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DEPARTMENT OF STREET CLEANING.

DEPARTMENT OF STREET CLEANING—CITY OF NEW YORK, NEW YORK, December 27, 1897.
Hon. WILLIAM L. STRONG, Mayor:

SIR—I beg to submit for your consideration a final report of the operations of the Department of Street Cleaning during the three years of your administration, relating especially to the modifications which have been made in the methods of the dumping and the final disposal of street sweepings, ashes, garbage and rubbish.

Special reference is made to the report of George L. Walker, Master Mechanic, concerning the operations of his Bureau, as relating to stables, picking-yards and storage dumps.

Also to the report of Charles A. Meade, Superintendent of Final Disposition, concerning, among other things, the construction and use of the Delahanty boats in connection with storage dumps, sea dumping and dumping at Riker's Island, and the disposal of rubbish, etc.

Also, reports of Hawthorne Hill on the private collection of garbage, the garbage tankage trade, street sweepings as a fertilizer and the traffic in waste paper.

Also the report of C. Herschel Koyl on the utilization of ashes, and his report on the principal factors governing the work and cost of street sweeping, etc. I ask your special attention to this report, which is accompanied by elaborate tables and computations showing, as a conclusion, a theoretical result that is in very close conformity to the actual practice of the Department at the same period.

To this report there is appended a table showing the results of actual measurements made by the District Superintendents and Foremen in the autumn of 1897, giving the square-yard area of asphalt, granite, Belgian, cobble, brick and wood pavements for each district and for the whole city, together with the total amount of daily sweepings.

Also the report of Macdonough Craven on the present condition of the Barren Island plant. Mr. Craven has for nearly the whole period of three years acted as scientific expert in the matter of garbage disposal, etc. His report is as follows:

"The first calendar year of separation collection and disposition of garbage which will be closed at the end of this month shows the following record of cartloads of garbage collected by the Department carts:

MONTH.	DEPARTMENT STREET CLEANING.	PERMITS.	TOTALS.
January.....	10,045	1,562½	11,607½
February.....	8,460	1,192¾	9,652¾
March.....	10,535½	1,720¼	12,255¾
April.....	11,890¾	1,645¼	13,536
May.....	15,153¾	1,505	16,658¾
June.....	17,103¾	1,780¾	18,884
July.....	17,241¼	1,873	19,114¼
August.....	16,291	1,572	17,863
September.....	16,371¼	1,596½	17,967¾
October.....	14,809¾	1,704½	16,514½
November.....	13,052¾	1,825½	14,878¼
December*.....	13,369	1,405	14,774
Total.....	164,422¼	19,383	183,705¼

* The figures for this month are in part estimated.

"The cartloads have been determined to have an average weight in round numbers of 1,700 pounds. This gives a total of 156,150 tons of 2,000 pounds for the year 1897 disposed of under the contract with the Sanitary Utilization Company. The quantities actually handled by the Barren Island plant are in excess of this, as a large part of the annual output of Brooklyn was also disposed of in the same plant.

"The present condition of the Barren Island plant is such that no additions will be necessary in order to handle the output of garbage of the coming year that should be disposed of in accordance with the contract.

"The improvements of the past year have been such as to show conclusively the good intentions of those interested in the enterprise. A large evaporator has been added to the works.

The Result of Actual Measurements of Streets Cleaned made by District Superintendents and Foremen in the Autumn of 1897.

DISTRICT.	AREA SQUARE YARDS ASPHALT.	AREA SQUARE YARDS GRANITE.	AREA SQUARE YARDS BELGIAN.	AREA SQUARE YARDS COBBLE.	AREA SQUARE YARDS BRICK.	AREA SQUARE YARDS WOOD.	AREA SQUARE YARDS TOTAL.	AMOUNT SWEEPINGS DAILY, BAGS.
No. 1.....	43,029½	487,718½	14,178½	1,396½	.....	.....	546,322½	3,921½
" 2.....	281,433.63	511,061.72	48,591.77	9,331.43	783.33	.....	851,201.88	4,460
" 3.....	223,388	606,069	113,721	2,800	1,480	.....	947,858	2,302½
" 4.....	294,868.08	310,750.97	218,999.76	4,571.97	.....	1,126.80	830,317.58	2,684
" 5.....	304,576½	381,791½	2,946.14	3,200	.....	.....	984,182	2,662½
" 6.....	348,140.14	236,622.73	269,994.10	4,054.30	.....	.....	858,811.27	1,835
" 7.....	353,699	515,070	124,831	4,300	299	.....	993,199	1,538½
" 8.....	292,140	386,726.2	219,726.4	7,988.3	.....	.....	906,580.9	1,503½
" 9.....	305,099½	492,388	73,125	200	.....	.....	770,835½	1,095½
" 10.....	202,633½	430,506½	209,236½	.....	.....	2.6½	858,592½	1,297
" 11.....	100,387½	842,957½	94,379½	322	24,332½	.....	1,062,379	2,015½
Totals.....	2,649,424.74	5,201,662.40	1,681,396.70	38,164.34	26,895.11	1,353.13	89,615,280.42	25,375½

§ 546½ Miles.

|| At 35 bags per cart-load, we have 686 cart-loads per day.

OFFICE OF MASTER MECHANIC, NEW YORK, December 10, 1897. Col. GEO. E. WARING, Jr., Commissioner:

SIR—I beg to submit the following report of the work of the Mechanical Bureau for the three years of your commissionership.

THE MECHANICAL BUREAU IN JANUARY, 1895.

Shops.

You found, in January, 1895, mechanics stationed at Stables A, B, C, D and E. The main body, however, were at Stable A, Seventeenth street and Avenue C. At the latter place 5,300 square feet were given over to shops for keeping the Department's property in repair. This 5,300 feet was scattered here and there throughout the 50,000 feet of floor space of the stable itself. Harness makers worked in one little squalid shanty, while carpenters, plumbers, tinsmiths and the like, worked in as many others, scattered, without system, throughout the building. The mechanics were mingled with the three hundred horses occupying the stable much the same as the squatters and goats in Harlem fifteen years ago. The ten or twelve men scattered through the other stables I have mentioned, were mostly without proper supervision and did what might be expected under those circumstances. On January 1, 1895, there were employed in this repair work 61 men. Fifty-three were on the mechanics' roll and the remainder drivers "detailed." Thirty of the fifty-three mechanics are here now. Seven of them have been dismissed in three years, while the remainder are either dead or have resigned. It certainly is significant that with the great change in results, there should have been so few found inefficient.

As for power equipments there was a boiler and engine which ran a blower for the two forges, two small drills and a grindstone, a ludicrous foundation on which to commence the work at hand.

† The garbage from Brooklyn.

‡ There is, during the winter and early spring, about one-half the quantity of food waste that there is of the same waste in the last half of summer and the first half of autumn.

Improved methods of unloading have been adopted, a better class of labor has been obtained, the resident superintendent is a man of energy and experience; a furnace for the utilization of the waste tins is in course of construction; the steam piping for cooking has been rearranged; a better system for the washing of noxious gases is in operation; additional precautions against a possible loss by fire, comprising a duplication of pumping machinery and improvements in construction, together with many changes of minor importance have been installed, and altogether the entire plant is in a very satisfactory condition. In addition to the above the quarters occupied by the workmen have been enlarged and improved in many ways, including the cuisine, and the adjacent grounds are constantly in course of improvement.

"Considering the fact that the plant was called on to handle a greater quantity of raw material than was at first anticipated and the necessarily rapid construction that was forced on the contractors, it may be safely said that a better state of affairs could not be expected.

"During the past season the stress of work resulted in a requirement for many repairs which the plant is at present undergoing, and it is now being placed in proper condition for the rush of the coming heavy season.†

"There is one question that will require consideration, however, and that is transportation. The past year has been generally free from prolonged periods of adverse weather conditions such as would make the entrance to Jamaica Bay impassable, or that would otherwise prevent transportation to Barren Island. These weather conditions are at their worst during the winter months, when the garbage output is at its lowest point and a delay of forty-eight hours in delivery would not, on account of the temperature, result in cause for complaint. Additional scows can also be readily procured at this season. The conditions, however, are antipodean if we consider the possibilities of delay during the summer months. At that time of year extra scows are sometimes unavailable; and decomposition of the collected material is rapid and would soon become a nuisance; the plant, moreover, is worked to nearly its utmost capacity and twenty-four hours' delay in delivery would result in an accumulation that would tax the powers of the machinery at the island to the utmost in an endeavor to regain the lost time. Such conditions do not always exist. The past summer was one of unprecedented activity in scowing, making extra scows out of the question for a long period.

"The completion of the usual winter repairs (slack season) will leave the works in thorough condition for the coming season as far as the garbage of the present city is concerned."

In addition to the foregoing, a very thorough investigation has been made, running over most of the past year, by Mr. Craven, Mr. Koyl and Mr. Joseph A. Shinn, of Pittsburgh, looking to the possibility of developing a money value from the coal ashes of domestic fires. The following results have been reached, and I think that the conclusion to which they point may be regarded as sound.

We are now collecting about 800,000 loads of domestic ashes per annum, equal to 1,200,000 cubic yards. Repeated experimental analysis of these ashes indicates that they will yield on the average:

Coal (recoverable).....	20 per cent.
Clinker.....	15 per cent.
Fine ash.....	50 per cent.
Coarse ash and stone.....	15 per cent.

These percentages give:

	Net Tons.	Cubic Yards.
Coal.....	144,000	.....
Clinker.....	.....	180,000
Fine ash.....	.....	600,000
Coarse ash and stone.....	.....	180,000

A fair estimate of value of these materials is as follows:

Coal, 144,000 net tons, at \$2.50, equals.....	\$360,000 00
Clinker, 180,000 cubic yards, at 75 cents, equals.....	135,000 00
Fine ash, 600,000 cubic yards, at 28 cents, equals.....	168,000 00
	\$663,000 00

The cost of collection and delivery at the present dumps, based on Department wages, purchases, rentals, administration, etc., is, per cartload, 80 cents; per cubic yard, 53 cents—making the total cost of collection \$640,000.

The cost of separating one cubic yard of ashes into its available parts is estimated at 12½ cents per cubic yard, or for the total output, \$150,000.

The fine ash, when properly mixed with lime, makes a building mortar which has a greater tensile strength and a proportionately higher crushing strength, and is of much less specific gravity than sand mortar. Therefore, if the use of such mortar could be legalized, it should at least have as good or perhaps better sale than sand mortar. The cost of manufacture and delivery would be about \$2.20 per cubic yard. Machine mixed sand mortar is selling in market for \$3.45, delivered.

Respectfully submitted,

GEO. E. WARING, JR., Commissioner.

Ash Carts.

You found Sixteenth street for 350 feet east of Avenue C, encumbered with broken ash carts so that only ten of the sixty feet in width of carriageway and sidewalk was available for the use of citizens. Stable A itself was congested with these dilapidated vehicles and the sidewalk display was only an overflow. While the money invested in these two hundred carts [\$20,000] was lying idle for want of a few repairs, the Department was hiring carts with which to do its work. Those carts in use were a sorry sight. They rattled at every clip and bolt. The steel bodies were rusted and the running gears mud-stained. The Street Cleaning Department cart was typical of the whole business of street cleaning. It was necessarily dirty and disreputable, and it was useless to attempt to render its appearance less repulsive. In fact, with the painting methods and facilities then in vogue, a cart could only have been painted once in eight years, provided they were done in rotation. In other words, most of the carts must have worn out, never having received a brush full of paint after they left the makers' shops.

During the months of February, March and April, 1895, the mechanics worked one and one-half time, in order to get all of the Department carts into commission.

By May 1 this was accomplished, and the shops had, thereafter, only to keep up with the daily breakage, as far as the carts were concerned.

Carriages.

The carriages used by the District Superintendents in the discharge of their duties were allowed to get into a condition which was a disgrace to the city. Instead of being kept in repair it was waited until they broke down completely and then they were sold at auction.

Dumping Boards.

Of the sixteen wooden dumping platforms which the Department then possessed, a few recently built by the Department of Docks were in good condition. In most cases, however, the 3-inch spruce sheathing had been allowed to wear through, and in many cases the 3-inch yellow pine under-flooring was through in places. This left the ramp and board not only uneven

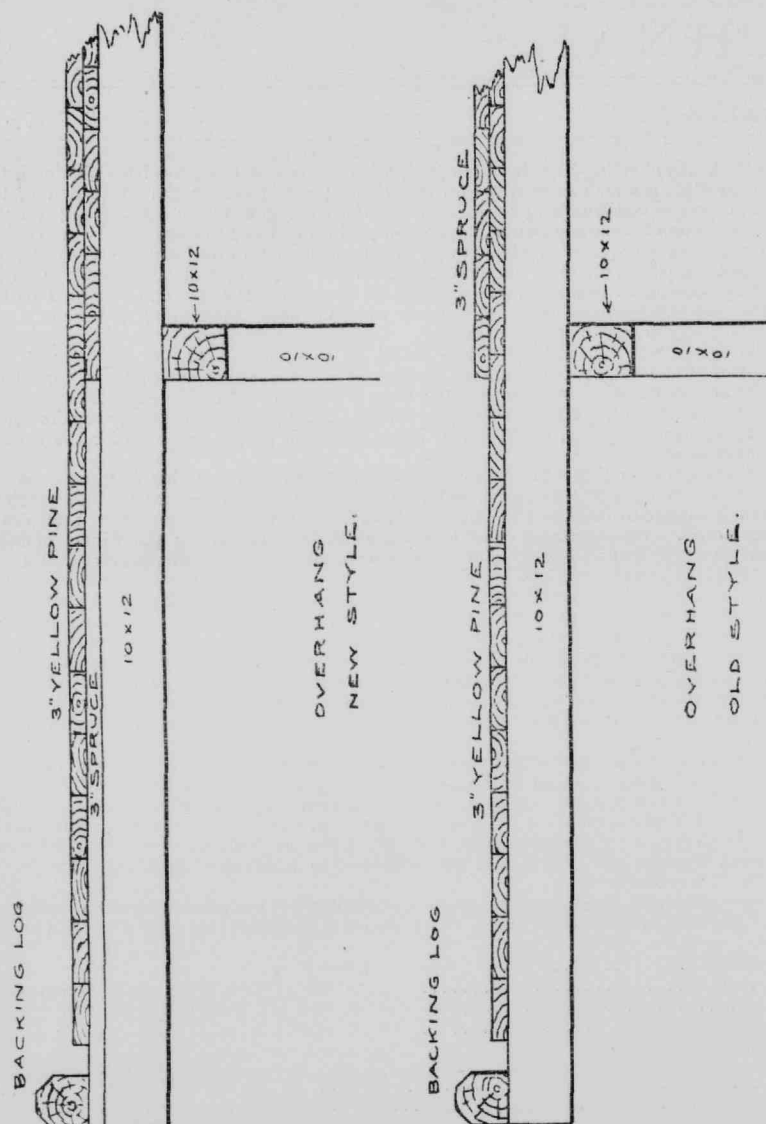
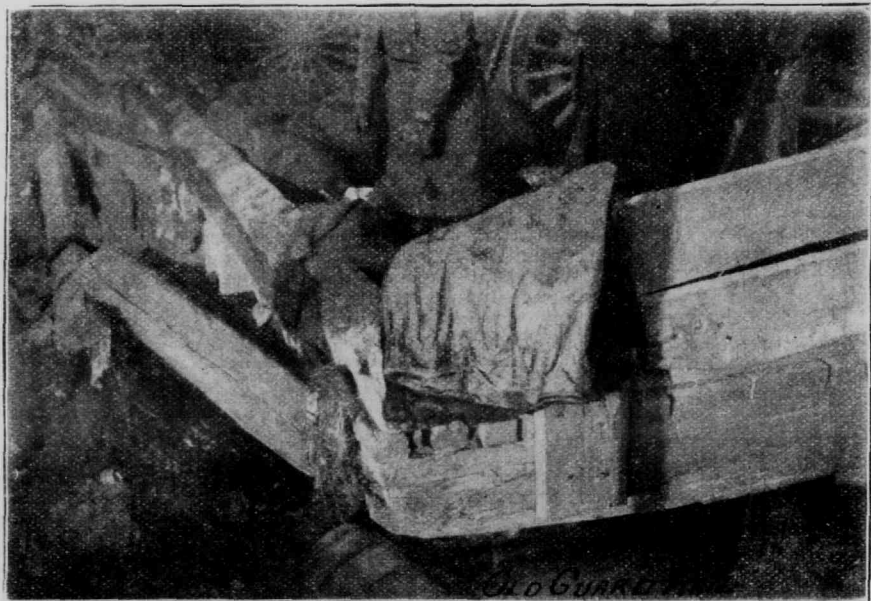
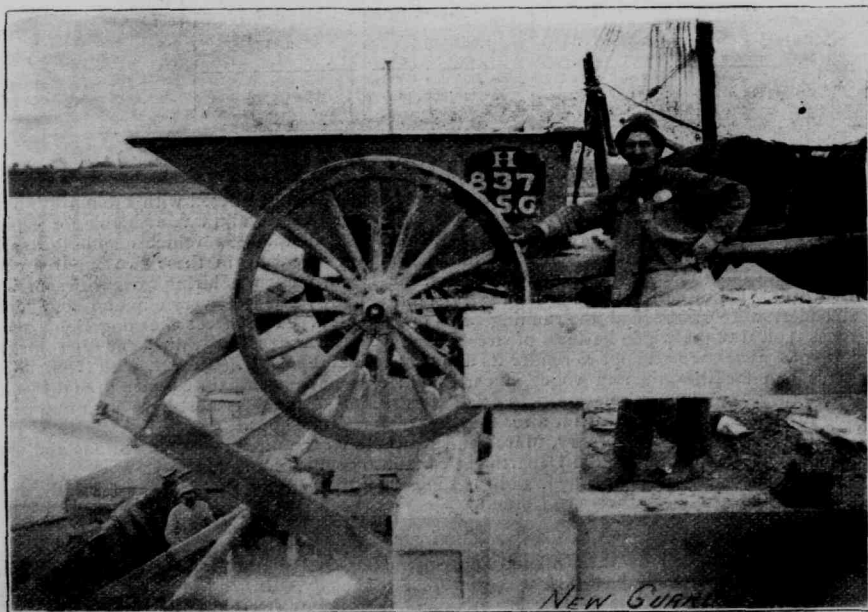


FIG. 1

and hard on the horses, but unsafe in places. In all cases the portion of the board overhanging the water was built 3 inches lower than the rest (see Fig. 1), and led to a heavy strain on the horses when backing to dump the load.



The so-called guard-rails placed beyond the backing-log to prevent carts which ride over the backing-log from going into the river or scow were ludicrous in their proportions. After careful inquiry not one instance could be found where they had done their duty. The portable derrick provided for this purpose was in daily requisition to get horses and carts out of the boats. One horse was drowned at East Seventeenth street. The derrick is no longer needed for its original purpose but is used for construction.

*Stables.*

Stable A, the first and for a long time the only stable of the Department, was originally built and used for a public market. It is an old building and can never be made a model stable. In January, 1895, its interior presented a hopeless confusion of shops, stalls, lumber, carts and rubbish. It had one large floor, 350 x 150 feet. The stalls drained into open wooden gutters, which gutters led no one knew where, except that his sense of smell told him it was not far. The stall bottoms, gutters and floors were saturated with filth and rotten.

Stable G was an old rickety building of the worst sort. In its cellars where horses were kept there was no sewer connection and the sewage had to be bailed out of a hole made in the earth floor.

The other seven stables were quite new buildings and in a condition which could easily be improved so as to make them models. The floors in all cases leaked and had to be caulked; in some cases new floors were laid. Concrete floors were put in the basements and stalls erected to make room for the larger number of horses. New stall-gutters and plumbing were installed. The stall sides and heads were all cut down to four feet in height and iron guards placed on them, thus giving relief from the heat of summer. Feed rooms were built on the top floors.

THE MECHANICAL BUREAU, DECEMBER, 1897.

Shops.

The mechanics have been concentrated in two shops, one at Stable A, Avenue C and Seventeenth street, and the other at Stable D, One Hundred and Sixteenth street and Pleasant avenue. The main shops at Stable A now occupy 15,300 square feet of floor area, nearly three times the space occupied in January, 1895. This extra 10,000 square feet has been gained by erecting mezzanine floors in the stable at an expense of \$3,000. The capacity of the stable for horses has been increased by concentrating the shops and tearing down the old shanties. There are now 64 men on the mechanics' roll and 60 detailed men employed here.

New shafting has been erected and communicates power to a large blower, to supply blast to seven forges and a gas tire heating machine, four drilling machines, a power punch, a circular saw, an emery wheel and a grindstone. Two hand punches, a cornice brake, a shearing machine, a vulcanizer, two tire benders, a welding machine and complete tinsmith's tools have been added.

The mechanics in the Harlem shops take care of the repairs for the Ninth, Tenth and Eleventh Districts. It has not been deemed advisable to absorb this shop in the Stable A plant, on account of the long distance required to haul material from the upper districts.

Ash Carts.

Carts are now repaired as fast as they are broken. There are enough extra carts so that it is never necessary to run a cart when it should be sent to the shop. All carts are painted at least once a year and some of them twice. The steel body is painted an ash color and the running gear a vermilion.

In the shops are made and repaired the steel scrapers used on the asphalt streets. Bag carriers, sprinkling cans and harness are each repaired in separate shops.

Carriages.

Since the first year of your administration not a carriage has been sold at auction or otherwise. When a carriage has become badly worn it is thoroughly overhauled and painted. It is turned out to all intents and purposes a new carriage. There are carriages now as good as new, which in January, 1895, were laid aside to await the next sale.

Bicycles.

A separate shop is provided where the bicycle repairs are made. There are now over 100 bicycles in use and a man is constantly employed on them.

Dumping Boards.

Two gangs of men are necessary to keep up with the heavy wear on these structures. They are carefully inspected every week by a competent engineer, so that we keep ourselves informed of their safety independent of the Dock Board. The repairs are at all times kept up with the wear. When it is found necessary to take up the overhang for dredging the slip, to resheath the ramp and board, or do other work which would interfere with the carting, men are sent at night or on Sunday. So that now a dump is never "closed for repairs," as was the case frequently under former administrations. A guard rail of iron knees supporting a 6 by 8 inches stick prevents the danger of an unmanageable horse backing the cart over the backing log into the boat. Two new boards have been built during the past year by us at a cost of \$1,400 each, a saving of 20 per cent. to the City over a contractor's price, not reckoning the saving in time of advertising for bids.

Stables.

At stable A new offices have been built for the Stable Foreman and Master Mechanic. A new feed room has been erected on a mezzanine floor and new and larger store rooms provided for the Property Clerk. Iron gutters with iron covers have been placed in the rear of the 242 stalls. Four modern water closets have been built and a large portion of the rotten wooden floor renewed. This building is the property of the City and should be cared for by the Department of Public Works. Much, however, remains to be done. An entire new drainage system, an asphalt floor and a new roof covering are the most pressing needs.

Pursuant to your order we have prepared and have now on file in this office, plans for the entire remodeling of this structure.

Stable G, in Hamilton street, is a new building erected during the first year of your administration on the site of the old one; it has three stories and a basement; in the basement are 52 stalls on a concrete floor; on the first floor is the Foreman's office and floor space for storage of carts; the horseshoers' shop is in the yard; on the second floor are 59 stalls on a water tight flooring; the third floor is given up to a feed room, harness room, store room and harness-makers' shop; this general arrangement applies to the other stables hereafter mentioned with the exception noted.

Stable E in West Twelfth street has no stalls in the cellar but 47 on the second and 39 on the third floor; a new office has been built for the District Superintendent and the Stable Foreman, two water-closets put in and a harness room built on the first floor.

STALL FOR STABLES OF DEPARTMENT OF STREET CLEANING

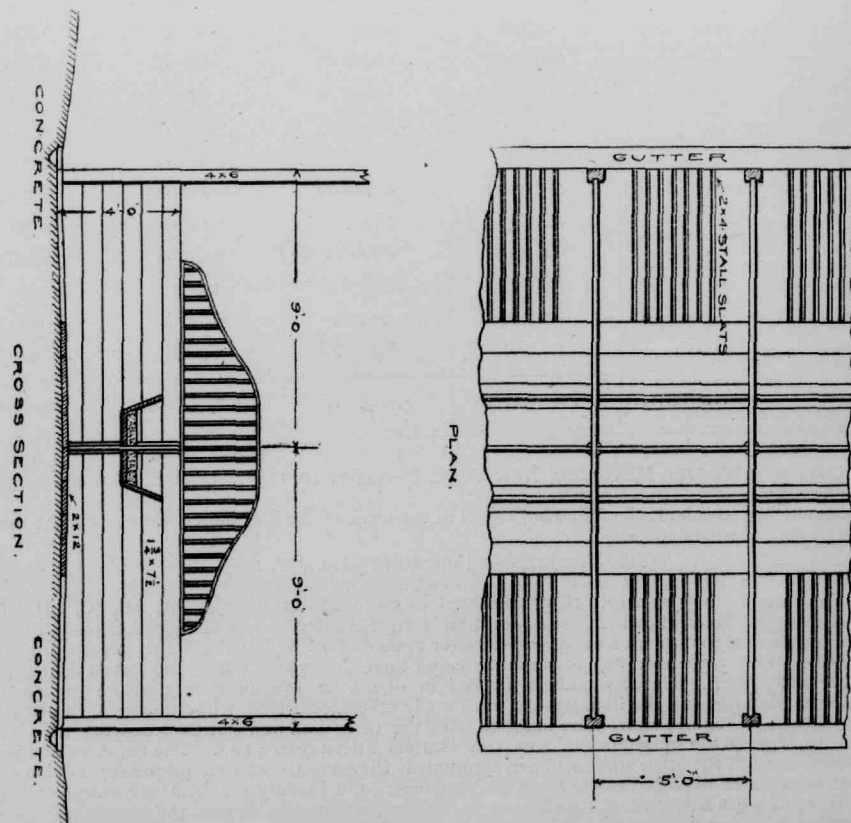


FIG. 2.

Stable H, in East Forty-eighth street, has had a new drainage system and concrete floor placed in the cellar; on this floor were placed 37 stalls 9 feet long 5 feet wide with $1\frac{3}{4}$ -inch yellow pine siding 4 feet high, surmounted by a 2-inch by 2-inch cap and an iron ogee guard 2 feet 6 inches high; the concrete bottom is given a slope of 2 inches to the cement gutter in the rear; the gutter has a malleable iron cover, the 2-inch by 4-inch oak stall slats are held together by two bolts and taken up each morning to allow the floor to be flushed; these slats are put together in the shops and made of a standard size to fit any stall in the Department (see Fig. 2); feed and harness rooms were built on the top floors and an office for the District Superintendent; a water-closet was put in on the first floor making two in the building; the 3-inch by 3-inch yellow pine flooring under the second story was recaulked and pitched; the 56 stalls on this floor were cut down and iron guards put up; in other respects they have been made to conform as nearly as practicable to our standard stall.

Stable B, in West Fifty-second street, has had a new drainage system and concrete floor placed in the cellar like that described for Stable H. On it were erected 44 stalls. The floor under the second story has been half renewed. The whole has been recaulked and the 61 stalls on this floor remodelled, as described for Stable H. On the top floor there has been provided a harness-makers' shop, store-room, feed-room, drug-room and closets for the hostlers and others employed around the stable. About 2,500 has been spent in this work.

Stable F, in East Eightieth street, has been drained and concreted as described for B and H. In the basement were erected 48 stalls. An entire new floor has been placed on the second floor. This floor is of 3 by 3 inches yellow pine, caulked with three strands of oakum and pitched. On this were erected 55 new stalls. A new $\frac{7}{8}$ -inch yellow pine floor was placed on the third floor, and a feed, drug and harness room built. A new water-closet was put in, making two in the building. The old runs from the basement to the first floor, and from the first floor to the second floor, and the stairway from the second to the third floor, were torn out and wider ones, with easier slopes, erected. This stable is now the best we have as far as the structure is concerned. About \$5,000 have been expended in these improvements.

Stable D, in East One Hundred and Sixteenth street, has been recaulked and pitched on the second floor. Shops have been installed on the top floor and in the basement, where twenty-two mechanics and detailed men are employed.

Stable C, in West One Hundred and Thirtieth street—A new concrete floor has been put in the cellar and 31 stalls erected. The second floor has been recaulked and pitched where rotten. This stable was in better condition than any of the others when you took charge of the Department. On the second floor there are 64 stalls.

Stable I, in East One Hundred and Fifty-second street, has had a new drainage system and a new concrete floor placed in the cellar. On this have been erected 44 stalls. About one-third of the second floor has been renewed and new stalls erected, making 44 stalls on that floor.

All of the stables and inspectors' houses at the dumps are painted and whitewashed once a year. There are now 997 stalls in the nine stables of the Department, "not counting stable A annex," as against 875 in January, 1895. This is an increase of nearly 14 per cent. in stable capacity without increase in number of stables.

Incumbrance Yards.

In the yard at West Fifty-sixth street 9,000 square feet of sheds have been erected at an expense of \$500. A water-closet and wash-bowl have been put in the custodian's house.

Section Stations.

There are now forty section-stations throughout the city. All of these have plumbing which must be looked after. Closets, pegs for clothing and benches have been placed in all of them. A man is detailed to visit each of these stations at least once in two weeks and report any necessary repairs.

Scows.

There are 23 flat scows owned by the Department. All repairs which do not necessitate docking are done by the Department's own mechanics. A force of from three to five men is constantly engaged in this work.

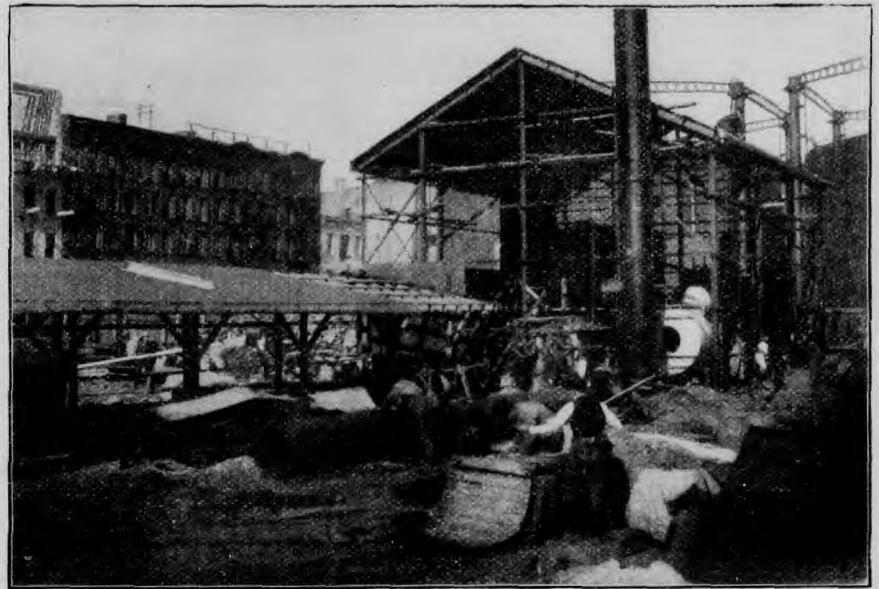
Work Done by Department.

For all of the work mentioned in the foregoing pages the Department depends solely on its own employees. The plans are drawn in this office and the work executed by the Department's mechanics under the supervision of the engineers who make the plans.

Light Refuse Disposal Plants.

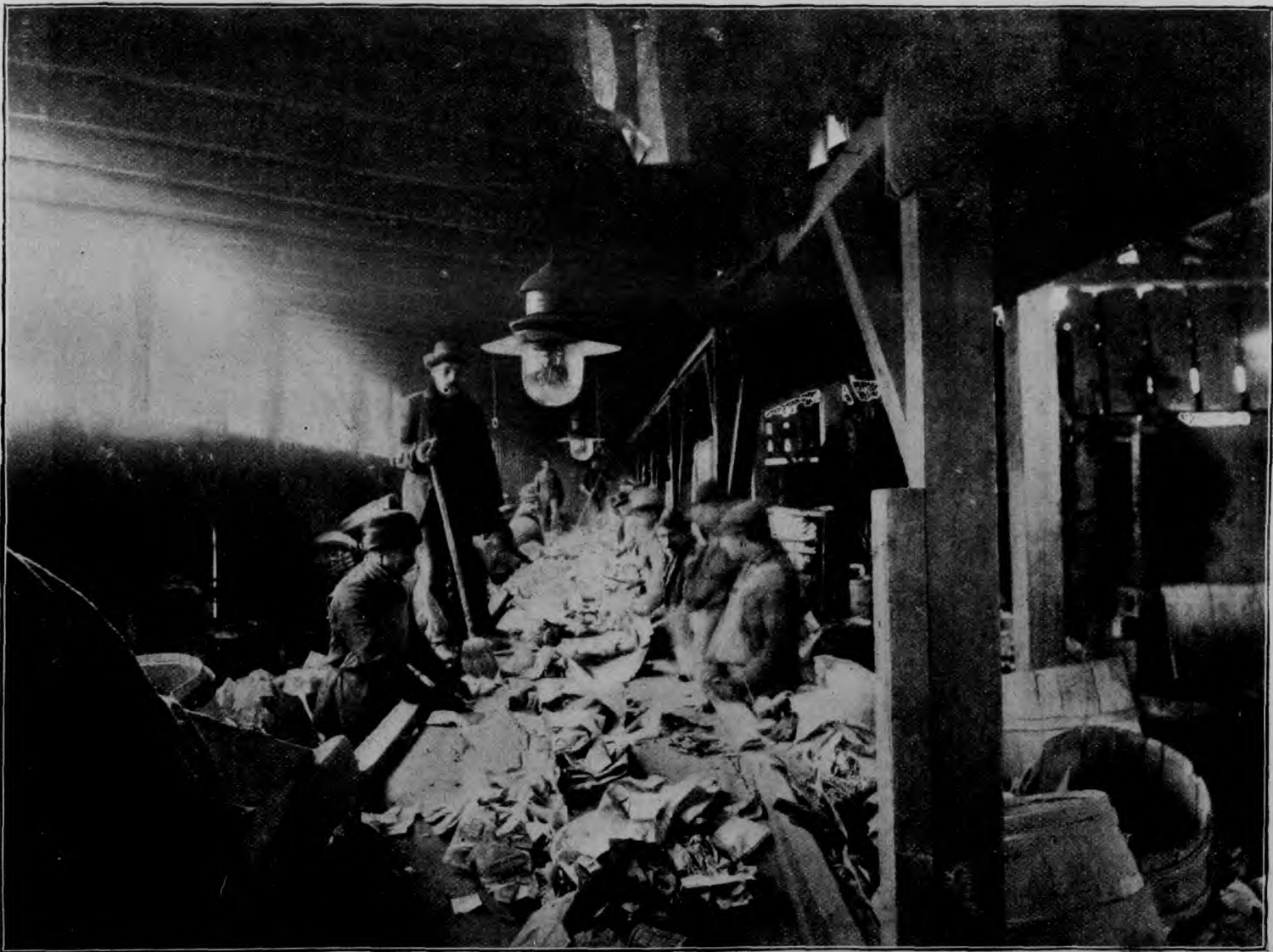
The old method of disposing of light refuse such as paper, rags, packing-boxes, fruit crates, excelsior, old shoes, bottles, etc., by dumping it at sea outside of Sandy Hook, was a nuisance to the inhabitants of the Long Island, Staten Island and New Jersey coasts, as the inflowing tides brought the floating material back to the shore. To abate this nuisance, it was sought to dispose of the refuse by some method of burning it within the city which would do the work economically and without giving off smoke or smells which could annoy neighboring inhabitants. After looking over and investigating various plans and propositions it was decided in 1895 to try a system designed by Mr. A. W. Colwell, and a plant for this purpose was erected near the North river, between Fifty-second and Fifty-third streets. This plant consisted of an inclined wooden slat conveyor, about three feet wide, which had a slope of about 28 degrees with the horizontal. This

down-draft furnace; that is, the air entered the top where the refuse is emptied in, and also at small openings around the sides, and the flame passed downward through the furnace and out at the bottom. At the bottom also was the ash-pit, from which the ashes could be cleaned



every day. The upper layer or grate-bars were placed with wide spaces and the second layer had narrower spaces, and the third layer still narrower spaces, so that the material as it became partially burned would fall through to a lower grate, so that each grate should have a fair proportion of the burning material upon it. From this furnace the hot gases passed through a horizontal boiler of about eighty horse-power, and from this they passed through a fan exhauster and thence through a dust separator to the stack. The exhauster was used to give the furnace a forced draft and force the smoke through the dust separator, which had helical plates inside to give the dust a rotary motion and throw the coarse dust to the outside where it could be cleaned out. In the operation of the plant the refuse was dumped from the carts on the elevator at the bottom and as it passed up to the furnace all the material of any value was picked and sorted out by workmen stationed on both sides of the belt on stages. The material sorted out consisted of newspapers, manila paper, cotton rags, woolen rags, bottles, old shoes, rubber of all kinds, tin cans, barrels, and the different kinds of metals. Each material was kept by itself and sold to various dealers, the paper and rags being baled in hand presses. The material remaining after the sorting process passed into the furnace and was consumed; the hot gases were used to generate steam in the boiler, a portion of which steam was used in running the elevator and fan exhauster. This first plant showed that this method of disposal had many advantages over the old method, aside from the mere abating the nuisance arising from floating rubbish along the shores.

On this basis early in 1897 a larger and more complete plant of similar design was erected on Eighteenth street, near Avenue C. This plant had an increased picking area by having a stitched canvas horizontal conveyor belt eighty feet long and four feet wide. This belt delivered the refuse upon the elevator and by having a line of pickers on each side, nearly the whole length, a very complete assorting was secured. The furnace in this plant was made larger than the previous one, but built in a similar style, except that the opening for the material was at one side near the top instead of directly in the top. The fan exhauster in this plant was run by a two-cylinder direct-connected engine, and the dust separator was horizontal instead of vertical as before, and the stack was 105 feet high, while the first plant had a 70 feet stack. As the lease on the land where the first plant was erected was for a short time, the plant was taken down before the second one was built, and the boiler, engine, stack and part of the machinery was used in the second plant. In this plant the sorting conveyor is located in a long shed, while the boiler, elevator, furnace, exhauster, dust separator, engine and machinery is located in a fire-proof building about thirty by forty feet in area, constructed of steel frame covered with corrugated iron. There is also a wooden one-story storage shed, about fifty feet square, for bales of material, separate from the building in

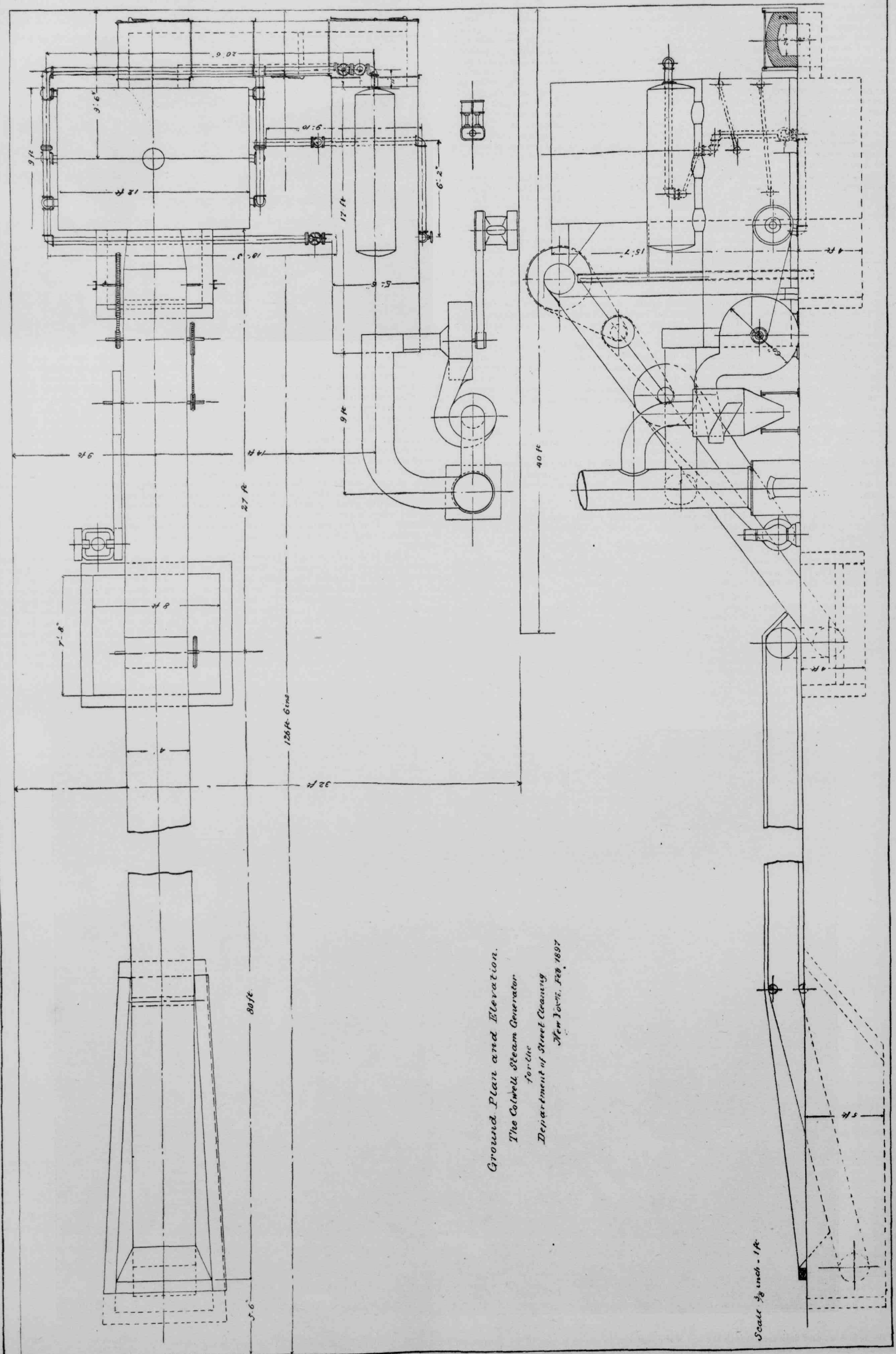


carried the refuse up and delivered it into the top of the furnace, in which it was to be consumed. This furnace consisted of a common brick shell lined with fire-brick and having a series of three grates, one above the other.

These grates were made of water-tubes to prevent burning out, and were all connected with large tubes at the sides to give a continual current of water through them. The furnace was a

which the furnace is located, to avoid any danger from fire. This plant has been in successful operation since last May and gives off no objectionable smoke or odor.

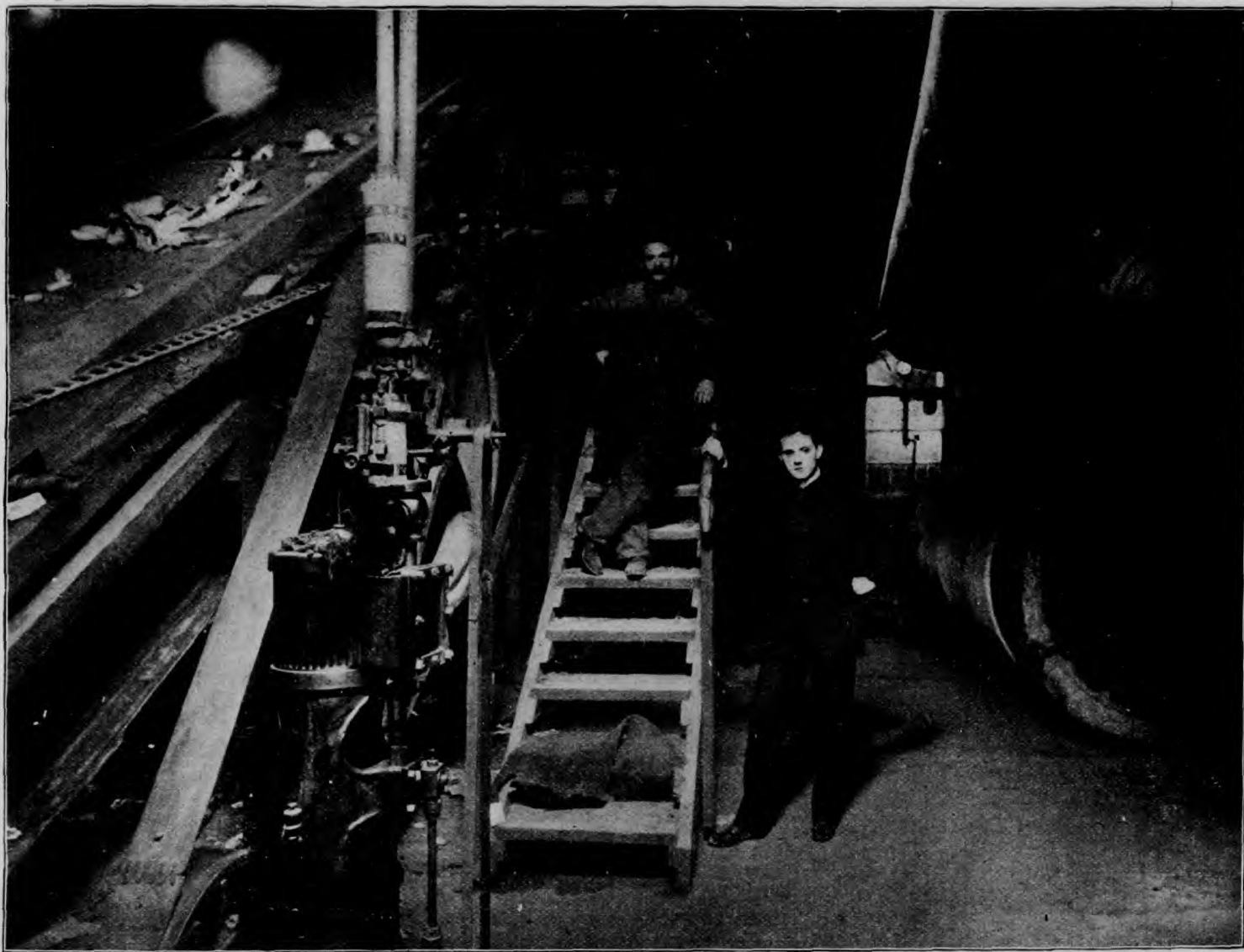
To further extend this general method of disposal of refuse by burning it, plans have been prepared for a much larger plant, to be located in East Forty-eighth street. These plans provide for a plant covering an area 85 feet by 100 feet, and having a brick furnace building 55 feet by 35



from the combustion pass through a series of settling chambers, to take out the coarse particles of dust and thence to the stack, which is about one hundred and forty feet high. A portion of the gases are taken through a bye pass to a boiler of about thirty horse-power to develop steam for running the machinery of the plant.

boards is further complicated by the fact that tides and loadings make a difference of 9 feet in the vertical position of the top of the pockets.

To prevent the scattering of dust when the pockets are discharging, a corrugated iron roof has been placed over the apron. It would probably be well in the future to lower the end of the apron



This plant is to be larger and more complete in its details than the previous ones and is expected to be capable of handling three hundred cubic yards of light refuse in ten hours. It is expected this plant will be ready for operation in the spring of 1898.

The conveyors and houses of the East Seventeenth Street Plant were designed and erected by the Department's engineers after the ideas of the Commissioner. The plant cost \$10,000; the Department designed and executed \$10,000 of the work.

Steel storage dumps were designed to meet the following objections to the wooden dumping platform:

First—They are not economical, in that the scow must remain under the board while the carts slowly load it. In the case of a Barney boat the City is paying \$33 per day, while the boat remains under the dumping board, serving only for purposes of storage. It takes two boats in this way to "cover" one dump.

Second—To reach the necessary height horses must pull up a steep ramp with the loaded cart. This is a loss in horse flesh.

Third—They allow dust to blow into the streets after each cart discharges its load.

The accompanying plans show the dump which was designed, at your direction, in an endeavor to meet these objections.

The first idea was to build pockets overhanging the water in such a manner that a scow could come underneath, the doors in the bottoms of the pockets be opened and the material discharged into the scow. The carts were to dump on to a conveyor which would elevate the material into the storage pockets. The Department of Docks objected to this construction and the matter was abandoned.

The idea finally settled upon was to have elevated pockets located on the pier. The floor of the pocket to be inclined and to extend in an apron over the boat. The material was to be elevated by a conveyor into the pockets. When the pockets were full the boat was to be placed under the apron, the doors of the pockets opened and the material allowed to slide down the inclined floor and apron into the boat.

At Seventeenth street and the East river such a plant has been erected and others are in course of construction at One Hundred and Thirty-first street and Thirtieth street on the Hudson river.

The structure is 100 feet long and 16 feet 8 inches wide centre to centre of columns. The pockets are supported on two longitudinal rows of I beam columns spaced 10 feet apart. The structure is divided into ten pockets by partitions at each transverse row of columns. Ten doors are provided on the outshore face of the pockets, running between the flanges of the columns and raised by winches placed on the upper conveyor platform. The floor of the pockets is 31 feet above the base of the columns on the inshore face of the structure, and originally ran at an angle of 35 degrees to the end of the apron. The end of the apron is 18 feet above mean high water. When the Delehanty boat was originally designed, it was to float light with the top of the pockets, 15 feet above the water. This would have left a clearance of 3 feet with a light boat at mean high water. The boat, however, floats 8 inches deeper than was expected. The conveyor and elevator is of the continuous, overlapping bucket type, built by the Link Belt Engineering Company, and especially designed to handle ashes and garbage.

Under the pockets and between the two longitudinal rows of columns which support the same, extend a series of hoppers, one under each pocket, sloping on their four sides toward a sliding door 2 feet square, through which the material, when dumped into the hopper by the carts, is fed by the pickers into the conveyor buckets beneath. The conveyor encircles the pockets passing under the hoppers, as aforesaid, up one end of the structure, over the pockets and down the other end, making a complete chain. The conveyor buckets, after receiving their load, elevate it to the pockets above and are dumped by means of a dumping carriage, which moves in either direction over the pockets and will discharge at any desired point. An 18 horse power engine runs the elevator.

The Seventeenth street pockets were first tried last August, and in the course of six weeks' running the following points have been developed:

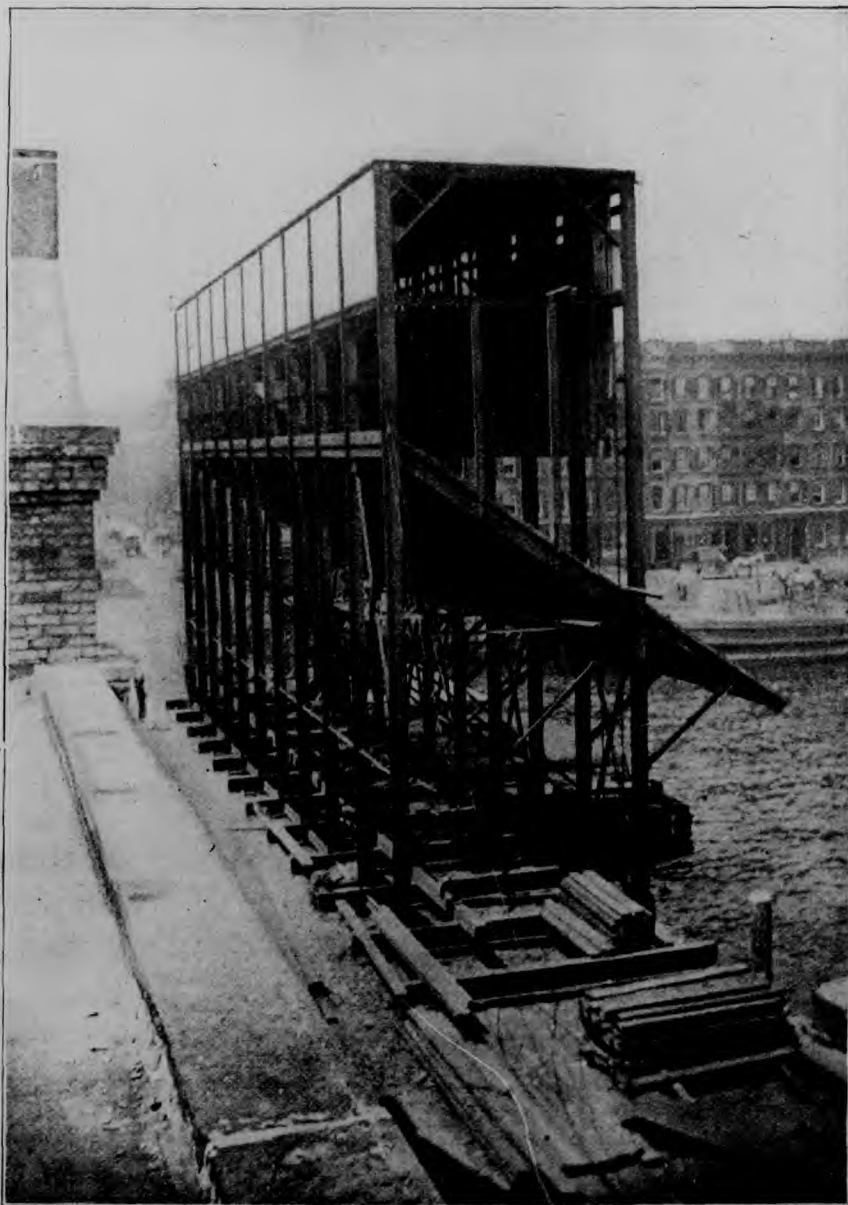
When drawing the plans some fear was entertained that the slope of the floor would not be sufficient to cause the material to run out when the doors were raised, but as there were no precedents to go by in the matter, it was thought best to make the slope 35 degrees, for if that were not found sufficient, it would be far simpler to increase it than to make it less. It soon developed that the floor was not steep enough.

A false floor was built in one of the pockets and different inclinations tried until 42 degrees was found to be sufficient. Now the pocket floors are inclined at 42 degrees but the apron remains at the original 35 degrees. Still the pockets do not always empty themselves clean when the material has stood for some time and become packed down. This latter is due to the arch which forms from the floor over the top of the doors. The wisdom of making the doors as large as we did is here shown. Many, from experience with ashes from power plants, insisted that a five-foot door was large enough and some even advised smaller doors.

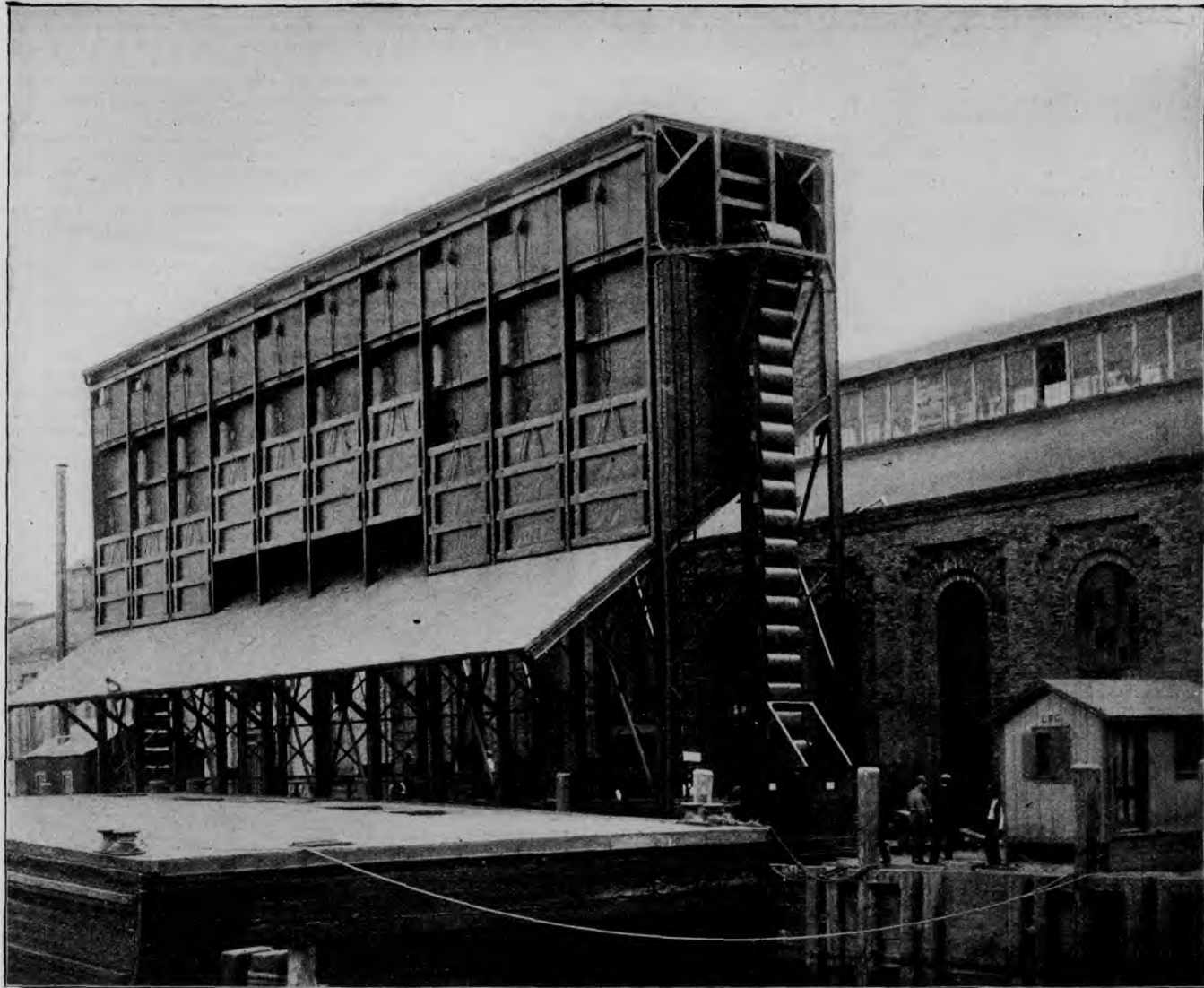
Also it has been found that when the doors are raised the material does not come out gradually, as would coal or steam ashes, but comes out in a body, giving a severe shock to the scow and loading it unevenly. It is hoped to remedy this by dividing the present pocket in half so as to discharge a smaller mass at one time and by hanging baffle boards from the roof of the apron, so that the material will strike them and fall vertically into the scow. The matter of the baffle

four feet. There would be times when the boat could not get under the apron at this height, but they would be few; and, on the other hand, the problem of properly loading the boat would be much simplified.

The doors are now raised by hand-winches. In future designs it would be better to place a shaft the whole length of the pockets over the doors. A clutch at each door would throw it into



gear for raising. The power could be supplied by the boiler used for the conveyor, but probably it would be wise to install a separate hoisting machine.



The cost of one of these dumps, with conveyor, receiving-board and power plant, complete and ready for use, is \$20,000.

In conclusion, I wish to acknowledge the assistance of Mr. Hunt, Mr. Crane and Mr. Daniel Curtin, Foreman of the Shops, in my efforts to execute your ideas and those of your Deputy in a way which would be worthy of your approval.

Respectfully submitted,

GEO. L. WALKER, Master Mechanic.

REPORT OF FINAL DISPOSITION. DECEMBER 16, 1897.

Up to the year 1894 the waste of New York City, ashes, rubbish, garbage and street sweepings were disposed of simultaneously in either one of two ways.

The material dumped on barges at the various receiving places along the North and East rivers, was subsequently discharged either at sea or on tide lands which had been bulkheaded. The latter was the favorite method of disposal for two reasons. First, it was cheaper; and second, delays and blockades were far less likely to be caused by weather conditions than in the case of deposit at sea.

When used for filling land, the mixture of ashes, garbage, rubbish and street sweepings could only be deposited in the winter, and then covered, before the summer heat began, with dirt or clean ashes—unless, perhaps, the fill was in an uninhabitable neighborhood from which complaints to Boards of Health were not likely to arise.

The saving in cost by this latter method of disposition over deposit at sea was due to the generally shorter haul, the greater capacity of the barges in sheltered waters than at sea, and the unloading by machinery instead of hand labor, which must be employed at sea, except in the case of dumping scows.



UNLOADING A DECK SCOW BY HAND LABOR AT THE "MUD BUOY" THREE MILES FROM CONEY ISLAND.

The grave objection to the sea dumping was, of course, the defilement of the beaches of summer resorts along Long Island with floating refuse of all sorts. The removal of the place of dumping further from shore only transferred the nuisance from one point to another without mitigating it, and at the same time largely increased the cost of disposition. In 1894, when the place of dumping at sea was changed from the "Mud Buoy" to the Sandy Hook lightship, the average haul was increased about thirty per cent., entailing thereby a large increase in the cost of the transportation, but only transferring the shore nuisance to points further east on Long Island.

Formerly, depositing was done here during the entire year. Since April 10, 1894, deposit from April until October has been made outside Sandy Hook lightship, nine miles farther from shore than the "Mud Buoy."

The barge in the foreground is of the type usually chartered by the Department when it becomes necessary to hire scows.

The agitation aroused by the nuisance caused at Riker's Island during the summer of 1894, by the attempt to fill behind the bulkhead with the mixed wastes of the city, resulted in the passage by the Legislature of the statute prohibiting the deposit behind bulkheads adjoining the waters of New York bay and harbor, of any material containing decayed animal or vegetable matter.



SHOWS THE LARGE AMOUNT OF FLOATING DEBRIS LIABLE TO BE WASHED ASHORE.

The cargo of the barges in this illustration consisted of ashes, street sweepings and light rubbish—no garbage.



GULLS FEEDING ON REFUSE UNLOADED FROM SCOWS AT SANDY HOOK LIGHTSHIP.

The Commission appointed by Mayor Gilroy July 26, 1894, to investigate the subject of garbage disposal for the city, made in November the following recommendations:

1. That dumping city refuse in any water of the harbor or its adjacent or tributary waters should be absolutely prohibited.
2. That the ordinance requiring householders to keep separate the garbage or kitchen refuse from ashes and other house refuse should be rigidly enforced.

3. That all house refuse should be collected in galvanized iron vessels with tight-fitting metallic covers, of such size that when full they can easily be handled by one man.

4. That daily collections of garbage should be made by the City, and delivered at the dump wharves into the temporary storage, or to self-propelling boats of an approved type, furnished by the party having the contract with the City for the disposition of the garbage.

5. That the garbage should be disposed of by a reduction process, producing fertilizer and commercial grease; that the City should invite competition by the various companies controlling such systems, in order that the greatest benefit to the City may result.

6. That a separate collection should be made of the remainder of the refuse of the City, not otherwise provided for, which should be used for filling at Riker's Island, or elsewhere, and for the transportation of this material a sufficient number of self-propelling boats of an approved type should be constructed and owned by the City. It should, however, be provided that whenever the whole or any considerable portion of the street sweepings can be disposed of by contract or sale for fertilizing purposes at a price greater to the City than their value for filling, then such disposition should undoubtedly be made of them.

The investigation of methods of garbage disposal and the final selection of a system has been made the subject of special work and report by Mr. Craven.

I desire to report particularly upon the work thus far accomplished along the lines laid out in the sixth item of the recommendations of the Gilroy Commission and the prospects of future development.

During the entire year of 1895 practically the only method of disposal available was by deposit at sea. The normal equipment for accomplishing this work consisted of a fleet of thirteen patent dumping scows, hired by the City from the Barney Dumping-boat Company of New York; 23 deck scows, owned by the Street Cleaning Department, and a number of chartered deck scows, which increased or diminished according as the work of deposit at sea was retarded or favored by the weather. This number of deck scows sank in summer, when the work was lightest and the weather best, to three or four, and in winter, when the work was heaviest and weather worst, rose at times to fifty or sixty. Rentals paid for chartered barges ranged from \$4 to \$6 each per day. The rental of the Barney dumping-boats was and is \$30 each per day. It costs to maintain and supply the deck scows owned by the Department about \$2 each per day, exclusive of supervision and interest on the cost of the plant. The unloading of these deck scows at sea, which can only be done by hand labor, costs on an average \$33.50 per scow load of about 425 cubic yards.

The report of February 3, 1896, on the disposal of garbage, mentions a scheme by which the cremation of the mixed wastes was proposed, the ash residue to be used for land filling. As the scheme did not look promising, nor its backers give sufficient evidence that their proposition would effectively settle the matter of disposition, the scheme was rejected. The disposition of the ashes, street sweepings and rubbish then hinged, as did the question of garbage disposal, upon the separate collection of these materials, and investigation of methods of disposal were made on this basis in line with the recommendations of the report of the Gilroy Commission.

Street Sweepings.

The quality of the street sweepings of New York varies very widely in different sections of the city, the down-town and tenement districts naturally containing larger percentages of litter and rubbish than the sweepings collected in the residence districts. To determine the value of this material, samples of the average street dirt were taken from those parts of the city that are comparatively free from the litter of paper, straw, wood, etc., that occurs in many of the down-town districts. The result of the analysis of these samples is given in the accompanying report of Mr. Hawthorne Hill. It is evident from Mr. Hill's report that the manure market in New York is at present so over-supplied with the out-put of the city's stables, and that the fertilizing value of the street sweepings is so small, that, for a long time yet to come, there will probably be no demand for street sweepings large or steady enough to warrant its separate collection and storage for transportation to the country districts. The proportion of street-sweepings to the ashes collected is not so large but that they may be mixed with the ashes for filling without any danger from the fermentation and decay of organic matter contained therein. Consequently, for the present at least, the cheapest and easiest way of handling the sweepings is to dispose of them in the same manner as the ashes and mixed with them.

Ashes.

In the appendix to the report of 1896 the industrial uses of clean ash have been commented upon, and another accompanying report of the same nature has been prepared by Mr. Koyl.

The ash received at the dumps of this Department is of two general grades: Boiler ash, which is generally hauled to the dumps in private carts, and the ash from house stoves and furnaces. The Department now has no means of keeping these grades separate from one another. Even if there were provided storage for the steam ashes the demand for them is so erratic that the expense incurred in making arrangements for storing would hardly be warranted. For the present, at any rate, the easiest and the cheapest way for the Department to handle all the ashes is to utilize them for land development.

New York, from its location, demands water transportation of its wastes. Wastes that are adapted for land filling should certainly be used, as advised in the report of the Gilroy Commission, first of all for the development of land belonging to the City, such—for instance—as Riker's Island.

The placing of material behind a bulkhead at Riker's Island means, therefore, a consideration of methods of loading, transporting, unloading, and handling in fill.

We have offered us broadly, either one of two methods of transportation. First, the one employed at present, namely, loading deck barges by the dumping of individual cart loads upon them and towing away the barges when loaded, by tug boats; or the provision of storage so arranged as to permit the rapid loading of self-propelling boats which may continually ply from storage place to storage place until they have a full cargo, when they may run to the place of discharging. The amount of material received daily at the various dumps ranges from 350 or 400 cubic yards up to 1,000 or 1,200 cubic yards, in the case of two dumps: Those at Canal street and Rutgers street, where the work is carried on night and day.

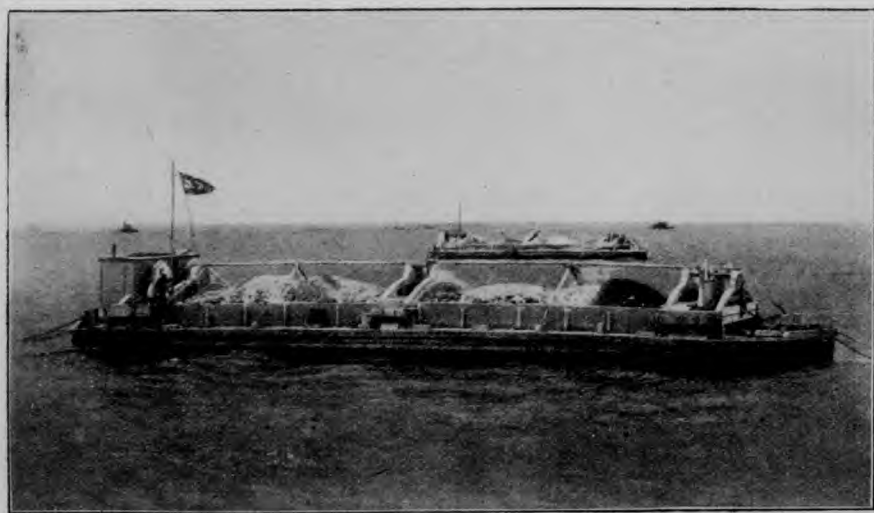
If we are to use our transport boat as a storage place, loading it by the successive dumping of individual cart loads, it will obviously be cheaper, as far as the transportation goes, to use simple barges with one man in charge, than a steamboat carrying a crew of several men and burning no small amount of coal, even when lying at the dump. The barges can be amply cared for by one man while loading, and the transporting power in a tow boat may be used to advantage in continually transporting.

If, however, instead of storing our ashes on a boat, we store them in a pocket or chamber which may be promptly and easily discharged, it becomes a question for careful consideration as to which system will be the cheaper and which will be the better.

At Riker's Island we have an area under water inclosed by a crib-work, alongside of which barges or steamboats carrying ashes and street sweepings may moor. At this point, then, we must consider, first, the discharge of the cargo; second, the distribution of the material in fill.

The handling of dredged material along water fronts has generally been done most cheaply by taking up the material, mixed with water, by pumps and delivering through pipes; the water acting as a distributing agent in connection with suitable changes from time to time in the location of the delivery pipes.

If the material is to be handled dry, it may be removed from the deck barges by crane and grapple and distributed by numerous systems of cars or carriers.



BARNEY DUMPERS AT "MUD BOY" WAITING TO DUMP ON THE EBB TIDE.

That a system which handles the material wet has advantages over one used to handle it dry, will be seen at once when the nature of the material is thoroughly understood. The fine dust of house ashes, the light street sweepings and the bits of paper which always find their way, with other odds and ends, into the ashes and sweepings, would, on windy days, render it well nigh

impossible to handle such material without causing a nuisance which would be a repetition on a large scale of that now caused at our dumping-boards by the carts as they discharge their loads into the boats. Furthermore, a fill made with material carried in suspension in water will compact on settling far better and be less liable to future settling and shrinking than one made by the deposit of dry material.

If the material is to be handled wet by some form of pump, it may be unloaded from either deck barges or dumping boats into a basin or receiver with which are connected the suction pipes of the pump. The easiest way, of course, to discharge a dumping-boat is to dump it, and if a water basin is built large enough to receive a dumping-boat or a scow and place it so that their cargoes may be respectively dumped or scraped off over the suction pipes of the pump, the cost of mere unloading will be reduced to a minimum for a transportation which employs either style of boat.

The designs of the storage dump and the self-propelling boat have had conditions imposed upon them by the nature of the material to be handled, which have been hard to fulfill, but whose difficulties have been thus far generally overcome.

The mixture of ashes and street sweepings, while free from large masses of rubbish and debris such as mattresses, spring beds and cooking stoves, still contains an amount of paper, cloth, straw and wood which causes trouble in the following way. The collection and packing of this material in a confined space for even a short period of time makes it necessary to consider any mass of the material to be handled not granular like coal or grain, but as a concrete, more or less readily broken up, according to the proportion of the elements it contains. Up to 1895 the only dumping boat capable of handling this material successfully was the Barney. The inventor of this boat had a very clear conception of what was necessary to provide for successful operation, namely, an opening at the bottom of the cargo larger than that at the top, a clear run of water through the centre of the boat when open, and the discharge of as much material in a single mass as possible.

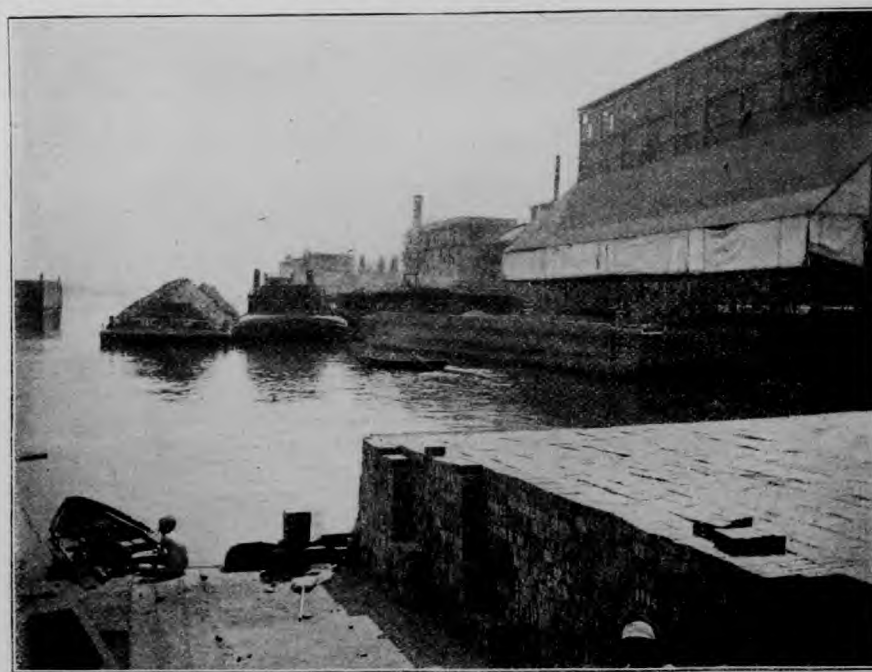


TWO BARNEY DUMPERS IN TOW IN ACT OF DUMPING.

These boats do their work well, but are adapted solely for sea dumping, as they will not dump when at rest on account of the tendency of the two hulls to close after the first weight of the load has been removed, and the lack of means to drive out floating matter confined in the space between the two hulls after dumping. They must be kept continually under way, if they are to be properly cleared out. Another serious objection to their use is the tendency, after they are partly loaded, of the hulls to separate to a certain extent, thereby rapidly filling the slips at which they are used with material which escapes from the bottom.

The boat proposed by Lieutenant-Commander Daniel Delahanty, and designed and built by Lewis Nixon, manages these difficulties very well. The first boat built—the "Cinderella"—was faulty in many details. The nature of these faults was thoroughly investigated by actual trial. A detailed review of the changes made in this boat in order to overcome the difficulties encountered would be interesting, but too lengthy to give here. It is sufficient to say that they were corrected in the "Cinderella," and have been avoided in the two succeeding boats—the "Aschenbroedel" and "Cenerentola."

The conditions for dumping as large a body of material as possible at one point in still water have been met in these boats as follows: The compartments in which the load is carried, between the pontoons, are wider at the bottom than at the top. The width of the compartments on top is 10 feet, and the two bottom doors opening laterally are each 6 feet wide. The compartments are 13 feet deep and 15 feet long. This form of compartment does away with arching or bridging of the material in its downward passage and moves the mass more or less as a unit, according to the proportion of elements it contains, such as street sweepings, paper, etc.



The upper right-hand corner shows a general view of the water front of the storage dump at Seventeenth street. Underneath the chute is an empty Department deck scow. Outside this scow, and farther back, is the first self-propelling dumper constructed by the Department—the "Cinderella." The photograph shows the pontoon form with the run of water between the two hulls.

The bottoms of the divisional bulkheads of the compartments and the decks connecting the pontoons forward and aft are about 20 inches from the water when the boat is light. After dumping, the backing of the two propellers sends a powerful current between the two pontoons which, after the heavy matter has sunk, quickly drives out the floating material and permits the shutting of the doors.

In the design of a storage dump there were three ways of obtaining the desired result:

First—The dump might be built as an overhanging structure whose outer end might be supported by columns on piles, thus forming a passageway between the pier and the piles supporting the columns into which a steamboat could enter to receive cargo.

Second—The dump might be built as in the first case, but as a cantilever, with storage pockets in the overhang.

Third—The storage pockets or compartments might be built directly over the pier, but at such a height as to make it possible to give their bottoms a slope sufficient to discharge their contents into a chute when the compartment doors of the storage pockets were opened.

The same method of filling the compartments of the storage dumps might be followed in all three suggestions—namely, the use of elevators or carriers, as there is not sufficient room at any of the places where the dumps of the Department are located to allow the building of a run of such length as to permit the dumping of carts into the compartments of the storage dump in the same manner as they dump at present on scows. The overhanging dump also offers objections on the score of the liability of damage occurring to boats that would load under it, from the fact that the material dropped from the compartments would move in masses so large as to strike the boat beneath with a dangerous momentum.

Of the three styles of dump proposed the last is the cheapest, both as to first cost and maintenance. First cost will be cheaper since the loading of an overhanging structure on the cantilever principle will of course demand heavier iron work than where the load may be borne almost directly upon the main columns and floor beams. For an overhanging dump there must be employed at least two carriers or elevators, while a chute dump will require but one.

