, westerly side, between Clement and Anawan avenues, West Roxbury.	W. A. Martfeldt Company.....	July 12, 1913.	Completed Nov. 21, 1913.....	1,488 45	2,327 50
Tremont street, westerly side, from St. Alphonsus street, about 350 feet easterly, and St. Alphonsus street, easterly side, between Tremont and Smith streets, Roxbury.	John McCourt & Co.....	July 18, 1913.	Completed Aug. 9, 1913.....	1,079 45	1,114 84
Minor street, between Charlemont and Adams streets, Dorchester.	David M. Biggs & Co.....	July 28, 1913.	Completed Sept. 23, 1913.....	2,668 40	2,839 53
Cohasset street, between Corinth and Albano streets, West Roxbury.	Martino De Matteo.....	July 28, 1913.	Completed Aug. 28, 1913.....	1,711 30	1,644 59
Elmo street, between Blue Hill avenue and Eric street, Dorchester.	James Doherty.....	July 28, 1913.	Completed Oct. 21, 1913.....	1,506 98	1,626 27
Germania street, between Boylston and Bismarck streets, West Roxbury.	John McCourt & Co.....	July 28, 1913.	Completed Nov. 15, 1913.....	2,109 70	2,209 85
Bernard street, between Harvard and Kerwin streets, Dorchester.	Thomas J. Hind Company.....	Aug. 4, 1913.	Completed Sept. 6, 1913.....	2,292 35	2,287 33
Conway street, between South and Fairview streets, and Fairview street, southerly side, from Conway street about 350 feet easterly, West Roxbury.	Martino De Matteo.....	Aug. 4, 1913.	Completed Nov. 1, 1913.....	2,778 01	2,769 39
Franklin street, easterly side, between Lincoln and Easton streets, and Alcott street, southerly side, from Franklin street about 100 feet easterly.	John J. Lane.....	Aug. 11, 1913.	Completed Sept. 10, 1913.....	997 90	1,065 75
Westville street, between Geneva avenue and Draper street, Dorchester.	William J. Rafferty Company.....	Aug. 15, 1913.	Completed Oct. 4, 1913.....	1,764 47	2,784 47

¹ Advertised and awarded to the lowest bidder.

Edgestones, Gutters, Crosswalks and Artificial Stone Sidewalks.—Concluded.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
¹ Washington street, between State and Boylston streets, city proper.	Warren Brothers Company.....	Sept. 8, 1913.	Completed Oct. 2, 1913.....	\$786 00	\$788 80
² Tremont street, easterly side, between Winter street and Hamilton place, city proper.	Warren Brothers Company.....	Sept. 10, 1913.	Completed Oct. 24, 1913.....	496 00	996 73
¹ Blue Hill avenue, easterly side, from Washington street about 192 feet southerly, Dorchester.	Robert Eager, Jr.....	Sept. 12, 1913.	Completed Oct. 27, 1913....	505 70	518 90
¹ Inwood street, between Olney and Norton streets, Dorchester.	Connolly and Diamond.....	Oct. 9, 1913.	Completed Oct. 24, 1913.....	337 79	352 65
¹ Greenwood street, between Elmo and Erie streets, Dorchester.	James Doherty.....	Oct. 11, 1913.	Completed Oct. 27, 1913.....	394 70	399 39

¹ Advertised and awarded to lowest bidder.

² Not advertised, only bid.

Miscellaneous.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
¹ Repairing artificial stone sidewalks on any street within the city limits.	Jeremiah J. Sullivan.....	Feb. 4, 1913.	Completed Jan. 31, 1914.	Less than 20 square feet, \$2.75 lump sum; 20 to 100 square feet, \$0.18 per square foot; 100 to 300 square feet, \$0.17 per square foot; 300 to 500 square feet, \$0.12 per square foot; 500 to 700 square feet, \$0.11 per square foot; 700 and less than 900 square feet, \$0.11 per square foot; 900 square feet and over, \$0.11 per square foot.	\$4,229 92

1 Teaming edgestones and flagging from the South End Yard of the Highway Division, 636 Albany street, to any street in the city.	S. & R. J. Lombard.....	Feb. 8, 1913.	Completed Jan. 31, 1914.	Streets in Hyde Park, \$0.10 per linear foot; all other districts, \$0.08 per linear foot.	1,161 21
2 Leasing Chestnut Hill avenue crusher for the purpose of quarrying stone.	Rowe Contracting Company,	Feb. 8, 1913.	Completed Jan. 31, 1914.	\$2,500.....	1,362 45
3 Rebuilding face of wharf, Paying Service Yard, Albany street.	Lawler Brothers.....	March 10, 1913.	Completed March 26, 1913.	\$950.....	950 00
3 Extending sidewalk on Condon street, East Boston.	George T. Rendle.....	April 5, 1913.	Completed April 22, 1913.	\$138.....	138 00
1 Rebuilding cap of bulkhead, L street, South Boston.	W. H. Ellis.....	May 1, 1913.	Completed May 16, 1913.	\$595.....	595 00
1 Building wooden steps at Hancock street, Paying Service, Dorchester.	Thomas H. Hannon.....	May 20, 1913.	Completed June 23, 1913.	\$971.....	971 00
4 Completing drainage system, Rutherford avenue stable, Sanitary Service, Charlestown.	James J. Brock.....	May 22, 1913.	Completed July 25, 1913.	\$237.70.....	237 70
1 Excavating and grading Walnut avenue, easterly side, from Fifey road to beyond Montebello road, West Roxbury.	John McCourt & Co.....	June 13, 1913.	Completed Aug. 1, 1913.	\$782.50.....	696 25
3 Repairing tar concrete sidewalk, Hobbrook street, Jamaica Plain.	H. F. Armington Company..	July 7, 1913.	Completed July 25, 1913.	\$240.....	329 95
3 Painting buildings and whitewashing stable, North End Paving Service.	Thomas F. Sullivan.....	Aug. 20, 1913.	Completed Aug. 21, 1913.	\$370.....	390 00
1 Building concrete wall, Summer street, northerly side, between B street and viaduct, South Boston.	McCarthy & Walsh.....	Nov. 5, 1913.	Completed Dec. 19, 1913.	\$7,326.....	7,294 45
3 Resurfacing Rose street, between Harrison avenue and Albany st.	Independent Coal Tar Co....	Nov. 11, 1913.	Completed Nov. 21, 1913.	\$660.....	652 20
5 Furnishing and installing heating system, Brighton Yard Paving Service, Chestnut Hill avenue.	Charles B. Collar.....	Nov. 14, 1913.	Completed Dec. 9, 1913.	\$195.50.....	208 50

1 Advertised and awarded to lowest bidder.
 4 Invitation bid, awarded lowest bidder.

2 Paid to city.
 5 Invitation bid, awarded highest bidder.

3 Only bid not advertised.

**HIGHWAY DIVISION.—SANITARY SERVICE.
Collecting and Removing House Offal.**

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended 1912 Contract.	Amount Expended 1913 Contract.
1 East Boston district.....	John T. Lane.....	Feb. 3, 1913..	Jan. 31, 1914.....	\$7,500 00	\$452 82	\$6,768 50
1 Brighton district.....	Northern Construction Company,	Feb. 3, 1913....	Jan. 31, 1914.....	8,400 00	533 50	7,630 00
1, 2 West Roxbury district.....	Municipal Supplementary Service Company.	Feb. 3, 1913....	Jan. 31, 1914.....	2,880 00	269 50	737 00
1 West Roxbury district.....	P. J. Reid Corporation.....	June 13, 1913..	Jan. 31, 1914.....	3,750 00	.....	3,801 75

1 Advertised and awarded to lowest bidder. 2 Contract canceled, readvertised and awarded to P. J. Reid Corporation June 13, 1913.

Collecting and Removing Ashes and Offal.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended 1912 Contract.	Amount Expended 1913 Contract.
1 Dorchester district.....	John J. Loomie.....	Feb. 3, 1913....	Jan. 31, 1914.....	\$73,680 00	\$4,463 80	\$67,018 50

1 Advertised and awarded to the lowest bidder.

Collecting and Removing Ashes.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1912.	Amount Expended in 1913.
1 East Boston district.....	Agostino De Stefano.....	Feb. 3, 1913....	Jan. 31, 1914.....	\$10,800 00	\$1,054 16	\$9,890 00
1 Brighton district.....	Joseph McGreevey.....	Feb. 3, 1913....	Jan. 31, 1914.....	10,740 00	1,089 00	9,786 40
1 West Roxbury district.....	John J. Moore.....	Feb. 3, 1913....	Jan. 31, 1914.....	7,080 00	734 00	7,065 25
1 Hyde Park district.....	M. McGinnis.....	Feb. 3, 1913....	Jan. 31, 1914.....	4,788 00	385 00	4,349 10

1. Advertised and awarded to lowest bidder.

Miscellaneous.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
2 Removing manure from the various yards and stables.	Joseph A. Kelley.....	Jan. 16, 1913.	Completed Jan. 31, 1914.....	\$81 00	\$1,200 88
4 Galvanized sheet metal cover plates for I beams at the Fort Hill Wharf and Albany and South Streets Receiving Stations.	H. P. Converse & Co.....	Feb. 17, 1913.	Completed May 8, 1913.....	930 00	930 00
6 Taking down and removing temporary runway and platform, Hecht's Wharf.	Lawler Bros.....	June 14, 1913.	Completed May 15, 1913.....	356 00	358 37
1, 6 Furnishing odor condenser at Spectacle Island....	6 Spray Engineering Company.....	July 28, 1913.	.....	6 2,800 00	

1 Not advertised, only bid.

4 Invitation bids, awarded to lowest bidder.

2 Advertised and awarded to highest bidder.

5 Paid to city.

3 Per horse per year paid to city.

6 Paid by Boston Development and Sanitary Company.

Contracts in Force Made in Previous Years.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
Disposal of refuse for ten years.....	Boston Development and Sanitary Company.	Feb. 1, 1912.	Unfinished.....	\$1,432,000 00	\$112,652 47

HIGHWAY DIVISION.— STREET CLEANING AND OILING SERVICE.
Furnishing Carts for Watering and Oiling Streets.

DISTRICT.	Awarded to	Dated.	Progress of Work.	Price per Cart per Day.	Amount Expended in 1913.
1 No. 2, East Boston and Breed's Island,	Agostino DeStefano.....	March 19, 1913.	Completed Dec. 1, 1913.....	Two-horse. \$5 20	\$3,906 50
1 No. 3, Charlestown.....	J. P. O'Riorden.....	March 19, 1913.	Completed Dec. 1, 1913.....	5 35	4,728 75
1 No. 5, West Roxbury.....	M. McGinnis & Co.....	March 19, 1913.	Completed Dec. 1, 1913.....	5 49	4,946 89
1 No. 6 and 9, Dorchester and Ashmont,	Patrick J. Lyons.....	March 19, 1913.	Completed Dec. 1, 1913.....	5 25	12,136 48
1 No. 7, Roxbury South and Jamaica Plain.	Joseph McGreevey.....	March 19, 1913.	Completed Dec. 1, 1913.....	5 38	9,495 71
1 No. 8, South End and Roxbury North,	Joseph Sprissler.....	March 19, 1913.	Completed Dec. 1, 1913.....	6 00	14,729 32

¹ Advertised and awarded to lowest bidder.

Miscellaneous.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
² Lease of land and buildings, 245-249 Rutherford avenue, Charlestown.	Timothy F. Callahan.....	Jan. 31, 1913.	Completed Jan. 31, 1914.....	* 600 00	
Lease of building, 47 Winchester street.....	Eleanor W. Daggett.....	Feb. 1, 1913.	Completed Jan. 31, 1914.....	* 600 00	
¹ Repairing roof of stable, North Grove street.....	William Martin.....	June 2, 1913.	July 14, 1913.....	\$100 00	\$100 00
¹ Painting stable, Highland street yard.....	John J. Gately.....	Oct. 9, 1913.	Dec. 8, 1913.....	\$5 00	\$5 00

* Per year.

¹ Not advertised, only bid.

² Paid to city.

Removal of Snow and Ice.

District.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
¹ Snow District No. 1.....	J. C. Coleman & Sons Company..	Nov. 20, 1913.	Expires May 1, 1914.....	\$0 43 per cubic yard....	\$481 60
¹ Snow District No. 2.....	Joseph McGreevey.....	Nov. 20, 1913.	Expires May 1, 1914.....	0 44 per cubic yard....	Nothing.
¹ Snow District No. 3.....	Charles J. Jacobs Company.....	Nov. 20, 1913.	Expires May 1, 1914.....	0 47 per cubic yard....	\$772 68
¹ Snow District No. 4.....	Coleman Brothers.....	Nov. 21, 1913.	Expires May 1, 1914.....	0 42 per cubic yard....	1,512 18
¹ Snow District No. 5.....	Coleman Brothers.....	Nov. 21, 1913.	Expires May 1, 1914.....	0 49 per cubic yard....	Nothing.
¹ Snow District No. 6.....	Joseph M. Kiley.....	Nov. 21, 1913.	Expires May 1, 1914.....	0 50 per cubic yard....	Nothing.

¹ Advertised and awarded to the lowest bidder.

**SEWER AND WATER DIVISION.—SEWER SERVICE.
Cleaning Catch-basins.**

DIVISION.	Awarded to	Dated.	Progress of Work.	Price per Basin.	Amount Expended in 1913.
No. 1, North of Dover and Berkeley streets to the water front and East Boston and Charlestown.	John W. Collins.....	Feb. 1, 1913.	Jan. 31, 1914.....	North of Dover street, \$4 25	
				East Boston..... 3 78	
No. 3, West Roxbury, Dorchester and Hyde Park.	John J. Loonie.....	Feb. 3, 1913.	Jan. 31, 1914.....	Charlestown..... 4 00	\$14,245 74
				West Roxbury..... 2 89	
				Dorchester..... 2 99	
				Hyde Park..... 3 25	
No. 2, South of Dover and Berkeley streets, South Boston and Brighton.	John J. Loonie.....	Feb. 3, 1913.	Jan. 31, 1914.....	South of Dover street., \$3 50	8,075 02
				South Boston..... 3 50	
				Brighton..... 3 00	

¹ Advertised and awarded to the lowest bidder.

Cleaning Sewers.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not Including Materials Furnished by City.	Amount Expended in 1913.
¹ Newcomb street, Bradford street and Rochester street, city proper, and Newman street, Roxbury.	James L. Pierce.....	Feb. 14, 1913.	Completed Feb. 24, 1913....	\$545 61	\$1,066 44
Public alley No. 44, passageway between St. Botolph street and N. Y., N. H. & H. R. R., from 75 feet southwest of Albemarle street to 115 feet northeast of Durham street; passageway between St. Botolph street and N. Y., N. H. & H. R. R., from 105 feet southwest of Follen and Garrison streets; South Margin street, between Hale and Standford streets, city proper.	James L. Pierce.....	April 18, 1913.	Completed May 19, 1913....	469 20	479 28
¹ Columbus avenue, from Roxbury Crossing, 150 feet beyond Station street; Tremont street, Linden Park street to Roxbury Crossing, Roxbury.	James L. Pierce.....	April 25, 1913.	Completed May 29, 1913....	573 12	541 48
¹ Main street, between Park street and Hancock square, Charlestown.	James L. Pierce.....	May 20, 1913.	Completed June 30, 1913....	1,533 70	1,549 38
¹ A street, between West Fourth and West Fifth streets; C street, between Broadway and West Fifth street; D street, between West Fourth street and Broadway; West Fourth street, between railroad bridge and Dorchester avenue; Gold street, between railroad bridge and A street; Gold street, between B and C streets; West Sixth street, between E and D streets, South Boston.	Richard A. Nagle.....	June 3, 1913.	Completed Aug. 23, 1913....	705 36	758 70
¹ Washington street, between Roslin and Euclid streets, Dorchester; Washington street, westerly side, between Brattle and Hanover streets; Portland street siphon; Hanover street, between Portland and Washington streets, city proper.	James L. Pierce.....	June 3, 1913.	Completed Aug. 16, 1913....	367 56	373 50

¹ Advertised and awarded to the lowest bidder.

Cleaning Sewers.— *Concluded.*

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not Including Materials Furnished by City.	Amount Expended in 1913.
1 Commercial street, between Hanover and Battery streets, city proper.	James L. Pierce.....	June 19, 1913.	Completed July 24, 1913....	\$100 21	\$2,141 66
1 Bennington street, southerly side, between Swift and Moore streets, and Chelsea street, between Wesley street and Day square, East Boston.	James L. Pierce.....	July 11, 1913.	Completed Aug. 30, 1913....	2,104 31	2,249 54
1 West First street, between D and Dorchester streets; East Second street, between Dorchester and H streets; H street, between East Second and East First streets, and East First, between H and L streets, South Boston.	James L. Pierce.....	July 17, 1913.	Completed Nov. 17, 1913....	1,653 54	1,656 86
1, 2 Chambers street, between Brighton and Charles streets; Commercial street and Atlantic avenue, between Battery and Chilton streets, city proper.	James L. Pierce.....	Aug. 25, 1913.	Unfinished.....	1,833 70	168 27
1, 2 Portland street, between Hanover and Market streets, and between Traverse and Causeway streets; Market street, between Portland and Canal streets; Canal street, between Causeway street and Haymarket square; Traverse street, between Portland and Canal streets; Haverhill street, between Causeway and Traverse streets; Cross street, between Haymarket square and Endicott street; Blackstone street, between Hanover and Cross streets; Canal street, relief sewer in Traverse and Haverhill streets, Haymarket square, Stillman, Endicott and Cross streets to Hanover street, city proper.	James L. Pierce & Co....	Sept. 2, 1913.	Unfinished.....	6,942 27	3,906 96

1 Advertised and awarded to the lowest bidder.

2 Final payment not made.

Furnishing and Driving Piles for Sewerage Works.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not including Materials Furnished by City.	Amount Expended in 1913.
¹ Northern avenue, from D street extension to about 600 feet easterly, South Boston.	W. S. Rendle.....	Feb. 8, 1913.	Completed May 14, 1913....	\$1,099 50	\$1,254 75
¹ Sleeper street, from Congress street about 630 feet northerly, South Boston.	Rendle & Stoddard.....	May 17, 1913.	Completed Sept. 11, 1913....	1,423 20	1,569 90
^{1, 2} Geneva street, between Porter and Gove streets, East Boston.	W. S. Rendle.....	Oct. 17, 1913.	Unfinished.....	660 00	675 41

¹ Advertised and awarded to lowest bidder.² Final payment not made.

Sewerage Works.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not including Materials furnished by City.	Amount Expended in 1913.
1, 2 Spring, Baker and Gardner streets, between Charles river and Heltun street, West Roxbury.	West Roxbury Trap Rock Company.	Feb. 6, 1913.	Completed Dec. 18, 1913.....	\$36,848 50	\$36,128 50
1 Lime street, between Brimmer and River streets, city proper.	Anthony Baruffaldi.....	April 4, 1913.	Completed May 10, 1913.....	1,853 15	1,841 20
1 Helena road, between Burgoyne and Adams streets, Dorchester.	George J. Regan.....	April 4, 1913.	Completed May 3, 1913.....	817 52	679 72
1 Frankfort street, between Prescott street and point about 200 feet southwesterly, East Boston.	McCarthy & Walsh.....	April 10, 1913.	Completed May 5, 1913.....	1,018 70	1,416 90
1 Vesta road and Harvard street and catch-basins in Benham road, Quincefield street, Plaisted road and Dawes street, Dorchester and Mitchell streets, South Boston.	George J. Regan.....	April 18, 1913.	Completed June 13, 1913.....	2,381 10	3,374 57
1 South street, between St. Joseph street and Arborway and outlet in Spalding street, West Roxbury.	Antony Cefalo.....	April 21, 1913.	Completed June 28, 1913.....	5,591 35	6,963 08
1 Montclair avenue, between Merlin and Centre streets, West Roxbury.	William L. Dolan.....	April 22, 1913.	Completed Aug. 5, 1913.....	4,199 50	7,283 99
1 Neponset Playground, between N. Y., N. H. & H. R. R. and Neponset avenue, Dorchester.	McCarthy & Walsh.....	April 28, 1913.	Completed July 31, 1913.....	21,550 45	22,567 95
1 Don street, between Callender street and Woodrow avenue, Dorchester.	Louis Balboni.....	May 2, 1913.	Completed May 13, 1913.....	345 14	367 27

1 Lower avenue, from existing sewer west- erly to Sawyer avenue, Dorchester.	Daniel Di Pietro.....	May 9, 1913.	Completed June 10, 1913.....	660 10	742 64
1 Tosta and Burnah streets and Edgewater drive, Dorchester, and Wood avenue, River, Baldwin and Blake streets, Hyde Park.	James H. Ferguson.....	May 10, 1913.	Completed July 24, 1913.....	7,341 00	9,336 50
1, 2 Pinchurst area, Hyde Park.....	Peter W. Hill.....	June 3, 1913.	Unfinished.....	35,619 65	35,144 64
1 Cliffondale street, between Kitredge and Norfolk streets, West Roxbury.	William L. Dolan.....	June 4, 1913.	Completed July 28, 1913.....	559 31	812 11
1 Norfolk street, from N. Y., N. H. & H. R. R. to Walk Hill street, Dorchester.	George J. Regan.....	June 5, 1913.	Completed July 14, 1913.....	1,749 04	4,637 75
1 Alberta street, between Centre street and N. Y., N. H. & H. R. R., West Roxbury.	Anthony Cefalo.....	June 11, 1913.	Completed Aug. 18, 1913.....	1,451 09	2,078 20
1 Welworth street, between Brook street and Belgrade avenue, West Roxbury.	William L. Dolan.....	June 11, 1913.	Completed Aug. 8, 1913.....	2,268 28	3,280 60
1 Crossman street, between Norfolk and West Selden streets, Dorchester.	Timothy Coughlin.....	June 12, 1913.	Completed July 30, 1913.....	3,053 21	1,762 49
1, 2 Bowdoyn street, between Hamilton and Olney streets and between Corona and Westville streets, Dorchester, and catch- basins in Bourmoside street, Dorchester, Howard, Sussex and Tremont streets, Roxbury.	Anthony Baruffaldi.....	June 12, 1913.	Completed Dec. 8, 1913.....	5,536 95	5,687 52
1 Adams street, from Leedsville street about 229 feet northerly, Dorchester.	George J. Regan.....	June 23, 1913.	Completed July 17, 1913.....	563 55	538 78
1 Scaver street, from Humboldt avenue to a point 232 feet northerly, Roxbury.	George J. Regan.....	June 23, 1913.	Completed Aug. 9, 1913.....	1,643 00	1,735 02
1 Willwood street, between Middleton and Morton streets, Dorchester.	George J. Regan.....	June 23, 1913.	Completed July 24, 1913.....	854 66	2,845 50
3 Palfrey street, northerly branch, between Brown avenue and N. Y., N. H. & H. R. R. and Grandview street, from Beech street to a point 150 feet southwesterly, West Roxbury.	Anthony Cefalo.....	July 11, 1913.	Completed July 23, 1913.....	191 06	476 04

Sewerage Works.—Continued.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not including Materials Furnished by City.	Amount Expended in 1913.
¹ Vale street, between La Grange street and a point 240 feet southwesterly, and Walker street, between Weld street and old sewer 76 feet northerly, West Roxbury.	Antony Cefalo.....	July 17, 1913.	Completed Sept. 2, 1913.....	\$785 19	\$1,229 67
¹ Water street, Metropolitan avenue, Highland street, Bridge street and Summit street, Hyde Park.	Antony Cefalo.....	July 17, 1913.	Completed Aug. 21, 1913.....	1,465 01	1,553 55
¹ Oakland street, between Faneuil and Washington streets, Brighton.	William L. Dolan.....	July 28, 1913.	Completed Oct. 18, 1913.....	9,893 40	9,951 32
^{1, 2} Anawan avenue, West Roxbury Parkway, Martin street and Stratford street, between N. Y., N. H. & H. R. R. and a point on Stratford street 220 feet east of Pelton street, West Roxbury.	The Henry Spinach Contracting Company.	Aug. 7, 1913.	Unfinished.....	38,315 50	28,259 64
¹ Train street, between Ashmont street and South Munroe terrace, Dorchester.	George J. Regan.....	Aug. 9, 1913.	Completed Sept. 12, 1913.....	773 20	841 35
^{1, 2} Pleasant street, between Eliot and Washington streets, city proper.	Antony Cefalo.....	Aug. 13, 1913.	Unfinished.....	15,958 50	13,521 13
¹ Cabnet street, between Hillside street and Parker Hill avenue, Roxbury.	George J. Regan.....	Aug. 15, 1913.	Completed Sept. 4, 1913.....	1,018 70	1,198 25
^{1, 2} Williams street, between Washington and Call streets and outlet in Washington street to Stony brook conduit, West Roxbury.	Antony Cefalo.....	Aug. 18, 1913.	Completed Dec. 18, 1913.....	8,176 28	9,043 96
^{1, 2} South End Sewer Improvement, Section 2, in Clarendon street, Buckingham street, Warren avenue, Chandler street, Union park, Montgomery street, Dartmouth street and West Canton street, city proper.	Antony Cefalo.....	Aug. 25, 1913.	Unfinished.....	56,349 25	41,555 95

1, 2 Wellington Hill street, and outlets in Gilmer and Morton streets, Dorchester.	M. De Sisto & Co.	Sept. 6, 1913.	Completed Dec. 11, 1913.	7,251 43	6,411 91
1 Dorchester avenue, from Freeport street, Brook to Roach street, and Roach street, between Dorchester avenue and Pleasant street, Dorchester.	Anthony Baruffaldi.	Sept. 8, 1913.	Completed Nov. 15, 1913.	3,878 95	4,191 48
1 Sheffield road, between Selwyn and Walter streets, West Roxbury.	George J. Regan.	Sept. 9, 1913.	Completed Sept. 27, 1913.	399 45	458 34
1 Preston road, between Pleasant street and Chapin avenue, West Roxbury.	Charles Latorella.	Sept. 9, 1913.	Completed Sept. 30, 1913.	607 65	599 31
1 Oak Grove terrace, between Ruggles street and Auburn place, Roxbury.	George J. Regan.	Sept. 16, 1913.	Completed Oct. 9, 1913.	963 95	1,459 77
1 Parker street, between Wood avenue and Oakwood street, Hyde Park.	Charles Latorella.	Sept. 20, 1913.	Completed Oct. 23, 1913.	179 72	594 03
1 Dorchester avenue, between Brook and Codman streets, Dorchester.	George J. Regan.	Sept. 27, 1913.	Completed Oct. 18, 1913.	602 80	664 65
1 Standard street, from River street 932 feet northerly, Dorchester.	George J. Regan.	Oct. 2, 1913.	Completed Nov. 22, 1913.	1,354 22	2,941 55
1 Harrison park, from Beach street to the end, and Beach street, from Harrison park 250 feet northeasterly, Dorchester.	Louis Balboni.	Oct. 9, 1913.	Completed Oct. 30, 1913.	623 10	699 84
1 Hallett-Davis street, and outlet in Marsh street extended, Dorchester.	Louis Balboni.	Oct. 17, 1913.	Completed Nov. 20, 1913.	1,303 40	1,087 11
1 South End Sewer Improvement, Section 4, in Union Park street, Albany street and Gately wharf, city proper.	William J. Barry.	Oct. 21, 1913.	Unfinished.	25,422 50	Nothing.
1 Centre street, between Spring and Cass streets, West Roxbury.	William L. Dolan.	Oct. 21, 1913.	Unfinished.	4,065 40	3,881 95
2, 3 Hyde Park avenue, between Mother brook and Factory street, Hyde Park.	Martino De Mattco.	Oct. 29, 1913.	Completed Feb. 3, 1914.	3,883 10	2,880 32
1, 2 Dorechester avenue, between Roach street and Savin Hill avenue, Dorchester.	R. Cartullo.	Oct. 31, 1913.	Unfinished.	3,217 20	2,774 57

Sewerage Works.—*Concluded.*

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not including Materials Furnished by City.	Amount Expended in 1913.
1, 2 Commonweath avenue, between Thorn-dike street and St. Lukes road, and St. Lukes road, between Commonweath and Brighton avenues, Brighton.	Giuseppe Bevilacqua.....	Nov. 9, 1913.	Unfinished.....	\$4,738 00	\$3,979 75
1, 2 Ballou avenue and outlets in Woodrow avenue and Lyons street, Dorchester.	George J. Regan.....	Nov. 11, 1913.	Unfinished.....	6,052 02	6,156 60
1, 2 Poplar street, between Hilburn street and point 300 feet southeasterly, West Roxbury.	Timothy Coughlin.....	Nov. 20, 1913.	Unfinished.....	751 00	775 62
1, 2 Montebello road, between Brookside avenue and Washington street, West Roxbury.	Louis Balboni.....	Nov. 20, 1913.	Completed Dec. 11, 1913.....	1,073 70	897 39
1, 2 L street, between Columbia road and East Ninth street, South Boston.	Louis Balboni.....	Nov. 28, 1913.	Completed Jan. 1, 1914.....	529 80	915 17
1, 2 Warren avenue, Water street, Station street and private land, near Fairmount avenue, Hyde Park.	Martino De Mattico.....	Nov. 28, 1913.	Unfinished.....	2,104 58	1,983 36
1, 2 Reservoir road, between Beacon street and B. & A. R. R., Brighton.	Louis Balboni.....	Nov. 29, 1913.	Unfinished.....	883 20	753 30
1 Mattapan brook in Astoria street and private land, between Norfolk and Delhi streets, and Delhi street, between Holborn and Crossman streets, Dorchester.	Charles Latorella.....	Dec. 12, 1913.	Unfinished.....	16,135 15	Nothing.
1 Davenport brook in private land, between Burt and Washington streets, Dorchester.	Anthony Baruffaldi.....	Dec. 23, 1913.	Unfinished.....	7,048 40	Nothing.
1 Munson street, between Beacon street and B. & A. R. R., city proper.	John McCourt & Co.....	Jan. 2, 1914.	Unfinished.....	973 50	Nothing.

¹ Advertised and awarded to lowest bidder.² Final payment not made.³ Advertised and awarded to second lowest bidder.

Pumping Station, Calf Pasture.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
1, 4 Building cast-iron floor, stairway, etc.	W. A. Snow Iron Works.	April 10, 1913.	Unfinished.	\$3,486 00	\$1,969 11
1 Reconstructing roof over turbine room.	E. Van Noorden & Co.	Aug. 27, 1913.	Completed Oct. 1, 1913.	2,185 00	2,359 00
2 Furnishing and installing pipe fittings, etc., necessary to make connection with feed water heater.	The William H. Gallison Company.	Sept. 10, 1913.	Completed Oct. 30, 1913.	600 00	592 16
3 Repairing boiler No. 1.	The Hodge Boiler Works.	Oct. 18, 1913.	Completed Dec. 7, 1913.	629 00	629 00
2 Repairing boiler No. 4.	The Hodge Boiler Works.	Jan. 1, 1914.	Unfinished.	644 00	Nothing.

¹ Advertised and awarded to the lowest bidder.

² Not advertised, award to only bidder.

³ Invitation bid, award to lowest bidder.

⁴ Final payment not made.

Miscellaneous.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
1 Building underground sewage Pumping station in Summer street, opposite E street, South Boston.	Anthony Boraiffaldi.....	Feb 25, 1913.	Completed Sept. 6, 1913.	\$5,465.....	\$6,205 41
Permission to pass under the tracks of the N. Y., N. H. & H. R. Co., near Forest Hills Station, for the purpose of constructing a sewer, West Roxbury.	N. Y., N. H. & H. R. Co.....	May 17, 1913.	.....	City to pay all costs of supporting and guarding trucks and roadbed and all expense occasioned by its maintenance or repairing.	
Lease of land and building, Gainsborough street and St. Botolph street extension.	Boston Elevated Railway Company.....	May 26, 1913.	Completed Jan. 31, 1914.	\$1,250 per year.....	1,249 92
4 Dredging Roxbury canal.....	Eastern Dredging Company.....	May 28, 1913.	Completed July 21, 1913.	\$125 per day.....	1,975 00
2, 3 Purchase and removal of buildings on land of the City of Boston at Union park and Albany street, city proper.	David Grossman.....	June 13, 1913.	Completed Aug. 6, 1913.	\$25.....	25 00
1 Furnishing and delivering sluice gates and compressed air rams at Moon Island.	Coffin Valve Company.....	June 27, 1913.	Completed Nov. 14, 1913.	\$7,625.....	7,625 00
1 Furnishing and erecting automatic electric sewage pumping plant in proposed pumping station in Union Park and Albany streets, city proper.	Epping-Carpenter Pump Company.....	July 28, 1913.	Unfinished.	\$34,836.....	Nothing.
5 Furnishing and delivering sluice gates and compressed air rams at Moon Island.	Coffin Valve Company.....	July 31, 1913.	Completed Nov. 14, 1913.	\$3,500.....	3,500 00
6 Furnishing gratings, Summer street pumping station.	New England Bolt and Steel Company.....	Aug. 2, 1913.	Completed July 18, 1913.	\$140.....	\$140 00

⁶ Supporting buildings on line of proposed sewer in passageway between Massachusetts avenue and Dartmouth street, city proper.	Isaac Blair & Co., Inc.....	Oct. 7, 1913.	Unfinished.	\$5,000	Nothing
⁶ Installing electrical system, Albany street yard.	Herbert S. Potter.....	Nov. 10, 1913.	Completed Dec. 31, 1913.	\$525.....	\$525 00
¹ Building shaft house over east shaft, Squantum.	MacKenzie & Temple.....	Nov. 19, 1913.	Unfinished.	\$2,592.....	850 00
⁶ Building catch-basins, Normandy and Intervale streets, Dorchester.....	Hugh J. McGuire.....	Nov. 29, 1913.	Completed Dec. 17, 1913.	\$170.....	194 97

¹ Advertised and awarded to the lowest bidder.

² Paid to city.

³ Invitation bid awarded to lowest bidder.

² Advertised and awarded to the highest bidder.

³ Only bid, not advertised.

SEWER AND WATER DIVISION.—WATER SERVICE.
Water Pipes.—Laying.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not Including Materials Furnished by City.	Amount Expended in 1913.
² Berkeley street, city proper.	Louis Balboni.	Feb. 14, 1913.	Completed March 13, 1913.	\$475 50	\$634 91
¹ Elkins and Tieknor streets, South Boston; Frankfort street, East Boston; Commonwealth avenue, Brighton; Murray Hill road, West Roxbury; Hendry and Intervale streets, Dorchester, and Milton street, Hyde Park.	R. Cartullo.	Mar. 5, 1913.	Completed April 30, 1913.	1,625 25	1,769 18
¹ Ferry, Fulton and Richmond streets and Eastern avenue, city proper.	John T. Shea, Jr.	April 10, 1913.	Completed April 26, 1913.	1,104 00	1,347 22
^{1, 4} Various streets in Dorchester, West Roxbury and Hyde Park.	M. DeSisto & Co.	April 21, 1913.	Completed Dec. 8, 1913.	23,310 00	24,349 94
¹ Arlington, Clarendon and Stuart streets, city proper.	Thomas Burke.	April 25, 1913.	Completed May 14, 1913.	1,012 75	561 48
¹ Brainerd road, Commonwealth avenue, Dustin street, Long avenue, Strathmore road, Washington street, Brighton.	R. Cartullo.	May 1, 1913.	Completed July 2, 1913.	1,473 70	2,286 01
¹ Bynner street, Roxbury; Avon street, Dix place, India street and India square, city proper.	Hugh McNulty.	May 12, 1913.	Completed July 28, 1913.	977 00	824 81
¹ Green, Lyman and Staniford streets, city proper.	Charles M. Callahan.	June 3, 1913.	Completed June 18, 1913.	615 00	686 65
² Providence street, between Park square and Arlington street, city proper.	John T. Shea, Jr.	June 5, 1913.	Completed June 16, 1913.	346 00	598 48
² Providence street, between Arlington and Berkeley streets, city proper.	John T. Shea, Jr.	June 12, 1913.	Completed July 5, 1913.	547 00	862 94

1 Commonwealth and Maple avenues, Nonantum and St. Lukes roads, Brighton; Howland street, Roxbury; Beacon street, city proper.	Hugh McNulty	July 11, 1913.	Completed Aug. 16, 1913.....	1,145 20	1,501 17
3 Winter street, between Washington and Tremont streets, city proper.	Boston Transit Commission.....	Aug. 7, 1913.	Completed Oct. 27, 1913.....	5,000 00	5,943 37
1 C and Mitchell streets, South Boston; Arlington street, Commonwealth avenue and Cygnets street, Brighton; Friend street and Harrison avenue, city proper.	Charles M. Callahan.....	Aug. 29, 1913.	Completed Nov. 10, 1913.....	2,662 50	2,752 47
1 Northern and Old Colony avenues, South Boston; Butler avenue and Orleans street, East Boston; Dix place, Munson and Stuart streets, city proper.	Hugh McNulty.....	Oct. 9, 1913.	Completed Dec. 9, 1913.....	3,226 00	2,599 40
2 Reservoir road, Brighton.....	M. DeSisto & Co.....	Oct. 16, 1913.	Completed Oct. 31, 1913.....	253 50	273 83
3 Summer street, between Washington and Arch streets, city proper.	Boston Transit Commission.....	Nov. 1, 1913.	Unfinished.....	3,000 00	Nothing.
1, 4 Crest, Dane and Goethe streets, Pierpont and Russell roads, Schottum's terrace and Stratford street, West Roxbury, and Ray street, Roxbury.	John T. Shea, Jr.....	Nov. 10, 1913.	Unfinished.....	1,778 50	\$1,524 46
1, 4 Goodenough street, Price road and Waverly street, Brighton.	Daniel E. Lynch.....	Nov. 19, 1913.	Completed Dec. 23, 1913.....	540 00	500 55
1, 4 Stinson street, West Roxbury; West Newton street, city proper, and Radcliffe road, Hyde Park.	M. DeSisto & Co.....	Dec. 3, 1913.	Unfinished.....	735 00	709 10
1, 4 Allston street, Boulevard terrace, Brighton; Hinsdale road, Trevoce and Wren streets, West Roxbury; Cameron street, Helena road and Tampa street, Dorchester.	M. DeSisto & Co.....	Dec. 27, 1913.	Unfinished.....	2,772 60	1,190 22
1, 4 Alabama street, Dorchester; Anony terrace, Roxbury; St. Mary's street, Brookline.	Charles M. Callahan.....	Dec. 29, 1913.	Unfinished.....	710 02	669 13

1 Advertised and awarded to lowest bidder.

2 Invitation bid awarded to lowest bidder.

4 Final payment not made.

3 Not advertised, only bid.

Water Pipes. — Relaying.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not including Materials Furnished by City.	Amount Expended in 1913.
¹ Fargo and B streets, South Boston, and Union Park street, city proper.	Thomas Burke.....	April 10, 1913.	Completed May 25, 1913....	\$1,494 50	\$1,407 10
¹ West River street, between Business and Readville streets, and Readville street, between West River and Chesterfield streets, Hyde Park.	Anthony Baruffaldi.....	April 25, 1913.	Completed June 27, 1913....	5,345 00	5,844 50
¹ Linden street, between Brighton avenue and Cambridge street, and Ashford street, between Linden and Malvern streets, Brighton.	Hugh McNulty.....	May 19, 1913.	Completed July 8, 1913....	1,840 00	1,756 39
¹ Newbury street, between Arlington and Berkeley streets, and between Clarendon and Fairfield streets; Marlborough street, between Dartmouth street and Massachusetts avenue, and Fairfield street, between Boylston and Beacon streets, city proper.	John T. Shea, Jr.....	May 20, 1913.	Completed Aug. 4, 1913....	5,138 00	4,569 54
¹ Pleasant street, between Eliot and Washington streets, city proper.	Charles M. Callahan.....	June 19, 1913.	Completed Nov. 3, 1913....	1,737 00	2,221 24
² Quincy shore reservation, Quincy.....	R. Cartullo.....	July 22, 1913.	Completed Aug. 8, 1913....	488 25	518 34
¹ Saratoga street, between Ford and Bennington streets; Bennington street, between Thurston and Antrim streets; Bred street, between Bennington and Ford streets; Emmons street, between Chelsea and Paris streets, and Antrim street, East Boston.	Anthony Baruffaldi.....	July 30, 1913.	Completed Nov. 1, 1913....	2,038 00	2,053 97

¹ River street, Huntington avenue and Mattiakeset street, Hyde Park.	R. Cartullo.....	Aug. 6, 1913.	Completed Nov. 3, 1913.....	4,319 25	4,150 55
¹ East Lenox street, between Washington and Fellows street; Yeoman street, between Albany and Hampden streets, Roxbury, and Roach street, between Dorchester avenue and Pleasant street, Dorchester.	Timothy Coughlin.....	Aug. 12, 1913.	Completed Oct. 14, 1913.....	1,950 00	1,831 88
¹ Norfolk street, between Talbot avenue and Bernard street, Dorchester.	Anthony Baruffaldi.....	Aug. 25, 1913.	Completed Oct. 1, 1913.....	2,157 50	2,415 74
^{1, 2} Fox, Draper, Faulkner, Drison, Leroy, Charles and Hecla streets, Dorchester.	Charles M. Callahan & Co.....	Sept. 6, 1913.	Completed Dec. 20, 1913.....	3,826 50	2,843 51
^{1, 2} George street, between Hampden and Shirley streets; Eustis street, between Dearborn and Hampden streets; and Norfolk avenue, between Hampden and Magazine streets, Roxbury.	Timothy Coughlin.....	Oct. 17, 1913.	Completed Dec. 20 1913.....	4,026 00	2,740 21
^{1, 2} St. Stephen street, between Bryant street and Opera place; Astor street, between Massachusetts avenue and Hemenway street; Batavia street, between St. Stephen and Hemenway streets; Haviland street, between Massachusetts avenue and Hemenway street, Roxbury; Dalton street, between Belvidere and Cambria streets; Cambria street, between Dalton and St. Cecilia streets, and St. Cecilia street, between Boylston and Cambria streets, city proper.	John T. Shea, Jr.....	Oct. 31, 1913.	Completed Dec. 20, 1913.....	3,402 00	2,537 78

¹ Advertised and awarded to lowest bidder.² Not advertised, invitation bid.³ Final payment not made.

Miscellaneous.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1913.
² Covering water pipe, West River street bridge over N. Y., N. H. & H. R. R., Hyde Park.	H. W. Johns-Manville Company,	Feb. 8, 1913.	Completed April 1, 1913.	\$328 00.....	\$328 00
² Inspecting special castings at the Warren Foundry and Machine Company.	W. R. Conard.....	March 26, 1913.	Unfinished.	\$0.85 per ton.....	576 15
² Furnishing labor necessary for assembling 100 Boston post hydrants.	Coffin Valve Company.....	April 4, 1913.	Completed June 24, 1913.	\$1,950 00.....	1,950 00
² Inspecting gate valves for high pressure fire service.	Will J. Sando.....	April 23, 1913.	Unfinished.	\$1,400 00.....	700 00
² Cleaning water pipes.....	National Water Main Cleaning Company.	April 28, 1913.	Completed July 1, 1913.	\$800 00.....	910 10
¹ Excavating and refilling trenches and openings, setting and regulating boxes, establishing hydrants, gates, etc.	Thomas Burke.....	May 7, 1913.	Completed Sept. 1, 1913.	\$15,476 00.....	5,370 80
² Inspecting flexible joint pipes at R. D. Wood & Co.	W. R. Conard.....	May 31, 1913.	Completed Nov. 22, 1913.	\$0.40 per ton.....	75 21
³ Supplying water to the Boston Navy Yard.	City of Boston.....	June 2, 1913.	Unfinished.	First, 20,000 cubic feet, \$0.14 per 100 feet; second 20,000 cubic feet, \$0.13 per 100 feet; third 20,000 cubic feet, \$0.12 per 100 feet, and up to 1,000,000 cubic feet or over, \$0.08 per 100 feet.	8,585 60
¹ Cleaning water pipe, River street, Dorchester, and Brook street, East Boston.	National Water Main Cleaning Company	June 23, 1913.	Completed Aug. 1, 1913.	\$2,510 00.....	2,157 29

³ Supplying water to Forts Strong Warren and Standish.	City of Boston.....	July 1, 1913.	Unfinished.	First, 20,000 cubic feet, \$0.14 per 100 feet; second 20,000 cubic feet, \$0.13 per 100 feet; third 20,000 cubic feet, \$0.12 per 100 feet, and up to 1,000,000 cubic feet or over, \$0.08 per 100 feet.	2,073 60
¹ Furnishing labor necessary for assembling Boston post hydrants and valves.	Coffin Valve Company.....	July 1, 1913.	Completed Nov. 24, 1913.	\$3,105 00.....	3,105 00
⁴ Erecting trolley system in the high pressure fire yard.	The Fairbanks Company.....	Aug. 1, 1913.	Completed Sept. 23, 1913.	\$318 00.....	318 00
² Furnishing plans and specifications for proposed pumping station, Charles street, city proper.	C. H. Blackall.....	Aug. 7, 1913.	.....	\$100 00.....	100 00
¹ Building portable slanty for cast-iron inspectors.....	Coveney Building Company.....	Aug. 15, 1913.	Completed Oct. 6, 1913.	\$125 00.....	125 00
³ Supplying water to the U. S. S. "Chicago" at Gas House Wharf.	City of Boston.....	Aug. 28, 1913.	Completed Oct. 1, 1913.	First, 20,000 cubic feet, \$0.14 per 100 feet; second 20,000 cubic feet, \$0.13 per 100 feet; third 20,000 cubic feet, \$0.12 per 100 feet, and up to 1,000,000 cubic feet or over, \$0.08 per 100 feet.	26 60
¹ Excavating and refilling trenches and openings, setting and regulating boxes, establishing hydrants, gates, etc.	Thomas Burke.....	Sept. 18, 1913.	Completed Dec. 10, 1913.	\$8,263 75.....	5,153 98
² Making, grinding and testing castings for water service.	Watworth Mfg. Company.....	Sept. 23, 1913.	Completed Dec. 1, 1913.	\$201 66.....	205 02
⁴ Furnishing and installing motor equipment, water service yard, Albany street.	Crocker-Wheeler Company.....	Sept. 29, 1913.	Completed Jan. 5, 1914.	\$494 00.....	538 00
Lease of wharf, South Bay Terminal ..	N. Y., N. H. & H. R. R. Co.....	Oct. 25, 1913.	Completed Jan. 31, 1914.	\$416 67 per month.	

¹ Advertised and awarded to lowest bidder.² Paid to city.³ Only bid, not advertised.⁴ Invitation bids, awarded to lowest bidder.

Miscellaneous.—*Concluded.*

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1912.
² Cleaning and painting offices for high pressure fire service, Bristol street, . . .	The Buildings Care Company, . . .	Oct. 25, 1913	Completed Nov. 8, 1913.	\$148 00.	\$148 00
² Agreement to replace 8-inch water pipe by 16-inch pipe under the tracks of the N. Y., N. H. & H. R. R., north of River street.	N. Y., N. H. & H. R. R. Co.	Nov. 3, 1913.			
¹ Furnishing all labor for assembling 200 Boston post hydrants.	Coffin Valve Company	Nov. 6, 1913.	Unfinished.	\$3,500 00.	Nothing.
² Covering water pipes on bridge over N. Y., N. H. & H. R. R. at Atlantic street, Atlantic.	H. W. Johns-Manville Company, . . .	Nov. 11, 1913.	Completed Dec. 15, 1913.	\$650 00.	\$650 00
² Inspecting 410 hydrants at East Orange, New Jersey.	W. R. Conard	Nov. 29, 1913.	Unfinished.	\$7.00 per day per man.	322 00
² Piling water pipe, water service yard, Albany street.	Betts Brothers & Co.	Jan. 1, 1914.	Completed Jan. 31, 1914.	\$0.50 per net ton.	Nothing.
¹ Furnishing and erecting electric pumping plant for high pressure fire service, Charles street.	Westinghouse Electric and Manufacturing Company.	Jan. 30, 1914.	Unfinished.	\$179,300 00.	Nothing.

* Only bid, not advertised.

† Advertised and awarded to lowest bidder.

The following table shows the snowfall and rainfall since 1907:

Snowfall (inches).

MONTH.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
January.....	16.1	4.3	11.2	11.9	0.7	17.8	0.3
February.....	25.5	9.3	2.3	12.6	19.5	0.2	7.7
March.....	6.6	4.4	3.1	0.2	.....	2.0	0.5
April.....	.....	0.8	.....	.....	.....	0.5	1.4
November.....	.....	.....	.....	1.4	0.3	0.3	.....
December.....	7.0	3.5	12.3	8.1	3.7	9.2	0.9
Totals.....	55.2	22.3	28.9	34.2	24.2	30.0	10.8

Rainfall (inches).

MONTH.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
January.....	2.54	2.47	3.94	4.25	2.28	2.87	2.38
February.....	1.88	2.96	4.71	3.44	2.85	2.38	2.99
March.....	1.66	2.97	3.28	1.25	2.95	4.18	4.81
April.....	3.31	1.70	3.92	2.22	2.28	3.07	4.77
May.....	3.12	3.78	2.33	1.02	0.35	4.04	3.22
June.....	2.56	1.08	4.45	4.89	3.67	0.27	0.64
July.....	1.09	3.17	0.97	1.15	4.65	5.16	2.69
August.....	1.10	4.35	3.55	0.98	4.17	1.94	2.86
September.....	7.43	0.68	5.15	2.14	2.95	1.67	2.51
October.....	2.54	3.70	1.07	1.14	2.27	1.00	6.04
November.....	6.02	0.74	4.11	3.75	4.29	2.61	2.15
December.....	4.31	2.47	3.19	2.10	3.07	5.36	3.05
Totals.....	37.56	30.07	40.67	28.33	35.78	34.55	38.11

In this rainfall is included the precipitation during the winter months, which equals one-tenth of an inch to one inch of snowfall.

Area of Pavements.

The Following Table Shows Areas in Square Yards and Character of Pavements on Accepted Streets February 1, 1914.

District.	Asphalt.	Granite Block.	Wood Block.	Plank on Bridges.	Brick.	Cobble.	Bitulithic.	Macadam.	Gravel.	Not Graded.	Totals.
Year 1912 report.....	333,931	2,278,748	114,521	41,230	107,777	2,239	129,382	6,945,748	637,806	130,139	10,724,520
Per cent.....	3.11	21.25	1.07	0.41	1.00	0.02	1.21	64.77	5.95	1.21	100.00
February 1, 1914.											
City Proper.....	249,352	948,708	92,492	11,570	7,733	1,342	86,672	574,518	240	1,461	1,974,088
Charlestown.....	5,284	265,105	1,418	3,147	756	396	.....	164,668	275	.....	440,653
East Boston.....	1,925	135,885	.....	2,109	572	.....	620	485,439	18,100	.....	645,106
South Boston.....	23,441	434,933	2,383	8,067	1,979	.....	17,784	388,750	11,672	50,087	939,096
Roxbury.....	54,191	303,667	24,479	1,417	49,790	.....	26,267	1,113,290	33,109	2,932	1,609,142
West Roxbury.....	.....	45,450	583	2,181	.....	.....	10,042	1,359,908	75,036	23,811	1,517,011
Dorchester.....	.....	154,240	36,613	5,571	48,041	.....	6,570	1,766,491	126,090	18,600	2,162,216
Brighton.....	130	10,086	256	3,928	.....	.....	7,134	834,346	67,864	5,180	928,924
Hyde Park.....	.....	1,661	.....	5,191	.....	.....	.....	344,959	238,426	9,567	599,804
Totals.....	1,334,323	2,299,735	158,224	43,181	108,871	1,738	155,089	3,032,369	570,872	111,638	10,816,040
Per cent.....	3.09	21.26	1.46	0.40	1.01	0.02	1.43	65.02	5.28	1.03	100.00

Total area of pavements on public streets, 10,816,040 square yards.

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 is included in city proper.

* Of this amount 95 square yards equal asphalt blocks.

† Of this amount 693,863 square yards equal granite block paving on concrete base.

‡ Of this amount 1,801 square yards equal Hassam pavement, and 946 square yards equal Blome grunitoid concrete blocked pavement, and 937,704 square yards equal bituminous macadam.

§ 24,789 square yards public alleys laid out under chapter 298 of the Acts of 1898 included in this table.

|| 268,398 square yards public streets in charge of Park and Recreation Department included in this table.

¶ In addition to this table there are 5,319 square yards accepted foot passageways.

Public streets laid out and discontinued by the Street Commissioners during the year show pavements increased 5.13 miles or 85,458 square yards.

The building of Stadium Bridge, North Harvard street, shows pavements increased 213 square yards.

Corrections to previous measurements on account of revision and other causes show pavements increased 0.21 mile or 5,849 square yards.

Total net increase, 5.34 miles or 91,520 square yards.

The rate of increase from year to year is shown in the following table:

	Miles.		Miles.		Miles.
1859.....	111.50	1885.....	379.60	1900.....	489.55
1871.....	201.32	1886.....	383.55	1901.....	491.85
1872.....	207.40	1887.....	390.30	1902.....	496.90
1873.....	209.24	1888.....	392.72	1903.....	499.85
1874.....	313.90	1889.....	397.84	1904.....	500.39
1875.....	318.58	1890.....	404.60	1905.....	502.20
1876.....	327.50	1891.....	409.60	1906.....	502.80
1877.....	333.20	1892.....	434.59	1907.....	510.04
1878.....	340.39	1893.....	443.34	1908.....	511.60
1879.....	345.19	1894.....	447.65	1909.....	514.28
1880.....	350.54	1895.....	452.12	1910.....	518.63
1881.....	355.50	1896.....	456.11	1911.....	521.21
1882.....	359.85	1897.....	459.12	1912.....	561.36
1883.....	367.99	1898.....	471.19	1913.....	567.51
1884.....	374.10	1899.....	479.47	1914.....	572.85

Length of Pavements.

The Following Table Shows Length in Miles and Character of Pavement on Accepted Streets February 1, 1914.

DISTRICT.	Asphalt.	Granite Block.	Wood Block.	Plank on Bridges.	Brick.	Cobble.	Bitulithic.	Macadam.	Gravel.	Not Graded.	Totals.
Year 1912 report.....	22.15	100.24	4.89	2.15	5.23	0.29	6.77	381.41	41.24	3.14	567.51
Per cent.....	3.90	17.67	0.86	0.38	0.92	0.05	1.19	67.21	7.27	0.55	100.00
February 1, 1914.											
City Proper.....	16.81	41.57	3.80	0.52	0.54	0.15	4.30	27.01	0.04	0.04	94.78
Charlestown.....	0.33	11.74	0.06	0.13	0.04	.....	.....	11.10	0.02	.....	23.42
East Boston.....	0.11	6.35	.....	0.14	0.02	0.06	0.03	22.76	0.86	.....	30.33
South Boston.....	1.98	18.45	0.14	0.37	0.13	.....	1.04	20.69	0.62	1.81	45.23
Roxbury.....	2.90	12.79	1.15	0.05	2.58	.....	1.56	64.67	2.42	0.18	88.30
West Roxbury.....	.....	1.72	.....	0.11	.....	.....	0.51	81.68	5.05	0.29	89.36
Dorchester.....	.....	7.18	1.46	0.25	1.94	.....	0.34	103.00	7.86	0.16	122.19
Brighton.....	.....	0.36	.....	0.24	.....	.....	0.24	38.70	4.62	0.04	44.20
Hyde Park.....	.....	0.08	.....	0.28	.....	.....	.....	18.71	15.73	0.24	35.04
Totals.....	† 22.13	‡ 100.24	6.61	2.09	5.25	0.21	8.02	‡ 388.32	37.22	2.76	572.85
Per cent.....	3.86	17.50	1.15	0.36	0.92	0.04	1.40	67.79	6.50	0.48	100.00

Total length of pavement on public streets, 572.85 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 is included in city proper.

† Of this amount 0.02 mile equals asphalt blocks.

‡ Of this amount 22.04 miles equal granite block paving on concrete base.

§ Of this amount 0.12 mile equals Hassam pavement, and 0.06 mile equals Blome granitoid concrete blocked pavement, and 42.55 miles equal bituminous macadam.

¶ 4.82 miles public alleys laid out under chapter 298 of the Acts of 1898 included in this table.

‡ 6.64 miles public streets in charge of Park and Recreation Department included in this table.

§ In addition to this table there are 1.04 miles accepted foot passageways.

The following changes in pavement were made during the year:

0.00 mile or 49 square yards asphalt changed to granite block.
 0.06 mile or 1,286 square yards asphalt changed to wood block.
 0.02 mile or 188 square yards asphalt changed to bitulithic.
 0.00 mile or 55 square yards granite block changed to asphalt.
 0.40 mile or 6,403 square yards granite block changed to wood block.
 0.41 mile or 3,353 square yards granite block changed to bitulithic.
 0.00 mile or 95 square yards granite block changed to macadam.
 0.02 mile or 471 square yards plank on bridges changed to wood block.
 0.02 mile or 290 square yards plank on bridges changed to macadam.
 0.00 mile or 52 square yards brick changed to wood block.
 0.08 mile or 501 square yards cobble changed to granite block.
 0.06 mile or 340 square yards macadam changed to asphalt.
 0.33 mile or 11,487 square yards macadam changed to granite block.
 1.24 miles or 32,653 square yards macadam changed to wood block.
 0.02 mile or 343 square yards macadam changed to brick.
 0.81 mile or 20,058 square yards macadam changed to bitulithic.
 0.05 mile or 2,074 square yards gravel changed to granite block.
 0.00 mile or 9 square yards gravel changed to wood block.
 0.00 mile or 4 square yards gravel changed to bitulithic.
 8.17 miles or 130,415 square yards gravel changed to macadam.
 0.00 mile or 1,467 square yards not graded changed to asphalt.
 0.30 mile or 15,494 square yards not graded changed to granite block.
 0.00 mile or 725 square yards not graded changed to brick.
 0.00 mile or 2,119 square yards not graded changed to bitulithic.
 0.17 mile or 2,856 square yards not graded changed to macadam.
 0.02 mile or 275 square yards not graded changed to gravel.

Streets laid out or discontinued by the Street Commissioners during the year show:

Asphalt decreased 0.01 mile or 45 square yards.
 Granite block decreased 0.06 mile or 1,045 square yards.
 Wood block increased 0.00 mile or 2,881 square yards.
 Brick increased 0.00 mile or 119 square yards.
 Macadam increased 0.70 mile or 10,212 square yards.
 Gravel increased 4.43 miles or 68,463 square yards.
 Not graded increased 0.07 mile or 4,873 square yards.

The building of Stadium Bridge shows North Harvard street at Stadium Bridge:

Macadam increased 0.00 mile or 213 square yards.

Corrections on account of revision and other causes show:

Asphalt increased 0.01 mile or 98 square yards.
 Granite block increased 0.11 mile or 2,333 square yards.
 Wood block decreased 0.00 mile or 52 square yards.
 Plank on bridges decreased 0.02 mile or 288 square yards.
 Brick decreased 0.00 mile or 40 square yards.
 Bitulithic increased 0.01 mile or decreased 15 square yards.
 Macadam increased 0.31 mile or 7,421 square yards.
 Gravel decreased 0.25 mile or 3,170 square yards.
 Not graded increased 0.04 mile or decreased 438 square yards.

LIST OF PERSONAL PROPERTY OF THE PUBLIC WORKS DEPARTMENT ON HAND FEBRUARY 1, 1914, AND ESTIMATED VALUE OF SAME, ALLOWING FOR DEPRECIATION.

Central Office.

1 automobile	\$450 00
Robes	22 00
Supplies for automobile	45 00
	<hr/>
	<u>\$517 00</u>

Bridge Service.

6 horses	\$1,950 00
6 wagons	360 00
7 buggies	210 00
9 harnesses	108 00
16 blankets	12 00
3 robes	15 00
2 automobiles	2,300 00
1 auto truck	2,000 00
Supplies, tools and machinery	8,600 00
	<hr/>
	<u>\$15,555 00</u>

Ferry Service.

7 ferryboats	\$220,000 00
Tools, machinery and supplies	30,000 00
	<hr/>
	<u>\$250,000 00</u>

Lighting Service.

9,997 mantle gas lamps	} posts	\$120,000 00
17 triplicate gas lamps		
95 double gas lamps		
159 fire gas lamps		
4,718 arc lamps		
3,507 tungsten lamps		
2 horses		650 00
2 buggies		60 00
1 auto and supplies		800 00
2 robes		20 00
1 sleigh		10 00
2 harnesses		40 00
		<hr/>
		<u>\$121,580 00</u>

Paving Service.

2 autos	\$1,000 00
260 blankets	260 00
28 buggies	870 00
11 pungs	220 00
7 sleighs	140 00
10 jiggers	500 00
31 wagons	1,860 00
10 caravans	1,000 00
3 horse sweepers	240 00
3 road scrapers	1,200 00
3 road machines	1,800 00
14 street watering carts	2,500 00
96 dump carts	10,000 00
116 horses	37,700 00
19 snow levels	3,800 00
21 section rollers	2,100 00
12 steam rollers	21,200 00
35 desks	300 00
2,301 picks	1,150 00
1,989 shovels	1,193 40
Supplies, tools, machinery, surveying instruments, engineers' supplies, etc.	50,000 00
	<hr/>
	\$139,033 40
	<hr/>

Sanitary Service.

2 automobiles	\$1,800 00
2 auto trucks	6,000 00
299 horse blankets	299 00
28 buggies	1,600 00
197 carts	14,000 00
251 harnesses	5,600 00
315 shovels	156 00
206 horses	66,950 00
91 wagons	4,500 00
23 desks	460 00
5 sleighs	50 00
109 pungs	1,000 00
Miscellaneous tools, washing supplies, instru- ments, etc.	40,000 00
3 scows	30,000 00
	<hr/>
	\$172,415 00
	<hr/>

Street Cleaning and Oiling Service.

3 autos	\$2,100 00
139 carts	9,730 00
23 buggies	920 00
27 street watering carts	2,700 00
11 wagons	900 00
210 harnesses	2,500 00
178 horses	57,850 00
42 street sweeping machines	8,400 00
10 flushing machines	4,000 00
112 push carts	224 00
713 street sweeping brooms	500 00
714 shovels	500 00
657 picks	459 90
Miscellaneous supplies, etc.	12,000 00
	<hr/>
	<u>\$102,783 90</u>

Sewer Service.

4 automobiles	\$2,500 00
46 horses	14,950 00
31 wagons	1,550 00
22 buggies	660 00
27 carts	2,700 00
2 caravans	250 00
71 harnesses	2,130 00
90 blankets	120 00
11 sleighs	220 00
614 shovels	428 40
507 pails	304 20
Derricks, pumps, dynamo, boilers, engineers' tools, machinery, instruments and supplies	480,000 00
	<hr/>
	<u>\$505,812 60</u>

Water Service.

5 automobiles	\$6,000 00
57 horses	18,525 00
40 wagons	2,200 00
14 buggies	280 00
10 sleighs	100 00
12 pungs	120 00
Shovels, picks and miscellaneous stock consisting of all kinds and sizes of iron, bad water pipe, meters, hydraulic machinery, boiler, hay and grain	310,000 00
	<hr/>
	<u>\$337,225 00</u>

Property in Charge of the Bridge and Ferry Division.— (Bridge Service.)

LOCATION.	ESTIMATED VALUE OF LAND.		Estimated Value of Buildings.	Total Value.
	Per Foot.	Total.		
SOUTH YARD AND STABLE. 170 Broadway extension, South Boston, 5,516 feet of land on Broadway extension and Dorchester avenue, on which is a brick building containing an office, workshop and stable; 918 square feet of this land was taken in 1912 for a convenience station.	\$1 75	\$9,600 00	\$15,000 00	\$24,600 00
LOCATION.	Estimated Value of Buildings.		Total Value.	
ATLANTIC AVENUE BRIDGE. Draw house, motor house and tool house.....	Draw house, \$1,400; motor house, \$500; tool house, \$100.		\$2,000 00	
BROADWAY BRIDGE. Draw house and one store house.....	Draw house, \$800; store house, \$200.....		1,000 00	
CHARLESTOWN BRIDGE. Draw house, electrical power room and six store houses *.....	Draw house, \$3,000; power room, \$1,000.....		4,000 00	
CHELSEA NORTH BRIDGE. Draw house.....	\$300.....		300 00	

* Five leased to M. P. Coleman for \$1,265 per year.

Property in Charge of the Bridge and Ferry Division.— (Bridge Service.)— *Concluded.*

LOCATION.	Estimated Value of Buildings.	Total Value.
CHELSEA SOUTH BRIDGE.	\$1,500	\$1,500 00
CONGRESS STREET BRIDGE.	Draw house, \$1,000; store house, \$100; shelter house, \$500.	1,600 00
COTTAGE STREET FOOTBRIDGE.	\$150	150 00
DOVER STREET BRIDGE.	Draw house, \$1,000; shelter houses, \$500	1,500 00
DORCHESTER AVENUE BRIDGE.	Draw house, \$1,000; motor houses, \$300; tool house, \$100; controller house, \$25.	1,425 00
GRANITE AVENUE BRIDGE.	\$100	100 00
L STREET BRIDGE.	Draw house, \$1,000; engine house, \$500	1,500 00
MALDEN BRIDGE.	\$2,000	2,000 00

MERIDIAN STREET BRIDGE.		
Draw house.....	\$2,500.....	2,500 00
NEPONSET BRIDGE.		
Tool house.....	\$150.....	150 00
NORTHERN AVENUE BRIDGE.		
Draw house, containing a power room and storage room for compressed air.....	\$4,500.....	4,500 00
SUMMER STREET BRIDGE.		
Draw house controller house and two shelter houses.....	Draw house, \$3,000; controller house, \$250; shelter houses, \$500.....	3,750 00
WARREN BRIDGE.		
Stable, draw house, containing an engine room and boiler room and a tool house.....	\$3,500.....	3,500 00
WESTERN AVENUE BRIDGE TO WATERTOWN.		
Tool house.....	\$200.....	200 00
CHELSEA STREET BRIDGE.		
Draw house.....	\$1,800.....	1,800 00

Property in Charge of Bridge and Ferry Division.—(Ferry Service.)

LOCATION.	ESTIMATED VALUE OF LAND.		Estimated Value of Buildings.	Total Value
	Per Foot.	Total.		
South Ferry, East Boston side located at the termination of Lewis street. On these premises are one headhouse with canopies, one workshop for carpenters, machinists and blacksmiths, one storehouse, one coal pocket, three piers which form the two slips, two drops and tanks, one wharf and dock.	* 33,198 at \$1.75 * 4,700 at 2.00 * 16,875 at 1.50 † 2,000 at 1.75	\$96,300 00	\$43,000 00	\$139,300 00
South Ferry, Boston side located at the termination of Eastern avenue. On these premises are one headhouse with canopies, one gate room, three piers which form the two slips and two drops and tanks.	2 00	51,100 00	75,000 00	126,100 00
North Ferry, East Boston side located at the termination of Border street. On these premises are one headhouse with canopies, one boiler, one coal pocket, three piers which form the two slips and two drops and tanks.	† 18,876 at 2.00 * 12,262 at 1.75	111,800 00	58,000 00	169,800 00
North Ferry, Boston side located at the termination of Battery street. On these premises are one headhouse with canopies, one gate room, three piers which form the two slips and two drops and tanks.	† 1,051 at 3.50 * 31,600 at 2.00	106,000 00	69,000 00	175,000 00
Eastern Avenue, No. 60, adjoining South Ferry Headhouse, Boston side. Upon this lot is a house and office building owned by Patrick J. Connolly.				

* Wharfs and docks.

† Solid.

Property in Charge of the Highway Division.—(Lighting Service.)

LOCATION.	Estimated Value of Land.	Estimated Value of Buildings.	Total Value.
Lot of land containing 8,000 square feet with brick building thereon, built in 1874, at 690 Albany street. This property is let to the Rising Sun Street Lighting Company at the rate of \$1,200 per year.	\$10,000 00	\$3,000 00	\$13,000 00

Property in Charge of the Highway Division.—(Paving Service.)

LOCATION.	ESTIMATED VALUE OF LAND.		Estimated Value of Buildings.	Total Value.
	Per Foot.	Total.		
SOUTH BOSTON. Columbia road, corner of H street, stable, carriage house, shed, tool house and office built by the city on land containing 12,917 square feet, rented from William H. Hart. Columbia road, corner Hamlin street, lot of land used for storage purposes, containing 6,710 square feet, rented from Charles P. Mooney, agent.	\$0 40	\$4,800 00	\$900 00	\$5,700 00
	25	1,700 00	.....	1,700 00
EAST BOSTON. † East Eagle street, corner Glendon street, sheds, stable and office building erected by the city on wharf property, containing 326,700 square feet, leased in 1910 from Renton Whidden for a term of one year. This property is used jointly with the Sewer, Sanitary, Street Cleaning and Watering Services.*	.....	129,700 00	13,300 00	143,000 00
CHARLESTOWN. Medford street, foot of Elm street, wharf property containing 44,700 square feet (Sur. Prog. 968), owned by the city. Upon this lot are a shed, stable and office building.	90	41,100 00	8,500 00	49,600 00
BRIGHTON. Union street, opposite Shepard street, lot of land containing 67,280 square feet, owned by the city. This lot is now in custody of Schoolhouse Commission. †	15	10,000 00	.....	10,000 00
Chestnut Hill avenue, ledge lot containing 569,776 square feet (L. 1 630), purchased in 1882 by the city. Upon this lot are stone crusher, stable, shed and office building and oil plant.	15	79,800 00	11,000 00	90,800 00

* These estates are only partly occupied by City of Boston.

† These estates are only partly occupied by the Paving Service.

‡ With privilege of extension.

Property in Charge of the Highway Division.—(Paving Service.)—Concluded.

LOCATION.	ESTIMATED VALUE OF LAND.		Estimated Value of Buildings.	Total Value.
	Per Foot.	Total.		
WEST ROXBURY. Child street, lot of land containing 43,024 square feet, owned by the city. Upon this lot are sheds, stable and office building. (See Sewer Service.) Mt. Vernon street, near Pleasant street, lot of land containing 16,275 square feet, belonging to the Schoolhouse Commission. Upon this lot is a stable and office building. Morton street, near Canterbury street, lot of land containing 14,484 square feet, owned by the city and used for storage purposes.	\$0 45	\$19,300 00	\$3,500 00	\$22,800 00
	15	2,400 00	3,000 00	5,400 00
	10	1,400 00	.....	1,400 00
DORCHESTER. Hancock street, opposite Bowdoin street, lot of land, known as the almshouse lot, containing 104,132 square feet, which belonged to the town of Dorchester at the time of annexation. Upon this land are two stables, office, shed and tool house, used in part by Street Cleaning Service. Downer avenue, lot of land containing 35,300 square feet, was purchased in 1871 to protect the almshouse lot. (Seven lots.)	18	19,000 00	8,000 00	27,000 00
	8c. and 10c.	3,300 00	.....	3,300 00
ROXBURY. Codman street, ledge lot containing 299,000 square feet, was purchased in 1870. Upon this lot is a shed containing steam engine and stone crusher, also a stable and tool house; 111,423 square feet additional bought in 1907 by the city. Highland street, lot of land containing 195,129 square feet, owned by the city. Upon this lot is a large brick stable erected in 1873-74 and used by the Sanitary Street-Cleaning and Paving Service; also a brick building used as a blacksmith shop and a shed for storage purposes. (See Sanitary Service.) Washington street, corner Dimock street, lot containing 134,671 square feet, owned by the city. Sold in 1913 for \$37,430.59.	05	20,600 00	3,000 00	23,600 00
	40	78,100 00	51,000 00	129,100 00
	25	33,700 00	.....	33,700 00

SOUTH END.

Albany street, No. 636, opposite Sharon street, wharf lot containing 63,200 square feet, owned by the city. Upon this lot are stables, office, blacksmith and carpenter shops.

Wharf lot adjoining the above, containing 39,511 square feet, owned by the city and used for storage purposes and receiving station for Sanitary Service. These wharves are owned by the city.

Massachusetts avenue, near Magazine street, lot of land containing 1,452,628 square feet, rented from New York, New Haven & Hartford Railroad Company and used for storage purposes.†

NORTH END.

Commercial street, No. 521, wharf lot containing 23,667 square feet, owned by the city. Upon this lot is a stable, shed and office building.

HYDE PARK.

Hyde Park avenue, lot containing 18,773 square feet, owned by the city. On this lot is an office, stable and shed.*

MILTON.

Brush Hill road, lot of land containing 64,523 square feet, leased May 13, 1843, by the town of Dorchester for a term of 999 years. Lot of land adjoining above, containing 30,000 square feet, owned by the City of Boston. These lots are not now in use.

* These estates are only partly occupied by the Paving Service.

† This estate is only partly occupied by the City of Boston.

1 25	79,000 00	1,800 00	80,800 00
90	35,800 00	6,200 00	42,000 00
80	1,162,100 00	24,900 00	1,187,000 00
2 35	55,300 00	15,700 0	71,000 00
1 00	18,800 00	22,200 00	41,000 00
.....	8,500 00	.....	8,500 00

Property in Charge of the Highway Division.— (Sanitary Service.)

LOCATION.	ESTIMATED VALUE OF LAND.		Estimated Value of Buildings.	Total Value.
	Per Foot.	Total.		
SOUTH BOSTON.				
H and Second streets, stable and sheds, containing 8,590 square feet. Leased from E. M. & M. J. Mahoney.	\$30 and \$40 (two lots).....			
EAST BOSTON.			*	
324 East Eagle street, sheds, stable and office building on wharf property, containing 326,700 square feet. (See Paving Service.)	.....		
DORCHESTER.				
South street, near Freeport street, lot of land taken in 1912 for refuse transfer station. Completed January 4, 1913.	37,990 feet valued as part of 78,458 feet at \$0.08	About \$3,000 00	\$71,333 00	\$71,333 00
ROXBURY.				
Massachusetts avenue and Southampton street, weighing shed containing about 2,500 square feet of land leased from the Boston Consolidated Gas Company.				
Ward street, northerly side near N. Y., N. H. & H. R. R. containing 12,500 square feet. See letter of Street Commissioner, January 6, 1914.				
Highland street, situated on the old almshouse block, containing 81,082 square feet. Upon this lot are stable, sheds, carriage house and oil plant, etc. A part of this stable and lot is used by the Paving Service and Street Cleaning and Oiling Service.*	.....			*

<p style="text-align: center;">SOUTH END.</p> <p>Albany street, No. 650, containing 90,800 square feet. Upon this lot are stables, buildings, sheds, veterinary hospital, blacksmith, wheelwright, paint and harness makers' shops, also a horseshoeing shop, used in part by the Street Cleaning and Sewer Services.</p>		114,000 00	29,000 00	143,000 00
<p>Albany street, No. 636, refuse transfer station which was completed March 21, 1913.*</p>		101,600 00	62,500 00	164,100 00
<p style="text-align: center;">NORTH END.</p> <p>Fort Hill Wharf, containing 20,750 square feet and used as a dumping station for the city's garbage and refuse. On this wharf a refuse transfer station was erected in 1912.</p>	<p>14,150 feet at \$12; 2,800 feet at \$3; 3,800 feet at \$1.50.</p>	183,900 00	1,000 00	184,900 00

* See Paving Service.

Property in Charge of the Highway Division.— (Street Cleaning and Oiling Service.)

LOCATION.	ESTIMATED VALUE OF LAND.		Estimated Value of Buildings.	Total Value.
	Per Foot.	Total.		
SOUTH BOSTON. Stable at 162 West Second street, leased by the city from R. S. Brine Transportation Company at \$1,000 per year.	\$0 75			
EAST BOSTON. Part of stable on East Eagle street. (See Paving Service.)				
CHARLESTOWN. Part of stable at 263 Rutherford avenue; office building, Rutherford avenue; stable at 245-249 Rutherford avenue, now occupied, under lease, by Timothy F. Callahan.	60	\$17,700 00	\$8,300 00	\$26,000 00
ROXBURY. Oil plant and part of stable on Highland street. (See Sanitary Service.)				
SOUTH END. Part of stable at 650 Albany street. (See Sanitary Service.)				
BACK BAY. Land at 62 Piedmont street, rented by city from Laurence Minot at \$10 per month; booth loaned by Election Commissioners used as an office on above land.	3 00			
West End. Brick building, 47 Winchester street, leased for \$600 per year from Eleanor W. Daggett.....	2 62½			
DORCHESTER. Oil plant in Sewer Service yard on Gibson street. (See Sewer Service.)				
BRIGHTON. Oil plant in Paving Service yard on Chestnut Hill avenue. (See Paving Service.)				

Property in Charge of Sewer and Water Division.— (Sewer Service.)

LOCATION.	Estimated Value of Land.	Estimated Value of Buildings.	Total Value.
<p>EAST BOSTON.</p> <p>East Eagle street, yard and buildings leased from Renton Whidden, part of rental paid by this service. (See Paving Service.)</p>			
<p>BRIGHTON.</p> <p>Yard, Western avenue. (See Water Service.)</p>			\$22,800 00
<p>WEST ROXBURY.</p> <p>Child and South streets, yard and buildings occupied in common with Paving Service. (See Paving Service).....</p>	\$19,300 00	\$3,500 00	
<p>DORCHESTER.</p> <p>Old Harbor Point, land and buildings, including pumping station, 224 acres; 45,729 square feet, more or less, on the westerly side of Mt. Vernon street exchanged with the Boston Consolidated Gas Company for 51,000 square feet, more or less, on the easterly side of Mt. Vernon street.</p>	138,000 00	675,000 00	813,000 00
<p>SOUTH END.</p> <p>Gibson street, land, buildings and oil plant eased from trustees of Gibson School Fund, buildings erected by Sewer Service, 42,000 square feet; this property is used jointly by Sewer and Water Services.</p>	7,000 00	5,000 00	12,000 00
<p>ALBANY STREET.</p> <p>Albany street, No. 678, yard and buildings, 42,000 square feet.....</p>	56,400 00	3,000 00	59,400 00
<p>MASSACHUSETTS AVENUE.</p> <p>Massachusetts avenue, near Albany street, land and buildings, 7,385 square feet.....</p>	5,200 00	500 00	5,700 00
<p>BACK BAY.</p> <p>Gainsborough street, lot of land with buildings leased from the Boston Elevated Railway Company, 28,000 square feet.</p>			
<p>BACK BAY FENS.</p> <p>Gate house.....</p>			12,000 00
<p>MOON ISLAND AND SQUANTUM.</p> <p>Land, buildings and reservoirs. Upland in Squantum, 19.5 acres; upland on Moon Island, 37.65 acres; flats about Moon Island and Squantum, 131 acres.</p>			

Property in Charge of Sewer and Water Division.— (Water Service.)

LOCATION.	ESTIMATED VALUE OF LAND.		Estimated Value of Buildings.	Total Value.
	Per Foot.	Total.		
EAST BOSTON.				
Eagle Hill Reservoir, with a capacity of 5,600,000 gallons. Area of property, 220,875 square feet,	\$0 30	\$66,300 00	\$400 00	\$66,700 00
Condor street, formerly East Boston pumping station, now used as district headquarters and containing 40,000 square feet filled and 78,000 square feet flats.....	25,000 at \$0.60 93,000 at \$0.15	15,000 00 13,900 00	8,000 00	36,900 00
High service tank, Orient Heights, capacity 122,000 gallons. Area of property, 11,394 square feet.	0 10	1,100 00	5,000 00	6,100 00
CHARLESTOWN.				
Medford street, corner Tufts street, containing 13,050 square feet. Upon this lot are a work-shop and stable.	50	6,500 00	4,000 00	10,500 00
BRIGHTON.				
Western avenue, lot of land containing 135,350 square feet.....		9,200 00	5,500 00	14,700 00
WEST ROXBURY.				
Mount Bellevue, high tank service, with a capacity of 122,000 gallons. Area of property, 2,455,062 square feet.	02	49,100 00	10,000 00	59,100 00
Washington street and Metropolitan avenue, lot of land and pumping station. Area of property, 12,895 square feet.	14	1,800 00	8,000 00	9,800 00
DORCHESTER.				
Gibson Street, land and buildings. See Sewer Service.				
ROXBURY.				
Heath and Lawn streets, strip of land containing 5,707 square feet.....	25	1,425 00		1,425 00

SOUTH END.

Albany street, No. 710, containing 98,100 square feet. Upon this lot are a machine shop, stable, wharf and pipe yard.

HYDE PARK.

Fairmount Reservoir, with a capacity of 1,500,000 gallons.*	.....	91,000 00	117 000 00	208,000 00
Fairmount standpipe, with a capacity of 500,000 gallons. Area of property, 6.35 acres.....	04	8,200 00	15,000 00	23,200 00
Water street, pumping station and lot of land. Area of property, 934,951 square feet.....	05	46,700 00	5,000 00	51,700 00
Sprague street, bordering Sprague Pond, lot of land containing 16,128 square feet.....	.....	500 00	.....	500 00

BROOKLINE.

Fisher Hill Reservoir, with a capacity of 15,400,000 gallons. Area of property, 459,670 square feet.†

Pipe route, from Beacon street to Boylston street. Area of property, 163,000 square feet.....

WINTHROP.

Strip of land at Point Shirley containing 7,725 square feet.....

DEDHAM.

Paradise lane, containing 12.5 acres. Upon this lot is a pumping station.....

.....	7,000 00	2,000 00	9,000 00
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* 206,020 square feet in Boston, balance in Milton.

† Sold to Metropolitan Sewerage and Water Board, June 10, 1913, for \$150,000.

EMPLOYEES.

The following tables show the number of requisitions made on the Civil Service Commission for men; the number appointed, reinstated, died, resigned, discharged and retired; also the grade and number of employees in the department:

Requisitions made on the Civil Service Commission	64
Requisitions canceled	5
Certifications returned, no selection made	4
Number of men called	120
Number of men certified	215
Number of men appointed	113
Provisional appointments made permanent	22
Applications made for promotions	20
Promotions allowed	12
Promotions allowed provisionally	8
Requests for permission to reinstate	25
Reinstatements allowed	* 20
Reinstatements not allowed	5
Number of men resigned	14
Number of men discharged	38
Number of men died	87
Number of Civil War veterans retired	17
Number of laborers retired	50
Number of transfers to other departments	14
Number of transfers from other departments	45

The records of the department show that there are now 3,370 persons eligible for employment in the several divisions and of that number 3,223 were upon the January, 1914, pay rolls.

* Fourteen of these men were on the eligible list February 1, 1913.

Grade and Number of Employees.

TITLE.	DIVISIONS.									Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Lamp.	Water.	
Commissioner.....	1									1
Division engineers.....		1					1		1	3
Chief clerk.....	1									1
Clerks.....	42	17	8	3	1		1	2	33	107
Messengers.....	2	3	1		1				2	9
Chief engineers (civil).....		1	1							2
Assistant engineers (civil).....		11	29				16		8	64
Draughtsmen.....		1	16				3		3	23
Instrumentmen.....		3	16				2		4	25
Rodmen.....		9	33				5		7	54
Axeman.....		1								1
Inspectors.....		43	48	42	40		3	5	43	224
Foremen.....		10	7	7	9				14	47
Subforemen.....		37	6		8		2			53
Addressograph printer.....									1	1
Blacksmiths and assistants.....		9	2	17					2	30
Boilermaker.....						1				1
Bracers and assistants.....			70							70
Blueprinters.....			1				1			2
Boys.....	1	3	1			1	1		1	8
Chauffeurs.....	1	2	5	3	3		3	1	5	23
Carpenters and assistants.....		17	8	5		3	12		9	54
Caretakers.....							2			2
Chief inspectors.....		1	1		1				2	5
Claim agent.....	1									1
Cement testers and assistants.....			2							2
Coal passers.....			7							7
Cashier.....						1				1
Drawtenders and assistants.....							148			148
Deckhands.....						31				31
Derrickmen.....									2	2
Driver.....		1								1
<i>Carried forward.....</i>	49	170	262	77	63	37	200	8	137	1,003

Grade and Number of Employees.— *Continued.*

TITLE.	DIVISIONS.									Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Lamp.	Water.	
<i>Brought forward</i>	49	170	262	77	63	37	200	8	137	1,003
Dumpers.....				1	3					4
Elevatorman.....									1	1
Engineers (steam).....		12	15			12			1	40
Electricians.....		1	1			1	1			4
Firemen.....		1	7		3	42			2	55
Gatemen.....			6			16			4	26
General foremen.....				1	2	1			2	6
Harnessmakers and assistants.....				9						9
Horseshoers.....				7						7
Inspectors, castings.....									2	2
Janitors (scrub).....		1		1		6	1		2	11
Janitresses.....						6				6
Joiners.....						3				3
Laborers and helpers.....		304	150	187	276	6			163	1,086
Lamplighters.....						2		2		4
Machinists and assistants.....			4				1		19	24
Meter testers.....									4	4
Meter readers.....									19	19
Masons (stone and brick).....			15							15
Medical inspectors.....		1		1						2
Oilers.....			15			12				27
Patternmaker.....									1	1
Pavers and assistants.....		73							1	74
Plumbers and assistants.....				1					48	49
Painters.....		1	1	11		2	3			18
Pilots.....						12				12
Property inspector.....	1									1
Quartermasters.....						12				12
Repairers.....									45	45
Roofers.....						1			1	2
Rammers.....		36								36
Rigger.....						1				1
<i>Carried forward</i>	50	600	476	296	347	172	206	10	452	2,609

Grade and Number of Employees.— *Concluded.*

TITLE.	DIVISIONS.									
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Lamp.	Water.	Total.
<i>Brought forward</i>	50	600	476	296	347	172	206	10	452	2,609
Sealers.....									2	2
Sewer flushers.....			3							3
Supervisors.....		1		1			2	1		5
Steamfitters.....			1			1				2
Stenographers.....	2	2	1			1	1			7
Stonecutters.....		16	2						1	19
Superintendents.....			1						1	2
Storekeeper.....						1				1
Stockkeepers.....				1					3	4
Stablemen.....		27	8	36	27		5		13	116
Tallymen.....				2						2
Tankman.....						1				1
Teamsters.....		77	16	181	130				27	431
Telephone operators.....	2								1	3
Tollmen.....						12				12
Toolmen.....		4								4
Chief veterinarian.....		1								1
Watchmen.....		30	21	16	5		5	1	12	90
Weighers and assistants.....		3		3						6
Wharfingers and assistants.....		1		4						5
Wheelwrights and assistants.....				5						5
Yardmen.....		9	5	13	6				7	40
Totals.....	54	771	534	558	515	188	219	12	519	3,370

**Comparative Table Showing the Number of Employees Actually
Employed February 1, 1913, and February 1, 1914.**

	Central Office.	Bridge.	Ferry.	Lamp.	Paving.	Sanitary.	Sewer.	Street Cleaning and Watering.	Water.	Total.
February 1, 1913.	56	212	179	11	739	571	528	474	509	3,279
February 1, 1914.	54	214	182	12	733	546	506	484	492	3,223

Total Eligible Force.

February 1, 1913.	56	217	186	11	773	596	553	496	538	3,426
February 1, 1914.	54	219	188	12	771	558	534	515	519	3,370

Table of Employees Showing Appointments, Transfers, Resignations, Retirements, Deaths, etc.,
During the Year.

Died.	Retired Laborers.	Retired Veterans.	Transferred to Other Departments.	Transferred to Other Services.	Resigned.	Discharged.	February 1, 1913.	SERVICES, 1913-14.	January 31, 1914.	Transferred from Other Services.	Transferred from Other Departments.	Reinstated.	Appointed.
		1	1	1	1		56	Central Office.....	* 54	1			1
6		3		4	3	2	217	Bridge.....	219	5			15
6	3	2	1	5	2	2	186	Ferry.....	188	15			8
							11	Lighting.....	12	1			
17	16	2	2	24	1	7	773	Paving.....	771	53	6	1	7
14	9	2	3	45	3	8	596	Sanitary.....	558	31	4	3	8
11	7	1	3	59		8	496	Street Cleaning.....	515	38	35	1	34
15	5	3	2	19	1	4	553	Sewer.....	534	14		1	15
18	10	3	2	9	3	7	538	Water.....	519	8			25
87	50	17	14	166	14	38	3,426	Totals..	3,370	166	45	6	113

* Includes eight Central Office employees who are paid on Water Service pay roll.

REPORT OF EXAMINING PHYSICIANS.

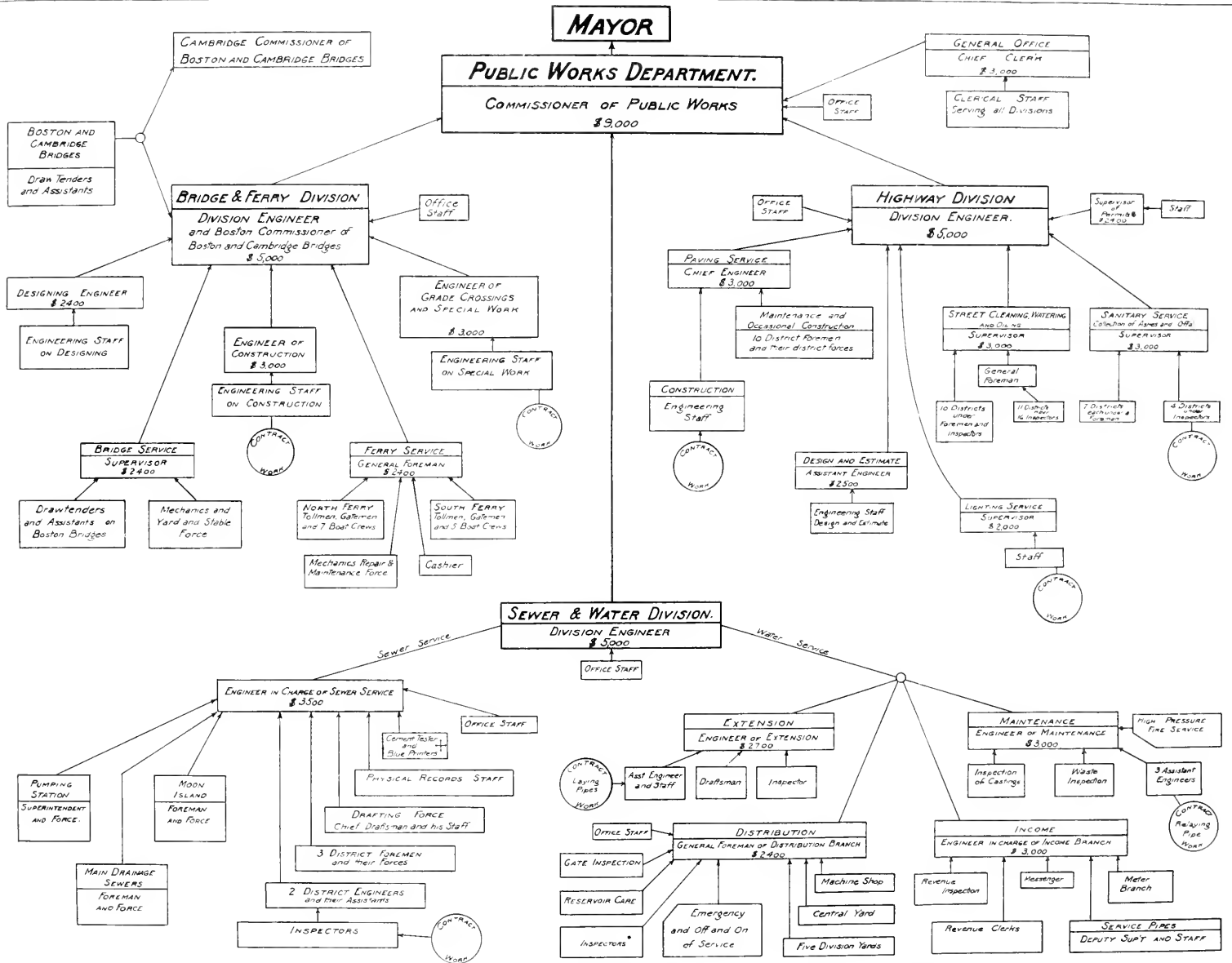
Number of accidents to employees reported	398
Number of employees examined for retirement	10
Number of employees treated	573

REPORT OF CHIEF VETERINARIAN.

Horses died	17
Horses condemned and killed	21
Horses sold at public auction	20
	—
Horses bought	58
	57

Respectfully submitted,

L. K. ROURKE,
Commissioner of Public Works.



† These men do cement testing and blue printing for all divisions.

* These men inspect also the contract work under "Extension" and "Maintenance".

PART II.

APPENDICES.

APPENDIX A.

Appropriation	\$80,000 00				
Transferred from Highway Division	159 50				
					<u>\$80,159 50</u>
Salary, commissioner	\$9,000 00				
Salaries, clerks, stenographers	60,836 94				
Automobile expense:					
Wages of chauffeur	\$1,113 00				
Electric light at garage	10 75				
Gasolene *	385 87				
Oil soap and grease	37 10				
Tubes, cases, repairs					
and supplies,	540 44				
Registration	15 50				
				2,102 66	
Books, papers and office expense	437 77				
Stationery	742 41				
Telephones, rentals and calls	2,981 22				
Printing	3,173 76				
Postage	384 11				
Travel expense	200 63				
Expert services, real estate	300 00				
				<u>\$80,159 50</u>	

* \$76.93 furnished other Service (452 gallons).

APPENDIX B.

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

BOSTON, February 2, 1914.

MR. L. K. ROURKE,

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 1913.

The expenditures of the division in the regular maintenance appropriations of the department were \$566,894.91, as against an appropriation and revenue of \$598,189.63, leaving a surplus for the year of \$31,294.72.

In addition to the regular maintenance work the division supervised the expenditure of \$290,370.51 under a number of special appropriations, mainly for the construction of bridges, making the total expenditures for the year under appropriations credited to the Bridge and Ferry Division \$857,265.42. This figure does not include the cost of widening and rebuilding Pleasant Street Bridge, which was paid for out of a special appropriation under the Highway Division, nor the expenditures on grade crossings and on work of other departments supervised by the division engineering staff.

BRIDGE SERVICE.

There are in Boston 186 highway bridges, of which 117 are maintained wholly or in part from the appropriation for the Bridge and Ferry Division, 45 are maintained wholly by the railroad corporations, 22 by the Park and Recreation Department and 2 by the Metropolitan Park Commission.

In addition to the usual work of maintenance on the bridges in its care this division has supervised during the year a considerable amount of new construction work on bridges, etc., principally as follows:

*Chelsea Bridge (over North Channel of Mystic River).—*The work of rebuilding this bridge, begun under contracts made in 1912, was substantially completed during the year. In the old bridge there was a single waterway, 60 feet in width, situated in an unsatisfactory location near the Chelsea shore. Acting under an order of the War Department the city has now provided through the bridge two waterways, each 125 feet in width, dredged to a depth of 30 feet at low water, thus opening up the Mystic River Basin to navigation by the largest vessels that can ever enter that estuary. This work necessitated the building upon a permanent masonry pier of a new steel draw span 363 feet long and 60 feet wide, weighing over 1,400 tons, this being the largest draw span in this part of the country. The remainder of the bridge, a pile structure, was rebuilt only so far as was necessary to conform to the new draw span. The reconstructed bridge was opened to travel May 28, 1913. (For a detailed description of this work see page 108).

*Chelsea Bridge (over South Channel of Mystic River).—*For a number of years the old draw span of this bridge, built in 1877, has been inadequate for highway travel, necessitating rigid traffic restrictions, which result in frequent blockades to the highway travel in rush hours. A permanent new bridge is needed extending from the Charlestown shore at the Navy Yard to Mystic Wharf. As a preliminary step to the building of a permanent new structure an appropriation of \$75,000 was made for the construction of a temporary bridge alongside the existing bridge. A contract for the temporary bridge was made August 15, 1913. Work was begun September 8, 1913, and is still in progress. (See page 92.)

Apportionment of Cost of Bridges Between Boston and Chelsea.—Under an act of the Legislature (chapter 581 of the Acts of 1911, supplemented by chapter 341 of the Acts of 1913) the cost of the reconstruction of Chelsea Bridge, noted above, and of Meridian Street Bridge, rebuilt in 1912, which has been wholly borne by the City of Boston, is to be apportioned in part by a special commission upon the city of Chelsea, other cities and towns specially benefited, and the street railway companies using the bridges. An important part of the work of the engineering staff of this division has been the preparation and presentation, under the direction of the Corporation Counsel, of evidence in the city's case on this apportionment, on which hearings were begun in April, 1913, and were not concluded until January, 1914.

Broadway Bridge (over Fort Point Channel). The greater part of this bridge was rebuilt in 1901-04, but at that time the old draw span, built in 1874-75, was continued in service, and had reached a condition such that its rebuilding is now necessary. On November 20, 1913, a contract was made for rebuilding the draw span and the masonry pier upon which it rests, and work on the new steel structure is now in progress at the mills and shops. It is expected that the new draw span will be completed during the summer of 1914.

Winthrop Bridge.—The reconstruction of Winthrop Bridge, which for some time has been an urgent necessity, was authorized by the Legislature under chapter 412 of the Acts of 1913, which provides that the City of Boston shall do the work, and that the cost of rebuilding the bridge shall be apportioned between Boston and Winthrop. Plans have been prepared and approved by the Directors of the Port of Boston, but the approval of the Secretary of War is still pending. A contract for the rebuilding of this bridge will be let as soon as the Federal license is obtained.

L Street Bridge.—The work of repairing L Street Bridge, begun in 1912, was completed September 3, 1913. This involved the complete rebuilding of the floor of the pile bridge and the strengthening of same to provide for street car traffic, the cost of strengthening being borne by the Boston Elevated Railway Company. An electric motor was substituted for steam power for the operation of the draw span. (For a detailed description of this work see page 111.)

Pleasant Street Bridge.—Pleasant Street Bridge, over the southerly entrance to the Tremont Street Subway, was widened and rebuilt during the year in connection with the widening of that street. (See page 112.)

Lawndale Terrace Subway.—The construction of a subway for foot travel, under the Providence Division of the New York, New Haven & Hartford Railroad, at Lawndale terrace, Jamaica Plain, begun in 1912, was completed on March 28, 1913.

Public Boat Landings.—During the year two temporary public boat landings, one at Northern Avenue Bridge, the other at Summer Street Bridge, in Fort Point channel, were completed and opened to public use.

Abolishment of Grade Crossings.—The work on the abolishment of the grade crossing on Saratoga street, East Boston, by the Boston, Revere Beach & Lynn Railroad, begun under a decree of the Superior Court in 1912, continued through the year until its completion on December 6, 1913. A verification of the accounts of the cost of the work for submission to the auditor appointed by the Court to apportion the expense is now in progress. (See, also, Saratoga Street Bridge, page 112.)

FERRY SERVICE.

A system of checking the collection of tolls from team traffic was put in operation during the year, and by its introduction approved business methods are now in effect in connection with the financial administration of the ferries. During the year the work of repairing ferry landings, under a special appropriation previously made, was completed and an unusually large amount of repair work to the ferryboats was done. Taken as a whole, the condition of the ferry plant shows marked improvement over former years.

The Directors of the Port of Boston have taken the old Eastern Railroad pier property, adjoining the South Ferry landing in East Boston, and they propose to deepen the dock next the ferry property by dredging. As this will undermine the ferry coal pocket and as part of the southerly ferry slip is needed for entrance to the proposed new dock, some rearrangement of the East Boston ferry landings will have to be made before the improvements contemplated by the Directors of the Port can be carried out, and plans for changes in these ferry landings are now under consideration.

RECOMMENDATIONS FOR 1914.

Bridge Service.— During the coming season a considerable amount of repair work on bridges should be done by contract in addition to the ordinary repairs made by the maintenance force of the division. For this purpose an appropriation was requested in the budget estimates of 1914 of \$108,000 for the repair of thirty-three City of Boston bridges and \$19,000 for Boston's share of necessary repairs on bridges under the charge of the Boston and Cambridge Bridge Commission. This money should be provided either as a part of the regular department appropriation or as a special appropriation. Of this total amount of \$127,000, \$57,000 is required for cleaning and painting steel structures. Failure to keep bridges properly painted, particularly in the case of steel bridges over railroads, is a most wasteful policy, as has been proven in the past in the case of Boylston Street Bridge over the Boston & Albany Railroad, which had to be entirely rebuilt in 1907 after eighteen years' service because of the excessive deterioration of the steel members from corrosion.

In addition to the above repair work on bridges, Hyde Park Avenue Bridge over Mother brook (Ward 26) should be entirely rebuilt, and the flooring of Warren Bridge, which has been in service for thirty-one years, should be renewed. Consideration should also be given to the necessity of rebuilding Congress Street Bridge across Fort Point channel, particularly in view of the large increase in teaming traffic between the city proper and the Commonwealth and fish piers on the South Boston waterfront.

The building of a permanent structure in the portion of Chelsea Bridge over the south channel of the Mystic river will shortly have to be provided for. The temporary bridge, now under construction, will replace the existing draw span which is now unsafe for heavy loads, but, because of its narrow width, it will not be adequate to reasonably accommodate the large volume of street car and team traffic using this important thoroughfare.

Ferry Service.— In the Ferry Service the most important matter is the provision for a new ferryboat in place of the old ferryboat "D. D. Kelly," which has been in service since 1879. The United States Government inspectors have cut down the allowable boiler pressure from the original limit of 40 pounds to 25 pounds, which

is the minimum pressure on which the boat can be safely operated. At any time the inspectors are liable to condemn the boat or to order a still further reduction in the allowable boiler pressure, which will be virtually a condemnation so far as service on the East Boston ferries is concerned. An appropriation for a new boat should be made early in 1914, as nearly a year will be required for its construction.

