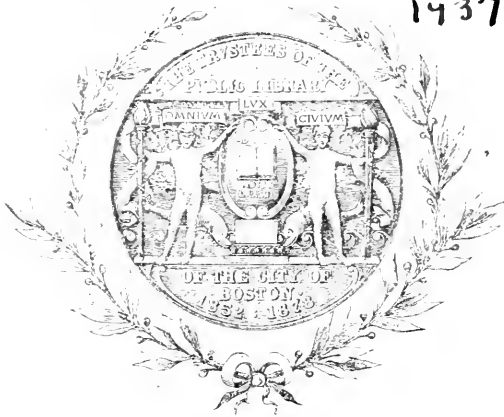


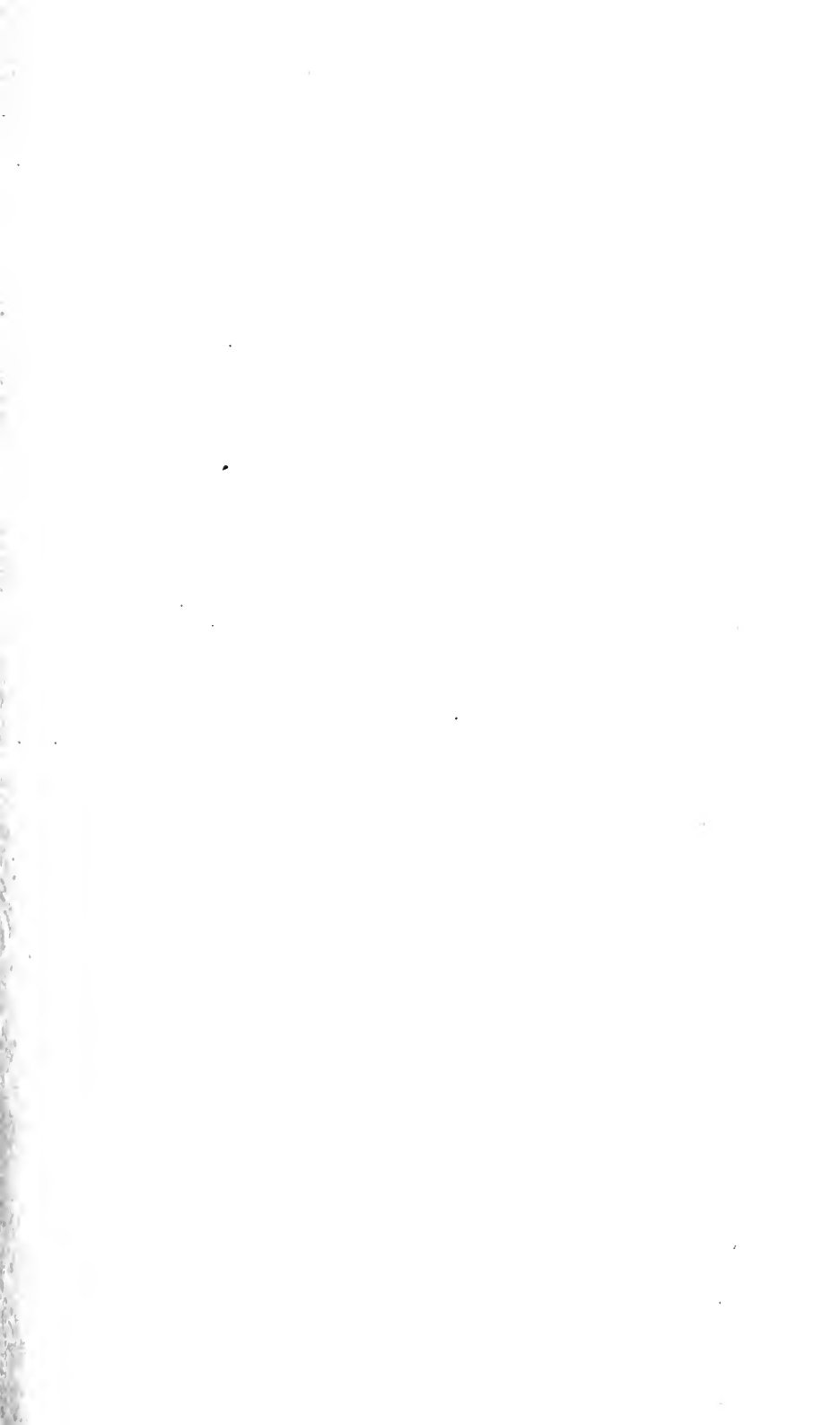
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ANNUAL REPORT
OF THE
PUBLIC WORKS DEPARTMENT
FOR THE YEAR 1937

[DOCUMENT 24—1938]

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ANNUAL REPORT
OF THE
PUBLIC WORKS DEPARTMENT
FOR THE
YEAR ENDING DECEMBER, 1937.

BOSTON, January 2, 1938.

HON. MAURICE J. TOBIN,
Mayor of Boston.

DEAR SIR,— In compliance with the Revised Ordinances, the annual report of the operations and expenses of the Public Works Department for the year ending December 31, 1937, is respectfully submitted. The Public Works Department created by Ordinances, 1910, chapter 9, now chapter 27 of the Revised Ordinances of 1925, was formed by consolidating the Engineering, Water and Street Departments.

ORGANIZATION.

The department is composed of six main divisions, viz.:

Bridge and Ferry Division.— This division, under a division engineer, has the charge and care of all bridges used as highways which are, in whole or in part, under the control of the city; and the care and management of the ferries owned by the city, including boats, slips, drops and buildings, and the maintenance and operation of the Sumner Tunnel.

NOTE.—The Boston and Cambridge Bridges Division, so called, is not, strictly speaking, 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 one by the Mayor of Cambridge, under the provisions of chapter 467 of the Acts of 1898; but because of the fact that the present Commissioner of Public Works is the Boston member of this commission, and also because one half of the expense of the commission is defrayed by the Bridge Service, it is in this report treated as a division of the department.

Highway Division.—This division, under a division engineer, has charge of the construction, reconstruction and maintenance of roadways and sidewalks, and the care of lamps and lighting of streets, parks and alleys.

Sanitary Division.—This division, under a division engineer, has charge of the collection and removal of ashes, garbage and refuse, street cleaning, and the oiling and flushing of streets.

Sewer Division.—This division, under a division engineer, has charge of the construction and maintenance of sewers, catch-basins and waterways.

Water Division.—This division, under a division engineer, has the care of all water pipes in the water system, the laying and relaying of water mains and the care of the high pressure fire system.

Water Income Division.—This division, under a division engineer, has charge of financial operations in connection with the sale of water, reading of water meter registrations, making out quarterly water bills for all consumers, forwarding said bills to City Collector's office, installation and maintenance of water meters and enforcement of payment of water bills.

Statements showing appropriations, expenditures and revenue received during the year, together with tabulations indicating the grade and number of employees, changes in personnel, etc., in the Public Works Department are attached.

Reports from the division engineers in charge of the various divisions are respectfully submitted.

Respectfully yours,

E. M. RICHARDSON,
Commissioner of Public Works.

APPROPRIATIONS.

The money assigned for the maintenance work of the Public Works Department for the year 1937 was derived from the income of the city raised by taxation. In December, 1936, the department estimates were submitted to the Mayor in segregated form. His Honor the Mayor made such allowances as he considered necessary and submitted them to the City Council. The total maintenance appropriations as passed by the City Council and approved by the Mayor are shown below:

Central Office	\$33,927 74
Bridge Service	435,266 50
Ferry Service	324,161 68
Lighting Service	981,777 00
Paving Service	1,196,346 33
Sanitary Service	2,300,227 82
Sewer Service	537,548 00
Sumner Traffic Tunnel	256,773 26
Water Division	1,105,983 84
Water Income Division	267,290 00
	<hr/>
Total	<u>\$7,439,302 17</u>

EXPENDITURES.

The expenditures under the several appropriations for the different services for the year 1937 were as follows:

CURRENT EXPENSES.

DIVISIONS AND SERVICES:

Central Office	\$33,182 03
Bridge Service	433,615 14
Ferry Service	315,817 53
Lighting Service	983,145 67
Paving Service	1,368,817 73
Sanitary Service	2,275,225 61
Sewer Service	531,716 72
Sumner Traffic Tunnel	229,385 86
Water Division	1,031,255 23
Water Income Division	238,065 32
	<hr/>
Total	\$7,440,226 84

SPECIAL APPROPRIATIONS, ETC.

Water Division:

Metropolitan Assessment, interest on debt, serial loans, etc.	\$3,364,903 96
Public Works Program, chapter 464, Acts of 1935	2,509 80
Bridges, repairs, etc.	64,223 38
Reconstruction of streets	20,284 22
Snow removal	2,950 90
	<hr/>
<i>Carried forward</i>	\$3,454,872 26
	<hr/>
	\$7,440,226 84

<i>Brought forward</i>	\$3,454,872 26	\$7,440,226 84
Sewerage works, revenue	140,297 41	
Sewerage works, non-revenue	563,596 35	
Sewerage works, chapter 366, Acts of 1933, as amended by chapter 21, Acts of 1934	94,103 02	
Chelsea Street and Eastern Avenue Bridge	441,747 20	
Northern Avenue Bridge	14,000 00	
Reconstruction of streets, chapter 366, Acts of 1933, as amended by chapter 21, Acts of 1934	57,762 48	
Construction, reconstruction and re- placement of sewers and covering of open water courses	20,168 11	
Chelsea North Bridge, water pipe trestle, reconstruction of	2,000 00	
Replacement of the Brookline avenue water main from the Brookline line to Beacon street	13,000 00	
Water main construction	26,000 00	
	<hr/>	
Total		4,827,546 83
		<hr/>
Grand total		<u>\$12,267,773 67</u>

REVENUES, 1937.

On Account of the Public Works Department, as Per Auditor's Statement.

Central Office:		
Sale of plans, etc.		\$764 00
Bridge Service:		
Chelsea North Bridge	\$56 97	
Meridian Street Bridge	4,725 40	
Clerical services	250 00	
Rent	200 00	
Albany Street Bridge	166 43	
Longfellow Bridge	50 00	
Charlestown Bridge:		
Rents	\$425 00	
Damage to property	135 00	
	<hr/>	560 00
Chelsea Street and Eastern Avenue Bridge:		
Federal grant	287,049 98	
	<hr/>	293,058 78
Ferry Service:		
Tolls	\$28,737 62	
Rent	534 00	
Commission on telephones	41 98	
Cleaning telephone booths	44 00	
Junk	18 00	
	<hr/>	29,375 60
Lighting Service:		
Damage to posts		66 00
Paving Service:		
From assessments on abutters for cost of laying sidewalks in front of their prem- ises, including materials for the same.		
Assessments added to taxes	\$20,009 99	
Assessments paid in advance	378 86	
	<hr/>	
<i>Carried forward</i>	\$20,388 85	\$323,264 38

<i>Brought forward</i>	\$20,388 85	\$323,264 38
Assessments unapportioned	13,264 59	
Permits	12,433 71	
Sale of material	405 42	
Rent	60 00	
Repairing signs	3 13	
Labor and materials furnished, etc.	103 28	
	<hr/>	46,658 98
Sanitary Service:		
Collection of commercial waste	\$19,540 40	
Sale of manure	1,159 60	
Sale of garbage, etc.	2,278 45	
Sale of junk, etc.	101 00	
Forfeiture on contract	8,000 00	
	<hr/>	31,079 45
Sewer Service:		
Pumping sewage, amount received from Commonwealth	\$17,857 00	
Entrance fees	1,768 08	
Labor and materials furnished	785 89	
	<hr/>	\$20,410 97
Sewerage Works:		
Assessment, under chapter 450, Acts of 1899	\$46,815 51	
Added to taxes:		
Paid in advance	3,997 18	
Unapportioned	2,291 30	
Rent	260 00	
Services of inspector	229 50	
	<hr/>	53,593 49
Construction, reconstruction and replacement of sewers and covering of open water courses:		
Federal grant	18,418 95	
	<hr/>	92,423 41
Water Service:		
Water rates due:		
For the year 1937 and prior	\$4,387,591 68	
Water added to taxes	220,565 41	
Service pipes for new water takers, extending, repairing, etc.	36,394 28	
Elevator and fire pipe connections	9,026 73	
Fees on overdue rates	11,465 21	
Relocating hydrants	804 69	
Sale of junk, etc.	6,085 57	
Labor and materials	1,109 49	
Board of horse	478 50	
Damage to hydrants	1,740 04	
Testing meters	351 75	
Weighing fees, etc.	304 13	
Chelsea North Bridge:		
Water pipe trestle, reconstruction of, Federal grant	33 65	
	<hr/>	4,675,951 13
		<hr/>
		\$5,169,377 35
Sumner Traffic Tunnel:		
Tolls, etc.		<hr/>
		\$808,951 81
		<hr/>

The records of the department show that there are now 2,550 persons eligible for employment in the several divisions, and of that number 2,503 were upon the January, 1938, pay rolls.

Grade and Number of Employees.

TITLE.	SERVICES.										Total.	
	Central Office.	Paving and Lighting.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Tunnel.	Bridge.	Water Income.	Water.		
Commissioner	1											1
Division engineers		1	1	1				1	1	1		6
Engineer, chief		1										1
Executive secretaries	1								1			2
Executive clerks	2	1						1	1	1		6
Chief clerks		1	1								1	3
Clerks	5	28	10	8	2	1	4	2	25	21		106
Assistant engineers (civil)		14	28	1				11		5		59
Draughtsmen		1	9					2		1		13
Instrumentmen		12	14					3		5		34
Rodmen		5	7					2				14
Inspectors		28	35	45	25		2	3	5	14		157
Foremen		10	8	12	11		1	1		7		50
Subforemen		16						3				19
Blacksmiths and assistants		5	2	15						2		24
Boilermaker			1									1
Blueprinters			6									6
Chauffeurs		75	31	87	52		14	4		12		275
Carpenters and assistants		14	3	3		1		12		6		39
Chief electrician							1					1
Chief inspectors		1	1									2
Cement testers and assistants			4									4
Chemists and assistants		2										2
Constables		18	1	11	9				10	8		57
Catch-basin machine operators			2									2
Cashiers and assistants				1		1	2		2			6
Drawtenders and assistants								153				153
Deckhands						10						10
<i>Carried forward</i>	9	233	164	184	99	13	24	198	45	84		1,053

Grade and Number of Employees.—Continued.

TITLE.	SERVICES.										Total
	Central Office.	Paving and Lighting.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Tunnel.	Bridge.	Water Income.	Water.	
<i>Brought forward</i>	9	233	164	184	99	13	24	198	45	84	1,053
Engineers (steam).....		8	5			9					22
Electricians.....			2				14	1			17
Emergency repairers.....										49	49
Firemen.....		1	8			18					27
Gatemen.....			5			10					15
General foreman.....										1	1
Harnessmaker and assistants.....				2							2
Head chauffeurs.....		5			1						6
Horseshoers.....				5							5
Janitor.....						1					1
Matrons.....						4					4
Joiners.....						4					4
Laborers-teamsters, etc.....		214	77	258	182	6	2	7	2	90	838
Master mechanics.....		3		1		1			2	2	9
Machinist and assistants.....			3			5	2	1		11	22
Meter readers.....									33		33
Masons (stone and brick).....			10	1						1	12
Medical inspector.....					1						1
Oilers, filth hoisters.....			18			6					24
Pipe fitters.....						3					3
Pavers.....		43								1	44
Plumbers.....										11	11
Painters.....		7	1	10		3		2			23
Captains.....						7					7
Quartermasters.....						7					7
Repairers and auto mechanics.....		30	3		1		1		23	106	164
Roofer.....						1					1
Rigger.....						1					1
Sealers.....									2		2
Sewer flushers.....			24								24
Supervisors and deputy.....		4		1							5
Stenographers.....		2	1	3							6
<i>Carried forward</i>	11	549	323	462	284	99	43	209	107	356	2,443

Grade and Number of Employees.— Concluded.

TITLE.	SERVICES.										Total.
	Central Office.	Paving and Lighting.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Tunnel.	Bridge.	Water Income.	Water.	
<i>Brought forward</i>	11	549	323	462	284	99	43	209	107	356	2,443
Stonecutters.....		9									9
Superintendent and deputy.....		1									1
Stockkeeper.....				1							1
Stablemen.....		6		12	11						29
Telephone operators.....		1								1	2
Tollmen-guards.....						5	35				40
Chief veterinarian.....					1						1
Wharfingers.....				3							3
Wheelwrights and assistants.....		1		7							8
Yardmen.....		5	2	3	1					2	13
Totals.....	11	572	325	488	297	104	78	209	107	359	2,550

Number of Employees Actually Employed January 1, 1937, and January 1, 1938.

	Tunnel.	Central Office.	Bridge.	Ferry.	Water Income.	Paving and Lighting.	Sanitary.	Sewer.	Street Cleaning and Watering.	Water.	Total.
January 1, 1937.....	76	12	182	108	98	570	493	305	278	351	2,473
January 1, 1938.....	78	11	208	104	106	552	481	321	293	349	2,503

Total Eligible Force.

January 1, 1937.....	77	12	182	109	100	579	498	306	288	356	2,507
January 1, 1938.....	78	11	209	104	107	572	488	325	297	359	2,550

Appointments, Transfers, Resignations, Retirements, Deaths, etc., of Employees.

Died.	Retired.	Transferred to Other Departments.	Transferred to Other Services.	Discharged.	Resigned.	January 1, 1937.	SERVICES 1937-1938.	January 1, 1938.	Transferred from Other Services.	Transferred from Other Departments.	Reinstated.	Appointed.
.....	2	.....	.....	.....	.....	12	Central Office.....	11	.....	1	.....	.....
1	4	1	.....	.....	1	182	Bridge.....	209	1	.....	.....	33
3	6	.....	1	.....	1	109	Ferry.....	104	2	.....	1	3
14	27	.....	31	2	4	579	Lighting and Paving.....	572	20	16	4	31
15	9	1	14	1	2	498	Sanitary.....	488	6	14	1	11
8	16	.....	16	.....	.....	288	Street Cleaning.....	297	37	2	1	9
3	12	.....	1	.....	.....	306	Sewer.....	325	4	21	1	9
6	7	.....	7	.....	1	356	Water.....	359	3	9	1	11
2	4	2	.....	3	.....	100	Water Income.....	107	1	1	2	14
.....	.....	.....	4	1	.....	77	Tunnel.....	78	.....	1	.....	5
52	87	4	74	7	9	2,507	Totals.....	2,550	74	65	11	126

PART II.
APPENDICES.

APPENDIX A.

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

BOSTON, January 2, 1938.

To the Commissioner of Public Works.

DEAR SIR,—I respectfully submit the following report of the income, expenditures and operation of the Bridge and Ferry Division for the year ending December 31, 1937. The expenditures of the division in the regular maintenance appropriations of the department were \$978,818.53. Under a number of special appropriations \$519,970.58 was expended, making the total expenditures for the year \$1,498,789.11. This does not include certain expenditures for construction work for other departments, which work was supervised by the engineers of this division.

Under orders of the Department of the Public Utilities, Commonwealth of Massachusetts, a schedule of tolls and charges for the use of the Sumner Traffic Tunnel, between Boston proper and East Boston, was approved, covering the year 1937.

A contract was awarded to T. Stuart & Son Company, Watertown, Mass., approved January 15, 1936, for rebuilding Chelsea Street Bridge, over Chelsea Creek, at a contract price of \$629,446.50. This was Federal Emergency Administration of Public Works Project, Mass. Docket 1086-R. The cost of rebuilding was paid for as follows:

55 per cent by the City of Boston.

45 per cent by the Federal Emergency Administration of Public Works. (Officially opened May 10, 1937, at 10 A. M.)

The work under this contract was completed June 30, 1937, at a total cost of \$642,124.20. A report on this work appears later on in this report.

This division had no Federal Relief Projects outside of the rebuilding of Chelsea Street Bridge.

The more important works undertaken during the past year in the Bridge Service were the rebuilding of Chelsea Street Bridge; repairs, repaving and altering of Beacon Street Bridge; redecking draw span and painting of Chelsea Bridge South; repairs to fender guards and piers of Chelsea Bridge North.

BRIDGE SERVICE.

Allston Bridge.

A contract entered into with the John F. Shea Company, Inc., on November 4, 1936, for repairing, altering and painting Allston Bridge, was completed on March 22, 1937, at a cost of \$10,352.

The work consisted of removing loose gunite or concrete from the under side of the deck system, repairing and strengthening present steel work, as directed, installing new blast guards as directed, the coating of the exposed steel work below the floor level with an approved protective coating, repairing the concrete fascias and cleaning and painting all exposed steel above the floor level.

These repairs, common to all bridges over railroads, are necessary periodically since there is no quite satisfactory method available for preventing the corrosion and erosion resulting from the blasts of the locomotives passing below.

Beacon Street Bridge.

The general condition of Beacon Street Bridge, over the Boston & Albany Railroad, indicated extensive repairs were necessary, or in a relatively short time it would be too late to save the structure.

To make the general repairs to the paving and steel work a contract with J. A. Singarella Construction Corporation was approved on August 24, 1937.

Work under the contract started at once, but owing to weather conditions and the fact that all work on the under side of the bridge floor was done between midnight and early morning, so that interference with railroad service would be reduced to a minimum, the contract was not more than half completed at the end of the year.

Chelsea Bridge North.

To repair the fender piers around the draw and the outer ends of the fixed spans of Chelsea Bridge North, which were badly in need of attention, due to natural deterioration of the pile and timber work and damage caused primarily by the motor ship "California" fouling the structure, a contract with the M. & R. Construction Company was approved on June 29, 1937.

In the course of the work 119 piles or pile stubs were removed, 11,050 linear feet of new oak piles were driven, 66 old spur shores were refitted, about 99,000 feet board measure new yellow pine was installed, about 19,000 pounds of bolts, etc., furnished and 188 gallons of wood preservative applied.

Work under this contract was completed on November 29, 1937, at a cost of \$20,435.54.

Chelsea Bridge South.

In spite of local repairs to the pavement of the draw leaves of the Chelsea Bridge South, the general condition became so bad that a new pavement, properly laid, was the most economical solution of the problem.

On March 17, 1937, a contract with Maurice M. Devine, Inc., was approved, for removing all the old paving, covering boards, etc., laying a new wood block pavement, complete, on each draw leaf, cleaning all the structurals by the sand blast method, patch painting with red lead followed by two coats of finish paint, laying new plank sidewalks, repairing bridge rails and adjusting the counterweights; all work under this contract was done without stopping of water-borne traffic and by keeping open one roadway at all times.

Work under this contract was completed on March 31, 1937, at a cost of \$13,666.

Chelsea Street Bridge.

The work called for under a contract for rebuilding Chelsea Street Bridge, which was signed January 15, 1936, was not completed until June 30, 1937, at a cost of \$642,124.20.

This work was a Federal Emergency Administration of Public Works Project, Mass. Docket 1086-R, calling for an entirely new bridge. T. Stuart & Son Company was the general contractor.

The new bridge, which parallels the adjacent railroad bridge, is located far enough from the old highway bridge so that the construction of a temporary bridge was not necessary, the old bridge remaining in operation until the completion of the new structure.

The new Chelsea Street Bridge is of concrete and steel construction, about 448 feet long and 70 feet wide, with two 10-foot sidewalks. There are six spans in all; four deck beam approach spans (one on the East Boston side and three on the Chelsea side), a tail span and a through bascule draw span of the heel trunnion type. The draw spans a 100-foot free waterway, as required by the United States Army, District Engineer Office.

In order to keep a free waterway at all times, the draw span was erected in the raised position. This span, which is 140 feet long from heel trunnion to center of bearing, is raised and lowered through two operating struts, which in turn are driven by the main pinions which engage with racks on the under side of the operating struts. The main pinions are driven, through a train of reducing gears, by two 50-horse power motors, 550 volts, direct current; in the common way shaft which drives the main pinion is mounted a differential which automatically equalizes the loads on the operating struts. There is also an emergency operating unit which consists of a 50-horse power gasoline engine; since completion of the contract emergencies have arisen which required operating the draw on this gasoline engine.

The heel trunnions on which the bridge turns are 21 inches in diameter; the counterweight trunnions which support the overhung counterweights are 38 inches in diameter; the counterweight weighs about 1,100 tons, is of reinforced concrete with provision for adjusting by stowing of 100-pound elements in sealed pockets.

The supporting steel of the deck of the fixed spans are all rolled sections. The deck is a reinforced concrete slab anchored to the top flanges of the supporting steel; the wearing surface is of granite block with asphalt joints.

The abutments are of concrete and the piers are of concrete, granite faced to an elevation 2 feet below

mean low water; piers are fitted with granite cap stones. The bridge was opened to all surface travel May 10, 1937.

On completion of the new structure, the old bridge was removed in detail, the old piles pulled and the whole waterway searched by divers to assure that the required depth of channel was maintained without obstacles of any kind.

Day Labor Force.