The details of design of this dump were influenced very largely, as were those of the boat, by the nature of the material to be handled. The conditions to be met were briefly as follows:

1. The storage compartments must be as large as consistent with the ease of handling the material.
2. The slope of the floors must be sufficient to readily start the mass in any compartment upon the opening of the door and break it up into particles so that its feed into the boat may be easily made and regulated.
3. The compartment openings must be of such size and shape as to prevent arching or bridging of the material during its discharge.
4. An elevating device of ample capacity must be provided so that the dumping of carts on the dumping platform may never be delayed.
5. A gear for the hoisting of the compartment doors must be provided which may be operated by the same power running the elevator.
6. A chute must be provided for the proper feeding and discharging of the material into the compartments of the self-propelling boats.

The difficulties met in the operation of this dump have been chiefly in the securing of a slope of floor which, without seriously constricting capacity or increasing height, would be ample for the certain moving of the material in the compartments, and the providing of a chute which could surely and easily regulate the material as it is fed into the boats. These difficulties have not been hard to eliminate, but have been necessarily investigated and obviated by tentative methods which will no doubt soon show just what will be necessary for the design of devices which will do perfectly the work assigned to the dump. The conditions obtaining at the storage dump in the handling of ashes and street sweepings, prevail in much the same degree in the case of handling garbage. Illustrations and description of this dump are given in the report of the Master Mechanic, Mr. George L. Walker.

The self-propelled dumping boats were originally designed to carry 300 tons of material, be propelled by two engines, one in each pontoon of about 125 I. H. P. and to attain a speed when loaded of ten miles per hour.

This capacity indicated, and estimates on this basis showed a very large saving in transportation over methods now in vogue. The pontoon boat, while answering admirably the conditions asked for dumping in quiet water, appears to be of a form which the designers and builders cannot make attain the speed originally estimated. The steamer "Cinderella," with a carrying capacity of 300 tons, with two engines of 125 I. H. P. each, and propellers of 4½ feet diameter and 6 feet pitch, can under favorable conditions attain a mean speed of about 8 miles per hour. This means, under ordinary running conditions, a speed of about 7 miles per hour.

The second boat built, the "Aschenbroedel," is propelled by two engines, one in each pontoon, of about 250 I. H. P. each, with propellers of 7½ feet pitch and 5 feet diameter, and made on her trial trip a speed (the mean of light and loaded condition) of a little more than 9 miles per hour. This means a speed, under ordinary conditions, of about 8 miles per hour, which figure I have used in my estimate given further on.

The displacement of the "Aschenbroedel" is 50 per cent. greater than that of the "Cinderella," and the I. H. P. 100 per cent. greater. The actual carrying capacity of the "Aschenbroedel" exceeds that of the "Cinderella" by about 15 per cent. The fact that an increase in power of 100 per cent. and an increase of displacement of only 50 per cent. results in an increase of but one mile per hour in the speed rate, seems clearly to indicate that for this type of boat a limiting speed has been reached.

The slight difference between the light and loaded speeds, a little more than one mile per hour, seems to indicate that the failure to attain a greater speed is due to interfering wave action between the two pontoons, as one of the 250 H. P. engines of either pontoon of the steamer "Aschenbroedel," would undoubtedly drive such a boat singly a rate of 12 or 14 miles per hour.

In making an estimate for cost of transportation we must, then, in determining the capacity of these boats, figure upon a mean speed not more than 8 miles per hour and a coal consumption for 500 I. H. P.

From the records of 1895, during which year all the material collected by the Street Cleaning Department was disposed of at sea in a mixed state, an estimate was made of the probable daily output of ashes and street sweepings after the removal of garbage and rubbish. The figure arrived at was 5,280 cubic yards per day for six days per week.

During the year 1897 an entirely separate collection of ashes and sweepings, garbage and light rubbish has been made. The records up to the present date show the following outputs of ashes and street sweepings for the year: By Department carts, 780,000 cart loads; by permit carts, 270,000 cart loads—giving a total of 1,050,000 cart loads. This, reduced to cubic yards, is 1,627,500. This gives an average daily output for 313 days, of 5,200 cubic yards per day.

With the information we possess at the present date, from what trials and experiments have been made with the self-propelling boats like the "Cinderella," and with the storage dump at Seventeenth street, East River, I have prepared the following estimates of the future cost of operation of the steamers, dumps and plant for the disposition of the ashes and sweepings at Riker's Island, with present methods that are available, in order to see what course it will be best to follow in future.

The work, as already noted, divides itself into three branches for whatever method is employed in handling and disposing of the ashes and street sweepings. These are namely:

- A. Loading.
- B. Transporting.
- C. Discharging and handling in fill.

In comparing costs I have first compared the actual running expenses, including repairs, of the various methods considered, omitting fixed charges, such as interest, depreciation, royalties, etc., and then I have made a comparison including these items.

On this basis I have made comparisons of the three methods which may be most readily inaugurated in the Riker's Island work, taking care to use for each estimate the same or equivalent items of cost. Administrative charges I have omitted, as they would be a factor common to all methods.

I.

1. Loading from Storage Dumps.
2. Transporting by self-propelling Boats.
3. Discharging and handling in fill by a Pumping Process.

II.

1. Loading from the present Dumping Boards into Deck Scows, the Department utilizing its own plant and chartering whatever Scows, in addition to its own, may be necessary.
2. Transporting by Tow Boats, by contract.
3. Discharging and handling in fill by contract, the contractor selecting his own method.

III.

- 1, 2. Loading and Transporting as in II.
3. Discharging and handling in fill as in I.

I.

A. COST OF OPERATION ALONE.

1. LOADING.

a. Labor—There will be needed at each of the storage dumps an engine-man for the operation of the elevating machinery; and at dumps where night work is done, extra men will be needed. The wages of these men will amount in the year to \$13,500.

Experience at the Seventeenth street dump has demonstrated the necessity of a gang at that place of four Italian laborers to attend to the proper loading of the elevator buckets and the picking out of materials possessing value, as well as those liable to cause trouble in the elevator. Not a great deal of value comes in with the ashes and street sweepings. At the Seventeenth street dump, from 1,960½ cartloads of ashes and sweepings the material culled was sold for \$31.07. This gives a load value of \$.016.

Laborers cost \$1.25 per day. At this rate, using gangs of four at the thirteen dumps and two extra gangs of four at the dumps doing night work, will give a complement of 60 men, costing \$75 per day. This cost will be partly offset by the value of the pickings from the ashes and street sweepings, which, on the basis just given, will be \$54 per day, leaving a balance to be paid out daily for the labor of \$21, or \$6,600 per year. It is possible that this labor may become self-supporting, but the evidence before us at present does not seem to warrant our making such an assumption.

b. Fuel—The coal consumption at the Seventeenth street dump during its operation was 2,800 pounds pea coal for six days. For 13 dumps, allowing for night work and over time, this will give us an annual coal consumption of 1,500 tons, costing \$4,125.

c. Supplies—Such as oil, waste, etc., and repairs to 13 engines at \$20 each per month will cost, per year, \$3,120.

d. Repairs to Dumps—The repairs to the steel structures will be less than those at the wooden dumps. The elevating machinery will, however, need more or less repairing and supplying of parts that will wear out or break. As far as can be seen at present, an allowance of \$50 per month, for each dump, appears to be fair. This will give an annual expenditure of \$7,800.

Summary—For Operating Expenses of Loading.

a. Labor.....	\$20,100 00
b. Fuel.....	4,125 00
c. Supplies and Repairs to Engines.....	3,120 00
d. Repairs to Dumps and Elevating Machinery.....	7,800 00

Total per year..... \$35,145 00

2. TRANSPORTING BY SELF-PROPELLING BOATS.

It is difficult to give an accurate estimate of the time that will necessarily be occupied in loading these boats from the storage dumps and discharging them at Riker's Island. The time of actual loading will no doubt, in many instances, be exceeded by the time lost in delays at crowded slips, by ice, fog, etc. For determining the time of loading, the operation of the dump at Seventeenth street, has not as yet been such as to give any positive information as to the actual time needed to properly discharge the contents of one compartment of the dump into a compartment of the steamer.

It will, of course, be an aid to economy in the operation of this system to plan a schedule of the boats, so that they may always take from any one dump a certain maximum amount. The delays in getting in and out of slips will be, as far as their location is concerned, a minimum at the up-town dumps and a maximum at such dumps as those at Canal and Rutgers streets. In winter, delays from ice will be a maximum in the North river and a minimum in the East river.

Also, there are bound to be delays in the clearing of compartments of the storage dumps, when the material contains large percentages of rubbishy matter. The occurrence of this matter, which must be counted on, will also affect the time of discharge from the boats into a receiving-basin at Riker's Island. At this point, delays in unloading, besides that just mentioned, will be in the warping of the steamers in and out of the basin, occasional waits for unloading machinery to receive cargoes, ice, etc. In view of all these facts, I do not believe that an average time allowance for loading of two hours, and for discharging of one and a half hours, is at all excessive.

As already noted, the maximum speed attained by the boats upon which we can count in actual practice, is 8 miles per hour. The working capacity of the boats is 550 cubic yards.

In determining the efficiency of these boats and the consequent size of plant necessary to properly carry on the work, account must be taken of the fact that the output of ashes and sweepings varies according to the season as much as 25 per cent. each way from the average for the year, and that we may count on the maximum daily output, as far as it concerns the size of plant necessary to transport it, remaining practically constant for nearly five months of the year.

It will, then, be advisable to consider first, a plant capable of caring for the maximum output; then one for the minimum. Since the Department operates two dumps (those at Canal and Rutgers streets) night and day, I have considered one boat running twenty-four hours each day the entire year and whatever others may be necessary, running on a twelve-hour basis.

The maximum output will be 6,500 cubic yards per day, of which 3,600 cubic yards will be from the East river and 2,900 cubic yards will come from the North river dumps.

The average round trip from the North river dumps to Riker's Island is 31 miles; from the East river dumps to Riker's Island, 12 miles. With these distances and the working speed of 8 miles per hour, allowing two hours for loading and one and a half hours for discharging, for each trip, we find that for the maximum period we shall need one boat running 24 hours and 4 boats running 12 hours per day.

The minimum output will be 3,900 cubic yards per day, of which 1,700 will be from the North river, and 2,200 from the East river dumps. Considering our working conditions as in the maximum estimate, we find that we shall need in addition to 1 boat working 24 hours each day, 2 boats working 12 hours. This will be the minimum complement.

Knowing the requisite size of plant, the cost of transporting may now be determined. The running expenses for a double crewed steamer will be as follows, per month:

Wages.....	\$920 00	Repairs and painting.....	\$70 00
Rations.....	240 00		
Coal.....	522 00		
Oils and supplies.....	25 00		
Total per year, \$21,324.		Total per month.....	\$1,777 00

For a boat running with a single crew, operating 12 hours of the day, the expenses of operation will be as follows:

Wages.....	\$530 00	Repairs.....	\$50 00
Rations.....	135 00		
Coal.....	261 00		
Oil and supplies.....	15 00		
Total per year, \$11,892.		Total per month.....	\$991 00

We have seen that for the maximum period of work we need a fleet of five boats, one working 24 hours and four working 12 hours per day; and for a minimum period of work we need three boats, one working 24 hours and two working 12 hours per day. Now, as already noted, the maximum condition of output prevails for practically five months of the year. The minimum period prevails for about two months. Then our fleet must work as follows: For twelve months of the year a double-crewed boat working 24 hours each day must be on duty. In addition to this there must be on duty for five months 4 single-crewed boats; for five months 3 single-crewed boats; for two months 2 single-crewed boats.

Summary for Operating Expenses of Transportation.

1 double-crewed boat, 12 months, at \$1,777 per month is.....	\$21,324 00
4 single-crewed boats, 5 months, at \$991 each per month.....	19,820 00
3 single-crewed boats, 5 months, at \$991 each per month.....	14,865 00
2 single-crewed boats, 2 months, at \$991 each per month.....	3,964 00

A total per year of..... \$59,973 00

Say, \$60,000.

I have considered using but one double-crewed boat, as that will amply care for the dumps which work at night. The working of another boat day and night means the necessity of keeping at certain dumps a night operating force. Now assuming that a 24-hour boat will do just twice as much work as a 12-hour boat, we have for the saving in cost of operation of a 24-hour boat over two 12-hour boats, \$205 per month.

The night maintenance of three dumps (the least number outside of those at Canal and Rutgers streets), necessary to successfully operate a second 24 hour boat would easily cost in labor and coal for keeping steam, more than this difference, as will be seen by referring to the estimate for the cost of operating the storage dumps.

3. DISPOSITION AT RIKER'S ISLAND.

(By Depositing Material in a Receiving-Basin and Pumping Material Ashore.)

In present engineering practice there are two methods of pumping solid matter carried in suspension in water. One is by the centrifugal pump which will handle, with the water it elevates, solid matter in varying percentages, according to its character. The other method, commonly called the pulsometer, utilizes the pressure of the atmosphere to fill a chamber with a suction pipe is connected, with a mixture of water and the solids to be handled, from which the mixture is forced through the delivery pipes by steam admitted into the chamber under pressures varying with the length of delivery pipe, height of fill, etc. The steam in the chamber is then condensed by a water jet, a partial vacuum created, the chamber filled with a mixture of solids and water by atmospheric pressure and the process just described repeated.

Far more work has been done, and far more reliable data are obtainable in the handling of dredged material in the case of centrifugal pumps than in those instances where the other method has been employed. However, as regards handling the material collected by the Street Cleaning Department, we unfortunately have had no opportunity to compare the relative merits of these two methods. We do know, however, that the chief cause of delay and stoppage in plants handling dredged material by the centrifugal pump is the clogging or breaking of the impeller vanes of the pump by large objects that are drawn into the suction-pipe. The delays in the other plant are chiefly due to the tendency to force through the delivery pipe mixtures containing too large a percentage of solid matter, thereby clogging the pipe and necessitating pipe cutting and clearing of the obstruction.

As regards economy of operation, the users of each system are inclined to belittle the results obtained by users of the other, and useful comparisons on this point are extremely difficult to make, owing to the lack of uniformity of conditions prevailing in the places where the various plants have been used or are in use to-day.

In choosing between these two methods for handling the material (ashes and street sweepings) which this Department intends to place behind the cribwork at Riker's Island, the factor most important and, indeed, almost alone in deciding the question, is the nature of the material. While it is proposed to transport and handle in this way only the ashes and street sweepings, there is always mingled with them such a large amount of debris, as wood, rags, large and small pieces of metal, wire, rope, stones, etc., that it is evidently necessary for handling such matter by pump to have suction and discharge-pipes as large as possible and the pump itself as devoid of details liable to injury as it is possible to make it.

Of the two systems mentioned the pulsometer or vacuum pump certainly meets the conditions more fully than the centrifugal pump. The design of a plant of this kind for use at Riker's Island

must be for one in duplicate in as many parts as possible in order to guard against delays by reason of stoppage or breakdown and must have a capacity for handling the maximum daily outputs in 12 hours.

Estimates from the builders of the machinery, requisite for such a plant show that an amount of \$50,000 would be necessary for building and equipping it. The cost of operation of such a plant is easily estimated as far as labor goes, but not as regards a very important item, namely, that of fuel. Similar plants at work to-day, though on far smaller scales than what would be necessary at Riker's Island, are generally operated in connection with a dredge or steam shovel, the pump and dredge gear drawing their steam from the same source, so that it is hard to say just how much coal will be necessary, per unit of material, per unit of distance delivered. One plant was seen where about 2,000 cubic yards, measured in fill, were dredged and pumped ashore 500 feet with a 5-foot lift of 5 tons of coal, or for this distance, $2\frac{1}{2}$ tons of coal per thousand cubic yards, measured in fill.

As the lift at Riker's Island is practically nothing and the delivery can be made for a long time at very short distances, it seems to be safe to say that an allowance of 2 tons of coal per 1,000 cubic yards put ashore will be sufficient.

On this basis the cost of operation of the plant will be as follows, per year:

Summary for Cost of Operation of Discharging.	
Labor.....	\$14,400 00
Fuel.....	9,500 00
Rations for crew.....	3,600 00
Supplies and repairs.....	1,500 00
Total per year.....	\$29,000 00

We now have as a summary of our first method of loading, transporting, and discharging and handling in fill the following figures:

Loading.....	\$35,145 00
Transporting.....	60,000 00
Discharging and filling.....	29,000 00
Total per year.....	\$124,145 00

B. COST OF OPERATION WITH FIXED CHARGES.

(Interest, Royalties, etc.)

In computing the cost of the plant just described we must add one more boat to the complement needed for actual operation, as it will always be necessary to have a spare boat for emergencies. This boat need not be commissioned but may be kept in readiness to receive the crew from any boat that may be temporarily disabled. Then 6 dumping-boats, at \$40,000 each, will cost \$240,000. The structure and machinery for the storage dumps will cost per dump \$19,500. This amount is divided as follows:

For structure.....	\$10,318 00
For elevator, engine-boiler and boiler-house.....	7,500 00
For cart run.....	1,000 00
For woodwork and minor equipment.....	650 00
Total.....	\$19,468 00

These figures are furnished by the kindness of the Master Mechanic, Mr. George L. Walker. Thirteen dumps supplied with such structures will give an outlay of \$253,500. Royalties to the inventor of the dumping-boats at \$10 each per day while the boats are in use will amount to (on the running schedule given in the cost of operation of the boats) a yearly sum of \$13,800.

Then we have cost of boats.....	\$240,000 00	Depreciation at 2 per cent.....	\$5,070 00
Interest at $3\frac{1}{2}$ per cent.....	8,400 00	Cost of pumping plant.....	50,000 00
Depreciation at 5 per cent.....	12,000 00	Interest at $3\frac{1}{2}$ per cent.....	1,750 00
Insurance at 2 per cent.....	4,800 00	Depreciation at 10 per cent.....	5,000 00
Cost of dumps.....	253,500 00	Royalties to patentees, per year.....	4,070 00
Interest at $3\frac{1}{2}$ per cent.....	8,870 00		

Summary of I., A.

Summary of I., A.....	\$124,145 00	Depreciation of storage-dumps.....	\$5,070 00
Royalties on dumping-boats per year.....	13,800 00	Interest on cost of pumping plant.....	1,750 00
Interest on cost of dumping-boats.....	8,400 00	Depreciation of pumping plant.....	5,000 00
Depreciation of dumping boats.....	12,000 00	Royalties on pumping plant.....	4,070 00
Interest on cost of storage-dumps.....	8,870 00	Total.....	\$183,105 00

II.

A. COST OF OPERATION ALONE.

1. LOADING.

a. In handling simply the ashes and street-sweepings, it will be fair to say that in the light of present experience at Seventeenth street the labor of trimming the deck scows at each dump will cost as much as caring for the material dumped into the storage dump's elevator buckets. This was computed for the year at \$6,600.

b. The only other cost incurred at the wooden dumps now in use by the Department will be for repairs and supplies, as the ashes and sweepings are dumped from the carts directly on the scows, the barges acting in the same capacity as the storage dumps in the preceding estimate.

The records kept by the Master Mechanic, Mr. Walker, and kindly put at my disposal, show an annual expenditure on the present dumps of \$3,300 for labor and \$1,000 for material, a total of \$4,300, or \$27.50 per dump per month.

Summary for Loading.

a. Labor.....	\$6,600 00
b. Maintenance of dumps.....	4,300 00
Total per year.....	\$10,900 00

2. TRANSPORTATION.

The loading of deck scows for handling material for filling-in places has shown that we can, on the average, safely load a deck scow, taking the varying sizes as they occur in New York harbor lighterage practice, with 500 cubic yards of ashes and street sweepings. With an average daily output for 313 days of 5,200 cubic yards, we shall have a daily output of 5.8 scow loads from the East river and 4.6 scow loads from the North river; a total of 1,815 scow loads annually from the East river and 1,440 from the North river.

Scows from the East river can be towed to Riker's Island and returned to the city dumps, by contract, for \$10 per scow, and from the North river for \$12 per scow. At these rates the towing will cost \$36,180.

For doing this work 40 deck scows will be required under ordinary conditions. This means the hiring of 18 deck scows, the Department owning 22. These scows may be chartered at \$5 each per day. This will give a yearly rental bill of \$32,850.

At certain times the number of chartered deck scows must be increased by reason of delays in work from ice, fog, storm, etc. In 1895-1896, when work was carried on entirely at sea, although the larger portion of the work was done by the Barney dumpers, this extra hiring above the normal was nearly \$30,000. On inside harbor work, where delays are rare from storm, and not nearly as frequent by reason of fog as when sea work is done, and where the time of transit is shorter, a total allowance for scow hire of \$40,000 will be sufficient.

In 1895-1896, which was a hard winter, \$9,541 was expended for shifting scows and breaking ice in the slips at the dumping boards. Shifting will always have to be done to a greater or less extent in using deck scows, and conditions of ice are so likely to arise in winter that an allowance of \$9,540 for these items is certainly not too large.

The records of the Department for 1896 show for maintenance of the Department's fleet of deck scows the following items:

Material used in repairing.....	\$1,486 08
Labor.....	3,847 09
Supplies.....	1,869 17
Total.....	\$7,202 34

We may use, in round numbers, for an estimate..... \$7,200 00
For 1896, the wages of Department scow men were..... 12,509 47

Summary for Transportation.

Towing.....	\$36,180 00
Hiring.....	40,000 00
Maintenance of 22 deck scows.....	7,200 00
Wages of Department of Street Cleaning scow men.....	12,510 00
Total.....	\$95,890 00

3. DISCHARGING AND HANDLING IN FILL.

The prices obtained in the past for "Towing and Unloading," show that by contract work, the contractor selecting his own method, the Department can certainly have the ashes and street sweepings unloaded from its barges at Riker's Island and distributed in fill for not more than 7 cents per cubic yard. This would be for 1,627,500 cubic yards, the yearly output, an annual outlay of \$113,925.

Summary of II., A.

Loading.....	\$10,900 00
Transporting.....	95,890 00
Discharging and filling.....	113,925 00
Total.....	\$220,715 00

B. COST OF OPERATION WITH FIXED CHARGES.

The value of the dumping boards, as existing at present, may be fairly put at \$26,000. Interest on this amount at $3\frac{1}{2}$ per cent. is \$910. Depreciation at 3 per cent. will be \$780.

The value of the scows, assuming them newly built, would be \$92,000. Interest at $3\frac{1}{2}$ per cent. on this amount will be \$3,220. Depreciation at 3 per cent. will be \$2,760.

Summary of II., B.

Summary of II., A.....	\$220,715 00
Interest on cost of dumps.....	910 00
Depreciation of dumps.....	780 00
Interest on scows.....	3,220 00
Depreciation of scows.....	2,760 00
Total per year.....	\$228,385 00

III.

A. COST OF OPERATION ALONE.

1. LOADING.

This is the same as II., A. 1, \$10,900.

2. TRANSPORTING.

This is the same as II., A. 2, \$95,890.

3. DISCHARGING AND FILLING.

In this item the cost of discharging and filling will be more than in I., A. 3, for the obvious reason that the material transported on the deck scows must be removed from the deck to the suction-pipes of the pump, while in the first case the dumping boats deposited their loads directly over the suction-pipes of the dredge, thereby necessitating an amount of dredging only sufficient to keep the suction-pipes well supplied with material. Now the deck scows may be unloaded by scraping their cargoes from the deck into a receiving basin where the suction-pipes of the dredge are located, or by picking up the material by buckets of a suitable type, and dropping the material into receiving hoppers from which the dredge's suction-pipes lead.

How much this work will increase the cost of discharging and filling over that given under I., A. 3, is hard to say, as so many devices may be conceived for the prompt discharge of cargo from the deck scows to the suction-pipes of the dredge. I do not believe it will be too large to say that it will increase the cost of handling in the neighborhood of 50 per cent., or raise it from \$29,000, as given in I., A. 3, to say, \$45,000.

Summary of III., A.

Loading.....	\$10,900 00
Transporting.....	95,890 00
Discharging and filling.....	45,000 00
Total.....	\$151,790 00

B. COST OF OPERATION, INCLUDING FIXED CHARGES.

Summary of III., A.....	\$151,790 00
Interest on cost of dumps.....	910 00
Depreciation of dumps.....	780 00
Interest on cost of scows.....	3,220 00
Depreciation of scows.....	2,760 00
Interest on cost of pumping plant.....	1,750 00
Depreciation of pumping plant.....	5,000 00
Royalties on pumping plant.....	4,070 00
Total.....	\$170,280 00

Comparison.

	I.	II.	III.		I.	II.	III.
A.....	\$124,145 00	\$220,715 00	\$151,790 00	A.....	.076	.136	.093
B.....	183,105 00	228,385 00	170,280 00	B.....	.112	.140	.105

Up to the present time the most economical method of disposing of ashes and sweepings at the command of this Department has been by the deposit at sea from the Barney dumpers. In 1896 these boats carried to sea 1,487,700 cubic yards. The expense incurred by the Department in this work was—

For hiring boats.....	\$137,820 00
For towing dumpers.....	61,071 49

Giving a total of..... \$198,891 49

—or a rate per cubic yard of \$0.134, omitting the portion of maintenance and depreciation of dumps chargeable to these boats for their use of the dumps (about \$2,000 for the year).

In 1896 the cost of final disposition of the ashes, rubbish, street sweepings and garbage handled by the Department, put on the same basis as the estimates prepared under I., II. and III., was made up of the following items:

Towing Barney dumpers to sea.....	\$61,071 49
Towing deck scows to sea, shifting and ice breaking.....	53,137 50
Hiring Barney dumpers.....	137,820 00
Hiring deck scows.....	20,788 00
Towing and unloading deck scows at filling-in places.....	29,175 12
Unloading deck scows at sea by hand labor.....	51,881 65
Maintenance of scows.....	7,200 00
Wages of scow men.....	12,510 00
Maintenance of dumps.....	4,300 00

Total for the year..... \$377,883 76
Or in round numbers..... 377,900 00

This gives a rate per cubic yard of \$0.146.

The material cared for was distributed as follows:

At sea in Barney dumpers.....	1,487,700 cubic yards.
At sea on the deck scows.....	785,900 "
In fill behind bulkheads on the deck scows.....	318,400 "

Total..... 2,592,000 cubic yards.

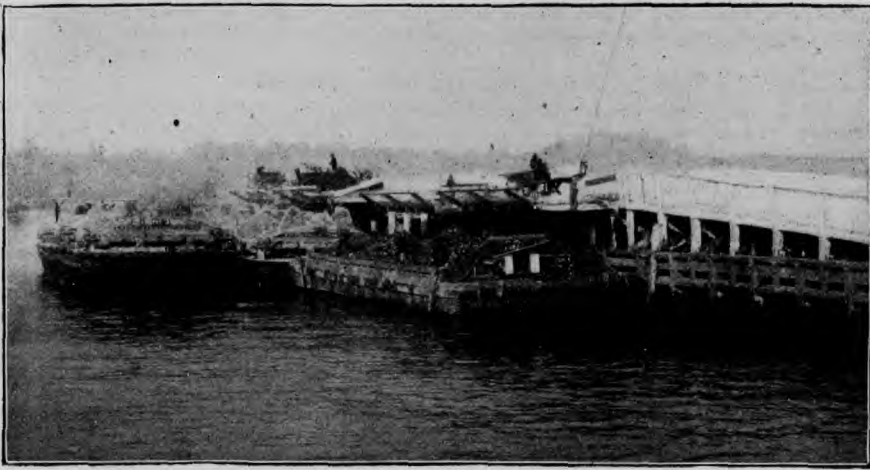
It will be seen from these figures that depositing the material behind the bulkhead at Riker's Island will be much cheaper than depositing at sea, no matter what system of loading, transporting and discharging and filling is adopted to carry on the work behind the bulkhead.

At Riker's Island, behind the existing crib-work, is an area of 65 acres capable of receiving about 2,000,000 cubic yards of ashes and street sweepings. In addition to this area there are, inside the bulkhead line located by the Secretary of War, 221 acres of submerged land capable of receiving about 6,500,000 cubic yards of filling. These areas would give space enough to absorb the City's output of ashes and street sweepings for over five years, at the end of which time the City would possess about 285 acres of land, which would probably be worth over \$500,000.

A review of the costs of transporting alone, omitting the cost of loading and the fixed charges, shows a large difference in favor of the self-propelling dumping boats. The excess of the total cost of disposition by system I. over that by system III. is due to the cost of operation of the storage dumps, the interest on the cost of the steamers and dumps and the royalties to the patentees of devices used.

In spite of the operative cost, the advantages of the storage dump over the present loading system are decided. The delay of carts at the dumps in use at present, by the shifting of scows when one is loaded, would be avoided by the storage dump, and the dust nuisance caused by the dumping of carts into the scows from a height above them of 12 or 14 feet would be largely obviated. The doing away with the steep run now in use would afford a most fortunate saving of

the wear and tear on cart horses and harness. The storage dumps may be built with an ample surplus capacity, which in itself, would be an invaluable aid to the interior work of the city when boats are delayed by fog or ice, as the continuous and uninterrupted work of the carting force of the Department is well nigh indispensable.



ONE OF THE DUMPING-BOARDS NOW IN USE. SCOW UNDER NEARER BOARD IS RECEIVING GARBAGE. UNDER THE OUTER BOARD IS A BARNEY DUMPER RECEIVING ASHES, STREET SWEEPINGS AND RUBBISH.

It would seem well, then, in view of the estimates just considered, to advise for the immediate future the following course of action: A properly equipped plant for handling the ashes and sweepings transported to Riker's Island by either of the transportation systems reviewed, should be installed and put in operation at once.

The moment this is done, dumping at sea may be stopped, and the residents of Long Island's beaches freed from a nuisance which will continually increase as long as sea dumping is continued. The Board of Estimate and Apportionment has at present before it a request from this Department for the granting of money for the erection of a plant which will effectively do this work.

The plant at Riker's Island may be put in operation either by the City or by contract. If put in by the City and properly operated, a yearly saving of about \$65,000 may be effected over the cost of the same work if done by contract. The present small system of storage dumps, whose erection is nearly complete, and the dumping boats soon to be delivered to the City, should be carefully developed to its fullest capacity, in order to determine as exactly as possible its capability and mark the way for future improvements and plans, when work must cease at Riker's Island and other outlets be sought for the disposition of the ashes and street sweepings.

Light Rubbish.

The light rubbish collected by the carts of the Department has always been a source of difficulty in the disposal of the City's wastes. A windy day at the dumping-boards scatters broad-cast over the neighboring property and into the water, paper and rag clippings, and all sorts of material light enough to be carried by the wind. The complaints along the Long Island shore, during the summer of 1897, were scarcely less bitter than in the preceding summer, although practically no garbage was dumped at sea after March, 1897. The casting ashore of old mattresses, boxes, barrels, etc., made the sea dumping as fruitful a source of complaint as ever.

When the mixture of ashes and light rubbish is used for land filling, the large percentage of paper and kindred rubbish makes a fill that is long in settling and is of generally poor quality, to say nothing of its bad appearance.

The commercial value of the rubbish, as received at the dumps in 1895-1896, was made the subject of special study and report by Mr. Hawthorne Hill in the report of February 3, 1896, transmitted to his Honor, the Mayor.

I wish to report here briefly upon the present condition of the work we are doing at present in the handling of this material in a cleanly manner, the revenue derived from its valuable parts and the reduction of the valueless or unmarketable matter to ashes which may be disposed of in the manner I have already described.

The disposal of the rubbish, as the disposal of the garbage, depended on a separate collection, so that the value of the paper, rags, etc., collected might not be greatly depreciated, as some materials are at the present dumping boards, by soiling with ashes, street dirt, etc., and that the parts of no value might be, as just stated, reduced to ash and clinker for disposal with the other waste fit for utilization in land development.

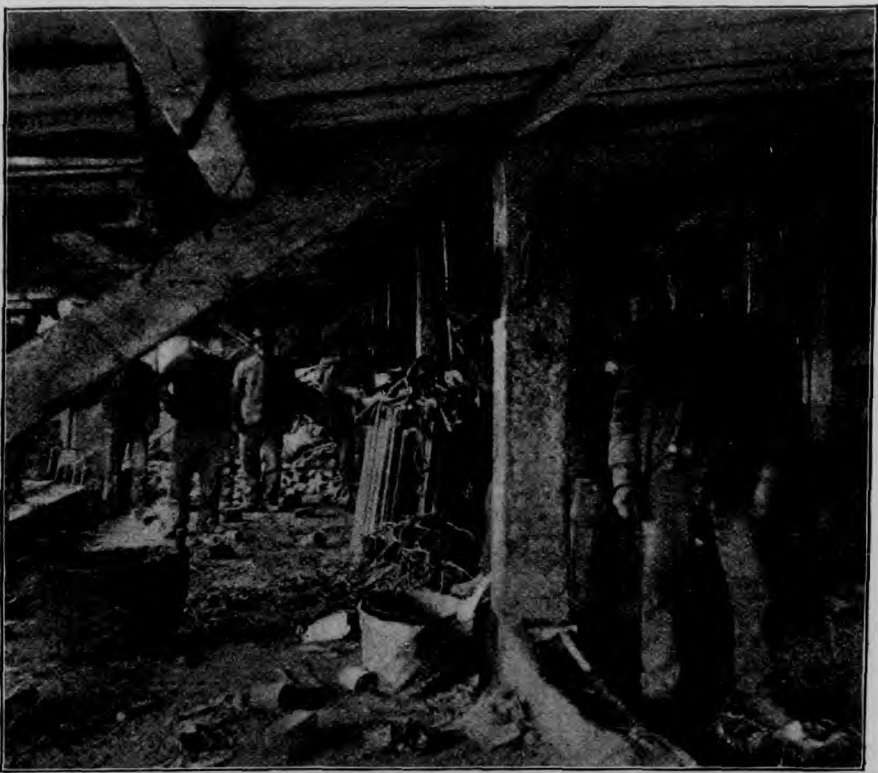
The possibilities of value and consequent revenue to be derived from this source in the future are the subjects of a special report by Mr. Hawthorne Hill.

Thus far the erection and operation of two plants for the sorting and destroying of rubbish have given us a large amount of information as to the cost and effectiveness of this branch of final disposition.

The plants constructed, one in West Fifty-third street, which was operated last year for a time, and the one in East Eighteenth street, opened in May of this year and continuously in operation since that time—are both described, as to details of construction and operation, in the report of the Master Mechanic, Mr. George L. Walker.

Practically the full possibilities of the plant in East Eighteenth street have been demonstrated only since the picking privilege at that place was let to a contractor on September 13, at the rate of \$85 per week.

Since September 13, the expenses to which the Department has been put at this plant have been those for supervision, rent, repairs and interest on the cost of the plant, and the final disposition of ashes and cinders, and wastes which are both indestructible and unmarketable. The contractor paying \$85 per week for the picking privilege has paid for all labor necessary in sorting and baling materials picked out and for the operation of the machinery, as well as for the removal of the ash and cinders, and the wastes that possess no value and are indestructible by fire.



BENEATH ONE OF THE OLD DUMPING-BOARDS WHERE PICKERS STORED THEIR FINDINGS.

From Monday, September 13, to Sunday, December 5, a period of twelve weeks, there were received from the Department of Street Cleaning "paper carts" at the yard 3,056 cart loads. The term "cart load," in speaking of these quantities, is somewhat indefinite, as the "paper cart," though of a capacity of 4½ cubic yards, is always, more or less, heaped with barrels and bundles of paper. Of the material received during this time 9.5 per cent. was of such a character that it

possessed no marketable value and could not possibly be destroyed by the furnace. This material consisted of such articles as woven wire mattresses, old pans and kettles, etc. These were loaded on sea-going scows and deposited at sea. The future disposition of these articles, when sea dumping is stopped, can probably best be accomplished by utilizing them to form the bottom of land fillings.

The amount of ash and clinker turned out from the furnace during this same period was about 260 cubic yards or 2.3 cubic feet per "paper cart" load. This means that if all the rubbish collected daily by the carts of the Department were treated in a similar manner, the average daily output of ashes and street sweepings of 5,200 cubic yards would be increased by about 60 yards.

The articles culled and sold from the rubbish delivered at this plant were paper (7 classes with varying grades of the different classes), rags (7 classes with varying grades of each class), carpets (4 classes with varying grades), bottles (9 classes), 7 kinds of old metals, tin cans, old shoes, old rubber, hats, brushes, barrels, hair cloth, curled hair, etc., and broken glass.

The operating expenses for the period September 13 to December 4, including fixed charges on the plant, are as follows:

a. Interest—The plant cost to build \$16,000. \$16,000 at 3½ per cent for 12 weeks is \$129.23.
b. Rent—The lot on which this plant stands costs the Department for rent \$2,000 per annum. This for 12 weeks is \$461.54.

c. Depreciation—In former and briefer reports I have always put the depreciation of this plant at 10 per cent. of the cost per annum. This is not too high. 10 per cent. of \$16,000 is \$1,600 per annum. For twelve weeks, \$369.23.

d. Supervision—The Department employs at the yard a man at night in the capacity of night watchman and one in the day time as an inspector. The salaries of these men are respectively \$720 and \$1,200 per annum. This for twelve weeks gives an expenditure of \$443.08.

e. Final Disposition—The ashes from the destructor for the period September 13 to December 4 amounted to 168 cart loads of the ordinary ash-cart size, and the wastes that were neither salable nor destructible amounted to 293 cart loads of the "paper-cart" size. In reckoning the cost of disposing of this matter it will be fair to consider in the cost of final disposition only those items which have been actually augmented by the caring for the material on the Department scows. This cost may be fairly taken for this season of the year for the whole 461 cart loads, considered of uniform size, at 22 cents per cart load. Then the cost of final disposition is \$101.44.

f. Repairs and Supplies.—For the period considered (September 13 to December 4) repairs to the plant cost \$120. Supplies to engine, such as oil, waste, etc., amount to \$18.

For a summary of the Department expenses in the operation of the plant we have the following:

a. Interest.....	\$129 23
b. Rent.....	461 54
c. Depreciation.....	369 23
d. Supervision.....	443 00
e. Final disposition.....	101 44
f. Repairs and supplies.....	138 00
Total.....	\$1,642 52

The Department has standing to its credit the following items:

Money paid by contractor for the privilege of picking, 12 weeks at \$85 per week....	\$1,020 00
Final disposition saved on 3,056 cart-loads, at 22 cents.....	672 32
Total.....	\$1,692 32

This gives a balance in favor of the plant of \$49.80.

There has been no nuisance from the operation of the furnace, and it has been possible to keep the entire plant in a very decent condition when consideration is taken of the litter that is handled. It certainly is infinitely better in every way than the conditions prevailing beneath the present dumps of the Department.

A review of the summary of operating expenses of the plant in East Eighteenth street, shows that the heaviest items of expense to be borne by the Department are those for rent and supervision. It is obvious that no larger supervisory force would be necessary for a plant of several times the capacity of this one. The furnace used in the Eighteenth street plant has been run to its full capacity. Therefore, in order to increase the profit derived from such a plant, it will be necessary to construct one whose ground rent will not exceed that of the plant in Eighteenth street, and whose capacity for assorting and destroying will very considerably exceed it. The plant and furnace of the Morse-Boulger type, whose erection and operation in East Forty-eighth street is proposed, and whose construction and operation is described in the report of the Master Mechanic, will undoubtedly show a very large increase in returns per unit of rubbish destroyed over those given by the Eighteenth street plant.

The material disposed of by the Eighteenth street plant, from September 13 to December 4, inclusive, was 5.8 per cent. of the total collection of rubbish by the Department and permit carts for this period from the entire city.

The arrangement of the carting system and the topography of the city will render it necessary to erect just so many plants of this kind as not to increase the cart haul and yet not save in the haul at the expense of rent, interest, etc., which will accompany the erection of each new plant.

A rough estimate made during the summer indicated the necessity of seven plants, each about four times the capacity of the one in Eighteenth street, and costing to operate \$221,000 per year. This estimate also showed that if the same material were transported to some place outside the city where it might be handled in a single plant of sufficient capacity, it could be disposed of—including transportation charges—for \$144,000, a difference in favor of transporting and handling in one plant of \$77,000 per annum. These figures were for operating expenses alone. It was assumed that there would be no loss in value of the revenue-returning material in the course of transportation; but this is probably incorrect.

A careful observation and record of the operations of the plant to be erected in East Forty-eighth street ought to show very positively, after a few months' operation, which will be the better course to pursue in this respect.

I have thus far given no attention to the matter of the value of the steam power created by the burning of the unmarketable matter. In a plant like the one at Eighteenth street, and the one proposed in East Forty-eighth street, about the only thing for which the available steam power may be utilized is the production of light; and, unfortunately, the steam production is at a time of day when there is practically no demand for this commodity. A chamber for storing refuse in the plant proposed for East Forty-eighth street may prove of value in this respect, in allowing the production of steam power at night and its utilization for light production.

Demands for steam power in other directions than that for lighting are, I believe, so small and variable as to forbid a consideration of them as a source of revenue in such a plant, though in special cases they might be such as to be of very material advantage. As far as the production of power is concerned, the handling of all of this material in one plant certainly offers greater possibilities than where it is handled in several small ones.

CHARLES A. MEADE, Superintendent Final Disposition.

THE PRIVATE COLLECTION OF GARBAGE.

A certain amount of swill or garbage from New York hotels and restaurants is removed daily to points outside the city, under permits issued by the Health Department. Thirty years ago, according to the advocates of sanitary reform at that time, the swill-boiling establishments and accompanying piggeries were among the worst of the many public nuisances then existing in New York. In the report of the Citizens' Committee of 1865, on the sanitary condition of the city, eighteen such establishments were enumerated on the single block bounded by Sixth and Seventh avenues and Fifty-first and Fifty-second streets. The first practical result of the work of that Committee was the creation of the Metropolitan Board of Health, with jurisdiction over a district composed of the cities of New York and Brooklyn, and among the earliest ordinances passed by the Board was one prohibiting the boiling of swill within this district.

The exodus of the swill collectors was first toward Hunter's Point, on Long Island, where they established themselves upon lands which had never been cleared, forming a considerable settlement too remote from other habitations to give rise to any complaint of nuisance. In time, however, the movement of population began again to inconvenience the proprietors of piggeries, and those who have remained have had a varied experience in defending their position in the courts. They have, indeed, compromised with public sentiment so far as to substitute cattle for pigs, as less offensive to their neighbors. Now that they have been included in the Greater New York, the swill collectors expect that even the feeding of cattle by their methods will be prohibited shortly. Their business has become gradually less profitable, however, and doubtless would cease soon to exist in any event. One complaint is that their swill business has suffered from the competition of the Germans in Secaucus, in New Jersey, whose economy in living cannot be equaled in Long Island City.

While the swill-collectors were dislodged gradually from the metropolitan district, so far as the location of their piggeries was concerned, they continued to remove swill from the hotels, there being, in fact, no better system to take the place of their wagons. The practice still prevailed of throwing swill from private houses, and especially from tenements, into the middle of the streets, to be trodden under foot and resolved gradually into its primary elements. It was a relief to the people of New York to be rid of the piggeries, but a nuisance remained in the methods of the swill-collectors, whose filthy carts defiled the streets and the ferry-boats. The Metropolitan Board of Health undertook to minimize this nuisance, and its efforts at regulation have been continued by the Health Department of the City of New York.

Under the Sanitary Code no private person shall engage in the transportation of swill within the city without a permit from the Health Department. There are in effect at the time of this

writing such permits for 38 wagons, each covering the removal of swill to a specified dock, and requiring wagons to be covered, not to leak, and to be disinfected periodically. The hours during which swill-carts can cross the ferries are limited. Each permit mentions the number of barrels of swill which its holder estimates that he will handle daily, and the figures aggregate 683 barrels. Putting the average weight per barrel at 140 pounds, which is believed to be fair, season by season, the daily volume of this business, in round numbers, is 48 tons.

The methods of conducting the swill business are the same, whether in Long Island City or in Secaucus, except that the Jerseymen, for the most part, continue to feed pigs. Their wagons leave for New York daily about 10 o'clock, and visit certain hotels and restaurants with which contracts have been made. Returning in the early morning hours, the swill is emptied into iron kettles of one or two tons capacity, in which it is cooked—rather than boiled—for twenty-four hours, or until the return of the wagons on the succeeding day. The grease which has risen to the top is then skimmed off, pressed and run into tins for sale. The remaining contents of the kettles are fed to pigs or cattle—being mixed, if for the latter, with hay and bran or pollard. If there is any surplus, it is sold to neighboring farmers, who generally feed a few pigs. Formerly the high price of grease yielded a profit from this source alone, but at 2½ cents a pound, all that the soap makers pay now, on delivery, it is claimed that the grease product fails to pay even the cost of the coal burned. The firing is constant, day and night, seven days in the week, since the hotels insist that the service rendered them shall not be interrupted on Sundays. But the cooking is essential to fit the swill for feeding.

The last remnant of the swill business in Long Island City is confined to the quarter known locally as "Sunnyside." Only four or five swill collectors are left, and these are grouped south of Jackson avenue, some 2½ miles from the Thirty-fourth Street Ferry leading from New York. Here Patrick McIntyre, the pioneer piggery-proprietor in town, is still at work at his original location. Not far away is Edward O'Keefe, whose father followed McIntyre from West Fifty-first street, New York, years ago. Their early associates in the business are gone, the others engaged in it to-day being comparatively "new comers." The two men named are credited by their neighbors with considerable holdings of real estate, paid for from the profits of their business in palmy days, so that they could look with equanimity upon any further suppression of cattle-feeding with swill.

Although more recent in its origin, the swill business back of Hoboken, in the scattering town of Secaucus, is conducted on a larger scale. Here are owned the greater number of the swill carts licensed by the New York Health Department. Among the holders of swill permits are Carl Schnell, Frank Eckhardt, H. Fischer, Jr., Jacob Blatz, C. Koegel, A. Hornung, J. Himsel, A. Zengel, H. Hummel and George Lausacker. Everybody here is interested in the same business, with no fear that a neighboring great city will ever absorb their out-of-the-way village, with ordinances to restrict their means of a livelihood as a nuisance. These, too, are a thrifty people, many of whom have paid for their homes with wealth gleaned from New York's wastes.

There is also to be considered the collection of garbage from some of the more important hotels and restaurants in the city by Messrs. P. White's Sons, of No. 41 Peck Slip, who have long had the contract, awarded by the Health Department, for the removal of dead animals from the streets. This garbage is handled, for the purpose of extracting the grease, at Barren Island, where are located several establishments for the utilization of waste products, in which the same firm have an interest. The Messrs. White also make collections every day in the week, and while the weight varies widely, with the different seasons, the daily average during the year probably is not far from 90 tons.

HAWTHORNE HILL.

THE GARBAGE TANKAGE TRADE.

Since it is essential to the successful operation of any garbage-reduction contract that a profitable market shall be found for the "tankage" produced, some considerations on the conditions of the trade in this commodity are presented herewith, based upon the statements of commercial authorities in response to a request in behalf of the Department of Street Cleaning.

Garbage tankage has distinct advantages as a raw material in the manufacture of superphosphates, possessing the requisite qualities of a "filler" required for certain grades of fertilizer, and also the property of absorbing moisture quickly, and thus being a good "dryer." A further advantage is the cheapness of the dried garbage, which induces manufacturers to use it, while at full market prices ruling for better-grade materials they would not handle it. The operation of each new municipal contract for garbage disposal by any of the reduction processes naturally increases the supply of garbage tankage and tends to depress prices, as has been demonstrated of late through the material increase in the production of this material. The continued extension of garbage reduction must be looked for, however, in response to the demands of sanitary science that the old methods of disposal of city wastes shall be abolished. Improved methods became a necessity for the City of New York, for instance, because of the menace to health from the pollution of the neighboring shores so long as the garbage was sent to sea. On the other hand, it has appeared of late that contractors have not been careful always to study the conditions of the fertilizer market, and as a result, their estimates sometimes have been too liberal as to the market value of the garbage tankage to be produced by their methods. Each new garbage-reduction plant unquestionably helps to depress prices. It is evident, therefore, that a point may be reached when the market will be over-supplied with garbage tankage, rendering its sale at a price commensurate with its cost impossible.

It must not be overlooked that garbage tankage has also its disadvantages. Its low percentage of ammonia renders it absolutely unsuited for high grade fertilizers. One of the largest fertilizer manufacturers in the United States has works located on Barren Island and yet will not use any of the garbage tankage produced there in large quantities by the contractors for the disposition of the garbage from New York and Brooklyn, because he manufactures only fertilizers requiring materials richer in ammonia. Garbage tankage affords a satisfactory basis for a fertilizer for cotton lands, for which a high percentage of nitrogenous matter is not considered essential, and a considerable quantity has found use as a raw material in that direction. But here is encountered a second disadvantage, the great bulkiness of garbage tankage in respect to weight as compared with other available materials, which makes transportation more expensive in many cases. Generally speaking, garbage tankage will not bear transportation for a great distance, since, with the low percentage of those elements which form the available plant food, transportation rates alone will raise the cost "per unit" of these ingredients to a higher figure than they cost in any other materials.

For the various reasons here given, the sale of garbage tankage constantly becomes more difficult, and is accomplished only by making larger and larger concessions to buyers. How much of the difficulty about prices for some time past may have been due to a generally depressed condition of business and industrial conditions, it is impossible to say. A revival of general prosperity undoubtedly would improve the condition of the fertilizer trade somewhat, but not to the extent of elevating prices appreciably of a low-grade article, such as garbage tankage, produced on a constantly increasing scale.

Of the various materials used as a base for superphosphates, garbage tankage ranks after tankage from packing houses, dried blood, fish-scrap, nitrate of soda (or sulphate of ammonia), and even cotton-seed meal. The latter contains as high as 8½ per cent. of ammonia, while garbage tankage does not exceed 3½ per cent.—an important difference in favor of the cotton-seed product. Besides, the cotton-seed meal is abundant in close proximity to the southern fertilizer factories, and likewise near to the plantations on which the complete fertilizers are to be applied, and therefore it can be used to great advantage.

Of the garbage tankage now in the market, the highest prices are obtained for the product of the St. Louis reduction plant, for the reason that the municipal contractors there also handle in the same plant the dead animals collected in the city, with the effect of giving a higher percentage of ammonia to the resulting garbage tankage. Material from the slaughter-houses and packing-houses is also sometimes bought by the contracting firm and added to the city wastes, with a view to still further enriching the garbage tankage in ammonia. Naturally this makes the cost of the product higher than where it results merely from the reduction of the garbage, so that, while the price of St. Louis tankage is frequently higher than that from any other city, the impression prevails in the trade that the St. Louis contractors have lost money.

From interviews had with members of the fertilizer trade in New York, it appears that a fair price to quote for the St. Louis product would be from \$5 to \$5.50 per ton, free on board. The same quotations rule for garbage tankage from Detroit, Michigan, for the reason that it is also the product in part of dead animals collected in the streets. The New York and Philadelphia grades, while less rich in nitrogenous matters, have the advantage of being produced nearer to important centres of fertilizer manufacturing, and hence are quoted at about \$4.50 to \$5 per ton. For the output of the Milwaukee garbage-reduction plant, \$2.50 per ton is asked, while for the Cincinnati product, owing to the more favorable location of that city with regard to the fertilizer industry, \$3.50 would be a fair quotation. But any one planning to engage in the production of garbage tankage to-day would be wise to figure upon even smaller returns than these figures indicate, as the market price is subject at all times to fluctuations.

It may be mentioned here that the recent decline in the price of cotton, by lessening the buying power of the planters, has had an unfavorable effect upon the market for the fertilizer materials used on cotton plantations. Another depressing factor of late has been the cutting of rail-freight rates, which by lowering the cost at which high-grade fertilizers may be laid down to the consumer has diminished the demand, for the time, for the low-grade products.

The comparatively slow movement of garbage tankage, as a new fertilizer material, is not due to any ignorance on the part of the trade in regard to it. There is not a manufacturer of fertilizers in the United States, in a position to use garbage tankage, who does not know where and at what price it may be bought. They are constantly besought to buy, by means of circulars and letters from brokers. Nor can it be said that the limited sale of garbage tankage is due to any prejudice against it as a new material. Everybody in the fertilizer business is too fully impressed with the importance of economy not to seize eagerly upon whatever may promise any lessening of cost of production. The fact is, that the character of garbage tankage is thoroughly known; that within a limited extent it has a purpose and fills it admirably. That the "fluffiness" of this material

reduces its usefulness as a "dry mixer," owing to its indisposition to combine with other ingredients, and only a limited number of manufacturers are equipped to use it. It is a fact, furthermore, that beyond certain limits, most manufacturers could not use garbage tankage, even at half its present low price. The natural tendency of all fertilizer materials seems to be downward, which fact most investors in city garbage contracts have overlooked, in estimating the value per ton of garbage tankage. It goes without saying that sooner or later the losses through contracts entered into by parties so over-estimating will fall upon the taxpayers of the various cities.

HAWTHORNE HILL.

STREET SWEEPINGS AS A FERTILIZER.

Within the past year an investigation was made into the character of the street sweepings, with reference to their possible value for agricultural purposes. After the adoption of the bagging system, it was suggested that, with the added convenience in handling this material, its qualities as a fertilizer might be turned to account to the City's advantage. Furthermore, it was recalled that, years before, the City had derived a revenue from the sale of some such refuse. Accordingly, the co-operation of the New York Agricultural Experiment Station at Geneva was sought and cheerfully given. Samples were selected carefully, under such circumstances as to make them representative, and two such samples were analyzed by Mr. L. L. Van Slyke, the chemist of the station. From his communication to this Department the following figures are quoted:

"Sample No. 1 contains 32.88 per cent. of moisture, 0.38 per cent. of total phosphoric acid (most of which is available), 0.37 per cent. of potash and 0.29 per cent. of nitrogen.

"The second sample contains 21.68 per cent. of water, 0.32 per cent. of phosphoric acid (mostly available), 0.31 per cent. of potash and 0.21 per cent. of nitrogen.

"In order that you may compare these figures with the composition of average well-kept mixed stable manure, I give you the following statement of composition of the latter: Phosphoric acid, 0.25 per cent.; potash, 0.50 per cent. and nitrogen, 0.50 per cent. At present prices nitrogen is worth about 13 cents a pound; phosphoric acid, 5 cents and potash, 5 cents a pound. On this basis, stable manure has an approximate fertilizing value of about \$2 per ton. Sample No. 1 has a fertilizing value of about \$1.50 and Sample No. 2 a value of nearly \$1.20 a ton."

Under present conditions of the fertilizer trade it would not be practicable to attempt to market a material of so little value in proportion to bulk and weight. The proposition was made to the Long Island Railroad Company, who own extensive unimproved lands, that any quantity of street sweepings which they might desire to use as a dressing for such lands would be delivered to them free of charge at the City's dumps, but the company were disposed to accept the material only if delivered by the Department at the other side of the East river, and all negotiations ceased.

In 1830 the City derived an income of \$19,033 from the sale of street sweepings and manure; in 1840 the figures reached \$38,711; in 1850 they were only \$30,898, and in 1860 they fell to \$17,928. All receipts from this source ceased not many years later. But in those days the high-grade commercial fertilizers now in general use were not known and the cheaper materials had relatively a higher value than now. Besides, the neighboring farms and market gardens then approached more nearly the heart of the city than at present, admitting of a shorter haul by the farmers who bought street sweepings for use as manure.

HAWTHORNE HILL.

THE TRAFFIC IN WASTE PAPER.

Two considerations connected with the destructor system for waste materials which may have a bearing in its favor upon the net results to the City treasury are:

1. The certain recovery of a larger volume of salable articles than under the old scow-trimming system; and
2. The probable establishment of a higher standard of value for the chief products than now prevails.

There is no basis for accurate comparison under either of these headings, but certain facts connected with the working of the experimental plant in East Eighteenth street promise desirable results. First, the gleaners at the destructor-belts find better conditions for their work than existed for the scow-trimmers. The regularity possible in loading the belts prevents such congestion of the debris as sometimes, in dumping from carts into scows, interfered with the work of the scow-trimmers, causing them to overlook salable scraps. Again, much material which formerly was contaminated by garbage or ashes on the way to the scows, becomes available under the more cleanly method.

As for the financial consideration, the figures presented in this report make a favorable showing for the destructor system, as supplementing the household separation of the wastes handled by this Department. The City's revenues from the leasing of scow-trimming privileges under the former regime were based to no small extent upon the salable value of the bones and fat collected by the scow-trimmers. The bones and fat now go to Barren Island, under the garbage-disposal contract, but it is possible that, under the destructor system, they would be more than compensated for, both by the increased collection of paper and rags, and the obtaining of higher prices for these materials. Hence the inquiry whether an adequate system of destructors, if erected by the City, might not be leased to contractors for more than the highest former receipts for scow-trimming privileges.

The most important product of the destructor system will be "paper stock," including paper and rags, and it is with regard to paper that the greatest difference between the old and new systems may be expected. While there is an immense trade in waste paper in this city, what is known as "dump stock" has at no time formed a large percentage of it, while in recent years it has fallen off. Prices of paper stock have declined, under the competition of wood pulp, until the mills can buy clean lots for little more than the cost of cleaning such paper as could be gleaned from the masses of garbage, ashes and general wastes dumped indiscriminately into the scows. The low prices for paper of this class and the irregularity of the demand latterly led the scow-trimmers to neglect it, except when orders were in hand for certain grades for immediate shipment. Most dealers after a time declined to handle such paper, and it has been accepted at comparatively few mills. But with the incentive of orders, the collection of paper at the dumps sometimes used to attain such volume as to indicate a large possible total yield, which bids fair to be realized under a system which protects the paper from all damaging contact and gives the gleaners a chance to save every scrap, while securing a higher valuation in the market.

In a "Report on the Final Disposition of the Wastes of New York," published by this Department in 1896, an estimate prepared from the best sources then available gave 25 tons as the average weekly outturn of paper from all the dumps. Under date of July 17, 1897, a statement prepared for the Superintendent of Final Disposal in this Department indicated the collection in one week, at eight dumps, of 454 bales of paper. Based upon the average of the weights given, the total would be 75 tons. These eight dumps, by the way, yielded only half the total quantity embraced in the estimate of 1896.

The tendency shown by these figures, as well as other data bearing upon the same subject, bears out the prediction that the household separation of the garbage from other materials—in full force since the beginning of 1897—would result in a larger yield of salable paper. Mention may be made here of the weekly returns for the scow-trimming privileges for several months prior to the going into operation of the garbage-reduction plant at Barren Island, which only went as high as \$1,368. During the corresponding months of 1897 the City's average weekly revenue from this source, notwithstanding that the scow-trimmers no longer collected bones and fat, reached \$800. Subsequently, i. e., from August 30 to the end of 1897, the same contractor paid for the same privileges \$960 a week, while he has signed a contract, to apply from the first of the new year, at \$1,225 per week. The latter rate will yield to the City two-thirds as much as the highest return in any former year, when bones and fat were included in the scow-trimming privileges, and paper of all grades sold for higher prices than now. The inference is that the present collections of paper stock at the dumps must have a substantial value. Besides, they are reported by dealers to have increased in volume, and in some cases in price, as a result of household separation, which minimizes the contamination of the paper, even where it continues to be taken to the dumps.

The estimate quoted above of 75 tons of paper per week for certain dumps is at the rate of 150 tons per week for all of them. A year ago a large buyer of paper from the dump lessees calculated that, if the demand from the mills were continuous, 90 tons of paper per week could be obtained from all the dumps, that being before the separation of garbage was begun.

At the East Eighteenth street plant, during the week June 21 to 27, the paper baled amounted to 58,473 pounds, or over 29 tons. It was culled from 236 loads of refuse, carted from 4 of the 58 sections into which the work of the Department is divided—Nos. 12, 14, 16 and 18—representing but a small percentage of the total area of the City. The dump to which all the refuse from these sections—and some others—was carted formerly was estimated in 1896 to yield only two or three tons of paper per week. An analysis of the stock thus baled serves to explain the increased yield of paper under the new system. This paper, from the starting of the plant to June 26, was graded and weighed as follows:

GRADES.	POUNDS.	PERCENTAGE OF THE WHOLE.
Ledger stock.....	11,450	5.25
Manila.....	28,278	13.15
Newspaper.....	59,867	27.35
Commons.....	79,231	36.25
Strawboard.....	39,320	18.
Total.....	218,146	100.

Subsequent results obtained at this plant have varied these percentages somewhat, but not enough to change the deductions from the above table which are to follow.

The paper which is still collected at the dumps is graded principally as "manila" and "news," and in the estimated collection of 454 bales in one week, already referred to, the classification was:

GRADES.	BALES.	PER-CENTAGE.
Manila.....	300	66.
News.....	154	34.
Total.....	454	100.

Whereas, about 82 per cent. of the paper baled at the destructor is of cheaper grades than "manila," only 34 per cent. of the paper gathered at the dumps is so classed. At a crematory operated by Herbert Tate in West Fifty-third street, in 1895 and 1896, about 167 tons of paper were baled, in two grades, of which 21 per cent. was "manila." This paper came to a great extent from stores, which may explain the larger percentage of "manila" than at East Eighteenth street, where rubbish is received from a residence district, under the new household separation system, which makes available a large bulk of newspapers. The point of these comparisons is not that the percentage of high-grade papers has been reduced, but that, under the new system, a large amount of paper otherwise useless has become commercially valuable.

Without doubt the new regulations of the Department will tend to discourage the activity of the itinerant paper collectors who have been accustomed to help themselves from waste receptacles on the sidewalks, to the extent often of violating the city ordinances by scattering litter upon the streets. When paper is no longer thus exposed, but is retained within doors for the coming of the Department carts, naturally there will be fewer private collectors, and this means fewer competitors for the paper to be culled from the sweepings of the large stores. The basements of many stores are now visited regularly by collectors, under arrangements involving a consideration from nothing to \$1,000 a year or more for the paper. But in some of the largest stores, the receipts from the sales of paper are readily dispensed with in consideration of the prompt and regular removal by the Department of all the debris from the daily sweepings. For some months past, the yard in East Eighteenth street has received all the refuse from the sweepings of a Broadway store, which formerly sold for about \$100 a month to a small paper collector, the privilege of culling daily from the basement. He paid at the rate of 30 cents per 100 lbs, without classification, and obtained about 16 tons of paper per month of good grades. Subsequently other large stores have begun to send their refuse to the Department yard, so that more clean wrapping papers—manila and other—are now reaching this point. These stores can afford better to throw away their paper than to maintain, as formerly, a service for the disposal of the valueless debris remaining, particularly since the decline in the prices of paper stock. One dealer who formerly obtained considerable paper from certain stores, paying 30 cents per 100 pounds, states that he gave up this branch of his business because he found it no longer profitable. If the paper were assorted for him at the stores he could afford to handle it, but not if the culling had to be done at his own expense. Often the lots of paper which reached him contained rubbish which rendered the stock unsalable without a great deal of work in handling it.

In case the destructor system should be adopted fully, judging from recent indications, a much larger proportion of the waste paper of the city would find its way into these plants than has gone hitherto to the dumps. This would not include "book shavings," "straw clippings," etc., which are the legitimate by-products of book-binders, paper-box factories and the like, nor the "over issues" of daily newspapers. But these classes of paper have never been "wastes" in any proper sense. Then, with better facilities and a larger scale of operations and a better grading of the stock than is now common in the trade, the old-paper business as a whole should become more profitable than now, even with wages higher than the earnings of money of the Italian paper-gatherers who toil from dawn to dusk in the streets and far into the night in the obscure cellars which shelter their stock-in-trade. Under the new regime there would be opportunities, as lessees of plants, for those who are now leaders in the paper trade, and as employees for those who are working in it for wages.

In considering the prices at which paper has been sold from the Eighteenth street yard, it should be understood that practically there is no standard of prices for old paper. The business is largely a matter of dickering, and prices depend largely upon the degree of anxiety of holders to unload their stocks or upon their necessities, since most of the collectors work on very little capital.

It appears that there has been a great change in recent years in the conditions of the business. The use of wood-pulp has lessened the demand for all other paper stock and has greatly reduced prices. As the profits began to decline the business drifted gradually into the hands of foreigners, who have not adhered to the old methods of the trade. For instance, the grading has been changed. Every marked decline in price has been followed by a decline in quality, until prices are fixed no longer by any standard, but by agreement between the parties to each transaction.

It is not enough that the general quality of a lot of paper should be good; uniformity and cleanliness are insisted on at the mills. A dealer who was buying from a collector a bale of "No. 2 manila" said that, judging from its general quality, he would have been willing to pay 50 cents per 100 pounds, but on account of a small percentage of "bogus" paper he could not afford to pay more than 35 cents, which was accepted. One dealer showed, as a specimen of paper stock returned from a mill as undesirable, a book stripped of its covers, made of high-class material, but having bound up with it a few leaves of colored paper. Another sample of rejected paper stock is a book having a very small amount of ashes between the leaves. The removal of such foreign materials involves trouble and expense, while, if retained in the paper, it causes defects in the manufactured product.

Besides the competition of wood pulp and the carelessness in grading paper stock, a factor in keeping prices down in the New York market has been the growth of the trade in other centers. Many mills now are located more conveniently with regard to other markets than to New York, and buy supplies accordingly. As to the market for old paper in future, the opinion entertained in the trade is that prices can hardly fall farther, without stopping the collection of stock. Nor does it appear that there can be much of an advance, even with a marked revival of general business, since the tendencies still prevail which have brought paper down from the high figures of former years. A leading member of the trade who was interviewed did not believe that enough paper could be put upon the market through the adoption of the destructor system in New York to depress prices. He had in mind at the time an estimate of 400 tons a week—equal to 41,600,000 pounds a year—as the probable outturn of such a system. In his opinion this paper would supplant that from some other sources. The trade would welcome an opportunity to buy paper of established grades, in large quantities, under such regular conditions as would result from the proposed system. Besides, the manufacture of paper is increasing constantly, leading to a greater demand for stock, though not at such a rate as to advance prices so long as wood pulp is abundant and cheap. It must be understood that some other stock must always be used in combination with wood pulp.

A member of an important house in the paper trade has kindly gone over in detail the various grades of paper baled at the Eighteenth street plant, comparing the prices quoted for corresponding grades in the paper trade journals, recent prices paid in the transactions of his house, and the prices paid for paper from the destructor plant. In regard to the trade journal quotations he said: "These published prices have little relation to the prices paid in the market. I don't know where they get their figures. Perhaps they intentionally make the figures too high, supposing this to be in the interest of the seller, assisting him to stand out for good prices." A summary of the comparison referred to follows:

I. Old Ledgers—Published price: \$1.30 to \$1.40 per 100 pounds.

This refers to book ledgers, stripped of their covers, with the back edges trimmed to get rid of binders' stitches and maulage. Such paper might cost the mills, at the outside, \$1.30 per 100 pounds. But what has been sold at Eighteenth street is "ledger stock," paper of a better quality than "book stock," and yet not as good as "old ledgers." It includes, for instance, such paper as insurance policies are written on. For some of this paper 90 cents has been obtained. The yield of "ledger stock" at the destructor is small, and that of "old ledgers" almost nil, the value of the latter being too well known for many of them to be thrown away.

II. Manila—Published prices: No. 1, extra, 90 cents to \$1; No. 1, ordinary, 70 to 80 cents; No. 2, 50 to 55 cents.

Real "manila" paper is made of "manila" rope, and for clean trimmings of this the mills might pay 1½ cents a pound. But most of our "manila" is made of wood-pulp and known as "wood manila." The real manila is known sometimes as "flour-sack paper," on account of being used for bagging flour. Nothing else will stand the pressure test of 80 pounds to the square inch to which flour bags are subjected. A dealer reports having been obliged recently to "haggle" over a lot of manila stock in order to get 40 cents a hundred, giving the buyer four months' time. His firm have taken most of the manila baled at the destructor, at 35 cents, and one lot at only 32½ cents.

"There is not much middle ground with manilas," said this gentleman. "Unless the mills want the highest grades, they will take only the ordinary sorts, and are unwilling to pay much more for any lot than the lowest prices current. Mr. Tate asked me at the start about grading paper stock at the destructor, and my advice was to make but one grade of manila, since his total output of this sort is small, and the labor cost of making two or more grades would more than offset any possible gain in price. I cannot compare the manila paper he sells us with anything else in the market. We handle it as a special grade, which is becoming known favorably to some of our customers."

There is a low grade of manila stock known as "bogus." It includes certain wrapping papers that are not even wood manilas, except that dark colors must be excluded. American

mills are more particular to turn out manila papers of a bright, even color, than papers that are strong. For this reason dark-colored papers will not be accepted for manila stock. The manila paper baled in Eighteenth street includes some "bogus."

III. Folded News—Published price: Over issues, 50 to 55 cents.

This grade comes from the publication offices of large dailies, being unsold copies which have not been unfolded or broken. Such stock goes to the paper mill with next to no handling. One advantage is that an entire lot may be composed of the issues of a single office and, therefore, uniform in quality. "Broken news," such as reaches Eighteenth street, is not only in a less desirable condition for mill use, but the quality is varied, the papers in a single bale coming from a great many sources. A house which has a contract to supply a certain mill with "over issues" at 42½ cents, bills due in four months, has paid 25 cents for broken news at the destructor, besides carting it away, which is estimated at 4 cents a hundred, or 29 cents. Meanwhile they have bought the same grade elsewhere at 27 cents, delivered, which they regard as cheaper than stock from the destructor at 25 cents.

IV. Commons—Published prices: Mixed papers, 30 to 40 cents; commons, 25 to 30 cents.

The first of these terms comes from England. It grew out of the mixture of colors—say the colored covers of pamphlets with the inside leaves of white paper, which would bring the price below that of white paper stock. "Commons" refers rather to a mixture of sorts, and is used at the destructor for what remains after the various other grades have been filled. This has been sold as high as 12½ cents, although dealers say that they can buy elsewhere for 10 to 12 cents, delivered.

V. Straw Clippings—Published price: 40 cents.

This refers, properly, to trimmings of cardboard, especially from paper-box factories. What is collected at the destructor is broken strawboard boxes—from drygoods stores and the like—a different article. The price received at the destructor is 25 cents. Not long ago, being short on straw boxes, a New York house imported a quantity at a cost of 26 cents. Should the price here go above 26 cents, it might be cheaper for the trade to import this grade, and similar conditions may exist with regard to other sorts baled at the destructor.

It is hardly necessary to discuss further the subject of prices for these grades. What is of chief interest is that, while the leading houses in the trade have had an opportunity to bid on the paper at the destructor, none have offered higher figures than are now received.

At the end of the twenty-first week of actual operation of this plant—October 30, 1897—the amount of paper which has been sold and delivered was 1,169,418 pounds, while probably 16,800 pounds remained in stock. Estimating the same rate of outturn for an entire year, and figuring the sales at the most usual prices obtained to that date, the result of the paper business at the destructor would appear as follows,* the classification being based on the actual results for twenty-one weeks:

Manila.....	504,685 pounds, at 35 cents.....	\$1,766 40
News.....	839,405 " 25 ".....	2,098 51
Mixed.....	826,297 " 12½ ".....	1,032 87
Strawboard.....	766,913 " 25 ".....	1,917 28
Total.....	2,937,300 pounds.....	\$6,815 06

This result is to be compared with, perhaps, 150 tons of paper per year from the same district, as collected at the dumps under the old regime, netting the dump-lessees not over \$5 per ton, or \$750 altogether. No reason is known why some such comparison might not hold good for the entire city, showing a like advantage in favor of the destructor system.†

Since the household separation of wastes began, and paper going to the dumps is no longer mixed with garbage, the classification of "dump stock" is disappearing, and the material collected is becoming known as "city stock." It is a better class of paper, is assorted to some extent, is in better demand and at higher prices, and is collected in larger volume than formerly. This is the class of paper referred to in a preceding mention of 454 bales collected in a single week at eight dumps. The following prices have been paid lately at the dumps for this new class of material, according to the dump lessees: Manila, 25 cents per 100 pounds; folded news, 20 cents; mixed, 15 cents.

This stock is collected, to some extent, for storage. It is sometimes shipped directly to the mills by the houses receiving it from dump-lessees, and sometimes sold to larger concerns in the trade, who in turn make a profit on the stock before it reaches the mills. These prices are not higher than have been paid for "dump stock" in the recent past, while they compare favorably with the prices obtained for stock at the destructor. This is due, according to one dealer, to the reputation of paper from the dumps which still adheres to any paper from this source, however handled, and time will be required for the mill owners to become satisfied that the paper now offered is preferable to that formerly supplied. He insists that the paper from the dumps to-day is "100 per cent. better" than the same grades in former years, but the grading needs to be improved before the best results in price can be hoped for. Besides, he says that the best "city stock" has an objectionable odor which suggests the old "dump stock."

The last mentioned dealer states that early in the history of the "dump stock" trade he paid as high as 1¼ cents a pound for manila, and correspondingly high prices for other grades. Later ¾ cents was a standard price for manila from this source, after which the price declined gradually to the figures paid to-day. The books of another house show the payment of 50 cents a hundred for "No. 2 manila" from the dumps as recently as 1893. There is no hope, therefore, of an advance in prices for paper stock equal to those of the earlier regime. The most that can be expected is a better price for carefully-graded lots than is now paid for paper from the dumps, with an additional slight advance in case there should be an improvement in general business.

Doubtless, it would be desirable if the paper mills would contract to take the baled paper from the destructors at fixed prices. But the opinion is general in the trade that this is unlikely to happen. The paper mills have an excess of capacity, and their operation is not continuous. Again, a manufacturer having an opportunity to buy on advantageous terms, may acquire enough stock to make further purchases unnecessary for a long period. Hence they prefer not to contract for stock, but to go into the open market according to their needs. At the same time, the tendency of dealers in paper stock is to become commission merchants merely. Instead of buying largely and warehousing the stock until sales can be made at a profit, they are more apt to await orders from the mills, which they fill by sending out to paper collectors, charging an agreed upon commission. No paper stock is imported for storage, but only to fill orders, just as it has not been customary to collect paper at the garbage dumps except as wanted at the mills.

Old paper of any grade is of small value in proportion to bulk, is perishable, is in irregular demand, involves a heavy expense for storage, and at no stage does it afford a liberal margin of profit. All of this is to be considered before the Department of Street Cleaning becomes engaged in the paper trade, together with the fact that the paper mills buy mostly on long time, while so many failures have occurred in recent years as to render the risk from this source something to be figured on in every large transaction.

Part of what is written above applies to rags no less than to paper. Rags can be handled under better conditions at the destructor than formerly at the dumps and marketed to a better advantage. But the same increase in the outturn as in the case of paper can hardly be expected, since rags, on account of their greater strength, could always be collected from the dumps, no matter how badly soiled. It may be worth while, however, to give an estimate of the collection of rags at the destructor for one year, based upon the actual sales from there during twenty-one weeks of actual operation. An estimate of the money value is not attempted on account of the varying prices during the twenty-one weeks under review. The rate of prices paid is given, however:

CLASSIFICATION.	ESTIMATE FOR ONE YEAR. POUNDS.	PRICES PAID, JUNE TO OCTOBER, PER 100 POUNDS.
Wool.....	11,898	\$6 25 to \$7 25
White.....	15,080	1 75
Black.....	157,125	15 to 23
Mixed.....	292,983	75 to 80
Carpets.....	145,934	Wool..... 3 00 to 4 25 Soft back..... 75 to 1 00 Hard back..... 22 to 26 Linsey..... 25 to 65
Twine and bagging.....	65,397	Twine..... 36 to 50 Bagging..... 28
Total.....	688,417	

* No account is taken here of the small amount of "ledger stock" baled at destructor, the quantity of which has been irregular.

† Since this table was prepared the quantity of paper stock handled at the destructor has been very much increased, without any necessity for enlarging the plant. But as this has been due to changes in the street cleaning sections drawn upon, and to receipts of paper from stores in the heart of the retail district, it is deemed proper to allow the figures already given to stand as representative of average conditions. The Superintendent of Final Disposition estimates that the capacity of the Eighteenth-street plant amounts to six per cent. of what would be required to extend the system throughout the City of New York. On this basis, the results given in the table would represent from four and one-half to five per cent. of the total output for the city under such a system.

The market for rags, and particularly for paper stock, is likewise in a depressed condition, and an increasing amount of waste of this class may be expected to reach the carts of the Street Cleaning Department in future.

Summary.

I. More paper can be collected by the new method than under the scow-trimming system. In East Eighteenth street, in one week, 29 tons were baled, the product of 4 out of the 58 street-cleaning sections. The estimated average weekly product of all the dumps two years ago did not exceed 25 tons.

II. The increase results from (1) better facilities for collecting paper; (2) the cleaner condition of the paper under the new system of separation; and (3) the transfer to the Department system of paper waste formerly handled privately—especially from large stores.

III. The average price obtained for the paper from the destructor is 23 cents per 100 pounds, or \$4.60 per ton. This is to be compared with the old price for dump stock. The present output from the dumps—known in the trade as "city stock"—brings better prices, but not equal to the average obtained at the destructor.