A special appropriation should also be made for rebuilding during the fall and winter of 1914 the south fender pier at the North Ferry, East Boston, and the south fender pier at the South Ferry, East Boston, both of which are in poor condition.

The ferryboat "Hugh O'Brien" will have to be extensively repaired, involving the entire renewal of the roadway deck and such timbers as may be found in a decayed condition. On the ferryboats "Noddle Island" and "Governor Russell" the circulating pumps and surface condensers are in poor condition and should be replaced by new pumps with jet condensers, similar to that just installed on the "General Sumner." All four headhouses should be painted, two drops at the North Ferry should be paved and a new tank should be provided at the North Ferry, East Boston.

Provision for this maintenance repair work on the ferries has been made in the department recommendations for the budget for the ensuing year.

REPORT IN DETAIL.

A detailed report of the operation and expenditures of the Bridge and Ferry Division during the year, including a statement of the financial activities of the division, exclusive of the cost of work supervised for other departments or divisions, is appended herewith.

Respectfully submitted,
FREDERIC H. FAY, *Division Engineer.*

BRIDGE AND FERRY DIVISION.

FINANCIAL STATEMENT.

Receipts.

Appropriation		\$597,000 00	
Revenue:			
Bridge Service	\$289 63		
Ferry Service	900 00		
		<u>1,189 63</u>	
			<u>\$598,189 63</u>

Expenditures from Maintenance Appropriation.

Bridge Service:			
City of Boston bridges	\$271,423 04		
Bridges in charge of Boston and C a m b r i d g e Bridge Com- mission	17,744 48		
Total charged to Bridge Service,	\$289,167 52		
Ferry Service	277,727 39		
		<u>\$566,894 91</u>	
Total expenditures under approp- riation		\$566,894 91	
Transferred:			
To Highway Division	30,000 00		
Balance unexpended	1,294 72		
			<u>\$598,189 63</u>

Total Expenditures.

Bridge Service:			
Expenditures from maintenance appropriation, as above	\$289,167 52		
Expenditures charged to special appropriations (new construc- tion, contract repair work, etc.),	282,838 00		
Total amount expended on bridges		\$572,005 52	
Ferry Service:			
Expenditures from maintenance appropriation, as above	\$277,727 39		
Carried forward	\$277,727 39		\$572,005 52

<i>Brought forward</i>	\$277,727 39	\$572,005 52
Expenditures charged to special appropriation for Ferry Landings, Repairs	7,532 51	
	<hr/>	
Total amount expended on ferries		285,259 90
		<hr/>
Total expenditures by Bridge and Ferry Division, exclusive of expenditures for grade crossings and of work supervised by the division engineering staff but paid for out of appropriations of other departments or divisions		<u>\$857,265 42</u>

BRIDGE SERVICE.

At the close of the fiscal year 1913-14 there are in the City of Boston 186 highway bridges, not including culverts. Six of these bridges, namely, Brookline Street, Cambridge, Cambridge Street, Harvard, Prison Point and Western Avenue to Cambridge, all connecting Boston and Cambridge (the four latter being draw bridges) are in charge of two commissioners, one of whom is appointed by the Mayor of Boston and the other by the Mayor of Cambridge. One-half the cost of the maintenance of these six bridges is paid by the City of Boston out of the appropriation for the Bridge and Ferry Division, and the division engineer of that division is the commissioner for the City of Boston in charge of these bridges. The Anderson Bridge at Soldiers Field, replacing the North Harvard Street Bridge, between Boston and Cambridge, is now being constructed under the direction of the Metropolitan Park Commission, and upon its completion will be maintained by the Boston and Cambridge Bridge Commission. The report of the Commissioner for the Boston and Cambridge bridges will be found in Appendix E. The Charles River dam, on the site of the old Canal or Craigie Bridge, and Mattapan Bridge are in charge of the Metropolitan Park Commission. One hundred and thirty-nine bridges are supported wholly or in part by the City of Boston, twenty-four of these being over navigable waterways and provided with draws. Forty-five highway bridges are supported entirely by railroad corporations.

There are sixteen important drawbridges wholly maintained by the City of Boston, namely, Broadway,

Chelsea South, Congress Street and Warren, operated by steam; Atlantic Avenue, Charlestown, Chelsea North, Chelsea Street, Dorchester Avenue, Dover Street, L Street, Malden, Meridian Street, Neponset and Summer Street, operated by electricity; and Northern Avenue, operated by compressed air, the compressors being run by electricity.

EXPENDITURES ON BOSTON BRIDGES.

(1.) Administration:

Salaries:

Division engineer *	\$2,500 00
Supervisors	3,949 17
Engineers and draftsmen,	24,303 64
Stenographer	1,050 57
Messenger	318 00

 \$32,121 38

Pensions paid to veterans of Civil War, retired

4,292 25

Pay allowed for holidays 610 10

Pay allowed for injuries to employees 137 50

Printing, postage and stationery 1,005 90

Advertising 125 50

Telephones 306 76

Traveling expenses 446 28

Engineers' office supplies, etc. 893 81

 \$39,939 48

(2.) On Bridges:

Salaries of drawtenders and caretakers

\$142,067 80

Extra help on bridges 140 00

 \$142,207 80

Light 1,110 27

Fuel 3,176 37

Electric power 3,698 85

Sand 41 66

Water 107 56

Oil 1,176 01

Tools, hardware and supplies 2,219 78

Furnishings 164 64

Building repairs, etc. 602 72

Ironwork and machine repairs 9,369 46

General repairs, fences, piers, foundations, etc. (outside of department force) 1,367 87

General repairs on machinery, roadways, fences, etc. (by department mechanics):

Labor, carpenters, painters, watchmen, electrician and machinist \$22,314 24

Labor, removing snow and cleaning bridges 1,200 14

 \$23,514 38

Lumber 21,888 84

Paint stock 455 37

 Carried forward \$45,858 59 \$165,242 99 \$39,939 48

* One-half salary; remainder paid by Ferry Service.

<i>Brought forward</i>	\$45,858 59	\$165,242 99	\$39,939 48
Paid railroad company's for flagmen	175 71	46,034 30	
		<u>211,277 29</u>	
(3.) Public Landings: Rent, East Boston public landing			366 63
(4.) Yard and stable:			
Yard: Employees:			
Clerk, janitor and watch- men	\$2,587 76		
Light	118 70		
Fuel	194 79		
Repairing, building, etc.,	325 75		
Catch-basin	198 29		
		<u>\$3,425 29</u>	
Stable:			
Employees: Stablemen and teamster	\$4,345 50		
Feed and straw	983 45		
Veterinary	61 50		
Shoeing and clipping	292 95		
Wagons and harness	1,138 27		
Stable supplies	58 78		
New horses	454 63		
		<u>7,334 58</u>	
			10,759 87
(5.) Automobiles:			
New: Truck		\$3,100 00	
Maintenance:			
Division engineer:			
Wages, chauffeur (part)	\$774 00		
Storage	240 00		
Repairs and s u p- plies	1,036 29		
Oil	45 10		
Gasolene	173 23		
Tires and tubes:			
New	\$305 19		
Repairs,	42 25		
	<u>347 44</u>		
		<u>\$2,616 06</u>	
Supervisor:			
Wages, chauffeur,	\$993 21		
Storage	135 00		
Repairs, supplies, oil, etc.	362 37		
Gasolene	98 98		
Tires and tubes:			
New	\$349 60		
Repairs,	47 35		
	<u>396 95</u>		
		<u>1,986 51</u>	
Truck:			
Wages, chauffeur,	\$824 00		
Repairs and s u p- plies	106 20		
Oil	53 05		
	<u>\$983 25</u>		
<i>Carried forward</i>	\$4,602 57	\$3,100 00	\$262,343 27

<i>Brought forward</i>	. . . . .	\$983 25	\$4,602 57	\$3,100 00	\$262,343 27
Gasolene	. . . . .	20 74			
Tires and tubes:					
New	. . . . .	\$295 56			
Repairs,	77 65				
		<u>373 21</u>			
			<u>1,377 20</u>		
				<u>5,979 77</u>	
					<u>9,079 77</u>

Total expenditures on City of Boston bridges \$271,423 04

Summary:

(1) Administration	. . . . .	\$39,939 48
(2) Bridges	. . . . .	211,277 29
(3) Public landings	. . . . .	366 63
(4) Yard and stable	. . . . .	10,759 87
(5) Automobiles	. . . . .	9,079 77
Total	. . . . .	<u>*\$271,423 04</u>

EXPENDITURES UNDER SPECIAL APPROPRIATIONS DURING FISCAL YEAR 1913-14.

ASHLAND STREET BRIDGE.

Labor, Paving Service, building approaches.	. . . . .	\$330 00
Amount paid Boston Bridge Works under contract for building sidewalks	. . . . .	<u>1,427 00</u>
		<u>\$1,757 11</u>

Total expended to January 31, 1914, \$1,801.61.

BROADWAY BRIDGE, REBUILDING.

Engineering	. . . . .	\$3,377 29
Printing	. . . . .	107 70
Advertising.	. . . . .	<u>11 70</u>
		<u>\$3,496 69</u>

Total expended to January 31, 1914, \$4,150.71.

CHELSEA BRIDGE NORTH.

Engineering	. . . . .	\$4,691 50
Inspection	. . . . .	1,815 84
Rent of wharf for temporary bridge	. . . . .	900 00
Reporting hearings	. . . . .	579 90
Two Norton jacks	. . . . .	443 34
Services of diver	. . . . .	33 40
Photographs and prints	. . . . .	98 13
Supplies for engineers' field office	. . . . .	16 75
Travel expenses	. . . . .	190 21
Shop inspection of material	. . . . .	323 45
Curbs, scuppers, etc.	. . . . .	127 26
Installing machinery:		
Lundin Electric Company	. . . . .	\$225 00
J. H. Long Machinery Company,	. . . . .	962 34
Cutler-Hammer Manufacturing Company	. . . . .	<u>14 67</u>
		<u>1,201 95</u>

Carried forward \$10,421 73

* Does not include bridges under charge of Boston and Cambridge Bridge Commission. (See Appendix E, page 489.)

<i>Brought forward</i>	\$10,421 73	
Water pipe tunnel:		
Lawler Brothers	\$442 00	
Metropolitan Water and Sewer Board	\$35 63	
	<hr/>	1,277 63
Bay State Dredging Company		1,019 40
Lighting and heating apparatus:		
Herbert S. Potter lighting apparatus	\$1,827 08	
Heating apparatus	514 90	
	<hr/>	2,341 98
Amount paid Boston Bridge Works under contract for building superstructure:		
Contract items	\$121,691 71	
Less amount paid in 1912	13,600 00	
	<hr/>	109,091 71
Amount paid Boston Bridge Works for miscellaneous repairs		973 89
Amount paid George T. Rendle under contract for rebuilding bridge:		
Contract items	\$156,663 36	
Extra work under order April 5, 1912	2,188 00	
Extra work under order April 10, 1912	2,766 79	
Extra work under order July 1, 1912	1,409 89	
Extra work under order September 19, 1912	13,591 32	
	<hr/>	\$176,619 36
Less 15 per cent on \$84,144.11	12,621 62	
	<hr/>	\$163,997 74
Less amount paid in 1912	141,257 82	
	<hr/>	22,739 92
Amount paid W. E. Litchfield for completion of Rendle contract for rebuilding bridge	\$15,069 72	
Less 15 per cent	2,260 46	
	<hr/>	12,809 26
Amount paid W. E. Litchfield, miscellaneous work		386 52
		<hr/>
		\$160,368 03
Total expended to January 31, 1914, \$380,294.55.		

CHELSEA BRIDGE SOUTH.

Engineering	\$3,495 84	
Inspection	680 50	
Advertising and printing	78 91	
Travel expenses	25 42	
Miscellaneous supplies, etc.	5 00	
Amount paid Rendle & Stoddard under contract for building temporary bridge	\$34,190 00	
Less 15 per cent	5,128 50	
	<hr/>	29,061 50
		<hr/>
		\$33,347 17
Total expended to January 31, 1914, \$33,347.17.		

MERIDIAN STREET BRIDGE.

Inspection	\$377 06	
Reporting hearings	190 20	
Photographs	43 75	
Electric machinery (J. H. Long Machine Company)	1,006 90	
Amount paid Cutler-Hammer Manufacturing Company, testing electric machinery	136 74	
Miscellaneous repairs, Lawler Brothers	674 52	
W. H. Ellis, cleaning up flats	150 00	
Amount paid Lawler Brothers under contract for rebuilding draw span, pile bridge, etc.	\$128,152 90	
Extra work under orders of:		
December 21, 1911	255 50	
December 28, 1911	225 00	
February 13, 1912	11,997 73	
May 24, 1912	2,430 00	
June 1, 1912	6,713 98	
January 15, 1913	541 69	
	<hr/>	
	\$150,316 80	
Less amount paid, 1912	132,717 35	
	<hr/>	17,599 45
Amount paid Laskey & McMurrer under contract for heating apparatus		230 00
Amount paid M. S. Kelleher for constructing drawtenders' house	\$2,259 00	
Extra work under order December 31, 1912	40 00	
	<hr/>	
	\$2,299 00	
Less amount paid in 1912	1,959 15	
	<hr/>	344 85
Amount paid Bay State Dredging Company under contract for dredging		324 40
		<hr/>
		<u>\$21,077 87</u>
Total expended to January 31, 1914, \$169,532.20.		

TEMPORARY PUBLIC LANDINGS.

Engineering	\$39 00	
Amount paid W. H. Ellis under contract for construction of landings, Extra work under order February 16, 1913	\$5,247 00	
	258 93	
	<hr/>	
	\$5,505 93	
Less amount paid in 1912	2,675 97	
	<hr/>	2,829 96
Amount paid W. H. Ellis for construction of fence, Total expended to January 31, 1914, \$6,161.81.		113 08
Amount paid Bay State Dredging Company under contract for dredging channel		495 00
		<hr/>
		<u>\$3,477 04</u>

BRIDGE REPAIRS. (APPROPRIATION.)

BROOKLINE STREET BRIDGE.*

Advertising	\$51 98	
Printing	21 25	
Amount paid James Doherty under contract for paving bridge	6,322 85	
Amount paid W. H. Ellis for construction of parapet	49 52	
	<u> </u>	\$6,445 ⁷ / ₆₀

CHARLESTOWN BRIDGE.

Paint stock	\$134 65	
Miscellaneous ironwork	47 66	
Amount paid W. A. Snow Iron Works under contract for repairing iron railings:		
Total expenditures from beginning of work to January 31, 1914	\$2,262 41	
Less payments prior to February 1, 1913	<u>1,677 64</u>	584 77
Amount paid M. M. Devine under contract for cleaning and painting:		
Total expenditures from beginning of work to January 31, 1914	\$5,400 00	
Less payments prior to February 1, 1913	<u>4,968 00</u>	432 00
		<u> </u>
		1,199 08

HARVARD BRIDGE.*

Painting girders:		
Labor	\$148 87	
Stock	8 75	
	<u> </u>	\$157 62
Amount paid F. S. & A. D. Gore under contract for planking and paving bridge:		
Total expenditures from beginning of work to January 31, 1914	\$31,133 33	
Less payments prior to February 1, 1913	<u>22,427 25</u>	8,706 08
		<u> </u>
		\$,863 70

L STREET BRIDGE.

General repairs	\$2,394 42	
Amount paid W. H. Ellis under contract for repairing and strengthening bridge:		
Total expenditures from beginning of work to January 31, 1914	\$51,625 58	
Less payments prior to February 1, 1913	<u>14,300 91</u>	37,324 67
		<u> </u>
		39,719 09
<i>Carried forward</i>		<u>\$56,227 47</u>

*Expended under direction of Boston and Cambridge Bridge Commission.

Brought forward. \$56,227 47

SPRAGUE STREET BRIDGE.

Amount paid M. S. Kelleher under contract for
planking bridge:

Total expenditures from begin-
ning of work to January 31,
1914 \$5,550 35

Less payments prior to February
1, 1913 2,463 73

3,086 62

Total \$59,314 09

Total expended to January 31, 1914, \$109,310.06.

Summary of Amounts Expended and Charged to Special Appropriations in Charge of Bridge Service.

	Balances from 1912.	Appropriations and Transfers During 1913.	Total Credits for 1913.	Expended During 1913.	Balances Unexpended January 31, 1914.	Total Expenditures to January 31, 1914.
Ashland Street Bridge, sidewalk.....	\$1,955 50	.....	\$1,955 50	\$1,757 11	\$198 39	\$1,801 61
Bridge repairs.....	55,328 36	\$13,230 29	68,558 65	59,314 09	9,244 56	109,310 06
Broadway Bridge, rebuilding.....	37,160 67	115,000 00	152,160 67	3,496 69	148,663 98	4,150 71
Chelsea Bridge North.....	217,469 83	7,500 00	224,969 83	160,368 03	64,601 80	380,294 55
Chelsea Bridge South.....	.....	75,000 00	75,000 00	33,317 17	41,682 83	33,347 17
Footbridge, Dalton street to Boylston street.....	9,445 00	.....	9,445 00	.....	9,445 00	.....
Meridian Street Bridge.....	39,515 67	.....	39,515 67	21,077 87	18,437 80	169,532 20
Winthrop Bridge.....	.....	55,000 00	55,000 00	.....	55,000 00	.....
Temporary public landings.....	5,315 23	.....	5,315 23	3,477 04	1,838 19	6,161 81
	\$366,220 26	\$265,730 29	\$631,950 55	\$282,838 00	\$349,112 55	\$704,598 11

INCOME.

The total amount received by the City Collector on account of bridges was \$13,885.88, and consisted of the following items:

Amount received from the town of Milton for its portion of salary of drawtender at Granite Bridge	\$250 13
Amount received for damage to automobile	39 50
	<hr/>
Total credited to division maintenance appropriation	\$289 63
Amount received from the Boston Elevated Railway Company for expense of strengthening L Street Bridge for street cars and credited to appropriation for Bridge Repairs	13,230 29
Amounts received and credited to general revenue:	
From sale of horses	\$340 10
From sale of old material	25 86
	<hr/>
	365 96
	<hr/>
Total	<u>\$13,885 88</u>

BRIDGE SERVICE CONSTRUCTION WORK,
1913-1914.

Ashland Street Bridge (over Providence Division, New York, New Haven & Hartford Railroad).

A new sidewalk has been built on the southerly side of this bridge under a contract with the Boston Bridge Works, Inc., dated December 10, 1912. A new steel plate girder, 5 feet $4\frac{3}{4}$ inches deep and 79 feet long, was erected on the southerly street line which supports one end of the new floor beams, the other end resting on the old outside girder. These beams are 9-inch steel channels, spaced 12 feet on centers, and support the 3-inch by 12-inch yellow pine stringers. The planking is 2-inch yellow pine.

The work was completed March 24, 1913, the contract price being \$1,427.

Broadway Bridge (over Fort Point Channel).

Plans and specifications were prepared for rebuilding the draw span of this bridge and its operating machinery, and a contract was made November 20, 1913, with the Boston Bridge Works, Inc., the lowest bidder, for doing the work on itemized prices. The field work will be started early in the spring and the contract calls for the completion of the work on July 15, 1914. Plans are being made for a temporary bridge with a draw to accommodate foot traffic while the bridge is closed to travel, and the work will soon be advertised.

Chelsea Bridge South.

The draw of this bridge, which was built in 1877, has been in such condition for a number of years that it could be kept in service for the heavy traffic to which it is now subjected only by restrictions as to traffic and by constant repairing and strengthening in every way that could be devised.

Early last year it was decided that it would not be safe to keep the bridge longer in service, and plans were

accordingly prepared and a contract made with Rendle & Stoddard, under date of July 8, 1913, for building a temporary bridge to accommodate traffic until a new permanent bridge could be built. Arrangements were made by which the temporary draw, which had been used during the rebuilding of Chelsea Bridge North, could be removed to this bridge and placed on new foundations.

At the date of this report about 61 per cent of the work under the Rendle & Stoddard contract has been completed.

Chelsea Bridge North.

The work of rebuilding this bridge was done under two main contracts, Contract No. 1 covering the construction of a temporary bridge and draw span to provide for travel during the construction of the permanent bridge, building a new draw fender pier and masonry foundations for new draw span, and raising the approaches to the elevation of the new draw. Contract No. 2 covered the building of a new steel draw with the necessary mechanical and electrical equipment.

Contract No. 1.— This work was done under a contract with George T. Rendle, dated February 28, 1912, and was begun March 20, 1912. As stated in the last annual report about 80 per cent of the work had been completed on February 1, 1913, and from that date the work was continued until July 10, 1913, at which date, owing to financial difficulties in which the contractor became involved, the United States District Court appointed William E. Litchfield as receiver, and under his direction the work was continued until August 13, 1913, when, by order of the commissioner, all work was discontinued under the original contract.

A new contract was made with William E. Litchfield, dated August 15, 1913, for the completion of the work at the unit prices of the original contract. At the date of this report the work is practically completed, only cleaning up and the removal of surplus lumber remaining to be done.

The work of rebuilding replaces the single 60-foot waterway with two waterways each 125 feet wide. A new center draw fender pier, 70 feet wide and about $526\frac{1}{2}$ feet long over all, was constructed and the old fender pier on the northerly side of the old waterway

was widened about 15 feet for its entire length, the old portion being practically rebuilt with the exception of the piles.

The approaches to the new draw span were rebuilt to meet the surface of the new draw, which was 10 feet 9 inches above the elevation of the old draw, the length rebuilt on the Charlestown side being about 220 feet and on the Chelsea side about 290 feet. The portions rebuilt were of the same form of construction as the old bridge with the exception of the stringers under the tracks of the street railway company, where 15-inch steel beams were used instead of yellow pine timber.

A masonry draw pier to support the new swing draw span was built 51 feet in diameter at the top. Below elevation 2, city base, the foundation of the pier was 60 feet in diameter, extending to bed rock, which was approximately 33 feet below city base. The foundation of the pier was built entirely of Portland cement concrete, held in place during construction by a curbing of 3-inch yellow pine plank, while the upper portion of the pier had a granite facing with Portland cement concrete backing.

A temporary wooden pile bridge was built on the down-stream side of the main bridge to provide for travel during the construction of the new bridge.

The total amount paid to date, under the G. T. Rendle contract and the W. E. Litchfield contract, is \$176,807.

Contract No. 2.— Bids were received June 8, 1912, for building a new steel draw with electrical equipment, and a contract was made with the Boston Bridge Works, Inc., the lowest bidder, for doing the work, dated June 22, 1912.

The work of erection under this contract was started on June 14, 1913, and the bridge opened to travel for one street car track on May 28, 1913, and opened to travel of all kinds on May 30, 1913. All work under this contract was completed on July 8, 1913.

The draw is of the rim bearing swing type, 363 feet long and 60 feet wide, center to center of railings, spanning two waterways each 125 feet wide. It has two riveted steel trusses 44 feet on centers, with steel floor beams and stringers providing a roadway 40 feet wide between curbs and two overhanging sidewalks. The width of the roadway is sufficient to take care of travel

on two car tracks and also the travel of two lines of teams simultaneously. A set of roadway gates operated by hand is provided at each approach, to shut off roadway travel when the draw is open.

The material of the draw is of steel throughout except for the wooden flooring and a patent wooden pavement. The wooden flooring is made up as follows: Eight-inch by 8-inch yellow pine ties are laid transversely of the bridge on the steel stringers, 4-inch yellow pine plank is laid longitudinally on the bridge on these ties and on the 4-inch plank is laid a wooden pavement. The street car rails are on tie plates which rest directly on the 8-inch by 8-inch ties. The pavement is of the Shuman "W. & A." type, consisting of wooden slabs about 6 feet long by 2 feet wide, made of hard maple strips 1 inch thick by $3\frac{7}{8}$ inches wide, coated with asphalt, laid on edge and tightly bolted together with iron bolts. The slabs are fastened to the 4-inch wood plank floor by toe-nailing. The sidewalks surface consists of 2-inch yellow pine plank.

The draw weighing about 1,400 tons is carried on 64 steel wheels running between steel faced tracks. Power for swinging is supplied by two 28 horse power motors, one on either side, located on a floor inside the cross girders on top of the drum. Each motor is geared through a set of steel gears to a pinion which engages a rack on the lower or fixed track. One motor with one set of gearing will operate the draw in case of temporary disablement of the other, or the draw can be swung by man power in case of entire suspension of electric current.

A centering device consisting of a bolt with a roll in the outer end, actuated by an air cylinder, the roll engaging a V-casting on the landing, is used for accurately centering the draw when it is stopped within ten or twelve inches of the exact center. Air for the centering device and air brakes is generated by a Westinghouse air brake pump with necessary receivers, valves, etc., located on the floor with the turning motors.

After swinging, the ends of the draw are lifted $\frac{3}{4}$ of an inch to 1 inch, this lift taking out part of the deflection and being found sufficient—the trusses being continuous—to offer stability under all loadings; the load lifted varying from 50 tons for minimum lift to 80 tons for maximum lift per end. The device for lifting is new and worthy of special mention. A double toggle joint,

in effect, lifts the load on a roll bearing on the landing block, after which a flat block is inserted and the roll partially withdrawn, thus transferring the load to the flat block. These lifts are actuated through a shaft and gearing by one 8 horse power motor at either end, located on a platform under the deck of the bridge. They are controlled by a mechanical automatic device which is geared direct to the motor and limits the amount of travel of the bearing block in either direction.

The operating room is in the tower some 34 feet above the deck. In this room within easy reach of the operator is the switch board on which is mounted the necessary switches, fuses, circuit breakers, and meters for all motors, lights and heating; also the operating board to which is attached the controllers for the turning and end lift motors and on which are mounted the valves for operating the centering device, the air brake valve, the electrical signals for showing the position of the draw, and the liquid indicators for showing the position of the end lifts and centering bolt, also an air gauge, whistle valve, telephone, speaking tubes, etc.

The current used for all motors is 550 volt direct current. Air pressure 100 pounds. Amount of current for swinging 60 amperes at start to 40 amperes for a period of not over 3 minutes per opening. Current for end lift motors 12 amperes, for two periods of 15 seconds per opening. The air compressor uses 6 amperes for not over two minutes per opening. Time for complete opening 4 to 5 minutes if not delayed by the shipping.

The total payments under Contract No. 2 amount to \$121,691.71.

It was necessary in conforming to the requirements of the United States War Department to rebuild the water pipe tunnel belonging to the Metropolitan Water Works, which crosses the river parallel to the bridge. This work was done under the direction of the Metropolitan Water and Sewerage Board. The cost of this work to January 1, 1914, was \$51,244.15.

L Street Bridge.

As stated in the last annual report, a contract was made with W. H. Ellis, dated October 11, 1912, for repairing and strengthening the pile bridge. The strengthening was done to allow the bridge to carry 42-ton street cars, and the cost of this part of the work,

amounting to \$13,230.29, was paid by the Boston Elevated Railway Company. The roadway paving, sidewalks, the entire roadway flooring, most of the stringers and part of the sidewalk bulkhead and fences were renewed; 168 oak piles were driven, some to carry the street cars, others to replace those that had been eaten by the *limnoria*; additional stringers were furnished under the lines of car rails. The draw landing and some of the supports for the draw were built of steel, the tracks were repaired and the draw pit was replanked. Asphalt sidewalks were also laid. The 6-inch roadway flooring was mopped with asphalt and covered with four thicknesses of roofing felt, each layer being mopped with asphalt. Oak ties, embedded in concrete were laid for supports for the street car rails, which were laid by the Boston Elevated Railway Company. The rest of the roadway flooring was covered with 1 inch of asphalt mastic. The granite blocks removed from the old bridge were relaid on a sand bed, the joints being filled with pebbles and half made stuff.

The work was completed September 3, 1913, at a cost to the city, for contract work, of \$51,625.58.

Pleasant Street Bridge (over the Subway).

In connection with the widening of Pleasant Street Bridge, it was necessary to entirely remove the surface of the old bridge over the entrance to the subway at this point, and build an addition on the northerly side of the bridge about 25 feet in width. The construction of the new portion is substantially the same as the old portion, reinforced concrete being substituted for brick arches between the steel beams. The roadway is paved with wood blocks and the sidewalks are of granolithic. The work, with the exception of the wood pavement, was done under a contract with W. A. & H. A. Root, Inc., dated June 21, 1913, and was completed November 19, 1913. The amount paid under the contract for the bridge was \$4,736.15.

The same contractor, at the time of building the bridge, laid two lines of 20-inch cast-iron pipe for sewer connection under the bridge at a cost of \$934.06, exclusive of the cost of the pipe.

Saratoga Street Bridge (over Boston, Revere Beach & Lynn Railroad, East Boston).

This bridge was built by the railroad company under a decree of the Superior Court abolishing the grade

crossing at this point, and was opened to travel September 18, 1913. The bridge consists of two pony trusses of 88 feet span center to center of end bearings and 17 feet 6 inches deep center to center of chords. The bridge is 50 feet wide between end railings, providing a roadway 32 feet 6 inches wide in the clear and two overhanging sidewalks each about 6 feet wide in the clear. The floor beams are built steel beams about 2 feet 9 inches deep and support steel I-beam stringers. All steel work below the surface of the street is encased in concrete. The roadway pavement is of brick and the sidewalks of granolithic.

PUBLIC BOAT LANDINGS.

Two public boat landings, one located at Summer Street Bridge and one at Northern Avenue Bridge, built under a contract with W. H. Ellis, dated October 28, 1912, were completed on April 11, 1913. The total amount paid for both landings under the contract was \$5,505.93.

LAWNDALE TERRACE SUBWAY.

The work on this subway, which was under contract at the beginning of the fiscal year, was completed on March 28, 1913. The total amount paid under the contract was \$6,921.

MISCELLANEOUS WORK.

The comprehensive survey of Mount Hope Cemetery in progress at the beginning of the year, as mentioned in last year's report, has been continued during the present year, and a set of sectional plans showing the location of each individual lot, as well as paths and drives, will be completed early in the coming year.

The work of rebuilding the power plant at Rainsford Island, for the Children's Institutions Department, in charge of this division, under contract with the Fitchburg Steam Engine Company, was completed on April 15, 1913, at a cost of \$2,148. The boiler for this plant was furnished by the Hodge Boiler Works under a contract dated August 4, 1913. The work was completed November 24, 1913. The total amount paid under the contract was \$1,792.82.

The bridge on Tremont street, over the Boston & Albany Railroad, carrying the water pipes, was repaired under a contract with the Boston Bridge Works, Inc.,

dated July 8, 1913, new steel beam supports for the pipes being furnished at a cost of \$748. The bridge at the same time was thoroughly cleaned by the sand blast process and painted under a contract with the W. L. Waples Company for \$260, the city furnishing the paint required.

LIST OF BOSTON BRIDGES.

I.—BRIDGES WHOLLY MAINTAINED BY BOSTON.

[In the list those marked with an asterisk (*) are over navigable waters, and are each provided with a draw.]

In Charge of Bridge and Ferry Division.

- Allston, over Boston & Albany Railroad at Cambridge street, Brighton.
- Ashland street, over New York, New Haven & Hartford Railroad, Providence Division, West Roxbury.
- Athens street, over New York, New Haven & Hartford Railroad, Midland Division.
- * Atlantic avenue, over Fort Point channel.
- B street (footbridge), over Neponset river, Hyde Park.
- Baker street, at Brook Farm, West Roxbury.
- Beacon street, over outlet to Back Bay Fens.
- Beacon street, over Boston & Albany Railroad.
- Bennington street, over Boston, Revere Beach & Lynn Railroad.
- Berkeley street, over Boston & Albany Railroad.
- Berwick park (footbridge), over New York, New Haven & Hartford Railroad, Providence Division.
- Blakemore street, over New York, New Haven & Hartford Railroad, Providence Division.
- Bolton street, over New York, New Haven & Hartford Railroad, Midland Division.
- Boylston street, over Boston & Albany Railroad.
- Broadway, over Boston & Albany Railroad.
- * Broadway, over Fort Point channel.
- Brookline avenue, over Boston & Albany Railroad.
- Brooks street, Brighton.
- Byron street, over Boston, Revere Beach & Lynn Railroad.
- Charlesgate, over Ipswich street.
- * Charlestown, from Boston to Charlestown.
- * Chelsea South, over south channel, Mystic river.
- * Chelsea street, from East Boston to Chelsea.
- Columbus avenue, over Boston & Albany Railroad.
- * Commercial Point, or Tenean, Dorchester.
- * Congress street, over Fort Point channel.
- Cottage Farm, over Boston & Albany Railroad, at Commonwealth avenue.

- Dana avenue, over Neponset river, Hyde Park.
Dartmouth street, over Boston & Albany Railroad.
* Dorchester avenue (formerly Federal street), over Fort Point channel.
* Dover street, over Fort Point channel.
Fairmount avenue, over Neponset river, Hyde Park.
Ferdinand street, over Boston & Albany Railroad.
Florence street, over Stony brook, West Roxbury.
Gainsborough street (footbridge), over New York, New Haven & Hartford Railroad, Providence Division.
Glenwood Avenue East (footbridge), over Neponset river, Hyde Park.
Glenwood Avenue West, over Mother brook, Hyde Park.
Gold street, over New York, New Haven & Hartford Railroad, Midland Division.
Huntington avenue, over Boston & Albany Railroad.
Huntington avenue, over Stony brook, Hyde Park.
Hyde Park avenue, over Mother brook (at woolen mill), Hyde Park.
Hyde Park avenue, over Stony brook, West Roxbury.
Hyde Park avenue, over Stony brook (near Clarendon Hills Station), Hyde Park.
Ipswich street, over waterway.
Irvington street (footbridge), over New York, New Haven & Hartford Railroad, Providence Division.
* L street, over Reserved channel, South Boston.
* Malden, from Charlestown to Everett.
Massachusetts avenue, over Boston & Albany Railroad.
Massachusetts avenue, over New York, New Haven & Hartford Railroad, Providence Division.
* Meridian street, from East Boston to Chelsea.
Metropolitan avenue (near Clarendon Hills Station), Hyde Park.
Newburn street, over Stony brook, Hyde Park.
* Northern avenue, over Fort Point channel.
Shawmut avenue, over Boston & Albany Railroad and New York, New Haven & Hartford Railroad, Providence Division.
Southampton street, over South Bay sluice.
Summer street, over A street.
Summer street, over B street.
Summer street, over C street.
* Summer street, over Fort Point channel.
Tollgate way (footbridge), over Providence Division, from Washington street to Hyde Park avenue, Forest Hills.
* Warren, from Boston to Charlestown.
West Newton street, over New York, New Haven & Hartford Railroad, Providence Division.
West River street, over Mother brook, Hyde Park.
West Rutland square (footbridge), over New York, New Haven & Hartford Railroad, Providence Division.
Winthrop, from Breed's Island to Winthrop.

In Charge of Bridge and Ferry Division and Park and Recreation Department.

Columbia road, over New York, New Haven & Hartford Railroad, Old Colony Division.
Columbia road, over Shoreham street.

In Charge of Park and Recreation Department.

Agassiz road, in Fens.
Audubon road, in Riverway, over Boston & Albany Railroad.
Berners street (footbridge), over Bridle Path in Riverway.
Boylston street, in Fens, over waterway.
Bridle path, in Riverway, over Muddy river.
* Castle Island (footbridge), in Marine Park, South Boston, to Castle Island.
Charlesgate, in Fens, over Boston & Albany Railroad.
Circuit drive, over Scarboro pond, in Franklin Park.
Commonwealth avenue, in Fens, over waterway.
Ellicott Arch, in Franklin Park.
Fens, in Fens.
Forest Hills entrance, in Franklin Park.
Leverett pond (footbridge), in Olmsted Park.
Neptune road, in Wood Island Park, over Boston, Revere Beach & Lynn Railroad.
Public Garden (footbridge).
Scarboro pond (footbridge), in Franklin Park.
Wood Island (footbridge), in Wood Island Park.

II.— BRIDGES OF WHICH BOSTON MAINTAINS THE PART WITHIN ITS LIMITS.

In Charge of Bridge and Ferry Division.

Central avenue, from Dorchester to Milton.
* Chelsea North, from Charlestown to Chelsea.
* Granite, from Dorchester to Milton.
Milton, from Dorchester to Milton.
* Neponset, from Dorchester to Quincy.
* North Beacon street, from Brighton to Watertown.
Paul's Bridge over Neponset river, Hyde Park.
Spring street, from West Roxbury to Dedham.
* Western avenue, from Brighton to Watertown.

In Charge of Park and Recreation Department.

Bellevue street, in the Riverway, over Muddy river.
Berners street (footbridge), over Muddy river.
Brookline avenue, in the Riverway, over Muddy river.
Huntington avenue, in the Riverway, over Muddy river.
Longwood avenue, in the Riverway, over Muddy river.

III.— BRIDGES OF WHICH BOSTON PAYS A PART OF THE COST OF MAINTENANCE.

In Charge of Bridge and Ferry Division.

- Albany street, over Boston & Albany Railroad (over freight tracks).
 Ashmont street and Dorchester avenue, over New York, New Haven & Hartford Railroad, Old Colony Division.
 Harvard street, over New York, New Haven & Hartford Railroad, Midland Division.
 Norfolk street, over New York, New Haven & Hartford Railroad, Midland Division, near Dorchester station.
 Pleasant street, over the subway.

In Charge of Commissioners for Boston and Cambridge Bridges.

- Anderson Bridge, from Brighton to Cambridge.
 Brookline street, from Brighton to Cambridge.
 Cambridge, from Boston to Cambridge.
 * Cambridge street, from Brighton to Cambridge.
 * Harvard, from Boston to Cambridge.
 * Prison Point, from Charlestown to Cambridge.
 * Western avenue, from Brighton to Cambridge.

IV.— BRIDGES OF WHICH BOSTON MAINTAINS THE WHOLE OR A PART OF THE WEARING SURFACE.

In Charge of Bridge and Ferry Division.

- Austin street, over Boston & Maine Railroad, Charlestown.
 Bennington street, over Boston & Albany Railroad.
 Blue Hill avenue, over New York, New Haven & Hartford Railroad, Midland Division.
 Boston street, over New York, New Haven & Hartford Railroad, Old Colony Division.
 Brookline street, Brighton to Cambridge, portion over Boston & Albany Railroad.
 Cambridge street, Charlestown, over Boston & Maine Railroad.
 Chelsea, over Boston & Maine Railroad.
 Curtis street, East Boston, over Boston & Albany Railroad.
 Dana avenue, over New York, New Haven & Hartford Railroad, Midland Division, Hyde Park.
 Dorchester avenue, over New York, New Haven & Hartford Railroad, Old Colony Division.
 Everett street, over Boston & Albany Railroad, Brighton.
 Fairmount avenue, over New York, New Haven & Hartford Railroad, Midland Division, and Station street, Hyde Park.
 Glenwood Avenue West, over passageway connecting land of the New York, New Haven & Hartford Railroad, Hyde Park.

- Hyde Park avenue, over proposed electric connection between Midland and Providence Divisions, New York, New Haven & Hartford Railroad, Hyde Park.
- Maverick street, East Boston, over Boston & Albany Railroad.
- Mystic avenue, over Boston & Maine and Boston & Albany Railroads.
- New Way at Neponset, over New York, New Haven & Hartford Railroad, Old Colony Division.
- Norfolk street, over New York, New Haven & Hartford Railroad, Midland Division, near Blue Hill avenue station.
- Oakland street, over New York, New Haven & Hartford Railroad, Midland Division, Mattapan.
- Porter street, over Boston & Albany Railroad.
- Prescott street, over Boston & Albany Railroad.
- Reservoir road, Brighton, over Boston & Albany Railroad, Newton Branch.
- Saratoga street, over Boston & Albany Railroad.
- Saratoga street, over Boston, Revere Beach & Lynn Railroad, East Boston.
- Southampton street, over New York, New Haven & Hartford Railroad, Old Colony Division.
- Sprague street, over New York, New Haven & Hartford Railroad, Midland Division, and branch of Providence Division, Hyde Park.
- Summer street, over New York, New Haven & Hartford Railroad, Midland Division.
- Summer street, East Boston, over Boston & Albany Railroad.
- West Fourth street, over New York, New Haven & Hartford Railroad, Old Colony Division.

V.— BRIDGES MAINTAINED BY METROPOLITAN PARK COMMISSION.

- Charles River Dam.
- Mattapan, over Neponset river.

VI.— BRIDGES MAINTAINED BY RAILROAD CORPORATIONS.

1st.— Boston & Albany Railroad.

- Albany street (over passenger tracks).
- Harrison avenue.
- Market street, Brighton.
- Tremont street.
- Washington street.
- Webster street (footbridge), East Boston.

2d.— Boston & Maine and Boston & Albany Railroads.

- Main street.
- Perkins street (footbridge).

3d.— Boston & Maine Railroad, Eastern Division.

Wauwatosa avenue, East Boston.

4th.— Boston, Revere Beach & Lynn Railroad.

Everett street.

5th.— New York, New Haven & Hartford Railroad, Midland Division.

Dorchester avenue.

East River street, at River Street Station, Hyde Park.

Morton street, Dorchester.

Silver street.

Washington street, Dorchester.

West Broadway.

West Fifth street.

West Fourth street.

West Second street.

West Sixth street.

West Third street.

6th.— New York, New Haven & Hartford Railroad, Old Colony Division.

Adams street.

Cedar Grove Cemetery.

Medway street.

Savin Hill avenue.

7th.— New York, New Haven & Hartford Railroad, Providence Division.

Albany street.

Baker street, West Roxbury.

Beech street, West Roxbury.

Bellevue street, West Roxbury.

Berkeley street.

Broadway.

Canterbury street, West Roxbury.

Castle square.

Centre and Mt. Vernon streets, West Roxbury.

Columbus avenue.

Dartmouth street.

Gardner street, West Roxbury.

Harrison avenue.

Milton street, Hyde Park.

New Allen street, Hyde Park.

Park street, West Roxbury.

Walworth street, West Roxbury.

Washington street.

West street, Hyde Park.

West River street, Hyde Park.

RECAPITULATION OF BRIDGES.

I.	Number wholly maintained by Boston:		
	In charge of Bridge and Ferry Division	65	
	In charge of Bridge and Ferry Division and Park and Recreation Department	2	
	In charge of Park and Recreation Department	17	
		—	84
II.	Number of which Boston maintains the part within its limits:		
	In charge of Bridge and Ferry Division	9	
	In charge of Park and Recreation Department	5	
		—	14
III.	Number of which Boston pays a part of the cost of maintenance:		
	In charge of Bridge and Ferry Division	5	
	In charge of Commissioners for Boston and Cambridge Bridges *	7	
		—	12
IV.	Number of which Boston maintains the whole or a part of the wearing surface		29
V.	Number maintained by Metropolitan Park Commission		2
VI.	Number maintained by railroad corporations:		
	1. Boston & Albany Railroad	6	
	2. Boston & Maine and Boston & Albany Railroads	2	
	3. Boston & Maine Railroad, Eastern Division	1	
	4. Boston, Revere Beach & Lynn Railroad,	1	
	5. New York, New Haven & Hartford Railroad, Midland Division	11	
	6. New York, New Haven & Hartford Railroad, Old Colony Division	4	
	7. New York, New Haven & Hartford Railroad, Providence Division	20	
		—	45
	Total number		<u>186</u>

* Including Anderson Bridge at Soldiers Field, now under construction, which will be maintained by the commissioners upon its completion.

List of Small Bridges or Culverts having Wooden Tops which are Repaired by Bridge and Ferry Division (Bridge Service).—Walls Repaired and Openings Cleaned by Sewer Service.

LOCATION.	Span, Feet.	Height of Opening, Feet.	Length, Feet.	Side Walls.	Covering.
Ashland and Canterbury streets, near Calvary Cemetery, West Roxbury,	7.6	5.5	75	Stone.	Wood.
Beech street, near Anawan avenue, at Central Station, West Roxbury...	4.0	4.0	50	Stone.	Wood.
Cass street, near Spring Street Station, West Roxbury.....	7.0	3.0	21	Stone.	Wood.
Cohasset street, Roslindale.....	14.0	7.5	60	Stone.	Wood.
Jamaica street, Jamaica Plain.....	10.0	4.0	39	Stone.	Wood.
Park street, west of Dorchester avenue, Dorchester.....	5.0	3.7	50	Stone.	Wood.
Park street, west of New York, New Haven & Hartford Railroad, Dor...	8.5	5.0	50	Stone.	Wood.
Spring street, near Spring Street Station, West Roxbury.....	2.7	2.7	63	Stone.	Wood.
Summer street, near Spring Street Station, West Roxbury.....	4.0	4.5	40	Stone.	Wood.
Williams street, at Stony brook, West Roxbury.....	5.0	5.0	50	Wood.	Wood.
Woodman street, Jamaica Plain.....	6.3	4.0	65	Stone.	Wood.

**Table Showing the Widths of Openings for Vessels in all Bridges
Provided with Draws in the City of Boston in January, 1914.**

NAME OF BRIDGE.	Location.	Number of Openings.	Width.
* Anderson	Brighton to Cambridge	1	45 feet 0 inches.
Atlantic avenue	Over Fort Point channel	1	42 " 6 "
Boston Elevated Railway	Boston to East Cambridge	1	45 " 0 "
Boston & Maine Railroad, Eastern Division.	Boston to Charlestown	1	39 " 8 "
Boston & Maine Railroad, Eastern Division.	Over Miller's river	1	35 " 0 "
Boston & Maine Railroad, Fitchburg Division.	Boston to Charlestown	1	36 " 9 "
Boston & Maine Railroad, Fitchburg Division (for teaming freight).	" "	1	36 " 7 "
Boston & Maine Railroad (freight), Southern Division.	Boston to East Cambridge	1	40 " 0 "
Boston & Maine Railroad (passenger), Southern Division.	" "	1	39 " 8 "
Boston & Maine Railroad, Western Division.	Boston to Charlestown	1	39 " 6 "
Boston & Maine Railroad, Western Division.	Over Miller's river	1	36 " 3 "
Broadway	Over Fort Point channel	1	42 " 11 "
† Brookline street	Brighton to Cambridge	1	40 " 0 "
† Cambridge	Boston to Cambridge	1	50 " 0 "
Cambridge street	Brighton to Cambridge	1	36 " 6 "
Charles River Dam (lock)	Boston to East Cambridge	1	45 " 0 "
Charlestown (main channel)	Boston to Charlestown	2	50 " 0 "
Charlestown (north channel)	" "	49	" 9 "
Chelsea (north channel)	Charlestown to Chelsea	2	125 " 0 "
‡ Chelsea (south channel)	" "	1	38 " 9 "
Chelsea street	East Boston to Chelsea	1	60 " 0 "
Commercial Point (or Tencan)	Dorchester	1	24 " 0 "
Congress street	Over Fort Point channel	1	50 " 0 "
Dorchester avenue	" "	1	41 " 3 "
Dover street	" "	1	40 " 3 "
Grand Junction Railroad	Brighton to Cambridge	1	39 " 3 "
Grand Junction Railroad	East Boston to Chelsea	1	60 " 0 "
Granite	Dorchester to Milton	1	36 " 0 "
Harvard (Boston side)	Boston to Cambridge	2	36 " 7 "

* Drawless opening; clear headroom of 12 feet above basin level (about elevation 8.0).

† Drawless opening; clear headroom of 28 feet above basin level.

‡ Opening to be widened to 47 feet 6 inches upon completion of temporary bridge.

Table Showing Widths of Openings, etc.—*Concluded.*

NAME OF BRIDGE.	Location.	Number of Openings.	Width.
Harvard (Cambridge side).....	Boston to Cambridge.....	.....	37 feet 0 inches.
L street.....	Over Reserved channel, South Boston.	1	39 " 3 "
Malden.....	Charlestown to Everett.....	1	50 " 0 "
Meridian street.....	East Boston to Chelsea.....	1	100 " 0 "
Neponset.....	Dorchester to Quincy.....	1	36 " 0 "
New York, New Haven & Hartford Railroad.	Over Fort Point channel.....	1	42 " 0 "
New York, New Haven & Hartford Railroad, Y-connection.	" ".....	1	42 " 0 "
New York, New Haven & Hartford Railroad, Plymouth Division.	Dorchester to Quincy.....	1	51 " 0 "
North Beacon street.....	Brighton to Watertown.....	1	30 " 0 "
Northern avenue.....	Over Fort Point channel.....	2	75 " 3 "
Prison Point.....	Charlestown to Cambridge....	1	37 " 5 "
Summer street.....	Over Fort Point channel.....	1	50 " 0 "
Warren.....	Boston to Charlestown.....	1	36 " 0 "
Western avenue.....	Brighton to Cambridge.....	1	36 " 3 "
Western avenue.....	Brighton to Watertown.....	1	36 " 0 "

Summary of Drawtenders' Report.

Number of Vessels Passing Through the Drawbridges Controlled by the City of Boston, February 1, 1913, to January 31, 1914, Inclusive.

BRIDGE.	STEAMERS.			SAILING VESSELS.			TUGS.			ALL OTHERS.			TOTAL NUMBER VESSELS.			Total Number of Carries.	Total Number of Openings.
	By Day.	By Night.	Total.	By Day.	By Night.	Total.	By Day.	By Night.	Total.	By Day.	By Night.	Total.	By Day.	By Night.	Total.		
Atlantic avenue.....	57	11	68	662	41	703	4,000	392	4,392	1,805	143	1,948	6,524	587	7,111	1,406	3,595
Broadway.....	86	19	105	698	8	706	4,235	114	4,349	1,891	51	1,942	6,910	192	7,102	1,418	2,544
Charlestown.....	2	.....	2	413	29	442	3,052	300	3,352	1,779	222	2,001	5,246	551	5,797	1,186	2,130
Chelsea North.....	751	202	953	560	66	626	10,700	1,922	12,622	5,163	798	5,961	17,174	2,998	20,172	4,439	8,580
Chelsea South.....	46	3	49	265	11	276	6,804	556	7,360	5,016	377	5,393	12,131	947	13,078	3,709	5,551
Chelsea street.....	9	37	46	.....	1	1	571	436	1,007	552	518	1,070	1,132	992	2,124	490	1,159
Congress street.....	191	26	217	768	54	822	5,873	630	6,503	2,314	189	2,503	9,146	899	10,045	1,433	5,217
Dorchester avenue.....	55	11	66	666	40	706	3,992	386	4,378	1,846	146	1,992	6,559	583	7,142	1,397	3,822
Dover street.....	36	10	46	631	43	674	3,653	316	3,969	1,612	107	1,719	5,932	476	6,408	1,215	2,837
Granite avenue.....	.....	.....	.....	.....	2	2	288	.....	288	164	4	168	454	4	458	48	221
L street.....	.....	.....	.....	214	36	250	3,019	127	3,146	2,024	180	2,204	5,257	343	5,600	794	3,949
Malden.....	.....	.....	.....	25	2	27	1,126	55	1,181	660	89	749	1,811	146	1,957	381	1,157
Meridian street.....	552	263	815	304	69	373	9,442	2,751	12,223	4,784	1,456	6,240	15,082	4,569	19,651	3,298	11,116
Neponset.....	.....	.....	.....	4	.....	4	384	.....	384	375	.....	375	763	.....	763	53	498
North Beacon street.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Northern avenue.....	759	359	1,118	793	56	849	9,134	1,482	10,616	3,943	659	4,602	14,629	2,556	17,185	2,493	7,879
Summer street.....	191	26	217	768	54	822	5,861	630	6,491	2,313	189	2,502	9,133	899	10,032	1,433	5,196
Warren.....	53	14	67	412	30	442	2,941	280	3,221	1,649	191	1,840	5,055	515	5,570	1,108	3,248
Western avenue to Watertown.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	2,788	981	3,769	7,185	540	7,725	75,075	10,417	85,492	37,890	5,319	43,209	122,938	17,257	140,195	26,310	68,699

ELEVATIONS AND DATUM PLANES REFERRED TO BOSTON CITY BASE.

Feet.	
* 0.00	Boston city base. This base is used by the towns of Brookline and Watertown and the cities of Chelsea, Everett, Malden, Newton and Waltham.
-4.98	Cambridge city base.
+0.64	Somerville city base.
0.00	Metropolitan Park Commission base.
+0.60	Harbor and Land Commission and Directors of the Port of Boston base.
0.00	Metropolitan Water Board base.
-100.00	Metropolitan Sewerage Board base.
-100.00	Boston Transit Commission base.
-100.00	Charles River Commission base.
15.45	Old bench mark on coping of old dry dock at Charlestown Navy Yard.
15.11	New bench mark on coping of old dry dock at Charlestown Navy Yard, northwest end over crowfoot.
5.00	Piles to be cut off for buildings.
12.00	Minimum cellar bottom elevation when not waterproofed.
9.82	South Boston base. Formerly in use, now abandoned.
0.00	Mean low water about 1830.†
+0.34	Mean low water, 1867.†
+0.79	Mean low water, 1902.†
+0.58	Navy Yard base, 1902.†
10.63	Mean high water, 1902.†
5.71	Mean sea level, 1902.†
9.84	Mean rise and fall of tide, 1902.†

* Definition of Boston city base: "Boston city base is a datum plane 15 feet above the average height of the sill of the Charlestown dry dock." (Page 552, report of Committee on Charles River Dam, 1903.)

† John R. Freeman, civil engineer, in report to Committee on Charles River Dam, 1903, pp. 562, 569, 570.

HIGHEST RECORDED TIDES.

- Feet.
- 15.62 April 16, 1851, average of seven observations, North Market street and vicinity, leveled on in 1854 by Charles Harris, Surveying Division n. b. 22, p. 54 (15.10 above mean low water, United States Coast Survey Chart of Boston Harbor, 1857).
- 15.64 December 26, 1909, average of twenty-nine observations, on water front, Nut Island to Deer Island, elevations determined in most cases by John H. Edmonds, before January 1, 1910, from points put in for that purpose, 1902 to 1905.
- 15.50 Actual elevation at North Ferry, Boston proper, as observed on staff gauge, at high water.
From comparison of contemporary diary and newspaper accounts the only tide of this class, prior to 1851, found by John H. Edmonds, was that of February 24, 1722-23, which was in all probability about 16.00.

The following tidal records may be of interest:

High Tides.

[Plane of Reference, Boston City Base.]

FEET.	Date.	Where Taken.	By Whom.
16.00	Feb. 24, 1722-23.	* By comparison.....	J. H. Edmonds.
15.62	April 16, 1851....	* Average of 7 observations.....	Charles Harris.
15.74	April 16, 1851....	Navy Yard, staff gauge.....	Isaac Williams.
14.94	Nov. 27, 1898....	Average of 15 observations.	
13.72	Nov. 8, 1900....	Malden Bridge.....	F. P. Spalding.
14.19	Nov. 25, 1901....	Average of 10 observations.	
13.60	Dec. 14, 1902....	Average of 11 observations.	
13.00	Feb. 17, 1903....	North Ferry, Boston proper.....	J. H. Edmonds.
13.40	Jan. 14, 1904....	North Ferry, Boston proper.....	J. H. Edmonds.
14.83	Jan. 25, 1905....	Average of 34 observations.	
14.70	Jan. 25, 1905....	Inner harbor, 10 observations.	
14.70	Jan. 25, 1905....	North Ferry, Boston proper.....	J. H. Edmonds.
13.50	Nov. 15, 1906....	Neponset Bridge.....	M. F. Toomey.
13.00	April 9, 1907....	North Ferry, Boston proper.....	J. H. Edmonds.

* See previous table.

High Tides.— Concluded.

FEET.	Date.	Where Taken.	By Whom.
13.10	Nov. 24, 1909....	North Ferry, Boston proper.....	J. H. Edmonds.
13.35	Nov. 25, 1909....	North Ferry, Boston proper.....	J. H. Edmonds.
13.10	Nov. 27, 1909....	North Ferry, Boston proper.....	J. H. Edmonds.
13.00	Nov. 28, 1909....	North Ferry, Boston proper.....	J. H. Edmonds.
15.64	Dec. 26, 1909....	* Average of 29 observations.	
15.50	Dec. 26, 1909....	North Ferry, Boston proper (a. m.).....	J. H. Edmonds.
11.90	Dec. 26, 1909....	North Ferry, Boston proper (p. m.).....	J. H. Edmonds.
13.45	Feb. 12, 1910....	North Ferry, Boston proper.....	J. H. Edmonds.
13.35	Oct. 21, 1910....	North Ferry, Boston proper.....	J. H. Edmonds.
13.50	Dec. 26, 1913....	North Ferry, Boston proper.....	F. P. Spalding.

* See previous table.

Low Tides.

5.60	Feb. 27, 1898....	Deer Island, metropolitan sewer station....	Self-recording gauge.
—3.50	Feb. 1, 1900....	Deer Island, metropolitan sewer station....	Self-recording gauge.
—2.94	Feb. 3, 1900....	South Boston station, Edison Electric.....	D. A. Harrington.
—3.00	Feb. 4, 1904....	Deer Island, metropolitan sewer station....	Self-recording gauge.
—2.70	Mar. 23, 1905....	Deer Island, metropolitan sewer station....	Self-recording gauge.

FERRY SERVICE.

An improvement in the administration of the Ferry Service was made in November, 1913, when a new system of checking the receipts from team traffic, collected by the gatemen, was put into effect. Under this system the gateman delivers to the driver of each vehicle a check punched to indicate the amount of fare collected and whether the fare was paid by ticket or in cash. These checks are collected as the vehicles go aboard the boat, examined to see that they are properly punched, and deposited in a locked box which is collected daily and taken to the main office of the Ferry Service. Each day the checks are carefully sorted and counted in the ferry office and compared with the gatemen's returns by ticket and by cash. The checks bear serial numbers and every check must be accounted for. The results by this system have proven satisfactory, but a considerable expense is involved in the matter of printing (about 1,200,000 checks being required annually), and in the labor involved in sorting the checks and verifying the returns in the ferry office. A second and less expensive method of checking the gatemen's collections is to be put into effect February 1, by which the captain or quartermaster of each boat is to keep a record of each class of vehicles as they come aboard the boat. If, after a fair trial, it should be found that accurate results can be had by this second method, it is probable that for reasons of economy the abolition of the first system, now in use, will be recommended.

At the beginning of the year the rebuilding of the north pier of the South Ferry, Boston side, was in progress under a contract with W. H. Ellis, the work being paid for out of a special appropriation for ferry landings repairs. This work was completed March 17, 1913, the amount paid under the contract being \$5,966.31.

From the regular maintenance appropriation, extensive repairs were made on the north drop at the Boston side and the south drop and landing at the East Boston side of the North Ferry, and a new type of paving, affording an excellent foothold for horses, which had

been tried out on some of the drops the previous year, was laid on two additional drops.

A large amount of repair work was done upon the boats, all of which were hauled out for repairs and inspection during the year, either upon the Atlantic Works railway or in Simpson's dry dock and the boats are now in much better condition than at the time of the organization of the Public Works Department in 1911. With the exception of extensive repairs to the "Hugh O'Brien," on which it will be necessary to relay an entire new roadway deck and to make many other repairs, it is probable that the cost of boat repairs in 1914 will not be large.

As mentioned in the Division Engineer's report, the ferryboat "D. D. Kelly," which has been in service for thirty-five years, has reached such a condition that at any time it may be condemned for ferry use, and a new boat is needed to replace the "D. D. Kelly." Recommendations for the more important repairs needed at the ferries are given in the report of the Division Engineer.

The property of the Ferry Service is as follows:

South Ferry, East Boston side.—Located at the termination of Lewis street and covers an area of 58,725 square feet of land and water. On these premises are one head-house with canopies, one workshop, one storehouse, one modern coal pocket, three piers which form the two slips, two drops and tanks, one wharf and dock where boats are laid while not in use or while undergoing repairs.

South Ferry, Boston side.—Located at the termination of Eastern avenue and covers an area of 38,135 square feet of land and water, on which are one head-house with canopies, one gate room, three piers which form the two slips, and two drops and tanks.

North Ferry, Boston side.—Located at the termination of Battery street and covers an area of 45,000 square feet of land and water, on which are one head-house with canopies, one gate room, three piers which form the two slips, and two drops and tanks.

North Ferry, East Boston side.—Located at the termination of Border street and covers an area of 62,138 square feet of land and water, on which are one head-house with canopies, one boiler and room, one coal pocket, three piers which form the two slips, and two drops and tanks.

The following steam ferryboats are in commission:

Name.	When Built.	Kind.	Length.
D. D. Kelley.....	1879	Side wheel	160 ft. 3 in.
Hugh O'Brien.....	1883	"	175 " 6 "
General Hancock.....	1887	"	160 " 3 "
Governor Russell.....	1898	Propeller	164 " 3 "
Noddle Island.....	1899	"	164 " 3 "
General Sumner.....	1900	"	164 " 3 "
John H. Sullivan.....	1912	"	172 " 3 "

FINANCIAL STATEMENT FOR THE YEAR ENDING
JANUARY 31, 1914.

1. Receipts.

Total cash receipts during the year		\$106,327 08
Cash in hands of tollmen at beginning of year		200 00
		<u>\$106,527 08</u>
Cash paid over to City Collector	\$105,937 02	
Cash in hands of tollmen January 31, 1914	200 00	
Cash in hands of cashier January 31, 1914 (balance)	390 06	
		<u>\$106,527 08</u>

2. Appropriations and Expenditures.

Balance unexpended from previous years (special appropriations)		\$8,048 11
Received from annual appropriation (part of appropriation) for Bridge and Ferry Division		277,727 39
		<u>\$285,775 50</u>
Total appropriations		285,259 90
Total expenditures		<u>\$515 60</u>
Balance unexpended (special appropriations)		\$515 60

3. Result of Operations for the Year.

Receipts for the year (net income)		\$106,327 08
Ordinary expenses	\$277,727 39	
Interest on ferry debt	16,155 00	
Cost of repairing ferry landings	7,532 51	
Decrease in valuation of real estate per assessors*	31,600 00	
Depreciation of ferryboats	16,061 15	
Depreciation of machinery and tools	337 86	
Decrease in stock of fuel	1,530 99	
Decrease in stock of supplies	81 02	
		<u>351,025 92</u>
Net outgo for the year		\$351,025 92
Net loss for the year		<u>\$244,698 84</u>

* This amount was erroneously included by the assessors in the valuation of 1912-13, and is here deducted from the valuation of 1913-14 to rectify the same.

End of Fiscal Year January 31, 1914.

ASSETS.	LIABILITIES.
AVAILABLE ASSETS: Cash on hand at close of year: Tollmen..... \$200 00 Office..... 390 06 ————— \$590 06 Inventory of supplies, viz.: Fuel..... \$4,783 97 Supplies for maintenance..... 4,481 65 ————— 9,265 62 Rents receivable..... 22 00 ————— \$9,877 68 Total available assets..... CONTINGENT ASSETS: City treasury..... 515 60 FIXED ASSETS: Real estate, land and buildings ¹ Ferryboats ³ 251,624 63 Machinery, tools, etc..... 3,040 69 ————— \$875,258 60 Total tangible assets..... Avenues, etc., East Boston ⁴ 315,815 68 Deficiency or loss by operation and maintenance of the ferries for fifty-six years to date..... 4,150,659 65 ————— \$5,341,733 93	CURRENT LIABILITIES: None. CONTINGENT LIABILITIES: Appropriations account..... \$515 60 FIXED LIABILITIES: Capital of the city invested in the ferries, viz.: Total expenditures of all kinds for fifty-six years, including interest on ferry debt..... \$12,332,822 18 Less total receipts..... 6,991,003 85 ————— 5,341,218 33 ————— \$5,341,733 93

¹ Original purchase of ferries..... \$276,375 00
 New buildings, traps, slips, etc., cost to date..... 607,523 64
 Land, Lincoln Wharf, cost, 1887..... 5,562 52
 Land, Battery Wharf, cost, 1893..... 10,000 00
 —————
 \$899,761 16

² Assessors' figures.....
 \$743,070 58
 Less boats sold, depreciated or destroyed..... 491,445 95
 —————
 \$251,624 63

³ Total cost to date, per ferry books.....
 Less boats sold, depreciated or destroyed.....
 —————
 \$315,815 68

⁴ Cost (net) previous to 1870, per ferry books, viz.:
 Expenditures for avenues..... \$250,000 00
 Expenditures for improvements..... 65,815 68
 —————
 \$315,815 68

* These expenditures were practically subsidies to the East Boston Ferry Company by the city before the ferries were purchased by the latter and should be added to the deficiency or loss.

5. Comparison of Receipts, Appropriations and Expenditures for Five Years.

	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.
RECEIPTS.					
From foot passengers (tollmen).....	\$61,419 42	\$60,981 61	\$57,930 98	\$57,598 10	\$58,163 78
“ foot passes (office sales).....	634 30	638 00	647 30	620 70	677 80
“ extra passengers on teams (gatemen).....	1,443 54	1,471 79	1,456 00	1,283 85	1,620 47
“ team tickets (office sales).....	547 00	805 50	1,153 50	1,308 50	1,314 50
“ strip team tickets (tollmen).....	26,233 00	25,703 50	24,767 00	24,733 50	23,567 00
“ teams (gatemen).....	15,325 74	15,484 21	16,652 26	18,960 14	18,843 01
“ City Collector for tickets.....	100 00	168 50	58 00		
“ free ferries July 4.....	1 00	1 00	1 00	1 00	1 00
Total from rates.....	\$105,704 00	\$106,254 11	\$102,666 04	\$104,525 79	\$104,187 56
From rents.....	405 66	497 34	514 00	492 00	514 00
“ old materials sold.....	193 59	157 66	40 37	149 50	74 00
“ other sources.....	1,029 05	829 46	868 69	2,391 74	1,551 52
Total ordinary receipts.....	\$107,332 30	\$106,738 57	\$104,089 10	\$107,559 03	\$106,327 08
EXPENDITURES (ORDINARY).					
Office:					
Division engineer's salary (one-half) *.....	\$3,000 00	\$3,000 00	\$2,291 66	\$2,500 00	\$2,500 00
Deputy superintendent's salary.....			3,172 04	3,300 00	3,366 66
General foreman and cashier.....	4,533 33	4,600 00	724 99	.....	117 50
Clerks and cashier.....			1,615 80	4,912 37	5,205 33
Retired veterans' pensions.....			.....	.....	572 45
Retired employees' pension (not veterans).....	184 76	191 02	227 86	218 72	164 23
Stationery.....	988 02	1,178 15	1,377 16	1,201 81	1,785 94
Printing.....					

Telephones.....	213 20	213 25	223 36	248 06	245 44
Advertising.....	72 21	14 80	7 70	32 40	56 80
Car fares.....	53 00	58 00	60 00	74 85	81 00
Postage.....	11 58	25 62	6 00	2 00	6 00
Premiums, surety companies.....	180 00	176 00	176 00	108 00	82 11
Total office expenses.....	\$9,236 10	\$9,456 84	\$9,882 57	\$12,598 21	\$14,183 46
Ferryboats and landings:					
Employees (wages).....	150,600 12	158,594 43	166,485 61	170,024 48	174,875 31
Fuel.....	30,629 72	36,741 08	34,438 29	38,588 73	36,437 11
Teaming, weighing coal, etc.....	2,795 07	2,791 89	3,438 22	2,969 12	3,032 21
Supplies, oil, waste †.....	7,061 92	7,338 79	8,141 24	7,528 33	6,250 18
Oils.....	.....	.....	.....	1,422 41	1,508 16
Gas.....	660 56	475 94	449 42	600 10	634 41
Electric light.....	3,412 57	3,705 69	3,911 98	3,929 04	4,090 55
Towing teams by electric motors.....	117 00	123 02	111 32	154 08	112 82
Repairs of boats.....	10,959 95	11,417 71	15,490 51	19,650 80	26,197 95
Repairs of buildings, piers and drops.....	5,798 89	4,450 35	4,366 36	10,185 41	8,882 71
Furnishings.....	227 51	241 70	293 20	527 53	433 12
Other expenditures †.....	601 69	583 19	619 35	838 28	1,089 40
Total from regular annual appropriations.....	\$222,101 10	\$235,920 63	\$247,628 07	\$269,016 52	\$277,727 39
EXPENDITURES FROM SPECIAL APPROPRIATIONS.					
Repairing ferryboat "General Summer".....	.....	39,500 00	62,589 31	61,870 69	.....
New ferryboat.....	.....	540 00	3,888 05	40,579 44	7,532 51
Ferry landings, repairs.....	.....	.....	.....	.....	.....
Total expenditures, regular and special.....	\$222,101 10	\$275,960 63	\$314,105 43	\$371,466 65	\$285,259 90
Balances in treasury unexpended.....	40,015 60	124,975 60	110,498 24	8,048 11	515 60

* Remainder paid by Bridge Service.
 † Includes repair of coal carts, analysis of coal, expressage and use of towboats.

† Oil purchases included in this item until 1912-13.

5. Comparison of Receipts, etc.—*Concluded.*

	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.
APPROPRIATIONS.					
Regular annual appropriations.	\$230,000 00	\$230,000 00	*\$247,628 07	*\$269,016 52	*\$277,727 39
Transfers from other sources . . . . .	.....	5,920 63			
Special appropriations:					
Repairing ferryboat "General Summer"	40,000 00				
New ferryboat . . . . .	.....	125,000 00	52,000 00		
Ferry landings, repairs. . . . .	.....	.....	
	\$270,000 00	\$360,920 63	\$299,628 07	\$269,016 52	\$277,727 39

* Part of appropriation for Bridge and Ferry Division applied to Ferry Service.

Comparative Balance Sheets at the Close of Each Year for Five Years.

	January 31, 1910.	January 31, 1911.	January 31, 1912.	January 31, 1913.	January 31, 1914.
<i>Assets.</i>					
Cash, balance on hand.....					\$390 06
Cash, tollmen's capital.....	\$200 00	\$200 00	\$200 00	\$200 00	200 00
Rents receivable.....				22 00	22 00
Fuel and supplies in stock.....	4,730 56	10,830 80	8,440 00	10,877 63	9,265 62
City Treasurer (balance of appropriation).....	40,015 60	124,975 60	110,498 24	8,048 11	515 60
Ferryboats (less depreciation).....	173,880 05	163,987 25	216,769 72	267,685 78	251,624 63
Machinery and tools (less depreciation).....	4,634 50	4,171 05	3,753 95	3,378 55	3,040 69
Real estate, land and buildings (assessors' valuation).....	606,400 00	616,400 00	641,800 00	641,800 00	610,200 00
Total tangible assets.....	\$829,860 71	\$920,564 70	\$981,461 91	\$932,012 07	\$875,258 60
Cost of avenues, etc., East Boston (previous to 1870) ¹	315,815 68	315,815 68	315,815 68	315,815 68	315,815 68
Deficiency of assets (loss).....	3,343,848 65	3,525,261 72	3,677,838 48	3,905,960 81	4,150,659 65
Totals.....	<u>\$4,489,525 04</u>	<u>\$4,761,642 10</u>	<u>\$4,975,116 07</u>	<u>\$5,153,788 56</u>	<u>\$5,341,733 93</u>
<i>Liabilities.</i>					
Capital invested by the City of Boston to date.....	\$4,449,509 44	\$4,636,666 50	\$4,864,617 83	\$5,145,740 45	\$5,341,733 93
Appropriations account (credit balance).....	40,015 60	124,975 60	110,498 24	8,048 11	515 60
Total liabilities.....	<u>\$4,489,525 04</u>	<u>\$4,761,642 10</u>	<u>\$4,975,116 07</u>	<u>\$5,153,788 56</u>	<u>\$5,341,733 93</u>

Details of Capital Invested by the City of Boston.

Total expenditures to date, per ferry books.....	\$10,659,427 16	\$10,953,322 79	\$11,285,363 22	\$11,674,764 87	\$11,977,239 77
Interest on debt for the year (per City Auditor).....	17,935 00	17,935 00	17,935 00	17,215 00	16,155 00
Interest previous years, etc. (net debits per auditor).....	279,148 85	279,148 85	279,148 85	279,148 85	279,148 85
Total expenditures ²	<u>\$10,956,511 01</u>	<u>\$11,250,406 64</u>	<u>\$11,582,447 07</u>	<u>\$11,971,128 72</u>	<u>\$12,272,543 62</u>
Deduct total receipts paid to collector ²	6,507,001 57	6,613,740 14	6,717,829 24	6,825,388 27	6,931,325 29
Excess of expenditures, capital.....	<u>\$4,449,509 44</u>	<u>\$4,636,666 50</u>	<u>\$4,864,617 83</u>	<u>\$5,145,740 45</u>	<u>\$5,341,218 33</u>

¹ See footnote 4 under Table 4.² Auditor's figures for total expenditures and receipts are \$60,278.56 more than the above, the difference (capital invested) being the same.

Total Expenditures Upon Ferries Since 1858-59.

Expenditures for avenues, paving, interest, etc., previous to purchase of the ferries by the city	\$444,101 30
Purchase of ferries, April, 1870	276,375 00
Expenditures for ferryboats since April, 1870	743,070 58
Expenditures for new buildings, piers, drops, etc.	607,523 64
Expenditures for tools and fixtures	14,752 46
Expenditures for land from Lincoln's Wharf in 1887	5,562 52
Expenditures for land from Battery Wharf in 1893	10,000 00
Total expenditures on capital account	\$2,101,385 50
Expenditures for repairs of all kinds	1,076,078 49
Expenditures for fuel	1,576,402 67
Expenditures for salaries and wages	5,733,881 82
Expenditures for all other purposes	1,845,073 70
	<hr/>
	\$12,332,822 18

Total Receipts From Ferries Since 1858-59.

Receipts from rents, etc., previous to purchase of ferries	\$29,588 56
Receipts from ferry tolls since purchase of ferries	6,696,508 37
Receipts from rents since purchase of ferries	64,670 79
Receipts from sales of ferryboats	149,067 44
Receipts from all other sources, per ferry books, Receipts from all other sources, additional, per auditor	21,623 90
	30,734 85
Total receipts from all sources	\$6,992,193 91
Less amount with tollmen as capital, \$200 00	
Less amount on hand with cashier at close of the year	390 06
	<hr/>
	590 06
Total receipts per auditor's figures	\$6,991,603 85

**REGULAR ANNUAL (ORDINARY) AND SPECIAL APPRO-
PRIATIONS (EXTRAORDINARY) OF THE FERRY
SERVICE FOR THE YEAR ENDING JANUARY 31, 1914.**

Appropriations (regular) for the year ending January 31, 1914	<u>\$277,727 39</u>
Amount of expenditures for the year	<u>\$277,727 39</u>

SPECIAL APPROPRIATIONS.

Appropriation authorized and issued May 27, 1902, for ferry improvements		\$100,000 00
Amount expended from May 27, 1902, to January 31, 1914		99,984 40
		<hr/>
Unexpended balance of the appropriation January 31, 1914		<u>\$15 60</u>
Appropriation authorized January 19, 1910, for transfer from Lamp Division, for repairing ferryboat "General Sumner"		\$40,000 00
Amount expended from January 19, 1910, to January 31, 1914		39,500 00
		<hr/>
Unexpended balance of this appropriation January 31, 1914		<u>\$500 00</u>
Appropriation authorized and issued August 22, 1911, for ferry landings repairs		<u>\$52,000 00</u>
Amount expended from August 22, 1911, to January 31, 1912,	\$3,888 05	
Amount expended from February 1, 1912, to January 31, 1913,	40,579 44	
Amount expended from February 1, 1913, to January 31, 1914,	7,532 51	
	<hr/>	<u>\$52,000 00</u>

AMOUNTS PAID FROM SPECIAL APPROPRIATION FOR FERRY LANDING REPAIRS.

Amount paid Samuel Cabot, Inc., fifty gallons "Conservo,"		\$20 00
Amount paid W. H. Ellis, under contract rebuilding Boston landing, South Ferry:		
15 piles under 45 feet at \$20.50	\$307 50	
23 piles (45 feet to 50 feet) at \$22	506 00	
22 piles (50 feet to 55 feet) at \$23.50	517 00	
80 piles delivered at \$16	1,280 00	
700 feet yellow pine at \$59	41 30	
Drop foundations, 45 per cent done (bid \$1,000)	450 00	
Miscellaneous, 60 per cent done (\$575 bid),	345 00	
	<hr/>	\$3,446 80
Less 15 per cent	517 02	
	<hr/>	2,929 78
Amount paid S. W. K. Brooks, rebuilding outer half of old wharf at Boston landing, South Ferry:		
Labor and material	\$187 47	
37 men, shoving trusses at 50c.	18 50	
182 men, moving ballast at 50c.	91 00	
	<hr/>	
Carried forward	\$296 97	\$2,949 78

<i>Brought forward</i>	\$296 97	\$2,949 78
150 men, examinations of tanks, from January 11, 1913, to March 1, 1913, at 50c.	75 00	
		371 97
Amount paid S. W. K. Brooks under contract, building tanks, Boston landing, South Ferry:		
Tank for south drop, complete	\$3,500 00	
Tank for north drop, complete	3,350 00	
	\$6,850 00	
Less previous payments	5,680 12	1,169 88
Amount paid W. H. Ellis under contract, rebuilding north pier, Boston landing, South Ferry:		
15 piles under 45 feet at \$20.50	\$307 50	
39 piles (45 feet to 50 feet) at \$22	858 00	
66 piles (50 feet to 55 feet) at \$23.50	1,551 00	
32 piles (55 feet to 60 feet) at \$25	800 00	
12,000 feet B. M. yellow pine at \$59	708 00	
14 chocks at \$1	14 00	
Drop foundations, 90 per cent done (bid \$1,000)	900 00	
Miscellaneous, 90 per cent done (bid \$575),	517 50	
	\$5,656 00	
Less 15 per cent	848 40	
	\$4,807 60	
Less previous payments	2,929 78	1,877 82
Amount paid W. H. Ellis under contract, rebuilding north pier, Boston landing, South Ferry:		
15 piles under 45 feet at \$20.50	\$307 50	
39 piles (45 feet to 50 feet) at \$22	858 00	
66 piles (50 feet to 55 feet) at \$23.50	1,551 00	
37 piles (55 feet to 60 feet) at \$25	925 00	
12,000 feet B. M. yellow pine at \$59	713 31	
14 chocks at \$1	14 00	
90 piles covered with canvas at 25c.	22 50	
Drop foundations	1,000 00	
Miscellaneous	575 00	
	\$5,966 31	
Less 5 per cent	298 32	
	\$5,667 99	
Less previous payments	4,807 60	860 39
Amount paid W. H. Ellis under contract, rebuilding north pier, Boston landing, South Ferry:		
Amount of contract as per last estimate	\$5,966 31	
Less previous payments	5,667 99	298 32
Amount paid General Waterproofing Company, covering three pile tops, Boston landing, North Ferry, middle pier		4 35
		<u>\$7,532 51</u>
Amount paid prior to February 1, 1912	\$3,888 05	
Amount paid from February 1, 1912, to February 1, 1913	40,579 44	
Amount paid from February 1, 1913, to February 1, 1914	7,532 51	
		<u>\$52,000 00</u>

STATEMENT SHOWING RECEIPTS AT EACH FERRY.

North Ferry.

FROM TOLLMEN.	Foot Passengers.	Team Tickets.	Totals.
East Boston side.....	\$16,214 90	\$8,126 50	\$24,341 40
Boston side.....	17,115 17	5,472 50	22,587 67
	\$33,330 07	\$13,599 00	\$46,929 07
From tollmen			\$46,929 07
From gatemen:			
For 86,077 foot passengers at 1 cent		\$860 77	
For cash fares for teams		9,187 29	
			10,048 06
Total at North Ferry			<u>\$56,977 13</u>

South Ferry.

FROM TOLLMEN.	Foot Passengers.	Team Tickets.	Totals.
East Boston side.....	\$12,055 73	\$3,959 50	\$16,015 23
Boston side.....	12,777 98	6,008 50	18,786 48
	\$24,833 71	\$9,968 00	\$34,801 71
From tollmen			\$34,801 71
From gatemen:			
For 75,970 foot passengers at 1 cent		\$759 70	
For cash fares for teams		9,655 72	
			10,415 42
Total at South Ferry			<u>\$45,217 13</u>
North and South Ferries as above			\$102,194 26
Tickets paid for at ferry office			1,992 30
Received in lieu of free ferries, July 4, 1913			1 00
			\$104,187 56
Rents for the year			514 00
<i>Carried forward</i>			<u>\$104,701 56</u>

<i>Brought forward</i>	\$104,701 56
Sale of old material	74 00
Commissions on public telephone	51 52
Head-house privileges	600 00
Revenue applied to appropriation, damages recovered	900 00
Total cash receipts for the year	<u>\$106,327 08</u>

STATEMENT OF TRAVEL ON THE FERRIES FROM FEBRUARY
1, 1913, TO JANUARY 31, 1914, INCLUSIVE.

	North Ferry.	South Ferry.
Foot passengers at 1 cent each	3,419,084	2,559,341
Foot passengers by ticket	39,250	26,832
Foot passengers free	1,396	1,113
Total foot	<u>3,459,730</u>	<u>2,587,286</u>
One-horse teams and pleasure carriages	350,218	301,483
Two-horse teams	128,232	110,889
Three-horse teams	5,207	2,525
Four-horse teams	2,008	2,570
Two-horse pleasure carriages and hacks	36,763	27,097
Handcarts, etc.	1,812	850
Dragwheels	1	—
Free teams	8,171	4,783
	<u>532,412</u>	<u>450,197</u>
Total cash foot passengers		6,044,507
Total free foot passengers		2,509
Total foot passengers carried		<u>6,047,016</u>
Total cash teams		969,655
Total free teams		12,954
Total teams carried		<u>982,609</u>

TOTAL TRAVEL ON BOTH FERRIES FROM FEBRUARY 1,
1909, TO JANUARY 31, 1914.

	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.
One-horse teams.....	625,723	625,081	635,792	658,255	651,701
Two-horse teams.....	245,131	241,896	236,600	249,052	239,121
Three-horse teams.....	11,929	11,040	10,357	9,697	7,732
Four-horse teams.....	9,257	9,498	7,218	5,838	4,578
Two-horse carriages and hacks.....	30,667	40,703	51,637	67,094	63,860
Two-cent tolls for handcarts, etc....	5,934	6,068	4,329	5,519	2,662
Dragwheels, etc.....	12	5	11	6	1
Paid teams at both ferries.....	934,653	934,291	946,144	995,101	969,655
Free teams at both ferries.....	4,722	5,386	8,134	14,541	12,954
Total teams at both ferries.....	939,375	939,677	954,278	1,009,642	982,609
Foot passengers, paid.....	6,352,461	6,313,696	6,007,367	5,950,153	6,044,507
Foot passengers, free.....	960	3,827	3,554	2,551	2,509
Total foot passengers.....	6,353,421	6,317,523	6,010,921	5,952,704	6,047,016

APPENDIX C.

REPORT OF DIVISION ENGINEER OF THE
HIGHWAY DIVISION.

BOSTON, February 2, 1914.

MR. L. K. ROURKE,

Commissioner of Public Works:

DEAR SIR,— I submit herewith a report of the income, expenditures and operations of the Highway Division of the Public Works Department for the year 1913.

The maintenance expenditures of the division for the year, from February 1, 1913, to January 31, 1914, was as follows:

Paving Service	\$1,392,468 22
Sanitary Service	925,318 56
Street Cleaning and Water Service	753,457 39
Lighting Service	795,880 53
	<hr/>
	<u>\$3,867,124 70</u>

The permanent pavements laid during the year were confined principally to wood blocks and bitulithic. Warren avenue in the South End; Marvin, Ruggles and Vernon streets in Roxbury, and the completion of the contract in Washington street, Dorchester, comprise the wood block areas. Bitulithic pavement was laid in Washington street, Brighton, and Centre and South streets, West Roxbury.

The use of bituminous binders in the maintenance of the macadam streets by the division forces has been continued, about all the streets resurfaced being treated with tar or asphalt. The resurfacing operations of the Paving Service used about 460,000 gallons of asphalt and tar.

The activity in the construction of assessment streets is shown by the awarding of 105 contracts during the year. Of this number 80 were completed, together with

27 carried over from last year, making 107 contracts completed in 1913, the balance, 25 contracts, carried over to 1914 for completion.

The contract with the Boston Development and Sanitary Company became operative in March, the Sanitary Service delivering its collections of garbage, ashes and refuse at the several water front stations and Southampton street and Massachusetts avenue dumps. The opening of these stations has eliminated the inland dumps which means long hauls for the material collected in the outskirts of the district and a consequent increase in the cost of the Sanitary Service. To facilitate the delivery of ashes, etc., to the stations two auto trucks were purchased, the results thus far being very satisfactory. New horse-drawn carts of special design have been added to the rolling stock which can be used in collecting either garbage or ashes.

The street cleaning rolling stock has been reinforced by the addition of two new pressure flushers and a number of new horses to replace some worn-out stock. Experiments have been made in the line of dustless sweeping by the use of calcium chloride and also spraying the broom, the results obtained not being entirely satisfactory. In the oiling of streets about 1,500,000 gallons of oil were used for dust suppression, covering an area of about 7,000,000 square yards. Oils with asphaltic base were principally used although a considerable area was treated with light or non-asphaltic oils, the latter being applied under pressure by the city gasolene automobile spraying machine, capacity of tank 1,000 gallons.

Street lamps of the various types have been installed on the new streets constructed by the division; also on private streets that have been opened and built upon.

The installation of arc and tungsten lamps in the city proper in place of gas lamps has been completed. Magnetite arc lamps have been substituted for inclosed arc lamps in the Charlestown district, giving that section the same service as received in the other sections of the city.

There is a growing demand for additional lighting on some of the business streets and thoroughfares which should be attended to when funds are available.

Respectfully,

JAMES H. SULLIVAN,
Division Engineer.

FINANCIAL STATEMENT, HIGHWAY DIVISION.

Receipts.

Appropriation	\$3,670,000 00
Transfer from Bridge and Ferry Division	30,000 00
Transfer from Printing Department	25,000 00
Transfer from Reserve Fund	25,000 00
Transfer from City Debt Requirements, Interest, Revenue	20,000 00
	98,805 44

PAVING SERVICE \$22,692 59

Inspectors' services	\$5,071 50
Labor and materials furnished	10,397 97
Materials sold	1,490 19
Care and feed of horses	4,083 64
Use of roller	7 00
Damage to automo- bile	500 00
Removing snow	500 00
Gasolene furnished	25 67
Refund of overpay- ment on crushed stone	616 62

SANITARY SERVICE 75,199 43

Sale of tickets for removal of ashes, garbage, etc.	\$60,530 05
Sale of tow boat "Cormorant"	8,287 42
Sale of old material	358 37
Horse killed on ac- count of glanders	50 00
Refund on overpay- ment on express charge	47
Work done and ma- terials furnished other divisions and departments	5,335 37
Care and feed of horses	628 00
Dumping boat serv- ice	9 75

Carried forward \$3,868,805 44

<i>Brought forward</i>		\$3,868,805 44
STREET CLEANING AND OILING		
SERVICE	\$913 42	
Removing street dirt,	\$833 00	
Horse killed on ac-		
count of glanders,	50 00	
Labor and materials		
furnished	30 42	
		<u>\$3,868,805 44</u>
Transferred to Central Office appropriation		159 50
		<u>\$3,868,645 94</u>

Expenditures.

Lighting Service	\$795,880 53	
Paving Service	1,392,468 22	
Sanitary Service	925,318 56	
Street Cleaning and Oiling Service,	753,457 39	
		<u>3,867,124 70</u>
Balance January 31, 1914		<u>\$1,521 24</u>

SPECIAL APPROPRIATIONS.

Street Lighting Equipment.

Balance February 1, 1913	\$296,411 48
Expenditures from February 1, 1913, to January 31, 1914	000,000 00
	<u>\$296,411 48</u>

Highways, Making of.

Expenditures from February 1, 1913, to January 31, 1914	<u>\$265,583 18</u>
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Old Colony Avenue, Construction of.

Balance February 1, 1913	\$16,053 51
Expenditures from February 1, 1913, to January 31, 1914	1,485 65
Balance January 31, 1914	<u>\$14,567 86</u>

*Tunnel Under Railroad Tracks Between Boylston and Green Streets, Jamaica Plain.**

Balance February 1, 1913	\$18,687 18
Amount paid by New York, New Haven & Hartford Railroad	528 55
	<u>\$19,215 73</u>
<i>Carried forward</i>	\$19,215 73

* Lawndale terrace laid out under chapter 393 of the Acts of 1906.

<i>Brought forward</i>	\$19,215 73
Expenditures from February 1, 1913, to January 31, 1914	12,227 55
Balance January 31, 1914	<u>\$6,988 18</u>
<i>Arlington Street Extension.*</i>	
Expenditures from February 1, 1913, to January 31, 1914	<u>\$318 33</u>
<i>Harvard Avenue, Brighton.*</i>	
Expenditures from February 1, 1913, to January 31, 1914	<u>\$645 68</u>
<i>Norfolk Street Widening.*</i>	
Expenditures from February 1, 1913, to January 31, 1914	<u>\$4,946 60</u>
<i>Pleasant Street Widening.*</i>	
Expenditures from February 1, 1913, to January 31, 1914	<u>\$26,415 58</u>
<i>Thacher Street Extension.</i>	
Expenditures from February 1, 1913, to January 31, 1914	<u>\$180 67</u>
<i>Union Park Street.*</i>	
Expenditures from February 1, 1913, to January 31, 1914	<u>\$8,852 47</u>
<i>Everett Street, Brighton, Property.</i>	
Balance February 1, 1913	\$23,000 00
Expenditures from February 1, 1913, to January 31, 1914	00,000 00
Balance February 1, 1914	<u>\$23,000 00</u>
<i>Land and Buildings, Refuse Station.</i>	
Balance February 1, 1913	\$61,110 85
Expenditures from February 1, 1913, to January 31, 1914	45,527 53
Balance February 1, 1914	<u>\$15,583 32</u>
<i>Refuse Destructor Site, Spectacle Island.</i>	
Balance February 1, 1913	\$15,000 00
Expenditures from February 1, 1913, to January 31, 1914	00,000 00
Balance February 1, 1914	<u>\$15,000 00</u>

* Laid out under chapter 393 of the Acts of 1906.

HIGHWAY DIVISION — LIGHTING SERVICE.

FINANCIAL STATEMENT.

*Expenditures, February 1, 1913, to January 31, 1914.**Electric Lighting:**Arc.*

Edison Electric Illuminating Company	\$432,163 09	
Charlestown Gas and Electric Company	27,131 68	
	<hr/>	\$459,294 77

Incandescent.

Edison Electric Illuminating Company	\$53,847 87	
Charlestown Gas and Electric Company	22 25	
	<hr/>	53,870 12

Gas Lighting:

Boston Consolidated Gas Com- pany	\$4,391 54	
Charlestown Gas and Electric Company	133 93	
East Boston Gas Company	171 79	
Rising Sun Street Lighting Com- pany	258,188 84	
City lighting and care	1,943 06	
	<hr/>	264,829 16

Salaries and Wages:

Division Engineer (part of)	\$1,250 00	
Supervisor	2,044 45	
Inspectors	4,275 75	
Messengers and watchmen	3,073 77	
	<hr/>	10,643 97

Auto Expenses:

Gasolene, oil, etc.	\$150 79	
Storage	155 33	
Tubes and shoes, new and repairs, Supplies	192 61	
Registration	170 85	
Registration	10 00	
Repairs (old car)	497 12	
Buick car (new)	648 00	
	<hr/>	\$1,824 70

Wages of chauffeur	1,113 00	
	<hr/>	2,937 70

<i>Carried forward</i>		<hr/>	\$791,575 75
----------------------------------	--	-------	--------------

<i>Brought forward</i>		\$791,575 72
<i>Construction:</i>		
Underground work	\$2,650 11	
Wrought-iron work	122 50	
Electric changes	85 58	
Lamp-posts	3 70	
	<hr/>	2,861 89
<i>Horsekeeping:</i>		
Horsekeeping, shoeing, repairs, etc.		920 86
<i>Printing, etc.:</i>		
Printing	\$99 28	
Postage	40 00	
Stationery and periodicals	62 55	
	<hr/>	201 83
<i>Miscellaneous:</i>		
Traveling expenses	\$237 45	
Telephone rentals, etc.	40 53	
Atlas	31 50	
Signs and numbers	2 00	
Tools, etc.	5 05	
Testing lamps	90	
Building repairs	2 80	
	<hr/>	320 23
 Total		<u>\$795,880 53</u>

The following is a statement of the work done during the year under the supervision of the Supervisor of Street Lighting.

The numerous petitions and applications for new lamps received from citizens and from officials, also complaints in relation to this service, have been investigated. All streets in the underground district prescribed for the calendar year 1913 have been inspected and the necessary changes and additions made.

Magnetite arc lamps have been substituted for the inclosed arc lamps in the Charlestown district, and all of the city proper district is now lighted electrically.

Arc lamps were provided for skating during the season at Franklin Field, Wood Island, Jamaica Pond, North Brighton, Savin Hill and Alford Street Playgrounds.

The number of miles of streets and ways lighted by this service is as follows:

	Miles.
Public streets and alleys	572.85
Public footways	1.04
Park roads, footways and private streets and alleys approximately	300.00
	<hr/> 873.89

During the year 15,237 defects in the gas lamps were reported by the inspectors, and the following defects were reported by the police: Arc lamps, 9,429; incandescent lamps, 1,144, and gas lamps, 766.

LAMPS INSTALLED.

Magnetite arc lamps	709	
Gilbert arc lamps	2	
Tungsten lamps	1,362	
Single mantle gas lamps	116	
Inverted mantle gas lamps	2	
Single mantle gas lamps relighted	39	
Fire alarm gas lamps	1	
	<hr/>	2,231

LAMPS DISCONTINUED.

Gilbert arc lamps	282	
Magnetite arc lamps	36	
Flame arc lamps	1	
Tungsten lamps	18	
Single mantle gas lamps	1,475	
Inverted mantle gas lamps	56	
Triple mantle gas lamps	1	
Fire alarm gas lamps	125	
	<hr/>	1,994
Net increase		<hr/> 237

The following table shows the work of setting, repairing and altering lamp-posts, brackets, services, etc.:

	Set for Lamps.	Set in Place of Broken Posts.	Shifted to New Location.	Straightened.	Reset to Line and Grade.	Removed.	Repaired.	Laid.	Relaid.	Reconnected.	Cleared.	Extensions Removed.	Extensions Set.	Set in Place of Brackets.	Shades.
Gas posts.....	71	20	14	39	180	168	21					56	2	1	10
Are posts.....	424		74	8	26	23									35
Tungsten posts....	445	1	3	2	4	8								5	8
Gas brackets.....						109									
Are fixtures.....	6						1								
Tungsten fixtures..	794		1			21	2								
Fire alarm posts:															
Gas.....	39														
Tungsten.....	122														
Fire alarm tungsten bracket.	1														
Services.....						343	268	122	27	2	213				

The following table shows the number of lamps of the various types in use on January 1, 1914, as compared with the number in use January 1, 1913:

	January, 1914.	January, 1913.	Increase or Decrease.
Single mantle gas.....	9,844	11,202	-1,358
Double mantle gas.....	95	95	.....
Triple mantle gas.....	17	18	-1
Inverted mantle gas.....	158	212	-54
Fire alarm gas.....	157	243	-86
Magnetite arc.....	4,698	4,025	+673
Gilbert arc.....	5	285	-280
Flame arc.....	30	31	-1
Tungsten incandescent.....	3,477	2,118	+1,359
Carbon incandescent.....	15	15	.....
Totals.....	18,496	18,259	+237

STREET LAMP OUTAGE.

Rebates for lamps not lighted on schedule time or out before the proper time have been received on the various monthly bills, as follows:

DATE.	Incandescent.	Gas.	Arc.
February, 1913.....	\$6 92	\$5 53	\$361 19
March.....	6 44	16 40	388 35
April.....			
May.....	3 30	4 59	130 06
June.....	4 36	2 91	124 48
July.....	1 12	2 91	110 22
August.....	4 19	3 51	60 39
September.....	4 67	3 01	115 33
October.....	4 84	1 55	204 55
November.....	10 23	4 21	271 18
December.....	9 23	5 11	351 34
January, 1914.....	7 26	8 08	337 61
Totals.....	\$62 56	\$57 81	\$2,464 70

GAS LIGHTING.

There are in use 9,844 single mantle gas lamps, 95 double mantle lamps, 17 triple mantle lamps, 158 inverted mantle lamps and 157 open flame fire alarm signal lamps.

The city furnishes and provides for the setting of the lamp-posts, has service pipes laid from the gas mains

to the top of the posts, maintains all such pipes and posts in good condition and repair, contracts for gas, lanterns, burners, other necessary equipment and labor for lighting and care, except for the inverted lamps, in which case the city furnishes the labor and equipment.

The Lighting Service provides for the gas, lighting and care of the fire alarm signal lamps, and the Fire Department that of repairs, setting of posts and lanterns.

Gas Lamps.

LIGHTING COMPANY.	Gas District.	Number of Lamps.	Type of Lamp.	Rated Candle Power.	Gas Consumed per Lamp per Hour.	Hours of Burning per Annum.	Cost of Gas per M.	Cost of Gas per Lamp per Annum.	Cost per Lamp for Lighting, Care and Repair per Annum.	Total Cost per Lamp.
Rising Sun Street Lighting Company.	Boston Consolidated.	8,830	Single mantle.	60	3 feet.	4,000	\$0 78	.....	.....	\$23 60
		12	Triple mantle.	180	9 feet.	4,000	78	.....	.....	47 60
		95	Double mantle.	120	6 feet.	4,000	78	.....	.....	35 20
		128	Open flame.	.....	4 feet.	4,000	78	\$12 48	.....	22 98
Rising Sun Street Lighting Company.	Charlestown.....	510	Single mantle.	60	3 feet.	4,000	85	.....	.....	23 60
		16	Open flame.	.....	3 feet.	4,000	85	9 60	10 50	20 10
Rising Sun Street Lighting Company.	East Boston.....	504	Single mantle.	60	3 feet.	4,000	85	.....	.....	23 60
		5	Triple mantle.	180	9 feet.	4,000	85	.....	.....	47 60
		13	Open flame.	.....	4 feet.	4,000	85	13 60	10 50	24 10

ELECTRIC LIGHTING.

There are in use 4,698 magnetite arc lamps, 30 flame arc lamps, 5 Gilbert arc lamps, 2,379 50-watt, 1,086 75-watt, 10 100-watt and 2 125-watt tungsten lamps and 15 carbon incandescent lamps.

The electric companies provide and set the lamp-posts, furnish lamps, overhead wires, underground cables and connections and all other necessary equipment and maintain them in good condition and repair.

The lighting rates for the electric lamps are in accordance with the following table:

LAMP.	Fixed Cost per Lamp Year.	Running Costs per Lamp Hour.
50-watt tungsten lamp.....	\$10 80	\$0 0025
75-watt tungsten lamp.....	12 00	0030
100-watt tungsten lamp.....	14 00	0040
125-watt tungsten lamp.....	18 00	0050
500-watt Gilbert arc lamp.....	36 00	0160
500-watt magnetite arc lamp.....	42 00	0175
500-watt flame arc lamp.....	42 00	0320

A discount of 5 per cent is made on the above rates for lamps in all sections of the city excepting the Hyde Park district, where the discount is 10 per cent.

A deduction at the rate of 1 cent per hour per tungsten lamp and 5 cents per hour per arc lamp is made for all outages.

Incandescent Lamps.

COMPANY.	Number of Lamps.	Type of Lamp.	Type of Circuit.	Watts.	Candle Power.	Lighting Hours.	Cost of Lamp per Annum.	
Edison Electric Illuminating Company.....	676	Tungsten.	Series 6.6 amp. D. C.	50	40	3,828	\$19 35	
	766	Tungsten.	Series 6.6 amp. D. C.	75	60	3,828	22 31	
	679	Tungsten.	Series 6.6 amp. D. C.	50	40	3,828	18 33	
	2	Tungsten.	Series 6.6 amp. D. C.	75	60	3,828	21 14	
	1	Tungsten.	Series 6.6 amp. D. C.	100	80	3,828	27 85	
	2	Tungsten.	Series 6.6 amp. D. C.	125	100	3,828	35 28	
	1,024	Tungsten.	Multiple D. C.	50	40	3,828	19 35	
	317	Tungsten.	Multiple D. C.	75	60	3,828	22 31	
	9	Tungsten.	Multiple D. C.	100	80	3,828	27 85	
	15	Carbon.	Multiple 113 volts.	.....	16	Meter.	.....
	1	Tungsten.	Series 6.6 amp. D. C.	75	60	3,828	22 31	
	Charlestown Gas and Electric Company.....							

HIGHWAY DIVISION (PAVING SERVICE).

The following is a description of the most important work done during the year under the supervision of the Chief Engineer.

GRANITE BLOCK PAVING.

Fulton street, from Richmond street to Lewis street, is about 525 feet in length. The contract for repaving this street on a new Portland cement concrete base with pitch joints was awarded to the Boston Paving Company, September 30, 1913. The contractor also reset the edgestone and relaid the brick sidewalks. The city furnished the new straight edgestone, corners and flagging at the South End Paving Yard and some second-hand flagging was hauled from Warren avenue. The city furnished the circular edgestone, sidewalk brick and second-hand granite paving blocks on the line of the work. The contractor removed the old paving blocks, did the excavating and furnished all other materials necessary to do the work.