The Day Labor Force patched and replaced deck sheathing, headers and sidewalk planking on various bridges; repaired platforms, refastened treads, repaired draw headers, cleaned and painted draw houses and shelter houses; made repairs to draw houses and controller houses; added to counterweights; repaired steps, removed snow and ice from bridges and sanded same; repaired piers, painted fences and gates; did general carpenter work and painting and made mechanical repairs, etc., patched sidewalks and roadways of following bridges: Berkeley Street, Blue Hill Avenue, Boston Street, Boylston Street, Byron Street, Charlestown, Chelsea South, Chelsea Street, Dover Street, Dorchester Avenue, Jones Avenue, Meridian Street, Neptune Road, Southampton Street, Summer Street over Fort Point Channel, Warren, Broadway, Central Avenue, Hyde Park Avenue, Malden, Dorchester Avenue, over railroad, Glenwood Avenue, L Street, Mystic Avenue, Norfolk Street, Redfield Street, Babson Street, Broadway Extension, Chelsea North, Commercial Point, Everett Street, Gove Street, Huntington Avenue, Albany Street, Cummins Highway, Follen Street, Sprague Street, Webster Street, Winthrop, West Fourth Street, Blakemore Street, Congress Street, River Street, Prison Point. Also repaired wood block paving, patched headers, fences, steps, platforms, etc., at Granite Avenue Bridge, Yarmouth Street Bridge, Berkeley Street Bridge, Blue Hill Avenue Bridge, Braddock Park Bridge, Charlestown Bridge, Gainborough Street Bridge, Summer Street Bridge, Chelsea North Bridge, Irvington Street Bridge, Jones Avenue Footbridge. Placed new wheel guards, painted gates and signals and power plant at Charlestown Bridge, painted new oil house, repaired boat and fence, built new bin, repaired draw ends, added counterweight at Chelsea Street Bridge, painted fence and boat, built sheave foundation, at Dorchester Avenue Bridge,

painted and repaired fences and gates, patched sheathing on island at Warren Bridge, also rebuilt safety barrier and erected shanty for snow workers at Warren Bridge, built vault foundations; painted furniture and gates, built raft fenders at Chelsea North Bridge, rebuilt approaches and draw ends at Warren Bridge, repaired float, rebuilt and painted gates; painted inside of draw house, put in new track ties, installed new draw roller trucks at Summer Street Bridge, removed gunite from ceiling and repaired platform at Beacon Street Bridge, painted machinery shelter in pit and repaired ramp and float at Northern Avenue Bridge, removed broken wallings in waterways of Chelsea Street Bridge, painted inside of draw house, painted gates and signals at Meridian Street Bridge, cleaned and varnished inside of draw house, painted gates and signals at Chelsea South Bridge, set window glass at various drawbridges, refastened traffic treads at various bridges; repaired rafts and piers; painted fences; patched wood block and granite block paving at various bridges. Machinery and electrical equipment of all bridges received frequent maintenance. Built new wooden ceiling at yard; adjusted counterweights on various bridges; built lockers and repaired floor at Sumner Tunnel. Repaired windows and built sand boxes at intown yard. Removed snow from intown bridges and sanded same. Made miscellaneous small repairs at various bridges.

Miscellaneous.

Aside from the purely divisional activities there was an appreciable amount of time and effort spent in other departmental work and work outside of the department itself. It should be noted in every case that work was deemed by the Commissioner to be of an emergency nature that required immediate attention of the personnel of this division.

SANITARY DIVISION.

Victory Road Disposal Station.

The Sanitary Division, through a W. P. A. grant, started a complete renewal of the siding of the Disposal Station at Victory road. Included in this work was a general overhauling and repairing of the superstructure.

While this much-needed work was under way, necessary foundation work was anticipated by the approval

of a contract with A. Orlando, Inc., on December 7, 1937. The work to be done under this contract is restricted almost entirely to the south side of the station and consists mainly of removing damaged outside supporting piles, driving of new sound piles and installing new crossbracing, posting and miscellaneous timber work.

Work under this contract started on December 21, 1937. For this reason but little work was accomplished before the close of the year.

FERRY SERVICE.

The following ferryboats are in commission:

Name.	When Built.	Length.	Gross Tons.
Lieutenant Flaherty.....	1921	174 ft.	755
Charles C. Donoghue.....	1926	174 " 4 in.	756.77
Daniel A. MacCormack.....	1926	174 " 4 in.	756.77
Ralph J. Palumbo.....	1930	174 " 4 in.	779

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

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

Ferryboat "Charles C. Donoghue."

The work on the hull and machinery at the time of the annual inspection of the "Charles C. Donoghue" was done under a contract with the Quincy Dry Dock and Yacht Corporation, approved on September 23, 1937. Repairs, other than the regular cleaning, painting and hull work, consisted of truing up on centers all main engine valve stems and piston rods, the refitting of all main crossheads, the rebabbitting of four main crank pin brasses, the adjusting and fitting of all main bearings and eccentrics, the complete overhaul of valve link assemblies, the opening of all boiler mountings and attachments as required by the United States Steamboat Inspection Service, the repairing of the internal piping of the boilers and the furnishing and fitting of three new high and three new low pressure piston rings.

Work on this contract was completed on November 5, 1937, at a cost of \$10,786.50.

Ferryboat "Daniel A. MacCormack."

On the expiration of the license of the "Daniel A. MacCormack," a contract with the Bethlehem Ship-

building Corporation was approved on April 8, 1937, for a rather extensive overhauling. In addition to the annual necessary cleaning and painting and hull repairs to seams, rivets, propellers, rudders, etc., it was necessary to insure reasonable continuous operation of the engines for the following year, to check clearances generally and to make the required adjustments for satisfactory running conditions.

The work done under this contract included the refitting of the main crossheads, rebabbiting of four main crank pin brasses and the scraping and fitting of all; the complete overhaul of the valve link assemblies; the opening up and inspection of all boiler nozzles and attachments as required by the United States Steamboat Inspection Service, the installing of an independent suction, complete, for the ship's fire and bilge pump, the relocating of the hand deck pump in the fire room, the furnishing of four new valve stems, the installing of four new piston rods, the reborings of one high and one low pressure cylinder and the reborings of two valve cages.

Work on this contract was completed on June 16, 1937, at a cost of \$9,650.92.

Ferryboat "Ralph J. Palumbo."

On November 30, 1936, a contract was made with the Quincy Dry Dock and Yacht Corporation to make the routine repairs to the hull and machinery of this vessel, all incidental to the annual inspection.

Included in the machine work was the opening of all boiler mountings and attachments, in accordance with United States Steamboat Inspection Service rules, the furnishing and fitting of a new independent suction for the ship's fire and bilge pump, with the necessary cutting of a new opening in the hull and the furnishing of a new inlet box and strainer and the rebabbiting and machining of four main engine crank pin boxes.

Work under this contract was completed on January 15, 1937, at a cost of \$8,643.59.

Department Force.

During the year machinists, carpenters, painters, riggers and electricians, who are included in the personnel of the Ferry Service, made all repairs possible to the plant to the extent of equipment at their disposal.

This work consisted mainly of minor repairs to the machinery on the boats, repairs to ferry bridge machinery, ferry bridge roadways and headhouse repairs in general.

SUMNER TUNNEL.

Summary of Work During 1937.

The plan of the rotating group schedule for maintenance work which was inaugurated in 1936 was continued in operation in 1937, and the system was made more effective by the development of the "Trouble Notice Reports." In the rotating schedule plan, the various equipment and items of work are divided into a number of groups, and as each man completes his period of shifts as operator and inspector on the operation of the tunnel, he is assigned to one of these groups for a given period. For each succeeding maintenance period, the man is shifted to a different group in accordance to a planned schedule, so that over a period of about a year, all the men will work on all the different types of equipment. In this way, every man is well trained and equipped to maintain and repair any equipment; the work is evenly divided, and the employees are more contented with a variation in the type of work.

The chief object of this system of rotating schedule is for the purpose of performing "preventative maintenance," that is, to check equipment and make necessary adjustments and repairs before trouble develops and thus avoid necessary shutdowns of equipment for trouble.

In March of 1937, the "Trouble Notice Report" system was put into effect. In this plan the operator, inspector, or other employee reports any trouble on the buildings, equipment, etc., on a form called "Trouble Notice." This report is made out in triplicate. One copy of this report goes to the man responsible for repairs and maintenance of the particular equipment, the second copy is sent at once to the office for a follow-up on the repairs, and the third copy is left in the book in the control room for reference. After repairs have been made, the original copy of the "Trouble Notice" is sent to the office with a report of the work done. By this system, equipment is repaired and ready for service with least delay.

During the year, in addition to the general maintenance of equipment, there was considerable work done of a special nature.

Toll Registering Equipment.—Steel plates were installed on each side of the treadles to correct the level of the treadles to the roadway, and to reduce the wear on the edges of the treadles. A number of treadles were repaired and overhauled during the year. The old type of cables on the treadles have been replaced by Anhydrex-insulated, Tirez rubber-jacketed type of cables. A new treadle circuit has been developed and tested out which will eliminate some of the troubles experienced previously. The work of rewiring the toll registers and key boxes has been started in order to eliminate all possibility of faulty operation of equipment due to grounds and shorts in the wiring. All of the toll registering equipment has been under constant supervision and carefully maintained in order to keep equipment in perfect working condition.

Traffic Signal System.—All relays and equipment connected with the traffic signal system have been cleaned, adjusted and tested at regular intervals. Broken glasses on signs and signals have been replaced, and signal units have been cleaned as needed. Drain holes have been cut in the niches, and the niche doors have been repainted. Periodic tests have been made on the operation of the Booth-Red signal system. The old lead cables at several stations have been replaced by Anhydrex rubber-jacketed type of cables. Relays and equipment have been installed on the Code Call system, so that the noise of the bells in the ventilation buildings can be eliminated at night and on Sundays. During this period the bells in the buildings are replaced by flashing lights.

Telephone System.—Since replacing the old defective lead cables with Latox-insulated, Anhydrex rubber-jacketed type of cables in 1935-36, there has been practically no trouble with the telephone system. The relays on the telephone switchboard have been checked and adjusted; a new fuse block was installed, and a meter was connected in the circuit to warn the operator of any trouble on the various lines. Changes have been made in the tungar charger so that the telephone batteries are now kept floating across the line instead

of being charged at periodic intervals. Porcelain number plates have been attached to all telephone stations in the tunnel.

Motor Generators and Batteries.— All motor generators have been cleaned regularly, and the commutators of the generators have been ground and polished. The power batteries have been checked and cleaned regularly. A representative of the Philco Company inspected, checked and tested both sets of batteries. He stated that the batteries were being properly maintained and that they were in very satisfactory condition. Alterations have been made to the electric heating equipment of the East Boston battery room in order to keep the room at proper temperature.

Elevators.— The elevators and the control equipment have been checked regularly and repaired. The annual load test and inspection was made by the Portland Elevator Company with the City of Boston Elevator Inspector.

Carbon Monoxide Recording Equipment.— The carbon monoxide equipment has been very carefully maintained, checked and calibrated at regular intervals in order to keep the equipment operating correctly at all times. All carbon monoxide records showing the condition of the tunnel air are properly labeled and filed away for future reference. A new type of spring arrangement was developed for the Lectrodryer valve mechanism to overcome faulty operation of this part of the equipment. As stated in the 1936 report, the alarm on the carbon monoxide recorders is set for 2.5 parts of carbon monoxide in 10,000 parts of air, and the operators have been instructed to keep the dilution of the air below 1.5 parts during certain periods of heavy traffic. Out of 8,760 hours during the year 1937, the carbon monoxide recorders indicated a value of 2.0 parts and above only 285 times, and most of these peaks were for a duration of only a few minutes.

Ventilation Equipment.— All fans, motors and fan control equipment have been cleaned and checked at regular intervals and carefully maintained. Some trouble has been experienced in the matter of proper lubrication of the motor bearings. This trouble has been entirely eliminated by the use of Lubriko M-6 grease. The spring cover type of oil level cup on the fan bearings has been replaced by a glass gauge type of cup, so that the oil level can be noted easily without the

possibility of dirt getting into the oil of the bearings. Weatherproof disconnecting switches were installed on four of the damper motors to replace the unsatisfactory indoor type. The disconnecting switches on the other damper motors will be replaced at a later date.

During the year the ventilation equipment was operated as follows:

	Total.	Average Per Day.
Fan hours on low speed.....	122,404	335
Fan hours on high speed.....	11,220	31

Miscellaneous Equipment.— All protective relays on switchgear were tested, checked and set for proper operation. All switchgear has been tested for operation at regular intervals. All switchboards and switchgear have been cleaned, adjusted and carefully maintained.

The oil in the power transformers and the lighting distribution transformers was checked and tested for dielectric strength and acidity.

The voltage regulators were checked, adjusted and set to give the proper voltage on lighting cables in the tunnel and the buildings. Connection taps on the power transformers were changed to the proper voltage values to correct for the low voltage on the buses.

The selsyn indicators on the meter board in the control room were remounted for better operation and maintenance.

In the harbor pump room, plugs and receptacles were installed for the float switches so that any pump can be operated by any one of the floats.

The neon signs on the plazas were repaired and repainted.

Ventilation Buildings — General.— Concrete risers were installed on various doors in the ventilation buildings to prevent water from running into the switchrooms.

Copper flashing was installed on some of the coping of the East Boston ventilation building. A section of the northeast wall of the East Boston ventilation building was pointed and washed with a waterproofing solution.

The walls of the boilers located in the East Boston garage and the Boston ventilation building were rebuilt.

Tunnel — General.— The catch-basins, sumps and the drainage system of the tunnel were cleaned as needed. The tunnel handrail and all niche doors were repainted. The exhaust air duct above the tunnel ceiling was cleaned in the fall by the vacuum cleaner. The tunnel roadway was repaired as needed.

Fire Protection Equipment.— All fire extinguishers have been inspected at periodic intervals, and a yearly test and inspection was made of all fire extinguishers. All fire extinguishers were repainted. Porcelain number plates were attached to all tunnel fire extinguisher niche doors.

The tunnel fire water line was put into operation in January, 1937. During the winter months this pipe line is kept dry, with the drain valve located in the harbor pump room kept closed. In case of a fire, the main valves located in the portal pump rooms will be opened by members of the Boston Fire Department. During the summer months this pipe line will be kept filled with water but not under pressure. On March 7 and March 21, tests were made on the fire line in conjunction with the Boston Fire Department. A check was made on the time to fill the line with the valve open at one end, and with the valves open at both ends. The static pressure was measured at various niches in the tunnel, and also pressure tests were made at the nozzle with one and two hose lines in the center of the tunnel.

Fire Alarms.—In order that the operator in the control room in the Boston ventilation building may know the location of fires with respect to the tunnel, for the proper operation of the ventilation equipment, a fire alarm tapper was installed in the control room in February, 1937. Due to the inability to hear the tapper at times of switching and the ringing of the alarm bells, an auxiliary register tape was added to the tapper circuit in May, 1937. The operator especially notes the location of fires from boxes in the vicinity of the tunnel buildings, so that by knowing the direction of the wind, the ventilation setup can be changed if necessary to prevent blowing smoke into the tunnel.

Cables.— The 2,300-volt tie cables between the two ventilation buildings were tested by Kenetron (15 KV.

D. C.) and Megger, and these cables were found to be in good condition. These tests were made by the Simplex Wire and Cable Company without charge to the City of Boston.

In 1935 a complete cable survey was made of the cables in the tunnel. These tests were made in collaboration with the engineers of the Simplex Wire and Cable Company. From that survey and a study of the results, it was determined that cable failures in the tunnel were due in large part to electrolysis from leakage currents, combined with some galvanic and chemical action. The cables had been seriously affected due to the fact that the cables were not installed properly, bonded and grounded.

The telephone cables in the tunnel were replaced in 1935 and 1936. In the report on the cable survey it was brought out that other cables in the tunnel were affected to a more or less extent, and that it would be necessary to install as soon as possible a ground network of sufficient size and to properly bond and ground all cable sheaths in order to eliminate the electrolysis action and to prolong the life of the cables in the tunnel.

In 1936 the Boston Edison Company reported trouble in recording the totalized demand readings from East Boston. This trouble was due to faulty conductors in the METERING cable which transfers meter readings from the East Boston ventilation building to the Boston ventilation building. Tests on the cable in 1936 showed that about half of the conductors in the cable had been affected and that it would be necessary to replace the cable.

In October, 1937, this old lead METERING cable was replaced by a 61-conductor, size number 19 A. W. G., stranded, Latex insulated, Anhydrex rubber-jacketed cable. This new cable was manufactured and installed in one length of 4,210 feet, without a splice. The work of pulling out the old lead cable and pulling in the new one-length rubber-jacketed cable was completed in four nights.

Power Consumption.—Electrical power is supplied by the Boston Edison Company at 13,800 volts by two cables to each ventilation building. This power is used not only for ventilation equipment, but also for pumps, elevators, electric heating, and lighting of the tunnel and buildings.

A summary of the power requirements for 1937 is given in the table below. The corresponding figures are given for 1936 for comparison.

	1936.	1937.
Total kilowatt hours.....	2,698,852	2,766,850
Total cost of power.....	\$38,472 28	\$38,607 68
Total vehicles.....	5,187,531	5,350,929
Average cost of power per month.....	\$3,206 02	\$3,217 31
Average cost of power per day.....	\$105.116	\$105.77
Average cost of power per kilowatt hour.....	\$0.01425	\$0.01395
Average cost of power per vehicle.....	\$0.00742	\$0.00721
Average kilowatt hour per vehicle.....	0.520	0.517
Average kilowatt load.....	310	316
Average load factor.....	0.342	0.355
Greatest monthly demand (kilowatts).....	1,220	1,144
Average total power factor.....	0.921	0.920

Garage Service Jobs.— During 1937 there were reported 357 tow jobs, of which 130 were trucks and buses, and 227 were passenger cars. During 1936 there were 268 tow jobs, and during 1935 there were 456 tow jobs.

Traffic Accidents in the Tunnel.— During the year 1937 there were nine traffic accidents. Three of these accidents occurred on the East Boston plaza, and the other six accidents were in the tunnel. Three of the nine accidents were between a car and city property — not a motor vehicle. In seven of these nine accidents there were minor personal injuries. During the three and one-half years of operation of the tunnel, there has not been a single fatal accident in the tunnel.

Two of the nine accidents were caused by faulty mechanism. One accident was reported as cause unknown, but apparently one or both parties cut out of line. The other six accidents were caused by excessive speed, cutting out of line, failure to maintain the proper distance between vehicles, and failure to obey traffic signals and the orders of the tunnel guards.

Fires in Tunnel.— During the year 1937 there were only five fires reported. Two of these fires were on the plazas, and three were in the tunnel. Four of these fires were minor and resulted in little or no damage. The Boston Fire Department was called in two cases,

but one alarm was needless. There was one serious truck fire on June 29, at 10.27 a. m. For this fire the tunnel was closed to traffic for twenty-six minutes.

Booth-Red.— In case of a fire, wreck, or other serious trouble in the tunnel, the guards on duty in the tunnel push an emergency button which sets the RED traffic lights and starts a horn blowing at both entrances to the tunnel. An alarm is also sounded in the control room. All traffic is stopped from entering the tunnel until clearance is given by the operator in the control room.

During 1937, the BOOTH-RED was put on twenty (20) times for a total duration of eighty-seven (87) minutes, and an average duration of 4.4 minutes. Of the twenty times, the BOOTH-RED was put on 13 times by mistake. Thus the BOOTH-RED was put on 7 times for some trouble in the tunnel for a total of 55 minutes. Most of the errors of putting on BOOTH-RED was caused by welfare workers. Every effort is being made to eliminate the errors of putting on BOOTH-RED which causes the tunnel to be closed to traffic.

A comparison of BOOTH-RED is given below for the years 1937, 1936 and 1935.

	1935.	1936.	1937.
Number times BOOTH-RED on.....	38	17	20
Total duration.....	331 minutes	107 minutes	87 minutes
Average duration.....	8.7 minutes	6.3 minutes	4.4 minutes
Maximum duration.....	50 minutes	34 minutes	26 minutes

Yours respectfully,

THOMAS H. SEXTON,
Division Engineer.

BRIDGE SERVICE.

FINANCIAL STATEMENT, 1937.

Expenditures from Maintenance Appropriations.

Boston bridges	\$428,612 35	
Boston and Cambridge bridges	5,002 79	
		<u>\$433,615 14</u>

Total Expenditures.

From maintenance appropriation	\$433,615 14	
From special appropriations	519,970 58	
		<u>\$953,585 72</u>

Expenditures on Boston Bridges.

Administration:		
Division engineer	\$3,000 00	
Engineers and draughtsmen	47,901 98	
Clerks	5,200 00	
Blueprinters	2,800 00	
Inspectors	8,815 63	
Foreman	2,500 00	
Veterans' pensions	1,500 00	
Holidays	1,785 51	
Vacations	1,310 39	
Injured employees	77 57	
		\$74,891 08
Printing, postage and stationery,	\$927 10	
Traveling expenses	250 90	
Telephone	13 45	
Engineers' supplies and instru- ments (new and repaired)	156 22	
Typewriter inspection	18 00	
Photographs	6 34	
Supplies and miscellaneous	71 75	
		<u>1,443 76</u>
		<u>\$76,334 84</u>

Yard and Stockroom:

Yard:

Clerk and watchmen	\$7,970 41
Traveling expenses	284 25
Tools, new and repaired	717 18
Telephone	289 51
Repairs in yard	116 93
Supplies	626 60
Auto equipment	6,252 08

\$16,256 36

Stockroom:

Stock purchased	\$16,909 51
Stock used	17,779 84

Decrease in stock 870 33\$15,386 03*Tidewater Bridges, 1937.*

BRIDGES.	Drawtenders' Salaries.	Mechanics' Wages.	Material.	Repair Bills.	Supplies.	Totals.
Broadway	\$17,420 69	\$1,310 93	\$702 57	\$173 45	\$238 71	\$19,846 35
Charlestown	23,186 81	2,619 00	1,611 45	783 21	297 49	28,497 96
Chelsea North	19,162 17	1,178 02	347 53	1,443 63	1,490 82	23,622 17
Chelsea South	20,033 64	1,074 81	1,994 81	839 31	699 28	24,641 85
Chelsea Street	19,207 40	1,671 51	946 55	774 61	749 00	23,349 07
Congress Street	17,355 63	506 89	169 56	146 11	431 00	18,609 19
Dorchester Avenue	17,290 43	2,917 11	1,255 28	574 74	247 30	22,284 86
Dover Street	17,631 77	2,839 39	1,334 40	406 21	207 12	22,418 89
L Street *	17,635 07	1,454 20	769 95	453 28	258 53	20,571 03
Malden	18,633 88	1,489 38	873 29	97 51	501 86	21,595 92
Meridian Street	17,210 70	2,900 19	680 20	571 64	275 20	21,637 93
Northern Avenue	19,618 87	1,302 40	247 84	1,586 44	3,626 38	26,381 93
Summer Street	17,562 90	2,757 75	897 54	549 92	329 85	22,097 96
Warren	17,243 86	3,363 79	1,297 55	1,906 62	296 90	24,108 72
Totals	\$259,193 82	\$27,385 37	\$13,128 52	\$10,306 68	\$9,649 44	\$319,663 83

* Now Summer Street, over Reserved Channel.

Repairs on Inland Bridges.

BRIDGES.	Labor and Material.
Albany Street.....	\$513 06
Austin Street — Prison Point.....	20 58
Arlington Street.....	10 50
Babson Street.....	795 68
Beacon Street, over Boston & Albany Railroad.....	493 69
Berkeley Street.....	223 28
Blakemore Street.....	83 95
Blue Hill Avenue.....	693 92
Boston Street.....	178 28
Bennington Street.....	318 13
Boylston Street, over Boston & Albany Railroad.....	1,366 87
Braddock Park — Follen Street (Foot).....	140 60
Broadway Extension.....	871 44
Byron Street.....	669 10
Cambridge Street, over Boston & Maine Railroad.....	261 45
Camden Street — Gainsborough Street.....	113 06
Central Avenue.....	118 04
Dartmouth Street (rent, \$300).....	317 23
Dorchester Avenue.....	603 22
Durham Street — West Rutland Square (Foot).....	116 42
Everett Street.....	98 58
Glenwood Avenue.....	374 52
Granite Avenue.....	57 01
Gove Street (Foot).....	348 28
Harvard Street.....	45 27
Hyde Park Avenue.....	48 08
Huntington Avenue.....	33 84
Irvington Street — Yarmouth Street (Foot).....	222 84
Jones Avenue (Foot).....	72 91
Massachusetts Avenue, over New York, New Haven & Hartford Railroad, ..	57 50
Milton Lower Mills.....	40 90
Mystic Avenue.....	171 20
Norfolk Street.....	129 44
New Allen Street.....	80 03
Neptune Road.....	107 47
Redfield Street.....	590 30
<i>Carried forward</i>	\$10,386 59

Repairs on Inland Bridges.— Concluded.

BRIDGES.	Labor and Material.
<i>Brought forward</i>	\$10,386 59
River Street.....	12 33
Spring Street.....	16 50
Southampton Street.....	120 25
Sprague Street.....	114 15
Toll Gate Way (Foot).....	95 50
Tremont Street.....	10 50
Walworth Street.....	135 23
Wordsworth Street.....	36 17
West Fourth Street.....	2,302 77
Winthrop.....	109 94
Cleaning bridges.....	3,316 67
Snow removal and sanding.....	430 15
Other services.....	140 90
Total.....	<u>\$17,227 65</u>

SUMMARY.

Administration	\$76,334 84
Yard and stockroom	15,386 03
Tidewater bridges	319,663 83
Inland bridges	17,227 65
	<u>\$428,612 35</u>
Boston and Cambridge bridges	5,002 79
Total	<u><u>\$433,615 14</u></u>

BRIDGES, REPAIRS, ETC.

ALLSTON BRIDGE.		
John F. Shea & Co., Inc.		\$10,352 00
BEACON STREET BRIDGE.		
J. A. Singarella Construction Company		12,528 23
BERKELEY STREET BRIDGE.		
Repair sidewalk		274 41
BOSTON STREET BRIDGE.		
Repair sidewalk		390 40
BROADWAY BRIDGE.		
Repair paving		385 50
CHARLESTOWN BRIDGE.		
Repair paving		692 68
CHELSEA NORTH BRIDGE.		
M. & R. Construction Company	\$17,370 21	
Install transformer vault	735 00	
		18,105 21
CHELSEA BRIDGE SOUTH.		
Maurice M. Devine	\$13,666 00	
Inspection of paving blocks	57 00	
Material	414 34	
New steel plates installed	500 00	
		14,637 34
DORCHESTER AVENUE BRIDGE.		
Repair paving		506 48
DORCHESTER AVENUE BRIDGE, OVER RAILROAD.		
Repair paving		469 20
DOVER STREET BRIDGE.		
Repair paving	\$471 75	
Repair fence	225 00	
		696 75
MALDEN BRIDGE.		
Repair paving		447 98
MERIDIAN STREET BRIDGE.		
W. H. Ellis & Son Company		1,742 77
NORTHERN AVENUE BRIDGE.		
Adjust counters in panels		674 05
<i>Carried forward</i>		\$61,903 00

Brought forward \$61,903 00

WARREN BRIDGE.