IV. The new method seems likely to lessen the number of private paper collectors, and hence to lessen the competition for the paper swept from stores, which in time will remove one inducement to merchants to withhold paper from the Department carts. Some large stores already prefer that the Department shall remove all their debris, including paper. Without doubt, after the introduction of the destructor system a greatly increased proportion of the waste paper in the city will come within the scope of the Department's work.

V. These considerations apply more or less to rags, and particularly to those classed as "paper stock."

THE FUEL VALUE OF CITY ASHES.

During the last year's study of the possibilities of the "utilization of clean ashes in the City of New York," it was learned that of the 1,500,000 cubic yards of ashes cared for annually by the Department of Street Cleaning, a very large proportion would be gladly received by the various building interests for use in fireproof buildings, for the foundation of cellars, sidewalks, yard concrete, etc., at no expense to the City except that of collection from the houses. A brief review also was given of the various efforts that had been made to utilize ashes in the manufacture of brick and other building material.

The refuse of any coal fire, called ashes, consists of fine ash, clinker, slate, etc., and coal partly coked, in varying proportions according to the kind of coal, the kind of furnace, and the kind of fireman.

The investigations of last spring had reference to fine ash, clinker and slate only, and the study did not include any consideration of the fuel value of the partly coked coal nor any method of utilizing it. The latter subject has been the unsuccessful study of so many people, in so many cities, that it was considered inadvisable to discuss it in the brief time then devoted to the consideration of the best means of utilization of the ashes.

During the months that have succeeded, however, I have studied the fuel value of ashes of different parts of the city and under different conditions, and have endeavored to learn both the percentage of available coal and the heating value of this coal per pound.

General Observations.

The ashes of the City may be roughly divided into four parts: (1) That which comes from the furnaces and stoves of individual houses managed by others than those who pay for the coal; (2) that which comes from kitchen ranges or flats; (3) the stove ashes from tenement houses; (4) the steam ashes from hotels, theatres, office buildings, factories, etc.

In ashes of the first class coal may be found in some quantity, because economy is not considered essential and because the character of the grates and the manner of operating the fires both conduce to the slipping away, unnoticed, of much good fuel. In ashes from flats may be found considerable coal, not so much from want of economy as because the lack of space in the kitchen precludes the possibility of sifting and saving coal at the expense of the dust produced thereby. In the ashes from tenement houses, where little fuel is burnt and scarcely anything is wasted, small heating value may be expected. In steam ashes, left over from large fires which receive the constant attention of firemen more or less skilled, one may expect, and there is found, both a smaller per cent. of ashes and a smaller percentage of coal.

In other days, when the ash pan was dumped into the larger can which already contained garbage, waste-paper, bottles, cans and rubbish of every description, little notice was taken of the refuse coal; but now since ashes are kept separate and any one may see the numerous pieces of coal, it is noticeable that in all parts of the City much more attention is given to the subject by the householder, and that everywhere persons who never before sifted their ashes, now regularly save the coal. It is probable, therefore, that as months go by the percentage of waste coal in the ashes will gradually decrease.

It cannot be long, however, before the decrease must cease, because the lack of room in the majority of homes in this city, and the dust necessarily produced, will always be operative as reasons against much sifting. Furthermore, the time required each morning is considerable, and when one remembers that the total stove refuse seldom exceeds 20 per cent. of the weight of the original coal burnt, and that less than half of this is available as fuel, it is readily seen that under the worst conditions the amount of coal thrown away is less than ten per cent. of the weight originally put on the fire. In flats, for instance, perhaps an average of two pounds of coal might, by careful picking, be recovered daily from the kitchen stove, and if this recovered coal is assumed to be worth five dollars per ton, it follows that four pounds are worth one cent, and that the daily recovery from the kitchen ashes is worth one-half cent. In ordinary cases this is small remuneration for the time, the resultant dust and the abraded fingers.

It is evident that the recovery of this coal can be a paying operation only when performed on a large scale, in proper buildings, by persons suitably clothed and probably aided by mechanical means of separation. In all my measurements, I have first separated the fine ashes by means of a screen, and afterwards separated the coal from the clinkers, slate, etc., by hand-picking. The latter operation is, of course, very tedious and, under the best conditions, expensive. It is doubtful whether the operation could ever be made to pay, even on a large scale, by hand-picking.

Amount of Coal in City Ashes.

The ashes of large house furnaces have shown on the average, 45 per cent. by weight of fine ash; 15 per cent. of clinkers, slate, etc.; 40 per cent. of available coal.

The ashes from flats have shown on an average, 45 per cent. of fine ash; 20 per cent. of clinker, slate and stones; 35 per cent. of coal.

Egg and nut coal ashes from factory fires have shown 45 per cent. of fine ash; 30 per cent. of clinker, slate, etc.; 25 per cent. of coal.

Ashes from pea coal from a boiler have shown 40 per cent. fine ash; 40 per cent. of clinker, etc.; 20 per cent. coal.

These figures are derived from examinations of about a cubic yard of ashes in each case, and while of course they must not be allowed too much weight since they are derived from such small quantities, they are, I think, fairly representative of the conditions existing in the city during the past few months. Frequent observations of the appearance of cars and cans loaded with ashes has made it possible to select those of about average fuel value.

I am not aware to what extent the ordinary ash can is picked over after it reaches the street, but I have found no can or cart which contains less than 20 per cent. by weight of coal, and I think that this amount may be taken as a safe estimate of the average percentage of available coal to be found in the city ashes at the dumping-board.

It may be noted incidentally that the proportions of fine ash, clinker and coal given above by weight, hold very nearly true as proportions by volume.

Characteristics of Waste Coal.

When it is remembered that coal received in houses is frequently not well sized, it is easy to account for the fact that the smaller coal recovered shows little effect of the fire, because it has fallen through the grate unburnt, while on the other hand, most of the larger coal recovered shows some coking action.

It is a matter of common knowledge that this coal is easily ignited and very cleanly in fire-making because of its freedom from coal dust, and it has often been noted that very little clinker and slate appear in its ash, due of course to the fact that all such matter which, covered with black dust originally was indistinguishable from coal, is sure to have been discarded in the hand-picking.

Waste coal differs from fresh coal principally in containing less gas, and while it therefore contains less heating power, the absence of the gas makes the rate of combustion much more uniform and the fire more easily controlled in furnaces and stoves. A new supply of fresh coal added to the fire always emits a large amount of gas which requires for a time an enormous addition to the supply of air. Lacking this, smoke is produced and the gas escapes up the chimney unburned and wasted. This additional and temporary supply of air requires the supervision of an attendant, while a coke fire may be renewed and left to itself. Further, since the only use of air in a fire is to supply oxygen, and since oxygen constitutes only one-fifth of the weight of air, the remaining four-fifths is a positive detriment in that it enters the fire cold and leaves it hot, and therefore carries up the chimney a large amount of heat. With different fuels this amount is nearly proportionate to the quantity of heat generated, and the increase and decrease of quantity of air necessary would be of no consequence could it be known and arranged for in advance. It seldom is, however, and a varying quality of fuel almost always means wasted heat from having too little air or too much.

Heating Power of Waste Coal.

To learn the heating power of this waste coal, I devised a small boiler on the order of a Rumford Calorimeter and made measurements with new coal of the same kind as the original of my recovered coal, and also with the recovered coal. The tests were continued for some time and the results represent the average heating power of the coal taken from eleven different ash can sources.

The water capacity of my boiler was about two gallons, the grate area about 25 square feet, the total exterior radiating surface about 18 square feet. A cold water feed-pipe near the bottom supplied measured quantities of water at 42 degrees Fahrenheit. All evaporation was at the pressure of the atmosphere and at about 212 degrees Fahrenheit. Sufficient provision was made against priming, and care was exercised in the draught. I was able to burn about 2 pounds waste coal per hour, and about 1.5 pounds new coal. The temperature of the room was about 60 degrees Fahrenheit, the average of the outside radiating surface 160 degrees Fahrenheit, with new coal, and 150 degrees Fahrenheit, with waste coal; and the flue gases about 220 degrees Fahrenheit in each case.

With new coal I evaporated an average of 7.5 pounds cold water per pound fuel, and with waste coal an average of 5.5 pounds cold water per pound fuel. This is equivalent to 8½ and 6.5 pounds respectively, of water converted into steam from and at 212 degrees Fahrenheit, which is the usual manner of stating the evaporative power of fuels.

To find the efficiency of my boiler and thus get the total amount of heat produced in each case, I calculated the heat lost by radiation, by convection, and by the flue gases. Elaborate investigations by Dulong and by Peclet have determined the heat lost by radiation from the exterior surface of such apparatus as mine at .900 English heat units per hour, per square foot radiating surface, per Fahrenheit degree of difference of temperature between the radiating surface and surrounding objects.

The heat lost by convection currents under such conditions is .617 English units per hour per square feet of vertical exposed surface per degree difference in temperature between this surface and the incident air.

Heat lost by the chimney gases is that carried off by the air admitted for combustion and is measured by the product of the weight of the air used, the specific heat of air, and the change in temperature.

From data supplied above, the computations for these quantities are as follows for the new coal:

Heat absorbed by water, 75 by (170 + 966).....	8,520	E. H. U.
Heat lost in radiation, .900 by 2½ by 18 by 100.....	1,080	"
Heat lost in convection, .617 by 2½ by 18 by 100.....	740	"
Heat lost in flue gases, 300 by .0761 by .238 by 160.....	864	"

Total heat given out by 1 pound new coal..... 11,204 "

And as follows for the waste coal:

Heat absorbed by water, 55 by (170 + 966).....	6,248	E. H. U.
Heat lost in radiation, .900 by 1½ by 18 by 90.....	729	"
Heat lost in convection, .617 by 1½ by 18 by 90.....	499	"
Heat lost in flue gases, 250 by .0761 by .238 by 160.....	720	"

Total heat given out by 1 lb. waste coal..... 8,196 "

There is some doubt in reference to the amount of air used for combustion. I endeavored to furnish enough for a good draught without chilling the fire, and believe that I did so. At the same time, the rate of combustion was low, and I am certain there was very little free oxygen in the flue gases. It is possible, therefore, that my estimate of 300 cubic feet and 250 cubic feet per pound of new coal and of waste coal, respectively, is too high.

At the same time the totals of 11,200 and 8,200 heat units represent with considerable accuracy the heating power of the two classes of coal; the little boiler was very efficient; and 7.5 pounds and 5.5 pounds of cold water, or 8.9 and 6.5 pounds of hot water, respectively, may be taken as the available evaporation effect of these two coals. The new coal was poor, because it furnished 9 per cent. of fine ash and an additional 9 per cent. of stone and slate.

Summary.

The percentage of waste coal in ashes examined varied from 20 per cent. to 40 per cent. by weight and averaged about 30 per cent. Including tenement-house ash it would probably average 20 per cent. of coal at the dumping-board. This is about 250 pounds per cubic yard, or 125,000 tons per 1,000,000 cubic yards of ashes, which is less than the city's annual output.

The value of this recovered coal as compared with ordinary new coal may be expressed as 8,000 heat units against 11,000 heat units, or 73 per cent.; 5½ pounds cold water evaporated against 7½ pounds equals 73 per cent.; 6½ pounds water evaporated from 212 F., 8½ pounds, equals 73 per cent.; 54 per ton delivered against 55.5 equals 73 per cent.

To this report I hope to subjoin another, of averages made on a much larger scale, as soon as I am able to separate coal from clinker at a sufficiently rapid rate.

Respectfully submitted,

C. HERSCHTEL KOYL.

DEPARTMENT OF STREET CLEANING, CITY OF NEW YORK. NEW YORK, December 15, 1897. GEORGE E. WARRING, JR., Commissioner of Street Cleaning:

SIR—A portion of the study of the Department during the past two and one half years in regard to the proper disposal of city wastes, has been a continuous effort to find some method of utilizing ashes better than the methods at present in use.

The ordinary waste of stoves and furnaces consists of partly burned coal, clinker and stone, and fine ash.

In a previous report I have discussed the fuel value of the coal contained in the city's ash cans and have found it sufficient to pay for separation if conducted on a large scale and by machine methods.

The hard clinker, if separated, is known to be valuable for use in concrete.

There remains only the fine ash, which amounts to nearly half the city's total stove and furnace refuse, or about 600,000 cubic yards annually, and is the portion which has appeared most difficult of disposal in any plan heretofore proposed for utilization within the city limits.

In a report to the Department under date June 15, 1896, I said that in the opinion of many consumers of ashes in large quantity, it would be feasible to use the city's household ash, if free from other substances, in filling under sidewalks and cellars to the extent of about 230,000 cubic yards annually, and in the construction of fire-proof floors and fire-proof partitions to the possible amount of 600,000 cubic yards annually, and if no superior plan is found, this still remains a more economical method than that of using it for filling outside the city limits.

The same report discussed briefly the results of some attempts to utilize the sifted fine ash in the manufacture of mortar, cement and artificial stone; and while none of the specimens of these substances which I had been able to examine fulfilled all the conditions necessary to success in building work, the report contained notes of hopeful signs and said: "It is possible that the manufacture of ash into brick and concrete may become at an early date a considerable industry. It would be the perfection of 'waste' utilization to build dwelling-houses in June from the dwelling-house ash of May. Attention has been concentrated upon the industrial uses of ash—which are considerable, and the industrial possibilities—which are greater."

I have now to report briefly upon a method for the utilization of fine house ash lately brought to the attention of the Department by Mr. Joseph A. Shinn, of Pittsburg, Pa.

Mr. Shinn says that in conducting a series of experiments to learn the best method of preparing furnace slag for the manufacture of mortar and cement, he discovered that fine domestic anthracite ash has valuable qualities for making mortar. He found that when nine parts of such ash are intimately mixed with one part of fresh lime and properly wet with water, there is formed a mortar much superior, for building purposes, to ordinary lime-sand mortar, in that its tensile strength, its resistance to crushing and its resistance to fire and water are greater and its specific gravity much less.

Mr. Shinn has submitted samples of his new ash mortar about thirty days old, to which I have applied some of the ordinary tests of lime-sand mortar, with which alone Mr. Shinn desires the new material to be compared. I have found the tensile strength to be about 65 pounds per square inch, while that of ordinary lime-sand mortar is perhaps 15 pounds per square inch; the crushing strength to be in some cases 1,000 pounds per square inch, that of ordinary mortar of same age, being 150 pounds; the resistance to fire and water greater than that of ordinary mortar of the same age. I state the results thus briefly and in general terms because I find a large variation in the strength and other qualities of different samples, some running for instance in tensile strength as high as 140 pounds per square inch; some resisting the action of water for only a few hours, others equally new for more than a week; and demonstrating without doubt that when the ash mortar is properly made it has great strength and enduring qualities, but that much remains to be learned of its proper method of manufacture. The samples made by myself under Mr. Shinn's directions are not of sufficient age to make the results of testing them of any value. Mr. Shinn insists that only by the most intimate machine-mixing are the best results accomplished.

While it is too early to state the strength and other qualities of this new material with the exactness necessary for architects and builders, the indications of its value are so strong, and the assurance of its cheapness so great that I have thought it wise to learn in a preliminary way the possibility of thus introducing our fine house ash as a substitute for sand in the manufacture of mortar, on a scale commensurate with the city's annual output which, as stated above, is approximately 600,000 cubic yards.

The points to be considered in the introduction of this ash mortar are:

1. Those incident to the introduction of any new material;
 2. The necessity of machine mixing, disturbing long established commercial and labor customs;
 3. The present building law which provides that "mortar shall be made of clean sharp sand."
- In regard to the first point, it is the general opinion that if the new mortar proves under the tests of Engineers and Department Inspectors to have greater strength and enduring qualities than lime sand mortar, it will be welcomed as a substitute by architects, and if it can be furnished at a less price than the other mortar it will be welcomed by builders.

Regarding the second point, it appears that in the lower part of the city, in the construction of large buildings cement mortar alone is used, and that since the cement is of necessity unbarreled on the ground, machine mixing is out of the question. But there is much lime mortar used for plastering, and in the upper part of the city where it is also used extensively for building, machine-made lime-sand mortar is popular and probably forms one half the total. It thus appears that there is a large field almost waiting for the new material if its use is permitted by law.

In regard to this third point, it is the general impression that if the new mortar should prove itself at the same time better and cheaper, the present law could undoubtedly be amended to meet the improved conditions.

From present indications I see no reason to doubt the early and extended use of fine house ash for various building purposes, and the realization of the expressed hope of the Department that "clean house ashes may become an article of commerce."

Respectfully submitted,

C. HERSCHEL KOYL.

NEW YORK, June 29, 1897. GEORGE E. WARING, JR., *Commissioner of Street Cleaning*:

SIR—I have the honor to submit herewith a report upon the principal factors which make up the cost of street cleaning in the City of New York, their distribution throughout the City and the percentage effect of each upon the total cost.

The term "street cleaning," as here used, applies only to the work of the sweepers and has no reference to the cost of horses, drivers or carts to remove the sweepings, nor to any other of the expenses of the Department.*

Last autumn a series of sweeping tests was made to determine the areas of asphalt, granite and Belgian pavements, respectively, which could be kept clean by one man, and the foremen were instructed to report in each case the condition of the pavement and the amount of traffic. But it was found that the differences on each class of pavement were not all to be accounted for by the dissimilarity in condition and in amount of traffic, and the present report has grown out of the desire to learn all the causes of variation.

The information has been gained through a block-by-block measurement of the area of paved streets cleaned by the Department—the measurements having been made during the winter by the section foremen under the supervision of the District Superintendent; a statement for each block of (1) its kind of pavement—*asphalt, granite, Belgian or other*; (2) the condition of the pavement, *good fair or bad*; (3) the amount of traffic, *light, medium or heavy*; (4) the amount of car track, if any, *single, double, triple or quadruple*; (5) the kind of rail—*flat, grooved, T or steam T*; (6) the amount of sanding of the track, *little or much*; (7) the amount of street sprinkling, whether it is sprinkling or flooding the street with so much water as to make slush; (8) the presence or absence of elevated railroad pillars and overhead structure; (9) the character of the population; (10) the number of schools; (11) the presence of market-stores, or (12) push-carts; (13) the vicinity of unpaved streets.

There are other conditions which affect the cost of cleaning, but nearly all of them are either temporary—such as building operations, or under the control of the District Superintendent—such as the energy and judgment of the sweeper, or under the general control of the Department—such as the quality of brooms, etc. The thirteen items above mentioned were considered to be beyond the control of the Department, and, with the exception of the schools and street sprinkling, beyond its influence.

Having selected these factors, in consultation with the superintendents, as having the most important bearing upon the subject in hand, and the measurements above mentioned having been made, there was prepared a tabulated statement for each district, which statements form the series of tables No. 1 of this report. It is to be noted concerning these tables that the figures in some columns, such as condition of pavement, amount of traffic and character of population, are statements of opinion rather than results of measurement, and that some allowance must be made for the "personal equation," since what is considered good condition of pavement or good character of population by one man might by another be considered in either case only fair. It is believed, however, that with few exceptions the statements may be taken as having nearly the same relative value.

The next step was to learn the influence of each of these factors upon the cost of cleaning. This has been accomplished as well as possible—at least a first approximation has been made—by a series of discussions with the district superintendents, supplemented by numerous tours of observation in various parts of the city, at various times of day and night during the past few months. Each superintendent was requested to state his opinion upon each point, formed from his months or years of daily observation of the work upon the streets, and each entered with spirit and interest into the plan and gladly gave his best aid and information.

Table No. 2 gives the record of these opinions, with the averages. It was a question whether the average figures should be used for further work or whether it would be better to apply the ratios of each superintendent to the statements of the condition of pavements, amount of traffic, character of population, etc., given by him for his district, since it was certain that his idea of the influence of, for instance, heavy traffic, would be closely related to his idea of the exact meaning of the term heavy traffic. I concluded, however, that fewer errors would be introduced by using a constant ratio for all the districts, than a different one for each, and the figures of the series of tables No. 3 are so derived.

In preparing table No. 2, each ratio was determined as an independent factor, without reference to other conditions and without knowledge of another man's opinion. A question was, "Supposing the difficulty of cleaning good asphalt pavement to be represented by 100, what is the difficulty of cleaning good granite pavement or good Belgian pavement, all other conditions being the same?" The replies varied for granite from 125 to 200, and for Belgian from 125 to 200; representing in each case the experience of one man perhaps in one district, perhaps in two or more. The longer the experience of the man, the more likely was his opinion to be accurate for his district; the wider his experience, the more likely was his opinion to represent an average for the City. Many superintendents desired not to be quoted as expressing an opinion of value for the City, based only upon experience in one district, and frequently without time for mature deliberation upon the subject, so that I must assume the full responsibility for introducing, to elucidate the report, the statements of opinion which were given only for my personal guidance, frequently on brief consideration and with many expressions of diffidence. I must also be responsible for such difference in interpretation of terms as may exist.

With table No. 2 complete, the average figures from it were used to multiply into the figures of table No. 1 and thus derive table No. 3. It is evident from reference to the table that by the method here adopted we obtain for each kind of pavement, by sections, all the principal difficulties expressed in terms of square yards of asphalt pavement, in good condition, with light traffic, with no car track, with good population, and with all other conditions favorable. This gives an absolutely uniform method of statement and enables us to sum up the difficulties in terms easily understood. For example, if granite is more difficult to sweep than asphalt by 50 per cent., it is evident that to obtain a statement of all the difficulties of cleaning granite, we must begin by adding in column 2 of table No. 3, 50 per cent. of the granite area. Then, if the condition of the granite is bad, there is to be added in column 3 of table No. 3, 40 per cent. more to represent this, and thus there are expressed in succession the equivalents in square yards of the various difficulties existent on the granite of that section.

The column in Table No. 3, headed "Equivalent Total" is the sum of all these items, and expresses the total difficulties of each kind of pavement in each section, in terms of square yards of our ideal pavement.

To derive the next column, "Sweepers Necessary," it remained to learn how many square yards of pavement under ideal conditions could be kept clean by one man. Observation of the City on Sunday showed that when the traffic is light and the character of population good, a street may be kept clean by one thorough sweeping and a little picking up daily. And observation in selected portions of the City demonstrated that where asphalt pavement is good, with other conditions as specified, a sweeper may cover with one thorough sweeping and a picking up about 20,000 square yards daily. I have, therefore, adopted this as the amount of our standard pavement which can be kept clean by one man, and the "Equivalent Total" divided by this number gives in each case the number of sweepers necessary.

For the sake of comparison there is added a column showing the number of sweepers employed, and, derived from these, two other columns showing the amounts of pavement of each kind that ought to be and that are kept clean by one man in each section.

The mass of details has been so great that only tabulated statements could show the results in readable form, and the tables are more easily understood than an explanation of them; but exactness of knowledge has grown with the progress of the work, and I regard this report as preliminary to a more exhaustive treatment of the subject based upon longer continued observation, measurements more accurately made, and ratios of influence more definitely determined. The difficulty of making these first conclusions rigidly exact may be judged from the fact that one item, now considered to have marked influence upon the cost of sweeping, passed unnoticed the consideration of all the superintendents and myself, and has been brought out by a thoughtful foreman only within a short time and too late for use in this report.

Notwithstanding, however, its preliminary character, I have some proofs of the accuracy and value of the conclusions reached by the table of equivalents. In the case of one district the number and arrangement of sweepers employed tallied quite closely with the figures for sweepers necessary, except that in one section there were six sweepers on granite and twelve on Belgian, while the table of difficulties showed that there should be 12.2 for granite and 6.3 for Belgian. Upon sending to the superintendent his original report with a request for reconsideration, he returned it with the twelve and six transposed and a note saying that there had been a mistake in copying. In another case, a serious error in the amount of street car track was found in the same way; and in still another, a mistake in the pavement area. Without the table of equivalents as a guide, a sweeper might have any amount from 2,000 to 20,000 square yards of pavement to keep clean, and

*Broadway, south from Fourteenth street, is not swept by the City force, and is not included in the discussion nor in the summary.

no one could tell without personal observation whether he was overworked or not, but with the table of difficulty-equivalents at hand the number of men necessary in any section and the amount of work per man are determined within narrow limits. I am well satisfied with the general accuracy of the report.

The figures in Table No. 1, for cost of sweeping 1,000 square yards per week, were deduced from the number of sweepers employed, weekly wages being \$13.77 each.

Following Tables Nos. 1 and 3 are summaries by districts, and last of all a summary for the city, which shows also the number of sweepers made necessary by each of the difficulty-items discussed. It is interesting to note how the total requirement of 1,638 sweepers is made up.

Were the pavement all asphalt and the population all neat in their habits, were there only light traffic and no street-car track, were there no push carts and no market-stores, were every consideration ideal, there would still be required for sweeping the streets a force of 466 men.

The density and character of the population in a few parts of the city make necessary 388 more, so that about one-quarter of the whole force is used in the extra sweeping and resweeping of the crowded sections of the city, in some streets as often as seven times daily.

The great amount of traffic calls for 323 additional men to clean up after it, and probably should be debited with extra 29 men of the First District, making a total of 352 men due to density of traffic alone. The added difficulty introduced by granite and Belgian pavement requires 200 men more, that by street-car tracks 86 men, the bad condition of the pavement in some streets 62 men, the vicinity of unpaved streets 36.

KINDS OF PAVEMENT.

There were in the city, at the time the measurements were made, about 1,920,428 square yards of asphalt pavement, 5,197,339 square yards of granite, 2,152,319 square yards of Belgian and 55,458 square yards of other pavement—brick, wood and cobble.

For purposes of cleaning the city, with its 9,325,544 square yards of paved streets, is divided into 11 districts and these districts into 5 or 6 sections each, so that there are all together 63 sections. The section, with an average area of nearly 150,000 square yards being the smallest official sub-division, has been used in this report as the unit of tabulation.

A well laid asphalt pavement is, in dry weather, easy to clean because being smooth it lends itself to the operations of a man with a scraper, so that the mass of the dirt may be gathered with considerable rapidity and there is left for the tedious labor of the hand broom only the cleaning of corners and edges and the final dressing of the street.

Granite pavement, on the other hand, being composed of distinct blocks which are laid in rows lengthwise across the street, furnishes a series of furrows, between the rows of blocks, into which the loose dirt of the street falls and whence it must be cleaned by the broom. No scraper can be used to advantage on a granite street and a thorough sweeping is absolutely necessary. This means more time occupied on each square yard, and more energy expended by the sweeper than is the case with asphalt.

Belgian pavement is also composed of blocks set side by side in the street like granite, but Belgian blocks are smaller and present more furrows per square yard, and are not so well proportioned for stability as are the granite blocks in common use, so that the surface of such a pavement is nearly always uneven and the term "good condition" for Belgian means less than it does for granite. Still, Belgian blocks wear smooth with use while granite does not, and the general opinion is that Belgian pavement is only slightly more difficult to sweep than granite.

Brick pavement appears to remain in good condition after long and heavy use, and is not difficult to clean. Of wood there is only one block in the City.* Cobble presents the extreme of difficulty to the Department.

The average of all the opinions gathered from the superintendents is that the difficulties of sweeping are, asphalt, 100; granite, 150; Belgian, 160; brick, 100; wood, 100, and cobble, 400, respectively.

It is distinctly stated by them that these figures represent not exactly the difficulty of keeping these respective pavements in equally cleanly condition, but rather the best approximation they can make to the amount of work expended upon them under existing conditions. They say, for instance, that the asphalt of the City is kept almost absolutely clean, because it is so smooth and so uniform in color that a small particle of dirt is not only conspicuous but easily cleaned, while the crevices of a granite or Belgian street hide dust and fine dirt which nobody sees and which is infrequently dug out. I have used the figures given above in my computations, but it is the opinion of the superintendents that to keep the pavements equally clean, the figures would be about as 100, 200 and 220.

CONDITION OF PAVEMENT.

Evenness of pavement surface affects the cost of cleaning, but not equally with different kinds of pavement. A depression on asphalt, where a scraper is used, is of more consequence than a depression on granite or Belgian where only the hand broom is used. The figures given are intended, therefore, rather as a general average than as strictly applicable to any one kind of pavement. The superintendents place the ratios of difficulty for conditions which I have denominated good, fair and bad as 100, 120, 140 respectively. The variation of the variation I have left for future study.

TRAFFIC.

The amount of traffic affects the cost of sweeping for four reasons: (1) Because of the amount of horse droppings; (2) because of the dirt of one kind and another which comes from the wagons, dust ground off the pavement, etc.; (3) because the passage of horses and teams effects a solid packing into the crevices of the dirt upon which they tread; (4) because of the difficulty of giving close attention to his work when the sweeper must devote a considerable part of his time to dodging horses and vehicles. The figures for dense traffic apply to streets in which the traffic is so congested or so swift as to interfere with the sweeper's work.

From observations upon selected streets, made by Mr. Hawthorne Hill, I learn that anything below 25 vehicles per hour on a 30 foot street, or 50 per hour on a 60 foot street may be considered light traffic; between 25 and 100 vehicles per hour on a 30 foot street, or 50 to 200 on a 60 foot street may be considered medium traffic; from 100 to 150 on a 30 foot street, or 200 to 300 on a 60 foot street, heavy traffic; 150 to 300 on a 30 foot street, or 300 to 600 on a 60 foot street, dense traffic.

The figures given for the four conditions light, medium, heavy and dense traffic are 100, 140, 180, 250, respectively.

STREET CAR TRACK.

The difficulties introduced by street car rails are due to the depression of street surface along the rail, the condition of pavement between rails, and the frequent sanding of the track. The ratios given by the superintendents represent the added difficulty of sweeping a 30 foot street with a single car track. All the reductions on table 3 are based upon these ratios.

ASSOCIATION SPRINKLING.

Association sprinkling has frequently been the cause of complaint by the officers of the department because of the entirely unnecessary amount of water with which some streets have been flooded by careless or wilful drivers. But of late much improvement has been noticed, due to the action of Association officers based upon complaints made by the Department of Street Cleaning.

ELEVATED RAILROAD.

The pillars of the elevated railroad are frequently an obstacle to the continuous operation of the street sweeper, and it is noticed that after every rain the sickly condition of the pavement shaded by the overhead structure continues much longer than on streets exposed to the action of sun and wind. Continued observations incline me to the belief that the effect of this item has been underestimated.

CHARACTER OF THE POPULATION.

No other cause contributes so much to the expense of the Department in the matter of sweeping as the action of careless and thoughtless persons in making the public streets the receptacle of all kinds of rubbish of which they wish to be rid, and which a little consideration would induce them to deposit in some can or pail which might be emptied into a cart without the trouble of sweeping and shoveling it from the pavement. Of course the densely populated condition of some streets, which leaves the pavement the only playground for children, removes them from the list of mere streets, but the greater part of the dirt found on these streets has been placed there by people of careless and dirty tendencies, and of such an age as to make change of habits difficult. The superintendents report a marked improvement in these sections during the last two years, due to education in matters of cleanliness, brought about by the officers of the University and College Settlements, the Principals of the public schools and especially the members of the Juvenile Leagues acting as aids to the Department. In these and other means for the education of the people lies the hope of the crowded districts for that prevention which in the matter of cleanly streets is both better and cheaper than cure.

The same remarks apply to the presence of schools, which used to be a fruitful source of lunch papers scattered upon the street; and to the refuse of fruit carts, the orange and banana skins from which formerly embellished the pavement. Produce markets and green-grocery stores, also, are the sources of considerable litter which ought to go into cans.

An unpaved street, in wet weather, has much of its surface mud carried by wheels a distance of one block each way upon the cross streets.

Some of the difficulties discussed are increasing, such as the amount of population and of traffic in the uptown districts; some are decreasing—such as poor pavements, badly laid car-tracks, excessive sanding of tracks, carelessness of sprinkling-cart drivers and thoughtless littering of the streets. In the co-operation of the people, and the enforcement of the law against wilful and obstinate ones, lies the hope of still better things.

I have the honor to be, sir, very respectfully yours,

C. HERSCHEL KOYL.

*Very smooth Karri wood on concrete.

To the Commissioner:

SIR—Heretofore the district superintendents have been engaged rather in cleaning the streets than in the study of means for preventing their uncleanness, but so much interest has been created among them by the study necessary to the production of this report that I think they would welcome an opportunity to make it of permanent benefit to the Department by continued investigation of the subjects treated and of others which, I doubt not, deserve consideration.

If you desire, I shall be glad to draw up sample forms on which each superintendent may record the area of his district and its condition, block by block, in respect to all the matters which affect the work of the Department.

Such a record would give a much more accurate statement of areas than is available anywhere at present, would enable superintendents to make a scientific study of their fields of operation and a wise distribution of their men, would create a valuable spirit of thoughtfulness and of pride in their work among lesser officers and would furnish to the Department an amount of accurate and

TABLES—

Showing by Sections the Area of Each Kind of Pavement Cleaned by the Department.

DISTRICT NO. 1.

SECTION.	KIND OF PAVEMENT.	AREA. SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Dense, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
1.....	Asphalt.....	13,200	4,292	13,908	.....	.....	.....	13,200	.....	.....	700	.....
	Granite.....	112,658	112,658	.....	.....	.....	.....	112,658	.....	.....	20,518	.....
	Total.....	130,858	116,950	13,908	.....	.....	.....	130,858	.....	.....	21,218	.....
2.....	Asphalt.....	17,010	7,672	9,338	.....	.....	.....	17,010	.....	.....	.....	.....
	Granite.....	117,337	117,337	.....	.....	.....	.....	117,337	.....	.....	16,826	.....
	Belgian.....	4,600	4,600	.....	.....	.....	.....	4,600	.....	.....	700	.....
	Total.....	138,947	129,609	9,338	.....	.....	.....	138,947	.....	.....	17,526	.....
3.....	Asphalt.....	4,518	.....	4,518	.....	.....	.....	4,518	.....	.....	.....	.....
	Granite.....	117,821	96,315	21,476	.....	.....	.....	117,821	.....	.....	15,510	.....
	Belgian.....	3,951	3,951	.....	.....	.....	.....	3,951	.....	.....	.....	.....
	Total.....	126,290	100,296	25,994	.....	.....	.....	126,290	.....	.....	15,510	.....
5.....	Granite.....	132,245	132,245	.....	.....	.....	14,892	117,353	.....	.....	24,410	4,400
	Belgian.....	4,796	1,500	3,296	.....	.....	.....	4,796	.....	.....	.....	.....
	Total.....	137,041	133,745	3,296	.....	.....	14,892	122,149	.....	.....	24,410	4,400

DISTRICT NO. 2.

SECTION.	KIND OF PAVEMENT.	AREA. SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Dense, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
3-5 Sub.....	Asphalt.....	31,784	31,784	.....	.....	.....	.....	31,784	2,250	.....	1,250	.....
	Granite.....	70,102	70,102	.....	.....	.....	.....	70,102	7,550	.....	8,800	.....
	Belgian.....	16,020	16,020	.....	.....	.....	.....	16,020	4,100	.....	2,150	.....
	Other (cobble).....	5,705	.....	.....	5,705	.....	.....	5,705	.....	.....	.....	.....
	Total.....	123,611	117,906	.....	5,705	.....	.....	123,611	13,900	.....	12,200	.....
4.....	Asphalt.....	10,901	10,901	.....	.....	.....	10,901	.....	.....	.....	.....	.....
	Granite.....	122,712	80,304	7,602	34,836	.....	122,742	.....	18,850	4,150	8,600	.....
	Belgian.....	1,004	1,004	.....	.....	.....	1,004	.....	.....	.....	.....	.....
	Total.....	134,617	92,209	7,602	34,836	.....	134,647	.....	18,850	4,150	8,600	.....
4 Sub.....	Asphalt.....	10,819	10,819	.....	.....	.....	4,819	6,000	.....	.....	.....	.....
	Granite.....	135,208	121,524	.....	13,684	.....	30,208	105,000	26,250	.....	5,000	.....
	Belgian.....	1,546	1,426	.....	120	.....	746	800	.....	.....	.....	.....
	Other (cobble).....	3,142	.....	.....	3,142	.....	1,542	1,600	150	.....	600	.....
	Total.....	150,715	133,769	.....	16,946	.....	37,315	113,400	26,400	.....	5,600	.....
6.....	Asphalt.....	54,739	54,739	.....	.....	.....	19,750	34,989	300	.....	3,100	.....
	Granite.....	27,745	27,745	.....	.....	.....	.....	27,745	5,300	4,100	3,000	.....
	Belgian.....	5,513	5,513	.....	.....	.....	1,200	4,313	.....	.....	3,000	.....
	Total.....	87,997	87,997	.....	.....	.....	20,950	67,047	5,600	4,100	9,100	.....
8.....	Asphalt.....	62,839	62,839	.....	.....	.....	25,200	37,639	1,600	.....	10,000	.....
	Granite.....	21,429	21,429	.....	.....	.....	6,500	14,929	5,300	1,100	2,400	.....
	Belgian.....	7,543	.....	.....	7,543	.....	.....	7,543	6,000	.....	.....	.....
	Total.....	91,811	84,268	.....	7,543	.....	31,700	60,111	12,900	1,100	12,400	.....

comparative information which, as far as I am aware, exists nowhere else in the country. Suggestion approved. G. E. W.

[In accordance with the above approved suggestion, blank forms were prepared and sent to each District Superintendent during the month of September, the headings referring to the name of the street, block limits, area, kind of pavement and its condition, density of traffic, car tracks and condition of pavement in connection therewith, association sprinkling, elevated road pillars, character of population, schools, produce markets and market stores, push-cart trade, number of

times swept daily, hours occupied in sweeping, and daily amount of sweepings collected. The results are on file in the Department, and it is believed that the information thus collected is more thorough with regard to the condition of the streets, and to the varying difficulties of cleaning them, than has ever been compiled in any city at any time in the past. The tables which follow, and which form a part of the preceding report by Mr. Koyl, contain information under headings for the most part similar, except that the unit of comparison is the district instead of the street, as in the case of the reports made by the Superintendents.]

SERIES No. 1.

ment, and the Amount of Each Affected by the Various Influencing Difficulties.

DISTRICT No. 1.

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
.....	700	700	Little trouble.	7,400 G. 9,300 F. 1,500 B. 54,000 50,158 8,503	6	4	4,550	\$3 43	
.....	13,118	7,400	13,118	7,400		24,204	.....	2	18	42	.....	33	3,414	4 03
.....	13,818	7,400	13,818	7,400		24,204	.....	2	18	42	.....	37	.....	.....
.....	Little trouble.	4,700 12,310 59,000 58,337 2,300 2,300	4	3	5,670	\$2 43	
.....	16,826	.....	16,826	.....		14,500	.....	1	12	60	.....	33	3,556	3 87
.....	700	.....	700	.....		.....	.....	.....	.....	1	.....	1	4,600	3 00
.....	17,526	17,526	14,500	1	12	63	37	
.....	.....	.....	.....	.....	Little trouble.	.....	1,500 2,918 59,000 58,821 1,951 2,500	.....	.....	2	.....	1	4,518	\$3 05
.....	11,510	4,000	9,510	6,000		19,890	.....	1	28	33	.....	32	3,682	3 74
.....	2	1	3,951	3 48	
.....	11,510	4,000	9,510	6,000	.....	19,890	.....	1	28	37	.....	34	.....	.....
.....	24,810	4,000	24,810	4,000	Little trouble.	9,894	56,000 55,472 20,773 2,400 2,396	.....	5	32	.....	35	3,778	\$3 65
.....	1	1	4,796	2 87	
.....	24,810	4,000	24,810	4,000		9,894	.....	.....	5	33	.....	36	.....	.....

DISTRICT No. 2.

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
1,000	2,500	1,500	2,000	No trouble. G. 15,784 F. 16,000 B. 35,102 35,000 V.B. 8,620 8,000 V.B. 1,705 4,000 V.B.	Condition now vastly improved, because of University and College Settlements, co-operation of Principals, Aids to the Department of Street Cleaning, paper cans, etc., etc.	10	10	10	3,178	\$4 33	Swept three times.
1,000	8,100	7,250	8,350	8,000		.....	.....		.....	.....	.....	19	3,690	3 73
900	3,400	1,950	3,150	3,100		.....	.....		.....	.....	.....	5	3,2 4	4 30
.....	3	1,902	7 24	
2,900	11,500	11,700	13,000	13,100	.....	.....	.....	.....	10	10	.....	37	.....	.....
.....	No trouble.	3,887 10,901 122,742 1,004		20	5,450	\$2 53	Swept twice.
3,280	15,600	12,720	15,800	15,800		16,879	.....		15	.....	.....	30.7	3,998	3 44
.....	.....	.....	.....	.....		.....	.....		.....	.....	.....	0.3	3,347	4 11
3,280	15,600	12,720	15,800	15,800	20,766	15	33.0	
.....	No trouble. 10,819 135,208 1,546 3,142	20	5,410	\$2 55	Swept twice.
6,350	500	24,400	15,250	16,000		.....	.....		.....	.....	.....	28.6	4,696	2 93
.....	.....	.....	.....	.....		.....	.....		.....	.....	.....	0.4	3,865	3 57
.....	750	350	400	1.0	3,142	4 38	
6,350	500	25,150	15,600	16,400	.....	.....	.....	.....	.....	.....	.....	32.0	.....	.....
2,000	1,400	1,700	1,700	No trouble.	4,214 54,739 V.B. 27,745 V.B. 5,513 V.B.		26	36	17	3,220	\$4 28	Swept three times.
8,500	3,900	.....	6,400	6,000		.....	.....		.....	.....	.....	8	3,468	3 94
.....	3,000	.....	1,500	1,500		.....	.....		.....	.....	.....	2	2,757	5 00
10,500	8,300	9,600	9,200	4,214	26	36	27	
10,000	1,600	6,600	5,000	No trouble.	4,764 62,839 V.B. 21,429 V.B. 7,543 V.B.		17	15	19	3,307	\$4 16	Swept three times.
7,200	1,600	.....	4,400	4,400		.....	.....		.....	.....	.....	6	3,572	3 83
6,000	.....	.....	3,000	3,000		.....	.....		.....	.....	.....	2	3,772	3 65
23,200	3,200	14,000	12,400	4,764	17	15	27	

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Dense, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
6-8 Sub.	Asphalt.....	42,692	42,692	.....	.....	11,074	31,618	.....	1,500	.....	250	.....
	Granite.....	46,558	28,892	8,833	8,833	40,088	6,470	.....	10,400	.....	4,400	.....
	Belgian.....	21,980	11,542	.....	10,438	13,680	8,300	.....	7,000	.....	5,000	.....
	Total.....	111,230	83,126	8,833	10,271	64,842	18,388	.....	18,900	.....	9,650	.....
10	Asphalt.....	17,142	17,142	.....	.....	.....	7,896	9,246	2,100	.....	4,000	.....
	Granite.....	50,020	31,438	12,906	5,676	.....	.....	50,020	1,300	3,400	12,150	.....
	Belgian.....	9,873	.....	.....	9,873	.....	.....	9,873	.....	.....	2,250	.....
	Total.....	77,035	48,580	12,906	15,549	.....	7,896	69,139	3,700	3,400	18,400	.....
10 Sub.	Asphalt.....	16,317	16,317	.....	.....	.....	.....	16,317	1,550	.....	1,550	.....
	Granite.....	64,994	64,994	.....	.....	.....	.....	64,994	4,200	3,400	2,000	.....
	Belgian.....	6,923	6,923	.....	.....	.....	.....	6,923	.....	.....	1,550	.....
	Total.....	88,234	88,234	.....	.....	.....	.....	88,234	5,750	3,400	5,100	.....

DISTRICT NO. 3.

SECTION.	KIND OF PAVEMENT.	AREA SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Light, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
7	Asphalt.....	13,479	13,479	.....	.....	4,493	.....	8,986	.....	.....	.....	.....
	Granite.....	75,489	50,326	22,043	3,120	.....	25,163	{ 20,326 30,000 D. }	3,206	.....	16,772	3,276
	Belgian.....	29,088	.....	.....	29,088	9,696	9,696	9,696	1,986	.....	6,704	.....
	Total.....	118,056	63,805	22,043	32,208	14,189	34,859	69,008	5,192	.....	23,476	3,276
9	Asphalt.....	20,843	20,843	.....	.....	3,474	3,474	13,895	1,657	.....	.....	.....
	Granite.....	144,560	31,878	84,037	28,645	36,140	36,149	{ 42,280 30,000 D. }	15,747	.....	19,843	4,904
	Belgian.....	11,309	.....	.....	11,309	11,309	.....	.....	.....	.....	2,307	.....
	Total.....	176,712	52,721	84,037	39,954	50,923	39,614	86,175	17,404	.....	22,050	4,904
7-9 Sub	Asphalt.....	13,307	13,307	.....	.....	.....	.....	13,307	.....	.....	.....	.....
	Granite.....	51,331	25,667	12,832	12,832	.....	.....	{ 25,331 20,000 D. }	.....	.....	15,720	.....
	Belgian.....	22,249	.....	.....	22,249	.....	.....	22,249	.....	.....	481	.....
	Total.....	86,887	38,974	12,832	35,081	.....	.....	86,887	.....	.....	16,201	.....
11	Asphalt.....	27,060	20,295	6,765	.....	.....	.....	{ 7,060 20,000 D. }	2,800	1,900	1,000	.....
	Granite.....	106,263	52,951	26,656	26,656	17,710	17,710	{ 50,843 20,000 D. }	10,565	1,298	16,655	.....
	Belgian.....	36,478	.....	12,159	24,319	.....	36,478	.....	.....	.....	2,000	.....
	Total.....	169,801	73,246	45,580	50,975	17,710	54,188	97,993	13,365	3,198	19,655	.....
13	Asphalt.....	15,462	15,462	.....	.....	3,092	.....	{ 2,370 10,000 D. }	.....	.....	2,302	.....
	Granite.....	110,763	36,921	36,921	36,921	18,460	18,460	{ 53,843 20,000 D. }	4,000	4,000	17,380	1,320
	Belgian.....	33,661	.....	.....	33,661	.....	.....	33,661	.....	.....	3,000	.....
	Other (Brick).....	1,150	1,150	.....	.....	.....	.....	1,150	.....	.....	.....	.....
	Total.....	161,036	53,533	36,921	70,582	21,552	18,460	121,024	4,000	4,000	22,680	1,320
15	Asphalt.....	52,728	52,728	.....	.....	.....	1,000	{ 1,728 50,000 D. }	1,600	.....	.....	.....
	Granite.....	74,827	2,000	1,000	71,827	13,706	18,706	{ 27,415 10,000 D. }	.....	.....	13,850	.....
	Belgian.....	38,202	.....	.....	38,202	.....	.....	38,202	.....	.....	.....	.....
	Total.....	165,757	54,728	1,000	110,029	18,706	19,706	127,315	1,600	.....	13,850	.....

DISTRICT NO. 4.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Dense, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
12	Asphalt.....	47,055	30,765	.....	16,290	8,866	23,728	14,161	6,138	2,660	6,542	.....
	Granite.....	64,473	36,223	16,530	11,720	4,070	12,998	47,405	3,560	3,120	4,680	.....
	Belgian.....	36,420	29,134	1,953	5,333	.....	34,860	1,560	.....	.....	3,653	.....
	Other (cobble).....	687	.....	.....	687	687	.....	.....	.....	.....	.....	.....
	Total.....	148,635	96,122	18,483	34,030	13,623	71,586	63,426	9,698	5,780	14,875	.....

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
1,750	850	900	No trouble.	20	16	10	4,269	\$3 22	Swept three times.
10,400	2,500	1,900	7,400	7,400		.....	42,692	.....	.....	.....	.....	11	4,232	3 25
8,500	2,900	600	7,000	5,000		.....	46,558	.....	.....	.....	.....	5	4,396	3 13
20,650	5,400	2,500	15,250	13,300	21,983	20	16	26	Swept twice.
2,000	4,400	.....	3,200	3,200	No trouble.	.....	17,142	.....	.....	.....	.....	3	5,714	\$2 41
9,000	2,850	5,000	8,450	8,400		.....	50,020	.....	.....	.....	.....	11	4,547	3 03
1,250	.....	1,000	1,250	1,000		9,873	9,873	.....	.....	.....	.....	2	4,937	2 79
12,250	7,250	6,000	12,300	12,600	.....	9,873	.....	.....	.....	.....	.....	16	.....	.....
.....	3,100	1,500	1,600	No trouble.	8,000	4	4,079	\$3 37	Swept twice.
9,600	.....	.....	5,100	4,500		.....	8,317	.....	.....	.....	.....	14	4,643	2 96
.....	.....	1,550	1,000	550		.....	32,000	.....	.....	.....	.....	2	3,462	3 98
9,600	3,100	1,550	7,600	6,650	32,994	20	

DISTRICT No. 3.

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
.....	.....	.....	.....	.....	No influence.	.....	13,479 G. 13,479 F. B.	2	.....	.....	.....	13 1/2	7,702	\$1 79	
11,390	8,658	3,206	.....	23,254		.....	63,489	2	.....	2	.....	14 1/2	5,100	2 70	
.....	2,063	6,627	8,690	.....		10,400	12,000	.....	.....	.....	.....	5 1/2	5,289	2 60	
11,390	10,721	9,833	8,690	23,254	.....	10,400	29,088	4	.....	2	.....	22	.....	.....
1,657	.....	.....	.....	1,657	No influence.	.....	20,843	1	.....	.....	.....	1 1/2	15,439	\$0 90	
40,494	.....	.....	.....	40,494		7,800	124,560	5	.....	2	.....	27 1/2	5,315	2 60	
.....	.....	2,207	.....	2,207		10,400	20,000	.....	.....	.....	.....	1 1/2	7,800	1 77	
42,151	.....	2,207	.....	44,358	.....	18,200	11,309	6	.....	2	.....	30	.....	.....
.....	.....	.....	.....	.....	No influence.	.....	5,307	.....	.....	1	.....	3	4,436	\$3 10	
15,720	.....	.....	.....	15,720		.....	8,000	2	4	15	.....	11	4,667	2 95	
.....	.....	481	.....	481		.....	35,331	.....	.....	.....	.....	4	5,562	2 48	
15,720	.....	481	.....	16,201	.....	.....	16,000	2	4	16	.....	18	.....	.....
5,700	.....	.....	5,700	.....	No influence.	.....	27,060	1	.....	.....	.....	3 1/2	7,465	\$1 84	
21,388	7,130	.....	.....	28,518		7,800	53,000	1	.....	.....	.....	17	6,251	2 20	
.....	.....	2,000	.....	2,000		9,100	53,263	1	.....	.....	.....	6 1/2	5,637	2 44	
27,086	7,130	2,000	5,700	30,518	.....	16,900	12,000	3	.....	.....	.....	27	.....	.....
.....	.....	2,300	.....	2,300	No influence.	.....	4,000	.....	.....	.....	.....	2 1/2	6,185	\$2 22	
13,330	13,350	.....	.....	26,700		6,500	11,462	3	.....	8	.....	18 1/2	5,987	2 30	
.....	.....	3,000	.....	3,000		6,500	55,000	.....	.....	.....	.....	6 1/2	5,179	2 66	
.....	.....	.....	.....	.....	.....	.....	55,763	.....	.....	.....	.....	1 1/2	2,300	6 00	
13,350	13,350	5,300	.....	32,000	.....	13,000	8,000	3	.....	8	.....	28	.....	.....
600	.....	1,000	.....	1,600	No influence.	.....	23,661	.....	.....	.....	.....	8	6,591	\$2 09	
7,124	3,363	3,363	.....	13,850		6,500	2,000 V. B.	2	.....	5	.....	12	6,236	2 21	
.....	.....	.....	.....	.....		6,500	.....	.....	.....	.....	.....	6	6,367	2 16	
7,724	3,363	4,363	.....	15,450	.....	13,000	.....	2	.....	5	.....	26	.....	.....

DISTRICT No. 4.

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
15,340	15,340	7,847 G. 7,848 F. 31,360 B.	2	2	9.0	5,228	\$2 63	
6,680	3,120	1,560	6,240	5,120	7,467	10,400	21,491	2	.....	2	.....	13.0	4,959	2 78
.....	2,053	1,600	3,653	.....	.....	.....	21,491	3	.....	.....	.....	6.9	5,278	2 61
.....	.....	.....	.....	.....	.....	.....	9,105	.....	.....	.....	.....	0.1	6,870	2 00
22,020	5,173	3,160	25,233	5,120	7,467	10,400	18,210	7	.....	4	.....	29.0	.....	.....

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Dense, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
14	Asphalt.....	29,931	24,864	.....	5,067	.....	12,054	17,867	2,700	.....	1,080	.....
	Granite.....	97,003	65,383	21,820	9,800	.....	43,203	53,800	9,426	5,920	18,456	.....
	Belgian.....	27,005	16,952	.....	10,053	.....	17,635	9,370	.....	.....	810	.....
	Other (cobble).....	3,087	.....	.....	3,087	3,087	.....	.....	.....	.....	1,080	.....
	Total.....	157,026	107,199	21,820	28,007	3,087	72,902	81,037	12,126	5,920	21,426	.....
16	Asphalt.....	34,208	29,430	4,878	.....	.....	11,852	22,456	2,500	.....	1,250	.....
	Granite.....	61,594	35,511	21,803	4,280	5,400	28,194	28,000	.....	5,000	20,350	.....
	Belgian.....	50,111	29,671	18,000	2,440	23,081	2,030	25,000	.....	.....	12,100	.....
	Other (wood).....	1,010	1,010	.....	.....	.....	1,010	.....	.....	.....	.....	.....
	Total.....	147,023	95,622	44,681	6,720	28,481	43,086	75,456	2,500	5,000	33,700	.....
18	Asphalt.....	49,593	49,593	.....	.....	.....	2,573	47,020	.....	2,600	520	.....
	Granite.....	84,378	26,848	36,100	21,430	.....	9,358	75,020	.....	14,050	8,371	.....
	Belgian.....	27,433	3,063	24,100	270	4,143	10,520	12,770	2,200	2,490	6,031	.....
	Total.....	161,404	79,504	60,200	21,700	4,143	22,451	134,810	2,200	19,150	14,922	.....
20	Asphalt.....	56,621	56,621	.....	.....	.....	25,058	31,563	.....	9,660	.....	.....
	Granite.....	65,006	42,636	.....	22,370	.....	14,701	50,305	13,392	6,380	.....	.....
	Belgian.....	34,861	.....	24,461	10,400	12,000	19,551	3,310	.....	.....	4,380	.....
	Total.....	156,488	99,257	24,461	32,770	12,000	59,310	85,178	13,392	16,040	4,380	.....

DISTRICT No. 5.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Light, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
17	Asphalt.....	51,075	45,333	5,742	.....	10,668	.....	40,357	3,120	3,400	3,120	.....
	Granite.....	87,758	66,388	12,000	9,400	13,088	18,700	56,000	.....	5,316	12,840	3,120
	Belgian.....	33,843	.....	33,843	.....	18,400	4,000	11,443	3,120	.....	3,120	.....
	Total.....	172,676	111,721	51,585	9,400	42,156	22,700	107,800	6,240	8,716	19,080	3,120
19	Asphalt.....	13,000	10,667	4,333	.....	.....	.....	15,000	3,200	.....	3,120	.....
	Granite.....	78,585	8,000	27,323	43,062	13,300	32,257	33,028	.....	5,608	12,480	6,240
	Belgian.....	68,600	.....	13,335	54,865	5,334	21,336	41,530	.....	2,408	9,440	.....
	Other (cobble).....	400	.....	.....	400	400	.....	.....	.....	.....	.....	.....
	Total.....	160,185	18,667	45,191	98,327	19,034	53,593	89,558	3,200	8,016	25,040	6,240
21	Asphalt.....	24,042	14,224	9,818	.....	1,072	14,700	8,270	.....	.....	3,120	.....
	Granite.....	60,082	.....	17,723	42,349	5,334	18,220	36,528	.....	6,480	9,360	.....
	Belgian.....	73,979	.....	17,780	56,199	13,400	18,700	41,879	.....	.....	3,120	.....
	Other (cobble).....	2,800	.....	.....	2,800	2,800	.....	.....	.....	.....	.....	.....
	Total.....	160,903	14,224	45,331	101,348	22,606	51,620	86,677	.....	6,480	15,600	.....
23	Asphalt.....	31,315	18,669	12,646	.....	2,667	21,716	6,932	.....	.....	3,120	.....
	Granite.....	62,670	35,370	6,504	20,796	.....	.....	62,670	.....	4,680	19,040	.....
	Belgian.....	82,795	.....	10,120	72,375	26,500	20,795	35,500	.....	.....	6,480	.....
	Total.....	176,780	54,039	29,570	93,171	29,167	42,511	105,102	.....	4,680	28,640	.....
25	Asphalt.....	28,303	18,669	9,634	.....	5,334	13,335	9,634	.....	.....	3,120	.....
	Granite.....	36,249	.....	9,398	26,851	.....	8,001	28,248	.....	3,120	6,240	.....
	Belgian.....	84,244	.....	35,067	49,157	16,002	32,004	36,218	800	.....	6,480	.....
	Other (cobble).....	2,500	.....	.....	2,500	2,500	.....	.....	.....	.....	.....	.....
	Total.....	151,296	18,669	54,099	78,508	23,836	53,340	74,100	800	3,120	15,840	.....
27	Asphalt.....	15,000	7,112	7,888	.....	5,334	2,734	6,932	.....	.....	3,120	.....
	Granite.....	53,000	.....	27,233	25,767	7,667	19,133	26,200	4,000	3,120	4,680	.....
	Belgian.....	102,660	.....	29,800	72,860	9,224	34,672	58,764	4,680	2,400	8,040	.....
	Total.....	170,660	7,112	64,921	98,627	22,225	56,539	91,896	8,680	5,520	15,840	.....

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
2,700	1,080	.....	3,780	.....	.....	.....	9,977 9,977 9,977 38,800 29,103 29,100 6,750 6,755 13,500	1	.....	.....	.....	6	4,989	\$2 76	
22,542	9,100	2,160	21,036	12,766	16,134	17,334	.....	4	.....	3	.....	20	4,850	2 84	
.....	810	.....	810	.....	.....	.....	.....	.....	.....	.....	.....	5	5,401	2 55	
.....	.....	1,080	1,080	.....	.....	.....	.....	.....	.....	.....	.....	1	3,087	4 46	
25,242	10,990	3,240	26,706	12,766	16,134	17,334	.....	5	.....	3	.....	32	.....	.....
2,500	.....	1,250	2,500	1,250	.....	.....	11,430 11,478 11,400 32,000 14,504 15,000 V.B. 25,000 12,111 13,000	1	.....	.....	.....	6.0	5,718	\$2 41	
7,500	16,600	1,250	19,100	6,250	16,134	17,334	.....	.....	.....	.....	.....	13.9	4,431	3 11	
.....	12,100	.....	12,100	.....	.....	.....	.....	1	.....	.....	.....	8.0	6,264	2 20	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.1	10,100	1 36	
10,000	28,700	2,500	33,700	7,500	16,134	17,334	.....	2	.....	.....	.....	28.0	.....	.....
3,120	.....	.....	.....	3,120	.....	8,667	25,000 12,593 12,000 21,000 21,378 42,000 6,433 7,000 14,000	.....	.....	.....	.....	9	5,510	\$2 50	
8,340	6,240	7,851	9,600	12,831	17,867	15,600	.....	.....	.....	.....	.....	20	4,219	3 26	
.....	4,690	6,031	8,231	2,490	.....	.....	.....	4	.....	3	.....	6	4,572	3 01	
11,460	10,930	13,882	17,831	18,441	17,867	24,267	.....	4	.....	3	.....	35	.....	.....
5,930	3,730	.....	5,930	3,730	.....	10,400	28,000 14,621 14,000 33,000 16,006 16,000 8,000 8,861 18,000	1	.....	.....	.....	9	6,291	\$2 19	
16,752	3,020	.....	4,380	15,392	17,867	10,400	.....	1	.....	.....	.....	13	5,000	2 76	
.....	.....	4,380	4,380	.....	.....	.....	.....	.....	.....	.....	.....	7	4,980	2 77	
22,682	6,750	4,380	14,690	19,122	17,867	20,800	.....	2	.....	.....	.....	29	.....	.....

DISTRICT No. 5.

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
6,520	.....	3,120	.....	9,640	.....	.....	..... G. 30,025 F. 21,000 B. 23,591 4,197 60,000 5,843 28,000	1	6	.....	.....	9	5,669	\$2 43	
7,100	7,936	6,240	6,240	15,036	.....	.....	.....	1	8	.....	.....	17	5,164	2 67	
.....	.....	6,240	.....	6,240	20,800	20,800	.....	1	9	.....	.....	7	4,833	2 85	
13,620	7,936	15,600	6,240	30,916	20,800	20,800	.....	3	23	.....	.....	33	.....	.....
3,200	.....	3,120	.....	6,320	.....	.....	5,000 5,000 5,000 7,000 34,585 37,000 16,000 13,200 39,000 ..... .....	.....	6	.....	.....	2.9	5,173	2 66	
6,320	3,120	14,888	12,480	11,848	.....	.....	.....	1	8	.....	.....	16.0	4,911	2 80	
.....	3,200	8,648	.....	11,848	20,800	20,800	.....	.....	9	.....	.....	13.0	5,246	2 62	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.1	4,000	3 44	
9,520	6,320	26,656	12,480	29,216	20,800	20,800	.....	1	23	.....	.....	32.0	.....	.....
.....	.....	3,120	.....	3,120	.....	.....	4,000 7,042 13,000 11,000 25,082 24,000 53,979 23,000 2,800	1	6	.....	.....	5	4,808	2 86	
3,360	2,120	9,360	9,600	6,240	.....	.....	.....	2	8	.....	.....	12	5,007	2 75	
.....	.....	3,120	.....	3,120	10,400	10,400	.....	1	7	.....	.....	14	5,284	2 61	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2,800	4 93	
3,360	3,120	15,600	9,600	12,480	10,400	10,400	.....	4	21	.....	.....	32	.....	.....
.....	.....	3,120	.....	3,120	.....	.....	15,000 5,315 11,000 21,000 15,670 26,000 30,000 10,795 42,000	1	8	.....	.....	5	6,263	2 20	
15,920	.....	7,800	7,800	15,920	.....	.....	.....	.....	4	.....	.....	13	4,821	2 86	
.....	3,360	3,120	3,360	3,120	10,400	10,400	.....	2	7	.....	.....	15	5,520	2 50	
15,920	3,360	14,040	11,160	22,160	10,400	10,400	.....	3	19	.....	.....	33	.....	.....
.....	.....	3,120	.....	3,120	.....	.....	10,000 5,303 13,000 4,000 2,249 30,000 40,000 18,224 26,000 2,500	.....	6	.....	.....	6	4,717	2 92	
3,120	.....	6,240	6,240	3,120	.....	.....	.....	.....	7	.....	.....	9	4,028	3 42	
.....	3,360	3,920	4,160	3,120	10,400	10,400	.....	2	6	.....	.....	14	6,016	2 29	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2,500	5 51	
3,120	3,360	13,280	10,400	9,360	10,400	10,400	.....	2	19	.....	.....	30	.....	.....
.....	.....	3,120	.....	3,120	.....	.....	10,000 2,000 3,000 25,000 12,000 16,000 38,000 14,660 50,000	1	6	.....	.....	2	7,500	1 84	
6,320	.....	5,480	7,120	4,680	.....	.....	.....	.....	1	.....	3	9	5,889	2 34	
7,080	3,360	4,680	10,440	4,680	10,400	18,733	.....	1	6	.....	.....	19	5,403	2 55	
13,400	3,360	13,280	17,560	12,480	10,400	18,733	.....	2	13	.....	3	30	.....	.....

DISTRICT No. 6.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Light, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
22	Asphalt.....	60,068	60,068	.....	.....	13,800	46,268	.....	1,539	.....	1,539	.....
	Granite.....	36,334	36,334	.....	.....	.....	.....	{ 9,200 27,134 D. }	3,078	3,078	1,926	.....
	Belgian.....	69,838	11,324	38,386	20,128	9,200	60,638	.....	1,539	.....	6,543	.....
	Other (cobble).....	755	.....	.....	755	.....	.....	755	.....	.....	.....	.....
	Total.....	166,995	107,726	38,386	20,883	23,000	106,906	37,089	6,156	3,078	10,008	.....
24	Asphalt.....	56,757	56,757	.....	.....	.....	56,757	.....	5,295	3,708	780	.....
	Granite.....	31,667	31,667	.....	.....	.....	.....	31,667 D.	1,122	3,708	6,228	.....
	Belgian.....	91,850	7,797	50,922	33,131	.....	30,617	61,233	321	.....	11,295	.....
	Other (cobble).....	893	.....	.....	893	.....	.....	893	.....	.....	.....	.....
	Total.....	181,167	96,221	50,922	34,024	.....	87,374	93,793	6,738	7,416	18,303	.....
26	Asphalt.....	61,783	61,783	.....	.....	6,900	54,883	.....	7,320	3,660	.....	.....
	Granite.....	31,693	7,943	12,285	11,465	.....	.....	31,693 D.	.....	3,660	3,660	.....
	Belgian.....	94,304	555	39,238	54,511	19,728	24,859	49,717	291	.....	3,369	.....
	Other (cobble).....	1,762	.....	1,762	.....	.....	.....	1,762	.....	.....	.....	.....
	Total.....	189,542	70,281	53,285	65,976	26,628	79,742	83,172	7,611	7,320	7,029	.....
28	Asphalt.....	65,269	24,549	35,861	4,859	.....	65,269	.....	5,628	2,814	.....	.....
	Granite.....	35,072	7,632	18,637	8,803	.....	.....	35,072 D.	.....	2,814	2,814	.....
	Belgian.....	77,924	.....	57,362	20,562	9,377	22,849	45,698	2,940	.....	8,814	.....
	Other (cobble).....	1,354	.....	1,354	.....	.....	.....	1,354	.....	.....	.....	.....
	Total.....	179,619	32,181	113,214	34,224	9,377	88,118	82,124	8,568	5,628	11,628	.....
30	Asphalt.....	43,065	43,065	.....	.....	2,300	40,765	.....	3,672	.....	3,672	.....
	Granite.....	42,142	42,142	.....	.....	.....	.....	{ 7,900 34,242 D. }	3,672	3,672	.....	.....
	Belgian.....	84,586	12,540	48,499	23,547	25,045	19,847	39,694	.....	651	3,672	.....
	Other (cobble).....	881	.....	881	.....	.....	.....	881	.....	.....	.....	.....
	Total.....	170,674	97,747	49,380	23,547	27,345	60,612	82,717	7,344	4,323	7,344	.....

DISTRICT No. 7.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Light, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
29	Asphalt.....	34,940	34,940	.....	.....	.....	13,273	21,667	.....	.....	7,000	.....
	Granite.....	59,910	.....	59,910	.....	28,267	16,043	15,600	.....	1,560	3,640	.....
	Belgian.....	55,730	.....	.....	55,730	9,600	35,730	10,400	.....	2,600	6,520	1,560
	Total.....	150,580	34,940	59,910	55,730	37,867	65,046	47,667	.....	4,160	17,160	1,560
31	Asphalt.....	48,970	48,970	.....	.....	11,067	16,569	21,334	.....	.....	4,800	.....
	Granite.....	74,670	5,067	69,603	.....	22,134	26,936	25,600	520	4,160	4,160	.....
	Belgian.....	11,410	.....	.....	11,410	.....	11,410	.....	.....	.....	4,160	.....
	Total.....	135,050	54,037	69,603	11,410	33,201	54,915	46,934	520	4,160	13,120	.....
33	Asphalt.....	39,920	39,920	.....	.....	.....	15,919	24,001	.....	.....	5,400	.....
	Granite.....	94,600	7,601	86,999	.....	11,067	65,733	17,800	4,680	4,680	4,680	.....
	Belgian.....	20,580	.....	.....	20,580	.....	20,580	.....	.....	.....	4,680	.....
	Total.....	155,100	47,521	86,999	20,580	11,067	102,232	41,801	4,680	4,680	14,760	.....
35	Asphalt.....	40,760	40,760	.....	.....	10,708	11,383	18,669	.....	.....	4,200	.....
	Granite.....	98,430	8,089	90,341	.....	10,708	63,455	24,207	3,296	7,280	3,640	.....
	Belgian.....	10,030	.....	.....	10,030	.....	10,030	.....	.....	.....	3,640	.....
	Total.....	149,220	48,849	90,341	10,030	21,416	84,868	42,936	3,296	7,280	11,480	.....

DISTRICT No. 6.

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
3,078	3,078	.....	.....	.....	{ 35,961 G. 18,400 F. 4,627 B. 22,250 9,084 5,000 12,116 48,470 9,252 755	I	.....	.....	.....	6.0	10,011	\$1 38	
8,082	8,082	.....	.....	10,502	{ 35,961 G. 18,400 F. 4,627 B. 22,250 9,084 5,000 12,116 48,470 9,252 755 .....	.....	6	.....	.....	10.8	3,364	4 09	
1,926	6,156	5,004	3,078	.....	20,970	{ 35,961 G. 18,400 F. 4,627 B. 22,250 9,084 5,000 12,116 48,470 9,252 755 .....	.....	.....	.....	.....	13.0	5,372	2 56	
.....	{ 35,961 G. 18,400 F. 4,627 B. 22,250 9,084 5,000 12,116 48,470 9,252 755 .....	.....	.....	.....	.....	0.2	3,775	3 65	
13,086	6,156	16,164	3,078	.....	31,472	.....	I	6	.....	.....	30.0	.....	.....
9,783	7,074	2,709	.....	.....	{ 36,311 18,156 2,290 16,750 7,917 7,000 16,538 66,152 9,160 893	I	.....	.....	.....	6.0	9,460	1 45	
11,058	4,830	6,228	.....	16,760	{ 36,311 18,156 2,290 16,750 7,917 7,000 16,538 66,152 9,160 893 .....	.....	6	.....	.....	10.7	2,960	4 65	
4,200	7,416	4,200	7,416	.....	24,711	{ 36,311 18,156 2,290 16,750 7,917 7,000 16,538 66,152 9,160 893	I	.....	.....	.....	16.0	5,741	2 40	
.....	{ 36,311 18,156 2,290 16,750 7,917 7,000 16,538 66,152 9,160 893 .....	.....	.....	.....	.....	0.3	2,977	4 63	
25,041	7,416	16,104	16,353	.....	41,471	.....	2	6	.....	.....	33.0	.....	.....
10,980	7,320	3,660	.....	.....	{ 41,189 20,594 16,354 6,339 9,000 15,641 62,563 16,110 1,762	I	.....	.....	.....	6	10,297	1 34	
.....	3,660	3,660	3,660	3,660	.....	24,631	{ 41,189 20,594 16,354 6,339 9,000 15,641 62,563 16,110 1,762	.....	6	.....	.....	8	3,962	3 48	
.....	3,660	.....	3,660	.....	12,267	{ 41,189 20,594 16,354 6,339 9,000 15,641 62,563 16,110 1,762	2	.....	.....	.....	15	6,287	2 19	
.....	{ 41,189 20,594 16,354 6,339 9,000 15,641 62,563 16,110 1,762	.....	.....	.....	.....	1	1,762	7 81	
10,980	3,660	7,320	10,980	10,980	.....	36,898	.....	3	6	.....	.....	30	.....	.....
8,442	8,442	.....	.....	.....	{ 43,513 21,750 17,058 9,014 9,000 12,825 51,299 13,800 1,354	.....	.....	.....	4	7	9,324	1 48	
.....	2,814	2,814	2,814	2,814	.....	18,740	{ 43,513 21,750 17,058 9,014 9,000 12,825 51,299 13,800 1,354	.....	6	.....	I	9	3,897	3 54	
.....	8,940	2,814	8,940	2,814	.....	9,376	{ 43,513 21,750 17,058 9,014 9,000 12,825 51,299 13,800 1,354	I	.....	.....	.....	13	5,994	2 30	
.....	{ 43,513 21,750 17,058 9,014 9,000 12,825 51,299 13,800 1,354	.....	.....	.....	.....	1	1,354	10 17	
8,442	11,754	5,628	20,296	5,628	.....	28,116	.....	I	6	.....	5	30	.....	.....
7,344	3,672	3,672	5,000	.....	{ 27,177 13,588 2,300 23,714 8,428 10,000 14,617 58,469 11,500 881	I	.....	.....	I	6.0	7,178	1 92	
7,344	7,344	.....	.....	12,165	{ 27,177 13,588 2,300 23,714 8,428 10,000 14,617 58,469 11,500 881	.....	6	.....	.....	8.0	5,268	2 61	
651	3,672	651	3,672	5,000	12,246	{ 27,177 13,588 2,300 23,714 8,428 10,000 14,617 58,469 11,500 881	I	.....	.....	.....	16.7	5,065	2 72	
.....	{ 27,177 13,588 2,300 23,714 8,428 10,000 14,617 58,469 11,500 881	.....	.....	.....	.....	0.3	2,937	4 69	
15,339	3,672	11,667	7,344	10,000	24,411	.....	2	6	.....	I	31.0	.....	.....

DISTRICT No. 7.

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
7,000	3,400	3,600	No influence.	No influence.	{ 33,230 G. 1,710 F. B. 43,510 16,400 55,730 }	I	3¼	10,919	\$1 26	
.....	1,560	3,640	1,820	3,380			I	{ S.B. } 10 }	....	....	10¼	5,816	2 37	
.....	9,120	1,560	10,680	.....			....	6	....	....	9½	5,866	2 35	
7,000	10,680	5,200	15,900	6,980			2	16	23
.....	4,800	4,800	No influence.	No influence.	{ 48,970 39,870 34,800 11,410 }	5	9,794	\$1 41	
4,160	.....	4,680	4,680	4,160			I	14	....	....	11	6,788	2 03	
.....	4,160	.....	4,160	.....			....	....	....	....	2	5,705	2 41	
4,160	8,960	4,680	8,840	8,960			I	14	18
.....	5,400	720	4,680	No influence.	No influence.	{ 39,920 39,800 34,800 20,580 }	5½	7,485	\$1 84	
4,680	.....	9,360	9,360	4,680			2	16	....	....	12½	7,670	1 80	
.....	4,680	.....	4,680	.....			....	....	....	....	3½	6,174	2 23	
4,680	10,080	9,360	14,760	9,360			2	16	21
.....	4,200	560	3,640	No influence.	No influence.	{ 40,760 75,230 23,200 10,030 }	I	4¼	9,591	\$1 44	
3,640	3,296	7,280	10,576	3,640			....	14	....	....	11¼	8,750	1 57	
.....	3,640	.....	3,640	.....			....	....	....	....	1½	6,687	2 06	
3,640	11,136	7,280	14,776	7,280			I	14	17

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Light, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
37.....	Asphalt.....	41,550	41,550	.....	.....	21,416	1,799	18,335	.....	.....	4,160	.....
	Granite.....	79,270	9,267	70,003	.....	11,000	36,202	32,068	4,160	4,160	4,160	.....
	Belgian.....	17,620	.....	.....	17,620	.....	17,620	.....	.....	.....	4,160	.....
	Other (cobble).....	1,330	.....	.....	1,330	.....	.....	1,330	.....	.....	.....	.....
	Total.....	139,770	50,817	70,003	18,950	32,416	55,621	51,733	4,160	4,160	12,480	.....
39.....	Asphalt.....	23,080	23,080	.....	.....	.....	9,328	13,752	.....	.....	3,120	.....
	Granite.....	66,280	2,311	57,969	.....	19,867	19,611	20,802	3,120	3,120	3,120	.....
	Belgian.....	20,790	.....	.....	20,790	.....	20,790	.....	.....	.....	3,120	.....
	Other (cobble).....	2,080	.....	.....	2,080	.....	.....	2,080	.....	.....	.....	.....
	Total.....	105,230	25,391	57,969	22,870	19,867	49,729	36,634	3,120	3,120	9,360	.....
41.....	Asphalt.....	58,570	58,570	.....	.....	10,440	25,730	22,400	.....	2,240	3,920	.....
	Granite.....	50,650	.....	50,650	.....	19,450	.....	31,200	4,600	5,378	4,600	.....
	Belgian.....	17,730	.....	.....	17,730	.....	17,730	.....	.....	.....	4,600	.....
	Other (cobble).....	3,310	.....	.....	3,310	.....	.....	3,310	.....	.....	.....	.....
	Total.....	130,260	58,570	50,650	21,040	29,890	43,460	56,910	4,600	7,618	13,120	.....