Providence street, from 70 feet east of Church street to Berkeley street. (See "Assessment Streets.")

Sleeper street, from Congress street about 650 feet northerly. The contract for furnishing and laying a special cut granite block pavement on a Portland cement concrete base with pitch joints was awarded to John E. Quinn June 3, 1913. It is a 40-foot street with a 5-foot sidewalk on the easterly side and a 3-foot sidewalk on the westerly side. The contractor reset the edgestone and relaid the brick sidewalks. The city furnished the straight edgestone at the South End Paving Yard and the sidewalk brick on the line of the work. The contractor did the excavating and hauled the old paving blocks to the Massachusetts avenue lot. The special cut granite blocks and all other materials necessary to do the work was furnished by the contractor.

Washington street (West Roxbury), at and near Hyde Park avenue and Tower street, about 120 feet in length, was paved with special granite blocks, 5 inches in depth, on a 6-inch Portland cement concrete base, with pitch and pebble joints. This work was done under contract by James Doherty who also did the excavating and regulating. The circular edgestone was furnished by the city on the line of the work. The contractor furnished all the other materials. The old gutter blocks were hauled to the Child Street Paving Yard by the contractor. The track area was paved by the Boston Elevated Railway Company with second-hand blocks on a gravel bed, with cement grout joints. The former surface was macadam.

West First street, from A street to the New England Railroad crossing, about 420 feet in length, was repaved with special cut granite blocks, on a 6-inch Portland cement concrete base and sand bed, by John E. Quinn, under his contract dated May 7, 1913. The contractor reset the edgestone, laid the crosswalks and relaid the brick sidewalks. The city furnished the straight edgestone at the South End Paving Yard and the circular edgestone and sidewalk brick on the line of the work. The contractor did the excavating and furnished the special blocks and flagging and all other materials required to do the work.

ASPHALT PAVING.

Hayward place, from Washington street to Harrison avenue, about 268 feet in length, was resurfaced by the Boston Paving Company under a five (5) year maintenance guaranty, with 1½ inches of Acme asphalt wearing surface and 1½ inches bituminous concrete binder; 392 square yards of the old concrete base next to Harrison avenue was removed on account of settlement and replaced by new Portland cement concrete 6 inches in depth. The remainder of the concrete base was found in good condition and was allowed to remain. The contractor furnished the necessary materials and labor.

Lovering place, from Washington street to Harrison avenue. (See "Assessment Streets.")

Union Park street, from Washington street to Harrison avenue. (See "Assessment Streets.")

WOOD BLOCK PAVING.

Beacon street, from Massachusetts avenue to Raleigh street, about 1,527 feet in length, was patched with new wood block under a one (1) year maintenance guaranty, on the existing concrete base, with gravel bed and joints, by the Central Construction Company, who also did a small amount of regulating. All materials were furnished by the contractor.

Church street, from Providence street to Boylston street. (See "Assessment Streets.")

Dorchester avenue, from Ralston street to 140 feet southerly, was paved with wood blocks on a Portland cement concrete base, with sand bed and sand joints, under a five (5) year maintenance guaranty, by Coleman Brothers, under their contract dated August 9, 1913. The edgestone was reset, crosswalk laid and brick sidewalks relaid. The existing paving in and between the car tracks was not disturbed. The city furnished the flagging at the South Boston Paving Yard and the sidewalk brick on the line of the work. The contractor did the excavating and furnished all other materials required to do the work. The former surface of the street was granite block on a gravel base.

Exchange street, from State street to Dock square, 337 feet in length, was paved in part with wood blocks on a Portland

cement concrete base, sand bed, expansion and sand joints, under a five (5) year guaranty, by the Central Construction Company, under its contract dated November 10, 1913, and in part with granite blocks on a concrete base, pitch and pebble joints. Under an order for extra work the original contract was extended from 174 feet north of State street to Dock square, about 163 feet in length. On the extended work wood blocks were laid with lath joints to within 25 feet of Dock square, which was repaved with the old granite blocks with pitch joints on a concrete base. On account of an existing injunction of the court, the contractor was ordered to remove the wood blocks for a distance of 160 feet from State street and to replace them with granite block and flagging with pitch and pebble joints. The city furnished the straight edgestone and flagging at the South End Paving Yard and the paving blocks and sidewalk brick on the line of the work. The contractor regulated the edgestone, did the excavating and furnished all other materials to do the work. The former surface of the street was granite block.

Marvin street, from Washington street to Shawmut avenue, about 264 feet in length; *Vernon street*, from Washington street to Shawmut avenue, about 295 feet in length, and *Ruggles street*, from Washington street to Shawmut avenue, about 459 feet in length, were paved with wooden blocks on a 6-inch Portland cement concrete base, sand bed and joints, under a five (5) year maintenance guaranty, by the Boston Paving Company, under their contract dated July 1, 1913. The contractors reset the edgestone and furnished and laid the artificial stone sidewalks, under a five (5) year maintenance guaranty. In connection with this work there was considerable edgestone reset, brick sidewalks relaid and block paving, gravel joints, repaved on Shawmut avenue at the approaches to the above streets. The city furnished the straight edgestone at the South End Paving Yard and circular edgestone on the line of the work. All other materials necessary to do the work were furnished by the contractor, who also did the excavating and hauled the old paving blocks, flagging, edgestone and sidewalk brick to the Dimock street lot. The former surfaces were macadam.

Pleasant street, from Eliot street to Washington street. (See "Assessment Streets.")

Warren avenue, from Berkeley street to Columbus square, about 2,044 feet in length, was paved with wood blocks on a 6-inch Portland cement concrete base, sand bed, expansion and sand joints, under a five (5) year maintenance guaranty, by the Boston Paving Company, under its contract dated July 1, 1913. The contractors reset the edgestone, laid the crosswalks and relaid most of the brick sidewalks. The city furnished the circular edgestone and sidewalk brick on the line of the work and the flagging at the South End Paving Yard. The contractors did the excavating and hauled the surplus old paving

blocks and flagging to the Massachusetts avenue lot, and furnished all other materials required in doing the work. The former surface of the street was macadam.

Washington street (Dorchester), from Blue Hill avenue to Talbot avenue and the extension across Codman square is about 7,645 feet in length. The roadway was paved during the summer of 1912 from Blue Hill avenue across Bowdoin street. Work was resumed in the spring of 1913 by the contractor, William J. Barry, and finished before the close of the season. The roadway is paved with wood blocks on a 6-inch concrete base and the sidewalks with artificial stone, both under a five (5) year maintenance guaranty. The contractor did the excavating and regulating and hauled the surplus excavated material to Morton street, between Harvard street and Canterbury street, where it was spread for filling. Old gutter blocks were hauled by the contractor to the Massachusetts avenue lot and were also used for gutter paving on various streets under construction. The former surface of this street was macadam.

BITULITHIC PAVING.

Centre and South streets, from Green street to Keyes street, about 2,742 feet in length, were paved on each side of and between street car tracks with 2 inches of bitulithic pavement on a 6-inch Portland cement concrete base, under a five (5) year maintenance guaranty, by the Warren Brothers Company. Wood block brows, 6 inches in width, were laid on a 6-inch Portland cement concrete base on each side of the car tracks. The crosswalk at side streets are the existing flagging laid on a 6-inch Portland cement concrete base with pitch joints; artificial stone sidewalks were laid and the space between the rails was paved with second-hand granite blocks on a gravel bed with cement grout joints, by the Boston Elevated Railway Company. The contractor did the excavating and regulating. The city furnished the necessary new straight edgestone at the South End Paving Yard and the new blocks and flagging, except what were delivered to various contractors for use on other streets, were hauled by the contractor to the Carolina street playground. All other material was furnished by the contractor. The former surface was macadam.

Norfolk street, from Washington street to the New York, New Haven & Hartford Railroad bridge. (See "Assessment Streets.")

Spring street, from Allen street to Poplar street, about 203 feet in length, was paved with a bitulithic pavement on a Portland cement concrete base by Warren Brothers Company, under a five (5) year maintenance guaranty. The contractor also reset the edgestone and relaid the brick sidewalks. The city furnished the straight edgestone at the South End Paving Yard and the circular edgestone and sidewalk brick on the line of the work. The contractor furnished all other materials

necessary to do the work, and also did the excavating and hauled the old paving blocks, etc., to the Massachusetts avenue lot. The former surface of the street was granite blocks on a gravel base.

Washington street (Brighton), from Cambridge street across Market street, about 1,146 feet in length, was paved with 2 inches of bitulithic pavement on a 6-inch Portland cement concrete base, under a five (5) year maintenance guaranty, by the Warren Brothers Company, under its contract dated May 26, 1913. The contractors reset the edgestone, laid the crosswalks, furnished and laid the wooden block brows along the car tracks and furnished and laid the artificial stone sidewalk under a five (5) year maintenance guaranty. The city furnished the straight edgestone and flagging at the South End Paving Yard and the circular edgestone on the line of the work. The contractors furnished the other materials necessary to do the work and hauled the old materials to the Brighton Paving Yard. The former surface of the street was macadam.

BRICK BLOCK PAVING.

Hancock and Bowdoin streets, from Winter street to Hancock street. (See "Assessment Streets.")

ASSESSMENT STREETS.

The following streets have been constructed or are in the process of construction under the provisions of chapter 393 of the Acts of 1906, and the acts in amendment or in addition thereto:

Appian way, from Franklin street to Raymond street, is about 426 feet in length. The contract for constructing the surface of this street was awarded to John J. Lane September 9, 1913. Work was begun September 12, 1913, and completed November 15, 1913. It is a 25-foot street with a 6-inch tar macadam roadway, edgestones were set, 2½-foot block gutters, and flagging crosswalks were laid. The sidewalks, 4½ feet wide, were laid with artificial stone, under a five (5) year maintenance guaranty. The straight edgestone and flagging were furnished by the city at the South End Paving Yard, the granite blocks at the Brighton Yard and the circular edgestone on the line of the work. The contractor did the excavating and furnished all other materials required in doing the work.

Armington street, from Webster street to Islington street, is about 570 feet in length, and *Islington street*, from Armington street to Brighton avenue, is about 263 feet in length. The contract for constructing the surfaces of these streets was awarded to A. J. & G. H. McMurtry October 24, 1913. Work was begun October 31, 1913, and suspended December 2, 1913. These streets, as constructed, are 29.75 feet in width, with a 6-inch tar macadam roadway, granite edgestone and flagging

crosswalks. The sidewalks are 5 feet wide, laid with artificial stone under a five (5) year maintenance guaranty. The straight edgestone and flagging was furnished by the city at the South End Paving Yard, Albany street, the granite paving blocks at the Massachusetts avenue lot, and the circular edgestone on the line of the work. The contractor did the excavating and furnished all other materials required in doing the work. These streets are completed with the exception of the sidewalks. The usual granite block gutters were omitted and tar macadam was substituted. Work will be resumed early in the spring.

Audubon road, from Ivy street to Mountfort street, is about 346 feet in length. The contract for constructing the surface of this street was awarded to the Boston Paving Company October 29, 1913. Work was begun November 19, 1913, and completed December 20, 1913. It is a 50-foot street with a 6-inch asphalt macadam roadway. Edgestone was set on the westerly side of the street and 3-foot granite block gutters were laid. An artificial stone sidewalk, 8 feet wide, was laid on the westerly side of street, under a five (5) year maintenance guaranty. The easterly sidewalk, which had been built previous to the present construction, was not disturbed. The straight edgestone, corners and flagging were furnished by the city at the South End Paving Yard, Albany street, the granite paving blocks at the Massachusetts avenue lot and the circular edgestone on the line of the work. The contractor did the excavating and furnished all other materials required in doing the work. Flagging crosswalks were also laid.

Barrymore street, from Blue Hill avenue to Harvard street, is about 271 feet in length. The contract for constructing the surface of this street was awarded to the Fred S. & A. D. Gore Corporation October 2, 1912. Work was begun March 17, 1913, and completed July 15, 1913. It is a 40-foot street with a 6-inch macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The straight edgestone and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone and flagging was furnished by the city on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty. The surplus excavation was hauled to Morton street.

Bentham road, from Draper street to Robinson avenue, is about 270 feet in length. The contract for constructing the surface of this street was awarded to James Doherty December 5, 1912. Work was begun May 3, 1913, and completed June 4, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks with loam space. The sidewalk on the east side is 7 feet in width, with an artificial stone walk 4 feet in width on both sides and a loam space. The straight edgestone, flagging and paving blocks were fur-

nished by the city and hauled by the contractor; the circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The new artificial stone sidewalks were laid under a five (5) year maintenance guaranty.

Brainerd road, from Harvard avenue to Warren street, is about 1,816 feet in length. The contract for constructing the surface of this street was awarded to James Doherty November 25, 1912. Work was begun March 15, 1913, and completed June 21, 1913. The street varies in width from 45 to 50 feet, with a 6-inch tar macadam roadway. Edgestone was set, 3-foot granite block gutters laid and flagging crosswalks laid. The sidewalk, 8 foot in width, was laid with artificial stone, under a five (5) year maintenance guaranty. The flagging and part of the straight edgestone was furnished by the city at the South End Paving Yard, Albany street, the remainder of the straight edgestone and the circular edgestone were delivered on the line of the work by the city and the granite paving blocks at the Brighton Paving Yard. The contractor did the excavating and furnished all other materials required in doing the work.

Brookview street, from Blue Hill avenue to Harvard street, is about 533 feet in length. The contract for constructing the surface of the street was awarded to James Doherty November 25, 1912. Work was begun May 19, 1913, and completed July 17, 1913. It is a 50-foot street, with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 8-foot sidewalks, consisting of a 5-foot artificial stone sidewalk and a loam space. The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty. The surplus material was hauled to Morton street and to Dumas street.

Bynner street, from South Huntington avenue to Day street, is about 716 feet in length. The contract for constructing the surface of this street was awarded to J. C. Coleman & Sons Company May 6, 1913. Work was begun July 9, 1913, and completed September 27, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestones and artificial stone sidewalks, 7 feet in width, laid under a five (5) year maintenance guaranty. The straight edgestone, corners and flagging were furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. The paving blocks were furnished by the city, a part at the Massachusetts avenue lot and a part at Hyde square, and hauled by the contractor. All other materials were furnished by the contractor.

Calumet street, from Parker Hill avenue to Hillside street,

is about 1,201 feet in length. The contract for constructing the surface of this street was awarded to James Doherty June 3, 1913. Work was begun August 26, 1913, and completed November 8, 1913. It is a 40-foot street with a 6-inch tar macadam roadway. Edgestone was set and 3-foot granite block gutters and flagging crosswalks were laid. The sidewalk, 7 feet in width, was laid with artificial stone, with a five (5) year maintenance guaranty. The straight edgestone, corners and flagging were furnished by the city at the South End Paving Yard, Albany street; the granite paving blocks were furnished by the city, some on the line of the work, some from Mountfort street and some from the South End Paving Yard, Albany street. The circular edgestone was furnished on the line of the work. The contractor put in crushed stone foundation under some of the edgestone and a ground water-drain to take care of the ground water which was very troublesome on this street. He also did the excavating and furnished all other materials necessary to do the work.

Church street, from Providence street to Boylston street, about 150 feet in length, was repaved with wood block on a concrete base, with sand bed and joints by Coleman Brothers, under their contract dated August 9, 1913. Work was begun August 12, 1913, and completed September 11, 1913. On account of the change in grade of Providence street it was necessary to raise the car tracks and pavement on this street. The contractor removed the old pavement and relaid the new one with new blocks on a new base. He also laid 7-foot artificial stone sidewalks. All the materials required to do the work were furnished by the contractor. The wood block pavement and artificial stone sidewalk are both laid under a five (5) year maintenance guaranty.

Clement avenue, from Stratford street to Park street, is about 437 feet in length. The contract for constructing the surface of this street was awarded to Thomas F. Minton April 28, 1913. Work was begun May 5, 1913, and completed July 7, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks, 7 feet in width, laid under a five (5) year maintenance guaranty. The straight edgestone, corners and flagging were furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work.

The granite blocks were furnished by the city and hauled by the contractor, part from Massachusetts avenue lot and part from Washington street, Dorchester. All other materials were furnished by the contractor.

Cliftondale street, from Kittredge street to Norfolk street, is about 951 feet in length. The contract for constructing the surface of this street was awarded to Thomas F. Minton June 9, 1913. Work was begun July 16, 1913, and completed Decem-

ber 31, 1913. It is a 40-foot street with a 6-inch Bermudez asphalt roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks, 7 feet in width, laid under a five (5) year maintenance guaranty (except 37 feet 2 inches from Sheffield road and 10 feet 1 inch from Montclair avenue). Corners and flagging were furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. The granite blocks were furnished by the city and hauled by the contractor, part from Massachusetts avenue lot and part from Centre and South streets. All other materials were furnished by the contractor.

Crossman street, from Norfolk street to West Selden street, is about 696 feet in length. The contract for constructing the surface of this street was awarded to James Doherty August 25, 1913. Work was begun October 15, 1913, and suspended December 5, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone with an artificial stone sidewalk on the north side and a crushed stone sidewalk on the south side. The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials by the contractor. The work was completed except the artificial stone sidewalk which is to be laid on the north side in the spring.

Dalrymple street, from Egleston street to Boylston street. This street was practically completed last year. This year the macadam surface was swept off and a sealing coat of tar applied. Work was resumed May 1, 1913, and completed May 2, 1913.

Dawes street, from East Cottage street to Willis street, is about 429 feet in length. The contract for constructing the surface of this street was awarded the J. J. McCarthy Company May 6, 1913. Work was begun May 22, 1913, and completed July 5, 1913. It is a 30-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 5-foot artificial stone sidewalks. The straight edgestone and flagging and paving blocks were furnished by the city. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Dexter street, from Alford street to the Everett line, is about 109 feet in length. The surface of this street was constructed by the Paving Service forces. Work was begun November 12, 1913, and completed November 19, 1913. Edgestone was set, block gutters paved and a tar macadam roadway built.

Don street, from Woodrow avenue to Callender street, is about 315 feet in length. The contract for constructing the surface of this street was awarded to the Boston Paving Com-

pany May 1, 1913. Work was begun July 10, 1913, and completed September 6, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Dumas street, from Willowwood street to Mascot street, is about 440 feet in length. The contract for constructing the surface of this street was awarded to James Doherty November 8, 1912. Work was begun May 15, 1913, and completed July 3, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Emmons street, from Paris street to Chelsea street, is about 320 feet in length. The contract for constructing the surface of this street was awarded to J. H. McCarthy Company July 10, 1913. Work was begun August 22, 1913, and completed October 28, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks 7 feet in width, laid under a five (5) year maintenance guaranty. The straight and circular edgestone were furnished by the city on the line of the work. The corners, flagging and granite blocks were furnished by the city at the East Eagle Street Yard and hauled by the contractor. All other materials were furnished by the contractor.

Evans road, from Corey road to the Brookline line, is about 140 feet in length. The contract for constructing the surface of this street was awarded to John J. Lane July 18, 1913. Work was begun August 6, 1913, and completed August 25, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, edgestone was set, 3-foot granite block gutters and flagging crosswalks were laid. The sidewalks, which are 6 feet wide, were constructed with 5-foot artificial stone walk under a five (5) year maintenance guaranty, with the balance a planting space. The ends of the walk next to Corey road are full width, artificial stone and on one side the walk widens to over 11 feet in width to conform to Corey road. The city furnished the straight edgestone at the Brighton Paving Yard, the flagging at Washington street, Brighton, the granite blocks at Boylston street and the circular edgestone on the line of the work. The contractor did the excavating and furnished all other materials necessary to do the work.

Gayland street, from West Cottage street to Judson street. The contract for constructing the surface of this street was awarded to James Doherty October 11, 1913. Work was begun December 22, 1913, and suspended December 30, 1913. The work done this year consisted of the hauling and setting of edgestone. Work will be resumed early in the spring.

Greenock street, from Blue Hill avenue to Harvard street, is about 576 feet in length. The contract for constructing the surface of this street was awarded to James Doherty May 16, 1913. Work was begun June 24, 1913, and completed August 9, 1913. It is a 40-foot street with a 6-inch asphalt macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The straight edgestone, corners and flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty. The surplus excavated material was hauled to Almont street.

Hadwin way, from Hyde Park avenue to Hammatt road, is about 268 feet in length. The contract for constructing the surface of this street was awarded to West Roxbury Trap Rock Company November 4, 1913. Work was begun November 7, 1912, suspended December 10, 1912, resumed March 24, 1913, and completed May 22, 1913. It is a 35-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks 6 feet in width, laid under a five (5) year maintenance guaranty. The circular edgestone was furnished by the city on the line of the work. The straight edgestone and flagging was furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. All other materials were furnished by the contractor.

Hallet street, from Minot street to the New York, New Haven & Hartford Railroad, is about 1,858 feet in length. The contract for constructing the surface of this street was awarded to James Doherty July 9, 1912. Work was begun September 30, 1912, and suspended January 3, 1913. Work was resumed September 10, 1913, and completed October 24, 1913. It is a 50-foot street with a 6-inch macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 8-foot sidewalks, part brick, part artificial stone and part crushed stone. The circular edgestone was furnished by the city on the line of the work and the flagging at the South End Paving Yard, Albany street. All other materials were furnished by the contractor. The artificial stone sidewalks were laid under a five (5) year maintenance guaranty.

Hansborough street, from Blue Hill avenue to Harvard street, is about 609 feet in length. The contract for constructing

the surface of this street was awarded to James Doherty May 17, 1913. Work was begun June 10, 1913, and completed July 24, 1913. It is a 50-foot street with a 6-inch asphalt macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 8-foot artificial stone sidewalks. The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished on the line of the work by the city. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty. The surplus excavated material was hauled by the contractor to Morton and Dumas street.

Hancock and Bowdoin streets, Dorchester, from Winter street to Hancock street, is about 220 feet in length. The contract for constructing the surface of this street was awarded to the Central Construction Company June 26, 1913. Work was begun July 7, 1913, and completed September 12, 1913. This street has a 30-foot brick block roadway on a 6-inch concrete base, with a 10-foot artificial stone sidewalk on the south side and a triangular park space with a 10-foot artificial stone sidewalk on the northeast side. The new granite paving blocks and flagging were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. The existing paving materials not used in the work were hauled to the Hancock Street Paving Yard by the contractor. The artificial stone sidewalks were laid under a five (5) year maintenance guaranty.

Holiday street, from Bowdoin street to Topliff street, is about 1,011 feet in length. The contract for constructing the surface of this roadway was awarded to James Doherty October 2, 1912. Work was begun April 7, 1913, and completed May 26, 1913. It is a 40-foot street with a 6-inch macadam roadway and 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The straight edgestone and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone and flagging was furnished by the city on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Homes avenue, from Topliff street to Draper street, is about 1,001 feet in length. The contract for constructing the surface of this street was awarded to James Doherty September 19, 1912. Work was begun March 19, 1913, and completed May 17, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Howes street, from Dorchester avenue to Pleasant street, is about 591 feet in length. The contract for constructing the surface of this street was awarded to James Doherty November 25, 1912. Work was begun July 8, 1913, and completed July 29, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 8-foot artificial stone sidewalks. The flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Islington street, from Brighton avenue to Webster street. (See Armington street.)

Kilton street, from Park street to Talbot avenue, is about 953 feet in length. The contract for constructing the surface of this street was awarded to James Doherty November 12, 1912. Work was begun July 21, 1913, and completed September 3, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalk, granite edgestone and 7-foot artificial stone sidewalks. The flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Lawndale terrace, from Lamartine street to Amory street, is about 419 feet in length. The contract for constructing the surface of this street from Lamartine street to the New York, New Haven & Hartford Railroad (about 262 feet in length) was awarded to James Doherty August 15, 1913. Work was begun November 12, 1913, and suspended December 5, 1913. It is a 25-foot street with 4-foot sidewalks for about 227 feet from Lamartine street, and is from 25 feet to about 33 feet in width, with 4 to 4½-foot sidewalks near the railroad. It has a 6-inch tar macadam roadway, 2½-foot granite block gutters, flagging crosswalks, granite edgestone and when completed will have artificial stone sidewalks. The work is completed with the exception of laying artificial stone walks. The cinders for foundation are already placed. A wooden fence with iron posts was erected on the easterly approach to the tunnel and a crosswalk was laid across Amory street, opposite the end of Lawndale terrace. The circular edgestone was furnished by the city on the line of the work. The straight edgestone and flagging was furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The granite blocks were furnished by the city at Norfolk street and hauled by the contractor. All other material was furnished by the contractor.

Lithgow street, from Washington street to Talbot avenue, is about 464 feet long. The contract for constructing the surface

of this street was awarded to Jeremiah J. McCarthy Company May 1, 1913. Work was begun May 5, 1913, and completed June 18, 1913. It is a 40-foot street, with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestones and artificial stone sidewalks 7 feet in width. There was a considerable amount of artificial stone sidewalk on the street and this was allowed to remain, the old edgestone being reset where necessary. The new artificial stone was laid under a five (5) year maintenance guaranty. The new straight edgestone and corners were furnished by the city on the line of the work. The flagging was furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The granite blocks were furnished by the city on Washington street, Dorchester, and hauled by the contractor. The surplus excavated materials were hauled by the contractor to Morton street. All other materials were furnished by the contractor.

Lovering place, from Washington street to Harrison avenue, is about 331 feet in length. The contract for widening and constructing the surface of this street was awarded to James Doherty April 28, 1913. Work was begun May 5, 1913, and completed June 16, 1913. The street is from 23.4 to 23.9 feet in width. The roadway was surfaced with 1½ inches of Acme asphalt and 1½ inches bituminous concrete binder on a 6-inch Portland cement concrete base; the northerly sidewalk, 4 feet in width, was laid with artificial stone, the southerly side was laid with brick and the edgestone was reset. The asphalt pavement and artificial stone sidewalk was laid under a five (5) year maintenance guaranty. The city furnished the straight edgestone, corners, flagging and paving blocks at the South End Paving Yard, Albany street, and sidewalk brick on the line of the work. The contractor did the excavating and furnished all other materials necessary to do the work.

Mascoma street, from Quincy street to Lawrence avenue, is about 605 feet in length. The contract for constructing the surface of this street was awarded to Fred S. & A. D. Gore Corporation November 15, 1912. Work was begun June 26, 1913, and completed October 23, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks, 7 feet in width, laid under a five (5) year maintenance guaranty. The circular edgestone was furnished by the city on the line of the work. The straight edgestone was furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The granite blocks and flagging were furnished by the city at Warren avenue and hauled by the contractor. All other materials were furnished by the contractor.

Mascot street, from Mountain avenue to Ballou avenue, is about 1,151 feet in length. The contract for constructing the

surface of this street was awarded to James Doherty November 8, 1912. Work was begun March 10, 1913, and completed July 3, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The flagging, paving blocks and straight edgestone were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The artificial stone sidewalks were laid under a five (5) year maintenance guaranty.

Maxfield street, from La Grange street to Bellevue street, is about 769 feet in length. The contract for constructing the surface of this street was awarded to the West Roxbury Trap Rock Company November 2, 1912. Work was begun April 29, 1913, and completed July 26, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot sidewalks, consisting of 4½ feet artificial stone walk and seeded loam space. The artificial stone sidewalks were laid under a five (5) year maintenance guaranty. A part of the edgestone was set on a crushed stone concrete foundation. The circular edgestone was furnished by the city on the line of the work. The straight edgestone and flagging were furnished by the city at the South End Paving Yard and hauled by the contractor. The granite blocks were furnished by the city at Washington street (Dorchester) and corners at Centre street and La Grange street and hauled by the contractor. All other materials were furnished by the contractor.

Mitchell street, from Old Colony avenue 265 feet northerly, was constructed by William J. Rafferty, under contract dated August 15, 1913. Work was begun October 6, 1913, and completed November 18, 1913. It is a 20-foot street with 6-inch tar macadam roadway, 2½-foot granite block gutters, flagging crosswalks, granite edgestone and brick sidewalks, 3½ feet in width. The circular edgestone and sidewalk bricks were furnished by the city on the line of the work. The straight edgestone and flagging were furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The granite blocks were furnished by the city at the South Boston Paving Yard and hauled by the contractor. A dry rubble and concrete wall, about 53 feet long, was built on the easterly side. A part of the rubble stone for wall was obtained from the old wall on Old Colony avenue. All the other materials were furnished by the contractor.

Montclair avenue, from Centre street across Fletcher street, is about 1,106 feet in length. The contract for constructing the surface of this street was awarded to Thomas F. Minton October 10, 1912. Work was begun June 10, 1913, and completed October 3, 1913. It is a 40-foot street with a 6-inch tar macadam

roadway, 3-foot granite block gutters, flagging crosswalk, granite edgestone and artificial stone sidewalks, 7 feet in width, laid under a five (5) year maintenance guaranty. A part of the edgestone was set on a crushed stone foundation. The circular edgestone and flagging were furnished by the city on the line of the work. The straight edgestone was furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The granite blocks were furnished by the city at Centre and South streets and on Huntington avenue, and hauled by the contractor. All other materials were furnished by the contractor.

Mountfort street, from Audubon road to St. Mary's street, is about 306 feet in length. The contract for constructing the surface of this street was awarded to James Doherty May 17, 1913. Work was begun August 30, 1913, and completed September 22, 1913. It is a 50-foot street with a 6-inch asphalt macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 8-foot artificial stone sidewalks laid under a five (5) year maintenance guaranty. The city furnished the straight edgestone and flagging at the South End Paving Yard, the granite paving blocks at Pleasant street and circular edgestone on the line of the work. The contractor did the excavating and furnished all other materials for doing the work.

Naples road, from Commonwealth avenue to Brookline line, is about 135 feet in length. The contract for constructing the surface of this street was awarded to John J. Lane July 18, 1913. Work was begun July 21, 1913, and completed August 6, 1913. It is a 50-foot street with 3-foot block gutters, flagging crosswalks, granite edgestone, 6-inch tar macadam roadway and 8-foot artificial stone sidewalks laid under a five (5) year maintenance guaranty. The city furnished the straight edgestone, corners and flagging at the Brighton Paving Yard and the second-hand paving blocks on Boylston street. The contractor did the excavating and furnished all other materials necessary to do the work.

Norfolk street, from Washington street to New York, New Haven & Hartford Railroad Bridge, is about 4,205 feet in length. The contract for constructing the surface of this street was awarded to James Doherty April 21, 1913. Work was begun October 24, 1913, and suspended December 29, 1913. It is a 60-foot street with a bitulithic roadway, on a 6-inch concrete base, flagging crosswalks, granite edgestone and 8-foot artificial stone sidewalks. The street has been regulated from Washington street to Woodrow avenue and the roadway paved with bitulithic. The tracks of Boston Elevated Railway have been paved with granite block within the same limits. Considerable grading has been done on the remainder of the street, and more than one-half the edgestone has been set thereon. Work was suspended on account of cold weather and will be resumed in

the spring. The Paving Service forces entered the street March 19, 1913, and did some rough grading. This work was completed June 28, 1913.

Normandy street, from Creston street to Intervale street, is about 265 feet in length. Contract for constructing the surface of this street was awarded to Hugh J. McGuire November 10, 1913. Work was begun November 19, 1913, and completed December 23, 1913. It is about a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite and artificial stone edgestones and artificial stone sidewalks about 7 feet in width. The new artificial stone sidewalks were laid under a five (5) year maintenance guaranty. The old artificial stone sidewalk and curb on the northerly side for about 152 feet from Creston street and on the southerly side for about 60 feet was allowed to remain. The straight edgestone and flagging were furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. The granite blocks were furnished at the Massachusetts avenue lot and hauled by the contractor. All other materials were furnished by the contractor.

Orient avenue, from Walley street to beyond Tower street, about 2,075 feet in length. The contract for grading and constructing the street was awarded to James Doherty June 13, 1913. Work was begun June 23, 1913, and completed November 6, 1913. It is a 40-foot street with a 6-inch asphalt macadam roadway, 3-foot granite blocks, gutters, flagging crosswalks, granite edgestone, and 8-foot artificial stone sidewalks, laid under a five (5) year maintenance guaranty. There is a large triangular planting park or planting space at the lower end next to Walley street. The city furnished the corners and part of the flagging at the East Eagle Street Yard and the balance of the flagging, straight and circular edgestone on the line of the work. The contractor did the excavating and furnished all other materials necessary to do the work.

Perkins street, from Prince street to Brookline line, is about 315 feet in length. This street is being constructed by the Paving Service forces. Work was begun August 18, 1913, and was suspended September 29, 1913. Work done this year consisted in widening, laying block dish gutters and constructing macadam roadway. The street is completed with the exception of sidewalks.

Playstead road, from Savin Hill avenue to Springdale street, is about 335 feet in length. The contract for constructing the surface of this street was awarded to William J. Rafferty Company May 2, 1913. Work was begun May 13, 1913, and completed July 14, 1913. It is a 40-foot street with a 3-foot granite block gutter, flagging crosswalk and granite edgestone. The 7-foot artificial stone sidewalks were furnished and laid under a five (5) year maintenance guaranty. The city furnished the

straight edgestone and flagging at the South End Paving Yard, the circular edgestone and sidewalk brick on the line of the work. The contractor did the excavating, which included rock cutting, and furnished the granite paving blocks and all other materials required to do the work.

Pleasant street, from Eliot street to Washington street, is about 1,673 feet in length. The contract for widening and constructing the surface of this street was awarded to Coleman Brothers July 11, 1913. Work was begun October 2, 1913, and suspended December 24, 1913. This street as widened varies from 60 to about 67 feet, with 10-foot artificial stone sidewalks, laid under a five (5) year maintenance guaranty. The edgestone was reset and the roadway, with the exception of that portion from the westerly side of Tremont street to the easterly side of Shawmut avenue, was paved with wood blocks on a 6-inch Portland cement concrete base, with sand joints, under a five (5) year maintenance guaranty. The portion of the roadway above mentioned is paved temporarily with old granite blocks, gravel bed and joints. The bridge over the Boston Elevated Railway tracks at the subway entrance is paved with wood blocks. The city furnished the straight edgestone corners and flagging at the South End Paving Yard, Albany street, and the new circular edgestone, granite paving blocks and sidewalk bricks on the line of the work. The contractor furnished all other materials necessary to do the work and did the excavating. Work will be resumed early in the spring.

Priesing street, from Mozart street to Chestnut avenue, is about 680 feet in length. The contract for constructing the surface of this street was awarded to the John Kelly Company May 26, 1913. Work begun June 6, 1913, completed July 31, 1913. A 40-foot street, with a 6-inch tar macadam roadway, was constructed for a distance of about 225 feet from Mozart street, 3-foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks, 7 feet in width, were constructed on the remainder of the street. The artificial stone sidewalks were laid under a five (5) year maintenance guaranty. The circular edgestone was furnished by the city on the line of the work. The straight edgestone and flagging were furnished by the city at the South End Paving Yard, Albany street, and were hauled by the contractor. The granite blocks were furnished by the city at Centre and South streets and hauled by the contractor. All other materials were furnished by the contractor.

Providence street, from 70 feet east of Church street to Berkeley street, about 1,117 feet in length, was paved with granite block, with pitch joints, on a 6-inch Portland cement concrete base with sand bed. The contract was awarded to Coleman Brothers June 30, 1913. Work was begun July 7, 1913, and completed August 21, 1913. The street varies in width from 40 to 100 feet. The contractor set and reset edgestone and

furnished and laid an artificial stone sidewalk on the northerly side of the street, under a five (5) year maintenance guaranty. This walk is 15 feet in width from Church to Arlington street and 7 feet wide from Arlington to Berkeley street. A 3-foot brick sidewalk was laid on the south side of the street from Arlington street to Berkeley street. The city furnished the straight edgestone, corners and flagging at the South Paving Yard, Albany street, and the circular edgestone and sidewalk brick on the line of the work. The contractor did the excavating and furnished the new granite paving blocks and all other materials necessary to do the work.

Quincefield street, from Humphreys street to Wendover street, is about 263 feet in length. The contract for constructing the surface of this street was awarded to James Doherty April 29, 1913. Work was begun June 21, 1913, and completed July 16, 1913. It is a 35-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 6-foot artificial stone sidewalks. The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Roach street, from Dorchester avenue to Pleasant street, is about 434 feet in length. The contract for constructing the surface of this street was awarded to James Doherty August 4, 1913. Work was begun October 22, 1913, and suspended November 19, 1913. It is a 30-foot street, with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 5-foot artificial stone sidewalks. The straight edgestone, corners, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. The surplus excavated material was hauled to the Mill street dump by the contractor. The construction is completed except the artificial stone sidewalks, which the contractor was unable to lay on account of cold weather. The sidewalk will be laid in the spring.

Sachem street, from Hillside street to Parker Hill avenue, is about 909 feet in length. The contract for constructing the surface of this street was awarded to John McCourt & Co. September 26, 1912. Work was begun October 8, 1912, and suspended December 8, 1912. Work was resumed April 10, 1913, and completed May 22, 1913. It is a 40-foot street for most of its length, with a 6-inch water bound macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone, ground water-drain and 7-foot brick sidewalks. There is a concrete retaining wall and fence about 94 feet long on the lower side of the street. The work done this year consisted of resetting edgestone and relaying block gutters, laying cross-

walks, placing a macadam surface, laying the brick sidewalks, and building a fence on the lower side of the street. The city furnished the straight edgestone, flagging and corners at the South End Paving Yard, Albany street, the paving blocks at the Brighton Paving Yard, Washington street, Dorchester, and District 7 Paving Yard. The circular edgestone and sidewalk bricks were furnished on the line of the work. The contractor furnished all other materials.

Sheffield road, from Walter street to Selwyn street, is about 706 feet in length. The contract for constructing the surface of this street was awarded William J. Rafferty Company September 9, 1913. Work was begun September 27, 1913, and completed November 28, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks, 7 feet in width, laid under a five (5) year maintenance guaranty. The circular edgestone was furnished by the city on the line of the work. The straight edgestone, corners and flagging were furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The granite blocks were furnished by the city at the Massachusetts avenue lot and Centre and South streets, and hauled by the contractor. All other materials were furnished by the contractor.

Silloway street, from Melville avenue to Mather street, is about 382 feet in length. The contract for constructing the surface of this street was awarded to James Doherty November 8, 1912. Work was begun June 5, 1913, and completed July 14, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and a 7-foot sidewalk, $4\frac{1}{2}$ feet of which is artificial stone and the remainder loam space. The straight edgestone and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. The artificial stone sidewalk was laid under a five (5) year maintenance guaranty.

Spring street, from Webster street to Charles river, is about 1,588 feet in length. The contract for constructing the surface of this street was awarded to the West Roxbury Trap Rock Company September 29, 1913. Work was begun October 6, 1913, and suspended December 19, 1913. It is to be an 80-foot street with a double car track paved with a granite block, and a 6-foot asphalt macadam roadway each side of tracks, flagging crosswalk at side street, granite edgestones and crushed stone sidewalks 13 feet in width. The work this year has consisted of rough grading.

Tellow street, from Worthington street to the Tremont entrance, is about 240 feet in length. The contract for constructing the surface of this street was awarded to James Doherty October 12, 1912. Work was begun April 8, 1913, and completed May 6, 1913. It is a 50-foot street with a 6-inch

tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 12-foot sidewalks with a seeded loam space. The old brick sidewalk on the south side of the street was relaid and an artificial stone walk 7 feet wide was laid on the northerly side of the street. The city furnished the straight edgestone and flagging at the South End Paving Yard, Albany street, the circular edgestone and sidewalk brick on the line of the work and the granite paving blocks for the gutters near the line of the work. The contractor furnished all other materials necessary to do the work.

Tucker street, from Woodrow avenue to Callender street, is about 378 feet in length. The contract for constructing the surface of this street was awarded to Fred S. and A. D. Gore Corporation November 8, 1912. Work was begun March 20, 1913, and completed June 25, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Tyndale street, from Walworth street to Guernsey street, is about 1,946 feet in length. The contract for constructing the surface of this street was awarded Hugh J. McGuire May 12, 1913. Work was begun May 15, 1913, and completed November 15, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks, 7 feet in width. A greater portion of the old artificial stone walk on the northerly side near Guernsey street was found in good condition and allowed to remain. The artificial stone sidewalk was laid under a five (5) year maintenance guaranty. The circular edgestone was furnished by the city on the line of the work. The straight edgestone and flagging was furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The granite blocks were furnished by the city at Centre and South streets, Massachusetts avenue lot and at the corner of South and Oakland streets, and hauled by the contractor. All other materials were furnished by the contractor.

Union Park street, from Washington street to Harrison avenue, is about 454 feet in length. The contract for widening and constructing the surface of this street was awarded to Fred S. & A. D. Gore Corporation April 25, 1913. Work was begun May 28, 1913, and completed June 28, 1913. This street, as constructed, varies in width from about 63 feet to 77.4 feet. The roadway is paved with $1\frac{1}{2}$ inches of Acme asphalt wearing surface on $1\frac{1}{2}$ inches of bituminous concrete binder on a 6-inch Portland cement concrete base. The sidewalks, varying in width from 10 feet to 13 feet, are artificial stone. The con-

tractor also reset the edgestone and laid the crosswalks. The city furnished the straight edgestone at the South End Paving Yard, Albany street, and the circular edgestone, corners and flagging on the line of the work. The contractor did the excavating and furnished all other materials necessary to do the work. There was some wood block pavement laid on Harrison avenue next to the street car rail. The asphalt, wood block and artificial stone sidewalk were laid under a five (5) year maintenance guaranty.

Vesta road, from Blue Hill avenue to Harvard street, is about 537 feet in length. The contract for constructing the surface of this street was awarded to James Doherty May 16, 1913. Work was begun September 25, 1913, and completed November 11, 1913. It is a 40-foot street with a 6-inch asphalt macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The artificial stone sidewalks were laid under a five (5) year maintenance guaranty. The surplus excavated material was hauled to Almont street by the contractor.

Walworth street, from Belgrade avenue across Brook street, is about 949 feet in length. The contract for constructing the surface of this street was awarded Hugh J. McGuire May 12, 1912. Work was begun August 21, 1913, and completed December 5, 1913. It is a 50-foot street with a 6-inch tar macadam roadway, flagging crosswalks, granite edgestone and artificial stone sidewalks, 8 feet in width, laid under a five (5) year maintenance guaranty. The circular edgestone was furnished by the city on the line of the work. The straight edgestone and flagging was furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The granite blocks for crosswalks were furnished by the city at the Massachusetts avenue lot and hauled by the contractor. All other materials were furnished by the contractor.

Whitfield street, from Wheatland avenue to Talbot avenue, is about 797 feet in length. The contract for grading and surfacing this street was awarded to William J. Rafferty Company May 23, 1913. Work was begun June 13, 1913, and completed August 28, 1913. It is a 40-foot street with a 6-inch asphalt macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks, 7 feet in width, laid under a five (5) year maintenance guaranty. The city furnished the straight edgestone at the South End Paving Yard, Albany street, the gutter blocks at the Massachusetts avenue lot and Washington street, Dorchester, flagging at Washington street, Dorchester, and the circular edgestone on the line of the work. The contractor furnished all other materials necessary to do the work.

GENERAL.

Alban street, from Welles avenue to Ashmont street, is about 1,358 feet in length. The contract for constructing the artificial stone sidewalks, regulating and gutters on this street was awarded to James Doherty July 10, 1913. It is a 40-foot street with a macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The straight edgestone, corners, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty. The surplus excavated material was hauled to the Mill street dump by the contractor.

Armandine street, from Milton avenue to Washington street, is about 1,398 feet in length. The contract for constructing artificial stone sidewalks and regulating the edgestone, gutters and crosswalks on this street was awarded to J. J. McCarthy Company June 31, 1913. It is a 40-foot street with a macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The straight edgestone, corners, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Bernard street, from Harvard street to Kerwin street, is about 910 feet in length. The contract for constructing the artificial stone sidewalks and regulating on this street was awarded to Thomas J. Hind, Inc., August 4, 1913. It is a 50-foot street with a macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 8-foot artificial stone sidewalks. The straight edgestone, corners, flagging and paving blocks were furnished by the city and hauled by the contractor. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Blue Hill avenue, from Washington street about 192 feet southerly. The contract for constructing an artificial stone sidewalk and regulating edgestone and gutters on the easterly side was awarded Robert Eagar, Jr., September 12, 1913. The contractor furnished all new material. The sidewalk was laid under a five (5) year maintenance guaranty.

Centre street (north side), from Allston street to the Shawmut Branch Railroad, is about 300 feet in length. The contract for constructing an artificial stone sidewalk and regulating edgestone and gutters was awarded to James Doherty October 28, 1913. It is a 45-foot street with a macadam roadway, 3-foot granite block gutters, flagging crossings, granite edgestone

and a 7-foot artificial stone sidewalk. The straight edgestone and paving blocks were furnished by the city and hauled by the contractor. All other materials were furnished by the contractor. The sidewalk was laid under a five (5) year maintenance guaranty.

Chelsea Bridge South, from Scott's court to angle near the draw, is about 347 feet in length. The iron fence on the northerly side was reconstructed by the W. A. Snow Iron Works, under contract. New top and bottom rails and thirteen new posts were furnished by the contractor who also did all work of reconstruction.

Cohasset street, from Corinth street to Albano street, is about 1,014 feet in length. The contract for constructing artificial stone sidewalks in this street was awarded Martino DeMatteo July 28, 1913. The sidewalks, 6 feet in width, were laid under a five (5) year maintenance guaranty. The contractor furnished all the materials and also did a small amount of regulating.

Conway street, from South street to Fairview street, is about 802 feet in length. The contract for constructing 3-foot granite block gutters, resetting edgestone and laying artificial stone sidewalks on this street and on *Fairview street* (south side), from Conway street 350 feet easterly, was awarded Martino DeMatteo August 4, 1913. The sidewalks are 6 feet 8 inches wide on Conway street, from South street to the bend, and 7 feet wide on Conway street, from the bend to Fairview street, and on the south side of Fairview street, from Conway street to 350 feet easterly. The artificial stone was laid under a five (5) year maintenance guaranty. The straight edgestone and corners were furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. The granite blocks were furnished by the city and hauled by the contractor, part from Washington street, at Tower street, part from Norfolk street, part from Park street, between Anawan avenue and Centre street, and part from Massachusetts avenue lot. All other materials were furnished by the contractor.

Dennis street, from Dudley street to Woodville street, is about 1,038 feet in length. The contract for constructing 3-foot granite block gutters, flagging crosswalks, setting and resetting edgestone and laying artificial stone sidewalks 6 feet to 7 feet in width was awarded to James Doherty June 9, 1913. The circular edgestone was furnished by the city on the line of the work. The straight edgestone was furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The granite blocks were furnished by the city at Washington street, Dorchester, and hauled by the contractor. The old sidewalk bricks were hauled by the contractor to the Massachusetts avenue lot. The artificial stone sidewalks were

laid under a five (5) year maintenance guaranty. All other materials were furnished by the contractor.

Dorchester avenue (easterly side), from Belfort street to St. Williams street, is about 174 feet in length; *Hollander street*, from Humboldt avenue about 200 feet westerly, about 250 feet in length, and *Rosedale street*, at numbers 7, 9, 10 and 12, about 55 feet in length. The contract for laying artificial stone sidewalks in these streets was awarded to William J. Rafferty Company June 27, 1913. The contractor reset the edgestone and repaved the gutters where necessary, and laid the artificial stone sidewalks under a five (5) year maintenance guaranty. He also did some rock excavation. The city furnished the circular edgestone on the line of the work. The contractor furnished all other materials required in doing the work.

Dorchester Paving Yard. The contract for constructing wooden steps in this yard was awarded to Thomas H. Hanlon May 20, 1913. The work consisted in building a flight of heavy wooden steps from Downer avenue to Hancock street, across the northerly side of the city paving yard. All the labor and materials were furnished by the contractor.

Dudley street, between Washington street and Harrison avenue, is about 380 feet in length. The contract for regulating the edgestone, laying crosswalks and furnishing and constructing the artificial stone sidewalks, under a five (5) year maintenance guaranty, was awarded to Robert Eager, Jr., June 9, 1913. In connection with this contract the contractor was ordered to furnish and lay an artificial stone walk and do the regulating on the westerly sidewalk on Warren street, between Dudley street and Zeigler street, about 215 feet in length. The city furnished the straight edgestone required at the South End Paving Yard, Albany street. The contractor hauled the old brick to Dimock Street Yard and furnished all other materials required in doing the work.

Elmo street, from Blue Hill avenue to Erie street, is about 800 feet in length. The contract for constructing the sidewalks and regulating on this street was awarded to James Doherty July 28, 1913. It is a 40-foot street with macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Evelyn street, from Blue Hill avenue to Norfolk street, is about 900 feet in length. The contract for constructing the artificial stone sidewalk and regulating was awarded to the Central Construction Company May 15, 1913. The contract for constructing the roadway was awarded to J. J. McCarthy Company July 28, 1913. It is a 40-foot street with a 6-inch tar macadam road-

way, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The straight edgestone, corners, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. The sidewalk was laid under a five (5) year maintenance guaranty. The surplus excavated material was hauled to Almont street by the contractor.

Franklin street (easterly side), between Lincoln and Easton streets, is about 736 feet in length and *Alcott street* (southerly side), from Franklin street about 100 feet easterly. The contract for setting edgestone, paving gutters, furnishing and laying artificial stone sidewalks on these streets was awarded to John J. Lane August 11, 1913. The city furnished the straight edgestone and corners at the South End Paving Yard, Albany street, the flagging at the Brighton Paving Yard and the circular edgestone on the line of the work. The granite paving blocks were on the street. The contractor did the excavating and the above work and furnished all other materials required to do the work. The artificial stone sidewalks were laid under a five (5) year maintenance guaranty.

Germania street, from Boylston street to Bismarck street, is about 709 feet in length. The contractor for grading the roadway of this street and constructing 3-foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks, 5 feet in width, was awarded to John McCourt & Co. July 28, 1913. The circular edgestone was furnished by the city on the line of the work. The straight edgestone and flagging was furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The granite paving blocks were furnished at the Massachusetts avenue lot, at Chestnut Hill avenue and at Dimock street lot, and hauled by the contractor. The contractor furnished all other materials. The artificial stone sidewalks were laid under a five (5) year maintenance guaranty. The Paving Service constructed a 6-inch tar macadam roadway in this street.

Greenwood street, from Elmo street to Erie street, is about 314 feet in length. The contract for constructing artificial stone sidewalks and regulating edgestones and gutters was awarded to James Doherty October 11, 1913. The sidewalks were laid under a five (5) year maintenance guaranty.

Howard street, from Gerard street to Magazine street, is about 427 feet in length. The contract for constructing 3-foot granite block gutters, flagging crosswalks, granite edgestone and brick sidewalks was awarded to the Boston Paving Company June 3, 1913. The circular edgestone and the sidewalk brick were furnished by the city on the line of the work. The straight edgestone, corners and flagging were furnished by the city at the South End Paving Yard and hauled by the contractor. The granite blocks were furnished by the city at Ruggles, Vernon and Marvin streets, and hauled by the contractor. The other materials were furnished by the contractor.

Inwood street, from Olney street to Norton street, is about 418 feet in length. The contract for completing the artificial stone sidewalks on this street was awarded Connolly & Diamond October 9, 1913. The work consisted in removing the grass plot along the curb and substituting artificial stone, laid under a five (5) year maintenance guaranty. All materials were furnished by the contractors.

Massachusetts avenue, westerly side, from the New England Railroad Bridge to Columbia road, is about 2,410 feet in length. The contract for setting edgestone, laying granite block gutters, crosswalks and artificial stone sidewalks was awarded to James Doherty July 10, 1913. The city furnished flagging and corners at the South End Paving Yard, Albany street, and the granite paving blocks and circular edgestone on the line of the work. The contractor furnished the straight edgestone and all other materials required to do the work. The sidewalks were laid under a five (5) year maintenance guaranty.

Metropolitan avenue (southerly side), from Washington street to Kittredge street, is about 678 feet in length. The contract for constructing 3-foot granite block gutters, granite edgestone and artificial stone sidewalks, 8 feet in width, was awarded to the West Roxbury Trap Rock Company November 15, 1912. The work done this year consisted in placing the artificial stone walk which was laid under a five (5) year maintenance guaranty. All materials were furnished by the contractor.

Milton avenue, from Norfolk street to Evans street, is about 1,512 feet in length. The contract for setting and resetting edgestone, paving and repaving granite block gutters, removing trees, furnishing and laying artificial stone sidewalks under a five (5) year maintenance guaranty, was awarded to Fred S. & A. D. Gore Corporation October 19, 1912. This is a 40-foot street with 7-foot artificial stone sidewalks. The city furnished the straight edgestone and flagging at the South End Paving Yard, Albany street, and the second-hand paving blocks on various streets under construction, and the circular edgestone on the line of the work. The contractors furnished all other materials required to do the work. The macadam roadway was resurfaced by the Paving Service forces.

Minot street, from Neponset avenue to Claremont street, is about 2,186 feet in length. The contract for doing the work was awarded to D. M. Biggs & Co. May 14, 1913. The contractor set and reset edgestone, paved and repaved 3-foot granite block gutters, laid flagging crosswalks and constructed the artificial stone sidewalks, which vary from 7 to 9 feet in width, under a five (5) year maintenance guaranty. The city furnished the corners and flagging at the South End Paving Yard, Albany street, and the circular edgestone on the line of the work. The contractor furnished all other materials required to do the work. The macadam roadway was resurfaced by the Paving Service forces.

Minot street, from Charlemont street to Adams street, is about 1,027 feet in length. The contract for doing the work on

this street was awarded to D. M. Biggs & Co. July 28, 1913. The contractor reset the edgestone, repaved the gutters, laid and relaid the crosswalks and constructed the 7-foot artificial stone sidewalks under a five (5) year maintenance guaranty. The city furnished the flagging at the South End Paving Yard, Albany street, and the new circular edgestone on the line of the work. The contractor furnished all other materials required to do the work. The macadam roadway was resurfaced by the Paving Service forces.

Nightingale street, from Talbot avenue to Wales street, is about 565 feet in length. The contract for constructing the artificial stone sidewalks and regulating on this street was awarded to Warren Brothers Company June 9, 1913. It is a 40-foot street with 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. All new materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Park street (westerly side), from Clement avenue to Anaway avenue, is about 1,158 feet in length. The contract for relaying 3-foot granite block gutters, flagging crosswalk, granite edgestone and constructing artificial stone sidewalks, $4\frac{1}{2}$ feet in width, and a seeded loam space was awarded the W. A. Murtfeldt Company July 12, 1913. This contract was extended to include relaying 3-foot granite gutters and constructing flagging crosswalks, granite edgestones and artificial stone sidewalks on the westerly side from March avenue to Centre street, a distance of about 546 feet. The circular edgestone was furnished by the city on the line of the work. The straight edgestone and flagging were furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. Old paving blocks were delivered to the contractor from Conway street, and also hauled by the contractor to the Mt. Vernon Street Yard. All other materials were furnished by the contractor.

Pope's Hill street, from Neponset avenue to Freeport street, is about 830 feet in length. The contract for constructing the artificial stone sidewalk and regulating this street was awarded to J. J. McCarthy Company June 27, 1913. It is a 50-foot street with a macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 8-foot artificial stone sidewalks. The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty.

Rose street, from Harrison avenue to Albany street, is about 483 feet in length. A contract for surfacing the old macadam surface with Taric Compound was awarded to the Independent Coal Tar Company November 11, 1913. The contractors fur-

nished all the materials required to do the work. The contractor guarantees to keep the surface in good repair for one year.

South street, from Robert street to Centre street, is about 2,560 feet in length. The contract for constructing 3-foot granite block gutters, granite edgestone, flagging crosswalks and artificial stone sidewalks was awarded Hugh J. McGuire August 31, 1912. Work was begun September 20, 1912, and suspended December 10, 1912. Work was resumed April 2, 1913, and completed May 12, 1913. The work this year has consisted in laying artificial stone sidewalks on the northerly side. The artificial stone sidewalk on the southerly side, from Robert street to Walworth street, 5 feet wide, has a seeded loam space 5 feet wide along the edgestone. From Walworth street about 175 feet east of Centre street a 5-foot artificial stone walk was laid next to the curb. From about 175 feet east of Centre street a crushed stone sidewalk 7 feet in width was laid. On the northerly side an artificial stone walk $9\frac{1}{2}$ feet wide was laid for a distance of about 60 feet east of Fletcher street. From Fletcher street to Bradfield avenue a 5-foot artificial stone walk was laid, with loam space next to curb, from 5 to 7 feet in width. From Bradfield avenue to Ainsworth street an artificial stone walk 7 feet wide was laid with a loam space from 5 to 11 feet in width next to curb. From Ainsworth street about 186 feet east of Guernsey street an artificial stone walk 5 feet wide was laid with loam space 5 feet wide next to curb. From about 186 feet east of Guernsey street to about 257 feet west of Guernsey street an artificial stone sidewalk 5 feet wide was laid with loam space from 2 to 5 feet wide next to curb. From about 257 feet west of Guernsey street to Centre street a crushed stone sidewalk 8 feet in width was constructed. The artificial stone sidewalks were laid under a five (5) year maintenance guaranty. All materials were furnished by the contractor.

Summer street, from B street to the State Viaduct, is about 368 feet in length. The contract for building a concrete wall on the northerly side of the street was awarded to McCarthy & Walsh November 5, 1913. The contractors built a pile bulkhead and tied it by iron rods to the old bulkhead back in the street, and a 2-foot concrete wall was built around this bulkhead, and a hard pine wooden fence was built on the wall. The contractor did the excavating, removed the old plank walk and furnished all the materials necessary to do the work.

Tremont street (northerly side), from St. Alphonsus street about 350 feet easterly and *St. Alphonsus street* (easterly side), from Tremont street to Smith street, 464 feet in length. The contract for furnishing and laying artificial stone sidewalks in these streets, under a five (5) year maintenance guaranty, was awarded to John McCourt Company July 18, 1913. The contractor did the excavating and furnished all the materials necessary to do the work.

Tremont street (easterly side), between Winter street and Hamilton place, is about 312 feet in length. A contract for furnishing and laying artificial stone sidewalks in this street, under a five (5) year maintenance guaranty, was awarded to Warren Brothers Company September 10, 1913. The contractor did the excavating and furnished all the materials necessary to do the work. This work was necessitated by the subway construction. There was considerable artificial stone walk put in where the old brick walks were between Winter and Boylston streets in connection with this contract.

Walnut avenue (easterly side), from Iffley road to beyond Montebello road, is about 287 feet in length. A contract for excavating and grading this street was awarded to John McCourt & Co. June 13, 1913. The contractor did the cutting, which was mostly rock, and furnished all materials required to do the work.

Walnut street, from Franklin street to Ericsson street, is about 1,576 feet in length. The contract for constructing artificial stone sidewalks and regulating on this street was awarded to D. M. Biggs & Co. July 2, 1913. It is a 35-foot street with a macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 6-foot artificial stone sidewalks. The straight edgestone, corners, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. All other materials were furnished by the contractor. The artificial stone sidewalk was laid under a five (5) year maintenance guaranty. The old sidewalk bricks were hauled by the contractor to the Codman Street Paving Yard, and the surplus excavated material to Pope's Hill street.

Washington street, between State street and Boylston street, is about 1,146 feet in length. The contract for furnishing and laying artificial stone sidewalks was awarded to Warren Brothers Company September 8, 1913. The contractor removed all the old brick sidewalk remaining on this section of Washington street and laid artificial stone sidewalks under a five (5) year maintenance guaranty. The contractor did the excavating and furnished all materials necessary to do the work.

Welles avenue (north side), from Talbot avenue to opposite Hawley street, is about 600 feet in length. The contract for constructing artificial stone sidewalks and regulating was awarded to Robert Eager, Jr., May 26, 1913. The sidewalk is 10 feet in width with a 6-foot artificial stone walk and a loam space. The contractor furnished all the materials for the artificial stone. The sidewalks were laid under a five (5) year maintenance guaranty.

Westville street, from Geneva avenue to Draper street, is about 1,408 feet in length. The contract for constructing the sidewalks and regulating on this street was awarded to William J. Rafferty Company August 15, 1913. It is a 40-foot street with a macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and artificial stone sidewalks.

The straight edgestone, flagging and paving blocks were furnished by the city and hauled by the contractor. All other materials were furnished by the contractor. The sidewalks were laid under a five (5) year maintenance guaranty. The surplus excavation was hauled to the Mill street dump by the contractor.

Winthrop street, from Blue Hill avenue to Brook avenue, is about 332 feet in length. The contract for laying and relaying 3-foot granite block gutters, flagging crosswalks, setting and resetting granite edgestone and constructing artificial stone sidewalks, 6 to 7 feet in width, was awarded to James Doherty October 28, 1912. The artificial stone sidewalks were laid under a five (5) year maintenance guaranty. About 120 linear feet of artificial stone walk on the easterly side, about 50 feet north of Blue Hill avenue, was found in good condition and allowed to remain. The straight edgestone was furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. Circular edgestone was furnished by the city on the line of the work. The granite blocks were furnished by the city at Washington street, Dorchester, and hauled by the contractor. All other materials were furnished by the contractor.

Withington street, from Norfolk street to Torrey street, is about 652 feet in length. The contract for completing the 3-foot granite block gutters, flagging crosswalks, granite edgestones and artificial stone sidewalks, 7 feet in width, was awarded to W. A. Murtfeldt Company June 27, 1913. The circular edgestone was furnished by the city on the line of the work. The straight edgestone and flagging were furnished by the city at the South End Paving Yard, Albany street, and hauled by the contractor. The granite paving blocks were furnished by the city at the Massachusetts avenue lot and hauled by the contractor. All the other materials were furnished by the contractor. The artificial stone sidewalks were laid under a five (5) year maintenance guaranty.

Woolson street, from Blue Hill avenue to Norfolk street, is about 1,219 feet in length. The contract for constructing the artificial stone sidewalks and regulating was awarded to the Warren Brothers Company May 9, 1913. The contract for constructing the roadway was awarded to J. J. McCarthy July 28, 1913. It is a 40-foot street with a 6-inch tar macadam roadway, 3-foot granite block gutters, flagging crosswalks, granite edgestone and 7-foot artificial stone sidewalks. The straight edgestone, corners, flagging and paving blocks were furnished by the city and hauled by the contractor. The circular edgestone was furnished by the city on the line of the work. The sidewalks were laid under a five (5) year maintenance guaranty. The surplus excavated material was hauled to Almont street by the contractor.

Work Done by Contract, 1913.

	Old.	New.	Total, Old and New.
Edgestone set.....	56,618 linear feet.	75,477 linear feet. ¹	132,095 linear feet.
Concrete base laid.....	2,700 square yards.	70,568 square yards.	79,268 square yards.
Granite block paving laid, with pitch and pebble joints.....	1,048 "	11,011 " " 2	12,059 "
Flagging crosswalks laid, with pitch and pebble joints.....	251 "	948 " " 3	1,199 "
Granite block paving laid on a gravel base, with gravel joints.....	14,088 "	25,943 "	40,631 "
Flagging crosswalks laid on a gravel base, with gravel joints.....	935 "	2,136 "	3,071 "
Granite block paving laid, with grout joints.....	14 "	.....	14 "
Flagging crosswalks laid, with grout joints.....	.....	20 "	20 "
Wood block pavement laid.....	3,914 "	36,383 "	40,297 "
Asphalt surface and binder laid.....	1,693 "	1,857 "	3,550 "
Asphalt patching.....	16,989 "	.....	16,989 "
Bituthitie patching.....	1,421 "	.....	1,421 "
Bituminous concrete binder laid.....	.....	2 cubic yards.	2 cubic yards.
Bituthitie pavement laid.....	19 "	24,398 square yards.	24,417 square yards.
Brick block pavement laid.....	285 "	1,235 "	1,520 "
Brick sidewalks laid.....	7,809 "	2,863 "	10,672 "
Coal tar sidewalks relaid.....	734 "	.....	734 "
Crushed stone sidewalks laid.....	.....	1,241 "	1,241 "
Artificial stone sidewalks laid.....	4,622 "	120,381 "	125,003 "

Earth excavation.....	71,119 "	"	71,119 "	"
Earth excavation.....	50,864 cubic yards.		50,864 cubic yards.	
Rock excavation.....	814 "	"	814 "	"
Filling furnished.....	2,500 "	"	2,500 "	"
Macadam surface placed (water-bound).....	6,713 square yards.		6,713 square yards.	
Macadam surface placed (tar preparation).....	56,163 "	"	56,163 "	"
Macadam surface placed (asphalt preparation).....	18,270 "	"	18,270 "	"
Loam furnished and laid.....	1,840 "	"	1,840 "	"
Covers reset.....	584		584	
Drain pipe laid (ground water).....	350 linear feet.		350 linear feet.	
Wooden fence built.....	415 "	"	415 "	"
Wooden bulkhead and concrete wall.....	358 "	"	358 "	"
Wooden steps built.....	185 "	"	185 "	"
Iron fence reconstructed.....	347 "	"	347 "	"
Dry rubble wall and concrete coping.....	53 "	"	53 "	"
Waterproofing.....	262 square yards.		262 square yards.	

¹ 3,806 linear feet laid on concrete and crushed stone foundation.

² About one-quarter ($\frac{1}{4}$) this area laid with existing granite block, formerly gravel joints.

³ About one-half ($\frac{1}{2}$) of this area laid with existing granite flagging, formerly gravel joints.

Work Done by Paving Service Forces, 1913.

	Old.	New.	Total Old and New.
Edgestones set.....	61,558 linear feet.	9,748 linear feet.	71,306 linear feet.
Edgestones roughed.....	2,397 "		2,397 "
Granite block paving, gravel base and joints, laid.....	82,166 square yards.	1,505 square yards.	83,671 square yards.
Granite block paving, concrete base, pitch joints, laid.....		2,195 "	2,195 "
Gutter paving, gravel base and joints, laid.....	38,076 "	3,555 "	41,631 "
Flagging crosswalks, gravel base and joints, laid.....	22,917 "	1,458 "	24,375 "
Flagging crosswalks, concrete base, pitch joints, laid.....		105 "	105 "
Macadam surface placed (water binder).....	133,705 "	23,448 "	157,153 "
Macadam surface placed (asphalt preparation binder).....	144,695 "	10,807 "	155,502 "
Macadam surface, patched.....	58,191 "		58,191 "
Brick sidewalks, laid.....	417,059 "		417,059 "
Gravel or crushed stone sidewalks, surfaced.....	101,157 "	1,783 "	102,940 "
Wooden fence built.....	215,158 "		215,158 "
Grading.....	101 linear feet.	555 linear feet.	656 linear feet.
		3,507 cubic yards.	3,507 cubic yards.

FINANCIAL STATEMENT, PAVING SERVICE.

Maintenance.

Expenditures from February 1, 1913, to January 31, 1914 (gross)	\$1,392,468	22
Collected for work done and materials furnished different services, departments, individuals and companies, etc.	\$17,621	09
Inspectors' services	5,071	50
		<u>22,692 59</u>
Net expenditures	\$1,369,775	<u><u>63</u></u>

*Special Appropriations.**Old Colony Avenue, Construction of.*

Unexpended balance, February 1, 1913	\$16,053	51
Expenditures from February 1, 1913, to January 31, 1914	1,485	65
		<u>\$14,567 86</u>
Unexpended balance, January 31, 1914		
Highways, making of	\$265,583	18
Arlington street extension *	318	33
Norfolk street, widening *	4,946	60
Union Park street *	8,852	47
Tunnel under railroad tracks between Boylston and Green streets, Jamaica Plain (Lawndale terrace) *	12,227	55
Harvard avenue, Brighton *	645	68
Pleasant street, widening *	26,415	58
Thacher street extension	180	67

INCOME.

Statement showing the amount of bills deposited with the City Collector from February 1, 1913, to January 31, 1914, and credited to general revenue:

On account of edgestone and sidewalk assessments	\$35,778	58
Stone from ledges (Chestnut Hill)	1,540	22
Permits	32,358	28
Junk, old materials, etc.	321	08
		<u>\$69,998 16</u>

* Laid out under chapter 393 of the Acts of 1906.

Amount paid into the city treasury during the year:

On account of edgestone and sidewalk assessments	\$28,292 87
Stone from ledges (Chestnut Hill)	1,382 85
Permits	31,572 92
Sale of junk, old materials, etc.	816 96
	<hr/>
	<u>\$62,065 60</u>

Object of Expenditures from the Maintenance Appropriation Classified by Districts from February 1, 1913, to
January 31, 1914.

Districts.	Macadam Repairs.	Block Repairs.	Snow.	Street Cleaning.	Edgestone and Sidewalk Repairs.	Crosswalk Repairs.	Street Work.	Schedule A, Miscellaneous.	Totals.
1. South Boston and Dorchester North...	\$3,473 62	\$5,821 89	\$2,687 81	\$2,637 11	\$12,376 56	\$2,009 82	\$67,476 93	.....	\$96,433 74
2. East Boston and Bread's Island.....	7,276 00	1,203 67	1,545 16	1,062 81	8,520 07	719 16	33,262 49	.....	53,589 36
3. Charlestown.....	5,718 26	4,953 10	3,053 28	2,240 44	5,581 51	750 31	23,875 14	.....	46,172 04
4. Brighton.....	8,381 91	148 46	1,993 40	18,545 50	2,259 88	200 64	65,472 86	.....	97,002 65
5. West Roxbury.....	17,365 74	414 68	3,698 10	24,230 04	5,601 60	359 73	77,390 41	.....	129,060 30
6. Dorchester.....	3,898 85	4,590 02	2,828 61	6,888 72	10,112 77	1,244 21	95,418 28	.....	124,981 46
7. Roxbury South and Jamaica Plain.....	9,851 94	6,306 97	4,571 92	27,783 62	10,380 92	2,078 76	44,561 20	.....	105,535 33
8. South End and Roxbury North.....	20,976 30	9,649 33	5,120 73	4,356 79	22,328 51	5,304 31	116,590 47	.....	184,326 44
9. Ashmont.....	5,753 89	737 91	927 29	6,909 47	2,671 49	460 24	91,309 30	.....	108,769 59
10. North and West Ends and Back Bay..	9,105 15	8,183 91	4,294 24	4,850 79	10,626 91	3,160 93	18,675 37	.....	58,897 30
11. Hyde Park.....	3,843 94	.....	605 51	5,186 08	3,365 46	346 76	12,412 22	.....	25,819 97
Totals.....	\$95,645 60	\$42,009 94	\$31,386 05	\$101,691 37	\$93,825 68	\$16,634 87	\$646,444 07	\$361,213 42	\$1,391,851 60

SCHEDULE A.

Salary of division engineer (part of)		\$1,250	00
Salary of office clerks, stenographers and mes- sengers		1,480	84
Salary of chief engineer		3,000	00
Salaries of assistant engineers (office work)		11,460	39
Salaries of permit office clerks		8,216	29
Salaries of permit office inspectors		10,530	15
Salaries of engineering inspectors (office work)		5,700	83
Salaries of inspectors on artificial stone sidewalks,		4,675	30
Salaries of district inspectors		6,158	85
Salary of medical inspector		1,000	00
Medical attendance on injured employees		10	20
Salary of chief veterinarian		3,000	00
Salary of inspector of horses		1,016	01
Wages of weigher at Chestnut Hill ledge		707	25
Wages of weigher at Centre street ledge		552	00
Wages of weigher and watchmen at Dimock street yard		2,980	50
Pensions paid to veterans of Civil War (retired),		11,876	12
Pensions paid to retired laborers		14,548	40
Pay allowed injured employees		947	25
Holidays, not including holidays charged to street accounts		44,406	55
Automobile expense, division engineer		2,079	41
Gasolene, grease, etc.	\$229	51	
Repairs	206	20	
New tires and tubes	290	43	
Repairing tires and tubes	13	65	
Wages of chauffeur	1,113	00	
Supplies	226	62	
Automobile expense, chief engineer		3,281	39
Gasolene, grease, etc.	\$297	09	
Repairs	1,406	56	
New tubes and tires	320	55	
Repairing tubes and tires	19	85	
Wages of chauffeur	1,109	50	
Supplies	127	84	
Automobile expense, emergency car		801	84
Rambler runabout (new)	\$800	00	
Gasolene, grease, etc.	1	84	
Automobile expense, old emergency car		533	47
Repairs	\$461	28	
Supplies	14	27	
Gasolene	57	92	
Automobile repairs, permit clerk		100	94
Advertising (miscellaneous)		12	40
<i>Carried forward</i>		<u>\$140,326</u>	38

<i>Brought forward</i>		\$140,326	38
Newspapers, magazines, etc.			3 00
Printing		2,808	35
Postage			568 80
Stationery			757 79
Traveling expenses, car fares, etc.			794 45
Engineering supplies and incidentals		1,530	71
Artificial stone sidewalks		19,067	98
Rebates allowed to contractors	\$14,411	42	
Repairs made	2,825	46	
Torrey street, Dorchester		115	02
Washington, at Torrey street		171	36
Union Park street		254	70
Brattle square		43	02
Washington street, Roxbury		245	70
Cliff street		140	40
Dana street		47	52
Tunnel, Roslindale		72	00
Market street, at cemetery		275	20
Columbia road, at K street		152	46
Morton street		56	16
Dakota street		75	43
Kenwood street		178	03
Advertising		4	10
Asphalt and bitulithic pavements repaired		29,094	43
Temporary repairs, labor, materials, etc.	\$938	85	
Engineering		343	40
Inspection		1,731	89
Engineering expense		9	10
Advertising		4	50
Amount paid to Barber Asphalt Paving Company		100	17
Amount paid to Warren Brothers Company, asphalt		24,672	80
Amount paid to Warren Brothers Company, bitulithic repairs		1,293	72
New crosswalks, not included elsewhere		4,375	24
Fence repairs		4,231	64
Plank walk repairs		1,953	29
Edgestones, sidewalks and gutters, new, not included elsewhere		12,946	71
Rent of land, etc.		4,756	63
Taxes (net)		612	90
Horses purchased and exchanged (net cost)		1,599	58
Buggies, carts and wagons, new		690	00
Expense of stables, including drivers, feeders, fodder, horseshoeing, repairs to harnesses, carts, etc.	\$123,251	82	
<i>Carried forward</i>	\$123,251	82	\$226,117 88

<i>Brought forward</i>	\$123,251 82	\$226,117 88
Amount earned by department; teams	93,428 24	
	<hr/>	29,823 58
Scarifier		466 00
Electric lighting, yards and stables		909 76
Gas lighting, yards and stables		142 44
Fuel for heating yard buildings, offices and stables, Electrical appliances, labor and stock, yards and stables		1,968 82
Furniture, yards and stables		1,125 54
Rent of towels		26 31
Stoves, pipes, grates, etc.		160 60
Telephone service		124 44
Derricks, repairing, etc.		1,330 71
Dumping boat service		557 16
Oil for street lighting		4 75
Ice		821 44
Oatmeal		80 98
Signs, making and putting up		42 72
Numbering streets, salaries		9,846 33
Numbering streets, figures for		1,219 53
Tools, hardware, etc., new; cost of repairing, etc., Executions of courts and damages		21 25
Snow dumps		21,190 84
Scale repairs		1,628 68
Expenses of yards, including salaries of foremen, yardmen, watchmen, tool wagon, etc.		760 87
Repairing yard offices, stables, sheds, etc.		49 19
Painting buildings at North End Yard		43,714 72
Altering blacksmith shop, stable, heating plant and steam roller shed at Brighton Paving Yard, Repairing tar concrete sidewalks		9,573 61
Sanding icy and slippery streets		390 00
Sanitary Service, work done and material fur- nished, not shown elsewhere		5,103 98
Sewer Service, work done and material furnished, not shown elsewhere		374 95
Work done and material furnished, individuals, corporations, etc.		1,231 81
Work done and material furnished, Schoolhouse Department		1,231 81
Work done and material furnished, Bridge Service, not included elsewhere		¹ 253 53
Work done and material furnished, Water Serv- ice, not included elsewhere		² 2,494 34
		³ 721 11
		⁴ 48 14
		⁵ 165 22
		⁶ 341 78
<i>Carried forward</i>		<hr/>
		\$362,833 01

¹ \$253.53 paid through City Collector.² \$1,852.43 paid through City Collector.³ \$721.11 paid through City Collector and \$14.40 withdrawn.⁴ \$23.94 paid through City Collector.⁵ \$165.22 paid through City Collector.⁶ \$341.78 paid through City Collector.

<i>Brought forward</i>		\$362,833 01	
Repairing culverts and building new culverts		664 22	
Motor cycle expense		282 82	
New Indian	\$185 00		
Repairs	68 31		
Registration	4 50		
Gasolene, oil and supplies	25 01		
Removal of gypsy moths		40 77	
Making cases for Central Office		80 16	
Catch-basins, marking locations		202 50	
Teaming empty oil barrels, etc.		47 44	
Trimming and removing trees		210 84	
Services of constable		2 81	
Photographs		12 60	
Sundries		6 73	
Grass seed		7 39	
Cleaning streets after fire in Roxbury		784 36	
Fire extinguishers		403 83	
Bandages		5 50	
Membership in Association for Standard Specifications		25 00	
Columbus Day parade		8 50	
Repairs to Traverse Street Subway		92 78	
Scale repairs at Chestnut Hill avenue ledge		368 57	
Scale repairs at Dimock Street Yard		75 45	
Stock, materials	\$81,541 84		
Stock, handling and teaming	18,454 09		
		\$99,995 93	
Less stock delivered on streets		97,278 17	
			2,717 76
			\$368,873 04
Steam rollers, amount earned	\$27,303 63		
Steam rollers, cost of operating, repairing, etc.	19,644 01		
			7,659 62
			<u>\$361,213 42</u>

STREET WORK DONE IN PART BY CONTRACT AND DEPARTMENT FORCE AND CHARGED TO THE MAINTENANCE APPROPRIATION.

<i>Beacon street</i> , between Massachusetts avenue and Raleigh street. Length, 1,526 linear feet. Area, 2,229 square yards. Wood block pavement laid and relaid.		
Engineering		\$32 62
Inspection		115 50
Engineering expense		25
<i>Carried forward</i>		<u>\$148 37</u>

<i>Brought forward</i>		\$148 37
Amount paid to Central Construction Com- pany, under contract:		
9 cubic yards concrete base furnished and laid @ \$6.90	\$62 10	
750 square yards wood block pavement furnished and laid @ \$3.27	2,452 50	
Addition to contract:		
1,479 square yards wood block p a v e m e n t (3½-inch block) furnished and laid @ \$3.15	4,658 85	
		<u>7,173 45</u>
		<u>\$7,321 82</u>

Armadine street, between Milton avenue and Washington street. Length, 1,398 linear feet. Area, 4,039 square yards. Edgestone set, block gutters paved and artificial stone sidewalks constructed.

Engineering		\$69 85
Inspection		182 00
Engineering expense		2 20
Labor, handling stock		31 65
Advertising		4 40
Edgestone, 1,914 feet straight, 93 feet 3 inches circular and 36 small corners		1,514 46
Flagging, 16 feet		12 80
Blocks, old granite, 29,690		418 08
Amount paid to Jeremiah J. McCarthy, under contract:		
17 trees removed @ \$10	\$170 00	
22 cubic yards water box excavation @ \$1	22 00	
27 cubic yards rock excava- tion @ \$4	108 00	
1,890 linear feet straight edge- stone and corners hauled and set @ 28c.,	529 20	
71 linear feet circular edge- stone set @ 15c.	10 65	
592 linear feet existing edge- stone reset @ 15c.	88 80	
853 square yards granite block paving hauled and laid @ 75c.	639 75	
88 square yards existing granite block paving relaid @ 40c.	35 20	
4 square yards flagging crosswalks hauled and laid @ \$1	4 00	
15,374 square feet artificial stone sidewalks fur- nished and laid @ 18c.,	2,767 32	
1,177 square feet artificial stone driveways furnished and laid @ 18c.	211 86	
1 cover reset @ \$3	3 00	
		<u>\$4,589 78</u>
<i>Carried forward</i>		<u>\$2,235 44</u>

<i>Brought forward</i>	\$4,589 78	\$2,235 44
Extra work — Remove existing edgestones and construct driveways where directed:		
47 hours, foreman, @ 62½c.,	29 38	
99½ hours, edgestone setter, @ 62½c.	62 19	
81½ hours, stonecutter, @ 62½c.	50 94	
298½ hours, tender, @ 31¼c.	93 28	
226 hours' labor @ 25c.	56 50	
Plus 15 per cent on \$292.29	43 84	
6 days, double team, @ \$6,	36 00	
1½ days, single team, @ \$3.50	5 25	
139 linear feet edgestone hauled @ 8c.	11 12	
	<hr/>	4,978 28
		\$7,213 72
Credit: Bricks, 7,500		52 50
		<hr/>
		\$7,161 22

Alcott street, southerly side, from Franklin street about 100 feet easterly. Length, 100 linear feet. Area, 643 square feet. Edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Inspection		\$10 50
Advertising		2 15
Amount paid to John J. Lane, under contract:		
107 linear feet existing edgestone reset @ 15c.	\$16 05	
36 square yards existing granite block paving relaid @ 35c.	12 60	
643 square feet artificial stone sidewalks furnished and laid @ 16c.	102 88	
	<hr/>	131 53
		<hr/>
		\$144 18

Alban street, between Welles avenue and Ashmont street. Length, 1,358 linear feet. Area, 3,948 square yards. Edgestone reset, block gutters repaved, flagging crosswalks relaid and artificial stone sidewalks constructed.

Engineering		\$47 78
Inspection		45 50
Engineering expense		2 20
Advertising		4 00
Teaming		3 00
Edgestone, 3 feet 7 inches		1 25
Amount paid to James Doherty, under contract:		
1,852 linear feet existing edgestone reset @ 13c.	\$240 76	
530 square yards existing granite block paving relaid @ 40c.	212 00	
	<hr/>	
<i>Carried forward</i>	\$452 76	\$103 73

<i>Brought forward</i>	\$452 76	\$103 73
10,575 square feet artificial stone sidewalks furnished and laid @ 17 $\frac{1}{4}$ c.	1,824 19	
1,042 square feet artificial stone driveways furnished and laid @ 17 $\frac{1}{4}$ c.	179 75	
Constructing dry well	5 00	
Extra work — Remove trees where directed:		
148 hours' labor @ 25c.	37 00	
Plus 15 per cent on \$37	5 55	
4 hours' double team @ 68 $\frac{3}{4}$ c.	2 75	
Extra work — Regulate Bradley head catch- basin as directed:		
6 hours, mason, @ 62 $\frac{1}{2}$ c.	3 75	
12 hours, tender, @ 25c.	3 00	
Plus 15 per cent on \$6.75,	1 01	
	<hr/>	2,514 76
		<hr/>
		\$2,618 49
Credit: Bricks, 2,400	\$16 80	
Blocks, 1,200	24 00	
	<hr/>	40 80
		<hr/>
		<u>\$2,577 69</u>

Centre street, northerly side, between Allston street and Shawmut Branch Railroad. Length, 300 linear feet. Reset edgestone, relay block gutters, relay flagging crosswalks and construct artificial stone sidewalks.

Engineering		\$8 17
Inspection		15 75
Engineering expense		40
Edgestone, 136 feet 5 inches		52 16
Blocks, 1,650 old granite		33 00
Labor, handling stock		18
Amount paid to James Doherty, under contract:		
136 linear feet straight edge- stone hauled and set @ 25c.	\$34 00	
163 linear feet existing edge- stone reset @ 12c.	19 56	
45 square yards granite block paving hauled and laid @ 70c.	31 50	
58 square yards existing gran- ite block paving relaid @ 37c.	21 46	
1,913 square feet artificial stone sidewalks furnished and laid @ 15 $\frac{3}{4}$ c.	301 30	
108 square feet artificial stone driveways furnished and laid @ 15 $\frac{3}{4}$ c.	17 01	
Extra work — Remove tree where directed:		
12 hours' labor @ 25c.	3 00	
Plus 15 per cent on \$3	45	
1 day, double team, @ \$5.50,	5 50	
	<hr/>	433 78
		<hr/>
		<u>\$543 44</u>

Blue Hill avenue, easterly side, from Washington street about 192 feet southerly. Length, 220 linear feet. Reset edgestone, repave gutters and construct artificial stone sidewalks.

Engineering		\$22 06	
Inspection		24 50	
Engineering expense		1 20	
Advertising		3 90	
Edgestone, 9 feet circular		11 20	
Teaming		3 00	
Amount paid to Robert Eager, Jr., under contract:			
12 linear feet circular edgestone set @ 00c.			
101 linear feet existing edgestone reset @ 10c.	\$10 10		
20 square yards existing granite block paving relaid @ 40c.		8 00	
3,130 square feet artificial stone sidewalks furnished and laid @ 16c.		500 80	
			518 90
			<u>\$584 76</u>

Centre street, between Green and Keyes streets. Edgestone reset, existing flagging crosswalks relaid, artificial stone sidewalks constructed and roadway paved with bitulithic on a concrete base.

Engineering		\$123 07	
Inspection		245 00	
Engineering expense		3 30	
Labor, handling stock		89	
Advertising		2 10	
Edgestone		31 89	
Teaming		12 00	
Amount paid to Warren Brothers Company, under contract:			
86 linear feet straight edgestone and corners hauled and set @ 24c.,	\$20 64		
22 linear feet circular edgestone set @ 22c.		4 84	
2,245 linear feet existing edgestone reset @ 19c.		426 55	
7 square yards existing granite block paving relaid, gravel joints, @ 40c.		2 80	
176 square yards existing granite block paving relaid, pitch joints, including concrete base, @ \$1.85		325 60	
4 square yards existing flagging crosswalks relaid, gravel joints, @ 35c.		1 40	
206 square yards existing flagging crosswalks relaid, pitch joints, including concrete base, @ \$1.75		360 50	
<i>Carried forward</i>	\$1,142 33		418 25

<i>Brought forward</i>	\$1,142 33	\$418 25
4,776 square yards concrete base and bitulithic wearing surface furnished and placed @ \$2.63	12,560 88	
17,816 square feet artificial stone sidewalks furnished and laid @ 20c.	3,563 20	
20 covers reset @ \$3	60 00	
Extra work — Remove concrete base already laid and lay new concrete base to conform to new catch-basin at engine house, Centre street:		
38 square yards old concrete base removed and replaced with new concrete @ \$1	38 00	
Extra work — Omit granite block paving for brows outside of and between tracks and substitute wood block and bitulithic as directed:		
310 square yards wood block pavement furnished and laid @ \$4.18	1,295 80	
1,035 square yards bitulithic wearing surface furnished and laid @ \$2.63	2,722 05	
	<hr/>	21,382 26
		\$21,800 51
Credit: Old blocks, 30,610		612 20
		<hr/>
		<u>\$21,188 31</u>

Bernard street, between Harvard and Kerwin streets. Length, 910 linear feet. Area, 3,440 square feet. Set edgestone, pave gutters, relay flagging crosswalks and construct artificial stone sidewalks.

Engineering		\$37 15
Inspection		59 50
Engineering expense		2 45
Advertising		4 00
Edgestone, 2 small corners		7 20
Amount paid to Thomas F. Hind, Inc., under contract:		
4 cubic yards rock excavation @ \$3	\$12 00	
8 linear feet straight edgestone hauled and set @ 23c.	1 38	
1,542 linear feet existing edgestone reset @ 15c.	231 30	
533 square yards existing granite block paving relaid @ 45c.	239 85	
	<hr/>	
<i>Carried forward</i>	\$484 53	\$110 30

<i>Brought forward</i>	\$484 53	\$110 30	
3 square yards existing flagging crosswalks relaid @ 50c.	1 50		
1 square yard existing brick sidewalk relaid @ 30c.	30		
11,119 square feet artificial stone sidewalks furnished and laid @ 16c,	1,779 04		
81 square feet artificial stone driveways furnished and laid @ 16c,	12 96		
3 covers reset @ \$3,	9 00		
	<hr/>	2,287 33	
			<u>\$2,397 63</u>

Chelsea South Bridge, from Scott's court to the draw. Length, 347 linear feet. Iron fence reconstructed.

Inspection	\$42 00	
Amount paid to W. A. Snow Iron Works, Inc., under contract:		
Repairing and restoring railing of bridge	506 00	
	<hr/>	<u>\$548 00</u>

Cohasset street, between Corinth and Albano streets. Length, 1,014 linear feet. Area, 9,939 square yards. Edgestone set, block gutters paved and artificial stone sidewalks constructed.

Engineering	\$20 47	
Inspection	28 00	
Engineering expense	85	
Advertising	3 70	
Amount paid to Martino DeMatteo, under contract:		
165 linear feet existing edgestone reset @ 15c.	\$24 75	
59 square yards existing granite block paving relaid @ 40c.	23 60	
9,939 square feet artificial stone sidewalks furnished and laid @ 16c,	1,590 24	
2 covers reset @ \$3	6 00	
	<hr/>	1,644 59
		<u>\$1,697 61</u>

Condor street, extending sidewalk at foot of Glendon street.

Amount paid to George T. Rendle as per agreement	\$138 00
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Dennis street, between Dudley and Woodville streets. Edgestone set and reset, block gutters paved and repaved, flagging crosswalks relaid and artificial stone sidewalks constructed.

Engineering	\$66 11	
Inspection	47 25	
Advertising	4 40	
Engineering expense	2 60	
Labor, handling stock	2 12	
Blocks, 5,800, old granite	116 00	
	<hr/>	<u>\$238 48</u>
<i>Carried forward</i>		\$238 48

<i>Brought forward</i>		\$238 48
Edgestone, 141 feet straight and 102 feet 1 inch circular		221 20
Amount paid to James Doherty, under con- tract:		
143 linear feet straight edge- stone and corners hailed and set @ 23c.,	\$32 89	
104 linear feet circular edge- stone set @ 18c.	18 72	
1,596 linear feet existing edge- stone reset @ 14c.	223 44	
220 square yards granite block paving hauled and laid @ 60c.	174 00	
339 square yards existing granite block paving relaid @ 40c.	135 60	
62 square yards existing flag- ging crosswalks relaid @ 50c.	31 00	
8 square yards existing brick sidewalks relaid @ 30c.,	2 40	
9,565 square feet artificial stone sidewalks furnished and laid @ 17c.	1,626 05	
221 square feet artificial stone driveways furnished and laid @ 17c.	37 57	
Extra work—Reset Bradley Head catch- basins to grade where directed:		
21 hours, mason, @ 62½c.	13 13	
39 hours, helper, @ 25c.	9 75	
Plus 15 per cent on \$22.88,	3 43	
1½ barrels Portland cement @ \$1.85	2 78	
½ double load sand @ \$1.50,	50	
	<hr/>	2,311 26
		\$2,770 94
Credit: 22,000 paving bricks (old)		154 00
		<hr/>
		<u>\$2,616 94</u>

Dorchester avenue, from Ralston street about 140 feet southerly. Length, 140 linear feet. Area, 498 square yards. Roadway paved with wood block on a concrete base, edgestone reset, flagging crosswalks relaid and brick sidewalks laid.

Engineering		\$10 38
Engineering expense		1 20
Advertising		3 90
Bricks, 2,200, old		15 40
Flagging, 6 feet		4 80
Amount paid to Coleman Brothers, under contract:		
308 linear feet existing edge- stone reset @ 16c.	\$49 28	
64 square yards existing granite block paving relaid, gravel joints, @ 60c.	38 40	
	<hr/>	
<i>Carried forward</i>	\$87 68	\$35 68

<i>Brought forward</i>	\$87 68	\$35 68	
8 square yards existing granite block paving relaid, pitch joints, including concrete base, @ \$2	16 00		
13 square yards existing flagging crosswalks relaid, gravel joints, @ \$1	13 00		
1 square yard flagging crosswalks hauled and laid, pitch joints, including concrete base, @ \$2	2 00		
10 square yards existing flagging crosswalks relaid, pitch joints, including concrete base, @ \$1.80,	18 00		
402 square yards wood block pavement furnished and laid @ \$3.90,	1,567 80		
320 square yards existing brick sidewalks relaid @ 35c.	112 00		
2 catch-basins reset @ \$3,	6 00		
	<hr/>	1,822 48	
		\$1,858 16	
Credit: Old granite blocks		103 00	
		<hr/>	<u>\$1,755 16</u>

Dorchester avenue, east side, between Belfort and St. William streets. Length, 174 linear feet. Area, 1,398 square feet. Edgestone set, block gutters paved and artificial stone sidewalks constructed.

Engineering	\$15 52		
Inspection	38 50		
Engineering expense	95		
Advertising	4 60		
Edgestone, 9 feet 5 inches circular	11 30		
Amount paid to William J. Rafferty Company, under contract:			
10 linear feet circular edgestone set @ 30c.	\$3 00		
13 linear feet existing edgestone reset @ 18c.	2 34		
3 square yards existing granite block paving relaid @ 50c.	1 50		
1,398 square feet artificial stone sidewalks furnished and laid @ 17c.	237 66		
	<hr/>	244 50	
		<hr/>	<u>\$315 37</u>

Dudley street, between Washington street and Harrison avenue. Length, 380 linear feet. Area, 5,615 square feet. Artificial stone sidewalks constructed.

Engineering	\$42 23		
Inspection	52 50		
Advertising	4 20		
Engineering expense	5 90		
	<hr/>	\$104 83	
<i>Carried forward</i>			

<i>Brought forward</i>		\$104 83
Labor, handling stock		39
Edgestone, 35 feet 10 inches		25 08
Amount paid to Robert Eager, Jr., under contract:		
26 linear feet straight edgestone hauled and set @ 30c.	\$7 80	
102 linear feet existing edgestone reset @ 15c.	15 30	
5,615 square feet artificial stone sidewalks furnished and laid @ 16c.	898 40	
Extra work — Furnish and lay artificial stone sidewalk and regulate Warren street (westerly side), from Dudley street to Zeigler street:		
237 linear feet existing edgestone reset @ 15c.	35 55	
1 square yard existing brick sidewalks relaid @ 35c.,	35	
2,063 square feet artificial stone sidewalks furnished and laid @ 16c.	330 08	
Extra work — Break out and remove concrete as directed:		
2 hours, mason, @ 62½c.	1 25	
6 hours, tender, @ 31¼c.	1 88	
14 hours' labor @ 25c.	3 50	
Plus 15 per cent on \$6.63	99	
		<hr/> 1,295 10
		\$1,425 40
Credit: 10,800 old bricks		<hr/> 75 60
		<hr/> <u>\$1,349 80</u>

Elmo street, between Blue Hill avenue and Erie street. Length, 800 linear feet. Area, 2,311 square yards. Edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$68 54
Inspection	71 75
Advertising	4 10
Engineering expense	3 55
Labor, handling stock	2 52
Edgestone, 20 feet 11 inches straight, 5 feet inches circular	17 65
Flagging, 162 feet 10 inches	127 01
Teaming	7 50
Labor, stone cutter	1 50
Blocks	8 00
Amount paid to James Doherty, under contract:	
33 cubic yards rock excavation @ \$5	\$165 00
9 linear feet circular edgestone set @ 17c.	1 53
	<hr/> \$166 53
<i>Carried forward</i>	\$312 12

<i>Brought forward</i>	\$166 53	\$312 12
1,091 linear feet existing edge- stone reset @ 13c.	141 83	
505 square yards existing gran- ite block paving relaid @ 40c.	202 00	
33 square yards flagging crosswalks hauled and laid @ 80c.	26 40	
6,248 square feet artificial stone sidewalks furnished and laid @ 17½c.	1,077 78	
68 square feet artificial stone driveways furnished and laid @ 17½c.	11 73	
	<u>1,626 27</u>	
	\$1,938 39	
Credit: 2 corners	3 60	
	<u>\$1,934 79</u>	

* *Conway street*, between South and Fairview streets. Length, 802 linear feet. Area, 9,556 square feet. Artificial stone sidewalks constructed, edgestone reset, block paving relaid.

Engineering		\$34 34
Inspection		129 50
Engineering expense		1 35
Advertising		2 10
Handling stock		18
Blocks, old granite, 19,310		386 20
Edgestone, 5 feet 4 inches straight, 31 feet 8 inches circular and 2 small corners		48 02
Amount paid to Martino De Matteo, under contract:		
12 linear feet straight edge- stone and corners hauled and set @ 35c.	\$4 20	
26 linear feet circular edge- stone set @ 15c.	3 90	
1,534 linear feet existing edge- stone reset @ 13c.	199 42	
494 square yards granite block paving hauled and laid @ 70c.	345 80	
17 square yards existing gran- ite block paving relaid @ 35c.	5 95	
9,392 square feet artificial stone sidewalks furnished and laid @ 17½c.	1,643 60	
164 square feet artificial stone driveways furnished and laid @ 19c.	31 16	
Extra work — Reset Bradley-Head catch- basin frames where di- rected @ \$5	15 00	
	<u>2,249 03</u>	
	<u>\$2,850 72</u>	

* See Fairview street, done in connection with this street.

* *Fairview street*, southerly side, from Conway street about 350 feet easterly. Length, 350 linear feet. Area, 2,184 square feet. Artificial stone sidewalks constructed, edgestone reset, block paving relaid.

Advertising		\$2 10	
Amount paid to Martino De Matteo, under contract:			
6 linear feet circular edgestone set @ 15c.	\$0 90		
354 linear feet existing edgestone reset @ 13c.	46 02		
112 square yards granite block paving hauled and laid @ 70c.	78 40		
20 square yards existing granite block paving relaid @ 35c.	7 00		
2,128 square feet artificial stone sidewalks furnished and laid @ 17½c.	372 40		
56 square feet artificial stone driveways furnished and laid @ 19c.	10 64		
Extra work — Reset Bradley-Head catch-basin frames:			
1 catch-basin frame reset @ \$5	5 00		
		<u>520 36</u>	
			<u>\$522 46</u>

Exchange street, from State street about 174 feet northerly. Length, 335 linear feet. Area, 593 square yards. Edgestone reset, roadway paved with wood block on a concrete base in part and balance paved with granite block on a concrete base.

Engineering		\$13 09	
Inspection		50 31	
Engineering expense		45	
Advertising		4 00	
Labor, handling stock		95	
Flagging, 42 feet 9 inches		33 36	
Bricks, 1,000		13 00	
Edgestone, 8 feet 6 inches		5 61	
Amount paid to Central Construction Company, under contract:			
8½ linear feet straight edgestone hauled and set @ 40c.	\$3 40		
153 linear feet existing edgestone reset @ 30c.	45 90		
57 square yards existing granite block paving relaid, pitch joints, @ \$1.49	84 93		
12 square yards flagging crosswalks hauled and laid, pitch joints, @ \$1.75	21 00		
6½ square yards wood block pavement furnished and laid @ \$4.96	32 24		
<i>Carried forward</i>	\$187 47	<u>\$120 77</u>	

* See Conway street, done in connection with this street.