Repair draw foundation	\$819 69	
Repair paving	1,500 69	
		2,320 38
		<u>\$64,223 38</u>

CHELSEA STREET AND EASTERN AVENUE BRIDGE.

Chapter 366, Acts of 1933, as Amended.

T. Stuart & Sons Company	\$225,759 70	
Fay, Spofford & Thorndike	3,583 70	
Strauss and Paine, Inc.	822 50	
Robert W. Hunt Company	1,457 86	
Inspection of rivets	500 00	
Inspection of lumber	139 71	
Testing concrete cylinders	11 00	
Diver	99 00	
Retirement of debt	208,000 00	
Interest	991 78	
Traveling expense	301 95	
Conduit cable riser	50 00	
		<u>\$441,747 20</u>

SUMMARY.

Expenditures from Special Appropriations.

	Balances from 1933.	Total Credits, Including Balances Carried Over and Transfers.	Expended During Year 1937.	Balances Unexpended December 31, 1937.
Bridges, repairs, etc.....	\$46,173 80	\$77,173 80	\$64,223 38	\$12,950 42
Chelsea North Bridge, re- pair and strengthening...	588 96	588 96	.....	588 96
Chelsea Street and Eastern Avenue Bridge, chapter 366, Acts of 1933, as amended.....	193,717 77	480,767 75	441,747 20	39,020 55
Northern Avenue Bridge, re- construction, chapter 366, Acts 1933, as amended *..	34,198 41	34,198 41	14,000 00	20,198 01
Totals.....	\$274,678 94	\$592,728 92	\$519,970 58	\$72,758 34

* \$14,000 expended for retirement of debt.

Draw Openings, 1937.

BUNDLES.	STEAMERS.			SAILING VESSELS.			TUGS.			BARGES.			ALL OTHERS.			TOTAL NUMBER OF VESSELS.			Total Number of Carries.	Total Number of Openings.
	Day.		Total.	Day.		Total.	Day.		Total.	Day.		Total.	Day.		Total.	Day.		Total.		
	Night.	Total.	Night.	Total.	Night.	Total.	Night.	Total.	Night.	Total.	Night.	Total.	Night.	Total.	Night.	Total.	Night.	Total.		
Broadway.....	10	1	11	36	7	43	555	37	592	108	11	119	256	6	262	965	62	1,027	295	545
Charlestown.....	4	19	23	39	10	49	541	227	768	115	86	201	711	355	1,066	1,410	697	2,107	626	846
Chelsea North.....	1,357	273	1,630	7	3	10	9,301	1,662	10,963	1,653	597	2,250	596	56	652	12,914	2,591	15,505	3,239	6,571
Chelsea South.....	115	78	193	6	2	8	2,978	121	3,099	139	18	157	1,629	38	1,667	4,867	257	5,124	1,826	1,775
Chelsea Street.....	254	115	369	.....	.....	.....	1,981	1,101	3,082	839	854	1,693	264	59	323	3,338	2,129	5,467	1,045	2,849
Congress Street.....	134	14	148	24	.....	24	1,202	68	1,270	232	24	256	1,122	206	1,328	2,714	312	3,026	430	1,887
Dorchester Avenue.....	18	1	19	32	.....	32	602	25	627	60	8	68	403	20	423	1,115	54	1,169	229	632
Dover Street.....	.....	.....	.....	49	4	53	585	25	610	112	5	117	267	6	273	1,013	40	1,053	219	581
L Street *.....	1	.....	1	226	48	274	248	28	276	703	50	753	714	96	810	1,892	222	2,114	377	1,819
Malden.....	106	30	136	7	.....	7	904	126	1,030	283	92	375	392	104	496	1,692	352	2,044	396	1,308
Meridian Street.....	1,009	286	1,295	.....	.....	.....	6,121	1,187	7,308	2,065	1,159	3,224	1,974	231	2,205	11,169	2,863	14,032	2,915	7,653
Northern Avenue.....	126	155	281	29	3	42	1,824	229	2,053	217	54	271	1,636	420	2,056	3,842	861	4,703	853	2,648
Summer Street.....	145	2	147	28	.....	28	1,370	21	1,391	270	8	278	436	11	447	2,249	42	2,291	441	1,285
Warren.....	13	17	30	11	.....	11	546	203	749	279	183	462	1,723	500	2,223	2,572	903	3,475	649	1,990
Totals.....	3,292	991	4,283	504	77	581	28,758	5,060	33,818	7,075	3,149	10,224	12,123	2,108	14,231	51,752	11,385	63,137	13,450	32,389

* Now Summer Street, over Reserved channel.

GRANITE AVENUE BRIDGE.*

Drawtenders' salaries	\$2,969 63
Material	152 12
Supplies	225 41
	<u>\$3,074 16</u>

* One half paid by County of Suffolk and one half by Town of Milton.

Granite Avenue Bridge Openings.

Openings	STEAMERS.		SAILING VESSELS.		TUGS.		BARGES.		ALL OTHERS.		TOTAL NUMBER OF VESSELS.		Total Number of Caroes.	Total Number of Openings.
	Day.	Night.	Day.	Night.	Day.	Night.	Day.	Night.	Day.	Night.	Day.	Night.			Total.	Total.
Openings	18	5	23	136	4	140	50	1	68	43	272	53	25	226

FERRY SERVICE.

FINANCIAL STATEMENT FOR THE YEAR ENDING DECEMBER 31, 1937.

1. Receipts.

Total cash receipts during the year	\$29,275 60
Cash in hands of tollmen at beginning of year	140 00

\$29,415 60

Cash paid over to City Collector ¹	\$29,375 60
Cash in hands of tollmen December 31, 1937	40 00

\$29,415 60

2. Appropriations and Expenditures.

Received from annual appropriations for Ferry Service	\$315,717 53
---	--------------

Unexpended balances from special appropriations, January 1, 1937	\$27,439 39
Expenditures	00

Unexpended balances of special appropriations, December 31, 1937	\$27,439 39
--	-------------

3. Results of Operation for the Year.

Receipts for the year (net income)	\$29,375 60
--	-------------

Ordinary expense (maintenance appropriations)	\$315,817 53
Interest paid on ferry debt	12,510 00
Depreciations on ferryboats	64,048 93
Decrease in value of machinery and tools	212 68

\$392,589 14

Increase in value of supplies on hand	1,094 54
---	----------

Net outgo for year	\$391,494 60
------------------------------	--------------

Net loss for year	² \$362,119 00
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¹ Includes \$100 deposited with City Collector, withdrawn from cash in hands of tollmen.
² Does not include expenditures for special appropriations.

Balance Sheet, End of Fiscal Year, December 31, 1937.

ASSETS.	LIABILITIES.
AVAILABLE ASSETS: Cash in hands of tollmen at close of year. \$40 00 INVENTORY OF SUPPLIES, viz.: Supplies for maintenance. 17,412 54 Rents receivable. 2,682 87 Damages receivable. 325 00 CONTINGENT ASSETS: City Treasurer. 27,439 39 FIXED ASSETS: Real estate, land and buildings ¹ ² 610,100 00 Ferryboats ³ 540,475 23 Machinery, tools, etc. 1,914 12 Total tangible assets. \$1,200,389 15 Deficiency or loss by operations and maintenance of the ferries for eighty years to date. 16,917,071 75 Total. \$18,117,460 90	CURRENT LIABILITIES: CONTINGENT LIABILITIES: Appropriations account. \$27,439 39 Capital of the city invested in the ferries, viz.: Total expenditures of all kinds for eighty years, including interest on ferry debt. \$26,999,272 58 Less total receipts. 8,909,251 07 Total. 18,090,021 51 Total. \$18,117,460 90
¹ Original purchase. \$276,375 00 New buildings, drops, slips, cost to 1913. 607,523 64 Land, Lincoln St Wharf, cost to 1867. 5,562 52 Land, Battery Wharf, cost to 1893. 10,000 00 Total. \$899,461 16 New drops, both ferries, cost from 1923 to December 31, 1937. 886,648 44 Total. \$1,786,109 60	² Assessors' figures. ³ Total cost to date, per ferry books. \$2,529,820 50 Less boats sold, depreciated or destroyed. 1,989,345 27 Total. \$540,475 23

Balance Sheet for Year 1937.

<i>Assets.</i>	
Cash, tollman's capital	\$40 00
Rents receivable	2,682 87
Supplies in stock	17,412 54
City Treasurer (balance of appropriation)	27,439 39
Ferryboats (less depreciation)	540,475 23
Machinery and tools	1,914 12
Real estate, land and buildings (assessors' valuation)	610,100 00
Damage received	325 00
	<hr/>
Cost of avenues, etc., East Boston (previous to 1871)	\$1,200,389 15
Deficiency of assets (loss)	¹ 315,815 68
	16,601,256 07
	<hr/>
Totals	<u>\$18,117,460 90</u>

Liabilities.

Capital invested by City of Boston to date	\$18,090,021 51
Appropriations account (credit balances)	27,439 39
	<hr/>
Total liabilities	<u>\$18,117,460 90</u>

Details of Capital Invested by the City of Boston.

Total expenditures to date per ferry books	\$26,620,363 73
Interest of debt for the year (per City Auditor's reports),	12,510 00
Interest previous years, etc. (net debits, per City Auditor's	
reports)	366,398 85
	<hr/>
Total expenditures	\$26,999,272 58
Deduct total receipts paid to City Collector	8,909,251 07
	<hr/>
Excess expenditures, capital	<u>\$18,090,021 51</u>

COMPARISON OF RECEIPTS, APPROPRIATIONS AND EXPENDITURES.

Receipts.

From foot passengers (tollmen)	\$10,087 02
From foot passengers (office sales)	30 00
From team tickets (office sales)	1,863 20
From strip team tickets (tollmen)	4,691 00
From cash for teams (gatemen)	² 11,873 52
From gatemen's refunds	92 88
	<hr/>
Total from rates	\$28,637 62
From rents	114 00
From other sources	523 98
	<hr/>
Ordinary receipts	<u>\$28,275 60</u>

Expenditures (Ordinary).

Office:	
Division engineers' salary (part)	\$1,500 00
Clerk — assistant cashier	1,700 00
Clerk (part time)	1,700 00
	<hr/>
Carried forward	<u>\$4,900 00</u>

¹ Included in deficiency of assets in balance sheet.² Includes cash fares from extra passengers on teams (gatemen).

<i>Brought forward</i>	\$4,900 00
Retired veterans' pensions	4,955 75
Retired employees' pensions	720 00
Stationery	86 25
Printing	573 40
Telephones	308 80
Advertising	34 00
Carfares	264 95
Postage	3 00
Premiums, surety companies	167 38
	<hr/>
Total office expenses	\$12,013 53
	<hr/>
Ferryboats and Landings:	
Employees (wages)	\$219,033 03
Fuel	34,581 20
Teaming, weighing coal, etc.	2,817 00
Supplies	6,740 97
Gas	42 70
Oil	917 16
Electric light	2,355 20
Electric power	936 19
Repairs to boats	29,499 22
Repairs of buildings, drops and piers	1,400 77
Furnishings	42 30
Other expenditures	5,438 26
	<hr/>
Total	\$315,817 53
	<hr/>

RECEIPTS, APPROPRIATIONS AND EXPENDITURES.

Expenditures from Special Appropriations.

Balance in treasury unexpended	\$27,439 39
	<hr/>

Appropriations.

Regular annual appropriations	\$324,161 68
	<hr/>

Total Expenditures upon Ferries Since 1858.

Expenditures for avenues, paving, interest, etc., previous to the purchase of the ferries by the city	\$444,101 50
Purchase of the ferries, April 1870	276,375 00
Expenditures for ferryboats since April 1, 1870	2,530,009 51
Expenditures for new buildings, piers, drops, etc.	1,491,468 59
Expenditures for tools and fixtures (prior to 1910)	14,752 46
Expenditures for land for Lincoln's Wharf in 1887	5,562 52
Expenditures for land for Battery Wharf in 1893	10,000 00
	<hr/>

Total expenditures on capital account	\$4,772,269 68
Expenditures for repairs of all kinds	3,011,733 85
Expenditures for fuel	3,157,300 93
Expenditures for salaries and wages	12,635,327 57
Expenditures for all other purposes	3,422,640 55
	<hr/>

\$26,999,272 58

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	8,569,648 25
Receipts from rents since purchase of ferries	73,504 40
Receipts from sale of ferryboats	168,004 57
Receipts from all other sources, per ferry books	37,810 44
Receipts from all other sources, per City Auditor	30,734 85
<hr/>	
Total receipts from all sources	\$8,909,291 07
Less amount with tollmen as capital	40 00
<hr/>	
Total receipts, Auditor's report	<u>\$8,909,251 07</u>

Regular Annual (Ordinary) and Special Appropriations (Extraordinary) of the Ferry Service for the Year Ending December 31, 1937.

Appropriations (regular) for the year ending December 31, 1937	\$324,161 68
Amount of expenditures (regular) for the year	315,817 53
<hr/>	
Transferred to Bridge Service	88,344 15
	3,000 00
<hr/>	
Transferred to City Treasurer	<u>\$5,344 15</u>

Special Appropriations.

East Boston Ferry, two additional boats and other permanent improvements:	
Unexpended balance January 1, 1937	\$19,064 81
<hr/>	
Unexpended balance December 31, 1937	<u>\$19,064 81</u>
<hr/>	
Ferry Improvements:	
Unexpended balance January 1, 1937	\$8,374 58
<hr/>	
Unexpended balance December 31, 1937	<u>\$8,374 58</u>

RECEIPTS OF SOUTH FERRY.

FROM TOLLMEN.	From Foot Passengers.	From Tickets.	Totals.
Boston side	\$5,123 30	\$3,554 00	\$8,677 30
East Boston side	4,934 32	1,166 40	6,100 72
Totals	\$10,057 62	\$4,720 40	\$14,778 02

From tollmen	\$14,778 02
From gatemen:	
Cash for teams	¹ 11,966 40
Total at South Ferry	² \$26,744 42
Tickets paid for at ferry office	1,893 20
Total in 1937 from rates	\$28,637 62
Rents for the year	114 00
Headhouse privileges	420 00
Care of public telephones	44 00
Commission on public telephones	41 98
Old material sold	18 00
Total	<u>\$29,275 60</u>

TRAVEL ON THE SOUTH FERRY FROM JANUARY 1, 1937,
TO DECEMBER 31, 1937, INCLUSIVE.

Foot passengers at 1 cent each \$1,005,762 00

SOUTH FERRY.

Handcart, or wheelbarrow and man	5 cents	}	36,216
Horse and rider	5 cents		
Horse and cattle, each with attendant	5 cents		
One or two horse vehicle with driver	5 cents	}	78,302
Motorcycle with driver	5 cents		
Trailer	10 cents	}	78,302
Three or four horse vehicle with driver	10 cents		
Passenger automobile with driver and more than one passenger	15 cents	}	53,325
Motor truck, six tons or less with driver	15 cents		
Motor truck, over six tons with driver	20 cents	}	6,394
Auto bus with driver	20 cents		
Auto bus with driver and passengers	30 cents		000
Free vehicles			1,030

¹ Includes gatemen's refund.

² Includes 1 cent cash fares from foot passengers for year.

SUMNER TRAFFIC TUNNEL.

1. RECEIPTS.

*Financial Statement for the Year Ending December 31,
1937.*

Cash in hands of cashier at the beginning of year	\$4,181 48
Received from tolls	\$808,933 12
Received through City Collector *	69 00
Commission on telephone tolls	17 76

Total receipts	809,019 88
	\$813,201 36
Cash paid over to City Collector	\$808,951 81
Cash in hands of cashier December 31, 1937	4,249 55
	\$813,201 36

2. APPROPRIATIONS AND EXPENDITURES.

Received from annual appropriations for Sumner Traffic Tunnel	\$256,773 26
Transferred to City Treasurer	27,387 40

Total expenditures for year	\$229,385 86

3. RESULT OF OPERATION FOR THE YEAR.

Ordinary expenses (maintenance appropriation)	\$229,385 86
Interest paid on tunnel debt	830,078 33
Sinking Fund	202,967 00

Net outgo for the year	\$1,262,431 19
Receipts for the year (net income)	808,951 81

Net deficit for the year	\$453,479 38

* Does not include \$21 for tickets sold to other departments not paid for in 1937.

Statement of Weekly Traffic and Tow Jobs Collected.

DATE.		Vehicles.	Tow Jobs Collected.
1937.			
Jan.	1 to Jan. 3	28,867	3
	4 to Jan. 10	68,806	4
	11 to Jan. 17	71,867	10
	18 to Jan. 24	69,702	9
	25 to Jan. 31	71,637	3
Feb.	1 to Feb. 7	71,575	9
	8 to Feb. 14	71,042	2
	15 to Feb. 21	75,009	6
	22 to Feb. 28	76,463	6
Mar.	1 to Mar. 7	77,009	2
	8 to Mar. 14	75,637	8
	15 to Mar. 21	76,777	5
	22 to Mar. 28	83,766	4
	29 to April 4	85,364	3
April	5 to April 11	84,910	7
	12 to April 18	89,127	4
	19 to April 25	93,268	4
	26 to May 2	96,498	3
May	3 to May 9	102,971	4
	10 to May 16	99,720	7
	17 to May 23	103,986	3
	24 to May 30	130,242	6
	31 to June 6	139,153	12
June	7 to June 13	138,955	0
	14 to June 20	148,826	11
	21 to June 27	124,685	6
	28 to July 4	129,866	7
July	5 to July 11	131,951	13
	12 to July 18	143,870	9
	19 to July 25	149,217	8
	26 to Aug. 1	147,626	10
Aug.	2 to Aug. 8	148,297	5
	9 to Aug. 15	150,072	5
	16 to Aug. 22	123,649	8
	23 to Aug. 29	119,390	6
	30 to Sept. 5	114,308	7
Sept.	6 to Sept. 12	110,744	7
	13 to Sept. 19	103,776	2
	20 to Sept. 26	105,302	5
	27 to Oct. 3	102,920	5
Oct.	4 to Oct. 10	106,608	5
	11 to Oct. 17	108,868	8
	18 to Oct. 24	99,931	9
	25 to Oct. 31	96,805	8
Nov.	1 to Nov. 7	96,954	7
	8 to Nov. 14	92,930	5
	15 to Nov. 21	93,731	4
	22 to Nov. 28	95,023	7
	29 to Dec. 5	90,909	3
Dec.	6 to Dec. 12	86,933	9
	13 to Dec. 19	85,604	6
	20 to Dec. 26	98,853	6
	27 to Dec. 31	62,934	5
Totals for year		5,350,933	320

APPENDIX B.

 REPORT OF THE DIVISION ENGINEER OF THE
 HIGHWAY DIVISION.

Boston, January 2, 1938.

To the Commissioner of Public Works.

DEAR SIR,— I submit the following report of the operations and expenditures of the Paving and Street Lighting Services of the Highway Division for the year ending December 31, 1937:

The maintenance expenditures of the division for the year were as follows:

Lighting Service	\$983,145 67
Paving Service	1,368,817 73

PAVING SERVICE.

The regular force of the Paving Service were employed as usual in the maintenance of all public streets, resurfacing and patching macadam, patching all permanent pavements, such as asphalt, granite block, etc., and taking care of all gravel, brick and artificial stone sidewalks. In nearly all the suburban districts the cleaning of streets and gutters was done by the Paving Service.

From the "Highways, Making of," loan, there was expended the sum of \$17,376.90. Most of this work was done in connection with streets in and around the new Federal Housing Project in South Boston.

For snow removal during the year the sum of \$2,950.90 was expended on account of an open winter with very little snow. There was no occasion to call out the snow plows.

Work was continued this year by the Federal Works Progress forces and carried the work of street resurfacing, construction of retaining walls, grading of lots and the erection of buildings on city property.

Ninety old streets were resurfaced and ten new streets were constructed during the year, making an area of 340,000 square yards.

The most important work done was the removal of the reservation in Bennington street, East Boston, and replacing same with a permanent pavement, the resurfacing of State street and the removal of the old wood block pavement in Warren avenue and replacing same with bituminous concrete.

An average number of 3,011 men were employed on our W. P. A. Projects and the City of Boston contributed the sum of \$249,991.41 as its share of this expense. This amount does not include the cost of city-owned equipment or personal services of the regular city forces.

There were installed thirty-one arc and 1,500 candle power Mazda lamps in the various sections of the City of Boston. Also one hundred and seventy-nine arc lamps were changed to 1,500 candle power Mazda lamps.

Eleven Mazda lamps of 1,500 candle power were installed on the new Chelsea Street Bridge, East Boston.

There were installed thirty-seven Mazda lamps of 600 candle power throughout the various sections of the city. There were three Mazda lamps of 250 candle power installed throughout the City of Boston.

Thirty-two Mazda lamps of 80 candle power were installed throughout the various sections. Also there were installed five Mazda fire alarm lamps throughout the city.

Petitions and requests for new lamps from citizens and officials, also complaints in relation to the Lighting Service have been investigated and attended to. All streets in the underground district prescribed for the year have been inspected and the necessary changes and additions have been made.

Respectfully,

WILLIAM T. MORRISSEY,
Division Engineer.

HIGHWAY DIVISION — PAVING SERVICE.
Work Done by Contract in 1937.

TYPE OF WORK.	Old Work.	New Work.	Total, Old and New Work.
Earth excavation.....		3,213 cubic yards.	3,213 cubic yards.
Rock excavation.....		173 " "	173 " "
Water box excavation.....		184 " "	184 " "
Old concrete base removed.....		475 square yards.	475 square yards.
Edgestone set.....		2,644 linear feet.	2,644 linear feet.
Edgestone reset.....	3,631 linear feet.		3,631 " "
Steel curb.....		240 linear feet.	240 " "
Concrete base.....		87 cubic yards.	87 cubic yards.
Concrete base, 6-inch.....	62 square yards.	4,346 square yards.	4,408 square yards.
Concrete base, 8-inch, reinforced.....		554 " "	554 " "
Granite block relaid, grout joints.....	347 square yards.	667 " "	1,014 " "
Sheet asphalt and binder.....	3,290 " "	4,955 " "	8,245 " "
Extra binder.....	111 tons.		111 tons.
Artificial stone sidewalks.....	33,415 square feet.	37,450 square feet.	70,865 square feet.
Non-slip sidewalks.....		3,860 " "	3,860 " "
Artificial stone driveways.....	964 square feet.	2,531 " "	3,495 " "
Ground water drain.....		714 linear feet.	714 linear feet.
Covers reset.....	90		90
Sign posts erected.....		2	2
Pipe rail fence.....		141 linear feet.	141 linear feet.
Chain link fence.....		145 " "	145 " "
Loam graded and seeded.....		150 square yards.	150 square yards.

Work Done Under Works Progress Administration in 1937.

TYPE OF WORK.	Old Work.	New Work.	Total, Old and New Work.
Preparing site*.....	.....	299,141 square yards.	299,141 square yards.
Earth excavation.....	.....	27,907 cubic yards.	27,907 cubic yards.
Rock excavation.....	.....	131 " "	131 " "
Edgestone set.....	.....	984 linear feet.	984 linear feet.
Concrete curb.....	.....	1,982 " "	1,982 " "
Granite block edgings.....	.....	41,798 " "	41,798 " "
Edgestone reset.....	11,689 linear feet.	.....	11,689 " "
Concrete base.....	1,435 cubic yards.	.....	1,435 cubic yards.
Bituminous concrete pavement.....	.....	15,202 square yards.	15,202 square yards.
Bituminous macadam pavement.....	300,995 square yards.	16,546 " "	317,541 " "
Concrete roadway.....	.....	6,230 " "	6,230 " "
Artificial stone sidewalks.....	18,487 square feet.	1,581 square feet.	20,068 square feet.
Artificial stone driveways.....	904 " "	.....	904 " "
Brick sidewalks.....	220 square yards.	.....	220 square yards.
Bituminous concrete sidewalks.....	.....	133,915 square feet.	133,915 " "
Crushed stone sidewalks.....	672 square yards.	.....	672 " "
Sidewalks graded.....	.....	21,840 square yards.	21,840 " "
Sign posts erected.....	.....	207	207
Street signs placed.....	.....	1,093	1,093
Rubble walls.....	.....	3,168 cubic yards.	3,168 cubic yards.
Ground water drain.....	.....	1,597 linear feet.	1,597 linear feet.

* Scarifying and grading on old streets 4 inches to 10 inches in depth.

Summary of Work Done by Contract and Works Progress Administration in 1937.

TYPE OF WORK.	Old Work.	New Work.	Total, Old and New Work.
Preparing site.....	.....	299,141 square yards.	299,141 square yards.
Earth excavation.....	.....	31,120 cubic yards.	31,120 cubic yards.
Rock excavation.....	.....	304 " "	304 " "
Water box excavation.....	.....	184 " "	184 " "
Old concrete base removed.....	.....	475 square yards.	475 square yards.
Edgestone set.....	.....	3,628 linear feet.	3,628 linear feet.
Edgestone reset.....	15,320 linear feet.	.....	15,320 " "
Concrete curb.....	.....	1,982 linear feet.	1,982 " "
Steel curb.....	.....	240 " "	240 " "
Granite block edgings.....	.....	41,798 " "	41,798 " "
Concrete base.....	1,435 cubic yards.	87 cubic yards.	1,522 cubic yards.
Concrete base, 6-inch.....	62 square yards.	4,346 square yards.	4,408 square yards.
Concrete base, 8-inch, reinforced.....	.....	554 " "	554 " "
Concrete roadway.....	.....	6,230 " "	6,230 " "
Bituminous concrete pavement.....	.....	15,202 " "	15,202 " "
Bituminous macadam pavement.....	300,995 square yards.	16,546 " "	317,541 " "
Granite block relaid, grout joints.....	347 " "	667 " "	1,014 " "
Sheet asphalt and binder.....	3,290 " "	4,955 " "	8,245 " "
Extra binder.....	111 tons.	.....	111 tons.