DISTRICT No. 8.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Light, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
32.....	Asphalt.....	63,480	63,480	.....	.....	.....	54,280	9,200	880	.....	3,222	.....
	Granite.....	87,106	62,829	24,277	.....	15,360	52,990	18,756	5,564	3,222	.....	.....
	Belgian.....	15,356	5,000	10,356	.....	.....	5,800	9,556	.....	.....	3,222	.....
	Total.....	165,942	121,309	34,633	.....	15,360	113,070	37,512	6,444	3,222	6,444	.....
34.....	Asphalt.....	37,623	37,623	.....	.....	.....	25,490	12,133	3,700	.....	3,700	.....
	Granite.....	91,796	76,497	15,299	.....	18,667	50,729	12,880 9,520 D	3,700	3,700	.....	.....
	Belgian.....	33,790	.....	11,481	22,309	.....	23,523	10,267	.....	.....	3,700	.....
	Total.....	163,209	114,120	26,780	22,309	18,667	99,742	44,800	7,400	3,700	7,400	.....
36.....	Asphalt.....	42,542	42,542	.....	.....	.....	.....	42,542	.....	840	7,520	.....
	Granite.....	102,992	48,267	44,860	9,865	18,667	61,925	22,400	3,760	3,760	.....	.....
	Belgian.....	65,512	.....	42,049	23,463	27,000	28,245	10,267	.....	.....	3,760	.....
	Total.....	211,046	90,809	86,909	33,328	45,667	90,170	75,209	3,760	4,600	11,280	.....
38.....	Asphalt.....	22,195	22,195	.....	.....	.....	10,062	12,133	.....	.....	3,770	.....
	Granite.....	127,292	93,533	30,316	3,443	42,292	63,532	21,468	7,040	3,770	3,770	.....
	Belgian.....	56,467	.....	22,870	33,597	15,000	32,132	9,335	6,620	.....	4,500	.....
	Total.....	205,954	115,728	53,186	37,040	57,292	105,726	42,936	13,660	3,770	12,040	.....
40.....	Asphalt.....	22,881	22,257	624	.....	.....	12,481	10,400	.....	.....	3,192	.....
	Granite.....	92,003	18,401	46,001	27,601	32,292	41,310	18,401	880	3,192	.....	.....
	Belgian.....	16,056	.....	6,614	9,442	.....	8,055	8,001	.....	.....	3,192	.....
	Total.....	130,940	40,658	53,239	37,043	32,292	61,846	36,802	880	3,192	6,384	.....

DISTRICT No. 9.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Light, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
45.....	Asphalt.....	27,590	27,590	.....	.....	16,327	2,783	8,480	3,816	.....	.....	.....
	Granite.....	95,363	.....	95,363	.....	47,083	37,613	10,667	8,324	3,800	11,284	.....
	Belgian.....	27,015	.....	13,500	13,515	.....	4,833	22,182	.....	.....	12,800	.....
	Total.....	149,968	27,590	108,863	13,515	63,410	45,229	41,329	12,140	3,800	24,084	.....
47.....	Asphalt.....	76,364	76,364	.....	.....	.....	76,364	.....	.....	.....	.....	.....
	Granite.....	64,245	.....	64,245	.....	20,800	27,926	15,519	.....	.....	.....	.....
	Belgian.....	41,810	18,917	.....	22,893	.....	.....	41,810	.....	.....	12,132	.....
	Total.....	182,419	95,281	64,245	22,893	20,800	104,290	57,329	.....	.....	12,132	.....

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
.....	4,160	4,160	No influence.	No influence.	41,550	5	520	8,228	\$1 67	
4,160	.....	8,320	8,320	4,160			51,270	I	16	.....	6	10	7,927	1 74
.....	4,160	.....	4,160	.....			28,000	.....	.....	.....	.....	23 1/2	6,407	2 15
.....	.....	.....	.....	.....			17,620	.....	.....	.....	.....	3 1/2	6,650	2 07
4,160	4,160	12,480	12,480	8,320			.....	I	16	.....	11	18	.....	.....
.....	3,120	3,120	No influence.	No influence.	23,080	3	3	7,693	\$1 79	
3,120	.....	6,240	6,240	3,120			39,280	.....	12	.....	3	8 1/2	7,092	1 94
.....	3,120	.....	3,120	.....			21,000	.....	.....	.....	.....	3	6,930	1 99
.....	.....	.....	.....	.....			20,790	.....	.....	.....	.....	1/2	4,160	3 31
3,120	6,240	6,240	9,360	6,240			.....	.....	12	.....	6	15	.....	.....
.....	6,160	2,520	3,640	No influence.	No influence.	58,570	11	6 1/2	8,613	\$1 60	
5,378	.....	9,200	9,898	4,680			29,650	I	11	.....	7	7	7,236	1 90
.....	4,600	.....	4,600	.....			21,000	.....	.....	.....	.....	2 1/2	6,649	2 07
.....	.....	.....	.....	.....			17,730	.....	.....	.....	.....	1 1/2	6,206	2 22
5,378	10,760	9,200	17,018	8,320			.....	I	11	.....	18	17	.....	.....

DISTRICT No. 8.

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
4,102	3,222	880	25,440 G 12,600 F 25,440 B	No influence, because of University and College settlements, co-operation of Principals, aids to the Department of Street Cleaning, paper cans, etc.	12	9	7,053	\$1 95	
2,346	6,440	.....	5,564	3,222	.....	10,733	33,853		12	.....	.....	14	6,222	2 21
.....	.....	3,222	3,222	.....	.....	10,733	19,400		6	.....	.....	3	5,119	2 69
.....	.....	.....	.....	.....	.....	.....	5,120		.....	.....	.....	.....	.....	.....
6,448	6,440	3,222	12,008	4,102	.....	21,466	10,236		30	.....	.....	26	.....	.....
.....	7,400	3,700	3,700	15,000	No influence, because of University and College settlements, co-operation of Principals, aids to the Department of Street Cleaning, paper cans, etc.	6	6	6,271	\$2 19	
3,700	3,700	.....	7,400	.....	.....	12,522	7,575		24	.....	.....	16	5,737	2 40
.....	.....	3,700	3,700	.....	.....	12,522	15,048		6	.....	.....	7	4,827	2 85
3,700	11,100	3,700	14,800	3,700	.....	25,044	36,000		36	.....	.....	29	.....	.....
.....	.....	.....	.....	.....	.....	.....	18,359		.....	.....	.....	.....	.....	.....
.....	8,360	3,760	4,600	37,437	No influence, because of University and College settlements, co-operation of Principals, aids to the Department of Street Cleaning, paper cans, etc.	6	3	6	7,090	\$1 94	
3,760	3,760	.....	7,520	.....	.....	12,522	11,263		24	.....	.....	16	6,437	2 14
.....	.....	3,760	3,760	.....	.....	12,522	22,527		6	.....	.....	10	6,551	2 10
3,760	12,120	3,760	15,040	4,600	.....	25,044	23,675		36	3	.....	32	.....	.....
.....	3,770	.....	3,770	.....	.....	.....	10,195		.....	.....	.....	.....	.....	.....
7,290	7,290	10,810	3,770	12,522	4,000	No influence, because of University and College settlements, co-operation of Principals, aids to the Department of Street Cleaning, paper cans, etc.	6	3	7,398	\$1 86	
.....	.....	11,120	11,120	.....	.....	12,522	8,000		24	.....	.....	18	7,072	1 95
7,290	11,060	11,120	25,700	3,770	.....	25,044	60,000		6	.....	.....	10	5,647	2 42
.....	3,192	.....	3,192	.....	.....	.....	25,000		36	.....	.....	31	.....	.....
.....	4,072	.....	880	3,192	.....	10,733	42,292		.....	.....	.....	.....	.....	.....
.....	3,192	3,192	10,733	18,000	No influence, because of University and College settlements, co-operation of Principals, aids to the Department of Street Cleaning, paper cans, etc.	6	3	7,627	\$1 80	
.....	.....	.....	.....	.....	.....	.....	18,000		11	.....	.....	15	6,134	2 24
.....	.....	.....	.....	.....	.....	.....	38,003		.....	.....	.....	3	5,352	2 57
.....	7,264	3,192	7,264	3,192	.....	21,466	5,000		17	.....	.....	21	.....	.....
.....	.....	.....	.....	.....	.....	.....	11,056		.....	.....	.....	.....	.....	.....

DISTRICT No. 9.

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
.....	3,816	3,816	20,000 G 7,590 F B	3	7	2	13,795	\$1 00	
3,800	19,608	.....	6,760	16,648	.....	.....	60,000	2	5	.....	6	12	7,947	1 73
.....	12,800	.....	12,800	.....	.....	17,100	35,363	.....	.....	.....	.....	4	6,754	2 04
3,800	36,224	23,376	16,648	11,100	10,000	5	5	13	18	
.....	.....	.....	.....	.....	38,000	.....	76,364	1	.....	.....	5	7	10,909	\$1 26
.....	.....	.....	.....	.....	47,790	.....	64,245	1	.....	2	8	9	7,138	1 93
5,264	6,868	.....	5,264	6,868	12,000	22,770	.....	1	1	.....	4	6	6,968	1 98
5,264	6,868	.....	5,264	6,868	97,790	22,770	41,810	3	1	2	17	22	.....	.....

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Light, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
49	Asphalt	19,550	19,550	.....	.....	.....	12,750	6,800	.....	.....	.....	.....
	Granite.....	70,630	.....	53,043	17,587	.....	70,630	.....	.....	.....	9,356	.....
	Total.....	90,180	19,550	53,043	17,587	.....	83,380	6,800	.....	.....	9,356	.....
51	Asphalt	11,547	11,547	.....	.....	.....	11,547	.....	.....	.....	.....	.....
	Granite.....	59,155	14,390	27,632	17,133	42,022	.....	17,133	.....	.....	5,140	.....
	Total.....	70,702	25,937	27,632	17,133	42,022	11,547	17,133	.....	.....	5,140	.....
52	Granite.....	40,533	16,200	24,333	.....	.....	40,533	.....	.....	4,680	2,600	.....
	Total.....	40,533	16,200	24,333	.....	.....	40,533	.....	.....	4,680	2,600	.....
53	Asphalt.....	36,622	36,622	.....	.....	36,622	.....	.....	.....	.....	.....	.....
	Granite.....	78,583	78,583	.....	.....	.....	78,583	.....	.....	.....	9,450	.....
	Total.....	115,205	115,205	.....	.....	36,622	78,583	.....	.....	.....	9,450	.....
54	Asphalt.....	2,717	2,717	.....	.....	2,717	.....	.....	.....	.....	.....	.....
	Granite.....	117,738	117,738	.....	.....	117,738	.....	.....	.....	.....	20,200	.....
	Total.....	120,455	120,455	.....	.....	120,455	.....	.....	.....	.....	20,200	.....

DISTRICT NO. 10.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Light, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
42	Asphalt.....	14,013	12,550	.....	1,463	3,016	2,784	8,213	.....	.....	.....	.....
	Granite.....	117,266	39,795	24,166	53,305	24,668	80,278	12,320	3,696	3,696	3,696	.....
	Belgian.....	12,133	.....	.....	12,133	.....	.....	12,133	.....	.....	7,392	.....
	Total.....	143,412	52,345	24,166	66,901	27,684	83,062	32,666	3,696	3,696	11,088	.....
43	Asphalt.....	9,380	9,380	.....	.....	.....	.....	9,380	.....	.....	.....	.....
	Granite.....	131,613	43,871	.....	87,742	54,000	50,773	26,840	12,996	3,228	3,228	.....
	Belgian.....	18,266	.....	.....	18,266	.....	7,706	10,560	.....	.....	6,456	.....
	Total.....	159,259	53,251	.....	106,008	54,000	58,479	46,780	12,996	3,228	9,684	.....
44	Asphalt.....	28,864	28,864	.....	.....	.....	21,757	7,107	.....	.....	.....	.....
	Granite.....	65,333	55,768	9,565	.....	15,000	25,376	24,957	2,132	12,722	2,132	.....
	Belgian.....	38,963	9,695	20,023	9,245	.....	31,656	7,307	.....	.....	4,264	.....
	Total.....	133,160	94,327	29,588	9,245	15,000	78,739	39,371	2,132	12,722	6,396	.....
46	Asphalt.....	30,915	19,322	7,729	3,864	.....	3,495	27,420	.....	.....	.....	.....
	Granite.....	62,910	39,319	15,728	7,863	10,000	44,110	8,800	2,640	2,640	2,640	.....
	Belgian.....	48,603	24,301	12,151	12,151	.....	39,803	8,800	.....	.....	5,280	.....
	Total.....	142,428	82,942	35,608	23,878	10,000	87,408	45,020	2,640	2,640	7,920	.....
48	Asphalt.....	13,268	13,268	.....	.....	.....	2,542	10,726	.....	.....	.....	.....
	Granite.....	54,950	44,649	6,867	3,434	15,000	19,183	20,767	2,640	2,640	2,640	.....
	Belgian.....	55,722	34,830	13,928	6,964	15,000	12,688	28,034	.....	13,200	2,640	.....
	Total.....	123,940	92,747	20,795	10,398	30,000	34,413	59,527	2,640	15,840	5,280	.....
50	Asphalt.....	49,686	43,819	.....	5,867	.....	19,356	30,330	.....	5,208	.....	.....
	Granite.....	76,860	33,444	3,203	40,213	38,260	27,423	11,177	4,490	2,112	.....	.....
	Belgian.....	39,935	.....	12,228	27,707	.....	39,935	.....	.....	.....	11,894	.....
	Total.....	166,481	77,263	15,431	73,787	38,260	86,714	41,507	4,490	7,920	11,894	.....

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCK.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
.....	19,550	.....	{ 19,550 20,000 20,000 20,000 20,000 }	.....	.....	.....	7	3	6,517	\$2 12	
4,080	5,276	9,356	.....	34,086	17,586	{ 20,000 30,000 20,000 }	1	.....	2	4	12	5,886	2 34	
4,080	5,276	9,356	.....	53,636	17,586	.....	1	.....	2	11	15	.....	.....
.....	11,547	.....	{ 11,547 }	1	.....	.....	2	1½	7,698	\$1 79	
.....	5,140	5,140	.....	12,300	17,133	{ 20,155 30,000 }	.....	.....	.....	14	9½	6,227	2 21	
.....	5,140	5,140	.....	23,847	17,133	.....	1	.....	.....	16	11	.....	.....
4,680	2,600	7,280	.....	.....	24,333	{ 20,000 20,533 ..... }	.....	.....	.....	20	7	5,790	\$2 38	
4,680	2,600	7,280	.....	.....	24,333	.....	.....	.....	.....	20	7	.....	.....
.....	{ 36,622 78,583 ..... }	.....	.....	.....	3	2	18,311	\$0 75	
.....	9,450	9,450	.....	.....	.....	.....	.....	.....	.....	.....	8	9,823	1 40	
.....	9,450	9,450	.....	.....	.....	.....	.....	.....	.....	3	10	.....	.....
.....	{ 2,717 117,738 ..... }	.....	.....	.....	.....	½	5,434	\$2 53	
.....	20,200	20,200	.....	.....	.....	.....	2	.....	.....	.....	9½	12,393	1 11	
.....	20,200	20,200	.....	.....	.....	.....	2	.....	.....	.....	10	.....	.....

DISTRICT NO. 10.

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
.....	.....	.....	.....	.....	.....	No influence.	{ G. F. 11,013 56,000 6,000 55,266 12,133 }	.....	.....	.....	5	2	7,007	\$1 96	
3,696	3,696	3,696	7,392	3,696	12,320		.....	1	7	.....	7	18	6,515	2 11	
.....	.....	7,392	7,392	.....	.....		.....	.....	1	.....	.....	4	3,033	4 54	
3,696	3,696	11,088	14,784	3,696	12,320	.....	.....	1	8	.....	12	24	.....	.....
.....	.....	.....	.....	.....	.....	No influence.	{ 3,130 6,250 73,000 3,000 55,613 18,266 }	.....	.....	.....	1	2	4,690	\$2 93	
3,228	12,996	3,228	16,224	3,228	10,560		.....	1	6	.....	1	18	7,312	1 88	
.....	.....	6,456	6,456	.....	.....		.....	.....	.....	.....	2	4	4,567	3 01	
3,228	12,996	9,684	22,680	3,228	10,560	.....	.....	1	6	.....	4	24	.....	.....
.....	.....	.....	.....	.....	.....	No influence.	{ 4,000 4,000 20,864 35,000 8,000 22,333 38,963 }	1	.....	.....	4	4	7,216	\$1 91	
2,132	12,722	2,132	14,854	2,132	7,040		.....	1	8	3	7	9	7,259	1 89	
.....	.....	4,264	4,264	.....	.....		.....	.....	.....	2	3	8	4,870	2 83	
2,132	12,722	6,396	19,118	2,132	7,040	.....	.....	2	8	5	14	21	.....	.....
.....	.....	.....	.....	.....	.....	No influence.	{ 20,000 10,915 26,000 20,000 16,910 48,603 }	1	.....	1	4	5	6,183	\$2 23	
2,640	2,640	2,640	5,280	2,640	8,800		.....	1	5	2	8	7	8,987	1 53	
.....	.....	5,280	5,280	.....	.....		.....	.....	.....	.....	3	11	4,418	3 12	
2,640	2,640	7,920	10,560	2,640	8,800	.....	.....	2	5	3	15	23	.....	.....
.....	.....	.....	.....	.....	.....	No influence.	{ 13,268 33,000 6,000 15,950 28,000 2,000 25,722 }	.....	.....	.....	2	3	4,423	\$3 12	
2,640	2,640	2,640	5,280	2,640	8,800		.....	1	5	2	1	7	7,850	1 75	
.....	.....	15,840	15,840	.....	34,830		.....	.....	.....	.....	4	10	5,572	2 47	
2,640	2,640	18,480	21,120	2,640	43,630	.....	.....	1	5	2	7	20	.....	.....
5,808	.....	.....	5,808	.....	.....	No influence.	{ 45,686 4,000 29,500 4,750 42,610 10,000 3,000 26,935 }	.....	.....	.....	4	7	7,098	\$1 94	
2,640	1,850	2,112	4,490	2,112	7,040		.....	.....	4	2	10	11	6,987	1 97	
.....	10,310	1,584	11,894	.....	.....		.....	.....	.....	.....	2	9	4,437	3 10	
8,448	12,160	3,696	22,192	2,112	7,040	.....	.....	.....	4	2	16	27	.....	.....

DISTRICT NO. 11.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Light, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
55.....	Asphalt.....	14,557	14,557	.....	.....	.....	.....	14,557	.....	.....	.....	.....
	Granite.....	146,777	120,566	2,622	23,589	32,935	56,921	56,921	31,800	.....	.....	.....
	Belgian.....	110,532	51,374	20,238	38,920	10,532	50,000	50,000	.....	.....	.....	.....
	Total.....	271,866	186,497	22,860	62,509	43,467	106,921	121,478	31,800	.....	.....	.....
56.....	Asphalt.....	9,809	9,809	.....	.....	.....	9,809	.....	.....	.....	.....	.....
	Granite.....	156,943	127,647	6,850	22,446	54,639	52,304	50,000	11,600	.....	.....	.....
	Belgian.....	68,449	57,455	3,844	7,150	25,633	22,816	20,000	.....	.....	.....	.....
	Total.....	235,261	194,971	10,694	29,596	80,272	84,989	70,000	11,600	.....	.....	.....
57.....	Granite.....	99,949	83,817	15,332	800	34,949	35,000	30,000	11,200	.....	.....	.....
	Belgian.....	30,398	10,000	15,698	4,700	10,000	12,398	8,000	2,000	.....	.....	.....
	Total.....	130,347	93,817	31,030	5,500	44,949	47,398	38,000	13,200	.....	.....	.....
58.....	Granite.....	229,664	227,508	.....	2,156	69,000	120,664	40,000	14,200	.....	.....	.....
	Belgian.....	24,653	3,216	.....	21,437	.....	24,653	.....	16,200	.....	.....	.....
	Other (Brick).....	22,612	22,612	.....	.....	22,612	.....	.....	.....	.....	.....	.....
	Total.....	276,929	253,336	.....	23,593	91,612	145,317	40,000	30,400	.....	.....	.....

SUMMARY.

DISTRICT.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.				LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Light, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Dense, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
1.....	Asphalt.....	39,728	11,964	27,764	.....	.....	.....	.....	39,728	.....	.....	700	.....
	Granite.....	480,061	458,585	21,476	.....	.....	.....	14,892	465,169	.....	.....	77,264	4,400
	Belgian.....	13,347	10,051	3,296	.....	.....	.....	.....	13,347	.....	.....	700	.....
	Total.....	533,136	480,600	52,536	.....	.....	.....	14,892	518,244	.....	.....	78,664	4,400
2.....	Asphalt.....	247,233	247,233	.....	.....	.....	11,074	100,184	135,975	9,600	.....	20,150	.....
	Granite.....	538,798	446,428	29,341	63,029	.....	40,088	165,920	332,790	79,150	16,150	46,350	.....
	Belgian.....	70,402	42,428	.....	27,974	.....	13,680	11,250	45,472	17,100	.....	13,950	.....
	Other (cobble).....	8,847	.....	.....	8,847	.....	.....	1,542	7,305	150	.....	600	.....
	Total.....	865,280	736,089	29,341	99,850	.....	64,842	278,896	521,542	106,000	16,150	81,050	.....
3.....	Asphalt.....	142,879	136,114	6,765	.....	11,059	4,474	47,346	80,000	6,057	1,900	3,300	.....
	Granite.....	563,233	199,743	183,489	180,001	91,016	116,179	220,038	136,000	33,518	5,298	103,220	9,500
	Belgian.....	170,987	.....	12,159	158,828	21,005	46,174	103,808	.....	1,586	.....	14,392	.....
	Other (brick).....	1,150	1,150	.....	.....	.....	.....	1,150	.....	.....	.....	.....	.....
	Total.....	878,249	337,007	202,413	338,829	123,080	166,827	372,342	216,000	41,561	7,198	117,912	9,500
4.....	Asphalt.....	217,508	191,273	4,878	21,357	.....	8,866	75,275	133,367	11,338	14,920	9,392	.....
	Granite.....	372,454	206,601	96,253	69,600	.....	9,470	108,454	254,530	26,378	34,480	51,857	.....
	Belgian.....	175,830	78,820	68,514	28,496	.....	39,224	84,596	52,010	2,200	2,490	26,974	.....
	Other (cobble and wood).....	4,784	1,010	.....	3,774	.....	3,774	1,010	.....	.....	.....	1,080	.....
	Total.....	770,576	477,704	169,645	123,227	.....	61,334	269,335	439,907	39,916	51,890	89,303	.....
5.....	Asphalt.....	164,685	114,674	50,011	.....	25,075	52,485	87,125	.....	6,320	3,400	18,720	.....
	Granite.....	378,374	109,758	100,391	168,225	39,389	96,311	242,674	.....	4,000	28,324	64,640	9,360
	Belgian.....	445,701	.....	140,245	305,456	88,860	131,507	225,334	.....	8,600	4,808	36,680	.....
	Other (cobble).....	5,700	.....	.....	5,700	5,700	.....	.....	.....	.....	.....	.....	.....
	Total.....	994,460	224,432	290,647	479,381	159,024	280,303	555,133	.....	18,920	35,532	120,040	9,360
6.....	Asphalt.....	286,942	246,222	35,861	4,859	23,000	263,942	.....	.....	23,454	10,182	5,991	.....
	Granite.....	176,908	125,718	30,922	20,268	.....	.....	17,100	159,808	7,872	16,932	14,628	.....
	Belgian.....	418,502	32,216	234,407	151,879	63,350	158,810	196,342	.....	5,091	651	33,693	.....
	Other (cobble).....	5,645	.....	3,997	1,648	.....	.....	5,645	.....	.....	.....	.....	.....
	Total.....	887,997	404,156	305,187	178,654	86,350	422,752	219,087	159,808	36,417	27,765	54,312	.....

DISTRICT No. 11.

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
.....	.....	.....	.....	.....	Little trouble.	.....	14,557 G. F. B. 71,377 70,000 5,400 110,532 .....	.....	.....	.....	4	2	7,279	\$1 89	
15,800	16,000	.....	31,800	.....		.....	.....	3	.....	.....	24	13	11,291	1 22	
.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	18	10	11,053	1 25	
15,800	16,000	.....	31,800	.....		.....	.....	3	.....	.....	46	25	.....	.....
.....	.....	.....	.....	.....	Little trouble.	.....	9,869 130,943 26,000 68,449 .....	.....	.....	.....	2	1	9,869	1 40	
.....	11,600	.....	11,600	.....		18,321	.....	2	.....	.....	26	20	7,847	1 76	
.....	.....	.....	.....	.....		.....	.....	2	.....	.....	11	8	8,556	1 61	
.....	11,600	.....	11,600	.....		18,321	.....	4	.....	.....	39	29	.....	.....
3,600	7,600	.....	11,200	.....	Little trouble.	18,120	99,949 30,398	1	.....	.....	17	17	5,879	2 34	
.....	.....	2,000 VB	2,000	.....		.....	.....	.....	.....	.....	7	6	5,066	2 72	
3,600	7,600	2,000	13,200	.....		18,120	.....	1	.....	.....	24	23	.....	.....
.....	14,200	.....	14,200	.....		43,007	229,664 24,653 22,612	3	.....	.....	40	25½	9,006	1 53	
.....	.....	16,200 VB	16,200	.....	Little trouble.	.....	.....	.....	.....	.....	5	9	2,739	5 03	
.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	3	1½	15,075	0 91	
.....	14,200	16,200	30,400	.....		43,007	.....	3	.....	.....	48	36	.....	.....

By Districts.

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILLARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS, KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
.....	700	.....	700	.....	Little trouble.	.....	13,700 G. 24,528 F. 1,500 B. 228,000 222,788 29,273 6,651 6,696 .....	....	....	12	....	8	4,966	\$2 77	
.....	66,264	15,400	64,264	17,400		68,488	.....	4	63	167	....	133	3,609	3 81	
.....	700	.....	700	.....		.....	.....	....	....	4	....	3	4,449	3 09	
.....	67,664	15,400	65,664	17,400	.....	68,488	.....	4	63	183	....	144	.....	.....
16,750	10,500	2,500	15,350	14,400	No trouble.	12,865	17,142 34,603 195,488 252,330 286,468 9,873 13,066 47,463 4,847 4,000	Improved because of paper cans, etc.	73	77	....	67.0	3,690	\$3 73	
55,330	35,050	51,270	71,150	70,500		16,879	.....		15	....	....	128.3	4,199	3 25	
16,650	9,300	5,100	16,900	14,150		9,873	.....		....	....	....	18.7	3,765	3 68	
.....	.....	750	350	400		.....	.....		....	....	....	4.0	2,212	6 22	
88,730	54,850	59,620	103,750	99,450	.....	39,617	.....	....	88	77	....	218.0	.....	.....
7,957	.....	3,300	5,700	5,557	No in- fluence.	.....	72,095 62,784 8,000 180,331 334,902 48,000 27,000 117,509 26,478	4	....	1	....	20¼	7,056	1 95	
109,466	32,501	6,569	.....	148,536		28,600	.....	15	4	32	....	100½	5,604	2 46	
.....	2,063	14,315	8,690	7,688		42,900	.....	1	....	....	....	29¾	5,747	2 40	
.....	.....	.....	.....	.....		.....	.....	....	....	....	....	½	2,300	5 99	
117,423	34,564	24,184	14,390	161,781	.....	71,500	.....	20	4	33	....	151	.....	.....
29,590	4,810	1,250	27,530	8,100	.....	19,067	82,254 56,517 78,737 146,291 162,572 123,591 55,288 43,832 76,710	5	....	2	....	39.0	5,577	\$2 47	
61,814	38,080	12,821	60,356	52,359	75,469	71,068	.....	7	....	5	....	79.9	4,662	2 95	
.....	19,653	12,011	29,174	2,490	.....	.....	.....	8	....	3	....	32.9	5,344	2 58	
.....	.....	1,080	1,080	.....	.....	.....	.....	....	....	....	....	1.2	3,987	3 45	
91,404	62,543	27,162	118,160	62,949	75,469	90,135	.....	20	....	10	....	153.0	.....	.....
9,720	.....	18,720	.....	28,440	.....	.....	44,000 54,685 66,000 91,591 93,783 193,000 183,822 56,879 205,000 5,700	4	38	....	....	29.9	5,508	\$2 50	
42,740	14,176	50,008	49,480	56,844	.....	.....	.....	4	36	....	3	76.0	4,979	2 77	
7,080	13,280	29,728	17,960	32,128	83,200	91,533	.....	7	44	....	....	82.0	5,435	2 53	
.....	.....	.....	.....	.....	.....	.....	.....	....	....	....	....	2.1	2,714	5 07	
58,940	27,456	98,456	67,440	117,412	83,200	91,533	.....	15	118	....	3	190.0	.....	.....
39,627	.....	.....	29,586	10,041	5,000	.....	185,151 G. 92,574 F. 9,217 B. 96,126 45,782 40,000 71,737 286,953 59,812	4	....	....	5	31.0	9,256	\$1 49	
26,484	6,474	6,474	26,730	12,702	.....	82,798	.....	....	30	....	1	46.5	3,804	3 62	
6,777	8,940	23,718	18,795	20,640	5,000	79,570	.....	5	....	....	....	73.7	5,679	2 43	
.....	.....	.....	.....	.....	.....	.....	.....	....	....	....	....	2.8	2,016	6 83	
72,888	15,414	30,192	75,111	43,383	10,000	162,368	.....	9	30	....	6	154.0	.....	.....

DISTRICT.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.				LINEAL FEET OF SINGLE CAR TRACK.			
			Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Light, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Dense, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
7	Asphalt.....	287,790	287,790	.....	.....	53,631	94,001	140,158	.....	.....	2,240	32,600	.....
	Granite.....	517,810	32,335	485,475	.....	122,493	227,980	167,337	.....	20,376	30,388	28,000	.....
	Belgian.....	153,890	.....	.....	153,890	9,600	133,890	10,400	.....	.....	2,600	30,880	1,560
	Other (cobble).....	6,720	.....	.....	6,720	.....	.....	6,720	.....	.....	.....	.....	.....
	Total.....	966,210	320,125	485,475	160,610	185,124	455,871	324,615	.....	20,376	35,178	91,480	1,560
8	Asphalt.....	188,721	188,097	624	.....	.....	102,313	86,408	.....	4,580	840	21,404	.....
	Granite.....	501,189	299,527	160,753	40,909	127,278	270,486	93,905	9,520	20,944	17,644	3,770	.....
	Belgian.....	187,181	5,000	93,370	88,811	42,000	97,755	47,426	.....	6,620	.....	18,374	.....
	Total.....	877,091	492,624	254,747	129,720	169,278	470,554	227,739	9,520	32,144	18,484	43,548	.....
9	Asphalt.....	174,390	174,390	.....	.....	55,666	103,444	15,280	.....	3,816	.....	.....	.....
	Granite.....	526,247	226,911	264,616	34,720	227,643	255,285	43,319	.....	8,324	8,480	58,030	.....
	Belgian.....	68,825	18,917	13,500	36,408	.....	4,833	63,992	.....	.....	.....	24,932	.....
	Total.....	769,462	420,218	278,116	71,128	283,309	363,562	122,591	.....	12,140	8,480	82,962	.....
10	Asphalt.....	146,126	127,203	7,729	11,194	3,016	49,934	93,176	.....	.....	5,808	.....	.....
	Granite.....	508,932	256,846	59,529	192,557	156,928	247,143	104,861	.....	28,594	27,038	14,336	.....
	Belgian.....	213,622	68,826	58,330	86,466	15,000	131,788	66,834	.....	.....	13,200	37,926	.....
	Total.....	868,680	452,875	125,588	290,217	174,944	428,865	264,871	.....	28,594	46,046	52,262	.....
11	Asphalt.....	24,426	24,426	.....	.....	.....	9,869	14,557	.....	.....	.....	.....	.....
	Granite.....	633,333	559,538	24,804	48,991	191,523	264,889	176,921	.....	68,800	.....	.....	.....
	Belgian.....	234,032	122,045	39,780	72,207	46,165	109,867	78,000	.....	18,200	.....	.....	.....
	Other (brick).....	22,612	22,612	.....	.....	22,612	.....	.....	.....	.....	.....	.....	.....
	Total.....	914,403	728,621	64,584	121,198	260,300	384,625	269,478	.....	87,000	.....	.....	.....

CITY SUMMARY.

KIND OF PAVEMENT.	AREA SQUARE YARDS.	CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.				LINEAL FEET OF SINGLE CAR TRACK.			
		Good, Square Yards.	Fair, Square Yards.	Bad, Square Yards.	Light, Square Yards.	Medium, Square Yards.	Heavy, Square Yards.	Dense, Square Yards.	Flat Rail.	Grooved Rail.	T Rail.	Steam Railroad.
Asphalt.....	1,920,428	1,749,386	133,632	37,410	171,447	700,402	659,509	389,070	65,165	39,290	112,257	.....
Granite.....	5,197,339	2,921,990	1,457,049	818,300	956,270	1,527,831	1,355,421	1,357,817	297,956	184,684	459,095	23,260
Belgian.....	2,152,319	378,303	663,601	1,110,415	285,980	867,528	887,982	110,829	59,797	23,749	238,501	1,560
Other.....	55,458	24,772	3,997	26,689	28,312	3,774	16,067	7,305	150	.....	1,680	.....
Total.....	9,325,544	5,074,451	2,258,279	1,992,814	1,442,009	3,099,535	2,918,979	1,865,021	423,068	247,723	811,533	24,820

TABLE No. 2.

Relative Difficulties of Street Cleaning Under Different Conditions (Estimates of the Superintendents).

DISTRICT.	KIND OF PAVEMENT.						CONDITION OF PAVEMENT.			AMOUNT OF TRAFFIC.			KIND OF RAIL.					CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING.		Association Sprinkling Heavy.	Elevated Railroad.	CHARACTER OF POPULATION.			BLOCKS.				
	Asphalt.	Granite.	Belgian.	Brick.	Wood.	Cobble.	Good.	Fair.	Bad.	Light.	Medium.	Heavy.	None.	Flat.	Grooved.	T Rail.	Steam.	Good.	Fair.	Bad.	Little.	Much.			Good.	Fair.	Bad.	With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.	
1	100	150	160	...	...	...	100	125	150	100	150	200	100	120	115	125	160	100	120	140	115	125	120	...	100	250	300	150	160	125	...
2	100	200	200	...	...	...	100	115	125	100	150	200	100	105	110	120	...	100	...	...	110	125	125	...	100	200	400	105	110	200	...
3	100	130	150	100	...	...	100	125	140	100	140	180	100	110	115	130	150	100	120	140	110	125	...	...	100	200	400	130	160	200	...
4	100	130	140	...	160	400	100	110	130	100	140	200	100	105	110	115	...	100	110	120	110	120	125	110	100	140	275	110	...	...	...
5	100	135	135	...	...	...	100	125	145	100	130	145	100	105	110	110	110	100	105	110	110	120	130	...	100	180	240	105	125	...	160
6	100	200	210	...	...	...	100	125	150	100	150	200	100	120	105	125	...	100	110	120	105	115	120	...	100	150	300	105	125	...	150
7	100	170	200	...	...	...	100	115	130	100	125	150	100	105	105	130	...	100	105	110	110	120	...	...	100	140	275	...	120	...	300
8	100	135	125	...	...	...	100	115	130	100	150	190	100	110	115	120	...	100	110	120	110	120	130	110	100	200	300	105	105	...	...
9	100	125	130	...	...	...	100	125	150	100	130	150	100	...	...	110	...	100	110	120	115	120	125	...	100	200	300	105	120	...	200
10	100	125	130	...	...	400	100	115	140	100	140	175	100	110	110	120	...	100	105	110	105	105	125	...	100	150	200	110	120	...	185
11	100	150	170	100	...	...	100	125	150	100	135	190	100	110	110	...	...	100	110	120	...	...	...	...	100	180	275	105	105	...	200
Average	100	150	160	100	100	400	100	120	140	100	140	180	100	110	110	120	140	100	110	120	110	120	125	110	100	200	300	110	125	175	200	

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS, PER WEEK.	REMARKS.	
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.					
7,000	23,680	4,160	7,200	27,640	No influence.	No influence.	286,080 1,710 295,100 206,310 16,400 98,160 55,730	2	....	....	19	32.5	8,855	\$1 55	
25,138	4,856	48,720	50,894	27,820			.....	6	93	....	16	70.5	7,345	1 87	
.....	33,480	1,560	35,040	.....			.....	....	6	....	....	24.6	6,256	2 20	
.....	.....	.....	.....	.....			.....	....	....	....	....	1.4	4,228	3 25	
32,138	62,016	54,440	93,134	55,460	.....	.....	.....	8	99	....	35	129.0	.....	.....
4,102	22,722	.....	17,644	9,180	None.	59,032	76,177 36,175 76,369 208,845 100,759 191,585 38,000 63,120 123,961	No influence because of paper cans, etc.	36	3	....	27	6,990	\$1 97	
17,096	25,262	.....	32,174	10,184			.....		95	....	....	79	6,344	2 17	
.....	.....	24,994	24,994	.....			.....		24	....	....	33	5,672	2 43	
21,198	47,984	24,904	74,812	19,364			.....		155	3	....	139	.....	.....
.....	3,816	.....	3,816	.....	69,097	.....	166,800 7,590 360,566 115,051 50,630 10,000 58,825	5	....	....	24	16	10,900	\$1 26	
12,560	19,608	42,666	58,186	16,648	94,176	59,052	.....	6	5	4	52	67	7,854	1 75	
5,264	19,668	.....	18,064	6,868	23,100	22,770	.....	1	1	....	4	10	6,883	2 00	
17,824	43,092	42,666	80,066	23,516	186,373	81,822	.....	12	6	4	80	93	.....	.....
5,808	5,808	No influence.	82,954 22,045 41,127 252,500 47,750 208,682 38,000 5,000 170,622	2	1	20	23	6,353	\$2 17	
16,976	36,544	16,448	53,520	16,448	54,560			5	35	9	34	70	7,270	1 62	
.....	10,310	40,816	51,126	34,830		1	2	14	46	4,644	2 97	
22,784	46,854	57,264	110,454	16,448	89,390			7	36	12	68	139	
.....	.....	.....	.....	.....	Little trouble.	79,448	24,426 400,990 200,943 31,400 165,583 68,449 22,612 ..... .....	.....	.....	.....	6	3.0	8,142	\$1 69	
19,400	49,400	68,800		9	107	75.5	8,388	1 64	
.....	V. B. 18,200	18,200		2	41	33.0	7,092	1 94	
.....	.....	.....	.....	.....			.....		.....	.....	3	1.5	15,075	0 91	
19,400	49,400	18,200	87,000	.....	.....	79,448	.....	11	....	....	157	113.0	.....	.....

CITY SUMMARY.

CONDITION OF PAVEMENT BETWEEN TRACKS.			SANDING OF TRACK.		ASSOCIATION SPRINKLING HEAVY, SQUARE YARDS.	STREETS WITH ELEVATED RAILROAD PILARS, SQUARE YARDS.	CHARACTER OF POPULATION, SQUARE YARDS.	BLOCKS.				SWEEPERS EMPLOYED.	DAILY AVERAGE PER SWEEPER, SQUARE YARDS KEPT CLEAN.	COST OF SWEEPING 1,000 SQUARE YARDS PER WEEK.	REMARKS.
Good, Lineal Feet.	Fair, Lineal Feet.	Bad, Lineal Feet.	Little, Lineal Feet.	Much, Lineal Feet.				With Schools.	With Produce Markets.	With Push-cart Trade.	Adjoining Unpaved Streets.				
120,554	66,228	29,930	113,354	103,358	74,097	31,932	1,050,779 G. 39,211 F. 476,438 B. 2,261,340 1,711,970 1,218,009 704,114 776,159 672,046 23,622 4,847 26,989	26	147	96	74	296.65	6,474	\$2 13	
386,404	328,215	250,376	535,554	429,441	307,405	556,898	.....	56	376	217	213	926.2	5,612	2 45	
35,771	117,394	170,442	239,643	83,964	62,930	214,145	.....	24	76	9	59	306.65	5,566	2 48	
.....	.....	1,830	1,430	400	.....	.....	.....	.....	....	....	3	13.5	4,108	3 35	
542,729	511,837	452,578	889,981	617,163	444,432	802,975	4,017,855 2,802,187 1,101,502	106	599	322	349	1,623.0	5,746	\$2 40	

TABLES—SERIES NO. 3.

Showing by Sections for Each Kind of Pavement the Existing Difficulties Expressed in Uniform Measure.

DISTRICT NO. 1—EQUIVALENTS.

SECTIONS.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	EQUIVALENT IN SQUARE YARDS OF DIFFICULTY ADDED BY—												EQUIVALENT TOTAL.	Add 25 per Cent. for Day Sweeping.	FINAL TOTAL.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement Between Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.	Vicinity of Unpaved Streets.					Calculated.	Employed.	In Sweeping Test of One Week.	
1.....	Asphalt.....	18,200	.....	2,782	27,300	389	195	195	Little trouble.	.....	12,300	.....	.....	9,000	.....	70,361	17,590	87,951	4.4	4.0	4,136	4,550	.....
	Granite.....	112,658	56,329	.....	168,987	11,399	7,760	7,760	.....	2,420	67,155	400	9,000	63,000	.....	506,868	126,717	633,585	31.7	33.0	3,534	3,414	.....
	Total.....	130,858	56,329	2,782	196,287	11,788	7,955	7,955	.....	2,420	79,455	400	9,000	72,000	.....	577,229	144,307	721,536	36.1	37.0	3,625	3,537	.....
2.....	Asphalt.....	17,010	.....	1,868	25,515	.....	.....	.....	Little trouble.	.....	12,310	.....	.....	6,000	.....	62,703	15,676	78,379	3.9	3.0	4,362	5,070	7,373
	Granite.....	117,137	58,669	.....	176,006	9,348	4,674	4,674	.....	1,450	58,337	200	6,000	90,000	.....	526,695	131,674	658,369	32.9	33.0	3,567	3,550	5,337
	Belgian.....	4,600	2,700	.....	6,900	389	195	195	.....	.....	2,300	.....	.....	1,500	.....	18,839	4,710	23,549	1.2	1.0	3,833	4,600	2,899
	Total.....	138,947	61,429	1,868	208,421	9,737	4,869	4,869	.....	1,450	72,947	200	6,000	97,500	.....	608,237	152,060	760,297	38.0	37.0	3,657	3,755	5,203
3.....	Asphalt.....	4,518	.....	904	6,777	.....	.....	.....	Little trouble.	.....	2,918	.....	.....	3,000	.....	18,117	4,529	22,646	1.1	1.0	4,107	4,518	.....
	Granite.....	117,821	58,911	4,296	176,732	8,618	5,420	5,975	.....	1,989	58,821	200	14,000	49,500	.....	502,283	125,571	627,854	31.4	32.0	3,752	3,682	.....
	Belgian.....	3,951	2,371	.....	5,926	.....	.....	.....	.....	.....	2,000	.....	.....	3,000	.....	17,248	4,312	21,560	1.1	1.0	3,392	3,951	.....
	Total.....	126,290	61,282	5,200	189,435	8,618	5,420	5,975	.....	1,989	63,739	200	14,000	55,500	.....	537,648	134,412	672,060	33.6	34.0	3,756	3,714	.....
5.....	Granite.....	132,245	66,123	.....	190,922	20,893	9,114	9,114	Little trouble.	990	97,018	.....	2,500	48,000	.....	576,919	144,230	721,149	36.1	35.0	3,663	3,778	.....
	Belgian.....	4,796	2,878	660	7,194	.....	.....	.....	.....	.....	2,396	.....	.....	1,500	.....	19,424	4,856	24,280	1.2	1.0	3,997	4,796	.....
	Total.....	137,041	69,001	660	198,116	20,893	9,114	9,114	.....	990	99,414	.....	2,500	49,500	.....	596,343	149,086	745,429	37.3	36.0	3,674	3,807	.....
District total...		533,136	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,899,331	144.9	144.0	3,680	3,702	5,203	Because of density of traffic this district is swept at night, while 20 per cent. of the men are busy during the day in such cleaning as the condition of traffic allows.

DISTRICT No. 2—EQUIVALENTS.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—												EQUIVALENT TOTAL.	Sweepers Necessary Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.	
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement bet. Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.				Vicinity of Unpaved Streets.	Calculated.	Employed.		In Sweeping Test of One Week.
3-5 Sub.	Asphalt	31,784	47,676	1,208	1,389	1,528	No trouble	63,784	5,000	15,000	167,369	8.4	10.0	3,784	3,178	Swept three times.	
	Granite.....	70,102	35,051	.....	105,153	6,986	6,278	6,764		.....	140,102	.....	.....	.....	370,436	18.5	19.0	3,789	3,690	.....	
	Belgian.....	16,020	9,612	.....	24,030	2,334	2,028	2,598		.....	32,020	.....	.....	.....	88,642	4.4	5.0	3,641	3,204	.....	
	Other (cobble).	5,705	17,115	2,282	8,558	.....	.....	.....		.....	13,705	.....	.....	.....	47,365	2.4	3.0	2,377	1,902	.....	
	Total.....	123,611	61,778	2,282	185,417	10,528	9,695	10,890	.....	.....	249,611	5,000	15,000	.....	673,812	33.7	37.0	3,668	3,341	.....	
4.....	Asphalt	10,901	10,901	No trouble	21,802	43,993	2.2	2.0	4,955	5,450	2,468	Swept twice.	
	Granite.....	122,742	61,371	15,455	122,742	11,167	10,900	13,167		1,688	245,484	7,500	612,216	30.6	30.7	4,011	3,998		2,228
	Belgian.....	1,004	602	.....	1,004	.....	.....	.....		.....	2,008	.....	.....	.....	4,618	0.2	0.3	5,020	3,347	.....	
	Total.....	134,647	61,973	15,455	134,647	11,167	10,900	13,167	.....	2,077	269,294	7,500	.....	.....	660,827	33.0	33.0	4,080	4,080	2,348
4 Sub....	Asphalt	10,819	13,819	No trouble	10,819	35,457	1.8	2.0	6,011	5,410	Swept twice; granite, dense traffic thoroughfare for steamboat trucks and carts.	
	Granite.....	135,208	67,604	5,474	187,708	10,070	13,694	13,125		.....	135,208	.....	.....	.....	568,091	28.4	28.6	4,761	4,696	.....	
	Belgian.....	1,546	928	48	1,946	.....	.....	.....		.....	1,546	.....	.....	.....	6,014	0.3	0.4	5,153	3,865	.....	
	Other (cobble).	3,142	9,426	1,257	3,942	375	416	320		.....	3,142	.....	.....	.....	22,020	1.1	1.0	2,857	3,142	.....	
	Total.....	150,715	77,958	6,729	207,415	10,445	14,110	13,445	.....	.....	150,715	.....	.....	.....	631,582	31.6	32.0	4,769	4,710	.....	
6.....	Asphalt	54,739	72,234	1,805	389	1,417	No trouble	109,480	13,000	54,000	307,485	15.4	17.0	3,554	3,220	3,392	Swept three times.	
	Granite.....	27,745	13,873	.....	41,618	4,278	1,083	5,111		.....	55,490	.....	.....	.....	149,198	7.5	8.0	3,700	3,468	1,977
	Belgian.....	5,513	3,308	.....	7,670	1,667	834	1,250		.....	11,026	.....	.....	.....	31,268	1.6	2.0	3,446	2,757	.....	
	Total.....	87,997	17,181	.....	121,522	7,750	2,306	7,778	.....	421	175,996	13,000	54,000	.....	487,951	24.5	27.0	3,592	3,259	2,685
8.....	Asphalt	62,839	81,658	6,000	445	4,611	No trouble	188,517	8,500	22,500	375,546	18.8	19.0	3,343	3,307	Swept three times.	
	Granite.....	21,429	10,714	.....	28,844	3,111	445	3,667		.....	64,287	.....	.....	.....	132,547	6.6	6.0	3,247	3,572	.....	
	Belgian.....	7,543	4,526	3,017	11,315	1,667	.....	2,500		.....	22,629	.....	.....	.....	53,197	2.7	2.0	2,794	3,772	.....	
	Total.....	91,811	15,240	3,017	121,867	10,778	890	10,778	.....	476	275,433	8,500	22,500	.....	561,290	28.1	27.0	3,267	3,400	.....	
6-8 Sub.	Asphalt	42,692	37,155	556	736	No trouble	85,184	8,000	24,000	198,523	9.9	10.0	4,312	4,269	Swept three times.	
	Granite.....	46,558	23,279	5,300	26,514	5,334	1,750	6,167		.....	93,116	.....	.....	.....	208,018	10.4	11.0	4,477	4,232	.....	
	Belgian.....	21,080	13,188	4,175	15,140	4,722	1,129	4,722		.....	43,060	.....	.....	.....	109,026	5.5	5.0	3,996	4,396	.....	
	Total.....	111,230	36,467	9,475	78,809	10,612	2,889	11,625	.....	.....	222,460	8,000	24,000	.....	515,567	25.8	26.0	4,308	4,278	.....	
10.....	Asphalt	17,142	21,765	2,889	1,222	2,667	No trouble	45,685	2.3	3.0	7,453	5,714	Swept three times.	
	Granite.....	50,020	25,010	4,852	75,030	8,056	3,570	7,014		.....	50,020	.....	.....	.....	223,572	11.2	11.0	4,466	4,547	.....	
	Belgian.....	9,873	5,924	3,940	14,810	1,250	556	903		987	.....	.....	.....	.....	38,252	1.9	2.0	5,196	4,937	.....	
	Total.....	77,035	30,934	8,801	111,605	12,195	5,348	10,584	.....	987	50,020	.....	.....	.....	307,509	15.4	16.0	5,002	4,815	.....	
10 Sub....	Asphalt.....	16,317	24,476	1,291	861	1,305	No trouble	24,317	68,567	3.4	4.0	4,795	4,079	Swept twice.	
	Granite.....	64,994	32,497	.....	97,491	3,222	.....	3,916		.....	96,994	.....	.....	.....	299,114	15.0	14.0	4,333	4,643	.....	
	Belgian.....	6,923	4,154	.....	10,385	861	861	589		.....	10,346	.....	.....	.....	34,119	1.7	2.0	4,072	3,462	.....	
	Total.....	88,234	36,651	132,352	5,374	1,722	5,810		131,657	401,800	20.1	20.0	4,390	4,422	
	District total..	865,280	4,240,338	212.0	218.0	4,082	3,969	2,516		

DISTRICT No. 3—EQUIVALENTS.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—												EQUIVALENT TOTAL.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.	
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement bet. Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.				Vicinity of Unpaved Streets.	Calculated.	Employed.		In Sweeping Test of One Week.
7.....	Asphalt	13,479	.....	.....	7,189	.....	.....	No influence.	.....	13,479	400	.....	.....	.....	34,547	1.7	1.7	7,929	7,929	7,386		
	Granite.	75,489	37,745	5,656	71,326	15,669	4,186		12,920	.....	87,489	400	.....	3,000	.....	313,880	15.7	14.8	4,808	5,100		6,534
	Belgian.	29,088	17,453	11,635	11,635	4,115	4,255		2,424	1,040	29,088	....	.....	.....	.....	110,733	5.5	5.5	5,289	5,289		5,851
	Total	118,056	55,198	17,291	90,150	19,784	8,441	15,344	.....	1,040	130,056	800	.....	3,000	.....	459,160	23.0	22.0	5,133	5,366		6,590
9.....	Asphalt.	20,843	.....	.....	12,506	455	.....	920	No influence.	.....	20,843	200	.....	.....	55,767	2.8	1.4	7,444	14,888	5,040		
	Granite.	144,560	72,280	28,265	93,280	23,574	.....	22,497		780	164,560	1,000	.....	3,000	.....	553,796	27.7	27.2	5,219	5,315		2,804
	Belgian.	11,309	6,785	4,524	.....	1,226	1,226	1,226		1,040	11,309	....	.....	.....	.....	38,645	1.9	1.4	5,952	7,800		5,564
	Total	176,712	79,065	32,789	105,786	25,255	1,226	24,643	.....	1,820	196,712	1,200	.....	3,000	.....	648,208	32.4	30.0	5,454	5,890		4,469
7-9 Sub.	Asphalt.	13,307	.....	.....	13,307	.....	.....	.....	No influence.	.....	16,000	....	.....	1,500	.....	44,114	2.2	3.0	6,049	4,436	5,736	
	Granite.	51,331	25,665	7,699	64,331	8,733	.....	8,733		.....	32,000	400	2,000	22,500	.....	223,392	11.2	11.0	4,583	4,667	5,235	
	Belgian.	22,249	13,349	8,900	22,249	267	267	267		.....	22,249	....	.....	.....	.....	89,797	4.5	4.0	4,944	5,562	5,107	
	Total	86,887	39,014	16,599	99,887	9,000	267	9,000	.....	.....	70,249	400	2,000	24,000	.....	357,303	17.9	18.0	4,854	4,827	5,359	
11.	Asphalt.	27,060	.....	1,353	35,648	1,861	.....	1,584	No influence.	.....	.....	200	.....	.....	67,706	3.4	3.6	7,959	7,465	7,381		
	Granite.	106,263	53,131	15,994	77,758	12,549	1,831	15,843		780	53,263	200	.....	.....	.....	337,612	16.9	17.0	6,288	6,251		5,066
	Belgian.	36,478	21,887	12,160	14,588	1,111	1,111	1,111		910	60,956	200	.....	.....	.....	150,512	7.5	6.4	4,864	5,637		7,568
	Total	169,801	75,018	29,507	127,994	15,521	2,942	18,538	.....	1,690	114,219	600	.....	.....	.....	555,830	27.8	27.0	6,108	6,289		6,672
13.....	Asphalt.	15,462	.....	.....	16,896	1,278	1,278	1,278	No influence.	.....	11,462	....	.....	.....	47,654	2.4	2.5	6,443	6,185	5,237		
	Granite.	110,763	55,382	22,153	80,558	14,077	3,709	14,833		650	55,763	600	.....	12,000	.....	370,488	18.5	18.5	5,987	5,987		5,640
	Belgian.	33,661	20,197	13,464	26,929	1,667	1,667	1,667		650	29,661	....	..	.....	.....	129,503	6.5	6.5	5,179	5,179		5,640
	Other (Brick)	1,150	.....	.....	920	.....	.....	.....		.....	.....	....	.....	.....	.....	2,070	0.1	0.5	11,500	2,300		.....
	Total	161,036	75,579	35,617	125,303	17,022	6,654	17,778	.....	1,300	96,886	600	.....	12,000	.....	549,775	27.5	28.0	5,855	5,751		5,506

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—													EQUIVALENT TOTAL.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement bet. Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.	Vicinity of Unpaved Streets.				Calculated.	Employed.	In Sweeping Test of One Week.	
15.	Asphalt.	52,728	.....	.....	76,782	445	556	889	No influence.	.....	17,000	...	.....	.....	148,400	7.4	8.0	7,125	6,591	8,700		
	Granite.	74,827	37,414	28,931	52,415	7,695	2,802	7,695		650	37,827	400	.....	7,500	.....	253,156	12.9	12.0	5,800	6,236	8,150	
	Belgian.	38,202	22,921	15,281	30,562	.....	.....	.....		650	19,202	...	.....	.....	.....	126,818	6.3	6.0	6,054	6,367	8,200	
	Total	165,757	60,335	44,212	159,759	8,140	3,358	8,584	.....	1,300	74,029	400	.....	7,500	.....	533,374	26.7	26.0	6,203	6,375	8,363	
	District total..	878,249	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,103,650	155.2	151.0	5,658	5,816	6,150	

DISTRICT No. 4—EQUIVALENTS.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—												EQUIVALENT TOTAL.	Sweepers necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.	
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement bet. Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.				Vicinity of Unpaved Streets.	Calculated.	Employed.		In Sweeping Test of One Week.
13.....	Asphalt.....	47,055	6,516	44,221	6,079	4,261	70,568	400	3,000	182,100	9.1	9.0	5,171	5,228	6,866	
	Granite.....	64,473	32,237	7,994	83,134	4,456	1,634	4,578	1,867	1,040	64,473	400	.....	3,000	.....	269,286	13.5	13.0	4,776	4,959	5,820
	Belgian.....	36,420	21,852	2,524	30,228	2,030	1,459	1,015	.....	.....	45,525	600	.....	.....	.....	141,653	7.1	6.9	5,130	5,278	5,475
	Other (cobble).....	687	2,061	275	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,023	0.1	0.1	6,870	6,870	.....
	Total.....	148,635	56,150	17,309	157,583	12,565	3,093	9,854	1,867	1,040	180,566	1,400	.....	6,000	.....	596,062	29.8	29.0	4,970	5,125	6,054
14.....	Asphalt.....	29,931	2,027	36,452	1,350	300	1,050	29,931	200	101,241	5.1	6.0	3,869	4,989	7,760	Traffic toward river very dirty, such as sand, coal, coke, etc.
	Granite.....	97,003	48,501	8,284	115,262	14,517	3,228	12,936	4,034	1,733	87,309	800	.....	4,500	.....	398,107	19.9	20.0	4,875	4,850	6,610
	Belgian.....	27,005	16,203	4,021	28,163	450	295	225	.....	.....	33,775	.....	.....	.....	.....	110,067	5.5	5.0	4,910	5,401	5,522
	Other (cobble).....	3,087	9,261	1,235	.....	600	600	300	.....	.....	.....	.....	.....	.....	.....	15,083	0.7	1.0	4,410	3,087	.....
	Total.....	157,026	73,965	15,567	179,877	16,917	4,353	14,511	4,034	1,733	151,015	1,000	.....	4,500	.....	624,493	31.2	32.0	5,033	4,907	6,631
16.....	Asphalt.....	34,308	976	43,166	1,400	695	1,390	34,434	200	116,569	5.8	6.0	5,915	5,718	8,372	
	Granite.....	61,594	30,797	6,073	58,715	12,694	5,362	9,334	4,034	1,733	59,594	.....	.....	.....	.....	249,030	12.5	13.9	4,928	4,431	5,156
	Belgian.....	50,111	30,056	4,576	47,956	6,722	3,361	3,361	.....	.....	38,111	200	.....	.....	.....	184,464	9.2	8.0	5,447	6,264	7,923
	Other (wood) ..	1,010	.....	.....	808	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,818	0.1	0.1	10,100	10,100	.....
	Total.....	147,023	60,863	11,625	150,645	20,816	9,418	14,085	4,034	1,733	132,139	400	.....	.....	.....	552,781	27.6	28.0	5,327	5,251	7,150
18.....	Asphalt.....	49,593	72,588	1,012	1,733	867	36,593	162,386	8.1	9.0	6,123	5,510	10,093	Rear of Madison Square Garden very dirty traffic; theatre exits strewn with programmes, etc.
	Granite.....	84,378	42,189	15,792	120,016	8,555	6,96	9,795	4,407	1,560	105,378	.....	.....	.....	.....	308,226	19.9	20.0	4,240	4,319	4,400
	Belgian.....	27,433	16,460	4,928	29,228	4,653	4,653	3,670	.....	.....	35,000	800	.....	4,500	.....	131,325	6.6	6.0	4,137	4,372	4,185
	Total.....	161,404	58,649	20,720	221,832	14,220	10,749	15,198	4,467	2,427	176,971	800	.....	4,500	.....	691,937	34.6	35.0	4,665	4,612	6,363
	Asphalt.....	56,621	67,391	2,728	1,037	3,720	1,040	42,621	200	175,358	8.8	9.0	6,434	6,291	7,366		Fifth avenue, swift and dangerous traffic.
Granite.....	65,006	32,503	8,948	87,219	5,493	839	9,768	4,467	1,040	48,006	200	.....	.....	.....	263,189	13.2	13.0	4,925	5,000	5,656	
Belgian.....	34,861	20,917	9,053	25,405	2,433	2,433	1,216	.....	.....	44,861	.....	.....	.....	.....	141,180	7.1	7.0	4,910	4,980	5,716	
Total.....	156,488	53,420	18,001	180,016	10,654	4,309	14,704	4,467	2,080	135,488	400	.....	.....	.....	580,027	29.1	29.0	5,378	5,396	6,246	
District total..	770,576	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,045,305	152.3	153.0	5,050	5,036	6,494

DISTRICT No. 5—EQUIVALENTS.

SECTION.	KIND OF PAVEMENT.	AREA SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—												EQUVALENT TOTAL.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.	
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement bet. Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.				Vicinity of Unpaved Streets.	Calculated.	Employed.		In Sweeping Test of One Week.
17.	Asphalt.	51,025	.....	1,139	32,286	3,544	1,733	5,336	.....	.....	72,025	200	3,000	.....	.....	170,308	8.5	9.0	6,003	5,669	8,420	
	Granite.	57,788	43,894	6,160	52,680	13,810	9,293	10,087	.....	.....	124,197	200	4,000	.....	.....	352,109	17.5	17.0	4,932	5,164	8,420	
	Belgian.	33,843	20,306	6,769	10,754	5,200	7,088	7,088	5,200	2,080	50,000	200	4,500	.....	.....	159,028	7.9	7.0	4,284	4,833	8,420	
	Total.	142,656	64,200	14,068	95,720	22,554	18,114	22,531	5,200	2,080	252,222	600	11,500	.....	.....	681,445	34.0	33.0	5,078	5,232	8,410	
19.	Asphalt.	15,000	.....	867	12,000	2,622	3,544	3,511	.....	.....	15,000	....	3,000	.....	.....	55,544	2.8	2.9	5,107	5,173	7,200	
	Granite.	72,585	39,292	22,730	43,326	18,886	10,043	10,050	.....	.....	108,525	200	4,000	.....	.....	335,697	16.8	16.0	4,678	4,911	7,450	
	Belgian.	68,000	40,920	24,613	41,758	5,918	5,693	6,582	5,200	2,080	91,200	....	4,500	.....	.....	296,664	14.8	13.0	4,608	5,246	8,420	
	Other (cobble).	400	1,200	160	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	.....	1,760	0.1	0.1	4,000	4,000	.....
Total.	162,185	81,412	48,370	97,084	27,426	19,280	20,143	5,200	2,080	214,785	200	11,500	.....	.....	689,665	34.5	32.0	4,701	5,068	7,690		
21.	Asphalt.	24,042	.....	1,964	12,496	1,733	3,544	3,544	.....	.....	33,042	200	3,000	.....	.....	83,575	4.2	5.0	5,724	4,808	8,420	
	Granite.	60,082	30,041	20,486	36,510	7,111	4,067	6,133	.....	.....	73,082	400	4,000	.....	.....	241,912	12.1	12.0	4,955	5,007	4,200	
	Belgian.	73,979	44,387	26,036	41,080	1,733	3,544	3,544	2,600	1,040	40,000	200	3,500	.....	.....	241,643	12.1	14.0	6,114	5,284	8,420	
	Other (cobble).	2,800	8,400	1,120	.....	.....	.....	.....	.....	.....	5,600	....	.....	.....	.....	17,020	0.9	1.0	3,111	2,800	.....
Total.	160,903	82,828	49,606	90,086	10,577	11,155	13,221	2,600	1,040	151,724	800	10,500	.....	.....	565,040	29.3	32.0	5,492	5,028	7,013		
23.	Asphalt.	31,315	.....	2,530	14,132	1,733	3,544	3,544	.....	.....	27,315	200	4,000	.....	.....	88,313	4.4	5.0	7,117	6,263	8,420	
	Granite.	62,670	31,335	9,619	50,136	11,878	4,333	11,011	.....	.....	67,670	....	2,000	.....	.....	250,652	12.5	13.0	5,014	4,821	6,007	
	Belgian.	82,795	49,677	33,034	36,718	3,822	2,667	2,667	2,600	1,040	94,795	400	3,500	.....	.....	313,715	15.7	15.0	5,274	5,520	5,814	
	Total.	176,780	81,012	45,183	100,986	17,433	10,544	17,222	2,600	1,040	189,780	600	9,500	.....	.....	652,680	32.6	33.0	5,423	5,357	6,747	
25.	Asphalt.	28,303	.....	1,927	13,042	1,733	3,544	3,544	.....	.....	31,303	....	3,000	.....	.....	86,396	4.3	6.0	6,582	4,717	6,013	
	Granite.	36,249	18,125	12,620	25,799	4,333	7,088	7,088	.....	.....	62,249	....	3,500	.....	.....	177,051	8.9	9.0	4,073	4,028	5,240	
	Belgian.	84,224	50,534	26,676	41,776	4,044	3,111	2,889	2,600	1,040	70,224	400	3,000	.....	.....	290,518	14.5	14.0	5,809	6,016	6,013	
	Other (cobble).	2,500	7,500	1,000	.....	.....	.....	.....	.....	.....	5,000	....	.....	.....	.....	16,000	0.8	1.0	3,125	2,500	.....
Total.	151,276	76,159	42,223	80,617	10,110	13,743	13,521	2,600	1,040	168,776	400	9,500	.....	.....	569,965	28.5	30.0	5,308	5,043	5,755		

SECTION.	KIND OF PAVEMENT.	AREA SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—												EQUIVALENT TOTAL.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.	
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement bet. Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.				Vicinity of Unpaved Streets.	Calculated.	Employed.		In Sweeping Test of One Week.
27.	Asphalt.	15,000	.....	1,578	6,639	1,733	3,544	3,544	.....	.....	8,000	200	3,000	.....	.....	43,238	2.2	2.0	6,818	7,500	5,240	
	Granite.	53,000	26,500	15,754	28,614	4,578	3,041	4,578	.....	.....	44,000	.....	500	.....	4,500	185,068	9.2	9.0	5,751	5,889	5,240	
	Belgian.	102,660	61,596	35,104	60,880	6,434	2,533	5,500	2,600	1,873	114,660	200	3,000	.....	.....	393,040	19.9	19.0	5,160	5,403	6,013	
	Total.	170,660	88,096	52,436	96,133	12,745	10,121	13,622	2,600	1,873	166,660	400	6,500	.....	4,500	626,346	31.3	30.0	5,452	5,689	5,498	
District total..		994,460	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,805,141	190.3	190.0	5,225	5,234	6,854	

DISTRICT NO. 6—EQUIVALENTS.

SECTION.	KIND OF PAVEMENT.	AREA SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—												EQUIVALENT TOTAL.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement Between Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.				Vicinity of Unpaved Streets.	Calculated.	Employed.		In Sweeping Test of One Week.
22	Asphalt.....	60,068	.....	.....	18,507	1,284	.....	805	.....	.....	27,734	200	.....	.....	108,598	5.4	6.0	11,124	10,011	7,797	
	Granite.....	36,334	18,167	.....	48,061	2,780	.....	2,245	.....	1,000	19,084	.....	3,000	.....	130,721	6.5	10.8	5,590	3,364	3,363	
	Belgian.....	69,838	41,903	15,728	24,255	4,063	3,420	3,100	.....	2,097	66,974	.....	.....	.....	231,378	11.6	13.0	6,021	5,372	6,320	
	Other (cobble).....	755	2,265	302	604	.....	.....	.....	.....	.....	755	.....	.....	.....	4,681	0.2	0.2	3,775	3,775	.....
	Total.....	166,995	62,335	16,030	91,427	8,127	3,420	6,150	.....	3,147	114,547	200	3,000	.....	475,378	23.8	30.0	7,017	5,567	5,827	
24	Asphalt.....	56,757	.....	.....	22,703	2,934	.....	3,470	.....	.....	22,736	200	.....	.....	108,800	5.4	6.0	10,510	9,460	7,200	
	Granite.....	31,667	15,834	.....	47,501	4,802	.....	4,802	.....	1,676	21,917	.....	3,000	.....	131,199	6.6	10.7	4,798	2,960	3,747	
	Belgian.....	91,850	55,110	23,437	61,233	6,364	4,120	5,287	.....	2,471	84,472	200	.....	.....	334,544	16.8	10.0	5,467	5,741	6,420	
	Other (cobble).....	893	2,679	357	714	.....	.....	.....	.....	.....	893	.....	.....	.....	5,536	0.3	0.3	2,977	2,977	...	
	Total.....	181,167	73,623	23,794	132,151	14,100	4,120	13,559	.....	4,147	130,018	400	3,000	.....	580,079	29.0	33.0	6,247	5,490	5,789	
26	Asphalt.....	61,783	.....	.....	21,953	3,050	.....	4,667	.....	.....	20,594	200	.....	.....	111,647	5.6	6.0	11,033	10,297	3,998	
	Granite.....	31,693	15,846	7,043	47,540	3,050	3,050	3,050	.....	2,463	24,339	.....	3,000	.....	141,074	7.1	8.0	5,872	3,962	4,304	
	Belgian.....	94,304	56,582	29,652	49,717	2,134	2,033	2,033	.....	1,227	94,763	400	.....	.....	332,845	16.6	15.0	5,681	6,287	6,036	
	Other (cobble).....	1,762	5,086	352	1,410	.....	.....	.....	.....	.....	3,524	.....	.....	.....	12,334	0.6	1.0	2,937	1,762	.....
	Total.....	189,542	77,714	37,047	120,620	8,234	5,083	9,150	.....	3,600	143,220	600	3,000	.....	597,900	29.9	30.0	6,339	6,318	4,779	
28	Asphalt.....	65,269	.....	9,116	26,108	2,345	.....	2,345	.....	.....	21,756	.....	.....	8,000	134,939	6.7	7.0	9,742	9,324	3,874	
	Granite.....	35,072	17,536	7,249	52,608	2,345	2,345	2,345	.....	1,874	27,014	.....	3,000	2,000	153,388	7.7	9.0	4,555	3,897	4,720	
	Belgian.....	77,924	46,754	19,697	45,698	5,714	4,047	4,047	.....	938	78,899	200	.....	.....	283,918	14.2	13.0	5,488	5,994	4,673	
	Other (cobble).....	1,354	4,062	271	1,083	.....	.....	.....	.....	.....	2,708	.....	.....	.....	9,478	0.5	1.0	2,768	1,354	.....
	Total.....	179,619	68,352	36,333	125,497	10,404	6,392	8,737	.....	2,812	130,377	200	3,000	10,000	581,723	29.1	30.0	6,173	5,987	4,422	
30	Asphalt.....	43,065	.....	.....	16,306	3,060	.....	3,060	1,250	.....	18,188	200	.....	2,000	87,129	4.4	6.0	9,788	7,178	6,603	
	Granite.....	42,142	21,071	.....	57,683	2,040	.....	2,040	.....	1,217	28,428	.....	3,000	.....	157,621	7.9	8.0	5,334	5,268	3,289	
	Belgian.....	84,586	50,752	19,119	39,694	2,221	2,040	2,221	1,250	1,215	81,469	200	.....	.....	284,777	14.2	16.7	5,957	5,065	6,704	
	Other (cobble).....	881	2,643	176	705	.....	.....	.....	.....	.....	1,762	.....	.....	.....	6,167	0.3	0.3	2,937	2,937	.....
	Total.....	170,674	74,466	19,295	114,358	7,321	2,040	7,321	2,000	2,442	129,847	400	3,000	2,000	535,694	26.8	31.0	6,368	5,505	5,532	
District total ..		857,997	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,770,774	138.5	154.0	6,412	5,766	5,270	

DISTRICT NO. 7—EQUIVALENTS.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—												EQUIVALENT TOTAL.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.		
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement bet. Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.				Vicinity of Unpaved Streets.	Calculated.	Employed.		In Sweeping Test of One Week.	
29	Asphalt.....	34,940	.....	.....	22,642	3,889	.....	2,945	No influence.	No influence.	1,710	200	.....	.....	66,326	3.3	3.2	10,538	10,919	9,650		
	Granite.....	59,910	29,955	11,982	18,897	2,456	2,456	2,500			76,310	200	4,332	.....	.....	208,998	10.5	10.3	5,706	5,816	7,540	
	Belgian.....	55,730	33,438	22,292	22,612	6,945	3,402	2,967			55,730	....	2,599	.....	.....	205,715	10.3	9.5	5,411	5,866	7,407	
	Total.....	150,580	63,393	34,274	64,151	13,290	5,858	8,412	.....	.....	133,750	400	6,931	.....	.....	481,039	24.1	23.0	6,248	6,547	8,199	
31	Asphalt.....	48,970	.....	.....	23,695	2,667	1,333	2,667	No influence.	No influence.	.....	.....	.....	.....	79,332	4.0	5.0	12,242	9,794	9,513		
	Granite.....	71,670	37,335	13,921	31,254	3,611	2,600	4,911			34,800	200	6,063	.....	.....	209,365	10.5	11.0	7,111	6,788	7,066	
	Belgian.....	11,410	6,846	4,564	4,564	2,311	1,156	1,156			.....	.....	.....	.....	.....	32,007	1.6	2.0	7,131	5,705	5,890	
	Total.....	135,050	44,181	18,485	59,513	8,589	5,089	8,734	.....	.....	34,800	200	6,063	.....	.....	320,704	16.1	18.0	8,388	7,503	7,490	
33	Asphalt.....	39,920	.....	.....	25,568	3,000	1,500	2,800	No influence.	No influence.	.....	.....	.....	.....	72,788	3.6	5.3	11,089	7,485	12,130		
	Granite.....	94,600	47,300	17,400	40,533	5,200	5,200	5,200			34,800	400	6,932	.....	.....	257,565	12.9	12.4	7,333	7,670	9,255	
	Belgian.....	20,580	12,318	8,232	8,232	2,600	1,300	1,300			.....	.....	.....	.....	.....	54,592	2.7	3.3	7,622	6,174	10,117	
	Total.....	155,100	59,648	25,632	74,333	10,800	8,000	9,300	.....	.....	34,800	400	6,932	.....	.....	384,945	19.2	21.0	8,087	7,386	10,501	
35	Asphalt.....	40,760	.....	.....	19,488	2,333	1,167	2,066	No influence.	No influence.	.....	200	.....	.....	66,014	3.3	4.2	12,351	9,591	13,690		
	Granite.....	98,430	49,215	18,068	44,796	4,060	4,834	4,849			23,200	.....	6,063	.....	.....	254,415	12.7	11.3	7,435	8,750	21,057	
	Belgian.....	10,030	6,018	4,012	4,012	2,022	1,011	1,011			.....	.....	.....	.....	.....	28,116	1.4	1.5	7,164	6,687	7,272	
	Total.....	149,220	55,233	22,080	68,296	9,415	7,012	7,926	.....	.....	23,200	200	6,063	.....	.....	348,545	17.4	17.0	8,576	8,778	10,673	
37	Asphalt.....	41,550	.....	.....	13,788	2,311	2,311	2,311	No influence.	No influence.	.....	.....	.....	.....	13,335	75,606	3.8	5.0	10,934	8,228	11,194	
	Granite.....	79,270	39,635	14,001	40,135	4,622	4,622	4,622			2,800	200	6,932	16,002	212,841	10.6	10.0	7,478	7,921	6,833	
	Belgian.....	17,620	10,572	7,048	7,048	2,311	1,156	1,156			.....	.....	.....	.....	.....	46,911	2.3	2.7	7,661	6,407	8,243	
	Other (cobble).....	1,330	3,990	532	1,064	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,916	0.3	0.3	4,433	6,650	.....		
Total.....		139,770	54,197	21,581	62,035	9,244	8,089	8,089	.....	.....	2,800	200	6,932	.....	29,337	342,274	17.0	12.0	8,222	7,765	8,757	

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—													EQUIVALENT TOTAL.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement Bet. Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.	Vicinity of Unpaved Streets.				Calculated.	Employed.	In Sweeping Test of One Week.	
39.....	Asphalt.....	23,080	.....	.....	14,733	1,733	867	1,733	No influence.	No influence.	.....	.....	.....	.....	8,001	50,147	2.5	3.0	9,232	7,693	11,077	
	Granite.....	60,230	30,140	11,594	21,486	3,467	3,467	3,467			21,000	.....	5,199	.....	8,001	171,101	8.6	8.5	7,009	7,092	5,300	
	Belgian.....	20,790	12,474	8,316	8,316	1,733	867	867			.....	.....	.....	.....	.....	53,363	2.7	3.0	7,700	6,930	.....
	Other (cobble).....	2,080	6,240	832	1,664	.....	.....	.....			.....	.....	.....	.....	.....	10,816	0.5	0.5	4,160	4,160	.....
	Total.....	106,230	48,854	20,742	49,199	6,933	5,201	6,067	.....	.....	21,000	.....	5,199	.....	16,002	285,427	14.3	15.0	7,436	7,082	8,189	
41.....	Asphalt.....	58,570	.....	.....	28,212	2,802	1,711	2,733	No influence.	No influence.	.....	.....	.....	.....	29,337	123,365	6.2	6.8	9,447	8,613	15,180	
	Granite.....	50,650	25,325	10,130	24,960	5,328	5,111	5,349			21,000	200	4,766	.....	18,669	171,488	8.6	7.0	5,890	7,236	5,207	
	Belgian.....	17,730	10,638	7,092	7,092	2,556	1,278	1,278			.....	.....	.....	.....	.....	47,664	2.4	2.6	7,387	6,649	5,721	
	Other (cobble).....	3,310	9,930	1,324	2,648	.....	.....	.....			.....	.....	.....	.....	.....	17,212	0.9	0.6	3,680	6,206	.....
	Total.....	130,260	45,893	18,546	62,912	10,686	8,100	9,360	.....	.....	21,000	200	4,766	.....	48,006	359,729	18.1	17.0	7,197	7,662	8,703	
District total ..		966,210	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,522,663	126.1	129.0	7,662	7,490	9,707		

DISTRICT NO. 8—EQUIVALENTS.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—												EQUIVALENT TOTAL.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.	
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement Bet. Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.				Vicinity of Unpaved Streets.	Calculated.	Employed.		In Sweeping Test of One Week.
32	Asphalt.....	63,480	...	.....	29,072	2,035	.....	1,385	No influence.	.....	63,480	No influence because of University and College Settlements, Aids to the Department Street Cleaning, etc., etc.	6,000	.....	.....	165,452	8.3	9.0	7,650	7,053	.....
	Granite.....	87,106	43,553	4,855	36,201	2,441	1,790	3,336		1,073	87,106		6,000	.....	.....	273,461	13.7	14.0	6,358	6,222	.....
	Belgian.....	15,356	9,214	2,071	9,965	1,790	1,790	895		1,073	25,592		3,000	.....	.....	70,746	3.5	3.0	4,388	5,119	.....
	Total.....	165,942	52,767	6,926	75,238	6,266	3,580	5,616		2,146		176,178	15,000	509,659	25.5	26.0	6,508	6,382
34	Asphalt.....	37,623	.....	.....	19,742	3,084	2,056	3,084	No influence.	.....	37,623	No influence because of University and College Settlements, Aids to the Department Street Cleaning, etc., etc.	3,000	.....	.....	106,260	5.3	6.0	7,099	6,271	.....
	Granite.....	91,796	45,898	3,060	45,876	2,056	1,028	2,056		1,252	93,233		12,000	.....	.....	298,255	14.9	16.0	6,161	5,737	.....
	Belgian.....	33,790	20,274	11,220	17,623	2,056	2,056	1,028		1,252	56,317		3,000	.....	.....	148,616	7.4	7.0	4,566	4,827	.....
	Total.....	163,209	65,172	14,280	83,241	7,196	5,140	6,168		2,504		187,221	18,000	553,131	27.7	29.0	5,892	5,628
36	Asphalt.....	42,542	.....	.....	34,034	5,400	2,322	3,600	No influence.	.....	42,000	No influence because of University and College Settlements, Aids to the Department Street Cleaning, etc., etc.	3,000	4,500	.....	137,398	6.9	6.0	6,166	7,090	7543	
	Granite.....	102,992	51,496	12,918	42,690	2,090	1,045	2,090		1,252	100,000		12,000	.....	.....	328,573	16.4	16.0	6,280	6,437	5,727	
	Belgian.....	65,512	39,307	18,795	19,512	2,090	2,090	1,045		1,252	69,187		3,000	.....	.....	221,790	11.1	10.0	5,902	6,551	6,615	
	Total.....	211,046	90,803	31,713	96,236	9,580	5,457	6,735		2,504		211,187	18,000	4,500	687,761	34.4	32.0	6,135	6,595	6,628
38	Asphalt.....	22,195	.....	.....	13,731	2,094	1,047	1,047	No influence.	.....	20,000	No influence because of University and College Settlements, Aids to the Department Street Cleaning, etc., etc.	3,000	.....	.....	63,114	3.2	3.0	6,936	7,398	.....
	Granite.....	127,292	63,646	7,440	42,587	5,097	2,025	5,097		1,252	109,584		12,000	.....	.....	376,020	18.8	18.0	6,771	7,072	.....
	Belgian.....	56,467	33,880	18,013	20,321	4,339	6,128	3,089		1,252	56,934		3,000	.....	.....	203,473	10.2	10.0	5,536	5,647	.....
	Total.....	205,954	97,526	25,453	76,639	11,530	9,250	9,233		2,504		186,518	18,000	642,607	32.1	31.0	6,416	6,644
40	Asphalt.....	22,881	.....	125	13,312	1,773	887	887	No influence.	.....	25,762	No influence because of University and College Settlements, Aids to the Department Street Cleaning, etc., etc.	3,000	.....	.....	68,627	3.4	3.0	6,730	7,627	.....
	Granite.....	92,003	46,001	20,241	31,245	1,131	1,131	2,018		1,073	94,006		5,500	.....	.....	294,349	14.7	15.0	6,259	6,134	.....
	Belgian.....	16,056	9,634	5,100	9,623	1,773	1,773	887		1,073	27,112		.....	.....	.....	73,031	3.7	3.0	4,340	5,352	.....
	Total.....	130,940	55,635	25,466	54,180	4,677	3,791	3,792		2,146		146,880	8,500	435,007	21.8	21.0	6,006	6,235
District total ..		877,091	.....	.....	.....	.....	.....	.....	.....	.....	.....	No influence because of University and College Settlements, Aids to the Department Street Cleaning, etc., etc.	.....	.....	.....	2,829,165	141.5	139.0	6,199	6,310	6,628	

DISTRICT NO. 9—EQUIVALENTS.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—												EQUIVALENT TOTAL.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.	
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement Bet. Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.				Vicinity of Unpaved Streets.	Calculated.	Employed.		In Sweeping Test of One Week.
45.....	Asphalt	27,590	.....	.....	7,897	1,050	1,050	1,050	.....	.....	7,590	600	.....	.....	14,000	60,857	3.0	2.0	9,197	13,795	13,800	
	Granite.....	95,363	47,682	1,873	23,579	9,638	5,447	11,071	.....	.....	35,363	400	2,500	.....	12,000	244,916	12.2	12.0	7,817	7,947	8,500	
	Belgian	27,015	16,209	8,106	19,679	7,111	3,556	3,556	2,775	.....	17,015	.....	.....	.....	.....	105,022	5.3	4.0	5,097	6,754	6,700	
	Total.	149,968	63,891	9,979	51,155	17,809	10,063	15,637	2,775	.....	59,968	1,000	2,500	.....	26,000	410,795	20.5	18.0	7,316	8,332	9,617	
47.....	Asphalt	76,364	.....	.....	30,546	.....	.....	.....	9,500	.....	.....	200	.....	.....	10,000	126,610	6.3	7.0	12,121	10,909	10,900	
	Granite.....	64,245	32,122	12,849	23,586	.....	.....	.....	11,947	.....	.....	200	.....	3,000	16,000	163,949	8.2	9.0	7,835	7,138	7,150	
	Belgian.....	41,810	25,086	9,157	33,448	6,740	1,808	5,279	3,000	2,277	41,810	200	500	.....	8,000	179,115	9.0	6.0	4,645	6,968	7,000	
	Total.	182,419	57,208	22,006	87,580	6,740	1,808	5,279	24,447	2,277	41,810	600	500	3,000	34,000	469,674	23.5	22.0	7,762	8,292	8,350	
49.....	Asphalt	19,550	.....	.....	10,540	.....	.....	.....	4,887	.....	.....	.....	.....	.....	14,000	48,977	2.5	3.0	7,820	6,517	6,500	
	Granite.....	70,630	35,315	17,643	28,252	5,198	2,931	2,599	8,522	1,759	71,260	200	.....	3,000	8,000	255,309	12.8	12.0	5,518	5,885	7,100	
	Total.	90,180	35,315	17,643	38,792	5,198	2,931	2,599	13,409	1,759	71,260	200	.....	3,000	22,000	304,286	15.3	15.0	5,894	6,012	6,800	
51.....	Asphalt	11,517	.....	.....	4,619	.....	.....	.....	2,887	.....	.....	200	.....	.....	4,000	23,253	1.2	1.5	9,623	7,693	7,700	
	Granite.....	59,155	29,577	12,380	13,706	2,856	2,856	1,428	3,075	1,713	59,155	.....	.....	.....	28,000	213,901	10.6	9.5	5,581	6,227	7,900	
	Total.	70,702	29,577	12,380	18,325	2,856	2,856	1,428	5,962	1,713	59,155	200	.....	.....	32,000	237,154	11.8	11.0	5,992	6,427	7,800	
52.....	Granite.....	40,533	20,267	4,866	16,213	2,744	1,444	2,022	.....	2,433	20,533	.....	.....	.....	40,000	151,055	7.5	7.0	5,404	5,790	8,100	
	Total.	40,533	20,267	4,866	16,213	2,744	1,444	2,022	.....	2,433	20,533	.....	.....	.....	40,000	151,055	7.5	7.0	5,404	5,790	8,100	
53.....	Asphalt	36,622	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,000	42,622	2.1	2.0	17,439	18,311	15,700	
	Granite.....	78,583	39,291	.....	31,433	5,250	5,250	2,625	.....	.....	.....	.....	.....	.....	.....	162,432	8.1	8.0	9,702	9,823	15,700	
	Total.	115,205	39,291	.....	31,433	5,250	5,250	2,625	.....	.....	.....	.....	.....	.....	6,000	205,054	10.2	10.0	11,295	11,521	15,700	

SECTION.	KIND OF PAVEMENT.	AREA SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—												EQUIVALENT TOTAL.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement bet. tracks.	Sanding of Tracks.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.				Vicinity of Unpaved Streets.	Calculated.	Employed.		In Sweeping Test o One Week.
51.....	Asphalt.....	2,717	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,717	0.14	0.5	20,000	5,434	15,700	
	Granite.....	117,738	58,869	.....	.....	11,222	11,222	5,611	.....	.....	.....	400	.....	.....	205,062	10.3	9.5	11,431	12,393	15,700	
	Total....	120,455	58,869	.....	.....	11,222	11,222	5,611	.....	.....	.....	400	.....	.....	207,779	10.4	10.0	11,582	12,046	15,700	
	District total..	769,462	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,985,797	99.2	93.0	7,757	8,274	9,329	

DISTRICT NO. 10—EQUIVALENTS.