<i>Brought forward</i>	\$187 47	\$120 77
2 covers reset @ \$3	6 00	
Extra work — Furnish and lay wood block pavement with lath joints, as directed, between 174 feet north of State street and Dock square:		
236 square yards wood block pavement furnished and laid, lath joints, @ \$5.06	1,194 16	
Extra work — Remove wood blocks for a distance of 160 feet north from State street and substitute granite blocks on a concrete base with pitch and pebble joints:		
288.4 square yards granite block paving laid on a concrete base with pitch and pebble joints @ \$2.98	859 43	
Allowance for delay under Article 8 of contract:		
5 hours, foreman, @ 65c.	3 25	
60 hours, double team, @ 75c.	45 00	
60 hours' labor @ 25c.	15 00	
8 hours, paver, @ \$1	8 00	
4 hours, rammer, @ 35c.	1 40	
Plus 15 per cent on \$72.65,	10 90	
	<hr/>	
	\$2,330 61	
Deduct because of violation of terms of injunction by officials of city,	150 00	
	<hr/>	
		2,180 61
		<hr/>
		\$2,301 38
Credit: Blocks, old granite, 7,975		159 50
		<hr/>
		<u>\$2,141 88</u>

Evelyn street, between Blue Hill avenue and Norfolk street. Length, 901 linear feet. Area, 2,603 square yards. Edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$55 37
Inspection	115 50
Engineering expense	1 20
Advertising	6 20
Labor, handling stock	83
Labor, tallying blocks	29 62
Flagging, 55 feet	44 00
Blocks, old granite	32 70
Edgestone, 1,344 feet 10 inches straight, 10 feet 3½ inches circular and 10 small corners,	1,093 05
	<hr/>
<i>Carried forward</i>	\$1,378 47

<i>Brought forward</i>		\$1,378 47
Teaming		2 87
Amount paid to Central Construction Com- pany, under contract:		
Removing trees, bushes, stumps, etc.	\$10 00	
41 cubic yards rock excava- tion @ \$3	123 00	
1,359 linear feet straight edge- stone and corners hailed and set @ 25c.	339 75	
10 linear feet circular edge- stone set @ 25c.	2 50	
49 linear feet existing edge- stone reset @ 25c.	12 25	
467 square yards granite block paving hauled and laid @ \$1	467 00	
14 square yards existing granite block paving re- laid @ 40c.	5 60	
12 square yards flagging crosswalks hauled and laid @ 65c.	7 80	
12 square yards existing flagging crosswalks re- laid @ 40c.	4 80	
8,325 square feet artificial stone sidewalks furnished and laid @ 15c.	1,248 75	
292 square feet artificial stone driveways furnished and laid @ 16c.	46 72	
2 covers reset @ \$3	6 00	
Extra work — Regulate catch-basins over 6 inches:		
4 hours, mason, @ 70c.	2 80	
4 hours, stonecutter, @ 62½c.	2 50	
4 hours, tender, @ 31¼c.	1 25	
Plus 15 per cent on \$6.55	98	
150 bricks @ \$13 per M.	1 95	
2 bags Portland cement @ 50c.	1 00	
	<hr/>	\$2,284 65
Less 1,343 feet 10 inches straight edgestone hauled by city @ 5c.	67 19	
	<hr/>	2,217 46
		<u>\$3,598 80</u>
<i>Evelyn street</i> , between Blue Hill avenue and Norfolk street. Length, 901 linear feet. Area, 2,603 square yards 6-inch tar macadam roadway constructed.		
Amount paid to Jeremiah J. McCarthy Company, under contract:		
365 cubic yards earth excavation @ 75c.	\$273 75	
76 square yards existing granite block paving relaid @ 50c.	38 00	
	<hr/>	\$311 75
<i>Carried forward</i>		

<i>Brought forward</i>	\$311 75	
1,956 square yards tar macadam surface furnished and placed @ 79c.	1,545 24	
8 covers reset @ \$3	24 00	
	<hr/>	<u>\$1,880 99</u>

Franklin street, easterly side, between Lincoln and Easton streets. Length, 736 linear feet. Area, 4,197 square feet. Edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$25 59	
Inspection	52 50	
Engineering expense	55	
Advertising	2 15	
Labor, handling stock	8 04	
Flagging, 31 feet	11 16	
Edgestone, 482 feet 5 inches straight, 45 feet 4½ inches circular and 6 small corners	389 05	
Amount paid to John J. Lane, under contract:		
456 linear feet straight edgestone hauled and set @ 25c.	\$114 00	
47 linear feet circular edgestone set @ 20c.	9 40	
178 linear feet existing edgestone reset @ 15c.	26 70	
246 square yards existing granite block paving relaid @ 35c.	86 10	
7 square yards flagging crosswalks hauled and laid @ \$1	7 00	
21 square yards existing flagging crosswalks relaid @ 50c.	10 50	
3,978 square feet artificial stone sidewalks furnished and laid @ 16c.	636 48	
219 square feet artificial stone driveways furnished and laid @ 16c.	35 04	
3 covers reset @ \$3	9 00	
	<hr/>	<u>934 22</u>
		<u>\$1,423 26</u>

Fulton street, between Richmond and Lewis streets. Length, 525 linear feet. Area, 2,169 square yards. Roadway paved with old granite blocks on a concrete base, edgestone set, flagging crosswalks laid and brick sidewalks relaid.

Engineering	\$65 98	
Inspection	126 01	
Engineering expense	1 10	
Advertising	4 10	
Labor, handling stock	3 20	
Labor, tallying blocks	8 50	
Teaming	39 60	
Bricks, 17,000	221 00	
Edgestone, 63 feet straight, 18 feet 10 inches circular and 2 small corners	63 81	
Flagging, 63 feet 1 inch	113 58	
	<hr/>	<u>\$646 88</u>
<i>Carried forward</i>		

<i>Carried forward</i>		\$646 88
Templets		8 59
Blocks, 4,120, old granite		82 40
Amount paid to Boston Paving Company, under contract:		
63 linear feet straight edge- stone and corners hailed and set @ 21c.,	\$13 23	
19 linear feet circular edge- stone set @ 13c.	2 47	
933 linear feet existing edge- stone reset @ 13c.	121 29	
225 square yards existing gran- ite block paving relaid, gravel joints, @ 45c.	101 25	
1,867 square yards existing gran- ite block paving relaid, pitch joints, including concrete base, @ \$1.73,	3,229 91	
39 square yards existing flag- ging crosswalks relaid, gravel joints, @ 50c.	19 50	
36 square yards flagging crosswalks hauled and laid, pitch joints, includ- ing concrete base, @ \$2,	72 00	
2 square yards existing flag- ging crosswalks relaid, pitch joints, including concrete base, @ \$1.73	3 46	
636 square yards existing brick sidewalks relaid @ 29c.,	184 44	
9 covers reset @ \$3	27 00	
Extra work — Perform Sunday work as directed:		
225 square yards existing gran- ite block paving relaid, gravel joints, @ 17c.	38 25	
491 square yards existing gran- ite block paving relaid, pitch joints, @ 30c.	147 30	
39 square yards existing flag- ging crosswalks relaid, gravel joints, @ 17c.	6 63	
Extra work — Repave on existing concrete base where directed:		
23 square yards existing gran- ite block paving relaid, pitch joints, @ 90c.	20 70	
2 square yards existing flag- ging crosswalks relaid, pitch joints, @ 90c.	1 80	
	<hr/>	3,989 23
		<hr/> <u>\$4,727 10</u>

Germania street, between Boylston and Bismarck streets. Length, 709 linear feet. Area, 1,576 square yards. Rough grade roadway, set edgestone, block gutters paved, flagging crosswalks laid, brick sidewalks relaid

and artificial stone sidewalks constructed, 1,018 square yards tar macadam roadway resurfaced, 7 inches deep.

Engineering	\$90 47
Inspection	105 00
Engineering expense	2 15
Advertising	4 20
Flagging, 296 feet 9 inches	231 46
Blocks, 13,225, old granite	264 50
Edgestone, 1,076 feet straight, 16 small corners and 54 feet 5 inches circular	832 81
Crushed stone, 333.6 tons	383 67
Tarite, 2,758 gallons	227 54
Steam roller	149 00
Labor, handling stock	18 90
Labor, employees, spreading macadam	228 34
Teaming	32 59

Amount paid to John McCourt & Co., under contract:

710 cubic yards earth excavation @ 74c.	\$325 40
71 cubic yards rock excavation @ \$3	213 00
1,100 linear feet straight edgestone and corners hauled and set @ 22c.	242 00
48 linear feet circular edgestone set @ 18c.	8 64
91 linear feet existing edgestone reset @ 16c.	14 56
440 square yards granite block paving hauled and laid @ 75c.	330 00
42 square yards existing granite block paving relaid @ 50c.	21 00
64 square yards flagging crosswalks hauled and laid @ \$1	64 00
10 square yards existing flagging crosswalks relaid @ 75c.	7 50
37 square yards existing brick sidewalks relaid @ 35c.,	12 95
4,931 square feet artificial stone sidewalks furnished and laid @ 14c.	690 34
128 square feet artificial stone driveways furnished and laid @ 18c.	23 04

\$2,152 43

Less 15 per cent retained,

322 86

1,829 57

\$4,400 20

Greenwood street, between Elmo and Erie streets. Length, 200 linear feet.

Edgestone reset, gutters repaved and artificial stone sidewalks constructed.

Engineering	\$3 57
Inspection	3 50

Carried forward \$7 07

<i>Brought forward</i>		\$7 07	
Advertising		4 00	
Engineering expense		20	
Amount paid to James Doherty, under contract:			
66 linear feet existing edge-stone reset @ 17c.	\$11 22		
15 square yards existing granite block paving relaid @ 45c.	6 75		
2,119 square feet artificial stone sidewalks furnished and laid @ 18c.	381 42		
		<u>399 39</u>	
			<u>\$410 66</u>
<i>Hancock Street Paving Yard.</i> Wooden steps constructed.			
Engineering		\$24 66	
Inspection		28 00	
Advertising		4 30	
Labor		12 00	
Teaming		10 25	
Amount paid to Thomas H. Hanlon, under contract:			
Building wood steps as per contract		971 00	
		<u>971 00</u>	
			<u>\$1,050 21</u>
<i>Hayward place, between Washington street and Harrison avenue.</i> Length, 268 linear feet. Area, 565 square yards. Concrete base built up and roadway resurfaced with asphalt and bituminous binder.			
Engineering		\$9 76	
Inspection		14 00	
Engineering expense		10	
Advertising		4 00	
Amount paid to Boston Paving Company, under contract:			
65 cubic yards concrete base furnished and laid @ \$8.25	\$536 25		
10 square yards existing granite block paving relaid, pitch joints, @ \$1.15	11 50		
565 square yards bituminous concrete binder and asphalt wearing surface furnished and laid @ \$2.05	1,158 25		
1 cover reset @ \$3	3 00		
		<u>1,709 00</u>	
			<u>\$1,736 86</u>
<i>Hollander street, from Humboldt avenue about 200 feet westerly.</i> Length, 250 linear feet. Area, 2,254 square feet. Edgestone set, block gutters paved and artificial stone sidewalks constructed:			
Engineering		\$11 63	
Inspection		14 00	
Engineering expense		45	
Edgestone, 12 feet 6 inches circular		15 00	
Labor employees, macadam excavation		509 62	
Labor employees, macadam spreading		186 78	
		<u>737 48</u>	
<i>Carried forward</i>		\$737 48	

<i>Brought forward</i>		\$737 48	
Teaming		217 00	
Steam roller, rolling		95 34	
Steam roller, picking		12 50	
Labor, street cleaning		5 96	
Crushed stone, 401.49 tons		461 72	
Tarite, 3,001 gallons		247 58	
Amount paid to William J. Rafferty Company, under contract:			
13.4 cubic yards rock excavation @ \$5	\$67 00		
12 linear feet circular edgestone set @ 30c.	3 60		
331 linear feet existing edgestone reset @ 18c.	59 58		
170 square yards existing granite block paving relaid @ 50c.	85 00		
2,254 square feet artificial stone sidewalks furnished and laid @ 17c.	383 18		
		<u>598 36</u>	
			<u>\$2,375 94</u>

Howard street, between Gerard and Magazine streets. Length, 427 feet. Area, 285 square yards. Edgestone set, gutters paved, flagging crosswalks laid and brick sidewalks laid.

Engineering		\$23 24	
Inspection		84 00	
Engineering expense		1 45	
Advertising		4 30	
Labor, handling stock		16 33	
Edgestone, 895 feet 1 inch straight, 10 small corners, 37 feet 5 inches circular		679 15	
Flagging, 150 feet 8 inches		117 52	
Bricks, 29,600		384 80	
Blocks, 12,550, old granite		251 00	
Amount paid to Boston Paving Company, under contract:			
921 linear feet straight edgestone and corners hauled and set @ 33c.	\$303 93		
38 linear feet circular edgestone set @ 20c.	7 60		
41 linear feet existing edgestone reset @ 15c.	6 15		
372 square yards granite block paving hauled and laid @ 70c.	260 40		
74 square yards existing granite block paving relaid @ 50c.	37 00		
32 square yards flagging crosswalks hauled and laid @ \$1	32 00		
630 square yards brick sidewalks laid @ 50c.	315 00		
16 square yards existing brick sidewalks laid @ 50c.	8 00		
4 covers reset @ \$3	12 00		
		<u>982 08</u>	
			<u>\$2,543 84</u>

Inwood street, between Olney and Norton streets. Length, 418 linear feet.
Area, 2,000 square feet. Construct artificial stone sidewalks.

Inspection	\$6 69	
Engineering expense	60	
Advertising	4 00	
Amount paid to Connolly & Diamond, under contract:		
2,000 square feet artificial stone sidewalks furnished and laid @ 17c.	\$340 00	
Extra work — Remove existing artificial stone sidewalk around hydrant and replace with new artificial stone:		
½ day, finisher, @ \$5	2 50	
1 day's labor @ \$2	2 00	
½ day, watchman, @ \$2	1 00	
Plus 15 per cent on \$5.50,	83	
1½ barrels cement @ \$1.60	2 40	
½ day, double team, @ \$5.50	2 75	
9 cubic feet crushed stone @ 8c.	72	
9 cubic feet sand @ 5c.	45	
		<hr/>
		352 65
		<hr/> <u>\$363 94</u>

L street. Rebuilt cap of bulkhead.

Labor, employees on filling	\$428 14	
Labor, employees on bulkhead	38 00	
Labor, employees resetting edgestone	17 25	
Labor, employees repaving roadway	15 00	
Labor, employees, crushed stone walks	15 50	
Teaming	66 00	
Gravel	1 75	
Lumber	37 50	
Nails	2 68	
Advertising	3 50	
Amount paid to Lawler Brothers, building bulkhead:		
Contract price	\$3,773 00	
Less amount paid in 1912	1,268 20	
		<hr/>
		2,504 80
Amount paid to Lawler Brothers for repairing cap of bulkhead	300 00	
Amount paid to W. H. Ellis, rebuilding cap of bulkhead	595 00	
		<hr/>
		<u>\$4,025 12</u>

Marvin street, between Washington street and Shawmut avenue. Length, 264 linear feet. Area, 576 square yards. Roadway paved with wood block on a concrete base, edgestone set, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$10 27
Inspection	42 00
Engineering expense	65
Advertising	3 43
Labor, handling stock	1 06
Edgestone, 70 feet 5 inches	49 29
	<hr/>
<i>Carried forward</i>	\$106 70

<i>Brought forward</i>		\$106 70	
Amount paid the Boston Paving Company, under contract:			
70 linear feet straight edge- stone hauled and set @ 25c.	\$17 50		
472 linear feet existing edge- stone reset @ 15c.	70 80		
33 square yards existing gran- ite block paving relaid, gravel joints, @ 50c.	16 50		
6 square yards existing granite block paving re- laid, pitch joints, includ- ing concrete base, @ \$2,	12 00		
14 square yards existing flagging crosswalks re- laid, pitch joints, includ- ing concrete base, @ \$2,	28 00		
562 square yards wood block pavement furnished and laid @ \$3.69	2,073 78		
6 square yards existing brick sidewalks relaid @ 30c.,	1 80		
2,195 square feet artificial stone sidewalks furnished and laid @ 18c.	395 10		
2 covers reset @ \$3	6 00		
	<hr/>	2,621 48	
		<hr/>	\$2,728 18
Credit: Bricks, 1,300, old	\$9 10		
Blocks, 5,750, old	115 00		
	<hr/>	124 10	
		<hr/>	<u>\$2,604 08</u>
<i>Massachusetts avenue</i> (westerly side), between New England Railroad Bridge and Columbia road. Length, 2,410 linear feet. Area, 24,713 square feet. Edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.			
Engineering		\$47 38	
Inspection		73 50	
Labor, handling stock		1 13	
Engineering expense		5 60	
Advertising		4 10	
Edgestone, 5 feet 3 inches straight, 2 large corners and 31 feet 5 inches circular		53 37	
Flagging, 70 feet 8 inches		55 12	
Amount paid to James Doherty, under con- tract:			
242 linear feet existing edge- stone reset @ 14c.	\$33 88		
834 square yards existing granite block paving relaid @ 38c.	316 92		
15 square yards flagging crosswalks hauled and laid @ 75c.	11 25		
24,712 square feet artificial stone sidewalks fur- nished and laid @ 16c.,	3,953 92		
	<hr/>		
<i>Carried forward</i>	\$4,315 97	\$240 20	

<i>Brought forward</i>	\$4,315 97	\$240 20	
8 catch-basin frames reset @ \$3	24 00		
Extra work — Omit the hauling and setting of straight edgestone and substitute the furnish- ing and setting of the same:	.		
2,010 linear feet straight edge- stone furnished and set @ 90c.	1,809 00		
Extra work — Set cir- cular edgestones and corners where di- rected:			
41 linear feet circular edge- stone and corners set @ 15c.	6 15		
	<hr/>	6,155 12	
		\$6,395 32	
Credit: Blocks, 4,825, old		96 50	
		<hr/>	<u>\$6,298 82</u>

Metropolitan avenue, southerly side, between Washington and Kittredge streets. Edgestone set, block gutters paved and artificial stone sidewalks constructed.

Engineering		\$12 88	
Inspection		35 00	
Engineering expense		40	
Lumber		98 91	
Teaming		10 74	
Amount paid to West Roxbury Trap Rock Company, under contract:			
3½ cubic yards water-box ex- cavation @ \$1	\$3 67		
1½ cubic yards rock excava- tion @ \$1	1 33		
671 linear feet straight edge- stone hauled and set @ 50c.	335 50		
22 linear feet circular edge- stone set @ 25c.	5 50		
234 square yards granite block paving hauled and laid @ \$1.45	339 30		
4,930 square feet artificial stone sidewalks furnished and laid @ 20c.	986 00		
	<hr/>	\$1,671 30	
Less amount paid in 1912,	\$860 67		
	<hr/>	\$10 63	
		\$968 56	
Credit: Edgestone		7 40	
		<hr/>	<u>\$961 16</u>

Morton street, between Harvard street to Canterbury street. Length, 211 linear feet. Area, 4,523 square yards. Filling from Washington street, Dorchester, and from Sewer Division placed. (Filling unfinished.)

Engineering	\$39 38	
Inspection	605 00	
Teaming	5 87	
Gravel filling, 4,728 cubic yards	3,114 00	
Engineering expense	1 10	
Labor employees, spreading filling	1,051 75	
		\$4,817 10
Credit: Blocks, old granite	25 00	<u>\$4,792 10</u>

Milton avenue, between Norfolk and Evans streets. Length, 1,512 linear feet. Area, 16,525 square feet. Trees removed, edgestone set, block gutters paved and artificial stone sidewalks constructed.

Engineering	\$136 07	
Inspection	199 50	
Engineering expense	4 00	
Labor, handling stock	28 83	
Flagging, 56 feet 4 inches	45 07	
Edgestone, 1,728 feet 5 inches straight, 4 small corners, 89 feet 11 inches circular	1,264 00	
Blocks, 24,270 old granite	491 27	
Amount paid to Fred S. and A. D. Gore Corporation, under contract:		
8 trees removed @ \$23	\$184 00	
1,726 linear feet straight edgestone hauled and set @ 23c.	396 98	
94 linear feet circular edgestone set @ 13c.	12 22	
781 linear feet existing edgestone reset @ 13c.	101 53	
590 square yards granite block paving hauled and laid @ 63c.	371 70	
262 square yards existing granite block paving relaid @ 43c.	112 66	
12 square yards flagging crosswalks hauled and laid @ 95c.	11 40	
16,524 square feet artificial stone sidewalks furnished and laid @ 15c.	2,478 60	
215 square feet artificial stone driveways furnished and laid @ 15c.	32 25	
		<u>3,701 34</u>
		<u>\$5,870 08</u>

Minot street, between Charlemont and Adams streets. Length, 1,027 linear feet. Area, 12,158 square yards. Edgestone reset, block gutters repaved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$83 29
Inspection	49 00
<i>Carried forward</i>	<u>\$132 29</u>

<i>Brought forward</i>		\$132 29
Advertising		4 00
Labor, handling stock		6 67
Flagging, 451 feet 8 inches		359 45
Edgestone, 81 feet 2½ inches		97 45
Engineering expense		2 00
Amount paid to D. M. Biggs Company, under contract:		
82 linear feet circular edge- stone set @ 17c.	\$13 94	
1,843 linear feet existing edge- stone reset @ 13c.	239 59	
694 square yards existing granite block paving relaid @ 40c.	277 60	
98 square yards flagging crosswalks hauled and laid @ 90c.	88 20	
4 square yards existing flagging crosswalks re- laid @ 45c.	1 80	
12,080 square feet artificial stone sidewalks furnished and laid @ 16¼c.	1,963 00	
78 square feet artificial stone driveways furnished and laid @ 16¼c.	12 68	
6 covers reset @ \$3	18 00	
Extra work — Remove driveway:		
4 hours, edgestone setter, @ 62½c.	2 50	
12 hours, helper, @ 31¼c.	3 75	
Plus 15 per cent on \$6.25, Extra work — Remove trees, roots, etc., as directed:	94	
40 hours, foreman, @ 62½c.,	25 00	
418 hours' labor, @ 25c.	104 50	
Plus 15 per cent on \$129.50	19 43	
16 hours, double team, @ 75c.	12 00	
64 hours' single team, @ 43¾c.	28 00	
4 hours, auto truck, @ \$4, 7 hours, filling furnished @ \$1.80	16 00	
	12 60	
		<u>2,839 53</u>
		\$3,441 39
Credit: 68 feet edgestone, old		23 80
		<u>\$3,417 59</u>
<i>Minot street, between Neponset avenue and Charlemont street. Length, 2,186 linear feet. Area, 26,603 square yards. Edgestone set and reset, block gutters paved and repaved, flagging crosswalks laid and artificial stone sidewalks constructed.</i>		
Engineering		\$85 92
Inspection		112 00
<i>Carried forward</i>		<u>\$197 92</u>

<i>Brought forward</i>	\$197 92
Engineering expense	2 05
Advertising	4 20
Labor, handling stock	3 60
Edgestone, 15 feet 7 inches circular, 2 small corners	25 90
Flagging, 240 feet 1 inch	192 07

Amount paid to D. M. Biggs
Company, under contract:

30 linear feet circular edge- stone set @ \$1	\$30 00
4,064 linear feet existing edge- stone reset @ 10c.	406 40
715 linear feet crushed stone and concrete founda- tion furnished and laid @ 8c.	57 20
1,423 square yards existing granite block paving relaid @ 30c.	426 90
53 square yards flagging crosswalks hauled and laid @ 90c.	47 70
14 square yards existing flagging crosswalks re- laid @ 50c.	7 00
6 square yards existing brick sidewalks relaid @ 30c.	1 80
25,123 square feet artificial stone sidewalks fur- nished and laid @ 16.9c.	4,245 79
1,480 square feet artificial stone driveways fur- nished and laid @ 16.9c.	250 12
2 covers reset @ \$3	6 00
Extra work — Regulate Bradley-Head catch- basins:	
8 basins regulated @ \$5	40 00
Extra work — Remove trees and roots where directed:	
66 hours' labor @ 25c.	16 50
Plus 15 per cent on \$16.50	2 48
	<hr/>
	5,537 89

\$5,963 63

Nightingale street, northerly side, between Wales street and Talbot avenue.
Length, 565 linear feet. Area, 2,892 square feet. Edgestone reset,
gutters repaved, flagging crosswalks relaid and artificial stone side-
walks constructed.

Engineering	\$17 99
Inspection	28 00
Engineering expense	75
Advertising	4 00
	<hr/>
<i>Carried forward</i>	\$50 74

<i>Brought forward</i>		\$50 74	
Amount paid to Warren Brothers Company, under contract:			
490 linear feet existing edge- stone reset @ 17c.	\$83 30		
173 square yards existing granite block paving re- laid @ 25c.	43 25		
10 square yards existing flagging crosswalks re- laid @ 50c.	5 00		
2,892 square feet artificial stone sidewalks furnished and laid @ 18c.	520 56		
65 square feet artificial stone driveways furnished and laid @ 18c.	11 70		
1 cover reset @ \$3	3 00		
		<u>666 81</u>	
			<u>\$717 55</u>

Park street (westerly side), between Clement and Anawan avenues.
Length, 1,704 linear feet. Area, 8,229 square yards. Edgestone set,
block gutters paved, flagging crosswalks laid and four and one-half
(4½) foot artificial stone sidewalk with loam space constructed between
Anawan and March avenues, and full width artificial stone sidewalk
constructed from March avenue to Centre street.

Engineering	\$40 90	
Inspection	91 00	
Engineering expense	1 35	
Advertising	4 10	
Flagging, 115 feet	89 70	
Edgestone, 1,576 feet 2 inches straight, 31 feet 2 inches circular, 14 small corners	1,128 07	
Labor, handling stock	24 52	
Amount paid to W. A. Murtfeldt Company, under contract:		
1,086 linear feet straight edge- stone and corners hauled and set @ 25c.	\$271 50	
22 linear feet circular edge- stone set @ 15c.	3 30	
7 linear feet existing edge- stone reset.*		
381 square yards existing granite block paving relaid @ 45c.	171 45	
6 square yards flagging crosswalks hauled and laid @ 65c.	3 90	
6 square yards existing flagging crosswalks re- laid @ 45c.	2 70	
5,111 square feet artificial stone sidewalks furnished and laid @ 18c.	919 98	
180 square feet artificial stone driveways furnished and laid @ 19c.	34 20	
<i>Carried forward</i>	<u>\$1,407 03</u>	<u>\$1,379 64</u>

* No price bid for this kind of work.

<i>Brought forward</i>	\$1,407 03	\$1,379 64	
207 square yards loam spaces, furnished, placed and seeded @ 30c.	62 10		
Extra work — Haul and set edgestone, relay gut- ters and furnish and lay artificial stone sidewalks in Park street, westerly side, from March avenue to Centre street:			
530 linear feet straight edge- stone and corners hauled and set @ 25c.	132 50		
10 linear feet circular edge- stone set @ 15c.	1 50		
19 linear feet existing edge- stone reset.*			
211 square yards existing granite block paving relaid @ 45c.	94 95		
18 square yards flagging crosswalks hauled and laid @ 65c.	11 70		
3,118 square feet artificial stone sidewalks furnished and laid @ 18c.	561 24		
192 square feet artificial stone driveways furnished and laid @ 19c.	36 48		
Extra work — Place con- crete in front of wooden bulkhead at northerly approach to bridge as directed:			
Placing concrete as di- rected	20 00		
			2,327 50
			\$3,707 14
Credit: Blocks, old granite, 5,988			119 76
			<u>\$3,587 38</u>

Pope's Hill street, between Neponset avenue and Freeport street. Length, 830 linear feet. Area, 3,182 square yards. Edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$43 39	
Inspection	269 50	
Engineering expense	2 25	
Advertising	4 30	
Labor, handling stock	4 79	
Edgestone, 381 feet 5 inches, 2 small corners,	263 74	
Flagging, 90 feet	70 20	
Blocks, 9,425, old granite	188 50	
Amount paid to Jeremiah J. McCarthy Com- pany, under contract:		
389 linear feet straight edge- stone and corners hauled and set @ 28c.	\$108 92	
<i>Carried forward</i>	\$108 92	\$846 67

* No price bid for this kind of work.

<i>Brought forward</i>	\$108 92	\$846 67
130 linear feet existing edge-stone reset @ 15c.	19 50	
395 square yards granite block paving hauled and laid @ 75c.	296 25	
125 square yards existing granite block paving relaid @ 50c.	62 50	
20 square yards flagging crosswalks hauled and laid @ \$1	20 00	
16 square yards existing flagging crosswalks relaid @ 50c.	8 00	
2,995 square feet artificial stone sidewalks furnished and laid @ 18c.	538 92	
1 cover reset @ \$3	3 00	
600 square yards crushed stone sidewalks furnished and placed @ 23c.*	138 00	
Extra work — Relay gutters where displaced in making fill:		
1 day, paver, @ \$5	5 00	
1 day, tender, @ \$2.25	2 25	
Plus 15 per cent on \$7.25,	1 09	
	<u>1,203 43</u>	<u>\$2,050 10</u>
<i>Porter street, from Amory street to Bismarek street. (Work not started.)</i>		
Advertising	\$3 90	
Blocks, 14,825, old granite	271 90	
	<u>\$275 80</u>	
Credit: Edgestone	14 35	
	<u>\$261 45</u>	
<i>Providence street, 70 feet east of Church street to Berkeley street. (Work done in connection with other work on Providence street.)</i>		
Labor, employees	\$80 28	
Amount paid to Coleman Brothers, under contract	4,103 45	
	<u>\$4,183 73</u>	
Rebuilding face of wharf at South End Yard, Albany street.		
Amount paid to Lawler Brothers, under contract:		
Rebuilding face of wharf		<u>\$950 00</u>
Reconstructing stable at Hancock Street Yard, Dorchester. Bids rejected.		
Work not done.		
Advertising		<u>\$7 80</u>
Repairing wall at Fort Hill Wharf.		
Labor, employees	\$86 25	
Cement	12 60	
Sand	6 48	
	<u>\$105 33</u>	

* A deduction of 7 cents per yard made on account of condition of walks.

Rosedale street, at numbers 7, 9, 10 and 12. Length, 55 linear feet. Area, 584 square feet. Edgestone set, block gutters paved and artificial stone sidewalks constructed.

Engineering		\$2 28	
Engineering expense		15	
Amount paid to William J. Rafferty Company, under contract:			
98 linear feet existing edgestone reset @ 18c.	\$17 64		
36 square yards existing granite block paving relaid @ 50c.,	18 00		
585 square feet artificial stone sidewalks furnished and laid @ 17c.	99 45		
54 square feet artificial stone driveways furnished and laid @ 20c.	10 80		
		<u>145 89</u>	
			<u>\$148 32</u>

Rose street, between Harrison avenue and Albany street. Length, 483 linear feet. Area, 1,089 square yards. Roadway resurfaced with Tarmac Compound.

Engineering		\$10 50	
Inspection		7 83	
Amount paid to Independent Coal Tar Com- pany, under contract:			
1,087 square yards Tarmac Compound furnished and laid @ 60c.		652 20	
		<u>652 20</u>	
			<u>\$670 53</u>

Ruggles street, between Washington street and Shawmut avenue. Length, 459 linear feet. Area, 1,300 square yards. Roadway paved with wood block on a concrete base, edgestone set, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering		\$39 38	
Inspection		49 00	
Engineering expense		2 80	
Advertising		1 44	
Edgestone, 4 feet 7 inches straight, 18 feet 11½ inches circular		25 96	
Amount paid the Boston Paving Company, under contract:			
5 linear feet straight edge- stone hauled and set @ 25c.	\$1 25		
20 linear feet circular edge- stone set @ 19c.	3 80		
625 linear feet existing edge- stone reset @ 15c.	93 75		
55 square yards existing gran- ite block paving relaid, gravel joints, @ 50c.	27 50		
21 square yards existing gran- ite block paving relaid, pitch joints, including concrete base, @ \$2	42 00		
		<u>\$168 30</u>	
<i>Carried forward</i>			<u>\$118 58</u>

<i>Brought forward</i>	\$168 30	\$118 58	
24 square yards existing flag- ging crosswalks relaid, pitch joints, including concrete base, @ \$2	48 00		
1,276 square yards wood block pavement furnished and laid @ \$3.69	4,708 44		
10 square yards existing brick sidewalks relaid @ 30c.,	3 00		
4,648 square feet artificial stone sidewalks furnished and laid @ 18c.	836 64		
8 covers reset @ \$3	24 00		
Extra work — Repave and regulate in Shawmut avenue, at approach to Ruggles street:			
275 linear feet existing edge- stone reset @ 15c.	41 25		
318 square yards existing gran- ite block paving relaid, gravel joints, @ 50c.	159 00		
166 square yards existing brick sidewalks relaid @ 30c.,	49 80		
	<hr/>	6,038 43	
		<hr/>	\$6,157 01
Credit: Bricks, old	\$137 20		
Blocks, old granite	367 00		
	<hr/>	504 20	
		<hr/>	<u>\$5,652 81</u>

Sleeper street, from Congress street about 650 feet northerly. Length, 626 linear feet. Area, 2,436 square yards. Roadway paved with new granite block on a concrete base, edgestone reset, flagging crosswalks laid and brick sidewalks laid and relaid.

Engineering		\$37 94
Inspection		94 50
Engineering expense		85
Labor, handling stock		56
Edgestone, 37 feet 6 inches		18 03
Bricks		123 50
Advertising		4 00
Amount paid to John E. Quinn, under con- tract:		
38 linear feet straight edge- stone hauled and set @ 40c.	\$15 20	
1,166 linear feet existing edge- stone reset @ 15c.	174 90	
91 square yards existing gran- ite block paving relaid, gravel joints, @ 50c.	45 50	
2,283 square yards granite block paving furnished and laid, including concrete base, pitch joints, @ \$3.81	8,698 23	
	<hr/>	
<i>Carried forward</i>	\$8,933 83	\$279 38

<i>Brought forward</i>	\$8,933 83	\$279 38	
25 square yards existing granite block paving relaid, pitch joints, @ 75c.	18 75		
14 square yards flagging crosswalks furnished and laid, pitch joints, including concrete base, @ \$5	70 00		
23 square yards existing flagging crosswalks relaid, pitch joints, @ 50c.	11 50		
160 square yards brick sidewalks laid @ 30c.	48 00		
262 square yards existing brick sidewalks relaid @ 30c.,	78 60		
7 covers reset @ \$3	21 00		
Extra work — Excavate and remove earth over sewer trench:			
220 loads earth removed @ \$1	220 00		
Extra work — Furnish and lay concrete base where directed in Congress street:			
25 square yards concrete base furnished and laid @ 75c.	18 75		
	<hr/>		
	\$9,420 43		
Less 2,740 old granite blocks @ 20c.	68 50		
	<hr/>		
		9,351 93	
		<hr/>	
		\$9,631 31	
Credit: Blocks, old granite, 48,410		968 20	
		<hr/>	
		<u>\$8,663 11</u>	

South street, between Green and Keyes streets. Edgestone reset, existing flagging crosswalks relaid, artificial stone sidewalks constructed and roadway paved with bitulithic on a concrete base.

Engineering		\$104 84
Inspection		187 25
Engineering expense		2 75
Labor, handling stock		88
Advertising		2 10
Edgestone, 116 feet 6 inches		67 55
Amount paid to Warren Brothers Company, under contract:		
76 linear feet straight edgestone and corners hauled and set @ 24c,	\$18 24	
35 linear feet circular edgestone set @ 22c.	7 70	
2,141 linear feet existing edgestone reset @ 19c.	406 79	
67 square yards existing granite block paving relaid, pitch joints, including concrete base, @ \$1.85	123 95	
	<hr/>	
<i>Carried forward</i>	\$556 68	\$365 37

<i>Brought forward</i>	\$556 68	\$365 37
94 square yards existing flagging crosswalks relaid, pitch joints, including concrete base, @ \$1.75	164 50	
4,432 square yards concrete base and bitulithic wearing surface furnished and laid @ \$2.63	11,656 16	
16,127 square feet artificial stone sidewalks furnished and laid @ 20c.,	3,225 40	
423 square feet artificial stone driveways furnished and laid @ 20c.,	84 60	
21 covers reset @ \$3	63 00	
Extra work — Omit granite block paving for brows outside of and between tracks and substitute wood block and bitulithic as directed:		
273 square yards wood block pavement furnished and laid @ \$4.18	1,141 14	
Extra work — Repoint wall on South street:		
1 day, mason, @ \$5	5 00	
2 days, tender, @ \$2	4 00	
Plus 15 per cent on \$9	1 35	
1 bag cement @ 40c.	40	
2 bags sand @ 20c.	40	
	<hr/>	16,902 63
		<hr/>
		\$17,268 00
Credit: Blocks, 1 large and 2 small corners	\$6 60	
16 feet flagging	6 40	
31,120 old granite blocks,	622 41	
	<hr/>	635 41
		<hr/>
		<u>\$16,632 59</u>
 <i>South street, between Robert and Centre streets. Length, 2,560 linear feet. Area, 24,656 square feet. Edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed, loam spaces placed and seeded on northerly side.</i>		
Engineering	\$91 38	
Inspection	126 00	
Engineering expense	1 90	
Blocks, 7,300	112 75	
Amount paid to Hugh J. McGuire, under contract:		
Removing trees, bushes, stumps, etc.	\$5 75	
17 cubic yards subgrading (rock excavation) @ \$2.75	46 75	
	<hr/>	
<i>Carried forward</i>	\$52 50	\$332 03

<i>Brought forward</i>	\$52 50	\$332 03
3,976 linear feet straight edge- stone furnished and set @ 94c.	3,737 44	
343 linear feet circular edge- stone set @ 14c.	48 02	
341 linear feet existing edge- stone reset @ 12c.	40 92	
380 linear feet crushed stone and concrete founda- tion furnished and placed @ 15c.	57 00	
1,536 square yards granite block paving hauled and laid @ 94c.	1,443 84	
134 square yards existing granite block paving relaid @ 38c.	50 92	
73 square yards flagging crosswalks furnished and laid @ \$4.75	346 75	
28 square yards existing flagging crosswalks re- laid @ 65c.	18 20	
199 square yards crushed stone sidewalks fur- nished and laid @ 50c.	99 50	
23,638 square feet artificial stone sidewalks fur- nished and laid @ 14 $\frac{3}{4}$ c.	3,486 61	
1,018 square feet artificial stone driveways fur- nished and laid @ 15c.	152 70	
1,037 square yards loam spaces furnished, placed and seeded @ 50c.	518 50	
	<hr/>	
	\$10,052 90	
Extra work — Excavate buried block at Dimock Street Yard:		
14 days' labor @ \$2.25	31 50	
Plus 15 per cent on \$31.50	4 73	
9 $\frac{1}{2}$ days, double team, @ \$6, Extra work — Furnish stonecutter:	57 00	
18 $\frac{1}{2}$ hours, stonecutter, @ 70c.	12 95	
Plus 15 per cent on \$12.95	1 94	
	<hr/>	
	\$10,161 02	
Less amount paid in 1912,	7,589 64	
	<hr/>	
		2,571 38
		<hr/>
		<u>\$2,903 41</u>

Spring street, between Allen and Poplar streets. Length, 203 linear feet. Area, 435 square yards. Roadway paved with bitulithic, edgestone reset and brick sidewalks relaid.

Engineering	\$30 50
Inspection	42 00
	<hr/>
<i>Carried forward</i>	\$72 50

<i>Brought forward</i>		\$72 50	
Advertising		4 00	
Labor, handling stock		1 31	
Edgestone, 3 feet 9 inches and 17 feet 2 inches circular		23 22	
Bricks, 3,500		24 50	
Teaming		9 62	
Amount paid to Warren Brothers Company, under contract:			
4 linear feet straight edgestone hailed and set @ 35c.	\$1 40		
18 linear feet circular edgestone set @ 35c.	6 30		
350 linear feet existing edgestone reset @ 30c.	105 00		
416 square yards concrete base and bitulithic wearing sur- face furnished and laid @ \$2.68	1,114 88		
248 square yards existing brick sidewalks relaid @ 25c.	62 00		
2 covers reset @ \$3	6 00		
	<hr/>	\$1,295 58	
Extra work — Resurface approach with bitulithic where directed:			
19 square yards bitulithic re- surfacing @ \$1.37	26 03		
	<hr/>	1,321 61	
		\$1,456 76	
Credit: Blocks, 14,750, old granite		295 00	
		<hr/>	<u>\$1,161 76</u>
 <i>Summer street, northerly side, between B street and viaduct. Length, 368 linear feet. Concrete retaining wall, bulkhead and fence built.</i>			
Engineering		\$63 67	
Inspection		187 25	
Engineering expense		4 05	
Advertising		4 10	
Labor, employees, on filling		354 20	
Teaming		10 36	
Amount paid to McCarthy & Walsh, under contract:			
121 spruce piles furnished and placed @ \$14	\$1,694 00		
356 linear feet concrete wall furnished and placed @ \$14.50	5,162 00		
368 linear feet yellow pine fence furnished and built @ 90c.	331 20		
26 linear feet yellow pine stringers furnished and placed @ \$1	26 00		
Extra work — Excavate extra depth as directed:			
65 cubic yards extra excavation @ \$1.25	81 25		
	<hr/>	7,294 45	
		<hr/>	<u>\$7,918 08</u>

St. Alphonsus street, easterly side, between Tremont and Smith streets. Length, 464 linear feet. Area, 3,059 square feet. Artificial stone sidewalks were constructed.

Engineering	\$10 28	
Inspection	8 75	
Engineering expense	15	
Advertising	2 10	
Amount paid to John McCourt & Co., under contract:		
3,092 square feet artificial stone sidewalks furnished and laid @ 16.9c.	\$522 55	
Extra work — Reset edgestone at catch-basin and relay sidewalk as directed:		
2 hours, edgestone setter, @ 62½c.	1 25	
2 hours, finisher, @ 60c.	1 20	
10 hours' labor @ 25c.	2 50	
Plus 15 per cent on \$4.95	74	
	<hr/>	528 24
		<hr/>
		\$549 52
Credit: Bricks, 25,700, old	179 90	
	<hr/>	<u>\$369 62</u>

Tremont street, easterly side, between Winter street and Hamilton place. Length, 312 linear feet. Area, 3,437 square feet. Artificial stone sidewalks constructed.

Engineering	\$3 91	
Inspection	20 13	
Amount paid to Warren Brothers Company, under contract:		
1,827 square feet artificial stone sidewalks furnished and laid @ 29c.	\$529 83	
Extra work — Furnish and lay artificial stone sidewalks between Winter and Boylston streets:		
1,610 square feet artificial stone sidewalks furnished and laid @ 29c.	466 90	
	<hr/>	996 73
		<hr/>
		<u>\$1,020 77</u>

Tremont street, northerly side, from St. Alphonsus street about 350 feet easterly. Length, 357 linear feet. Area, 3,471 square feet. Artificial stone sidewalks were constructed.

Engineering	\$14 92	
Inspection	8 75	
Advertising	2 10	
Amount paid to John McCourt & Co., under contract:		
3,471 square feet artificial stone sidewalks furnished and laid @ 16.9c.	586 60	
	<hr/>	<u>\$612 37</u>

Vernon street, between Washington street and Shawmut avenue. Length, 295 linear feet. Area, 845 square yards. Roadway paved with wood

block on a concrete base, edgestone set, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering		\$16 92	
Inspection		42 00	
Engineering expense		65	
Advertising		1 43	
Edgestone, 9 feet 3 inches circular		11 10	
Amount paid the Boston Paving Company, under contract:			
9 linear feet circular edge-stone set @ 19c.	\$1 71		
583 linear feet existing edge-stone reset @ 15c.	87 45		
57 square yards existing granite block paving relaid, gravel joints, @ 50c.	28 50		
7 square yards existing granite block paving relaid, pitch joints, including concrete base, @ \$2,	14 00		
26 square yards existing flagging crosswalks relaid, pitch joints, including concrete base, @ \$2,	52 00		
819 square yards wood block pavement furnished and laid @ \$3.69	3,022 11		
14 square yards existing brick sidewalks relaid @ 30c.,	4 20		
3,100 square feet artificial stone sidewalks furnished and laid @ 18c.	558 00		
4 covers reset @ \$3	12 00		
		<hr/>	3,779 97
			<hr/>
			\$3,852 07
Credit: Bricks, 8,900, old	\$62 30		
Blocks, 6,250, old granite,	125 00		
		<hr/>	187 30
			<hr/>
			<u>\$3,664 77</u>

Walnut avenue (easterly side), from Iffley road to beyond Montebello road. Length, 287 linear feet. Area, 120 square yards. This street was widened and rough graded.

Engineering		\$59 98	
Engineering expense		90	
Advertising		4 10	
Amount paid to John McCourt & Co., under contract:			
43 cubic yards earth excavation @ 75c.	\$32 25		
166 cubic yards rock excavation @ \$4	664 00		
		<hr/>	696 25
			<hr/>
			<u>\$761 23</u>

Walnut street, between Franklin and Ericsson streets. Length, 1,576 linear feet. Area, 4,028 square yards. Edgestone set, block gutters paved and artificial stone sidewalks constructed.

Engineering	\$75 38
Inspection	157 50
Engineering expense	5 35
Advertising	4 20
Labor, handling stock	23 27
Edgestone, 13.59 feet 2 inches, 8 small corners and 32 feet 11 inches circular	962 55
Flagging, 206 feet	160 68
Blocks, 38,970, old granite	779 57
Amount paid to D. M. Biggs Company, under contract:	

16 cubic yards water-box excavation @ \$1	\$16 00
1,372 linear feet straight edge- stone and corners hailed and set @ 29c.	397 88
33 linear feet circular edge- stone set @ 18c.	5 94
1,710 linear feet existing edge- stone reset @ 14c.	239 40
1,095 square yards granite block paving hauled and laid @ 79c.	865 05
35 square yards existing granite block paving relaid @ 40c.	14 00
45 square yards flagging crosswalks hauled and laid @ 90c.	40 50
33 square yards existing flagging crosswalks re- laid @ 50c.	16 50
16,788 square feet artificial stone sidewalks furnished and laid @ 17c.	2,853 96
216 square feet artificial stone driveways furnished and laid @ 19c.	41 04
1 cover reset @ \$3	3 00
Extra Work— Remove tree roots from gut- ters:	
42 hours' labor @ 25c.	10 50
Plus 15 per cent on \$10.50	1 58

4,505 35

\$6,673 85

Warren avenue, between Berkeley street and Columbus square. Length, 2,044 linear feet. Area, 12,382 square yards. Roadway paved with wood block on a concrete base, edgestone reset, flagging crosswalks relaid and brick sidewalks relaid.

Engineering	\$157 35
Inspection	469 00
Engineering expense	6 90
Advertising	4 20
Labor, handling stock	7 50
Teaming	33 25
Bricks, 29,000	281 00

Carried forward \$959 20

<i>Brought forward</i>		\$959 20	
Edgestone, 125 feet 5½ inches circular		150 55	
Flagging, 4 feet 6 inches		1 80	
Amount paid to Boston Paving Company, under contract:			
165 linear feet circular edge- stone set @ 15c.	\$24 75		
3,952 linear feet existing edge- stone reset @ 13c.	513 76		
274 square yards existing granite block paving relaid, gravel joints, @ 43c.	117 82		
77 square yards existing granite block paving relaid, pitch joints, in- cluding concrete base, @ \$1.85	142 45		
31 square yards existing flagging crosswalks, re- laid, gravel joints, @ 43c.	13 33		
108 square yards existing flagging crosswalks re- laid, pitch joints, in- cluding concrete base, @ \$1.85	199 80		
12,382 square yards wood block pavement furnished and laid @ \$3.69	45,689 58		
4,243 square yards existing brick sidewalks relaid @ 30c.	1,272 90		
1 cover reset @ \$3	3 00		
	<hr/>	47,977 39	
		<hr/>	\$49,088 94
Credit: Flagging, 709 feet	\$255 42		
Blocks, 46,482, old granite	929 64		
Edgestone, 46 feet 4 inches	16 22		
	<hr/>	1,201 28	
		<hr/>	<u>\$47,887 66</u>

Washington street, from Cambridge street across Market street. Length, 1,146 linear feet. Area, 7,795 square yards. Edgestone set, crosswalks laid, artificial stone sidewalks constructed and roadway paved with bitulithic.

Engineering	\$136 29
Inspection	248 50
Engineering expense	5 15
Advertising	4 10
Labor, handling stock	8 84
Labor, stonecutter	39 00
Edgestone, 64 feet 6 inches, 2 small corners and 121 feet circular	188 88
Flagging, 539 feet	431 20
	<hr/>
<i>Carried forward</i>	\$1,061 96

<i>Brought forward</i>		\$1,061 96
Amount paid to Warren Brothers Company, under contract:		
65 linear feet straight edge- stone and corners hauled and set @ 25c.,	\$16 25	
117 linear feet circular edge- stone set @ 22c.	25 74	
1,290 linear feet existing edge- stone reset @ 20c.	258 00	
12 square yards existing granite block paving relaid, gravel joints, @ 42c.	5 04	
180 square yards existing granite block paving relaid, pitch joints, in- cluding concrete base, @ \$1.85	333 00	
111 square yards flagging crosswalks hauled and laid, pitch joints, in- cluding concrete base, @ \$2.20	244 20	
97 square yards existing flagging crosswalks re- laid, pitch joints, in- cluding concrete base, @ \$1.80	174 60	
6,100 square yards concrete base and bitulithic wearing surface fur- nished and laid @ \$2.62	15,982 00	
10 square yards existing brick sidewalks relaid @ 25c.	2 50	
11,526 square feet artificial stone sidewalks fur- nished and laid @ 18c.,	2,074 68	
70 square feet artificial stone driveways fur- nished and laid @ 18c.,	12 60	
30 covers reset @ \$3	90 00	
Extra work — Omit granite block paving for brows outside of and between tracks and substitute wood block and bitulithic as directed:		
1,039 square yards bitulithic pavement furnished and laid @ \$2.62	2,722 18	
256 square yards wood block pavement furnished and laid @ \$4.20	1,075 20	
<i>Carried forward</i>	\$23,015 99	\$1,061 96

<i>Brought forward</i>	\$23,015 99	\$1,061 96
Extra work — Furnish and lay extra concrete on account of change in brows:		
36 square yards extra concrete furnished and laid @ 75c.	27 00	
	<u>27 00</u>	23,042 99
		<u>\$24,104 95</u>
Credit: Blocks, 24,441, old granite	\$488 82	
Flagging, 455 feet 5 inches	163 95	
Edgestone, 55 feet, 1 large and 1 small corner	27 05	
	<u>27 05</u>	679 82
		<u>\$23,425 13</u>

Washington street, West Roxbury, at and near Hyde Park avenue and Tower street. Length, 120 linear feet. Area, 945 square yards. Edgestone set, special granite block paving laid on a concrete base with pitch and pebble joints and brick sidewalks relaid.

Engineering	\$25 39
Inspection	73 50
Engineering expense	1 90
Advertising	3 80
Labor, handling stock	8 50
Labor, stonecutter	1 50
Teaming	15 00
Edgestone, 38 feet circular	22 83
Flagging, 16 feet	6 40

Amount paid to James Doherty, under contract:

57 linear feet circular edgestone set @ 17c.	\$9 69
31 linear feet existing edgestone reset @ 14c.	4 34
18 square yards existing granite block paving relaid, gravel joints, @ 50c.	9 00
848 square yards granite block paving furnished and laid, pitch joints, including concrete base, @ \$4.15	3,519 20
66 square yards existing granite block paving relaid, pitch joints, including concrete base, @ \$1.60	105 60
7 square yards existing granite block paving relaid, pitch joints on existing concrete base.*	

<i>Carried forward</i>	\$3,647 83	\$158 82
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* No price bid on this work.

<i>Brought forward</i>	\$3,647 83	\$158 82	
31 square yards existing flagging crosswalks re- laid, pitch joints, in- cluding concrete base, @ \$1.60	49 60		
93 square yards existing brick sidewalks relaid @ 35c.	32 55		
2 covers reset @ \$3	6 00		
Extra work — Cut sewer sheathing:			
1 day's labor @ \$2	2 00		
Plus 15 per cent on \$2	30		
Extra work — Haul flag- ging as directed:			
1 day, double team, @ \$5.50	5 50		
	<hr/>	3,743 78	
		<hr/>	\$3,902 60
Credit: Edgestone, 42 feet straight Blocks, 2,770, old granite	\$14 70		
	55 40		
	<hr/>	70 10	
		<hr/>	<u>\$3,832 50</u>

Washington street (Dorchester), between Blue Hill and Talbot avenues:
Length, 7,645 linear feet. Area, 36,000 square yards. (Work unfin-
ished.) Edgestone reset, roadway being paved with wood block on a
concrete base and artificial stone sidewalks being constructed.

Engineering		\$722 93
Inspection		926 62
Engineering expense		15 70
Teaming		87 62
Lumber		2 49
Labor, handling stock		3 10
Labor, stonecutter		15 00
Labor, making templets		5 25
Labor, removing trees		22 00
Edgestone, 40 feet, 2 small and 6 large corners, 12 feet 6 inches circular		86 50
Steam roller		22 50
Amount paid William J. Barry, under con- tract:		
27,861 square yards preparing site @ 20c.	\$5,572 20	
1,065 linear feet straight edge- stone hauled and set @ 21c.	223 65	
281 linear feet circular edge- stone set @ 16c.	44 96	
6,986 linear feet existing edge- stone reset @ 12c.	838 32	
27,861 square yards concrete base furnished and laid @ 65c.	18,109 65	
<i>Carried forward</i>	\$24,788 78	\$1,909 71

<i>Brought forward</i>	\$24,788 78	\$1,909 71
769 square yards existing granite block paving relaid, gravel joints, @ 50c.	384 50	
6 square yards granite block paving hauled and laid, pitch joints, @ \$1.50	9 00	
408 square yards existing granite block paving relaid, pitch joints, @ \$1.20	489 60	
46 square yards existing flagging crosswalks re- laid, gravel joints, @ 75c.	34 50	
157 square yards existing flagging crosswalks re- laid, pitch joints, @ \$1.20	188 40	
26,110 square yards wood block pavement furnished and laid @ \$2.65	69,191 50	
1,635 square yards nonslipping wood block pavement furnished and laid @ \$3.50	5,722 50	
141 square yards existing brick sidewalks relaid @ 25c.	35 25	
95,575 square feet artificial stone sidewalks furnished and laid @ 14½c.	13,858 38	
3,600 square feet artificial stone driveways furnished and laid @ 18c.	648 18	
Extra work — Haul ex- cavated material to Morton street, between Harvard and Canter- bury streets:		
19,936 tons excavated material hauled more than one and one-half miles, and less than two miles, one mile overhaul, per half mile per ton @ 11c.	4,385 92	
Extra work — Furnish man to spread material on Morton street hauled from Washing- ton street:		
125½ days' labor @ \$2	251 00	
<i>Carried forward</i>	\$119,987 51	\$1,909 71

<i>Brought forward</i>	\$119,987 51	\$1,909 71
Plus 15 per cent on \$251,	37 65	
	<hr/>	
	\$120,025 16	
Less 1 per cent retained,	1,200 25	
	<hr/>	
	\$118,824 91	
Less amount paid in 1912,	63,749 17	
	<hr/>	55,075 74
		<hr/>
		\$56,985 45
Credits: Edgestone, 128 feet 8 inches circular, 25 feet straight, 6 small and 1 large corner	\$99 65	
Blocks, 73,336, old granite	1,466 73	
Flagging, 1,287 feet 9 inches, old	466 98	
	<hr/>	2,033 36
		<hr/>
		<u>\$54,952 09</u>

Washington street, between State and Boylston streets. Length, 351 linear feet. Area, 2,720 square feet. Artificial stone sidewalks constructed.

Engineering	\$3 21
Inspection	17 50
Advertising	3 80
Amount paid to Warren Brothers Company, under contract:	
2,720 square feet artificial stone sidewalks furnished and laid @ 29c.	788 80
	<hr/>
	<u>\$813 31</u>

Welles avenue, northerly side, from Talbot avenue to opposite Harley street. Length, 600 linear feet. Area, 3,862 square feet. Artificial stone sidewalks constructed.

Engineering	\$17 82
Inspection	12 25
Engineering expense	50
Advertising	4 20
Labor, stonecutter	1 50
Teaming	3 00
Blocks	6 00
Amount paid to Robert Eager, Jr., under contract:	
56 linear feet existing edge- stone reset @ 15c.	\$8 40
21 square yards existing granite block paving re- laid @ 30c.	6 30
5 square yards existing flagging crosswalks re- laid @ 50c.	2 50
	<hr/>
<i>Carried forward</i>	\$17 20
	<hr/>
	\$45 27

<i>Brought forward</i>	\$17 20	\$45 27	
3,862 square feet artificial stone sidewalks furnished and laid @ 16c.	617 92		
	<hr/>	635 12	
			<u>\$680 39</u>

West First street, between A street and railroad crossing. Length, 420 linear feet. Area, 1,752 square yards. Roadway paved with new granite blocks on a concrete base, with pitch and pebble joints, edge-stone reset, flagging crosswalks relaid and brick sidewalks relaid.

Engineering	\$58 61
Inspection	73 50
Advertising	4 00
Teaming	48
Edgestone, 8 feet 4 inches and 31 feet 6 inches circular	43 63
Bricks, 16,600	199 20
Blocks, 11,055, old granite	221 10

Amount paid to John E. Quinn, under contract:

8 linear feet straight edge-stone hauled and set @ 40c.	\$3 30
32 linear feet circular edge-stone set @ 20c.	6 40
792 linear feet existing edge-stone reset @ 15c.	118 80
236 square yards existing granite block paving relaid, gravel joints, @ 50c.	118 00
1,463 square yards granite block paving furnished and laid, pitch joints, including concrete base. @ \$3.85	5,632 55
11 square yards flagging crosswalks furnished and laid, including concrete base, @ \$5	55 00
42 square yards existing flagging crosswalks relaid, pitch joints, including concrete base, @ \$1.90	79 80
517 square yards existing brick sidewalks relaid @ 30c.	155 10
12 covers reset @ \$3	36 00
	<hr/>
	\$6,204 85

Less 1,458 square yards old granite paving blocks sold to contractor @ 50c.

	729 00
	<hr/>

5,475 85

\$6,076 37

Westville street, between Geneva avenue and Draper street. Length, 1,408 linear feet. Area, 4,068 square feet. Reset edgestones, repave gutters, relay flagging crosswalks and construct artificial stone sidewalks.

Engineering	\$48 49
Inspection	105 00
Engineering expense	2 65
Advertising	4 10
Edgestone, 130 feet 4 inches and 1 small corner	79 62
Flagging, 56 feet	43 68
Blocks, 1,100, old granite	22 00
Labor, handling stock	2 29

Amount paid to William J. Rafferty Company, under contract:

130 linear feet straight edgestone hauled and set @ 25c.	\$32 50
1,431 linear feet existing edgestone reset @ 12c.	171 72
47 square yards granite block paving hauled and laid @ 80c.	37 60
690 square yards existing granite block paving relaid @ 38c.	262 20
13 square yards flagging crosswalks hauled and laid @ 75c.	9 75
9,353 square feet artificial stone sidewalks furnished and laid @ 16½c.	1,519 86
209 square feet artificial stone driveways furnished and laid @ 16½c.	33 96
4 covers reset @ \$3	12 00
Extra work — Lay under drains to catch-basins:	
3 hours, mason, @ 62½c.	1 88
Plus 15 per cent on \$1.88	28
12 linear feet drain pipe @ 15c.	1 80
Extra work — Furnish and lay artificial stone sidewalks between Draper and Corwin streets:	
4,251 square feet artificial stone sidewalks furnished and laid @ 16½c.	690 79
42 square feet artificial stone driveways furnished and laid @ 16½c.	6 83
Extra work — Cement joints in existing edgestone, not reset, between Draper and Corwin streets:	
1 day's labor @ \$2	2 00
Plus 15 per cent on \$2	30
2 bags cement @ 50c.	1 00

2,784 47

\$3,092 30

Winthrop street, between Blue Hill and Brook avenues. Length, 332 linear feet. Area, 7,268 square yards. Edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$23	47
Inspection	54	25
Engineering expense		55
Labor, handling stock		75
Edgestones, 50 feet 1 inch straight, 18 feet 9 inches circular		57 56
Blocks, 8,225, old granite		98 70
Amount paid to James Doherty, under contract:		
48 linear feet straight edgestone hauled and set @ 23c.	\$11	04
19 linear feet circular edgestone set @ 15c.	2	85
1,057 linear feet existing edgestone reset @ 11c.	116	27
256 square yards granite block paving hauled and laid @ 55c.	140	80
247 square yards existing granite block paving relaid @ 35c.	86	45
25 square yards existing flagging crosswalks relaid @ 40c.	10	00
89 square yards existing brick sidewalks relaid @ 30c.	26	70
7,268 square feet artificial stone sidewalks furnished and laid @ 15c.,	1,090	20
		<hr/>
		1,484 31
		<hr/>
	\$1,719	59
Credit: Bricks, old		32 62
		<hr/>
		<u>\$1,686 97</u>

Wilmington street, between Norfolk and Torrey streets. Length, 652 linear feet. Area, 5,831 square yards of artificial stone sidewalk. Set edgestones, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$29	33
Inspection	42	00
Engineering expense		1 30
Advertising		4 20
Labor, handling stock		14 01
Edgestone, 880 feet 9 inches straight, 4 small corners, 110 feet 2 inches circular		603 27
Flagging, 40 feet 1 inch		31 27
Blocks, 10,833, old granite		216 66
Teaming		1 50
Amount paid to W. A. Murtfeldt Company, under contract:		
894 linear feet straight edgestone and corners hauled and set @ 24c.,	\$214	56
		<hr/>
<i>Carried forward</i>	\$214	56
		<hr/>
	\$943	54

<i>Brought forward</i>	\$214 56	\$943 54
10 linear feet circular edge- stone set @ 26c.	2 60	
107 linear feet existing edge- stone reset @ 10c.	10 70	
292 square yards granite block paving hauled and laid @ 65c.	189 80	
129 square yards existing granite block paving relaid @ 50c.	64 50	
8 square yards flagging crosswalks hauled and laid @ \$1	8 00	
21 square yards existing flagging crosswalks re- laid @ 50c.	10 50	
5,831 square feet artificial stone sidewalks fur- nished and laid @ 18c.,	1,049 58	
129 square feet artificial stone driveways fur- nished and laid @ 18½c.	23 87	
	<hr/>	<hr/>
		1,574 11
		<hr/>
		<u>\$2,517 65</u>

Woolson street, between Blue Hill avenue and Norfolk street. Length, 1,219 linear feet. Area, 3,522 square yards. Edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$145 60
Inspection	295 75
Engineering expense	2 80
Advertising	6 20
Labor, handling stock	21 80
Edgestone, 1,789 feet 6 inches straight, 2 small corners, 75 feet circular	1,330 28
Blocks, 21,365, old granite	312 38
Flagging, 306 feet	110 16
Steam roller	26 00

Amount paid to Warren Brothers Company,
under contract:

Removing trees, bushes, stumps, etc.	\$1 00
1,408 cubic yards earth excava- tion @ 60c.	\$44 80
118 cubic yards rock excava- tion @ \$3.25	383 50
1,810 linear feet straight edge- stone hauled and set @ 18c.	325 80
76 linear feet circular edge- stone set @ 10c.	7 60
36 linear feet existing edge- stone reset @ 10c.	3 60
675 square yards granite block paving hauled and laid @ 70c.	472 50
	<hr/>
<i>Carried forward</i>	\$2,038 80
	<hr/>
	\$2,250 97

<i>Brought forward</i>	\$2,038 80	\$2,250 97
108 square yards existing granite block paving relaid @ 50c.	54 00	
64 square yards flagging crosswalks hauled and laid @ 80c.	51 20	
11,598 square feet artificial stone sidewalks furnished and laid @ 15c.	1,739 70	
3 covers reset @ \$3	9 00	
	<hr/>	3,892 70
Amount paid to Jeremiah J. McCarthy Company, under contract:		
4 square yards existing granite block paving relaid @ 50c.	\$2 00	
2,700 square yards tar macadam surface furnished and placed @ 79c.	2,133 00	
1 cover reset @ \$3	3 00	
	<hr/>	\$2,138 00
Less 2 days' use of city steam roller @ \$15	30 00	
	<hr/>	2,108 00
		<hr/>
		<u>\$8,251 67</u>

SPECIAL APPROPRIATIONS.

<i>Harvard avenue</i> , Commonwealth avenue to Cambridge street. Set edgestone at corner of Brighton avenue. Contractors work not started.		
Engineering		\$373 41
Engineering expense		1 10
Advertising		4 00
Labor, setting edgestone		95 40
Labor, handling stock		2 05
Edgestone, 195 feet 1 inch and 2 small corners,		143 06
Teaming		26 66
		<hr/>
		<u>\$645 68</u>

Norfolk street, from Washington street to the railroad. Excavated, edgestone set, roadway in part paved with bitulithic and sidewalks graded. (Work unfinished.)

Advertising		\$4 10
Engineering		1,059 29
Inspection		648 88
Engineering expense		15 80
Labor, making templets		22 00
Labor, stonemason		22 50
Labor, handling stock		91 59
Labor, erecting signs		5 00
Labor, building fence		8 00
Labor, moving shanty		10 50
Teaming		43 78
Gravel, 5 double loads		7 50
Lumber		8 67
Edgestone, 5,017 feet 4 inches straight, 384		
		<hr/>
<i>Carried forward</i>		\$1,947 61

<i>Brought forward</i>		\$1,947 61	
feet circular and 12 small corners		3,850 04	
Flagging, 401 feet 4 inches		313 04	
			\$6,110 69
Credit: Blocks, 57,067 old granite and 110 crossing	\$1,155 09		
Edgestone, 3 old large corners	9 00		
			1,164 09
			<u>\$4,946 60</u>

Old Colony avenue. Construction. Filled and graded from Hyde street toward Mt. Vernon street.

Engineering		\$118 61	
Engineering expense		2 00	
Labor, spreading filling		645 01	
Filling, 2,875 double loads		718 75	
Lumber		1 28	
			<u>\$1,485 65</u>

Pleasant street, between Eliot and Washington streets. This street was widened and paved with wood block on a concrete base, edgestone reset and artificial stone sidewalks constructed. (Work not finished.)

Engineering		\$1,728 92	
Inspection		580 37	
Engineering expense		15 10	
Advertising		26 00	
Labor, handling stock		3 83	
Labor, cutting wall at bridge		22 00	
Engineering, bridge rebuilding		91 16	
Teaming		5 88	
Edgestone, 555 feet 9½ inches straight and 312 feet 3 inches circular		743 27	
Bricks, 2,500		32 50	
Stationery		27 50	
Templets		11 15	
Amount paid to Coleman Brothers, under contract:			
480 linear feet straight edgestone hauled and set @ 20c.	\$96 00		
294 linear feet circular edgestone set @ 20c.	58 80		
1,650 linear feet existing edgestone reset @ 13c.	214 50		
75 square yards existing granite block paving relaid, gravel joints, @ 50c.	37 50		
5,400 square yards wood block pavement furnished and laid, including concrete base, @ \$3.70	19,980 00		
100 square yards wood block pavement furnished and laid on existing concrete base @ \$3	300 00		
11,800 square feet artificial stone sidewalks furnished and laid @ 16c.,	1,888 00		
			<u>\$22,574 80</u>
<i>Carried forward</i>			<u>\$3,287 68</u>

<i>Brought forward</i>	\$22,574 80	\$3,287 68
Less 15 per cent retained,	3,386 22	
	<hr/>	19,188 58
Amount paid to W. A. & H. A. Root, Inc.:		
Contract price, widening bridge	\$4,085 00	
638 pounds supplementary re- inforced rods @ 3c.	19 14	
60.4 cubic yards supplementary concrete @ \$7	422 80	
30 square yards supplemen- tary waterproofing @ 65c.	19 50	
72.4 linear feet resetting edge- stone @ 50c.	36 20	
74 hours, redressing edge- stone, @ 75c.	55 50	
60.5 square yards artificial stone sidewalks @ \$1.62	98 01	
Extra work — Building sewer under subway:		
150.5 hours, foreman, @ 79 ⁶ / ₁₁ c.	\$119 72	
704 hours, men, @ 35c.	246 40	
304 hours, men, @ 30c.	91 20	
53 barrels Portland c e m e n t @ \$1.85	98 05	
46 tons broken stone @ \$1.50	69 00	
21 cubic yards sand @ \$1.25	26 25	
Water for con- crete	5 00	
Use of tools	34 32	
20 days' use of gaso- lene p u m p, hose, gasolene and oil @ \$1	20 00	
20 days' use of der- rick, chain fall and hopper @ \$1	20 00	
Teaming, 6 trips @ \$3	18 00	
20 pounds oakum @ 3 ¹ / ₂ c.	70	
1,359 feet B. M. boards @ \$10	13 59	
5,000 feet B. M. plank @ \$10	50 00	
	<hr/>	
	\$812 23	
Plus 15 per cent,	121 83	
	<hr/>	
	934 06	
	<hr/>	
		5,670 21
		<hr/>
		\$28,146 47
		<hr/>
<i>Carried forward</i>		\$28,146 47

<i>Brought forward</i>		\$28,146 47	
Credit: Blocks, 76,600, old granite	\$1,532 00		
Edgestone, 184 feet, old, and 5 large corners, old	79 40		
Flagging, 336 feet 11 inches, old	119 49		
		<u>1,730 89</u>	
			<u>\$26,415 58</u>
<i>Thatcher street extension, Hyde Park. Graded. (Work unfinished.)</i>			
Labor, excavating		\$10 00	
Labor, filling		19 34	
Labor, drilling and blasting		113 83	
Labor, clearing and cutting trees		37 50	
			<u>\$180 67</u>
<i>Tunnel under railroad tracks, between Boylston and Green streets, Jamaica Plain. (Lawndale Terrace.)</i>			
Engineering		\$607 18	
Inspection		115 04	
Engineering expense		10 15	
Amount paid to James D. Kelly, under contract:			
Contract price	\$5,800 00		
9.6 cubic yards rock excavation @ \$4	38 40		
	<u>\$5,838 40</u>		
Extra work done under order dated December 18, 1912	1,000 00		
Extra work done under order dated March 1, 1913	82 60		
		<u>\$6,921 00</u>	
Deduct for liquidated damages, 4 days @ \$25	100 00		
		<u>\$6,821 00</u>	
Amount paid in 1912	1,086 64		
		<u>5,734 36</u>	
Amount paid to N. Y., N. H. & H. R. R. Co. for amount agreed upon for labor and material account of false work	\$5,600 00		
For labor and material used in building fence, account of Lawndale terrace subway	160 82		
		<u>5,760 82</u>	
			<u>\$12,227 55</u>
<i>Union Park street, between Washington street and Harrison avenue. Length, 227 linear feet. Area, 2,720 square yards. This street was widened, edgestone set, flagging crosswalks laid, asphalt pavement laid and artificial stone sidewalks constructed.</i>			
Engineering		\$116 34	
Inspection		105 00	
		<u>\$221 34</u>	
<i>Carried forward</i>			

<i>Brought forward</i>		\$221 34
Engineering expense		15 07
Advertising		4 10
Labor, handling stock		6 60
Templets		8 27
Teaming		5 30
Edgestone, 273 feet 2 inches straight, 292 feet 3 inches circular and 2 large corners		313 97
Flagging, 4 feet 2 inches		3 33
Amount paid to Fred S. & A. D. Gore Corpora- tion, under contract:		
273 linear feet straight edge- stone hauled and set @ 19c.	\$51 87	
98 linear feet circular edge- stone set @ 15c.	14 70	
644 linear feet existing edge- stone reset @ 15c.	96 60	
193 square yards existing granite block paving relaid, gravel joints, @ 50c.	96 50	
23 square yards existing granite block paving relaid, pitch joints, @ 95c.	21 85	
8 square yards existing flag- ging crosswalks relaid, gravel joints, @ 50c.	4 00	
24 square yards flagging crosswalks hauled and laid, pitch joints, in- cluding concrete base, @ \$2.25	54 00	
2,410 square yards concrete base bituminous con- crete binder and as- phalt wearing surface furnished and laid @ \$2.57	6,193 70	
50 square yards bituminous concrete binder and as- phalt wearing surface furnished and laid @ \$1.85	92 50	
29 square yards existing brick sidewalks relaid @ 50c.	14 50	
10,115 square feet artificial stone sidewalks furnished and laid @ 15½c.	1,567 83	
12 square yards wood block pavement furnished and laid @ \$3.75	45 00	
Extra work — Furnish and lay extra bitumi- nous binder where di- rected:		
2 cubic yards extra bitumi- nous binder furnished and laid @ \$11	22 00	
<i>Carried forward</i>	\$8,275 05	\$577 98

<i>Brought forward</i>	\$8,275 05	\$577 98	
Extra work — Shift and dress edgestone as di- rected:			
5½ hours, stonecutter, @ 62½c.	3 44		
1 hour, paver, @ 62½c.	63		
3 hours' labor @ 25c.	75		
Plus 15 per cent on \$4.82,	72		
	<hr/>		
	\$8,280 59		
Less 5 feet 1 inch circular edgestone broken by contractor @ \$1.20	6 10		
	<hr/>		
		8,274 49	
		<hr/>	
			<u>\$8,852 47</u>

STREETS CONSTRUCTED OR IN THE PROCESS
OF CONSTRUCTION UNDER CHAPTER 393
OF THE ACTS OF 1906, AND THE COST
CHARGED TO THE APPROPRIATION FOR
HIGHWAYS, MAKING OF.

Appian way, between Franklin and Raymond streets. Length, 426 linear feet. Area, 807 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering		\$108 44	
Inspection		122 50	
Engineering expense		2 00	
Advertising		5 96	
Labor, handling stock		13 89	
Edgestone, 817 feet 8 inches straight, 2 large corners, 44 feet 8½ inches circular		605 96	
Flagging, 89 feet 11 inches		70 14	
Blocks, 8,820, old granite		176 40	
Amount paid to John J. Lane, under contract:			
Removing trees, bushes, stumps, etc.	\$0 01		
447 cubic yards earth excava- tion @ 50c.	223 50		
828 linear feet straight edge- stone and corners hailed and set @ 35c.,	289 80		
45 linear feet circular edge- stone set @ 15c.	6 75		
6 linear feet existing edge- stone reset @ 1c.	6		
243 square yards granite block paving hauled and laid @ 75c.	182 25		
20 square yards existing gran- ite block paving relaid @ 1c.	20		
18 square yards flagging crosswalks hauled and laid @ \$1	18 00		
506 square yards tar macadam surface furnished and placed @ 90c.	455 40		
3,312 square feet artificial stone sidewalks furnished and laid @ 16c.	529 92		
3 covers reset @ \$3	9 00		
		<hr/>	
		1,714 89	
			<hr/>
			\$2,820 18

Arlington street, from Boylston street to Columbus avenue. (Unfinished work from 1912.)

Engineering	\$13 00
Engineering expense	30
	<hr/>
<i>Carried forward</i>	\$13 30

<i>Brought forward</i>	\$13 30
Edgestone, 55 feet	38 50
Gravel, 49 double loads and 52½ tons	110 60
Teaming	155 93

\$318 33

Armington street, between Webster street and Brighton avenue. (Not completed.) Length, 570 linear feet. Area, 1,263 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed. (Walks unfinished.)

Engineering	\$128 91
Inspection	52 50
Engineering expense	1 75
Advertising	8 13
Edgestone, 1,052 feet 7 inches straight, 2 small corners, 36 feet 1 inch circular	786 63
Flagging, 135 feet	105 30
Blocks, 400, old granite	8 00
Labor, handling stock	20 58
Amount paid to A. J. & G. H. McMurtry, under contract:	
Preparing site	\$3 00
500 cubic yards earth excavation @ 60c.	300 00
1,034 linear feet straight edge- stone and corners hailed and set @ 15c.	155 10
24 linear feet circular edge- stone set @ 10c.	2 40
59 linear feet existing edgestone reset @ 5c.,	2 95
28 square yards granite block paving hauled and laid @ 55c.	15 40
29 square yards flagging crosswalks hauled and laid @ 60c.	17 40
1,207 square yards tar macadam surface furnished and placed @ 65c.	784 55
4,400 square feet artificial stone sidewalks furnished and laid (unfinished) @ 7c.,	308 00
2 covers reset @ \$3	6 00

\$1,594 80

Less amount retained 239 22

1,355 58

\$2,467 38

Audubon road, between Ivy and Mountfort streets. Length, 346 linear feet. Area, 1,663 square yards. Six-inch asphalt macadam roadway constructed, edgestone set, block gutters paved and artificial stone sidewalks laid.

Engineering	\$176 83
Inspection	115 50
Engineering expense	2 55
Advertising	5 57
Labor, handling stock	3 03

Carried forward \$303 48

<i>Brought forward</i>	\$303 48
Flagging, 205 feet 5 inches	160 23
Edgestone, 156 feet 8 inches straight, 183 feet circular, 4 large corners	353 27
Blocks, 7,700, old granite	154 00
	<hr/>
Credit: 57 feet 4 inches old circular edgestone	\$970 98 34 40
	<hr/>
	<u>\$936 58</u>

No payment made on contract.

<i>B street</i> , from Fargo street to Congress street. Work done in 1912.	
Engineering expense	\$0 70
Bricks, 38,784	503 94
	<hr/>
	<u>\$504 64</u>

<i>Ballou avenue</i> , from Woodrow avenue to Willowwood street. (Work not started.)	
Engineering	\$207 39
Engineering expense	1 00
Advertising	7 83
Teaming	99 60
Blocks, 42,450, old granite	849 00
	<hr/>
	<u>\$1,164 82</u>

<i>Barrymore street</i> , between Blue Hill avenue and Harvard street. Length, 271 linear feet. Area, 783 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.	
Engineering	\$58 92
Inspection	199 50
Engineering expense	1 85
Labor, handling stock	9 60
Teaming	8 80
Edgestone, 530 feet 1 inch straight, 38 feet 11 inches circular, 2 small corners	424 25
Flagging, 110 feet	88 00
Blocks, 7,470, old granite	151 42
Amount paid to Fred S. & A. D. Gore Corporation, under contract:	
Removing trees, bushes, stumps, etc.	\$1 00
358 cubic yards earth excavation @ 73c.	261 34
4½ cubic yards rock excavation @ \$3.25	14 63
532 linear feet straight edgestone hauled and set @ 21c.	111 72
46 linear feet circular edgestone set @ 13c.	5 98
185 square yards granite block paving hauled and laid @ 65c.	120 25
22 square yards existing granite block paving relaid @ 43c.	9 46
	<hr/>
<i>Carried forward</i>	\$524 38
	<u>\$942 34</u>

<i>Brought forward</i>	\$524 38	\$942 34
23 square yards flagging crosswalks relaid @ 43c.,	9 89	
567 square yards macadam surface furnished and placed @ 69c.	391 23	
3,511 square feet artificial stone sidewalks furnished and laid @ 13c.	456 43	
3 covers reset @ \$3	9 00	
	<hr/>	1,390 93
		<u>\$2,333 27</u>

Bentham road, between Draper street and Robinson avenue. Length, 270 linear feet. Area, 720 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid, artificial stone sidewalks constructed.

Engineering		\$54 10
Inspection		94 50
Engineering expense		1 80
Labor, handling stock		8 70
Edgestone, 511 feet 6 inches straight, 46 feet 8½ inches circular		399 70
Flagging, 100 feet 1 inch		80 07
Blocks, 7,750, old granite		93 00
Amount paid to James Doherty, under contract:		
Removing trees, bushes, etc.	\$5 00	
290 cubic yards earth excava- tion @ 50c.	145 00	
518 linear feet straight edge- stone hauled and set @ 20c.	103 60	
40 linear feet circular edge- stone set @ 15c.	6 00	
4 linear feet existing edge- stone reset @ 12c.	48	
260 linear feet crushed stone and concrete founda- tion furnished and laid @ 15c.	39 00	
197 square yards granite block paving hauled and laid @ 65c.	128 05	
4 square yards existing gran- ite block paving relaid @ 40c.	1 60	
21 square yards flagging crosswalks hauled and laid @ 72c.	15 12	
516 square yards tar macadam surface furnished and placed @ 82c.	423 12	
162 square feet artificial stone sidewalks furnished and laid @ 13c.	21 06	
2 covers reset @ \$3	6 00	
191 square yards loam spaces placed and seeded @ 10c.	19 10	
	<hr/>	
<i>Carried forward</i>	\$913 13	\$731 87

<i>Brought forward</i>	\$913 13	\$731 87	
10.7 cubic yards loam furnished @ \$1.10	11 77		
	<hr/>	924 90	
			<u>\$1,656 77</u>
<i>Binney street</i> , Longwood avenue to Francis street.			Work not started.
Engineering		\$110 85	
Engineering expense		90	
Advertising		6 17	
		<hr/>	<u>\$117 92</u>
<i>Brainerd road</i> , between Harvard avenue and Warren street. Length, 1,816 linear feet. Area, 6,480 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.			
Engineering		\$238 64	
Inspection		315 00	
Engineering expense		4 80	
Labor, handling stock		49 58	
Teaming		1 44	
Edgestone, 3,362 feet 2 inches straight, 6 small corners, 145 feet 7½ inches circular		2,455 36	
Flagging, 730 feet 10 inches		584 67	
Blocks, 4,492 new and 45,329 old granite		1,221 02	
Amount paid to James Doherty, under contract:			
Removing trees, bushes, stumps, etc.	\$5 00		
2,373 cubic yards earth ex- cavation @ 45c.	1,067 85		
4 cubic yards rock excava- tion @ \$3	12 00		
3,311 linear feet straight edgestone hauled and set @ 19c.	629 09		
166 linear feet circular edgestone set @ 13c.,	21 58		
136 linear feet existing edgestone reset @ 13c.	17 68		
1,280 square yards granite block paving hauled and laid @ 67c.	857 60		
63 square yards existing granite block paving relaid @ 37c.	23 31		
158 square yards flagging crosswalks hauled and laid @ 79c.	124 82		
6 square yards existing flagging crosswalks relaid @ 40c.	2 40		
4,973 square yards tar maca- dam surface furnished and placed @ 81c.	4,028 13		
21,642 square feet artificial stone sidewalks fur- nished and laid @ 13c.	2,813 46		
25 covers reset @ \$3	75 00		
	<hr/>		
<i>Carried forward</i>	\$9,677 92	\$4,870 51	

<i>Brought forward</i>	\$9,677 92	\$4,870 51	
Extra work — Remove unsuitable material below subgrade:			
36 hours' labor @ 25c.	9 00		
Plus 15 per cent on \$9,	1 35		
½ day, single team, @ \$3.50	1 75		
	<hr/>		
		9,690 02	
		<hr/>	\$14,560 53

Brookdale street, from Florence street to Sycamore street. (Work not started.)

Engineering		\$82 48	
Engineering expense		50	
		<hr/>	\$82 98

Brookview street, between Blue Hill avenue and Harvard street. Length, 533 linear feet. Area, 2,014 square yards. 6-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid, and artificial stone sidewalks constructed.

Engineering		\$92 18	
Inspection		101 50	
Engineering expense		2 15	
Labor, handling stock		15 29	
Edgestone, 1,010 feet straight and 18 feet 9 inches circular		708 90	
Flagging, 139 feet 8 inches		110 94	
Blocks, 11,885, old granite		248 96	
Amount paid to James Doherty, under contract:			
Removing trees, bushes, stumps, etc.	\$5 00		
869 cubic yards earth excavation @ 50c.	434 50		
4½ cubic yards rock excavation @ \$3	13 50		
1,020 linear feet straight edgestone hauled and set @ 20c.	204 00		
19 linear feet circular edgestone set @ 13c.	2 47		
20 linear feet existing edgestone reset @ 13c.	2 60		
365 square yards granite block paving hauled and laid @ 70c.	255 50		
27 square yards existing granite block paving relaid @ 35c.	9 45		
30 square yards flagging crosswalks hauled and laid @ 81c.	24 30		
1,635 square yards tar macadam surface furnished and placed @ 81c.	1,324 35		
5,273 square feet artificial stone sidewalks furnished and laid @ 13c.	685 49		
6 covers reset @ \$3	18 00		
	<hr/>		
<i>Carried forward</i>	\$2,979 16	\$1,279 92	

<i>Brought forward</i>	\$2,979 16	\$1,279 92
Extra work — Omit artificial stone sidewalks where directed and furnish, place and seed loam spaces:		
257 square yards loam spaces furnished, placed and seeded, @ 45c.	115 65	
18 hours' labor (removing cinders) @ 25c.	4 50	
Plus 15 per cent on \$4.50	68	
1 day, double team, @ \$5.50, Extra work — Haul surplus excavation to Dumas street:	5 50	
382 tons material hauled to Dumas street, one-half mile overhaul, per half mile, per ton (Section 1, Article E), @ 11c.	42 02	
	<u>\$3,147 51</u>	
Less amount charged to Dumas street	42 02	
		<u>3,105 49</u>
		<u>\$4,385 41</u>

Bynner street, between South Huntington avenue and Day street. Length, 716 linear feet. Area, 2,116 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$170 64
Inspection	141 00
Engineering expense	3 75
Advertising	7 01
Labor, handling stock	20 09
Blocks, 19,200 old granite	374 82
Flagging, 83 feet	66 14
Edgestone, 1,249 feet 4 inches straight, 44 feet 9 inches circular, and 2 small corners	885 46
Amount paid to J. C. Coleman & Sons Company, under contract:	
Removing trees, bushes, stumps, etc.	\$1 00
962 cubic yards earth excavation @ 70c.	673 40
50 cubic yards rock excavation @ \$4	200 00
1,241 linear feet straight edgestone hauled and set @ 30c.	372 30
45 linear feet circular edgestone set @ 20c.	9 00
201 linear feet existing edgestone reset @ 15c.	30 15
439 square yards granite block paving hauled and laid @ 80c.	351 20
<i>Carried forward</i>	<u>\$1,637 05</u>
	<u>\$1,668 91</u>

<i>Brought forward</i>	\$1,637 05	\$1,668 91
112 square yards existing granite block paving relaid @ 50c.	56 00	
18 square yards flagging crosswalks hauled and laid @ \$1	18 00	
40 square yards existing flagging crosswalks relaid @ 50c.	20 00	
1,586 square yards tar macadam surface furnished and placed @ 80c.	1,268 80	
9,023 square feet artificial stone sidewalks furnished and laid @ 15c.	1,353 45	
4 covers reset @ \$3	12 00	
Extra work — Cut concrete from in front of poles in edgestone trench:		
3 days' labor @ \$2	6 00	
Plus 15 per cent on \$6	90	
Extra work — Cut guttermouths where directed and replace round basin covers with new covers furnished by Sewer Service:		
2 days, stonemason, @ \$4.80	9 60	
1 day, mason, @ \$5.60	5 60	
2 days, helper, @ \$2.50	5 00	
Plus 15 per cent on \$20.20	3 03	
	<hr/>	4,395 43
		<hr/> <u>\$6,064 34</u>

Calumet street, between Parker Hill avenue and Hillside street (unfinished). Length, 1,201 linear feet. Area, 4,336 square yards. (Work unfinished.) Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$332 82
Inspection	231 00
Engineering expenses	5 90
Labor, handling stock	32 69
Advertising	6 81
Flagging, 440 feet 9 inches	343 78
Edgestone, 1,765 feet straight, 621 feet 8 inches circular	1,891 16
Blocks, 39,810 old granite	712 26
Amount paid to James Doherty, under contract:	
Removing trees, bushes, stumps, etc.	\$5 00
2,000 cubic yards earth excavation @ 87c.	1,740 00
43 cubic yards water-box excavation @ \$1	43 00
	<hr/>
<i>Carried forward</i>	\$1,788 00
	<hr/>
	\$3,556 42

<i>Brought forward</i>	\$1,788 00	\$3,556 42
2 cubic yards rock excavation @ \$4	8 00	
1,700 linear feet straight edge-stone and corners hauled and set @ 23c.,	391 00	
600 linear feet circular edge-stone set @ 15c.	90 00	
80 linear feet existing edge-stone reset @ 14c.	11 20	
50 linear feet crushed stone and concrete foundation furnished and placed @ 15c.	7 50	
870 square yards granite block paving hauled and laid @ 65c.	565 50	
20 square yards existing granite block paving relaid @ 45c.	9 00	
95 square yards flagging crosswalks hauled and laid @ 85c.	80 75	
5 square yards existing crosswalks relaid @ 50c.	2 50	
2,850 square yards tar macadam surface furnished and placed @ 87c.	2,479 50	
26 square yards existing brick sidewalks relaid @ 30c.	7 80	
13,500 square feet artificial stone sidewalks furnished and laid @ 15c.	2,025 00	
11 covers reset @ \$3	33 00	
250 linear feet ground water drain furnished and laid @ 46c.	115 00	
	<u>\$7,613 75</u>	
Less 15 per cent retained	1,142 06	
		<u>6,471 69</u>
		<u><u>\$10,028 11</u></u>

Church street, between Boylston and Providence streets. Length, 150 linear feet. Area, 440 square yards. Roadway paved with wood block on a concrete base and artificial stone sidewalks were constructed.

Engineering	\$46 69
Inspection	24 50
Engineering expense	95
Advertising	3 90
Blocks, 20,000 *	980 00
Gravel, 36 double loads	50 40
Teaming	45 20
	<u>\$1,151 64</u>
<i>Carried forward</i>	\$1,151 64

* These blocks will not be used and account will be credited in 1914.

<i>Brought forward</i>		\$1,151 64	
Amount paid to Coleman Brothers, under contract:			
440 square yards wood block pavement furnished and laid @ \$3.90	\$1,716 00		
1,614 square feet artificial stone sidewalks furnished and laid @ 17c.	274 38		
		<u>1,990 38</u>	
		\$3,142 02	
Credit: Blocks, 11,200, old granite	\$224 00		
Bricks, 4,300, old	30 10		
		<u>254 10</u>	
			<u>\$2,887 92</u>
<i>Chestnut street, Brimmer street to Charles River Embankment. (Work not started.)</i>			
Engineering		\$60 60	
Engineering expense		10	
		<u> </u>	<u>\$60 70</u>
<i>Clement avenue, Anawan avenue to Clement avenue. (Work not started.)</i>			
Engineering			<u>\$41 34</u>
<i>Clement avenue, Meredith street to Clement avenue. (Work not started.)</i>			
Engineering			<u>\$41 34</u>
<i>Clement avenue, between Stratford and Park streets. Length, 437 linear feet. Area, 1,309 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.</i>			
Engineering		\$52 67	
Inspection		141 75	
Engineering expense		1 15	
Advertising		6 76	
Labor, handling stock		12 47	
Blocks, 4,500, old granite		90 00	
Edgestone, 762 feet 2 inches straight, 6 small corners, 65 feet circular		577 66	
Flagging, 60 feet 11 inches		21 93	
Steam roller		3 25	
Amount paid to Thomas F. Minton, under contract:			
Removing trees, bushes, stumps, etc.	\$10 00		
315 cubic yards subgrading (earth excavation) @ 50c.	157 50		
9 cubic yards water-box excavation @ \$1	9 00		
1½ cubic yards rock excavation @ \$2	3 00		
779 linear feet straight edgestone and corners hauled and set @ 2Sc.	218 12		
<i>Carried forward</i>	\$397 62	<u> </u>	\$907 64

<i>Brought forward</i>	\$397 62	\$907 64
65 linear feet circular edge-stone set @ 25c.	16 25	
280 square yards granite block paving hauled and laid @ \$1.15	322 00	
37 square yards existing granite block paving relaid @ 45c.	16 65	
13 square yards flagging crosswalks hauled and laid @ \$1	13 00	
14 square yards existing flagging crosswalks relaid @ 50c.	7 00	
1,055 square yards tar macadam surface furnished and placed @ 77c.	812 35	
5,880 square feet artificial stone sidewalks furnished and laid @ 16c.	860 80	
179 square feet artificial stone driveways furnished and laid @ 17c.	30 43	
2 covers reset @ \$3	6 00	
	<hr/>	
	\$2,482 10	
Less $\frac{1}{4}$ day steam roller @ \$15	3 75	
	<hr/>	
		2,478 35
		<hr/>
		\$3,385 99

Clermont street, from Bailey street to Fuller street. (Work not started.)

Engineering	\$42 35
Engineering expense	50
Advertising	7 93
	<hr/>
	\$50 78

Cliftondale street, between Kittredge street and Norfolk streets. Length, 951 linear feet. Area, 2,747 square yards, 6-inch Bermudez asphalt macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$166 69
Inspection	252 00
Engineering expense	2 70
Advertising	4 00
Labor, handling stock	30 27
Blocks, 23,950, old granite	479 00
Flagging, 226 feet 3 inches	176 47
Edgestone, 1,786 feet 9 inches straight, 82 feet 3 inches circular, 11 small corners	1,323 64
Amount paid to Thomas F. Minton, under contract:	
12 trees removed @ \$10	\$120 00
2,269 cubic yards earth excavation @ 65c.	1,474 85
10 cubic yards water-box excavation @ \$1	10 00
26 cubic yards rock excavation @ \$2	52 00
	<hr/>
<i>Carried forward</i>	\$1,656 85
	<hr/>
	\$2,434 77

<i>Brought forward</i>	\$1,656 85	\$2,434 77	
1,804 linear feet straight edge- stone and corners hailed and set @ 28c.,	505 12		
83 linear feet circular edge- stone set @ 25c.	20 75		
672 square yards granite block paving hauled and laid @ \$1.15	772 80		
29 square yards existing granite block paving relaid @ 45c.	13 05		
49 square yards flagging crosswalks hauled and laid @ \$1.50	73 50		
22 square yards existing flagging crosswalks re- laid @ 75c.	16 50		
1,968 square yards asphalt macadam surface fur- nished and placed @ \$1.05	2,066 40		
12,079 square feet artificial stone sidewalks fur- nished and laid @ 16c.,	1,932 64		
365 square feet artificial stone driveways fur- nished and laid @ 16c.,	58 40		
12 covers reset @ \$3	36 00		
Extra work — Raise manhole covers over 6 inches:			
2 manhole covers raised over 6 inches @ \$6	12 00		
Extra work — Construct driveways not shown on plan:			
1½ days, stone cutter, @ \$4.80	9 00		
½ day's labor @ \$2	1 00		
Plus 15 per cent on \$10,	1 50		
½ day, double team, @ \$6,	3 00		
	<hr/>	7,178 51	
		<hr/>	\$9,613 28

Colonial avenue, from Talbot avenue to New England avenue. (Work not started.)

Engineering	\$103 22	
Engineering expense	1 00	
Advertising	5 37	
Blocks, 16,475, old granite	260 10	
	<hr/>	\$369 69

Cottage street, from Gove street to Porter street. (Work not started.)

Engineering	\$61 68	
Engineering expense	78	
Advertising	3 58	
	<hr/>	\$66 04

Crossman street, between Norfolk street and West Selden street. Length, 696 linear feet. Area, 2,125 square feet. Roadway excavated, edgestone set and gutters paved. (Street not finished.)

Engineering	\$219 71
Inspection	129 50
Engineering expense	4 55
Advertising	6 76
Labor, handling stock	30 35
Flagging, 260 feet 1 inch	202 86
Edgestone, 1,100 feet 2 inches straight, 174 feet 6 inches circular, 4 small corners	947 91
Blocks, 19,750, old granite	395 00
Repairing iron fence	15 60
Amount paid to James Doherty, under contract:	

Removing trees, bushes, stumps, etc.	\$25 00
350 cubic yards earth excavation @ 65c.	227 50
1,000 linear feet straight edgestone and corners hauled and set @ 23c.,	230 00
100 linear feet circular edgestone set @ 15c.	15 00
300 square yards granite block paving hauled and laid @ 75c.	225 00

\$722 50

Less 15 per cent retained 108 38

614 12

\$2,566 36

Dalrymple street, between Egleston and Boylston streets. (Work done in 1912.) Length, 784 linear feet. Area, 2,265 square yards. Constructed 6-inch tar macadam roadway, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$2 50
Amount paid to John Kelly Company, under contract:	

Removing trees, bushes, stumps, etc.	\$1 00
1,169 cubic yards subgrading (earth excavation) @ 60c.	701 40
11½ cubic yards subgrading (rock excavation) @ \$1.75	20 13
999 linear feet straight edgestone hauled and set @ 15c.	149 85
61 linear feet circular edgestone set @ 10c.	6 10
144 linear feet existing edgestone reset @ 10c.	14 40
545 linear feet crushed stone and concrete foundation furnished and placed @ 40c.	218 00

\$1,110 88

Carried forward

\$2 50

<i>Brought forward</i>	\$1,110 88	\$2 50
149 square yards existing granite block paving relaid @ 35c.	52 15	
14 square yards flagging crosswalks hauled and laid @ \$1	14 00	
10 square yards existing flagging crosswalks relaid @ 45c.	4 50	
7,103 square feet artificial stone sidewalks furnished and laid @ 14 $\frac{1}{2}$ c.	1,047 69	
7 covers reset @ \$3	21 00	
Extra work — Haul paving blocks from Dimock Street Yard instead of from Massachusetts avenue lot:		
406 square yards granite block paving hauled and laid @ 58c.	235 48	
Extra work — Omit water-bound macadam roadway and substitute tar macadam roadway:		
1,788 square yards tar macadam surface furnished and placed @ 80c.	1,430 40	
Extra work — Reset edgestone and lay granite block gutter on Eggleston street, northwest corner D al r y m p l e street:		
64 linear feet existing edgestone reset @ 10c.	6 40	
21 square yards granite block paving hauled and laid @ 58c.	12 18	
Extra work — Dress edgestone as directed:		
1 $\frac{1}{2}$ days, stonecutter, @ \$5	7 50	
Plus 15 per cent on \$7.50,	1 13	
	<hr/>	
	\$3,943 31	
Less $\frac{1}{2}$ day, city stonecutter (cutting flagging), @ \$3	1 50	
	<hr/>	
	\$3,941 81	
Less amount paid in 1913,	3,737 95	
	<hr/>	
		203 86
		<hr/>
		\$206 36
<i>Dawes street</i> , between East Cottage and Willis streets. Length, 429 linear feet. Area, 952 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.		
Engineering	\$131 14	
Inspection	98 00	
	<hr/>	
<i>Carried forward</i>	\$229 14	

<i>Brought forward</i>		\$229 14	
Engineering expense		1 80	
Advertising		6 56	
Labor, handling stock		12 48	
Edgestone, 701 feet 4 inches straight, 29 feet 3 inches circular		526 03	
Flagging, 90 feet 1 inch		72 07	
Steam roller		45 00	
Amount paid to Jeremiah J. McCarthy Company, under contract:			
Removing trees, bushes, stumps, etc.	\$1 00		
482 cubic yards earth excava- tion @ 60c.	289 20		
695 linear feet straight edge- stone hauled and set @ 20c.	139 00		
30 linear feet circular edge- stone set @ 20c.	6 00		
25 linear feet existing edge- stone reset @ 20c.	5 00		
273 square yards granite block paving hauled and laid @ 60c.	163 80		
39 square yards existing granite block paving re- laid @ 50c.	19 50		
19 square yards flagging crosswalks hauled and laid @ \$1	19 00		
688 square yards tar macadam surface furnished and placed @ 85c.	584 80		
3,153 square feet artificial stone sidewalks fur- nished and laid @ 15c., 4 covers reset @ \$3	472 95		
Extra work — Raise man- hole over 6 inches to grade: Manhole raised over 6 inches	5 00		
Extra work — Raze wall at Brewer estate: 1½ days, foreman, @ \$4	6 00		
15 days' labor @ \$2	30 00		
Plus 15 per cent on \$36	5 40		
1½ days, double team, @ \$6, 1½ days, single team, @ \$3.50	7 50		
	4 81		
	<u>\$1,770 96</u>		
Less 3 days' use of city steam roller @ \$15	45 00		
		<u>1,725 96</u>	
		<u>\$2,619 04</u>	
Credit: Blocks, 525, old granite, Edgestone, 4 feet, old, 1 large corner	\$10 50		
	4 40		
		<u>14 90</u>	
		<u>\$2,604 14</u>	

Denton terrace, from Washington street to Kittredge street. (Work not started.)
Engineering \$72 18

Dexter street, from Alford street to the Everett line. Length, 100 linear feet. Area, 391 square yards. 6-inch tar macadam roadway constructed, edgestone set, block gutters paved, brick walks relaid and crushed stone sidewalks built. Work done by department force.

Labor, excavating, setting and resetting edgestone	\$69 59
Labor, excavating and relaying brick walks	2 95
Labor, excavating and repaving gutters	8 96
Labor, excavating and relaying crosswalks	16 17
Labor, spreading crushed stone on roadway	58 92
Labor, spreading crushed stone on sidewalk	26 08
Labor, engineering	25 18
Sand and gravel	6 40
Tarvia, 888 gallons	71 88
Flagging, 9 feet 3 inches	7 40
Crushed stone, 107.8 tons	154 15
Teaming	29 75
Engineering	30
Steam roller, rolling	30 00
Edgestone, 200 feet straight	156 00
	<u>\$663 73</u>

Dillaway street, from Hollis street to Dix place. (Work not started.)
Engineering \$49 55
Engineering expense 1 00
\$50 55

Don street, between Woodrow avenue and Callender street. Length, 315 linear feet. Area, 910 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid, and artificial stone sidewalks constructed.