Artificial stone sidewalks.....	51,902 square feet.	39,031 square feet.	90,933 square feet.
Artificial stone driveways.....	1,868 "	2,531 "	4,399 "
Brick sidewalks.....	220 square yards.	.....	220 square yards.
Non-slip sidewalk.....	.....	3,860 square feet.	3,860 square feet.
Bituminous concrete sidewalks.....	.....	133,915 "	133,915 "
Crushed stone sidewalks.....	672 square yards.	.....	672 square yards.
Sidewalks graded.....	.....	21,840 square yards.	21,840 "
Covers reset.....	90	.....	90
Sign posts erected.....	.....	209	209
Street signs placed.....	.....	1,093	1,093
Rubble walls.....	.....	3,168 cubic yards.	3,168 cubic yards.
Pipe rail fence.....	.....	141 linear feet.	141 linear feet.
Chain link fence.....	.....	145 "	145 "
Loam graded and seeded.....	.....	150 square yards.	150 square yards.
Ground water drain.....	.....	2,311 linear feet.	2,311 linear feet.

Work Done by Paving Service Forces During 1937.

	Old Work.	New Work.	Total, Old and New Work.
Concrete base laid	354 square yards.	.....	354 square yards.
Roadway, granite block, gravel joints	3,880 " "	.....	3,800 " "
Roadway, granite block, grout joints	3,880 " "	.....	3,880 " "
Gutter, granite block, gravel joints	13,606 " "	.....	13,606 " "
Gutter, granite block, grout joints	2,535 " "	307 square yards.	2,842 " "
Flagging crosswalk, gravel joints	154 " "	.....	154 square feet.
Sidewalk excavation, no sidewalk laid . . . . .	.....	3,030 cubic yards.	3,030 cubic yards.
Asphalt surface patched	1,798 square yards.	.....	1,798 square yards.
Macadam surface patched	188,600 " "	.....	188,600 " "
Asphalt penetration, macadam surface placed	36,366 " "	.....	36,366 " "
Grading, no pavement laid	2,400 " "	.....	2,400 " "
Brick sidewalks relaid	33,020 " "	.....	33,020 " "
Artificial stone sidewalks laid	23,012 " "	.....	23,012 " "
Gravel or crushed stone sidewalks surfaced	110,436 " "	.....	110,436 " "
Tar sidewalks patched	7,010 " "	.....	7,010 " "
Edgestone set and reset	24,311 linear feet.	.....	24,311 linear feet.
Fence repairs	1,443 " "	.....	1,433 " "
Roadway excavating, roadway changed	5,737 cubic yards.	.....	5,737 cubic yards.
Rock excavating . . . . .	.....	12 cubic yards.	12 " "
Snow removed . . . . .	.....	.....	775 " "
Street cleaning removed . . . . .	.....	.....	32,641 " "
Roadway excavating, no roadway constructed	432 cubic yards.	.....	432 " "
Macadam roadway, blanket coated	6,416 square yards.	.....	6,416 square yards.
Paved roadway repaired	13,473 " "	.....	13,473 " "
Wood block roadway repaved	10 " "	.....	10 " "

Objects of Expenditures from Maintenance Appropriation, Classified by Districts, from January 1, 1937, to
December 31, 1937.

Districts.	Macadam Repairs.	Paved Street Repairs.	Removal of Snow.	Street Cleaning.	Edgestone, Sidewalk and Gutters, Repairs.	Street Work (Resurfacing).	Miscellaneous.	Totals.
South Boston and Dorchester North,	\$11,331 10	\$2,787 98	\$50 50	\$855 13	\$23,076 47	\$1,439 06	.....	\$40,140 24
East Boston and Breed's Island.....	14,740 64	.....	540 71	15,089 46	9,306 92	.....	.....	39,677 73
Charlestown.....	1,535 84	4,542 25	275 50	100 00	10,456 31	.....	.....	16,909 90
Brighton.....	10,210 06	10 00	290 50	27,455 63	7,076 97	9,497 72	.....	54,540 88
West Roxbury.....	17,537 28	1,150 00	1,971 19	39,747 35	15,136 69	10,939 79	.....	86,482 30
Dorchester.....	9,163 33	70 00	779 61	8,347 02	13,593 82	5,715 39	.....	37,669 17
Roxbury South and Jamaica Plain..	25,280 43	7,977 54	.....	19,560 43	11,371 82	9,829 29	.....	74,019 51
City Proper.....	19,502 28	20,968 83	569 59	420 27	25,594 96	16,616 67	.....	83,672 60
Ashmont.....	10,044 38	.....	312 68	15,668 50	8,802 09	2,182 20	.....	37,009 85
Hyde Park.....	20,914 54	.....	274 50	4,270 00	2,805 17	3,111 20	.....	31,375 41
Miscellaneous.....	.....	.....	.....	.....	.....	.....	* \$867,320 14	\$67,320 14
Totals.....	\$140,259 88	\$37,506 60	\$5,064 78	\$131,513 79	\$127,821 22	\$59,331 32	\$867,320 14	\$1,308,817 73

* Miscellaneous includes: Artificial stone sidewalks, \$33,089.02; new edgestone and sidewalks, \$207.46; street signs, \$17,982.23; asphalt street repairs, \$161.95; Item "I," \$297,443.67; F-11, \$1,846.61; F-7, \$9,570; miscellaneous, \$477,018.60.
SPECIAL APPROPRIATIONS: Public Works Program, chapter 464, Acts of 1936, \$2,509.80; record of streets, \$20,284.22; snow removal, \$2,950.90; H. M. O., \$17,376.90; F. W. A., \$57,762.48. (No expenditure of P. W. A. by this department. This balance taken by City Auditor.)
TOTAL (Maintenance and Specials), \$1,469,702.03.

STREET OPENINGS.

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

	Number of Permits.
Sewer and Water Service	2,489
Edison Company	1,063
Miscellaneous	1,159
Boston Consolidated Gas Company	609
Emergency permits	1,287
New England Telephone and Telegraph Company	293
Boston Elevated Railway Company	132
Dedham and Hyde Park Gas and Electric Company	27
Total	<u>7,059</u>

Permits for other than street openings have been issued as follows:

Painting and minor repairs	2,743
Placing signs flat on buildings	592
Special permits	637
Erecting and repairing buildings	443
Repairing awnings	139
Emergency permits for raising and lowering	60
Moving buildings in streets	2
Cleaning snow from roofs	3
Driving cattle through streets	1
Total	<u>4,620</u>
Grand total	<u><u>11,679</u></u>

The fees received from these permits amounts to \$12,587.65; of this amount \$10,052.65 was deposited with the City Collector and \$2,535 was billed to public service corporations.

BONDS.

There are now on file 2,073 surety bonds, in the amount of one, three, four and twenty thousand dollars, covering the city against claims for damages, etc., through the use of permits.

TABLE SHOWING LENGTH AND AREA OF PAVING ON ACCEPTED STREETS, CORRECTED TO JANUARY 1, 1938.

	LENGTH IN MILES											AREA IN SQUARE YARDS										
	Sheet Asphalt	Asphalt Concrete	Granite Block	Wood Block	Plank on Bridges	Brick	Concrete	Macadam	Gravel	Not Graded	Totals	Sheet Asphalt	Asphalt Concrete	Granite Block	Wood Block	Plank on Bridges	Brick	Concrete	Macadam	Gravel	Not Graded	Totals
Year 1936 report	140.89	140.83	88.02	2.31	0.79	0.97	9.79	285.16	24.94	2.91	606.91	2,712,283	2,844,745	2,334,502	50,852	17,501	22,431	185,054	4,608,490	385,502	74,926	13,296,236
Per Cent	20.22	20.21	12.63	0.33	0.11	0.14	1.40	40.96	3.58	0.42	100.00	20.40	21.40	17.56	0.38	0.13	0.17	1.29	35.11	2.90	0.56	100.00
JANUARY 1, 1938																						
City Proper	33.21	23.40	31.50	0.82	0.16	0.40	1.00	6.43	0.19		97.11	661,942	538,925	765,736	14,593	4,055	9,776	9,257	100,620	2,066		2,101,973
Charlestown	0.69	2.26	10.29	0.08	0.07		0.80	9.22	0.01		23.42	10,218	36,280	246,052	2,011	1,999		18,910	133,659		41	449,170
East Boston	3.86	3.99	6.02	0.01	0.06	0.04	0.44	21.16	0.86	0.04	36.48	86,231	90,161	143,197	325	854	771	26,090	438,565	16,818	865	863,877
South Boston	8.73	5.46	14.22	0.56	0.19	0.12	0.12	15.95	0.38	1.29	47.02	165,146	119,272	353,780	10,006	4,797	3,004	3,642	286,469	6,876	34,550	987,542
Roxbury	25.80	13.85	14.62	0.10	0.04	0.11	0.63	38.50	1.19		94.87	463,043	273,301	373,722	3,778	1,022	3,387	18,404	569,876	15,460	61	1,722,024
West Roxbury	25.12	31.52	3.44	0.04	0.07		2.32	70.05	2.91	0.32	135.76	458,385	649,805	156,646	210	1,380		33,102	1,100,694	46,819	10,351	2,427,382
Dorchester	32.56	33.18	7.12	0.11	0.07	0.27	1.86	83.78	4.63	0.07	163.65	609,800	620,551	211,838	2,855	1,346	5,493	31,097	1,345,589	71,062	2,312	2,901,943
Brighton	11.39	22.87	0.65		0.08		2.27	22.49	2.25		61.90	260,150	456,791	75,446	1,007	1,231		45,316	372,991	31,954	2,870	1,247,756
Hyde Park	0.65	5.27	0.05	0.09	0.05		0.29	21.64	10.78	0.24	39.06	15,411	108,158	9,349	1,488	747		7,056	372,387	166,537	7,965	689,098
Totals	142.01	141.80	187.91	1.78	0.79	0.97	9.73	289.12	23.20	1.96	699.27	2,730,296	2,863,244	2,335,756	36,273	17,434	22,431	192,874	4,720,850	357,592	99,015	13,335,765
Per Cent	20.31	20.28	12.57	0.25	0.11	0.14	1.39	41.35	3.32	0.28	100.00	20.47	21.47	17.52	0.27	0.13	0.17	1.45	35.40	2.68	0.44	100.00

TOTAL PUBLIC STREETS 699.27 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 0.10 mile or 834 square yards is Bitulthine, and 0.08 mile or 1,323 square yards is Astrok, and 0.02 mile or 479 square yards is Unonite.

† Of this amount 0.02 mile or 667 square yards is Anestite; and 23.33 miles or 419,275 square yards is asphalt concrete, and 106.07 miles or 2,196,136 square yards is bitulthine; and 0.02 mile or 4,973 square yards is Colprovia; and 0.06 mile or 959 square yards is Filbertine; and 0.00 mile or 4,000 square yards is Hepburnite; and 0.00 mile or 3,903 square yards is Laykold; and 0.00 mile or 4,167 square yards is macasphalt; and 0.24 mile or 5,544 square yards is Simasova, and 11.65 mile or 211,061 square yards is Topoka; and 0.00 mile

‡ Of this amount 0.02 mile or 175 square yards is rubble, and 57.62 miles or 1,767,782 square yards is granite block paving on concrete base.

§ Of this amount 0.06 mile or 924 square yards is Blome granite-od concrete block

¶ Of this amount 196.39 miles or 3,308,754 square yards is bituminous macadam

|| Of this amount 39.363 square yards public alleys included in this table; 7.55 miles or 334,386 square yards public streets in charge of Park Department included in this table; 3.95 miles or 123,247 square yards public streets in charge of Commonwealth of Massachusetts included in this table. In addition to this table there are 1.75 miles or 8,729 square yards of accepted footways.

APPENDIX C.

REPORT OF THE DIVISION ENGINEER OF
THE SANITARY DIVISION.

BOSTON, January 2, 1938.

To the Commissioner of Public Works.

DEAR SIR,—I submit herewith a statement of the activities and expenditures of the Sanitary Division for the year ending December 31, 1937:

Maintenance expenditures	\$2,275,225 61
Distributed as follows:	
I. Waste collection and disposal	1,552,906 22
(a) By contract. (Table II)	\$476,745 99
(b) By day labor. (Table III)	1,076,160 23
II. Street cleaning. (Table V)	654,800 07
III. Not directly chargeable to 1937 operation	67,519 32
(a) For other services	\$16,049 03
(b) Pensions and annuities	5,078 25
(c) Injured roll	3,184 59
(d) W. P. A.	25,742 00
(e) Unused stock	17,465 45
Personnel changes in permanent force:	
Total personnel January 1, 1937	801
Transfers from other departments and divisions	49
New appointments	12
Reinstatements	2
	864
Deaths	23
Resignations	1
Retirements	21
Transferred out	20
	65
Personnel January 1, 1938	799

The 1937 expenditures show an increase over 1936 of \$54,464. There was a saving of \$93,612 in the day labor districts due to the continuation of the no-hiring policy. A new street-cleaning district was started in June, 1937, comprising the northerly section of Dorchester which was formerly covered by the Paving Division forces. Men and trucks were, therefore, added to the Sanitary Division forces. Were it not for this additional expense, the amount saved would have been greater.

However, the decrement was more than offset by an increase of \$120,753 in the contract districts. This increase was due to higher prices bid, and to the placing of the Elm Hill District under contract, accounting for an increase of \$29,400. Also, an increase of about \$50,000 was caused by the addition of the Jamaica Plain section to the West Roxbury (contract) District.

Work for other services increased	\$3,472 00
W. P. A. increased	\$24,733 00
Unused stock increased	\$1,670 00
Pensions and annuities decreased	\$2,545 00
Injured rolls decreased	\$5 00

A W. P. A. Project was started in April, 1937, for the repairing of the various waterfront refuse stations. At the Fort Hill station the old concrete walls were removed and replaced with transite, the old wooden ramp was replaced with one of steel and wood, and the steel work was painted. At the Victory road station the old ramp was replaced with a shorter one with new concrete piers, and wooden posts instead of piles. At Albany street a start was made on repairing the platform, but this work was discontinued as the project ran out in December.

A contract was let to A. Orlando, Inc., for the repairing of the piling at Victory road, and the replacement of rotted piling on the westerly side of the building. This work was started in December, and a considerable amount of it remained to be done at the end of the year. The contract price was \$11,455.

MAN POWER.

The number of city laborers employed in the Sanitary Division during the year 1937 fell from 483 to 469.

Assistance of Welfare men continued to be of increasing importance, and the year 1937 showed unprecedented fluctuation in the number of men supplied. At the beginning of the year we had 600 men per day, which gradually increased, so that by the middle of March we were getting 750 Welfare men. This number gradually fell to a low of 470 by the middle of June, after which the number increased abruptly to 850 at the end of July, and from then to the end of the year at varying rates of increase until the top figure of 1,100 men per day was reached in December.

Such wide fluctuations obviously resulted in considerable irregularity in the amount of work performed, causing a bewildering effect upon the public because of intermittent efficiency in the removal of waste material and the cleaning of the streets.

Since the Sanitary Division depends upon men supplied by the Welfare Department for two-thirds of its man power, it is obvious that any improvement in the condition of the Welfare Department results in a shortage of man power in the Sanitary Division, to the detriment of the service rendered the public. Thus, the savings in the Welfare Department are offset by the necessity for additional expenditures in the Sanitary Division for man power in order to keep the number of employees at a level sufficient to render satisfactory service.

COMPLAINTS.

There were 2,220 service complaints during the year 1937 as compared with 3,372 in 1936.

Dead animals removed numbered 655.

Respectfully submitted,

ADOLPH J. POST,
Division Engineer.

Amount Expended for the Collection and Disposal of Ashes and Garbage by Districts.

Districts.	Popu- lation.	ASHES AND RUBBISH.		GARBAGE.		Total Cost.	Per Capita.
		Cost.	Per Capita.	Cost.	Per Capita.		
South Boston.....	59,645	\$108,675 55	\$1 822	\$31,401 12	\$0 5264	\$140,076 67	\$2 3485
East Boston.....	65,549	35,946 32	0 5483	15,392 63	0 2348	51,338 95	0 7832
Charlestown.....	30,065	49,581 83	1 6491	13,108 72	0 4360	62,690 55	2 0851
Brighton.....	69,529	30,860 01	0 4438	13,226 93	0 1902	44,086 94	0 6340
West Roxbury.....	86,225	43,213 28	0 511	29,149 78	0 3380	72,363 06	0 8392
Dorchester.....	211,379	150,389 96	0 7114	111,338 66	0 5267	261,728 62	1 2381
Roxbury.....	107,503	238,472 91	2 2182	83,682 30	0 7784	322,155 21	2 9967
Roxbury (Elm Hill District).....	24,531	24,332 25	0 9919	8,775 28	0 3577	33,107 53	1 3496
South End and Back Bay.....	106,326	314,251 72	2 9555	26,763 42	0 2517	341,015 14	3 2072
North and West Ends.....	53,972	186,825 92	3 4615	23,396 74	0 4335	210,222 66	3 8950
Hyde Park.....	25,832	7,953 46	0 3078	6,107 43	0 2387	14,120 89	0 5466
Totals.....	840,556	\$1,190,503 21	\$1 4163	\$362,403 01	\$0 4311	\$1,552,906 22	\$1 8474

TABLE II.
Cost of Collection and Disposal of Refuse by Contract in City of Boston, 1937.

CONTRACT DISTRICTS.	CHARACTER OF REFUSE.	Cubic Yards.	Cost per District.	Cost per Cubic Yard.	Population.	Total Cost Per Capita.
East Boston.....	Mixed refuse.....	74,792				
	Garbage.....	2,668				
	Totals.....	77,460	\$51,338 95	\$0 6627	65,549	\$0 7832
Brighton.....	Mixed refuse.....	84,537				
	Garbage.....	8,201				
	Totals.....	92,738	\$44,086 94	\$0 4753	69,529	\$0 6434
West Roxbury.....	Mixed refuse.....	106,974				
	Garbage.....	17,032				
	Totals.....	124,006	\$72,363 06	\$0 5835	86,225	\$0 8392
Dorchester.....	Mixed refuse.....	243,284				
	Garbage.....	42,126				
	Totals.....	285,410	\$239,803 72	\$0 8409		
Roxbury (Elm Hill Section).....	Garbage disposal, proportionate charge.....		21,924 90			
	Totals.....	285,410	\$261,728 62	\$0 917	211,379	\$1 2381
	Mixed refuse.....	26,690				
Hyde Park.....	Garbage.....	3,507				
	Totals.....	30,197	\$33,107 53	\$1 0963	24,561	\$1 3496
	Mixed refuse.....	18,444				
Totals.....	Garbage.....	3,992				
	Totals.....	22,436	\$14,120 89	\$0 6293	25,832	\$0 5466
	Mixed refuse.....	554,721				
Totals.....	Garbage.....	77,526				
	Totals.....	632,247	\$476,745 99	\$0 754	483,045	\$0 9869

TABLE III.
Cost of Collection and Disposal of Refuse by Day Labor Force in the City of Boston for the Year Ending December 31, 1937.

DISTRICTS AND POPULATION.	CHARACTER OF REFUSE.	Cubic Yards.	COST PER CUBIC YARD.		COST TOTAL PER CUBIC YARD.			Total Cost, Collection and Disposal.	Total Cost Per Capita.
			Collect.	Disposal.	Collection and Disposal.	Cost to Collect.	Cost for Disposal.		
1. South Boston (59,645)	Mixed refuse.....	91,199	\$0 6711	\$0 52046	\$1 19156	\$61,210 12	\$47,465 43	\$108,675 55	
	Garbage.....	9,777	2 6912	0 52046	3 21166	26,312 58	5,088 54	31,401 12	
	Totals.....	100,976	\$0 8667	\$0 52046	\$1 3872	\$87,522 70	\$52,553 97	\$140,076 67	\$2 3485
3. Charlestown (30,065)	Mixed refuse.....	39,902	\$0 7221	\$0 52046	\$1 2426	\$28,814 44	\$20,767 39	\$49,581 83	
	Garbage.....	3,300	3 4518	0 52046	3 9723	11,391 20	1,717 52	13,108 72	
	Totals.....	43,202	\$0 9306	\$0 52046	\$1 4511	\$40,205 64	\$22,484 91	\$62,690 55	\$2 0851
7. Roxbury (107,503)	Mixed refuse.....	173,514	\$0 8539	\$0 52046	\$1 3743	\$148,166 07	\$90,306 84	\$238,472 91	
	Garbage.....	24,929	2 8363	0 52046	3 3562	70,707 75	12,974 55	83,682 30	
	Totals.....	198,443	\$1 1029	\$0 52046	\$1 6234	\$218,873 82	\$103,281 39	\$322,155 21	\$2 9967
8 and 9. South End and Back Bay (106,326)	Mixed refuse.....	223,614	\$0 8848	\$0 52046	\$1 4053	\$197,869 84	\$116,381 88	\$314,251 72	
	Garbage.....	7,126	3 1988	0 52046	3 7557	22,794 74	3,968 68	26,763 42	
	Totals.....	230,740	\$0 9563	\$0 52046	\$1 4779	\$220,664 58	\$120,350 56	\$341,015 14	\$3 2072
10. North and West Ends (53,972)	Mixed refuse.....	131,481	\$0 9004	\$0 52046	\$1 4209	\$118,392 38	\$68,433 54	\$186,825 92	
	Garbage.....	8,596	2 2014	0 52046	2 7218	18,923 60	4,473 14	23,396 74	
	Totals.....	140,077	\$0 9802	\$0 52046	\$1 5007	\$137,315 98	\$72,906 68	\$210,222 66	\$3 895
Total (337,511)	Mixed refuse.....	659,710							
	Garbage.....	53,728							
	Totals.....	713,438	\$0 9875	\$0 52046	\$1 5084	\$704,582 72	\$371,577 51	1,076,160 23	\$3 0101

TABLE IV.
Comparative Costs Per Cubic Yard, 1936-1937.

DAY LABOR DISTRICTS.	COLLECTION.		TOTAL COST.		Cubic Yards. 1936.	Cubic Yards. 1937.
	1936.	1937.	1936. \$0.4908 Disposal.	1937. \$0.52406 Disposal.		
1. South Boston.....	\$0 8785	\$0 8667	\$1 3679	\$1 3872	94,865	100,976
3. Charlestown.....	0 9898	0 9306	1 4806	1 4511	44,045	43,202
7. Roxbury.....	1 036	1 1029	1 5269	1 6234	270,226	198,443
8 and 9. South End and Back Bay.....	1 0483	0 9563	1 5435	1 4779	220,324	230,740
10. North and West Ends....	1 004	0 9802	1 4948	1 5007	136,101	140,077
Average.....	\$1 0117	\$0 9875	\$1 5039	\$1 5084	765,561	713,438
Collection Cost.....					\$774,550 83	\$704,582 72

CONTRACT DISTRICTS.	COST PER CUBIC YARD.		Cubic Yards. 1936.	Cubic Yards. 1937.
	1936.	1937.		
2. East Boston.....	\$0 4965	\$0 6627	78,624	77,460
4. Brighton.....	0 5445	0 4753	85,901	92,738
5. West Roxbury.....	0 5038	0 5835	86,823	124,006
6. Dorchester (including disposal).....	0 7943	0 8409	245,045	285,410
7a. Roxbury (Elm Hill Section).....		1 0963		30,197
11. Hyde Park.....	0 7077	0 6293	20,433	22,436
Totals.....			516,826	632,247
Average.....	\$0 6888	\$0 754		

TABLE V.
Street Cleaning and Oiling Service, 1937.
Distribution of Expenditures.

Removing snow	\$15,798 68
Brooming	308,015 73
Pushcart patrolling	116,552 02
Flushing streets	7,132 45
Horse-drawn sweeping	74,353 42
Motor sweeping	45,136 82
Team patrol	3,871 34
Refuse box collection	26,335 22
Sanding	4,106 20
Removal of old automobiles	2,142 47
Underpass	2,790 69
Cleaning lots	48 18
Public alleys	541 93
Clean-up week	17,963 87
	<hr/>
Total	\$624,789 02
Oiling and watering of public streets and ways,	30,011 05
	<hr/>
Total	<u>\$654,800 07</u>

APPENDIX D.

REPORT OF THE DIVISION ENGINEER OF THE
SEWER DIVISION.

BOSTON, January 2, 1938.

To the Commissioner of Public Works.

DEAR SIR,— I submit herewith statement of the activities and expenditures of the Sewer Division for the year ending December 31, 1937.

During the fiscal year 1937, there were built by contractors, day labor, private parties, and by the city under W. P. A. supervision 10.70 miles of common sewers and surface drains throughout the city. After deducting 0.34 mile of sewers and surface drains, rebuilt or abandoned, the net increase for 1937 is 10.36 miles, which added to the existing 1,176.87 miles of common sewers and surface drains and 30.93 miles of intercepting sewers, makes a grand total of 1,218.16 miles of all sewers belonging to the City of Boston, and under the care of the Sewer Division on January 1, 1938.

There were 213 catch-basins built or rebuilt and 31 abandoned or removed during the year, making a net gain of 182 catch-basins and a grand total of 21,666 catch-basins under the care of the Sewer Division on January 1, 1938.

Entrance fees to the amount of \$1,768.08 have been deposited with the City Collector for collection from estates upon which no sewer assessments were ever paid, in accordance with Ordinances of 1910, chapter 9, section 10.