SECTION.	KIND OF PAVEMENT.	AREA SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—													EQUIVALENT TOTAL.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement Between Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.	Vicinity of Unpaved Streets.				Calculated.	Empl yed.	In Sweeping Test of One Week.	
42.....	Asphalt.....	14,013	.....	585	7,684	.....	.....	.....	No influence.	28,026	.....	.....	.....	8,665	58,973	3.0	2.0	4,671	7,007	8,709		
	Granite.....	117,266	58,633	24,151	41,967	4,773	3,080	4,107		3,080	116,532	200	3,502	.....	12,131	389,420	19.5	18.0	6,014	6,515	8,048	
	Belgian.....	12,133	7,210	4,853	9,716	4,107	4,107	2,053		.....	24,266	.....	502	.....	.....	69,005	3.5	4.0	3,467	3,033	4,600	
	Total.....	143,412	65,913	29,589	59,357	8,880	7,187	6,160	3,080	.....	168,824	200	4,002	.....	20,796	517,398	26.0	24.0	5,516	5,975	7,119	
43.....	Asphalt.....	9,380	.....	.....	7,594	.....	.....	.....	No influence.	15,630	.....	.....	.....	1,733	34,247	1.7	2.0	5,520	4,690	6,134		
	Granite.....	131,612	65,806	35,097	41,781	6,306	5,493	6,300		2,640	114,216	200	3,000	.....	1,733	414,099	20.7	18.0	6,358	7,312	11,275	
	Belgian.....	18,266	10,919	7,306	11,510	3,587	3,587	1,794		.....	36,532	.....	.....	.....	3,466	97,027	4.9	4.0	3,728	4,567	6,133	
	Total.....	159,259	76,725	42,403	60,815	9,887	8,990	8,094	2,640	.....	166,388	200	3,000	.....	6,932	545,373	27.3	24.0	5,834	6,636	7,817	
44.....	Asphalt.....	28,864	.....	.....	14,388	.....	.....	.....	No influence.	45,728	200	.....	.....	6,932	95,112	4.8	4.0	6,013	7,216	6,647		
	Granite.....	65,133	32,667	1,913	30,116	5,310	4,719	5,111		1,760	52,666	200	4,000	4,500	12,131	220,626	11.0	9.0	5,940	7,259	7,580	
	Belgian.....	38,963	23,378	7,703	18,508	2,370	2,370	1,185		.....	77,926	.....	.....	3,000	5,199	180,602	9.0	8.0	4,329	4,670	6,133	
	Total.....	133,160	56,045	9,616	63,012	7,680	7,089	6,196	1,760	.....	176,320	400	4,000	7,500	24,262	427,340	24.8	21.0	5,370	6,341	6,787	
46.....	Asphalt.....	30,915	.....	3,091	23,374	.....	.....	.....	No influence.	10,915	200	.....	1,500	6,932	76,887	3.8	5.0	8,136	6,183	6,004		
	Granite.....	62,910	31,455	6,491	24,654	2,933	2,905	2,938		2,200	53,820	200	2,500	3,000	13,864	209,200	10.5	7.0	5,991	8,087	9,207	
	Belgian.....	48,603	29,162	7,291	22,961	2,933	2,931	1,467		.....	97,206	.....	.....	.....	5,199	217,755	10.9	11.0	4,459	4,418	6,133	
	Total.....	142,428	60,617	16,873	70,979	5,863	5,138	4,405	2,200	.....	161,941	400	2,500	4,500	25,925	503,842	25.2	23.0	5,652	6,193	7,111	
48.....	Asphalt.....	13,268	.....	.....	9,598	.....	.....	.....	No influence.	.....	.....	.....	.....	5,334	28,200	1.4	3.0	9,477	4,423	5,062		
	Granite.....	54,950	27,475	2,747	24,287	2,933	2,205	2,938		2,200	37,000	200	2,500	3,000	2,667	166,002	8.3	7.0	6,620	7,850	6,647	
	Belgian.....	55,722	33,433	5,572	27,502	5,134	8,800	4,400		8,706	53,444	.....	.....	.....	10,663	213,381	10.7	10.0	5,208	5,572	6,133	
	Total.....	123,940	60,908	8,319	51,387	8,067	11,005	7,138	10,906	.....	91,344	200	2,500	3,000	18,669	407,583	20.4	20.0	6,076	6,197	5,917	
50.....	Asphalt.....	49,686	.....	4,347	32,006	1,613	.....	1,613	.....	4,000	.....	.....	.....	10,668	101,933	5.1	7.0	9,742	7,498	7,242		
	Granite.....	76,860	38,430	16,726	19,911	1,834	1,687	2,420	1,760	89,970	.....	2,000	3,000	26,670	281,268	14.2	11.0	5,413	6,987	7,680		
	Belgian.....	39,935	23,961	13,528	15,974	6,605	3,744	3,134	.....	56,670	.....	.....	.....	5,334	169,258	8.5	9.0	4,698	4,437	.....	
	Total.....	166,481	62,391	32,601	67,891	10,055	5,431	7,137	1,760	.....	150,840	.....	2,000	3,000	42,672	552,459	27.6	27.0	6,032	6,166	7,491	
District total..		868,680	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,023,995	151.2	139.0	5,745	6,249	6,955		

DISTRICT NO. 11—EQUIVALENTS.

SECTION.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—												EQUIVALENT TOTAL.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.			REMARKS.	
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement bet. Tracks.	Sanding of Tracks.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.				Vicinity of Unpaved Streets.	Calculated.	Employed.		In Sweeping Test of One Week.
55.....	Asphalt.....	14,557	11,646	Little trouble.	6,000	32,203	1.6	2.0	9,098	7,279	The width and evenness of pavements in these sections allow the extensive use of machine sweepers, which save much labor of the hand-broom.	
	Granite.....	146,777	73,389	9,960	68,305	8,834	4,445	8,834		.....	80,800	600	.....	48,000	449,944	22.5	13.0	6,523	11,291	.....	
	Belgian.....	110,532	66,319	19,616	60,000	.....	.....	.....		.....	.....	.....	.....	36,000	292,467	14.6	10.0	7,571	11,053	.....	
	Total.....	271,866	139,708	29,576	139,951	8,834	4,445	8,834	.....	80,800	600	.....	90,000	774,614	38.7	25.0	7,025	10,875	.....		
56.....	Asphalt.....	9,869	3,948	Little trouble.	4,000	17,817	0.9	1.0	10,966	9,869	This section being the northeastern limit of the city, the paved streets are so far apart that much of the sweepers' time is used in reaching the successive parts of their work.	
	Granite.....	156,943	78,471	10,348	60,922	3,222	3,222	3,222		1,832	132,943	400	52,000	553,525	27.7	20.0	5,665	7,847	
	Belgian.....	68,449	41,069	3,629	25,126	.....	.....	.....		.....	68,449	400	.....	22,000	229,122	11.5	8.0	5,952	8,556	.....	
	Total.....	235,261	119,540	13,977	89,996	3,222	3,222	3,222	.....	1,832	251,392	800	.....	78,000	800,464	40.1	29.0	5,867	8,113	.....	
57.....	Granite.....	99,949	49,974	3,386	38,000	3,111	2,111	3,111	Little trouble.	1,812	200	34,000	235,654	11.8	17.0	8,445	5,879	This section being the northeastern limit of the city, the paved streets are so far apart that much of the sweepers' time is used in reaching the successive parts of their work.	
	Belgian.....	30,398	18,239	5,020	11,359	556	2,222	556		.....	.....	.....	.....	14,000	82,350	4.1	6.0	7,414	5,066	.....	
	Total.....	130,347	68,213	8,406	49,359	3,667	4,333	3,667		1,812	200	48,000	318,004	15.9	23.0	8,198	5,667	
	Granite.....	229,664	114,832	862	80,265	3,945	3,945	3,945	Little trouble.	4,301	.....	600	.....	80,000	522,360	26.1	25.5	8,799	9,006	.....	
58.....	Belgian.....	24,653	14,792	8,575	9,861	4,500	18,000	4,500		.....	.....	.....	.....	10,000	94,881	4.7	9.0	5,246	2,739	.....	
	Other (Brick).....	22,612	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	6,000	28,612	1.5	1.5	15,075	15,075	.....	
	Total.....	276,929	129,624	9,437	92,127	8,445	21,945	8,445	.....	4,301	.....	600	.....	96,000	645,853	32.3	36.0	8,574	7,693	.....	
District total.....		914,493	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,538,935	127.0	113.0	7,200	8,092	.....		

CITY SUMMARY—

KIND OF PAVEMENT.	AREA, SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS							
		Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Length in Feet.	Condition Pavement bet. Tracks.	Sanding of Track.	Association Sprinkling.	Character of Population.
Asphalt.....	1,920,428	.....	41,695	1,413,321	92,311	44,081	96,005	18,524	1,424,767
Granite.....	5,197,339	2,598,670	599,729	3,782,937	428,669	235,119	392,792	56,053	4,171,266
Belgian.....	2,152,319	1,291,392	579,891	1,231,401	161,383	142,750	118,670	36,531	2,137,814
Other.....	55,458	92,058	11,475	24,120	975	1,016	620	.....	37,089
Total.....	9,325,544	3,982,120	1,232,790	6,451,779	683,338	422,966	608,087	111,108	7,770,936
Sweepers necessary because of.....		466.3	199.1	61.6	322.6	34.2	21.1	30.4	388.5

SUMMARY BY DISTRICTS—EQUIVALENTS.

DISTRICT.	KIND OF PAVEMENT.	AREA, SQUARE YARDS.	EQUIVALENT, IN SQUARE YARDS, OF DIFFICULTY ADDED BY—														EQUIVALENT, TOTAL.	Add 25 per Cent. for Day Sweeping.	Final Total.	Sweepers Necessary, Calculated.	Sweepers Employed.	SQUARE YARDS KEPT CLEAN PER SWEEPER.		
			Kind of Pavement.	Condition of Pavement.	Amount of Traffic.	Car Track.	Condition of Pavement bet. Tracks.	Sanding of Track.	Association Sprinkling.	Elevated Railroad.	Character of Population.	Schools.	Produce and Market Stores.	Push-cart Trade.	Vicinity of Unpaved Streets.	Calculated.						Employed.	In Sweeping Test of One Week.	
1.....	Asphalt.....	39,728	.....	5,554	59,592	389	195	195	Little trouble.	.....	27,528	.....	.....	18,000	.....	151,181	37,795	188,976	9.4	8.0	4,226	4,966	7,373
	Granite.....	480,061	240,032	4,236	712,647	50,258	26,968	7,23		6,849	281,331	800	31,500	250,300	.....	2,112,765	528,191	2,640,955	132.0	133.0	3,637	3,609	5,337
	Belgian.....	13,347	8,009	660	20,020	389	195	195		6,696	.....	.....	.....	6,000	.....	55,511	13,878	69,389	3.5	3.0	3,814	4,449	2,899
	Total.....	533,136	248,041	10,510	792,259	51,036	27,358	27,913		6,849	315,555	800	31,500	274,500	.....	2,319,457	579,864	2,899,321	144.9	144.0	3,680	3,702	5,203
2.....	Asphalt.....	247,233	.....	.....	309,684	13,749	4,305	12,264	No trouble.	1,286	504,103	Vastly improved, because of paper cans, etc.	34,500	115,500	.....	1,242,625	.....	.....	62.1	67.0	3,981	3,690	2,930
	Granite.....	538,798	269,399	31,081	685,150	52,224	37,720	58,931		1,688	880,701		7,500	.....	.....	2,563,192	.....	.....	128.1	128.3	4,206	4,199	2,102
	Belgian.....	70,402	42,242	11,189	86,300	12,501	5,418	12,562		987	123,535		.....	.....	.....	365,135	.....	.....	18.3	18.7	3,847	3,765	.....
	Other (cobble).....	8,847	26,541	3,539	12,500	375	416	320		16,847	.....		.....	.....	.....	69,385	.....	.....	3.4	4.0	2,602	2,212	.....
	Total.....	865,280	338,182	45,809	1,093,634	78,849	47,860	4,077		3,961	1,525,186		42,000	115,500	4,240,338	212.0	218.0	4,082	3,969	2,516
3.....	Asphalt.....	142,879	.....	1,353	162,328	4,039	1,834	4,671	No influence.	.....	78,784	800	.....	1,500	.....	398,188	.....	.....	19.9	20.2	7,180	7,056	6,580
	Granite.....	563,233	281,617	108,608	439,668	82,297	12,528	82,521		2,860	430,902	3,000	2,000	48,000	.....	2,057,324	.....	.....	102.9	100.5	5,474	5,604	5,578
	Belgian.....	170,957	102,592	65,964	105,963	8,386	8,326	6,695		4,290	172,465	200	.....	.....	646,068	.....	.....	32.3	29.8	5,294	5,747	6,322	
	Other (brick).....	1,150	.....	.....	920	.....	.....	.....		.....	.....	.....	.....	.....	2,070	.....	.....	0.1	0.5	11,500	2,300	.....	
	Total.....	878,249	384,209	176,915	708,879	94,722	22,888	93,887		7,150	682,151	4,000	2,000	49,500	.....	3,103,650	.....	.....	155.2	151.0	5,658	5,816	6,160
4.....	Asphalt.....	217,508	.....	9,519	261,818	12,569	2,032	12,154	No influence.	1,907	214,147	1,000	.....	3,000	.....	737,654	.....	.....	36.9	39.0	5,900	5,577	8,091
	Granite.....	372,454	186,227	47,091	464,246	45,715	17,159	46,411		7,106	364,760	1,400	.....	7,500	.....	1,579,038	.....	.....	79.0	79.9	4,712	4,652	5,528
	Belgian.....	175,830	105,498	25,102	160,981	16,288	12,131	9,487		.....	197,272	1,600	.....	4,500	.....	708,689	.....	.....	35.4	32.9	4,967	5,344	5,864
	Other (cobble and wood).....	4,784	11,322	1,510	808	600	600	300		.....	.....	.....	.....	.....	19,924	.....	.....	1.0	1.2	4,784	3,987	.....	
	Total.....	770,576	393,047	83,222	889,953	75,172	31,922	68,352		18,869	9,013	776,179	4,000	15,000	3,045,305	152.3	153.0	5,060	5,036	6,494
5.....	Asphalt.....	164,685	.....	10,005	90,595	13,098	19,453	23,043	No influence.	.....	186,685	800	19,000	.....	.....	527,364	.....	.....	26.4	29.9	6,238	5,568	7,285
	Granite.....	378,374	189,187	87,369	237,055	60,596	37,868	48,947		.....	479,783	800	18,000	.....	4,500	1,542,489	.....	.....	77.1	76.0	4,908	4,979	6,093
	Belgian.....	445,701	227,420	132,232	232,966	27,151	25,636	28,270		9,153	466,879	1,400	22,000	.....	.....	1,699,608	.....	.....	85.0	82.0	5,244	5,435	7,183
	Other (cobble).....	5,700	17,100	2,280	.....	.....	.....	.....		.....	10,600	.....	.....	.....	.....	35,680	.....	.....	1.8	2.2	3,167	2,714	.....
	Total.....	994,460	473,707	251,886	560,626	100,845	82,957	100,260		9,153	1,143,947	3,000	59,000	.....	4,500	3,805,141	.....	.....	190.3	190.0	5,225	5,234	6,854
6.....	Asphalt.....	286,942	.....	9,116	105,577	12,673	.....	13,747	No influence.	1,250	111,008	800	.....	.....	10,000	551,113	.....	.....	27.5	31.0	10,434	9,256	5,894
	Granite.....	176,908	88,454	14,292	253,393	15,017	5,395	14,482		8,280	120,782	.....	15,000	.....	2,000	714,003	.....	.....	35.7	46.5	4,956	3,804	3,885
	Belgian.....	418,502	251,101	107,633	220,597	20,496	15,660	16,688		1,250	7,953	406,577	1,000	.....	.....	1,467,462	.....	.....	73.4	73.7	5,550	5,679	6,031
	Other (cobble).....	5,645	16,935	1,458	4,516	.....	.....	.....		.....	9,642	.....	.....	.....	.....	38,196	.....	.....	1.9	2.8	2,971	2,016	.....
	Total.....	887,997	356,490	132,499	584,083	48,186	21,055	44,917		2,500	16,238	648,009	1,800	15,000	12,000	2,770,774	138.5	154.0	6,412	5,766	5,270
7.....	Asphalt.....	287,790	.....	.....	148,126	18,735	8,889	17,255	No influence.	1,710	400	.....	.....	.....	50,673	533,578	.....	.....	26.7	32.5	10,779	8,855	12,240
	Granite.....	517,810	258,905	97,096	225,061	29,644	28,290	30,898		213,910	1,200	40,287	.....	42,672	1,485,773	.....	.....	74.3	70.5	6,969	7,345	9,250	
	Belgian.....	153,890	92,334	61,556	61,876	20,478	10,170	9,735		55,730	.....	2,599	.....	.....	.....	468,368	.....	.....	23.4	24.6	6,577	6,256	7,810
	Other (cobble).....	6,720	20,160	2,688	5,376	.....	.....	.....		.....	.....	.....	.....	.....	.....	34,944	.....	.....	1.7	1.4	3,953	4,228	.....
	Total.....	956,210	371,399	161,340	440,439	68,857	47,349	57,888		271,350	1,600	42,886	93,345	2,522,663	126.1	120.0	7,662	7,490	9,767
8.....	Asphalt.....	188,721	.....	125	109,891	14,386	6,312	10,003	No influence.	.....	188,913	.....	18,000	4,500	.....	540,851	.....	.....	27.1	27.0	6,964	6,990	7,543
	Granite.....	501,189	250,594	48,514	198,599	12,815	7,019	14,597		5,902	483,929	.....	47,500	.....	.....	1,570,658	.....	.....	78.5	79.0	6,384	6,344	5,727
	Belgian.....	187,181	112,309	55,199	77,044	12,048	13,887	6,944		5,902	235,142	.....	12,000	.....	.....	717,656	.....	.....	35.9	33.0	5,214	5,672	6,615
	Total.....	877,091	362,903	103,838	385,534	39,249	27,218	31,544		11,804	907,984	77,500	4,500	2,829,165	141.5	139.0	6,199	6,310	6,628
9.....	Asphalt.....	174,390	.....	.....	53,602	1,060	1,060	1,060	No influence.	.....	7,590	1,000	.....	.....	48,000	305,036	.....	.....	15.2	16.0	11,473	10,900	11,717
	Granite.....	526,247	263,123	49,611	136,769	36,908	29,150	25,356		5,905	186,311	1,200	2,500	6,000	104,000	1,396,624	.....	.....	69.8	67.0	7,539	7,854	10,021
	Belgian.....	68,825	41,295	17,263	53,127	13,851	5,364	8,835		5,775	58,825	200	500	.....	8,000	284,137	.....	.....	14.2	10.0	4,847	6,883	6,850
	Total.....	769,462	394,418	66,874	243,498	51,819	35,574	35,251		46,593	8,182	252,726	2,400	3,000	6,000	160,000	1,985,797	99.2	93.0	7,757	8,274	9,529
10.....	Asphalt.....	146,126	.....	6,023	94,514	1,613	.....	1,613	No influence.	.....	104,299	400	.....	1,500	40,264	396,352	.....	.....	19.8	23.0	7,380	6,353	6,633
	Granite.....	508,932	254,466	87,125	182,746	24,083																		

BOARD OF ALDERMEN. STATED MEETING.

TUESDAY, December 28, 1897, 2 o'clock P. M.

The Board met in Room 16, City Hall.

PRESENT:

John Jeroloman, President.

John P. Windolph, Vice-President, Aldermen Nicholas T. Brown, William E. Burke, Thomas M. Campbell, William Clancy, Thomas Dwyer, Christian Goetz, Elias Goodman, Frank J. Goodwin, Joseph T. Hackett, Benjamin E. Hall, Jeremiah Kennefick, Francis J. Lantry, Frederick L. Marshall, John J. Murphy, Robert Muh, Andrew A. Noonan, John J. O'Brien, Charles A. Parker, Rufus R. Randall, Andrew Robinson, Joseph Schilling, Henry L. School, William Tait, Frederick A. Ware, Charles Wines, Collin H. Woodward, Jacob C. Wund—29.

Alderman Robinson moved that the reading of the minutes of the last meeting be dispensed with and that they be approved as printed.

Which was adopted.

MESSAGES FROM HIS HONOR THE MAYOR.

The President laid before the Board the following message from his Honor the Mayor:
CITY OF NEW YORK—OFFICE OF THE MAYOR,
December 27, 1897.

To the Honorable the Board of Aldermen, New York:

GENTLEMEN—I return herewith, without approval, resolution of your Honorable Body permitting Henry Dohman to maintain a hitching-post at the southeast corner of Madison avenue and One Hundred and Thirty-second street, on the ground of the report of the Commissioner of Public Works, that hitching-posts are illegal and a dangerous class of sidewalk obstructions.

Very respectfully yours,

W. L. STRONG, Mayor.

Resolved, That Henry Dohman, at the southeast corner of Madison avenue and One Hundred and Thirty-second street, be and he is hereby permitted to erect and maintain a hitching-post in front of his premises, the same to be paid for by himself, but to be of pattern and material as directed by the Commissioner of Public Works, placed in position under the supervision of said Commissioner, and be subject to removal at the pleasure of the Common Council.

Which was laid over, ordered to be printed in the minutes and published in full in the CITY RECORD.

The President laid before the Board the following message from his Honor the Mayor:
CITY OF NEW YORK—OFFICE OF THE MAYOR,
December 27, 1897.

To the Honorable the Board of Aldermen, New York:

GENTLEMEN—I return herewith, without approval, resolution of your Honorable Body permitting Schmigg & Hillenbrandt to erect a storm-door at No. 136 Lenox avenue, on the ground of the report of the Commissioner of Public Works that the erection and maintenance of storm-doors on the public sidewalk is illegal.

Very respectfully yours,

W. L. STRONG, Mayor.

Resolved, That permission be and the same is hereby given to Schmigg & Hillenbrandt, of No. 136 Lenox avenue, to place, erect and keep a storm-door in front of their premises, provided that the said storm-door be constructed in compliance with the provisions of the ordinance relating to storm-doors, the work to be done at their own expense, under the direction of the Commissioner of Public Works; such permission to continue only during the pleasure of the Common Council.

Which was laid over, ordered to be printed in the minutes and published in full in the CITY RECORD.

The President laid before the Board the following message from his Honor the Mayor:
CITY OF NEW YORK—OFFICE OF THE MAYOR,
December 27, 1897.

To the Honorable the Board of Aldermen, New York:

GENTLEMEN—I return herewith, without approval, resolution of your Honorable Body permitting Joshua Williams Davis to cut down the curb two and a half inches at No. 123 West Fifty-third street, on the ground of the report of the Commissioner of Public Works that this resolution is unnecessary, as permission can be obtained from the Water Purveyor.

Very respectfully yours,

W. L. STRONG, Mayor.

Resolved, That permission be and the same is hereby given to Joshua Williams Davis to cut down the curb two and one-half inches in front of his stable, No. 123 West Fifty-first street, the work to be done at his own expense, under the direction of the Commissioner of Public Works; such permission to continue only during the pleasure of the Common Council.

Which was laid over, ordered to be printed in the minutes and published in full in the CITY RECORD.

MOTIONS AND RESOLUTIONS.

By Alderman Lantry—

Resolved, That permission be and the same is hereby given to Mrs. A. B. Barnes to suspend ten banners at various points throughout the City, for the purpose of announcing the Fairy Operetta of Cinderella, for the benefit of Seton Hospital for Consumptives, St. John's Day Nursery and St. Ann's Maternity Hospital; the work to be done at her own expense, under the direction of the Commissioner of Public Works; such permission to continue only until January 15, 1898.

Which was adopted.

COMMUNICATIONS FROM DEPARTMENTS AND CORPORATION OFFICERS.

The President laid before the Board the following communication from the Department of Docks:

CITY OF NEW YORK—DEPARTMENT OF DOCKS,
PIER A, NORTH RIVER, BATTERY PLACE,
NEW YORK, December 23, 1897.

Hon. JOHN JEROLOMAN, President, Board of Aldermen:

SIR—At a meeting of the Board of Docks, held this date, the Consulting Architect of this Department, Edward H. Kendall, submitted a report in reference to the heating and lighting of Recreation Piers, a copy of which I was directed to transmit to your Honorable Board, and to request that the resolution now under consideration be adopted as soon as practicable.

Yours respectfully,

GEO. S. TERRY, Secretary.
NEW YORK, December 23, 1897.

To the Board of Docks:

GENTLEMEN—In accordance with the resolutions of your Board on September 23 and October 21, I take pleasure in presenting the plans, specifications and detail drawings for heating the Recreation Pier Buildings at East Twenty-fourth, West Fiftieth and East Third streets.

They have been prepared with great care, and will, I think, fully meet with the difficult requirements of their several locations. Being convinced at the outset that it would be unjust to the City and to the times in which we live if your Department should not avail itself of the best devices known for the economical administration, or running, of these steam plants, I have, in concurrence with the opinion of your Engineer-in-Chief and of experts whom I have consulted and employed, specified such boilers, shaking-grates for pea coal, automatic damper regulators, reducing valves, radiators, radiator valves, thermostatic valves, feed-water heaters, vacuum and feed pumps, blowers and sectional covering for the steam and water pipes, as will produce a satisfactory and economical result and be creditable alike to your Department and to the City of New York.

Respectfully submitted,

(Signed) EDWARD H. KENDALL, Consulting Architect, Department of Docks.

Which was ordered on file.

The President laid before the Board the following communication from the Board of Estimate and Apportionment:

Resolved, That the sum of five hundred dollars (\$500) be and the same is hereby transferred from the appropriation made to the Common Council for 1897 entitled "Salaries—Common Council," the same being in excess of the amount required for the purposes and objects thereof, to the appropriation made for 1897 entitled "City Contingencies," the amount of said appropriation being insufficient.

A true copy of resolution adopted by the Board of Estimate and Apportionment December 23, 1897.

CHAS. V. ADEE, Clerk.

Which was ordered on file.

COMMUNICATIONS.

The President laid before the Board the following communication from James P. Hart:
NEW YORK, December 27, 1897.

WM. H. TEN EYCK, Esq., Chief Clerk of the Board of Aldermen:

SIR—I hereby tender my resignation as Commissioner of Deeds of the City and County of New York, to take effect December 28, 1896.

Respectfully,

JAS. P. HART, No. 200 First avenue, New York.

The resignation was accepted, and the vacancy referred to the Committee on Salaries and Offices.

The President laid before the Board the following communication from the Craig Colony:

STATE OF NEW YORK—CRAIG COLONY,
SONYEA, N. Y., December 24, 1897.

To Mr. WILLIAM H. TEN EYCK, Clerk of the Board of Aldermen, New York, New York County, N. Y.:

DEAR SIR—In accordance with legal requirements, you are herewith notified that Nicholas

Corr; age, 25; sex, male; nationality, American; residence, New York City, and an epileptic, was, on the official application of John P. Faure, Commissioner of Public Charities of New York County, admitted to the Craig Colony on November 3, 1897, as an indigent patient, for a non-specified period of time.

Very respectfully,

WM. P. SPRATLING, Medical Superintendent.

STATE OF NEW YORK—CRAIG COLONY,
SONYEA, N. Y., December 24, 1897.

To Mr. WILLIAM H. TEN EYCK, Clerk of the Board of Aldermen, New York, New York County, N. Y.:

DEAR SIR—In accordance with legal requirements, you are herewith notified that William Reiersen, age, 19; sex, male; nationality, American; residence, New York City, and an epileptic, was, on the official application of John P. Faure, Commissioner of Public Charities of New York County, admitted to the Craig Colony on November 30, 1897, as an indigent patient, for a non-specified period of time.

Very respectfully,

WM. P. SPRATLING, Medical Superintendent.

STATE OF NEW YORK—CRAIG COLONY,
SONYEA, N. Y., December 24, 1897.

To Mr. WILLIAM H. TEN EYCK, Clerk of the Board of Aldermen, New York, New York County, N. Y.:

DEAR SIR—In accordance with legal requirements, you are herewith notified that Spencer Huggins, age, 57; sex, male; nationality, English; residence, New York City, and an epileptic, was, on the official application of John P. Faure, Commissioner of Public Charities of New York County, admitted to the Craig Colony on October 26, 1897, as an indigent patient, for a non-specified period of time.

Very respectfully,

WM. P. SPRATLING, Medical Superintendent.

Which was referred to the Comptroller.

REPORTS.

The Committee on Finance, to whom was referred the annexed resolution, with instructions to examine the bill of Werner & Windolph, respectfully

REPORT:

That, having examined the subject, they recommend that the accompanying resolution of your committee be adopted:

Resolved, That the Comptroller be and he is hereby authorized and instructed to draw a warrant for the sum of eighty dollars in favor of Werner & Windolph, for designs for flags, etc., the same to be charged to the appropriation for City Contingencies for 1897.

FRANK J. GOODWIN, ROBERT MUH, FREDERICK L. MARSHALL, Committee on Finance.

Which was adopted by the following vote:

Affirmative—The President, the Vice-President, Aldermen Burke, Campbell, Clancy, Dwyer, Goetz, Goodman, Goodwin, Hackett, Hall, Kennefick, Lantry, Marshall, Noonan, O'Brien, Parker, Randall, Robinson, Schilling, School, Tait, Ware, Wines, and Wund—25.

UNFINISHED BUSINESS.

Alderman Randall called up G. O. 1974, being a resolution, as follows:

Resolved, That the Commissioner of Street Improvements of the Twenty-third and Twenty-fourth Wards be and he hereby is directed to change and designate the numbers of houses on Park avenue, north of the Harlem river, beginning with street number 2100 and running north.

Which was adopted by the following vote:

Affirmative—The President, the Vice-President, Aldermen Burke, Campbell, Clancy, Dwyer, Goetz, Goodman, Goodwin, Hackett, Hall, Kennefick, Lantry, Marshall, Noonan, O'Brien, Parker, Randall, Robinson, Schilling, School, Tait, Ware, Wines, and Wund—25.

Alderman Lantry called up G. O. 1986, being a resolution, as follows:
Resolved, That, in addition to the sum of three hundred dollars appropriated for the decoration, music, etc., of the City Hall, in honor of the birth of Greater New York, as set forth in the resolution adopted by the Board of Aldermen December 21, 1897, and approved by the Mayor December 22, 1897, that a further appropriation of five hundred dollars be made therefor, to be paid from the said City Contingent Fund, provided such amount be transferred by the Board of Estimate and Apportionment to such contingent fund.

Which was adopted by the following vote:

Affirmative—The President, the Vice-President, Aldermen Burke, Clancy, Dwyer, Goetz, Goodman, Goodwin, Hackett, Hall, Kennefick, Lantry, Marshall, Muh, Noonan, O'Brien, Parker, Randall, Robinson, Schilling, School, Tait, Ware, Wines, and Wund—25.

Alderman Randall called up G. O. 1977, being a resolution, as follows:
Resolved, That the name of Norwood avenue, from Moshulu Parkway to Gun Hill road, be and the same is hereby changed to Decatur avenue, under the direction of the Commissioner of Street Improvements of the Twenty-third and Twenty-fourth Wards.

Which was adopted by the following vote:

Affirmative—The President, the Vice-President, Aldermen Burke, Clancy, Dwyer, Goetz, Goodman, Goodwin, Hackett, Hall, Kennefick, Lantry, Marshall, Muh, Noonan, O'Brien, Parker, Randall, Robinson, Schilling, School, Tait, Ware, Wines, and Wund—25.

Alderman Wines called up Veto Message No. 409, and moved that it be adopted, notwithstanding the objections of his Honor the Mayor. The message is as follows:

CITY OF NEW YORK—OFFICE OF THE MAYOR, December 13, 1897. To the Honorable the Board of Aldermen, New York:

GENTLEMEN—I return herewith, without approval, resolution of your Honorable Body permitting C. J. Reilly to erect a storm-door in front of his premises, No. 345 East One Hundred and Fifteenth street, on the ground of the report of the Commissioner of Public Works that the erection and maintenance of storm-doors on the public sidewalk constitutes an illegal obstruction.

Very respectfully yours,

W. L. STRONG, Mayor.

Resolved, That permission be and the same is hereby given to Cornelius J. Reilly to erect, keep and maintain a storm-door in front of his premises, No. 345 East One Hundred and Fifteenth street, provided that said storm-door be constructed in accordance with the provisions of the ordinance relating to storm-doors, the work to be done at his own expense under the direction of the Commissioner of Public Works; such permission to continue only during the pleasure of the Common Council.

The Board then, as provided in section 75, chapter 410, of the Laws of 1882, proceeded to reconsider the same and, upon a vote being taken thereon, was adopted, notwithstanding the objections of his Honor the Mayor, as follows:

Affirmative—Aldermen Burke, Clancy, Dwyer, Goetz, Goodman, Goodwin, Hackett, Kennefick, Lantry, Marshall, Muh, Noonan, O'Brien, Parker, Randall, Robinson, Schilling, School, Tait, Ware, Wines, and Wund—22.

Negative—The President—1.

Excused—Alderman Hall—1.

REPORTS RESUMED.

POLICE DEPARTMENT OF THE CITY OF NEW YORK,
No. 300 MULBERRY STREET,
NEW YORK, October 29, 1897.

WILLIAM H. TEN EYCK, Clerk, Board of Aldermen:

DEAR SIR—At a meeting of the Board of Police held this day the following proceedings were had:

Whereas, Under section 405 of the Corporation Ordinances, furniture and other property is brought to Police Headquarters in cases where a dispute arises regarding the charges for the transportation or cartage of the same; and

Whereas, As there is a vast amount of this stuff brought here, it necessarily clogs up and interferes with our accommodations for stolen and seized property and disabled Police material; and

Whereas, It creates a great deal of confusion to properly handle, label and store it until such time as the dispute is settled at the Mayor's office; and

Whereas, Sections 193, 195, 286 and 287 of the Corporation Ordinances direct the Commissioner of Public Works to remove abandoned property and incumbrances from the streets; and

Whereas, As disputed charges for the transportation of furniture and other property would naturally cause it to fall under the head of "Abandoned Property and Incumbrances"; therefore be it

Resolved, That the Board of Aldermen be requested to amend section 405 of the Corporation Ordinances by substituting the words "Bureau of Incumbrances" in lieu of "Chief of Police."

Very respectfully,

WM. H. KIPP, Chief Clerk.

The Committee on Law Department, to whom was referred the annexed communication in favor of amending the ordinances, section 405, respectfully

REPORT:

That, having examined the subject, they believe the proposed amendment to be necessary. They therefore recommend that the words "Bureau of Incumbrances" be substituted in lieu of the words "Chief of Police," wherever mentioned in said section. They therefore recommend that the annexed resolution and ordinance be adopted.

FREDERICK A. WARE, BENJAMIN E. HALL, RUFUS R. RANDALL, JACOB C. WUND, Committee on Law Department.

Which was adopted.

(G. O. 1987.)

The Committee on Law Department, to whom was referred the annexed preamble and resolution, respectfully

REPORT:

That, having examined the subject, they recommend that the annexed preamble and resolution be adopted:

Whereas, Chapter 138 of the Laws of 1890 specifically recites that it shall be lawful for the Mayor, Alderman and Commonalty of the City of New York to exempt places of public worship from the payment of any fee for the construction of vaults under the sidewalk or in front thereof; and

Whereas, The Commissioner of Public Works has compelled the Congregation Shereth Israel and L. Napoleon Levy, its President, to pay the sum of eighty-four dollars, notwithstanding the provisions of said Act of 1890; therefore be it

Resolved, That the Commissioner of Public Works be and he is hereby respectfully requested to arrange with the Finance Department for the repayment of said sum of eighty-four dollars, so paid him by the Congregation Shereth Israel and L. Napoleon Levy, its President.

FREDERICK A. WARE, JACOB C. WUND, RUFUS R. RANDALL, Committee on Law Department.

Subsequently Alderman Hall called up G. O. 1987, and moved to amend by striking out the resolution thereto attached and substituting therefor the following:

Resolved, That permission be and the same is hereby given Congregation Sheareth Israel, south side Seventieth street, Central Park, West, to construct a vault under the sidewalk in front of the above premises without the payment of the regular fee, provided the work be done in a safe and durable manner, and said congregation or its representatives, stipulate with the Commissioner of Public Works to save the City harmless from any loss or damage that may occur during the progress or subsequent to the completion of the work, the work to be done at their own expense, under the direction of the Commissioner of Public Works; such permission to continue only during the pleasure of the Common Council.

The amendment was adopted.

The report was then received and the substitute was adopted.

MOTIONS AND RESOLUTIONS RESUMED.

By Alderman Kennefick—

Preamble and resolution submitted to the Board of Aldermen of the City of New York:

Whereas, There are in existence many valuable relics and documents of Colonial and Revolutionary days and of the time of the war of 1812, the Mexican war and the Civil war, of great interest to every patriotic American citizen, and especially to all interested in historical research, and which have been so scattered throughout the country that the masses have not had access to them, and for which they crave; and

Whereas, It is fitting that such objects should be collected and displayed, not merely for historical purposes, but also as a tribute to the memory of those noble patriots who founded, preserved and maintained our indissoluble Union, and also to inculcate the love of their country and a pride in its history among the youth of the nation and of this great city; and

Whereas, The National Historical Museum, with these ends in view, is founded, and has already secured a number of most interesting relics, dating from the earliest periods of our country's history down to and including our late great war, comprising more than two thousand valuable relics, among which are thirty-four battle flags, 25 pieces of artillery, embracing French, Spanish and English guns, dating far back into the seventeenth century; arms, armor and ammunition; specimens of all small arms and accoutrements used in the United Service, from the flint-lock to the modern rifle; specimens of projectiles; relics from Yorktown to Gettysburg; specimens of uniforms and equipments for both horse and foot; hundreds of Indian war trophies of great value and variety, from the most ancient days to the present time, including relics of the Custer massacre; relics of Washington, Jefferson, Adams, Gates, La Fayette, Hamilton, Jackson, Taylor, Scott, Lincoln, Grant, Calhoun, Anderson, McClellan, Sherman, Sheridan and Hancock; maps and plans of famous battles and campaigns; medals and coins; Colonial and Continental currency; natural curiosities; pictures and sculpture, including many photographs taken in camp during the late war; books, manuscript and autographs of great value, and innumerable collections equally interesting; rare and priceless objects and documents; and

Whereas, The National Historical Museum is anxious to tender for permanent free exhibition to the people of the City of New York these and further acquisitions already pledged, and others, such as may from time to time be acquired by or loaned to the Museum, and to permanently display them in such a manner that they may be seen at all times, free, and without hindrance, by all the people of the city and of the nation; that it may be a safety deposit where those having precious relics may keep them and have access to them always, thus handing down from father to son their priceless family possessions; and

Whereas, The City of New York has a series of museums and free educational institutions, beginning with the Aquarium on the Battery, and including the Metropolitan Museum of Art and the American Museum of Natural History, and extending to the Zoological and Botanical gardens, now under construction in Bronx Park; and

Whereas, It is the purpose of the organization known as the National Historical Museum to place these invaluable relics on public exhibition for the education and elevation of the people of the City of New York and of the country, and to thereby inculcate and instill the spirit of patriotism, which is the foundation and essence of good citizenship; and

Whereas, The Old Hall of Records and Register's Office is the oldest and most historic public building in the city, having been erected in the middle of the last century and used as a jail for the confinement of American officers held as prisoners of war by the British during the Revolution, and because of its subsequent history so prominently associated with many of the most striking of local events; and

Whereas, The Old Hall of Records and Register's Office in the City Hall Park is shortly to be vacated, and is by its location, structure and architecture peculiarly fitted to such a purpose; be it and it hereby is

Resolved, That said building be and hereby is dedicated, granted and set aside, as soon as vacated, for the free exhibition of the collection of relics already and hereafter to be acquired by or loaned to the National Historical Museum, under the usual conditions of reversion to the City, consequent upon failure on the part of said Museum to assume, maintain and enjoy the privileges hereby granted.

The subjoined petition is signed by the following well-known people, representing a variety of interests and all shades of political opinions:

Hon. Thomas C. Platt, United States Senator.	John Hone, New York Stock Exchange.
Gen. Anson G. McCook, Chamberlain of New York City.	Mrs. Dunlap Hopkins.
Ashbel P. Fitch, Comptroller New York City.	Mrs. Brayton Ives.
Gen. Benjamin F. Tracy, former Secretary of the Navy.	Dr. Elizabeth Johnson.
Seth Low, President of Columbia College.	Mrs. Virginia T. Kent.
Chas. W. Dayton, former Postmaster of New York City.	Rev. J. Harris Knowles, Trinity Parish.
Judge George L. Ingraham, Justice of the Supreme Court.	Mrs. Marie Clinton Le Duc.
John D. Crimmins.	Lewis Cass Ledyard, Lawyer, Carter & Ledyard.
Joel B. Erhardt, Loyal Legion.	Mrs. Richard P. Lounsbury.
Wm. D'H. Washington, Sons of the American Revolution.	Mrs. Josephine Shaw Lowell.
Frederick R. Coudert, President Manhattan Club.	John McAnerney, President Seventh National Bank.
J. Pierpont Morgan, Banker, J. P. Morgan & Co.	Mrs. Donald McLean.
Mrs. Robert Abbe, President City History Club.	Robert Grier Monroe, Lawyer.
James W. Alexander, President University Club.	James Mortimer Montgomery, Secretary-General Sons of Revolution.
Rev. J. McClure Bellows.	General J. Frederick Pierson, President Army and Navy Club.
Augustus Belmont, Banker, Belmont & Co.	Miss Ellen J. Pond.
John M. Bowers, Lawyer.	T. F. Rodenbough, Brevet Brigadier-General U. S. A. (retired).
Hubert S. Brown.	Herbert L. Satterlee, Naval Reserve.
Prescott Hall Butler, Lawyer, Evarts, Choate & Beaman.	John A. Stewart, President United States Trust Company.
Walter S. Carter, Lawyer, Carter, Hughes & Dwight.	James Stillman, President, City National Bank.
Clarence Cary, Lawyer, Cary & Whittridge.	J. Edward Simmons, President Fourth National Bank.
Robert C. Cornell, City Magistrate.	Francis B. Swayne, Lawyer.
William H. Clark, Former Corporation Counsel.	Gen. Wager Swayne.
Charles D. Dickey, Banker, Brown Bros. & Co.	Henry S. Van Duzer, Judge-Advocate, N. G. S. N. Y.
Mrs. Louise W. Dickey.	James M. Varnum, Society of the Cincinnati.
John DuFais, Society of the War 1812.	Charles Dudley Warner, Man of Letters.
Mrs. Ben Ali Haggin.	Miss M. I. Wilmerding.
Mrs. Gertrude Van Cortlandt Hamilton.	Gen. James Grant Wilson, Historian of City of New York.
Arthur M. Hatch, Society of Colonial Wars.	And others.

To the Honorable Board of Aldermen:

The undersigned, being strongly impressed with the importance and great opportunity afforded to the people of the City by the passage of the resolution concerning the grant of the use of the old Hall of Records Building to the National Historical Museum, very respectfully petition your Honorable Body to adopt the same at the earliest date.

Joel B. Erhardt,
Wager Swayne,
Francis B. Swayne,
August Belmont,
Ashbel P. Fitch,
John McAnerney,
Charles W. Dayton,
Wm. H. Clark,
Arthur M. Hatch,
John Hone,
J. P. Morgan,
R. C. Cornell,
B. F. Tracy,
John A. Stewart,
J. Edward Simmons,
James W. Alexander,
Walter S. Carter,
T. C. Platt,
James Stillman,
Lewis Cass Ledyard,
J. Harris Knowles.

J. McClure Bellows,
Clarence Cary,
John M. Bowers,
R. G. Monroe,
Prescott Hall Butler,
Mrs. Donald McLean,
Gertrude Van Cortlandt Hamilton,
Marie Clinton Le Duc,
John D. Crimmins,
James M. Varnum,
James Mortimer Montgomery,
F. R. Coudert,
Wm. D'H. Washington,
Jno. DuFais,
Jas. Grant Wilson,
Herbert L. Satterlee,
H. S. Van Duzer,
Anson G. McCook,

Seth Low,
J. Fred. Pierson,
Geo. V. Manley,
T. F. Rodenbough,
Mrs. Dunlap Hopkins,
Ellen J. Pond,
Mrs. R. P. Lounsbury,
Jesse Festetics de Lohia,
Virginia T. Kent,
M. I. Wilmerding,
Chas. D. Dickey,
Elizabeth Johnson, M. D.,
Louise W. Dickey,
Eleanor B. Ives,
Hubert S. Brown,
Josephine Shaw Lowell,
Chas. Dudley Warner,
Mrs. Robert Abbe,
Lee W. Haggin,

Alderman Goodman offered the following amendment:

Resolved, That immediately after the approval hereof by his Honor the Mayor, the Clerk of this Board shall and he is hereby instructed to transmit a certified copy to the Honorable Robert A. Van Wyck, Mayor-elect, with request that he take such steps or inaugurate such measures as may be necessary to carry into effect and consummate the object of the foregoing resolution.

Which was adopted.

The resolution as amended was then adopted.

UNFINISHED BUSINESS RESUMED.

Alderman Hall called up G. O. 1958, being a resolution and ordinance, as follows:

Resolved, That the sidewalks on the north side of Ninety-seventh street, between Boulevard and West End avenue, and on the east side of West End avenue, between Ninety-sixth and Ninety-seventh streets, be flagged eight feet wide, where not already done, and that all the flagging and the curb now on the sidewalks be relaid and reset where necessary, and that new flagging and curb be furnished where the present flagging and curb are defective, as provided by section 321, chapter 410, Laws 1882, as amended by chapter 569, Laws 1887, under the direction of the Commissioner of Public Works; and that the accompanying ordinance therefor be adopted.

Be it Ordained by the Mayor, Aldermen and Commonalty of the City of New York, in Common Council convened, That the sidewalks on the north side of Ninety-seventh street, between Boulevard and West End avenue, and on the east side of West End avenue, between Ninety-sixth and Ninety-seventh streets, be flagged eight feet wide, where not already done, and that all the flagging and the curb now on the sidewalks be relaid and reset where necessary, and that new flagging and curb be furnished where the present flagging and curb are defective, as provided by section 31, chapter 410, Laws 1882, as amended by chapter 569, Laws 1887, under such directions as shall be given by the Commissioner of Public Works, who may appoint an Inspector thereon, and one of the City Surveyors.

And Whereas, The said Mayor, Aldermen and Commonalty deem it necessary, for the more speedy execution of the said ordinance, to cause the work necessary for the purpose above specified to be executed and done at their own expense, on account of the persons respectively upon whom the same might be assessed;

Therefore be it further Ordained, That the Board of Assessors be and they are hereby directed to make a just and equitable assessment of the expense of conforming to the provisions of this ordinance among the owners or occupants of all the houses and lots intended to be benefited thereby, in proportion, as nearly as may be, to the advantages which each may be deemed to acquire.

Which was adopted by the following vote:

Affirmative—The President, the Vice-President, Aldermen Burke, Clancy, Dwyer, Goetz, Goodman, Goodwin, Hackett, Hall, Kennefick, Lantry, Marshall, Muh, Murphy, Noonan, O'Brien, Parker, Randall, Robinson, Schilling, School, Tait, Ware, Wines, Woodward, and Wund—27.

Alderman Woodward called up G. O. 1920, being a resolution and ordinance as follows:

Resolved, That the carriage-way of Audubon avenue, from One Hundred and Seventy-fifth street to Fort George avenue, be regulated and graded, the curb-stones set, the sidewalks flagged a space four feet in width, crosswalks laid at each intersecting or terminating street and avenue, where not already laid, under the direction of the Commissioner of Public Works; and that the accompanying ordinance therefor be adopted.

Be it Ordained by the Mayor, Aldermen and Commonalty of the City of New York, in Common Council convened, That the carriage-way of Audubon avenue, from One Hundred and Seventy-fifth street to Fort George avenue, be regulated and graded, the curb-stones set, the sidewalks flagged a space four feet in width, crosswalks laid at each intersecting or terminating street and avenue, where not already laid, under such directions as shall be given by the Commissioner of Public Works, who may appoint an Inspector thereon, and one of the City Surveyors.

And Whereas, The said Mayor, Aldermen and Commonalty deem it necessary, for the more speedy execution of the said ordinance, to cause the work necessary for the purpose above specified to be executed and done at their own expense, on account of the persons respectively upon whom the same might be assessed;

Therefore be it further Ordained, That the Board of Assessors be and they are hereby directed to make a just and equitable assessment of the expense of conforming to the provisions of this ordinance among the owners or occupants of all the houses and lots intended to be benefited thereby, in proportion, as nearly as may be, to the advantages which each may be deemed to acquire.

Which was adopted by the following vote:

Affirmative—The President, the Vice-President, Aldermen Brown, Burke, Campbell, Clancy, Dwyer, Goetz, Goodman, Goodwin, Hackett, Hall, Kennefick, Lantry, Marshall, Muh, Murphy, Noonan, O'Brien, Parker, Randall, Robinson, Schilling, School, Tait, Ware, Wines, Woodward, and Wund—29.

MOTIONS AND RESOLUTIONS AGAIN RESUMED.

By Alderman Lantry—

Resolved, That when this Board adjourns it do adjourn sine die.

Which was lost by the following vote:

Affirmative—Aldermen Goodwin, Kennefick, Lantry, Muh, Murphy, Noonan, O'Brien, Schilling, and Tait—9.

Negative—The President, the Vice-President, Aldermen Brown, Campbell, Clancy, Dwyer, Goetz, Goodman, Hackett, Hall, Marshall, Parker, Randall, Robinson, School, Ware, Wines, Woodward, and Wund—19.

UNFINISHED BUSINESS AGAIN RESUMED.

Alderman School called up G. O. 1983, being a resolution and ordinance, as follows:

Resolved, That East One Hundred and Fifty-eighth street, from Mott avenue to Sheridan avenue, be regulated and graded, the curb-stones set, the sidewalks flagged a space four feet in width, crosswalks laid at each intersecting or terminating street and avenue, where not already laid, fences placed along the sides thereof where necessary and approaches built where required, under the direction of the Commissioner of Street Improvements of the Twenty-third and Twenty-fourth Wards; and that the accompanying ordinance therefor be adopted.

Be it Ordained by the Mayor, Aldermen and Commonalty of the City of New York, in Common Council convened, That East One Hundred and Fifty-eighth street, from Mott avenue to Sheridan avenue, be regulated and graded, the curb-stones set, the sidewalks flagged a space four feet in width, crosswalks laid at each intersecting or terminating street and avenue, where not already laid, fences placed along the sides thereof where necessary and approaches built where required, under such directions as shall be given by the Commissioner of Street Improvements of the Twenty-third and Twenty-fourth Wards, who may appoint an Inspector thereon, and one of the City Surveyors.

And Whereas, The said Mayor, Aldermen and Commonalty deem it necessary, for the more speedy execution of the said ordinance, to cause the work necessary for the purpose above specified to be executed and done at their own expense, on account of the persons respectively upon whom the same might be assessed;

Therefore be it further Ordained, That the Board of Assessors be and they are hereby directed to make a just and equitable assessment of the expense of conforming to the provisions of this ordinance among the owners or occupants of all the houses and lots intended to be benefited thereby, in proportion, as nearly as may be, to the advantages which each may be deemed to acquire.

Which was adopted by the following vote:

Affirmative—The President, the Vice-President, Aldermen Brown, Burke, Clancy, Dwyer, Goetz, Goodman, Goodwin, Hackett, Hall, Kennefick, Lantry, Marshall, Muh, Murphy, Noonan, O'Brien, Parker, Randall, Robinson, Schilling, School, Tait, Ware, Wines, Woodward, and Wund—28.

PETITIONS.

By Alderman Brown—

To the Honorable Board of Aldermen of the City of New York:

The undersigned, owners or occupants of property upon Park Row, hereby state to your Honorable Body that the safety, health and convenience of the public require that the roadway of Park Row be widened between Mail street and Broadway.

Your petitioners further show that the sidewalk upon the Post Office side of Park Row is much in excess of the regulation width and is seldom used by the traveling public, the great bulk of foot passengers proceeding upon the sidewalk upon the opposite side of the street.

Your petitioners further state that not only will the public be greatly benefited by such change, but that no one will be prejudiced thereby.

Your petitioners therefore request that the width of the sidewalk of Park Row south of Mail street upon the Post Office side be limited, and the roadway of the street be increased so as to conform with the diagram hereto annexed.

Lipton & Westervelt, No. 1 Park Row.

M. J. McKeon, No. 3 Park Row.

Jeffreys & Co., No. 1 Park Row.

Jeffreys & Son, No. 23 Park Row.

William Renn, Nos. 31 and 32 Park Row.

In connection herewith Alderman Brown offered the following:

Resolved, That the sidewalk on the westerly side of Park Row, between Mail street and Broadway, be reduced three and one-half feet in width, and that the curb and gutter stones adjoining the same be relaid and reset, under the direction of the Commissioner of Public Works, in accordance with the accompanying diagram, provided that the party or parties petitioning therefor, or some of them, shall, within five days hereafter, file with the Commissioner of Public Works an agreement in writing and under seal that the work shall be done at his or their expense, and that the accompanying ordinance be adopted.

Be it enacted by the Mayor, Aldermen and Commonalty of the City of New York, in Common Council convened, that the sidewalk on the westerly side of Park Row, between Mail street and Broadway, be reduced three and one-half feet in width, and that the curb and gutter stones adjoining the same be relaid and reset, under the direction of the Commissioner of Public Works, in accordance with the accompanying diagram, provided that the party or parties petitioning therefor, or some of them, shall within five days hereafter file with the Commissioner of Public Works an agreement in writing and under seal that the work shall be done at his or their expense.

WASHINGTON, D. C., December 27, 1897.

Custodian, Court-house and Post Office, New York City:

Department will interpose no objection to widening of carriage-way on Park Row, between Mail Street and Broadway, by City, provided Government put to no expense thereby and its use of any vaults or chutes under sidewalk not interfered with.

4.55 P. M.

The resolution was adopted.

O. L. SPAULDING, Acting Secretary.

REPORTS AGAIN RESUMED.

The Committee on Streets, to whom was referred the annexed resolution in favor of permitting the New York Ice Company to lay ten-inch pipe along East Eighteenth street, from No. 525 to East river, respectfully

REPORT:

That, having examined the subject, they believe the proposed improvement to be necessary. They therefore recommend that the said resolution be adopted.

Resolved, That permission be and the same is hereby given to the New York Ice Company to lay a ten-inch cast-iron suction pipe along East Eighteenth street, from No. 525 East Eighteenth street to the East river, for the purpose of taking salt water from said river to said premises, pipes to be laid three feet below the surface on the south side of East Eighteenth street, and not to interfere with any pipes, sewers or conduits now already laid in said street, as shown on the accompanying diagram, upon payment of the usual fee, provided that the said New York Ice Company stipulates with the Commissioner of Public Works to save the City harmless from any loss or damage that may occur during the progress or subsequent to the work of laying said pipe, the work to be done at their own expense, under the direction of the Commissioner of Public Works; such permission to continue only during the pleasure of the Common Council.

COLLIN H. WOODWARD, ANDREW A. NOONAN, JACOB C. WUND, JOSEPH SCHILLING, Committee on Streets.

Which was adopted.

MOTIONS AND RESOLUTIONS AGAIN RESUMED.

By Alderman Brown—

Resolved, That permission be and the same is hereby given to H. O. Havemeyer to erect storm-doors in front of the elevator entrance of No. 220 Broadway, provided said storm-doors conform in all respects with the ordinance relating to storm-doors, the work to be done at his own expense, under the direction of the Commissioner of Public Works; such permission to continue only during the pleasure of the Common Council.

Which was adopted.

By Alderman Clancy—

Resolved, That permission be and the same is hereby given to Independent Russian-American Schuetzen Bund to parade with an advertisement on the evening of Saturday, January 1, 1898, through the territory bounded by the Battery, Tenth street, Broadway and the East river, the work to be done at their own expense, under the direction of the Chief of Police; such permission to continue only for date above mentioned.

Which was adopted.

By the same—

Resolved, That permission be and the same is hereby given to the following-named persons, whose applications for stands have been indorsed by the Aldermen of the districts in which they are to be located, to erect, keep and maintain stands for the sale of newspapers, periodicals, fruit and soda-water and for bootblacking purposes, within the stoop-lines, at the locations set respectively opposite their names, and in compliance with the provisions of an ordinance entitled "An ordinance to regulate the use of the sidewalks of the streets of the City of New York, within the stoop-lines, for stands, etc.":

Third Assembly District—Soda-water stand: Israel Semachowitz, No. 50 Delancey street.

Fifth Assembly District—Soda-water stand: Mendel Araten, No. 45 Willett street.

Thirteenth Assembly District—Newspaper stand: Barnet Segalovitz, No. 265 West Nineteenth street.

Twenty-seventh Assembly District—Bootblack stand: Francesco Bastone, No. 2357 Second avenue.

Twenty-eighth Assembly District—Newspaper stands: Joseph Chankin, No. 200 West One Hundred and Thirty-fifth street; Joshua Pollock, No. 2527½ Eighth avenue.

Which was adopted.

By Alderman Goodman—

Resolved, That the permit granted and license issued to Peter W. Kennedy to erect and maintain a newspaper stand on the northeast corner of Third avenue and One Hundred and Twenty-fifth street, under the elevated railroad stairs, be and the same is hereby revoked.

Which was adopted.

By the same—

Resolved, That permission be and the same is hereby given to Rosie Rosoff to place and keep a stand for the sale of newspapers and periodicals under the elevated railroad stairs on the northeast corner One Hundred and Twenty-fifth street and Third avenue, provided said stand shall be erected in conformity with the provisions of subdivision 3, section 86 of the New York City Consolidation Act of 1882, as amended by the Laws of 1896, and subject to the conditions of an ordinance to regulate the placing of stands under the stairs of the elevated railroad which was adopted by the Board of Aldermen September 3, 1896, and repassed on October 6, 1896.

Which was adopted.

By the same—

Whereas, The contemplated celebration and exercises in front of and about the City Hall on the night of December 31 promise to be of a highly important and interesting character, and should be witnessed by all who can conveniently attend; therefore

Resolved, That the Committee on County Affairs, which is authorized to arrange for a suitable recognition of the official birth of Greater New York on January 1, be also empowered and instructed to provide on the evening of the 31st inst. for public officials and their ladies, such accommodations as the interior of the City Hall will permit.

Which was adopted.

By Alderman Goodman—

Resolved, That the ordinances relating to the discharge of fireworks and firearms in the City of New York be and the same are hereby suspended, so as to permit the "New York Journal" to discharge a salute of guns in the vicinity of the City Hall Park on the night of December 31, 1897, and for a display of fireworks upon the same evening, such work to be done at its own expense, under the direction of the Chief of Police; such suspension to continue only for the day and date above mentioned.

Which was adopted.

By the same—

Resolved, That the various committees of this Board be and they are hereby discharged from the further consideration of the several matters referred to them and now in their possession, and they are hereby respectfully requested to return all papers in their possession to the Clerk of this Board, and the same be filed by him.

Resolved, further, That all matters on the list of general or special orders and all other matters undisposed of be taken from such list and placed on file.

Which was adopted.

By Alderman Kennefick—

Resolved, That permission be and the same is hereby given to Joseph Brennan to place and keep a stand for the sale of newspapers and periodicals under the elevated railroad stairs on the northeast corner of Chambers and West Broadway, provided said stand shall be erected in conformity with the provisions of subdivision 3, section 86 of the New York City Consolidation Act of 1882, as amended by the Laws of 1896, and subject to the conditions of an ordinance to

regulate the placing of stands under the stairs of the elevated railroad which was adopted by the Board of Aldermen September 3, 1896, and repassed on October 6, 1896.

Which was adopted.

By Alderman Marshall—

Resolved, That permission be and the same is hereby given to W. Joralemon to construct an outside stairway in front of the premises No. 122 Elm street, as shown upon the accompanying diagram, the work to be done at his own expense, under the direction of the Commissioner of Public Works; such permission to continue only during the pleasure of the Common Council.

Which was adopted.

By Alderman Parker—

Resolved, That permission be and the same is hereby given to George Ehret to extend a vault in front of his premises, Nos. 232 and 234 East Ninety-third street, as shown on the accompanying diagram, upon payment of the usual fee, provided that the said George Ehret shall stipulate with the Commissioner of Public Works to save the City harmless from any loss or damage that may be occasioned by the exercise of the privilege hereby given during the progress or subsequent to the completion of extending said vault, the work to be done at his own expense, under the direction of the Commissioner of Public Works.

Which was adopted.

By Alderman Robinson—

Resolved, That permission be and the same is hereby given to the American Theatre Opera Company to erect, place and keep two signs on the Forty-second street side of the American Theatre, Forty-second street and Eighth avenue, provided said signs conform in all respects to the ordinance relating to signs, the work to be done at their own expense, under the direction of the Commissioner of Public Works; such permission to continue only during the pleasure of the Common Council.

Which was adopted.

By Alderman Randall—

The Mayor, Aldermen and Commonalty of the City of New York do ordain as follows:

Section 1. Section 251 of Article 14 of the Revised Ordinances of 1897 is hereby amended by inserting after the word "throughout" the words "and shall be good, durable composition, to be approved by the Commissioner of Public Works," and by further striking out the word "or" before the word "of."

Sec. 2. Section 252 of the Revised Ordinances of 1897 is hereby amended by inserting after the word "shall" in the second line the words "either be good, durable composition, to be approved by the Commissioner of Public Works."

Sec. 3. All ordinances or parts of ordinances inconsistent or conflicting with the provisions of this ordinance are hereby repealed.

Sec. 4. This ordinance shall take effect immediately.

Alderman Lantry moved that the whole be laid on the table.

Which was adopted.

Alderman Ware moved that the above vote be reconsidered.

Alderman Lantry moved that the above motion be laid on the table.

Which was lost by the following vote:

Affirmative—The President, Aldermen Burke, Campbell, Goodwin, Hall, Kennefick, Lantry, Muh, Murphy, O'Brien, Schilling, and Wund—12.

Negative—Aldermen Brown, Clancy, Dwyer, Goodman, Hackett, Marshall, Noonan, Parker, Randall, Robinson, School, Tait, Ware, Wines, and Woodward—15.

Alderman Ware's motion to reconsider was then adopted.

The President then put the question whether the Board would agree with said ordinance.

Which was decided in the negative by the following vote:

Affirmative—Aldermen Brown, Clancy, Dwyer, Goodman, Hackett, Hall, Marshall, Noonan, Parker, Randall, Robinson, School, Ware, Wines, and Woodward—15.

Negative—The President, Aldermen Burke, Campbell, Goodwin, Kennefick, Lantry, Muh, Murphy, O'Brien, Schilling, Tait, and Wund—12.

By Alderman Ware—

Resolved, That permission be and the same is hereby given to Henry F. Kahl to place and keep a stand for the sale of newspapers and periodicals under the elevated railroad stairs on the southwest corner of Eighteenth street and Sixth avenue, provided said stand shall be erected in conformity with the provisions of subdivision 3, section 86 of the New York City Consolidation Act of 1882, as amended by the Laws of 1896, and subject to the conditions of an ordinance to regulate the placing of stands under the stairs of the elevated railroad which was adopted by the Board of Aldermen September 3, 1896, and repassed on October 6, 1896.

Which was adopted.

By the same—

Resolved, That permission be and the same is hereby given to Mrs. Mallon Felton to place and keep a stand for the sale of newspapers and periodicals under the elevated railroad stairs on the northwest corner of Sixth avenue and Twenty-third street, provided said stand shall be erected in conformity with the provisions of subdivision 3, section 86 of the New York City Consolidation Act of 1882, as amended by the Laws of 1896, and subject to the conditions of an ordinance to regulate the placing of stands under the stairs of the elevated railroad which was adopted by the Board of Aldermen September 3, 1896, and repassed on October 6, 1896.

Which was adopted.

By the same—

Resolved, That permission be and the same is hereby given to Max Rosenthal to place and keep a stand for the sale of newspapers and periodicals under the elevated railroad stairs on the southwest corner Sixth Avenue and Twenty-eighth street, provided said stand shall be erected in conformity with the provisions of subdivision 3, section 86 of the New York City Consolidation Act of 1882, as amended by the Laws of 1896, and subject to the conditions of an ordinance to regulate the placing of stands under the stairs of the elevated railroad which was adopted by the Board of Aldermen September 3, 1896, and repassed on October 6, 1896.

Which was adopted.

By Alderman Woodward—

Resolved, That permission be and the same is hereby given to William King to place and keep a stand for the sale of newspapers and periodicals under the elevated railroad stairs on the southeast corner One Hundred and twenty-fifth street and Eighth avenue, provided said stand shall be erected in conformity with the provisions of subdivision 3, section 86 of the New York City Consolidation Act of 1882, as amended by the Laws of 1896, and subject to the conditions of an ordinance to regulate the placing of stands under the stairs of the elevated railroad which was adopted by the Board of Aldermen September 3, 1896, and repassed on October 6, 1896.

Which was adopted.

By Alderman Burke—

Resolved, That Stephen Philbin, of No. 139 West Seventy-sixth street, be and he hereby is reappointed a Commissioner of Deeds in and for the City and County of New York.

Which was referred to the Committee on Salaries and Offices.

By Alderman Goodman—

Resolved, That William R. Wood, of No. 130 West Sixty-fifth street, be and he is hereby appointed a Commissioner of Deeds in and for the City and County of New York.

Which was referred to the Committee on Salaries and Offices.

By the same—

Resolved, That Harry Osborne, of No. 222 West Thirty-sixth street, be and he is hereby appointed a Commissioner of Deeds in and for the City and County of New York.

Which was referred to the Committee on Salaries and Offices.

By Alderman Schilling—

Resolved, That Herman Fromme, of No. 287 Broadway, be and he is hereby appointed a Commissioner of Deeds in and for the City and County of New York.

Which was referred to the Committee on Salaries and Offices.

By Alderman Ware—

Resolved, That Edwin N. Whitfield, of No. 42 West Twenty-sixth street, be and he hereby is appointed a Commissioner of Deeds in and for the City and County of New York.

Which was referred to the Committee on Salaries and Offices.

By the same—

Resolved, That Benjamin Bernstein, of No. 309 Broadway, be and he hereby is appointed a Commissioner of Deeds in and for the City and County of New York.

Which was referred to the Committee on Salaries and Offices.

REPORTS AGAIN RESUMED.

The Committee on Salaries and Offices, to whom was referred the annexed resolutions in favor of appointing various persons Commissioners of Deeds, respectfully

REPORT:

That, having examined the subject, they recommend that the said resolutions be adopted.

Resolved, That the following-named persons be and they are hereby respectively reappointed to the office of Commissioner of Deeds in and for the City and County of New York, to date from the expiration of their present terms of office:

Charles Putzel.

Townsend Wandell.

Edward J. Healey.

Louis Bruckheimer.

George H. Hyde.

John C. McNeilly.

Richard L. Lush.

Gino Speranza.

John J. Ranagan.

Henry A. Van Pelt.

Alexander C. Montgomery.

Isaac L. Dunn.

George F. Scannell.

Frank H. Mackintosh.

George W. Mark.

Henry Silverstone.

Max Altmayer.

John J. Ranagan.

L. Hensel.

Thomas H. Baskerville.