Engineering	\$101 56
Inspection	66 50
Engineering expense	2 85
Advertising	6 56
Labor, handling stock	8 78
Edgestone, 584 feet straight	407 39
Flagging, 9 feet, old	3 24
Blocks, 8,675 old granite	173 50
Amount paid to Boston Paving Company, under contract:	
Removing trees, bushes, stumps, etc.	\$5 00
442 cubic yards earth excavation @ 79c.	349 18
578 linear feet street edgestone hauled and set @ 23c.,	132 94
80 linear feet existing edgestone reset @ 15c.	12 00
196 square yards granite block paving hauled and laid @ 75c.	147 00
34 square yards existing granite block paving relaid @ 50c.	17 00
	<u>\$663 12</u>
<i>Carried forward</i>	<u>\$770 38</u>

<i>Brought forward</i>	\$663 12	\$770 38
2 square yards flagging crosswalks hauled and laid @ 90c.	1 80	
10 square yards existing flagging crosswalks relaid @ 50c.	5 00	
665 square yards tar macadam surface furnished and placed @ 83c.	551 95	
3,899 square feet artificial stone sidewalks furnished and laid @ 15c.	584 85	
7 covers reset @ \$3	21 00	
	<hr/>	1,827 72
		<hr/> <u>\$2,598 10</u>

Dumas street, between Willowwood and Mascot streets. Length, 440 linear feet. Area, 1,628 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$111 51	
Inspection	85 75	
Engineering expense	2 55	
Labor, handling stock	3 75	
Edgestone, 658 feet 10 inches circular, 2 small corners, 22 feet straight	817 06	
Flagging, 146 feet	116 80	
Blocks, 14,790, old granite	266 81	
Teaming surplus material	48 95	
Amount paid to James Doherty, under contract:		
Removing trees, bushes, stumps, etc.	\$10 00	
363 cubic yards earth excavation @ 45c.	163 35	
9 cubic yards rock excavation @ \$3.50	31 50	
103 linear feet straight edgestone hauled and set @ 19c.	19 57	
666 linear feet circular edgestone set @ 12c.	79 92	
158 linear feet existing edgestone reset @ 11c.	17 38	
283 square yards granite block paving hauled and laid @ 69c.	195 27	
97 square yards existing granite block paving relaid @ 33c.	32 01	
36 square yards flagging crosswalks hauled and laid @ 69c.	24 84	
67 square yards existing flagging crosswalks relaid @ 40c.	26 80	
1,318 square yards tar macadam surface furnished and placed @ 81c.	1,067 58	
	<hr/>	
<i>Carried forward</i>	\$1,668 22	\$1,453 18

<i>Brought forward</i>	\$1,668 22	\$1,453 18
5,549 square feet artificial stone sidewalks furnished and laid @ 13c.	721 37	
59 square feet artificial stone driveways furnished and laid @ 13c.	7 67	
4 covers reset @ \$3	12 00	
Extra work — Grade approach to Mountain avenue to conform to Dumas street:		
12 hours' labor @ 25c.	3 00	
Plus 15 per cent on \$3	45	
	<hr/>	2,412 71
		<hr/> <u>\$3,865 89</u>

Emmons street, between Paris and Chelsea streets. Length, 320 linear feet. Area, 924 square yards. Construct 6-inch tar macadam roadway, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering		\$73 78
Inspection		203 00
Engineering expense		3 17
Advertising		6 76
Edgestone, 558 feet 4 inches straight, 37 feet 8 inches circular and 2 small corners		487 91
Flagging, 71 feet old granite		28 40
Blocks, 6,400 old granite; 200 new granite		141 40
Amount paid to Jeremiah J. McCarthy Com- pany, under contract:		
Removing trees, bushes, stumps, etc.	\$20 00	
362 cubic yards earth excava- tion @ 70c.	253 40	
549 linear feet straight edge- stone and corners hauled and set @ 25c.	137 25	
38 linear feet circular edge- stone @ 15c	5 70	
57 linear feet existing edge- stone reset @ 15c.	8 55	
215 square yards granite block paving hauled and laid @ 65c.	139 75	
273 square yards existing gran- ite block paving relaid @ 50c.	136 50	
16 square yards flagging crosswalks hauled and laid @ \$1	16 00	
28 square yards existing flag- ging crosswalks relaid @ 50c.	14 00	
666 square yards tar macadam surface furnished and placed @ 85c.	566 10	
34 square yard sexisting brick sidewalks relaid @ 30c.,	10 20	
<i>Carried forward</i>	<hr/> \$1,307 45	<hr/> \$944 42

<i>Brought forward</i>	\$1,307 45	\$944 42
3,634 square feet artificial stone sidewalks furnished and laid @ 15c.	545 10	
195 square feet artificial stone driveways furnished and laid @ 15c.	29 25	
1 cover reset @ \$3	3 00	
	<hr/>	
	\$1,884 80	
Less 549 linear feet straight edgestone hauled by city @ 5c.	27 45	
	<hr/>	
		1,857 35
		<hr/>
		<u>\$2,801 77</u>

Evans road, between Corey road and Brookline line. Length, 140 linear feet. Area, 458 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed with a loam space.

Engineering		\$101 28
Inspection		31 50
Engineering expense		1 00
Advertising		6 66
Teaming		9 00
Edgestone, 320 feet 4 inches circular, 17 feet straight		384 50
Flagging, 193 feet old granite		69 48
Blocks, 605 old granite		12 10
Amount paid to John J. Lane, under contract:		
Removing trees, bushes, stumps, etc.	\$0 01	
237 cubic yards earth excava- tion @ 50c.	118 50	
29 linear feet straight edge- stone hauled and set @ 30c.	8 70	
299 linear feet circular edge- stone set.*		
6 linear feet existing edge- stone reset @ 15c.	90	
97 square yards granite block paving hauled and laid @ 75c.	72 75	
42 square yards existing gran- ite block paving relaid @ 35c.	14 70	
29 square yards flagging crosswalks hauled and laid @ \$1	29 00	
4 square yards existing flag- ging crosswalks relaid @ 50c.	2 00	
332 square yards tar macadam surface furnished and placed @ 90c.	298 80	
1,824 square feet artificial stone sidewalks furnished and laid @ 16c.	291 84	
1 cover reset @ \$3	3 00	
	<hr/>	
<i>Carried forward</i>	\$840 20	\$615 52

* No price bid for this work.

<i>Brought forward</i>	\$840 20	\$615 52	
67 square yards loam spaces furnished, placed and seeded @ 25c.	16 75		
		<u>56 95</u>	
			<u>\$1,472 47</u>

Gayland street, West Cottage street to Judson street. Length, 603 linear feet. Area, 1,700 square yards. Edgestone set, gutters paved and sidewalks partially constructed. (Work unfinished.)

Engineering		\$91 53	
Inspection		35 00	
Engineering expense		40	
Advertising		5 67	
Labor, handling stock		14 84	
Edgestone, 988 feet straight		<u>652 08</u>	
			<u>\$799 52</u>

Greenock street, between Blue Hill avenue and Harvard street. Length, 576 linear feet. Area, 1,664 square yards. Six-inch asphalt macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering		\$115 56	
Inspection		91 00	
Engineering expense		4 30	
Advertising		6 76	
Labor, handling stock		17 83	
Edgestone, 1,090 feet 4 inches straight, 30 feet 5 inches circular, 4 small corners		<u>768 07</u>	
Flagging, 120 feet 5 inches		96 33	
Blocks, 9,825, old granite		<u>167 70</u>	
Teaming		2 48	

Amount paid to James Doherty, under contract:

Removing trees, bushes, stumps, etc.	\$5 00		
902 cubic yards earth excavation @ 87c.	784 74		
2 cubic yards rock excavation @ \$3.25	6 50		
1,104 linear feet straight edge- stone hauled and set @ 22c.	<u>242 88</u>		
30 linear feet circular edge- stone set @ 15c.	4 50		
24 linear feet existing edge- stone reset @ 14c.	3 36		
285 linear feet crushed stone and concrete foundation furnished and placed @ 15c.	<u>42 75</u>		
390 square yards granite block paving hauled and laid @ 75c.	<u>292 50</u>		
24 square yards existing gran- ite block paving relaid @ 45c.	10 80		
26 square yards flagging crosswalks hauled and laid @ 85c.	<u>22 10</u>		
<i>Carried forward</i>	\$1,415 13	<u>\$1,270 03</u>	

<i>Brought forward</i>	\$1,415 13	\$1,270 03
1,278 square yards asphalt macadam surface furnished and placed @ 97c.	1,239 66	
7,209 square feet artificial stone sidewalks furnished and laid @ 14½c.	1,045 31	
139 square feet artificial stone driveways furnished and laid @ 14½c.	20 16	
11 covers reset @ \$3	33 00	
	<hr/>	3,753 26
		<u>\$5,023 29</u>

Hadwin way, between Hyde Park avenue and Hammatt road. Six-inch tar macadam roadway constructed, edgestone set, block paving laid, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering		\$45 66
Inspection		185 50
Engineering expense		2 35
Labor, handling stock		4 51
Flagging, 45 feet 1 inch		36 07
Edgestone, 256 feet straight, 259 feet 6 inches circular		480 36
Amount paid to West Roxbury Trap Rock Company, under contract:		
Removing trees, bushes, stumps, etc.	\$10 00	
88 cubic yards subgrading (earth excavation) @ 70c.	61 60	
418 cubic yards filling furnished @ \$1	418 00	
254 linear feet straight edgestone hauled and set @ 30c.	76 20	
261 linear feet circular edgestone set @ 25c.	65 25	
39 linear feet existing edgestone reset @ 25c.	9 75	
22 square yards existing granite block paving relaid @ 25c.	8 00	
10 square yards flagging crosswalks hauled and laid @ 40c.	4 00	
11 square yards existing flagging crosswalks relaid @ 25c.	2 75	
469 square yards tar macadam surface furnished and placed @ 70c.	328 30	
2,701 square feet artificial stone sidewalks furnished and laid @ 16c.	432 16	
Extra work — Omit the hauling and laying of granite block paving and substitute the furnishing and laying of same:		
	<hr/>	<hr/>
<i>Carried forward</i>	\$1,416 01	\$754 45

<i>Brought forward</i>	\$1,416 01	\$754 45	
181 square yards granite block paving furnished and laid @ \$2.50	452 50		
		<u>1,868 51</u>	
			<u>\$2,622 96</u>

Hallet street, between Minot street and New York, New Haven and Hartford Railroad. Length, 1,858 linear feet. Area, 7,020 square yards. Six-inch macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$258 05
Inspection	59 50
Engineering expense	3 00
Labor, handling stock	1 02
Blocks, 6,700, old granite	134 00
Bricks	215 06
Flagging, 68 feet 3 inches	53 24
Edgestone, 2 small corners	7 20
Teaming	3 00
	<u>\$734 07</u>

Amount paid to James Doherty, under contract:

Removing trees, bushes, stumps, etc.	\$45 00
1,372 cubic yards earth excavation @ 40c.	548 80
1,124 cubic yards filling furnished @ 10c.	112 40
3,563 linear feet straight edgestone furnished and set @ 88c.	3,135 44
140 linear feet circular edgestone set @ 14c.	19 60
208 linear feet existing edgestone reset @ 14c.	29 12
1,326 square yards granite block paving hauled and laid @ 80c.	1,060 80
66 square yards existing granite block paving relaid @ 40c.	26 40
15 square yards flagging crosswalks hauled and laid @ 90c.	13 50
5,985 square yards macadam surface furnished and placed @ 77c.	4,608 45
2,440 square yards crushed stone sidewalks furnished and laid @ 54c.,	1,317 60
319 square yards brick sidewalks laid @ 48c.	153 12
3 covers reset @ \$3	9 00
	<u>\$11,079 23</u>

<i>Carried forward</i>	\$11,079 23	\$734 07
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<i>Brought forward</i>	\$11,079 23	\$734 07
Extra work — Construct drop-inlets and sluices where directed:		
15 drop-inlets and sluices constructed @ \$26	390 00	
Extra work — Furnish and lay artificial stone sidewalks where directed, on westerly side from Minot street:		
2,807 square feet artificial stone sidewalks furnished and laid @ 16c.,	449 12	
Extra work — Haul and place filling:		
653 cubic yards filling hauled and placed @ 75c.	489 75	
	<hr/>	
	\$12,408 10	
Less amount paid in 1912	7,588 75	
	<hr/>	4,819 35
Amount paid to John Kelly Company, under contract:		
25,852 cubic yards filling furnished and placed @ 74c.	\$19,130 48	
Extra work — Build approach to Hallet street from the old road near the railroad:		
5 hours, foreman, @ 62½c.,	3 13	
41 hours' labor @ 25c.	10 25	
Plus 15 per cent on \$13.38	2 01	
10 days, double team, @ 62½c.	6 25	
Extra work — Build box culvert to drain adjacent marsh land:		
Box culvert furnished and built	120 00	
	<hr/>	
	\$19,272 12	
Less amount paid in 1911	\$5,661 00	
Less amount paid in 1912	12,658 48	
Less amount drawn but not paid	952 64	
	<hr/>	
	19,272 12	<hr/>
		<u>\$5,553 42</u>

Hancock and Bowdoin streets, from Winter street to Hancock street. Length, 220 linear feet. Area, 1,235 square yards. Brick block

roadway constructed, edgestone set, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering		\$176 84	
Inspection		157 50	
Engineering expense		4 00	
Advertising		4 40	
Labor, handling blocks		1 40	
Labor, stonecutter		24 00	
Edgestone, 406 feet 6 inches circular		487 80	
Flagging, 93 feet 3 inches		74 60	
Blocks, 730, old granite		14 60	
Steam roller		3 25	
Amount paid to Central Construction Com- pany, under contract:			
408 linear feet circular edge- stone set @ 20c.	\$81 60		
162 linear feet existing edge- stone reset @ 20c.	32 40		
169.2 cubic yards concrete base furnished and laid @ \$5.50	930 60		
25 square yards granite block paving hauled and laid, gravel joints, @ 80c.	20 00		
17 square yards existing granite block paving re- laid, gravel joints, @ 70c.	11 90		
14 square yards granite block paving hauled and laid, grout joints, including concrete base, @ \$2	28 00		
5 square yards flagging crosswalks hauled and laid, gravel joints, @ \$1.50	7 50		
7 square yards existing flagging crosswalks re- laid, gravel joints, @ 70c.	4 90		
20 square yards flagging crosswalks hauled and laid, grout joints, in- cluding concrete base, @ \$1.25	25 00		
1,235 square yards brick block pavement furnished and laid @ \$2.30	2,840 50		
3,796 square feet artificial stone sidewalks furnished and laid @ 25c.	949 00		
205 square yards loam spaces, furnished, placed and seeded @ \$1	205 00		
Extra work — Excavate rock in edgestone trenches where directed:			
16 cubic yards rock excavated @ \$3	48 00		
<i>Carried forward</i>	\$5,184 40	\$948 39	

<i>Brought forward</i>	\$5,184 40	\$948 39
Extra work — Fill abandoned catch-basins:		
1 hour, foreman, @ 50c.	50	
3 hours' labor @ 25c.	75	
Plus 15 per cent on \$1.25	19	
	<hr/>	5,185 84
		\$6,134 23
Credit: 114 feet straight edgestone, 58 feet circular, 2 small corners, all old		78 30
		<hr/>
		<u>\$6,055 93</u>

Hansborough street, between Blue Hill avenue and Harvard street. Length, 609 linear feet. Area, 2,301 square yards. Six-inch asphalt macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$87 14
Inspection	52 50
Engineering expense	1 50
Advertising	6 76
Labor, handling stock	15 26
Edgestone, 881 feet straight, 19 feet 5 inches circular and 2 small corners	646 44
Flagging, 112 feet 10 inches	94 26
Blocks, 15,360	196 20

Amount paid to James Doherty, under contract:

Removing trees, bushes, stumps, etc.	\$5 00	
779 cubic yards earth excavation @ 55c.	428 45	
884 linear feet straight edgestone hauled and set @ 22c.	194 48	
25 linear feet circular edgestone set @ 15c.	3 75	
301 linear feet existing edgestone reset @ 14c.	42 14	
419 square yards granite block paving hauled and laid @ 75c.	314 25	
20 square yards existing granite block paving relaid @ 45c.	9 00	
30 square yards flagging crosswalks hauled and laid @ 85c.	25 50	
1,870 square yards asphalt macadam surface furnished and placed @ 97c.	1,813 90	
8,765 square feet artificial stone sidewalks furnished and laid @ 14½c.	1,270 93	
71 square feet artificial stone driveways furnished and laid @ 14½c.	10 30	
5 covers reset @ \$3	15 00	
	<hr/>	
<i>Carried forward</i>	\$4,132 70	\$1,100 06

<i>Brought forward</i>	\$4,132 70	\$1,100 06	
Extra work — Haul surplus excavation to Dumas street: 63 tons material hauled to Dumas street, $\frac{1}{2}$ mile overhaul, per $\frac{1}{2}$ mile per ton (section 1, Article 3) @ 11c.		6 93	
	\$4,139 63		
Less amount charged to Dumas street	6 93		
	<u>4,132 70</u>		<u>\$5,232 76</u>

Harmon street, from Oakland street southeasterly for a distance of 90 feet. (Rough graded only.)

Labor, employees excavating	\$919 13	
Teaming	344 36	
Labor, resetting sign post	1 12	
Dynamite and fuse	1 49	
	<u>1,266 10</u>	

Harold Park, southerly from Harold street. (Work not started.)

Engineering	\$38 75	
Engineering expense	50	
Advertising	1 77	
	<u>\$41 02</u>	

Haverford street, from Montebello road 100 feet westerly. (Work not started.)

Engineering	\$29 60	
Advertising	1 77	
	<u>\$31 37</u>	

Henshaw street, at Cambridge street. (Work not started.)

Engineering	\$65 20	
Engineering expense	70	
	<u>\$65 90</u>	

Holiday street, between Bowdoin and Topliff streets. Length, 1,011 linear feet. Area, 2,921 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$69 46	
Inspection	94 50	
Engineering expense	2 75	
Labor, handling stock	1 75	
Flagging, 164 feet 10 inches	129 94	
Edgestone, 1,378 feet straight, 68 feet 10 inches circular and 2 small corners	1,009 77	
Bricks, 3,650	43 80	
Blocks, 21,305, old granite	337 10	
Teaming	12 80	
Amount paid to James Doherty, under contract: Removing trees, bushes, stumps, etc.,	\$5 00	
<i>Carried forward</i>	\$5 00	<u>\$1,701 87</u>

<i>Brought forward</i>	\$5 00	\$1,701 87
1,320 cubic yards earth excavation @ 50c.	660 00	
1,374 linear feet straight edgestone hauled and set @ 21c.	288 54	
76 linear feet circular edgestone set @ 15c.	11 40	
572 linear feet existing edgestone reset @ 11c.	62 92	
590 square yards granite block paving hauled and laid @ 65c.	383 50	
165 square yards existing granite block paving relaid @ 35c.	57 75	
37 square yards flagging crosswalks laid @ 45c.	16 65	
51 square yards existing flagging crosswalks relaid @ 40c.	20 40	
2,214 square yards macadam surface furnished and placed @ 65c.	1,439 10	
12,702 square feet artificial stone sidewalks furnished and laid @ 13c.	1,651 26	
66 square feet artificial stone driveways furnished and laid @ 13c.	8 58	
8 covers reset @ \$3	24 00	
	<hr/>	
	\$4,629 10	
Extra work — Remove trees where directed:		
10 hours, foreman, @ 62½c.,	6 25	
230 hours' labor @ 25c.	57 50	
Plus 15 per cent on \$63.75	9 56	
16 hours, double team, @ 75c.	12 00	
	<hr/>	
		4,714 41
		<hr/>
		<u>\$6,416 28</u>

Homes avenue, between Topliff and Draper streets. Length, 1,001 linear feet. Area, 2,892 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$167 22
Inspection	168 00
Engineering expense	1 70
Advertising	2 76
Labor, handling stock	28 46
Edgestone, 1,763 feet 10 inches straight, 10 small corners	1,200 13
Bricks, 25,150	301 80
Lumber	37 91
Teaming	2 40
Blocks, 700, old granite	14 00
	<hr/>
<i>Carried forward</i>	\$1,924 38

<i>Brought forward</i>		\$1,924 38	
Amount paid to James Doherty, under contract:			
Removing trees, bushes, stumps, etc.	\$10 00		
1,108 cubic yards earth excavation @ 55c.	609 40		
10 cubic yards water box excavation @ \$1.25	12 50		
3 cubic yards rock excavation @ \$3	9 00		
1,761 linear feet straight edgestone hauled and set @ 21c.	369 81		
32 linear feet circular edgestone set @ 15c.,	4 80		
214 linear feet existing edgestone reset @ 12c.	25 68		
612 square yards granite block paving hauled and laid @ 65c.	397 80		
86 square yards existing granite block paving relaid @ 35c.	30 10		
35 square yards existing flagging crosswalks relaid @ 40c.	14 00		
12,180 square feet artificial stone sidewalks furnished and laid @ 13c.	1,583 40		
332 square feet artificial stone driveways furnished and laid @ 13c.	43 16		
5 covers reset @ \$3	15 00		
		<u>\$3,124 65</u>	
Extra work — Omit water-bound macadam roadway and substitute tar macadam roadway:			
2,202 square yards tar macadam roadway furnished and placed @ 85c.	1,871 70		
		<u>4,996 35</u>	
			<u>\$6,920 73</u>
 <i>Howes street</i> , between Dorchester avenue and Pleasant street. Length, 591 linear feet. Area, 1,707 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.			
Engineering		\$63 36	
Inspection		42 00	
Engineering expense		50	
Advertising		2 76	
Labor, handling stock		1 68	
		<u>\$110 30</u>	
<i>Carried forward</i>			

<i>Brought forward</i>		\$110 30	
Edgestone, 7 feet 5½ inches circular and 4 small corners			23 36
Flagging, 112 feet			89 60
Blocks, 10,885 old granite			217 70
Amount paid to James Doherty, under con- tract:			
Removing trees, bushes, stumps, etc.	\$5 00		
694 cubic yards earth ex- cavation @ 50c.	347 00		
13 linear feet circular edge- stone set @ 15c.	1 95		
997 linear feet existing edge- stone reset @ 11c.	109 67		
393 square yards granite block paving hauled and laid @ 50c.	196 50		
80 square yards existing granite block paving relaid @ 35c.	28 00		
21 square yards flagging crosswalks hauled and laid @ 77c.	16 17		
1,166 square yards tar mac- adam surface furnished and placed @ 84c.	979 44		
5,584 square feet artificial stone sidewalks furn- ished and laid @ 13c.,	725 92		
144 square feet artificial stone driveways furn- ished and laid @ 13c.,	18 72		
3 covers reset @ \$3	9 00		
Extra work — Cut joints in old artificial stone to conform with new work and trim tree roots where directed:			
8 hours, finisher, @ 62½c.	5 00		
21½ hours' labor @ 25c.	5 38		
Plus 15 per cent on \$10.38	1 56		
		<u>2,449 31</u>	
			\$2,890 27
Credit: Edgestone, 19 feet old, Flagging, 14 feet old	\$6 65 5 04		
			<u>11 69</u>
			<u>\$2,878 58</u>

Islington street, between Webster street and Brighton avenue. Length, 263 linear feet. Area, 622 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed. (Unfinished.)

Engineering	\$84 71
Inspection	42 00
Engineering expense	75
Advertising	5 89
	<u>133 35</u>
<i>Carried forward</i>	\$133 35

<i>Brought forward</i>		\$133 35	
Edgestone, 463 feet 2 inches straight, 13 feet circular and 2 small corners		337 17	
Blocks, 700, old granite		14 00	
Amount paid to A. J. & G. H. McMurtry, under contract:			
Preparing site	\$2 00		
150 cubic yards earth excavation @ 60c.	90 00		
489 linear feet straight edgestone and corners hauled and set @ 15c.	73 35		
26 linear feet circular edgestone set @ 10c.	2 60		
37 linear feet existing edgestone reset @ 5c.	1 85		
26 square yards existing granite block paving relaid @ 30c.	7 80		
8 square yards existing flagging crosswalks relaid @ 25c.	2 00		
587 square yards tar macadam surface furnished and placed @ 65c.	381 55		
2,400 square feet artificial stone sidewalks furnished and laid (u n f i n i s h e d) @ 7c.	168 00		
2 covers reset @ \$3	6 00		
		<u>\$735 15</u>	
Amount retained		110 27	
			<u>624 88</u>
			<u>\$1,109 40</u>

Kenneth street, from Stratford street to Farrington avenue.
Credit on account of overcharges in account for 1912

Edgestone	\$264 65
Teaming	54 49
	<u>\$319 14</u>

Kilton street, between Park street and Talbot avenue. Length, 953 linear feet. Area, 2,751 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed. (No payment on contract until 1914.)

Engineering	\$85 50
Inspection	126 00
Engineering expense	3 75
Labor, handling stock	26 99
Edgestone, 1,516 feet 5 inches straight, 9 feet 5 inches circular, 4 small corners	1,053 03
Flagging, 250 feet	195 00
Blocks, 26,260 old granite	502 84
Teaming;	3 62
Amount paid to James Doherty, under contract	0 00
	<u>\$1,996 73</u>

Kiltredge street, between Metropolitan avenue and Cornell street. Work not started.

Engineering	\$86 38	
Engineering expense	40	
		<u>\$86 78</u>

* *Lawndale terrace*, between Lamartine and Amory streets. Length, 261 linear feet. Area, 516 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed. (Unfinished.)

Engineering	\$42 51
Inspection	70 00
Engineering expense	1 45
Advertising	4 20
Labor, handling stock	8 33
Flagging, 96 feet 10 inches	74 75
Edgestone, S2 feet 6 inches circular and 440 feet straight	405 40
Blocks, 5,950, old granite	71 40

Amount paid to James Doherty, under contract:

Removing trees, etc.	\$5 00
308 cubic yards earth excavation @ 65c.	200 20
439 linear feet straight edgestone hauled and set @ 25c.	109 75
83 linear feet circular edgestone set @ 18c.	14 94
9 linear feet existing edgestone reset @ 15c.	1 35
171 square yards granite block paving hauled and laid @ 80c.	136 80
1 square yard existing granite block paving relaid @ 50c.	50
19 square yards flagging crosswalks hauled and laid @ 90c.	17 10
354 square yards tar macadam surface furnished and placed @ \$1	354 00
2 square yards existing brick sidewalks relaid @ 35c.,	70
1,750 square feet artificial stone sidewalks furnished and laid (unfinished) @ 7c.,	122 50
Building fence	179 00

\$1,141 84

Less 5 per cent retained 57 09

1,084 75

\$1,760 79

Lithgow street, between Washington street and Talbot avenue. Length, 464 linear feet. Area, 1,404 square yards. Six-inch tar macadam

* See, also, special appropriation, "Tunnel under railroad tracks between Boylston and Green streets, Jamaica Plain."

roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.	
Engineering	\$91 70
Inspection	22 50
Engineering expense	1 45
Labor, handling stock	3 40
Advertising	6 76
Edgestone, 10 feet 3 inches and 2 small corners,	11 84
Flagging, 213 feet	170 40
Blocks, 12,300	181 20
Teaming	1 44
Steam roller	37 50
Amount paid to Jeremiah J. McCarthy Com-	
pany, under contract:	
Removing trees, bushes,	
stumps, etc.	\$1 00
501 cubic yards subgrading	
(earth excavation) @	
65c.	325 65
2½ cubic yards subgrading	
(rock excavation) @ \$4,	10 00
10 linear feet straight edge-	
stone set @ 15c.	1 50
7 linear feet circular edge-	
stone set @ 15c.	1 05
591 linear feet existing edge-	
stone reset @ 15c.	88 65
294 square yards granite block	
paving hauled and laid	
@ 70c.	205 80
53 square yards existing gran-	
ite block paving relaid	
@ 40c.	21 20
43 square yards flagging	
crosswalks hauled and	
laid @ \$1	43 00
12 square yards existing flag-	
ging crosswalks relaid	
@ 40c.	4 80
1,125 square yards tar macadam	
surface furnished and	
placed @ 84c.	945 00
2,285 square feet artificial stone	
sidewalks furnished and	
laid @ 15c.	342 75
1 cover reset @ \$3	3 00
	<hr/>
	\$1,993 40
Less 2½ days' use of city	
steam roller @ \$15	37 50
	<hr/>
	1,955 90
	<hr/>
	<u>\$2,584 09</u>

Lovering place, between Washington street and Harrison avenue. Length, 331 linear feet. Area, 579 square yards. Street widened, edgestone set, flagging crosswalks laid, roadway paved with asphalt and artificial stone sidewalks were constructed on the northerly side of the street and brick sidewalks on the southerly side.

Engineering	\$44 43
Inspection	91 00
	<hr/>
<i>Carried forward</i>	\$135 43

<i>Brought forward</i>	\$135 43
Engineering expense	3 25
Advertising	4 00
Labor, handling stock	5 72
Edgestone, 307 feet 11 inches straight, 2 large corners	227 54
Blocks, 25, old granite	50
Bricks, 4,100	43 70
Flagging	40 65

Amount paid to James Doherty, under contract:

Removing trees, fences, etc.	\$20 00
305 linear feet straight edgestone hauled and set @ 26c.	79 30
10 linear feet circular edgestone set @ 15c.	1 50
373 linear feet existing edgestone reset @ 15c.,	55 95
29 square yards existing granite block paving relaid, gravel joints, @ 51c.	14 79
13 square yards existing granite block paving relaid, pitch joints, including concrete base, @ \$2.05	26 65
12 square yards flagging crosswalks hauled and laid, pitch joints, including concrete base, @ \$2.27	27 24
525 square yards concrete base, bituminous concrete binder and asphalt wearing surface furnished and laid @ \$2.74,	1,438 50
167 square yards brick sidewalks relaid @ 43c.	71 81
997 square feet artificial stone sidewalks furnished and laid @ 19c.	189 43
1 cover reset @ \$3	3 00
Extra work — Remove old concrete under edgestone:	
72 hours' labor @ 25c.	18 00
Plus 15 per cent on \$18	2 70
Extra work — Seal up abandoned manhole:	
4 hours, mason, @ 70c.	2 80
10 hours' labor @ 25c.	2 50
Plus 15 per cent on \$5.30,	80
½ barrel cement @ \$1.85	93

1,955 90

\$2,416 79

<i>Lubec street</i> , between Gove street and Porter street. (Work not started.)		
Engineering		\$65 75
Engineering expense		42
Advertising		3 58
		<u> </u>
		<u>\$69 75</u>
<i>Maitland street</i> , between Beacon street and Boston & Albany Railroad. (Work done in 1912.)		
Engineering expense		<u>\$0 40</u>
<i>Manthorne road</i> , between Weld street and Centre street. (Work not started.)		
Engineering		<u>\$43 00</u>
<i>Marlowe street</i> , between Vinson street and Park street. (Work not started.)		
Engineering		\$38 60
Engineering expense		40
Advertising		5 67
Edgestone, 9 feet 4 inches circular		11 20
		<u> </u>
		<u>\$55 87</u>
<i>Marmion street</i> , between Montebello road and 112 feet southwesterly. (Work not started.)		
Engineering		\$31 25
Advertising		1 77
		<u> </u>
		<u>\$33 02</u>
<i>Mascoma street</i> , between Quincy street and Lawrence avenue. Length, 605 linear feet. Area, 1,748 square yards. (Work unfinished.) Constructed 6-inch tar macadam roadway, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.		
Engineering		\$76 65
Inspection		301 00
Engineering expense		4 05
Labor, handling stock		16 59
Edgestone, 1,043 feet 1 inch straight		754 71
Flagging, 165 feet 6 inches, 46 feet 6 inches circular		59 58
Blocks, 14,087, old granite		281 74
Teaming		3 00
Amount paid the Fred S. and A. D. Gore Corporation, under contract:		
Removing trees, brushes, stumps, etc.	\$1 00	
800 cubic yards earth excavation @ 50c.	400 00	
1,037 linear feet straight edgestone hauled and set @ 19c.	197 03	
54 linear feet circular edgestone set @ 13c.	7 02	
80 linear feet existing edgestone reset @ 13c.	10 40	
347 square yards granite block paving hauled and laid @ 55c.	190 85	
	<u> </u>	<u> </u>
<i>Carried forward</i>	\$806 30	\$1,497 32

<i>Brought forward</i>	\$806 30	\$1,497 32
94 square yards existing granite block paving relaid @ 43c.	40 42	
38 square yards flagging crosswalks hauled and laid @ 85c.	23 80	
29 square yards existing flagging crosswalks relaid @ 43c.	12 47	
1,367 square yards tar macadam surface furnished and placed @ 83c.	1,134 61	
7,153 square feet artificial stone sidewalks furnished and laid @ 13c.	929 89	
58 square feet artificial stone driveways furnished and laid @ 13c.	7 54	
5 covers reset @ \$3	15 00	
	<hr/>	
	\$2,970 03	
Less 15 per cent retained	445 50	
	<hr/>	
		2,524 53
		<hr/>
		<u>\$4,021 85</u>

Mascot street, between Mountain and Ballou avenues. Length, 1,151 linear feet. Area, 3,325 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$151 93
Inspection	196 00
Engineering expense	3 29
Labor, handling stock	23 48
Edgestone, 1,450 feet straight, 697 feet 2 inches circular and 2 small corners	1,858 15
Flagging, 115 feet 7 inches	92 47
Blocks, 29,650 old granite	390 68

Amount paid to James Doherty, under contract:

Removing trees, bushes, stumps, etc.	\$30 00
967 cubic yards earth excavation @ 45c.	435 15
5 cubic yards rock excavation @ \$3.50	17 50
1,440 linear feet straight edgestone hauled and set @ 19c.	273 60
707 linear feet circular edgestone set @ 12c.	84 84
55 linear feet existing edgestone reset @ 11c.	6 05
752 square yards granite block paving hauled and laid @ 69c.	518 88
1 square yard existing granite block paving relaid @ 33c.	33
	<hr/>
<i>Carried forward</i>	\$1,366 35
	<hr/>
	\$2,716 00

<i>Brought forward</i>	\$1,366 35	\$2,716 00
24 square yards flagging crosswalks hauled and laid @ 69c.	16 56	
2,593 square yards tar macadam surface furnished and placed @ 81c.	2,100 33	
13,643 square feet artificial stone sidewalks furnished and laid @ 13c.	1,773 59	
57 square feet artificial stone driveways furnished and laid @ 13c.	7 41	
22 covers reset @ \$3	66 00	
Extra work — Grade ap- proaches as directed:		
12 hours' labor @ 25c.	3 00	
Plus 15 per cent on \$3	45	
	<hr/>	5,333 69
		<u>\$8,049 69</u>

Maxfield street, between La Grange and Bellevue streets. Length, 769 linear feet. Area, 2,222 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed with seeded loam spaces.

Engineering	\$49 07
Inspection	266 00
Engineering expense	95
Labor, handling stock	24 58
Edgestone, 1,512 feet 6 inches straight, 37 feet 6 inches circular, 4 small corners	1,011 57
Flagging, 105 feet	84 00
Blocks, 22,625, old granite	326 58
Amount paid to West Roxbury Trap Rock Company, under contract:	
Removing trees, bushes, stumps, etc.	\$10 00
860 cubic yards earth excava- tion @ 60c.	516 00
1½ cubic yards rock excava- tion @ \$3	4 50
1,506 linear feet straight edge- stone hauled and set @ 25c.	376 50
51 linear feet circular edge- stone set @ 25c.	12 75
683 linear feet crushed stone and concrete foundation furnished and placed @ 30c.	204 90
537 square yards granite block paving hauled and laid @ \$1.25	671 25
26 square yards existing granite block paving re- laid @ 50c.	13 00
23 square yards flagging crosswalks hauled and laid @ 50c.	11 50
<i>Carried forward</i>	<hr/> \$1,820 40
	<hr/> \$1,762 75

<i>Brought forward</i>	\$1,820 40	\$1,762 75
1,756 square yards tar macadam surface furnished and placed @ 60c.	1,053 60	
7,157 square feet artificial stone sidewalks furnished and laid @ 14c.	1,001 98	
9 covers reset @ \$3	27 00	
295 square yards loam spaces furnished, placed and seeded @ 40c.	118 00	
	<hr/>	
	\$4,020 98	
Less 1,000 second-hand paving blocks taken by contractor @ 2c.	20 00	
	<hr/>	
		4,000 98
		<hr/>
		\$5,763 73

Mitchell street, from Old Colony avenue about 240 feet northerly. Length, 265 linear feet. Area, 382 square yards. Filling made, edgestone set, block gutters paved, flagging crosswalks laid, brick sidewalks laid, retaining wall built and 6-inch tar macadam roadway constructed. (Work unfinished.)

Engineering		\$127 04
Inspection		80 50
Engineering expense		3 85
Advertising		6 76
Labor, handling stock		2 46
Edgestone, 114 feet 1 inch straight		95 60
Flagging, 50 feet		39 00
Blocks, 2,100 old granite, 16 feet 11 inches circular		44 00
Bricks, 6,500		84 50
Steam roller		13 00
Amount paid to William J. Rafferty Company, under contract:		
Removing trees, bushes, stumps, etc.	\$0 01	
74 cubic yards earth excavation @ \$1	74 00	
233 cubic yards filling furnished @ 50c.	116 50	
113 linear feet straight edgestone hauled and set @ 20c.	22 60	
17 linear feet circular edgestone set @ 15c.	2 55	
402 linear feet existing edgestone reset @ 12c.	48 24	
51 square yards granite block paving hauled and laid @ 50c.	25 50	
120 square yards existing granite block paving relaid @ 35c.	42 00	
10 square yards flagging crosswalks hauled and laid @ 75c.	7 50	
	<hr/>	
<i>Carried forward</i>	\$338 90	\$496 71

<i>Brought forward</i>	\$338 90	\$496 71
233 square yards tar macadam surface furnished and placed @ 95c.	221 35	
162 square yards brick sidewalks laid @ 38c.	61 56	
38 square yards existing brick sidewalks relaid @ 30c.	11 40	
4 covers reset @ \$3	12 00	
Building wall	175 00	
	<hr/>	
	\$820 21	
Less 15 per cent retained,	123 03	
	<hr/>	

697 18

\$1,193 89

Montclair avenue, between Centre and Fletcher streets. Length, 1,106 linear feet. Area, 3,195 square yards. Set edgestone, pave gutters, flagging crosswalks laid, artificial stone sidewalks constructed and 6-inch tar macadam roadway constructed.

Engineering	\$128 83	
Inspection	232 75	
Engineering expense	2 85	
Labor, handling stock	22 32	
Edgestone, 1,319 feet 8 inches straight, 838 feet circular and 5 small corners	1,953 09	
Flagging, 225 feet 1 inch	179 92	
Blocks, 26,300, old granite	524 10	
Amount paid to Thomas F. Minton, under contract:		
Removing trees, bushes, stumps, etc.	\$10 00	
1,638 cubic yards earth excavation @ 50c.	819 00	
14 cubic yards water-box excavation @ \$1	14 00	
1 cubic yard rock excavation @ \$2	2 00	
1,307 linear feet straight edgestone hauled and set @ 28c.	365 96	
889 linear feet circular edgestone set @ 18c.	160 02	
50 linear feet existing edgestone reset @ 18c.	9 00	
730 linear feet crushed stone and concrete foundation furnished and placed @ 35c.	255 50	
781 square yards granite block paving hauled and laid @ \$1	781 00	
37 square yards existing granite block paving relaid @ 45c.	16 65	
50 square yards flagging crosswalks laid @ 50c.,	25 00	
9,895 square feet artificial stone sidewalks furnished and laid @ 15c.,	1,484 25	
	<hr/>	
<i>Carried forward</i>	\$3,942 38	\$3,043 86

<i>Brought forward</i>	\$3,942 38	\$3,043 86
164 square feet artificial stone driveways furnished and laid @ 15c.,	24 60	
16 covers reset @ \$3	48 00	
Extra work—Omit water-bound macadam roadway and substitute tar macadam roadway:		
2,509 square yards tar macadam roadway furnished and laid @ 75c.	1,881 75	
Extra work—Omit loam spaces and substitute full width artificial stone sidewalks:		
3,700 square feet artificial stone sidewalks furnished and laid @ 15c.	555 00	
Extra work—Raise manholes over 6 inches:		
6 manholes raised @ \$5	30 00	
Extra work—Haul circular edgestone from Centre street:		
14 days' labor @ \$2	28 00	
Plus 15 per cent on \$28	4 20	
7 days, double team, @ \$6	42 00	
Extra work—Lay blocks on cement in front of trees:		
$\frac{1}{2}$ day, paver, @ \$5	2 50	
2 days' labor @ \$2	4 00	
Plus 15 per cent on \$6.50	98	
1 bag Portland cement @ 50c.	50	
	<hr/>	6,563 91
		<hr/> <u>\$9,607 77</u>

Montebello road, from Washington street to Brookside avenue. Work not started.

Engineering	\$102 06
Engineering expense	40
Advertising	6 27
Flagging, 19 feet 5 inches	15 15
	<hr/>
	<u>\$123 88</u>

Morton street, Blue Hill avenue to beyond Leslie street.

Final payment made to James Doherty on contract for work done in 1911	<u>\$858 88</u>
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Morton street, west side, from Greendale road 607 feet. Work not started.
Advertising \$1 77

Mountfort street, between Audubon road and St. Mary's street. Length, 306 linear feet. Area, 1,209 square yards. Six-inch Bermudez asphalt macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$155 38
Inspection	73 50
Engineering expense	3 20
Advertising	6 81
Labor, handling blocks	6 91
Edgestone, 366 feet straight, 26 feet 8 inches circular	276 30
Flagging, 95 feet	76 00
Blocks, 600 old granite	12 00

Amount paid to James Doherty, under contract:

Removing trees, bushes, stumps, etc.	\$5 00
96 cubic yards earth excavation @ 50c.	48 00
309 cubic yards filling furnished @ 70c.	216 30
360 linear feet straight edgestone hauled and set @ 22c.	79 20
27 linear feet circular edgestone set @ 15c.	4 05
17 linear feet existing edgestone reset @ 15c.	2 55
214 square yards granite block paving hauled and laid @ 75c.	160 50
5 square yards existing granite block paving relaid @ 45c.	2 25
20 square yards flagging crosswalks hauled and laid @ 85c.	17 00
970 square yards asphalt macadam surface furnished and placed @ \$1.15	1,115 50
2,462 square feet artificial stone sidewalks furnished and laid @ 15c.	369 30
Extra work — Furnish and place filling on approaches as directed:	
991 cubic yards filling furnished and placed @ 70c.	693 70
Extra work — Rebuild top of manhole:	
4 hours, mason, @ 62½c.	2 50
4 hours, tender, @ 25c.	1 00
4 hours' labor @ 25c.	1 00
Plus 15 per cent on \$4.50	68
240 bricks @ \$10.50 per M.	2 52
3 bags cement @ 50c.	1 50
	<hr/>
	2,722 55
	<hr/>
	\$3,332 65
Credit: Blocks, 1,600 old granite	32 00
	<hr/>
	<u>\$3,300 65</u>

Myrick street, from Easton street to Coolidge road. (Work not started.)

Engineering	\$48 61	
Engineering expense	50	
Advertising	5 77	
		<u>\$54 88</u>

Naples road, between Commonwealth avenue and Brookline line. Length, 135 linear feet. Area, 498 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$59 18
Inspection	14 00
Engineering expense	1 75
Advertising	6 86
Edgestone, 250 feet old, and 2 small corners	91 10
Flagging, 20 feet old	7 20
Teaming	3 00

Amount paid to John J. Lane, under contract:

Removing trees, bushes, stumps, etc.	\$0 01
173 cubic yards earth excavation @ 50c.	86 50
255 linear feet straight edgestone and corners hauled and set @ 25c.	63 75
124 linear feet existing edgestone reset @ 15c.	18 60
85 square yards granite block paving hauled and laid @ 75c.	63 75
57 square yards existing granite block paving relaid @ 35c.	19 95
10 square yards existing flagging crosswalks relaid @ 50c.	5 00
403 square yards tar macadam surface furnished and placed @ 90c.	362 70
1,837 square feet artificial stone sidewalks furnished and laid @ 16c.	293 92
2 covers reset @ \$3	6 00
Extra work — Haul and lay flagging crosswalks as directed:	
4.4 square yards flagging crosswalks hauled and laid @ \$1	4 40

924 58

\$1,107 67

Normandy street, between Creston and Intervale streets. Length, 265 linear feet. Area, 766 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$101 63
Inspection	108 50
Engineering expense	1 85
Labor, handling stock	2 06

Carried forward \$214 04

<i>Brought forward</i>		\$214 04	
Edgestone, 244 feet 1 inch straight and 10 feet 5 inches circular		176	167
Flagging, 77 feet		52	08
Blocks, 7,600 old granite		152	00
Advertising		6	38
Teaming		1	50
Amount paid to Hugh J. McGuire, under contract:			
Removing trees, bushes, etc.	\$1	00	
313 cubic yards earth ex- cavation @ 55c.	172	15	
237 linear feet straight edge- stone hauled and set @ 22c.	52	14	
10 linear feet circular edge- stone set.*			
76 linear feet existing edge- stone reset @ 14c.	10	64	
181 square yards granite block hauled and laid @ 80c.	144	80	
23 square yards existing granite block paving relaid @ 50c.	11	50	
17 square yards flagging crosswalks hauled and laid at \$1.50	25	50	
6 square yards existing flagging crosswalks re- laid @ 75c.	4	50	
638 square yards tar mac- adam surface fur- nished and placed @ 90c.	574	20	
1,904 square feet artificial stone sidewalks furnished and laid @ 15c.	285	60	
4 covers reset @ \$3	12	00	
Extra work -- Cut gutter- mouth as directed:			
1½ days, stonecutter, @ \$5,	6	25	
Plus 15 per cent on \$6.25,		94	
		<u>3,101</u>	<u>22</u>
			<u>\$1,903 89</u>

Orient avenue, from Walley street to beyond Tower street. Six-inch asphalt macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed. (Work unfinished)

Engineering	\$566	81
Inspection	367	50
Engineering expense	11	36
Advertising	6	76
Labor, handling stock	11	33
Edgestone, 3,766 feet straight, 660 feet 4½ inches circular and 10 small corners	3,763	52
Flagging, 713 feet 10 inches	427	88
<i>Carried forward</i>	\$5,155	16

* No price bid for this kind of work.

<i>Brought forward</i>		\$5,155 16	
Amount paid to James Doherty, under contract:			
27 trees and stumps removed @ \$7	\$189 00		
2,500 cubic yards earth excavation @ 60c.	1,500 00		
3,700 linear feet straight edgestone hauled and set @ 23c.	851 00		
615 linear feet circular edgestone set @ 15c.	92 25		
70 linear feet existing edgestone reset @ 15c.	10 50		
700 linear feet crushed stone and concrete foundation furnished and placed @ 17c.	119 00		
1,300 square yards granite block paving furnished and laid @ \$2.12	2,756 00		
80 square yards flagging crosswalks hauled and laid @ 90c.	72 00		
26,000 square feet artificial stone sidewalks furnished and laid @ 16c.	4,160 00		
4 covers reset @ \$3	12 00		
		<u>\$9,761 75</u>	
Less 15 per cent retained	1,464 26		
			<u>\$8,297 49</u>
			<u>\$13,452 65</u>

Perkins street, from Prince street to Brookline line. Length, 315 feet. Widened, subgraded, resurfaced with macadam 4 inches deep and dish gutters paved.

Labor, employees paving gutters	\$156 00	
Labor, employees macadamizing roadway	122 50	
Cement	93	
Crushed stone, 117 tons	122 94	
Teaming	137 87	
Water cart	33 00	
Gravel, 26 double loads	36 40	
Steam roller	110 50	
Advertising	2 06	
		<u>\$722 20</u>

Pinehurst street, from Belgrade avenue to Dudley avenue. (Work not started.)

Engineering	<u>\$102 53</u>
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Playstead road, between Savin Hill avenue and Springdale street. Length, 335 linear feet. Area, 1,049 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$135 80	
Inspection	147 00	
Engineering expense	2 60	
Advertising	6 86	
Labor, handling stock	11 34	
Edgestone, 639 feet 8 inches straight, 81 feet 1½ inches circular	545 12	
Flagging, 116 feet 6 inches	93 20	
Bricks, 110	1 43	
Amount paid to William J. Rafferty Company, under contract:		
Removing trees, bushes, stumps, etc.	\$0 01	
299 cubic yards earth excavation @ 40c.	119 60	
80 cubic yards rock excavation @ \$5	400 00	
630 linear feet straight edgestone hauled and set @ 20c.	126 00	
81 linear feet circular edgestone set @ 15c.	12 15	
37 linear feet existing edgestone reset @ 15c.	5 55	
36 square yards existing granite block paving relaid @ 50c.	18 00	
26 square yards flagging crosswalks hauled and laid @ \$1	26 00	
8 square yards existing flagging crosswalks relaid @ 75c.	6 00	
733 square yards tar macadam surface furnished and placed @ 95c.	696 35	
19 square yards existing brick sidewalks relaid @ 50c.,	9 50	
4,405 square feet artificial stone sidewalks furnished and laid @ 16c.	704 80	
4 covers reset @ \$3	12 00	
Extra work — Omit the hauling and laying of granite block paving and substitute the furnishing and laying of the same:		
246 square yards granite block paving furnished and laid @ \$1.90	467 40	
	<hr/>	
	2,603 36	
		<u>\$3,546 71</u>

Potosi street, from Mt. Ida road to Percival street. (Work not started.)

Engineering	\$53 43	
Engineering expense	40	
Advertising	6 16	
	<hr/>	
		<u>\$59 99</u>

Priesing street, between Mozart street and Chestnut avenue. Length, 680 linear feet. Area, 523 square yards. Six-inch tar macadam roadway constructed for a distance of about 225 linear feet from

Mozart street, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.		
Engineering		\$109 34
Inspection		123 00
Engineering expense		2 40
Advertising		6 81
Labor, handling stock		4 36
Edgestone, 145 feet 11 inches straight, 298 feet		
10 inches circular		460 74
Flagging		115 93
Blocks, 5,175 old granite		103 50
Teaming		10 63
Steam roller		44 30
Amount paid to John Kelly Company, under contract:		
570 cubic yards earth excavation @ 45c.	\$256 50	
143 linear feet straight edgestone hauled and set @ 16c.	22 88	
300 linear feet circular edgestone set @ 15c.	45 00	
1,017 linear feet existing edgestone reset @ 10c.	101 70	
137 square yards granite block paving hauled and laid @ 75c.	102 75	
370 square yards existing granite block paving relaid @ 35c.	129 50	
34 square yards flagging crosswalks hauled and laid @ \$1	34 00	
523 square yards tar macadam surface furnished and placed @ 75c.	392 25	
8,366 square feet artificial stone sidewalks furnished and laid @ 15c.	1,254 90	
8 covers reset @ \$3	24 00	
	<u>\$2,363 48</u>	
Less 3 days' use of city steam roller @ \$15	45 00	
	<u>\$2,318 48</u>	
Less 600 second-hand paving blocks taken by contractor @ 2c.	12 00	
	<u>\$2,306 48</u>	
Less 125 second - hand crossing blocks taken by contractor @ 10c.	12 50	
	<u>2,293 98</u>	
		<u>\$3,274 99</u>
Credit: Edgestone, 19 feet 10 inches and 5 small corners (old)	\$21 94	
Flagging, 20 feet 4 inches (old)	7 32	
	<u>29 26</u>	
		<u>\$3,245 73</u>

Providence street, from 70 feet east of Church street to Berkeley street. Length, 1,117 linear feet. Area, 4,316 square yards. Roadway paved with granite blocks on a concrete base, with pitch and pebble joints, edgestone set, flagging crosswalks laid, and artificial stone sidewalks were constructed on the north side of the street and brick sidewalks on the south side.

Engineering	\$154 84
Inspection	97 12
Engineering expense	6 85
Labor, handling stock	8 13
Advertising	4 30
Edgestone, 779 feet 8 inches straight, 52 feet 11½ inches circular and 1 large corner	597 11
Flagging, 232 feet 8 inches	197 00
Bricks, 5,450	70 85
Blocks, 44,880 old granite	778 18
Cement	44
Teaming	382 16
Gravel, 91 double loads and 65 tons	179 40
Labor, employees filling sidewalks	9 75
Labor, employees repaving gutters	42 75
Labor, employees filling roadway	172 26

Amount paid to Coleman Brothers, under contract:

480 linear feet straight edge- stone hauled and set @ 20c.	\$96 00
75 linear feet circular edge- stone set @ 20c.	15 00
921 linear feet existing edge- stone reset @ 15c.	138 15
338 square yards existing gran- ite block paving relaid, gravel joints, @ 50c.	169 00
3,848 square yards granite block paving furnished and laid, pitch joints, includ- ing concrete base, @ \$3.65	14,045 20
56 square yards existing gran- ite block relaid, pitch joints, @ \$1	56 00
49 square yards flagging crosswalks hauled and laid, pitch joints, includ- ing concrete base, @ \$1.80	88 20
19 square yards existing flag- ging crosswalks relaid, pitch joints, @ \$1	19 00
6 square yards existing flag- ging crosswalks relaid, pitch joints, including concrete base, @ \$1.75	10 50
162 square yards brick side- walks laid @ 30c.	48 60
8,960 square feet artificial stone sidewalks furnished and laid @ 16c.	1,433 60
15 covers reset @ \$3	45 00
<i>Carried forward</i>	\$16,164 25
	\$2,701 14

<i>Brought forward</i>	\$16,164 25	\$2,701 14	
Drill bar and remove old wall:			
510 hours' labor @ 25c.	127 50		
Plus 15 per cent on \$127.50	19 13		
20 hours, double team, @ 75c., Extra work — Chip grout from old paving blocks:	15 00		
184 hours' labor @ 25c.	45 00		
Plus 15 per cent on \$45	6 90		
Extra work — Repair street as directed over settlement:			
8 hours, foreman, @ 50c.	4 00		
6 hours, paver, @ 62½c.	3 75		
56 hours' labor @ 25c.	14 00		
Plus 15 per cent on \$21.75, 4 hours, double team, @ 75c.	3 26		
2 tons crushed stone @ \$1.50	3 00		
2 bbls. Portland cement @ \$2	4 00		
	<u>\$16,413 79</u>		
Less amount charged to Paving Service appropriation	4,103 45		
		<u>12,310 34</u>	
			<u>\$15,011 48</u>

Puritan avenue, from Richfield street to unnamed street. (Work not started.)

Engineering	\$73 55	
Engineering expense	1 00	
Advertising	5 97	
		<u>\$80 52</u>

Quincefield street, between Humphreys and Wendover streets. Length, 263 linear feet. Area, 672 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$123 19	
Inspection	38 50	
Engineering expense	1 85	
Advertising	6 96	
Labor, handling stock	21	
Edgestone, 23 feet 11 inches straight, 27 feet 5½ inches circular	47 88	
Blocks, 5,895 old granite	76 74	
Amount paid to James Doherty, under contract:		
Removing trees, bushes, stumps, etc.	\$5 00	
274 cubic yards earth excavation @ 60c.	164 40	
14 linear feet straight edgestone hauled and set @ 22c.	3 08	
	<u>\$172 48</u>	<u>\$295 33</u>
<i>Carried forward</i>		

<i>Brought forward</i>	\$172 48	\$295 33	
28 linear feet circular edge- stone set @ 15c.	4 20		
388 linear feet existing edge- stone reset @ 14c.	54 32		
173 square yards granite block paving hauled and laid @ 63c.	108 99		
14 square yards existing gran- ite block paving relaid @ 50c.	7 00		
18 square yards existing flag- ging crosswalks relaid @ 50c.	9 00		
471 square yards tar macadam surface furnished and placed @ 90c.	423 90		
2,016 square feet artificial stone sidewalks furnished and laid @ 15½c.	307 44		
2 covers reset @ \$3	6 00		
Extra work — Cut gutter- mouth in catch-basin stone:			
8 hours, stonecutter, @ 62½c.	5 00		
Plus 15 per cent on \$5	75		
	<hr/>	1,099 08	
		<hr/>	<u>\$1,394 41</u>

Rexhame street, from Belgrade avenue to Colberg avenue. (Work not started.)

Engineering	\$52 25	
Engineering expense	40	
Advertising	4 20	
	<hr/>	<u>\$56 85</u>

Roach street, between Dorchester avenue and Pleasant street. Length, 434 linear feet. Area, 965 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed. (Unfinished.)

Engineering	\$101 59	
Inspection	87 50	
Engineering expense	4 75	
Advertising	6 06	
Labor, handling stock	12 20	
Edgestone, 785 feet 3 inches, 37 feet 8 inches circular	563 47	
Flagging, 22 feet	17 46	
Blocks, 7,650 old granite	139 00	
Amount paid to James Doherty, under con- tract:		
Removing trees, bushes, stumps, etc.	\$5 00	
470 cubic yards earth excava- tion @ 65c.	305 50	
¾ cubic yards rock excava- tion @ \$3	2 00	
	<hr/>	<hr/>
<i>Carried forward</i>	\$312 50	\$931 73

<i>Brought forward</i>	\$312 50	\$931 73
788 linear feet straight edge- stone hauled and set @ 21c.	165 48	
38 linear feet circular edge- stone set @ 17c.	6 46	
77 linear feet existing edge- stone reset @ 14c.	10 78	
279 square yards granite block paving hauled and laid @ 61c.	170 19	
39 square yards existing gran- ite block paving relaid @ 45c.	17 55	
5 square yards flagging crosswalks hauled and laid @ 80c.	4 00	
12 square yards existing flag- ging crosswalks relaid @ 50c.	6 00	
695 square yards tar macadam surface furnished and placed @ 89c.	618 55	
3,500 square feet artificial stone sidewalks furnished and laid (unfinished) @ 7c.,	245 00	
4 covers reset @ \$3	12 00	
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	\$1,568 51	
Less 15 per cent retained,	235 28	
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		1,333 23
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		\$2,264 96

Sachem street, between Hillside street and Parker Hill avenue. Length, 909 linear feet. Area, 3,369 square yards. Six-inch water-bound macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and brick sidewalk laid.

Engineering	\$152 31
Inspection	126 00
Engineering expense	3 60
Labor, handling blocks	8 41
Edgestone, 218 feet 2 inches straight, 281 feet circular	489 16
Flagging, 523 feet 4 inches	418 66
Blocks, 6,300 old granite	120 40
Bricks, 57,700	750 10
Steam roller	6 50
Labor on catch-basins and manholes	18 00
Amount paid to John McCourt & Co., under contract:	
Removing trees, bushes, stumps, etc.	\$0 01
2,180 cubic yards subgrading (earth excavation) @ 50c.	1,090 00
2 cubic yards subgrading (rock excavation) @ \$3, 1,207 linear feet straight edge- stone hauled and set @ 20c.	6 00
	241 40
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<i>Carried forward</i>	\$1,337 41
	<hr/>
	\$2,093 14

<i>Brought forward</i>	\$1,337 41	\$2,093 14	
480 linear feet circular edge-stone set @ 14c.	67 20		
433 linear feet existing edgestone reset @ 15c.,	64 95		
662 square yards granite block paving hauled and laid @ 70c.	463 40		
105 square yards existing granite block paving relaid @ 45c.	47 25		
113 square yards flagging crosswalks hauled and laid @ \$1	113 00		
2,469 square yards macadam surface furnished and placed @ 73c.	1,802 37		
1,263 square yards brick sidewalks laid @ 33c.	416 79		
26 square yards existing brick sidewalks relaid @ 25c.,	6 50		
7 covers reset @ \$3	21 00		
Concrete retaining wall furnished and built	1,325 00		
346 linear feet wood fence furnished and built @ 50c.,	173 00		
482 linear feet ground water drains furnished and laid @ 35c.	168 70		
Extra work — Relay existing flagging crosswalks where directed:			
20 square yards existing flagging crosswalks relaid @ 65c.	13 00		
Extra work — Haul gutter blocks from Brighton Paving Yard:			
89½ tons gutter blocks hauled, one and one-half (1½) miles overhaul, per half-mile per ton @ 11c.	29 45		
	<hr/>		
	\$6,049 02		
Less amount paid in 1912,	2,379 92		
	<hr/>		
		3,669 10	
		<hr/>	\$5,762 24

Seaver street, at Walnut avenue. (Work done in 1912.)

Engineering \$8 50

Sheffield road, between Walter and Selwyn streets. Length, 706 linear feet. Area, 2,040 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed. (Work unfinished.)

Engineering	\$115 81
Inspection	119 00
Engineering expense	1 40
Advertising	5 96
Labor, handling blocks	21 38

Carried forward \$263 55

<i>Brought forward</i>		\$263 55
Edgestone, 1,368 feet 9 inches straight, 18 feet 10 inches circular and 2 small corners		932 69
Flagging, 55 feet		42 90
Blocks, 18,115 old granite		362 30
Amount paid to William J. Rafferty Company, under contract:		
1,071 cubic yards earth excavation @ 65c.	\$696 15	
1,370 linear feet straight edgestone and corners hauled and set @ 30c.	411 00	
19 linear feet circular edgestone set @ 15c.	2 85	
23 linear feet existing edgestone reset @ 12c.	2 76	
475 square yards granite block paving hauled and laid @ 75c.	356 25	
8 square yards existing granite block paving relaid @ 40c.	3 20	
12 square yards flagging crosswalks hauled and laid @ \$1.50	18 00	
1,538 square yards tar macadam surface furnished and placed @ 95c.	1,461 10	
8,800 square feet artificial stone sidewalks furnished and laid @ 16c.	1,408 00	
62 square feet artificial stone driveways furnished and laid @ 16c.	9 92	
6 covers reset @ \$3	18 00	
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	\$4,387 23	
Less 15 per cent retained,	658 08	
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		3,729 15
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		<u>\$5,330 59</u>

Silloway street, between Melville avenue and Mather street. Length, 382 linear feet. Area, 1,142 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed, with loam spaces.

Engineering		\$36 12
Inspection		45 50
Engineering expense		40
Labor, handling stock		10 35
Blocks, 8,725 old granite		107 30
Edgestone, 690 feet straight, 9 feet 4 inches circular		494 20
Amount paid to James Doherty, under contract:		
Removing trees, bushes, stumps, etc.	\$5 00	
303 cubic yards earth excavation @ 50c.	151 50	
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<i>Carried forward</i>	\$156 50	\$693 87

<i>Brought forward</i>	\$156 50	\$693 87
692 linear feet straight edge- stone hauled and set @ 19c.	131 48	
9 linear feet circular edge- stone set @ 13c.	1 17	
12 linear feet existing edge- stone reset @ 13c.	1 56	
232 square yards granite block paving hauled and laid @ 65c.	150 80	
836 square yards tar macadam surface furnished and placed @ 83c.	693 88	
948 square feet artificial stone sidewalks furnished and laid @ 14c.	132 72	
1 cover reset @ \$3	3 00	
117 square yards loam spaces placed and seeded @ 10c.,	11 70	
	<hr/>	1,282 81
		<u>\$1,976 68</u>

Southern avenue, from Washington street to Bernard street. (Work done in 1912.)

Amount paid to Jeremiah J. McCarthy, retained under contract for work done in 1912	<u>\$200 00</u>
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Spring street, Webster street to Charles river. (Unfinished.) Length, 1,638 linear feet. Area, 9,828 square yards. Excavating and filling.

Engineering	\$438 75
Inspection	224 00
Engineering expense	6 10
Advertising	6 96
Amount paid to West Roxbury Trap Rock Company, under contract: Removing trees, bushes, stumps, etc. (unfin- ished)	\$1,000 00
2,000 cubic yards earth excava- tion @ 70c.	1,400 00
14 cubic yards rock excava- tion @ \$5	70 00
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	\$2,470 00
Less 5 per cent retained	123 50
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	2,346 50
	<u>\$3,022 31</u>

St. Lukes road, from Brighton avenue to Commonwealth avenue. (Work not started.)

Engineering	\$37 70
Engineering expense	35
Advertising	5 77
	<hr/>
	<u>\$43 82</u>

Stratford street, from Clement avenue to Providence Division Railroad. (Work done in 1912.)

Engineering	<u>\$4 50</u>
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Tellow street, between Worthington street and Tremont entrance of Back Bay Fens. Length, 240 linear feet. Area, 856 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed with a loam space, brick sidewalks relaid.

Engineering	\$113 29	
Inspection	143 50	
Engineering expense	1 75	
Labor, handling stock	24 72	
Edgestone, 180 feet straight, 62 feet 10 inches circular	194 22	
Flagging, 50 feet	40 00	
Bricks, 3,200	41 60	
Blocks, 7,000 old granite	133 58	
Amount paid to James Doherty, under contract:		
Removing trees, bushes, stumps, etc.	\$5 00	
202 cubic yards earth excavation @ 50c.	101 00	
181 linear feet straight edgestone hauled and set @ 30c.	36 20	
63 linear feet circular edgestone set @ 15c.	9 45	
318 linear feet existing edgestone reset @ 12c.	38 16	
165 square yards granite block paving hauled and laid @ 60c.	99 00	
33 square yards existing granite block paving relaid @ 35c.	11 55	
11 square yards flagging crosswalks hauled and laid @ 81c.	8 91	
647 square yards tar macadam surface furnished and placed @ 90c.	582 30	
298 square yards existing brick sidewalks relaid @ 30c.,	89 40	
1,576 square feet artificial stone sidewalks furnished and laid @ 13½c.	212 76	
2 covers reset @ \$3	6 00	
188 square yards loam spaces placed and seeded @ 9c.,	16 92	
72 cubic yards loam furnished @ 80c.	57 60	
Extra work—Furnish and place filling as directed:		
238 cubic yards filling furnished and placed @ 65c.	154 70	
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	1,428 95	
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	\$2,121 61	

Tucker street, between Lauriat avenue and Callender street. Length, 378 linear feet. Area, 1,091 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$59 08
Inspection	266 00
Engineering expense	1 15
Labor, handling stock	11 21
Edgestone, 692 feet 2 inches	484 51
Flagging, 45 feet 1 inch	36 07
Blocks, 9,735 old granite	197 64
Teaming	2 87

Amount paid to Fred S. & A. D. Gore Corporation, under contract:

Removing trees, bushes, stumps, etc.	\$1 00
364 cubic yards earth excavation @ 50c.	182 00
4 cubic yards rock excavation @ \$3.25	13 00
693 linear feet straight edgestone hauled and set @ 19c.	131 67
6 linear feet circular edgestone set @ 13c.	78
71 linear feet existing edgestone reset @ 13c.	9 23
234 square yards granite block paving hauled and laid @ 67c.	156 78
48 square yards existing granite block paving relaid @ 43c.	20 64
10 square yards flagging crosswalks hauled and laid @ 90c.	9 00
19 square yards existing flagging crosswalks relaid @ 43c.	8 17
807 square yards tar macadam surface furnished and placed @ 85c.	685 95
4,710 square feet artificial stone sidewalks furnished and laid @ 15c.	706 50
2 covers reset @ \$3	6 00

\$1,930 72

Extra work — Raise manhole covers to grade where directed:

2 days, mason, @ \$5	10 00
3½ days, tender, @ \$2.50	8 75
1 day, labor, @ \$2	2 00
Plus 15 per cent on \$20.75,	3 11
9 bags Portland cement @ 50c.	4 50
9 cubic feet sand @ 5c.	45
750 sewer brick @ \$12 per M.,	9 00

1,968 53

\$3,027 06

Tyndale street, between Walworth and Guernsey streets. Length, 1,946 linear feet. Area, 5,795 square yards. Six-inch tar macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid, crushed stone sidewalks laid and artificial stone sidewalks constructed.

Engineering		\$238 59	
Inspection		416 50	
Engineering expense		3 95	
Labor, handling stock		56 13	
Advertising		7 06	
Edgestone, 3,634 feet 5 inches straight, 2 small corners, 262 feet 4 inch circular		2,746 01	
Flagging, 50 feet		44 00	
Blocks, 55,075 old granite		1,071 95	
Teaming		1 50	
Amount paid to Hugh J. McGuire, under contract:			
Removing trees, bushes, stumps, etc.	\$5 00		
2,594 cubic yards earth exca- vation @ 54c.	1,400 76		
10 cubic yards rock excava- tion @ \$3.75	37 50		
3,628 linear feet straight edge- stone hauled and set @ 25c.	907 00		
270 linear feet circular edge- stone set @ 15c.	40 50		
82 linear feet existing edge- stone reset @ 15c.	12 30		
1,323 square yards granite block paving hauled and laid @ \$1.10	1,455 30		
66 square yards existing granite block paving relaid @ 45c.	29 70		
12 square yards flagging crosswalks hauled and laid @ \$1.75	21 00		
11 square yards existing flagging crosswalks relaid @ 75c.	8 25		
4,491 square yards tar macad- am surface furnished and placed @ 80c.	3,592 80		
138 square yards crushed stone sidewalks fur- nished and placed @ 50c.	69 00		
21,815 square feet artificial stone sidewalks furnished and laid @ 14c.	3,054 10		
68 square feet artificial stone driveways furnished and laid @ 14c.	9 52		
28 covers reset @ \$3	78 00		
		<u>10,720 73</u>	
			<u>\$15,306 42</u>

Vassar street, from Washington street to Kilton street.

Engineering	\$100 36	
Engineering expense	50	
Advertising	5 57	
		<u>\$106 43</u>

Vaughan avenue, from Geneva avenue to Devon street. (Work done in 1912.)

Engineering expense	\$0 10	
Credit:		
Bricks, 1,700	\$22 10	
Edgestone, 10 feet 6 inches circular	12 60	
		<u>34 70</u>
Net credit		<u>\$34 60</u>

Vesta road, between Blue Hill avenue and Harvard street. Length, 537 linear feet. Area, 1,551 square yards. Six-inch asphalt macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$130 36
Inspection	115 50
Engineering expense	4 85
Advertising	6 66
Labor, handling stock	13 95
Labor, stonecutter	18 00
Teaming	33 02
Flagging, 10 feet	3 60
Edgestone, 1,012 feet 2 inches straight	668 03
Blocks, 10,875 old granite	217 50

Amount paid to James Doherty, under contract:

Removing trees, bushes, stumps, etc.	\$5 00	
730 cubic yards earth excavation @ 90c.	657 00	
5 cubic yards rock excavation @ \$3.25	16 25	
610 linear feet straight edgestone hauled and set @ 22c.	134 20	
399 linear feet circular edgestone set @ 15c.	59 85	
54 linear feet existing edgestone reset @ 14c.	7 56	
344 square yards granite block paving hauled and laid @ 75c.	258 00	
13 square yards existing granite block paving relaid @ 45c.	5 85	
13 square yards existing flagging crosswalks relaid @ 50c.	6 50	
1,145 square yards asphalt macadam surface furnished and placed @ 97c.	1,110 65	
3,743 square feet artificial stone sidewalks furnished and laid @ 14 $\frac{3}{4}$ c.	552 09	
8 covers reset @ \$3	24 00	
		<u>2,836 95</u>
		<u>\$4,048 42</u>

Walworth street, between Belgrade avenue and Brook street. Length, 949 linear feet. Area, 3,706 square yards. (Work unfinished.) Six-inch tar macadam roadway constructed, edgestone set, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering	\$152 25	
Inspection	232 06	
Engineering expense	2 70	
Labor, handling stock	27 68	
Advertising	6 86	
Edgestone, 1,627 feet 4 inches straight, 4 small corners, 120 feet 9 inches circular .	1,233 34	
Flagging, 395 feet 1 inch	308 16	
Blocks, 5,175, old granite	103 50	
Amount paid to Hugh J. McGuire, under contract:		
1,130 cubic yards earth excava- tion @ 64c.	\$723 20	
30 cubic yards rock excava- tion @ \$3.75	112 50	
1,626 linear feet straight edge- stone and corners hauled and set @ 25c.,	406 50	
123 linear feet circular edge- stone set @ 17c.	20 91	
56 linear feet existing edge- stone reset @ 15c.	8 40	
87 square yards granite block paving hauled and laid @ \$1.10	95 70	
45 square yards existing granite block paving relaid @ 50c.	22 50	
84 square yards flagging crosswalks hauled and laid @ \$1.85	155 40	
29 square yards existing flag- ging crosswalks relaid @ 75c.	21 75	
3,021 square yards tar mac- adam surface furnished and placed @ 80c.	2,416 80	
12,743 square feet artificial stone sidewalks furnished and laid @ 14c.	1,784 02	
163 square feet artificial stone driveways furnished and laid @ 14c.	22 82	
Extra work — Omit granite block paving for gutters and sub- stitute tar macadam:		
575 square yards tar mac- adam surface furnished and placed @ 80c.	460 00	
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	\$6,250 50	
Less 5 per cent retained,	312 53	
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	5,937 97	
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	\$8,004 52	
<i>Wellington Hill street, from Morton street to Blue Hill avenue. (Work not started.)</i>		
Engineering	\$661 68	
Engineering expense	3 60	
Advertising	10 20	
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	\$675 48	

Whitfield street, between Wheatland and Talbot avenues. Length, 797 linear feet. Area, 2,365 square yards. Six-inch Burnmudez asphalt macadam roadway constructed, edgestone set, block gutters paved, flagging crosswalks laid and artificial stone sidewalks constructed.

Engineering		\$142 45	
Inspection		168 00	
Engineering expense		1 95	
Advertising		6 96	
Labor, handling stock		17 47	
Edgestone, 1,159 feet 1 inch straight, 51 feet 4 inches circular and 1 small corner		875 96	
Blocks, 15,880 old granite		295 28	
Amount paid to William J. Rafferty Company, under contract:			
Removing trees, bushes, stumps, etc.	\$0 01		
1,444 cubic yards earth excavation @ 91c.	1,314 04		
3 cubic yards rock excavation @ \$2	6 00		
1,161 linear feet straight edgestone and corners hauled and set @ 21½c.,	249 62		
55 linear feet circular edgestone set @ 14c.	7 70		
61 linear feet existing edgestone reset @ 12c.	7 32		
508 square yards granite block paving hauled and laid @ 73c.	370 84		
41 square yards existing granite block paving relaid @ 40c.	16 40		
47 square yards flagging crosswalks hauled and laid @ \$1	47 00		
1,769 square yards asphalt macadam surface furnished and placed @ 95c.	1,680 55		
7,630 square feet artificial stone sidewalks furnished and laid @ 14½c.	1,087 28		
10 covers reset @ \$3	30 00		
		<hr/>	
		4,816 76	
			<hr/> <u>\$6,324 83</u>

Wilmore street, from Blue Hill avenue to Norfolk street. (Work not started.)

Engineering	\$70 60	
Engineering expense	90	
Advertising	3 80	
Blocks, 307 old granite	6 14	
		<hr/>
		<u>\$81 44</u>

Woodford street, from Magnolia street to Magnolia street. (Work done in 1912.)

Engineering	\$9 84	
Amount paid to Jeremiah J. McCarthy, retained under contract for work done in 1912,	349 71	
		<hr/>
		<u>\$359 55</u>

RECAPITULATION OF STREET WORK.

MAINTENANCE.

<i>Academy Hill road, Washington street to Chestnut Hill avenue</i>	\$1,340 28
<i>Adams street, Rozella to south of King street</i>	396 06
<i>Adams street, Winthrop to Common street</i>	624 54
<i>Alban street, Welles avenue to Ashmont street</i>	2,577 69
<i>Alcott street, Franklin street to 100 feet east</i>	144 18
<i>Aldie street, Franklin to Everett street</i>	277 70
<i>Allston street, Washington street to Summit avenue</i>	323 88
<i>Anawan avenue, Beech to Park street</i>	763 84
<i>Armandine street, Milton avenue to Washington street</i>	7,161 22
<i>Ashmont street, Washington street to Dorchester avenue</i>	31 85
<i>Atherton street, Washington to Amory street</i>	1,259 10
<i>B street, West First to West Third street</i>	1,922 64
<i>B street, West First to Cypher street</i>	9 70
<i>Baxter street, D to E street</i>	753 57
<i>Beacon street, Audubon circle to railroad bridge</i>	5,307 87
<i>Beacon street, Brookline avenue to Raleigh street,</i>	2,034 17
<i>Beacon street, Charles to Spruce street</i>	2,204 92
<i>Beacon street, Cleveland circle to Brookline line</i>	1,867 20
<i>Beacon street, Massachusetts avenue to Raleigh street</i>	7,321 82
<i>Beethoven street, Washington to Arcadia street</i>	969 56
<i>Bennington street, Chelsea to across Wordsworth street</i>	26,275 52
<i>Bernard street, Harvard to Kerwin street</i>	2,397 63
<i>Blue Hill avenue, Columbia road to Canterbury street</i>	2,060 15
<i>Blue Hill avenue, east side Walk Hill to River street</i>	7,442 98
<i>Blue Hill avenue, west side Harvard to River street,</i>	3,128 44
<i>Blue Hill avenue, at Clarkwood and Stratton streets (crosswalk)</i>	473 62
<i>Blue Hill avenue, Washington street to 192 feet south</i>	584 76
<i>Bolton street, B to C street</i>	4 74
<i>Bourne street, at Neponset avenue</i>	170 36
<i>Bowdoin street, Mt. Ida road to Geneva avenue</i>	1,643 68
<i>Carried forward</i>	\$81,473 67



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<i>Brought forward</i>	\$81,473 67
<i>Bowdoin street</i> , Winter to Quincy street	1,638 65
<i>Brigham street</i> , Webster street to 200 feet south	833 90
<i>Bunker Hill street</i> , Sackville to Mead street	984 18
<i>C street</i> , West Broadway to West First street	2,585 46
<i>Cambridge street</i> , Union square to Allston bridge	3,883 74
<i>Centre street</i> , north side Allston street to railroad	543 44
<i>Centre street</i> , Washington street to railroad	7 90
<i>Centre street</i> , Green to South street	21,188 31
<i>Chelsea Bridge South</i> , approach to	548 00
<i>Chelsea street</i> , Maverick to Day square	413 01
<i>Chestnut avenue</i> , Mozart to Centre street	3,182 96
<i>Chestnut Hill avenue</i> , Winship street to Cleveland circle	2 50
<i>Clarendon street</i> , Stuart street to St. James avenue,	326 41
<i>Cohasset street</i> , Corinth to Albano street	1,697 61
<i>Columbia road</i> , Cushing to Davenport avenue	2,792 73
<i>Columbia road</i> , Hamilton to Richfield street	368 06
<i>Columbia road</i> , Quincy street to railroad bridge	1,442 82
<i>Columbus avenue</i> , Dimock to Washington street	3,149 18
<i>Condor street</i> , at foot of Glendon street	138 00
<i>Conway street</i> , South to Fairview street	2,850 72
<i>Cornell street</i> , Washington street to Bellevue avenue	92 72
<i>Denmark street</i> , St. Stephen to Hemenway street	181 55
<i>Dennis street</i> , Dudley to Woodville street	2,616 94
<i>Dorchester avenue</i> , Belfort to Williams street	315 37
<i>Dorchester avenue</i> , Park to Ashmont street	3,928 43
<i>Dorchester avenue</i> , Ralston street to 140 feet south,	1,755 16
<i>Draper street</i> , Westville to Bowdoin street	41 65
<i>Dudley street</i> , Washington street to Harrison avenue	1,349 80
<i>E street</i> , West Broadway to West Third street	620 46
<i>East Dedham street</i> , Harrison avenue to Washington street	1,260 57
<i>East Fourth street</i> , G to H street	1,268 34
<i>East Ninth street</i> , K street to Columbia road	4,203 07
<i>Edgeworth street</i> , Bunker Hill to Ferrin street	1,345 03
<i>Elmo street</i> , Blue Hill avenue to Erie street	1,934 79
<i>Elmwood street</i> , Roxbury to King street	1,274 83
<i>Essex street</i> , Commonwealth avenue to Cottage Farm Bridge	787 77
<i>Evelyn street</i> , Blue Hill avenue to Norfolk street	5,479 79
<i>Everett street</i> , Western avenue to North Beacon street	6,214 73
<i>Exchange street</i> , State street to 174 feet north	2,141 88
<i>Fairview street</i> , Conway street to 350 feet east	522 46
<i>Ferrin street</i> , Edgeworth to 75 feet east of Jackson street	1,833 47
<i>Carried forward</i>	\$169,220 06

<i>Brought forward</i>	\$169,220 06
<i>Fisher avenue</i> , Parker to Hayden street	4,750 56
<i>Foss street</i> , Water to Chelsea street	4,805 54
<i>Foster street</i> , Washington to Surrey street	215 52
<i>Francis street</i> , Huntington to Longwood avenue	21 82
<i>Franklin street</i> , Broad to India street	438 53
<i>Franklin street</i> , Easton to Lincoln street	1,423 26
<i>Freeport street</i> , Neponset avenue to Pope's Hill station	5,703 77
<i>Fulton street</i> , Richmond to Lewis street	4,727 10
<i>Gardner street</i> , Centre to Roxbury street	1,052 99
<i>Geneva avenue</i> , Bowdoin to Park street	2,231 07
<i>Germania street</i> , Boylston to Bismarck street	4,400 20
<i>Gold street</i> , D to E street	388 98
<i>Greenwood street</i> , Elmo to Erie street	410 66
<i>H street</i> , East Seventh street to Columbia road	1,851 88
<i>Harrison avenue</i> , Essex to Beach street	45 00
<i>Harvard street</i> , Blue Hill avenue to Morton street	7,507 65
<i>Harvard street</i> , Walk Hill to Oakland street	3,192 93
<i>Harvard street</i> , Washington street to Blue Hill avenue	4,514 94
<i>Hatch street</i> , East Eighth to East Ninth street	386 49
<i>Haverhill street</i> , Sever to Main street	596 09
<i>Hayward place</i> , Washington street to Harrison avenue	1,736 86
<i>Hemenway street</i> , Boylston street to Huntington avenue	75 68
<i>Hollander street</i> , Humboldt avenue to Harold street	91 93
<i>Hollander street</i> , from Humboldt avenue, 200 feet west	2,375 94
<i>Holworthy street</i> , Walnut avenue to Harold street	953 60
<i>Howard street</i> , Gerard to Magazine street	2,543 87
<i>Huntington avenue</i> , Longwood avenue to Gainsborough street	16,846 34
<i>Hyde Park avenue</i> , Eldridge road to Stony brook	3,257 68
<i>Hyde Park avenue</i> , Dana to Glenwood avenue	4,248 20
<i>Hyde Park avenue</i> , Tower to lower Walk Hill street	1,441 62
<i>Hyde Park avenue</i> , West Roxbury line to River street	3,070 76
<i>I street</i> , Broadway to Second street	1,905 87
<i>India square</i> , Broad to India street	463 58
<i>Inwood street</i> , Olney to Norton street	363 94
<i>Jackson street</i> , Bunker Hill to Ferrin street	2,436 79
<i>Judson street</i> , Dean to West Cottage street	469 39
<i>K street</i> , Broadway to the waterfront	4,336 86
<i>Kenneth street</i> , Farrington to Beach street	337 10
<i>Carried forward</i>	\$264,841 05

<i>Brought forward</i>	\$264,841 05
<i>Kinross road</i> , Commonwealth avenue to Sutherland road	1,304 82
<i>L street</i> , bulkhead	4,025 12
<i>L street</i> , East Fourth to East Sixth street	2,609 16
<i>L street</i> , from 200 feet north to 600 feet north of East First street	422 94
<i>Lamartine street</i> , Green to Boylston street	4,646 58
<i>Landseer street</i> , La Grange to Bellevue street	876 35
<i>Lauriat avenue</i> , Norfolk street to Blue Hill avenue,	1,199 69
<i>Lime street</i> , River to Brimmer street	1,120 22
<i>Linden street</i> , Cambridge street to Commonwealth avenue	4,532 52
<i>Linnet street</i> , La Grange to Bellevue street	855 25
<i>Loring street</i> , Seventh to Eighth street	374 10
<i>Lyon street</i> , Dorchester avenue to Adams street	83 80
<i>Marcella street</i> , Washington to Ritchie street	425 44
<i>Marvin street</i> , Washington street to Shawmut avenue	2,604 08
<i>Massachusetts avenue</i> , New England Railroad to Edward Everett square	1,353 89
<i>Massachusetts avenue</i> , New England Railroad to Columbia road	6,298 82
<i>Maverick square</i> , Sumner to Maverick street	1,305 92
<i>Maverick street</i> , Border to New street	434 37
<i>Maxwell street</i> , Milton avenue to Capen street	2 00
<i>Medford street</i> , Baldwin to Cook street	22 40
<i>Medford street</i> , Cook to Elm street	2,947 95
<i>Medford street</i> , Elm to Monument street	1,577 52
<i>Metropolitan avenue</i> , Washington to Kittredge street	961 16
<i>Metropolitan avenue</i> , Washington to Poplar street,	11,598 24
<i>Milk street</i> , Broad to India street	681 93
<i>Mill street</i> , Adams street to Old Colony Railroad,	1,926 27
<i>Milton avenue</i> , Norfolk to Evans street	5,870 08
<i>Milton avenue</i> , Norfolk to Maxwell street	3,337 90
<i>Minot street</i> , Adams street to Neponset avenue	2,872 35
<i>Minot street</i> , Charlemont to Adams street	3,417 59
<i>Minot street</i> , Neponset avenue to Charlemont street	5,963 63
<i>Mitchell street</i> , West Ninth street to 190 feet south of West Ninth street	317 42
<i>Morton street</i> , Harvard to Canterbury street	4,792 10
<i>N street</i> , Fifth to Sixth street	724 59
<i>Newbury street</i> , Arlington to Berkeley street	1,422 09
<i>Nightingale street</i> , Wales street to Talbot avenue,	717 55
<i>Nightingale street</i> , Wales to Bernard street	5 82
<i>North Beacon street</i> , Vineland street to Charles River Bridge	917 99
<i>Carried forward</i>	\$349,390 70

<i>Brought forward</i>	\$349,390 70
<i>North Harvard street</i> , Western avenue to Charles River Bridge	6,200 45
<i>Park street</i> , City square to Henley street	1,363 37
<i>Park street</i> , Clement to Anawan avenue	3,587 38
<i>Parkman street</i> , North Anderson to North Grove street	521 33
<i>Parsons street</i> , Faneuil to Harriet street	2,628 95
<i>Perkins street</i> , South Huntington avenue to the parkway	1,097 30
<i>Phillips street</i> , Anderson to Grove street	597 97
<i>Phillips street</i> , West Cedar to Grove street	38 25
<i>Pierce street</i> , West street to Fairmount avenue	3,249 59
<i>Pope's Hill street</i> , Neponset avenue to Freeport street	2,050 10
<i>Pope's Hill street</i> , Neponset avenue to Freeport street	811 80
<i>Poplar street</i> , Brown to Metropolitan avenue	957 46
<i>Porter street</i> , Bismarck to Amory street	261 45
<i>Preston street</i> , Mill to Freeport street	1,874 05
<i>Providence street</i> , Berkeley to Clarendon street	81 16
<i>Providence street</i> , 70 feet east of Church to Berkeley street	4,183 73
<i>Quincy street</i> , Columbia road to railroad bridge	684 03
<i>Rawson street</i> , Boston street to Dorchester avenue,	1,419 05
<i>Raymond street</i> , Everett to Franklin street	182 77
Rebuilding face of wall at South Yard	950 00
Reconstruction of stable at Hancock Street Yard,	7 80
<i>Reed street</i> , Newcomb to Hunneman street	1,610 18
Repairing wall at Fort Hill Wharf	105 33
<i>Richfield street</i> , Barry street to Columbia road	1,953 65
<i>Richmond street</i> , Adams street to Dorchester avenue	973 01
<i>Ritchie street</i> , Marcella to Centre street	1,451 19
<i>River street</i> , Mattapan line to railroad bridge	1,843 67
<i>Rose street</i> , Harrison avenue to Albany street	670 53
<i>Rosedale street</i> , Nos. 7, 9, 10, 12	148 32
<i>Ruggles street</i> , Washington street to Shawmut avenue	5,652 81
<i>Ruth street</i> , Webster to Marginal street	568 15
<i>Sanford street</i> , Washington to Cedar street	7 35
<i>Saratoga street</i> , Bremen to Moore street	1,809 67
<i>Saratoga street</i> , Wordsworth street to Orient Heights	1,483 95
<i>Savin Hill avenue</i> , Dorchester avenue to railroad bridge	1,452 34
<i>School street</i> , Washington to Amory street	1,348 95
<i>Seattle street</i> , Hopedale street to 90 feet north	74 69
<i>Sever street</i> , Cambridge to Haverhill street	1,513 28
<i>Carried forward</i>	\$404,805 76

<i>Brought forward</i>	\$404,805 76
<i>Shepard street</i> , Washington to Union street	198 25
<i>Short street</i> , Bunker Hill to Medford street	455 94
<i>Sleeper street</i> , Congress street to about 650 feet north	8,663 11
<i>South street</i> , Centre to Keyes street	16,632 59
<i>South street</i> , Neponset avenue to Freeport street	1,066 89
<i>South street</i> , Robert to Centre street	2,903 41
<i>Sparhawk street</i> , Cambridge to Market street	2,823 67
<i>Spring street</i> , Allen to Poplar street	1,161 76
<i>St. Alphonsus street</i> , Tremont to Smith street	369 62
<i>St. Alphonsus street</i> , Tremont to Calumet street	31 05
<i>Steps</i> at Hancock Street Yard	1,050 21
<i>St. Stephen street</i> , Massachusetts avenue to Opera place	3,617 06
<i>Summer street</i> , north side B street to viaduct	7,918 08
<i>Summer street</i> , Annabel to Stoughton street	37 92
<i>Surrey street</i> , Foster to Parsons street	214 67
<i>Thacher street</i> , Endicott to Prince street	656 59
<i>Thorndike street</i> , Washington street to Harrison avenue	1,435 94
<i>Tremont street</i> , Burke to Cunard street	38 15
<i>Tremont street</i> , north side, 350 feet east from St. Alphonsus street	612 37
<i>Tremont street</i> , Winter street to Hamilton place	1,020 77
<i>Tudor street</i> , E to F street	357 47
<i>Union Park street</i> , Harrison avenue to Albany street	1,202 91
<i>Vernon street</i> , Washington street to Shawmut avenue	3,664 77
<i>Walker street</i> , Main to Russell street	1,684 02
<i>Walk Hill street</i> , Harvard street to Blue Hill avenue	49 22
<i>Walnut avenue</i> , Iffley road to beyond Montebello road	761 23
<i>Walnut avenue</i> , Warren street to Humboldt avenue	1,266 08
<i>Walnut street</i> , Franklin to Ericsson street	6,673 85
<i>Waltham street</i> , Harrison avenue to Tremont street,	2,471 68
<i>Warren avenue</i> , Berkeley street to Columbus square	47,887 66
<i>Warren street</i> , Cambridge street to Commonwealth avenue	4,717 28
<i>Warren street</i> , Rockland to Townsend street	2,210 29
<i>Warren street</i> , Thompson square to Monument avenue	1,137 02
<i>Washington street</i> , Blue Hill to Talbot avenue	54,952 09
<i>Washington street</i> , Bowdoin to Moultrie street	4 90
<i>Washington street</i> , Cambridge across Market street,	23,425 13
<i>Carried forward</i>	\$608,179 41

<i>Brought forward</i>	\$608,179 41
<i>Washington street, Elmore to Dimock street</i>	637 33
<i>Washington street, Elmore to Townsend street</i>	2 43
<i>Washington street, Foster to Market street</i>	2,255 24
<i>Washington street, at and near Hyde Park avenue and Tower street</i>	3,832 50
<i>Washington street, South to Poplar street</i>	337 62
<i>Washington street, State to Boylston street</i>	813 31
<i>Welles avenue, north side Talbot avenue to opposite Harley street</i>	680 39
<i>West Cottage street, Dudley street to Brook avenue,</i>	591 26
<i>Western avenue, Market to Waverly street</i>	15 00
<i>West Fifth street, B to C street</i>	933 41
<i>West First street, A street to railroad crossing</i>	6,076 37
<i>West Third street, B to E street</i>	3,636 89
<i>Westland avenue, Hemenway street to Massachusetts avenue</i>	747 10
<i>Westville street, Geneva avenue to Draper street</i>	3,092 30
<i>Westville street, Corwin to Draper street</i>	28 45
<i>Wharf street, Broad to India street</i>	514 81
<i>Willow street, Centre street to 700 feet west</i>	1,326 12
<i>Windom street, to 104 feet north</i>	191 57
<i>Winthrop street, Blue Hill to Brook avenue</i>	1,686 97
<i>Wirt street, Washington to Henshaw street</i>	96 87
<i>Withington street, Norfolk to Torrey street</i>	2,517 65
<i>Woolson street, Blue Hill avenue to Norfolk street,</i>	8,251 67
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	<u>\$646,444 67</u>

CHARGED TO SPECIAL APPROPRIATIONS.

<i>Arlington street extension, Boylston street to Columbus avenue</i>	\$318 33
<i>Harvard avenue, Brighton, Commonwealth avenue to Cambridge street</i>	645 68
<i>Tunnel under railroad tracks, between Boylston and Green streets, Jamaica Plain</i>	12,227 55
<i>Norfolk street widening, Washington street to New York, New Haven & Hartford Railroad</i>	4,946 60
<i>Old Colony avenue, construction of</i>	1,485 65
<i>Pleasant street widening, Eliot to Washington street</i>	26,415 58
<i>Thatcher street extension, Bradlee street to 478 feet easterly of</i>	180 67
<i>Union Park street, Washington street to Harrison avenue</i>	8,852 47
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	<u>\$55,072 53</u>

CHARGED TO APPROPRIATION FOR HIGHWAYS, MAKING OF.

<i>Appian way</i> , Franklin to Raymond street	\$2,820 18
<i>Armington street</i> , Webster street to Brighton avenue	2,467 38
<i>Audubon road</i> , Ivy to Mountfort street	936 58
<i>B street</i> , Fargo to Congress street	504 64
<i>Ballou avenue</i> , Woodrow avenue to Willowwood street	1,164 82
<i>Barrymore street</i> , Blue Hill avenue to Harvard street	2,333 27
<i>Bentham road</i> , Draper street to Robinson avenue,	1,656 77
<i>Binney street</i> , Longwood avenue to Francis street,	117 92
<i>Brainerd road</i> , Harvard avenue to Warren street,	14,560 53
<i>Brookdale street</i> , Florence to Sycamore street	82 98
<i>Brookview street</i> , Blue Hill avenue to Harvard street	4,385 41
<i>Bynner street</i> , South Huntington avenue to Day street	6,064 34
<i>Calumet street</i> , Hillside street to Parker Hill avenue	10,028 11
<i>Chestnut street</i> , Brimmer street to Charles river embankment	60 70
<i>Church street</i> , Boylston to Providence street	2,887 92
<i>Clement avenue</i> , Anawan to Clement avenue	41 34
<i>Clement avenue</i> , Meredith street to Clement avenue	41 34
<i>Clement avenue</i> , Stratford to Park street	3,385 99
<i>Clermont street</i> , Bailey to Fuller street	50 78
<i>Cliftondale street</i> , Kittredge to Norfolk street	9,613 28
<i>Colonial avenue</i> , Talbot to New England avenue,	369 69
<i>Cottage street</i> , Gove to Porter street	66 04
<i>Crossman street</i> , Norfolk to West Selden street	2,566 36
<i>Dalrymple street</i> , Egleston to Boylston street	206 36
<i>Dawes street</i> , East Cottage to Willis street	2,604 14
<i>Denton terrace</i> , Washington to Kittredge street	72 18
<i>Dexter street</i> , Alford street to Everett line	663 73
<i>Dillaway street</i> , Hollis street to Dix place	50 55
<i>Don street</i> , Woodrow avenue to Callender street,	2,598 10
<i>Dumas street</i> , Willowwood to Mascot street	3,865 89
<i>Emmons street</i> , Paris to Chelsea street	2,801 77
<i>Evans road</i> , Corey road to Brookline line	1,472 47
<i>Gayland street</i> , West Cottage to Judson street	799 52
<i>Greenock street</i> , Blue Hill avenue to Harvard street	5,023 29
<i>Hadwin way</i> , Hyde Park avenue to Hammatt road	2,622 96
<i>Hallet street</i> , Minot street to railroad	5,553 42
<i>Carried forward</i>	\$94,540 75

<i>Brought forward</i>	\$94,540 75
<i>Hancock and Bowdoin streets, Winter to Hancock street</i>	6,055 93
<i>Hansborough street, Blue Hill avenue to Harvard street</i>	5,232 76
<i>Harmon street, from Oakland street 90 feet south-westerly</i>	1,266 10
<i>Harold park, from Harold street south</i>	41 02
<i>Haverford street, from Montebello road 100 feet west</i>	31 37
<i>Henshaw street, at Cambridge street</i>	65 90
<i>Holiday street, Bowdoin to Topliff street</i>	6,416 28
<i>Homes avenue, Topliff to Draper street</i>	6,920 73
<i>Howes street, Pleasant street to Dorchester avenue,</i>	2,878 58
<i>Islington street, Webster street to Brighton avenue,</i>	1,109 40
<i>Kenneth street, Farrington to Stratford street</i> (credit \$319.14).	
<i>Kilton street, Park street to Talbot avenue</i>	1,996 73
<i>Kittredge street, Metropolitan avenue to Cornell street</i>	86 78
<i>Lawndale terrace, Lamartine to Amory street</i>	1,760 79
<i>Lithgow street, Washington street to Talbot avenue</i>	2,584 09
<i>Lovering place, Washington street to Harrison avenue</i>	2,416 69
<i>Lubec street, Gove to Porter street</i>	69 75
<i>Maitland street, Beacon street to Boston & Albany Railroad</i>	40
<i>Manthorne road, Weld to Centre street</i>	43 00
<i>Marloue street, Vinson to Park street</i>	55 87
<i>Marmion street, Montebello road to 112 feet west,</i>	33 02
<i>Mascoma street, Quincy street to Lawrence avenue,</i>	4,021 85
<i>Mascot street, Mountain to Ballou avenue</i>	8,049 69
<i>Maxfield street, Bellevue to La Grange street</i>	5,763 73
<i>Mitchell street, West Ninth street to Old Colony avenue</i>	1,193 89
<i>Montclair avenue, Centre street to northeasterly line of Fletcher street extension</i>	9,607 77
<i>Montebello road, Washington street to Brookside avenue</i>	123 88
<i>Morton street, Blue Hill avenue to beyond Leslie street</i>	858 88
<i>Morton street, west side Greendale road, 607 feet</i>	1 77
<i>Mountfort street, southeasterly of Audubon road to St. Mary's street</i>	3,300 65
<i>Myrick street, Easton street to Coolidge road</i>	54 88
<i>Naples road, Commonwealth avenue to Brookline line</i>	1,107 67
<i>Normandy street, Creston to Intervale street</i>	1,903 89
<i>Carried forward</i>	\$169,594 49

<i>Brought forward</i>	\$169,594	49
<i>Orient avenue, Walley street to beyond Tower street</i>	13,452	65
<i>Perkins street, Prince street to Brookline line</i>	722	20
<i>Pinehurst street, Belgrade to Dudley avenue</i>	102	53
<i>Playstead road, Savin Hill avenue to Springdale street</i>	3,546	71
<i>Potosi street, Mt. Ida road to Percival street</i>	59	99
<i>Priesing street, Chestnut avenue to Mozart street,</i> <i>Providence street, Columbus avenue to about 932 feet southwesterly</i>	3,245	73
<i>Puritan avenue, from Richfield to unnamed street,</i> <i>Quincefield street, Humphreys to Wendover street,</i> <i>Rexhame street, Belgrade to Colberg avenue</i>	80	52
<i>Roach street, Dorchester avenue to Pleasant street,</i> <i>Sachem street, Hillside street to Parker Hill avenue,</i> <i>Seaver street, at Walnut avenue</i>	1,394	41
<i>Sheffield road, Walter to Selwyn street</i>	56	85
<i>Silloway street, Melville avenue to Mather street,</i> <i>Southern avenue, Washington to Bernard street</i>	2,264	96
<i>Spring street, Webster street to Charles river</i>	5,762	24
<i>St. Lukes road, Brighton avenue to Commonwealth avenue</i>	8	50
<i>Stratford street, Clement avenue to railroad</i>	5,330	59
<i>Tellow street, Worthington to Tremont street, entrance to Back Bay Fens</i>	1,976	68
<i>Tucker street, Lauriat avenue to Callender street,</i> <i>Tyndale street, Walworth to Guernsey street</i>	200	00
<i>Vassar street, Washington to Kilton street</i>	3,022	31
<i>Vaughan avenue, Geneva avenue to Devon street (credit \$34.60).</i>	43	82
<i>Vesta road, Blue Hill avenue to Harvard street</i>	4	50
<i>Walworth street, Belgrade avenue to beyond Brook street</i>	2,121	61
<i>Wellington Hill street, Morton street to Blue Hill avenue</i>	3,027	06
<i>Whitfield street, Wheatland to Talbot avenue</i>	15,306	42
<i>Wilmore street, Blue Hill avenue to Norfolk street,</i> <i>Woodford street, Magnolia to Magnolia street</i>	106	43
	4,048	42
	8,004	52
	675	48
	6,324	83
	81	44
	359	55
	<hr/>	
	\$265,936	92
Less credits	353	74
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Total	\$265,583	18
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PUBLIC WORKS DEPARTMENT — HIGHWAY DIVISION — PAVING SERVICE.

Maintenance of Macadam Streets.

Schedule of Amounts Resurfaced and Cost of Same for Years Ending February 1, 1907, to January 31, 1914.

	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Length of macadam in miles.....	346.02	348.62	350.85	353.81	358.35	381.41	388.32
Total area of macadam in square yards.....	6,348,389	6,406,246	6,436,823	6,480,706	6,543,978	6,945,748	7,032,369
Total cost of maintenance of macadam *.....	\$480,607 27	\$340,822 36	\$421,420 66	\$383,004 11	\$328,118 57	\$370,040 49	\$482,070 30
Cost per mile over entire mileage *.....	\$1,389 00	\$977 62	\$1,201 14	\$1,082 51	\$915 63	\$970 19	\$1,241 43
Cost per square yard over entire area *.....	\$0 08	\$0 053	\$0 065	\$0 059	\$0 05	\$0 053	\$0 069
Length of macadam resurfaced yearly in miles.....	20.9	22.2	43.1	36.7	23.3	31.9	25.6
Cost per mile of macadam resurfaced yearly.....	\$17,742 00	\$11,705 13	\$7,726 90	\$7,756 18	\$10,014 56	\$8,828 07	\$14,741 36
Area of macadam resurfaced yearly in square yards.....	392,670	406,438	582,267	480,110	307,774	391,708	370,906
Cost per square yard of resurfacing over yearly area.....	\$0 95	\$0 689	\$0 572	\$0 593	\$0 758	\$0 719	\$1 002
Cost per square yard of street cleaning over entire macadam area.....	\$0 0173	\$0 01264	\$0 0137	\$0 0152	\$0 0145	\$0 0127	\$0 0149
Percentage of maintenance and street improvements appropriations used for maintenance of macadam *.....	36.5%	33.7%	33.6%	30.4%	26.3%	28.2%	34.6%

* Including street cleaning by Paving Service.

New Edgestones. (Does not include work done on streets laid out and constructed under chapter 393 of the Acts of 1906.)

First Setting. Linear Feet.