920 permits have been issued, viz.: 344 to district foremen and contractors and 576 to drain layers for repairing or laying new house drains. Inspectors from this office have personally inspected the work done under these drain layers' permits.

Plans for the assessments of estates for sewer construction have been furnished the Board of Street Commissioners, representing 17,852.06 linear feet of sewers.

485 complaints have been investigated and report in writing has been made in each case.

878 gasoline traps have been examined in garages and cleansing establishments.

1,400 grease traps have been examined in hotels, restaurants and commercial establishments.

Reported in writing on 2,773 municipal liens to the City Collector in accordance with chapter 60, section 23, of the General Laws. Reported orally in the Sewer Assessment office on about 5,000 requests for information on municipal liens.

229 notices have been mailed to abutters in conformity with the Ordinance which says: "that all abutters shall be notified when the Commissioner of Public Works proposes to build a new sewer or repair an old sewer, to afford abutters facilities for entering the sewer."

Respectfully,

GEORGE W. DAKIN,
Division Engineer.

Financial Statement from January 1, 1937, to December 31, 1937.

Object.	Balance on Hand January 1, 1937.	Appropriation and Revenue, 1937.	Total Credits.	Transfer from	Total Debits.	Unexpended.	Loan Authorized and Not Issued.	Unliquidated.	Unencumbered.
Sewer Service.....	\$4,800 00	\$538,548 00	\$543,348 00	\$1,000 00	\$532,716 72	\$10,631 28	.....	.....	\$10,631 28
Sewerage Works, Revenue.....	.....	162,026 50	162,026 50	.....	140,297 41	21,729 09	.....	\$5,055 32	16,073 77
Sewerage Works, Non-Revenue....	182,520 40	450,329 50	632,749 90	.....	* 563,596 35	69,153 55	\$255,000 00	45,076 21	279,077 34
Sewerage Works, W. P. A.....	.....	100,000 00	100,000 00	.....	94,103 02	5,896 98	.....	1,250 88	4,646 10
Sewerage Works, P. W. A.....	24,842 27	18,418 95	43,261 22	.....	20,168 11	23,093 11	.....	7,996 31	15,096 80

* Including \$250,000 used to repay temporary loan.

MAINTENANCE EXPENDITURES JANUARY 1 TO DECEMBER 31, 1937.

SEWER DIVISION.

Improved Sewerage.

Pumping Station, Calf Pasture, inside	\$98,876 13	
Pumping Station, Calf Pasture, outside	13,812 58	
Pumping Station, Calf Pasture, engines	45,329 87	
Pumping Station, Calf Pasture, boilers	16,994 73	
Pumping Station, Calf Pasture, Union Park street	9,146 99	
Pumping Station, Calf Pasture, Summer street, Moon Island	2,354 04	
	26,408 27	
Main and intercepting sewers	17,812 27	
Repair No. 4 pump, Calf Pas- ture Pumping Station, con- tract dated June 21, 1937. } Built by } The Marine } Company. }	832 79	
	\$231,567 67	

Maintenance — Regular.

Automobiles	\$54,976 40	
Cleaning catch-basins	74,868 68	
Cleaning sewers	43,985 26	
Employed at yards	34,705 91	
Fuel and oil	759 19	
Hardware and tools	5,276 32	
House connections	14,633 17	
Horses, carts, harness, etc.	1,592 00	
Maintenance, Stony Brook	212 25	
Office expense	2,367 01	
Office salaries	48,466 56	
Stock	5,784 04	
Yard and locker	1,186 43	
	288,813 22	

Maintenance — Repairs.

Repairing department buildings	\$2,858 41	
Repairing catch-basins, South Boston	4,849 73	
Repairing catch-basins, East Boston	405 87	
Repairing catch-basins, Charlestown	413 21	
Repairing catch-basins, Brighton	1,272 01	
Repairing catch-basins, West Roxbury	2,305 45	
Repairing catch-basins, Dorchester	6,315 10	
Repairing catch-basins, Hyde Park	73 55	
Repairing catch-basins, Roxbury	5,135 34	
Repairing catch-basins, City Proper	7,499 87	
Repairing sewers, South Boston	426 58	
Repairing sewers, East Boston	1,150 74	
Repairing sewers, Charlestown	367 96	
Repairing sewers, Brighton	516 35	
Repairing sewers, West Roxbury	1,733 17	
Repairing sewers, Dorchester	2,261 16	
Repairing sewers, Hyde Park	596 62	
Repairing sewers, Roxbury	817 56	
Repairing sewers, City Proper	1,040 00	
	40,038 68	
<i>Carried forward</i>	\$560,419 57	

<i>Brought forward</i>		\$560,419 57
<i>Maintenance — Miscellaneous.</i>		
Miscellaneous	\$36,345 79	
Back Bay Fens	158 90	
Telephone	783 44	
Rubber goods	393 72	
Pensions and annuities	3,165 50	
	<hr/>	40,847 35
		<hr/>
		\$601,266 92
Less cost of stock and autos used on jobs		70,341 98
		<hr/>
		\$530,924 94
Debit transfers from Sewerage Works stock	\$791 78	
Debit transfers from Election Department	1,000 00	
	<hr/>	1,791 78
		<hr/>
		<u>\$532,716 72</u>

Sewerage Works, 1937.

Accounts.	Labor.	Compressors, Pumps and Trucks.	Materials.	Miscellaneous.	Contractors.	Totals.
Miscellaneous, W. P. A.....	\$37,150 53	\$68 91	\$7 94	\$415 07	.....	\$37,652 45
Engineers' and officers' salaries.....	79,359 40	.....	.....	.....	.....	79,359 40
Engineers' expense.....	9,406 47	1,960 57	1,308 44	3,918 56	\$790 63	17,384 67
Miscellaneous.....	2,077 75	85 50	260 50	29 96	.....	2,453 71
Land-takings.....	.....	.....	.....	.....	.....	.....
New manholes.....	11,751 65	1,048 00	1,518 11	290 95	676 76	15,285 47
New catch-basins, South Boston.....	6,156 20	162 00	436 14	1 00	50 73	6,806 07
New catch-basins, East Boston.....	107 95	.....	.....	.....	260 37	368 32
New catch-basins, Charlestown.....	785 22	18 00	54 45	.....	29 40	887 07
New catch-basins, Brighton.....	.....	.....	.....	.....	.....	.....
New catch-basins, West Roxbury.....	1,555 64	6 00	139 69	131 00	987 03	2,819 36
New catch-basins, Dorchester.....	3,182 77	473 50	1,192 62	.....	1,604 42	6,453 31
New catch-basins, Hyde Park.....	175 40	.....	294 38	.....	.....	469 78
New catch-basins, Roxbury.....	4,213 60	36 00	94 48	7 00	89 94	4,441 02
New catch-basins, City Proper.....	5,097 30	48 00	240 27	4 50	18 94	5,409 01
Repair streets.....	882 20	169 00	197 27	.....	.....	1,248 47
Release sewers.....	245 64	.....	.....	9 00	.....	254 64
Stock.....	.....	.....	23,130 46	.....	.....	23,130 46

	1,120 12	1,120 12	.....	.....	.....	.....	.....	.....	.....
Holiday.....									1,120 12
Unadvertised jobs.....									980 10
Totals.....	\$163,277 84	\$1,075 48	\$28,874 75	\$4,807 01	\$5,488 32	\$206,523 43			
Sewers built, entire city.....	78,032 19	93,999 78	60,273 58	10,152 86	124,605 75	367,064 16			
Totals.....	\$241,310 03	\$98,075 26	\$89,148 33	\$14,959 90	\$130,094 07	\$573,587 59			
Debit Transfers to:									
Paving Service.....	\$4,000 00								
Water Service.....	3,000 00								
Bridge Service.....	2,800 00								
Sewer Service stock.....	791 78								
Sewerage Works stock.....	13,264 42								
Sewer Service trucks.....	7,653 00								
Totals.....	\$31,509 20	7,653 00	14,056 20			31,509 20			
Totals.....	\$231,510 03	\$90,422 26	\$75,092 13	\$14,959 90	\$130,094 07	\$542,078 39			
Debit Transfers from:									
Sewer Service stock.....	\$1,436 89								
Sewer Service trucks.....	4,481 50	4,481 50	1,436 89						
Totals.....	\$5,918 39					5,918 39			
Total expenditures for 1937.....	\$231,510 03	\$94,903 76	\$76,529 02	\$14,959 90	\$130,094 07	\$547,996 78			

Sewerage Works Construction, January 1, 1937, to December 31, 1937, Inclusive.

LOCATION.	Began.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1937.
Stony Brook, section 14, from 404 feet northeast of Mt. Hope street to 156 feet southwest of Mt. Hope street.	May 19, 1936	Dec. 4, 1936	A. Baruffaldi Co.		No construction in 1937.	\$12,334 88
Miscellaneous						
Teneau Creek, section K, from Victory road to 721 feet easterly to culvert under New York, New Haven & Hartford Railroad.	May 17, 1935	Dec. 2, 1935	Charles Struzziery.		No construction in 1937.	2,491 14 3,842 09
Maywoods Brook in Circuit street, public land, Cathedral court, Ray street and Regent street, from Washington street to Dale street.	May 21, 1935	Dec. 30, 1935	John Williams.		No construction in 1937.	1,500 00
SOUTH BOSTON.						
B and Seventh streets overflow in land of New York, New Haven & Hartford Railroad about 1,600 feet south of and parallel to Dover street.	March 5, 1936	June 10, 1936	N. Ciborfi Company.		No construction during 1937.	1,051 65
Old Harbor Village*.	Nov. 16, 1936	July 10, 1937	W. P. A.	*		60,317 08
Northern avenue, from existing sewer manhole 525 feet east of D street to 532 feet easterly.	Oct. 17, 1937	Dec. 31, 1937	Edward M. Matz, Inc.	5,173.00	1' 6" by 1' 6" V-shaped concrete sewer, 3 manholes.	6,494 99
Sheet asphalt pavement in streets connected with Old Harbor Village project, Ward 7—named Old Colony avenue, Mohawk street, Maj. Michael J. O'Connor way, Gen. William H. Devine way, Kemp street and sewerage works in Mohawk street.	Dec. 6, 1937	Dec. 17, 1937	Standard Contracting Company	65.50 58.00	12" pipe surface drain..... 10" and 15" pipe minor drain. 1 manhole, 3 catch-basins.	1,174 18

Location	Date	Contractor	Amount	Description	Total
Pumping station, Summer street, two new pumps. EAST BOSTON.	Oct. 29, 1936	The Marine Company		Furnish and install 2 new pumps.	1,380 00
Drake place, from Chelsea street to north-westerly and northeasterly ends.	Nov. 15, 1937	R. Zoppo	107 00 145 80 98 00	15" pipe, sewer. 12" pipe, sewer. Pipe, minor drain. 5 manholes.	2,847 23
CHARLESTOWN.					
Front street, from 750 feet west of Warren avenue to 340 feet westerly.	June 21, 1937	W. P. A.	317 00 9 00 27 00 40 00 30 00	20" by 20" U-shaped concrete sewer. 24" pipe, sewer. 12" pipe, surface drain. 10" pipe, catch-basin drain. 6" pipe, minor drain. 7 manholes. 4 catch-basins.	9,465 42
Bunker Hill court, Clarken court at south-erly end, and outlet in private land, from Russell street to Clarken court.	Feb. 23, 1937	W. P. A.	253 00 20 00 8 00	12" pipe, surface drain. 10" pipe, catch-basin drain. 6" pipe, minor drain. 5 manholes. 2 catch-basins. 1 drop inlet.	2,853 27
BRIGHTON.					
Everett street extension	Sept. 8, 1936	Roxbury Concrete Construction Company.		No construction in 1937.	605 83
Dustin street, from North Beacon street to Cambridge street and Cambridge street, Dustin street to Warren avenue.	Jan. 25, 1937	W. P. A.	756 26 852 78	3' 3" concrete conduit. 2' 3" concrete conduit. 24" cast-iron pipe. 68' catch-basin drain. 10 manholes. 5 catch-basins.	22,277 07
Larch street, Lake street and Kenrick street.	Oct. 29, 1936	W. P. A.	1,177 96 676 40 348 45	3' concrete conduit. 12" pipe, surface drain. 10" pipe, surface drain. 68' catch-basin drain. 14 manholes. 9 catch-basins.	7,437 81

* See pages 81, 82 and 83 for details of this contract.

Sewerage Works Construction, January 1, 1937, to December 31, 1937, Inclusive.—Continued.

LOCATION.	Begun.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1937.
<i>BRIGHTON.—Concluded.</i>						
Durland street, from Hardwick street to 200 feet northeasterly.	June 7, 1937	June 18, 1937	The Prompt Contractors, Inc.	214.45	10" pipe, surface drain..... 48' catch-basin drain. 1 manhole. 2 catch-basins.	\$917 05
Estonia street, from Sorrento street to North Harvard street.	July 6, 1937	Aug. 21, 1937	W. P. A.....	340.82	10" pipe, sanitary sewer..... 2 manholes.	911 28
Adair road, from Faneuil street to point 500 feet northerly.	Nov. 1, 1937	Nov. 12, 1937	M. DeSisto.....	286.79 186.23	12" pipe, surface drain..... 10" pipe, surface drain. 93' catch-basin drain. 2 manholes. 2 catch-basins.	1,537 71
Leicester street (formerly Arlington place), northeast of Arlington street.	Oct. 26, 1937	Nov. 4, 1937	J. D'Amico, Inc.....	59.88 60.72	10" pipe, sanitary sewer..... 10" pipe, surface drain. 53' catch-basin drain. 1 manhole. 2 catch-basins.	884 80
Foster street, from Surrey street to 780 feet south of Rogers Park avenue.	June 22, 1936	Oct. 17, 1936	W. P. A.....		No construction in 1937.....	403 25
<i>WEST ROXBURY.</i>						
Bellevue Hill road, from La Grange street to Bellevue park.	Sept. 9, 1936	Oct. 31, 1936	J. D'Amico, Inc.....		No construction in 1937.....	298 03
Pondred Circle, from existing sewer to 110 feet northeasterly.	Dec. 28, 1936	Jan. 16, 1937	J. D'Amico, Inc.....	109.77 116.19	10" pipe, sanitary sewer..... 10" pipe, surface drain. 48' catch-basin drain. 1 manhole. 3 catch-basins.	1,124 78

Spring Street brook in Baker street, Hart street and Prospect street.	Oct.	22, 1936	March 30, 1937	Charles Struaziary.....	698.62 22.24	5' 4" by 4' 6" concrete conduit..... 30" pipe, surface drain. 2 manholes.	16,099 72
Washington street, outlets in Archdale road, public land and Toll Gate road, in Whipple avenue and public land.	Oct.	26, 1937	March 18, 1937	M. DeSisto Company.....	941.33 238.76 110.00 41.60	24" by 30" concrete conduit..... 10" pipe, sanitary sewer. 12" pipe, sanitary sewer. 24" by 15" pipe, surface drain. 10 manholes.	12,202 05
Corey street, from Weld street to Cuddington road.	April	21, 1936	Sept. 10, 1936	W. P. A.....		No construction 1937.....	41 72
Canterbury street, from Faine street to Mt. Hope street.	June	15, 1936	Nov. 21, 1936	W. P. A.....			5 59
Metropolitan avenue, West Roxbury and Hyde Park.	Oct.	13, 1936	June 3, 1937	W. P. A.....	1,154.28 1,195.44	10" pipe, sanitary sewer..... 15" pipe, surface drain. 18 manholes.	4,325 89
Simson street, from Washington street to Centre street and outlet in private land, Centre street.	Sept.	8, 1936	July 31, 1937	W. P. A.....	254.96 326.01 332.23 350.57 942.87 404.49 1,325.04 952.53 191.83 16.30 78.00	5' 0" by 5' 4" concrete conduit..... 4' 0" by 4' 6" concrete conduit. 2' 10" by 3' 3" concrete conduit. 2' 10" by 3' 0" concrete conduit. 30" pipe, surface drain. 12" pipe, surface drain. Pipe, sanitary sewer. Pipe, sanitary sewer. Pipe, sanitary sewer. 10" pipe, sanitary sewer. 24", 18" and 15" pipe, sanitary sewer. 12' catch-basin drain. 34 manholes.	19,182 92
Thurlow street.....	Oct.	29, 1936	Nov. 21, 1936	W. P. A.....			10 21
Washington street, between Grove street and Edgencore road.	Oct.	8, 1936	July 3, 1937	W. P. A.....	419.20 74.32 306.68	12" pipe, sanitary sewer..... 12" pipe, surface drain. 10" pipe, surface drain. 5 manholes.	5,958 17
Stimson street and outlet in public land (blasting).	Nov.	16, 1936	Jan. 20, 1937	National Engineering and Contracting Company.		456.42 cubic yards rock.....	1,369 26

Sewerage Works Construction, January 1, 1937, to December 31, 1937, Inclusive.—Continued.

LOCATION.	Begun.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1937.
<i>West Roxbury.—Continued.</i>						
Washington street between Grove street and Edgenere road (blasting).	Nov. 6, 1936	April 8, 1937	John Williams		446 .97 cubic yards rock.	\$4,022 73
Stinson street and outlet in Metropolitan avenue (blasting).	March 11, 1937	June 16, 1937	R. Zoppo		671 .58 cubic yards rock.	2,484 85
Burnside avenue from Wold street to Peak Hill road, Bellaire road from Burnside avenue to Cerdan avenue, Glenburnie road from Burnside avenue to Cerdan avenue, West Roxbury.	March 8, 1937	July 3, 1937	W. P. A.	498 00 397 00 320 00 393 00 427 00	12" pipe, surface drain. 12" pipe, surface drain. 10" pipe, surface drain. 12" pipe, surface drain. 10" pipe, surface drain. 150' catch-basin drain. 12 manholes. 8 catch-basins.	3,300 05
Mt. Hope street, West Roxbury.	Jan. 25, 1937	Oct. 21, 1937	W. P. A.	249 60 286 00	10" pipe, sanitary sewer. 12" pipe, surface drain. 2 manholes.	1,240 74
Washington street, Mosgrove avenue to South street.	Sept. 23, 1937	Nov. 6, 1937	W. P. A.	419 20 74 32 306 68	12" pipe, sanitary sewer. 12" pipe, surface drain. 10" pipe, surface drain. 9 manholes.	10,371 95
Conamba street, extended from Hawthorne street to Poplar street.	May 27, 1937	June 5, 1937	The Prompt Contractors, Inc.	200 00	10" pipe, sanitary sewer. 4 manholes.	776 09
Mt. Hope street, Bellaire road, Glenburnie road and Burnside avenue.	March 22, 1937	May 15, 1937	R. Zoppo		73 .21 cubic yards rock.	285 52
Vincent road, Gretter road and Baker street.	May 7, 1937	May 27, 1937	The Prompt Contractors, Inc.	153 00	Catch-basin drain. 9 catch-basins.	1,818 49
Carroll street, from Keith street to Vermont street.	July 6, 1937	Aug. 9, 1937	W. P. A.	319 80	12" pipe, surface drain. 26' catch-basin drain. 2 catch-basins. 2 manholes.	1,174 57

Washington Heights avenue and private land east of Washington street.	July 6, 1937	Aug. 11, 1937	W. P. A.	99.30 153.35	18" pipe, surface drain. 15" pipe, surface drain. 16" catch-basin drain. 3 manholes. 1 catch-basin.	1,234.93
Cowing street from Washington street to Partridge street.	June 7, 1937	July 2, 1937	M. DeSisto Company.		8 catch-basins.	2,492.26
Washington Heights avenue and private land, West Roxbury and in Ellison avenue, from Morton street to Gallivan Boulevard, Eventeau street, between Freeport street and Ashland street and Humes road, from Newhall avenue, 240 feet + North West Dorchester (blasting).			Roslindale Contracting Company.		No construction in 1937.	11.25
Cowing street, from Searles road to La Grange street.			W. P. A.		No construction in 1937.	28.94
Courtney road, from Parkvale road to Church street.	July 6, 1937	Aug. 14, 1937	W. P. A.	509.14 205.00	15" pipe, surface drain. 12" pipe, surface drain. 90" catch-basin drain. 5 manholes. 6 catch-basins.	4,110.54
Hobson street, from East Border road to 280 feet northeasterly.	Aug. 5, 1937	Oct. 9, 1937	W. P. A.	266.40 278.90	10" pipe, sanitary sewer. 12" pipe, surface drain. 4 manholes.	2,312.94
Bradford circle.	Sept. 7, 1937	Oct. 27, 1937	W. P. A.	194.60 200.20	10" pipe, sanitary sewer. 10" pipe, surface drain. 1 manhole.	1,527.88
Bronx road extension and outlet in Ashland avenue.	Oct. 25, 1937	Dec. 3, 1937	Joseph Capone	229.91 222.93 215.17 214.98	10" pipe, sanitary sewer. 10" pipe, surface drain. 10" pipe, sanitary sewer. 12" pipe, surface drain. 5 manholes.	2,699.89
Hillcroft road.	Sept. 23, 1937	Nov. 6, 1937	W. P. A.	340.80	10" pipe, surface drain. 1 manhole.	1,437.61

Sewerage Works, Construction, January 1, 1937, to December 31, 1937, Inclusive.—Continued.

LOCATION.	Began.	Finished.	Built by.	Length. in feet.	Character.	Amount Expended in 1937.
WEST ROXBURY.—<i>Concluded.</i>						
Gretter road, from Macey road to Weld street.	Nov. 15, 1937	Dec. 15, 1937	Hanover Contracting Com- pany.	38.19 155.20 159.07 423.83	15" pipe, surface drain. 12" pipe, surface drain. 10" pipe, surface drain. 10" pipe, sanitary sewer. 42' catch-basin drain. 2 manholes. 2 catch-basins.	\$3,022 05
Anawan terraces.	Dec. 20, 1937	.....	W. P. A.	.....	No work 1937.	178 24
Charme avenue.	Dec. 20, 1937	.....	W. P. A.	.....	No work 1937.	214 81
Hawthorne street.	Dec. 20, 1937	.....	W. P. A.	.....	No work 1937.	199 33
Cowing street.	.....	.....	W. P. A.	.....	No work 1937.	16 89
Rendall road and Weld street.	April 27, 1936	Sept. 25, 1936	W. P. A.	.....	.....	207 12
DORCHESTER.						
Davenport brook in Hibbard avenue Pleasant Hill avenue and Morton street.	Oct. 19, 1936	June 16, 1937	Louis Balboni, Inc.	918.40 49.00 422.85	4' by 6' concrete surface drain. 2'-6" by 2'-10" concrete sewer. 12" pipe, sewer. 16 manholes. 1 catch-basin.	48,929 28
Belton street, from Gallivan Boulevard to Milton street.	Jan. 11, 1937	Feb. 27, 1937	W. P. A.	407.71	12" pipe, surface drain. 4 manholes. 2 catch-basins.	1,229 49
Grayson street from Gallivan Boulevard to Milton street.	Feb. 23, 1937	May 8, 1937	W. P. A.	529.30	12" pipe, surface drain. 5 manholes. 2 catch-basins.	2,750 87

Humphreys place, off Humphreys street.....	March 1937	May 22, 1937	W. P. A.....	15" pipe, sewer. 10" pipe, sewer. 12" pipe, surface drain. 10" pipe, surface drain. 6" pipe, sewer drain. 6 manholes. 2 catch-basins.	19.27 312.04 139.08 166.25 9.50	2,284 49
Hallowell street, from Cummins Highway, 125 feet southwest of Messenger street.	Jan. 14, 1937	May 8, 1937	W. P. A.....	10" pipe, sewer..... 20" D. S. pipe, surface drain. 18" D. S. pipe, surface drain. 12" pipe, surface drain. 10" pipe, surface drain. 9 manholes. 7 catch-basins.	251.76 229.12 298.99 191.82 194.43	3,025 71
Magnolia street, from Dudley street to Mag- noha square.	April 15, 1936	Aug. 21, 1936	W. P. A.....	No construction in 1937.		188 38
Magdala street.....	Nov. 30, 1936	Jan. 9, 1937	W. P. A.....	12" pipe, surface drain..... 4 manholes. 4 catch-basins.	474.05	405 48
St. Brendan road.....	Sept. 28, 1936	Nov. 30, 1936	W. P. A.....	No construction in 1937.		113 59
Weybosset street.....	Oct. 5, 1936	Feb. 20, 1937	W. P. A.....	5 manholes..... 2 catch-basins.		2,971 59
Wood avenue, from Cummins Highway to Scamhole street.....	Jan. 25, 1937	June 26, 1937	W. P. A.....	15" pipe, surface drain..... 12" pipe, surface drain. 7 manholes. 3 catch-basins.	904.72 249.75	6,646 46
Nonquit street, Ward 13, from Dudley street, 378 feet southwest city.	Nov. 4, 1936	Nov. 14, 1936	Dooley Brothers, Inc.....	No construction in 1937.		268 03
Auckland street.....			W. P. A.....	No construction in 1937.		11 36
Pumping Station, Calf Pasture, Dorchester, new No. 1B pump.	March 26, 1937	Sept. 8, 1937	Worthington Pump and Ma- chinery Corporation.	Furnished and installed new pump.		6,802 77
Ellison avenue, from Morton street to Galli- van Boulevard.	June 28, 1937	Oct. 20, 1937	W. P. A.....	18" pipe, surface drain..... 12" pipe, surface drain. 7 manholes. 2 catch-basins.	106.10 767.50	4,176 56

Sewerage Works, Construction, January 1, 1937, to December 31, 1937, Inclusive—Continued.