William P. Rinckhoff.

William B. Ewing.

Louis Bock.

Edward J. Halligan.

Daniel Sherry.

Edward P. Holahan.

Resolved, That the following-named persons be and they are hereby respectively appointed Commissioners of Deeds in and for the City and County of New York, in the places, respectively, of those whose names appear opposite, and whose term of office has expired, viz.:

William Richmond, in place of Charles A. Rosenthal.
Gustavus A. Rathkowsky, in place of Edward Swann.
Max Monfried, in place of E. C. Sheehy.
Alfred I. Dittler, in place of Miss Jennie Scott.
O. Willett Hochstadter, in place of Sidney Smith.
Charles Comisky, in place of Peter Schultz.
Thomas Hogan, in place of David J. Solinger.
John Haldorf, in place of Miss Emma M. Voos.
Gustave Hafer, in place of Laurence A. Wells.
George William Wallace, in place of E. J. Wilkinson.
Jessie W. Ehrlich, in place of Aldred W. Ahrens.
Max Davis, in place of Albert Bach.
I. E. Rider, in place of William H. Broderick.
Bernath Krausz, in place of Edward J. Dwyer.
Louis L. Van Derloven, in place of George C. de Arcy.
RUFUS R. RANDALL, JOSEPH T. HACKETT, FRANK J. GOODWIN, THOMAS DWYER, THOMAS M. CAMPBELL, Committee on Salaries and Offices.
Which were adopted by the following vote:
Affirmative—The President, the Vice-President, Aldermen Brown, Burke, Campbell, Clancy, Dwyer, Goodman, Goodwin, Hackett, Hall, Kennefick, Lantry, Marshall, Muh, Murphy, Noonan, O'Brien, Parker, Randall, Robinson, Schilling, School, Tait, Ware, Wines, Woodward, and Wund—25.

MOTIONS AND RESOLUTIONS AGAIN RESUMED.

By Alderman Ware—

Resolved, That the Board of Aldermen hereby express their sympathy to their esteemed fellow-member, John T. Oakley, in his recent bereavement in the death of his heroic brother, and a sincere hope for his own speedy recovery from his present illness.
Which was adopted.

By Alderman Goodwin—

Resolved, That we, the members of this Board, with unfeigned pleasure do hereby extend to our worthy President, the Honorable John Jeroloman, an expression of our high regard and respect, and in this parting hour, when our official relations are about to be severed, we desire to tender our thanks for the dignified and impartial manner in which he has presided over our deliberations.

Resolved, That as we separate to-day, each to follow different paths in life—but a few to continue in official association—we will ever cherish pleasant recollections of the agreeable relations which have existed between our worthy President and ourselves.

Resolved, That, though differing in political belief and in party affiliations, the divergent views and the natural opposition arising therefrom which at times have occasioned only apparent, but no real antagonisms, have in no way marred or lessened the mutual friendships existing between us, and which we hope will ever continue between the Honorable John Jeroloman and the entire membership of this Board.

Resolved, That, in whatever sphere of life Honorable John Jeroloman may hereafter be placed, he may confidently expect such cordial encouragement and support from the members of this Board as it may be within their power to bestow.

Resolved, That a committee of three be appointed, duly authorized to have the foregoing resolutions engrossed, bound and presented to our President at an early date as tangible evidence of our sincere friendliness and of our high esteem.

Alderman Goodwin put the question on the resolution.
Which was adopted.

By Alderman Goodman—

Whereas, This Board deems it a pleasurable duty to place upon record an expression of its appreciation of the exemplary character and of the marked ability of its Chief Clerk, Mr. William H. Ten Eyck, and also to make a minute of its recognition of the ever-ready and courteous manner in which he has rendered services to the Common Council, and to the individual members thereof whenever such services were needed or requested; therefore

Resolved, That in the performance of his many duties, Mr. William H. Ten Eyck has manifested a clear conception of the requirements of the position he has so acceptably filled, and has exemplified in no unmistakable manner a general intelligence and special qualifications which have materially contributed toward marked accuracy and perfection of detail in the management and administration of the clerical department of this branch of the City Government during the term of three years about coming to a close.

Resolved, That the thanks of each and all of the members of the Board of Aldermen are hereby most sincerely tendered to Mr. William H. Ten Eyck, and with them we extend also our best wishes for that bright and prosperous future which his sterling worth and general merit entitle him—whether that future be devoted to duties in private life, or he be called upon to perform public service in any capacity, for our nation, State or Municipality.

Resolved, That a Committee of three be appointed by the President, with instructions to have the foregoing appropriately engrossed, duly authenticated, and formally presented to Mr. William H. Ten Eyck on behalf of the Board of Aldermen of the City of New York.

Which was adopted.
And the President appointed as such Committee Aldermen Goodman, Goodwin and Hall.
Alderman Woodward moved that the same Committee be appointed to engross the resolutions for the President.

Which was adopted.

By Alderman Wund—

Resolved, That the thanks of the members of this Board are hereby cordially tendered to Alderman Nicholas T. Brown, of the Second Assembly District, for the courteous, efficient and able manner in which he has advocated the rights of the Democratic members of this Board during the three years last past.

Which was adopted.
The President appointed to engross the resolutions for Alderman Brown the following committee: Aldermen Kennefick, Ware and Tait.

By Alderman O'Brien—

Resolved, That the thanks of the Board of Aldermen be and are hereby tendered to Hon. John P. Windolph, Vice-President, for his uniform courtesy and ability when called upon to act as presiding officer during the last three years of this Board, and the members, irrespective of party, beg to assure him that he takes with him their sincere love, respect and friendship, and it is the desire and wish of every member of the Board of Aldermen who served during the years 1895, 1896 and 1897 that his lot in life may be bright, cloudless and prosperous.

Resolved, That a copy of this resolution, suitably engrossed and duly authenticated by the Clerk of this Board, be presented to the said Hon. John P. Windolph.

Which was adopted.
And the President directed the committee, consisting of Aldermen Goodman, Goodwin and Hall, to have the resolutions suitably engrossed.

Alderman Ware moved that the thanks of the Board be tendered to Michael F. Blake, John J. Gallagher, and the other Clerks and attaches of the Board, for their courtesy and faithful attention to duty.

Which was adopted.
Alderman Goodwin moved that the Board adjourn sine die.

Which was adopted.
And the President announced that the Board stood adjourned sine die.

WM. H. TEN EYCK, Clerk.

OFFICIAL PAPERS.

MORNING "NEW YORK PRESS," "NEW YORK TRIBUNE,"
Evening—"Mail and Express," "News,"
Weekly—"Leslie's Weekly," "Weekly Union,"
German—"Staats-Zeitung,"
HENRY McMILLEN, Supervisor.

POLICE DEPARTMENT.

POLICE DEPARTMENT, NEW YORK, December 15, 1897.
PUBLIC NOTICE IS HEREBY GIVEN THAT four Horses, the property of the Police Department, will be sold at Public Auction, on Friday, December 31, 1897, at 10 o'clock A. M., by Van Tassel & Kearney, Auctioneers, at their stables, Nos. 130 and 132 East Thirteenth street.

By order of the Board,
WM. H. KIPP, Chief Clerk.

PROPERTY CLERK'S OFFICE—POLICE DEPARTMENT OF THE CITY OF NEW YORK, NEW YORK, November 23, 1897.

PUBLIC NOTICE IS HEREBY GIVEN THAT the 38th auction sale of Unclaimed and Police Property will be sold at Public Auction, at Police Headquarters, on Wednesday, January 5, 1898, at 11 o'clock A. M., of the following property, viz.: Watches, Jewelry, Revolvers, Pistols, Knives, Razors, etc., Iron Bedsteads and Miscellaneous Articles. For particulars see catalogue on day of sale.

JOHN F. HARRIOT, Property Clerk.

POLICE DEPARTMENT—CITY OF NEW YORK, 1896.
OWNERS WANTED BY THE PROPERTY CLERK of the Police Department of the City of New York, No. 100 Mulberry street, Room No. 9, for the following property, now in his custody, without claimants: Boats, rope, iron, lead, male and female clothing, boots, shoes, wine, blankets, diamonds, canned goods, liquors, etc.; also small amount of money taken from prisoners and found by Patrolmen of this Department.
JOHN F. HARRIOT, Property Clerk.

DEPARTMENT OF DOCKS.

TO CONTRACTORS. (No. 614.)
PROPOSALS FOR ESTIMATES FOR PREPARING FOR AND REPAIRING AND EXTENDING THE PIER AT THE FOOT OF WEST ONE HUNDRED AND TWENTY-NINTH STREET, NORTH RIVER.

ESTIMATES FOR PREPARING FOR AND REPAIRING AND EXTENDING THE Pier at the foot of West One Hundred and Twenty-ninth street, North river, will be received by the Board of Commissioners at the head of the Department of Docks, at the office of said Department, on Pier "A," foot of Battery place, North river, in the City of New York, until 11.30 o'clock A. M. of

TUESDAY, JANUARY 4, 1898,

at which time and place the estimates will be publicly opened by the head of said Department. The award of the contract, if awarded, will be made as soon as practicable after the opening of the bids.

Any person making an estimate for the work shall furnish the same in a sealed envelope to said Board, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation and a statement of the work to which it relates.

The bidder to whom the award is made shall give security for the faithful performance of the contract, in the manner prescribed and required by ordinance, in the sum of Twenty-five Thousand Dollars.

The Engineer's estimate of the nature, quantities and extent of the work is as follows:

CLASS I.—EXTENDING AND REPAIRING PIER.

(a) EXTENDING PIER.

To be Furnished by the Department of Docks.

1. Yellow Pine Timber, 12" x 14", about 21,122 feet, B. M., measured in the work; Yellow Pine Timber, 12" x 12", about 100,638 feet, B. M., measured in the work; Yellow Pine Timber, 10" x 12", about 8,820 feet, B. M., measured in the work; Yellow Pine Timber, 9" x 12", about 144 feet, B. M., measured in the work; Yellow Pine Timber, 10" x 10", about 1,167 feet, B. M., measured in the work; Yellow Pine Timber, 8" x 16", about 576 feet, B. M., measured in the work; Yellow Pine Timber, 8" x 18", about 1,190 feet, B. M., measured in the work; Yellow Pine Timber, 8" x 12", about 2,096 feet, B. M., measured in the work; Yellow Pine Timber, 8" x 10", about 94 feet, B. M., measured in the work; Yellow Pine Timber, 8" x 8", about 52,923 feet, B. M., measured in the work; Yellow Pine Timber, 6" x 8", about 350 feet, B. M., measured in the work; Yellow Pine Timber, 7" x 14", about 359 feet, B. M., measured in the work; Yellow Pine Timber, 7" x 12", about 3,164 feet, B. M., measured in the work; Yellow Pine Timber, 6" x 12", about 4,134 feet, B. M., measured in the work; Yellow Pine Timber, 6" x 10", about 185 feet, B. M., measured in the work; Yellow Pine Timber, 5" x 10", about 20,710 feet, B. M., measured in the work; Yellow Pine Timber, 4" x 10", about 30,771 feet, B. M., measured in the work; Yellow Pine Timber, 3" x 10", about 34,188 feet, B. M., measured in the work; Yellow Pine Timber, 4" x 6", about 56 feet, B. M., measured in the work—Total, about 291,687 feet, B. M., measured in the work.

NOTE.—It is the intention of the Department of Docks to furnish all the yellow pine timber of the above dimensions, with the exceptions noted in Items No. 2 and No. 5, required to do the work under these specifications, and it will be furnished by the Department of Docks to the contractor, free of charge, in the water or on a pier or bulkhead at one or more points on the North river water-front south of West Seventy-fifth street, as hereinafter specified. And the contractor is to raft it, care for it and transport it to the site of the work at his own expense and risk.

To be Furnished by the Contractor.

2. Yellow Pine Timber, 12" x 16", about 3,664 feet, B. M., measured in the work; Yellow Pine Timber, 12" x 14", about 2,076 feet, B. M., measured in the work; Yellow Pine Timber, 10" x 12", about 350 feet, B. M., measured in the work; Yellow Pine Timber, 8" x 18", about 71,600 feet, B. M., measured in the work; Yellow Pine Timber, 5" x 10", about 282 feet, B. M., measured in the work; Yellow Pine Timber, 5" x 5", about 41,300 feet, B. M., measured in the work; Yellow Pine Timber, 4" x 8", about 3,312 feet, B. M., measured in the work; Yellow Pine Timber, 3" x 12", about 81 feet, B. M., measured in the work; Yellow Pine Timber, 2" x 14", about 2,146 feet, B. M., measured in the work; Yellow Pine Timber, 2" x 8", about 930 feet, B. M., measured in the work; Yellow Pine Timber, 1" x 10", about 30 feet, B. M., measured in the work; total, about 126,491 feet, B. M., measured in the work.

NOTE.—The contractor will be required to furnish all the yellow pine of any dimension other than those specified in Item 1 required to do the work under this contract.

3. White Oak Timber, 8" x 12", about 2,240 feet, B. M., measured in the work.

NOTE.—The above quantities of timber in Items 1, 2 and 3 are inclusive of extra lengths required for scarfs, laps, etc., but are exclusive of waste.

4. White Pine, Yellow Pine, Norway Pine or Cypress Piles for extension, foundations and sewer, 474.

It is expected that these piles will have to be from about 75 feet to about 105 feet in length, to meet the requirements of the specifications for driving. Where the length exceeds 85 feet the piles may be spliced, in which case the lower or small end may be of spruce.

5. Square built yellow pine columns, exceeding 85 feet in length, 60.

NOTE.—The Department of Docks will furnish 50,000 B. M. of 8" x 8" yellow pine timber for these columns, which amount is included in item No. 1.

6. White Oak Fender Piles, about 60 feet in length, 30.

7. 2-inch White Oak Dowels for all Spliced Piles, 12" long, 248.

8. 1" x 1" Tapered Locust Treennails, 16" long, 4,500.

9. 3" x 26", 3" x 24", 3" x 22", 3" x 20", 3" x 18", 3" x 16", 3" x 14", 3" x 12", 3" x 10", 3" x 8", 3" x 6", 3" x 4", square and 3" x 8", 3" x 6", 3" x 4", round Wrought-iron, Spike-pointed Dock-spikes and, 40d. and 6d Nails and Staples, about 40,457 pounds.

10. 2", 1 1/2", 1 1/4", 1 1/8", 1", 3/4", and 3/8" Wrought-iron Screw-bolts and Nuts and Lag Screws and Screws, about 30,033 pounds.

11. Wrought-iron Strap-bolts, Straps, Hinges, Safety Hooks, etc., about 2,012 pounds.

12. Wrought-iron Washers for 2", 1 1/2", 1 1/4", 1", 3/4" and 3/8" Screw-bolts, about 3,419 pounds.

13. Wrought iron Column Shoes, about 5,100 pounds.

14. Cast-iron Washers for 1 1/4", 1 1/8", 1" and 3/4" Screw-bolts, about 7,429 pounds.

15. Boiler-plate Armatures, about 13,084 pounds.

16. Cast-iron Mooring-posts, about 1,800 pounds, each, 2.

17. Cast-iron Chocks, about 225 pounds, each, 4.

18. Hackmatack Knees, 4.

19. 3/4-inch Chain, about 90 feet.

20. Hoisting Machinery, similar to that now in use at outer end of West Twenty-second Street Pier, or as manufactured by the American Ship Windlass Company, of Providence, R. I.

21. Labor of Framing and Carpentry, including all moving of Timber, Jointing, Planking, Bolting, Spiking, Painting, Oiling or Tarring, and labor of every description for about 10,680 square feet of extension.

(b) SEWER.

To be Furnished by the Department of Docks.

22. Yellow Pine Timber, 12" x 14", about 1,260 feet, B. M., measured in the work; Yellow Pine Timber, 12" x 12", about 7,068 feet, B. M., measured in the work; Yellow Pine Timber, 10" x 12", about 740 feet, B. M., measured in the work; Yellow Pine Timber, 5" x 10", about 7,725 feet, B. M., measured in the work; Yellow Pine Timber, 5" x 8", about 240 feet, B. M., measured

in the work—Total, about 17,033 feet, B. M., measured in the work.

To be Furnished by the Contractor.

23. Yellow Pine Timber, 5" x 16", about 13,160 feet, B. M., measured in the work; Yellow Pine Timber, 5" x 14", about 1,313 feet, B. M., measured in the work; Yellow Pine Timber, 5" x 12", about 2,150 feet, B. M., measured in the work; Yellow Pine Timber, 5" x 10", about 2,100 feet, B. M., measured in the work—Total, about 18,723 feet, B. M., measured in the work.

24. Spruce or Yellow Pine Timber, creosoted 4" x 4", about 50,047 feet, B. M.; Spruce or Yellow Pine Timber, creosoted, 9" x 14", about 74 feet, B. M.—Total, about 51,021.

NOTE.—The Contractor will be required to furnish all the yellow pine of any dimension other than those specified in Item 22, required to do the work under this contract.

25. 7/8" x 26", 7/8" x 22", 3/4" x 12", 3/4" x 8" and 3/4" x 6" square Wrought-iron spike pointed Dock-spikes, about 5,371 pounds.

26. 1 1/4", 1 1/8" and 3/4" Wrought-iron Screw-bolts and Nuts, about 2,279 pounds.

27. Galvanized Wrought-iron Bands, Bolts, Mouth-pieces, Manhole-frames and Doors, etc., about 18,478 pounds.

28. Cast-iron Washers for 1 1/4" and 1 1/8" Screw-bolts, about 1,382 pounds.

29. Wrought-iron Washers for 3/4" bolts, about 54 pounds.

30. Labor and Material for Temporary Centres for Sewer-boxes.

31. Labor of every description for 682 linear feet of Oval Sewer.

(c) REPAIRING PIER.

32. Removing about 12,060 square feet of Deck and Sheathing, together with the Dumping Board and Ramp, Backing-logs, any Decayed or Broken Fenders, Chocks, Rangers, Side-caps, Cross caps, all the Oak Fenders, all the Fender-piles, etc., and the Mooring-posts and Corner Plates, etc.

To be Furnished by the Department of Docks.

33. Yellow Pine Timber, 12" x 12", about 33,384 feet, B. M., measured in the work; Yellow Pine Timber, 8" x 8", about 2,556 feet, B. M., measured in the work; Yellow Pine Timber, 6" x 12", about 720 feet, B. M., measured in the work; Yellow Pine Timber, 5" x 10", about 1,075 feet, B. M., measured in the work; Yellow Pine Timber, 4" x 10", about 40,034 feet, B. M., measured in the work; Yellow Pine Timber, 3" x 10", about 36,215 feet, B. M., measured in the work—total about 115,004 feet, B. M., measured in the work.

NOTE.—It is the intention of the Department of Docks to furnish all the yellow pine timber of the above dimensions required to do the work under these specifications, and it will be furnished by the Department of Docks to the Contractor, free of charge, in the water or on a pier or bulkhead at one or more points on the North river water-front, south of West Seventy-fifth street, as hereinafter specified, and the Contractor is to raft it, care for it and transport it to the site of the work at his own expense and risk.

To be Furnished by the Contractor.

34. Yellow Pine Timber, 3" x 12", about 3,330 feet, B. M., measured in the work; Yellow Pine Timber, 2" x 4", about 1,997 feet, B. M., measured in the work—total, about 5,327 feet, B. M., measured in the work.

NOTE.—The Contractor will be required to furnish all the yellow pine of any dimension other than those specified in Item 27 required to do the work under this contract.

35. White Oak Timber, 8" x 12", about 3,920 feet, B. M., measured in the work.

36. White Pine, Yellow Pine, Norway Pine or Cypress Piles, 24.

NOTE.—The above quantities of timber in items 33, 34, and 35 are inclusive of extra lengths required for scarfs, laps, etc., but are exclusive of waste.

37. 7/8" x 26", 7/8" x 22", 3/4" x 12", 3/4" x 8", 3/4" x 6", square Wrought-iron, Spike-pointed Dock-spikes, and 40d. Nails, about 7,007 pounds.

38. 1 1/4", 1 1/8" and 1" Wrought-iron Screw-bolts and Nuts, about 3,459 pounds.

39. Wrought-iron Washers for 1 1/4" and 1" Screw-bolts and Lag-screws, about 205 pounds.

40. Cast-iron Washers for 1 1/8" and 1" Screw bolts, about 952 pounds.

41. Cast-iron Mooring-posts, about 900 pounds each, 6.

42. Labor of Framing and Carpentry, including all moving of Timber, Jointing, Planking, Bolting, Spiking, Painting, Oiling or Tarring and labor of every description.

CLASS II.—RIP-RAP.

43. Rip-rap stone furnished and put in place over the whole area of the extension, about 36,000 cubic yards.

N. B.—As the above-mentioned quantities, though stated with as much accuracy as is possible, in advance, are approximate only, bidders are required to submit their estimates upon the following express conditions, which shall apply to and become a part of every estimate received:

1st. Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may prefer, as to the accuracy of the foregoing Engineer's estimate, and shall not, at any time after the submission of an estimate, dispute or complain of the above statement of quantities, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

2d. Bidders will be required to complete the entire work to the satisfaction of the Department of Docks, and in substantial accordance with the specifications of the contract and the plans herein referred to. No extra compensation, beyond the amount payable for each class of the work before mentioned, which shall be actually performed at the prices therefor, to be specified by the lowest bidder, shall be due or payable for the entire work.

The work to be done under the contract is to be commenced within five days after the date of the receipt of a notification from the Engineer in Chief of the Department of Docks that the work is ready to be begun, and all the work to be done under this contract is to be fully completed on or before the expiration of 150 days after the date of service of said notification; and the damages to be paid by the contractor for each day that the contract may be unfulfilled after the time fixed for the fulfillment thereof has expired, are, by a clause in the contract, determined, fixed and liquidated at Fifty Dollars per day.

Where the City of New York owns the wharf, pier or bulkhead at which the materials under this contract are to be delivered, and the same is not leased, no charge will be made to the contractor for wharage upon vessels conveying said materials.

Bidders will state in their estimates a price for the whole of the work to be done in Class I., and a price per cubic yard for Class II., in conformity with the approved form of agreement and the specifications therein set forth, by which prices the bids will be tested. These prices are to cover all expenses of every kind involved in or incidental to the fulfillment of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder. The award of the contract, if awarded, will be made to the bidder who is the lowest for doing the whole of the work comprised in both of the classes, and whose estimate is regular in all respects.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for doing each class of the work.

The person or persons to whom the contract may be awarded will be required to attend at this office with the sureties offered by him or them, and execute the contract within five days from the date of the service of a notice to that effect, and in case of failure or neglect so to do, he or they will be considered as having abandoned it and as in default to the Corporation, and the contract will be re-advertised and relet, and so on until it be accepted and executed.

Bidders are required to state in their estimates their names and places of residence, the names of all persons interested with them therein, and if no other person be so interested the estimate shall distinctly state the fact;

also that the estimate is made without any consultation, connection or agreement with, and the amount thereof has not been disclosed to, any other person or persons making an estimate for the same purpose, and is not higher than the lowest regular market price for the same kind of labor or material, and is in all respects fair and without collusion or fraud; that no combination or pool exists of which the bidder is a member, or in which the bidder is directly or indirectly interested, or of which the bidder has knowledge, either personal or otherwise, to bid a certain price, or not less than a certain price, for said labor or material, or to keep others from bidding thereon; and also that no member of the Common Council, Head of a Department, Chief of a Bureau, Deputy thereof or Clerk therein, or any other officer or employee of the Corporation of the City of New York, or any of its departments, is directly or indirectly interested in the estimate, or in the supplies or work to which it relates, or in any portion of the profits thereof, and has not been given, offered or promised, either directly or indirectly, any pecuniary or other consideration by the bidder or anyone in his behalf with a view to influencing the action or judgment of such officer or employee in this or any other transaction heretofore had with this Department, which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects true. *Where more than one person is interested it is requisite that the verification be made and subscribed to by all the parties interested.*

In case a bid shall be submitted by or in behalf of any corporation, it must be signed in the name of such corporation by some duly authorized officer or agent thereof, who shall also subscribe his own name and office. If practicable, the seal of the corporation should also be affixed.

Each estimate shall be accompanied by the consent in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person or persons making the estimate, they will, upon its being so awarded, become bound as his or their sureties for its faithful performance; and that if said person or persons shall omit or refuse to execute the contract, they will pay to the Corporation of the City of New York any difference between the sum to which said person or persons would be entitled upon its completion and that which said Corporation may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting, the amount in each case to be calculated upon the estimated amount of the work to be done by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered will be subject to approval by the Comptroller of the City of New York after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of security required for the faithful performance of the contract. Such check or money must not be included in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him to execute the same, the amount of the deposit made by him shall be forfeited and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

Bidders are informed that no deviation from the specifications will be allowed unless under the written instructions of the Engineer-in-Chief.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation, upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

In case there are two or more bids at the same price, which price is the lowest price bid, the contract, if awarded, will be awarded by lot to one of the lowest bidders.

THE RIGHT TO DECLINE ALL THE ESTIMATES IS RESERVED IF DEEMED FOR THE INTEREST OF THE CORPORATION OF THE CITY OF NEW YORK.

Bidders are requested, in making their bids or estimates, to use the blank prepared for that purpose by the Department, a copy of which, together with the form of agreement, including specifications, and showing the manner of payment for the work, can be obtained upon application therefor at the office of the Department.

EDWARD C. O'BRIEN, EDWIN EINSTEIN, JOHN MONKS, Commissioners of the Department of Docks.

Dated New York, October 14, 1897.

TO CONTRACTORS. (No. 624.)
PROPOSALS FOR ESTIMATES FOR PREPARING FOR AND EXTENDING PIERS, NEW 20 AND NEW 21, NORTH RIVER, NEAR THE FOOT OF CHAMBERS AND DUANE STREETS.

ESTIMATES FOR PREPARING FOR AND extending Piers, new 20 and new 21, North river, near the foot of Chambers and Duane streets, will be received by the Board of Commissioners at the head of the Department of Docks, at the office of said Department, on Pier "A," foot of Battery place, North river, in the City of New York, until 11.30 A. M. of

THURSDAY, DECEMBER 30, 1897,

at which time and place the estimates will be publicly opened by the head of said Department. The award of the contract, if awarded, will be made as soon as practicable after the opening of the bids.

Any person making an estimate for the work shall furnish the same in a sealed envelope to said Board, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation, and a statement of the work to which it relates.

The bidder to whom the award is made shall give security for the faithful performance of the contract, in the manner prescribed and required by ordinance, in the sum of Eleven Thousand Dollars.

The Engineer's estimate of the nature, quantities and extent of the work is as follows:

CLASS I.—EXTENSION TO PIER, NEW 20.
To be furnished by the Department of Docks.
1. Yellow Pine Timber, 12" x 14", about 26,838 feet B. M., measured in the work; Yellow Pine Timber, 12" x 12", about 76,692 feet B. M., measured in the work; Yellow Pine Timber, 10" x 12", about 892 feet B. M., measured in the work; Yellow Pine Timber, 8" x 12", about 576 feet B. M., measured in the work; Yellow Pine Timber, 8" x 10", about 1,550 feet B. M., measured in the work; Yellow Pine Timber, 8" x 12", about 1,920 feet B. M., measured in the work; Yellow Pine Timber, 8" x 10", about 93 feet B. M., measured in the work; Yellow Pine Timber, 8" x 8", about 6.9 feet B. M., measured in the work; Yellow Pine Timber 7" x 14", about

653 feet B. M., measured in the work; Yellow Pine Timber, 7" x 12", about 4,354 feet B. M., measured in the work; Yellow Pine Timber, 6" x 12", about 936 feet B. M., measured in the work; Yellow Pine Timber, 5" x 10", about 31,229 feet B. M., measured in the work—Total, about 149,642 feet B. M., measured in the work.

NOTE.—It is the intention of the Department of Docks to furnish all the yellow pine timber of the above dimensions in item 1 of class I., and of the dimensions in item 1 of class II., required to do the work under these specifications, and it will be furnished by the Department of Docks to the contractor free of charge in the water or on a pier or bulkhead at one or more points on the North river water-front south of West Seventy-fifth street, as hereinafter specified, and the contractor is to raft it, care for it and transport it to the site of the work at his own expense and risk.

To be furnished by the Contractor.
2. Yellow Pine Timber, 4" x 12", about 320 feet B. M., measured in the work; Yellow Pine Timber, 3" x 12", about 660 feet B. M., measured in the work; Yellow Pine Timber, 4" x 10", about 20,623 feet B. M., measured in the work; Yellow Pine Timber, 3" x 10", about 25,025 feet B. M., measured in the work; Yellow Pine Timber, 6" x 8", about 376 feet B. M., measured in the work; Yellow Pine Timber, 2" x 4", about 1,820 feet B. M., measured in the work—Total, about 57,833 feet B. M., measured in the work.

NOTE.—The Contractor will be required to furnish all the yellow pine of any dimension other than those specified in item 1 required to do the work under this contract.

3. White Oak Timber, 8" x 12", 448 feet B. M., measured in the work.

NOTE.—The above quantities of timber in items 1, 2 and 3 are inclusive of extra lengths required for scarfs, laps, etc., but are exclusive of waste.

4. White Pine, Yellow Pine, Norway Pine or Cypress Piles, 293.

(It is expected that these piles will have to be about from 72 to 85 feet in length, to meet the requirements of the specifications for driving.)

5. White Oak Fender Piles, about 60 feet long, 14. 6. 7/8" x 26", 7/8" x 22", 7/8" x 16", 7/8" x 14", 7/8" x 12", 3/4" x 22", 3/4" x 20", 3/4" x 16", 3/4" x 14", 3/4" x 12", 3/4" x 10", 3/4" x 8", 3/4" x 6", square and 5/8" x 8 1/2" round Wrought-iron Dock-spikes and 40d. Nails, about 20,182 pounds.

7. 2", 1 1/2", 1 1/4", 1 1/8" and 1" Wrought-iron Screw-bolts and Nuts, about 19,554 pounds.

8. 1 1/2" Lag-screws, about 53 pounds.

9. Wrought-iron Straps and Strap-bolts, about 484 pounds.

10. Wrought-iron Washers, about 186 pounds.

11. Cast-iron Washers for 1 1/4", 1 1/8" and 1" Screw-bolts, about 5,672 pounds.

12. Boiler-plate Armatures, about 13,084 pounds.

13. a. Cast-iron Mooring-posts, about 1,800 pounds each, 2. b. Cast-iron Mooring Posts, about 900 pounds each, 1.

14. Materials and labor for painting, oiling and tarring.

15. Labor of every description for about 8,300 square feet of pier.

CLASS II.—EXTENSION TO PIER, NEW 21.
To be furnished by the Department of Docks.

1. Yellow Pine Timber, 12" x 14", about 32,502 feet B. M., measured in the work; Yellow Pine Timber, 12" x 12", about 90,108 feet B. M., measured in the work; Yellow Pine Timber, 10" x 12", about 3,880 feet B. M., measured in the work; Yellow Pine Timber, 10" x 10", about 892 feet B. M., measured in the work; Yellow Pine Timber, 8" x 12", about 576 feet B. M., measured in the work; Yellow Pine Timber, 8" x 10", about 1,960 feet B. M., measured in the work; Yellow Pine Timber, 8" x 12", about 2,312 feet B. M., measured in the work; Yellow Pine Timber, 8" x 10", about 334 feet B. M., measured in the work; Yellow Pine Timber, 8" x 8", about 411 feet B. M., measured in the work; Yellow Pine Timber, 7" x 14", about 817 feet B. M., measured in the work; Yellow Pine Timber, 7" x 12", about 5,502 feet B. M., measured in the work; Yellow Pine Timber, 6" x 12", about 1,152 feet B. M., measured in the work; Yellow Pine Timber, 5" x 10", about 39,338 feet B. M., measured in the work—Total, about 150,684 feet B. M., measured in the work. (See note following item 1 in class I.)

To be furnished by the Contractor.

2. Yellow Pine Timber, 3" x 12", about 702 feet B. M., measured in the work; Yellow Pine Timber, 4" x 10", about 37,060 feet B. M., measured in the work; Yellow Pine Timber, 3" x 10", about 31,738 feet B. M., measured in the work; Yellow Pine Timber, 6" x 8", about 376 feet B. M., measured in the work; Yellow Pine Timber, 2" x 4", about 2,287 feet B. M., measured in the work—Total, about 72,163 feet B. M., measured in the work. **NOTE.**—The contractor will be required to furnish all the yellow pine timber of any dimension for Class II., other than those specified in Item 1 required to do the work under this contract.

3. White Oak Timber, 8" x 12", 448 feet B. M., measured in the work.

4. White Pine, Yellow Pine, Norway Pine or Cypress Piles, 346. (It is expected that these piles will have to be about from 74 to 85 feet in length to meet the requirements of the specifications for driving.)

5. White Oak Fender Piles, about 60 feet long, 14. 6. 7/8" x 26", 7/8" x 22", 7/8" x 16", 7/8" x 14", 7/8" x 12", 3/4" x 22", 3/4" x 20", 3/4" x 16", 3/4" x 14", 3/4" x 12", 3/4" x 10", 3/4" x 8", 3/4" x 6", square and 5/8" x 8 1/2" round Wrought-iron Dock-spikes and 40d. Nails, about 23,872 pounds.

7. 2", 1 1/2", 1 1/4", 1 1/8" and 1" Wrought-iron Screw-bolts and Nuts, about 15,906 pounds.

8. 1 1/2" Lag-screws, about 53 pounds.

9. Wrought-iron Straps and Strap-bolts, about 484 pounds.

10. Wrought-iron Washers, about 216 pounds.

11. Cast-iron Washers for 1 1/4", 1 1/8" and 1" screw-bolts, about 7,330 pounds.

12. Boiler-plate Armatures, about 13,084 pounds.

13. a. Cast-iron Mooring Posts, about 18,000 pounds each, 2. b. Cast-iron Mooring Posts, about 900 pounds each, 2.

14. Materials and labor for painting, oiling and tarring.

15. Labor of every description for about 10,500 square feet of pier.

N. B.—As the above-mentioned quantities, though stated with as much accuracy as is possible in advance, are approximate only, bidders are required to submit their estimates upon the following express conditions, which shall apply to and become part of every estimate received:

1st. Bidders must satisfy themselves, by personal examination of the location of the proposed work, and by such other means as they may prefer, as to the accuracy of the foregoing Engineer's estimate, and shall not at any time after the submission of an estimate dispute or complain of the above statement of quantities, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

2d. Bidders will be required to complete the entire work to the satisfaction of the Department of Docks, and in substantial accordance with the specifications of the contract and the plans therein referred to. No extra compensation, beyond the amount payable for each class of the work before mentioned, which shall be actually performed, at the prices therefor, to be specified by the lowest bidder, shall be due or payable for the entire work.

The work to be done under the contract is to be commenced within five days after the date of the receipt of a notification from the Engineer-in-Chief, that the work or any part of it, is ready to be begun, and all the work to be done under the contract is to be fully completed on or before the expiration of sixty days after the date of service of said notification; and the damages to be paid by the contractor for each day that the contract may be unfulfilled after the time fixed for the fulfillment thereof has expired, are by a clause in the contract, determined, fixed and liquidated at Fifty Dollars per day.

All the old material to be removed under this contract,

excepting the cast-iron mooring posts, is to be relinquished to the Contractor; and bidders must estimate the value of such old material when they consider the price for which they do the work under this contract. All such material will be removed by the Contractor.

Where the City of New York owns the wharf, pier or bulkhead at which the materials under this contract are to be delivered, and the same is not leased, no charge will be made to the contractor for wharfage upon vessels conveying said materials.

Bidders will state in their estimates a price for the whole of the work to be done in each class in conformity with the approved form of agreement and the specifications therein set forth, by which prices the bee will be tested. These prices are to cover all expenses of every kind involved in or incidental to the fulfillment of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder. The award of the contract, if awarded, will be made to the bidder who is the lowest for doing the whole of the work comprised in both classes, and whose estimate is regular in all respects.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for doing each class of the work.

The person or persons to whom the contract may be awarded will be required to attend at this office with the sureties offered by him or them, and execute the contract within five days from the date of the service of a notice to that effect, and in case of failure or neglect so to do, he or they will be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet and so on until it be accepted and executed.

Bidders are required to state in their estimates their names and places of residence, the names of all persons interested with them therein, and if no other person be so interested the estimate shall distinctly state the fact; also that the estimate is made without any consultation, connection or agreement with, and the amount thereof has not been disclosed to any other person or persons making an estimate for the same purpose, and is not higher than the lowest regular market price for the same kind of labor or material, and in all respects fair and without collusion or fraud; that no combination or pool exists of which the bidder is a member, or in which the bidder is directly or indirectly interested, or of which the bidder has knowledge, either personal or otherwise, to bid a certain price, or not less than a certain price for said labor or material, or to keep others from bidding thereon, and also that no member of the Common Council, Head of a Department, Chief of a Bureau, Deputy thereof, or Clerk therein, or any other officer or employee of the Corporation of the City of New York, or any of its departments, is directly or indirectly interested in the estimate, or in the supplies or work to which it relates, or in any portion of the profits thereof, and has not been given, offered or promised, either directly or indirectly, any pecuniary or other consideration by the bidder or anyone in his behalf with a view to influencing the action or judgment of such officer or employee in this or any other transaction heretofore had with this department, which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects true. *Where more than one person is interested it is requisite that the verification be made and subscribed to by all the parties interested.*

In case a bid shall be submitted by or in behalf of any corporation it must be signed in the name of such corporation by some duly authorized officer or agent thereof, who shall also subscribe his own name and office. If practicable, the seal of the corporation should also be affixed.

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person or persons making the estimate, they will, upon its being so awarded, become bound as his or their sureties for its faithful performance, and that if said person or persons shall omit or refuse to execute the contract, they will pay to the Corporation of the City of New York any difference between the sum to which said person or persons would be entitled upon its completion and that which said Corporation may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting, the amount in each case to be calculated upon the estimated amount of the work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered will be subject to approval by the Comptroller of the City of New York after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of security required for the faithful performance of the contract. Such check or money must not be included in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

Bidders are informed that no deviation from the specifications will be allowed unless under the written instructions of the Engineer-in-Chief.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

In case there are two or more bids at the same price, which price is the lowest price bid, the contract, if awarded, will be awarded by lot to one of the lowest bidders.

THE RIGHT TO DECLINE ALL THE ESTIMATES IS RESERVED IF DEEMED FOR THE INTEREST OF THE CORPORATION OF THE CITY OF NEW YORK.

Bidders are requested, in making their bids or estimates, to use the blank prepared for that purpose by the Department, a copy of which, together with the form of the agreement, including specifications, and showing the manner of payment for the work, can be obtained upon application therefor at the office of the Department.

EDWARD C. O'BRIEN, EDWIN EINSTEIN, JOHN MONKS, Commissioners of the Department of Docks.

Dated New York, December 2, 1897.

CITY CIVIL SERVICE COMM.

NEW CRIMINAL COURT BUILDING, NEW YORK, December 21, 1897.

EXAMINATIONS WILL BE HELD AS FOLLOWS:

FRIDAY, DECEMBER 31, 10 A. M., HOMEOPATHIC APOTHECARY. The examination will consist of writing, arithmetic, technical knowledge and experience.

S. WILLIAM BRISCOL, Secretary.

DEPT. OF PUBLIC CHARITIES.

DEPARTMENT OF PUBLIC CHARITIES, NEW YORK, December 21, 1897.

PROPOSALS FOR RYE STRAW. SEALED bids or estimates for furnishing Rye Straw during the year 1898, in conformity with samples and specifications, will be received at the office of the Department of Public Charities, No. 66 Third Avenue, in the City of New York, until 10 o'clock A. M. of Wednesday, January 5, 1898.

RYE STRAW.

All rye straw to be delivered in installments as may be required during the year 1898. 296,000 pounds long, bright rye straw, weight and tare not to exceed 3 pounds per bale, weight charged as received at Blackwell's Island.

The person or persons making any bid or estimate shall furnish the same in a sealed envelope, indorsed "Bid or Estimate for Rye Straw," with his or their name or names, and the date of presentation, to the head of said Department, at the said office, on or before the day and hour above named, at which time and place the bids or estimates received will be publicly opened by the President of said Department, or his duly authorized agent, and read.

THE BOARD OF PUBLIC CHARITIES RESERVES THE RIGHT TO REJECT ALL BIDS OR ESTIMATES IF DEEMED TO BE FOR THE PUBLIC INTEREST, AS PROVIDED IN SECTION 64, CHAPTER 410, LAWS OF 1882.

No bid or estimate will be accepted from or contract awarded to any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The award of the contract will be made as soon as practicable after the opening of the bids.

Delivery will be required to be made from time to time, and in such quantities as may be directed by the said Commissioners.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect, and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract by his or their bond, with two sufficient sureties, each in the penal amount of fifty (50) per cent. of the bid for each article.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him or them therein, and if no other person be so interested, it shall distinctly state that fact; also that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud, and that no member of the Common Council, head of a department, chief of a bureau, deputy thereof or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. *Where more than one person is interested it is requisite that the verification be made and subscribed by all the parties interested.*

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person making the estimate, they will, upon its being so awarded, become bound as his sureties for its faithful performance, and that if he shall omit or refuse to execute the same, they shall pay to the Corporation any difference between the sum to which he would be entitled on its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent letting, the amount in each case to be calculated upon the estimated amount of the work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York and is worth the amount of the security required for the completion of this contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety or otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by section 12 of chapter 7 of the Revised Ordinances of the City of New York, if the contract shall be awarded to the person or persons for whom he consents to become surety. The adequacy and sufficiency of the security offered to be approved by the Comptroller of the City of New York.

No bid or estimate will be considered unless accompanied by either a certified check upon one of the State or National Banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be included in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept but do not execute the contract and give the proper security, he or they will be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet, as provided by law.

Bidders will write out the amount of their estimates in addition to inserting the same in figures.

Payment will be made by a requisition on the Comptroller, in accordance with the terms of the contract.

The form of the contract, including specifications, and showing the manner of payment, will be furnished at the office of the Department, and bidders are cautioned to examine each and all of its provisions carefully, as the Board of Public Charities will insist upon its absolute enforcement in every particular.

Dated New York, December 21, 1897.

DR. STEPHEN SMITH, President; JOHN P. FAURE, Commissioner; JAMES R. O'BRIEN, Commissioner, Department of Public Charities.

DEPARTMENT OF PUBLIC CHARITIES, NO. 66 THIRD AVENUE, NEW YORK, December 20, 1897.

TO CONTRACTORS.
PROPOSALS FOR MATERIALS AND WORK REQUIRED FOR STONE AND BRICK BUILDING TOGETHER WITH APPARATUS FOR THE DESTRUCTION OF GARBAGE, BLACKWELL'S ISLAND.

SEALED BIDS OR ESTIMATES FOR THE aforesaid work and materials, in accordance with the specifications and plans, will be received at the office of the Department of Public Charities, No. 66 Third Avenue, in the City of New York, until Friday, December 31, 1897, until 10 o'clock A. M. The person, or persons making any bid or estimate shall furnish the same in a sealed envelope, indorsed "Bid or Estimate for Materials and Work Required for Stone and Brick Building, together with Apparatus for the Destruction of Garbage, Blackwell's Island," and with his or their name or names, and the date of presentation, to the head of said Department, at the said office, on or before the day and hour above named, at which time and place the

DEPARTMENT OF PUBLIC CHARITIES, No. 66 THIRD AVENUE, NEW YORK, December 20, 1897.

TO CONTRACTORS. PROPOSALS FOR MATERIALS AND WORK REQUIRED FOR REPAIRS AND ALTERA- TIONS TO HARLEM HOSPITAL.

SEALING BIDS OR ESTIMATES FOR THE aforesaid work and materials, in accordance with the specifications and plans, will be received at the office of the Department of Public Charities, No. 66 Third Avenue, in the City of New York, until Friday, December 31, 1897, at 10 o'clock A.M. The person or persons making any bid or estimate shall furnish the same in a sealed envelope, indorsed "Bid or Estimate for Materials and Work Required for Repairs and Alterations to Harlem Hospital," and with his or their name or names, and the date of presentation, to the head of said Department, at the said office, on or before the day and hour above named, at which time and place the bids or estimates received will be publicly opened by the President of said Department and read.

THE BOARD OF PUBLIC CHARITIES RESERVES THE RIGHT TO REJECT ALL BIDS OR ESTIMATES IF DEEMED TO BE FOR THE PUBLIC INTEREST, AS PROVIDED IN SECTION 64, CHAPTER 410, LAWS OF 1882.

No bid or estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The award of the contract will be made as soon as practicable after the opening of the bids.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect, and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract by his or their bond, with two sufficient sureties, each in the penal amount of FOUR THOUSAND (\$4,000) DOLLARS.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him or them therein, and if no other person be so interested it shall distinctly state that fact; also that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud, and that no member of the Common Council, head of a department, chief of a bureau, deputy thereof or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested it is requisite that the verification be made and subscribed by all the parties interested.

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person making the estimate, they will, on its being so awarded, become bound as his sureties for its faithful performance, and that if he shall omit or refuse to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled on its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent letting, the amount in each case to be calculated upon the estimated amount of the supplies by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York and is worth the amount of the security required for the completion of this contract, over and above his debts of every nature, and over and above his liabilities as bail surety or otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by section 12 of chapter 7 of the Revised Ordinances of the City of New York, if the contract shall be awarded to the person or persons for whom he consents to become surety. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York.

No bid or estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept but do not execute the contract and give the proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet as provided by law.

Bidders will write out the amount of their estimates in addition to inserting the same in figures. Payment will be made by a requisition on the Comptroller, in accordance with the terms of the contract. The form of the contract, including specifications, and showing the manner of payment, can be obtained at the office of John W. Marshall, architect, Nos. 105-106 Bible House, New York City, and bidders are cautioned to examine each and all of its provisions carefully, as the Board of Public Charities will insist upon its absolute enforcement in every particular.

Dr. STEPHEN SMITH, President; JOHN P. FAURE, and JAMES R. O'BRIEN, Commissioners, Department of Public Charities.

PROPOSALS FOR 3,000 TONS OF FRESH MINED WHITE ASH NUT COAL FOR THE OUT-DOOR POOR.

PROPOSALS, SEALED AND INDORSED AS above, will be received by the Board of Public Charities, at their office, until 10 o'clock A.M. of Thursday, December 30, 1897, at which time they will be publicly opened and read by the President of said Board, or his authorized agent, for THREE THOUSAND (3,000) TONS Fresh Mined White Ash Nut Coal, of the best quality, each ton to consist of two thousand pounds, to be well screened, and to be delivered on the east and west side south of Eighty-fourth street, to be subject to such inspection as the Commissioners may direct, and to meet their approval as to the quality, quantity, time and manner of delivery in every respect.

The award of the contract will be made as soon as practicable after the opening of the bids.

No proposal will be considered unless accompanied by the consent, in writing, of two householders or freeholders of the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded under that proposal, they will, on its being so awarded, become bound as sureties in TWELVE THOUSAND (12,000) DOLLARS each, for its faithful performance, which consent must be verified by the justification of each of the persons signing the same for double the amount of security required, the adequacy and sufficiency of such security to be approved by the Comptroller.

No bid or estimate will be received or considered un-

less accompanied by either a certified check upon one of the National or State banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

The Board of Public Charities reserves the right to reject all bids if deemed for the best interests of the City, and no proposal will be accepted from, or a contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Blank forms of proposals and specifications, which are to be strictly complied with, can be obtained on application at the office of the Department, and all information furnished.

THE COAL MUST BE DELIVERED AT SUCH TIMES AND IN SUCH PLACES AS THE URGENCY OF THE CASE MAY REQUIRE.

Dated New York, December 18, 1897.
STEPHEN SMITH, President; JOHN P. FAURE, Commissioner; JAMES R. O'BRIEN, Commissioner, Department of Public Charities.

DEPARTMENT OF PUBLIC CHARITIES, NEW YORK, December 18, 1897.

PROPOSALS FOR OOLONG TEA. SEALED bids or estimates for furnishing Groceries during the year 1898, in conformity with samples and specifications, will be received at the office of the Department of Public Charities, No. 66 Third Avenue, in the City of New York, until 10 o'clock A.M. of Thursday, December 30, 1897.

OOLONG TEA. All goods to be delivered in installments as may be required during the year 1898.

32,000 pounds Oolong Tea, in half chests, free from all admixture and in original packages. No empty packages are to be returned to bidders or contractors except such as are designated in the specifications.

The person or persons making any bid or estimate shall furnish the same in a sealed envelope, indorsed "Bid or Estimate for Oolong Tea," with his or their name or names, and the date of presentation, to the head of said Department, at the said office, on or before the day and hour above named, at which time and place the bids or estimates received will be publicly opened by the President of said Department, or his duly authorized agent, and read.

THE BOARD OF PUBLIC CHARITIES RESERVES THE RIGHT TO REJECT ALL BIDS OR ESTIMATES IF DEEMED TO BE FOR THE PUBLIC INTEREST, AS PROVIDED IN SECTION 64, CHAPTER 410, LAWS OF 1882.

No bid or estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The award of the contract will be made as soon as practicable after the opening of the bids.

Delivery will be required to be made from time to time, and in such quantities as may be directed by the said Commissioners.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect, and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract by his or their bond, with two sufficient sureties, each in the penal amount of fifty (50) per cent. of the bid for each article.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him or them therein, and if no other person be so interested it shall distinctly state that fact; also that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud, and that no member of the Common Council, head of a department, chief of a bureau, deputy thereof or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested it is requisite that the verification be made and subscribed by all the parties interested.

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person making the estimate, they will, on its being so awarded, become bound as his sureties for its faithful performance, and that if he shall omit or refuse to execute the same, they shall pay to the Corporation any difference between the sum to which he would be entitled on its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract, over and above his liabilities as bail, surety or otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by section 12 of chapter 7 of the Revised Ordinances of the City of New York, if the contract shall be awarded to the person or persons for whom he consents to become surety. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York.

No bid or estimate will be considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept but do not execute the contract and give the

proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet as provided by law.

The quality of the articles, supplies, goods, wares and merchandise must conform in every respect to the samples of the same on exhibition at the office of the said Department, or, in the absence of samples, to the printed specifications. Bidders are cautioned to examine the specifications for particulars of the articles, etc., required before making their estimates.

Bidders will state the price for each article, by which the bids will be tested.

Bidders will write out the amount of their estimates in addition to inserting the same in figures.

Payment will be made by a requisition on the Comptroller, in accordance with the terms of the contract, or from time to time, as the Commissioners may determine.

The form of the contract, including specifications, and showing the manner of payment, will be furnished at the office of the Department, and bidders are cautioned to examine each and all of its provisions carefully, as the Board of Public Charities will insist upon its absolute enforcement in every particular.

Dr. STEPHEN SMITH, President; JOHN P. FAURE, and JAMES R. O'BRIEN, Commissioners, Department of Public Charities.

DEPARTMENT OF PUBLIC CHARITIES, No. 66 THIRD AVENUE, NEW YORK, December 18, 1897.

PROPOSALS FOR HOSPITAL SUPPLIES FOR

the Department of Public Charities for 1898. Sealed bids or estimates for furnishing the following Hospital Supplies will be received at the Department of Public Charities, No. 66 Third Avenue, in the City of New York, until 10 A. M. of Thursday, December 30, 1897. The person or persons making any bid or estimate shall furnish the same in a sealed envelope, indorsed "Bid for Hospital Supplies," with his or their name or names, and the date of presentation, to the head of said Department, at the said office, on or before the day and hour above named, at which time and place the bids or estimates received will be publicly opened by the President, or his duly authorized agent, of said Department and read.

9 lbs., more or less, Powdered Extract Nux Vomica U.S.P. Assay, in 1 lb. bott., per lb.

HOMOEOPATHIC PREPARATIONS.

N.B.—No bid for homoeopathic preparations will be accepted from any one who is not known to be a manufacturer of these products recognized by the profession. About 50 lbs. Ordinary Domestic Tinctures; about 30 lbs. Ordinary Imported Tinctures; about 1,000 oz. Ordinary Trit. Tablets, in boxes; about 500 oz. Ordinary Trit. Tablets, in gl.-st. bott. Special Trit. Tablets, in gl.-st. bott.; about 16 oz. Arsenic Iodide 2x; about 8 oz. Codeine 1x; about 4 oz. Hyosine Hydrobromate 3x; about 8 oz. Mercurius Dulcis 1x; about 12 oz. Mercur. Solub. Hahnemannii 1x; about 4 oz. Morphine Sulph. 1x; about 4 oz. Sanguinaria Nitr. 1x; about 4 oz. Sparteum Sulph. 1x; about 4 oz. Agaricin 1x; about 4 oz. Platinum Chloride 30x; about 2 oz. Syphilinum 200x; about 4 oz. Santonin 1x; about 4 oz. Tuberculin 30x.

As it is impossible to foresee what other homoeopathic preparations may be required in cases of emergency, bidders will please inclose in separate sealed wrapper, marked on the outside like the bids, two copies of their price-lists, giving net prices of their products, or stating the discounts allowed.

200 oz., more or less, Antipyrine, 1 oz. orig. pack.; 200 oz., more or less, Aristol, 1 oz. orig. pack.; 800 oz., more or less, Phenacetin, Bayer, 1 oz. orig. pack.; 100 oz., more or less; Salophen, 1 oz. orig. pack.; 250 oz., more or less, Sulfonal, 1 oz. orig. pack.; 350 oz., more or less, Trional, 1 oz. orig. pack.; 18 doz., more or less, Medicine Glasses (like sample shown); 3 doz., more or less, Glass Graduates, 10 oz. (like sample); 4 doz., more or less, Glass Graduates, 8 oz. (like sample); 2 doz., more or less, Glass Graduates 4 oz. (like sample); 4 doz., more or less, Glass Graduates, 2 oz. (like sample); 1 doz., more or less, Glass Graduates, 1 oz. (like sample); 3 doz., more or less, Glass Graduates, 1/2 oz. (like sample); 12 doz., more or less, Glass Graduates, 1/4 oz. (like sample); 4 doz., more or less, Jars, Museum, with knobs, no clamps, 5 1/2 x 6 inch (like sample); 4 doz., more or less, Jars, Museum, with knobs, no clamps, 5 1/2 x 11 inch (like sample); 4 doz., more or less, Jars, Museum, with knobs, no clamps, 7 1/2 x 8 inch (like sample); 3 doz., more or less, Jars, Museum, with knobs, no clamps, 7 1/2 x 12 inch (like sample); 10 doz., more or less, Rectal Tubes, Tieman (like sample); 2 doz., more or less, Urinometer, Squibb's (like sample); 3, more or less, Cauteries (like sample shown), each; 40 hanks, more or less (each of 10 bundles of 100 strings), of Silkworm-gut (like sample shown), per hank.

Prices are to be given net.

The articles supplies, goods, wares and merchandise are to be delivered, free of expense, at the General Drug Department on the grounds of Bellevue Hospital, East Twenty-sixth street, east of F Avenue, and are to be delivered in such quantities and at such times as may be required.

The quality of the Hospital Supplies must conform in every respect to the specifications and samples, and bidders are cautioned to examine both specifications and samples of the articles required before making their estimates.

Bidders will state the price for each article, by which the bids will be tested.

THE BOARD OF PUBLIC CHARITIES RESERVES THE RIGHT TO REJECT ALL BIDS OR ESTIMATES IF DEEMED TO BE FOR THE PUBLIC INTEREST, AS PROVIDED IN SECTION 64, CHAPTER 410, LAWS OF 1882.

No bid or estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The award of the contract will be made as soon as practicable after the opening of the bids.

Delivery will be required to be made from time to time, and in such quantities as may be directed by the said Commissioners, or be provided for by the specifications.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect, and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract by his or their bond, with two sufficient sureties, each in the penal amount of fifty (50) per cent. of the bid for each article.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him or them therein, and if no other person be so interested, it shall distinctly state that fact; also that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud, and that no member of the Common Council, head of a department, chief of a bureau, deputy thereof or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested it is requisite that the verification be made and subscribed by all the parties interested.

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person making the estimate, they will, on its being so awarded, become bound as his sureties for its faithful performance, and that if he shall omit or refuse to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled on its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the supplies by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract, over and above his liabilities as bail, surety or otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by section 12 of chapter 7 of the Revised Ordinances of the City of New York, if the contract shall be awarded to the person or persons for whom he consents to become surety. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York.

by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York and is worth the amount of the security required for the completion of this contract, over and above his liabilities as bail, surety or otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by section 12 of chapter 7 of the Revised Ordinances of the City of New York, if the contract shall be awarded to the person or persons for whom he consents to become surety. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York.

No bid or estimate will be considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept but do not execute the contract and give the proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet, as provided by law.

Payment will be made by a requisition on the Comptroller, in accordance with the terms of the contract, or from time to time, as the Commissioners may determine.

The form of the contract, including specifications, and showing the manner of payment, can be obtained at the office of the General Bookkeeper and Auditor, No. 66 Third Avenue, and bidders are cautioned to examine each and all of its provisions carefully, as the Board of Public Charities will insist upon its absolute enforcement in every particular.

Dr. STEPHEN SMITH, President; JOHN P. FAURE, and JAMES R. O'BRIEN, Commissioners, Department of Public Charities.

DEPARTMENT OF PUBLIC CHARITIES, No. 66 THIRD AVENUE, NEW YORK, December 24, 1897.

TO CONTRACTORS.

PROPOSALS FOR MATERIALS AND WORK REQUIRED FOR ADDITION TO GENERAL DRUG DEPARTMENT TO BE ERRECTED ON GROUNDS OF BELLEVUE HOSPITAL.

SEALED BIDS OR ESTIMATES FOR THE

aforesaid work and materials, in accordance with the specifications and plans, will be received at the office of the Department of Public Charities, No. 66 Third Avenue, in the City of New York, until Friday, January 7, 1898, at 10 o'clock A.M. The person or persons making any bid or estimate shall furnish the same in a sealed envelope, indorsed "Bid or Estimate for Materials and Work Required for Addition to General Drug Department to be Erected on Grounds of Bellevue Hospital," and with his or their name or names, and the date of presentation, to the head of said Department, at the said office, on or before the day and hour above named, at which time and place the bids or estimates received will be publicly opened by the President of said Department and read.

THE BOARD OF PUBLIC CHARITIES RESERVES THE RIGHT TO REJECT ALL BIDS OR ESTIMATES IF DEEMED TO BE FOR THE PUBLIC INTEREST, AS PROVIDED IN SECTION 64, CHAPTER 410, LAWS OF 1882.

No bid or estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The award of the contract will be made as soon as practicable after the opening of the bids.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect, and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract, by his or their bond, with two sufficient sureties, each in the penal amount of EIGHT THOUSAND (\$8,000) DOLLARS.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him or them therein, and if no other person be so interested it shall distinctly state that fact; also that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud, and that no member of the Common Council, Head of a Department, Chief of a Bureau, Deputy thereof or Clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested it is requisite that the verification be made and subscribed by all the parties interested.

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person making the estimate, they will, on its being so awarded, become bound as his sureties for its faithful performance, and that if he shall omit or refuse to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled on its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent letting, the amount in each case to be calculated upon the estimated amount of the supplies by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract, over and above his liabilities as bail, surety or otherwise, and that he has offered himself as a surety in good faith, and with the intention to execute the bond required by section 12 of chapter 7 of the Revised Ordinances of the City of New York, if the contract shall be awarded to the person or persons for whom he consents to become surety. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York.

No bid or estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box; and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except

that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and be retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept but do not execute the contract and give the proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet, as provided by law.

Bidders will write out the amount of their estimates in addition to inserting the same in figures.

Payment will be made by a requisition on the Comptroller, in accordance with the terms of the contract.

The form of the contract, including specifications, and showing the manner of payment, can be obtained at the office of Withers & Dickson, No. 54 Bible House, New York City, and bidders are cautioned to examine each and all of their provisions carefully, as the Board of Public Charities will insist upon their absolute enforcement in every particular.

DR. STEPHEN SMITH, President; JOHN P. FAURE and JAMES R. O'BRIEN, Commissioners, Department of Public Charities.

DEPARTMENT OF PUBLIC CHARITIES, No. 66 THIRD AVENUE, NEW YORK, December 17, 1897.

TO CONTRACTORS.

PROPOSALS FOR MATERIALS AND WORK REQUIRED FOR FLOORING AND STEEL CEILINGS AT CITY HOSPITAL, BLACKWELL'S ISLAND.

SEALED BIDS OR ESTIMATES FOR THE aforesaid work and materials, in accordance with the specifications and plans, will be received at the office of the Department of Public Charities, No. 66 Third Avenue, in the City of New York, until Friday, January 7, 1898, until 10 o'clock A.M. The person or persons making any bid or estimate shall furnish the same in a sealed envelope, indorsed "Bid or Estimate for Materials and Work Required for Flooring and Steel Ceilings at City Hospital, Blackwell's Island," and with his or their name or names, and the date of presentation, to the head of said Department, at the said office, on or before the day and hour above named, at which time and place the bids or estimates received will be publicly opened by the President of said Department and read.

THE BOARD OF PUBLIC CHARITIES RESERVES THE RIGHT TO REJECT ALL BIDS OR ESTIMATES IF DEEMED TO BE FOR THE PUBLIC INTEREST, AS PROVIDED IN SECTION 64, CHAPTER 410, LAWS OF 1882.

No bid or estimate will be accepted from or contract awarded to any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The award of the contract will be made as soon as practicable after the opening of the bids.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect, and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract, by his or their bond, with two sufficient sureties, each in the penal sum of EIGHT THOUSAND (\$8,000) DOLLARS.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him or them therein, and if no other person be so interested it shall distinctly state that fact; also that it is made without any connection with any other person making an estimate for the same purpose and is in all respects fair and without collusion or fraud, and that no member of the Common Council, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate that the several matters stated therein are in all respects true. When more than one person is interested it is requisite that the verification be made and subscribed by all the parties interested.

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person making the estimate, they will, on its being so awarded, become bound as his sureties for its faithful performance, and that if he shall omit or refuse to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled on its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent letting, the amount in each case to be calculated upon the estimated amount of the work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract over and above all his debts of every nature, and over and above his liabilities as bail, surety or otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by section 12 of chapter 7 of the Revised Ordinances of the City of New York, if the contract shall be awarded to the person or persons for whom he consents to become surety. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York.

No bid or estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and be retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept but do not execute the contract and give the proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet as provided by law.

Bidders will write out the amount of their estimates in addition to inserting the same in figures.

Payment will be made by a requisition on the Comptroller, in accordance with the terms of the contract.

The form of the contract, including specifications, and showing the manner of payment, can be obtained at the office of Withers & Dickson, 54 Bible House, New York City, and bidders are cautioned to examine each and all of their provisions carefully, as the Board of

Public Charities will insist upon their absolute enforcement in every particular.

DR. STEPHEN SMITH, President; JOHN P. FAURE and JAMES R. O'BRIEN, Commissioners, Department of Public Charities.

DEPARTMENT OF PUBLIC CHARITIES, No. 66 THIRD AVENUE, NEW YORK, December 17, 1897.

TO CONTRACTORS.

PROPOSALS FOR MATERIALS AND WORK REQUIRED FOR RECEIVING AND FERRY HOUSE TO BE ERRECTED AT CITY HOSPITAL LANDING, BLACKWELL'S ISLAND.

SEALED BIDS OR ESTIMATES FOR THE aforesaid work and materials, in accordance with the specifications and plans will be received at the office of the Department of Public Charities, No. 66 Third Avenue, in the City of New York, until Friday, January 7, 1898, until 10 o'clock A.M. The person or persons making any bid or estimate shall furnish the same in a sealed envelope, indorsed "Bid or Estimate for Materials and Work Required for Receiving and Ferry House to be erected at City Hospital Landing, Blackwell's Island," and with his or their name or names, and the date of presentation, to the head of said Department, at the said office, on or before the day and hour above named, at which time and place the bids or estimates received will be publicly opened by the President of said Department and read.

THE BOARD OF PUBLIC CHARITIES RESERVES THE RIGHT TO REJECT ALL BIDS OR ESTIMATES IF DEEMED TO BE FOR THE PUBLIC INTEREST, AS PROVIDED IN SECTION 64, CHAPTER 410, LAWS OF 1882.

No bid or estimate will be accepted from or contract awarded to any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The award of the contract will be made as soon as practicable after the opening of the bids.

Any bidder for this contract must be known to be engaged in and well prepared for the business, and must have satisfactory testimonials to that effect, and the person or persons to whom the contract may be awarded will be required to give security for the performance of the contract, by his or their bond, with two sufficient sureties, each in the penal sum of FIVE THOUSAND (\$5,000) DOLLARS.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him or them therein, and if no other person be so interested it shall distinctly state that fact; also that it is made without any connection with any other person making an estimate for the same purpose and is in all respects fair and without collusion or fraud, and that no member of the Common Council, head of a Department, Chief of a Bureau, Deputy thereof, or Clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested, it is requisite that the verification be made and subscribed by all the parties interested.

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person making the estimate, they will, on its being so awarded, become bound as his sureties for its faithful performance, and that if he shall omit or refuse to execute the same they will pay to the Corporation any difference between the sum to which he would be entitled on its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent letting, the amount in each case to be calculated upon the estimated amount of the work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety or otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by section 12 of chapter 7 of the Revised Ordinances of the City of New York, if the contract shall be awarded to the person or persons for whom he consents to become surety. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York.

No bid or estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and be retained by the City of New York as liquidated damages for such neglect or refusal, but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept but do not execute the contract and give the proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet as provided by law.

Bidders will write out the amount of their estimates in addition to inserting the same in figures.

Payment will be made by a requisition on the Comptroller, in accordance with the terms of the contract.

The form of the contract, including specifications, and showing the manner of payment, can be obtained at the office of Withers & Dickson, 54 Bible House, New York City, and bidders are cautioned to examine each and all of their provisions carefully, as the Board of Public Charities will insist upon their absolute enforcement in every particular.

DR. STEPHEN SMITH, President; JOHN P. FAURE and JAMES R. O'BRIEN, Commissioners, Department of Public Charities.

CORPORATION NOTICE.

PUBLIC NOTICE IS HEREBY GIVEN TO THE owner or owners, occupant or occupants, of all houses and lots, improved or unimproved lands affected thereby, that the following assessments have been completed and are lodged in the office of the Board of Assessors for examination by all persons interested, viz.:

List 5242, No. 1. Outlet sewer and appurtenances in Jerome Avenue, from Harlem River to Elliot Street.

The lots embraced by such assessments include all the several houses and lots of ground, vacant lots, pieces and parcels of land situated on—

No. 1. Both sides of Jerome Avenue, from Harlem River to Elliot Street; also all the property included within the following area: Commencing at the new bridge approach just east of Jerome Avenue at Harlem River and extending northerly along said bridge approach to One Hundred and Sixty-first Street; thence easterly along One Hundred and Sixty-first Street to Walton Avenue; thence northerly along Walton Avenue to One

Hundred and Sixty-second Street; thence easterly on a line parallel to One Hundred and Sixty-second Street to Mott Avenue; thence northerly along Mott Avenue to One Hundred and Sixty-fifth Street; thence easterly along One Hundred and Sixty-fifth Street to Sheridan Avenue; thence northerly along Sheridan Avenue to Arcularius Place; thence in a northeasterly direction to the corner of Sherman Avenue and Elliot Street; thence easterly along Elliot Street to Claremont Park; thence northerly and including said park to the corner of Walnut Street and Monroe Place; thence in a northeasterly direction to the corner of Topping and One Hundred and Seventy-fourth Street; thence northerly to the corner of One Hundred and Seventy-sixth Street and Morris Avenue; thence northerly along Morris Avenue to Ash Street; thence in a northeasterly direction to the corner of One Hundred and Eighty-third Street and Ryer Avenue; thence running northerly to the corner of St. James Street and Kirsides Avenue; thence westerly along St. James Street to the southwest corner of St. James Street and Jerome Avenue; thence in a southwesterly direction to the corner of Fordham Road and Aqueduct Avenue; thence southerly and following the line of Aqueduct Avenue to Bosquet Avenue and Ogden Avenue intersection; thence southerly along Ogden Avenue to Birch Street; thence easterly in Birch Street to the first Avenue East of Ogden Avenue; thence in a southeasterly direction to the corner of Woodcrest Avenue and Union Street; thence in a southwesterly direction to a point on Lind Avenue about 450 feet north of Devos Street; thence southerly and including both sides of Lind Avenue to Sedgwick Avenue; thence southerly along Sedgwick Avenue and including both sides thereof to the west side of Jerome Avenue; thence southerly along Jerome Avenue to the Harlem River; thence easterly along the Harlem River to the new bridge approach, the place of beginning.

All persons whose interests are affected by the above-named assessments, and who are opposed to the same, or either of them, are requested to present their objections, in writing, to the Chairman of the Board of Assessors, at their office, No. 320 Broadway, within thirty days from the date of this notice.

THOMAS J. RUSH, Chairman; PATRICK M. HAVERTY, JOHN W. JACOBUS, EDWARD MCCUE, Board of Assessors.

NEW YORK, December 20, 1897.

DEPARTMENT OF BUILDINGS.

DEPARTMENT OF BUILDINGS, No. 220 FOURTH AVENUE, NEW YORK, June 22, 1896.

NOTICE TO OWNERS, ARCHITECTS AND BUILDERS.

THE DEPARTMENT OF BUILDINGS HAS established a branch office at junction of Third and Courtlandt Avenues, where all plans for the erection or alteration of buildings above the Harlem River may be submitted and filed.

STEVENS ON CONSTABLE, Superintendent Buildings.

FIRST JUDICIAL DISTRICT COURT.

DISTRICT COURT OF THE CITY OF NEW YORK FOR THE FIRST JUDICIAL DISTRICT.

IN THE MATTER OF THE APPLICATION OF George E. Waring, Jr., as Commissioner of Street Cleaning of the City of New York, for permission to sell certain described carts, trucks and other property removed from the public streets.

Public notice is hereby given that J. George E. Waring, Jr., Commissioner of Street Cleaning of the City of New York, pursuant to the final order made and issued by the Hon. Wauhope Lynn, Justice of the District Court for the First Judicial District of the City of New York, dated December 24, 1897, will sell at public auction, all the unhitched trucks, carts, wagons and other vehicles, etc., seized and removed from the public streets in the City of New York, and now held at the Corporation Yard described below, as provided for by chapter 697 of the Laws of 1894, at the following time and place:

All said unhitched trucks, etc., now held at the Corporation Yard at West Fifty-sixth Street, in the City of New York, between Eleventh Avenue and the North River, at said yard, on Thursday, January 6, 1898, at 10.30 o'clock in the forenoon of that day.

Dated New York, December 30, 1897.

DAMAGE COMM.—23-24 WARDS.

PURSUANT TO THE PROVISIONS OF CHAPTER 537 of the Laws of 1893, entitled "An act providing for ascertaining and paying the amount of damages to lands and buildings suffered by reason of changes of grade of streets or avenues, made pursuant to chapter 721 of the Laws of 1887, providing for the depression of railroad tracks in the Twenty-third and Twenty-fourth Wards, in the City of New York, or otherwise," and the acts amendatory thereof and supplemental thereto, notice is hereby given that public meetings of the Commissioners appointed pursuant to said acts, will be held at Room 58, Schermerhorn Building, No. 96 Broadway, in the City of New York, on Monday, Wednesday and Friday of each week, at 3 o'clock P.M., until further notice.

Dated New York, October 30, 1897.
DANIEL LORD, JAMES M. VARNUM, GEORGE W. STEPHENS, Commissioners.
LAMONT McLOUGHLIN, Clerk.

STREET CLEANING DEPT.

DEPARTMENT OF STREET CLEANING,
NEW YORK LIFE BUILDING,
No. 346 BROADWAY.

CONTRACT FOR FURNISHING AND DELIVERING HAY, STRAW, OATS, BRAN, COARSE SALT, ROCK SALT, OILMEAL, AND PINE-NEEDLE BEDDING.

PUBLIC NOTICE.
ESTIMATES INCLOSED IN SEALED ENVELOPES and indorsed with the name and address of the person or persons making the same, and the date of presentation, and a statement of the work and supplies to which they relate, will be received at the office of the Department of Street Cleaning, New York Life Building, No. 346 Broadway, in the City of New York, until 12 o'clock M. of Wednesday, the twelfth day of January, 1898, at which time and place the estimates will be publicly opened and read for the furnishing and delivery of:

905,000 pounds Hay, of the quality and standard known as Best Prime Hay.
77,000 pounds good, clean, long Rye Straw.
1,025,000 pounds clean No. 1 White Clipped Oats, to be bright, sound, well cleaned, and reasonably free from other grain, weighing not less than 36 pounds to the measured bushel.
80,000 pounds first quality Bran.
3,000 pounds first quality Coarse Salt.
8,000 pounds first quality Rock Salt.
2,500 pounds first quality Oil Meal.
150,000 pounds first quality green Pine-needle Bedding, free from chaff.

The person or persons to whom the contract may be awarded will be required to execute such contract within five days from the date of the receipt of notice to that effect, and in case of failure or neglect so to do, he or they will be considered as having abandoned such contract and as in default to the Corporation, whereupon the Commissioner of Street Cleaning will readvertise and relet the work, and so on until the contract be accepted and executed.

Bidders are required to state in their estimate, under oath, the names and places of residence, the names of all persons interested with them therein, and if no other person be so interested they

shall distinctly state the fact; also, that it is made without any connection with any other person making any bid or estimate for the above work or supplies, and that it is in all respects fair and without collusion or fraud; and also that no member of the Common Council, head of a department, chief of a bureau, deputy thereof or clerk therein, or other officer of the Corporation is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. Where more than one person is interested, it is requisite that the verification be made and subscribed by all the parties interested. Each estimate shall also be accompanied by the consent, in writing, of two householders or freeholders of the City of New York, with their respective places of business or residence, or a guarantee or surety company, duly authorized by law to act as surety, as shall be satisfactory to the Comptroller, to the effect that if the contract be awarded to the person or persons making the estimate, they will on its being so awarded become bound as his or their sureties for its faithful performance in the amount of Ten Thousand Dollars (\$10,000), and that if he or they shall omit or refuse to execute the same they will pay to the City of New York, any difference between the sum to which he would be entitled on its completion and that which the City of New York may be obliged to pay to the person or persons to whom the contract may be subsequently awarded. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature and over and above his liabilities as bail, surety or otherwise; and that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law. The adequacy and sufficiency of the sureties offered shall be approved by the Comptroller.

The price must be written in the bid or estimate, and also stated in figures. Permission will not be given for the withdrawal of any bid or estimate, and the right is expressly reserved by the Commissioner of Street Cleaning to reject all the bids, if, in his judgment, it is deemed best for the interest of the City. No bid will be accepted from or contract awarded to any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Each bid or proposal must be accompanied by a certified check on one of the State or National banks of the City of New York, payable to the order of the Comptroller of said city, for Five Hundred Dollars (\$500), or money to that amount. On the acceptance of any bid, the checks or money of the unaccepted bidders will be returned to them, and upon the execution of the contract the check or money of the accepted bidder will be returned to him.

All bids must be made with reference to the form of contract and the requirements thereof on file at the Department of Street Cleaning, or they will be rejected.

The form of the agreement (with specifications), showing the manner of payment for the articles, may be seen, and forms of proposals may be obtained at the office of the Department.

COMMISSIONER OF STREET CLEANING.
Dated New York, December 22, 1897.

DEPARTMENT OF STREET CLEANING, NEW YORK LIFE BUILDING, No. 346 BROADWAY.

TO CONTRACTORS.
PROPOSALS FOR ESTIMATES FOR A REFUSE DISPOSAL PLANT IN THE YARD OF THE DEPARTMENT OF STREET CLEANING, Nos. 408, 410, 412, 414, 416 EAST FORTY-EIGHTH STREET, IN THE CITY OF NEW YORK.

BIDS OR ESTIMATES FOR PREPARING FOR and constructing buildings, furnace and machinery complete for a refuse disposal plant in the yard of the Department of Street Cleaning, Nos. 408, 410, 412, 414, 416 East Forty-eighth Street in the City of New York, will be received by the Commissioner of Street Cleaning at the office of said Department, in the New York Life Building, No. 346 Broadway, in the City of New York, until Friday, at 12 M., the first day of December, 1897, at which time and place the bids or estimates will be publicly opened by the head of said Department. The award of the contract, if awarded, will be made as soon as practicable after the opening of the bids.

N. B.—The Board of Estimate and Apportionment, by a resolution adopted the 16th day of September, 1897, authorized the issue of bonds to an amount not to exceed twenty-two thousand (\$22,000) dollars, for payment for the work under the said contract, and bids in excess of the above-mentioned amount will, therefore, not be entitled to be received.