YEAR.	South Boston.	East Boston.	Charlestown.	Brighton.	West Roxbury.	Dorchester and Hyde Park.	Roxbury.	City Proper.	Totals.
1905.....	2,049	1,494	.....	1,867	6,056	13,548	1,814	4,705	31,533
1906.....	2,078	628	.....	261	4,203	15,119	2,307	.....	24,596
1907.....	414	1,263	250	908	349	4,781	1,663	534	10,162
1908.....	656	798	.....	2,405	2,399	3,654	4,811	813	15,536
1909.....	723	2,898	.....	214	779	4,833	2,380	5,253	17,080
1910.....	328	1,182	100	983	5,190	8,044	6,810	50	22,687
1911.....	1,718	465	.....	2,098	11,627	14,627	5,806	352	36,693
1912.....	6,045	1,017	229	1,806	7,890	9,669	3,168	407	30,231
1913.....	2,199	557	70	1,221	2,907	10,296	2,716	1,359	21,325
Totals...	16,210	10,302	649	11,673	41,400	84,571	31,475	13,473	209,843

New Brick Sidewalks. (Does not include work done on streets laid out and constructed under chapter 393 of the Acts of 1906.)

First Laying. Square Yards.

YEAR.	South Boston.	East Boston.	Charlestown.	Brighton.	West Roxbury.	Dorchester and Hyde Park.	Roxbury.	City Proper.	Totals.
1905.....	1,186	1,980	.....	202	103	4,140	790	400	8,801
1906.....	934	699	.....	106	.....	1,758	899	328	4,724
1907.....	455	1,157	223	250	278	856	296	313	3,828
1908.....	217	836	.....	.....	400	958	884	.....	3,295
1909.....	311	2,597	.....	.....	156	406	5,359	.....	8,829
1910.....	1,292	974	42	166	987	596	2,230	.....	6,287
1911.....	520	364	.....	.....	.....	460	1,469	314	3,127
1912.....	2,249	623	.....	.....	.....	208	716	.....	3,796
1913.....	490	465	.....	.....	80	103	647	86	1,871
Totals...	7,654	9,745	265	724	2,004	9,685	13,290	1,441	44,558

Recapitulation, 1912.

	Edgestones. <i>Linear Feet.</i>	Brick. <i>Square Yards.</i>
South Boston Paving District No. 1.....	2,199	490
East Boston Paving District No. 2.....	557	465
Charlestown Paving District No. 3.....	70	.....
Brighton Paving District No. 4.....	1,221	.....
West Roxbury Paving District No. 5.....	2,907	80
Dorchester and Hyde Park Paving Districts Nos. 6, 9-11.....	10,296	103
Roxbury Paving District No. 7.....	2,716	647
City Proper Paving Districts Nos. 8 and 10..	1,359	86
Totals.....	21,325	1,871

Loads of Dirt and Street Cleanings Removed from February 1, 1913,
to January 31, 1914.*By Paving Service.*

DISTRICTS.	Single.	Double.	Cubic Yards.
South Boston.....	732	571	1,874
East Boston.....	206	20	246
Charlestown.....	368	26	420
Brighton.....	3,018	3,781	10,580
West Roxbury.....	6,508	4,507	15,522
Dorchester.....	753	1,300	3,353
Roxbury.....	5,201	3,090	11,381
South End.....	821	566	1,953
Ashmont.....	3,045	1,323	5,691
North End.....	1,114	536	2,186
Hyde Park.....	2,364	497	3,358
Totals.....	24,130	16,217	56,564

Loads of Snow Removed from February 1, 1913, to January 31, 1914.

DISTRICTS.	Single.*	Double.†	Cubic Yards.	Cost.‡
South Boston.....	847	72	1,910	\$2,687 81
East Boston.....	362	26	802	1,545 16
Charlestown.....	290	86	838	3,053 28
Brighton.....	14	10	58	1,993 40
West Roxbury.....	716	459	2,809	3,698 10
Dorchester.....	485	216	1,618	2,828 61
Roxbury.....	408	42	942	4,571 92
South End.....	1,843	434	4,988	5,120 73
Ashmont.....	134	59	445	927 29
North End.....	860	.....	1,720	3,521 56
Hyde Park.....	.....	.....	.....	665 51
Totals.....	5,959	1,404	16,130	\$30,613 37

* Single loads, 2 cubic yards.

† Double loads, 3 cubic yards.

‡ Includes cost of plowing gutters, cleaning sidewalks and picking ice not carted away.

Snow Removed by Contract.*

DISTRICTS.	Number of Loads.†	Cubic Yards.	Cost per Cubic Yard.	Total Cost.
Snow District No. 1.....	371	1,120	\$0 43	\$481 60
Snow District No. 3.....	410	1,644	47	772 68*
Snow District No. 4.....	697	2,313	42	971 46
Snow District No. 5.....	328	1,103½	49	540 72
Totals.....	1,806	6,180½	\$0 452	\$2,766 46

* Only this amount paid out of 1913 appropriation.

† The capacity of the loads varies from two (2) cubic yards to four (4) cubic yards.

Summary of Volume and Cost of Snow Removed, Year Ending January 31, 1914.

WORK DONE BY	TEAMS.		TOTAL TEAMS.		Cubic Yards.	Total Cubic Yards.	Cost.	Total Cost.	COST PER CUBIC YARD.	
	Single.	Double.	Single.	Double.					COST PER CUBIC YARD.	TOTAL COST PER CUBIC YARD.
Paving Service, Day Work.	South Boston.....	72			1,910	\$2,687 81				
	East Boston.....	847			802	1,545 16				
	Charlestown.....	352			86	838	3,053 23			
	Brighton.....	290			10	58	1,993 40			
	West Roxbury.....	14			2,800	3,698 10				
	Dorchester.....	716			1,618	2,828 61				
	Roxbury.....	485			942	4,571 92				
	South End.....	408			4,388	5,120 73				
	Ashmont.....	1,843			445	927 29				
	North End.....	134			1,720	3,521 56				
Hyde Park.....	800					665 51	\$30,613 37			
Paving Service, Contracts.	Snow District No. 1.....			1,404		\$481 60			\$0 43	
	Snow District No. 3.....	371			1,120	4,772 68			47	
	Snow District No. 4.....	410			1,644	971 46			42	
	Snow District No. 5.....	697			2,313	540 72			49	
		328			1,103½			\$2,766 42			$0 452
Street Cleaning Service, Day Work.	South Boston.....	792			2,059	\$1,392 11			\$0 67	
	East Boston.....	843			2,192	301 13			18	
	Charlestown.....	382			993	558 88			56	
	Dorchester.....	392			1,019	524 51			51	
	Roxbury.....	402			1,045	405 97			38	
	South End.....	337			876	901 23			1 08	
	North and West End.....	5,048			12,125	13,186 34			1 02	
	Back Bay.....	887			2,306	680 31			28	
	Patrol System.....	522			1,357	2,199 40			1 62	
	Totals (Exclusive of Paving Service, Day Work.....)				1,806	24,972	\$22,986 30	\$20,219 88			70
Totals (Inclusive of Paving Service, Day Work.....)				1,806	31,152½	\$53,599 67	\$53,599 67			\$0 576

1 Single loads, 2 cubic yards.
 2 Double loads, 3 cubic yards.
 3 Capacity of loads varies from 2 to 4 cubic yards.
 4 Only this amount paid out of 1913 appropriation.
 5 Includes cost of plowing gutters, cleaning sidewalk and picking ice not carted away.
 6 Street cleaning, branch loads, 2.60 cubic yards.
 7 Includes Sunday, paid time and one-half and holidays paid double time.

STREET OPENINGS.

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

NAME.	Permits.	Length in Feet.
City of Boston Fire Department.....	111	7,125
City of Boston Lamp Service.....	71	460
City of Boston Police Department.....	16	640
City of Boston Schoolhouse Commission.....	18	2,460
City of Boston Sewer Service.....	448	26,653
City of Boston Water Service.....	2,244	55,084
Boston Consolidated Gas Company.....	2,206	36,156
Boston Elevated Railway Company.....	356	78,090
Charlestown Gas and Electric Company.....	182	3,578
Dedham and Hyde Park Gas and Electric Company.....	79	3,560
East Boston Gas Company.....	230	14,565
Edison Electric Illuminating Company.....	4,342	425,711
New England Telephone and Telegraph Company,	501	70,975
Miscellaneous.....	3,611	278,825
Emergency, Class A.....	844	.....
Emergency, Class A, returned as used.....	437	.....
Estimated length.....	.....	10,925
Totals.....	15,696	1,014,807

Making a total length of openings of about 192 miles, an increase of fifty-two miles from the previous year.

Permits for occupation of public ways for purposes other than openings have been issued as follows:

Advertising by men wearing lettered hat and coat	59
Cleaning snow from roof	45
Driving cattle through the streets	11
Dumping snow in public alleys	23
Erecting and repairing awnings	1,370
Erecting and repairing buildings	3,773
Painting or minor repairs	4,223
Feeding horses on streets	955
Moving buildings in the streets	27
Placing signs flat in buildings	1,308
Projecting signs or lamps	393
Raising or lowering safes or heavy machinery	243
Loading and unloading goods	2
Emergency permits (Class B)	274
<i>Carried forward</i>	12,706

<i>Brought forward</i>	12,706
Special permits for other than the above purposes	51
Annual permits for other purposes	427
	<hr/>
Total	13,184
Total for openings in public ways	15,696
	<hr/>
Total of all permits issued	<u>28,880</u>

* The income from the issuance of permits amounted to \$32,258.03, divided as follows:

Class No. 1.	Openings	\$8,096 00
2.	Emergency openings	524 50
3.	Advertising	26 00
4.	Cleaning snow from roofs	45 00
5.	Driving cattle	55 00
6.	Dumping snow	11 50
7.	Erecting and repairing awnings	685 00
8.	Erection, alteration and repairs on buildings	16,744 28
9.	Minor repairs on buildings	2,113 00
10.	Feeding horses	955 00
11.	Moving buildings	355 00
12.	Painting signs on fences	0 00
13.	Placing flat signs	654 00
14.	Projecting signs, etc.	393 00
15.	Raising and lowering	243 00
16.	Loading and unloading	7 00
17.	Emergency, Class B	274 00
18.	Special	12 75
19.	Annual permits	1,064 00
		<hr/>
Total		<u>\$32,258 03</u>

SIDEWALK DEFECTS.

One thousand two hundred and ninety-eight (1,298) notices were sent to property owners to make repairs on sidewalks for the maintenance of which they were responsible. These included steps, fences, portions of buildings encroaching on sidewalks and defective bulkheads, area covers, etc.

* \$25,088.62 cash paid in to City Collector. Bills sent to City Collector for collection of balance, \$7,169.41.

ROADWAY DEFECTS.

Twenty-three thousand seven hundred and fifty-seven (23,757) notices were sent out to district foremen, contractors, public service corporations and others to make repairs in the streets where defects existed on account of operations for which they were responsible. One hundred and eighty-two (182) notices were sent departments, corporations and others to perform work under the direction of the Paving Service, made necessary by construction or resurfacing of streets by the Paving Service.

POLES.

Permits have been issued for the placing of 181 poles in the public ways in accordance with plans filed in the Permit Office. Permits have been issued for removal of 344 poles and for the resetting of 1,058 defective or unsafe poles.

BONDS.

There are on file in the Permit Office seventeen hundred (1,700) bonds covering the issuance of permits and maintenance of certain structures.

STREET NUMBERING.

Building numbers have been assigned as listed below:

	Entire Streets Numbered.	Entire Streets Renumbered.	Partly Numbered Streets.	Partly Renumbered Streets.	Estates Numbered.	Estates Renumbered.	Figures Issued.
East Boston.....		1	3		103	12	325
Charlestown.....					16		38
Boston.....		1	6		277	45	914
South Boston.....			3		90		259
Dorchester.....		2	13	2	534	87	1,556
Roxbury.....		3	9		203	74	710
West Roxbury.....		3	7		338	76	980
Brighton.....	2	2	15	1	362	79	1,087
Hyde Park.....		9		3	91	104	502
Totals.....	2	21	56	6	2,014	477	6,371

PLANS.

During the year plans were filed as follows:

	Pole.	Track.	Conduit.
New England Telephone and Telegraph Company.....	76	.....	75
Edison Electric Illuminating Company.....	52	.....	587
Boston Elevated Railway Company.....	17	18	16
Hyde Park Gas and Electric Light Company.....	.....	.....	12
Charlestown Gas and Electric Company.....	.....	.....	5
East Boston Gas Company.....	.....	.....	4
Boston Consolidated Gas Company.....	.....	.....	22
Postal Telegraph Cable Company.....	.....	.....	8
Bay State Street Railway Company.....	1	3	.....
Western Union Telegraph Company.....	1	.....	.....
Boston Low Tension Wire Association.....	.....	.....	1
American Telephone and Telegraph Company.....	1	.....	.....
Boston Fire Department.....	96	.....	.....
Boston Police Department.....	1	.....	8
Totals.....	245	21	738

Poles, 245; tracks, 21; conduits, 738; miscellaneous, 43; total of 1,047 plans filed this year, making a total of plans on file of 11,628.

LIST OF STREETS WITH SMOOTH PAVEMENT.

For list of streets having a smooth pavement see pamphlet published separately.

TABLE SHOWING THE UNIT COST OF ASPHALT AND BITULITHIC REPAIRS PER SQUARE YARD OF STREET SURFACE FROM 1904 TO 1913, INCLUSIVE.

Trinidad Asphalt.

City Proper.

STREET.	Limits.	Year Laid.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Albany street.....	80 feet north of Broadway, across Way street.	1899	*			\$0.009		\$0.005				
Albany street.....	East Concord street to 225 feet north of Massachusetts avenue.	1884	\$0.029	\$0.082	\$0.055	.086	\$0.124	.401	\$0.346	\$0.284	\$0.235	\$0.150
Arch street.....	Franklin street to Milk street.....	1893	.091	.057	.062	‡ .082						
Arch street.....	200 feet south of Milk street to Franklin street.	1893					.329	.145	‡			
Arlington street.....	Boylston street to Beacon street.....	1901								* .010	.002	.014
Ash street.....	Bennet street to Nassau street.....	1887	.033	‡				‡				
Avon street.....	Washington street to Chauncy street..	1901								* .028	.023	.146
Barton court.....	Barton street to Brighton street.....	1894	‡									
Batterymarch street.....	Milk street to Liberty square.....	1896	.247	.004	.008	.070	.030	.013	.060	.196	.319	.043
Beacon street.....	Charles street, across Arlington street,	1891	.043	.048	.049	.107	‡ .062					
Beacon street.....	Charles street to Brimmer street.....	1891					.109	.064	.074	.192		.053
Beacon street.....	Charles street to Brimmer street and southerly side to Arlington street.	1891-1901									.046	
Beacon street.....	Easterly side of Dorimouth street to within 150 feet of westerly line of Gloucester street.	1892	.060	.013	.036	.063	.084	‡ .028				

* Guaranty expired in this year.

‡ Repaved in this year.

‡ Westerly side repaved in this year.

Castle street.....	1899	*	.025							
Cazenove street.....	1899	*	.016							
Central street.....	1887	.141	.169	.029	.085	.191	.076	.099	†.120	
Chambers street.....	1894									
Chambers street.....	1895	.011	.025	.062	.073	.272	.004	.086	.115	.154
Chandler street.....	1899	*								
Charles street.....	1909									
Charter street.....	1894	.189	.192	.148	.386	.616	.150	.251	.273	.683
Cherry street.....	1892		.047	.027	.108	.012	.049	.029	.034	.082
Clark street.....	1892	.033	.027	.064	.136	.392	.038	.053	.248	.207
Columbus avenue.....	1884-99	.126	.160		†					
Columbus avenue.....	1896	.123	.193		†					
Congress square.....	1883-1900		*		.127	.007		.061	.116	.051
Cooper street.....	1887	.128	.051	.123	.340	.339	.170	.663	.361	.457
Cooper street.....	1897	.065	.158	.226		†				
Corning street.....	1883-96	.056	.204	.202	.487	†.061				.005
Court street.....	1891-1904	†								.027
Court square.....	1881	||.115								
Court square.....	1881-94	.171	.107	.036	.097	.191	.046	.193	.290	.021
Dartmouth street.....	1894				.026	.067		.023	.110	.049
Dartmouth street.....	1901								.039	.008

* Guaranty expired in this year.
 † Repaved in this year.
 ‡ From center of Byron street to Chestnut street repaved in this year.
 § Westerly side repaved in this year.
 ¶ Part repaved in this year.

Cost of Trinidad Asphalt Repairs, 1904-13.—Continued.

City Proper.—Continued.

STREET.	Limits.	Year Laid.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Dartmouth street.....	Buckingham street to 101 feet north- erly.	1899	.....	* \$0.019	.....	.....	.....	.....	.....	.....	.....	.....
Davis street.....	Washington street to Harrison avenue.	1892	\$0.010	\$0.082	.060	\$0.081	\$0.100	\$0.173	\$0.332	\$0.184	\$0.680	\$0.106
Devonshire street.....	Milk street to Water street.....	1909	.....	.....	.....	.....	.....	.....	*	.056	.099	.459
Dillon street.....	Lenox street to Sawyer street.....	1902	.....	.....	.....	.....	.....	.....	.....	.....	*	.010
Doane street.....	Kilby street to Broad street.....	1881	.103	.043	.....	.058	.307	.055	‡.189	.031	.224	.058
Edinboro' street.....	Essex street to Beach street.....	1895	.021	.113	.086	.061	.068	.170	.093	.377	‡.229	.....
Endicott street.....	Cooper street, across Thacher street...	1899	.....	.....	.....	.....	.....	*	.154	.177	.163	.278
Exchange place.....	Congress street to Kilby street.....	1887	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ferdinand street.....	At Castle square.....	1889	*	.....	.....	.....	.....	.....	.....	.....	.....	.....
Groton street.....	Washington street to Shawmut avenue.	1892	.028	.....	.031	.022	.045	.045	.115	.041	.079	.031
Hanover avenue.....	Hanover street to North street.....	1892	.006	.060	.059	.028	.237	.102	.029	.222	.209	.107
Harrison avenue.....	22 feet south of Kneeland street to 22 feet north of Harvard street.	1899	.....	.....	.....	.....	.....	*	.271	.250	.189	.211
Harrison avenue.....	East Newton street to East Springfield street.	1888-95	.017	.068	.115	.221	.369	.233	.291	.258	.378	.081
Harrison avenue.....	Asylum street, across Davis street....	1901	.....	.....	.....	.....	.....	.....	.....	*.231	.327	.150
Harrison avenue.....	Northerly side Union Park street, across Malden street.	1903	.....	.....	.....	.....	.....	.....	.....	.....	.....	*.193
Harrison avenue.....	East Springfield street to 90 feet south- erly.	1888	.017	.....	.....	.195	.880	.078	.208	.....	.080	.216

Hollis street.....	Tremont street, toward Washington street.	1891	.150	.051	.071	.173	.092	.073	.227	.295	.072	.080
Hudson street.....	Beach street to 90 feet north of Curve street (minus Kneeland and Harvard streets intersection).	1891	.037	.068	.132	.149	.175	.142	.178	.358	.224	.188
Huntington avenue.....	Boylston street, across Dartmouth street.	1901	.....	.....	.....	.....	.....	.....	.....	* .037	.033	.069
Kilby street.....	Liberty square.....	1881	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kilby street.....	Central street to Milk street (including Liberty square).	1881-98	.030	.056	.224	.149	‡.010	.016	.040	.045	.028	.012
Laconia street.....	Washington street to Harrison avenue.	1896	.....	.027	.054	.056	.157	.018	.224	.013	.117	.048
La Grange street.....	Tremont street, toward Washington street.	1897	.100	.068	.132	.110	.180	.074	.160	.216	.147	.333
Lincoln place.....	Worcester street to Springfield street..	1897	.....	.....	.024	.....	.037	.021	.....	.242	.....	.....
Malcolm street.....	Mt. Vernon street to Chestnut street..	1892	.....	.065	.....	.101	.128	.104	.....	.....	†	.066
Malden street.....	Washington street to Harrison avenue.	1902	.....	.....	.....	.....	.....	.....	.....	.....	* .004	.034
Mason street.....	449 feet south of West street to 22 feet north of Avery street.	1909	.....	.....	.....	.....	.....	.....	.....	.....	†.063	.190
Mason street.....	Tremont street to Avery street.....	1900	.....	.....	.....	.....	.....	.....	.....	.....	.....	.042
Massachusetts avenue.....	Columbus avenue to Tremont street (southerly roadway).	1892	.031	.034	.019	.073	.088	.070	†.070	.....	.064	.....
Massachusetts avenue.....	Tremont street to Shawmut avenue (southerly roadway).	1892	.031	.017	.015	.019	.063	.045	†.017	.....	.....	.....
Massachusetts avenue.....	Shawmut avenue to Washington street (southerly roadway).	1892	.031	.013	.048	.043	.200	.021	†.066	.....	.....	.....
Moon street.....	North square to Lewis street.....	1891	.....	.040	.096	.035	.150	.105	.083	.189	.218	.073
North Bennet street.....	Hanover street to Salem street.....	1883	†	.....	.....	.....	.....	.....	.....	.....	.....	.....

* Guaranty expired in this year.

† Repaved in this year.

‡ Part repaved in this year.

Cost of Trinidad Asphalt Repairs, 1904-13.—Continued.

City Proper.—Concluded.

STREET.	Limits.	Year Laid.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
North Margin street.....	Stillman street to Thacher street.....	1895	\$0.015	\$0.029	\$0.032	\$0.008	\$0.114	\$0.005	\$0.024	\$0.142	\$0.085	\$0.105
Oxford street.....	Beach street to Essex street.....	1895	.006	.096	.049	.076	.159	.107	.285	.227	.247	.182
Parkman street.....	North Anderson street, across Blossom street.	1898	.....	.....	.007	.034	.020	.....	.044	.032	.013	.058
Parmenter street.....	Hanover street to Salem street.....	1893	.....	.....	.....	.....	.....	.....	.....	.....	*.006	.213
Pinckney street.....	Charles street, across Brimmer street..	1895	.032	.015	.089	.096	.248	.056	.147	.172	.036	.056
Pine street.....	Washington street to Harrison avenue.	1896	.....	.081	.015	.032	.037	.040	.055	.032	.142	.031
Pleasant street.....	Tremont street to Shawmut avenue....	1900	.....	*	.648	1.717	.314	.399	.557	.402	.605	.024
Poplar street.....	Chambers street to Charles street.....	1887-92	.032	.057	.050	.101	.217	.022	.071	.144	.172	.102
Public Alley No. 415.....	Between Beacon street and Marlborough street, from Hereford street to Gloucester street.	1901	.....	.....	.....	.....	.....	.....	.....	*	.....	.001
Public Alley No. 425.....	Between Beacon street and Marlborough street, from Berkeley street to Clarendon street.	1899	.....	.....	.....	.....	.....	.....	.344	.....	.....	.....
Public Alley No. 416.....	Between Beacon street and Marlborough street, from Clarendon street to Berkeley street.	1901	.....	.....	.....	.....	.....	.....	.....	*	.....	.011
Public Alley No. 426.....	Between Commonwealth avenue and Marlborough street, from Fairfield street to Exeter street.	1901	.....	.....	.....	.....	.....	.....	.....	*.094	.....	.006
Public Alley No. 417.....	Between Beacon street and Marlborough street, from Fairfield street to Exeter street.	1901	.....	.....	.....	.....	.....	.....	.....	*	.....	.024

Spring street.....	1895	.091	.107	.187	.381	.440	.069	.128	.333	.160	.183
Stevens street.....	1897										
Stullman street.....	1892	.009	.038	.047	.349	.009	.005	.035	.041	.286	
Stoddard street.....	1892	.099	.212	.040	.049		.176	.127	.023	.076	
Sun-court street.....	1891	.069	.244	.108	.101	.304	.118	.060	.245	.190	.119
Temple place.....	1900							* .017	.154	.086	.183
Thacher street.....	1892	.006	.020	.043	.168	.405	.014	.226	.267	.127	.453
Public Alley No. 428.....	1901								*		.017
Tileston street.....	1887	.173	†								
Tileston street.....	1895	.019			.025	.270		.228	.640	.385	.206
Tremont street.....	1900							* .074	.319	.228	.421
Tremont street.....	1899	*									
Trinity place.....	1900							* .007	.013	† .127	.136
Unity street.....	1897	.046	.066	.067	.197	.182	.013	.126	.030	.390	.071
Warrenton street.....	1884-91	.050	.110	.038	.031	.112	.038	.319	.031	.059	.256
Warrenton street.....	1891	.027	.108	.067	.088	.120	.050	.233	.094	.008	.168
Water street.....	1889									*	.014
Water street.....	1896	.050	.013	.018	.029	.025	.038	.059	.213	.070	.060
Wiget street.....	1897			.063	.060	.186	.045	.046	.342	.159	.029
Wiggin street.....	1887	.229	† .197								

* Guaranty expired in this year.

† Repaved in this year.

‡ Part repaved in this year.

Cost of Trinidad Asphalt Repairs, 1904-13.—Concluded.

Charlestown.

STREET.	Limits.	Year Laid.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Austin street.....	Seminary place to Lawrence street....	1891	\$0.027	\$0.042	\$0.037	\$0.124	\$0.151	\$0.142	\$0.173	\$0.821	\$0.109	\$0.087
Bunker Hill street.....	At Tufts street.....	1897										
Washington Street North,	Over Fitchburg Railroad.....	1899	1.127	.341	.336	1.272	.632	.503	1.099	.039	.154	.164
Corey street.....	124 feet north of Moulton street to Moulton street.	1897		.042		.236	.238		.132	.247		.194
Moulton street.....	Easterly side of Corey st. to Vine st..	1897					.025			.030		.043
Moulton street.....	Vine street to Bunker Hill street.....	1897		.012	.039		.007	.008	.032	.095		.044
Tufts street.....	Bunker Hill street, 141 feet northerly,	1897				.038	.070	.044		.154		.035
Vine street.....	Bunker Hill street, across Moulton st.,	1897					.031	.007	.027	.039		.049

South Boston.

D street.....	West Fifth street to Gold street.....	1889	\$0.032	\$0.051	\$0.165	\$0.137	\$0.302	\$0.126	\$0.388	\$0.284	\$0.204	\$0.211
E street.....	West Third street to Bolton street....	1892	.053	.035	.026		.213	.025	.225	.056	.075	.018
I street.....	East Broadway to East Fourth street,	1910							*			.001
Rogers street.....	Dorchester street to Preble street.....	1891					.074		.111			
West Sixth street.....	160 feet east of C st., toward D street,	1887	.032	*.073								
West Third street.....	153 feet west of E street, across E st..	1892	.054		.032	.027	.117	.007	.134	.002	.016	

Roxbury.

Cabot street.....	1891	\$0.002	\$0.019	\$0.025	\$0.069	\$0.078	\$0.014	\$0.144	\$0.178	\$0.173	\$0.048
Cabot street.....	1892	.006	.020	.034	.....	.100	.108	.089	.038	.107	.030
Cabot street.....	1897	.001	.....	.008	.013	.161	.024	.011	.058	.006	.030
Columbus avenue.....	1896	.123	.060	*	.....	.....	.....	.....	.....	.....	.....

* Repaved in this year.

Cost of Sicilian Rock Asphalt Repairs, 1904-13.

City Proper.

STREET.	Limits.	Year Laid.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Acton street.....	Washington street to Bradford street..	1895	\$0.008	\$0.010	\$0.051	\$0.018	\$0.129	\$0.095	\$0.052	\$0.021	\$0.241	\$0.037
Albany street.....	Easterly side of Stoughton street, across East Concord street.	1897	.205	†.048	.....	.....	.....	.....	.....	.....	.....	.....
Arch street.....	Summer street to Franklin street.....	1901	.....	.....	.....	.....	.....	.....	.....	*.011	.028	.005
Ash street.....	Oak street, across Nassau street.....	1895	.183	.029	.....	.070	.....	†	.....	.....	.....	.....
Avery street.....	Washington street to Mason street....	1897	.....	‡	.099	.....	.096	.100	.....	.261	.144	.....
Barton street.....	Leverett street to Milton street.....	1895	.052	.019	.035	.035	.101	.005	.025	.134	.054	.084
Beacon street.....	Arlington street to Dartmouth street..	1901	.....	.....	.....	.....	.....	.....	.....	*.161	.039	.072
Boylston street.....	Arlington street to Berkeley street....	1900	.....	.....	.....	.....	.....	.....	*	.329	.154	.020
Bradford street.....	Waltham street to Shawmut avenue....	1897	.021	.001	.011	.018	.010	.021	.021	.005	.034	.011
Cobb street.....	Washington street to Shawmut ave....	1897	.....	.042	.019	.006	.008	.....	.047	.....	.032	.....
Decatur street.....	Washington street to Harrison ave....	1892	.052	.126	.119	.187	.460	.094	.379	.404	.283	.187
Dwight street.....	Shawmut avenue to Tremont street....	1893	.013	.022	.005	.041	.005	.025	.028	.012	.050	.028
East Concord street.....	At Albany street (crossing).....	1897	.....	.....	.....	.....	.....	.....	.....	.....	.170	.....
Essex place.....	Essex street to Tufts street.....	1901	.....	.....	.....	.....	.....	.....	.....	*.135	.057	.038
Exeter place.....	Chauncy street to Harrison avenue...	1897	.....	.046	.032	.105	.008	.....	.074	.043	.045	.025
Fabin street.....	Newland street to Ivanhoe street.....	1895	.....	.067	.....	.....	.008	.....	.....	.....	.....	.058
Fay street.....	Dover street to Harrison avenue.....	1894	.048	.....	.014	.020	.084	.015	.033	.058	.375	.016

Hamburg street.....	1896	.022	.006	.023	.020	.010	.010	.011	.089
Hanover street.....	1896	.065	.144	.146	.122	.231	.137	.771	.310
Harrison avenue.....	1903								*.043
Huntington avenue.....	1896	.012	.017	.015	.035	.039	.128	.046	.037
India street.....	1901							*	.536
Kingston street.....	1899						*.080	†.355	
Marlborough street.....	1901							*.025	.006
Mason street.....	1894	.198	.256	.325	†				.027
Mason street.....	1901							*.505	.104
Massachusetts avenue.....	1894	.011	.013	.035	.002	.029	.014	.080	.058
Massachusetts avenue.....	1891	.011	.034	.003	.010	.055	.045	.165	.056
Massachusetts avenue.....	1901							*.154	.164
Massachusetts avenue.....	1901							*.341	.617
Mayo street.....	1897		.065	.011		.047	.027		.047
Meander street.....	1896		.002			.015	.089	.116	.010
Morton street.....	1901							*	.137
Motte street.....	1892-99	.025			.147	.032	.017	.150	.059
Mystic street.....	1895	.012	.036	.016	.015	.027	.010	.017	.006
North Margin street.....	1897	.027	.065	.015	.077	.105	.003	.011	.085

† Part repaved in this year.

† Repaved in this year.

* Guaranty expired in this year.

Cost of Sicilian Rock Asphalt Repairs, 1904-13.—Continued.

City Proper.—Concluded.

STREET.	Limits.	Year Laid.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Norwich street.....	Mystic street to Meander street.....	1896	.....	\$0.029	\$0.015	.....	\$0.014	\$0.016	\$0.042	.....	.....	\$0.043
Ohio street.....	Washington st. to Shawmut ave.....	1896	\$0.077	.040	.021	\$0.030	.088	.093	.096	\$0.009	\$0.254	.....
Other street.....	Beacon st. to alley along Charles river,	1901	.....	.....	.....	.....	.....	.....	.....	*	.163	.003
Pemberton square.....	Front of Suffolk Courthouse.....	1894	.030	.008	.012	.002	.013	.....	.017	.029	.....	.....
Prince street.....	Hanover street to Bennet avenue.....	1895	.190	.007	.035	.038	.073	.021	.093	.812	.225	.409
Salem street.....	Endicott street, across Prince street...	1901	.....	.....	.....	.....	.....	.....	.....	*	.181	.045
Shawmut avenue.....	132 feet south of Castle street, across Cherry street.	1898	.057	.069	.081	.150	.198	.194	.325	.325	.504	.114
Stoughton street.....	At Albany street (crossing).....	1897	.....	.....	.....	.....	.....	.....	.....	.....	.059	.....
Taylor street.....	Dwight street to Milford street.....	1896	.....	.048	.020	.....	.020	.....	.084	.012	.046	.024
Tufts street.....	Kingston street to South street.....	1901	.....	.....	.....	.....	.....	.....	.....	*.064	.033	.029
Tyler street.....	Oak street to Harvard street.....	1901	.....	.....	.....	.....	.....	.....	.....	*.113	.180	.099
Whitmore street.....	Kneeland street to Harvard street.....	1895	.....	.063	.030	.....	.026	.018	.137	.....	.055	.035

South Boston.

Athens street.....	West Second street to A street.....	1895	.....	\$0.019	.....	\$0.009	.....	\$0.073	.....	.....	\$0.102	.....
Athens street.....	B street to C street.....	1892	.....	.028	\$0.013	.010	.....	.064	.....	.....	.059	.....
Athens street.....	C street to D street.....	1901	.....	.....	.....	.....	.....	.....	.....	*	.172	.....

Cost of Sicilian Rock Asphalt Repairs, 1904-13.—*Concluded.*

East Boston.

STREET.	Limits.	Year Laid.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Meridian street.....	Trenton street to Eutaw street.....	1900	.....	.....	.....	.....	.....	.....	*	\$0.243	.....	\$0.169

Charlestown.

Lawrence street.....	East side of Lawrence avenue, across Miller street.	1901	.....	.....	.....	.....	.....	.....	.....	*	.....	\$0.036
Miller street.....	Main street to Lawrence street.....	1901	.....	.....	.....	.....	.....	.....	.....	*	.....	.231
Warren street.....	Winthrop street, across Soley street...	1901	.....	.....	.....	.....	.....	.....	.....	*	\$0.293	.543

* Guaranty expired in this year.

Cost of Seyssel Rock Asphalt Repairs, 1904-13.

STREET.	Limits.	Year Laid.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Genesee street.....	Harrison avenue to Albany street.....	1899	*	\$0.039	\$0.007	\$0.016	\$0.010	\$0.084	\$0.069	\$0.040	\$0.127	\$0.042
Mason street.....	444 feet south of West street to Avery street.	1899	*	.....	.045	.097	.086	† .025	.....	.....	.....	.....
Mason street.....	22 feet north of Avery street to Avery street.	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.127
Milton street.....	Brighton street to Spring street.....	1899	.....	.....	.....	.....	.....	.....	.026	.052	.....	.058
Oswego street.....	Harrison avenue to Albany street.....	1899	*	.006	.008	.009	.022	.032	.041	.038	.075	.010
Paul street.....	Emerald street to Village street.....	1897-99	.....	.....	.....	.023	.077	.....	.056	.299	.042	.017
Paul street.....	Village street to Tremont street.....	1897-99	.....	.015	.....	.028	.094	.040	.138	.175	.065	.069
Pelham street.....	Washington street to Shawmut ave.....	1897	\$0.091	.....	.016	.013	.042	.078	.027	.028	.193	.105
Waterford street.....	Washington street to Shawmut ave.....	1897	.149	.021	.089	.085	.093	.047	.131	.184	.168	.....

* Guaranty expired in this year.

† Part repaved in this year.

Summary of Table Showing the Cost of Asphalt Repairs from 1904 to 1913.

YEAR.	Contract Awarded to	CONTRACT PRICES.			AREAS AND COST.			
		Asphalt Surface and Binder per Square Yard.	Concrete Base per Square Yard.	Extra Binder per Cubic Yard.	Total Area Not Under Guaranty Maintained by the City. Square Yards.	Cost of Maintenance for Current Year.	Unit Area Repaired.	Unit Cost per Square Yard.
1904.....	Barber Asphalt Paving Company*.....	\$2 50	\$0 75	\$9 00	200,000	\$11,166 24	.0222	\$0 056
1905.....	Barber Asphalt Paving Company*.....	2 50	75	9 00	196,932	13,488 16	.0274	069
1906.....	Barber Asphalt Paving Company*.....	2 50	75	9 00	148,359	8,101 15	.0217	055
1907.....	Barber Asphalt Paving Company*.....	2 50	75	9 00	140,821	10,808 44	.0305	077
1908.....	Warren Brothers Company†.....	1 73	75	7 50	135,676	15,793 80	.0667	116
1909.....	Jones & Moehean†.....	1 62	75	8 00	131,688	9,945 24	.0463	076
1910.....	Barber Asphalt Paving Company†.....	1 49	1 00	8 00	139,829	15,632 74	.0742	112
1911.....	Warren Brothers Company†.....	1 34	1 00	9 00	218,007	27,504 52	.0680	125
1912.....	Warren Brothers Company†.....	1 24	1 10	11 00	223,848	26,397 97	.0633	118
1913.....	Warren Brothers Company†.....	1 37	1 15	11 00	226,837	22,839 01	.0729	.....

* Not advertised.

† Advertised and awarded to lowest bidder.

Cost of Bitulithic Repairs, 1904 to 1913, Inclusive.

STREETS.	Limits.	Year Laid.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Belvidere street	West Newton street to Massachusetts avenue.	1903	.....	.....	.....	.....	.....	.....	.....	.....	.....	\$.075
Berkeley street	Boylston street to Beacon street	1903	.....	.....	.....	.....	.....	.....	.....	.....	.....	*.005
Bowdoin street	Ashburton place to Cambridge street	1902	.....	.....	.....	.....	.....	.....	.....	.....	*	.164
Hancock street	Mt. Vernon street to Cambridge street,	1902	.....	.....	.....	.....	.....	.....	.....	.....	*	.009
Maverick street	London street to Hayre street	1903	.....	.....	.....	.....	.....	.....	.....	.....	.....	*.013
Massachusetts avenue	Columbus avenue to Huntington ave- nue.	1903	.....	.....	.....	.....	.....	.....	.....	.....	.....	*.094
Massachusetts avenue	Beacon street to Harvard Bridge	1902	.....	.....	.....	.....	.....	.....	.....	.....	*	.300
Tremont street	St. Alphonsus street to Phillips street	1902	.....	.....	.....	.....	.....	.....	.....	.....	*	.042
West Newton street	Columbus avenue to Huntington ave- nue.	1903	.....	.....	.....	.....	.....	.....	.....	.....	.....	*.014
West Newton street	Huntington avenue, across Belvidere street.	1903	.....	.....	.....	.....	.....	.....	.....	.....	.....	*.014

* Guaranty expired in this year.

Summary of Table Showing Cost of Bitulithic Repairs, 1913.

YEAR.	Contract Awarded to.	CONTRACT PRICES.				AREAS AND COST.			
		Bitulithic Full Depth Patches per Square Yard.	Bitulithic Surface Patches per Square Yard.	Concrete Base per Square Yard.	Extra Binder per Cubic Yard.	Total Area Not Under Guaranty Maintained by the City. Square Yards.	Cost of Maintenance for Current Year.	Unit Area Repaired.	Unit Cost per Square Yard.
1913.....	Warren Brothers Company*..	\$1 37	†80 80	\$1 15	\$11 00	40,888	\$1,625 60	.0309	\$0.040

* Advertised and awarded to lowest bidder.

† By agreement.

SANITARY SERVICE.

FINANCIAL STATEMENT.

Expenditures from February 1, 1913, to January 31, 1914		\$968,252 20
Amount transferred by Service transfer, for work done and materials furnished:		
Lighting Service	\$427 80	
Paving Service	13,898 72	
Street Cleaning and Oiling Service	33,684 43	
	<u> </u>	\$48,010 95
Less Service transfers, work done and materials furnished by other Services:		
Paving Service	\$1,145 32	
Street Cleaning and Oiling Service	3,931 99	
	<u> </u>	5,077 31
		<u> </u>
		42,933 64
Cost of maintenance of Sanitary Service		\$925,318 56
Of this amount there was received and credited to the appropriation:		
For the sale of tickets for the removal of ashes and waste	\$60,530 05	
Sale of "Cormorant"	8,287 42	
Sale of old material	358 37	
Sale of old hose	50 00	
Refund Adams Express	47	
Work done and materials furnished different divisions and departments	5,973 12	
	<u> </u>	75,199 43
Net cost of maintenance of Sanitary Service,		<u><u>\$850,119 13</u></u>

SPECIAL APPROPRIATIONS.

LAND AND BUILDINGS, REFUSE STATIONS.

Albany Street Transfer Station.

Labor, engineering		\$253 10
Labor, building run		613 31
Teaming		66 00
Blacksmith work, guard rails		113 75
Scales (new)		177 50
Covering I-beams, etc.		527 21
Amount paid to Lawler Brothers, under contract:		
Contract price	\$31,033 00	
Extra work:		
Removing capstan	7 30	
Build concrete pier	255 42	
Drill I-beams	100 00	
Material and planking around dump strip	161 23	
Allowance on account of delay,	1,733 40	
		<u>\$33,290 35</u>
Credit.		
Less second-hand o a k piles in place of n e w piles	\$60 00	
78 M. feet lum- ber at \$34.50	2,691 00	
14 chutes at \$20,	280 00	
		<u>3,031 00</u>
		<u>\$30,259 35</u>
Less amount paid in 1912	6,003 72	
		<u>24,255 63</u>
		<u><u>\$26,006 50</u></u>

Fort Hill Wharf, Atlantic Avenue Transfer Station.

Labor, inspection		\$84 00
Electric lighting		50 59
Blacksmith work, guard rails		189 06
		<u>323 65</u>
Carried forward		\$323 65

<i>Brought forward</i>		\$323 65
Scales (new)		382 80
Covering I-beams, etc.		580 87
Roofing, fire hose, etc.		466 10
Sundries		15 79
Amount paid to Rendle & Stoddard under contract:		
Contract price	\$64,864 00	
Extra work:		
Concrete piers changed to piles,	25 00	
Sheathing driven in bulkhead,	38 78	
Extra bend at exit incline	56 56	
Stone wall on north side line	38 88	
False cap under main girder caps	26 00	
Curve extended on exit incline,	31 77	
Cutting away to make room for I-beam	10 50	
Shims on both runways	23 48	
3 extra doors built	17 05	
Holes drilled in roof beams	40 60	
Holes drilled in steel beams	31 50	
Plank laid on exit runway	13 25	
Fence posts moved back and gate built on exit incline	20 80	
End of iron beams planked, entrance incline	98 50	
Wheel guards around gate posts	14 55	
Fender blocks at corner of drives	10 50	
Bevel hatch combings	6 00	
2 by 4 spiking pieces placed to fasten rafters and bridge	143 50	
	<hr/>	
	\$65,511 22	
Less amount paid in 1912	61,620 80	
	<hr/>	
		3,890 42
		<hr/>
		<u>\$5,659 63</u>

South Station Transfer Station.

Labor, inspection	\$147 00
Labor	90 82
Teaming	28 70
Electric lights	211 82
Blacksmith work, guard rails	330 42
Scales	382 80
	<hr/>
<i>Carried forward</i>	\$1,191 56

<i>Brought forward</i>		\$1,191 56
Covering I-beams, fire hose, etc.		587 02
Sundries		10 49
Amount paid to Lawler Brothers under contract:		
Contract price	\$71,330 00	
Extra work:		
Removing two trees	25 00	
Extra girder braces	159 71	
500 feet B. M. hard pine	20 00	
Roof beams drilled and rider plates placed	173 27	
3 extra doors furnished and placed	25 19	
Molding changed	31 85	
Help furnished for emergency drop	62 13	
	<hr/>	\$71,830 15
Credit.		
Less deduction for change in size of lumber	167 32	
	<hr/>	\$71,662 83
Less amount paid in 1912	60,026 72	
	<hr/>	11,636 11
		<hr/> <hr/>
		\$13,425 18

Ward Street Transfer Station.

Labor, clearing ground	\$122 68
Labor, engineering	163 54
Commission paid to real estate dealer	150 00
	<hr/>
	\$436 22

Total Cost of House Dirt, Waste and Rubbish and House Offal.

Salaries of division engineer, supervisor, medical inspector and general foreman	\$9,237 91
Office supplies and expenses, printing, stationery, etc.	5,424 63
Ashes, waste and rubbish account	604,074 09
House offal account	251,183 85
Annuities	\$600 00
Retired veterans' pensions	3,775 28
	<hr/>
<i>Carried forward</i>	\$4,375 28
	<hr/>
	\$869,920 48

<i>Brought forward</i>	\$4,375 28	\$869,920 48
Retired laborers' pensions	9,391 20	
	<hr/>	13,766 48
		<hr/>
		\$883,686 96

Construction, Repair and Horseshoeing Account.

Expended for labor	\$58,210 54	
Expended for stock	26,354 70	
	<hr/>	84,565 24
		<hr/>
		\$968,252 20

(Service Transfers.)

Street Cleaning and Oiling Service,	\$29,752 44	
Paving Service	12,753 40	
Lighting Service	427 80	
	<hr/>	42,933 64
		<hr/>
		<u>\$925,318 56</u>

Total Revenue Received for Board and Care of Horses, Rent, Use of Dumping Boats, Shoeing, Repairing Vehicles, etc.

Bridge Service, Bridge and Ferry Division	\$683 79	
Paving Service, Highway Division	13,898 72	
Lighting Service, Highway Division	427 80	
Street Cleaning and Oiling Service, Highway Division	33,684 43	
Sewer Service, Sewer and Water Division	1,729 54	
Water Service, Sewer and Water Division	3,289 54	
Health Department	270 25	
	<hr/>	\$53,984 07
Gross revenue		<hr/>
Paid in transfers	\$48,010 95	
Paid in to collector	5,973 12	
	<hr/>	\$53,984 07
		<hr/>

Money deposited, bills presented and collections made by the City Collector during the year ending January 31, 1914:

Bills Presented and Money Deposited.

To letting of scow privileges	\$859 85
Sale of offal, Hyde Park	1,156 32
Sale of junk	289 59
Sale of manure	878 58
	<hr/>
<i>Carried forward</i>	\$3,184 34

<i>Brought forward</i>	\$3,184 34	
Use of Barney dumpers	3,700 00	
Tearing down runway, Fort Hill Wharf	356 00	
		<u>\$7,240 34</u>

Amount Collected.

Sale of manure	\$878 58	
To letting of scow privileges	859 85	
Use of Barney dumpers	3,580 00	
Use of paper cart	¹ 25 00	
Use of paper cart	² 2 50	
Tearing down runway, Fort Hill Wharf	356 00	
Collection of offal, Hyde Park	³ 289 08	
Collection of offal, Hyde Park	978 57	
Sale of junk	289 59	
		<u>\$7,259 17</u>

¹ Deposited 1912-13.² Deposited 1911-12.³ Deposited 1912-13.**Items of Expenditure for the Year 1913-14.**

ITEMS.	Total Amount Expended.
Salary, Division Engineer (in part)	\$1,250 00
Salary, supervisor	*2,991 56
Salary, general foreman	1,795 04
Salaries, yard clerks	1,643 23
Salaries, foreman	10,324 84
Salaries, engineers	20 00
Labor — collecting and disposing of house dirt and ashes	250,049 72
Labor — collecting and disposing of waste and rubbish	31,997 40
Labor — collecting and disposing of house offal	151,339 54
Labor and stock in stables and yards	59,402 00
Hired teams on ashes	103,966 53
Hired teams on offal	1,609 42
Contracts on ashes — East Boston, Brighton, West Roxbury and Dorchester	83,856 11
Contracts on offal — East Boston, Brighton, West Roxbury and Dorchester	43,712 17
Ash and offal stock	541 23
Holidays, pay allowed	39,760 25
Grain	20,746 29
Hay and straw	20,054 87
Medical attendance on injured employees	499 98
Pay allowed injured employees	2,787 86
Horses, new	3,558 70
<i>Carried forward</i>	<u>\$831,906 74</u>

* One-half of Supervisor's salary paid by Street Cleaning and Oiling Service.

Items of Expenditure.—*Concluded.*

ITEMS.					Total Amount Expended.
<i>Brought forward.</i>					\$831,906 74
Veterinary services and medicine.....					1,226 63
Horse hire.....					86 00
Outside board and care of horses.....					1,396 00
Outside horseshoeing, wheelwrighting, blacksmithing, etc....					5,849 71
Labor and stock—paint, wheelwright, blacksmith and harness shops.....					75,293 54
Dumping boats—stock and supplies.....					101 70
Repairs to stables and sheds.....					2,638 47
Repairs to wharves and boats.....					3,153 59
Fuel.....					1,337 01
Gas.....					553 19
Electric light and power.....					3,772 96
Printing, stationery, office items and incidentals.....					4,192 21
Automobile expense:					
	Super-visor.	General Foreman.	TRUCKS.		Total.
			Peerless.	Garford.	
Cost.....			\$2,643 97	\$4,500 00	\$7,143 97
Supplies.....	\$194 60	\$77 79	26 55	298 94	298 94
Repairs.....	456 62	332 81	889 45	81 57	1,760 45
Tires and tubes...	389 77	132 91	70 79	593 47	593 47
Gasolene.....	208 01	151 34	265 11	47 35	671 81
Storage.....	180 00	180 00	140 00	100 00	600 00
Chauffeur wages..	1,038 10	600 00	600 00	270 00	1,908 10
Totals.....	\$2,467 10	\$874 85	\$4,635 87	\$4,998 92	\$12,976 74
Advertising.....					118 60
Rents.....					7,394 98
Tolls and fares.....					45 70
Telephones.....					1,203 98
Taxes.....					1,237 97
Annuities.....					600 00
Pensions, retired veterans.....					3,775 28
Pensions, retired laborers.....					9,391 20
Gross expenditures of Sanitary Service.....					\$968,252 20
Amounts paid by other departments and divisions.....					42,933 64
Cost of maintenance of Sanitary Service.....					\$925,318 56

Construction and Repair Shops, 1913-14.

For work done and materials furnished for other services and departments and for the Sanitary Service the different shops received and expended the following amounts:

SHOPS.	STOCK AND LABOR.		Total.
	Other Services and Departments.	Sanitary.	
Wheelwright.....	\$7,971 04	\$11,611 82	\$19,582 86
Blacksmith — South End..	9,137 19	9,208 46	18,345 65
Blacksmith — West End....		8 60	8 60
Paint.....	7,603 30	5,586 78	13,190 08
Harness.....	4,550 04	8,003 88	12,553 92
Horseshoeing — South End,	3,816 25	1,511 95	5,328 20
Horseshoeing — West End..	1,280 25	1,832 32	3,112 57
Horseshoeing — Roxbury...	584 25	1,807 27	2,391 52
Totals, stock and labor...	\$34,942 32	\$39,571 08	\$74,513 40

Foreman	\$1,524 28	
Clerk	780 14	
Express teamster	734 39	
Allowed time and holidays	5,630 37	
Pay allowed injured employees and medical attendance	88 38	
Expended for electric power	514 14	
		<u>9,271 70</u>
Total cost, maintenance of shops		\$83,785 10
Income from outside services and departments		34,942 32
		<u>48,842 78</u>
Net cost of maintenance of shops to Sanitary Service		<u>\$48,842 78</u>

Detailed Account of Amounts Paid to the Sanitary Service During Year Ending January 31, 1914.

For official salaries	\$2,081 04
For repair and construction work	29,261 57
For horseshoeing	5,680 75
For use of dumping boats	7,831 50
For hay, straw, grain and board and care of horses	3,485 87
Carried forward	<u>\$48,340 73</u>

<i>Brought forward</i>	\$48,340 73
For feeders, stablemen and watchmen	1,810 07
For fuel, light, etc.	775 32
For board and care of sick horses in veterinary hospital	912 00
For rent of wharf, Atlantic avenue	3,000 00
For labor and supervision, cleaning and watering streets	439 25
For contract teams on snow	41 25
For labor and supervision, removing snow	267 69
For furnishings of prison vans	27 01
For telephones	6 75
 Total income	 <u>*\$55,620 07</u>

* Includes bill paid by County of Suffolk, \$1,636, and 1912 bills paid by Water Service, \$155.68.

Amounts Paid to Other Services for the Year Ending January 31, 1914, by the Sanitary Service.

To Street Cleaning and Oiling Service, removal of ashes	\$3,931 99
To Paving Service, labor, ashes	80 38
To Paving Service, board and care of horses	863 97
To Paving Service, lumber, gravel, sand, etc.	200 97
	<u>\$5,077 31</u>

Horseshoeing, by Divisions.

KINDS AND STYLES.	HIGHWAY DIVISION.					Health Department.	County of Suffolk.	Totals.
	Sanitary Service.	Street Cleaning and Oiling Service.	Paving Service.	Lighting Service.	Sewer and Water Division, Sewer Service.			
Plain shoes	7,980	4,842	854	36	639	82	94	14,527
Bar shoes	464	190	52	....	130	2	25	863
Leathers	4,469	2,675	376	14	469	44	30	8,077
Resets	684	638	93	14	69	1	66	1,565
Pads	352	555	86	22	105	34	84	1,238

Average cost per shoe, 46 cents.

Cost of Horseshoeing.

	Division Shops.	Outside Shops.
Stock.....	\$3,418 96	\$2,351 70
Labor.....	7,413 32	
Totals.....	\$10,832 28	\$2,351 70

Amount Expended for the Collection and Disposal of House Dirt, Ashes, Garbage and Waste and Rubbish, by Districts, Including Labor, Stock, etc.

Districts.	Population.	ASHES.		GARBAGE.		WASTE AND RUBBISH.		Total Cost.	Total Cost per Capita.
		Cost.	Cost per Capita.	Cost.	Cost per Capita.	Cost.	Cost per Capita.		
1. South Boston.....	73,672	\$32,672 53	\$0 4435	\$16,568 18	\$0 2254	\$981 48	\$0 0119	\$50,222 19	\$0 6808
2. East Boston.....	63,376	12,262 97	0 1966	8,559 64	0 1350	.....	.....	20,822 61	0 3316
3. Charlestown.....	41,747	30,690 62	0 7351	13,192 62	0 3160	513 02	0 0122	44,396 26	1 0633
4. Brighton.....	29,377	13,640 95	0 4643	10,922 10	0 3718	.....	.....	24,563 05	0 8361
5. West Roxbury.....	47,544	23,794 96	0 5004	15,374 92	0 3233	95 61	0 0020	39,265 49	0 8257
6. Dorchester.....	127,831	55,434 30	0 4336	30,001 93	0 2347	.....	.....	85,436 23	0 6683
7. Roxbury.....	122,975	85,741 04	0 6964	37,187 42	0 3024	1,099 41	0 0089	124,027 87	1 0077
8 and 9. South End and Back Bay.....	118,488	137,027 87	1 1568	45,844 30	0 3870	27,564 87	0 2327	210,437 04	1 7765
10. North and West Ends.....	87,686	72,086 12	0 8221	12,472 99	0 1422	8,217 93	0 0937	92,777 04	1 0580
11. Hyde Park.....	16,376	5,873 10	0 3586	3,034 84	0 1853	.....	.....	8,907 94	0 5439
Dumping boats.....	.....	84,836 77	.....	58,024 91	.....	11,540 54	.....	154,402 22	.....
Totals.....	729,072	\$554,061 23	.....	\$251,183 85	.....	\$50,012 86	.....	\$855,257 94	.....

Force Employed on House Dirt and Ashes January 31, 1914.

CITY FORCE.	Number.	Hired Teams.	CONTRACTORS' TEAMS.					Total.
			East Boston.	Brighton.	West Roxbury.	Dorchester.	Hyde Park.	
Inspectors.....	26	.....	.....	.....	.....	.....	.....	26
Teamsters.....	104	78	4	8	4	24	1	223
Helpers.....	110	78	10	16	7	48	2	271
Dumpers.....	21	.....	.....	.....	.....	.....	.....	21
Totals.....	251	156	14	24	11	72	3	541

Amount of House Dirt and Ashes Removed.

YEARS.	Loads.	Cubic Yards.	Tons.
1909.....	299,071	692,865	311,791
1910.....	284,343	746,585	335,997
1911.....	274,737	707,916	333,782
1912.....	282,190	781,140	368,327
1913.....	269,982	715,928	337,560

Force Employed on House Offal January 31, 1914.

CITY FORCE.	Number.	CONTRACTORS' TEAMS.					Total.
		East Boston.	West Roxbury.	Brighton.	Dorchester.	Hyde Park.	
Inspectors.....	16	.....	.....	.....	.....	.....	16
Teamsters.....	48	3	4	6	10	1	72
Helpers.....	47	5	4	6	10	1	73
Dumpers.....	5	.....	.....	.....	.....	.....	5
Totals.....	116	8	8	12	20	2	166

Amount of House Offal Removed.

YEARS.	Loads.	Cubic Yards.	Tons.
1909.....	54,747	105,595	68,636
1910.....	48,510	97,651	63,451
1911.....	47,372	103,890	70,126
1912.....	49,102	108,832	73,462
1913.....	54,873	124,302	83,903

Force Employed on Waste and Rubbish January 31, 1914.

CITY FORCE.	Number.
Inspectors.....	2
Teamsters.....	12
Helpers.....	21
Total.....	35

Amount of Waste and Rubbish Removed.

YEARS.	LOADS.		Cubic Yards.	Tons.
	Paper Carts.	Market Wagons.		
1909.....	5,556	7,397	99,975	10,916
1910.....	5,655	8,370	112,801	12,328
1911.....	1,943	4,847	63,719	8,250
1912.....	1,308	5,490	66,598	8,632
1913.....	1,174	7,812	75,257	9,747

Number of Loads of Material Collected from February 1, 1907, to January 29, 1914.

YEARS.	Ashes.	Offal.	Rubbish.	Total Loads.	Tons.
1907.....	377,058	64,712	17,169	458,939	379,067
1908.....	339,913	62,892	16,238	419,045	403,767
1909.....	299,071	54,747	12,953	366,771	391,343
1910.....	284,343	48,610	14,025	346,978	411,776
1911.....	274,737	47,372	6,790	328,899	412,158
1912.....	282,190	49,107	6,798	338,095	450,421
1913.....	269,982	54,873	8,986	333,841	431,220

Capacity of Carts and Wagons in Use by the Sanitary Service.

	Pounds.	Cubic Feet.
Single ash carts.....	1,886	54
Double ash carts (City).....	3,300	94.5
Double ash carts (contractors).....	5,064	145
Paper carts.....	1,400	146
Paper wagons (City).....	2,200	229
Paper wagons (contractors).....	3,000	312
Single offal wagons.....	2,363	47
Double offal wagons.....	5,726	94

Loads Collected by Contractors.

DISTRICTS.	ASH LOADS.			Paper Wagons.	Cubic Yards.	TONS.		Total Tons Ashes and Paper.
	Single.	Double.	Cubic Yards.			Ashes.	Paper.	
East Boston.....		10,212	52,898			24,941		24,941
Brighton.....	2,880	9,254	38,149			17,988		17,988
West Roxbury.....	81	7,348	25,880			12,202		12,202
Dorchester.....		22,933	123,150	831	9,557	58,065	1,247	59,312
Hyde Park.....	3,853	839	10,643			5,018		5,018
Totals.....	6,814	50,586	250,720	831	9,557	118,214	1,247	119,451

	OFFAL LOADS.				SUMMARY.		
	Single.	Double.	Cubic Yards.	Tons.	Material.	Cubic Yards.	Tons.
East Boston.....		1,550	5,425	3,662	Ashes.....	250,720	118,214
Brighton.....		1,705	5,968	2,014	Offal.....	55,292	37,315
West Roxbury.....	14	1,148	4,043	2,729	Paper.....	9,557	831
Dorchester.....		10,990	38,465	25,964			
Hyde Park.....	789		1,381	932			
Totals.....	803	15,393	55,282	37,315	Totals....	315,569	156,360

Final Disposition of all Materials, in Loads and Tons (2,000 Pounds), Collected by the Sanitary Service from January 24, 1913, to January 29, 1914, Inclusive.

CLASS OF REFUSE.	Boston Development and Sanitary Company.	Collected and Disposed of by Contractors.	Towed to Sea.	Total Number of Loads Disposed of.	Total Tons.
House dirt and ashes.....	235,515	34,467	.....	269,982	337,560
	277,411	60,149	.....	
Ofal.....	49,677	5,206	.....	54,873	83,903
	72,552	11,351	.....	
Waste and rubbish.....	8,986	.....	.....	8,986	9,747
	9,747	.....	.....
Cesspool dirt.....	.....	.....	38	38	49
	.....	.....	49		
Street sweepings.....	.....	.....	31,288	31,288	39,930
	.....	.....	39,930		
Totals {	294,168	39,673	31,326	365,167	471,189
	359,710	71,500	39,979		

NOTE.— First item, loads. Second item, tons.

Cost of Collection and Disposal of Refuse by Contract in the City of Boston for the Year 1913-14.

Contract Districts and Population.	Character of Refuse.	Tons. (2,000 lbs.)	Total Tons.	Cost per Ton by Districts; Collection and Disposal.	Cost by Districts.			Where Disposed of.
					Cost.	Total Cost.	Total Cost per Capita.	
2. (63,376) ..	{ Mixed refuse, principally ashes (no kitchen wastes)	24,941	.....	\$0 4916	\$12,262 97	.....	Inland dumps.
	{ Garbage, principally kitchen wastes	3,662	28,603	2 3374	8,559 64	\$20,822 61	Inland dumps.*	
4. (29,377) ..	{ Mixed refuse, principally ashes (no kitchen wastes)	17,988	.....	Av. \$0 7209	.....	.....	Inland dumps.
	{ Garbage, principally kitchen wastes	4,028	22,016	\$0 7583	\$13,640 95	.....	Inland dumps.*
5. (part) (26,457) ..	{ Mixed refuse, principally ashes (no kitchen wastes)	12,202	.....	2 7115	10,922 10	24,563 05	Inland dumps.*
	{ Garbage, principally kitchen wastes	2,729	14,931	Av. \$1 1156	.....	.....	Inland dumps.
6. (127,831) ..	{ Mixed refuse, principally ashes (no kitchen wastes)	58,065	.....	\$0 6864	\$8,375 84	.....	Inland dumps.
	{ Garbage, principally kitchen wastes	25,904	.....	1 9731	5,384 71	13,760 55	Inland dumps.*
Hyde Park (416,376) ..	{ Mixed refuse, principally ashes (no kitchen wastes)	1,247	85,276	Av. \$0 9216	.....	.....	Boston Development and Sanitary Company.†
	{ Store refuse and paper .....	.....	.....	\$0 9346	\$55,434 30	.....	Inland dumps.
263,417	{ Mixed refuse, principally ashes (no kitchen wastes)	5,018	5,018	2 0200	52,448 21	.....	Inland dumps.
	{ Store refuse and paper .....	.....	.....	Av. \$1 2651	.....	107,882 51	Boston Development and Sanitary Company.†
Totals .....	.....	.....	155,844	Av. \$1 1094	.....	\$172,901 82	\$0 6563

* Removed beyond city limits and presumably fed to swine.

† Contract for disposal.

‡ Population, 16,376, duplicated on day labor table.

Total, as above..... \$172,901 82

Add total of day labor table (preceding page 363)..... 752,416 74

Net amount of appropriation..... \$925,318 56

Number of Carts, Wagons and Sleds Used by the Sanitary Service for the Collection of House Dirt and Ashes, Waste and Rubbish and Garbage During the Year Ending January 31, 1914.

Districts.	ASH CARTS.			OFFAL WAGONS.				FADFR.		Sleds.	Pungs.	Contractors.
	WOOD.			IRON.		WOOD.		Carts.	Wagons.			
	Auto.	Single.	Double.	Single.	Double.	Single.	Double.					
1. South Boston.....		22		3		6		2	1	15		
3. Charlestown.....		14		5					1	9		
7. Roxbury.....	1	41	7	16	2	9	2	3	1	37	8	
8. South End Shop.....		26	1	3	6			1				
10. North and West Ends.....		39		7				6	4	5		
8 and 9. South End.....		66		19	1			5	10	32		
Total number used by Sanitary Service.....	1	208	8	53	9	15	2	17	17	98	8	
IN USE BY CONTRACTORS.												
2. East Boston.....			4									Capron Cerrilli & Co.
2. East Boston.....							3					Frank P. Neelon.
4. Brighton.....		1	6						1			Joseph McGreevey.
4. Brighton.....					2		4					Timothy J. Lehan.
5. West Roxbury.....			4									John J. Moore.
5. West Roxbury.....					1		3					Walter Griffin.
6. Dorchester.....			24									John J. Bradley.
6. Dorchester.....				1	10							M. H. Loonie.
11. Hyde Park.....		3										M. McGuinness & Co.
11. Hyde Park.....							1	1				William P. Nickerson.
Totals.....	1	212	46	54	22	15	13	18	18	98	8	

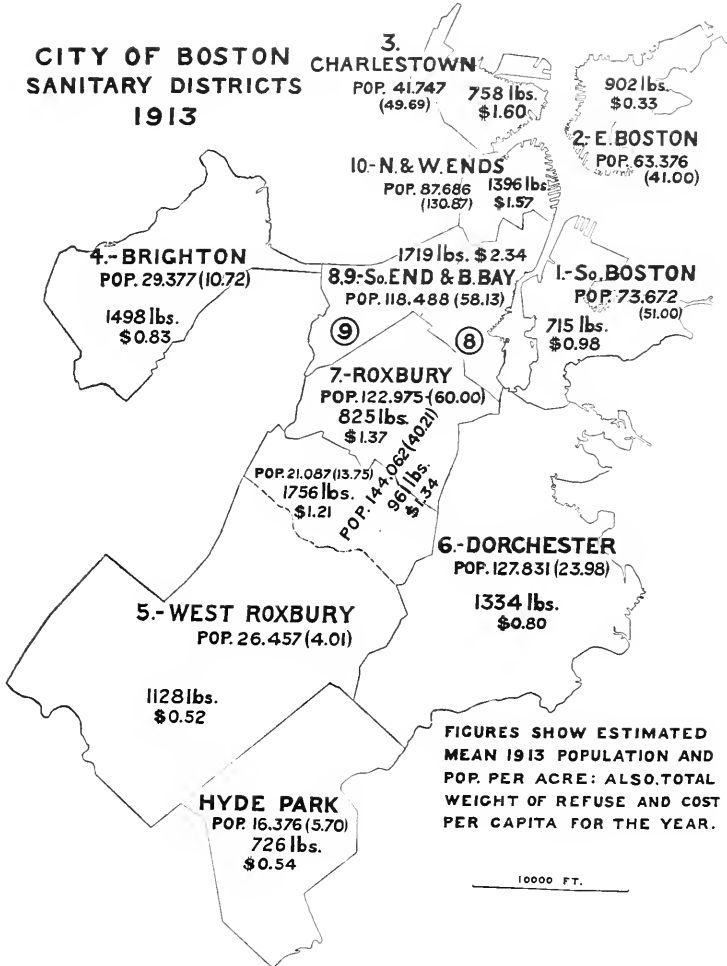
Cost of Collection and Disposal of Refuse by Day Labor Force in the City of Boston for the Year 1913-14.

Districts and Population.	CHARACTER OF REFUSE.	COST PER TON BY DISTRICTS.				COST BY DISTRICTS.					WHERE DISPOSED OF.		
		Tons (2,000 lbs.)	Total Tons.	To Collect.	For Disposal.	Total Collection and Disposal	To Collect.	Total Cost to Collect.	For Disposal.	Total Cost of Disposal.		Total Cost of Collection and Disposal.	Total Cost per Capita, Collection and Disposal.
1. (73,672)	Mixed refuse, principally ashes (no kitchen wastes).....	21,324	...	\$1 7315	\$0 0354	\$1 7666	\$36,923 63	.....	\$748 90	.....	.....	.....	To inland dumps.
	Garbage, principally kitchen wastes.....	4,541	...	3 6485	.....	3 6485	16,568 48	.....	.....	.....	.....	.....	Boston Development and Sanitary Company.
	Store refuse, principally paper.....	316	.....	3 1059	.....	3 1059	984 48	.....	.....	.....	.....	.....	To inland dumps.
			26,181	Av. \$2 0806	Av. \$0 0286	Av. \$2 1092	.....	.....	\$748 90	.....	\$55,222 19	\$0 7488	
3. (41,747)	Mixed refuse, principally ashes (no kitchen wastes).....	13,243	.....	\$2 6366	\$0 0584	\$2 6950	\$34,917 06	.....	\$773 39	.....	.....	.....	To inland dumps.
	Garbage, principally kitchen wastes.....	2,489	.....	6 0793	0 0246	6 1039	15,131 39	.....	61 23	.....	.....	.....	Boston Development and Sanitary Company.
	Store refuse, principally paper.....	102	.....	5 0296	0 0527	5 0266	513 02	.....	.....	.....	.....	.....
			15,834	Av. \$3 1922	Av. \$0 0551	Av. \$3 2459	.....	.....	.....	\$34 62	51,266 09	1 2311	
5 (part) and 7. (144,062)	Mixed refuse, principally ashes (no kitchen wastes).....	55,044	.....	\$2 0731	\$0 0551	\$2 1282	\$115,115 16	.....	\$3,035 00	.....	.....	.....	To inland dumps.
	Garbage, principally kitchen wastes.....	13,828	.....	3 6237	0 0049	3 6286	50,108 88	.....	68 75	.....	.....	.....	Boston Development and Sanitary Company.
	Store refuse, principally paper.....	426	.....	2 8051	.....	2 8051	1,195 02	.....	.....	.....	.....	.....	To inland dumps.
			69,298	Av. \$2 4014	Av. \$0 0448	Av. \$2 4462	.....	.....	.....	3,103 75	166,522 84	1 1767	
8 and 9. (118,488)	Mixed refuse, principally ashes (no kitchen wastes).....	76,330	.....	\$2 0616	\$0 0627	\$2 1293	\$157,780 17	.....	\$4,811 59	.....	.....	.....	39,994 tons to sea; 45,039 tons to Boston Development and Sanitary Company.
	Garbage, principally kitchen wastes.....	19,330	.....	2 8052	0 0869	2 8921	54,224 43	.....	1,680 49	.....	.....	.....	Boston Development and Sanitary Company.
	Store refuse, principally paper.....	6,237	.....	3 0876	0 0171	4 0047	19,257 42	.....	57 20	.....	6,549 28	237,811 30	2 0070
			101,897	Av. \$2 3436	Av. \$0 0518	Av. \$2 3984	.....	.....	.....	.....	.....	.....
10. (87,686)	Mixed refuse, principally ashes (no kitchen wastes).....	53,405	.....	\$1 7611	.....	\$1 7611	\$94,081 05	.....	\$5 07	.....	.....	.....	To sea.
	Garbage, principally kitchen wastes.....	6,400	.....	3 0426	.....	3 0426	19,472 99	.....	.....	.....	.....	.....	Boston Development and Sanitary Company.
	Store refuse, principally paper.....	1,119	.....	6 4960	.....	6 4960	9,217 93	.....	.....	.....	.....	.....	City Refuse Utilization Company.*
			61,224	Av. \$2 0052	.....	Av. \$2 0052	.....	.....	.....	.....	.....	.....
Hyde Park. †(16,376)	Garbage, principally kitchen wastes.....	932	932	\$3 2562	.....	\$3 2562	\$3,034 84	3,034 84	.....	.....	.....	3,034 84	0 1850
	Contract, Boston Development and Sanitary Company.....	.....	.....	.....	.....	.....	.....	.....	\$112,652 47	112,652 47	112,652 47	.....
482,031	Totals.....	.....	275,366	Av. \$2 0081	Av. \$0 4409	Av. \$2 4490	.....	.....	\$628,522 85	.....	\$123,894 09	\$762,416 74	\$1 5609

Total, as above..... \$752,416 74
 Add total of contract table (page 361)..... 172,901 82
 Net amount of appropriation..... \$925,318 56

* Contracts for disposal.
 † Population, 16,376, duplicated in contract table.

**CITY OF BOSTON
SANITARY DISTRICTS
1913**



HIGHWAY DIVISION — STREET CLEANING AND OILING SERVICE.

Items of Expenditure for the Year.

Street Cleaning Branch.

General administration		\$21,162 65
Salary of division engineer (in part),	\$875 00	
Salary of supervisor (in part)	762 27	
Salary of medical inspector (in part),	360 27	
Salary of general foreman	2,560 51	
Salary of inspector of uniforms (in part)	1,035 09	
Stationery	108 95	
Postage	116 21	
Printing	891 45	
Telephone service	474 12	
Advertising	2 60	
Incidentals	17 40	
Coffee	\$2 15	
Experimental work	4 75	
Photographs	3 00	
Engineer's services	7 50	
Automobile repairs and mainte- nance	2,809 11	
Supplies	\$206 61	
Garage rent	181 50	
Gasolene, oil, etc.	304 54	
Tubes, tires, cases, new,	571 57	
Tubes, tires, cases, re- pairs of	62 95	
Engine and body re- pairs	371 94	
Wages of chauffeur, gen- eral foreman	1,110 00	
Wages of supervisor's chauffeur (in part)	278 25	
Annuity, chapter 569, Acts of 1898, Pensions paid to veterans, Civil War (retired)	300 00	
Pensions paid to retired laborers	3,472 46	
Uniforms	5,571 53	
	1,527 43	
<i>Carried forward</i>		\$21,162 65

<i>Brought forward</i>		\$21,162 65	
General expenses, other than general administration			111,430 93
Wages of stablemen	\$23,500	76	
Wages of yardmen	6,125	68	
Wages of watchmen	5,307	49	
Wages of foremen's drivers	970	58	
Wages of yard clerks and messengers, Veterinary services and medicines	2,680	54	
Hay and straw	17,027	99	
Grain	15,439	84	
Wagons and carriages, repairs	1,947	38	
Harnesses, new and repairs	2,738	38	
Horseshoeing	7,274	00	
Horses, new	10,963	70	
Horses, clipping of	57	00	
Horses, outside board and care of	3,839	00	
Stables and yards, rent of	3,280	86	
Stables and yards, taxes on	844	99	
Stables and yards, blankets, coverings, brushes, oils, greases, polishes, furnishings	3,789	11	
Stables and yards, buildings, repairs	2,444	94	
Electric light, yards and stables	1,128	20	
Fuel, yards and stables	470	02	
Operating expenses			392,352 31
District foremen, salaries of	\$15,413	39	
Subforemen, wages of, on paved streets gutters, crossings, snow work, patrolling, etc.	30,324	12	
Laborers, wages of, on paved streets, gutters, crossings, snow work, patrolling, etc.	255,095	73	
Hired teams, on paved streets, gutters, crossings, snow work, patrolling, etc.	16,391	35	
Horses, driving, hire of	198	00	
Holidays, pay allowed	30,878	85	
Pay allowed injured employees	1,802	63	
Dumps, labor on	3,761	35	
Dumps, rent of	10,282	71	
Snow license (part cost)	500	00	
Flushing machines, new	2,312	20	
Flushing machines, repairs	671	03	
Sweeping machines, repairs, etc.	3,888	66	
Water carts, repairs, etc.	1,190	04	
Carts, repairs	6,899	84	
<i>Carried forward</i>	\$512,203 48		\$524,945 89

<i>Brought forward</i>	\$512,203 48	\$524,945 89
Snowplows, road machines, etc., new	624 00	
Snowplows, road machines, etc., re- pairs	281 22	
Push brooms, team brooms, handles, etc.	2,187 00	
Hoes, shovels, picks, etc.	1,169 13	
Machine brooms and cores	4,295 00	
Push carts and barrels	1,929 50	
Refuse boxes	1,056 51	
Sand barrels and boxes	46 37	
Sand (used on slippery streets)	564 35	
Hose, for flushing machines	192 78	
Hose, for watering carts	72 90	
Calcium chloride, for watering streets	323 65	
Total expenditures		<u>\$524,945 89</u>

Street Oiling and Watering Branch.

General administration		\$7,089 18
Salary of division engineer (in part),	\$375 00	
Salary of supervisor (in part)	762 27	
Salary of medical inspector (in part),	154 40	
Salary of general foreman	1,499 48	
Salary of inspector of uniforms (in part)	77 91	
Wages of messenger	262 00	
Stationery	46 69	
Printing	272 11	
Postage	107 32	
Advertising	4 10	
Telephone service	55 94	
Traveling expense	21 00	
Damages to property	66 35	
Analyses of oils	35 00	
Engineer's services	2 50	
Express charges	1 70	
Automobile expense, general fore- man	2,952 19	
New Rambler	\$1,200 00	
Registration	10 00	
Garage rent	180 00	
Gasolene, oil, etc.	230 81	
Tubes, tires, cases, new,	364 20	
Tubes, tires, cases, re- pairs	38 46	
<i>Carried forward</i>	\$2,023 47	<u>\$6,695 96</u>
		<u>\$7,089 18.</u>

<i>Brought forward</i>	\$2,023 47	\$6,695 96	\$7,089 18
Engine and body re- pairs	793 49		
Supplies	104 45		
Wages of chauffeur (gen- eral foreman)	30 78		
Wages of supervisor's chauffeur (in part)		278 25	
Uniforms		114 97	
General expenses, other than general adminis- tration			4,782 88
Wages of stablemen, watchmen and yardmen		\$2,281 31	
Veterinary services and medicines		34 64	
Hay, straw and grain		684 89	
Wagons and carriages, repairs		319 55	
Harnesses, new and repairs		97 62	
Horseshoeing		132 50	
Horses, new		325 00	
Yard and stables, blankets, covers, brushes, oils, greases, polishes, furnishings		427 81	
Yard and stable buildings, repairs		368 91	
Light and fuel		47 75	
Bicycles, repairs		62 90	
Operating expenses			216,639 44
Inspector, wages, water distribu- tion		10,843 11	
Inspectors, wages, oil distribution		2,957 13	
Inspectors, wages, oil, plants and cars		1,225 00	
Laborers, wages, water distribution,		176 63	
Laborers, wages, oil distribution		3,835 26	
Laborers, wages, oil, plants and cars,		5,638 44	
Laborers, wages, calcium chloride		519 87	
Chauffeurs and operators on auto trucks		360 42	
Hired teams, oil distribution		12,001 50	
Hired teams, water distribution		67,777 31	
Hired teams, plants		1,007 63	
Hired teams, calcium chloride		418 36	
Pay allowed injured employees		100 00	
Holidays, pay allowed		1,350 10	
Fuel, used at plants		666 64	
Oil plants, repairs and furnishings		1,020 43	
Standpipes, repair and maintenance,		2,230 67	
Calcium chloride		1,377 09	
Road oil		94,788 33	
Soap, emulsifying		2,734 87	
<i>Carried forward</i>		\$222,900 85	\$228,511 50

<i>Brought forward</i>	\$222,900 85	\$228,511 50
Lime, ash, sand, etc.	39 93	
Sand and oil, labor mixing	54 19	
Automobile truck, repairs and main- tenance	459 69	
Automobile express, repairs and maintenance	137 63	
Oil and water carts, repairs	3,138 63	
Tools	15 67	
Rent, Whittemore car siding, Mt. Hope	215 00	
Freights and demurrage on oil cars	1,549 91	
 Total expenditures		<u>\$228,511 50</u>
 Total, Street Cleaning Branch	\$524,945 89	
Total, Street Oiling and Watering Branch	228,511 50	
 Grand total		<u>\$753,457 39</u>

Miles and Areas of Streets Cared for, Year 1913-14.

DISTRICT No.	Location.	MILES OF STREETS CARED FOR.		SQUARE YARDS CARED FOR.		Total Square Yards.
		Paved.	Macadam.	30-foot Roadway. Paved.	Macadam. 9-foot Wide Gutters.	
1.....	South Boston.....	20.19	17.82	424,000	94,090	518,090
2.....	East Boston.....	7.21	19.23	154,000	101,535	255,535
3.....	Charlestown.....	12.91	11.60	293,000	61,250	354,250
6.....	Dorchester (part).....	9.26	24.32	201,000	128,410	329,410
7.....	Roxbury.....	17.32	9.29	383,000	49,050	432,050
8.....	South End (uptown).....	11.16	12.01	225,000	63,415	288,415
8.....	South End (downtown)...	28.20	1.22	570,000	6,440	576,440
9.....	Back Bay.....	12.46	18.00	252,000	95,040	347,040
10.....	North and West Ends.....	20.83	0.94	421,000	4,965	425,965
Totals.....	.....	139.54	114.43	2,923,000	604,195	3,527,195

Summary.

ITEMS.	STREET CLEANING BRANCH.		STREET OILING AND WATERING BRANCH.	
	1912-1913.	1913-1914.	1912-1913.	1913-1914.
Labor.....	\$365,620 84	\$382,842 51	\$28,045 84	\$32,727 46
Teaming.....	15,223 54	16,589 35	69,694 47	81,204 80
Supplies and repairs.....	106,454 45	125,514 03	101,253 62	114,579 24
Totals.....	\$487,298 83	\$524,945 89	\$198,993 93	\$228,511 50

Amount of Hay, Straw, Oats and Shorts Used by the Street Cleaning and Oiling Service for the Year 1912-13.

	Amount Used.	PRICE PAID.	
		Highest.	Lowest.
		<i>Per Ton.</i>	
Hay	1,111,822 lbs.	\$22 50	\$18 25
Straw	68,248 lbs.	21 75	18 00
Shorts	47,500 lbs.	28 00	23 00
		<i>Per Bushel.</i>	
Oats	30,166 bu.	\$0 52 $\frac{3}{4}$	\$0 41

Distribution of Horses and Rolling Stock January 31, 1914.

ITEMS.	Oil Plants.	DISTRICTS.					South Stable.	West Stable.	Total.
		1.	2.	3.	6.	7.			
Horses, cart.....	1	18	11	11	8	16	61	33	159
Horses, driving.....	3	2	1	1	1	2	5	1	16
Carts, single.....		16	8	10	11	14	49	28	136
Carts, watering....	13	1	1	1	2	1	6	2	27
Machines:									
Single.....				1			7		8
Double.....		4	2	2	2	4	15	9	38
Flushing.....						1	9	1	11
Road.....			1	1	1	1	6	2	12
Wagons:									
Express.....	1	1	1	1	1	1	2	1	9
Concord.....				1	1	1	2		5
Exercising.....							1		1
Snowplows.....		1	1	1			3	1	7
Buggies.....	3	2	2	1	1	1	5	1	16

Cost of Maintaining Horses on a Basis of 365 Days Per Year.

DISTRICTS.	SOUTH BOSTON.		EAST BOSTON.		CHARLESTOWN.		DORCHESTER.		ROXBURY.		WEST STABLE.		SOUTH STABLE.		TOTALS.	
	AVERAGE NUMBER OF HORSES KEPT.	19.64	11.87	12.11	11.25	21.11	35.25	45.53	158.76							
ITEMS.	TOTAL COST.	Per Year.	Per Horse per Day.	TOTAL COST.	Per Year.	Per Horse per Day.	TOTAL COST.	Per Year.	Per Horse per Day.	TOTAL COST.	Per Year.	Per Horse per Day.	TOTAL COST.	Per Year.	Per Horse per Day.	
	Labor.....	\$5,087 52	\$0 7097	\$3,135 50	\$0 7241	\$2,300 15	\$0 5204	\$1,360 58	\$0 2814	\$3,840 75	\$0 4985	\$7,225 18	\$0 5615	\$12,206 06	\$0 7399	\$35,245 74	$0 6083
Hay and grain.....	3,607 75	0 5033	2,157 53	0 4983	2,314 20	0 5236	391 12	0 0809	3,823 28	0 4963	6,764 52	0 5207	14,094 32	0 8481	33,152 72	0 5722
Fuel, light and rent..	1,274 23	0 1777	2,427 32	0 5606	162 30	0 3367	.....	.....	266 70	0 0346	232 68	0 0180	471 16	0 0283	4,834 39	0 0834
Shoeing.....	753 95	0 1051	607 75	0 1403	574 00	0 1299	428 00	0 0885	738 75	0 0959	1,350 50	0 1049	2,821 05	0 1698	7,274 00	0 1255
Stable repairs.....	57 15	0 0081	.....	.....	4 623 86	0 1411	.....	.....	1,272 21	0 1651	459 42	0 0367	220 90	0 0133	2,633 54	0 0454
Veterinary services and medicine....	198 51	0 0277	108 00	0 0249	159 25	0 0360	120 00	0 0248	193 15	0 0251	57 40	0 0044	798 80	0 0481	1,635 11	0 0282
Furnishings and repairs.....	402 26	0 0561	186 03	0 0429	133 49	0 0302	169 73	0 0351	341 65	0 0143	969 65	0 0747	1,439 73	0 0866	3,612 54	0 0629
Hire of driving horses.....	.....	.....	.....	.....	136 00	0 0308	25 00	0 0051	.....	.....	.....	.....	37 00	0 0022	198 00	0 0034
Outside board and care of horses.....	.....	.....	.....	.....	.....	.....	3,839 00	0 7940	.....	.....	.....	.....	.....	.....	3,839 00	0 0662
Miscellaneous.....	6 00	0 0008	4 00	0 0009	5 00	0 0011	6 00	0 0012	.....	.....	3 00	0 0002	33 00	0 0019	57 00	0 0010
Totals.....	\$11,387 37	\$1 5886	\$8,626 13	\$1 9921	\$6,408 25	\$1 4498	\$6,339 43	\$1 3111	\$10,476 49	\$1 3598	\$17,062 35	\$1 3260	\$32,212 02	\$1 6383	\$92,512 04	\$1 5966

¹ Of 4,835 horses' days 3,839 horses' days were in outside stable.

² Includes \$712.53 paid for taxes and \$1,500.86 paid for rent.

³ Includes \$1,014 paid for rent and water taxes.

⁴ Thorough overhauling of stable drainage and ventilation.

⁵ Includes cost of building addition.

SNOW WORK.

Cost of Snow Work and Volume of Snow Removed.

DISTRICTS.	Snow Work on Crossings and Gutters. Total Cost.	SNOW REMOVAL.			
		Total Cost. *	Single Loads of Snow Removed. †	Cubic Yards Removed. †	Cost per Cubic Yard Removed. *
1. South Boston.....	\$1,593 71	\$1,392 11	792	2,059	\$0 67
2. East Boston.....	254 28	391 13	843	2,192	0 18
3. Charlestown.....	329 16	558 88	382	993	0 56
6. Dorchester.....	491 87	524 51	392	1,019	0 51
7. Roxbury.....	700 26	405 97	402	1,045	0 38
8. Uptown.....	716 17	901 23	337	876	1 03
8. Downtown.....	1,691 08	6,393 52	2,795	7,267	0 88
9. Back Bay.....	508 65	660 31	887	2,306	0 28
10. West End and North End.....	2,046 47	6,792 82	2,253	5,858	1 16
11. Patrol System.....	4,069 91	2,199 40	522	1,357	1 62
Totals.....	\$12,401 56	\$20,219 88	9,605	24,972	.....
Average.....	.....	.....	.....	.....	\$0 81

* Includes Sundays paid time and one-half, holidays paid double time.

† Street Cleaning Branch loads, 2.6 cubic yards.

Summary.

ITEMS.	Cost of Inspection, Labor and Teaming.	Cost of all Other Charges.	Total Cost.	AMOUNT OF SNOW REMOVED.		Cost per Load Removed.	Cost per Cubic Yard Removed.
				Loads.	Cubic Yards.		
Snow removal.....	\$14,092 51	\$6,127 37	\$20,219 88	9,605	24,972	\$2 10	\$0 81
Snow crossings and gutters.....	11,761 29	640 27	12,401 56	.....	.....	.....	.....
Totals.....	\$25,853 80	\$6,767 64	\$32,621 44	.....	.....	.....	.....

Flushing.

Cost of Supervision.	Cost of Labor and Teams.	Cost of Repairs and Tools.	* Cost of All Other Charges.	† Total Cost.	Square Yards Flushed Once.	Total Gallons of Water Used.	Gallons of Water Used per Square Yard.	Cost per Thousand Square Yards Flushed Once.
\$1,322 72	\$8,043 21	\$3,595 02	\$8,601 80	\$21,562 75	136,654,469	12,485,500	.0913	\$0.1577

* Cost of new machines, \$2,312.20, included.

† Cost of water not included.

Push Cart, Team and Box Patrols and Collections.

Districts.	TEAM PATROL.					PUSH CART COLLECTION.							
	Inspection, Labor and Teaming.	All Other Charges.	Total Cost.	Number of Loads Collected.	Number of Cubic Yards Collected.	Cost per Cubic Yard.	Inspection, Labor and Teaming.	All Other Charges.	Total Cost.	Number of Barrels Collected.	Cubic Yards Collected.	Cost per Barrel Collected.	Cost per Cubic Yard Collected.
1.....	\$701 37	\$441 84	\$1,143 21	283	566	\$2 02	\$2,694 27	\$622 16	\$3,316 43	5,344	910	\$0 621	\$3 46
2.....	897 62	846 37	1,743 99	327	654	2 67	2,099 51	201 80	2,301 31	4,297	732	0 535	3 14
3.....	1,497 42	1,167 39	2,664 81	555	1,110	2 40	2,273 57	297 49	2,541 06	2,848	485	0 892	5 24
6.....	1,159 88	624 24	1,784 12	383	766	2 33	553 47	47 93	601 40				
7.....	643 04	333 91	976 95	347	694	1 41	8,846 30	1,336 29	10,182 59	21,321	3,632	0 477	2 80
8. Uptown.....	814 61	395 59	1,210 20	129	258	4 69							
8. Downtown....	1,028 68	503 74	1,532 42	212	424	3 61							
9.....	870 53	492 65	1,363 18	165	330	4 13	102 04	5 13	107 17				
10.....	7,124 81	2,585 66	9,710 47	2,090	4,180	2 32	8,572 81	521 50	9,094 31	15,898	2,709	0 572	3 36
11.....	1,496 65	1,572 62	3,069 27	415	830	3 70	65,983 02	10,867 50	76,850 52	117,648	20,044	0 653	3 83
Totals.....	\$16,234 61	\$8,964 01	\$25,198 62	4,906	9,812	.....	\$91,124 99	\$13,869 80	\$104,994 79	167,356	28,512	.....	.....

Subway patrol \$1,067 10
 Refuse box collection \$6,247 91
 Sanding streets \$1,835 06
 Number of boxes collected 62,152
 Capacity of barrels:
 Wooden 4.6 cubic feet.
 Metal 3.0 cubic feet

Machine Sweeping of Paved Streets and Gutters.

DISTRICTS.	PAVED STREETS.		GUTTERS.		TOTAL.	PAVED STREETS AND GUTTERS.				LOADS OF DIRT REMOVED.		CUBIC YARDS OF DIRT REMOVED.			
	Square Yards Cleaned Once.	Equivalent Mileage of 30-foot Roadway Cleaned Once.	Square Yards Cleaned Once.	Miles Cleaned Once.		Square Yards Cleaned Once.	Inspection, Labor and Training.	All Other Charges.	Total Cost.	Cost per Mile Cleaned Once.	Cost per Thousand Square Yards Cleaned Once.	Total.	Per Thousand Square Yards.	Total.	Per Thousand Square Yards.
1.....	34,987,576	1,987.93	6,588,816	1,247.88	41,576,392	\$26,460 80	\$14,380 93	\$40,841 73	\$12 62	\$0 982	13,239	.32	26,478	.64	\$1 54
2.....	11,972,608	680.26	3,991,805	756.03	15,964,473	14,901 97	10,441 07	25,343 04	17 64	1 687	7,495	.47	14,990	.94	1 69
3.....	29,586,983	1,681.08	2,265,447	429.06	31,852,430	18,786 18	7,835 05	26,621 23	12 62	8 45	8,089	.25	16,178	.51	1 65
6.....	7,263,100	412.65	3,132,317	593.24	10,395,417	15,554 89	8,374 54	23,929 43	23 79	2 302	8,051	.77	16,102	1.55	1 49
7.....	30,302,222	1,721.72	3,358,925	636.16	33,661,147	17,846 93	9,418 27	27,265 20	11 56	809	7,731	.23	15,462	.46	1 76
8. Uptown.....	36,046,467	2,048.09	3,821,304	723.73	39,867,771	1 21,679 52	2 10,327 60	32,007 12	11 58	802	7,114	.18	14,228	.36	2 27
8. Downtown...	108,455,333	6,162.23	382,907	72.52	108,838,240	39,130 96	22,729 70	61,860 66	9 92	559	12,688	.12	25,376	.23	2 44
9.....	13,191,711	749.52	3,900,987	738.83	17,092,698	12,971 75	4 5,436 29	18,408 04	12 37	1 079	4,736	.27	9,472	.55	1 94
10.....	75,154,419	4,270.02	618,786	117.19	75,773,205	39,785 62	23,492 48	63,278 10	14 42	835	15,596	.21	31,192	.41	2 03
11.....						617 46	265 93	883 39							
Totals.....	346,960,419	19,713.50	28,061,354	5,314.64	375,021,773	\$207,736 08	\$112,701 86	\$320,437 94			84,739		169,478		
Averages.....									\$14 06	\$1 088		.31		.63	\$1 78

¹ Includes \$20.11 expended on public alleys.

² Includes 10.01 expended on public alleys.

³ Includes 316.01 expended on public alleys.

⁴ Includes 158.79 expended on public alleys.

⁵ Includes \$505.62 expended on public alleys.

STREET OILING.

Showing Cost of Labor, Teaming, Oil, etc., Including Superintendence, 1913.

Districts.	Total Area Oiled (Square Yards).	Equivalent Mileage, 30-foot Roadway.	Area Covered (Once (Square Yards).	DATES OF OILING.		Average Number of Times District Treated.	Total Cost.	COST PER SQUARE YARD.		Gallons Used.	Gallons per Square Yard of Oiled Area.	Total Water Used (Gallons).
				First.	Last.			Covered Once.	Entire Season.			
1. South Boston.....	558,869	31.7539	4,030,530	April 10	Nov. 12	7.2119	\$10,885.73	\$0.0027	\$0.01917	135,796	.24299	396,450
2. East Boston.....	483,371	27.4642	3,420,074	April 2	Nov. 7	7.0754	7,996.27	0.0233	0.1651	95,240	.19703	275,850
3. Charlestown.....	155,684	8.8156	1,261,839	April 22	Sept. 27	8.1051	3,852.01	0.0305	0.2174	31,119	.19988	94,950
4. Brighton.....	770,644	43.7865	3,481,964	March 19	Dec. 16	4.5182	14,031.33	0.0429	0.182	186,132	.24152	609,800
5. West Roxbury.....	1,187,599	67.4772	4,206,976	April 10	Nov. 25	3.5124	17,031.46	0.0404	0.1434	216,070	.18193	582,300
6 and 9. Dorchester.....	1,531,639	87.0249	8,122,892	March 19	Dec. 15	5.3033	29,078.22	0.0357	0.1898	411,008	.26834	1,083,808
7. Roxbury.....	1,137,261	64.6171	6,512,108	March 26	Dec. 17	5.7261	24,889.46	0.0382	0.2188	326,755	.2873	1,006,441
8 and 10. South End, Back Bay and part of Roxbury....	699,541	39.7466	6,828,509	March 19	Dec. 21	9.7614	23,118.87	0.0385	0.3304	272,023	.38886	778,950
11. Hyde Park.....	578,894	32.8917	1,965,738	April 24	Nov. 3	3.3936	7,448.02	0.0378	0.1286	84,220	.14548	249,300
Totals.....	7,103,502	403.6077	39,830,630	.....	.....	54.6394	\$138,331.37	\$0.03143	\$0.18065	1,758,363	2.15333	5,077,849
Averages.....	.....	.....	.....	.....	.....	5.607	.....	\$0.00344	\$0.01947	.....	.....	.....

NOTE.—1913. Cost of 1 square yard (for season), \$0.01947.
1912. Cost of 1 square yard (for season), \$0.01827.

AREA WATERED, 1913.

Total Cost per Square Yard and Amount of Water Used.

DISTRICTS.	Total Square Yards Watered.	Equivalent Mileage 30-foot Roadway.	DATES OF WATERING.		Number of Days One or More Carts Out.	Total Cost.	Cost per Square Yard.	Carts days Worked.	Loads Spread During Season.	Square Yards Covered Once.	Total Gallons of Water Used.
			First.	Last.							
South Boston.....	476,547	27.0765	1913, Feb. 3	1913, Dec. 21	212	\$10,674 59	\$0 02239	1,639	24,505	103,257,000	14,751,000
East Boston.....	136,225	7.71	Feb. 3	Dec. 21	199	4,967 94	03646	626	9,390	39,438,000	5,634,000
Charlestown.....	251,950	14.3153	Mar. 9	Dec. 31	196	6,080 70	02413	832	12,380	51,996,000	7,428,000
Brighton.....	98,954	5.6223	Mar. 9	Dec. 31	198	4,646 93	04696	622	9,330	39,186,000	5,598,000
West Roxbury.....	127,575	7.2485	Mar. 9	Dec. 31	200	6,563 61	05144	810	12,150	51,030,000	7,290,000
Dorchester.....	192,452	10.9342	Feb. 2	Dec. 31	217	10,647 81	05532	1,558	23,370	98,154,000	14,022,000
Roxbury.....	189,873	10.7882	Feb. 2	Jan. 15	229	10,235 65	0539	1,406	21,090	88,578,000	12,654,000
South End and part of Roxbury.....	585,954	33.2928	Feb. 2	Jan. 19	248	17,388 58	02907	2,647	39,705	166,761,000	23,823,000
City Proper.....	553,404	31.4434	Feb. 3	Jan. 19	239	16,066 29	02975	2,476	37,140	155,988,000	22,284,000
Hyde Park.....	50,264	2.8559	Mar. 23	Dec. 21	183	2,908 03	05785	292	4,380	18,396,000	2,628,000
Totals.....	2,663,198	151.3171	.....	.....	.....	\$90,180 13	\$0 40787	12,908	193,520	812,784,000	116,112,000
Average.....	.....	.....	.....	.....	.....	.....	03386	.....	.....	.....	.....

NOTE.—1913, cost per square yard for the season, \$0.03386; 1912, cost per square yard for the season, \$0.03565.

STREET WATERING.—1913.

MONTH.	Days Out.	Carts-days Worked.	Average Cart-days Worked.	Number of Carts Out.	Average Number of Carts Out.	Cost of Teaming.	Average Cost per Cart, Teaming.	Cost of Labor.	Total Cost Teaming and Labor.	Average Cost per Cart, Teaming and Labor.
1913.										
February.....	4	50	12	57	14	\$241 42	\$56 09	\$534 76	\$3,451 40	\$66 37
March.....	12	541	45	623	52	2,916 64	104 92	787 40	8,551 70	115 56
April.....	21	1,465	70	1,563	74	7,764 30	130 15	978 58	12,301 97	141 40
May.....	25	2,133	85	2,187	87	11,323 39	144 28	839 86	12,526 88	154 65
June.....	28	2,227	80	2,272	81	11,687 02	153 83	902 26	12,594 40	165 72
July.....	31	2,209	71	2,358	76	11,692 14	138 55	1,099 53	10,659 25	154 48
August.....	28	1,814	65	1,937	69	9,559 72	115 46	932 97	8,342 40	130 35
September.....	23	1,421	62	1,463	64	7,389 43	37 26	1,349 82	3,011 05	64 07
October.....	8	289	36	377	47	1,661 23	75 65	1,383 51	3,890 11	117 88
November.....	16	469	29	528	33	2,496 60				
December.....	16	259	16	300	19	946 84				
January.....	7	32	5	39	6	389 85				
Totals.....	219	12,909	576	13,704	622	\$68,068 58	\$956 19	\$8,838 69	\$75,329 16	\$1,110 48
Less February and December, 1913, and January, 1914.....	192	12,568	543	13,308	583					
Average per month, March to November, inclusive.....	21½	1,396½	60½	1,478½	64½		106 24			123 39

Note.—Average cost for one cart for one month, 1913, \$123.39 for a period of nine months; average cost for one cart for one month, 1912, \$131.59 for a period of eight months.

DISTRIBUTION OF EXPENDITURES.

Removing snow	\$20,219 88		
Snow work on crossings and gutters	12,401 56		
	<u> </u>	\$32,621 44	
Flushing streets		21,562 75	
Street patrolling by teams	\$25,198 62		
Street patrolling by push carts	104,994 79		
Cleaning of subway passage	1,067 10		
Collection of refuse boxes	6,247 91		
	<u> </u>	137,508 42	
Cleaning of paved streets and gutters	\$319,932 32		
Cleaning of public alleys	505 62		
	<u> </u>	320,437 94	
Sanding of slippery streets		1,835 06	
		<u> </u>	\$513,965 61
Purchase of new horses		\$10,963 70	
Work performed for Sanitary Service		16 58	
		<u> </u>	10,980 28
			<u> </u>
Total expenditures, Street Cleaning Branch			\$524,945 89
Oiling of public streets and ways		\$138,331 37	
Watering of public streets and ways		90,180 13	
Total expenditures, Street Watering and Oiling Branch			
		<u> </u>	228,511 50
			<u> </u>
Total expenditures, Street Cleaning and Oiling Service			<u>\$753,457 39</u>

APPENDIX D.

REPORT OF THE DIVISION ENGINEER OF
THE SEWER AND WATER DIVISION.

FEBRUARY 2, 1914.

MR. L. K. ROURKE,

Commissioner of Public Works:

DEAR SIR,— I respectfully submit the following report of the income, expenditures and operation of the Sewer and Water Division for the year 1913.

SEWER SERVICE.

The more important items of work completed during 1913, or in progress at present, together with a brief list of the work which it is intended to do in 1914, are as follows:

BRIGHTON.

Two thousand one hundred and fifty-four linear feet of 2-foot 6-inch concrete and pipe surface drains in Brainerd road.