LOCATION.	Began.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1937.
DORCHESTER.— <i>Concluded.</i> Everdean street, from Freeport street to Ashland street.	July 21, 1937	Sept. 22, 1937	W. P. A.	384.68 161.58	18" D. S. pipe, surface drain. 15" D. S. pipe, surface drain. 5 manholes.	\$1,765 77
Gallivan Boulevard, north side, from Hallett street, 227 feet northeasterly.	Aug. 2, 1937	Sept. 25, 1937	W. P. A.	223.78 218.37	12" pipe sewer. 12" pipe, surface drain. 4 manholes.	2,662 17
Humes road, from Newhall street to 240 feet northwesterly.	June 28, 1937	July 24, 1937	W. P. A.	226.70	12" pipe, surface drain. 2 manholes.	611 92
Neponset River road (proposed), from Gallivan Boulevard, 160 feet southeasterly, outlet in Gallivan Boulevard, from Hallett street to proposed Neponset River road.	Nov. 29, 1937	Dec. 29, 1937	Francis E. Daddario	143.03 147.85 311.42	15" pipe, surface drain. 12" pipe, surface drain. 12" pipe, sewer. 7 manholes.	2,605 35
Frazier street, Woodhaven street, Rangleley street and Rundle park.	Nov. 7, 1937	Dec. 2, 1937	N. Cibotti & Co.	152.00 152.00 23.00	10" pipe, sewer. 12" pipe, surface drain. 12" pipe, surface drain. 5 manholes. 3 catch-basins.	2,037 75
Nahant avenue	Dec. 20, 1937	Not completed.	W. P. A.			78.55
O'Connell road, from 470 feet northeast of Washington street to 350 feet southwest-erly.	Dec. 9, 1937	Feb. 12, 1938	W. P. A.	42.00	12" pipe, surface drain. 1 manhole.	381 25
Ridlon road, Hyde Park, Dorelester	Dec. 20, 1937	Not completed.	W. P. A.			41 94
Savannah avenue, from 225 feet southwest of Canaan street to 683 feet northeasterly.	Dec. 20, 1937	Not completed.	W. P. A.			102 60
Woodhaven street and outlet in private land,	Dec. 20, 1937	Not completed.	W. P. A.			60 65

HYDE PARK.								
Mercer street from Thelston street to 180 feet north-easterly.	Nov. 24, 1936	Dec. 4, 1936	R. Zoppo			No construction in 1937.		196 75
Chester street.	May 27, 1936	Nov. 21, 1936	W. P. A.			No construction in 1937.		320 15
Edwards street, Lewis street, private land and Frazer street.	April 21 1936	Jan. 9, 1937	W. P. A.			No construction in 1937.		2,110 98
Frazer street from Reddy avenue to Wood avenue.	Jan. 11, 1937	March 31, 1937	W. P. A.		112.97 529.30	4' by 3" conduit, 12" pipe, surface drain, 6 manholes, 4 catch-basins.		5,369 29
Forest avenue and Linden street.	Nov. 19, 1936	March 6, 1937	W. P. A.			3 manholes.		3,427 23
Neponset avenue.	May 11, 1936	Oct. 5, 1936	W. P. A.			No construction in 1937.		38.97
Williams avenue.	May 27, 1936	March 13, 1937	W. P. A.			5 manholes, 3 catch-basins.		4,518 63
Albion street from Beacon street to Highland street.	Feb. 2, 1937	March 27, 1937	W. P. A.		623.77	12" pipe surface drain, 3 manholes, 2 catch-basins.		1,329 74
Warren avenue from Beacon street to Summit street.	March 1, 1937	July 3, 1937	W. P. A.		688.00 858.69	18" pipe, surface drain, 15" pipe, surface drain, 3 manholes, 10 catch-basins.		4,487 62
Neponset avenue, from 350 feet northwest of Loring street to 830 feet southeast.	March 29, 1937	June 12, 1937	W. P. A.		188.20 167.15 479.05	20" pipe, surface drain, 15" pipe, surface drain, 12" pipe, surface drain, 4 manholes, 8 catch-basins.		2,220 36
Windsor street and private land, from Taunton avenue, to Thelston street, Hyde Park, and Thelston street, from Windsor street to Mercer street.	Dec. 20, 1937	Not completed.	W. P. A.					79 83
Hawthorne street, Prescott street and private land, Hyde Park.			Charles Struzziery.			Execution of construction.		550 00

Sewerage Works, Construction, January 1, 1937, to December 31, 1937, Inclusive. — Continued.

LOCATION.	Began.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1937.
HYDE PARK.— <i>Concluded.</i>						
Ruskin road and Farrar avenue.....	May 28, 1937	July 8, 1937	Fred T. Daddario.....	280.55 274.80 114.14	12" pipe, sewer..... 18" pipe, surface drain. 12" pipe, sewer, 3 manholes. 1 L. H.	\$2,959 58
Milton avenue and Summit street, Hyde Park.	May 1, 1936	Sept. 28, 1936	W. P. A.....		No construction in 1937.....	1 50
Hazard avenue, from Dana avenue to 57 feet northeasterly and southeasterly.	Oct. 18, 1937	Nov. 18, 1937	J. D'Amico, Inc.....	579.34	12" pipe, sewer..... 4 manholes.	1,912 53
Danbury road, from George street to 288 feet westerly.	Nov. 1, 1937	Nov. 13, 1937	Hanover Contracting Company.	292.09 289.34	10" pipe, sewer. 12" pipe, surface drain. 5 manholes.	1,312 00
Farrar avenue, from 90 feet east of Ruskin road to 296 feet east.	Nov. 8, 1937	Feb. 12, 1938	Roxbury Concrete Construction Company.	225.00	12" pipe, sewer.	592 17
Fairmount avenue.....	May 1, 1936	Oct. 21, 1936	W. P. A.....		No construction in 1937.....	11 60
Prescott street, between 485 feet south of Stanley street and 350 feet north of Stanley street and outlet in Stanley street and Hyde Park avenue, between Stanley street and Milton street.	Nov. 29, 1937	Not completed..	W. P. A.....			1,077 77
Prospect street.....	Dec. 20, 1937	Not completed..	W. P. A.....			17 26
Spring Hill road, from Milton avenue to Highland street and Highland street, from Highland street to Spring Hill road.	Dec. 20, 1937	Not completed..	W. P. A.....			85 55

ROXBURY.									
Cheney street, about 90 feet east of Maple street to Edm Hill avenue.	May 21, 1936	June 29, 1936	Standard Contracting Company.		No construction in 1937	157 66			
Nira avenue, from Day street 480 feet westerly.	March 4, 1937	June 26, 1937	W. P. A.	453.10 30.00 10.00	12" pipe, surface drains. 10" pipe, minor drains. 6" pipe, minor drains. 4 manholes. 2 catch-basins.	2,251 87			
Colburn street, Whiting street, Wave street, private land, Edgenere road, Miller street.	Sept. 17, 1931	April 6, 1932	C. Russo.		No construction in 1937	250 00			
Grotto Glen road, from Day street 244 feet westerly.	March 4, 1937	June 26, 1937	W. P. A.	245.91 233.02 44.00 16.00	12" pipe, service. 15" pipe, surface drain. 6" pipe, minor drain. 10" pipe, minor drain. 4 manholes. 1 catch-basin.	1,947 07			
Maywood's brook in Laurel street, and Ottawa street from Dale street to Sherman street (completion of Kennedy's job).	April 23, 1935	Oct. 24, 1935	James J. Coughlan and Sons.		No construction in 1937	3,271 06			
Atherton street, from Amory street to Washington street.	April 1, 1937	June 26, 1937	W. P. A.	212.35 689.40 452.35 80.00 186.00	12" vitreous pipe, sewer. 18" concrete pipe, surface drain. 12" vitreous pipe, surface drain. 6" pipe, minor drain. 10" pipe, catch-basin drain. 13 manholes. 2 catch-basins.	4,428 30			
Huntington avenue at Parker street	Sept. 18, 1937	Dec. 6, 1937	Standard Contracting Company.		New sewer regulator, and appurtenances in old regulator manhole.	879 79			
CITY PROPER.									
East Springfield street, from Harrison avenue to Washington street.	Aug. 17, 1936	Oct. 19, 1936	M. DeSisto Company.		No construction in 1937	480 08			
North street, from Salutation street to Hanover street.	July 14, 1936	Aug. 12, 1936	R. Zoppo.		No construction in 1937	149 61			

Sewerage Works, Construction, January 1, 1937, to December 31, 1937, Inclusive.—Concluded.

LOCATION.	Began.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1937.
<i>CITY PROPER.—Concluded.</i>						
Estes place, from Congress street to Aldine street.	June 8, 1936	July 8, 1936	M. DeSisto Company		No construction in 1937.	\$135 09
Somerset street, from Howard street to Allston street.	May 25, 1937	July 1, 1937	J. D'Amico, Inc.	12.00 169.55	18" pipe, sewer. 15" pipe, sewer 4 manholes.	2,315 75
Commonwealth Avenue Underpass at Massachusetts avenue.			W. P. A.*			358 62
Pumping station, Union Park street, new screen and rake.	Oct. 18, 1937	Not completed.	The Marine Company		Furnish and install new screen and rake.	1,110 16
Boylston street, Huntington avenue and Exeter street.			W. P. A.*			84 38
Huntington Avenue Subway			W. P. A.*			126 57

* Transit Department work. The Sewer Division is consulted regarding sewer changes and design and provides inspector on the work.

Summary of Sewer Construction for the Twelve Months Ending December 31, 1937.

DISTRICTS.	Built by City by Contract or Day Labor.	Built by City Under W. P. A. Supervision.	Built by Private Parties.	Total Length Built.	
	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Miles.</i>
City Proper.....	181.55		955.67	1,137.22	0.215
Roxbury.....		2,286.13	424.00	2,710.13	0.513
South Boston.....	582.80	9,316.95		9,899.75	1.875
East Boston.....	252.80			252.80	0.048
Charlestown.....		606.00		606.00	0.115
Brighton.....	808.07	4,497.87		5,305.94	1.005
West Roxbury.....	4,399.79	15,166.84	407.12	19,973.75	3.789
Dorchester.....	2,436.75	6,515.50		8,952.25	1.693
Hyde Park.....	2,055.26	5,597.22		7,652.48	1.449
Totals.....	10,717.02	43,986.51	1,786.79	56,490.32	10.699

Length in Feet and Character of Sewerage Works Built in Connection with Old Harbor Village.

Monsignor Dennis F. O'Callaghan Way, formerly Wakefield street, between Old Colony avenue and General Lawrence J. Logan Way, formerly Mohawk street.

543.64 linear feet, 18" x variable height, U-shaped sewer (concrete).

232.74 linear feet, 18" x 18", concrete U-shaped sewer.

278.18 linear feet, 18" x 15", concrete U-shaped sewer.

129.54 linear feet, 18" x 12", concrete U-shaped sewer.

Total length of sewer built = 1,184.10 linear feet.

8 manholes built on sewer.

164.08 linear feet, 24" x 24", U-shaped concrete surface drain.

233.57 linear feet, 20" x 24", U-shaped concrete surface drain.

199.41 linear feet, 18" x 26", U-shaped concrete surface drain.

386.31 linear feet, 18" x 18", U-shaped concrete surface drain.

126.30 linear feet, 18" x 15", U-shaped concrete surface drain.

131.16 linear feet, 18" x 12", U-shaped concrete surface drain.

Total length of surface drain built = 1,240.83 linear feet.

13 manholes built on surface drain.

12 catch-basins.

2 drop inlets.

183 linear feet, 10", pipe catch-basin drain.

22 linear feet, 15", pipe catch-basin drain.

112 caissons.

Government land, off Monsignor Dennis F. O'Callaghan Way, formerly Wakefield street, between Monsignor Dennis F. O'Callaghan Way and New York, New Haven & Hartford Railroad.

215.92 linear feet, 18" x 18", U-shaped concrete sewer.

554.83 linear feet, 18" x 12", U-shaped concrete sewer.

Total length of sewer built = 770.75 linear feet.

6 manholes on sewer.

416.93 linear feet, 18" x 18", U-shaped concrete surface drain.

753.16 linear feet, 18" x 15", U-shaped concrete surface drain.

188.97 linear feet, 18" x 12", U-shaped concrete surface drain.

Total length of surface drain built = 1,359.06 linear feet.

12 manholes built on surface drain.

142 caissons.

Doctor Michael Gavin Way, formerly Needham street, between Old Colony avenue and Monsignor Dennis F. O'Callaghan Way, formerly Wakefield street.

183.20 linear feet, 18" x variable height, U-shaped concrete sewer.

268 linear feet, 18" x 12", U-shaped concrete sewer.

Total length of sewer built = 451.20 linear feet.

2 manholes built on sewer.

641.34 linear feet, 36" x 36", U-shaped concrete surface drain.

3 manholes built on surface drain.

5 catch-basins.

93 linear feet, 10", pipe catch-basin drain.

56 caissons.

General Lawrence J. Logan Way, formerly Mohawk street, between Old Colony avenue and General William H. Devine Way, formerly Hyde street.

110.57 linear feet, 18" x 18", U-shaped concrete sewer.

326.93 linear feet, 18" x 15", U-shaped concrete sewer.

Total length of sewer built = 437.50 linear feet.

4 manholes built on sewer.

277.85 linear feet, 24" x 24", U-shaped concrete surface drain.

163.95 linear feet, 22" x 22", U-shaped concrete surface drain.

53.38 linear feet, 18" x 18", U-shaped concrete surface drain.

112.16 linear feet, 18" x 15", U-shaped concrete surface drain.

Total length of surface drain built = 607.34 linear feet.

7 manholes built on surface drain.

5 catch-basins.

1 drop inlet.

72 linear feet, 10", pipe catch-basin drain.

49 caissons.

Government land, between General Lawrence J. Logan Way, formerly Mohawk street, and Monsignor Dennis F. O'Callaghan Way, formerly Wakefield street.

9.25 linear feet, 18" x 42", U-shaped concrete sewer.

435.34 linear feet, 18" x 18", U-shaped concrete sewer.

Total length of sewer built = 444.59 linear feet.

5 manholes built on sewer.

28 caissons.

287.33 linear feet, 33" x 33", U-shaped concrete surface drain.

2 manholes built on surface drain.

28 caissons.

Government land, between General Lawrence J. Logan Way, formerly Mohawk street, and Old Colony avenue.

312.51 linear feet, 18" x 12", U-shaped concrete sewer.

2 manholes.

26 caissons.

Major Michael J. O'Connor Way, formerly Ralston street, formerly Albert street, between Kemp street and Dorchester avenue.

454.40 linear feet U-shaped concrete sewer.

3 manholes.

4 catch-basins.

51 linear feet, 10", pipe catch-basin drain.

270 linear feet, 12", pipe sewer and 1 manhole removed.

39 caissons.

General William H. Devine Way, formerly Hyde street, between Old Colony avenue and Dorchester avenue.

1,064 linear feet, 22' x 26", U-shaped concrete sewer.

62 linear feet, 12", pipe sewer.

Total length of sewer built = 1,126 linear feet.

10 manholes.

11 catch-basins.

80 linear feet, 10", pipe catch-basin drain.

25 linear feet, 12", pipe sewer, abandoned.

65 linear feet, 10", pipe sewer, abandoned.

1 surface drain manhole abandoned.
 94 caissons.
 Kemp street, between Dorchester avenue and Monsignor Dennis F. O'Callaghan Way, formerly Wakefield street.
 2 catch-basins and 72 linear feet, 10", pipe catch-basin drain.

SUMMARY.

5,119.05 linear feet U-shaped concrete sewer.
 62.00 linear feet 12-inch pipe sewer.
 4,135.90 linear feet U-shaped concrete surface drain.

9,316.95 linear feet sewers and surface drains.
 573 linear feet pipe catch-basin drains.
 39 catch-basins.
 3 drop inlets.
 574 concrete caissons.

**Net Increase in Length of Sewers Built Between January 1, 1937,
 and December 31, 1937.**

DISTRICTS.	Length of Sewers Built During Twelve Months Ended December 31, 1937.	Length of Sewers Re-built or Abandoned During Twelve Months Ended December 31, 1937.	Net Increase for Twelve Months Ended December 31, 1937.	
	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Miles.</i>
City Proper.....	1,137.22	.....	1,137.22	0.215
Roxbury.....	2,710.13	204.35	2,505.78	0.475
South Boston.....	9,899.75	1,219.91	8,679.84	1.644
East Boston.....	252.80	.....	252.80	0.048
Charlestown.....	606.00	.....	606.00	0.115
Brighton.....	5,305.94	.....	5,305.94	1.005
West Roxbury.....	19,973.75	.....	19,973.75	3.783
Dorchester.....	8,952.25	366.00	8,586.25	1.626
Hyde Park.....	7,652.48	.....	7,652.48	1.449
Totals.....	56,490.32	1,790.26	54,700.06	10.360

<i>Total Length of Sewers.</i>	<i>Miles.</i>
Total common sewers and surface drains built previous to January 1, 1937,	1,176.87
Net increase of common sewers and surface drains between January 1, 1937, and December 31, 1937.....	10.36
Total common sewers and surface drains to December 31, 1937.....	1,187.23
Total city intercepting sewers connecting with Metropolitan sewers to December 31, 1937*.....	6.81
Total Boston main drainage intercepting sewers to December 31, 1937, *	24.12
Grand total of common and intercepting sewers to December 31, 1937...	1,218.16
Total mileage of streets containing sewerage works to December 31, 1937.	673.71

* No additional lengths built during year 1937.

**Summary of Sewer Construction for Five Years Previous to
December 31, 1937.**

	1933.	1934.	1935.	1936.	1937.
	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>
Built by city by contract or day labor.....	93,434 36	16,637 61	8,530 08	7,166 08	10,717 02
Built by city under United States Government supervision.....		29,167 46	24,981 43	17,726 55	43,986 51
Built by private parties.....	972 00	610 00	160 00	1,145 00	1,786 79
Totals.....	94,406 36	46,415 07	33,671 51	26,037 63	56,490 32

Catch-Basins in Charge of the Sewer Division.

DISTRICTS.	CATCH-BASINS FOR TWELVE MONTHS ENDED DECEMBER 31, 1937.			TOTAL FOR WHOLE CITY IN CHARGE OF SEWER DIVISION.	
	Number Built or Rebuilt.	Number Abandoned or Removed.	Net Increase.	Previous Report to January 1, 1937.	Grand Total to January 1, 1938.
City Proper.....	10	10	0	3,614	3,614
Roxbury.....	17	13	4	3,377	3,381
South Boston.....	52	6	46	1,401	1,447
East Boston.....	2	2	0	1,057	1,057
Charlestown.....	7	0	7	840	847
Brighton.....	22	0	22	1,898	1,920
West Roxbury.....	44	0	44	3,556	3,600
Dorchester.....	33	0	33	5,065	5,098
Hyde Park.....	26	0	26	676	702
Totals.....	213	31	182	21,484	21,666

**Table of Approximate Quantities, Lifts and Duties at Calf Pasture Pumping Station
from January 1, 1937, to December 31, 1937, Inclusive.**

MONTH.	Total Gallons Pumped.	Average per Day, Gallons.	Minimum per Day, Gallons.	Maximum per Day, Gallons.	Average Lift. (Feet.)
January.....	3,349,254,521	108,040,469	89,938,197	153,870,885	39.2
February.....	2,718,712,443	97,096,873	77,312,184	124,902,628	39.2
March.....	2,796,301,118	90,203,261	75,810,808	168,881,308	39.2
April.....	3,207,154,487	106,905,150	81,146,459	176,625,374	39.2
May.....	3,208,462,114	103,498,778	76,256,443	133,611,208	39.2
June.....	3,024,089,219	100,802,973	81,168,682	147,675,682	39.2
July.....	2,999,826,568	96,768,599	73,131,128	119,833,754	39.2
August.....	2,797,093,604	90,228,836	67,775,184	126,714,619	39.2
September.....	2,698,790,236	89,959,674	74,081,505	147,823,552	39.2
October.....	2,711,016,230	87,452,136	67,276,363	126,676,298	39.2
November.....	2,963,592,175	98,786,406	75,822,542	167,686,126	39.2
December.....	3,179,569,326	102,566,752	79,683,287	205,780,265	39.2
Total.....	35,653,862,041				
Average.....	2,971,155,170	97,681,814			39.2

NOTES.—Gallons pumped by oil, 15,155,499,541; gallons of fuel oil used, 714,542; gallons pumped by electricity, 20,498,362,500; kilowatt hours used, 3,627,040.

Quantities are based on plunger displacement and pump ratings, no allowance having been made for slip or condition of pump.

Running Time of Pumps.—No. 1-A, run 4,017 hours, 35 minutes; 1-B, run 546 hours, 10 minutes; 2-A, run 122 hours, 5 minutes; 2-B, run 296 hours, 10 minutes; 3, run 4,619 hours, 55 minutes; 4, run 3,205 hours, 5 minutes; 5, run 8,532 hours, 57 minutes.

Total gallons pumped in 1937	35,653,862,041
Daily average gallons pumped	97,681,814
Average dynamic head	39.2
Foot gallons, total	1,397,631,392,007
Foot pounds, total	11,696,777,119,703

Cost of Pumping for 1937 (Calf Pasture Pumping Station).

ITEMS.	Cost.	Cost per Million Foot Gallons.
Labor.....	\$97,348 14	\$0 06965
Edison power.....	42,340 12	0 03029
Fuel oil.....	25,732 95	0 01841
Oils and waste.....	1,198 91	0 00086
Rubber valves and packing.....	255 27	0 00019
Miscellaneous renewals and supplies.....	4,885 53	0 00349
Totals.....	\$171,760 92	\$0 12289
Labor at screens.....	10,824 60	0 00774
Cleaning pump wells.....	975 00	0 00070
Grand totals.....	\$183,560 52	\$0 13133

Refuse Removed from Filth Hoists.

MONTH.	Number of Cheeses.	Weight. (Pounds.)
January.....	84	20,244
February.....	93	22,413
March.....	188	45,308
April.....	157	37,837
May.....	175	42,175
June.....	124	29,884
July.....	85	20,485
August.....	101	24,341
September.....	94	22,654
October.....	90	21,690
November.....	105	25,305
December.....	125	30,125
Totals.....	1,421	342,461 = 171.23 tons.

Average 241 pounds to a cheese.

Sludge in Deposit Sewers.

	North Sewer. (Cubic Yards.)	South Sewer. (Cubic Yards.)	Total. (Cubic Yards.)
In deposit sewers January 1, 1937.....	2,072	1,396	3,468
Deposited during 1937.....	3,161	1,585	4,746
Removed during 1937.....	4,788	2,469	7,257
In sewers January 1, 1938.....	445	512	957

APPENDIX E.

 REPORT OF THE DIVISION ENGINEER OF
 THE WATER DIVISION.

BOSTON, January 2, 1938.

To the Commissioner of Public Works.

I respectfully submit the following report of the activities of the Water Division, operations and expenditures for the fiscal year ending December 31, 1937.

The Engineering Branch of the division was engaged in the extension and improvement of the distribution system, most of the work being performed by the W. P. A. forces under the general supervision of the division's regular engineering and inspection forces. Funds were supplied by the Federal Emergency Relief Administration for the labor used by the so called W. P. A. forces, and a very small amount of the material used on the work, and the funds of the Water Division were used to supply cast-iron pipe, specials, gates, hydrants, lead, boxes, etc.

A total of 52,014 linear feet of pipe were either laid or relaid, approximating about 10 miles, of which the W. P. A. forces performed 45,013 feet of pipe, approximating 8.52 miles, varying in size from 6-inch to 48-inch, inclusive, the remaining work being done by the department forces or private contractors engaged by the Water Division.

Twenty-one petitions were received for the extension of water mains throughout the city, and called for the laying of 3.82 miles of water pipe 8-inch and 12-inch in diameter.

482 petitions for service pipes were received during the year.

In districts the extension of water mains laid were:

City Proper	. . . . .	2,846 feet.	
East Boston	. . . . .	192 feet.	Long Island.
Dorchester	. . . . .	2,543 feet.	

South Boston	5,066 feet.
Charlestown	90 feet.
Brighton	1,285 feet.
West Roxbury	5,725 feet.
Hyde Park	2,424 feet.
	<hr/>
Total	20,171 feet, or 3.82 miles.

Of the above work, 13,992 feet or 2.65 miles, were laid by W. P. A. forces.

CITY PROPER.

Water pipes were laid in Huntington avenue, Falmouth and Clearway streets, Edgerly road and Boylston street, to connect 16-inch high service pipe in Massachusetts avenue, with the 20-inch high service main in Huntington avenue, thus giving added fire protection for the sprinkler systems in the theaters in the Massachusetts avenue district and to the Christian Science Publishing Society buildings.

The high service was extended in Hull street, North End, from Commercial to Salem streets, to supply high service fire sprinkler system that had been installed in the belfry tower of the "Old North Church."

SOUTH BOSTON.

About 5,000 linear feet of 8-inch and 12-inch water pipes were laid on account of the construction of the "Old Harbor Village Housing Project."

HYDE PARK, BRIGHTON, DORCHESTER, AND WEST ROXBURY.

Water pipes were extended in these districts to provide for new building construction and roadway construction.

The total length of water mains of sizes from 4-inch to 48-inch, inclusive, relaid or relocated was 31,843 linear feet, or 6.03 miles. Of this length 31,021 linear feet or 5.87 miles, was done by the W. P. A. forces.

In continuation of the policy of replacing older and smaller water mains with larger sizes for the improvement of fire protection in the more densely populated sections of the city, 30,195 feet, or 5.72 miles of 4-inch and 6-inch pipes laid fifty years or more ago, were replaced with 8-inch and 12-inch pipe. Of this relay work, 29,373 feet, or 5.56 miles, were performed by the W. P. A. forces.

In districts the older and smaller size mains were relaid with new and larger size mains, as follows:

City Proper	4,391 feet.
South Boston	444 feet.
Charlestown	572 feet.
Roxbury	2,734 feet.
Dorchester	4,928 feet.
Brighton	4,574 feet.
West Roxbury	5,664 feet.