Any person making a bid or estimate for the work shall furnish the same on the form supplied by this Department in a sealed envelope to said Commissioner of Street Cleaning, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or name of the person or persons presenting the same, the date of its presentation, and a statement of the work to which it relates.

The bidder to whom the award is made shall give security for the faithful performance of the contract in the manner prescribed and required by ordinance in the sum of Twelve Thousand (\$12,000) Dollars.

The work to be done under the contract is to be commenced within five days after the date of execution of the contract, and all the work to be done under the contract is to be fully completed within five calendar months from the date of said execution of this contract, or within such further time as may be allowed by the Commissioner of Street Cleaning for such performance and completion, and the damages to be paid by the contractor for each day that the contract may be unfulfilled after the time fixed for the fulfillment thereof has expired, are, by a clause in the contract, determined, fixed and liquidated at Fifty Dollars per day.

Bidders will state in their estimates a price for the whole of the work to be done in conformity with the approved form of agreement and the specifications therein set forth, by which price the bids will be tested. This price is to cover all expenses of every kind involved in or incidental to the fulfillment of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder, or any claim for the right to use therein any patent-right. The award of the contract, if awarded, will be made to the bidder who is the lowest for doing the whole of the work, and whose estimate is regular in all respects.

The bidder to whom the contract shall be awarded shall, on or before the execution of the said contract, execute a good and sufficient license or permission, of a form to be approved by the Council to the Corporation, to the Mayor, Aldermen and Commonalty of the City of New York, to use in the construction of the work under the said contract and forever afterwards as a part of said refuse disposal plant and machinery in said yard in any and all patent-rights involved in said work.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for the work.

The person or persons to whom the contract may be awarded will be required to execute the contract within five days from the date of the receipt of a notice to that effect; and, in case of failure or neglect so to do, he or they will be considered as having abandoned it, and as in default to the Corporation; and the contract will be readvertised and relet, and so on until it be accepted and executed.

Bidders are required to state in their estimates their names and places of residence, the names of all persons interested with them therein, and if no other person be so interested the estimate shall distinctly state the fact; also, that the estimate is made without any connection with any other person or persons making an estimate for the same purpose, and is in all respects fair and without collusion or fraud, and also that no member of the Common Council, head of a department, chief of a bureau, deputy thereof, or clerk therein, or any other officer or employee of the Corporation of the City of New York or any of its departments, is directly

or indirectly interested in the estimate, or in the supplies or work to which it relates, or in any portion of the profits thereof, which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested, it is requisite that the verification be made and subscribed to by all the parties interested.

In case a bid shall be submitted by or in behalf of any corporation, it must be signed in the name of such corporation by some duly authorized officer or agent thereof, who shall also subscribe his own name and office. If practicable, the seal of the corporation should also be affixed.

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, or of a guaranty or surety company duly authorized by law to act as surety, to the effect that if the contract be awarded to the person or persons making the estimate, they will, upon its being so awarded, become bound as his or their sureties for its faithful performance; and that if said person or persons shall omit or refuse to execute the contract they will pay to the Corporation of the City of New York any difference between the sum to which said person or persons would be entitled upon its completion and that which said Corporation may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the work to be done by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature and over and above his liabilities as bail, surety and otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered will be subject to approval by the Comptroller of the City of New York, after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the Estimate box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Bidders are informed that no deviation from the specifications will be allowed, unless under the written instructions of the Commissioner of Street Cleaning.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation, upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

THE RIGHT TO DECLINE ALL THE ESTIMATES IS RESERVED IF DEEMED FOR THE INTEREST OF THE CORPORATION OF THE CITY OF NEW YORK.

Bidders are required to make their bids or estimates in reference to the form of agreement and specifications approved by the Corporation Counsel, copies of which may be seen upon application therefor at the office of the Department.

F. M. GIBSON, Deputy and Acting Commissioner of Street Cleaning.

Dated NEW YORK, December 18, 1897.

DEPARTMENT OF STREET CLEANING, NEW YORK LIFE BUILDING, No. 346 BROADWAY.

TO CONTRACTORS.

PROPOSALS FOR ESTIMATES FOR PREPARING FOR AND CONSTRUCTING A CONVEYOR FOR THE DUMP AT THE FOOT OF WEST ONE HUNDRED AND THIRTY-FIRST STREET, IN THE CITY OF NEW YORK.

ESTIMATES FOR PREPARING FOR AND constructing a Conveyor, as provided for in a form of contract for the same, designated as No. 1, for the dump at the foot of West One Hundred and Thirty-first street, in the City of New York, will be received by the Commissioner of Street Cleaning at the office of said Department, in the New York Life Building, No. 346 Broadway, in the City of New York, until Friday at 12 o'clock M., the 31st day of December, 1897, at which time and place the estimates will be publicly opened by the head of said Department. The award of the contract, if awarded, will be made as soon as practicable after the opening of the bids.

N. B.—The Board of Estimate and Apportionment, by a resolution adopted the 14th day of October, 1897, authorized the issue of bonds to an amount not to exceed seven thousand five hundred dollars (\$7,500), for payment for the work under the said contract, and bids in excess of the above-mentioned amount will, therefore, not be entitled to be received.

Any person making an estimate for the work shall furnish the same in a sealed envelope to said Commissioner of Street Cleaning, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation, and a statement of the work to which it relates.

The bidder to whom the award is made shall give security for the faithful performance of the contract in the manner prescribed and required by ordinance in the sum of Four Thousand Dollars.

The work to be done under the contract is to be commenced within five days after the date of execution of the contract, and all the work to be done under the contract is to be fully completed within seventy days from the date of said execution of the contract, or within such further time as may be allowed by the Commissioner of Street Cleaning for such performance and completion, and the damages to be paid by the contractor for each day that the contract may be unfulfilled after the time fixed for the fulfillment thereof has expired, are, by a clause in the contract, determined, fixed and liquidated at twenty-five (25) dollars per day.

Bidders will state in their estimates a price for the whole of the work to be done in conformity with the approved form of agreement and the specifications therein set forth, by which price the bids will be tested. This price is to cover all expenses of every kind involved in or incidental to the fulfillment of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder, or any claim for the right to use therein any patent right.

The bidder to whom the contract shall be awarded shall on or before the execution of the said contract execute a good and sufficient license or permission, of a form to be approved by the Counsel to the Corporation, to the Mayor, Aldermen and Commonalty of the City of New York, to be used in the construction of the work under the said contract and forever afterwards as a part of said conveyor, at the foot of West One Hundred and Thirty-first street, in the City of New York, any and all patent-rights involved in said work.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for the work. The person or persons to whom the contract may be awarded will be required to execute the contract within

five days from the date of the receipt of a notice to that effect; and in case of failure or neglect so to do, he or they will be considered as having abandoned it, and as in default to the Corporation; and the contract will be readvertised and relet, and so on until it be accepted and executed.

Bidders are required to state in their estimates, their names and places of residence, the names of all persons interested with them therein, and if no other person be so interested, the estimate shall distinctly state the fact; also that the estimate is made without any connection with any other person or persons making an estimate for the same purpose, and is in all respects fair and without collusion or fraud; and also that no member of the Common Council, head of a department, chief of a bureau, deputy thereof or clerk therein, or any other officer or employee of the Corporation of the City of New York or any of its departments is directly or indirectly interested in the estimate, or in the supplies or work to which it relates, or in any portion of the profits thereof, which estimate must be verified by the oath, in writing, of the party making the estimate that the several matters stated therein are in all respects true. *Where more than one person is interested, it is requisite that the verification be made and subscribed to by all the parties interested.*

In case a bid shall be submitted by or on behalf of any corporation, it must be signed in the name of such corporation by some duly authorized officer or agent thereof, who shall also subscribe his own name and office. If practicable, the seal of the corporation should also be affixed.

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, or of a guaranty or surety company duly authorized by law to act as surety, to the effect that if the contract be awarded to the person or persons making the estimate, they will, upon its being so awarded, become bound as his or their sureties for its faithful performance, and that if said person or persons shall omit or refuse to execute the contract, they will pay to the Corporation of the City of New York any difference between the sum to which said person or persons would be entitled upon its completion and that which said Corporation may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the work to be done by which the bid are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise; and that he has offered himself as a surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered will be subject to approval by the Comptroller of the City of New York after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Bidders are informed that no deviation from the specifications will be allowed unless under the written instructions of the Commissioner of Street Cleaning.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

THE RIGHT TO DECLINE ALL THE ESTIMATES IS RESERVED IF DEEMED FOR THE INTEREST OF THE CORPORATION OF THE CITY OF NEW YORK.

Bidders are required to make their bids or estimates in reference to the form of the agreement and specifications approved by the Corporation Counsel, copies of which may be seen upon application therefor at the office of the Department.

F. M. GIBSON, Deputy and Acting Commissioner of Street Cleaning.

Dated NEW YORK, December 18, 1897.

DEPARTMENT OF STREET CLEANING, NEW YORK LIFE BUILDING, No. 346 BROADWAY.

TO CONTRACTORS.

PROPOSALS FOR ESTIMATES FOR PREPARING FOR AND CONSTRUCTING A CONVEYOR FOR THE DUMP AT THE FOOT OF WEST ONE HUNDRED AND THIRTY-FIRST STREET, IN THE CITY OF NEW YORK.

ESTIMATES FOR PREPARING FOR AND constructing a Conveyor at the foot of West One Hundred and Thirty-first street, in the City of New York, as provided for in a form of contract for the same designated as Form No. 2, will be received by the Commissioner of Street Cleaning, at the office of said Department, in the New York Life Building, No. 346 Broadway, in the City of New York, until Friday at 12 o'clock M., the 31st day of December, 1897, at which time and place the estimates will be publicly opened by the head of said Department. The award of the contract, if awarded, will be made as soon as practicable after the opening of the bids.

N. B.—The Board of Estimate and Apportionment, by a resolution adopted the 14th day of October, 1897, authorized the issue of bonds to an amount not to exceed seven thousand five hundred (\$7,500) dollars, for payment for the work under the said contract, and bids in excess of the above-mentioned amount will therefore not be entitled to be received.

Any person making an estimate for the work shall furnish the same in a sealed envelope to said Commissioner of Street Cleaning at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation and a statement of the work to which it relates.

The bidder to whom the award is made shall give security for the faithful performance of the contract in the manner prescribed and required by ordinance in the sum of Four Thousand Dollars.

The work to be done under the contract is to be commenced within five days after the date of execution of the contract, and all the work to be done under the contract is to be fully completed within seventy days from the date of said execution of this contract, or within such further time as may be allowed by the Commissioner of Street Cleaning for such performance and completion, and the damages to be paid by the contractor for each day that the contract may be unfulfilled after the time fixed for the fulfillment thereof has expired, are, by a clause in the contract, determined, fixed and liquidated at Twenty-five Dollars per day.

Bidders will state in their estimates a price for the whole of the work to be done, in conformity with the approved form of agreement and the specifications

therein set forth, by which price the bids will be tested. This price is to cover all expenses of every kind involved in or incidental to the fulfillment of the contract, including any claim that may arise through delay, from any cause, in the performing of the work thereunder, or any claim for the right to use therein any patent right.

The bidder to whom the contract shall be awarded shall, on or before the execution of the said contract, execute a good and sufficient license or permission, of a form to be approved by the Counsel to the Corporation, to the Mayor, Aldermen and Commonalty of the City of New York, to use in the construction of the work, under the said contract and forever afterwards, as a part of said conveyor at the foot of West One Hundred and Thirty-first street, in the City of New York, any and all patent-rights involved in said work.

Bidders will distinctly write out, both in words and in figures, the amount of their estimates for the work.

The person or persons to whom the contract may be awarded will be required to execute the contract within five days from the date of the receipt of a notice to that effect, and in case of failure or neglect so to do, he or they will be considered as having abandoned it, and as in default to the Corporation, and the contract will be readvertised and relet, and so on until it be accepted and executed.

Bidders are required to state in their estimates their names and places of residence; the names of all persons interested with them therein; and if no other person be so interested, the estimate shall distinctly state the fact; also that the estimate is made without any connection with any other person or persons making an estimate for the same purpose, and is in all respects fair and without collusion or fraud; and also, that no member of the Common Council, head of a department, chief of a bureau, deputy thereof or clerk therein, or any other officer or employee of the Corporation of the City of New York or any of its departments, is directly or indirectly interested in the estimate, or in the supplies or work to which it relates, or in any portion of the profits thereof; which estimate must be verified by the oath, in writing, of the party making the estimate, that the several matters stated therein are in all respects true. *Where more than one person is interested, it is requisite that the verification be made and subscribed to by all the parties interested.*

In case a bid shall be submitted by or in behalf of any corporation, it must be signed in the name of such corporation by some duly authorized officer or agent thereof, who shall also subscribe his own name and office. If practicable, the seal of the corporation should also be affixed.

Each estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, or of a guaranty or surety company duly authorized by law to act as surety, to the effect that if the contract be awarded to the person or persons making the estimate, they will, upon its being so awarded, become bound as his or their sureties for its faithful performance; and that if said person or persons shall omit or refuse to execute the contract, they will pay to the Corporation of the City of New York any difference between the sum to which said person or persons would be entitled upon its completion and that which said Corporation may be obliged to pay to the person to whom the contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the work to be done by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise; and that he has offered himself as a surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered will be subject to approval by the Comptroller of the City of New York after the award is made and prior to the signing of the contract.

No estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of security required for the faithful performance of the contract. Such check or money must not be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Bidders are informed that no deviation from the specifications will be allowed, unless under the written instructions of the Commissioner of Street Cleaning.

No estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation, upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

THE RIGHT TO DECLINE ALL THE ESTIMATES IS RESERVED IF DEEMED FOR THE INTEREST OF THE CORPORATION OF THE CITY OF NEW YORK.

Bidders are required to make their bids or estimates in reference to the form of the agreement and specifications approved by the Corporation Counsel, copies of which may be seen upon application therefor at the office of the Department.

F. M. GIBSON, Deputy and Acting Commissioner of Street Cleaning.

Dated NEW YORK, December 18, 1897.

PERSONS HAVING BULKHEADS TO FILL, IN the vicinity of New York Bay, can procure material for that purpose—ashes, street sweepings, etc., such as is collected by the Department of Street Cleaning—free of charge, by applying to the Commissioner of Street Cleaning, in the Criminal Court Building.

GEORGE E. WARING, JR.,
Commissioner of Street Cleaning

DEPARTMENT OF PUBLIC WORKS

NEW YORK, December 29, 1897.

TO CONTRACTORS.

BIDS OR ESTIMATES, INCLOSED IN A sealed envelope, with the title of the work and the name of the bidder indorsed thereon, also the number of the work as in the advertisement, will be received at the Mayor's office at the City Hall until 12 o'clock M., on Wednesday, January 12, 1898. The bids will be publicly opened by the President of the Board of Public Improvements at the Mayor's office, City Hall, at the hour above mentioned.

No. 1. FOR REGULATING AND PAVING WITH ASPHALT-PAVEMENT, ON THE PRESENT PAVEMENT, THE CARRIAGEWAY OF SEVENTY-SIXTH STREET, between West End avenue and Riverside Drive.

No. 2. FOR REGULATING AND PAVING WITH ASPHALT-PAVEMENT, ON CONCRETE FOUNDATION, THE CARRIAGEWAY OF EIGHTY-FIRST STREET, from Park to Third avenue.

No. 3. FOR REGULATING AND PAVING WITH ASPHALT-PAVEMENT, ON CONCRETE FOUNDATION, THE CARRIAGEWAY

OF EIGHTY-FIRST STREET, from Columbus to Amsterdam avenue, AND EIGHTY-FOURTH STREET, from West End avenue to Boulevard.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him therein, and if no other person be so interested it shall distinctly state that fact; that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud, and that no member of the Municipal Assembly, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or in the work to which it relates or in any portion of the profits thereof.

Each estimate must be verified by the oath, in writing, of the party making the same, that the several matters therein stated are true, and must be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, to the effect that if the contract is awarded to the person making the estimate, they will, upon its being so awarded, become bound as his sureties for its faithful performance, and that if he shall refuse or neglect to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled upon its completion and that which the Corporation may be obliged to pay to the person to whom the contract shall be awarded at any subsequent letting, the amount to be calculated upon the estimated amount of the work by which the bids are tested.

The consent last above mentioned must be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety, or otherwise, and that he has offered himself as surety in good faith, with the intention to execute the bond required by law.

No estimate will be considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in a sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of the deposit will be returned to him.

THE PRESIDENT OF THE BOARD OF PUBLIC IMPROVEMENTS WILL RESERVE THE RIGHT TO REJECT ALL BIDS RECEIVED FOR ANY PARTICULAR WORK IF HE DEEMS IT FOR THE BEST INTERESTS OF THE CITY.

Blank forms of bid or estimate, the proper envelopes in which to inclose the same, the specifications and agreements, and any further information desired, can be obtained in the office of the Chief Clerk of the Department of Public Works No. 150 Nassau street, Room 1708.

CHARLES H. T. COLLIS, Commissioner of Public Works.

COMMISSIONER'S OFFICE, No. 150 NASSAU STREET, NEW YORK, December 18, 1897.

TO CONTRACTORS.

BIDS OR ESTIMATES, INCLOSED IN A sealed envelope, with the title of the work and the name of the bidder indorsed thereon, also the number of the work as in the advertisement, will be received at No. 150 Nassau street, corner of Spruce street, in the Chief Clerk's office, Room No. 1704-7, until 12 o'clock M., on Friday, December 31, 1897. The bids will be publicly opened by the head of the Department, on second floor at No. 150 Nassau street, at the hour above mentioned.

No. 1. FOR REGULATING AND PAVING WITH ASPHALT-BLOCK PAVEMENT, ON CONCRETE FOUNDATION, THE CARRIAGEWAY OF ONE HUNDRED AND EIGHTY-THIRD STREET, from Kingsbridge road to Amsterdam avenue.

No. 2. FOR REGULATING AND PAVING WITH ASPHALT-BLOCK PAVEMENT, ON CONCRETE FOUNDATION, THE CARRIAGEWAY OF ONE HUNDRED AND SIXTY-SECOND STREET, from Kingsbridge road to Eleventh avenue or Boulevard.

No. 3. FOR REGULATING AND PAVING WITH ASPHALT-BLOCK PAVEMENT, ON CONCRETE FOUNDATION, THE CARRIAGEWAY OF ONE HUNDRED AND FORTY-EIGHTH STREET, from Seventh to Eighth avenue.

No. 4. FOR REGULATING AND PAVING WITH ASPHALT-BLOCK PAVEMENT, ON CONCRETE FOUNDATION, THE CARRIAGEWAY OF ONE HUNDRED AND FIFTY-FOURTH STREET, from Eighth to Bradhurst avenue.

No. 5. FOR REGULATING AND PAVING WITH ASPHALT-BLOCK PAVEMENT, ON CONCRETE FOUNDATION, THE CARRIAGEWAY OF EDGEcombe AVENUE, from north side of One Hundred and Forty-fifth street to north side of One Hundred and Fiftieth street.

No. 6. FOR REGULATING AND PAVING WITH ASPHALT-BLOCK PAVEMENT, ON CONCRETE FOUNDATION, THE CARRIAGEWAY OF ONE HUNDRED AND FORTY-SEVENTH STREET, from Seventh to Eighth avenue.

No. 7. FOR REGULATING AND PAVING WITH ASPHALT-BLOCK PAVEMENT, ON CONCRETE FOUNDATION, THE CARRIAGEWAY OF ONE HUNDRED AND THIRTY-EIGHTH STREET, from Seventh to Lenox avenue.

No. 8. FOR REGULATING AND PAVING WITH ASPHALT-BLOCK PAVEMENT, ON CONCRETE FOUNDATION, THE CARRIAGEWAY OF ONE HUNDRED AND SEVENTY-FIFTH STREET, from Amsterdam to Eleventh avenue.

No. 9. FOR REGULATING AND PAVING WITH ASPHALT-BLOCK PAVEMENT, ON CONCRETE FOUNDATION, THE CARRIAGEWAY OF AUDUBON AVENUE, from One Hundred and Seventy-third to One Hundred and Seventy-fifth street.

No. 10. FOR REGULATING AND PAVING WITH ASPHALT-BLOCK PAVEMENT, ON CONCRETE FOUNDATION, THE CARRIAGEWAY OF ONE HUNDREDTH STREET, from Lexington to Park avenue.

No. 11. FOR REGULATING AND PAVING WITH ASPHALT-BLOCK PAVEMENT, ON CONCRETE FOUNDATION, THE CARRIAGEWAY OF ONE HUNDRED AND SIXTY-SIXTH STREET, from Amsterdam to Edgecombe avenue.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him therein, and if no other person be so interested it shall distinctly state that fact; that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud, and that no member of the Common Council, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or in the work to which it relates or in any portion of the profits thereof.

Each estimate must be verified by the oath, in writing, of the party making the same, that the several matters

therein stated are true, and must be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, to the effect that if the contract is awarded to the person making the estimate, they will, upon its being so awarded, become bound as his sureties for its faithful performance, and that if he shall refuse or neglect to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled upon its completion, and that which the Corporation may be obliged to pay to the person to whom the contract shall be awarded at any subsequent letting, the amount to be calculated upon the estimated amount of the work by which the bids are tested.

The consent last above mentioned must be accompanied by the oath or affirmation, in writing, of each of the persons signing the same that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety, or otherwise, and that he has offered himself as surety in good faith, with the intention to execute the bond required by law.

No estimate will be considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in a sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of the deposit will be returned to him.

THE COMMISSIONER OF PUBLIC WORKS RESERVES THE RIGHT TO REJECT ALL BIDS RECEIVED FOR ANY PARTICULAR WORK IF HE DEEMS IT FOR THE BEST INTERESTS OF THE CITY.

Blank forms of bid or estimate, the proper envelopes in which to inclose the same, the specifications and agreements, and any further information desired, can be obtained in Bureau of Water Purveyor.

CHARLES H. T. COLLIS, Commissioner of Public Works.

DEPARTMENT OF PUBLIC WORKS—COMMISSIONER'S OFFICE, No. 150 NASSAU STREET, NEW YORK, March 23, 1897.

NOTICE IS HEREBY GIVEN TO ALL PLUMBERS, to whom license has been or may be issued to make and connect service pipes, for conducting water to houses and tenements with the distributing pipes in this city, after said pipes have been tapped, and to make connections with sewers or drains from houses and tenements with the sewers or drains in the streets or avenues of this city, that such license will be revoked in the case of any plumber who permits another to use his license and to do the work of a master plumber without holding a certificate of competency from the Examining Board of Plumbers; or who violates any of the regulations which have been or may hereafter be established by the Department, respecting the introduction and use of the Croton water and connections made with sewers and drains.

CHARLES H. T. COLLIS, Commissioner of Public Works.

TO OWNERS, ARCHITECTS AND BUILDERS.

NOTICE IS HEREBY GIVEN THAT ALL ORDINANCES of the Common Council, approved March 30, 1897, and subsequent thereto, in relation to the use and occupancy of sidewalks, must be complied with, and that all hoistways must occupy only such space of the sidewalk as is authorized by special ordinance of the Common Council, passed March 30, 1886, viz.:

"Hoistways may be placed within the stoop-lines, but in no case to extend beyond five feet from the house-line, and shall be guarded by iron railings or rods to prevent accidents to passers-by."

You are further notified that all violations now existing of such ordinances must be removed, and that all conditions set forth in permits granted for vault or other purposes must be complied with within sixty days. The special ordinances permitting court-yard inclosures give no right to occupy this space otherwise.

CHARLES H. T. COLLIS, Commissioner of Public Works.

DEPARTMENT OF PUBLIC WORKS, COMMISSIONER'S OFFICE, No. 150 NASSAU STREET, NEW YORK, August 6, 1896.

NOTICE IS HEREBY GIVEN THAT THE charge for vault permits is fixed at the rate of \$2 per square foot, under and pursuant to ordinance of the Common Council relating thereto.

HOWARD PAYSON WILDS, Deputy Commissioner of Public Works.

NOTICE TO PROPERTY-OWNERS, BUILDERS, FLAGGERS AND OTHERS.

NOTICE IS HEREBY GIVEN THAT THE practice of placing concrete or other friable curbs on the streets of this city is in contravention of chapter 5, Article XIV, section 251, Revised Ordinances of 1897 which reads: "All curbs-stones * * * shall be of the best hard blue or gray granite." and this Department will find it necessary to prosecute to the full penalty imposed by law persons setting or making such curbs, whether they have broken up or removed the curbs-stones provided by the City or not.

Further notice is given that this Department will in no case entertain claims or damages to concrete or other artificial sidewalks that are caused by repair or setting of hydrants, or by other work which the City does for the general good.

CHARLES H. T. COLLIS, Commissioner of Public Works.

ST. OPENING AND IMPROVEMENT.

NOTICE IS HEREBY GIVEN THAT THERE will be a special meeting of the Board of Street Opening and Improvement of the City of New York held at the Mayor's Office on Friday next, December 31, at 11 o'clock A.M., at which meeting it is proposed to consider unfinished business and such other matters as may be brought before the Board.

Dated New York, December 28, 1897.

V. B. LIVINGSTON, Secretary.

NOTICE IS HEREBY GIVEN THAT THE Board of Street Opening and Improvement of the City of New York, deeming it for the public interest so to do, propose to alter the map or plan of the City of New York by laying out, widening and extending Claremont avenue, from 150 feet north of One Hundred and Sixteenth street to Riverside Drive, 50 feet south of One Hundred and Sixteenth street, in the Twelfth Ward of said city, more particularly bounded and described as follows:

Beginning at a point in the westerly line of Claremont avenue distant 200 feet northerly from the northerly line of One Hundred and Sixteenth street; thence southerly and curving to the right, radius 250 feet, distance

189.53 feet; thence westerly and curving to the right, radius 95.6 feet, distance 77.25 feet, to a point in the northerly line of One Hundred and Sixteenth street distant 62.46 feet from Riverside avenue; thence easterly along the northerly line of One Hundred and Sixteenth street, distance 137.54 feet, to the westerly line of Claremont avenue; thence northerly and along said line, distance 20 feet, to the point or place of beginning.

Also beginning in easterly line of Riverside avenue distant 157.98 feet as measured along the said line northerly from the northerly line of One Hundred and Fifteenth street; thence northerly and easterly in curved line to the right, radius 63.62 feet, distance 84.4 feet, to the southerly line of One Hundred and Sixteenth street; thence westerly and along said southerly line, distance 51.54 feet, to the westerly line of Riverside avenue; thence southerly and along said line, distance 49.33 feet, to the point or place of beginning.

V. B. LIVINGSTON, Secretary.

Dated New York, December 18, 1897.

STREET IMPROVEMENTS, 23D AND 24TH WARDS.

DECEMBER 17, 1897.

TO CONTRACTORS.

SEALED BIDS OR ESTIMATES FOR EACH OF the following-mentioned works, with the title of the work and name of the bidder indorsed thereon, also the number of the work, as in the advertisement, will be received by the Commissioner of Street Improvements of the Twenty-third and Twenty-fourth Wards, at his office, Third avenue and One Hundred and Seventy-seventh street, until 11 o'clock A.M. on Friday, December 31, 1897, at which time and hour they will be publicly opened:

No. 1. REGULATING, GRADING, SETTING CURB-STONES, LAYING CROSSWALKS, AND PLACING FENCES IN WOODLAWN ROAD, from Jerome avenue to Bronx Park.

No. 2. REGULATING, GRADING, SETTING CURB-STONES, FLAGGING THE SIDEWALKS, LAYING CROSSWALKS AND PLACING FENCES IN ONE HUNDRED AND NINETY-SEVENTH STREET, from Webster avenue to Bainbridge avenue.

No. 3. FOR CONSTRUCTING SEWER AND APPURTENANCES IN EAST ONE HUNDRED AND EIGHTY-SECOND STREET, from the existing sewer in Jerome avenue to Aqueduct avenue, East.

No. 4. REGULATING, GRADING, SETTING CURB-STONES, FLAGGING THE SIDEWALKS, LAYING CROSSWALKS AND PLACING FENCES IN LAFAYETTE AVENUE, from Longwood avenue to the Bronx river.

Each estimate must contain the name and place of residence of the person making the same, the names of all persons interested with him therein, and if no other person be so interested it shall distinctly state that fact. That it is made without any connection with any other person making an estimate for the same work, and is in all respects fair and without collusion or fraud. That no member of the Common Council, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of the Corporation, is directly or indirectly interested in the estimate or in the work to which it relates or in the profits thereof.

Each bid or estimate must be verified by the oath, in writing, of the party making the same, that the several matters therein stated are true, and must be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, to the effect that if the contract is awarded to the person making the estimate, they will, upon its being so awarded, become bound as his sureties for its faithful performance, and that if he shall refuse or neglect to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled upon its completion, and that which the Corporation may be obliged to pay to the person to whom the contract shall be awarded at any subsequent letting; the amount to be calculated upon the estimated amount of the work by which the bids are tested.

The consent last above mentioned must be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of the contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety, or otherwise, and that he has offered himself as surety, in good faith, with the intention to execute the bond required by law.

No estimate will be considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must not be inclosed in a sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

The Commissioner of Street Improvements of the Twenty-third and Twenty-fourth Wards reserves the right to reject all bids received for any particular work if he deems it for the best interests of the City.

Blank forms of bid or estimate, the proper envelopes in which to inclose the same, the specifications and agreements, and any further information desired, can be obtained at this office.

LOUIS F. HAFEN, Commissioner of Street Improvements, Twenty-third and Twenty-fourth Wards.

BOARD OF EDUCATION.

SEALED PROPOSALS WILL BE RECEIVED BY the Committee on Buildings of the Board of Education of the City of New York, at the Annex of the Hall of the Board, No. 585 Broadway, eleventh floor, until 3.30 o'clock P.M. on Tuesday, January 11, 1898, for Erecting a New School Building for Public School 168, One Hundred and Fourth and One Hundred and Fifth streets, between First and Second avenues; also, for Supplying the Heating and Ventilating Apparatus and Electric Lighting Plant for Public School 42, Hester, Ludlow and Orchard streets.

Plans and specifications may be seen and blank proposals obtained at the Annex of the Hall of the Board, Estimating Room, Nos. 419 and 421 Broome street, top floor.

The attention of bidders is expressly called to the time stated in the contract within which the work must be completed. They are expressly notified that the successful bidder will be held strictly to completion within said time.

The Committee reserve the right to reject any or all of the proposals submitted.

The party submitting a proposal, and the parties proposing to become sureties, must each write his name and place of residence on said proposal.

Two responsible and approved sureties, residents of this city, are required in all cases.

The contractor shall provide bonds of suretyship

of one of the several surety companies doing business in this city when the amount of the bid exceeds two thousand dollars (\$2,000).

No proposal will be considered from persons whose character and antecedent dealings with the Board of Education render their responsibility doubtful.

It is required as a condition precedent to the reception or consideration of any proposals, that a certified check upon or a certificate of deposit of one of the State or National banks or Trust Companies of the City of New York, drawn to the order of the President of the Board of Education, shall accompany the proposal to an amount of not less than three per cent. of such proposal when said proposal is for an amount under ten thousand dollars; that on demand, within one day after the awarding of the contract by the Committee, the President of the Board will return all the deposits of checks and certificates of deposits made to the persons making the same, except that made by the person or persons whose bid has been so accepted, and that if the person or persons whose bid has been so accepted shall refuse or neglect, within five days after due notice has been given that the contract is ready for execution, to execute the same, the amount of the deposit or of the check or certificate of deposit made by him or them shall be forfeited to and retained by this Board, not as a penalty, but as liquidated damages for such neglect or refusal, and shall be paid into the City Treasury to the credit of the Sinking Fund of the City of New York; but if the said person or persons whose bid has been so accepted shall execute the contract within the time aforesaid, the amount of his or their deposit of check or certificate of deposit shall be returned to him or them.

RICHARD H. ADAMS, DANIEL E. MCSWEENEY, WILLIAM H. HURLBUT, JACOB W. MACK, CHAS. C. BURLINGHAM, Committee on Buildings.

Dated New York, December 30, 1897.

SEALED PROPOSALS WILL BE RECEIVED BY the Committee on Buildings of the Board of Education of the City of New York, at the Annex of the Hall of the Board, No. 585 Broadway, eleventh floor, until 3.30 o'clock P.M. on Tuesday, January 4, 1898, for erecting new Public School 44 on southeast corner of Hubert and Collier streets.

Plans and specifications may be seen and blank proposals obtained at the Annex of the Hall of the Board, Estimating Room, Nos. 419 and 421 Broome street, top floor.

The attention of bidders is expressly called to the time stated in the contract within which the work must be completed. They are expressly notified that the successful bidder will be held strictly to completion within said time.

The Committee reserve the right to reject any or all of the proposals submitted.

The party submitting a proposal, and the parties proposing to become sureties, must each write his name and place of residence on said proposal.

Two responsible and approved sureties, residents of this city, are required in all cases.

The contractor shall provide bonds of suretyship of one of the several surety companies doing business in this city, when the amount of the bid exceeds two thousand dollars (\$2,000).

No proposal will be considered from persons whose character and antecedent dealings with the Board of Education render their responsibility doubtful.

It is required as a condition precedent to the reception or consideration of any proposals, that a certified check upon or a certificate of deposit of one of the State or National banks or Trust Companies of the City of New York, drawn to the order of the President of the Board of Education, shall accompany the proposal to an amount of not less than three per cent. of such proposal when said proposal is for or exceeds ten thousand dollars, and to an amount of not less than five per cent. of such proposal when said proposal is for an amount under ten thousand dollars; that on demand, within one day after the awarding of the contract by the Committee, the President of the Board will return all the deposits of checks and certificates of deposits made to the persons making the same, except that made by the person or persons whose bid has been so accepted; and that if the person or persons whose bid has been so accepted shall refuse or neglect, within five days after due notice has been given that the contract is ready for execution, to execute the same, the amount of the deposit or of the check or certificate of deposit made by him or them shall be forfeited to and retained by this Board, not as a penalty, but as liquidated damages for such neglect or refusal, and shall be paid into the City Treasury to the credit of the Sinking Fund of the City of New York; but if the said person or persons whose bid has been so accepted shall execute the contract within the time aforesaid, the amount of his or their deposit of check or certificate of deposit shall be returned to him or them.

EDWARD H. PEASELEE, RICHARD H. ADAMS, DANIEL E. MCSWEENEY, WILLIAM H. HURLBUT, JACOB W. MACK, Committee on Buildings.

Dated New York, December 21, 1897.

SEALED PROPOSALS FOR CONVEYING pupils from Morris Heights to Public School 155 and return, in three stages, on every school-day, from and including January 3, 1898, to and including July 1, 1898; also sealed proposals for conveying pupils from Riverdale Library, Riverdale, New York City, to Public School 146 and return, in two or more stages, on every school-day, from and including January 3, 1898, to and including July 1, 1898; also sealed proposals for conveying pupils from Fort Seelyer to Public School 99 and return, in one or more stages, on every school-day, from and including January 3, 1898, to and including July 1, 1898; and also sealed proposals for conveying pupils from Boston road and Fifth avenue, Eastchester, along Boston road to Kingsbridge road to Fourth street, thence by the most direct route to Public School 101, and return, in one or more stages, on every school-day from and including January 3, 1898, to and including July 1, 1898, will be received by the Committee on Supplies of the Board of Education, at the Hall of the Board of Education, No. 146 Grand street, until Friday, December 31, 1897, at 4 o'clock P.M. The Committee reserves the right to reject any or all proposals.

For terms of contract and for information as to further requirements, inquire at the Hall of the Board of Education, No. 146 Grand street.

Dated New York, December 18, 1897.

HUGH KELLY Chairman, Committee on Supplies.

HEALTH DEPARTMENT.

HEALTH DEPARTMENT, CRIMINAL COURT BUILDING, CENTRE, WHITE, ELM AND FRANKLIN STREETS.

TO CONTRACTORS.

SEALED BIDS OR ESTIMATES FOR FURNISHING Five Hundred Tons of White Ash Coal, egg size, for the Willard Parker and Reception Hospitals, foot of East Sixteenth street, under the charge of the Board of Health, will be received at the office of the Health Department, in the City of New York, until 12.30 o'clock P.M. of January 4, 1898. The person or persons making any bid or estimate shall furnish the same in a sealed envelope, indorsed "Bid or Estimate for Furnishing Coal for Willard Parker and Reception Hospitals," and with his or her name or names, and the date of its presentation, to the head of said Department, at the said office, on or before the day and hour above named, at which time and place the bids or estimates received will be publicly opened by the President of said Board and read.

The Board of Health reserves the right to reject all bids or estimates, as provided in section 64, chapter 410, Laws of 1882, it deemed to be for the public interest. No bid or estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as

surety or otherwise, upon any obligation to the Corporation.

The award of the contract will be made as soon as practicable after the opening of the bids.

The Coal to be of good quality, and the quantity that will be required will be about Five Hundred (500) Tons of White Ash Coal, egg size, to be well screened and in good order, each ton to be 2,240 pounds, in accordance with the specifications attached to and which form a part of the contract aforesaid.

Delivery to be made at the time required by the Board of Health; any changes in the time or place of delivery, however, may be made, in writing, by the Board of Health.

The above quantity is estimated and approximated only, and bidders are notified that the Board of Health reserves the right to increase or diminish said quantities by an amount not exceeding fifteen per cent. of the estimated quantities, and the contractor will be paid therefor only at the rate or price named in the contract, and that in case the above-named quantity shall not be required by the Department, no allowance will be made for any real or supposed damage or loss of profit.

The person or persons to whom the contract may be awarded will be required to give security for the performance of the contract by his or their bond, with two sufficient sureties, each in the penal sum of \$1,200.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him or them therein, and if no other person be so interested it shall distinctly state that fact; also that it is made without any connection with any other person making an estimate for the same purpose, and that it is in all respects fair and without collusion or fraud, and that no member of the Common Council, head of a Department, Chief of a Bureau, deputy thereof, or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate that the several matters stated therein are in all respects true. Where more than one person is interested, it is requisite that the verification be made and subscribed by all the parties interested.

Bidders will be required to furnish testimonials that they are engaged in the coal business in the City of New York, and have the plant necessary to carry out promptly and regularly the contract, if it be awarded, to the entire satisfaction of the Board of Health, and must furnish an undertaking for the faithful performance of all the provisions thereof in the manner provided by law, executed by two householders or freeholders of the City of New York, each justifying in the penal sum of 1,200 dollars, and agreeing that if he shall omit or refuse to execute the said contract, they will pay to the Corporation any difference between the sum to which he would be entitled on its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract shall be awarded at any subsequent letting, the amount in each case to be calculated upon the estimated amount of the work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety or otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York.

Should the person or persons to whom the contract is awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to him or their bid or estimate, or if he or they accept, but do not execute, the contract and give the proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet as provided by law.

No bid or estimate will be received or considered unless accompanied by either a certified check upon one of the National or State banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the faithful performance of the contract. Such check or money must NOT be inclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

Bidders are cautioned to examine the form of contract and the specifications for particulars before making their estimates. Bidders will write out the amount of their estimate in addition to inserting the same in figures.

Payment for the Coal will be made by requisition on the Comptroller, and as more specifically and particularly is set forth in the contract form.

Bidders are informed that no deviation from the contract and specifications will be allowed unless under the written instruction of the Board of Health.

The form of the agreement, including specifications, showing the manner of payment, will be furnished at the office of the Department, Criminal Court Building, Centre, White, Elm and Franklin streets.

CHARLES G. WILSON, GEORGE B. FOWLER, M. D., ALVAH H. DOLY, M. D., FRANK MOSS, Commissioners.

Dated New York, December 20, 1897.

DEPARTMENT OF PUBLIC PARKS

DEPARTMENT OF PUBLIC PARKS, ARSENAL, CENTRAL PARK, NEW YORK, December 17, 1897.

TO CONTRACTORS.

SEALED BIDS OR ESTIMATES, WITH THE title of the work and the name of the bidder indorsed thereon, will be received by the Department of Public Parks, at its offices, Arsenal Building, Sixty-fourth street and Fifth avenue, Central Park, until 2.00 o'clock P.M. of Friday, December 31, 1897, for the following-named works:

No. 1. FOR CONSTRUCTING BICYCLE AND BRIDLE ROADWAYS AND APPURTENANCES ADJACENT TO THE EXISTING ROADWAY IN THE BRONX AND PELHAM PARKWAY, between Bear Swamp road and Eastern Boulevard in Pelham Bay Park, in the City of New York.

No. 2. FOR THE CONSTRUCTION AND IMPROVEMENT OF A PORTION OF CROTONA PARK, IN THE TWENTY-THIRD WARD OF THE CITY OF NEW YORK.

No. 3. FOR ERECTING TERRACE AND RETAINING WALLS, BALUSTRADE, RUSTIC FENCE, STEPS, PLATFORMS, ETC. FOR APPROACH TO THE PUBLIC BUILDING, AND GRADING AND IMPROVING THE GROUND SURROUNDING IN CROTONA PARK, AT THIRD AND TREMONT AVENUES, IN THE CITY OF NEW YORK.

The works must be bid for separately.

No. 4. ABOVE MENTIONED. The Engineer's estimate of the work to be done, and by which the bids will be tested, is as follows: 38,000 cubic yards earth excavation.

9,000 cubic yards rock excavation.
80,000 cubic yards filling to be furnished.
100 cubic yards dry rubble masonry retaining-walls.
200 lineal feet of brick culvert, three feet by four feet, egg-shaped, including masonry foundation and cradle.
240 lineal feet of brick culvert, two feet four inches by three feet six inches, egg-shaped, including masonry foundation and cradle.
60 lineal feet of pipe culvert of two (2) pipes each, thirty inches interior diameter, including concrete foundation and cradle.
350 lineal feet of pipe culvert, two (2) feet interior diameter, including concrete foundation and cradle.
600 lineal feet of fifteen inch vitrified stoneware drain pipe.
3,000 lineal feet twelve-inch vitrified stoneware drain-pipe.
800 lineal feet eight-inch vitrified stoneware drain-pipe.
10 receiving-basins, complete.
40 road-basins, complete.
95 cubic yards of broken range quarry-faced masonry, backed with heavy rubble in abutments, wing and parapet walls of eight feet arch culvert.
55 cubic yards of brick masonry in arch of eight-feet arch culvert.
125 cubic yards rubble-stone masonry in cement.
70 cubic yards of concrete in foundations.
6,000 lineal feet of piles to be furnished, driven, etc., in foundations.
8,000 feet, B. M., of timber and plank to be furnished and laid in foundations, including iron.
63,000 square yards of earth roadway.
2,500 square yards of rubble or cobble stone paved gutters.
The time allowed for the completion of the whole work will be two hundred and sixty-five consecutive working days.
The damages to be paid by the contractor for each day that the contract, or any part thereof, may be unfulfilled after the time fixed for the completion thereof has expired, are fixed at Fifty Dollars per day.
The amount of security required is Thirty-five Thousand Dollars.

No. 2, ABOVE MENTIONED.
2,500 cubic yards earth excavation.
600 cubic yards rock excavation.
2,400 cubic yards filling, in place.
1,500 cubic yards mould, in place.
600 square yards vitrified brick pavement, including concrete foundation.
200 square feet new bridge stone, including concrete foundation.
550 lineal feet of new blue stone, six (6) inches thick, fine axed, straight and curved surface.
57,000 square feet gravel walk, including rubble-stone foundation.
350 square yards vitrified brick pavement in walk gutters, including concrete and rubble-stone foundation.
250 lineal feet of blue-stone steps.
50 lineal feet of blue-stone cheeks.
2 receiving-basins (complete).
42 walk basins (complete).
4 surface basins (complete).
1,000 lineal feet of 15-inch vitrified stoneware drain pipe.
500 lineal feet of 12-inch vitrified stoneware drain pipe.
40 lineal feet 10-inch vitrified stoneware drain pipe.
400 lineal feet of 8-inch vitrified stoneware drain pipe.
400 lineal feet of 6-inch vitrified stoneware drain pipe.
60 cubic yards rubble masonry in cement mortar.
17,000 square feet of sod, furnished and laid.
2 acres of ground finished and seeded.
The time allowed for the completion of the whole work will be one hundred and twenty-five consecutive working days.
The damages to be paid by the contractor for each day that the contract, or any part thereof, may be unfulfilled after the time fixed for the completion thereof has expired, are fixed at Twenty Dollars per day.
The amount of security required is Ten Thousand Dollars.

No. 3, ABOVE MENTIONED.
Erecting fully complete the terrace-walls, retaining-walls, balustrade, rustic fence, steps, platforms, etc., forming the approach to the public building in Crotona Park at Third and Tremont avenues, in the City of New York.
2,400 cubic yards earth excavation, other than in foundations, etc., included in Item No. 1.
4,000 cubic yards rock excavation, other than in foundations, etc., included in Item No. 1.
3,000 cubic yards of mould or top-soil in place.
The time allowed for the completion of the entire work will be until July 1, 1898.
The damages to be paid by the contractor for non-completion of the work within the specified time are fixed at Twenty Dollars per day.
The amount of security required is Fifteen Thousand Dollars.
Bidders must satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may prefer, as to the nature and extent of the work, and shall not, any time after the submission of an estimate, dispute or complain of such statement, nor assert that there was any misunderstanding in regard to the nature or amount of the work to be done.
The estimates received will be publicly opened by the head of the said Department at the place and hour last above mentioned and read.
Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him or them therein, and if no other person be so interested it shall distinctly state that fact; that it is made without any connection with any other person making an estimate for the same purpose and is in all respects fair and without collusion or fraud; and that no member of the Common Council, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested it is requisite that the verification be made and subscribed by all the parties interested.
Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders in the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person making the estimate, they will, on its being so awarded, become bound as sureties for its faithful performance, and that if he shall omit or refuse to execute the same they will pay to the Corporation any difference between the sum to which he would be entitled on its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent letting, the amount in each case to be calculated upon the estimated amount of the work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract, over and above all his debts of every nature and over and above his liabilities as bail, surety or otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by section 27 of chapter 8 of the Revised Ordinances of the City of New York, if the contract shall be awarded to the person or persons for whom he consents to become surety; the adequacy and sufficiency of the security offered to be approved by the Comptroller of the City of New York.

No bid or estimate will be received or considered unless accompanied by either a certified check upon one of the State or National banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of five per centum of the amount of the security required for the completion of the work, or money to the amount of five per centum of the amount of the security required for the completion of the work, or money to the amount of five per centum of the amount of the security required for the completion of the work.

required for the faithful performance of the contract. Such check or money must not be enclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits except that of the successful bidder will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

N. B.—The prices must be written in the estimate and also stated in figures, and all estimates will be considered as informal which do not contain bids for all items for which bids are herein called or which contain bids for items for which bids are not herewith called for. Permission will not be given for the withdrawal of any bid or estimate. No bid will be accepted from or contract awarded to any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

The Department of Public Parks reserves the right to reject any or all the bids received in response to this advertisement if it should deem it for the interest of the City so to do, and to readvertise until satisfactory bids or proposals shall be received, but the contracts when awarded will be awarded to the lowest bidders.

Blank forms for proposals, and forms of the several contracts which the successful bidder will be required to execute, can be had, the plans can be seen, and information relative to them can be had at the office of the Department, Arsenal, Central Park.
SAMUEL McMILLAN, S. V. R. CRUGER, SMITH ELY, EDWARD MITCHELL, Commissioners of Public Parks.

FIRE DEPARTMENT.

NEW YORK, December 18, 1897.

TO CONTRACTORS.

SEALED PROPOSALS FOR FURNISHING THE materials and labor and doing the work required for constructing and erecting a building for the Fire Department on the premises Nos. 42 and 44 Great Jones street, will be received by the Board of Commissioners of the Fire Department, at the office of said Department, Nos. 157 and 159 East Sixty-seventh street, in the City of New York, until 10:30 o'clock A. M., Friday, December 31, 1897, at which time and place they will be publicly opened by the head of said Department and read.

No estimate will be received or considered after the hour named.
For information as to the amount and kind of work to be done, bidders are referred to the specifications and drawings, which form part of these proposals.

The form of the agreement, and the specifications, showing the manner of payment for the work, and forms of proposals may be obtained and the plans may be seen at the office of the Department.

Proposals must be made for all the work contained in the specifications.

Bidders will write out the amount of their estimate in addition to inserting the same in figures.

The building is to be completed and delivered within two hundred and twenty-five (225) days after the execution of the contract.

The damages to be paid by the contractor for each day that the contract may be unfulfilled after the time specified for the completion thereof shall have expired are fixed and liquidated at Twenty (20) Dollars.

The award of the contract will be made as soon as practicable after the opening of the bids.

Any person making an estimate for the work shall present the same in a sealed envelope to said Board, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation and a statement of the work to which it relates.

The Fire Department reserves the right to decline any and all bids or estimates, or either part thereof, if deemed to be for the public interest. No bid or estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same; the names of all persons interested with him or them therein; and if no other person be so interested, it shall distinctly state that fact; that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud; and that no member of the Common Council, head of a department, chief of a bureau, deputy thereof or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested it is requisite that the verification be made and subscribed by all the parties interested.

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders of the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person making the estimate, they will, on its being so awarded, become bound as sureties for its faithful performance in the sum of Twenty-four Thousand (24,000) Dollars, and that if he shall omit or refuse to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled on its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety or otherwise; and that he has offered himself as a surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York before the award is made and prior to the signing of the contract.

No estimate will be considered unless accompanied by either a certified check upon one of the banks of the City of New York, drawn to the order of the Comptroller, or money to the amount of Twelve Hundred (1,200) Dollars. Such check or money must not be enclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid, the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept, but do not execute, the contract and give the proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet as provided by law.

JAMES R. SHEFFIELD, O. H. LA GRANGE, and THOMAS STURGIS, Commissioners.

HEADQUARTERS FIRE DEPARTMENT, NOS. 157 AND 159 EAST SIXTY-SEVENTH STREET, NEW YORK, December 18, 1897.

TO CONTRACTORS.

SEALED PROPOSALS FOR FURNISHING THE materials and labor and doing the work required in altering and repairing the building of this Department occupied as quarters of Engine Co. No. 21, at No. 216 East Fortieth street, will be received by the Board of Commissioners at the head of the Fire Department, at the office of said Department, Nos. 157 and 159 East Sixty-seventh street, in the City of New York, until 10:30 o'clock A. M., Friday, December 31, 1897, at which time and place they will be publicly opened by the head of said Department and read.

No estimate will be received or considered after the hour named.

For information as to the amount and kind of work to be done, bidders are referred to the specifications, which form part of these proposals.

The form of agreement, showing the manner of payment for the work, with the specifications, and forms of proposals, may be obtained at the office of the Department.

Proposals must be made for all of the work called for in the specifications.

Bidders will write out the amount of their estimates in addition to inserting the same in figures.

The work is to be completed and delivered within the time specified in the contract.

The damages to be paid by the contractors for each day that the contract may be unfulfilled after the time specified for the completion thereof shall have expired are fixed and liquidated at Ten (10) Dollars.

The award of the contract will be made as soon as practicable after the opening of the bids.

Any person making an estimate for the work shall present the same in a sealed envelope to said Board, at said office, on or before the day and hour above named, which envelope shall be indorsed with the name or names of the person or persons presenting the same, the date of its presentation, and a statement of the work to which it relates.

The Fire Department reserves the right to decline any and all bids or estimates, if deemed to be for the public interest. No bid or estimate will be accepted from, or contract awarded to, any person who is in arrears to the Corporation, upon debt or contract, or who is a defaulter, as surety or otherwise, upon any obligation to the Corporation.

Each bid or estimate shall contain and state the name and place of residence of each of the persons making the same, the names of all persons interested with him or them therein, and if no other person be so interested it shall distinctly state that fact; that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair and without collusion or fraud, and that no member of the Common Council, head of a department, chief of a bureau, deputy thereof or clerk therein, or other officer of the Corporation, is directly or indirectly interested therein, or in the supplies or work to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party or parties making the estimate, that the several matters stated therein are in all respects true. Where more than one person is interested it is requisite that the verification be made and subscribed by all the parties interested.

Each bid or estimate shall be accompanied by the consent, in writing, of two householders or freeholders of the City of New York, with their respective places of business or residence, to the effect that if the contract be awarded to the person making the estimate, they will, on its being so awarded, become bound as sureties for its faithful performance in the sum of Six Thousand Five Hundred (6,500) Dollars; and that if he shall omit or refuse to execute the same, they will pay to the Corporation any difference between the sum to which he would be entitled on its completion and that which the Corporation may be obliged to pay to the person or persons to whom the contract may be awarded at any subsequent letting, the amount in each case to be calculated upon the estimated amount of the work by which the bids are tested. The consent above mentioned shall be accompanied by the oath or affirmation, in writing, of each of the persons signing the same, that he is a householder or freeholder in the City of New York, and is worth the amount of the security required for the completion of this contract, over and above all his debts of every nature, and over and above his liabilities as bail, surety or otherwise, and that he has offered himself as a surety in good faith and with the intention to execute the bond required by law. The adequacy and sufficiency of the security offered is to be approved by the Comptroller of the City of New York before the award is made and prior to the signing of the contract.

No estimate will be considered unless accompanied by either a certified check upon one of the banks of the City of New York, drawn to the order of the Comptroller or money to the amount of Three Hundred and Twenty-five (325) Dollars. Such check or money must not be enclosed in the sealed envelope containing the estimate, but must be handed to the officer or clerk of the Department who has charge of the estimate-box, and no estimate can be deposited in said box until such check or money has been examined by said officer or clerk and found to be correct. All such deposits, except that of the successful bidder, will be returned to the persons making the same within three days after the contract is awarded. If the successful bidder shall refuse or neglect, within five days after notice that the contract has been awarded to him, to execute the same, the amount of the deposit made by him shall be forfeited to and retained by the City of New York as liquidated damages for such neglect or refusal; but if he shall execute the contract within the time aforesaid the amount of his deposit will be returned to him.

Should the person or persons to whom the contract may be awarded neglect or refuse to accept the contract within five days after written notice that the same has been awarded to his or their bid or proposal, or if he or they accept but do not execute the contract and give the proper security, he or they shall be considered as having abandoned it and as in default to the Corporation, and the contract will be readvertised and relet as provided by law.

JAMES R. SHEFFIELD, O. H. LA GRANGE, and THOMAS STURGIS, Commissioners.

FINANCE DEPARTMENT.

PETER F. MEYER, AUCTIONEER.

SALE OF FERRY FRANCHISE.

THE FRANCHISE OF A FERRY FROM THE foot of Twenty-third street, East river, to Greenpoint, Brooklyn, together with the wharf property belonging to the City of New York, now used and required for ferry purposes, will be offered for sale by the Comptroller of the City of New York, at public auction to the highest bidder, at his office, Room 15, Stewart Building, No. 280 Broadway, on the 21st day of December, 1897, at 12 o'clock A. M., for a term of five years, from the 21st day of December, 1897, upon the following

TERMS AND CONDITIONS OF SALE.

The minimum or upset price per annum for the franchise of the ferry is five per cent. per annum of the gross receipts for ferriage of passengers, vehicles, freight, etc., which amount per annum shall not be less than \$12,000.

The annual rental of the wharf property now used and required for ferry purposes is fixed at the sum of \$10,000.

No bid will be received which shall be less than the minimum or upset price and value per annum of said franchise and the annual rental for the wharf property as fixed above.

The highest bidder will be required to pay the auctioneer's fee and to deposit with the Comptroller at the time of sale the sum of Five Thousand Five Hundred (5,500) Dollars, to be credited on the first quarter's rent, or to be forfeited to the City if the lease is not executed by the purchaser when notified that it is ready for execution.

The lessees will be required to give bonds in the penal sum of Forty-four Thousand (44,000) Dollars with two sufficient sureties, to be approved by the Comptroller, conditioned for the faithful performance of the covenants and conditions of the lease and the payment of the rent quarterly in advance.

The lease will contain the usual covenants and conditions, in conformity with the provisions of law and the ordinances of the Common Council relative to ferries, and shall provide that the lessees will maintain and operate the ferry during the whole term, and will provide ample accommodations in the way of safe and spacious boats and sufficiency of trips, as to the sufficiency of which accommodations the decision of the Mayor and Comptroller shall be final; also conditions that the lessees shall dredge the ferry slip, as required by the Department of Docks; that during the term of the lease they will erect and build, at their own expense, and will at all times well and sufficiently repair, maintain and keep in good order, all and singular the floats, racks, fenders, bridges and other fixtures of the landing places, and in the event of any damage to the bulkheads or piers from collision by the ferry-boats or otherwise, from any accident or negligence on their part, they will immediately repair and restore said wharf property to its previous condition, free of cost to the City of New York; that if at any time during the term of the lease the Department of Docks shall require any of the wharf property used for ferry purposes in order to proceed with water-front improvements in the vicinity of the ferry landings, the said lessees shall surrender and vacate the premises, without any claim upon the City for any damages whatever, upon written notice being given to the lessees three months in advance of the intention of said Department; that such notice shall specify by general terms of description or by reference to the plans and specifications of the proposed work of improvement the character of the alterations and improvements to be made in regard to said water-front, affecting the property and rights hereby authorized to be demised, and upon receiving such notice the lessee may elect to terminate the lease of the said wharf property and ferry privileges or franchises by serving notice of such election upon the Department of Docks and the Commissioners of the Sinking Fund within one month after receiving the notice from the Department of Docks of its intention to improve the water-front in the vicinity of the ferry landing; that sworn returns of the amounts of ferry receipts shall be made to the Comptroller when required by him, and that the books of account of the ferry shall be subject to his inspection.

The lease will contain a covenant providing for the purchase, at a fair valuation, of the boats, buildings and other property of the lessees used in and actually necessary for the operation of said ferry upon the termination and surrender and delivery of the premises by the lessees, if the lessees shall not become the purchasers for another term, provided that the Mayor, Aldermen and Commonality of the City of New York shall not be deemed thereby to purchase said property in any event. The rates of ferriage and charges for vehicles and freight shall not exceed the rates now charged.

The form of lease which the purchaser will be required to execute can be seen at the office of the Comptroller.

The right to reject any bid is reserved if deemed by the Comptroller to be for the interest of the City.

By order of the Commissioners of the Sinking Fund, under a resolution adopted July 2, 1897.

ASHBEL P. FITCH, Comptroller.

FINANCE DEPARTMENT, COMPTROLLER'S OFFICE, December 7, 1897.

The above sale is postponed to Tuesday, December 28, 1897, at the same hour and place.

ASHBEL P. FITCH, Comptroller.

CITY OF NEW YORK—FINANCE DEPARTMENT, COMPTROLLER'S OFFICE, December 21, 1897.

The above sale is postponed to Thursday, December 30, 1897, at the same hour and place.

ASHBEL P. FITCH, Comptroller.

CITY OF NEW YORK—FINANCE DEPARTMENT, COMPTROLLER'S OFFICE, December 28, 1897.

NOTICE OF ASSESSMENTS FOR OPENING STREETS AND AVENUES.

IN PURSUANCE OF SECTION 916 OF THE "New York City Consolidation Act of 1882," as amended, the Comptroller of the City of New York hereby gives public notice of the confirmation by the Supreme Court, and the entering in the Bureau for the Collection of Assessments, etc., of the assessment for OPENING AND ACQUIRING TITLE to the following-named streets and avenues in the

TWENTY-THIRD WARD.

CRANESTREET, from Robbins avenue to Timpson place; confirmed November 15, 1897; entered December 7, 1897. Area of assessment includes all those lots, pieces or parcels of land, situate, lying and being in the City of New York, which, taken together are bounded and described as follows, viz.: On the north by the southerly side of Dater street and said southerly side produced from St. Mary's Park to the Southern Boulevard; thence by the southerly side of East One Hundred and Forty seventh street and said southerly side produced from the Southern Boulevard to the middle line of the block between Timpson place and Austin place; on the south by the northerly side of St. Mary's street, from St. Mary's Park to the Southern Boulevard; on the east by the middle line of the block between Timpson place and Austin place and said middle line produced from the northern boundary of the area of assessment to the southern boundary of the area of assessment, and on the west by St. Mary's Park.

FOX STREET (formerly Simpson street), from Westchester avenue to Freeman street; confirmed November 1, 1897; entered December 7, 1897. Area of assessment includes all those lots, pieces or parcels of land, situate, lying and being in the City of New York, which, taken together, are bounded and described as follows, viz.: On the north by a line drawn parallel to Freeman street and distant 100 feet northerly from the northerly side thereof; on the south by Westchester avenue and East One Hundred and Sixty-fifth street; on the east by a line drawn parallel to the Southern Boulevard and distant 100 feet easterly from the easterly side thereof from the northerly boundary of the area of assessment to a line drawn parallel to Home street and distant 100 feet southerly from the southerly side thereof; thence by a line drawn parallel to Fox street (formerly Simpson street) and distant 100 feet easterly from the easterly side thereof to Westchester avenue; and on the west by a line drawn parallel to Intervale avenue and distant 100 feet westerly from the westerly side thereof; from the northerly boundary of the area of assessment to a line drawn parallel to Chisholm street and distant 100 feet southerly from the southerly side thereof; thence by said line drawn parallel to Chisholm street and distant 100 feet southerly from the southerly side thereof to a line drawn parallel to Barretto street and distant 100 feet westerly from the westerly side thereof; thence by a line drawn parallel to Barretto street and distant 100 feet westerly from the westerly side thereof to a line drawn parallel to Home street and distant 100 feet southerly from the southerly side thereof; and thence by a line drawn parallel to Fox street (formerly Simpson street) and distant 100 feet westerly from the westerly side thereof to the southerly boundary of the area of

assessment, as such streets are shown upon the Final Maps of the Twenty-third and Twenty-fourth Wards of the City and County of New York.

EAST ONE HUNDRED AND FORTY-SEVENTH STREET, from Southern Boulevard to Austin place; confirmed November 22, 1897; entered December 7, 1897. Area of assessment includes all those lots, pieces or parcels of land situate, lying and being in the City of New York, which taken together are bounded and described as follows, viz.:

On the north by a line drawn parallel to the northerly side of East One Hundred and Forty-seventh street and said northerly side produced and distant 100 feet northerly therefrom; on the south by a line drawn parallel to the southerly side of East One Hundred and Forty-seventh street and said southerly side produced and distant 100 feet southerly therefrom; on the east by a line drawn parallel to Austin place and distant easterly 100 feet from the easterly side thereof; on the west by a line drawn parallel to Southern Boulevard and distant westerly 100 feet from the westerly side thereof as such streets are shown upon the Final Maps of the Twenty-third and Twenty-fourth Wards of the City and County of New York.

EAST ONE HUNDRED AND SIXTY-FIRST STREET, from Sedgwick avenue to Ogden avenue; confirmed November 1, 1897; entered December 7, 1897. Area of assessment includes all those lots, pieces or parcels of land, situate, lying and being in the City of New York, which taken together are bounded and described as follows, viz.:

On the north by the middle line of the blocks between East One Hundred and Sixty-first street and East One Hundred and Sixty-fifth street and said middle line produced from the middle line of the blocks between Woodcrest avenue, or Bremer avenue, and Ogden avenue to the Spuyten Duyvil and Port Morris Branch of the N. Y. C. & H. R. Railroad; on the south by Jerome avenue; on the east by the middle line of the blocks between Woodcrest avenue, or Bremer avenue, and Ogden avenue, and on the west by the Spuyten Duyvil and Port Morris Branch of the N. Y. C. & H. R. Railroad.

TWENTY-THIRD AND TWENTY-FOURTH WARDS.

CHARLOTTE STREET, from Jennings street to Crotona Park; confirmed November 1, 1897; entered December 7, 1897. Area of assessment includes all those lots, pieces or parcels of land situate, lying and being in the City of New York, which taken together, are bounded and described as follows, viz.:

On the north by a line drawn parallel to Crotona Park and distant 100 feet northerly from the northerly side thereof; on the south by a line drawn parallel to Freeman street and distant 100 feet southerly from the southerly side thereof; on the east by the middle line of the block between East One Hundred and Seventy-third street and Suburban place and said middle line produced, from the northerly boundary of the area of assessment to the middle line of the blocks between East One Hundred and Seventy-second street and East One Hundred and Seventy-third street; thence by a line drawn parallel to the Southern Boulevard and distant 100 feet easterly from the easterly side thereof, from the middle line of the blocks between East One Hundred and Seventy-second street and East One Hundred and Seventy-third street to a line drawn parallel to Jennings street and distant 100 feet northerly from the northerly side thereof; thence by the westerly side of Bryant street, from a line drawn parallel to Jennings street and distant 100 feet northerly from the northerly side thereof to a line drawn parallel to Jennings street and distant 100 feet southerly from the southerly side thereof, and thence by a line drawn parallel to the Southern Boulevard and distant 100 feet easterly from the easterly side thereof from a line drawn parallel to Jennings street and distant 100 feet southerly from the southerly side thereof to the southerly boundary of the area of assessment; and on the west by the middle line of the block between Wendover avenue and Prospect avenue and said middle line produced, from the northerly boundary of the area of assessment to a line drawn parallel to Stebbins avenue and distant 100 feet westerly from the westerly side thereof; thence by said line drawn parallel to Stebbins avenue and distant 100 feet westerly from the westerly side thereof to a line drawn parallel to Jennings street and distant 100 feet southerly from the southerly side thereof; thence by the middle line of the blocks between Stebbins avenue and Intervale avenue from a line drawn parallel to Jennings street and distant 100 feet southerly from the southerly side thereof to the southerly boundary of the area of assessment as said streets are shown upon the Final Maps of the Twenty-third and Twenty-fourth Wards of the City and County of New York.

The above-entitled assessments were entered in the Record of Titles of Assessments, kept in the "Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents," on the respective dates herein above given, and unless the amount assessed for benefit on any person or property shall be paid within sixty days after the said respective dates of entry of the assessment, interest will be collected thereon, as provided in section 97 of said "New York City Consolidation Act of 1882."

The above assessments are payable to the Collector of Assessments and Clerk of Arrears, at the "Bureau for the Collection of Assessments and Arrears of Taxes and Assessments and of Water Rents," Room 31, Stewart Building, between the hours of 9 a. m. and 2 p. m., and all payments made thereon on or before February 5, 1898, will be exempt from interest, as above provided, and after that date will be charged interest at the rate of seven per cent. per annum from the above respective dates of entry of the assessment in the Record of Titles of Assessments in said Bureau to the date of payment.

ASHBEL P. FITCH, Comptroller.

CITY OF NEW YORK—FINANCE DEPARTMENT, COMPTROLLER'S OFFICE, December 15, 1897.

INTEREST ON CITY BONDS AND STOCKS.

THE INTEREST DUE JANUARY 1, 1898, ON the Registered Bonds and Stocks of the City and County of New York will be paid on that day by the Comptroller at the office of the City Chamberlain, Room 27, Stewart Building, corner of Broadway and Chambers street.

The Transfer Books will be closed from December 15 to January 1, 1898.

The interest due January 1, 1898, on the Coupon Bonds and Stocks of the City and County of New York, will be paid on that day by the Knickerbocker Trust Company, No. 66 Broadway.

ASHBEL P. FITCH, Comptroller.

CITY OF NEW YORK—FINANCE DEPARTMENT, COMPTROLLER'S OFFICE, December 17, 1897.

FINANCE DEPARTMENT, BUREAU FOR THE COLLECTION OF TAXES, No. 57 CHAMBERS STREET (STEWART BUILDING), NEW YORK, December 2, 1897.

NOTICE TO TAXPAYERS.

THE RECEIVER OF TAXES OF THE CITY OF New York hereby gives notice to all persons who have omitted to pay their taxes for the year 1897, to pay the same to him at his office on or before the first day of January, 1898, as provided by section 846 of the New York City Consolidation Act of 1882.

Upon any such tax remaining unpaid after the first day of December, 1897, one per centum will be charged, received and collected in addition to the amount thereof; and upon such tax remaining unpaid on the first day of January, 1898, interest will be charged, received and collected upon the amount thereof at the rate of seven per centum per annum, to be calculated from the first day

of October, 1897, on which day the assessment rolls and warrants for the Taxes of 1897 were delivered to the said Receiver of Taxes, to the date of payment, pursuant to section 843 of said act.

DAVID E. AUSTEN, Receiver of Taxes.

SUPREME COURT.

In the matter of the application of the Board of Education, by the Counsel to the Corporation of the City of New York, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands at the SOUTHWEST CORNER OF SECOND STREET AND WHITE PLAINS AVENUE, in the Twenty-fourth Ward of said city, duly selected and approved by said Board as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to a Special Term of the Supreme Court of the State of New York, in and for the First Judicial District, to be held in Part III, thereof, at the County Court-house, in the City of New York, on the 12th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands and premises, with the buildings thereon and the appurtenances thereto belonging, at the southwest corner of Second street and White Plains avenue, in the Twenty-fourth Ward of said city, in fee simple absolute, the same to be converted, appropriated and used for school purposes, said property having been duly selected and approved by the Board of Education as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896, being the following-described lots, pieces or parcels of land, namely:

All those certain lots, pieces or parcels of land situate, lying and being in the Twenty-fourth Ward of the City of New York, bounded and described as follows:

Beginning at a point in the southerly line of Second street distant 100 feet easterly from the corner formed by the intersection of the easterly line of Park avenue with the southerly line of Second street, which point is also the intersection of the easterly line of the present site of Public School 98 as now inclosed; running thence southerly parallel with Park avenue and along the said easterly line of the present site of Public School 98 as now inclosed 200 feet; thence easterly parallel with Second street 72 feet more or less to the westerly line of White Plains avenue as now opened and used; thence northerly along said westerly line of White Plains avenue 200 feet 8 1/4 inches more or less to the southerly line of Second street; thence westerly along said southerly line of Second street 135 feet more or less to the point or place of beginning.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Education, by the Counsel to the Corporation of the City of New York, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands at the NORTHERLY SIDE OF FORTY-NINTH STREET, between Ninth and Tenth avenues, in the Twenty-second Ward of said city, duly selected and approved by said Board as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890 and chapters 387 and 890 of the Laws of 1896.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to a Special Term of the Supreme Court of the State of New York, in and for the First Judicial District, to be held in Part III, thereof, at the County Court-house, in the City of New York, on the 12th day of January, 1898, at the opening of the court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands and premises, with the buildings thereon and the appurtenances thereto belonging, on the northerly side of Forty-ninth street, between Ninth and Tenth avenues, in the Twenty-second Ward of said city, in fee simple absolute, the same to be converted, appropriated and used for school purposes, said property having been duly selected and approved by the Board of Education as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896, being the following-described lots, pieces or parcels of land, namely:

All those certain lots, pieces or parcels of land situate, lying and being in the Twenty-second Ward of the City of New York, bounded and described as follows:

Beginning at a point in the northerly line of Forty-ninth street distant 300 feet easterly from the corner formed by the intersection of the easterly line of Tenth avenue with the northerly line of Forty-ninth street; running thence northerly parallel with Tenth avenue and part of the way through a party wall 100 feet and 5 inches to the centre line of the block; thence easterly parallel with Forty-ninth street and along said centre line of the block 50 feet; thence southerly parallel with Tenth avenue and part of the way through a party wall 100 feet and 5 inches to the northerly line of Forty-ninth street; thence westerly along said northerly line of Forty-ninth street 50 feet to the point or place of beginning.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Education, by the Counsel to the Corporation of the City of New York, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands in the block bounded by EIGHTEENTH AND NINETEENTH STREETS, EIGHTH AND NINTH AVENUES, in the Sixteenth Ward of said city, duly selected and approved by said Board as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to a Special Term of the Supreme Court of the State of New York, in and for the First Judicial District, to be held in Part III, thereof, at the County Court-house, in the City of New York, on the 12th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands and premises, with the buildings thereon and the appurtenances thereto belonging, in the block bounded by Eighteenth and Nineteenth streets, Eighth and Ninth avenues, in the Sixteenth Ward of said city, in fee simple absolute, the same to be converted, appropriated and used for school purposes, said property having been duly selected and approved by the Board of Education as a site for school purposes, under and in pursuance of

the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896, being the following-described lots, pieces or parcels of land, namely:

All those certain lots, pieces or parcels of land situate lying and being in the Sixteenth Ward of the City of New York, bounded and described as follows:

Beginning at a point in the interior of the block between Eighteenth and Nineteenth streets, Eighth and Ninth avenues, which point is distant 47 feet 3 1/4 inches northerly from the northerly line of Eighteenth street and 100 feet easterly from the easterly line of Ninth avenue; running thence westerly parallel with Eighteenth street 20 feet; thence northerly parallel with Ninth avenue 44 feet 8 1/4 inches; thence easterly parallel with Eighteenth street 20 feet; thence southerly parallel with Ninth avenue 44 feet 8 1/4 inches to the point or place of beginning.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Education, by the Counsel to the Corporation of the City of New York, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands on the SOUTHERLY SIDE OF THIRTY-THIRD STREET, between Second and Third avenues, in the Twenty-first Ward of said city, duly selected and approved by said Board as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890 and chapters 387 and 890 of the Laws of 1896.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to a Special Term of the Supreme Court of the State of New York, in and for the First Judicial District, to be held in Part III, thereof, at the County Court-house, in the City of New York, on the 12th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands and premises, with the buildings thereon and the appurtenances thereto belonging, on the southerly side of Thirty-third street, between Second and Third avenues, in the Twenty-first Ward of said city, in fee simple absolute, the same to be converted, appropriated and used for school purposes, said property having been duly selected and approved by the Board of Education as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896, being the following-described lots, pieces or parcels of land, namely:

All those certain lots, pieces or parcels of land situate, lying and being in the Twenty-first Ward of the City of New York, bounded and described as follows:

Beginning at a point in the southerly line of Thirty-third street distant 135 feet easterly from the corner formed by the intersection of the easterly line of Third avenue with the southerly line of Thirty-third street; running thence easterly along the southerly line of Thirty-third street 100 feet; thence southerly parallel with Third avenue, 98 feet and 9 inches to the centre line of the block between Twenty-second and Thirty-third streets and to the northerly line of the present site of Public School 116; thence westerly parallel with Thirty-third street along said centre line of the block and the northerly line of the present site of Public School 116, 100 feet; thence northerly parallel with Third avenue 98 feet and 9 inches to the point or place of beginning.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Education, by the Counsel to the Corporation of the City of New York, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands in the block bounded by FORTY-FIRST AND FORTY-SECOND STREETS, SECOND AND THIRD AVENUES, in the Nineteenth Ward of said city, duly selected and approved by said Board as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890 and chapters 387 and 890 of the Laws of 1896.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to a Special Term of the Supreme Court of the State of New York, in and for the First Judicial District, to be held in Part III, thereof, at the County Court-house in the City of New York, on the 12th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands and premises, with the buildings thereon and the appurtenances thereto belonging, in the block bounded by Forty-first and Forty-second streets, Second and Third avenues, in the Nineteenth Ward of said city, in fee simple absolute, the same to be converted, appropriated and used for school purposes, said property having been duly selected and approved by the Board of Education as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890 and chapters 387 and 890 of the Laws of 1896, being the following-described lot, piece or parcel of land, namely:

All that certain lot, piece or parcel of land, situate, lying and being in the Nineteenth Ward of the City of New York, bounded and described as follows:

Beginning at a point in the interior of the block bounded by Forty-first and Forty-second streets, Second and Third avenues, which point is distant 73 feet and 9 inches northerly from the northerly line of Forty-first street, and 121 feet and 8 inches easterly from the easterly line of Third avenue; running thence northerly parallel with the easterly line of Third avenue 35 feet 4 1/4 inches to the southwesterly line of the present site of Public School 27; thence southeasterly along said southwesterly line of the present site of Public School 27, 19 feet 2 1/4 inches to a point in the centre line of the block between Forty-first and Forty-second streets; thence easterly along said centre line of the block and the southerly line of the present site of Public School 27, 67 feet and 2 inches; thence southerly parallel with Third avenue 25 feet; thence westerly parallel with Forty-first street 83 feet and 4 inches to the point or place of beginning.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Education, by the Counsel to the Corporation of the City of New York, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands in the block bounded by FIFTY-SEVENTH AND FIFTY-EIGHTH STREETS, NINTH AND TENTH AVENUES, in the Twenty-second Ward of said city, duly selected and approved by said Board as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890 and chapters 387 and 890 of the Laws of 1896.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to a Special Term of the Supreme Court of the State of New York, in and for the First Judicial District, to be held in Part III, thereof, at the County Court-house, in the City of New York, on the 12th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands and premises, with the buildings thereon and the appurtenances thereto belonging, in the block bounded by Fifty-seventh and Fifty-eighth streets, Ninth and Tenth avenues, in the Twenty-second Ward of said city, in fee simple absolute, the same to be converted, appropriated and used for school purposes, said property having been duly selected and approved by the Board of Education as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896, being the following-described lots, pieces or parcels of land, namely:

All those certain lots, piece or parcels of land situate lying and being in the Twenty-second Ward of the City of New York, bounded and described as follows:

Beginning at a point in the southerly line of Fifty-eighth street distant 200 feet easterly from the corner formed by the intersection of the easterly line of Tenth avenue with the southerly line of Fifty-eighth street; running thence southerly parallel with Tenth avenue and along the easterly line of the present site of Public School 141, 100 feet 5 inches to the centre line of the block; thence westerly along said centre line of the block and the southerly line of the present site of Public School 141, 85 feet; thence southerly parallel with Tenth avenue 25 feet; thence easterly parallel with the southerly line of Fifty-eighth street 120 feet; thence northerly parallel with Tenth avenue and partly through a party wall 125 feet 5 inches to the southerly line of Fifty-eighth street; thence westerly along the southerly line of Fifty-eighth street 25 feet to the point or place of beginning.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Education, by the Counsel to the Corporation of the City of New York, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands on the NORTHERLY SIDE OF KING STREET, between Varick and Congress streets, in the Eighth Ward of said city, duly selected and approved by said Board as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, and the various statutes amendatory thereof.