Three hundred and fifty feet of 6-foot 6-inch by 5-foot concrete conduit in Commonwealth avenue, at St. Lukes road.

Two thousand nine hundred and thirty-five linear feet of pipe sewers and surface drains in Oakland street.

Contemplated.

The Telford street outlet across Charles River Reservation and through Telford street, between Charles river and Western avenue. This is to be a 5-foot 6-inch storm water outlet and is needed for the relief of the Everett street area.

A portion at least of the 7,500 linear feet of 6-foot by 10-foot 6-inch concrete conduit for the easterly branch of Shepard brook, between Charles river and Everett street, should be put in.

It is desirable also to build a sewer and surface drain in Mt. Vernon street, with outlets in Foster street and private land, to the Faneuil valley sewer and conduit, and a concrete and pipe surface drain in Waverly street.

EAST BOSTON.

The 5-foot by 6-foot concrete culvert between Bennington and Saratoga streets was completed and pipe surface drains built in Thurston street, Butler avenue, Breed and Saratoga streets; also a sewer and surface drain system in Geneva street, between Gove and Porter streets.

Contemplated.

One thousand one hundred linear feet of 5-foot 3-inch by 4-foot 9-inch concrete surface drain should be built in Frankfort street, between Prescott road and Neptune road, and in Neptune road on the northwest side, between Orleans and Cottage streets, and on southeast side, between Orleans street and Boston, Revere Beach & Lynn Railroad, about 3,000 linear feet of 3-foot 6-inch concrete and pipe surface drains.

The sewer in Border street, between Summer street and Central square, has broken down several times and should now be rebuilt; and also the Webster street sewer, between points 60 feet and 220 feet east of Orleans street.

CHARLESTOWN.

Nothing built during 1913.

Contemplated.

About 1,700 linear feet of the Rutherford avenue sewer, between Middlesex and Cambridge streets, is in a dangerous condition and should be rebuilt; as should also the old slate, wood and brick sewer in Thompson street, between Warren and Main streets.

WEST ROXBURY.

The West Roxbury low level sewer was completed to Florence street by building 2,687 linear feet of 2-foot 6-inch by 3-foot concrete sewer.

A sewer system was built in Spring, Baker and Gardner streets, between Charles river and Heldun street, aggregating 6,500 linear feet of 3-foot 9-inch concrete surface drain and pipe sewers and surface drains.

In Anawan avenue, 2,900 linear feet of pipe sewers and 3,400 linear feet of 3-foot 3-inch to 4-foot 6-inch circular concrete surface drain were built.

In Montclair avenue, between Merlin and Centre streets, there were built 680 linear feet of pipe sewer and 2,500 linear feet of pipe surface drain.

Work is in progress on the Spring street brook conduit in private land, between Summer and Centre streets.

Contemplated.

The Roslindale brook conduit should be extended from its present terminus at Anawan avenue to Centre street. This would allow of the building of surface drains and catch-basins throughout the whole valley between Beech street and Mt. Vernon street. This is highly desirable as it would remove a large amount of storm water from the Roslindale main sewer, which has a direct connection with the Metropolitan main sewer and pours such a large flood of water into it during storms as to cause some complaint on the part of the Metropolitan Commission.

Surface drain systems should be built in the Auburn street brook area, in Centre street, between Day and Green streets, and in Green street, between Washington and Centre streets, the latter not only to separate the system but also to relieve the existing sewer system.

A start should be made on the Temple street brook conduit between the metropolitan sewer at Farragut street and Temple street at the Needham Branch Railroad.

Surface drains should be built in Central and Centre streets, between the New York, New Haven & Hartford Railroad and Montclair avenue, and in Parkman road, between Jamaicaaway and Perkins street.

DORCHESTER.

In the Neponset Playground a 4-foot 9-inch by 4-foot 6-inch concrete conduit was built from the railroad to Neponset avenue, putting out of sight the offensive channel.

Across Hallet street a 7-foot 9-inch by 6-foot 2-inch double reinforced concrete conduit to form a part of the permanent channel of Davenport brook; this work was made necessary by the construction of Hallet street.

Surface drainage system in Wellington Hill street and in Ballou avenue.

Separate systems were installed in Roach street, Vesta road and Bowdoin street.

A pipe sanitary sewer built in Dorchester avenue, between Freeport street brook and Savin Hill avenue, also in Adams street, Beach street, Cameron street, Downer court and Harrison park.

The brick intercepting sewer, 5 feet in diameter, in Auckland street, between Freeport street brook and Hoyt street, rebuilt in concrete, was completed.

Contemplated.

The completion of the Mattapan brook conduit and accompanying sewer in Astoria street and private land, between Norfolk and Delhi streets, and the Davenport brook conduit (north branch) in private land between Burt and Washington streets.

Completion of the separate system of sewers in Ballou and Woodrow avenues and Lyons street, and of the surface drain in Blue Hill avenue, between Deering road and Stratton street.

Construction of the Davenport brook conduit main channel, from a point 820 feet easterly of Adams street to Magdala street.

Davenport brook conduit, south branch, from Codman street to Dorchester avenue. Rebuilding of old and defective sewers in Springdale street, between the New York, New Haven & Hartford Railroad and Denny street, and in Dorchester avenue, from Hyde street 155 feet northerly. Systems of sanitary sewers in the Rugby district of Dorchester and Hyde Park.

HYDE PARK.

Pipe sanitary sewers were built throughout the Pinehurst district, where cesspools afforded the only means of sewage disposal; 15,292 linear feet of sanitary sewers were built.

In Hyde Park avenue a 2-foot 9-inch concrete conduit, connecting with Mother brook, was built to abolish the worst surface water nuisance in Hyde Park, viz., near the rear of Kennally's Block, in the center of the business district.

Contemplated.

Systems of sanitary sewers in:

The Readville district.

Hubbard street, from Metropolitan avenue to Huntington avenue.

Huntington avenue, from Jefferson street to Safford street.

Metropolitan avenue, from Vose street to Greenwood avenue.

Milton avenue and Washington place.

Thompson street, from Glenwood avenue to Franklin street.

Foster street and Washington street.

Rutledge road, from Blake street to Wood avenue.

Systems of surface drains in:

Hyde Park avenue, from Factory street to River street.

Dana avenue, from Hyde Park avenue to Folsom street, and in Folsom street.

Arlington street, from Hyde Park avenue to Providence street.

Providence street, from Arlington street to West street.

Outlet for Business street to Mother brook.

ROXBURY.

Separate systems of sewers were built in Huntington avenue, between Bryant and Gainsborough streets, in Munson street, Oak Grove terrace, Seaver and Sarsfield streets and in Van Ness street, also a concrete surface drain in Fenner street, Cobden street, etc., to relieve the floodings in Cobden street.

Contemplated.

The work contemplated for the coming year consists of the completion of the separate systems of drainage in the Cobden street district, the Harold street district and the Halleck street district.

It is also necessary that several streets in the Back Bay, such as Haviland street, Batavia street, etc., should be rebuilt.

SOUTH BOSTON.

The low level sewer consisting of 24-inch, 18-inch and 15-inch pipe, on piles, across the Commonwealth lands from Summer street to Northern avenue and in Northern avenue to the new Commonwealth and Fish Piers, was completed.

The pumping station in Summer street, near E street, to lift sewage from the system described above and

discharge into the old sewer in E street was completed and put in operation. This station is underground, automatic, electric, and contains two 10-inch Yeomans vertical, single suction, inclosed impeller pumps, driven by two 20 horse power Westinghouse motors, controlled by two Cutler-Hammer automatic switches. Total lift, about 13 feet.

A separate system was built in Sleeper street, the Kemp street overflow, a 10-foot 4-inch by 6-foot 3-inch concrete conduit, completed 500 feet into Old Harbor and the H street overflow extended 50 feet with 60-inch iron pipe.

Contemplated.

Separate systems in Old Colony avenue, from Hyde street to Mt. Vernon street, and in East First street extension, from H street to West First street. Surface drains in B street, from Frazer to Congress street, and in Southampton street, from the South bay sluiceway easterly. A half-tide dam in the South bay sluiceway at Southampton street, to keep the flats between that point and Massachusetts avenue covered in order to abate the nuisance arising from the sewage pollution flats.

CITY PROPER.

The main sewer for the South End improvement system, a double superposed structure, 6 feet 5 inches by 6 feet 5 inches and 6 feet 5 inches by 4 feet 2 inches, reinforced concrete, between Albany and Tremont streets, was finished.

A contract was let for the extension of the system northwest of Tremont street, and sewers built in Montgomery, Clarendon, Chandler, Buckingham, West Canton streets and Warren avenue. Sewers vary in size from 12-inch pipe to 9-foot by 4-foot reinforced concrete.

In the alleyway northwest of Tremont street and in Dartmouth street the old sewers are being rebuilt, sizes running from 3 feet 6 inches by 3 feet 6 inches to 4 feet 9 inches by 4 feet 9 inches. A contract was let for the pumping station machinery and contracts for the pumping station structure and outlet section through the Gately Wharf property to Fort Point channel. The machinery consists of four vertical centrifugal electric motor-operated pumping units,

together with all fitting, valves, switch boards, controllers, etc. The four units are as follows:

One 24-inch centrifugal pump, capacity 15,000 gallons per minute under $13\frac{1}{2}$ feet head.

Three 36-inch centrifugal pumps, capacity 30,000 gallons per minute, each under $13\frac{1}{2}$ feet head.

One 75 brake horse power constant speed, squirrel-cage, 3-phase, alternating current, induction motor, speed 240 revolutions per minute, with 60-cycle current at 440 volts.

Three 150 brake horse power motors, description same as above, speed 200 revolutions per minute, with current as above.

Contractors, the Epping Carpenter Pump Company of Pittsburgh, Pa.; contract price, \$34,836.

The pumping machinery is to be automatically started and stopped, and this station will be the largest sewage pumping station of this kind in the world.

The contract for the pumping station structure comprises a reinforced concrete chamber, below ground, 91 feet long by 40 feet wide by 29 feet deep, and a superstructure one story in height and 63 feet long by 40 feet wide. It also includes sewers to connect up with the main sewers built last year and this in Union Park street.

The aggregate value of the contract is \$60,520, of which about \$50,000 is for the pumping station. The contract for the outlet section through Gately's Wharf comprises about 293 linear feet of 4-foot 10-inch by 10-foot 6-inch gravity main and 2-foot 9-inch by 10-foot 6-inch force main placed side by side, all of reinforced concrete, also regulator, tide gates, etc., in Albany street.

On the Pleasant street widening, a separate system of sewers was designed and built, and is of a highly complicated nature. The old combined system had to be changed to the separate system in the middle of a district where no work of converting the old system to the separate system had as yet been done. The system put in had therefore to be fitted to operate as a separate system when the mains for the separate system shall have been brought up from Beacon street some years hence, while operating at present as a combined system; the existing sewers also were utilized, and the system,

on account of the width of the street, was made a double one, that is, a sewer and surface drain on each side of the street.

Separate systems of sewers were also built in Berkeley, Lime, North Anderson, Parkman and River streets.

The Transit Commission has constructed sewers in Boylston street, Summer street and Court street in conjunction with their work of subway building.

Contemplated.

On the South End improvement the pumping station is to be built and the extension of the system northwest of Tremont street is to be completed; in the alleyway and in Concord square, Greenwich park and alleyway north of Massachusetts avenue.

A separate system in Chestnut street, between Brimmer street and Charles river, rebuilding the old sewer.

The following old sewers rebuilt:

Waterford street, between Washington street and Shawmut avenue.

Church street, between Boylston and Providence streets.

Beach street, between Atlantic and Harrison avenues.

Kilby street, between Central and Milk streets.

Water street, between Broad and Congress streets.

Salutation street, between Hanover and Commercial streets.

A new sewer in Lucas street and a sewer for the widening in Avery street.

WATER SERVICE.

On August 20, 1913, the Metropolitan Water and Sewerage Board, under authority of chapter 694 of the Acts of 1912, acquired Fisher Hill Reservoir and 14.41 miles of large supply mains owned by the City of Boston in Brookline and Somerville, paying therefor the sum of \$150,000. This action terminates an undesirable condition which has existed since 1898; the fact that all the reservoirs and large mains outside of the city limits are now under one control undoubtedly makes for safety.

During the year one hundred thirteen thousand seven hundred seventy-one (113,771) linear feet of main pipe was laid, relaid and relocated, and fifty-four thousand nine hundred forty (54,940) linear feet was abandoned.

The character of the work was as follows: Sixty-three thousand one hundred thirty (63,130) linear feet consisted of extensions in anticipation of street construction, for new buildings, for the general improvement of the system, and for fire and sprinkler service. Among other improvements effected have been the following:

The connection of several mains between Dorchester and Hyde Park.

The fire protection of the Rugby district at Mattapan.

The mains required for the Park square district.

The furnishing of a second high service feed from Columbus avenue into Copley square.

The abolishing of dead-ends in that part of Hyde Park known as "Corriganville."

The establishing of two emergency connections, one with Newton on Washington street, Brighton, and one, the "double high service," with Brookline on Pond street, West Roxbury.

The strengthening of the "double high service" by a main crossing the New York, New Haven & Hartford Railroad at Bellevue station and connecting with the 12-inch pipe in Centre street at Church street, West Roxbury.

The supplying St. Joseph's Cemetery, West Roxbury, and Fairview Cemetery, Hyde Park, with water.

The laying of an auxiliary supply main in Butler street, Orient Heights, to insure a more certain supply for Deer Island, etc.

The relaying was done where the need of better fire protection was most urgent, being scattered throughout the city as follows:

CITY PROPER.

Newbury street, 2,450 feet 6-inch pipe relaid with 12-inch.
 Marlborough street, 2,900 feet 6-inch pipe relaid with 12-inch.
 Fairfield street, 1,150 feet 6-inch pipe relaid with 10-inch.
 Pleasant street, 1,800 feet 12-inch pipe relaid with 12-inch.
 Astor street, 900 feet 6-inch pipe relaid with 12-inch.
 Haviland street, 500 feet 6-inch pipe relaid with 12-inch.
 Batavia street, 1,000 feet 6-inch pipe relaid with 10-inch.
 St. Stephen street, 600 feet 6-inch pipe relaid with 10-inch.
 Dalton street, 500 feet 8-inch pipe relaid with 12-inch.
 Cambria street, 400 feet 6-inch pipe relaid with 12-inch.

ROXBURY.

East Lenox street, 1,100 feet 6-inch pipe relaid with 12-inch.
 Yeoman street, 900 feet 6-inch pipe relaid with 12-inch.
 Norfolk avenue, 1,250 feet 6-inch pipe relaid with 12-inch.
 George street, 1,750 feet 6-inch pipe relaid with 10-inch.
 Eustis street, 1,350 feet 6-inch pipe relaid with 10-inch.

SOUTH BOSTON.

Fargo street, 600 feet 12-inch pipe relaid with 16-inch.
 B street, 400 feet 12-inch pipe relaid with 16-inch.

BRIGHTON.

Linden street, 100 feet 6-inch pipe relaid with 10-inch.
 Ashford street, 1,500 feet 6-inch pipe relaid with 10-inch.

DORCHESTER.

Norfolk street, 2,150 feet 6-inch pipe relaid with 10-inch.
 Hecla street, 900 feet 6-inch pipe relaid with 10-inch.
 Faulkner street, 550 feet 6-inch pipe relaid with 10-inch.
 Ditson street, 500 feet 6-inch pipe relaid with 10-inch.
 Draper street, 1,100 feet 6-inch pipe relaid with 10-inch.
 Charles street, 950 feet 8-inch pipe relaid with 12-inch.
 Fox street, 450 feet 6-inch pipe relaid with 12-inch.

HYDE PARK.

West River street, 290 feet 8-inch pipe relaid with 12-inch.
 Readville street, 1,700 feet 6-inch pipe relaid with 12-inch;
 750 feet 12-inch pipe relaid with 12-inch.
 River street, 4,500 feet 4-inch, 6-inch and 8-inch pipe relaid
 with 16-inch.

In Hyde Park particularly a very great and much needed improvement was made, both in the fire protection and in the general supply, 9,850 linear feet of old and small pipes being relaid with pipes of adequate size, in addition to extensions amounting to 3,560 feet in length.

Five hundred fifty-one public and seven private hydrants were established, and 306 public and three private hydrants were abandoned, the work being done partly in connection with pipe-laying contracts, partly under a separate contract, and partly by day labor. (See Table VII., page 470, for details of hydrants.)

One thousand four hundred ninety-three service pipes were laid and 485 were abandoned. (See Table X., page 472, for details of services.)

The following mains were cleaned by contract during the year with very satisfactory results:

2,242 linear feet 16-inch in Brooks street, East Boston.

842 linear feet 12-inch in Prince street, city proper.

6,677 linear feet 12-inch in Washington street, West Roxbury.

7,449 linear feet 12-inch in River street, Dorchester.

The daily average consumption for the year was 79,390,600 gallons, a decrease of 10,646,900 gallons from the consumption of 1912. The daily average per capita consumption was 108 gallons, a decrease of 17 gallons from the record of 1912, and the lowest rate since 1895. These figures show a notable decrease in the quantity of water used in the city. They mean that 3,886,118,500 less gallons were used during the past year than in 1912, despite the fact that the estimated increase of population has been 14,460. This gratifying result is due to the installation of meters, an unusually mild winter, and to the work of the Waste Prevention force.

Respectfully submitted,

F. A. McINNES,
Division Engineer.

SEWER SERVICE.

The work of the service is carried on under chapter 9, City Ordinances 1910, and chapter 47, Revised Ordinances 1898, and the following statutes:

Chapter 426 — 1897, as amended by 450 — 1899 and 268 — 1903.

Chapter 383 — 1903, as amended by 464 — 1907.

Chapter 550 — 1907.

Chapter 204 — 1908.

Chapter 514 — 1908.

Chapter 348 — 1912.

THE DUTIES OF THE SEWER SERVICE.

1. Preparation of plans for sewerage works.
2. Construction and maintenance of all drainage works.
3. Investigation of complaints in regard to defective drainage.
4. The granting of permits for sewer construction.
5. The preparation of plans for the assessment of the cost of sewer construction.
6. The examination of the plans of other corporations proposing to construct works in public streets with reference to their probable interference with sewerage works.

Total number of employees on pay roll January 31, 1913	532
Total number of employees on pay roll January 31, 1914	516
Total amount of weekly pay roll January 31, 1913	\$9,667 42
Total amount of weekly pay roll January 31, 1914	\$10,205 00
Total amount of monthly pay roll January 31, 1913	\$658 00
Total amount of monthly pay roll January 31, 1914	\$666 33
Total amount of monthly pension roll January 31, 1913:	
Veterans	\$403 52
Laborers	\$247 54

Total amount of monthly pension roll January 31, 1914:	
Veterans	\$513 42
Laborers	\$367 92
Average weekly pay roll, including monthly roll and exclusive of pension roll, for fiscal year,	\$9,951 06
Charged as follows:	
Maintenance	*\$1,391 68
Sewerage works	2,845 92
Separate systems of drainage	2,713 46
Average number of men employed	526
Number of men on pension roll January 31, 1913:	
Veterans	9
Laborers	8
Number of men on pension roll January 31, 1914:	
Veterans	12
Laborers	12
Average number of horses maintained by the service during the year	46
Rate of wages per day to common laborers	†\$2 25

* Includes amount charged to the Sanitary and Street Cleaning Services	\$326 61
Paving Service	412 75
Abolishment of grade crossings	2,158 07
High Pressure Fire Service	508 36
Bridge Service	198 29

\$3,604 08

† \$2.25 to May 31, \$2.50 from May 31.

Financial Statement from February 1, 1913, to January 31, 1914.

Объект.	Balances on Hand Feb. 1, 1913.	Appropriations, Loans and Transfers.	Revenue Received During the Year.	Total Credits.	Expenditures During the Year.	Balances on Hand Jan. 31, 1914.
Sewer Service.....	.....	\$380,000 00	\$7,208 91	\$387,208 91	\$387,120 67	\$88 24
Sewerage works.....	\$193,117 36	600,000 00	.....	793,117 36	536,099 47	257,017 89
Separate systems of drainage.....	119,615 74	400,000 00	.....	519,615 74	455,997 19	63,618 55
Totals.....	\$312,733 10	\$1,380,000 00	\$7,208 91	\$1,699,942 01	\$1,379,217 33	\$320,724 68

NOTE.—Work done in East Boston district on account of grade crossing and charged to that appropriation, \$3,183.51.

MAINTENANCE EXPENDITURES, FEBRUARY 1, 1913, TO
JANUARY 31, 1914.

SEWER SERVICE.

Improved Sewerage.

Pumping station, inside	\$43,433 74	
Pumping station, outside	15,259 82	
Pumping station, engines	22,784 55	
Pumping station, boilers	16,462 34	
	<hr/>	\$97,940 45
Moon Island		17,898 50
Main and intercepting sewers		26,098 29
Office salaries		3,000 00
		<hr/>
		\$144,937 24

Stony Brook.

Maintenance		1,593 44
-----------------------	--	----------

Miscellaneous Maintenance Charges.

Cleaning catch-basins		35,821 47
Yards and lockers		4,561 95
Employed at yards		22,478 59
Horses, carts, harnesses, etc.	\$22,621 98	
Teaming	19,079 30	
	<hr/>	
	\$41,701 28	

Less amount earned by service teams	24,560 42	
	<hr/>	
		17,140 86

Automobiles		8,962 44
Cleaning sewers		36,956 62
Office salaries		13,263 46
Office expenses		3,354 75
Culverts, repairing and maintaining	\$1,837 48	
Repairing department buildings	1,409 96	
Repairing catch-basins, South Boston	1,741 65	
Repairing catch-basins, East Boston	554 18	
Repairing catch-basins, Charlestown	485 71	
Repairing catch-basins, Brighton	950 05	
Repairing catch-basins, West Roxbury	1,327 37	
Repairing catch-basins, Dorchester	3,851 62	
Repairing catch-basins, Hyde Park	47 36	
Repairing catch-basins, Roxbury	4,265 93	
Repairing catch-basins, city proper	3,834 38	
Repairing sewers, South Boston	539 89	
Repairing sewers, East Boston	511 25	
Repairing sewers, Charlestown	243 38	
Repairing sewers, Brighton	634 24	
Repairing sewers, West Roxbury	2,189 10	
Repairing sewers, Dorchester	3,537 42	
Repairing sewers, Roxbury	9,962 86	
Repairing sewers, city proper	5,293 46	
Repairing sewers, Hyde Park	58 76	
	<hr/>	
		43,276 05

Pension roll (veterans)		5,151 63
Pension roll (laborers)		3,589 68
		<hr/>

Carried forward \$341,088 18

<i>Brought forward</i>		\$341,088	18
Fuel and oil		2,139	47
Hardware, tools, etc.		7,124	31
Engines and boilers		66	39
Sundries and miscellaneous charges		10,734	56
Damages, claims and medical attendance		4,576	74
Telephones		835	31
House connections		9,194	10
Rubber goods		1,770	04
Gatehouse, Fenway		150	24
Stock		40,413	37
		\$418,092	71

Credit.

Amount earned by service engines	\$340	00	
Stock transferred and used on construction	28,531	84	
Rubber goods transferred and used on construction	295	95	
Fuel and oil transferred and used on construction	1,134	43	
Hardware, tools, etc., transferred and used on construction	669	82	
		30,972	04
		<u>\$387,120</u>	<u>67</u>

1913.

Charges to Various Parties for Work Done and Material Furnished.

Transit Commission	\$4,492	58
Sanitary Service	631	03
Water Service	507	05
Paving Service	221	89
Street Cleaning and Oiling	217	66
Boston Elevated Railroad	1,046	35
Bridge Service	133	69
Abolishment of Grade Crossing	312	28
R. S. Brine Transportation Company	47	26
Boston Pneumatic Transit Company	74	94
James Doherty	6	00
Cruff & Byrne	5	50
C. J. Donovan	61	00
Metropolitan Sewer and Water Board	6,770	20
United States Trust Company	20	00
R. B. Brigham Hospital Trustees	665	75
Wheeler, McElveen Company	147	25
W. Perry Company	83	50
Boston Athletic Association	67	92
John Hallett	44	00
Roxbury Iron Metal Company	49	00
David Grossman	25	00
E. L. Rhodes, E. O. Howard, Trustees	65	60
Schoolhouse Commission	38	43
Edison Electric Illuminating Company	36	11
Max Palis	427	78
Jersey Creamery Company	144	00
Mr. Bradley	2	00
T. Reardon	5	00
New England Telephone & Telegraph Company	397	88
West Newton Street Garage	108	00
Monahan Estate	20	73
<i>Carried forward</i>	\$16,875	38

<i>Brought forward</i>	\$16,875 38
Metropolitan Park Department	13 27
Paine Furniture Company	6 00
	<hr/>
	\$16,894 65

Amounts Collected by City Collector and Credited to Appropriation for Sewer Service Maintenance, February 1, 1913, to January 31, 1914.

Boston Transit Commission	\$4,584 23
Boston Elevated Railway Company	712 35
Paine Furniture Company	6 00
United States Trust Company	20 00
Edison Electric Illuminating Company	36 11
Boston Athletic Association	67 92
Boston Pneumatic Service Company	74 94
Cruff & Byrne	5 50
Abolishment of grade crossings	312 28
Public Works Department, Paving Service	155 53
Public Works Department, Sanitary Service	572 00
Public Works Department, Water Service	438 39
Public Works Department, Street Cleaning Service	217 66
J. Doherty	6 00
	<hr/>
	\$7,208 91
	<hr/>
Appropriation for 1913-14	\$380,000 00
Collections for 1913-14	7,208 91
	<hr/>
	\$387,208 91

Sewer and Water Division, Sewer Service.—Maintenance Expenditure, Detail, 1913-1914.

ACCOUNTS.	Total Expenditure.	Labor.	Teaming.	Stock.	Contracts.	Miscellaneous.
Automobiles (5).....	\$8,962 44	\$2,418 00				New auto..... \$1,300 00 Gasolene..... 623 25 Storage..... 710 00 Repairs: Labor..... 840 12 Fittings, etc..... 3,071 07 \$6,544 44
Cleaning catch-basins.....	35,821 47	7,956 76	\$570 26		\$27,158 09	Car fares..... \$81 98 Advertising..... 4 60 Stock..... 22 03 Salt..... 27 75 136 36
Cleaning sewers.....	36,956 62	12,092 69	4,180 92		12,275 63	Advertising..... \$31 60 Dumping..... 5 45 Machines..... 1,000 00 Rubber goods, etc..... 28 70 Machine cleaning: Machines..... 2,322 26 Labor..... 5,016 37 8,407 38
Culverts, repairing and maintaining.....	1,837 48	1,756 23	81 25			Waste..... \$27 10 Repairs, inspection, etc..... 39 29 66 39
Engines and boilers.....	66 39					
Employed at yards.....	22,478 59	22,478 59				
Fuel and oil.....	2,139 47					Coal..... \$1,350 75 Oil and gasolene..... 788 72 2,139 47
Hardware and tools.....	7,124 31					10½ doz. picks..... } 30 doz. pick handles..... } \$621 44 46 doz. shovels..... } Hose..... 1,036 85 Canvas..... 779 56 Hardware, repairs, etc..... 3,871 67 Large tools..... 814 79 7,124 31
House connections.....	9,194 10	8,400 26	117 10	\$224 71		Car fares..... 452 03

Horses, carts, harnesses, etc.....	22,621 98	8,588 37																				
Maintenance, Stony brook.....	1,593 44	1,185 21	392 19	16 04																		
Office expenses.....	3,354 75																					3,354 75
Office salaries.....	13,263 46	13,263 46																				
Repairing department buildings.....	1,409 96	30 50	19 50	1,359 96																		
Repairing catch-basins, South Boston.....	1,741 65	1,175 43	188 79	377 43																		
" " " " East Boston.....	554 18	255 14	127 62	171 42																		
" " " " Charlestown.....	485 71	332 60	56 45	96 05																		
" " " " Brighton.....	950 05	302 17	191 52	456 36																		
" " " " West Roxbury.....	1,327 37	591 54	156 65	579 18																		
" " " " Dorchester.....	3,851 62	1,964 21	481 59	1,405 82																		
" " " " Hyde Park.....	47 36	39 00	6 25	2 11																		
" " " " " city proper.....	4,265 93	3,213 86	232 64	819 43																		
" " " " Roxbury.....	3,834 38	1,023 24	532 67	2,278 47																		
Repairing sewers, South Boston.....	539 89	349 70	63 07	127 12																		
" " " " East Boston.....	511 25	323 83	103 43	83 99																		
" " " " Charlestown.....	243 38	150 43	63 03	29 92																		
" " " " Brighton.....	634 24	324 00	155 01	155 23																		
" " " " West Roxbury.....	2,189 10	1,523 78	333 36	331 96																		
" " " " Dorchester.....	3,537 42	2,454 44	361 97	721 01																		
" " " " Roxbury.....	9,962 86	5,742 61	837 63	3,382 62																		
" " " " " city proper.....	5,293 46	2,847 83	797 01	1,648 62																		
" " " " Hyde Park.....	58 76	36 80	17 63	4 33																		
Rubber goods.....	1,770 04																					1,770 04
Stock.....	40,413 37	598 50	51 38	39,763 49																		
Tearing.....	19,079 30	19,079 30																				
Telephones.....	835 31																					835 31
Yard and locker.....	4,561 95	221 78	262 97																			
Fodder.....	\$6,261 62																					
New horses.....	1,582 93																					
Stable goods.....	811 85																					
Veterinary service.....	203 50																					
Repairs, wagons, and harnesses.....	3,316 85																					
Shoeing.....	972 61																					
Board and miscellaneous.....	884 25																					14,033 61
Printing.....	\$2,167 58																					
Stationery.....	783 63																					
Miscellaneous.....	403 54																					
Weekly.....	\$8,338 47																					
Monthly.....	4,924 99																					
284 pairs boots.....																						
71 coats.....																						
72 hats.....																						
Rent.....	\$1,732 67																					
Gas.....	146 94																					
Electricity.....	94 52																					
Miscellaneous.....	2,103 07*																					4,077 20

* Includes hot water system, hydrant and gasoline tank, South End Yard.

Sewer and Water Division, Sewer Service.— Maintenance Expenditure, Detail, 1913-14.— Concluded.

ACCOUNTS.	Total Expenditure.	Labor.	Teaming.	Stock.	Contracts.	Miscellaneous.
Back Bay Fens, gatehouses.....	\$150 24					Electric light..... \$125 69 Car fares..... 11 00 Miscellaneous..... 13 55 \$150 24
Damages, claims and medical attendance.....	4,576 74					Accidents, allowance on account of..... \$1,176 74 Annuities..... 600 00 Dredging..... 2,500 00* Miscellaneous..... 250 00 4,576 74
Miscellaneous, sundries.....	10,734 56	\$5,267 37	\$318 96	\$2,417 73	\$1,975 00†	Sundries: Repairing streets..... \$97 43 Summer street, pump- ing station..... 115 07 Rain gauges..... 23 45 Dumping..... 34 10 Gypsy moth..... 14 57 Milling..... 4 11 Developing..... 75 Motor cycle..... 3 18 Chloride of lime..... 2 40 Glycerine..... 3 25 Repairs..... 236 07 Car fares..... 221 12 755 50
Pension roll, veterans and laborers.....	8,741 31	8,741 31				
	\$297,715 89	\$134,728 94	\$10,700 85	\$56,453 61	\$41,408 72	\$54,423 77
<i>Less Credits.</i>						
Teams.....	\$24,560 42					
Stock.....	28,531 84					
Engines and boilers.....	340 00					
Rubber goods.....	295 95	18,892 60		24,560 42		12,079 44
Fuel and oil.....	1,134 43					
Hardware and tools.....	669 82					
Totals.....	\$242,183 43	\$115,836 34	\$10,700 85	\$31,893 19	\$41,408 72	\$42,344 33

* Settlement of claims Boston Wharf Company.

† Dredging Roxbury Canal.

Sewer and Water Division, Sewer Service.— Maintenance Expenditure, Detail, 1913-14.

Accounts.	Total Expenditure.	Labor.	Contracts.	Teaming.	Waste.	Coal and Wood.	Oil and Gasolene.	Packing.	Valves.	Car Fares.	Stable.	Pipe Fittings and Miscellaneous.	Towing.
Pumping station, inside	\$43,433 74	\$22,005 23			\$306 22	\$17,768 45	\$129 54	\$66 08		\$23 30		\$3,134 92	
" " outside	15,259 82	11,672 33		\$179 28	5 00					13 25	\$875 04	1,189 92	\$1,325 00
" " engines	22,784 55	18,311 16					1,027 41	1,457 82	\$1,705 71			282 45	
" " boilers	16,462 34	15,247 20										1,215 14	
Moon Island	17,898 50	13,983 38	\$900 00		30 65	582 18	18 34			737 35	526 31	1,120 29	
Office salaries	3,000 00	3,000 00											
Main and intercepting sewers,	26,385 48	17,072 12	4,677 13	653 38	10 54	131 78	67 45			52 60	1,252 51	2,467 97	
	\$145,224 43	\$101,291 42	\$5,577 13	\$832 66	\$317 41	\$18,487 41	\$1,242 74	\$1,523 90	\$1,705 71	\$826 50	\$2,653 86	\$9,410 69	\$1,325 00
<i>Credits.</i>													
Main and intercepting sewers:											66 29		
Amount earned by service	287 19	220 90											
teams	\$144,937 24	\$101,070 52	\$5,577 13	\$832 66	\$317 41	\$18,487 41	\$1,242 74	\$1,523 90	\$1,705 71	\$826 50	\$2,587 57	\$9,410 69	\$1,325 00

Recapitulation.— Maintenance Detail, 1913=14.

	Improved Sewerage.	Outside Improved Sewerage.	Totals.
Labor.....	\$101,291 42	\$134,728 94	\$236,020 36
Contracts.....	5,577 13	41,408 72	46,985 85
Teaming, hired and city.....	832 66	10,700 85	11,533 51
Waste.....	* 347 41	27 10	374 51
Fuel.....	† 18,487 41	1,350 75	19,838 16
Oil.....	‡ 1,242 74	788 72	2,031 46
Packing.....	§ 1,523 90		1,523 90
Valves.....	1,705 71		1,705 71
Car fares and traveling expenses.....	\$26 50	766 13	1,592 63
Horses, etc.....	2,653 86	14,033 61	16,687 47
Towing.....	|| 1,325 00		1,325 00
Pipe fittings and miscellaneous.....	9,410 69		9,410 69
Rent.....		1,732 67	1,732 67
Telephones.....		835 31	835 31
Automobiles, repairs and supplies.....		6,544 44	6,544 44
Stock and miscellaneous supplies.....		84,798 65	84,798 65
	\$145,224 43	\$297,715 89	\$442,940 32
CREDITS.			
<i>Improved Sewerage.</i>			
Labor.....	\$220 90		
Stables.....	66 29		
	287 19		
<i>Outside Improved Sewerage.</i>			
Miscellaneous.....	\$12,079 44		
Labor.....	18,892 60		
Stock.....	24,560 42		
		55,532 46	55,819 65
	\$144,937 24	\$242,183 43	\$387,120 67
* WASTE.			
1,870½ pounds at 10c.....	\$187 02		
728 pounds at 8½c.....	63 70		
600 pounds at 9½c.....	55 50		
300 pounds at 10c. and express,	30 65		
124 pounds at 8½c.....	10 54		
	<u>\$347 41</u>		
† COAL.			
4,340 tons 1,058 pounds soft... \$17,773 45			
87 tons 1,100 pounds hard.. 692 96			
2 cords wood..... 21 00			
	<u>\$18,487 41</u>		
|| TOWING.			
Boston Tow Boat Company... \$1,325 00			
§ PACKING.			
24 springs.....		\$54 00	
1,435½ pounds at 35c. to \$2.50,		1,401 70	
Repair to metallic packing....		68 20	
		<u>\$1,523 90</u>	
‡ OIL.			
2,090½ gallons engine at.....		18c.	
1,256½ gallons cylinder at.....		28c.	
57 gallons sperm at.....		90c.	
50 gallons lard at.....		90c.	
60 gallons raw at.....		52c.	
3,000 pounds grease at.....		10c.	
810 gallons kerosene at.....		8½ to 12c.	
210 gallons gasolene at.....		17 to 19½c.	
		<u>\$1,242 74</u>	

Coal at Pumping Station.

DATE.	Contractor.	Tons.	PAID IN 1913-14.	
			Per Ton.	Totals.
1913.				
March 12..	D. Doherty & Co.....	1	\$5 00	\$5 00
April 5..	Spring Coal Company (barge "George R. Scofield").....	1,269 ¹⁵⁵ / ₃₂₅	3 67	4,660 27
May 28..	J. P. Stewart Coal Company.....	1	4 50	4 50
July 10..	Staples Coal Company (lighter "Marse").....	200	4 65	930 00
Aug. 27..	J. P. Stewart Coal Company.....	1	4 50	4 50
Aug. 22..	James O'Neil <i>et al.</i> , receivers (lighter "Franklin H. Skeele").	178 ¹³⁵ / ₃₂₅	{ * 0 18	} 746 42
July 18..	New England Coal and Coke Company (lighter "Cherry")..	500 ²⁵⁵ / ₃₂₅	{ † 0 20 ‡ 0 27	
Sept. 4..	New England Coal and Coke Company (barge "Annie")....	1,068 ²²⁵ / ₃₂₅	4 18	8,230 08
Sept. 6..	Metropolitan Coal Company (lighter "No. 3").....	220 ³⁵⁵ / ₃₂₅	4 35	957 50
Totals.....		4,340 ¹⁰⁵⁵ / ₃₂₅	.....	\$17,773 45

* Stevedoring.

† Lighterage.

‡ Discharging.

Catch-basins Cleaned by Contract, 1913=14.

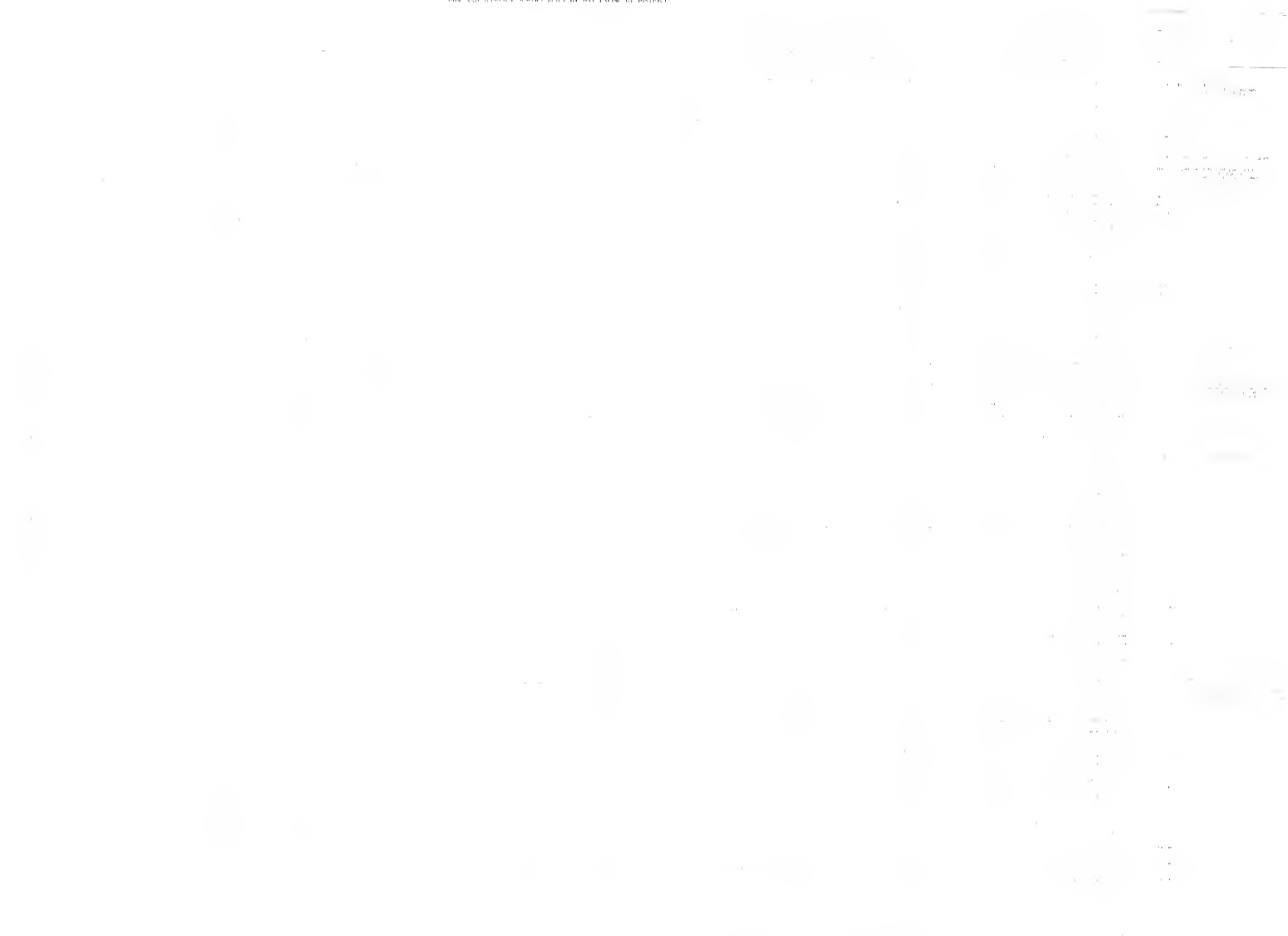
District.	Contractor.	Start and Finish of Work.	Price per Basin.	Total Cubic Yards Excavated.	Contractor Received.	Total Basins Cleaned.	Total Basins Freed.	Total Drop Inlets Cleaned.	Average Cubic Yards per Basin.	Inspection.	Per Cent of Cost for Inspection.	Average Cost to City per Basin.	Average Number Basins Cleaned per day.
1. South Boston.....	J. J. Loonie.....	Mar. 24, 1913 Jan. 20, 1914	\$3 50	.....	\$1,763 50	501	3	4	.....	\$357 00	16.80	\$4 23	5.0
2. East Boston.....	J. W. Collins.....	Mar. 3, 1913 Feb. 3, 1914	3 78	.....	956 34	253	.....	.....	.....	272 75	22.20	4 86	4.2
3. Charlestown.....	J. W. Collins.....	Mar. 3, 1914 Jan. 8, 1914	4 00	.....	1,642 00	406	3	12	.....	374 50	18.60	4 97	4.3
4. Brighton.....	J. J. Loonie.....	Feb. 10, 1913 Dec. 31, 1913	3 00	.....	1,217 00	402	.....	11	.....	294 00	19.50	3 76	5.3
5. West Roxbury.....	J. W. Collins.....	Mar. 24, 1913 Sept. 30, 1913	2 89	.....	1,406 53	477	2	24	.....	405 50	22.40	3 80	4.6
6. Dorchester.....	J. W. Collins.....	Feb. 4, 1913 Feb. 3, 1914	2 99	.....	4,817 14	1,586	4	78	.....	1,143 25	19.20	3 75	5.4
7. South of Dover and Berkeley streets.....	J. J. Loonie.....	Feb. 7, 1914 Feb. 1, 1913	3 50	.....	6,489 52	1,819	19	90	.....	1,385 20	17.60	4 33	6.3
8. North of Dover and Berkeley streets.....	J. W. Collins.....	Feb. 3, 1914 Feb. 1, 1913	4 25	.....	6,845 50	1,566	63	64	.....	1,657 82	19.50	5 43	5.4
11. Hyde Park.....	J. W. Collins.....	Feb. 1, 1913 Aug. 28, 1913	3 25	.....	694 25	209	2	11	.....	142 75	17.00	4 00	5.2

Total catch-basins cleaned.....	7,219	Total cost: Contractors.....	\$25,831 78
Total drop inlets cleaned.....	294	Inspection.....	6,032 77
Total catch-basins freed.....	96	Advertising.....	4 60
		Miscellaneous.....	54 38
			\$31,923 53

PUBLIC WORKS DEPARTMENT.

DETAIL OF WORK DONE BY HIGHWAY DIVISION, FORCE

DATE	DESCRIPTION OF WORK	AMOUNT	REMARKS
1911
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Sewerage Works.

Expenditures, February 1, 1913, to January 31, 1914.

ACCOUNTS.	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Miscellaneous.	Contracts.	Totals.
Engineers' salaries.....	\$34,274 01						\$34,274 01
Engineers' expense.....	774 71	\$84 56			\$4,492 32		5,351 59
Pumping station.....	1,489 95		\$2,373 64		12 90	\$18,632 39	22,508 88
Sundries.....					65 22	7,975 00	8,040 22
Land-taking and court executions.....					18,534 30		18,534 30
New manholes, entire city.....	2,238 22	531 66	1,305 13		98 26		4,173 27
New catch-basins, South Boston.....	505 01	73 16	469 98		29 48		1,077 63
New catch-basins, East Boston.....	3,526 35	799 50	1,899 83		44 85		6,270 53
New catch-basins, Brighton.....	2,197 74	386 50	1,298 30		19 40		3,901 94
New catch-basins, West Roxbury.....	505 68	103 85	99 63		5 00		714 16
New catch-basins, Dorchester.....	3,256 69	381 74	1,827 42		18 01		5,483 86
New catch-basins, Roxbury.....	606 02	95 81	69 86				771 69
New catch-basins, city proper.....	237 93	51 01	191 43				480 37
Sewers built in entire city.....	101,518 55	7,399 17	31,936 96	\$6,472 96	6,776 11	266,736 95	423,810 70
New catch-basins, Charlestown.....	62 85	31 13	55 95				149 93
New catch-basins, Hyde Park.....	244 83	33 13	248 43				526 39
	\$154,438 54	\$9,971 22	\$41,776 56	\$6,472 96	\$30,095 85	\$293,344 34	\$536,099 47

Sewerage Works.

Expenditures, February 1, 1913, to January 31, 1914.

LOCATION.	Built by	Engineering.	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Contracts.	Miscellaneous.	Totals.	Remarks.
SOUTH BOSTON.										
E street, at Anchor street.	Day labor			\$87 75	\$896 84	\$248 40		\$132 17	\$865 16	
Land of the Commonwealth of Massachusetts, Summer street to Northern avenue, and Northern avenue from D street to 600 feet east.	Day labor	\$527 00	\$15,050 64	1,164 76	7,105 40	2,303 17	\$3,261 91	969 04	30,381 92	
Kemp street, overflow in land of City of Boston, at foot of Kemp street.	Contract	517 00	869 00	1 00	35 89		14,977 73	3 83	* 16,401 45	
Northern avenue, extended from D street to 994 feet west.	Contract	289 00	442 50		71 92		10,665 80	6 12	11,475 34	
II street, from Columbia road to tide water.	Day labor	82 00	299 26	71 78	415 33			1 43	869 80	
L street, from East Ninth street to Columbia road.	Contract	100 00	77 00				915 17		* 1,092 17	
Sleeper street, from Congress street to 630 feet north.	Day labor	556 00	7,737 17	752 09	3,734 20	1,027 00	1,569 90	506 63	15,882 99	8 catch-basins included.
Summer street, opposite E street, underground pumping station.	Contract	900 00	875 00	23 19	734 98		6,205 41	73 79	8,812 37	
Summer street, opposite E street, automatic pumping plant.	Contract						3,103 00	146 20	3,249 20	
EAST BOSTON.										
Private land, Bennington and Saratoga streets, and under Saratoga street to Orient Heights Playground.	Day labor	100 00	2,503 79	431 80	1,375 49	596 60		138 51	5,146 19	

Saratoga street, near Ford street, to 200 feet west and extension 120 feet west.	Day labor.....	20 00	494 67	97 25	315 34	.....	2 50	929 76
Cottage street, from Prescott street to Neptune road.	Contract.....	60 00	34 13	.....	194 71	3,895 92	.....	4,184 76
Private land, from Faxon street to Saratoga street.	Day labor.....	20 00	568 07	9 00	472 55	.....	.....	1,069 62
Frankfort street, from Prescott street to 200 feet southwesterly.	Contract.....	50 00	73 50	.....	11 92	1,416 90	3 90	1,556 22
Geneva street, from Gove street to north-east of Porter street.	Day labor.....	98 00	4,196 01	549 01	878 97	675 44	21 80	* 6,419 23	
Neptune road, from Cottage street to Gosnold street.	Day labor.....	45 00	885 07	249 13	357 40	.....	11 40	1,548 00
Porter street, from Orleans street to Cottage street.	Day labor.....	15 00	991 74	196 13	249 01	.....	14 90	1,466 78
Porter street outlet to end of street.....	Day labor.....	30 00	953 32	52 38	830 67	.....	21 12	1,887 49
Saratoga street, from 225 feet east of Trumbull street to 265 feet easterly.	Day labor.....	36 00	1,061 38	235 88	406 54	.....	11 50	1,751 30
BRACHROX.									
Maple avenue, from Dustin street to Murdoch street.	Day labor.....	28 00	585 43	69 06	105 80	.....	7 68	795 97
Spring street, from Dustin street to Murdoch street.	Day labor.....	10 00	399 22	50 38	85 17	.....	1 50	546 27
WEST ROXBURY.									
Alberta street, from Centre street to railroad.	Contract.....	30 00	143 50	.....	55 79	2,078 20	4 20	2,311 69
Lawn street, from Mt. Hope street to 200 feet northeasterly.	Day labor.....	12 00	662 49	83 00	97 15	.....	15 55	869 89
Padfrey street, from Brown avenue to railroad, and Grandview street, from Beech street 170 feet southwesterly.	Contract.....	31 00	56 00	.....	50 24	476 04	4 30	620 58

* Cost not complete.

Sewerage Works.—Continued.

LOCATION.	Built by	Engineer- ing.	Labor.	Teaming.	Materials.	Hired and Depart- ment Ma- chinery.	Contracts.	Miscel- laneous.	Totals.	Remarks.
Preston road, from Pleasant street to Chapin avenue.	Contract.....	\$20 00	\$40 25	.....	\$44 00	.....	\$599 31	\$4 30	\$707 86	
Vale street, from La Grange street to 275 feet southwest, and Walker street, between Weld street and old sewer 76 feet north.	Contract.....	25 00	161 00	.....	51 29	.....	1,229 67	4 20	1,471 16	
DORCHESTER.										
Dorchester intercepting sewer in Auckland street, from Freeport Street brook to Hoyt street.	Day labor....	242 00	8,880 18	\$647 68	2,376 94	\$1,093 20	327 91	485 41	14,053 32	
Adams street, Dakota road, Homes avenue and Lawrence park.	Contract.....	.....	.....	.....	.....	.....	557 46	.....	557 46	
Davenport brook, Hallet street to 112 feet north of Marsh street extended.	Contract.....	296 00	510 00	.....	46 46	.....	5,699 74	257 16	* 6,809 36	
Preston and Freeport streets.....	Contract.....	118 00	91 00	.....	187 43	.....	4,032 42	96 09	4,524 94	
Tenean street, from existing sewer to 1,000 feet south.	Contract.....	.....	.....	.....	.....	.....	263 46	.....	263 46	
Bailey street, from Washington street to 184 feet east.	Day labor....	.....	.....	.....	8 88	.....	.....	.....	8 88	
Mattapan brook, in private land between New York, New Haven & Hartford Railroad and Norfolk street.	Day labor....	.....	.....	.....	209 40	.....	.....	.....	209 40	
Helena road, from Burgoyne street to Adams street.	Contract.....	15 00	87 50	.....	55 26	.....	679 72	3 80	841 28	
Adams street, from Leedsville street to 229 feet northerly.	Contract.....	10 00	21 00	.....	75	.....	538 78	4 00	574 53	

Bowdoin street, from Hamilton street to Olney street; Bowdoin street, from Corona street to Westville street; Bourne-side street, southeast corner of Park street.	Contract.....	585 00	556 50	511 13	5,687 52	4 80	* 7,347 95	12 catch-basins included.
<i>Roisbury.</i>								
Tremont street, east of Stony brook conduit; Sussex street, northwest corner of Hammond street; Magazine street, north side, 10 feet west of Gerard street; Howard, Gerard, and Magazine streets.								
Vesta road, from Harvard street to Blue Hill avenue.								
Harvard street, from Standish street to New York, New Haven & Hartford Railroad.								
Springdale street, east and west corners of Playstead road; Savin Hill avenue, west corner of Playstead road; Draper street, north corner of Bentham road.	Contract.....	50 00	35 00	1 63	372 37	1 10	1,256 51	10 catch-basins †
Quincefield street, west side, 160 feet north of Wendover street; Wendover street, north-west corner of Quincefield street.								
Mitchell street, northwest and southeast sides, 125 feet from Old Colony avenue.								
Daves street, east and west sides, 75 feet north of Willis street.								
Crossman street, from Norfolk street to West Selden street.	Contract.....	163 00	143 50	211 23	1,762 49	4 00	2,314 22	4 catch-basins included.
Downer avenue, from existing sewer to Sawyer avenue.	Contract.....	70 00	80 50	49 21	742 64	4 00	946 35	
Dorchester avenue, from Roach street to 500 feet south, and Roach street, from Dorchester avenue to Pleasant street.	Contract.....	287 00	115 50	197 89	4,191 48	207 75	4,999 62	1 catch-basin included.
Dorchester avenue, from Brook street to Codman street.	Contract.....	69 00	49 00	36 86	661 65	4 30	823 81	
Dorchester avenue, from Roach street to Savin Hill avenue.	Contract.....	326 00	262 50		2,774 57	67 75	* 3,430 82	
Davenport brook, private land, from Burt street to Washington street.	Contract.....	523 00	140 00				* 663 00	

* Cost not complete.

† See Vesta road, etc., separate system of drainage.

Sewerage Works.—Continued.

Location.	Built by	Engineering.	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Contracts.	Miscellaneous.	Totals.	Remarks.
Everdeen street, from Freeport street to Blanche street.	Day labor.....	\$10 00	\$1,917 93						* \$1,927 93	
Harrison park and Beach street, from Harrison park to 250 feet northeast.	Contract.....	65 00	38 50		\$54 54		\$699 84	\$4 30	862 18	
Hallett-Davis street and outlet in Marsh street extended.	Contract.....	133 00	42 00		110 08		1,278 95	4 20	1,568 23	
Neponset Playground, from railroad to Neponset avenue.	Contract.....	\$24 00	400 00		493 92		22,567 95	4 00	24,289 87	
Norfolk street, from railroad to Walk Hill street.	Contract.....	85 00	94 50	\$3 25	174 64		4,637 75	4 10	4,999 24	2 catch-basins included.
Sawyer avenue, from 180 feet south of Cushing avenue to Cushing avenue.	Day labor.....	10 00	654 67	63 06	108 61				836 34	
Train street, from Ashmont street to South Munroe terrace.	Contract.....	40 00	91 00		40 29		841 35	3 90	1,010 54	
Tesla street, from River street to Edgewater drive; Burmah street, from Edgewater drive to 330 feet northwest; Edgewater drive, from Malta street to Burmah street; Wood avenue, from 1,475 feet south of Parker street to Tina avenue; River street, from Mattakesit street to Monponset street; Baldwin street, from River street to 200 feet northwest; Blake street, from 370 feet north of River street to 543 feet north.†	Contract.....	530 00	518 00		275 00		9,336 50	4 50	10,664 00	†
Cameron street, from Hancock street to Downer avenue.	Day labor.....	80 00	2,070 45	103 45	444 83			2 35	2,701 08	
Mattapan brook and Delphi street.....	Contract.....	696 00	160 00					3 50	* \$59 50	

Standard street, from River street to 932 feet north.	Contract.....	185 00	105 00	120 01	2,941 55	4 20	3,355 76
ROXBURY.							
Southampton street, from Massachusetts avenue to 430 feet east of New York, New Haven & Hartford Railroad.	Day labor.....					158 60	158 60
Calumet street, from Hillside street to Parker Hill avenue.	Contract.....	26 00	49 00	335 70	1,198 25	4 30	1,613 25
Harrison avenue, from Taber street to 295 feet south.	Day labor.....	119 00	1,202 95	263 41	\$107 46	29 31	1,833 70
CITY PROPER.							
East Concord street, from Roxbury canal to Albany street.	Day Labor.....			71 78		613 96	685 74
Fulton street, from Richmond street to Lewis street.	Day Labor.....			115 03		1 67	116 70
Harrison avenue, from Beach street to Essex street.	Day labor.....					21 80	21 80
Nashua street, from Causeway street to Minot street.	Day labor.....			14 00		358 65	372 65
<i>South End Improvement, Section 1.</i>							
Union Park street and Union park, from Albany street to Tremont street.	Contract.....	1,394 00	1,151 00	410 07	59,324 49	681 19	63,165 25
<i>South End Improvement, Section 2.</i>							
Clarendon street, from Tremont street to Columbus avenue; Buckingham street, from Columbus avenue to 75 feet north; Warren avenue, from alley west of Berkeley street to alley west of Clarendon street; Chandler street, from alley east of Clarendon street to 284 feet west of Clarendon street; West Canton street, from alley north of Tremont street to alley north of Columbus avenue; Dartmouth street, from Montgomery street to alley north of Tremont street; Montgomery street, from Union park to Dartmouth street; Union park, from Tremont street to Montgomery street.	Contract.....	1,436 00	2,002 50	35 00	41,555 95	79 30	* 45,122 07

† See Hyde Park.

* Cost not complete.

Sewerage Works.—Continued.

LOCATION.	Built by	Engineer- ing.	Labor.	Teaming.	Materials.	Hired and Depart- ment Ma- chinery.	Contracts.	Miscel- laneous.	Totals.	Remarks.
<i>South End Sewer Improvement, Section 3.</i>										
Dartmouth street, from Tremont street to alley north of Tremont street; alley north of Tremont street, from Dartmouth street to West Newton street; alley north of Tremont street, from West Newton street to alley east of Massachusetts avenue.	Day labor.....	\$920 00	\$19,850 28	\$1,637 65	\$3,615 83	\$883 63		\$816 97	* \$27,724 66	
<i>South End Sewer Improvement, Section 4.</i>										
Private land, east of Albany street.....	Contract.....	635 00	485 00		1,783 00			8 60	* 2,861 60	
<i>South End Sewer Improvement, Section 5.</i>										
Union Park street and Albany street.....	Contract.....	1,050 00	137 62	29 25				450 62	* 1,667 49	
East Newton street.....	Day labor....	150 00	1,738 22	334 34	567 78	213 20		199 16	3,202 70	
Howard street, from Somerset street to Bulfinch street.	Day labor....	3 00	1,476 54	319 13	391 51			52 11	2,322 29	
HYDE PARK.										
A, Fulton, Margin streets and Eastern avenue.	Contract.....						\$312 60			342 60
Hyde Park avenue, from Mother brook to Factory street.	Contract.....	504 00	402 50	3 50			2,880 32	4 20	* 3,794 52	8 catch-basins included.

Parker street, from Wood avenue to Oak-wood street.	Contract.....	77 00	57 75	13 83	594 03	4 00	746 61
<i>Pinchurst Area.</i>							
Blanchard street, from Parkway to private land; Buckingham street, from Readville street to Regent street; Chesterfield street, from Readville street to Regent street; Durrell avenue, from Nelson street to Stark avenue; Ellice avenue, from Stoughton avenue to Milton street; Knight street, from Modier brook to Readville street; Mamla avenue, from Norton street to Vaughan street; Milton street, from Readville street to Dedham line; Nelson street, from Vaughan street to Stoughton avenue; Norton street, from River street to Readville street; Neponset River Parkway and private land, from Readville street to Norton street; Readville street, from Damon street to 450 feet north of Knight street; River street, from Neponset River Parkway to Dedham line; Stark avenue, from Stoughton avenue to Milton street; Stoughton avenue, from Stark avenue to Elton street; Stoughton avenue, from Readville street to Stark avenue; Sunnyside avenue, from River street to Dedham line; Vaughan street, from Mamla avenue to Nelson street; Vaughan street, from Nelson street to Readville street.	Contract.....	1,850 00	2,151 37	3 25	35,144 64	5 69	* 39,154 95
Warren avenue, from Neponset river to Beacon street; Beacon street, from Warren avenue to 25 feet north of Water street, opposite Williams avenue; Station street, from 40 feet northeast to Fairmount avenue; private land, at Neponset avenue near Fairmount avenue.	Contract.....	133 00	90 75		1,983 36		* 2,207 11

S catch-basins included.

* Cost not complete.

Sewerage Works.—*Concluded.*

Locarion.	Built by	Engineering.	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Contracts.	Miscellaneous.	Totals.	Remarks.
Baldwin street, from River street 200 feet northwest.										
Blake street, from 370 feet north of River street to 343 feet north.										
River street, from Mattakeeset street to Monponset street.										
Wood avenue, from 1475 feet south of Parker street to Tina avenue.	Contract.	\$72 00	\$84 00	.....	\$124 69	.....	\$1,553 55	\$4 20	\$1,838 44	2 catch-basins included.
Water street, from existing sewer to 110 feet easterly; Highland street, from existing sewer to Metropolitan avenue; Metropolitan avenue, from Highland street to 150 feet southeasterly; Bridge street, from Water street to New York, New Haven & Hartford Railroad; Summit street, from Milton avenue to 210 feet east.										†
Totals.		\$17,465 00	\$87,053 55	\$7,399 17	\$31,936 96	\$6,472 96	\$266,870 73	\$6,776 11	\$423,974 48	
<i>Credit.</i>										
Transfers to separate systems of drainage.							133 78		‡ 133 78	
		\$17,465 00	\$87,053 55	\$7,399 17	\$31,936 96	\$6,472 96	\$266,736 95	\$6,776 11	\$423,840 70	

† See Dorchester, Tesla street, etc.

‡ C-B. Dorchester, South Boston and Roxbury.

Sewerage Works Loan, 1913-14.

Engineers' salaries, general	\$34,274 01
Amount charged to construction of sewers	17,465 00
	<hr/>
	\$51,739 01
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ENGINEERS' EXPENSE.

Labor	\$774 71
Teaming	84 56
Car fares, etc.	1,008 92
Photos	679 60
Rubber goods	35 99
Motorcycle	300 00
Rent	18 00
Supplies, repair on instruments, and miscellaneous	2,449 81
	<hr/>
	\$5,351 59
	<hr/> <hr/>

PUMPING STATION CONSTRUCTION.

Contracts Pumping Station Calf Pasture.

E. F. Kennelly, waterproofing	\$625 72
Lumsden & Van Stone Company, steam drum	450 00
Power Equipment Company, turbine pumping engine	6,000 15
Coffin Valve Company, hydraulic press,	950 00
Gibby Company, pipe supports	86 00
Gibby Company, cast-iron screens	600 00
Lumsden & Van Stone Company, piping,	1,767 18
W. H. Gallison Company, piping	794 07
Power Equipment Company, connecting force main	910 00
Lumsden & Van Stone Company, piping,	650 00
Smith Erecting & Contracting Company, steel floors	879 00
W. A. Snow Iron Works, flooring	1,969 11
E. Van Norden Company	2,359 00
W. H. Gallison Company, piping	592 16
	<hr/>
	\$18,632 39
Labor	1,489 95
Studies	368 80
Borings	69 50
Machinery	1,160 67
Materials	774 67
Advertising	12 90
	<hr/>
	\$22,508 88
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SUNDRIES.

B. F. Sturtevant Company, extending drain on
Readville street, Hyde Park \$56 92

Moon Island.

Coffin Valve Company:			
Ten new sluice gates	\$7,125	00	
Advertising		4	30
			<hr/>
			7,129 30
McKenzie & Temple:			
New shaft house	\$850	00	
Advertising		4	00
			<hr/>
			854 00
			<hr/>
			<u>\$8,040 22</u>

Abolishment of Grade Crossings.

*Saratoga and other streets, East Boston, begun April 24, 1913;
finished November 6, 1913.*

WORK DONE BY DAY LABOR.

Engineering	\$94	20
Labor	2,063	87
Teaming	256	25
Material	863	24
Miscellaneous	218	23
		<hr/>
		<u>\$3,495 79</u>

Built, 1913:

Butler avenue, from Bayswater street to Faxon street, 139.62 linear feet 18-inch pipe surface, 2 manholes	6.3-foot cut
210.66 linear feet 15-inch pipe surface	5.5-foot cut
Saratoga street, from Butler avenue easterly, 210.30 linear feet 15-inch pipe surface, 1 man- hole	7.5-foot cut
Breed street, from Ford street to Bennington street, 210 linear feet 10-inch pipe surface, 1 manhole	8.5-foot cut
Thurston street, from Butler avenue easterly, 143.90 linear feet 12-inch pipe surface, 1 man- hole	6.5-foot cut

Court Executions and Awards on Account of Land-takings, Etc.

Roman Catholic Archbishop of Boston, Leyden street, court execution	\$124 96
Reuben Whitten, Glendon street, court execution	3,384 79
Boston Elevated Railway Company, Stony brook, Street Commissioners award	31 50
Lawrence Norton, Stony brook, Street Commissioners award	75 00
M. M. Wilson, Mt. Bowdoin terrace, Street Commissioners award	33 80
C. M. Hayden and J. W. Dutton, Albany and Union Park streets, Street Commissioners award	13,125 00
E. S. Grew <i>et al.</i> , Beaver street, Hyde Park, court execution	61 25
W. J. Jordan, Clifford street, Street Commissioners award	150 00
H. I. Bornstein, Ballou avenue, Street Commissioners award	80 00
E. R. Bolster, Norfolk street, Street Commissioners award	75 00
C. V. Lynch, Norfolk street, Street Commissioners award	40 00
C. E. Pinkham, Vermont street, Street Commissioners award	103 00
Jacob Koob, Walworth street, Street Commissioners award	250 00
Jacon Seaver <i>et al.</i> , Morton street, court execution	1,000 00
	<hr/>
	<u>\$18,534 30</u>

SEWERAGE WORKS LOAN.

New Catch-basins Paid for, February 1, 1913, to January 31, 1914. (Contract and Day Labor.)

District.	Built by	BUILT IN 1912.		BUILT IN 1913.			Total Expenditure.	Location.	Number Catch-basins Built.	Number Catch-basins Rebuilt.
		Materials, etc.	Labor.	Contractor.	Material and Teaming.					
New catch-basins, South Boston.....	Day labor.....	\$17 13	.....	.....	.....	\$17 13	.....	.....	.....
New catch-basins, South Boston.....	Day labor.....	.....	\$211 33	.....	\$195 63	406 96	B street.....	3	.....
New catch-basins, South Boston.....	Day labor.....	.....	32 35	.....	41 40	73 75	Wendell street.....	.....	1
New catch-basins, South Boston.....	Day labor.....	.....	102 73	.....	79 40	182 13	East Ninth street.....	2	.....
New catch-basins, South Boston.....	Day labor.....	.....	57 45	.....	71 92	129 37	Dorchester street.....	1	.....
New catch-basins, South Boston.....	Day labor.....	.....	101 15	.....	167 14	268 29	K street.....	2	.....
New catch-basins, East Boston.....	Day labor.....	\$17 13	\$505 01	.....	\$555 49	\$1,077 63	.....	8	1
New catch-basins, East Boston.....	Day labor.....	\$3 60	.....	.....	.....	\$3 60	.....	.....	.....
New catch-basins, East Boston.....	Day labor.....	.....	\$2,729 85	.....	\$1,707 68	4,437 53	Orient avenue †.....	15	.....
New catch-basins, East Boston.....	Day labor.....	.....	66 30	.....	181 84	248 14	Emmons street.....	2	.....
New catch-basins, East Boston.....	Day labor.....	.....	256 55	.....	338 64	* 595 19	Lubec street.....	6	.....
New catch-basins, East Boston.....	Day labor.....	.....	473 65	.....	512 42	* 986 07	Cottage street.....	8	.....
New catch-basins, Charlestown.....	Day labor.....	\$3 60	\$3,526 35	.....	\$2,740 58	\$6,270 53	Foss street.....	31	.....
		.....	\$62 85	.....	\$87 08	\$149 93	.....	1	1

New catch-basins, Brighton.....	Contract.....			\$132 93	\$38 00	\$170 93	Appian way.....	2
New catch-basins, Brighton.....	Day labor.....	\$20	\$301 43		294 59	596 02	Armington street.....	3
New catch-basins, Brighton.....	Day labor.....		1,473 40		999 78	2,473 18	Harvard avenue.....	9
New catch-basins, Brighton.....	Day labor.....		123 35		110 96	234 31	Islington street.....	2
New catch-basins, Brighton.....	Day labor.....		278 56		148 94	427 50	Myrick street.....	2
New catch-basins, West Roxbury.....	Day labor.....	\$2 20	\$2,476 74	\$132 93	\$1,592 27	\$3,901 94		18
New catch-basins, West Roxbury.....	Day labor.....		\$82 60		\$100 00	182 60	Lanartine street.....	1
New catch-basins, West Roxbury.....	Day labor.....		150 13		121 10	271 23	Metropolitan avenue.....	1
New catch-basins, West Roxbury.....	Day labor.....		172 95		85 18	258 13	Germania avenue.....	1
New catch-basins, Dorchester.....	Day labor.....	\$2 20	\$405 68		\$306 28	\$714 16		3
New catch-basins, Dorchester.....	Day labor.....	\$11 73				\$11 73		
New catch-basins, Dorchester.....	Day labor.....		\$78 85		\$102 97	181 82	Neponset avenue.....	1
New catch-basins, Dorchester.....	Day labor.....		66 88		65 57	132 45	Lithgow street.....	1
New catch-basins, Dorchester.....	Day labor.....		90 00		73 19	163 19	Dorchester avenue, No. 2049,	1
New catch-basins, Dorchester.....	Day labor.....		30 90		45 46	76 36	Willowood street.....	1
New catch-basins, Dorchester.....	Day labor.....		241 98		166 71	408 69	Armadine street.....	2
New catch-basins, Dorchester.....	Day labor.....		141 13		90 94	232 07	Bird street.....	1
New catch-basins, Dorchester.....	Day labor.....		58 70		48 34	107 04	Geneva avenue.....	1
New catch-basins, Dorchester.....	Day labor.....		68 75		57 85	126 60	Blue Hill avenue.....	1
New catch-basins, Dorchester.....	Day labor.....		141 40		99 96	241 36	Hancock street.....	1

* Cost not complete.

†129.25 linear feet 24-inch pipe surface drain and 58.50 linear feet 10-inch pipe surface drain built and included in cost of basins.

Sewerage Works Loan.—Concluded.
New Catch-basins Paid for, February 1, 1913, to January 31, 1914. (Contract and Day Labor.)

District.	Built by	BUILT IN 1912.		BUILT IN 1913.			Total Expenditure.	Location.	Number Catch-basins Built.	Number Catch-basins Rebuilt.
		Materials, etc.	Labor.	Contractor.	Material and Teaming.					
New catch-basins, Dorchester.	Day labor.	.....	\$189 35	.....	.....	\$78 65	\$208 00	Walnut street.....	1	.....
New catch-basins, Dorchester.	Day labor.	.....	199 60	.....	.....	171 73	371 33	Dorchester avenue and Valley road.	2	.....
New catch-basins, Dorchester.	Day labor.	.....	71 50	.....	.....	69 27	140 77	Don street.....	1	.....
New catch-basins, Dorchester.	Day labor.	.....	88 00	.....	.....	121 10	209 10	Pope's Hill street.....	2	.....
New catch-basins, Dorchester.	Day labor.	.....	56 20	.....	.....	95 86	152 06	Westville street.....	1	.....
New catch-basins, Dorchester.	Day labor.	.....	676 45	.....	.....	187 67	864 12	Potosi street.....	2	.....
New catch-basins, Dorchester.	Day labor.	.....	111 20	.....	.....	48 43	159 63	Bowdoin street.....	1	.....
New catch-basins, Dorchester.	Day labor.	.....	111 85	.....	.....	96 27	208 12	River street.....	1	.....
New catch-basins, Dorchester.	Day labor.	.....	104 95	.....	.....	81 50	186 45	Claremont street.....	1	.....
New catch-basins, Dorchester.	Day labor.	.....	159 30	.....	.....	211 52	370 82	Gayland street.....	2	.....
New catch-basins, Dorchester.	Day labor.	.....	475 50	.....	.....	193 13	668 63	Colonial avenue.....	4	.....
New catch-basins, Dorchester.	Day labor.	.....	94 20	.....	.....	36 77	130 97	Milton avenue.....	1	.....
New catch-basins, Dorchester.	Contract.	.....	.....	.....	.....	72 55	* 72 55	Normandy street.....	2	.....
		\$11 73	\$3,256 69	.....	.....	\$2,215 44	\$5,483 86		30	1

New catch-basins, Hyde Park.....	Day labor.....	\$86 63	\$93 85	\$180 48	Hyde Park avenue, No. 1931,	1
New catch-basins, Hyde Park.....	Day labor.....	79 45	107 51	186 96	Hyde Park avenue, near Dana avenue.	1
New catch-basins, Hyde Park.....	Day labor.....	78 75	80 20	158 95	Warren avenue.....	1
New catch-basins, Roxbury.....	Day labor.....	\$244 83	\$281 56	\$526 39		3
New catch-basins, Roxbury.....	Day labor.....	\$60 68	\$84 09	\$144 77	Thorndike street.....	1
New catch-basins, Roxbury.....	Day labor.....	284 75	81 58	* 366 33	Columbus avenue.....	1
New catch-basins, Roxbury.....	Day labor.....	260 59		* 260 59	Winslow street and Eustis street.	3
New catch-basins, city proper.....	Day labor.....	\$606 02	\$165 67	\$771 69		5
New catch-basins, city proper.....	Day labor.....	\$87 43	\$74 11	\$161 54	Bay State road.....	1
New catch-basins, city proper.....	Day labor.....	24 30	40 63	64 93	680 Albany street.....	1
New catch-basins, city proper.....	Day labor.....	72 60	71 45	144 05	Loring place.....	1
New catch-basins, city proper.....	Day labor.....	53 60	56 25	109 85	883 Washington street.....	1
		\$237 93	\$212 44	\$480 37		2
		\$34 66	\$132 93	\$8,186 81		2
Grand total.....				\$19,376 50		4

* Cost not complete.

New Catch-basins Paid for, February 1, 1913, to January 31, 1914. (Included in Other Sewer Construction.)

DISTRICT.	Built by	BUILT IN 1913.				Total Expenditures.	Location.	Number of Catch-basins Built.	Number of Catch-basins Rebuilt.
		Con-tractor.	Materials.	Labor.	Material and Teaming.				
New catch-basins, East Boston.....	Day labor.....	.....	.....	\$50 00	\$80 77	Saratoga street.....	1	.....
New catch-basins, South Boston.....	Day labor.....	.....	.....	342 50	752 89	Sleeper street.....	8	.....
New catch-basins, Dorchester.....	Contract.....	\$159 00	\$71 31	.....	230 31	Winter street.....	1	.....
						Howes street.....	1	.....
						Bowdoin street.....	2	.....
						Bourneside street.....	1	.....
New catch-basins, Dorchester.....	Contract.....	242 00	149 08	.....	391 08	Crossman street.....	4	.....
New catch-basins, Dorchester.....	Contract.....	69 00	32 77	.....	101 77	Dorchester avenue.....	1	.....
New catch-basins, Dorchester.....	Contract.....	105 60	61 20	.....	166 80	Norfolk street.....	2	.....
New catch-basins, Dorchester.....	Contract.....	560 00	634 15	.....	1,194 15	Springdale street.....	2	.....
						Savin Hill avenue.....	1	.....
						Draper street.....	1	.....
						Quincefield street.....	1	.....
						Wendover street.....	1	.....
						Mitchell street.....	2	.....
						Dawes street.....	2	.....
New catch-basins, Hyde Park.....	Contract.....	631 20	.....	.....	* 631 20	Hyde Park avenue.....	8	.....
New catch-basins, Hyde Park.....	Contract.....	712 50	.....	.....	* 712 50	Warren avenue.....	3	.....
						Beacon street.....	2	.....
						Water street.....	1	.....
						Station street.....	1	.....
						Neposset avenue.....	1	.....

New catch-basins, Hyde Park.....	Contract.....	110 50	56 54	167 04	Bridge street.....	2
New catch-basins, Roxbury.....	Contract.....	1,198 25	415 00	1,613 25	Calumet street.....	10
New catch-basins, Roxbury.....	Contract.....	710 60	313 93	1,024 53	Tremont street.....	3
					Sussex street.....	1
					Magazine street.....	1
					Howard street.....	4
New catch-basins, city proper.....	Contract.....	296 50	73 98	370 48	South End sewer improve- ment, Section 1.....	4
New catch-basins, city proper.....	Contract.....	786 00		* 786 00	South End sewer improve- ment, Section 2.....	3
		\$5,581 15	\$1,807 96	\$392 50		75
				\$813 66		9
				\$8,595 27		

* Cost not complete.

101 catch-basins built	} included in other sewer construction.	Amount Paid.
4 catch-basins rebuilt		
75 catch-basins built		
9 catch-basins rebuilt		
		\$19,376 50
		8,595 27
		<u>\$27,971 77</u>

Sewerage Works—New Manholes.

LOCATION.	Built by	Number.	Labor.	Teaming.	Contracts.	Material.	Totals.	Begun.	Finished.
Beacon street, at Dartmouth street.....	Day labor....	1	\$22 96	\$12 00	.....	\$28 78	\$63 74	1913 Jan. 1	1913 Jan. 2
East Dedham street, between Harrison avenue and Albany street.	Day labor....	1	32 20	5 38	.....	53 27	90 85	Feb. 17	Feb. 25
Kilby street, at Water street.....	Day labor....	1	53 70	31 12	.....	41 52	126 34	Mar. 12	Mar. 15
East Sixth street, near K street.....	Day labor....	1	51 67	11 25	.....	35 36	98 28	April 7	April 12
Alley No. 447, off Exeter street.....	Day labor....	1	49 08	21 75	.....	40 80	111 63	April 8	April 16
Devonshire street, at Summer street.....	Day labor....	1	85 75	6 00	.....	43 87	135 62	Mar. 31	April 8
B street, at Bolton street.....	Day labor....	1	69 33	6 00	.....	41 54	116 87	April 14	April 22
West Third street, between C and D streets....	Day labor....	1	33 92	19 50	.....	32 87	86 29	April 14	April 18
Maverick street, at Cottage street.....	Day labor....	1	52 80	13 50	.....	39 67	105 97	April 25	April 30
Silver street, at No. 44.....	Day labor....	1	61 50	13 00	.....	44 84	119 34	April 30	May 6
Dresser street, at F street, and near Dorchester street.	Day labor....	2	93 64	14 38	.....	65 69	173 71	April 29	May 5
Alley, between St. Stephen street and Hunting- ton avenue.	Day labor....	1	23 35	9 75	.....	27 07	60 17	June 14	June 15
Chestnut avenue, No. 32.....	Day labor....	1	80 55	13 00	.....	44 42	137 97	June 27	July 3
Terrace street, No. 84.....	Day labor....	1	72 75	26 00	.....	48 67	147 42	July 5	July 14
East Canton street, from Washington street to Harrison avenue.	Day labor....	1	54 00	19 50	.....	42 24	115 74	July 23	July 29
Murdock street, at North Beacon street.....	Day labor....	1	81 19	17 06	.....	36 82	135 07	July 8	July 15
Waverly street, at Market street.....	Day labor....	1	88 45	6 94	.....	44 77	140 16	July 11	July 16

Decatur street, at Bunker Hill street.....	Day labor.....	1	42 40	10 00	.....	13 25	65 65	July 28	July 31
Parker street, No. 526.....	Day labor.....	1	32 45	13 00	.....	14 10	59 55	July 31	Aug. 6
Dorchester avenue, near Hyde street.....	Day labor.....	1	40 00	16 50	.....	21 21	77 71	July 17	July 22
Walker street, between Main and Hyde streets,	Day labor.....	1	31 20	10 13	.....	45 53	86 86	Sept. 15	Sept. 18
Blue Hill avenue, at Glenway street.....	Day labor.....	1	103 70	15 56	.....	29 16	148 42	Sept. 19	Oct. 4
Sixth street, between E and D streets.....	Contract.....	1	.....	.....	\$50 00	12 83	62 83	Aug. 19	Aug. 23
G street, No. 150.....	Day labor.....	1	108 43	30 91	.....	77 50	216 84	Aug. 30	Sept. 6
Porter street, 207 feet southeast of Jess street...	Day labor.....	1	68 47	6 50	.....	2 80	77 77	Oct. 3	Oct. 9
Metropolitan avenue, at Washington street...	Day labor.....	1	151 81	39 50	.....	49 83	244 14	Sept. 26	Oct. 4
Cross and Fulton streets.....	Day labor.....	1	376 54	38 87	.....	73 70	489 11	Nov. 17	Nov. 28
Prince street, between Hanover and Garden- court streets.	Day labor.....	1	69 83	19 00	.....	42 04	130 87	Nov. 17	Nov. 20
Dillway street, between Hollis street and Dix place.	Day labor.....	1	41 35	15 75	.....	29 85	89 95	Nov. 19	Nov. 27
Winslow street, near Eustis street.....	Day labor.....	1	93 35	10 56	.....	.....	* 103 91	Dec. 26	1914 Jan. 3
Totals.....	.....	.....	\$2,172 37	\$172 41	\$50 00	\$1,121 00	\$3,818 78	.....	.....
Paid in 1913 — manholes built in 1912.....	.....	.....	65 85	59 25	.....	229 39	354 49	.....	.....
Totals.....	.....	.....	\$2,238 22	\$531 66	\$50 00	\$1,350 39	\$4,173 27	.....	.....

* Cost not complete.

Separate Systems of Drainage.
Expenditures, February 1, 1913, to January 31, 1914.

ACCOUNTS.	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Miscellaneous.	Contracts.	Totals.
Engineers' salaries.....	\$41,107 06						\$41,107 06
Engineers' expense.....	754 69	\$151 52			\$1,310 75		2,219 96
Sundries.....	51 00	55 25	\$315 47		478 28		900 00
Land-takings and court executions.....					1,004 38		1,004 38
New manholes (entire city).....	309 48	78 75	215 05				603 28
New catch-basins, West Roxbury.....	3,899 90	711 88	1,597 57		17 40		6,226 75
New catch-basins, Brighton.....	182 06	47 25	195 22		70		425 23
New catch-basins, Dorchester.....	947 80	211 55	859 01		5 43		2,023 79
New catch-basins, city proper.....	354 28	63 76	221 88				639 92
Sewers built in entire city.....	94,710 35	10,983 75	29,945 67	\$2,834 08	16,609 50	\$245,703 47	400,786 82
	\$142,376 62	\$12,306 71	\$33,349 87	\$2,834 08	\$19,426 44	\$245,703 47	\$455,997 19

Separate Systems of Drainage.

Setters and Service Drains Built by the City February 1, 1913, to January 31, 1914.

LOCATION.	Built by	Engineer- ing.	Labor.	Teaming.	Materials.	Hired and Depart- ment Ma- chinery.	Miscel- laneous.	Contracts.	Totals.	Remarks.
BENCHON.										
Hano and Cambridge streets.....	Day labor.....			\$12 00	\$90 54		\$7 93		\$110 47	
North Harvard street, from Hopedale street to Hooker street.	Day labor.....			16 10	17 43				33 53	
Kilsyth road, from Lanark road to Selkirk road.	Contract.....		\$3 50					\$1,782 67	1,786 17	
Washington street, from Market street to Cambridge street.	Contract.....		14 00		144 68		55 95	894 45	1,109 08	
Commonwealth avenue, from Chiswick road to Wallingford road.	Contract.....	\$63 00	105 00		28 91		4 40	865 56	1,066 87	
Brainerd road, from Harvard avenue to Warren street, and Redford street, from Commonwealth avenue to Brainerd road.	Contract.....	180 00	571 75	3 00	709 76		4 50	7,220 20	8,689 21	20 catch-basins included.
Commonwealth avenue, from Thorncliffe road to St. Lukes road, and St. Lukes road, from Commonwealth avenue to Brighton avenue.	Contract.....	135 00	394 00				22 15	2,471 16	3,022 31	2 catch-basins included.
Oakland street, from Faneuil street to Washington street.	Contract.....	140 00	340 00	13 25	422 47		97 05	9,951 32	10,964 09	6 catch-basins included.
Reservoir road, from Beacon street to Boston & Albany Railroad.	Contract.....	37 00	122 50				27 85	753 30	940 65	

Separate Systems of Drainage.—Continued.

Location.	Built by	Engineering.	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Miscellaneous.	Contracts.	Totals.	Remarks.
West Roxbury.										
Call street, Hall street and Boynton street,	Day labor.....						\$63 67		\$63 67	
Church street, from Centre street to Halford road.	Contract.....							\$650 95	* 650 95	
South and Centre streets.....	Contract.....				\$655 24		30 21	5,176 93	5,862 38	
Dent street brook, Baker street and private land.	Day labor.....	\$12 00	\$1,137 87	\$207 75	98 50		17 70		1,473 82	
Poplar street, from Sycamore street to Hillburn street.	Day labor.....	20 00	2,184 51	361 24	1,420 94	\$217 50	137 66		4,391 85	5 catch-basins included.
West Roxbury low level sewer, in Washington street, etc.	Contract.....	2,000 00	2,164 00	3 00	329 50		105 01	42,264 80	46,866 31	
Stony brook, Section 6.....	Contract.....	47 00							* 47 00	
Stony brook, Section 7.....	Contract.....	237 00					116 05		* 353 05	
Stony brook, Section 8.....	Contract.....	1,205 00	1,041 28	124 38	329 11		11,767 49	29,348 26	* 43,815 52	
Anawan avenue, West Roxbury Parkway, Marlin and Stratford streets, between New York, New Haven & Hartford Railroad and a point in Stratford street 220 feet east of Felton street, West Roxbury.	Contract.....	1,324 00	1,280 05	42 50	31 93		89 25	28,259 64	* 31,027 37	1 catch-basin included.
Centre street, from Spring street to Cass street.	Contract.....	236 00	308 00	3 25			47 50	3,881 95	* 4,476 70	

Cliffondale street, from Kittredge street to Norfolk street.	Contract	10 00	46 50	234 88	34 66	812 11	1,138 15	{ 6 catch-basins included.	
Dent street brook	Day labor	69 00	583 41	95 38	26 94	865 91	* 2,823 10		
Private land, from Vermont street to 30 feet south of Roberts avenue.	Contract	35 00	87 50	1,094 96	103 03		2,002 06		
Forest Hills square, Hyde Park avenue and Asticou road to St. Ann street.	Day labor		1,887 12	379 61					
WEST ROXBURY.									
Presno street, from Alder street to 227 feet northeast.	Day labor	80 00	2,900 59	359 23	33 78	26 00	* 3,945 33		
Montclair avenue	Contract	220 00	332 50	410 95	12 12	7,283 99	8,291 06	8 catch-basins included.	
Montebello road, from Brookside avenue to Washington street.	Contract	30 00	42 00		4 00	897 39	* 973 39	7 catch-basins included.	
Parental Home, brook	Day labor	30 00	1,921 06	225 80	52 91	499 42	* 4,258 71		
Spring street to Charles river	Contract	67 00	178 50	3 25	4 00	775 62	* 1,028 37		
Poplar street, from Hilburn street to 300 feet southeasterly.	Contract	20 00	52 50	106 02	4 00	458 34	640 86		
Sheffield road, from Water street to Selwyn street.	Contract	184 00	409 50	3 13	419 20	6,963 08	8,520 22	2 catch-basins included.	
South street, from St. Joseph street to Arborway, and Spalding street, from railroad to South street.	Contract	1,950 00	1,698 50	12 75	72 76	36,128 56	* 39,872 13	23 catch-basins, 1 rebuilt included.	
Spring street, from Charles river to Baker street; Baker street, from Spring street to Gardner street, and Gardiner street, from Baker street to Heklan street.	Contract	31 00	3,363 67	185 25			* 3,579 92		
Spring street brook, in private land, from Summer street to 115 feet east of Alarie street.	Day labor								

* Cost not complete.

Separate Systems of Drainage.—Continued.

LOCATION.	Built by	Engineering.	Labor.	Teaming.	Materials.	Hired and Department Machinery.	Miscellaneous.	Contracts.	Totals.	Remarks.
Sycamore street, from Hawthorne street to Poplar street, and Poplar street, from Sycamore street to 465 feet north.	Day labor.....	\$42 00	\$2,819 04	\$441 26	\$831 46	\$9 50	\$65 86	.....	\$4,209 12	1 catch-basin included.
Walworth street, from Brook street to Belgrade avenue.	Contract.....	60 00	165 00	6 50	308 18	.....	17 95	\$3,280 60	3,838 23	6 catch-basins included.
Williams street, from Washington street to Call street; Washington street, from Stony brook to Williams street.	Contract.....	170 00	558 50	.....	4 25	.....	4 00	9,013 96	*9,780 71	4 catch-basins included.
DORCHESTER.										
Blue Hill avenue, Harvard street, private land and Barrymore street.	Contract.....	30 00	.....	.....	370 14	.....	58 25	912 66	* 1,371 05	.....
Browning avenue, from Bernard street to 300 feet west.	Day labor.....	.....	.....	.....	9 00	.....	.....	.....	9 00	.....
Washington street, Grove Hall to Codman square.	Contract.....	.....	.....	.....	.....	.....	.....	859 21	859 21	.....
Jones avenue and outlet.....	Contract.....	.....	.....	.....	.....	.....	32 18	.....	32 18	.....
Blue Hill avenue, from Mansborough street to Morton street.	Day labor.....	58 00	1,712 87	700 49	1,820 64	198 50	109 01	.....	* 4,599 51	6 catch-basins included.
Catch-basins (Dorchester, South Boston and Roxbury).†	Contract.....	.....	.....	.....	.....	.....	.....	1,853 91	1,853 91	.....
Wentworth street, from Norfolk street to Dunbar avenue.	Contract.....	.....	.....	.....	.....	.....	.....	195 69	195 69	.....

Blue Hill avenue, from Hansborough street to Greenock street.	Day labor.....	48 00	1,099 52	48 76	605 46	.....	.....	* 1,801 74	
Norfolk street, from Corbet street to Washington street, and outlet for Norfolk street in private land, etc.	Contract.....	218 00	157 50	.....	873 45	.....	141 52	4,065 91	9 catch-basins included.
Ballou avenue; Willowood street to Woodrow avenue, and outlet.	Contract.....	772 00	213 50	.....	.....	.....	4 00	6,156 00	10 catch-basins included.
Don street, from Callender street to Woodrow avenue.	Contract.....	28 00	28 00	.....	30 84	.....	4 10	367 27	458 21
Greenock street, from Blue Hill avenue to Harvard street.	Day labor.....	152 00	1,716 24	121 69	251 62	.....	30 99	.....	2,272 54
Vesta road, from Harvard street to Blue Hill avenue, and Harvard street from Standish street to New York, New Haven & Hartford Railroad.	Contract.....	160 00	108 50	.....	70 24	.....	14 21	2,578 16	2,931 11 †
Wellington Hill street, from Morton street to Blue Hill avenue, and outlet in Morton and Gilmer streets.	Contract.....	880 00	469 00	.....	755 20	.....	4 10	6,411 91	* 8,520 21 15 catch-basins included.
Whitfield street, from Talbot avenue to Park street.	Day labor.....	30 00	1,377 07	116 84	341 81	.....	10 44	.....	1,876 16 1 catch-basin included.
Wildwood street, from Middleton street to Morton street.	Contract.....	81 00	70 00	.....	75 85	.....	4 20	2,845 50	3,076 55
ROXBURY.									
Benton street, from Tremont street to Columbus avenue.	Day labor.....	.....	.....	.....	97 20	\$62 93	4 60	.....	164 73
Cabot street, from Marble street to Newbern street.	Contract.....	.....	.....	.....	.....	.....	270 38	.....	270 38
Edge Hill street, from Gay Head street to 80 feet westerly.	Day labor.....	.....	.....	.....	15 60	.....	7 01	.....	22 61

† See Sewerage Works.

* Cost not complete.

Separate Systems of Drainage.— *Concluded.*

LOCATION.	Built by	Engineer- ing.	Labor.	Teaming.	Materials.	Hired and Depart- ment Ma- chinery.	Miscel- laneous.	Contracts.	Totals.	Remarks.
Hammond street, from Tremont street to Shawmut avenue.	Contract.....						\$83 93		\$83 93	
Marbury terrace, from Amory street to Stony brook.	Contract.....							\$69 36	69 36	
Sachem street, from Hillside street to Wait street.	Day labor.....				\$49 36		68		50 04	
Stealing street, from Tremont street to Washington street.	Contract.....						1 26		1 26	
Van Ness street, from Jersey street to Ipswich street.	Day labor....	\$187 00	\$4,799 52	\$1,456 23	3,338 40	\$717 36	548 07		11,046 58	
Oak Grove terrace, from Ruggles street to Auburn place.	Contract.....	90 00	89 25		32 04		23 05	1,459 77	1,694 11	
Private land, from Washington street to Fenner street, and Fenner street, Cardington street, etc.	Day labor....	973 00	13,175 12	1,379 77	3,228 32	470 34	281 87		* 19,508 42	
Tremont and Whittier streets.....	Day labor....	300 00	2,362 49	206 38			4 75		* 2,873 62	
Seaver street, from Humboldt avenue to 232 feet northwest.	Contract.....	44 00	80 50		67 15		18 37	1,735 02	1,945 04	
Sarsfield street, from Tremont street to Columbus avenue.	Day labor....	102 00	1,507 24	231 57	352 60	200 06	67 27		2,460 74	
CITY PROPER.										
Dartmouth street.....	Day labor....						140 03		140 03	
Fruit street, from North Grove street to 70 feet west.	Day labor....	10 00		246 10	438 22	126 75	72 81		893 88	

Otis place.....	Day labor.....					3 00	92 22		6 92	102 14
Van Rensselaer place.....	Day labor.....							250 00		250 00
Arlington street extension.....	Day labor.....						26 50			26 50
St. James avenue and Providence street.....	Contract.....						81 97		300 00	573 14
Chestnut street, between River and Lime streets.....	Day labor.....	200 00	2,521 72	517 32	609 88	191 67				4,384 14
Berkeley street, from Boylston street to Columbus avenue.....	Day labor.....	298 00	9,057 40	1,700 50	2,437 45	291 00				* 13,893 43
Mt. Vernon street, from Charles street to River street, and River street, from Mt. Vernon street to Alley No. 301; Alley No. 301, from River street to Mt. Vernon square.....	Day labor.....	126 00	2,044 21	153 13						* 2,323 34
Munson street, from Beacon street to Boston & Albany Railroad.....	Contract.....	72 00	70 00							* 142 00
Pleasant street, from Washington street to Eliot street.....	Contract.....	1,600 00	924 61	7 44	472 50				8 80	13,521 13
Huntington avenue, from Bryant street to Gainsborough street.....	Day labor.....	78 00	2,033 91	262 70	449 40				38 81	2,862 82
Lime street, from River street to Brimmer street.....	Contract.....	50 00	105 00		49 67				8 10	1,841 20
North Anderson street, from Parkman street to Fruit street.....	Day labor.....	71 00	1,449 91	325 26	560 68	76 67				2,512 29
North Grove street, from Fruit street to Parkman street.....	Day labor.....	80 00	1,530 86	289 51	404 08	83 60			41 13	2,429 18
Parkman street, from North Grove street to North Anderson street.....	Day labor.....	174 00	3,748 06	898 64	1,632 74	162 20			196 51	6,812 15
Grand total.....		\$15,546 00	\$79,164 35	\$10,983 75	\$29,945 67	\$2,834 08	\$16,609 50	\$245,703 47		\$400,786 82

* Cost not complete.

† See Sewerage Works.

Separate Systems of Drainage, 1913-14.

Engineers' salaries, general	\$41,167 06
Amount charged to construction of sewers	15,509 00
	<u>\$56,676 06</u>

ENGINEERS' EXPENSES.

Labor	\$754 69
Teaming	154 52
Car fares	828 38
Photos	152 90
Supplies and stationery	99 47
Rent	230 00
	<u>\$2,219 96</u>

SUNDRIES.

City of Newton, right of drainage	\$450 00
Labor	51 00
Teaming	55 25
Material	315 47
Paving and Water Services	19 78
Advertising	8 50
	<u>\$900 00</u>

COURT EXECUTIONS AND AWARDS ON ACCOUNT OF LAND-TAKINGS, ETC.

Ellen F. Root, Stony brook, Section 7, court execution	<u>\$1,004 38</u>
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SEPARATE SYSTEMS OF DRAINAGE.
New Catch-basins Paid for, February 1, 1913, to January 31, 1914. (Contract and Day Labor.)

DISTRICTS.	Built by		BUILT IN 1912.		BUILT IN 1913.			Total Expenditure.	Locations.	Number Catch-basins Built.
	Day labor.	Day labor.	MATERIALS, ETC.		LABOR.	DAY LABOR.				
			Materials, etc.			Labor.	Material and Teaming.			
New catch-basins, Brighton.....	Day labor.....	Day labor.....	\$69 32	\$182 00	\$173 85			\$69 32	Naples road.....	2
New catch-basins, Brighton.....	Day labor.....	Day labor.....	\$69 32	\$182 06	\$173 85			355 91		2
New catch-basins, West Roxbury.....	Day labor.....	Day labor.....	\$96 89	\$158 52	\$243 37			\$96 89	Hadwin way.....	2
New catch-basins, West Roxbury.....	Day labor.....	Day labor.....		476 52	465 14			701 89	Lamarine street.....	4
New catch-basins, West Roxbury.....	Day labor.....	Day labor.....		896 24	736 99			1,633 23	Lynsdale street.....	10
New catch-basins, West Roxbury.....	Day labor.....	Day labor.....		373 68	114 66			488 34	Centre street.....	2
New catch-basins, West Roxbury.....	Day labor.....	Day labor.....		169 82	42 25			212 07	South street.....	1
New catch-basins, West Roxbury.....	Day labor.....	Day labor.....		216 21	116 34			332 55	4295 Washington street.....	1
New catch-basins, West Roxbury.....	Day labor.....	Day labor.....		129 81	134 83			264 64	Florence street.....	1
New catch-basins, West Roxbury.....	Day labor.....	Day labor.....		497 03	213 67			710 70	Catherine street.....	1
New catch-basins, West Roxbury.....	Day labor.....	Day labor.....		251 96				* 251 96	Bellevue street.....	1
New catch-basins, West Roxbury.....	Day labor.....	Day labor.....		430 11	162 71			592 82	March avenue.....	2
New catch-basins, Dorchester.....	Day labor.....	Day labor.....	\$96 89	\$3,899 90	\$2,229 96			\$6,226 75		26
New catch-basins, Dorchester.....	Day labor.....	Day labor.....		\$674 90	\$527 05			\$1,201 95	Woolson street.....	6
New catch-basins, Dorchester.....	Day labor.....	Day labor.....		272 90	548 94			821 84	Harvard street.....	4
New catch-basins, city proper.....	Day labor.....	Day labor.....		\$947 80	\$1,075 99			\$2,023 79		10
New catch-basins, city proper.....	Day labor.....	Day labor.....	\$58 75	\$60 70	\$81 83			\$58 75	Ipswich street.....	1
New catch-basins, city proper.....	Day labor.....	Day labor.....		293 58	145 06			142 53	Mountford street †.....	1
New catch-basins, city proper.....	Day labor.....	Day labor.....		8554 28	\$226 89			\$639 92		2
Totals.....			\$224 96	\$5,384 04	\$3,706 69			\$9,315 69		40

* Cost not complete.

† 95.90 linear feet 10-inch pipe surface drain built and included in cost of basin.

New Catch-basins Paid for, February 1, 1913, to January 31, 1914. (Included in Other Sewer Construction.)

DISTRICTS.	Built by	CONTRACTS.		DAY LABOR.		Total Expenditure.	Location.	Number Catch-basins Built.	Number Catch-basins Rebuilt.
		Contractor.	Materials.	Labor.	Material and Teaming.				
New catch-basins, Brighton.....	Contract.....	\$1,141 20	\$652 07	.....	.....	\$1,793 27	Brainerd road.....	20	.....
New catch-basins, Brighton.....	Contract.....	119 00	.....	.....	.....	119 00	Commonwealth avenue and St. Lukes road*.....	2	.....
New catch-basins, Brighton.....	Contract.....	608 00	119 28	.....	.....	727 28	Oakland street.....	6	.....
New catch-basins, West Roxbury.....	Day labor.....	.....	.....	\$517 77	\$343 38	861 15	Poplar street.....	5	.....
New catch-basins, West Roxbury.....	Contract.....	79 20	.....	.....	.....	79 20	Anawan avenue*.....	1	.....
New catch-basins, West Roxbury.....	Contract.....	303 60	208 62	.....	.....	512 22	Cliftondale street.....	6	.....
New catch-basins, West Roxbury.....	Contract.....	510 00	264 66	.....	.....	774 66	Montclair avenue.....	8	.....
New catch-basins, West Roxbury.....	Contract.....	428 50	.....	.....	.....	428 50	Montebello road*.....	7	.....
New catch-basins, West Roxbury.....	Contract.....	157 00	79 04	.....	.....	236 04	Sheffield road.....	3	.....
New catch-basins, West Roxbury.....	Contract.....	1,207 00	.....	.....	.....	1,207 00	Spring street*.....	23	1
New catch-basins, West Roxbury.....	Day labor.....	.....	.....	94 70	79 53	174 23	Sycamore street.....	1	.....
New catch-basins, West Roxbury.....	Contract.....	135 50	97 56	.....	.....	233 06	South street.....	2	.....
New catch-basins, West Roxbury.....	Contract.....	321 30	205 62	.....	.....	526 92	Walworth street.....	6	.....
New catch-basins, West Roxbury.....	Contract.....	253 00	.....	.....	.....	253 00	Williams street*.....	4	.....
New catch-basins, Dorchester.....	Day labor.....	.....	.....	650 00	550 00	1,200 00	Blue Hill avenue, Hansboro street to Morton street.....	6	.....