Over 1,000 linear feet of 48-inch water main was relaid in a new location on account of the Commonwealth Avenue-Massachusetts Avenue Underpass. Approximately 700 feet of 24-inch water pipes were abandoned in Massachusetts avenue between Beacon street and Commonwealth avenue.

The work of relaying the 20-inch cement lined pipe in Medford street, Charlestown, with 24-inch cast-iron pipe, was completed during the year.

Considerable time was spent during the months of May, June and July, in conjunction with the State Board of Health and the Boston Board of Health, sampling and testing the water at various taps throughout the city, owing to the evidence of bacteria in the water, and as a result of this testing, the Metropolitan District Commission increased the amount of chlorine being injected into the water supplies feeding the Metropolitan area.

Quite a few complaints were received from water users on account of the disagreeable taste of the water, but by late September or early October the complaints subsided and at present no complaints are being received.

An investigation was made of the water supply to Deer Island during the year by F. A. Barbour.

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

A tremendous increase in the amount of work performed was occasioned by the laying out of new streets

with the resultant regulating of gate boxes, shut-off frames and covers, hydrants, services and the installation of new services on the relaying work by the W. P. A. forces. The machine shop and plumbing shop were forced to handle all the drilling and connecting of services occasioned by the above-mentioned forces, in addition to the regular work carried on in these shops, such as the assembling and machining of gates, valves and hydrants.

Respectfully submitted,

DANIEL M. SULLIVAN,
Division Engineer.

1937 — Financial Transactions — Water Division.

Balance after deducting expenditures of Water Income Division		\$4,406,545 72
Expenditures from revenue:		
Current expenses and extensions	\$1,031,255 23	
Metropolitan Water Assessments	3,282,200 75	
		<u>4,313,455 98</u>
		\$93,089 74
Expenditures on Debt Account:		
Payments on Boston water debt	\$34,000 00	
Payments on Hyde Park water debt,	16,000 00	
Payments on interest on water loans,	29,111 25	
		<u>79,111 25</u>
Balance for payment of Metropolitan Water Assessment,		<u>\$13,978 49</u>
Loan Account:		
Balance outstanding January 1, 1937,	\$943,000 00	
Paid during 1937:		
Account Boston water debt	\$34,000 00	
Account Hyde Park water debt	16,000 00	
Account P. W. A. loans No. 4214 and No. 7223	41,000 00	
		<u>91,000 00</u>
Balance outstanding December 31, 1937		<u>\$852,000 00</u>
Construction Account:		
Extension of mains (from revenue)		<u>\$225,844 56</u>
Cost of construction December 31, 1937	\$24,002,330 89	
Cost of construction December 31, 1936	23,776,486 33	
Increase in plant cost during 1937		<u>\$225,844 56</u>
Cost of existing works December 31, 1937:		
Pipe yards and buildings	\$94,832 16	
Engineering expenses	57,873 58	
Distribution system (additions 1937, \$225,844.56)	* 23,674,625 15	
Hyde Park water works	175,000 00	
		<u>\$24,002,330 89</u>
High Pressure Fire Service		† 2,293,316 75
Total cost		<u>\$26,295,647 64</u>

* Includes \$155,023.89 expended for High Pressure Fire Service in 1925, 1926, 1931, 1932, 1933.

† \$33,850.96 deducted from cost of High Pressure Fire Service on account of abolition of Battery Street Pumping Station.

Table No. I.
*Showing Length of Water Pipes and Connections Owned and Operated by the Public Works Department, Water Division, Water Service,
 and Number of Valves in Same, December 31, 1937.*

	DIAMETER OF PIPES IN INCHES.														Totals.		
	48.	42.	40.	36.	30.	24.	20.	16.	14.	12.	10.	8.	6.	4.		3.	2.
Length, owned and operated December 31, 1936.....	41,385	15,980	9,599	14,148	90,623	83,549	93,987	317,816	1,900	1,748,122	453,386	1,133,363	1,032,147	68,934	11,225	6,509	5,153,003
Gate valves in same.....	27	4	5	25	56	78	79	713	15	4,997	1,571	4,210	3,315	553	18	16	15,712
Air valves in same.....	61	5	10	35	113	80	53	100	1	162	40	205	144	68	15	2	526
Blow-offs in same.....	11	4	6	11	33	36	51	77	1	162	40	205	144	68	15	2	898
Length laid and relaid during 1937.....	1,018					6,180				29,720	166	18,138	369	16			55,633
Gate valves in same.....						3		6		109	9	98	12	1			240
Air valves in same.....	2					5		1		2							10
Blow-offs in same.....	1					1		1		2		11		1			16
Length abandoned during 1937.....	1,018				570	281	6,132		1,615	392	2,397	1,422	20,702	3,153			37,685
Gate valves in same.....	1				1	2	3		1	6	4	3	66	5			92
Air valves in same.....	3					1				1							4
Blow-offs in same.....							2							1			7
Length, owned and operated December 31, 1937.....	41,385	15,980	9,599	14,448	90,053	89,451	87,855	317,846	285	1,777,450	451,155	1,150,099	1,011,814	65,797	11,225	6,509	5,170,951
Gate in valves in same.....	26	4	5	25	55	81	76	749	14	5,100	1,576	4,305	3,261	549	18	16	15,860
Air valves in same.....	60	5	10	35	113	84	53	101	1	64	1	5			1		532
Blow-offs in same.....	11	5	6	11	33	37	52	77		163	40	213	144	68	15	2	877

975.34 miles in system.

Table No. II.

HIGH PRESSURE FIRE SERVICE.

Showing Length of Water Pipes, Connections, Hydrants and Valves in Same, December 31, 1937.

	20-Inch.	16-Inch.	12-Inch.	8-Inch.	6-Inch.	Totals.
Length owned and operated December 31, 1936.....	20,140	46,953	31,756	—	—	98,849
Gates in same.....	—	201	144	502	—	847
Blow-offs in same.....	—	—	—	—	6	6
Length laid in 1937.....	—	—	—	—	—	—
Gate valves in same.....	—	—	—	—	—	—
Length owned and operated December 31, 1937.....	20,140	46,953	31,756	—	—	98,849
Gate valves in same.....	—	201	144	502	—	847
Blow-offs in same.....	—	—	—	—	6	6
High-pressure fire hydrants.....	—	—	—	—	—	505

18.72 miles of mains in system.

Table No. III.

Total Number of Hydrants in System December 31, 1937.

	Lowly.	Boston Lowly.	Boston Post.	Ordinary Post.	Batchelder and Fineran Post.	Ludlow Post.	Chapman Post.	Coffin Post.	Matthews Post.	Boston.	Totals.
Brighton (public)	5	13	224	345	491					8	1,086
" (private)				8						2	10
Charlestown (public)	32	14	114	42	142					2	346
" (private)	13	1	2	37						5	58
City proper (public)	395	26	341	202	503					44	1,511
" (private)	5		9	1	2					37	54
Dorchester (public)	59	83	618	940	875					11	2,586
" (private)	1	1	9		2					4	17
East Boston (public)	11	7	154	179	186					5	542
" (private)	8	1	1	8						25	43
Hyde Park (public)			69	69	515	1	22	1			677
" (private)						13	55		4		72
Roxbury (public)	12	29	286	233	982					1	1,548
" (private)	2	1	3	4	2					9	21
South Boston (public)	56	14	175	166	244					14	669
" (private)	4	1	1	14	1					27	48
West Roxbury (public)	8	106	336	924	921					13	2,308
" (private)				15	1					1	17
Deer Island (private)			3	17							20
Gallup's Island (private)				3						1	4
Long Island (private)				6							6
Rainsford Island (private)				3							3
Thompson's Island (private)				2							2
Quincy				9							9
Total number (public)	578	292	2,317	3,100	4,859	1	22	1		98	11,268
Total number (private and suburban)	33	5	28	127	8	13	55		4	111	384

WATERWORKS STATISTICS, CITY OF BOSTON.
FOR THE FISCAL YEAR ENDING DECEMBER 31, 1937.
DISTRIBUTION.

Mains.

Kind of pipe: Cast iron, wrought iron, steel.
Size: 2-inch to 48-inch.
Extended, miles, 3.79.
Size enlarged, miles, 5.96.
Total miles now in use, 979.34.
Public hydrants added, 50.
Public hydrants now in use, 11,268.
Stop gates added, 148.
Stop gates now in use, 15,860.
Stop gates smaller than 4-inch, 34.
Number of blow-offs, 877.
Range of pressure on mains, 30 to 90 pounds.

Service.

Kind of pipe and size: Lead and lead lined, $\frac{1}{2}$ -inch to 2-inch; cast iron, 2-inch to 16-inch; wrought iron and cement lined, $\frac{3}{4}$ -inch to 2-inch; brass and copper, $\frac{5}{8}$ -inch to 2 $\frac{1}{2}$ -inch.
Service taps added, 131.
Total service taps now in use as per metered services, 104,908.

Cost of Abandoned Main Pipe.

STREET.	Location.	District.	Size (Inch).	Feet.	Cost of Department Materials, Etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Remarks.
Pemberton square.....	At old Court House.....	City Proper.	4	145	\$0 58	\$22 01	.....	\$22 59	Public, asphalt.
Auburn court.....	Between Cambridge street and dead end.	City Proper.	4	118	8 55	26 86	.....	35 41	Private, gravel.
			4	263	\$9 13	\$48 87	.....	\$58 00	
Ralston street.....	Between Old Colony avenue and New Ralston street.	South Boston.	10	975	.....	.....	.....	.....	On account Housing Project.
Massachusetts avenue.....	Between Beacon street and Commonwealth avenue.	City Proper.	{24 {30	230 570	.....	.....	.....	.....	Public, W. P. A.

Cost of Relocation of Main Pipe.

STREET.	Location.	District.	Size. (Inches).	Feet.	Cost of Department Materials, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	(Original Size) (Inches).	Feet.	Remarks.
Spectacle Island.....	Boston Harbor.....	East Boston.	6	90	\$24 23	\$550 39	.....	\$574 62	6	90	Private, gravel.
Garrison street.....	Between St. Botolph street and Huntington avenue.	City Proper.	8	18	\$79 86	.....	\$14 70	\$94 56	8	18	Public, W. P. A.
Conry Crescent.....	Between Pond and Rockwood streets.	West Roxbury.	8	244	41 77	\$448 27	91 39	581 43	8	244	Public, under construction, ledge.
Prospect street.....	At Moreland street.....	West Roxbury.	8	105	24 95	109 83	7 35	142 13	8	105	Private, gravel, ledge.
Cowing street.....	Between Washington and La Grange streets.	West Roxbury.	8	77	118 88	317 72	21 09	457 69	8	77	Public, ledge.
Alleyn street.....	Between Cowing street and Vershire road.	West Roxbury.	8	93	.....	.....	.....	.....	8	93	
			8	537	\$265 46	\$875 82	\$134 53	\$1,275 81	8	537	
West Newton street.....	At Huntington avenue.....	City Proper.	12	50	\$161 17	.....	\$31 24	\$192 41	12	50	Public, W. P. A.
Commonwealth avenue.....	Between Hereford street and Charlesgate East.	City Proper.	48	1,018	\$16,449 56	.....	\$350 04	\$16,799 60	48	1,018	Public, W. P. A.

Cost of Replacement of Main Pipe.

STREET.	Location.	District.	Size (Inches).	Feet.	Cost of Department Materials, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Original Size (Inches).	Feet.	Remarks.
Norwood street	At Conley street	Dorchester.	10	28	\$71 13		\$7 35	\$78 48	10	28	Public, W. P. A.
Rockne avenue	At Gallivan Boulevard	Dorchester.	10	25	75 91		7 35	83 26	10	25	Public, W. P. A.
Glenwood avenue	At Mattapan-Milton Highway.	Hyde Park.	{ 10 8	{ 94 34	516 92		14 70	526 62	{ 10 6	{ 53 45	Public, W. P. A.
Mariposa road	At Blake street	Hyde Park.	10	3	8 10			8 10	6	3	Public, W. P. A.
Wendell street	Between Freble and Hyde streets.	South Boston.	10	16	103 42		3 68	107 10	10	16	Public, W. P. A.
	Totals		{ 8 10	{ 34 166	\$770 48		\$33 08	\$803 56	{ 6 10	{ 48 122	
Parsons street	Between Washington and Surrey streets.	Brighton.	12	507	\$1,552 78		\$110 25	\$1,663 03	{ 6 8	{ 491 16	Public, W. P. A.
Hobart street	Between Falkland terrace and Kanelegh road.	Brighton.	12	745	2,143 15		173 64	2,316 79	6	745	Public, W. P. A.
Webster place	Between Stanley A. Ringer Playground and Armington street.	Brighton.	12	288	788 92		70 74	859 66	6	288	Private, W. P. A.
Griggs place	Between Stanley A. Ringer Playground and Allston street.	Brighton.	12	277	1,211 45		89 20	1,299 65	6	277	Private, W. P. A.
Armington street	Between Barrows and Isington streets.	Brighton.	12	312	1,413 53		102 90	1,516 43	6	312	Public, W. P. A.
Islington street	Between Armington street and Brighton avenue.	Brighton.	12	320	1,136 00		102 90	1,238 90	6	320	Public, W. P. A.

Waverly street.....	Between Western avenue and Duval street.	Brighton.	12	614	2,052 04	191 00	2,243 14	6	614	Public, W. P. A.
Pinckney street.....	Between Embankment road and Charles street.	City Proper.	12	131	594 60	69 83	664 43	6	131	Public, W. P. A.
Commonwealth avenue.	Between Massachusetts avenue and Charlesgate East.	City Proper.	12	786	3,303 82	117 60	3,421 42	6	786	Public, W. P. A.
Brimmer street.....	Between Beacon and Pinckney streets.	City Proper.	12	1,000				6	1,000	Public, W. P. A.
Otis place.....	At Brimmer street.....	City Proper.	8	5	5,133 04	264 60	5,397 64	8	5	Public, W. P. A.
Lime street.....	At Brimmer street.....	City Proper.	6	4				6	4	Public, W. P. A.
Beaver place.....	At Brimmer street.....	City Proper.	8	19				6	19	Public, W. P. A.
Rochester street.....	Between Harrison avenue and Albany street.	City Proper.	12	491	1,849 88	140 57	1,990 45	6	491	Public, W. P. A.
Conley street.....	Between Old Colony avenue and Tenean street.	Dorchester.	12	272	777 11	51 45	828 56	12	272	Public, W. P. A.
Lenoxdale avenue.....	At Gallivan Boulevard.....	Dorchester.	12	9	32 20	3 68	35 88	8	9	Public, W. P. A.
Gallivan Boulevard.....	Between Crockett street and Granite avenue.	Dorchester.	12	596	2,044 19	110 25	2,154 44	8	596	Public, W. P. A.
Carruth street.....	Between Verdun and Ashmont streets.	Dorchester.	12	1,322				6	1,322	Public, W. P. A.
Elmer road.....	At Carruth street.....	Dorchester.	12	4	4,805 55	313 58	5,119 13	12	4	Public, W. P. A.
Ashmont street.....	At Carruth street.....	Dorchester.	12	7				12	7	Public, W. P. A.
Bruce street.....	Between Wrentham and Ashmont streets.	Dorchester.	12	541	1,856 31	97 39	1,953 70	6	541	Public, W. P. A.
Tyler street.....	At Mattapan-Milton Highway.	Dorchester.	12	44	226 54		226 54	12	44	Public, W. P. A.
Mattapan-Milton Highway.	Between Dana avenue and Milton line.	Dorchester.	12	2,853	7,457 49	588 00	8,045 49	10	1,300	State Highway, W. P. A.
								14	1,615	

Cost of Replacement of Main Pipe.—Continued.

STREET.	Location.	District.	Size (Inches.)	Feet.	Cost of Depart- ment Materials, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Original Size (Inches.)	Feet.	Remarks.
Dana avenue.....	At Loring street.....	Dorchester.	12	67	\$542 45	.....	\$2 76	\$545 21	6	67	Public, W. P. A.
Loring street.....	Between Garfield and Williams avenues.	Dorchester.	12	1,166	3,610 28	.....	255 42	3,865 70	4	1,166	Public, W. P. A.
Highland street.....	Between Williams and Fair- mount avenues.	Dorchester.	12	575	1,776 94	.....	132 30	1,909 24	6	575	Public, W. P. A.
Pond street.....	Highland street.....	Dorchester.	{ 6 8	{ 17 7	.....	.....	.....	.....	6	24	.....
Williams avenue.....	Between Loring and Highland streets.	Dorchester.	{ 8 12	{ 62 298	1,173 79	.....	80 85	1,254 64	6	360	Public, W. P. A.
Floral place.....	At Williams avenue.....	Dorchester.	6	26	.....	.....	.....	.....	4	26	.....
Tileston street.....	Between Mercer street and Radcliffe road.	Dorchester.	12	241	1,013 97	.....	55 13	1,069 10	6	241	Public, W. P. A.
Radcliffe road.....	Between Tileston street and Taunton avenue.	Dorchester.	12	342	1,377 88	.....	91 88	1,469 76	6	342	Public, W. P. A.
Taunton avenue.....	Between Radcliffe road and Blake street.	Dorchester.	12	225	955 90	.....	53 29	1,009 19	6	225	Public, W. P. A.
Blake street.....	Between Taunton avenue and Ridion road.	Dorchester.	{ 8 12	{ 193 364	1,849 79	.....	145 16	1,994 95	6	557	Public, W. P. A.
Waumbeck street.....	Between Humboldt avenue and Warren street.	Roxbury.	12	971	.....	.....	.....	.....	6	971	Public, W. P. A.
Wabeno street.....	From Waumbeck street.....	Roxbury.	{ 8 6	{ 14 5	3,213 47	.....	314 70	3,528 17	6	19	Public, W. P. A.
Wenonah street.....	From Waumbeck street.....	Roxbury.	8	7	.....	.....	.....	.....	6	7	Public, W. P. A.

Chestnut avenue.....	Between Centre and Hoffman streets.	Roxbury.	12	862	3,285 14	.....	143 33	3,428 47	6	862	Public, W. P. A.
Ralston street.....	Between Dorchester avenue and Kemp street.	South Boston.	12	176	679 55	.....	36 75	716 30	6	176	Public, W. P. A.
Kemp street.....	Between Dorchester avenue and Wakefield street.	South Boston.	12	268	828 65	.....	34 94	863 59	6	268	Public, W. P. A.
Green street.....	At Woolsey square.....	West Roxbury.	12	15	88 52	.....	3 68	92 20	12	15	Public, W. P. A.
Seaverns avenue.....	Between Elm and Alfred streets.	West Roxbury.	12	732	2,049 46	.....	104 73	2,154 19	6	732	Public, W. P. A.
Hawthorne street.....	At Sherman street.....	West Roxbury.	12	24	61 12	\$32 60	.....	93 72	8	24	Private, peat bog bottom.
Sheridan street.....	Between Centre street and Chestnut avenue.	West Roxbury.	12	1,593	6,878 50	.....	417 12	7,295 62	6	1,593	Public, W. P. A.
	Totals.....		{ 6 8 12	{ 52 307 19,038	\$67,794 01	\$32 60	\$4,468 72	\$72,265 33	{ 4 6 8 10 12 14	{ 1,192 14,390 680 1,300 342 1,615	
Massachusetts avenue.	Between Commonwealth avenue and Newbury street.	City Proper.	24	54	\$196 88	.....	\$14 70	\$211 58	24	54	Public, W. P. A.
Medford street.....	Between Chelsea and Main streets.	Charlestown.	24	5,553	59,329 24	.....	2,296 28	61,625 52	{ 20	5,552	Public, W. P. A.
Main street.....	Between Medford and Cambridge streets.	Charlestown.	24	579	.....	.....	.....	.....	20	579	Public, W. P. A.
	Totals.....		24	6,186	\$59,526 12	.....	\$2,310 98	\$61,837 10	{ 20 24	{ 6,132 54	
Lothrop street.....	Between Portsmouth and Market streets.	Brighton.	8	584	\$1,545 84	.....	\$154 35	\$1,700 19	6	584	Public, W. P. A.
Portsmouth street...	Between Lincoln and Waverly streets.	Brighton.	8	855	2,324 04	.....	183 75	2,507 79	6	855	Public, W. P. A.

Cost of Replacement of Main Pipe.—Concluded.

Street.	Location.	District.	Size (Inches).	Feet.	Cost of Department Materials, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Original Size (Inches).	Feet.	Remarks.
Byron street	Between Brimmer and River streets.	City Proper.	8	413	\$902 30	.....	\$80 85	\$983 15	6	413	Private, W. P. A.
Walnut street	Between Mt. Vernon and Beacon streets.	City Proper.	8	461	1,037 27	.....	129 55	1,166 82	6	461	Public, W. P. A.
Front street	Between Mason and Austin streets.	Charlestown.	8	177	140 60	.....	31 24	171 84	8	177	Public, W. P. A.
Myrtlebank avenue	At Gullivan Boulevard	Dorchester.	8	28	81 83	.....	7 35	89 18	8	28	Public, W. P. A.
Minot street	At Carruth street	Dorchester.	8	20	73 68	.....	7 35	81 03	6	20	Public, W. P. A.
Fairfax street	At Carruth street	Dorchester.	8	18	70 90	.....	5 52	76 42	6	18	Public, W. P. A.
Beaumont street	At Carruth street	Dorchester.	8	20	66 55	.....	3 68	70 23	6	20	Public, W. P. A.
Radford lane	At Carruth street	Dorchester.	8	33	136 48	.....	7 35	143 83	6	33	Public, W. P. A.
Van Winkle street	At Carruth street	Dorchester.	8	33	110 93	.....	7 35	118 28	6	33	Public, W. P. A.
Rowena street	At Carruth street	Dorchester.	8	34	81 99	.....	5 52	87 51	6	34	Public, W. P. A.
Lombard street	At Carruth street	Dorchester.	8	32	108 13	.....	3 68	111 81	6	32	Public, W. P. A.
Dracut street	From Bruce street	Dorchester.	8	38	101 29	.....	7 35	108 64	6	38	Public, W. P. A.
Cottage street	At Mattapan-Milton Highway.	Hyde Park.	8	56	350 68	.....	14 70	365 38	6	56	Private, W. P. A.
Foster street	At Mattapan-Milton Highway.	Hyde Park.	8	30	129 69	.....	1 84	131 53	8	30	Public, W. P. A.
Garfield street	At Mattapan-Milton Highway.	Hyde Park.	8	131	408 00	.....	88 20	496 29	6	131	Public, W. P. A.

Warren avenue.....	Between Beacon street and Neponset river.	Hyde Park.	8	328	665 87	88 20	754 07	4	328	Public, W. P. A.
Neponset avenue.....	At Loring street.....	Hyde Park.	8	45	175 36		175 36	6	45	Public, W. P. A.
George street.....	At Danbury road.....	Hyde Park.	8	78	235 66	\$150 12	417 42	4	78	Public, gravel.
Dell avenue.....	Between Central and Hyde Park avenues.	Hyde Park.	8	714	2,008 90	235 20	2,244 10	4	714	Public, W. P. A.
Ridlen road.....	Between Greenfield and Blake streets.	Hyde Park.	8	580	1,795 74	209 48	2,005 22	6	580	Public, W. P. A.
Grotto Glen road.....	Between Day street and dead end.	Roxbury.	8	289	762 76		762 76	6	289	Public, W. P. A.
Lambert street.....	Between Highland street and Lambert avenue.	Roxbury.	8	658	1,446 72		1,638 74	6	658	Public, W. P. A.
Rockville park.....	From Warren street to dead end.	Roxbury.	8	578	1,978 94		2,201 28	4	578	Public, W. P. A.
Hoffman street.....	At Chestnut avenue.....	Roxbury.	8	34	131 26		134 94	6	34	Public, W. P. A.
Armstrong street.....	Between Chestnut avenue and Mozart street.	Roxbury.	8	535	1,212 82		1,293 67	6	535	Public, W. P. A.
Call street.....	Between Gordon and Bishop streets.	West Roxbury.	8	74	336 26		346 37	6	74	Public, W. P. A.
Gordon street.....	Between Call and Everett streets.	West Roxbury.	{ 8 12	{ 297 35	989 30		1,053 61	6	332	Public, W. P. A.
Starr lane.....	Between Seaverns avenue and Centre street.	West Roxbury.	8	735	1,768 31		1,896 93	6	735	Private, W. P. A.
School Street place.....	Between School and Cleaves streets.	West Roxbury.	8	194	480 53	257 00	737 53	6	194	Private, gravel.
Totals.....			{ 8 12	{ 8,102 35	\$21,658 72	\$616 60	\$24,071 92	{ 4 6 8	{ 1,698 6,204 235	

Cost of Extension of Main Pipe.

STREET.	Location.	District.	Size (Inches).	Feet.	Cost of Department Materials, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Remarks.
Sheridan place	From Sheridan street	West Roxbury.	4	16	\$115 15	.....	\$3 68	\$118 83	Private, W. P. A.
Salem street	At Old North Church	City Proper.	6	23	\$64 85	\$111 25	.....	\$176 10	Public, artificial stone.
Long Island	At Fort Strong Reservation	East Boston.	6	192	242 09	71 00	.....	313 09	United States Government property.
	Totals	.....	6	215	\$306 94	\$182 25	.....	\$489 19	
Eatonia street	Between North Harvard and Sorrento streets.	Brighton.	8	327	\$405 50	.....	\$73 50	\$479 00	Private, W. P. A.
Colon street	Between Warren and Gordon streets.	Brighton.	8	557	927 90	.....	139 65	1,067 55	Private, W. P. A.
Oakland avenue	At Malbert place	Brighton.	8	17	138 79	\$64 06	3 68	206 53	Private, ledge.
Malbert road	Between Washington street and Oakland avenue.	Brighton.	8	176	208 84	332 83	113 92	655 59	Private, clay, ledge.
Huntington avenue	Between West Newton and Norway streets.	City Proper.	8	235	1,144 07	.....	36 75	1,180 82	Public, W. P. A.
Charles River avenue	From Water street	Charlestown.	8	90	689 07	212 03	.....	901 10	Public, granite block, concrete base.
Victoria road	Between Gallivan Boulevard and St. Brendan road.	Dorchester.	8	297	692 82	.....	62 48	755 30	Private, W. P. A.
Clearwater Drive	Between Morton and Beatrice streets.	Dorchester.	8	448	516 59	220 77	47 78	785 14	Private, gravel.
Ridlon road	Between Cummins Highway and Ruxton road.	Dorchester.	8	84	409 40	.....	43 50	452 90	Public, W. P. A.