PURSUANT TO THE PROVISIONS OF CHAP-ter 191 of the Laws of 1888, and the various statutes amendatory thereof, notice is hereby given that an application will be made to a Special Term of said Court, to be held at Part III, thereof, at the County Court-house, in the City of New York, on the 24th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands and premises, with the buildings thereon and the appurtenances thereto belonging, on the northerly side of King street, between Varick and Congress streets in the Eighth Ward of said city, in fee simple absolute, the same to be converted, appropriated and used to and for the purposes specified in said chapter 191 of the Laws of 1888, and the various statutes amendatory thereof, said property having been duly selected and approved by the Board of Education as a site for school purposes, under and in pursuance of the provisions of said chapter 191 of the Laws of 1888, and the various statutes amendatory thereof, being the following-described lot, piece or parcel of land, namely:

All that certain lot, piece or parcel of land situate, lying and being in the Eighth Ward of the City of New York, bounded and described as follows:

Beginning at a point in the northerly line of King street distant 150 feet 2 inches westerly from the corner formed by the intersection of the northerly line of King street and the westerly line of Congress street; running thence northerly parallel with Congress street 100 feet; thence westerly parallel with King street 25 feet to the easterly line of the present site of Public School 8; thence southerly parallel with Congress street and along the easterly line of the present site of Public School 8, 100 feet to the northerly line of King street; thence easterly along the northerly line of King street, 25 feet to the point or place of beginning.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Education, by the Counsel to the Corporation of the City of New York, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands at the SOUTHWEST CORNER OF ONE HUNDRED AND SEVENTY-SIXTH STREET AND PROSPECT AVENUE, in the Twenty-fourth Ward of said city, duly selected and approved by said Board as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890 and chapters 387 and 890 of the Laws of 1896.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to a Special Term of the Supreme Court of the State of New York, in and for the First Judicial District, to be held in Part III, thereof, at the County Court-house, in the City of New York, on the 12th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands and premises, with the buildings thereon and the appurtenances thereto belonging, at the southwest corner of One Hundred and Seventy-sixth street and Prospect avenue, in the Twenty-fourth Ward of said city, in fee simple absolute, the same to be converted, appropriated and used for school purposes, said property having been duly selected and approved by the Board of Education as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896, being the following-described lots, pieces or parcels of land, namely:

All those certain lots, pieces or parcels of land situate, lying and being in the Twenty-fourth Ward of the City of New York, bounded and described as follows:

Beginning at the corner formed by the intersection of the southerly line of One Hundred and Seventy-sixth street (as now proposed) with the westerly line of Prospect avenue; running thence southerly along said westerly line of Prospect avenue 191 feet; thence westerly parallel with One Hundred and Seventy-sixth street (as now proposed) 150 feet; thence northerly parallel with Prospect avenue 191 feet to the southerly line of One Hundred and Seventy-sixth street (as now proposed); thence easterly along said southerly line of One Hundred and Seventy-sixth street, 150 feet to the point or place of beginning.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Education, by the Counsel to the Corporation of the City of New York, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands on ONE HUNDRED AND FORTY-FOURTH AND ONE HUNDRED AND FORTY-FIFTH STREETS AND COLLEGE AVENUE, in the Twenty-third Ward of said city, duly selected and approved by said Board as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890 and chapters 387 and 890 of the Laws of 1896.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to a Special Term of the Supreme Court of the State of New York, in and for the First Judicial District, to be held at Part III, thereof, at the County Court-house, in the City of New York, on the 12th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York to certain lands and premises, with the buildings thereon and the appurtenances thereto belonging, on One Hundred and Forty-fourth and One Hundred and Forty-fifth streets and College avenue, in the Twenty-third Ward of said city, in fee simple absolute, the same to be converted, appropriated and used for school purposes, said property having been duly selected and approved by the Board of Education as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896, being the following-described lots, pieces or parcels of land, namely:

All those certain lots, pieces or parcels of land, situate, lying and being in the Twenty-third Ward of the City of New York, bounded and described as follows:

Beginning at a point in the southerly line of One Hundred and Forty-fifth street distant 150 feet westerly from the corner formed by the intersection of the westerly line of College avenue with the southerly line of One Hundred and Forty-fifth street; running thence southerly parallel with College avenue 200 feet to the northerly line of One Hundred and Forty-fourth street; thence easterly along said northerly line of One Hundred and Forty-fourth street 150 feet to the westerly line of College avenue; thence northerly along said westerly line of College avenue 75 feet to the southerly line of property now being acquired by condemnation proceedings as a site for school purposes; thence westerly parallel with One Hundred and Forty-fifth street and along said southerly line of the property now being acquired by condemnation proceedings as a site for school purposes 125 feet; thence northerly parallel with College avenue and along the westerly line of the property now being acquired by condemnation proceedings as a site for school purposes 125 feet to the southerly line of One Hundred and Forty-fifth street; thence westerly along said southerly line of One Hundred and Forty-fifth street 25 feet to the point or place of beginning.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Education, by the Counsel to the Corporation of the City of New York, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands on the SOUTHERLY SIDE OF FIFTY-FIFTH STREET, between Sixth and Seventh avenues, in the Twenty-second Ward of said city, duly selected and approved by said Board as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to a Special Term of the Supreme Court of the State of New York, in and for the First Judicial District, to be held at Part III, thereof, at the County Court-house in the City of New York, on the 12th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York to certain lands and premises, with the buildings thereon and the appurtenances thereto belonging, on the southerly side of Fifty-fifth street, between Sixth and Seventh avenues, in the Twenty-second Ward of said city, in fee simple absolute, the same to be converted, appropriated and used for school purposes, said property having been duly selected and approved by the Board of Education as a site for school purposes under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896, being the following-described lots, pieces or parcels of land, namely:

All those certain lots, pieces or parcels of land situate, lying and being in the Twenty-second Ward of the City of New York, bounded and described as follows:

Beginning at a point in the southerly line of Fifty-fifth street distant 350 feet westerly from the corner formed by the intersection of the westerly line of Sixth avenue with the southerly line of Fifty-fifth street, which point is also the intersection of the westerly line of the Annex to Public School 69 with the southerly line of Fifty-fifth street; running thence southerly parallel with Sixth avenue and along said westerly line of Annex to Public School 69, 100 feet and 5 inches to the centre line of the block between Fifty-fourth and Fifty-fifth streets and to the northerly line of the present site of Public School 69; thence westerly parallel with Fifty-fifth street and along said centre line of the block and the northerly line of the present site of Public School 69, 50 feet; thence northerly parallel with Sixth avenue 100 feet and 5 inches to the southerly line of Fifty-fifth street; thence easterly along said southerly line of Fifty-fifth street 50 feet to the point or place of beginning.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Education, by the Counsel to the Corporation of the City of New York, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York to certain lands on the SOUTHERLY SIDE OF EIGHTY-SIXTH STREET, between Park and Madison avenues, in the Nineteenth Ward of said city, duly selected and approved by said Board as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to a Special Term of the Supreme Court of the State of New York, in and for the First Judicial District, to be held at Part III, thereof, at the County Court-house, in the City of New York, on the 12th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York to certain lands and premises, with the buildings thereon and the appurtenances thereto belonging, on the southerly side of Eighty-sixth street, between Park and Madison avenues, in the Nineteenth Ward of said city, in fee simple absolute, the same to be converted, appropriated and used for school purposes, said property having been duly selected and approved by the Board of Education as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896, being the following-described lots, pieces or parcels of land, namely:

All those certain lots, pieces or parcels of land situate, lying and being in the Nineteenth Ward of the City of New York, bounded and described as follows:

Beginning at a point in the southerly line of Eighty-sixth street distant 62 feet 2 1/2 inches east of Madison avenue; running thence southerly parallel with Madison avenue, 102 feet 2 inches to the centre line of the block

and the northerly line of the present site of Public School 6; thence easterly along the centre line of the block and the northerly line of the present site of Public School 6, 51 feet 1 1/2 inches; thence northerly parallel with Madison avenue 102 feet 2 inches to the southerly line of Eighty-sixth street; thence westerly along the southerly line of Eighty-sixth street 51 feet 1 1/2 inches to the point or place of beginning.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Education, by the Counsel to the Corporation of the City of New York, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York to certain lands on the NORTHERLY SIDE OF EIGHTY-SECOND STREET, between First and Second avenues, in the Nineteenth Ward of said city, duly selected and approved by said Board as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, and the various statutes amendatory thereof.

PURSUANT TO THE PROVISIONS OF CHAPTER 191 of the Laws of 1888, and the various statutes amendatory thereof, notice is hereby given that an application will be made to the Supreme Court of the State of New York, at a Special Term of said Court, to be held at Part III, thereof, at the County Court-house, in the City of New York, on the 24th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York to certain lands and premises, with the buildings thereon and the appurtenances thereto belonging, on the northerly side of Eighty-second street, between First and Second avenues, in the Nineteenth Ward of said city, in fee simple absolute, the same to be converted, appropriated and used to and for the purposes specified in said chapter 191 of the Laws of 1888, and the various statutes amendatory thereof, said property having been duly selected and approved by the Board of Education as a site for school purposes, under and in pursuance of the provisions of said chapter 191 of the Laws of 1888, and the various statutes amendatory thereof, being the following-described lots, pieces or parcels of land, namely:

All those certain lots, pieces or parcels of land situate, lying and being in the Nineteenth Ward of the City of New York, bounded and described as follows:

Beginning at a point in the northerly line of Eighty-second street distant 100 feet easterly from the corner formed by the intersection of the northerly line of Eighty-second street and the easterly line of Second avenue; running thence easterly along the northerly line of Eighty-second street 150 feet; thence northerly parallel with Second avenue 102 feet 2 inches to the centre line of the block; thence westerly parallel with Eighty-second street and along said centre line 150 feet; thence southerly parallel with Second avenue 102 feet 2 inches to the point or place of beginning.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Education, by the Counsel to the Corporation of the City of New York, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands on the EASTERLY SIDE OF JAMES STREET, between Oak and Cherry streets, in the Fourth Ward of said city, duly selected and approved by said Board as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to a Special Term of the Supreme Court of the State of New York, in and for the First Judicial District, to be held at Part III, thereof, at the County Court-house, in the City of New York, on the 12th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York to certain lands and premises, with the buildings thereon and the appurtenances thereto belonging, on the easterly side of James street, between Oak and Cherry streets, in the Fourth Ward of said city, in fee simple absolute, the same to be converted, appropriated and used for school purposes, said property having been duly selected and approved by the Board of Education as a site for school purposes, under and in pursuance of the provisions of chapter 191 of the Laws of 1888, chapter 35 of the Laws of 1890, and chapters 387 and 890 of the Laws of 1896, being the following-described lot, piece or parcel of land, namely:

All that certain lot, piece or parcel of land situate, lying and being in the Fourth Ward of the City of New York, bounded and described as follows:

Beginning at a point in the easterly line of James street distant 178 feet and 6 inches southerly from the corner formed by the intersection of the southerly line of Oak street with the easterly line of James street; running thence easterly at right angles or nearly so with James street 99 feet and 7 inches; thence southerly parallel or nearly so with James street 24 feet 7 1/2 inches; thence westerly 98 feet 10 1/2 inches to the easterly line of James street; thence northerly along said easterly line of James street 25 feet 2 1/2 inches to the point or place of beginning.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of The Mayor, Aldermen and Commonalty of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening EAST ONE HUNDRED AND EIGHTY-NINTH STREET (although not yet named by proper authority), from Webster avenue to Thirteenth avenue, as the same has been heretofore laid out and designated as a first-class street or road, in the Twenty-fourth Ward of the City of New York.

NOTICE IS HEREBY GIVEN THAT WE, THE undersigned, were appointed by an order of the Supreme Court, bearing date the 11th day of November, 1897, Commissioners of Estimate and Assessment for the purpose of making a just and equitable estimate and assessment of the loss and damage, if any, or of the benefit and advantage, if any, as the case may be, to the respective owners, lessees, parties and persons respectively entitled to or interested in the lands, tenements, hereditaments and premises required for the purpose by and in consequence of opening the above-mentioned street or avenue, the same being particularly set forth and described in the petition of The Mayor, Aldermen and Commonalty of the City of New York, and also in the notice of the application for the said order thereto attached, filed herein in the office of the Clerk of the City and County of New York on the 2d day of December, 1897, and a just and equitable estimate and assessment of the value of the benefit and advantage of said street or avenue so to be opened or laid out and formed, to the respective owners, lessees, parties and persons respectively entitled to or interested in the said respective lands, tenements, hereditaments and premises not required for the purpose of opening, laying out and forming the same, but benefited thereby, and of ascertaining and defining the extent and boundaries of the respective tracts or parcels of land to be taken or to be assessed therefor, and of performing the trusts and duties required of us by chapter 16, title 5, of the act entitled "An act to consolidate into one act and to declare the special and local laws affecting public interests in the City of New York," passed July 1, 1882, and the acts or parts of acts in addition thereto or amendatory thereof.

All parties and persons interested in the real estate taken or to be taken for the purpose of opening the said street or avenue, or affected thereby, and having any claim or demand on account thereof, are hereby required to present the same, duly verified, to us, the undersigned Commissioners of Estimate and Assessment, at our office, Room No. 2, fourth floor, No. 2 Tryon Row, in the City of New York, with such affidavits or other proofs as the said owners or claimants may desire, within twenty days after the date of this notice.

And we, the said Commissioners, will be in attendance at our said office on the 8th day of January, 1898, at 10 o'clock in the forenoon of that day, to hear the said parties and persons in relation thereto, and at such time and place, and at such further or other time and place as we may appoint, we will hear such owners in relation thereto and examine the proofs of such claimant or claimants, or such additional proofs and allegations as may then be offered by such owner, or on behalf of The Mayor, Aldermen and Commonalty of the City of New York.

In the City of New York," passed July 1, 1882, and the acts or parts of acts in addition thereto or amendatory thereof.

All parties and persons interested in the real estate taken or to be taken for the purpose of opening the said street or avenue, or affected thereby, and having any claim or demand on account thereof, are hereby required to present the same, duly verified, to us, the undersigned Commissioners of Estimate and Assessment, at our office, Nos. 60 and 92 West Broadway, in the City of New York, with such affidavits or other proofs as the said owners or claimants may desire, within twenty days after the date of this notice.

And we, the said Commissioners, will be in attendance at our said office on the 14th day of January, 1898, at 10 o'clock in the forenoon of that day, to hear the said parties and persons in relation thereto, and at such time and place, and at such further or other time and place as we may appoint, we will hear such owners in relation thereto and examine the proofs of such claimant or claimants, or such additional proofs and allegations as may then be offered by such owner, or on behalf of The Mayor, Aldermen and Commonalty of the City of New York.

Dated New York, December 29, 1897.
EMANUEL BLUMENSTIEL, FRANCIS V. S. OLIVER, S. J. O'SULLIVAN, Commissioners.
JOHN P. DUNN, Clerk.

In the matter of the application of The Mayor, Aldermen and Commonalty of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to EAST ONE HUNDRED AND FORTIETH STREET (although not yet named by proper authority), from St. Ann's avenue to Locust avenue, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to the Supreme Court of the State of New York, at a Special Term of said Court, to be held at Part III, thereof, in the County Court-house, in the City of New York, on Friday, the 31st day of December, 1897, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate and Assessment in the above-entitled matter. The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York, for the use of the public, to all the lands and premises, with the buildings thereon and the appurtenances thereto belonging, required for the opening of a certain street or avenue known as East One Hundred and Fortieth street, from St. Ann's avenue to Locust avenue, in the Twenty-third Ward of the City of New York, being the following-described lots, pieces or parcels of land, viz.:

PARCEL "A."
Beginning at a point in the western line of Cypress avenue distant 191.52 feet southerly from the intersection of the western line of Cypress avenue with the southern line of East One Hundred and Forty-first street.

1st. Thence southerly along the western line of Cypress avenue for 60.48 feet.
2d. Thence westerly deflecting 97 degrees 13 minutes 20 seconds to the right for 820.06 feet to the eastern line of St. Ann's avenue.
3d. Thence northerly along the eastern line of St. Ann's avenue for 60.11 feet.
4th. Thence easterly for 815.91 feet to the point of beginning.

PARCEL "B."
Beginning at a point in the eastern line of Cypress avenue distant 191.52 feet southerly from the intersection of the eastern line of Cypress avenue with the southern line of East One Hundred and Forty-first street.

1st. Thence southerly along the eastern line of Cypress avenue for 60.48 feet.
2d. Thence easterly deflecting 82 degrees 46 minutes 40 seconds to the left for 462.12 feet to the western line of Robbin's avenue.
3d. Thence northerly along said line for 60.48 feet.
4th. Thence westerly for 462.12 feet to the point of beginning.

PARCEL "C."
Beginning at a point in the eastern line of Robbin's avenue distant 223.72 feet southerly from the intersection of said line with the southern line of East One Hundred and Forty-first street.

1st. Thence southerly along the eastern line of Robbin's avenue for 60.48 feet.
2d. Thence easterly deflecting 82 degrees 46 minutes 40 seconds to the left for 388.31 feet to the western line of Southern Boulevard.
3d. Thence northeasterly along said line for 69.31 feet.
4th. Thence westerly for 430.81 feet to the point of beginning.

PARCEL "D."
Beginning at a point in the western line of Walnut avenue, distant 200 feet southerly from the intersection of said line with the southern line of East One Hundred and Forty-first street.

1st. Thence southerly along the western line of Walnut avenue for 60 feet.
2d. Thence westerly deflecting 90 degrees to the right for 273.55 feet.
3d. Thence westerly deflecting 80 degrees 22 minutes 53 seconds to the left for 709.26 feet to the eastern line of Southern Boulevard.
4th. Thence northeasterly along said line for 69.31 feet.
5th. Thence easterly deflecting 59 degrees 57 minutes 30 seconds to the right for 678.96 feet.
6th. Thence easterly for 277.94 feet to the point of beginning.

PARCEL "E."
Beginning at a point in the eastern line of Walnut avenue distant 200 feet southerly from the intersection of said line with the southern line of East One Hundred and Forty-first street.

1st. Thence southerly along the eastern line of Walnut avenue for 60 feet.
2d. Thence easterly deflecting 90 degrees to the left for 350 feet to the western line of Locust avenue.
3d. Thence northerly along said line for 60 feet.
4th. Thence westerly for 350 feet to the point of beginning.

East One Hundred and Fortieth street is designated as a street of the first class, and is shown on section 15 of the Final Maps and Profiles of the Twenty-third and Twenty-fourth Wards of the City of New York, filed in the office of the Commissioner of Street Improvements of the City of New York on June 13, 1894, in the office of the Register of the City and County of New York on June 15, 1894, and in the office of the Secretary of State of the State of New York on June 15, 1894.

Dated New York, December 29, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of The Mayor, Aldermen and Commonalty of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening EAST ONE HUNDRED AND NINETY-SIXTH STREET (although not yet named by proper authority), from Jerome avenue to Marion avenue, as the same has been heretofore laid out and designated as a first-class street or road, in the Twenty-fourth Ward of the City of New York.

NOTICE IS HEREBY GIVEN THAT WE, THE undersigned, were appointed by an order of the Supreme Court, bearing date the 11th day of November, 1897, Commissioners of Estimate and Assessment for the purpose of making a just and equitable estimate and assessment of the loss and damage, if any, or of the benefit and advantage, if any, as the case may be, to the respective owners, lessees, parties and persons respectively entitled to or interested in the lands, tenements, hereditaments and premises required for the

purpose by and in consequence of opening the above-mentioned street or avenue, the same being particularly set forth and described in the petition of The Mayor, Aldermen and Commonalty of the City of New York, and also in the notice of the application for the said order thereto attached, filed herein in the office of the Clerk of the City and County of New York on the 2d day of December, 1897; and a just and equitable estimate and assessment of the value of the benefit and advantage of said street or avenue so to be opened or laid out and formed, to the respective owners, lessees, parties and persons respectively entitled to or interested in the said respective lands, tenements, hereditaments and premises not required for the purpose of opening, laying out and forming the same, but benefited thereby, and of ascertaining and defining the extent and boundaries of the respective tracts or parcels of land to be taken or to be assessed therefor, and of performing the trusts and duties required of us by chapter 16, title 5, of the act entitled "An act to consolidate into one act and to declare the special and local laws affecting public interests in the City of New York," passed July 1, 1882, and the acts or parts of acts in addition thereto or amendatory thereof.

All parties and persons interested in the real estate taken or to be taken for the purpose of opening the said street or avenue, or affected thereby, and having any claim or demand on account thereof, are hereby required to present the same, duly verified, to us, the undersigned Commissioners of Estimate and Assessment, at our office, Room No. 2, fourth floor, No. 2 Tryon Row, in the City of New York, with such affidavits or other proofs as the said owners or claimants may desire, within twenty days after the date of this notice.

And we, the said Commissioners, will be in attendance at our said office on the 8th day of January, 1898, at 10 o'clock in the forenoon of that day, to hear the said parties and persons in relation thereto, and at such time and place, and at such further or other time and place as we may appoint, we will hear such owners in relation thereto and examine the proofs of such claimant or claimants, or such additional proofs and allegations as may then be offered by such owner, or on behalf of The Mayor, Aldermen and Commonalty of the City of New York.

Dated New York, December 14, 1897.
JOHN H. ROGAN, FRANCIS HIGGINS, CHAS. HILTON BROWN, Commissioners.
JOHN P. DUNN, Clerk.

In the matter of the application of The Mayor, Aldermen and Commonalty of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening PLIMPTON AVENUE (although not yet named by proper authority), from Boscobel avenue to Featherbed lane, as the same has been heretofore laid out and designated as a first-class street or road, in the Twenty-fourth Ward of the City of New York.

NOTICE IS HEREBY GIVEN THAT WE, THE undersigned, were appointed by an order of the Supreme Court, bearing date the 11th day of November, 1897, Commissioners of Estimate and Assessment for the purpose of making a just and equitable estimate and assessment of the loss and damage, if any, or of the benefit and advantage, if any, as the case may be, to the respective owners, lessees, parties and persons respectively entitled to or interested in the lands, tenements, hereditaments and premises required for the purpose by and in consequence of opening the above-mentioned street or avenue, the same being particularly set forth and described in the petition of The Mayor, Aldermen and Commonalty of the City of New York, and also in the notice of the application for the said order thereto attached, filed herein in the office of the Clerk of the City and County of New York on the 2d day of December, 1897, and a just and equitable estimate and assessment of the value of the benefit and advantage of said street or avenue so to be opened or laid out and formed, to the respective owners, lessees, parties and persons respectively entitled to or interested in the said respective lands, tenements, hereditaments and premises not required for the purpose of opening, laying out and forming the same, but benefited thereby, and of ascertaining and defining the extent and boundaries of the respective tracts or parcels of land to be taken or to be assessed therefor, and of performing the trusts and duties required of us by chapter 16, title 5, of the act entitled "An act to consolidate into one act and to declare the special and local laws affecting public interests in the City of New York," passed July 1, 1882, and the acts or parts of acts in addition thereto or amendatory thereof.

All parties and persons interested in the real estate taken or to be taken for the purpose of opening the said street or avenue, or affected thereby, and having any claim or demand on account thereof, are hereby required to present the same, duly verified, to us, the undersigned Commissioners of Estimate and Assessment, at our office, Nos. 60 and 92 West Broadway, in the City of New York, with such affidavits or other proofs as the said owners or claimants may desire, within twenty days after the date of this notice.

And we, the said Commissioners, will be in attendance at our said office on the 8th day of January, 1898, at 12 o'clock noon of that day, to hear the said parties and persons in relation thereto, and at such time and place as we may appoint, we will hear such owners in relation thereto and examine the proofs of such claimant or claimants, or such additional proofs and allegations as may then be offered by such owner, or on behalf of The Mayor, Aldermen and Commonalty of the City of New York.

Dated New York, December 4, 1897.
DAVID McCURE, WILLIAM H. BARKER, DAVID M. KOEHLER, Commissioners.
H. DE F. BALDWIN, Clerk.

In the matter of the application of the Commissioner of Street Improvements of the Twenty-third and Twenty-fourth Wards of the City of New York, for and on behalf of The Mayor, Aldermen and Commonalty of the City of New York, relative to acquiring title for the use of the public to all the lands in fee and to easements in lands required for the construction of an elevated roadway, viaduct or bridge over the tracks of the New York and Harlem Railroad, and the Port Morris Branch of the New York and Harlem Railroad, connecting Melrose avenue from East One Hundred and Sixty-third street to the junction of Webster avenue and Brook avenue at East One Hundred and Sixty-fifth street, in the Twenty-third Ward of the City of New York, pursuant to the provisions of chapter 680 of the Laws of 1897.

PURSUANT TO THE STATUTES IN SUCH cases made and provided pursuant to chapter 680 of the Laws of 1897, notice is hereby given that an application will be made to the Supreme Court of the State of New York, at a Special Term of said Court, to be held at Part III, thereof, in the County Court-house, in the City of New York, on Thursday, the 30th day of December, 1897, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate and Assessment in the above-entitled matter. The nature of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York, for the use of the public, to certain lands in fee and to easements in lands required for the construction of an elevated roadway, viaduct or bridge over the tracks of the New York and Harlem Railroad and the Port Morris Branch of the New York and Harlem Railroad connecting Melrose avenue from East One Hundred and Sixty-third street to the junction of Webster avenue and Brook avenue, at East One Hundred and Sixty-fifth street, in the Twenty-third Ward of the City of New York, pursuant to the provisions of chapter 680 of the Laws of 1897. The lots, pieces or parcels of land to be acquired in fee are bounded and described as follows, viz.:

Beginning at a point in the northern line of East One Hundred and Sixty-third street distant 152.87 feet easterly from the intersection of the northern line of East One Hundred and Sixty-third street with the eastern line of Courtlandt avenue.

1st. Thence easterly along the northern line of East One Hundred and Sixty-third street for 80.04 feet.

2d. Thence northerly deflecting 91 degrees 53 minutes 35 seconds to the left for 159.42 feet.

3d. Thence westerly curving to the left on the arc of a circle whose radius drawn southerly from the northern extremity of the preceding course forms an angle of 9 degrees 48 minutes 8 seconds to the west with said course and whose radius is 480 feet for 80.40 feet.

4th. Thence southerly for 163.78 feet to the point of beginning.

Beginning at a point in the western line of Brook avenue distant 31.85 feet southerly from the intersection of the western line of Brook avenue with the southern line of East One Hundred and Sixty-fifth street.

1st. Thence southerly along the western line of Brook avenue for 36.33 feet.

2d. Thence southwesterly deflecting 47 degrees 9 minutes 29 seconds to the right for 42.61 feet.

3d. Thence southerly deflecting 29 degrees 20 minutes 14 seconds to the left for 211.28 feet.

4th. Thence northerly curving to the right on the arc of a circle of 583.0 feet radius for 286.05 feet to the point of beginning.

The easements and right of way to be acquired are over, under or through the following lots, pieces or parcels of land, viz.:

Beginning at a point in the eastern line of Park avenue (legally opened as Railroad avenue, West), distant 7.20 feet southwesterly from the intersection of the eastern line of Park avenue with the southern line of East One Hundred and Sixty-fifth street.

1st. Thence northeasterly along the eastern line of Park avenue for 7.20 feet to the southern line of East One Hundred and Sixty-fifth street.

2d. Thence easterly along the southern line of East One Hundred and Sixty-fifth street for 76.58 feet to the western line of Brook avenue.

3d. Thence southerly along the western line of Brook avenue for 31.85 feet.

4th. Thence southerly curving to the left on the arc of a circle whose radius drawn easterly from the northern extremity of the preceding course forms an angle of 56 degrees 8 minutes 29 seconds to the north with the southern prolongation of said course and whose radius is 583 feet for 286.05 feet.

5th. Thence southerly on a line forming an angle of 77 degrees 55 minutes 1 second to the east with the western prolongation of the radius of the preceding course drawn through its southern extremity, for 400.62 feet.

6th. Thence westerly curving to the left on the arc of a circle whose radius drawn southerly from the southern extremity of the preceding course forms an angle of 9 degrees 48 minutes 8 seconds to the west with the southern prolongation of said course and whose radius is 480 feet for 80.40 feet.

7th. Thence northerly for 702.93 feet to the point of beginning.

The above pieces or parcels of land are shown on section 6 of the Final Maps and Profiles of the City of New York, filed in the office of the Commissioner of Street Improvements of the Twenty-third and Twenty-fourth Wards of the City of New York on August 6, 1895, in the office of the Register of the City and County of New York on August 7, 1895, and in the office of the Secretary of State of the State of New York on August 9, 1895.

Dated New York, December 17, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of The Mayor, Aldermen and Commonalty of the City of New York, to ascertain the loss and damage and compensation for the lands and premises laid out, set apart and appropriated for and as a Public Park, pursuant to the provisions of an act entitled "An act to provide for the acquisition and construction of a Public Park at the junction of East One Hundred and Eighty-first street, Sedgwick avenue and Cedar avenue, in the Twenty-fourth Ward of the City of New York," being chapter 654 of the Laws of 1897.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, and pursuant to chapter 654 of the Laws of 1897, notice is hereby given that an application will be made to the Supreme Court of the State of New York, at a Special Term of said Court, to be held at Part III, thereof, in the County Court-house, in the City of New York, on Friday, December 31, 1897, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The above-entitled proceeding is for the purpose of ascertaining the loss and damage and compensation for the lands and premises taken for a Public Park pursuant to said chapter 654 of the Laws of 1897. The said lands and premises are bounded and described as follows, viz.:

Beginning at a point in the eastern line of Cedar avenue distant 62.55 feet southerly from the intersection of the eastern line of Cedar avenue with the southern line of East One Hundred and Twenty-first street (as the same is laid down on section 16 of the Final Maps of the Twenty-third and Twenty-fourth Wards).

1st. Thence easterly at right angles to Cedar avenue for 102.33 feet to the western line of Sedgwick avenue.

2d. Thence northeasterly along the western line of Sedgwick avenue for 768.18 feet to the northern line of East One Hundred and Eighty-first street (as laid down on section 16 of the Final Maps of the Twenty-third and Twenty-fourth Wards).

3d. Thence westerly deflecting 114 degrees 28 minutes 34 seconds to the left for 206.34 feet along the northern line of said East One Hundred and Eighty-first street to the eastern line of Cedar avenue.

4th. Thence southwesterly along the eastern line of Cedar avenue for 741.61 feet to the point of beginning.

And as shown on three similar maps, entitled "Map or Plan showing the location of a public park at the junction of East One Hundred and Eighty-first street, Sedgwick avenue and Cedar avenue, in the Twenty-fourth Ward of the City of New York, laid out and set apart as a public park under authority of chapter 654 of the Laws of 1897," and filed one in the office of the Register of the City and County of New York on July 13, 1897, one in the office of the Secretary of the State of New York on July 14, 1897, and one in the office of the Department of Public Parks on November 3, 1897.

Dated New York, December 8, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, by the Counsel to the Corporation of said city, relative to acquiring title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands, tenements, hereditaments and premises in the Twenty-second Ward of the City of New York, bounded by Eleventh and Twelfth avenues, West Fifty-second, West Fifty-third and West Fifty-fourth streets, duly selected, located and laid out as and for a public park, under and in pursuance of the provisions of chapter 320 of the Laws of 1887.

PURSUANT TO THE PROVISIONS OF CHAP-ter 320 of the Laws of 1887, notice is hereby given that an application will be made to the Supreme Court of the State of New York, at a Special Term of said Court, to be held at Part III, thereof, in the County Court-house, in the City of New York, on Friday the 21st day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York, to certain lands, tenements, hereditaments and premises in the Twenty-second Ward of the City of New York, bounded by Eleventh and Twelfth avenues, West Fifty-second, West Fifty-third and West Fifty-fourth streets, in fee simple absolute, the same to be appropriated, converted and used to and for the purposes specified in said chapter 320 of the Laws of 1887, said property having

been duly selected, located and laid out by the Board of Street Opening and Improvement of the City of New York as and for a public park, under and in pursuance of the provisions of said chapter 320 of the Laws of 1887, being the following-described lots, pieces or parcels of land, namely:

All those lots, pieces or parcels of land in the Twenty-second Ward of the City of New York, bounded and described as follows, to wit:

PARCEL "A."

Beginning at the intersection of the westerly line of Eleventh avenue with the southerly line of West Fifty-third street, and thence (1) running westerly along said southerly line of West Fifty-third street for a distance of 800 feet to the easterly line of Twelfth avenue; thence (2) running southerly along said easterly line of Twelfth avenue for a distance of 200 feet and 10 inches to the northerly line of West Fifty-second street; thence (3) running easterly along said northerly line of West Fifty-second street for a distance of 800 feet to the westerly line of Eleventh avenue; thence (4) running northerly along said westerly line of Eleventh avenue for a distance of 200 feet 10 inches to the place or point of beginning.

PARCEL "B."

Beginning at the intersection of the westerly line of Eleventh avenue with the southerly line of West Fifty-fourth street, and thence (1) running westerly along said southerly line of West Fifty-fourth street for a distance of 800 feet to the easterly line of Twelfth avenue; thence (2) running southerly along said easterly line of Twelfth avenue for a distance of 200 feet and 10 inches to the northerly line of West Fifty-third street; thence (3) running easterly along said northerly line of West Fifty-third street for a distance of 800 feet to the westerly line of Eleventh avenue; thence (4) running northerly along said westerly line of Eleventh avenue for a distance of 200 feet and 10 inches to the place or point of beginning.

The lots, pieces or parcels of land above described are shown on two similar maps, plans and profiles, accompanied with explanatory remarks, made by the Department of Public Parks, each of which is entitled "Map showing a public park west of Eleventh avenue, between Fifty-second and Fifty-fourth streets, in the Twenty-second Ward of the City of New York," one of which said maps is filed in the office of the Register of the City and County of New York, and the other of which is filed in the office of the Department of Public Parks in said city.

The said Board of Street Opening and Improvement, under and in pursuance of the provisions of said chapter 320 of the Laws of 1887, has determined that the proportion of the expense to be incurred in acquiring the land for such park to be assessed upon the property, persons and estates to be benefited by the acquisition and construction of such park shall be twenty-five per cent., or one-quarter of such expense; and said Board has also determined that the area within which such expense shall be so assessed shall be as follows: On the north by Fifty-sixth street; on the south by Forty-eighth street; on the east by Ninth avenue, and on the west by Twelfth avenue.

Dated New York, December 24, 1897.
FRANCIS M. SCOTT,
Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of The Mayor, Aldermen and Commonalty of the City of New York, acting by and through the Board of Docks, relative to acquiring right and title to and possession of the wharfage rights, terms, easements, emoluments and privileges appurtenant to Pier No. 35, East river, now owned by the Mayor, Aldermen and Commonalty of the City of New York, and all right, title and interest in and to said pier, or any portion thereof, not now owned by the Mayor, Aldermen and Commonalty of the City of New York, to be taken for the improvement of the water-front of the City of New York, on the East river, at or near Catharine Slip, pursuant to the plan heretofore adopted by the said Board of Docks and approved by the Commissioners of the Sinking Fund.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants of all houses and lots and improved and unimproved lands or wharf property, and all persons interested therein, or in any rights, privilege or interests pertaining thereto, affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our preliminary report and our estimate and assessment, and that all persons interested in this proceeding, or in any of the uplands, lands, lands under water, premises, buildings and wharf property affected thereby, and having objections thereto, do present their said objections, in writing, duly verified, to us, at our office, Rooms 312 and 313, No. 253 Broadway, New York City, on or before the 24th day of January, 1898; that we, the said Commissioners, will hear parties so objecting within the ten week days next after the said 24th day of January, 1898, and for that purpose will be in attendance at our said office on each of said ten days at 3 o'clock P. M.

Second—That the abstract of our said estimate and assessment, together with our damage map and also the affidavits, estimates and other documents used by us in making our report, have been deposited in the Bureau of Street Opening in the Law Department of the City of New York, at Nos. 90 and 92 West Broadway, in the said city, there to remain until the 24th day of January, 1898.

Third—That our report herein will be presented to the Supreme Court of the State of New York, at a Special Term, Part III, thereof, to be held in the County Court-house, in the City of New York, on the 25th day of February, 1898, at the opening of Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed, and for such other and further relief as may be just and meet.

Dated New York, December 17, 1897.
WILBUR LARREMORE, Chairman; WILLIAM M. LAWRENCE, WM. J. ELLIS, Commissioners.
JOHN A. HENNEBERRY, Clerk.

In the matter of the application of Charles H. T. Collis, Commissioner of Public Works of the City of New York, for and in behalf of the Mayor, Aldermen and Commonalty of the City of New York, relative to acquiring title in fee to certain lots, pieces or parcels of land, in the Twelfth Ward of the City of New York, for the purpose of widening the East One Hundred and Thirtieth street and southwest approach to the bridge over the Harlem river, connecting the northerly end of Third avenue, in the Twelfth Ward of said city, with the southerly end of Third avenue, in the Twenty-third Ward of said city, pursuant to the provisions of chapter 413 of the Laws of 1892, entitled "An Act to provide for the construction of a draw-bridge over the Harlem river, in the City of New York, and for the removal of the present bridge at Third avenue, in said city," and the various statutes amendatory thereof and all other statutes in such case made and provided.

PURSUANT TO THE PROVISIONS OF CHAP-ter 413 of the Laws of 1892, entitled "An Act to provide for the construction of a draw-bridge over the Harlem river in the City of New York, and for the removal of the present bridge at Third avenue in said City," and the various statutes amendatory thereof, and all other statutes in such case made and provided, notice is hereby given that an application will be made to the Supreme Court of the State of New York, at a Special Term of said Court, to be held in Part III, thereof, in the County Court-house, in the City of New York, on the 20th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate and Apportionment in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title in fee, in the name and on behalf of the Mayor, Aldermen and Commonalty of

the City of New York, to certain lots, pieces or parcels of land, with the buildings thereon and the appurtenances thereto belonging, situate, lying and being in the Twelfth Ward of the City of New York, for the purpose of widening the East One Hundred and Thirtieth street and southwest approach to the bridge over the Harlem river, connecting the northerly end of Third avenue, in the Twelfth Ward of said city, with the southerly end of Third avenue, in the Twenty-third Ward of said city, under and in pursuance of the provisions of chapter 413 of the Laws of 1892 and the various statutes amendatory thereof and all other statutes in such case made and provided, the consent and approval of the Board of Estimate and Apportionment of the City of New York to such acquisition having been first had and obtained, and the Commissioner of Public Works deeming it necessary that the same should be acquired for the above-said purpose, being the following lots, pieces or parcels of land, and bounded and described as follows:

PARCEL "A."

Beginning at a point on the easterly line of Lexington avenue distant 44 feet northerly from the corner formed by the intersection of the northerly line of East One Hundred and Thirtieth street with the easterly line of Lexington avenue, and running thence easterly parallel to said northerly line of East One Hundred and Thirtieth street 360 feet; thence northerly parallel with the westerly side of Third avenue 38 feet; thence southwesterly 54.63 feet; thence westerly parallel to the first-mentioned course and distant therefrom 16 feet 310 feet to the easterly line of Lexington avenue, and thence southerly along the said easterly line of Lexington avenue 16 feet to the point or place of beginning.

PARCEL "B."

Beginning at the corner formed by the intersection of the westerly line of Lexington avenue with the northerly line of East One Hundred and Thirtieth street, and running thence northerly along said westerly line of Lexington avenue 60 feet; thence westerly parallel with said northerly line of East One Hundred and Thirtieth street and distant therefrom 60 feet 405 feet to the easterly line of Park avenue; thence southerly along the easterly line of Park avenue 60 feet to the northerly line of East One Hundred and Thirtieth street, and thence easterly along said northerly line of East One Hundred and Thirtieth street 405 feet to the point or place of beginning.

The lots, pieces or parcels of land above described are shown on a certain map entitled "Map of lands required for the widening of the East One Hundred and Thirtieth street and southwest approach to the bridge over Harlem river," chapter 413, Laws of 1892; chapter 716, Laws of 1896; chapter 660, Laws of 1897," which said map was duly approved by the Board of Estimate and Apportionment of the City of New York by resolution duly adopted on the 12th day of October, 1897, and filed in the office of the Department of Public Works of the City of New York.

Dated New York, December 22, 1897.
FRANCIS M. SCOTT, Counsel to the Corporation,
No. 2 Tryon Row, New York City.

In the matter of the application of The Mayor, Aldermen and Commonalty of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening EAST ONE HUNDRED AND SIXTY-NINTH STREET (although not yet named by proper authority), from Jerome avenue to the Concourse, as the same has been heretofore laid out and designated as a first-class street or road, in the Twenty-third Ward of the City of New York.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants, of all houses and lots and improved and unimproved lands affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands affected thereby, and having objections thereto, do present their said objections, in writing, to us at our office, Nos. 90 and 92 West Broadway, ninth floor, in said city, on or before the 22d day of January, 1898, and that we, the said Commissioners, will hear parties so objecting within the ten week days next after the said 22d day of January, 1898, and for that purpose will be in attendance at our said office on each of said ten days at 4 o'clock P. M.

Second—That the abstract of our said estimate and assessment, together with our damage and benefit maps, and also all the affidavits, estimates and other documents used by us in making our report, have been deposited in the Bureau of Street Opening in the Law Department of the City of New York, Nos. 90 and 92 West Broadway, in said city, there to remain until the 24th day of January, 1898.

Third—That the limits of our assessment for benefit include all those lots, pieces or parcels of land, situate, lying and being in the City of New York, which taken together are bounded and described as follows, viz.: On the north by a line drawn parallel to Marcy place and distant 100 feet northerly from the northerly side thereof from a line drawn parallel to Jerome avenue and distant 100 feet westerly from the westerly side thereof to a line drawn parallel to Jerome avenue and distant 100 feet easterly from the easterly side thereof; also by the middle line of the blocks between Clarke place and Marcy place and said middle line produced from a line drawn parallel to Jerome avenue and distant 100 feet easterly from the easterly side thereof to a line drawn parallel to the Grand Boulevard and Concourse and distant 100 feet easterly from the easterly side thereof; also by a line drawn parallel to East One Hundred and Sixty-ninth street and distant 100 feet northerly from the northerly side thereof from a line drawn parallel to the Grand Boulevard and Concourse and distant 100 feet easterly from the easterly side thereof to the westerly side of Clay avenue; on the south by the middle line of the blocks between East One Hundred and Sixty-seventh street and East One Hundred and Sixty-eighth street and said middle line produced from a line drawn parallel to Jerome avenue and distant 100 feet westerly from the westerly side thereof to the Grand Boulevard and Concourse; also by a line drawn parallel to East One Hundred and Sixty-eighth street and distant 100 feet southerly from the southerly side thereof from the Grand Boulevard and Concourse to a line drawn parallel to the Grand Boulevard and Concourse and distant 100 feet easterly from the easterly side thereof; also by a line drawn parallel to East One Hundred and Sixty-ninth street and distant 100 feet southerly from the southerly side thereof from a line drawn parallel to the Grand Boulevard and Concourse and distant 100 feet easterly from the easterly side thereof to the westerly side of Clay avenue; on the east by a line drawn parallel to the Grand Boulevard and Concourse and distant 100 feet easterly from the easterly side thereof from the middle line of the blocks between Clarke place and Marcy place and said middle line produced to a line drawn parallel to East One Hundred and Sixty-ninth street and distant 100 feet northerly from the northerly side thereof; also by the westerly side of Clay avenue from a line drawn parallel to East One Hundred and Sixty-ninth street and distant 100 feet northerly from the northerly side thereof to a line drawn parallel to East One Hundred and Sixty-ninth street and distant 100 feet southerly from the southerly side thereof; also by the westerly side of the Grand Boulevard and Concourse from a line drawn parallel to East One Hundred and Sixty-eighth street and distant 100 feet southerly from the southerly side thereof to the middle line of the blocks between East One Hundred and Sixty-seventh street and East One Hundred and Sixty-eighth street; and on the west by a line drawn parallel to Jerome avenue and distant 100

feet westerly from the westerly side thereof from a line drawn parallel to Marcy place and said line produced and distant 100 feet northerly from the northerly side thereof to the prolongation westerly of the middle line of the blocks between East One Hundred and Sixty-seventh street and East One Hundred and Sixty-eighth street, as such streets are shown upon the Final Maps of the Twenty-third and Twenty-fourth wards of the City and County of New York, excepting from said area all streets, avenues and roads or portions thereof heretofore legally opened, as such area is shown upon our benefit maps deposited as aforesaid.

Fourth—That our report herein will be presented to a Special Term of the Supreme Court, Part III., of the State of New York, to be held in and for the City and County of New York, at the County Court-house, in the City of New York, on the 28th day of February, 1898, at the opening of the Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed.

Dated New York, December 8, 1897.
WILBUR MCBRIDE, Chairman; HAROLD M. SMITH, SAM'L A. FIRETAG, Commissioners.
HENRY DE FOREST BALDWIN, Clerk.

In the matter of the application of The Mayor, Aldermen and Commonalty of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening EAST ONE HUNDRED AND EIGHTY-SECOND STREET (Andrews avenue) (although not yet named by proper authority), from the Croton Aqueduct to Jerome avenue, as the same has been heretofore laid out and designated as a first-class street or road, in the Twenty-fourth Ward of the City of New York.

NOTICE IS HEREBY GIVEN THAT WE, THE undersigned, were appointed by an order of the Supreme Court bearing date the 23d day of November, 1897, Commissioners of Estimate and Assessment for the purpose of making a just and equitable estimate and assessment of the loss and damage, if any, or of the benefit and advantage, if any, as the case may be, to the respective owners, lessees, parties and persons respectively entitled unto or interested in the lands, tenements, hereditaments and premises required for the purpose by and in consequence of opening the above-mentioned street or avenue, the same being particularly set forth and described in the petition of the Mayor, Aldermen and Commonalty of the City of New York, and also in the notice of the application for the said order thereto attached, filed herein in the office of the Clerk of the City and County of New York on the 10th day of December, 1897, and a just and equitable estimate and assessment of the value of the benefit and advantage of said street or avenue so to be opened or laid out and formed, to the respective owners, lessees, parties and persons respectively entitled unto or interested in the said respective lands, tenements, hereditaments and premises not required for the purpose of opening, laying out and forming the same, but benefited thereby, and of ascertaining and defining the extent and boundaries of the respective tracts or parcels of land to be taken or to be assessed therefor, and of performing the trusts and duties required of us by chapter 16, title 5, of the act entitled "An act to consolidate into one act and to declare the special and local laws affecting public interests in the City of New York," passed July 1, 1882, and the acts or parts of acts in addition thereto or amendatory thereof.

All parties and persons interested in the real estate taken or to be taken for the purpose of opening the said street or avenue, or affected thereby, and having any claim or demand on account thereof, are hereby required to present the same, duly verified, to us, the undersigned Commissioners of Estimate and Assessment, at our office, Nos. 90 and 92 West Broadway, in the City of New York, with such affidavits or other proofs as the said owners or claimants may desire, within twenty days after the date of this notice.

And we, the said Commissioners, will be in attendance at our said office on the 15th day of January, 1898, at 10 o'clock in the forenoon of that day, to hear the said parties and persons in relation thereto, and at such time and place, and at such further or other time and place as we may appoint, we will hear such owners in relation thereto and examine the proofs of such claimant or claimants, or such additional proofs and allegations as may then be offered by such owner, or on behalf of the Mayor, Aldermen and Commonalty of the City of New York.

Dated New York, December 21, 1897.
CLIFFORD W. HARTBRIDGE, HERMAN ALSBERG, PETER F. MEYER, Commissioners.
H. DE F. BALDWIN, Clerk.

In the matter of the application of The Mayor, Aldermen and Commonalty of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to EAST ONE HUNDRED AND THIRTY-NINTH STREET (although not yet named by proper authority), from St. Ann's avenue to Locust avenue, in the Twenty-third Ward of the City of New York, as the same has been heretofore laid out and designated as a first-class street or road.

PURSUANT TO THE STATUTES IN SUCH cases made and provided, notice is hereby given that an application will be made to the Supreme Court of the State of New York, at a Special Term of said Court, to be held at Part III, thereof, in the County Court-house, in the City of New York, on Friday, the 31st day of December, 1897, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate and Assessment in the above-entitled matter. The nature and extent of the improvement hereby intended is the acquisition of title by The Mayor, Aldermen and Commonalty of the City of New York, for the use of the public, to all the lands and premises, with the buildings thereon and the appurtenances thereto belonging, required for the opening of a certain street or avenue known as East One Hundred and Thirty-ninth street, from St. Ann's avenue to Locust avenue, in the Twenty-third Ward of the City of New York, being the following-described lots, pieces or parcels of land, viz.:

PARCEL "A."

Beginning at a point in the eastern line of St. Ann's avenue distant 200.08 feet northerly from the intersection of the eastern line of St. Ann's avenue with the northern line of East One Hundred and Thirty-eighth street.

1st. Thence northerly along the eastern line of St. Ann's avenue for 60.02 feet.

2d. Thence easterly deflecting 91 degrees 34 minutes 35 seconds to the right for 839.90 feet to the western line of Cypress avenue.

3d. Thence southerly along the western line of Cypress avenue for 60.48 feet.

4th. Thence westerly for 845.85 feet to the point of beginning.

PARCEL "B."

Beginning at a point in the eastern line of Cypress avenue distant 201.60 feet northerly from the intersection of the eastern line of Cypress avenue with the northern line of East One Hundred and Thirty-eighth street.

1st. Thence northerly along the eastern line of Cypress avenue for 60.48 feet.

2d. Thence easterly deflecting 97 degrees 13 minutes 20 seconds to the right for 462.12 feet to the western line of Robbins avenue.

3d. Thence southerly along the western line of Robbins avenue for 60.48 feet.

4th. Thence westerly for 462.12 feet to the point of beginning.

PARCEL "C."

Beginning at a point in the eastern line of Robbins avenue distant 201.60 feet northerly from the intersection of the eastern line of Robbins avenue with the northern line of East One Hundred and Thirty-eighth street.

1st. Thence northerly along the eastern line of Robbins avenue for 60.48 feet.

2d. Thence easterly deflecting 97 degrees 13 minutes

20 seconds to the right for 247.50 feet to the western line of Southern Boulevard.

3d. Thence southwesterly along the western line of Southern Boulevard for 69.31 feet.

4th. Thence westerly for 255.20 feet to the point of beginning.

PARCEL "D."

Beginning at a point in the western line of Walnut avenue distant 225 feet northeasterly from the intersection of the western line of Walnut avenue with the northern line of East One Hundred and Thirty-eighth street:

1st. Thence northeasterly along the western line of Walnut avenue for 60 feet.

2d. Thence northwesterly deflecting 90 degrees to the left for 258.89 feet.

3d. Thence westerly deflecting 8 degrees 22 minutes 53 seconds to the left for 810.27 feet to the eastern line of Southern Boulevard.

4th. Thence southwesterly along the eastern line of Southern Boulevard for 69.31 feet.

5th. Thence easterly deflecting 120 degrees 2 minutes 30 seconds to the left for 840.38 feet.

6th. Thence southeasterly for 254.50 feet to the point of beginning.

PARCEL "E."

Beginning at a point in the western line of Locust avenue distant 225 feet northeasterly from the intersection of the western line of Locust avenue with the northern line of East One Hundred and Thirty-eighth street:

1st. Thence northeasterly along the western line of Locust avenue for 60 feet.

2d. Thence northwesterly deflecting 90 degrees to the left for 350 feet to the eastern line of Walnut avenue.

3d. Thence southwesterly along the eastern line of Walnut avenue for 60 feet.

4th. Thence southeasterly for 350 feet to the point of beginning.

East One Hundred and Thirty-ninth street is designated as a street of the first class, and is shown on section 15 of the Final Maps and Profiles of the Twenty-third and Twenty-fourth Wards of the City of New York, filed in the office of the Commissioner of Street Improvements of the City of New York on June 15, 1894, in the office of the Register of the City and County of New York on June 15, 1894, and in the office of the Secretary of State of the State of New York on June 15, 1894.

Dated New York, December 20, 1897.

FRANCIS M. SCOTT, Counsel to the Corporation.

No. 2 Tryon Row, New York City.

In the matter of the application of Charles H. T. Collis, Commissioner of Public Works of the City of New York, for and in behalf of The Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title in fee to certain lots, pieces or parcels of land, in the Twelfth Ward of the City of New York, for the purpose of the construction of the South Third Avenue approach to the bridge over the Harlem river, connecting the northern end of Third avenue, in the Twelfth Ward of said city, with the southerly end of Third avenue, in the Twenty-third Ward of said city, pursuant to the provisions of chapter 413 of the Laws of 1892, entitled "An Act to provide for the construction of a draw-bridge over the Harlem river, in the City of New York, and for the removal of the present bridge at Third avenue in said city," and the various statutes amendatory thereof, and all other statutes in such case made and provided.

NOTICE IS HEREBY GIVEN THAT WE, THE undersigned, were appointed by an order of the Supreme Court, bearing date the 28th day of October, 1897, and filed and entered in the office of the Clerk of the City and County of New York on the 4th day of November, 1897, Commissioners of Estimate and Apportionment for the purpose of making a just and equitable estimate of the loss and damage, to the respective owners, lessees, parties and persons respectively entitled unto or interested in the lands, tenements, hereditaments and premises required, and to be acquired in fee in the name of and for and in behalf of The Mayor, Aldermen and Commonality of the City of New York, for the purpose of the construction of the South Third Avenue approach to the bridge over the Harlem river, connecting the northern end of Third avenue, in the Twelfth Ward of said city, with the southerly end of Third avenue, in the Twenty-third Ward of said city, pursuant to the provisions of chapter 413 of the Laws of 1892, and the various statutes amendatory thereof, and all other statutes in such case made and provided, being the following-described lots, pieces or parcels of lands:

PARCEL "A."

Beginning at the corner formed by the intersection of the easterly side of Third avenue with the northerly side of East One Hundred and Twenty-eighth street, and running thence northerly along said easterly side of Third avenue 109.83 feet to the corner formed by the intersection of the southerly side of East One Hundred and Twenty-ninth street with the easterly side of Third avenue; thence easterly along the said southerly side of East One Hundred and Twenty-ninth street, 170 feet; thence southerly, parallel with the easterly side of Third avenue 99.32 feet; thence southwesterly 101.9 feet to the northerly side of East One Hundred and Twenty-eighth street, and thence westerly along the said northerly side of East One Hundred and Twenty-eighth street 150 feet to the point or place of beginning.

The title to so much of the lands above described in Parcel "A" as are owned by the Manhattan Railway Company is to be acquired for the aforesaid purpose, subject, however, to the perpetual right of said company, its successors and assigns, to maintain and operate its elevated railroad above the said lands as it now exists, and to construct and maintain additional tracks and platforms above said lands and above the lands above described in Parcel "A," and to be acquired herein for said approach, lying between the lands of said company and the north line of One Hundred and Twenty-eighth street, and in Third avenue, and One Hundred and Twenty-ninth street, as shown on the map submitted to the Board of Estimate and Apportionment of the City of New York on the 10th day of June, 1897, entitled "Manhattan Railway Company, proposed Third Avenue Terminal, May 25, 1897, J. Waterhouse, Chief Engineer," and to operate its said road in connection with such additional tracks and platforms.

PARCEL "B."

Beginning at the corner formed by the intersection of the easterly side of Third avenue with the northerly side of East One Hundred and Twenty-ninth street, and running thence northerly along said easterly side of Third avenue 221.67 feet to land heretofore acquired by the Mayor, Aldermen and Commonality of the City of New York for an approach to the new Third Avenue Bridge; thence southeasterly along the southerly side of said land heretofore acquired by the said city for said purpose 175.39 feet to a point which is distant northerly 143.22 feet from the northerly side of East One Hundred and Twenty-ninth street and distant easterly 156.87 feet from the easterly side of Third avenue; thence southeasterly and still along said land of said city on a curve turning to the right with a radius of 160.13 feet 61.17 feet; thence southerly and parallel with Third avenue 26.07 feet; thence westerly parallel with East One Hundred and Twenty-ninth street 35 feet; thence southerly parallel with Third avenue 80 feet to the northerly side of East One Hundred and Twenty-ninth street, and thence westerly along the said northerly side of East One Hundred and Twenty-ninth street 180 feet to the point or place of beginning.

PARCEL "C."

Beginning at a point on the easterly side of land heretofore acquired by the Mayor, Aldermen and Commonality of the City of New York for an approach to the new Third Avenue Bridge distant northerly from the northerly side of East One Hundred and Twenty-ninth street 265.476 feet and distant easterly from the easterly side of Third avenue 37.65 feet; thence northeasterly along said land of said city 34.39 feet to a point which is distant northerly from the

northerly side of East One Hundred and Twenty-ninth street 291.88 feet and distant easterly from the easterly side of Third avenue 55.436 feet; thence southeasterly on a curve turning to the right with a radius of 287.169 feet, 107.734 feet to a point on the northerly side of said land of said city which point is distant northerly from the northerly side of East One Hundred and Twenty-ninth street 218.84 feet and distant easterly from the easterly side of Third avenue 130.86 feet, and thence northwesterly along said northerly line of said land of said city 104.266 feet to the point or place of beginning.

The lots, pieces or parcels of land above described are shown on a certain map entitled "Map of lands required for the construction of the South Third Avenue approach to the bridge over Harlem river, under chapter 413, Laws of 1892, and under chapter 716, Laws of 1896, and under chapter 660, Laws of 1897," which said map was duly approved by the Board of Estimate and Apportionment of the City of New York by resolution duly adopted on the 16th day of June, 1897, and filed in the office of the Department of Public Works of the City of New York.

All parties and persons interested in the real estate taken or to be taken for the aforesaid purpose or affected thereby, and having any claim or demand on account thereof, are hereby required to present the same, duly verified, to us, the undersigned Commissioners of Estimate and Apportionment, at our office, Room No. 2, on the fourth floor of the Staats-Zeitung Building, No. 2 Tryon Row, in the City of New York, with such affidavits or other proofs as the owners or claimants may desire, within thirty (30) days after the date of this notice (December 6, 1897).

And we, the said Commissioners, will be in attendance at our said office on the 8th day of January, 1898, at 10 o'clock in the forenoon of that day, to hear the said parties and persons in relation thereto.

And at such time and place and at such further or other time and place as we may appoint we will hear such owners and examine the proofs of such claimant or claimants or such additional proofs and allegations as may then be offered by such owner or on behalf of the Mayor, Aldermen and Commonality of the City of New York.

Dated New York, December 6, 1897.

DAVID LEVENTRITT, PETER BOWE,

ARTHUR INGRAHAM, Commissioners.

JAMES A. C. JOHNSON, Clerk.

In the matter of the application of the Board of Street Opening and Improvement of the City of New York, by the Counsel to the Corporation of said City, relative to acquiring title by the Mayor, Aldermen and Commonality of the City of New York, to certain lands, tenements, hereditaments and premises in the Seventeenth Ward of the City of New York, bounded by Houston, Norfolk, Stanton and Essex streets, duly selected, located and laid out as and for a public park or playground, under and in pursuance of the provisions of chapter 320 of the Laws of 1887, chapter 293 of the Laws of 1895 and chapter 676 of the Laws of 1897.

PURSUANT TO THE PROVISIONS OF CHAPTER 320 of the Laws of 1887, chapter 293 of the Laws of 1895 and chapter 676 of the Laws of 1897, notice is hereby given that an application will be made to the Supreme Court of the State of New York, at a Special Term of said Court, to be held in Part III, thereof, in the County Court-house, in the City of New York, on Thursday, the 24th day of January, 1898, at the opening of the Court on that day, or as soon thereafter as counsel can be heard thereon, for the appointment of Commissioners of Estimate in the above-entitled matter.

The nature and extent of the improvement hereby intended is the acquisition of title by the Mayor, Aldermen and Commonality of the City of New York to certain lands, tenements, hereditaments and premises in the Seventeenth Ward of the City of New York, bounded by Houston, Norfolk, Stanton and Essex streets, in fee simple absolute, the same to be appropriated, converted and used to and for the purposes specified in chapter 320 of the Laws of 1887, chapter 293 of the Laws of 1895 and chapter 676 of the Laws of 1897, said property having been duly selected, located and laid out by the Board of Street Opening and Improvement of the City of New York as and for a public park or playground, under and in pursuance of the provisions of said chapter 320 of the Laws of 1887, chapter 293 of the Laws of 1895 and chapter 676 of the Laws of 1897, being the following-described lots, pieces or parcels of land, namely:

All those lots, pieces or parcels of land in the Seventeenth Ward of the City of New York, bounded and described as follows, to wit:

Beginning at the northeasterly corner of Stanton and Essex streets; thence northerly along the easterly line of Essex street, distance 295 feet 3/4 inches; thence easterly and parallel with Houston street, distance 17 feet 6 1/2 inches; thence northerly and nearly parallel to Norfolk street, distance 100 feet; to the southerly line of Houston street; thence easterly along said line, distance 25 feet 2 1/2 inches, to the southwesterly corner of Houston and Norfolk streets; thence southerly and along the westerly line of Norfolk street, distance 398 feet 2 1/4 inches, to the northerly line of Stanton street; thence westerly along said line, distance 17 feet 6 inches; thence northerly and parallel to Norfolk street, distance 98 feet 2 inches; thence westerly and parallel to Stanton street, distance 80 feet 3/4 inches; thence southerly and parallel to Norfolk street, distance 98 feet 2 inches, to the northerly line of Stanton street; thence westerly along the northerly line of Stanton street, distance 73 feet 1/2 inch, to the point or place of beginning.

The lots, pieces or parcels of land above described are shown on two similar maps, plans and profiles thereof, accompanied with explanatory remarks, made by the Department of Public Works, each of which is entitled "Map showing a public park or playground bounded by Houston, Norfolk, Stanton and Essex streets in the Seventeenth Ward of the City of New York, as laid out and established by the Board of Street Opening and Improvement," one of which said maps is filed in the office of the Register of the City and County of New York, and the other of which is filed in the office of the Department of Public Parks in said city.

Dated New York, December 23, 1897.

FRANCIS M. SCOTT, Counsel to the Corporation,

No. 2 Tryon Row, New York City.

In the matter of the application of the Mayor, Aldermen and Commonality of the City of New York, acting by and through the Board of Docks, relative to acquiring right and title to and possession of the wharfage, rights, terms, easements, emoluments and privileges appurtenant to the bulkhead on the southerly side of South street, beginning at a point on said bulkhead seventy-two and thirty-eight hundredths (72.38) feet easterly from the easterly side of Catharine slip, extended; thence running easterly along said southerly side of South street one hundred and nine and sixty-nine hundredths (109.69) feet, necessary to be taken for the improvement of the water-front of the City of New York, on the East river, pursuant to the plan heretofore adopted by the said Department of Docks and approved by the Commissioners of the Sinking Fund.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants of all houses and lots and improved and unimproved lands or wharf property, and all persons interested therein, or in any rights, privileges or interests pertaining thereto, affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our preliminary report and our estimate and assessment, and that all persons interested in this proceeding, or in any of the uplands, lands, lands under water, premises, buildings and wharf property affected thereby, and having objections thereto, do present their said objections in writing, duly verified, to us, at our office, Rooms 312 and 313, No. 253 Broadway, New York City, on or before the 24th day of January, 1898; that we, the said Commissioners, will hear

parties so objecting within the ten week days next after the said 24th day of January, 1898, and for that purpose will be in attendance at our said office on each of said ten days at 2 o'clock P. M.

Second—That the abstract of our said estimate and assessment, together with our damage map and also all the affidavits, estimates and other documents used by us in making our report, have been deposited in the Bureau of Street Openings in the Law Department of the City of New York, at the office of said Bureau, at Nos. 90 and 92 West Broadway, in the said city, there to remain until the 24th day of January, 1898.

Third—That our report herein will be presented to the Supreme Court of the State of New York, at a Special Term, Part III., thereof, to be held in the County Court-house, in the City of New York, on the 25th day of February, 1898, at the opening of Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed, and for such other and further relief as may be just and meet.

Dated New York, December 17, 1897.

WILBUR LARREMORE, Chairman; WILLIAM

M. LAWRENCE, WM. J. ELLIS, Commissioners.

JOHN A. HENNEBERY, Clerk.

In the matter of the application of The Mayor, Aldermen and Commonality of the City of New York, acting by and through the Department of Docks, relative to acquiring title to the wharf property, rights, terms, easements, emoluments and privileges of and to the lands and the lands necessary to be taken for the improvement of the water-front of the City of New York, on the North river, between West Eleventh and Bank streets and between West street and Thirteenth avenue, pursuant to the plan heretofore adopted by the said Board of Docks and approved by the Commissioners of the Sinking Fund.

WE, THE UNDERSIGNED COMMISSIONERS of Estimate and Assessment in the above-entitled matter, hereby give notice to all persons interested in this proceeding, and to the owner or owners, occupant or occupants, of all houses and lots and improved and unimproved lands or wharf property, and all persons interested therein, or in any rights, privileges or interests pertaining thereto, affected thereby, and to all others whom it may concern, to wit:

First—That we have completed our preliminary report and our estimate and assessment, and that all persons interested in this proceeding, or in any of the lands, premises, buildings and wharf property affected thereby and having objections thereto, do present their said objections in writing, duly verified, to us, at our office, Rooms 312 and 313, No. 253 Broadway, New York City, on or before the 24th day of January, 1898; that we, the said Commissioners, will hear parties so objecting within the ten week days next after the said 24th day of January, 1898, and for that purpose will be in attendance at our said office on each of said ten days at 4 o'clock P. M.

Second—That the abstract of our said estimate and assessment, together with our damage map and also all the affidavits, estimates and other documents used by us in making our report, have been deposited in the Bureau of Street Openings in the Law Department of the City of New York, at the office of said Bureau, at Nos. 90 and 92 West Broadway, in the said city, there to remain until the 24th day of January, 1898.

Third—That our report herein will be presented to the Supreme Court of the State of New York, at a Special Term, Part III., thereof, to be held in the County Court-house, in the City of New York, on the 25th day of February, 1898, at the opening of Court on that day, and that then and there, or as soon thereafter as counsel can be heard thereon, a motion will be made that the said report be confirmed, and for such other and further relief as may be just and meet.

Dated New York, December 17, 1897.

LAWRENCE GODKIN, Chairman; WILLIAM B.

ELLISON, WILBUR LARREMORE, Commissioners.

EMIL F. MAUREL, Clerk.

In the matter of the application of The Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands and premises required for the purpose of opening BURNSIDE AVENUE (although not yet named by proper authority, between Tremont avenue and East One Hundred and Seventy-eighth street, as the same has been heretofore laid out and designated as a first-class street or road, in the Twenty-fourth Ward of the City of New York.

NOTICE IS HEREBY GIVEN THAT WE, THE undersigned, were appointed by an order of the Supreme Court, bearing date the 11th day of November, 1897, Commissioners of Estimate and Assessment for the purpose of making a just and equitable estimate and assessment of the loss and damage, if any, or of the benefit and advantage, if any, as the case may be, to the respective owners, lessees, parties and persons respectively entitled unto or interested in the lands, tenements, hereditaments and premises required for the purpose by and in consequence of opening the above-mentioned street or avenue, the same being particularly set forth and described in the petition of The Mayor, Aldermen and Commonality of the City of New York, and also in the notice of the application for the said order thereto attached, filed herein in the office of the Clerk of the City and County of New York on the 2d day of December, 1897, and a just and equitable estimate and assessment of the value of the benefit and advantage of said street or avenue so to be opened or laid out and formed, to the respective owners, lessees, parties and persons respectively entitled unto or interested in the said respective lands, tenements, hereditaments and premises not required for the purpose of opening, laying out and forming the same, but benefited thereby, and of ascertaining and defining the extent and boundaries of the respective tracts or parcels of land to be taken or to be assessed therefor, and of performing the trusts and duties required of us by chapter 16, title 5, of the act entitled "An act to consolidate into one act and to declare the special and local laws affecting public interests in the City of New York," passed July 1, 1882, and the acts or parts of acts in addition thereto or amendatory thereof.

All parties and persons interested in the real estate taken or to be taken for the purpose of opening the said street or avenue, or affected thereby, and having any claim or demand on account thereof, are hereby required to present the same, duly verified, to us, the undersigned Commissioners of Estimate and Assessment, at our office, Nos. 90 and 92 West Broadway, in the City of New York, with such affidavits or other proofs as the said owners or claimants may desire, within twenty days after the date of this notice.

And we, the said Commissioners, will be in attendance at our said office on the 8th day of January, 1898, at 10 o'clock in the forenoon of that day, to hear the said parties and persons in relation thereto, and at such time and place, and at such further or other time and place as we may appoint, we will hear such owners or claimants, or such additional proofs and allegations as may then be offered by such owner, or on behalf of The Mayor, Aldermen and Commonality of the City of New York.

Dated New York, December 14, 1897.

GEORGE M. VAN HOESEN, JAS. B. BRADY,

WILLIAM M. LAWRENCE, Commissioners.

JOHN P. DUNN, Clerk.

In the matter of the application of The Mayor, Aldermen and Commonality of the City of New York, relative to acquiring title, wherever the same has not been heretofore acquired, to the lands, tenements and hereditaments required for the purpose of opening RIVER AVENUE (although not yet named by proper authority), from Tremont avenue to Burnside avenue, as the same has been heretofore laid out and designated as a first-class street or road, in the Twenty-fourth Ward of the City of New York.

NOTICE IS HEREBY GIVEN THAT WE, THE undersigned, were appointed by an order of the Supreme Court, bearing date the 11th day of November, 1897, Commissioners of Estimate and Assessment for the purpose of making a just and equitable estimate and assessment of the loss and damage, if any, or of the benefit and advantage, if any, as the case may be, to the respective owners, lessees, parties and persons respectively entitled unto or interested in the lands, tenements, hereditaments and premises required for the purpose by and in consequence of opening the above-mentioned street or avenue, the same being particularly set forth and described in the petition of The Mayor, Aldermen and Commonality of the City of New York, and also in the notice of the application for the said order thereto attached, filed herein in the office of the Clerk of the City and County of New York on the 2d day of December, 1897, and a just and equitable estimate and assessment of the value of the benefit and advantage of said street or avenue so to be opened or laid out and formed, to the respective owners, lessees, parties and persons respectively entitled unto or interested in the said respective lands, tenements, hereditaments and premises not required for the purpose of opening, laying out and forming the same, but benefited thereby, and of ascertaining and defining the extent and boundaries of the respective tracts or parcels of land to be taken or to be assessed therefor, and of performing the trusts and duties required of us by chapter 16, title 5, of the act entitled "An act to consolidate into one act and to declare the special and local laws affecting public interests in the City of New York," passed July 1, 1882, and the acts or parts of acts in addition thereto or amendatory thereof.

All parties and persons interested in the real estate taken or to be taken for the purpose of opening the said street or avenue, or affected thereby, and having any claim or demand on account thereof, are hereby required to present the same, duly verified, to us, the undersigned Commissioners of Estimate and Assessment, at our office, Nos. 90 and 92 West Broadway, in the City of New York, with such affidavits or other proofs as the said owners or claimants may desire, within twenty days after the date of this notice.

And we, the said Commissioners, will be in attendance at our said office on the 8th day of January, 1898, at 10 o'clock in the forenoon of that day, to hear the said parties and persons in relation thereto, and at such time and place, and at such further or other time and place as we may appoint, we will hear such owners or claimants, or such additional proofs and allegations as may then be offered by such owner, or on behalf of The Mayor, Aldermen and Commonality of the City of New York.

Dated New York, December 14, 1897.

EDWARD E. McCALL, WILLIAM J. CARROLL,

GEORGE M. VAN HOESEN, Commissioners.

H. DE F. BALDWIN, Clerk.

In the matter of the application of the Mayor, Aldermen and Commonality of the City of New York, by and through the Counsel to the Corporation, to acquire title to certain lands in the Twenty-third Ward of the City of New York as and for a public park, under and pursuant to the provisions of chapter 224 of the Laws of 1896, as amended by chapter 70 of the Laws of 1897.

NOTICE IS HEREBY GIVEN THAT WE, THE undersigned, were appointed by an order of the Supreme Court bearing date the 15th day of October, 1897, and filed and entered in the office of the Clerk of the City and County of New York on the 4th day of November, 1897, Commissioners of Appraisal for the purpose of ascertaining and appraising the compensation to be made to the owners and all persons interested in the real estate hereinafter described and laid out, appropriated or designated by said chapter 224 of the Laws of 1896, as amended by chapter 70 of the Laws of 1897, as and for a public park in the Twenty-third ward of the City of New York, and proposed to be taken or affected for the purposes named in said act, and to perform such other duties as are by said act prescribed.

The real estate so proposed to be taken or affected for said purposes comprises all the lands, tenements, hereditaments and premises not now owned or the title to which is not vested in the Mayor, Aldermen and Commonality of the City of New York, within the limits or boundaries of the parcels of land laid out, appropriated or designated for said public park by said chapter 224 of the Laws of 1896, as amended by chapter 70 of the Laws of 1897, namely: On the north by the southerly line of One Hundred and Sixty-second street; on the east by the westerly line of Cromwell's avenue as far south as the southerly line of One Hundred and Sixty-first street, and south of that point by the northwesterly line of the channel of Cromwell's creek; on the south by said northwesterly line of the channel of Cromwell's creek and the easterly bulkhead line of the Harlem river, and on the west by the easterly bulkhead line of the Harlem river to the lands now or formerly belonging to the West Side and Yonkers Railroad or Railway Company; thence running easterly and bounded by the lands of said company to Sedgwick avenue; thence again running easterly across Sedgwick avenue to the southerly line of One Hundred and Sixty-first street or the passageway leading from Sedgwick avenue to Summit avenue; thence running southeasterly along the southerly line of One Hundred and Sixty-first street or said passageway to the westerly line of Summit avenue; thence running southwesterly along the westerly line of Summit avenue to the southerly line of One Hundred and Sixty-first street; thence running southeasterly along the southerly line of One Hundred and Sixty-first street to the westerly line of Ogden avenue; thence again running southerly in a straight line to the southeasterly corner of Jerome avenue and One Hundred and Sixty-second street, the point or place of beginning, including all the lands within said bounds, excepting and reserving therefrom all public streets, avenues or places now laid out across or over any part of said land and shown on the official field maps of the Commissioner of Street Improvements of the Twenty-third and Twenty-fourth Wards of the City of New York.

All parties and persons, owners, lessees or other persons interested in the real estate above described and to be taken for the purposes of said public park, or any part thereof, or affected by the proceedings had under or authorized by said act, chapter 224 of the Laws of 1896, as amended by chapter 70 of the Laws of 1897, and having any claim or demand on account thereof, are required to present the same to us, duly verified, with such affidavits or other proof in support thereof as the said owner or claimant may desire, within sixty days after the date of this notice (November 8, 1897), at our office, Nos. 90 and 92 West Broadway, ninth floor, in the City of New York.

And we, the said Commissioners, will be in attendance at our said office on the 18th day of January, 1898, at twelve o'clock noon of that day, to hear the said parties and persons in relation thereto, and in case any such person or claimant shall desire at such time and place to offer further and additional proofs or testimony, such person or claimant will be heard or said proofs or testimony will be received by us.

And at such time and place, or at such further or other time and place as we may appoint, we will hear the proofs and allegations of any owner, lessee or other person in any way entitled to or interested in such real estate, or any part or parcel thereof, and also such proofs and allegations as may be then offered on behalf of the Mayor, Aldermen and Commonality of the City of New York.

Dated New York, November 8, 1897.

CHARLES L. GUY, WILLIAM H. BARKER,

HENRY H. PORTER, Commissioners.

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