New catch-basins, Dorchester.....	Contract.....	657 50	321 64	.....	979 14	Norfolk street.....	9
New catch-basins, Dorchester.....	Day labor.....	.....	.....	250 00	400 00	Blue Hill avenue, Hansboro street to Greenock street.	2
New catch-basins, Dorchester.....	Contract.....	526 05	.....	.....	526 05	Ballou avenue*.....	10
New catch-basins, Dorchester.....	Day labor.....	.....	.....	20 10	76 29	Greenock street.....	1
New catch-basins, Dorchester.....	Contract.....	1,119 00	.....	.....	1,119 00	Wellington Hill street.....	* 15
New catch-basins, Dorchester.....	Day labor.....	.....	.....	44 65	111 06	Whitfield street.....	1
New catch-basins, city proper.....	Contract.....	1,674 00	.....	.....	1,674 00	Pleasant street *.....	22
New catch-basins, city proper.....	Day labor.....	.....	.....	55 00	100 00	Mt. Vernon street.....	1
		\$9,239 85	\$1,948 49	\$1,632 22	\$14,111 07		161

* Cost not complete.

Recapitulation.

40 catch-basins built.....	Amount Paid.....	\$9,315 69
161 catch-basins built.....		14,111 07
1 catch-basin rebuilt.....		
		<u>\$23,426 76</u>

Separate Systems of Drainage.— New Manholes.

LOCATION.	Built by	Number.	Labor.	Teaming.	Material.	Totals.	Begun.	Finished.
Marlborough street.....	Day labor.....	5	\$204 35	\$34 13	\$170 52	\$409 00	May 8	May 17
Newbury street.....	Day labor.....	3	105 13	44 62	44 53	194 28	May 22	May 26
Totals.....	.....	8	\$309 48	\$78 75	\$215 05	\$603 28	.....	.....

Catch-basins Built, 1913-1914.

DISTRICT.	Contract.	Day Labor.	REBUILT.	
			Contract.	Day Labor
City proper.....	29	5	.....	11
Roxbury.....	19	5	.....	1
Dorchester.....	56	50	.....	.....
West Roxbury.....	60	35	1	.....
Brighton.....	30	18	.....	.....
Charlestown.....	.....	1	.....	.....
East Boston.....	.....	32	.....	.....
South Boston.....	.....	16	.....	1
Hyde Park.....	18	3	.....	.....
Totals.....	212	165	1	13

Total catch-basins built, 391.

ENTRANCE FEES, PERMITS AND ASSESSMENTS.

Entrance fees to the amount of \$4,854.24 have been deposited with the City Collector for collection from estates upon which no sewer assessment was ever paid, in accordance with the Ordinances of 1910, chapter 9, section 10.

Bills for sewer assessments amounting to \$1,597.78 have been deposited for collection, representing those estates assessed under chapter 456 of the Acts of 1889, and other acts, which have been connected during the year with the sewers for which they were assessed.

Three thousand five hundred and seventy-one permits have been issued, viz., 581 to district foremen, 233 to contractors and 2,757 to licensed drain layers for repairing or laying house drains. The work done under these permits has been inspected and a record of the same made on the plans of the Sewer Service, in accordance with the Ordinances of 1910, chapter 9.

Plans for the assessment of estates for sewer construction have been furnished the Street Commissioners, representing 34,782 feet of sewers and appurtenances, costing \$211,247.09.

RATES PAID FOR HIRED MACHINERY.

Bull wheel derrick and engine	\$85.00 per month
Carson trench machine, complete	\$170.00 per month
Carson trench machine, without engine	\$120.00 per month
Electric motor	\$1.00 per month per horse power
Cable and engine, complete	\$170.00 per month
Hoisting engine	\$75.00 per month
Boiler	\$75.00 per month
Buckets, Carson machine	\$1.40 per month each
Buckets, large iron	\$2.50 per month each
Pumping engine or motor and pump, complete	\$75.00 per month

Cost of Maintaining all Horses in the Sewer Service, February 1, 1913, to January 31, 1914.

ITEMS.	Total Cost.	46 Horses, Average Cost per Day.
Labor.....	\$12,950 92	\$0 771
Hay and grain.....	7,585 57	452
Shoeing.....	1,832 50	109
Veterinary services, medicine and clipping.....	212 05	012
Stable goods.....	469 31	027
	\$23,050 35	\$1 371

Summary of Sewer Construction for the Year Ending January 31, 1914.

DISTRICT.	Built by the City by Contract or Day Labor.	Built by Private Parties.	Total Length Built.
	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>
City proper.....	16,287.71	7,756.12	24,043.83
East Boston.....	3,492.63	.....	3,492.63
Charlestown.....	.....	.....	.....
South Boston.....	4,086.97	771.87	4,858.84
Roxbury.....	4,856.30	258.96	5,115.26
West Roxbury.....	33,483.10	7,625.40	41,108.50
Dorchester.....	30,021.69	2,194.28	32,215.97
Brighton.....	7,536.17	440.20	7,976.37
Hyde Park.....	19,933.03	423.99	20,357.02
Totals.....	119,697.60	19,470.82	139,168.42

Summary of Sewer Construction for Five Years Previous to
February 1, 1914.

	1909.	1910.	1911.	1912.	1913.
	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>
Built by the city by contract or day labor.....	101,073.47	114,731.10	73,974.21	97,884.05	119,697.60
Built by private parties.....	11,606.97	17,051.62	9,622.46	18,106.61	19,470.82
Totals.....	112,680.44	131,782.72	83,596.67	115,990.66	139,168.42

Schedule of Sewers Built to February 1, 1914, in the City of Boston.

DISTRICT.	Length of Sewers Built During the Year Ending January 31, 1914.	Length of Sewers Re-built or Abandoned During the Year Ending January 31, 1914.	Additional Length of Sewers for the Year Ending January 31, 1914.	
	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Miles.</i>
City proper.....	24,043.83	8,842.85	15,200.98	2.88
East Boston.....	3,492.63	300.00	3,192.63	0.60
Charlestown.....				
South Boston.....	4,858.84	658.00	4,200.84	0.80
Roxbury.....	5,115.26	1,361.25	3,754.01	0.71
West Roxbury.....	41,108.50	680.00	40,428.50	7.66
Dorchester.....	32,215.97	1,393.01	30,822.96	5.84
Brighton.....	7,976.37		7,976.37	1.51
Hyde Park.....	20,357.02	265.00	20,092.02	3.81
Totals.....	139,168.42	13,500.11	125,668.31	23.81
Total length built previous to January 31, 1913.....				818.78
Length of common sewers.....				842.59
Length of Metropolitan intercepting sewers.....				6.81
Length of intercepting sewers.....				24.12
Total.....				873.52
Total mileage of streets containing sewerage works.....				540.50

Table of Approximate Quantities, Lifts and Duties at Calf Pasture Pumping Station, 1913-1914.

MONTH.	Total Pumpage. Gallons.	Average per Day. Gallons.	Minimum Day. Gallons.	Maximum Day. Gallons.	Average Lift. Feet.	Average Duty, Foot-Pounds, per 100 Pounds of Coal.
1913.						
February.....	2,597,813,000	92,779,000	75,168,000	143,517,000	39.6	96,100,000
March.....	3,520,043,000	113,550,000	87,119,000	171,698,000	39.7	96,600,000
April.....	3,363,447,000	112,114,000	82,161,000	177,575,000	39.7	98,200,000
May.....	2,852,476,000	92,015,000	72,645,000	134,161,000	39.6	105,300,000
June.....	2,493,724,000	83,124,000	64,885,000	106,156,000	39.5	95,400,000
July.....	2,452,288,000	79,106,000	66,820,000	105,921,000	39.4	93,700,000
August.....	2,756,849,000	88,931,000	65,973,000	122,731,000	39.5	91,000,000
September.....	2,725,198,000	90,840,000	72,579,000	142,184,000	39.5	88,300,000
October.....	3,609,356,000	116,431,000	80,137,000	137,689,000	39.6	87,300,000
November.....	2,629,567,000	87,652,000	69,727,000	149,018,000	39.6	79,500,000
December.....	2,878,006,000	92,839,000	71,868,000	140,301,000	39.6	89,700,000
1914.						
January.....	3,161,876,000	101,996,000	76,465,000	163,594,000	39.5	88,800,000
Total.....	35,040,643,000					
Averages.....		95,948,000	73,796,000	141,212,000	39.6	* 92,309,000

* Average from yearly quantities.
Records from plunger displacement.

CALF PASTURE PUMPING STATION.

This plant contains the following sewage pumping units:

One vertical beam and fly-wheel triple expansion engine of the Leavitt type; cylinders, 18½ inches, 33 inches, 52¾ inches in diameter; two single acting pump plungers, each 60 inches in diameter and 120-inch stroke; capacity, 72,000,000 gallons in twenty-four hours with 40-foot lift.

Two vertical beam and fly-wheel compound engines of the Leavitt type; cylinders, 25½ inches, 52 inches in diameter; two single acting pump plungers, each 48 inches in diameter and 108-inch stroke; capacity of each engine, 35,000,000 gallons in twenty-four hours with 40-foot lift.

Two steam driven turbine centrifugal pumps of the De Laval type with a capacity of 56,000,000 gallons each in twenty-four hours with 40-foot head.

The principal alterations and repairs are as follows:

Gate House.—A new steam and hydraulic sewage press was installed, resulting in a saving of 300 pounds of coal a day.

Main Building.—The second steam turbine centrifugal pump was installed, both units are now undergoing tests; the cast-iron floor for the turbines and the new roof over them was completed. The slate roof and the windows were repaired. The salt water injection pumps, dynamos, and motor on pipe cutting machine were overhauled and repaired.

Boiler Room.—Nos. 1, 2 and 4 boilers were repaired and Nos. 1 and 2 retubed; meters were installed on Nos. 1 and 3 boilers. The closed heater, previously condemned, was repaired, repiped and erected by the station force, piping used being some stored on the plant.

Deposit Sewers.—A new scraper chain was placed in the north sewer; a 10 horse power motor to run the scraper chains was set up in place of the old boiler; the 12-inch iron pipe which conveys sludge from the deposit sewers to the sludge tank was condemned, taken out and will be replaced at once.

In General.—The sea wall at end of deposit sewer was pointed, a new hydrant located in the yard near the wharf, the main road graded and fence painted.

Summer Street Station.—New piping and a gauge for the tell-tale were installed and the station painted.

Quite extensive repairs are necessary on the main building. The stonework in eaves and turrets needs pointing so badly that rain water finds its way into the brick backing and thence into the interior of the station; new copper gutters and flashing is also needed and extensive patching of the slate roofing.

MOON ISLAND.

The concrete bottoms of Basins Nos. 2, 3 and 4 need repairs, and the salt water pipes in all basins need renewal.

The I-beams supporting the floor in the long gate-house are in bad condition, and should be replaced and the floor rebuilt of concrete. The same is true of the floor in the head house.

The gates in Basins Nos. 1 and 2 are now in good condition. Nine of the new gates are now being installed and the remaining eleven will be as soon as possible.

Both gates to the turbine pit should be renewed and the gates at the outlet repaired.

The fencing of the roadway is being renewed with neat concrete posts and wooden rails, all by department force.

The east shaft should be entirely cleared of all iron beams and guides and masses of grease as a measure of safety, lest some of the ironwork should become detached and drop into the tunnel and obstruct it.

COST OF PUMPING.

Average cost per million foot-gallons for pumping:

Volume (35,040.64 million gallons) by (= times) lift (39.6 feet) = 1,387,609 million foot-gallons for the year.

Labor cost included in the totals is based upon the following force of forty-eight men:

One superintendent, one clerk, one storekeeper, one electrician, one carpenter, one blacksmith, two machinists, four laborers, and four "engineers' watches," each including nine men.

Cost of city water not included.

ITEMS.	Cost.	Cost per Million Foot-Gallons.
Labor.....	\$49,815 17	\$0 03590
Coal.....	22,128 03	01595
Oil and waste.....	1,405 07	00101
Rubber valves and packing.....	4,345 94	00313
Miscellaneous supplies and renewals.....	4,480 95	00323
Totals.....	\$82,175 16	\$0 05922
Labor at screens.....		\$0 00294

MAIN DRAINAGE.

The work of the main drainage district consists of the repairing and cleaning of all tide gates, sumps, regulators and overflows connected with the metropolitan sewer in Brighton, Charlestown, Dorchester and East Boston.

The repairing and cleaning of all tide gates, sumps, regulators and overflows connected with the main sewer, east side, west side, South Boston, Stony brook, Dorchester and Roxbury intercepters.

These gates, sumps, regulators and overflows must be inspected and cleaned after each storm or heavy rise of sewage.

The masonry repairs in all gatehouses and all sewer

manholes of the entire main drainage system comes under the care of this district.

The care of the Stony brook district, consisting of the care and cleaning of the old channel from the premises of the Boston Belting Company to the outlet at the Charles river, with the care of all connecting overflows and flushing gates.

The cleaning and care of Stony brook channel, from Williams street, Forest Hills, to the Charles river, with the care of all connecting gates and overflows.

The care of two gatehouses located in the Back Bay Fens and the maintenance in proper condition of gates, machinery and electric switch boards.

SIPHONS.

The twin siphons on the top sewer under Muddy river, between Roxbury and Brookline, and four siphons on the improved sewer, and the connection of the Roslindale top sewer with the metropolitan sewer also comes under the care of this district.

Number of Tide Gates, Sumps, Regulators and Overflows to be Cared for in Each District.

	Gates.	Sumps.	Regulators.	Overflows.
Brighton.....	42	17	15	23
Charlestown.....	24	11	9	12
East Boston.....	47	19	18	26
City proper.....	92	41	15	42
Dorchester.....	64	11	2	18
South Boston.....	50	25	4	21
Roxbury.....	42	11	.....	20
Penstock and flushing gates.....	19			

ACCOUNT OF WORK PERFORMED DURING YEAR ENDING JANUARY 31, 1914.

Tide gates inspected and cleaned	4,947
Sumps inspected and cleaned	2,424
Regulators inspected and cleaned	1,202
Overflows inspected and cleaned	1,767
Tide gates repaired	139
Sumps repaired	22
Regulators repaired	13
Overflows repaired	8
Manholes repaired	191
Manhole steps put in	80
Tide gates replaced with new ones	4
New tide gates put in	4
Penstock and flushing gates cleaned, oiled and repaired,	89

Amount of Refuse Removed from Gatehouse from February 1, 1913, to January 31, 1914, Inclusive.

MONTHS.	Pounds.
1913.	
February.....	71,162
March.....	64,753
April.....	61,659
May.....	65,637
June.....	65,858
July.....	71,604
August.....	70,720
September.....	63,427
October.....	64,311
November.....	67,847
December.....	63,648
1914.	
January.....	60,775
	791,401 = 395 $\frac{1}{2}$ $\frac{1}{10}$ tons

Coal used in crematory 1 = $\frac{1362}{2240}$ tons.

NOTE.— February 14, 1913, began to operate the new steam and hydraulic press, burning the compressed refuse under the boilers, resulting in a saving of 300 pounds of coal daily at the crematory and gaining the fuel value of the compressed refuse.

Amount of Sludge Received and Removed from Deposit Sewers from February 1, 1913, to January 31, 1914, Inclusive.

MONTH.	Cubic Yards Received.	Cubic Yards Removed.	
1913.			
February.....	603	595	Sludge in sewers February 1, 1913, 2,556 cubic yards.
March.....	602	595	
April.....	149	85	
May.....	489	425	
June.....	489	425	
July.....	404	340	
August.....	574	510	
September.....	574	510	
October.....	234	170	
November.....	236	170	
December.....	85	* 2,265	
1914.			
January.....	442	Sludge in sewers February 1, 1914, 1,347 cubic yards.
Totals.....	4,881	6,090	

* Sludge scoured out of sewers.

WATER SERVICE.

FINANCIAL STATEMENT.

Total receipts from all sources	\$3,031,600 36
Income credited to City Loan on account to pay Hyde Park Water debt	17,000 00
Net income	\$3,014,600 36
Total expenditures for all purposes	2,948,361 41
Excess receipts over expenditures	\$66,238 95
Balance at beginning of year	274,580 54
Balance at end of year	<u>\$340,819 49</u>

TOTAL RECEIPTS FOR THE YEAR FROM ALL SOURCES.

Sales of water	\$2,947,210 88
Service fire elevator and motor pipes and repairs, labor, etc.,	63,052 63
Sales of merchandise	7,970 75
Fees for summonses	5,013 94
Sales of old material	3,615 55
Shutting off and letting on water	2,085 45
Sales of horses	824 63
Use of West Roxbury pumping station	770 05
Board of horses	612 00
Interest on deposits	248 25
Rent of conduit, Congress street	100 00
Reimbursement for destruction of horse	50 00
Repayment of overcharge, gypsy moth assessment	46 23
	<u>\$3,031,600 36</u>

EXPENDITURES.

Current expenses and extensions	\$899,338 91
Service mains and relaying mains	86,945 40
Metropolitan water assessment	1,842,127 65
Interest	118,673 48
Refunded water rates	1,275 97
	<u>\$2,948,361 41</u>

Details of expenditures under the appropriation for current expenses for the fiscal year ending January 31, 1914. (From revenue.)

F. A. McInnes, division engineer,	\$5,000 00	
Less six months paid by Sewer Service	2,500 00	\$2,500 00
Superintendent		3,000 00
<i>Carried forward</i>		<u>\$5,500 00</u>

<i>Brought forward</i>	\$5,500	00	
Clerks, messengers and assistants	49,735	87	
Foremen	27,792	26	
Mechanics	88,611	79	
Inspectors	71,189	29	
Laborers, etc.	212,898	13	
Inspector of castings and assistant (paid on department pay roll)	1,765	00	
Engineers and assistants	20,268	00	
<hr/>			
Total salaries and wages	\$477,760	34	
Water pipes and other castings	163,954	62	
Blasting, excavation of trenches, laying and relaying water pipes, setting boxes, etc.	95,835	54	
Meters:			
New meters	\$49,347	15	
Repairs and extra parts	3,247	82	
<hr/>			52,594 97
Stables, etc.:			
Board, feed, etc.	\$10,725	61	
Carriages, wagons, etc. and repairs	5,453	75	
Horseshoeing	2,786	30	
Harnesses and repairs	1,349	17	
Veterinary services and medicines	598	71	
Horses, purchase of	325	00	
<hr/>			21,238 54
Tools and machinery and repairs of same, iron, steel, tin, hardware and miscellaneous supplies	18,778	74	
Repairs of buildings, streets and structures	15,450	45	
Lead and lead pipe	10,635	25	
Lumber	6,748	75	
Printing	5,037	42	
Damages	4,607	24	
Traveling expenses	2,937	59	
Fuel	2,777	00	
Stationery	1,987	09	
Telephones	1,628	60	
Gravel and crushed stone	901	65	
Inspection of castings	866	27	
Teaming freights and expressage	812	41	
Rents	733	00	
Electric lighting	732	90	
Taxes	626	85	
Launch, repairs and supplies	554	15	
Oils	540	69	
Postage	473	83	
Cement and sand	388	28	
Engineers' supplies	376	37	
Furniture	330	66	
Waterproof clothing	252	09	
Bricks	224	55	
Advertising	218	30	
Professional and expert services	180	50	
Gas	146	72	
Destroying moth pests	92	46	
Ice	53	60	
Drain pipe	34	56	
Recording papers	34	00	
Premium on bond	12	50	
Inspection of boilers	10	00	
<hr/>			
<i>Carried forward</i>	\$890,568	48	

AUTOMOBILES.

No. 100.— Division Engineer.

<i>Brought forward</i>		\$890,568 48
Registration and license	\$10 50	
Tires and tubes, new and repairs,	232 88	
Gasolene, oils, etc.	118 43	
Storage	288 50	
Repairs and supplies	365 72	
Robe, \$10.00; auto hire, \$5.00	15 00	
Total		\$1,031 03

No. 80.— Superintendent.

Registration	\$15 00	
Tires and tubes, new and repairs,	7 35	
Gasolene, oils, etc.	15 04	
Repairs and supplies	143 36	
Total		180 75

No. 101.— Engineer Income Branch.

New Buick roadster	\$998 00	
Registration	22 00	
Tires and tubes, new and repairs,	8 75	
Gasolene, oils, etc.	25 46	
Repairs and supplies	40 70	
Storage	90 85	
Total		1,185 76

No. 90.— General Foreman.

Registration	\$10 00	
Tires and tubes, new and repairs,	148 72	
Gasolene, oils, etc.	122 36	
Repairs and supplies	589 26	
Total		870 34

Nos. 83 and 96.— Emergency Cars. (Trucks.)

No. 96 new White truck	\$3,000 00	
Registration and license	15 75	
Tires and tubes, new and repairs,	333 37	
Gasolene, oils, etc.	330 34	
Repairs and supplies	480 32	
Chauffeurs' wages	3,395 03	
Total		7,554 81
*Gasolene, oils, etc.	\$2,071 16	
Less gasolene, oils, etc., from stock	624 72	
		1,446 44

Total cost		\$12,269 13
Less repairs at department shop,	\$103 67	
Less chauffeurs' wages, included in pay rolls	3,395 03	
		3,498 70

8,770 43

Total expenditures current expenses	\$899,338 91
--	---------------------

* Supplied to all department cars.

Details of expenditures under appropriation for service mains and relaying mains for the fiscal year ending January 31, 1914. (From revenue.) Order City Council. August 12, 1913.

Water pipes and castings	\$75,156 02
Laying and relaying mains, etc.	10,777 52
Inspection of castings	1,007 86
Advertising	4 00
Total	<u>\$86,945 40</u>

There was also expended by the Water Service, under an appropriation of \$5,000 from the Reserve Fund, for ice for drinking fountains (order of City Council, approved July 1, 1913), \$4,717.01.

RESERVE FUND.

Amounts paid during the year 1913-14 from Reserve Fund to pensioned employees of the Water Service:

Civil War veterans, twenty-one names on pay roll, January 31, 1914	\$11,418 81
Retired laborers, twenty names on pay roll, January 31, 1914,	6,188 51
Total	<u>\$17,607 32</u>

HIGH PRESSURE FIRE SERVICE.

Expenditures during the year 1913-14 from loans:

Salaries and wages:	
Engineers	\$14,526 50
Clerk	1,088 94
Laborers	108 75
Mechanics	47 70
Inspectors	47 25
Foremen	12 25
Total pay roll	<u>\$15,831 39</u>
Water pipes and castings	194,242 01
Construction, Winter street	6,024 66
Architect	3,121 45
Inspection of castings	3,078 10
Electric pumping plant	1,500 00
Tools, machinery, iron, steel, etc.	\$17 39
Yard	733 39
Printing	567 44
Traveling expenses	505 41
Teaming	312 28
Engineers' supplies	270 02
Paving	252 00
Painting office	148 00
Carried forward	<u>\$227,403 54</u>

<i>Brought forward</i>	\$227,403 54
Stationery	97 27
Hydrant changes	81 33
Telephones	72 60
Hydrant platforms	67 80
Testing metals	36 25
Advertising	33 60
Furniture	18 80
Postage	12 62
	<u>\$227,823 81</u>

Comparative Table of Receipts and Expenditures.

Receipts.

	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.
Sales of water	\$2,026,564 59	\$2,609,102 39	\$2,764,887 76	\$2,730,398 37	\$2,906,569 76	\$2,947,210 88
Other receipts	52,509 31	69,969 60	64,168 20	67,690 88	75,674 49	84,389 48
	\$2,679,073 90	\$2,679,071 99	\$2,829,055 96	\$2,798,089 25	\$2,982,244 25	\$3,031,600 36
Credited from taxes,		159,000 00				
Transfers by City Auditor.	16,687 10	59,563 49		31,777 31		
	\$2,695,761 00	\$2,897,635 48	\$2,829,055 96	\$2,829,866 56	\$2,982,244 25	\$3,031,600 36
Balance beginning of year.				† \$11,983 69		
Balance end of year.			\$11,983 69	{ † 31,777 31		
			* \$11,983 69	{ † 32,744 66		
				\$64,521 97		

Expenditures.

	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.
Current expenses	§ \$729,677 14	§ \$871,367 43	§ \$860,676 10	§ \$822,377 46	§ \$835,072 00	§ \$899,338 91
Service and relaying mains.						86,945 40
Metropolitan water assessment.	1,789,315 84	1,862,823 42	1,815,658 85	1,825,362 87	1,792,123 83	1,842,127 65
Interest	175,010 17	161,963 39	138,460 17	127,280 37	137,875 37	118,673 48
Refunded water rates	1,757 85	1,481 24	2,277 15	2,307 58	2,680 28	1,275 97
	\$2,695,761 00	\$2,897,635 48	\$2,817,072 27	\$2,777,328 28	\$2,767,751 48	\$2,948,361 41

* Taxes.

† Revenue.

‡ Transfer.

§ Amount expended for current expenses and extensions, there being one appropriation only.

The following is a statement of the cost of the existing works on January 31, 1913:

East Boston Reservoir	\$66,103 09
East Boston high service	24,173 26
West Roxbury high service	22,346 56
Pipe yards and buildings	94,832 16
Engineering expenses	57,873 58
Distribution (additions during the year, \$280,980.23)	15,753,234 18
Hyde Park waterworks	468,000 00
Total	<u>\$16,486,562 83</u>

Parker Hill Reservoir transferred to Park Department, June 1, 1912. Order City Council, approved January 25, 1912.

Fisher Hill Reservoir transferred to Metropolitan Water and Sewerage Board, September 11, 1913. Acts 1912, chapter 694. \$150,000 paid into city treasury.

COST OF CONSTRUCTION AND CONDITION OF
WATER DEBT.

Cost of construction of waterworks to February 1, 1913	\$16,602,511	76
Less cost of Parker Hill Reservoir	\$205,793	81
Less cost of Fisher Hill Reservoir	191,135	35
	<u>\$396,929</u>	16
		<u>\$16,205,582</u>
		60
Cost of construction of waterworks to February 1, 1914	16,486,562	83
Increase during the year	<u>\$280,980</u>	23
Outstanding loans February 1, 1913, at 3½ per cent	\$818,400	00
Outstanding loans February 1, 1913, at 4 per cent	2,381,050	00
	<u>\$3,199,450</u>	00
Outstanding loans February 1, 1914, at 3½ per cent	\$612,400	00
Outstanding loans February 1, 1914, at 4 per cent	1,874,050	00
	<u>2,486,450</u>	00
Decrease during the year	<u>\$713,000</u>	00
The Water Sinking Fund February 1, 1913, was	\$2,551,192	16
The Water Sinking Fund February 1, 1914, was	1,954,263	42
Decrease during the year	<u>\$596,928</u>	74
Net Water Debt February 1, 1913	\$648,257	84
Water Debt February 1, 1914	\$2,486,450	00
Less Sinking Fund February 1, 1914	1,954,263	42
Net Water Debt February 1, 1914	532,186	58
Decrease during the year	<u>\$116,071</u>	26
Stock on hand February 1, 1914	\$190,630	77
Stock on hand February 1, 1913	144,581	64
Increase during the year	<u>\$46,049</u>	13
Cochituate Water Sinking Fund Receipts for the year 1913-14:		
Interest on investments	\$79,804	38
Interest on bank deposits	3,321	84
	<u>\$83,126</u>	22

HIGH PRESSURE FIRE SERVICE.

Owing to the fact that the location of the pumping station has not been decided upon no construction work was done during the year.

The following contracts for materials have been placed and deliveries made as stated:

CONTRACTORS.	Materials Ordered.	Delivered.
Standard Cast Iron Pipe and Foundry Company, Bristol, Penn.	7,000 tons cast-iron pipe.....	7,000 tons.
Warren Foundry and Machine Company, Phillipsburg, Penn.	685 tons cast-iron pipe specials..	697 tons.
Davis & Farnum Manufacturing Company, Waltham, Mass.	100 tons semi-steel special castings.	106 tons.
Kennedy Valve Manufacturing Company, Elmira, N. Y.	642 valves.....	350 valves.
A. P. Smith Manufacturing Company, East Orange, N. J.	410 hydrants.....	No delivery.
Worcester Pressed Steel Company, Worcester, Mass.	500 hydrant hoods.....	No delivery.
A. P. Smith Manufacturing Company, East Orange, N. J.	450 hydrant auxiliary valves...	No delivery.
Gibby Foundry Company, East Boston, Mass.	182 tons miscellaneous castings..	107 tons.

The post hydrant adopted was designed in the department. Exhaustive tests have been made to determine its friction losses, durability, etc. Detail tests have also been made of the strength of the alloy joints it is proposed to use in the pipe line where unbalanced pressures exist. Street surveys have been completed covering practically the whole area to be protected.

WASTE PREVENTION BRANCH.

A force of twelve inspectors has been continuously employed in locating and in stopping waste both inside of premises and generally throughout the distribution system. Their effective work has been a factor in reducing consumption.

WASTE PREVENTION BRANCH.

Table I.

Waste Prevention.

Premises examined.....	34,558
Special investigations.....	1,848
Waste reports.....	12,679
Re-examined.....	11,484
Found repaired.....	10,963
Not repaired.....	521
Water shut off for waste.....	11

Table II.
Defective Fixtures and Waste.

Tank fixtures leaking.....	6,092
Faucets leaking.....	4,740
Hopper cocks leaking.....	48
Pipes inside leaking.....	445
Pipes outside leaking.....	145
Metered premises with defective fixtures.....	1,156
Hydrants leaking.....	16
Willful waste.....	37

INCOME AND METER BRANCH.

The financial statement of the year again evidences efficient work on the part of this branch. The required number of meters have been set in compliance with the provisions of chapter 52 of the Acts of 1907. The "double high service" in West Roxbury and Hyde Park, about two-thirds of the services in South Boston, and all new premises have been metered.

A notable decrease in consumption occurred in Charlestown, which was put on metered service January 1, 1913, the daily average consumption being reduced from 6,860,200 gallons in 1912 to 4,394,200 gallons, a result due largely to the installation of meters.

The following table shows the results obtained from meters and waste inspection for the past eight years:

YEAR.	Number of Services, Boston.	Meters in Service, Boston.	Percentage of Services Metered, Boston.	Population of Boston.	Daily Consumption of Boston (Gallons).	Daily per Capita of Boston (Gallons).	Population of Metropolitan District.	Metropolitan Daily Consumption (Gallons).	Metropolitan Daily per Capita (Gallons).
1906.....	93,091	5,084	5.5	613,220	90,951,800	148	930,740	117,524,600	126
1907.....	93,942	5,185	5.5	628,520	96,422,800	153	955,760	124,145,600	130
1908.....	94,960	5,380	5.7	643,810	98,379,300	153	973,320	125,444,000	129
1909.....	96,132	12,048	12.5	659,110	94,029,900	143	997,760	119,119,100	119
1910.....	93,780	18,467	19.7	674,400	87,346,700	130	1,022,230	112,092,100	110
1911.....	95,037	25,206	26.5	688,520	85,571,500	124	1,046,630	109,994,800	105
1912.....	*99,700	†34,565	34.8	718,900	90,037,500	125	1,086,690	116,230,700	107
1913.....	101,100	41,168	40.7	735,098	79,390,600	108	1,104,263	103,847,700	94

* Including 2,562 acquired by annexation of Hyde Park.

† Including 1,540 meters acquired by annexation of Hyde Park.

METER BRANCH.

Table I.

General Statement of Work Performed During the Year.

MAKE.	New Sets.	Discontinued.	CHANGED.		Tested.	Repaired in Shop.	Repaired in Service.	Discontinued on Account of Frost.
			In.	Out.				
Hersey disc.....	7,059	461	3,334	2,469	8,734	2,731	385	270
Hersey rotary.....	41	28	200	591	535	226	45	4
American.....	88	28	117	230	366	115	22	6
Crown.....	143	44	381	503	861	351	91	2
Nash.....	28	19	82	123	230	97	24	3
Worthington.....		4	5	82	119	9	20	.....
Worthington disc.....	6	1	26	44	56	23	4	1
Lambert.....	24	12	71	93	186	91	13	.....
Keystone.....	3	2	23	34	60	23	6	.....
Metropolitan.....		3	.....	14	14	1	1	.....
Empire.....	6	1	14	55	37	19	.....	.....
Trident.....	8	4	20	20	48	17	4	3
Hersey detector.....	10	.....	1	.....	2	.....	12	.....
Gem.....		.....	10	10	24	6	1	.....
B. W. W.....		.....	.....	1	1	.....	.....	.....
Thomson.....		.....	.....	3	3	.....	.....	.....
Standard.....		.....	.....	1	1	.....	.....	.....
Union.....		.....	.....	1	.....	.....	.....	.....
Totals.....	7,416	607	4,284	4,284	11,277	3,709	628	289

Table II.

Meters in Stock February 1, 1914.

MAKE.	DIAMETER IN INCHES.								Totals.
	$\frac{3}{8}$	$\frac{1}{2}$	1	1½	2	3	4	6	
Hersey disc.....	1,794	223	34	45	2	1	.....	.....	2,099
Hersey rotary.....	379	54	19	28	37	4	5	3	529
Hersey detector.....	.....	.....	.....	.....	.....	.....	1	.....	1
Crown.....	221	119	21	18	26	4	5	5	419
Nash.....	58	22	5	2	.....	.....	.....	.....	87
Lambert.....	27	10	3	3	.....	.....	.....	.....	43
Trident.....	16	.....	1	1	.....	.....	.....	.....	18
Worthington.....	1	.....	3	4	6	.....	2	.....	16
Worthington disc.....	22	5	1	.....	.....	.....	.....	.....	28
Keystone.....	13	3	.....	.....	1	.....	.....	2	19
Metropolitan.....	.....	1	.....	.....	1	.....	.....	.....	2
American.....	154	67	.....	.....	.....	.....	.....	.....	221
Hersey torrent.....	.....	.....	.....	.....	.....	.....	.....	1	1
Empire.....	55	2	.....	1	.....	.....	.....	.....	58
Gem.....	.....	.....	.....	.....	2	4	4	3	13
Standard.....	9	.....	.....	.....	1	.....	.....	.....	10
B. W. W.....	.....	1	.....	.....	.....	.....	.....	.....	1
Thomson.....	3	1	.....	.....	.....	.....	.....	.....	4
Union.....	1	.....	.....	.....	.....	.....	.....	.....	1
Totals.....	2,753	508	87	102	76	13	17	14	3,570

Table III.

Meters in Service February 1, 1914.

MAKE.	DIAMETER IN INCHES.											Totals.
	$\frac{5}{8}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	3	4	6	8	12	
Hersey disc.....	29,829	2,109	930	1	496	163	56	12	2	...	...	33,598
Hersey rotary.....	340	319	259	...	149	120	54	22	10	...	...	1,273
Hersey detector.....	...	...	...	...	...	...	3	9	19	7	1	39
Crown.....	1,004	443	390	...	205	173	106	60	11	...	...	2,392
Nash.....	441	228	136	...	43	39	3	...	...	...	...	890
Lambert.....	321	113	73	...	11	21	...	4	...	...	...	543
Trident.....	179	6	2	...	1	3	...	...	1	...	...	192
Worthington.....	...	42	139	...	34	23	13	1	...	...	...	252
Worthington disc.....	141	40	5	...	...	18	...	...	...	...	...	204
Keystone.....	169	82	22	...	2	2	9	...	...	...	...	286
Metropolitan.....	...	39	5	...	1	...	...	...	...	...	...	45
American.....	881	434	...	...	...	...	...	...	...	...	...	1,315
Worthington turbine..	...	...	...	...	...	...	...	1	...	...	...	1
Empire.....	99	2	5	...	7	...	...	...	...	...	...	113
Gem.....	...	...	...	...	...	1	...	3	6	...	...	10
Standard.....	6	...	...	...	...	...	...	...	...	...	...	6
B. W. W.....	...	2	...	...	...	...	...	...	...	...	...	2
Thomson.....	3	1	...	...	...	...	...	...	...	...	...	4
Union.....	1	1	...	...	...	...	...	...	...	...	...	2
Gamon.....	1	...	...	...	...	...	...	...	...	...	...	1
Totals.....	33,415	3,861	1,966	1	949	563	244	112	49	7	1	41,168

Table IV.
Meters Purchased.

MAKE.	DIAMETER IN INCHES.									Totals.
	$\frac{3}{8}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8	
Hersey disc.....	7,001	351	131	171	76	30	12	1	.....	7,773
Hersey detector.....						3	2	4	2	11
Nash.....	1									1
Trident.....	1	1	1	1	1					5
Crown.....							3			3
Gem.....							1	3		4
Totals.....	7,003	352	132	172	77	33	18	8	2	7,797

Table V.
Meters Condemned.

MAKE.	DIAMETER IN INCHES.								Totals.
	$\frac{3}{8}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4		
Hersey disc.....	21	.....	1	1	1	.....	.....	24
Hersey rotary.....	1	3	.....	.....	1	.....	.....	5
Crown.....	15	3	4	.....	1	1	2	26
Worthington.....	1	8	41	14	23	2	3	92	
Metropolitan.....	.....	18	2	1	.....	.....	.....	21
American.....	1	.....	.....	.....	.....	.....	.....	1
Trident.....	1	.....	.....	.....	.....	.....	.....	1
Keystone.....	1	.....	.....	.....	.....	.....	.....	1
Totals.....	41	32	48	16	26	3	5	171	

Table VI.
Meters Repaired in Service.

MAKE.	CAUSES.								Totals.
	Clock Broken.	Cover Broken.	Spindle Leak.	Coupling Leak.	Leak at Stopcock.	Relocated.	Joint Leaking.	Miscellaneous.	
Hersey disc.....	43	7	25	127	16	27	10	130	385
Hersey rotary.....	12	1	10	9	.....	.....	.....	13	45
American.....	1	.....	3	2	.....	.....	10	6	22
Crown.....	22	4	13	10	1	.....	2	39	91
Nash.....	2	.....	5	5	.....	.....	.....	12	24
Worthington.....	7	2	3	.....	.....	.....	5	3	20
Worthington disc.....	1	.....	1	.....	.....	.....	.....	2	4
Lambert.....	2	.....	6	4	.....	.....	1	.....	13
Keystone.....	3	.....	.....	1	.....	.....	.....	2	6
Metropolitan.....	.....	.....	.....	.....	.....	.....	.....	1	1
Trident.....	.....	.....	.....	.....	.....	1	1	2	4
Hersey detector.....	6	.....	.....	.....	.....	.....	.....	6	12
Gem.....	.....	.....	.....	.....	.....	.....	.....	1	1
Totals.....	99	14	66	158	17	28	29	217	628

Table VII.
Meter Changes.

MAKE.	METERS IN.						METERS OUT.						Totals.					
	DIAMETER IN INCHES.						DIAMETER IN INCHES.											
	¾	1	1½	2	3	4	6	8	10	11	12	14		16	Totals.			
Hersey disc.....	2,712	260	147	110	70	25	10	.....	3,331	2,121	191	81	41	24	11	.....	2,169
Hersey rotary.....	82	42	31	6	32	3	2	2	200	406	57	39	27	48	7	5	2	591
American.....	46	71	117	142	88	230
Crown.....	159	74	65	27	23	11	16	6	381	242	79	61	43	32	17	20	6	503
Nash.....	31	19	18	9	4	1	.....	.....	82	62	27	21	10	2	1	.....	123
Worthington.....	1	3	1	5	2	9	32	10	24	1	4	82
Worthington disc.....	15	3	2	.....	6	.....	.....	.....	26	28	7	3	.....	6	.....	.....	44
Lambert.....	41	17	5	.....	3	.....	2	.....	71	57	22	10	1	3	.....	.....	93
Keystone.....	9	5	6	.....	1	2	.....	.....	23	17	7	6	.....	1	3	.....	34
Metropolitan.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	2	1	.....	.....	.....	14
Empire.....	13	.....	1	.....	.....	.....	.....	.....	14	63	1	.....	1	.....	.....	.....	65
Trident.....	18	2	.....	.....	.....	.....	.....	.....	20	18	1	.....	.....	1	.....	.....	20
Hersey detector.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Gem.....	.....	.....	.....	.....	.....	.....	2	8	10	.....	.....	.....	.....	.....	2	8	10
B. W. W.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Thomson.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....	.....	3
Standard.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Union.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Totals.....	3,130	496	276	152	139	42	33	16	4,281	3,161	502	258	135	141	40	31	16	4,284

Table VIII.

Meters Applied.

MAKE.	DIAMETER IN INCHES.									Totals.
	$\frac{5}{8}$	$\frac{3}{4}$	1	1 $\frac{1}{2}$	2	3	4	6	8	
Hersey disc.....	6,665	183	80	73	37	17	3	1	.....	7,059
Hersey rotary.....	2	19	12	1	5	1	.....	1	.....	41
American.....	72	16	.....	.....	.....	.....	.....	.....	.....	88
Crown.....	89	17	14	8	5	6	4	.....	.....	143
Nash.....	12	4	8	2	2	.....	.....	.....	.....	28
Worthington disc.....	4	1	.....	.....	1	.....	.....	.....	.....	6
Lambert.....	8	9	5	.....	2	.....	.....	.....	.....	24
Keystone.....	1	1	.....	.....	.....	1	.....	.....	.....	3
Empire.....	4	.....	1	1	.....	.....	.....	.....	.....	6
Trident.....	5	.....	1	.....	2	.....	.....	.....	.....	8
Hersey detector.....	.....	.....	.....	.....	.....	3	1	4	2	10
Totals.....	6,864	250	121	85	54	28	8	6	2	7,416

Table IX.

Meters Discontinued.

MAKE.	DIAMETER IN INCHES.						Totals.
	$\frac{5}{8}$	$\frac{3}{4}$	1	1 $\frac{1}{2}$	2	4	
Hersey disc.....	376	47	18	11	9	.....	461
Hersey rotary.....	5	9	10	.....	3	1	28
American.....	24	4	.....	.....	.....	.....	28
Crown.....	22	8	8	2	3	1	44
Nash.....	10	3	2	2	2	.....	19
Worthington.....	.....	1	.....	1	.....	.....	2
Worthington disc.....	3	.....	.....	.....	.....	.....	3
Lambert.....	6	3	2	1	.....	.....	12
Keystone.....	1	1	.....	.....	.....	.....	2
Metropolitan.....	.....	3	.....	.....	.....	.....	3
Empire.....	1	.....	.....	.....	.....	.....	1
Trident.....	4	.....	.....	.....	.....	.....	4
Totals.....	452	79	40	17	17	2	607

NOTE.—Inclusive in the above table, the following meters were discontinued on account of frost and are to be reset as soon as conditions permit:

Hersey disc.....	270
Hersey rotary.....	4
American.....	6
Crown.....	2
Nash.....	3
Worthington disc.....	1
Trident.....	3
Total.....	<u>289</u>

INCOME BRANCH.

Table I.

Comparative Statement of Water Rates January 31, 1914.

YEAR.	Amount Assessed.	Amount Abated.	Amount Collected.	Balance Outstanding.
1895.....	\$2,266,519 08	\$55,510 53	\$2,211,008 55	.....
1896.....	2,568,246 04	* 95,162 39	2,473,083 65	.....
1897.....	2,630,413 37	53,864 09	2,576,549 28	.....
1898.....	2,342,804 58	* 235,414 43	2,107,390 15	.....
1899.....	2,414,731 72	* 258,449 66	2,156,282 06	.....
1900.....	2,197,026 64	46,873 45	2,150,153 19	.....
1901.....	2,264,845 26	46,713 28	2,218,131 98	.....
1902.....	2,327,996 91	43,706 89	2,284,290 02	.....
1903.....	2,386,428 02	58,050 51	2,328,347 51	\$30 00
1904.....	2,391,751 16	38,290 92	2,352,679 94	780 30
1905.....	2,446,978 39	36,093 08	2,410,871 31	14 00
1906.....	2,524,205 25	37,599 28	2,486,605 97	.....
1907.....	2,619,031 00	34,959 33	2,584,071 67	.....
1908.....	2,645,962 55	36,549 98	2,609,023 23	389 34
1909.....	2,694,338 67	47,703 89	2,645,001 13	1,633 65
1910.....	2,845,949 55	* 113,459 99	2,728,182 17	4,307 39
1911.....	2,861,230 39	59,210 09	† 2,795,923 81	6,096 49
1912.....	3,001,731 88	40,956 23	2,942,561 93	18,213 72
1913.....	2,999,433 43	34,735 57	2,843,630 30	121,067 56
1914 †.....	786,919 80	1,252 57	107,683 23	677,984 00

The above amounts for the years 1895, 1896 and 1897 include both Mystic supply and Cochituate accounts. The contracts to supply Chelsea, Somerville and Everett with Mystic water were abrogated by the Metropolitan Water Act of January 1, 1898.

* These amounts include certain city department accounts abated by order of the Mayor.

† The statement of water rates for the year 1914 represents annual accounts only, as the quarterly meter accounts can only be estimated at this time.

‡ \$875.11 for Hyde Park water rates do not appear in this column; were not assessed on our books.

Table II.*Kind and Number of Fixtures in Use January 1, 1914.*

	Number.
Bathtubs.....	120,035
Bowls.....	158,383
Foot tubs.....	240
Sinks.....	222,112
Taps (other than sinks, bowls, etc.).....	41,485
Urinals, automatic.....	6,101
Urinals, otherwise.....	610
Washtubs.....	188,619
Water-closets.....	226,797
Total.....	964,382

Table III.*Number and Amount of Abatements Allowed During the Year 1913.*

ON ACCOUNT OF ASSESSMENT FOR YEAR.	Number.	Amount.
1910.....	2	\$8 50
1911.....	57	2,979 73
1912.....	1,101	15,978 73
1913.....	3,447	33,523 38
Totals.....	4,607	\$52,490 34

Table IV.*Application for New Pipes During the Year 1913.*

Elevators.....	6
Fire pipes.....	82
Motors.....	—
Service pipes.....	1,401
Total.....	1,489

Table V.

Turning Water Off and On During the Year 1913.

For complaints.....	471
For repairs of service.....	4,457
For non-payment of water bills.....	3,529
For waste.....	12
Turned on first time.....	1,342
Vacancies.....	2,686
Total.....	12,497

Table VI.

Elevators.

Under supervision December 31, 1912.....	573
Discontinued during the year.....	7
Changed to electric.....	4
New elevators accepted during the year.....	6
Under supervision December 31, 1913.....	568
Changed to tank and metered water and now under supervision.....	46
Registering inaccurately and repaired by owner.....	12
Clock cords broken and repaired by owner.....	8
Clock hands broken and repaired by owner.....	5

Table VII.

Motors.

Under supervision December 31, 1912.....	111
Discontinued during the year.....	4
New motors accepted during the year.....	—
Under supervision December 31, 1913.....	107
Motors on meter.....	18

Table VIII.

Fire Pipes.

Under supervision December 31, 1912.....	644
Supervision discontinued during the year.....	—
Premises equipped during the year.....	82
Premises under supervision December 31, 1913.....	726
Premises inspected.....	4,271
Number of inspections of outlet valves.....	55,391
Number of hydrant inspections.....	2,490
Number of valves sealed and resealed.....	4,519
Number of hydrant valves sealed and resealed.....	228
Meter by-passes under supervision of December 31, 1912.....	42
Discontinued.....	—
By-pass additional.....	6
Meter by-passes under supervision December 31, 1913.....	48
Inspections made of by-passes.....	48
By-passes sealed or resealed.....	16

DISTRIBUTION BRANCH.

The organization of this branch is a central yard at 710 Albany street and six outlying yards in East Boston, Charlestown, Brighton, Dorchester, West Roxbury and Hyde Park. At the central yard is a machine shop, a plumbing shop, a carpenter shop and a blacksmith shop. An electrical shop was abolished during the year. The work done consists both of construction, including the manufacture of gates, hydrants, service cocks, pipe boxes, etc., and of mains, which term includes a wide variety of important work which must be quickly and properly done if damage is not to result. An automobile emergency service is maintained at 710 Albany street, with men ready to respond at any time.

The following tables, Nos. 1 to 32, give details of the work done by the Distribution Branch, with its cost where it could be determined:

Table No. 1.

Main Lines of Water Pipes and Connections Owned and Operated by the Public Works Department (Water Service), and Number of Valves Set in Same, January 31, 1914.

	DIAMETER OF PIPES IN INCHES.													Totals.			
	48	42	40	36	30	28	24	20	16	14	12	10	8		6	4	3	2
Length owned and operated																	
January 31, 1913.....	39,184	16,813	23,104	47,993	97,339	244	77,780	95,021	228,003	5,021	1,315,752	246,378	710,149	1,311,411	117,905	6,755	5,762
Gate valves in same.....	12	6	11	21	58	67	66	74	474	20	2,891	792	2,130	4,124	649	16	12
Air valves in same.....	23	5	10	29	67	67	38	41	58	.....	31	2	.....	3	.....	.....	.....
Blow-offs in same.....	8	3	6	13	30	.....	19	42	58	.....	138	23	60	105	51	4	1
Length laid and relaid during year 1913-14 (feet).....	.....	12	.....	720	7	.....	731	68	7,814	.....	40,136	34,646	27,405	2,214	17	.....	.....
Gate valves in same.....	.....	.....	.....	2	.....	.....	.....	5	18	.....	131	126	131	25	.....	.....	.....
Air valves in same.....	.....	.....	.....	2	.....	.....	2	4	2	.....	3	.....	.....	.....	.....	.....	.....
Blow-offs in same.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....
Length abandoned during year 1913-14 (feet).....	.....	241	.....	4	7	.....	224	18	273	.....	6,627	1,702	6,249	37,044	2,551	.....	.....
Gate valves in same.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	16	10	20	118	15	.....	.....
Air valves in same.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Blow-offs in same.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Length taken by Metropolitan Water and Sewerage Board during year 1913-14 (feet).....	28,547	1,108	6,999	10,453	21,296	.....	3,913	3,514	.....	.....	19	.....	.....	.....	.....	.....	.....
Gate valves in same.....	4	2	3	5	12	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....
Air valves in same.....	11	2	3	4	5	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Blow-offs in same.....	7	.....	3	5	7	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lengths owned and operated January 31, 1914 (feet).....	10,637	15,476	16,105	38,256	76,073	244	74,374	91,557	236,114	5,021	1,349,242	279,322	731,306	1,306,581	115,371	6,755	5,762
Gate valves in same.....	8	4	8	18	46	.....	65	78	489	20	3,005	908	2,241	4,031	634	16	12
Air valves in same.....	12	3	7	27	62	.....	38	42	30	.....	34	2	.....	3	.....	.....	.....
Blow-offs in same.....	1	3	3	8	23	.....	16	42	58	.....	142	24	62	107	52	4	1

Total, 825.42 miles in the system January 31, 1914.

Table No. II.
Hydrant, Blow-off and Reservoir Pipes.

	DIAMETER IN INCHES.								Totals.
	16	12	10	9	8	6	4	3	
Total length connected with system January 31, 1913.	474	6,461	186	2,005	4,622	49,478	6,495	44	69,768
Length laid and relaid during the year.					295	4,018			4,313
Length abandoned during the year.		6	10	10	101	1,045	12		1,184
Length taken by Metropolitan Water and Sewerage Board.	445	559			5	60			1,069
Total length connected with system January 31, 1914.	29	5,899	176	1,995	4,811	52,391	6,483	44	71,828

Table No. III.
Hydrants in System January 31, 1914.

	Lowry.	Boston Lowry.	Boston Post.	Ordinary Post.	Boston.	Chapman Post.	Coffin Post.	Luflow Post.	Mathews Post.	Totals.
City proper (public).....	582	47	612	183	83					1,507
" (private).....	4		9	6	39					58
Roxbury (public).....	427	78	462	382	32					1,381
" (private).....	2	1	3	2	10					18
West Roxbury (public).....	78	216	390	653	20					1,357
" (private).....				16	1					17
Brighton (public).....	64	77	211	388	15					755
" (private).....				8	2					10
Dorchester (public).....	319	212	599	955	24					2,109
" (private).....		1	8	1	4					14
South Boston (public).....	174	32	277	126	26					635
" (private).....	3			15	28					46
East Boston (public).....	76	28	215	153	5					477
" (private).....	8			7	25					40
Charlestown (public).....	122	42	153	29	2					348
" (private).....	14	1		36	5					56
Deer Island (private).....			1	20						21
Long Island (private).....				6						6
Thompson's Island (private).....				2						2
Gallop's Island (private).....				3						4
Rainsford Island (private).....				3	1					4
Quincy.....				9						9
Hyde Park (public).....		1	10	104		164	1	9		289
" (private).....						55		13	4	72
Total number (public).....	1,842	733	2,929	2,973	207	164	1	9		8,858
Total number (private and suburban).....	31	3	21	134	116	55		13	4	377

Table No. IV.

*Number and Length of Service Pipes Connected with the System
January 31, 1914.*

SIZE.	Total Number.	Aggregate Length in Linear Feet.
½-inch.....	6,962	159,431
⅝-inch.....	81,905	2,300,154
¾-inch.....	3,042	106,931
1-inch.....	5,275	192,128
1¼-inch.....	412	12,837
1½-inch.....	1,461	44,049
2-inch.....	1,998	63,204
3-inch.....	820	24,311
4-inch.....	1,410	51,955
6-inch.....	162	21,544
8-inch.....	39	2,999
10-inch.....	10	1,427
12-inch.....	16	3,569
16-inch.....	2	95
Totals.....	103,514	2,984,634

Table No. V.

Fountains in Service January 31, 1914.

	Style A.	Style B.	Style C.	Style D.	Style E.	Style F.	Style G.	Style H.	Style I.	Style J.	Style K.	Style L.	Style M.	Totals.
City proper.....	7							7	20	13	4	1	1	53
Roxbury.....	4			1				4	2	6	3			20
West Roxbury.....	1		1							2	4			8
Brighton.....								1			5			6
Dorchester.....		5					1	3		1	2			12
South Boston.....		* 3						4	5	5	1			18
East Boston.....		4						5		3				12
Charlestown.....		5							11	6		1		23
Hyde Park.....		3						1		1				5
Totals.....	32		1	1			1	25	38	37	19	2	1	157

* "B" style: Granite fountain. (Gift of Warren Hall.)

FOUNTAIN DESCRIPTION.

- A. Indicates fountain for man and beast, with automatic fixtures for man and beast in warm weather and a continuous flow of water for beasts in cold weather.
- B. Indicates fountain for beasts only. Continuous flow of water during year.
- C. Indicates fountain for man only. Automatic fixtures. In service during warm weather.
- D. Indicates fountain for man and beast. Automatic fixtures for both.
- E. Indicates cold water fountain for man only. Automatic fixtures. In service during warm weather.
- F. Indicates fountain for man and beast, with automatic fixtures for man in warm weather and a continuous flow of water for beasts all the year.
- G. Indicates fountain for man and beast. Hygienic bubble fixtures for man. Continuous flow of water for man and beast all the year.
- H. Indicates fountain for man only. Water of ordinary temperature. Hygienic bubble fixtures controlled by self-closing cocks. In service during warm weather.
- I. Indicates taps on water posts, hydrants and fountains for watering horses.
- J. Indicates fountain for man only. Cold water. Hygienic bubble fixtures controlled by self-closing cocks. In service during warm weather.
- K. Indicates fountain for man and beast, fitted with automatic fixtures controlled by self-closing cock. Bubble fixture for man in warm weather. Continuous flow for beasts all the year.
- L. Indicates fountain for man and beast, bubble fixtures for man, and taps fitted for the purpose of filling pails to water horses, continuous flow for beasts all the year.
- M. Indicates fountain for beasts only, fitted with taps for the purpose of filling pails to water horses. Continuous flow for beasts all the year.

Table No. VI.
Maintenance of Main Pipe.

NATURE OF WORK.	Number of Jobs.	Total Cost.
Gate boxes renewed	538	\$6,946 18
Gates inspected (oiled, tested, covers replaced, etc.)	5,256	2,727 76
Repaving	216	1,692 02
Leaking joints repaired	153	2,288 26
Gate boxes cleaned out	2,489	1,445 41
Gate boxes raised and lowered	556	1,885 92
Gates salted	1,639	367 97
Bridge boxes renewed and repaired	28	475 56
Dead ends blown off	327	513 78
Gate locations marked	4,452	878 23
Gates repaired, etc.	13	89 07
Gates leaking at packing	68	457 46
Bridge boxes painted	6	80 01
Frames and covers broken, etc.	10	69 96
Box tops renewed	99	587 01
Work caused by contractors and corporations, etc.	51	2,485 59
Leaks due to settlement and other causes repaired	49	1,819 83
Gates renewed	11	440 77
Opening and shutting gates	32	210 66
Miscellaneous work	37	1,073 28
Totals	16,030	\$26,534 73

Table No. VII.
Hydrants Established and Abandoned.

	ESTABLISHED.						ABANDONED.							
	Lowry.	Boston Lowry.	Boston Post.	Ordinary Post.	Chapman Post.	Totals.	Lowry.	Boston Lowry.	Boston Post.	Ordinary Post.	Chapman Post.	Ludlow Post.	Boston.	Totals.
City proper (public).....	2	1	57	.....	.....	60	10	1	9	36	.....	.....	.....	56
“ (private).....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Roxbury (private).....	.....	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
“ (public).....	2	.....	47	7	.....	56	20	4	3	16	.....	.....	4	47
West Roxbury (public).....	.....	7	57	3	.....	67	13	3	.....	6	.....	.....	1	23
Brighton (public).....	2	2	97	6	.....	107	12	11	1	12	.....	.....	2	38
Dorchester (public).....	1	4	80	6	.....	91	17	15	3	14	.....	.....	2	51
“ (private).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
South Boston (public).....	.....	.....	15	.....	.....	15	1	1	2	3	.....	.....	.....	7
East Boston (public).....	.....	1	25	.....	.....	26	7	.....	3	3	.....	.....	1	14
Charlestown (public).....	1	.....	25	.....	.....	26	23	1	1	1	.....	.....	.....	26
Hyde Park (public).....	.....	.....	2	81	20	103	1	2	.....	.....	37	4	.....	44
Deer Island (private).....	.....	.....	.....	2	.....	2	.....	.....	.....	2	.....	.....	.....	2
Gallop's Island (private).....	.....	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Total (public).....	8	15	405	103	20	551	103	37	24	91	37	4	10	306
Total (private).....	.....	.....	.....	7	.....	7	.....	.....	.....	3	.....	.....	.....	3

Table No. VIII.
Hydrants Established and Changed.

NUMBER.	Cost of Material.	Cost of Labor, Teaming, etc.	Total Cost.
126 additional hydrants established.....	\$9,055 55	\$3,904 24	\$12,959 79
108 changes in style and location.....	5,856 20	4,501 41	10,357 61
Totals.....	\$14,911 75	\$8,405 65	\$23,317 40

Table No. IX.
Hydrant Repairs.

NATURE OF WORK.	Number of Jobs.	Cost.
Inspected, oiled, cleaned and pumped out on account of cold weather.....	56,997	\$6,467 55
Boxes raised, lowered, reset and repaired	681	7,158 50
Hydrant barrels changed, relocated, reset and repaired.....	479	4,658 45
Streets repaved on account of hydrant repairs.....	140	674 87
Hydrants thawed.....	67	358 66
Hydrants painted.....	3,805	597 94
Delivered 1,455 sacks of salt to Fire Department.....		945 75
Totals.....	62,169	\$20,861 72

Table No. XI.
New Service Pipes Laid.

SIZE.	Number.	Length in Feet.	Material.	Labor, Teaming, etc.	Repaving.	Blasting.	Total Cost.	Average Cost per Service.	Average Cost per Linear Foot.
½-inch...	1	24	\$7 97	.....	.....	.....	\$7 97	\$7 97	\$0 33
¾-inch...	721	17,425	6,171 39	\$8,271 49	\$333 96	\$1,060 50	\$15,837 34	21 97	91
1-inch...	69	1,652	760 11	785 75	9 80	206 00	1,761 66	25 53	1 07
1-inch...	40	1,237	647 95	549 48	40 44	.....	1,237 87	30 95	1 00
1½-inch...	9	285	208 56	128 00	10 96	.....	347 52	38 61	1 27
1½-inch...	18	461	424 57	249 71	25 85	.....	700 13	38 89	1 52
2-inch...	19	575	651 56	308 22	54 75	.....	1,014 53	53 40	1 77
3-inch...	12	304	553 93	350 20	4 14	.....	908 27	75 69	2 99
4-inch...	69	1,510	3,427 34	2,376 97	163 76	54 40	6,022 47	87 28	3 99
8-inch...	7	123	641 48	259 74	30 04	.....	931 26	133 04	7 57
10-inch...	4	12	250 87	55 57	.....	.....	306 44	76 61	25 54
	969	23,608	\$13,745 73	\$13,335 13	\$673 70	\$1,320 90	\$29,075 46		
¾-inch*..	19	142	25 32	82 72	.....	.....	108 04		
¾-inch*..	3	32	8 16	17 86	.....	.....	26 02		
¾-inch†..	6	‡	16 10	7 51	.....	.....	23 61		
	969	23,782	\$13,795 31	\$13,443 22	\$673 70	\$1,320 90	\$29,233 13		

* Services previously laid to vacant lots. They have been previously counted in the number of services laid.

† Delivering cocks, uprights, etc., to applicants.

‡ Cocks, uprights, etc.

Table No. XII.
Service Pipes Abandoned and Plugged.

SIZE.	Number.	Length in Feet.	Material.	Labor, Teaming, etc.	Repaving.	Total Cost.	Credit (Stock Returned).	Net Total Cost.	Average Cost per Service.	Average Cost per Linear Foot.
½-inch....	1	31	\$1 61	85 84	.....	\$7 45	\$3 26	\$4 19	\$4 19	\$0 14
¾-inch....	188	3,818	20 20	671 33	\$82 86	774 39	263 26	511 13	2 72	14
1-inch....	6	85	1 61	51 21	9 54	62 36	16 59	45 77	7 63	54
1-inch....	4	103	1 42	11 73	.....	13 15	4 77	8 38	2 09	08
1½-inch....	1	30	41	12 47	.....	12 88	1 56	11 32	11 32	38
1½-inch....	4	67	1 78	36 94	.....	38 72	34 73	3 99	99	06
3-inch....	2	94	5 88	24 08	.....	29 96	3 96	26 00	13 00	28
4-inch....	11	335	109 54	161 76	27 84	299 14	64 41	234 73	21 34	70
6-inch....	4	114	35 17	38 29	.....	73 46	59 96	13 50	3 37	12
Totals...	221	4,677	\$177 62	\$1,013 65	\$120 24	\$1,311 51	\$452 50	\$859 01		

Table No. XIII.

Laying New Service Pipes, Excavating and Backfilling Done by Applicant.

SIZE.	Number.	Length in Feet.	Material.	Labor, Teaming, etc.	Repaving.	Blasting.	Total Cost.	Average Cost per Service.	Average Cost per Linear Foot.
½-inch...	257	4,962	\$1,923 45	\$737 94	.....	.....	\$2,661 39	\$10 36	\$0 54
¾-inch...	26	636	289 33	84 62	.....	\$35 00	408 95	15 73	64
1-inch...	4	79	52 36	15 10	.....	.....	67 46	16 86	85
1¼-inch...	1	69	39 17	6 33	.....	.....	45 50	45 50	66
1½-inch...	4	37	42 84	16 50	.....	.....	59 34	14 83	1 60
2-inch...	1	3	8 63	5 08	.....	.....	13 71	13 71	4 57
4-inch...	1	9	39 72	8 33	.....	.....	48 05	48 05	5 34
Totals..	294	5,795	\$2,395 50	\$873 90	.....	\$35 00	\$3,304 40		

Table No. XIV.

Service Pipes Laid, Replacing Others.

SIZE.	LAID.		ABANDONED AND PLUGGED.		Material.	Labor, Teaming, etc.	Repaving.	Blasting.	Total Cost.	Average Cost per Service.	Average Cost per Linear Foot.
	Number.	Length in Feet.	Number.	Length in Feet.							
½-inch...	.....	.....	2	57	.....	.....	.....	.....	.....	.....	.....
¾-inch...	62	1,311	193	4,731	\$391 44	\$550 92	\$17 32	.....	\$959 68	\$15 48	\$0 73
1-inch...	25	791	8	86	213 14	368 24	28 56	.....	609 94	24 40	77
1-inch...	59	1,513	26	682	686 50	1,144 75	203 25	.....	2,034 50	34 48	1 34
1¼-inch...	5	121	1	18	76 50	86 17	.....	.....	162 67	32 53	1 35
1½-inch...	33	930	5	358	637 77	715 30	175 03	.....	1,528 10	46 31	1 64
2-inch...	21	436	11	73	398 58	465 60	54 37	.....	918 55	43 74	2 11
3-inch...	14	254	8	93	421 76	468 05	18 76	.....	908 57	64 90	3 58
4-inch...	10	112	9	80	301 20	368 82	.....	.....	670 02	67 00	5 98
6-inch...	.....	.....	1	30	.....	.....	.....	.....	.....	.....	.....
12-inch...	1	30	.....	.....	42 33	.....	.....	.....	42 33	42 33	1 41
.....	230	5,498	264	6,208	\$3,169 22	\$4,167 85	\$497 29	.....	\$7,834 36		
¾-inch*..	20	547	.....	.....	143 47	188 98	.....	.....	332 45		
1-inch*..	3	37	.....	.....	27 79	28 45	.....	.....	56 24		
4-inch*..	1	12	.....	.....	25 41	37 92	.....	.....	63 33		
.....	254	6,094	264	6,208	\$3,365 89	\$4,423 20	\$497 29	.....	\$8,286 38		

* Existing services extended to street line.

Table No. XV.
Service Pipe Repairs.

KINDS OF WORK AND CAUSES.	Number of Jobs.	Cost.
Repaired leaks caused by:		
defective pipes.....	489	\$6,932 84
settlement.....	296	4,825 56
pick hole.....	18	110 86
defective joint.....	29	291 20
electrolysis.....	16	395 63
defective coupling.....	57	666 72
defective cocks.....	78	732 36
gnawed by rats.....	5	57 74
steam roller.....	15	137 83
defective gates.....	3	67 25
defective packing.....	12	90 97
sewer construction.....	41	311 43
Repared — settlement.....	425	2,844 21
Cleared pipe of rust, dirt and fish.....	645	3,643 34
Sidewalk uprights established, repaired, renewed and relocated,	75	471 42
Sidewalk uprights driven down, oiled and inspected.....	2,990	1,572 97
Sidewalk cocks established, renewed, repaired and relocated....	49	473 43
Operations by contractors and corporations.....	165	606 53
Frozen pipes thawed.....	27	137 51
Gate boxes renewed, repaired and relocated.....	22	289 37
Pipes regulated to proper line and grade.....	87	796 94
Flange boxes established.....	12	82 01
Main cocks renewed, repaired and relocated.....	11	143 10
Abandoned and plugged pipes.....	50	641 96
Defective valves.....	3	13 49
Subway construction.....	172	1,521 90
Shut off and let on.....	8,691	11,119 44
Investigations.....	558	1,208 58
Main uprights established, renewed, regulated and repaired....	10	105 36
Totals.....	15,060	\$40,291 95

Table No. XVI.

Fountains Changed.

ESTABLISHED.		ABANDONED.	
<i>Style.</i>		<i>Style.</i>	
B.	Everett square, Hyde Park.	H.	(Old style.)
K.	(New style) Blackstone square, east side.	K.	(Old style.)
K.	(New style) Massachusetts avenue, at Westland avenue.	K.	(Old style.)
K.	(New style) Codman square.	K.	(New style.)*
L.	(New style) Fort Hill square.	B.	(New style.)*
L.	(New style) Rutherford avenue, at Eden street.	H.	(New style.)
M.	(New style) Haymarket square.		
H.	(New style) Bennington street, at Orient Heights.		

* Changes made necessary on account of glanders.

FOUNTAINS.

*Established During the Year.**Style.*

- H. Washington street, at Northampton street.
- J. Thompson square.
- H. Bennington street, at Day square.
- H. Blossom street, at Massachusetts General Hospital.
- H. (One bubble.) Brookline avenue, at Longwood avenue.
- H. Blue Hill avenue, at Savin Hill avenue.
- H. Maverick square (at tunnel entrance).
- B. Ornamental stone fountain for horses, Flood square. (Gift of Warren Hall.)

*Abandoned During the Year.**Style.*

- B. Bennington street, at Saratoga street.
- J. Everett street, at Lamson street.

Table No. XVII.
Fountains Repaired.

CAUSES.	Number of Jobs.	Cost.
Troughs and fountains cleaned.....	722	\$401 73
Fountains leaking.....	29	240 65
New door put on.....	3	14 55
Drains stopped up.....	60	186 22
Struck by team.....	14	53 94
Too much force.....	1	3 44
Full of dirt.....	7	20 06
Bad paving.....	6	23 63
Top loose.....	2	4 38
Removing hoods.....	25	92 07
Faucets leaking.....	11	30 69
Handles gone.....	4	11 24
Repaired hydrant attachments.....	14	58 05
Grating broken.....	2	9 94
Coupling loose.....	1	5 99
Waste pipe broken.....	1	6 29
Bubbles put on.....	5	18 91
Feed pipe stolen.....	3	8 13
Put on iron steps.....	2	8 29
Repaired ice box.....	6	21 17
New tablet.....	1	3 25
Below grade.....	1	2 17
Shut-off at main.....	1	5 58
Shut-off on account of glanders.....	4	72 07
Shut-off on account of cold weather.....	32	88 25
Service pipe broken.....	1	5 80
Fountain hole filled in.....	1	6 28
Base settled.....	1	9 79
Totals.....	960	\$1,412 56

Table No. XVIII.

Cost of Establishing and Abandoning Fountains.

NUMBER.	Material.	Labor and Teaming.	Total Cost.
Fifteen established.....	\$1,895 74	\$1,884 49	\$3,780 23
Eleven abandoned.....			

Table No. XIX.

Water Posts Established and Abandoned.

ESTABLISHED.	ABANDONED
No. 272. Paris street, near Gove street, E. B.	No. 272. Paris street at Meridian street, E. B.
No. 103. Opposite 27 West Tremlett street, Dor.	No. 344. Saratoga street, opposite Bayswater street, E. B.
No. 435. Cleveland circle, Bri.	No. 103. Wheatland avenue at Washington street, Dor.
No. 32. 187 Chelsea street, at Mystic Playground, Chas'n.	No. 435. Beacon street, at Ayr road, Bri.
No. 4. Northern avenue, between Piers 1, 2, S. B.	No. 428. Bailey street, at Dorchester avenue, Dor.
No. 428. Dorchester avenue, north of Bailey street, Dor.	No. 233. Palmer street, at Washington street, Rox.
No. 16. Northern avenue, near new fish pier, S. B.	No. 458. S-12 Howard street, C. P.
No. 233. Eustis street, near Washington street, Rox.	

NUMBER.	Material.	Labor and Teaming.	Total Cost.
Eight established.....	\$131 42	\$220 44	\$351 86
Seven abandoned.....			

Table No. XX.
Water Post Repairs.

CAUSES.	Number of Jobs.	Cost.
Valves leaking.....	111	\$243 09
Defective pipe.....	32	353 85
Rotten box.....	17	168 47
Shut-off and put on during season.....	370	358 89
Hit by team.....	7	87 57
Arm broken off.....	12	41 54
Bad paving.....	5	24 54
Relocated.....	6	42 06
2-inch valves repaired.....	180	370 28
Miscellaneous.....	4	45 86
Totals.....	744	\$1,736 15

Table No. XXI.
Meters Set for Income Branch.

NUMBER SET.		Size.	Cost of Material.	Labor, Teaming, Car Fares.	Total.
Outside.	Inside.				
	177	$\frac{3}{8}$ -inch	\$94 74	\$283 96	\$348 70
97.....		$\frac{3}{8}$ -inch	660 54	722 64	1,383 18
	4	$\frac{3}{4}$ -inch	11 10	20 66	31 76
12.....		$\frac{3}{4}$ -inch	78 21	85 46	163 67
	2	1-inch	17 20	25 99	43 19
11.....		1-inch	80 21	78 49	158 70
12.....		1 $\frac{1}{4}$ -inch	85 52	90 84	176 36
9.....		2-inch	68 73	79 13	147 86
1.....		3-inch	7 39	24 16	31 55
6.....		4-inch	37 31	151 07	188 38
3.....		6-inch	35 52	81 41	116 93
2.....		8-inch	7 98	24 99	32 97
153.....	183				
Totals....	336		\$1,154 45	\$1,668 80	\$2,823 25

Table No. XXII.

Meter Repairs.

CAUSES.	Number of Jobs.	Cost.
Box decayed.....	200	\$2,177 59
Set to grade.....	71	321 22
Change frame and cover.....	5	37 49
Covers broken.....	27	51 27
Leaking.....	32	70 24
Bad paving.....	48	231 89
Frozen.....	3	5 44
Full of dirt.....	3	5 25
Box abandoned.....	5	19 39
Box hit by team.....	2	28 70
Reset upright.....	1	4 75
Box relocated.....	5	51 71
Put in 6-inch gate.....	1	34 91
Miscellaneous.....	15	40 11
Totals.....	418	\$3,079 96

Table No. XXIII.

Machine Shop.

Stock Manufactured from the Rough.

KIND.	Number.	Labor.	56 per cent Added.	Stock.	Cost Each.	Total Cost.
Boston post hydrants.....	202	\$14 86	\$23 18	\$28 91	\$52 09	\$10,522 18
Lowry hydrants, 4 feet.....	2	5 66	8 83	19 44	28 27	56 54
3-inch B. O. hydrants.....	27	7 07	11 03	8 77	19 80	534 60
3-inch gates.....	2	4 69	7 32	5 34	12 66	25 32
4-inch gates.....	76	5 74	8 95	7 23	16 18	1,229 68
6-inch gates.....	35	7 33	11 42	13 40	24 82	868 70
8-inch gates.....	199	8 15	12 71	20 35	33 06	6,578 94
10-inch gates.....	111	12 23	19 08	29 53	48 61	5,395 71
12-inch gates.....	65	14 01	21 86	38 23	60 09	3,905 95
16-inch gates.....	17	27 64	43 12	50 29	93 41	1,587 97
$\frac{3}{8}$ -inch sidewalk cocks.....	980	42	66	29	95	931 00
$\frac{1}{2}$ -inch sidewalk cocks.....	50	54	84	46	1 30	65 00
1-inch sidewalk cocks.....	64	66	1 03	75	1 78	113 92
$\frac{3}{8}$ -inch corporation cocks.....	1,996	42	66	32	98	1,956 08.
$\frac{1}{2}$ -inch corporation cocks.....	197	52	81	47	1 28	252 16
1-inch corporation cocks.....	202	66	1 03	83	1 86	375 72
1 $\frac{1}{2}$ -inch corporation cocks.....	94	98	1 53	1 64	3 17	297 98
$\frac{1}{2}$ -inch female coupling nuts.....	50	01	02	04	06	3 00
$\frac{3}{8}$ -inch female coupling nuts.....	2,273	02	03	05	08	181 84
1-inch female coupling nuts.....	203	03	05	13	18	36 54
1 $\frac{1}{4}$ -inch female coupling nuts.....	24	05	08	20	28	6 72
1 $\frac{1}{2}$ -inch female coupling nuts.....	307	07	11	28	39	119 73
2-inch female coupling nuts.....	17	08	12	37	49	8 33
1-inch meter coupling nuts.....	36	05	08	13	21	7 56
$\frac{3}{8}$ -inch combination coupling nuts.....	214	05	08	07	15	32 10
1-inch combination coupling nuts.....	100	06	09	10	19	19 00
1 $\frac{1}{2}$ -inch combination coupling nuts.....	100	08	12	18	30	30 00
$\frac{3}{8}$ -inch female coupling tubes.....	6,165	01	02	03	05	308 25
$\frac{1}{2}$ -inch female coupling tubes.....	334	02	03	07	10	33 40
1 $\frac{1}{2}$ -inch female coupling tubes.....	290	08	12	23	35	101 50
2-inch female coupling tubes.....	115	09	14	34	48	55 20
$\frac{3}{8}$ -inch bent tubes.....	397	06	09	08	17	67 49
<i>Carried forward.....</i>						\$35,708 11

Machine Shop.—Continued.

Stock Manufactured from the Rough.—Concluded.

KIND.	Number.	Labor.	56 per cent Added.	Stock.	Cost Each.	Total Cost.
<i>Brought forward</i>						\$35,708 11
$\frac{5}{8}$ -inch bent tubes threaded.....	168	17	27	19	46	77 28
$\frac{3}{4}$ -inch bent tubes.....	196	09	14	13	27	52 92
$1\frac{1}{2}$ -inch bent tubes.....	50	12	19	49	68	34 00
$\frac{5}{8}$ -inch male couplings.....	200	02	03	09	12	24 00
1 by $\frac{5}{8}$ -inch male and female couplings.....	12	08	12	21	33	3 96
1-inch combination coupling.....	100	17	27	34	61	61 00
1-inch combination coupling, bent.....	50	23	36	46	82	41 00
$1\frac{1}{2}$ -inch combination coupling.....	100	25	39	70	1 09	109 00
2-inch combination coupling.....	83	31	48	98	1 46	121 18
2-inch hose couplings.....	337	11	17	43	60	202 20
1 by $\frac{5}{8}$ -inch solder nipples.....	50	15	23	21	44	22 00
$\frac{5}{8}$ -inch meter nipples.....	104	05	08	14	22	22 88
$1\frac{1}{2}$ -inch meter nipples.....	237	11	17	24	51	120 87
2-inch meter nipples.....	100	15	23	42	65	65 00
$\frac{5}{8}$ by $\frac{3}{4}$ -inch meter bushing.....	99	10	16	12	28	27 72
$\frac{5}{8}$ -inch plugs.....	487	07	11	01	12	58 44
1-inch plugs.....	100	17	27	03	30	30 00
$1\frac{1}{2}$ -inch plugs.....	10	21	33	06	39	3 90
Bubble cocks (fountain).....	49	1 19	1 86	1 18	3 04	148 96
Hydrant wastes.....	530	21	33	24	57	302 10
6-inch jointers.....	8	13	20	1 07	1 27	10 16
10-inch jointers.....	2	29	45	1 30	1 75	3 50
12-inch jointers.....	12	31	48	1 58	2 06	24 72
16-inch jointers.....	1	42	66	2 15	2 81	2 81
Sidewalk upright, bushings.....	1,455	04	06	19	25	363 75
Total.....						\$37,641 46

Table No. XXIV.
 Machine Shop.— *Continued.*
Stock Repaired.

	Number.	Total Cost.
3-inch gate valves.....	4	\$12 30
4-inch gate valves.....	7	8 63
6-inch gate valves.....	27	69 45
8-inch gate valves.....	8	18 70
10-inch gate valves.....	3	11 18
12-inch gate valves.....	8	27 40
16-inch gate valves.....	1	6 48
4-inch Smith gate and valves.....	2	2 49
Lowry hydrants.....	46	152 77
Boston Lowry hydrants.....	9	13 45
Ordinary post hydrants.....	92	301 41
Boston post hydrants.....	27	190 99
Bachelor hydrants.....	24	154 14
Hyde Park hydrants.....	14	23 50
Blow-off hydrants.....	3	3 32
Miscellaneous.....	136	32 18
Totals.....	411	\$1,028 39

Table No. XXV.
Machine Shop.—*Concluded.*
Miscellaneous Work.

	Number.	Total Cost.
Made 1½-inch drilling machines.....	2	\$345 27
Repaired autos.....	5	66 18
Repaired 42 meter plates for meter service.....	42	65 82
Burning out joints on Long Island.....		61 43
Improving gate-hoisting machine.....	1	42 56
Repairs in carpenter shop.....		40 95
Miscellaneous.....	43	138 32
Total.....		\$760 53

Table No. XXVI.

Blacksmith Shop.

Sharpened 5,563 picks, 563 bars, 2,150 chisels and 7 bull points.....	\$1,138 13
Repaired 2,358 tools.....	855 54
Made 350 new tools.....	603 48
Repaired 92 wagons, autos, etc.....	179 86
Repaired reservoir fence at East Boston.....	113 16
Labor and stock used on 2 new tool houses.....	100 17
Miscellaneous.....	189 86
Total.....	\$3,180 20

Table No. XXVII.

Carpenter Shop.

Stock Manufactured.

	Number.	Total Cost.
Post hydrant boxes at \$5.68.....	38	\$215 84
Lowry hydrant boxes at \$5.14.....	23	118 22
Boston Lowry hydrant boxes at \$7.07.....	44	311 08
Boston hydrant boxes at \$4.83.....	9	43 47
Small gate boxes at \$4.37.....	148	646 76
Large gate boxes at \$5.48.....	18	98 64
Meter boxes at \$4.91.....	19	93 29
Deacon meter boxes at \$5.48.....	6	32 88
Tops for Lowry and post hydrant boxes at \$0.69.....	69	47 61
Tops for small gate boxes at \$0.57.....	114	64 98
Tops for large gate boxes at \$0.63.....	36	22 68
Ground meter boxes at \$0.50.....	1,350	675 00
Meter protection boxes at \$0.25.....	613	153 25
Pieces for raising hydrant boxes at \$0.08.....	2,510	200 80
Pieces for raising small gate boxes at \$0.07.....	4,682	327 74
Pieces for raising large gate boxes at \$0.08.....	592	47 36
Pieces for raising meter boxes at \$0.07.....	848	59 36
Wedges for main pipe work and concrete boxes.....	12,972	133 90
Plugs for main pipe work.....	110	119 13
Tool handles.....	509	47 65
Miscellaneous.....		341 29
Total.....		\$3,800 93

Table No. XXVIII.

Carpenter Shop.

Remodeling old paint shop for Meter Department	\$1,619 81
Repairs in stable, 710 Albany street	1,216 76
Repaired 972 tools	653 92
Repaired stable and outbuildings in old sewer yard, Charles- town	566 12
Repairs in yard, 710 Albany street	297 45
Repairs in Brighton yard	295 56
Repairs in East Boston yard	186 42
New tool house	154 91
Repairs on wagons	110 80
<i>Carried forward</i>	\$5,101 75

<i>Brought forward</i>	\$5,101 75
Miscellaneous jobs (21)	107 62
New tool-house for inspectors	102 74
Repairs in machine shop	94 11
Repaired signs on Gallop's Island	89 26
Miscellaneous	367 54
Total	<u>\$5,863 02</u>

Table No. XXIX.

Pattern Shop.

Made 38 new patterns	\$999 06
Repaired 87 patterns	990 97
Changed 6 patterns	237 91
Remodeling high pressure hydrant pattern	139 36
Miscellaneous	56 77
Total	<u>\$2,424 07</u>

Table No. XXX.

Plumbing Shop.

Miscellaneous.

Put in new heater and sink in Charlestown yard	\$42 65
Repairs in machine shop	41 94
Repaired gauges in City Hall	39 65
Repaired bubble cocks on fountains	32 90
New sink and fittings in carpenter shop	32 34
Repairs on gauge glasses at yard, 710 Albany street	23 21
Repairs in blacksmith shop	20 54
Repaired waste pipe, 77 Lenox street, Roxbury	16 34
Repaired pumps (8)	13 53
Miscellaneous	66 26
Total	<u>\$329 36</u>

Table No. XXXI.

Electrical Shop.

Repairs and inspections of indicators and gauges at Orient Heights standpipe, East Boston	\$158 63
Repairs and inspection of indicator and gauge at City Hall	9 76
Miscellaneous repairs and extensions in yards and buildings, including labor, materials, teaming, etc.	136 00
Total	<u>\$304 39</u>

Work discontinued July 31, 1913.

Average Monthly Heights, in Feet, Above Boston City Base, to Which Water Rose at Different Stations.

1913.	SOUTHERN HIGH SERVICE.																		NORTHERN HIGH SERVICE.			
	City Hall.		Engine House No. 24, Quincy and Warren Streets, Roxbury.		Engine House No. 20, Walnut Street, Neponset.		Engine House No. 19, Norfolk Street, Mattapan.		Engine House No. 28, Centre, near Green Street, Jamaica Plain.		Engine House No. 30, Centre, near Bellevue Street, West Roxbury.		Engine House No. 45, Washington and Poplar Streets, Roslindale.		Engine House No. 29, Chestnut Hill Avenue, Brighton.		Engine House No. 48, Winthrop Street and Harvard Avenue Hyde Park.		Engine House No. 5, Marion Street, East Street.		Engine House No. 32, Banker Hill Street, Charlestown.	
	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.
January.....	246	234	246	235	245	235	245	238	246	240	246	239	246	241	250	248	244	238	166	158	161	157
February.....	246	234	245	234	245	236	246	238	246	241	246	238	246	241	249	248	243	235	165	157	162	158
March.....	244	230	248	236	247	237	247	238	247	241	247	239	248	243	249	247	245	236	166	158	163	158
April.....	245	230	248	235	247	237	247	238	246	241	246	238	247	241	249	247	245	236	166	158	166	162
May.....	244	230	248	237	.....	.....	242	238	246	239	246	237	246	241	249	247	244	235	166	158	165	158
June.....	245	232	248	236	248	232	248	236	245	240	247	238	247	240	249	246	244	235	165	159	165	160
July.....	245	232	247	236	248	235	248	239	247	241	245	238	247	241	250	247	249	241	166	158	167	163
August.....	246	232	248	237	247	236	249	240	247	242	247	239	247	242	249	246	249	242	164	158	164	159
September.....	246	234	246	235	247	233	247	236	248	241	247	240	247	240	249	248	248	239	164	158	165	162
October.....	246	234	245	234	248	234	247	237	.....	.....	243	237	247	242	250	248	246	237	165	158	165	161
November.....	247	236	246	235	249	235	248	239	.....	.....	246	240	248	243	249	247	244	237	165	158	165	163
December.....	244	233	245	234	246	231	247	238	248	242	244	238	247	242	249	247	244	236	165	159	166	161

Average Monthly Heights, in Feet, Above Boston City Base, to Which Water Rose at Different Stations.

1913.	LOW SERVICE.																	
	Chestnut Hill Pumping Station, Brighton.		Engine House No. 34, Western Avenue, Brighton.		Boston Common.		Engine House No. 8, Salem Street, City Proper.		Engine House No. 7, East Street, City Proper.		Engine House No. 38, Congress and Farnsworth Streets, South Boston.		Engine House No. 2, Fourth and O Streets, South Boston.		Water Service Yard, 710 Albany Street, South End.		Water Service Yard, Gibson Street, Dorchester.	
	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.
January....	163	163	162	152	158	145	156	135	159	141	155	138	158	140	162	144	154	137
February....	162	163	160	151	161	144	155	136	157	139	152	133	156	135	158	141	151	133
March.....	163	163	160	151	162	146	155	142	158	142	152	137	155	140	158	143	149	124
April.....	162	163	160	150	161	150	.....	.....	162	146	162	140	162	145	164	146	146	135
May.....	173	163	168	150	170	151	169	145	168	146	168	142	166	144	170	148	162	138
June.....	165	164	163	154	164	151	163	145	162	146	160	144	163	145	165	148	154	138
July.....	163	163	163	158	162	151	160	144	160	146	158	141	160	146	163	147	151	134
August.....	164	164	161	152	163	152	161	143	163	148	157	141	162	145	163	147	150	138
September....	165	164	161	151	164	151	161	146	161	146	159	142	162	143	163	148	151	138
October.....	164	163	160	152	163	150	161	144	161	144	157	141	162	145	163	148	158	141
November....	164	163	162	152	163	152	162	145	163	147	159	142	161	146	162	148	155	137
December....	164	163	162	147	161	146	160	138	161	141	157	136	161	138	161	143	147	125

Table No. XXXII.

Miscellaneous.

Testing work done for high pressure service	\$533 98
Three hundred and thirty-six inspections of patch paving	485 35
Repaired roof in old sewer yard, Rutherford avenue, Charlestown	270 35
Repairs on underpinning of carpenter shop	215 48
Repaired leaking roof on stable at Brighton	192 72
Repaired conductors, roofs and gutters in Charlestown yard,	183 67
Inspection on Boylston street subway	103 45
Rebuilt chimney on main building, 710 Albany street	95 55
Miscellaneous repairs and cleaning in yard and reservoir, East Boston	89 37
Set hydrant to new location (Bristol Street Fire Department Headquarters)	87 50
Put in new pipe for fire hose, sanitary garbage plant, Atlantic avenue	85 26
Put in new fire pipe in sanitary building, South street, Dorchester	84 66
Put in new service gate on private line, Boston & Maine Railroad	69 94
Miscellaneous	457 51
Total	<u>\$2,954 79</u>

WATERWORKS STATISTICS — CITY OF BOSTON.

FOR THE FISCAL YEAR ENDING JANUARY 31, 1914.

Date of construction of plant: 1848.

By whom owned: City of Boston.

Source of supply: The Metropolitan Water Works from Lake Cochituate, Sudbury river and Nashua river.

Mode of supply: Both gravity and pumping.

CONSUMPTION.

Estimated population supplied	733,400
Total consumption for year 1913	28,977,569,000 gallons
Passed through meters for year 1913	12,597,420,308 gallons
Percentage of consumption metered	43.5 gallons
Daily average consumption for year 1913	79,390,600 gallons
Gallons per day to each consumer	108 gallons

DISTRIBUTION.

Mains.

Kind of pipe: Cast iron, wrought iron.

Sizes: From 2-inch to 48-inch.

Extended, miles: 11.95.

Sizes, enlarged miles: 9.6.

Total miles now in use: \$25.42.*

Public hydrants added: 245.

Public hydrants now in use: 8,858.

Stop-gates added: 227.

Stop-gates now in use: 11,583.

Stop-gates smaller than 4 inches: 28.

Number of blow-offs: 546.

Range of pressure on mains: 30 pounds to 90 pounds.

* During the year 1913 all supply lines outside of Boston were taken by the Metropolitan Water and Sewerage Board, comprising 14.35 miles of pipe (from 12-inch to 48-inch, inclusive), 29 stop-gates and 24 blow-offs.

Service.

Kind of pipe and size: Lead and lead-lined, $\frac{1}{2}$ -inch to 2-inch; cast iron, 3-inch to 12-inch; wrought iron and cement lined, $\frac{3}{4}$ -inch to 2-inch.

Extended, feet: 24,786.

Total now in use, miles: 565.3.

Service-taps added: 1,008.

Total service-taps now in use: 103,514.

Meters added: 7,488.

Total meters now in use: 41,654.

Percentage of services metered: 40.2.

Motors and elevators in use: 675.

Standpipes for street watering: 544.

Yearly revenue from annual water rates \$895,687 12

Yearly revenue from metered water 2,051,523 76

Percentage of total revenue from metered water 69.6

Data — Metropolitan District.

CITIES AND TOWNS.	Valuatic.a. April 1, 1912.	Average Daily Consumption (Gallons), 1912.	Assessments, 1913.
Boston.....	\$1,489,611,817	90,037,500	\$1,842,127 65
Chelsea.....	28,147,960	2,935,500	51,547 66
Everett.....	29,742,700	2,707,800	49,124 16
Malden.....	40,617,596	2,226,300	47,126 88
Medford.....	27,179,600	1,222,900	27,916 12
Melrose.....	17,584,600	1,132,100	22,684 86
Newton.....	16,026,489	.....	6,680 74
Quincy.....	35,475,395	3,003,100	55,519 02
Somerville.....	69,916,340	6,427,500	116,320 88
Arlington.....	14,164,626	1,075,500	20,491 56
Belmont.....	7,555,625	434,500	9,042 70
Lexington.....	8,223,665	356,800	8,267 34
Milton.....	28,178,814	343,300	16,402 68
Nahant.....	9,662,998	158,800	6,181 89
Revere.....	19,924,460	1,495,400	28,587 67
Stoneham.....	5,281,875	590,700	10,213 41
Swampscott.....	12,574,824	443,300	11,254 35
Watertown.....	16,159,165	922,300	19,245 16
Winthrop.....	14,824,820	717,400	15,909 87
Totals.....	\$1,890,853,369	116,230,700	\$2,364,644 60

APPENDIX E.

REPORT OF THE COMMISSIONER FOR THE
BOSTON AND CAMBRIDGE BRIDGES.

BOSTON, February 2, 1914.

MR. L. K. ROURKE,

Commissioner of Public Works:

SIR,—As commissioner for the City of Boston I respectfully submit herewith the annual report of the Boston and Cambridge Bridge Commission for the year 1913-14.

The commission is constituted under chapter 467, Acts 1898, and is composed of two members, one appointed by the Mayor of the City of Boston and one by the Mayor of the City of Cambridge. Francis J. Smith is the commissioner for the city of Cambridge. The division engineer of the Bridge and Ferry Division has been appointed commissioner for the City of Boston.

The commission has charge of the care and maintenance of the following-named bridges connecting the cities of Boston and Cambridge: Prison Point, Cambridge, Harvard, Brookline Street, Cambridge Street-River Street and Western Avenue. The bridge connecting North Harvard street in Boston with Boylston street in Cambridge, at Soldiers Field, has been removed and is being replaced by a new masonry arch bridge to be known as the Anderson Bridge. The new structure is being constructed under the direction of the Metropolitan Park Commission in accordance with chapter 628, Acts 1910; chapter 439, Acts 1911, and chapter 92, Acts 1912. By the latter act, the bridge upon its completion is to be maintained wholly by the cities of Boston and Cambridge, under the direction of the Boston and Cambridge Bridge Commission. It is expected that the bridge will be completed in the spring of 1914.

The expense of the maintenance of the bridges between Boston and Cambridge is borne equally by the two cities.

The City of Boston's portion of the ordinary maintenance cost is paid from the appropriation for the Bridge and Ferry Division of the Public Works Department. During 1913-14 this expenditure amounted to \$17,744.48.

In addition to the ordinary maintenance work on these bridges, the cost of which is given in detail in the table of expenditures for the year 1913-14, extensive repairs were made to Brookline Street Bridge and final payments were made on account of the contract for the reflooring of Harvard Bridge, done in 1912, these amounts being paid from a special appropriation, as noted on page 103 of the report of the Bridge and Ferry Division. The following is the principal repair work done during the year on the bridges under the care of this commission:

BROOKLINE STREET BRIDGE.

In accordance with recommendation made in last year's report, the roadway of this bridge, which formerly had a surface of spruce plank, was paved for its entire length with $3\frac{1}{2}$ -inch creosoted yellow pine blocks. The yellow pine under-flooring of the roadway was entirely renewed and new wooden stringers were put in place of such old stringers as were found in poor condition. The work was done under a contract made with James Doherty of Boston, lowest bidder, at a contract price of \$12,645.70, one-half being paid by each city. The paving is laid under a five-year guaranty and affords a most satisfactory roadway. It should prove more economical than the former spruce plank wearing surface of the roadway which had to be renewed at frequent intervals.

MAINTENANCE WORK ON OTHER BRIDGES.

On Prison Point, Cambridge Street-River Street and Western Avenue Bridges, as well as on the draw span of Harvard Bridge, the usual repairs have been made to the plank wearing surface of the roadways. The entire roadway of Prison Point Bridge and of the draw span of Harvard Bridge were resheathed twice during the year owing to the heavy traffic carried by these structures, and at Harvard Bridge it was found necessary to renew several stringers on the draw span. At the Cambridge Street-River Street Bridge the upper portion of the downstream pier was entirely rebuilt and some repairs were made to the deck planking.

RECOMMENDATIONS FOR 1914.

Besides the ordinary maintenance work on the bridges between Boston and Cambridge, extensive repairs are necessary on certain bridges for which special appropriations should be made.

Prison Point Bridge.— The plank surface of the roadway of this bridge should be replaced by some form of permanent wooden pavement, both in the interests of economy and public convenience. The steel work is much rusted and should be thoroughly cleaned and painted. Repairs should also be made to the wharf and fences. The estimated cost of this work is \$12,000, one half of which is to be paid by the City of Boston.

Cambridge Bridge.— The steel superstructure of this bridge is greatly in need of painting. Neglect to properly care for this large and important structure will prove to be a most uneconomical policy, as has been shown by Boston's experience with other bridges. Furthermore, aside from the injury to the steel work which corrosion will cause, the cities of Boston and Cambridge should take pride in keeping this monumental structure in good condition, particularly because of its location in the Charles River Basin. Besides painting, some repairs are needed to the roadway paving. The estimated cost of this work is \$16,000, one half of which is to be paid by the City of Boston.

Harvard Bridge.— The draw pier, draw landings, and the machinery of the draw span are in need of repairs. The estimated cost of this work is \$8,000, one half of which is to be paid by the City of Boston.

Brookline Street Bridge.— The steel work of this bridge should be cleaned by sand blast and painted, at an estimated cost of \$2,000, one half of which is to be borne by the City of Boston.

Tables are appended showing the distribution of the expenses of the commission for the year and statements of the draw openings.

Respectfully submitted,

FREDERICK H. FAY,
Commissioner for the City of Boston.

Expenditures for Year 1913-14.
(Being the City of Boston's Portion (one half) of the Total Expense.)

	Administration.	Essex Street-Brookline Street Bridge.	Harvard Bridge.	Prison Point Bridge.	Cambridge Street-River Street Bridge.	Western Avenue Bridge.	Cambridge Bridge.	Totals.
Salaries, drawtenders and sweepers.....	.....	.....	\$2,949 22	\$2,946 75	\$2,925 19	.....	*\$1,458 11	\$10,279 27
General repairs.....	.....	\$172 25	288 63	385 25	380 60	\$295 54	58 63	1,580 90
Lumber.....	.....	128 57	197 81	292 49	326 89	149 28	83 51	1,178 55
Iron and machine work.....	.....	.....	225 82	126 87	.....	.....	129 15	481 84
Hardware and supplies.....	.....	4 71	26 14	40 71	45 16	8 92	48 29	173 93
Cleaning and sanding roadways.....	.....	.....	140 39	.....	.....	.....	57 67	198 06
Lighting.....	.....	227 47	895 10	9 48	35 60	35 59	1,704 00	2,907 24
Fuel.....	.....	.....	6 22	18 82	12 70	.....	2 52	40 26
Inspection.....	.....	116 00	182 00	120 00	30 00	80 00	40 00	568 00
Clerical services.....	\$249 98	.....	.....	.....	.....	.....	.....	249 98
Office expenses: Printing, postage, stationery, fares and telephones.....	86 45	.....	.....	.....	.....	.....	.....	86 45
Totals.....	\$336 43	\$649 00	\$4,911 33	\$3,940 37	\$3,756 14	\$569 33	\$3,581 88	\$17,744 48

* Includes amount paid for drawtenders' services on Western Avenue Bridge.

Monthly Summary of Draw Openings.

	CAMBRIDGE STREET- RIVER STREET.			HARVARD.			PRISON POINT.			WESTERN AVENUE.		
	Vessels.	Cargoes.	Openings.	Vessels.	Cargoes.	Openings.	Vessels.	Cargoes.	Openings.	Vessels.	Cargoes.	Openings.
1913.												
February.....	4	2	2	17	2	12	55	10	32	4	2	2
March.....	12	6	6	18	5	2	42	7	25	5	.....	2
April.....	80	39	39	97	20	54	35	7	19	67	.....	31
May.....	78	41	41	131	16	74	61	10	34	78	.....	41
June.....	40	22	22	66	5	44	49	8	27	30	.....	16
July.....	26	13	13	16	1	10	47	6	26	18	.....	7
August.....	13	8	8	89	16	57	40	6	19	7	.....	4
September.....	5	3	3	85	15	54	103	17	58	2	.....	1
October.....	20	11	11	98	18	59	40	7	22	5	.....	3
November.....	20	11	11	76	15	48	29	4	17	9	.....	5
December.....	21	15	15	92	12	58	56	9	32	26	.....	17
1914.												
January.....	.....	.....	.....	9	1	6	54	7	32	.....	.....	.....
Totals.....	322	2	171	791	126	478	611	98	313	251	2	129

Summary of Drawtenders' Reports, February 1, 1913, to January 31, 1914.

BRIDGE.	TUGS.			BARGES.			ALL OTHERS.			TOTAL NUMBER OF VESSELS.			Cargoes.	Openings.
	Day.	Night.	Total.	Day.	Night.	Total.	Day.	Night.	Total.	Day.	Night.	Total.		
Cambridge Street-River Street.....	102	5	107	12	.....	12	140	3	143	314	8	322	2	171
Harvard.....	482	2	484	250	.....	250	60	.....	60	792	2	794	126	478
Prison Point.....	376	44	420	125	11	136	42	13	55	543	68	611	98	343
Western Avenue to Cambridge.....	118	5	123	.....	.....	.....	125	3	128	243	8	251	2	129
Totals.....	1,138	56	1,194	387	11	398	307	19	386	1,892	86	1,978	228	1,121

DOCUMENT NUMBERS OF ANNUAL REPORTS OF THE
PUBLIC WORKS DEPARTMENT.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1911	1912	29
Annual report.....	1912	1913	29
Annual report.....	1913	1914	26

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