Bellevue street.....	Between Hamilton and Barry streets.	Dorchester.	8	425	951 88	197 50	1,147 58	Public, W. P. A.
Mattapan-Milton Highway.	Easterly southwest to land of R. C. Grew.	Hyde Park.	8	76	149 61	7 35	156 96	State Highway, W. P. A.
Haszard street.....	Between Dana avenue and Milton line.	Hyde Park.	8	603	7,194 39	126 78	1,321 17	Private, W. P. A.
Ruskin road.....	Between Tacoma street and Farrar avenue.	Hyde Park.	8	253	427 91	47 77	794 43	Private, clay, ledge.
Farrar avenue.....	Between Ruskin road and dead end.	Hyde Park.	8	204	483 33	23 88	988 75	Private, clay, ledge.
Ruskindale road.....	Between Blake street and Wood avenue.	Hyde Park.	8	238	1,167 01	43 50	1,210 51	Private, W. P. A.
Wesley street.....	Between Preble and Hyde streets.	South Boston.	8	28	87 74	3 68	91 42	Public, W. P. A.
Carpenter street.....	Between Preble and Hyde streets.	South Boston.	8	25	287 22	3 68	290 90	Public, W. P. A.
Rogers street.....	Between Preble and Hyde streets.	South Boston.	8	17	116 27	7 35	123 62	Public, W. P. A.
Bronx road.....	Between Ashland avenue and Ansonia road.	West Roxbury.	6 8	12 259	662 09	64 31	726 40	Private, W. P. A.
Woodard road.....	Between Park and Wren streets.	West Roxbury.	8	193	453 98	34 91	488 89	Public, W. P. A.
Woolsey square.....	Between Green and Gordon streets.	West Roxbury.	8	221	377 86	51 45	429 34	Private, W. P. A.
Southbourne road.....	Between Bourne street and Eastbourne road.	West Roxbury.	8	201	286 01	22 05	448 76	Private, gravel.
Eastbourne road.....	At Southbourne road.....	West Roxbury.	8	91	272 39	12 86	356 22	Private, gravel.
Chellman road.....	Between Veterans of Foreign Wars Highway and Lasell street.	West Roxbury.	8	466	764 49	29 40	1,125 19	Private, sandy clay.

Cost of Extension of Main Pipe.—Continued.

STREET.	Location.	District.	Size. (Inches.)	Feet.	Cost of Department Materials, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Remarks.
Rosindale avenue.....	At East Border road.....	West Roxbury.	8	17	\$40 75	\$11 90	\$1 84	\$54 49	Public, clay.
Cutlibert road.....	Between Bellevue street and dead end.	West Roxbury.	8	235	490 49	186 53	34 91	711 93	Private, clay.
Celia road.....	Between Bellevue street and dead end.	West Roxbury.	8	238	485 74	176 61	20 21	682 56	Private, clay.
Danbury road.....	Between Wood avenue and George street.	West Roxbury.	8	379	564 26	422 08	31 64	1,017 98	Private boulders, gravel.
Veterans of Foreign Wars Parkway.	Between Bonair and Worley streets.	West Roxbury.	8	290	682 59	212 64	22 05	917 28	Metropolitan District Commission lands.
Bonair street.....	Between Veterans of Foreign Wars Parkway and Ad-dington road.	West Roxbury.	8	420	892 47	272 62	34 07	1,199 16	Private, sandy clay.
Prospect street.....	At Moreland street.....	West Roxbury.	8	33	105 57	20 46	3 68	129 71	Private, clay.
Moreland street.....	Between Spring and Prospect streets.	West Roxbury.	8	365	611 43	282 66	58 80	952 89	Private, clay, ledge.
Eastbourne road.....	North and south of South-bourne road.	West Roxbury.	8	351					
Woodbourne road.....	From Eastbourne road.....	West Roxbury.	8	120	1,211 40	411 88	58 80	1,682 08	Private, gravel.
Bourne road.....	From Eastbourne road.....	West Roxbury.	8	59					
Mansur street.....	From Metropolitan avenue...	West Roxbury.	8	180	392 53	292 91	40 42	725 86	Private, clay, ledge.
Bradford Circle.....	Between South street and dead end.	West Roxbury.	8	219	688 26	402 19	44 55	1,135 00	Private, clay, ledge.
Crechore road.....	Between Hackensack and Le-land roads.	West Roxbury.	8	275	612 84	1,020 24	135 05	1,768 13	Private, clay, ledge.
Hobson street.....	Between East Border road and Beech street.	West Roxbury.	8	283	533 87	417 07	12 78	963 72	Private, wet clay, sand.

Wright street.....	From Hawthorne street.....	West Roxbury.	8	13	55 63	8 33	32 00	95 96	Private, peat bog bottom.
Eastbourne road.....	Between Bourne street and Bourne road.	West Roxbury.	8	160	340 01	238 15	31 64	609 83	Private, gravel, ledge.
	Totals.....		{ 6 8	{ 12 9,178	\$20,523 06	\$6,549 22	\$1,758 37	\$28,830 65	
Stanley A. Ringer Play-ground.	Between Griggs place and Webster street.	Brighton.	12	187	\$516 68	.....	\$22 05	\$538 73	Park Department, play-ground, W. P. A.
West Newton street.....	Between Huntington avenue and Falmouth street.	City Proper.	12	55	406 61	.....	22 05	128 66	Public, W. P. A.
Hull street.....	Between Commercial and Salem streets.	City Proper.	12	853	4,725 91	.....	555 98	5,281 89	Public, W. P. A.
Falmouth street.....	Between Belvidere and Dalton streets.	City Proper.	12	445	2,684 79	.....	164 46	2,849 25	Public, W. P. A.
Clearway street.....	Between Falmouth street and Massachusetts avenue.	City Proper.	12	617	2,071 01	.....	105 66	2,176 67	Public, W. P. A.
Edgerly road.....	Between Burbank and Norway streets.	City Proper.	12	319	.....	.....	.....	.....	.....
Burbank street.....	At Edgerly road.....	City Proper.	12	40	1,976 58	.....	100 15	2,076 73	Public, W. P. A.
Norway street.....	At Edgerly road.....	City Proper.	12	27	.....	.....	.....	.....	.....
Boylston street.....	Between Clarendon and Dartmouth streets.	City Proper.	12	244	1,114 13	.....	\$2 69	1,196 82	Public, W. P. A.
St. Brendan road.....	Between Galhvan Boulevard and Milton street.	Dorchester.	12	739	1,804 42	.....	147 00	1,951 42	Public, W. P. A.
Dorchester Park.....	Between Adams and Richview streets.	Dorchester.	12	639	1,920 99	.....	584 33	2,505 32	Park Department property.
Mattapan-Milton Highway.	From pipe line to former Pumping Station.	Hyde Park.	12	76	235 67	.....	7 35	243 02	State Highway, W. P. A.
Williams avenue.....	Between Prospect street and Milton line.	Hyde Park.	12	106	601 13	.....	31 23	632 36	Public, W. P. A.
Mattapan-Milton Highway.	At Metropolitan avenue.....	Hyde Park.	12	94	259 03	.....	7 35	266 38	State Highway, W. P. A.
Hyde street.....	Between Dorchester and Old Colony avenues.	South Boston.	12	1,141	3,492 64	.....	130 46	3,623 10	Public, W. P. A.

Cost of Extension of Main Pipe.—Concluded.

Street.	Location.	District.	Size (Inches.)	Feet.	Cost of Depart- ment Materials, etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Remarks.
Ralston street.....	Between Dorchester avenue and Kemp street.	South Boston.	12	270	\$565 84	.....	\$58 80	\$624 64	Public, W. P. A.
Kemp street.....	Between Dorchester avenue and Wakefield street.	South Boston.	12	144	490 87	.....	7 35	498 22	Public, W. P. A.
Mohawk street.....	Between Hyde street and Old Colony avenue.	South Boston.	12	1,065	3,603 71	.....	208 56	3,812 27	Public, W. P. A.
Needham street.....	Between Wakefield street and Old Colony avenue.	South Boston.	12	689	2,216 08	.....	134 14	2,350 22	Public, W. P. A.
Wakefield street.....	Between Mohawk street and Old Colony avenue.	South Boston.	12	1,744	5,589 91	.....	218 66	5,808 57	Public, W. P. A.
Partridge street.....	Between Cowing and Spar- row streets.	West Roxbury	12	96	272 28	\$391 05	69 82	733 15	Private, clay, rock.
East Border road.....	Between Orange street and Nikish avenue.	West Roxbury.	12	546	1,242 65	446 76	64 31	1,753 72	Public, Metropolitan District Commission.
Morey road.....	Between Gretter road and dead end.	West Roxbury.	12	183	1,131 89	.....	23 88	1,155 77	Private, W. P. A.
Sherman street.....	From Hawthorne street.....	West Roxbury.	12	41	255 85	83 87	.....	339 72	Private, peat bog bottom.
Hawthorne street.....	Between Sherman and Heath- cote streets.	West Roxbury.	12	237	819 20	297 32	.....	1,116 52	Public, under cut.
	Totals.....	.....	12	10,597	\$37,947 87	\$1,219 00	\$2,746 28	\$41,963 15	

APPENDIX F.

REPORT OF THE DIVISION ENGINEER OF
THE WATER INCOME DIVISION.

BOSTON, January 2, 1938.

To the Commissioner of Public Works:

I respectfully submit data and tables showing the activities of the Water Income Division for the year ending December 31, 1937.

Yours respectfully,

JAMES A. McMURRY,
Division Engineer.

Financial Transactions, Water Income Division.

Revenues:					
Receipts for water	.	.	.	.	\$4,608,157 09
All other receipts	.	.	.	.	67,760 39
					<hr/>
Total receipts	.	.	.	.	\$4,675,917 48
Transfer from appropriation for City Hospital to cover deficit	.	.	.	.	68,377 76
					<hr/>
Total receipts and credits	.	.	.	.	\$4,744,295 24
Expenditures from revenue:					
Current expenses, Water Income Division	.	.	.	.	\$238,065 32
Refunded water rates	.	.	.	.	3,591 96
Transfer to Collecting Department appropriation	.	.	.	.	96,092 24
					<hr/>
Total	.	.	.	.	337,749 52
Balance available for other water purposes	.	.	.	.	\$4,406,545 72
					<hr/> <hr/>

Shutting Off and Turning On of Water in 1937.

Number of shut-offs for repairs	4,543
Number of premises turned on after repairs	4,431
Number of shut-offs for vacancy	1,250
Number of premises turned on for occupancy	1,149
Number of shut-offs for nonpayment of water rates, Number of premises turned on again after being shut off for nonpayment	277
Number of premises shut off on account of waste	136
Number of premises shut off on account of waste	107
Number of premises turned on again after being shut off for waste	276
Number of new service pipes turned on for first time	262
Total number of times water was shut off or turned on	<u>12,431</u>

**Statement of Each Year's Water Rates, 1912 to 1937, Inclusive,
as of December 31, 1937.**

ACCOUNT OF YEAR.	Amount Assessed.	Amount Abated.	Amount Collected.	Amount Outstanding.
1912	\$3,001,771 87	\$58,369 39	\$2,943,402 48	
1913	3,004,331 52	50,147 90	2,954,183 62	
1914	3,034,885 83	64,653 01	2,970,232 82	
1915	2,960,797 45	57,782 09	2,903,015 36	
1916	3,130,590 53	67,771 69	3,062,818 84	
1917	3,120,878 86	77,353 75	3,043,525 11	
1918	3,359,714 95	162,415 52	3,197,299 43	
1919	3,210,147 91	95,812 76	3,114,335 15	
1920	3,503,677 88	123,509 90	3,380,167 98	
1921	3,615,663 51	90,946 23	3,524,717 28	
1922	3,612,715 51	90,453 27	3,522,262 24	
1923	3,817,642 72	77,449 02	3,740,193 70	
1924	3,832,531 26	43,678 41	3,783,363 20	\$5,489 65
1925	3,875,434 21	39,084 94	3,829,117 89	7,231 38
1926	3,910,119 54	44,694 94	* 3,858,340 96	7,083 54
1927	3,979,153 63	44,181 22	* 3,917,939 81	17,032 60
1928	4,418,039 84	37,801 18	* 4,371,386 13	8,852 53
1929	5,018,524 39	44,929 23	4,958,825 23	14,769 93
1930	4,864,180 27	44,240 85	* 4,800,542 49	19,396 93
1931	4,749,546 18	45,719 43	* 4,674,102 44	29,724 31
1932	4,611,461 41	37,467 69	* 4,530,338 70	43,655 02
1933	4,572,539 96	34,802 86	* 4,450,150 17	87,586 93
1934	4,703,863 07	50,278 74	* 4,514,278 16	139,306 17
1935	4,630,717 54	44,744 67	* 4,346,177 54	239,795 33
1936	4,671,698 72	24,173 14	* 4,175,617 47	471,908 11
1937	4,717,045 05	10,913 81	2,931,385 33	1,774,745 91
Total outstanding water rates December 31, 1937.....				\$2,866,578 34

* Include Water Collections in Tax Possessions Accounts.

WATER METER DIVISION.

Table No. 1. Statement of Work Done During the Year 1937.

MAKE.	Applied.	Discontinued.	METERS CHANGED.		Tested.	Repaired in Service.	Repaired in Shop.	Resets.
			Out.	In.				
Hersey disc.....	183	150	3,815	4,164	6,150	1,288	4,702	303
Worthington disc.....	13	16	796	351	1,116	130	361	14
Watch dog.....	158	59	2,058	2,330	3,059	269	2,017	145
King.....	22	2	535	525	978	272	13	18
Federal.....	1	.....	34	2	30	20	2	
American.....	1	4	103	72	112	19	17	7
Lambert.....	1	1	24	.....	25	21	1	1
Crown.....	.....	.....	30	.....	19	27		
Trident.....	3	2	14	16	24	29	1	
Hersey rotary.....	.....	2	11	.....	12	55		
Arctic.....	2	.....	.....	2	2	7	1	
Nash.....	.....	1	36	1	31	39		
Detector.....	3	.....	.....	.....	3	68		
Keystone.....	.....	.....	7	.....	7			
Empire.....	.....	1	.....	.....		
Totals.....	387	238	7,463	7,463	11,568	2,244	7,115	489

Table No. 2. Meters in Service December 31, 1937.

MAKE.	DIAMETER IN INCHES.											Totals.
	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{2}$	2	3	4	6	8	10	12	
Hersey disc.....	53,259	3,643	1,775	939	386	160	119	32	1	.....	.....	60,314
Worthington disc.....	7,353	25	32	31	49	13	.....	.....	.....	.....	.....	7,503
Watch dog.....	22,492	1,031	1,068	736	444	371	85	.....	.....	.....	.....	26,227
King.....	2,445	230	.....	35	45	.....	.....	.....	.....	.....	.....	2,755
Federal.....	689	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	689
American.....	695	262	20	.....	.....	.....	.....	.....	.....	.....	.....	977
Lambert.....	224	75	49	.....	12	.....	2	.....	.....	.....	.....	362
Crown.....	198	312	48	64	76	23	.....	6	.....	.....	.....	727
Trident.....	132	1	6	1	12	20	15	1	1	2	.....	191
Hersey rotary.....	329	234	132	101	183	53	21	15	.....	.....	.....	1,068
Keystone.....	145	141	.....	6	3	.....	.....	.....	.....	.....	.....	295
Arctic.....	.....	.....	.....	23	20	20	10	.....	.....	.....	.....	73
Empire.....	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18
Nash.....	89	238	19	2	6	.....	.....	.....	.....	.....	.....	354
Hersey detector.....	.....	.....	.....	.....	.....	4	49	63	35	26	5	182
Hersey compound.....	.....	.....	.....	.....	.....	1	9	12	.....	.....	.....	22
Totals.....	88,068	6,192	3,149	1,938	1,236	665	310	129	37	28	5	101,757

Table No. 3. Meters in Shop December 31, 1937.

MAKE.	DIAMETER IN INCHES.										Totals.
	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{2}$	2	3	4	6	12		
King.....	2,214	12	.....	.....	.....	.....	.....	.....	.....	.....	2,226
Trident.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	3
Hersey detector.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	2
Hersey disc.....	35	.....	1	.....	.....	3	1	1	.....	.....	41
Watch dog.....	46	.....	4	.....	1	7	2	.....	.....	.....	60
Worthington disc.....	9	.....	.....	.....	.....	1	.....	.....	.....	.....	10
Arctic.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Totals.....	2,304	12	5	.....	1	14	5	1	1	.....	2,343

Table No. 4. Meters Purchased in 1937.

MAKE.	DIAMETER IN INCHES.								Totals.
	$\frac{3}{8}$	$\frac{1}{2}$	1	1 $\frac{1}{2}$	2	3	4	6	
Detector							3	2	5
Trident					6				6
King	1,250	50	50	20	17	20	5		1,412
Watch dog		30	30	16	20	35	10		141
Totals	1,250	80	80	36	43	55	18	2	1,564

Table No. 5. Meters Reset.

MAKE.	DIAMETER IN INCHES.							Totals.	Occupied.	Connection Pieces.
	$\frac{3}{8}$	$\frac{1}{2}$	1	1 $\frac{1}{2}$	2	3	4			
Hersey disc	270	15	10	6	1		1	303	122	181
Worthington disc	13		1					14	5	9
Watch dog	122	6	7	3	6	1		145	70	75
King	9	1	3	4	1			18	8	10
American	7							7	4	3
Lambert	1							1	1	
Hersey detector							1	1	1	
Totals	422	22	21	13	8	1	2	489	211	278

Table No. 6. Meters Repaired in Service.

MAKE.	Defaced.	Clock Broken.	Spindle Leak.	Coupling Leak.	Stoppage.	Miscellaneous.	Totals.
Hersey disc.....	214	80	544	267	72	111	1,288
Worthington disc.....	9	5	77	30	1	8	130
Watch dog.....	22	16	219	7	1	4	269
King.....	4	8	211	40	.....	9	272
Federal.....	1	1	5	7	.....	6	20
American.....	3	.....	9	4	1	2	19
Lambert.....	.....	4	2	4	2	9	21
Crown.....	3	13	.....	4	3	4	27
Trident.....	2	2	4	11	5	5	29
Hersey rotary.....	7	9	.....	14	11	14	55
Nash.....	5	7	.....	7	8	12	39
Arctic.....	2	3	.....	.....	.....	2	7
Hersey detector.....	21	19	.....	.....	13	15	68
Totals.....	293	167	1,071	395	117	201	2,244

Table No. 7. Meters Changed in Year 1937.

MAKE.	METERS OUT. DIAMETER IN INCHES.						Totals	METERS IN. DIAMETER IN INCHES.						Totals				
	½	1	1½	2	3	4		6	½	1	1½	2	3		4	6		
Hersey disc.....	3,229	296	152	78	34	17	8	1	3,815	3,668	269	129	55	24	10	8	1	4,164
Watch dog.....	1,693	91	137	71	30	24	5	.....	2,051	1,906	135	136	82	40	25	6	.....	2,330
Worthington disc.....	781	12	.....	1	1	1	.....	.....	796	346	5	.....	.....	.....	.....	.....	.....	351
King.....	495	18	15	7	.....	.....	.....	.....	535	410	74	.....	18	23	.....	.....	.....	525
American.....	72	31	.....	.....	.....	.....	.....	.....	103	34	18	20	.....	.....	.....	.....	.....	72
Lambert.....	7	9	6	1	.....	.....	1	.....	24	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crown.....	9	3	6	2	10	.....	.....	.....	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trident.....	10	2	.....	.....	1	1	.....	.....	14	1	.....	.....	.....	12	3	.....	.....	16
Federal.....	34	.....	.....	.....	.....	.....	.....	.....	34	2	.....	.....	.....	.....	.....	.....	.....	2
Nash.....	23	6	4	3	.....	.....	.....	.....	36	.....	.....	.....	1	.....	.....	.....	.....	1
Keystone.....	3	1	2	1	.....	.....	.....	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hersey rotary.....	1	5	4	1	.....	.....	.....	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arctic.....	.....	.....	.....	2	1	1	.....	.....	4	.....	.....	.....	.....	2	.....	.....	.....	2
Hersey compound.....	.....	.....	.....	.....	.....	.....	2	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	6,357	474	326	167	76	44	17	2	7,463	6,367	501	285	156	89	47	17	1	7,463

Table No. 8. Causes for Meter Changes.

MAKE.	Tested.	Don't Register.	No Force.	Enlarged.	Spindle Leak.	Coupling Leak.	Frost.	Set Backwards.	Defaced.	Totals.
Hersey disc.....	181	979	51	26	1,575	643	280	26	54	3,815
Watch dog.....	9	1,347	5	5	214	366	84	5	16	2,051
Worthington disc.....	46	477	5	7	189	11	55	3	3	796
King.....	2	86	14	1	315	9	97	2	9	535
American.....	4	63	8	.....	9	12	5	1	1	103
Lambert.....	1	12	7	.....	.....	4	.....	.....	.....	24
Crown.....	1	11	5	1	.....	7	3	.....	2	30
Trident.....	3	3	.....	.....	.....	8	.....	.....	.....	14
Federal.....	5	26	3	.....	.....	.....	.....	.....	.....	34
Nash.....	2	23	1	2	.....	4	2	.....	2	36
Keystone.....	.....	2	5	.....	.....	.....	.....	.....	.....	7
Hersey rotary.....	2	5	2	.....	.....	2	.....	.....	.....	11
Arctic.....	.....	4	.....	.....	.....	.....	.....	.....	.....	4
Hersey compound.....	.....	3	.....	.....	.....	.....	.....	.....	.....	3
Totals.....	256	3,041	106	42	2,302	1,066	526	37	87	7,463

Table No. 9. Meters Applied in 1937.

MAKE.	DIAMETER IN INCHES.								Totals.
	$\frac{1}{8}$	$\frac{1}{4}$	1	1 $\frac{1}{2}$	2	3	4	6	
Hersey disc.....	110	16	15	17	12	8	3	2	183
Worthington disc.....	12	.....	.....	1	.....	.....	.....	.....	13
Watch dog.....	77	6	14	9	12	34	6	.....	158
King.....	6	.....	3	4	9	.....	.....	.....	22
American.....	1	.....	.....	.....	.....	.....	.....	.....	1
Arctic.....	.....	.....	.....	.....	1	1	.....	.....	2
Hersey detector.....	.....	.....	.....	.....	.....	.....	1	2	3
Federal.....	.....	.....	.....	.....	1	.....	.....	.....	1
Trident.....	.....	.....	.....	.....	.....	1	2	.....	3
Lambert.....	.....	.....	.....	.....	.....	.....	1	.....	1
Totals.....	206	22	32	31	35	44	13	4	387

Applied on old services	36
Applied on new services	351
Total applied	387

Table No. 10. Meters Discontinued in 1937.

MAKE.	DIAMETER IN INCHES.							Totals.	Connection Pieces.	Vacant.	Discontinued.
	$\frac{3}{8}$	$\frac{1}{2}$	1	1½	2	3	4				
Hersey disc.....	341	44	16	12	4	2	4	423	110	163	150
Worthington disc.....	58							58	23	19	16
Watch dog.....	130	12	12	13	8	4		179	42	78	59
King.....	13	2	1	1				17	7	8	2
Federal.....	2							2	1	1	
American.....	6	3						9	1	4	4
Lambert.....					1			1			1
Crown.....					1			1	1		
Trident.....						3		3		1	2
Hersey rotary.....		1	1		1			3	1		2
Keystone.....											
Nash.....				1				1			1
Empire.....				1				1			1
Hersey detector.....							1	1		1	
Totals.....	550	62	30	28	15	9	5	699	186	275	238

APPENDIX G.

REPORT OF THE BOSTON AND CAMBRIDGE
BRIDGE COMMISSION.

BOSTON, January 2, 1938.

To the Honorable the Mayor.

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 ending December 31, 1937.

The commission is composed of two members, one appointed by the Mayor of the City of Boston and the other by the Mayor of the City of Cambridge, under provisions of chapter 467, Acts of 1898.

The commission has charge of the maintenance of the following named bridges between Boston and Cambridge:

Cottage Farm, Longfellow and Prison Point.

As there is no separate appropriation made for the City of Boston's portion of the expenses of this commission, the same is taken from the appropriation for the Bridge and Ferry Division, Bridge Service. The amount expended during the fiscal year ending December 31, 1936, was \$5,002.79.

Respectfully submitted,

E. M. RICHARDSON,
Commissioner for the City of Boston.

**Boston and Cambridge Bridges. Expenditures for the Year Ending
December 31, 1937.**

Being the Portion Paid by the City of Boston, Which is One Half of the Total Expenditure.

	Administration.	Cottage Farm Bridge.	Longfellow Bridge.	Prison Point Bridge.	Totals.
Salaries.....	\$50 00		\$1,565 00		\$1,615 00
Inspection.....		\$194 00	194 00	\$216 00	604 00
Light.....		946 01	1,694 83		2,640 84
Repairs.....		53 23	5 25		58 48
Supplies.....			72 07		72 07
Printing and stationery.....	12 40				12 40
Totals.....	\$62 40	\$1,193 24	\$3,531 15	\$216 00	\$5,002 79

ANNUAL REPORT
OF THE
PUBLIC WORKS DEPARTMENT
FOR THE YEAR 1938
[DOCUMENT 24—1939]

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